



# Transit-Oriented Development Infrastructure Planning

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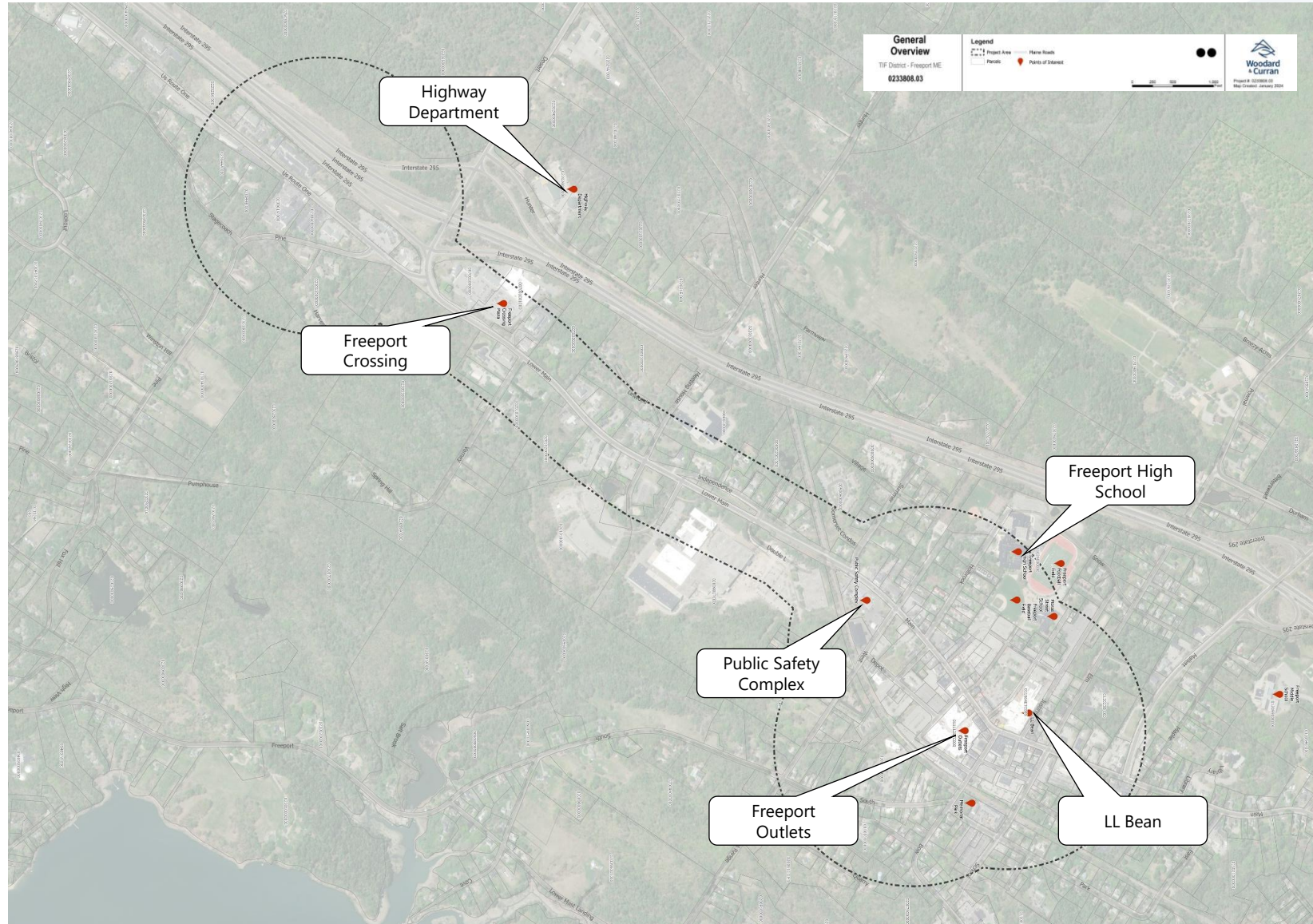
**Freeport Economic Development Corporation**

**Brent Bridges, PE, Woodard & Curran**

**January 30, 2024**

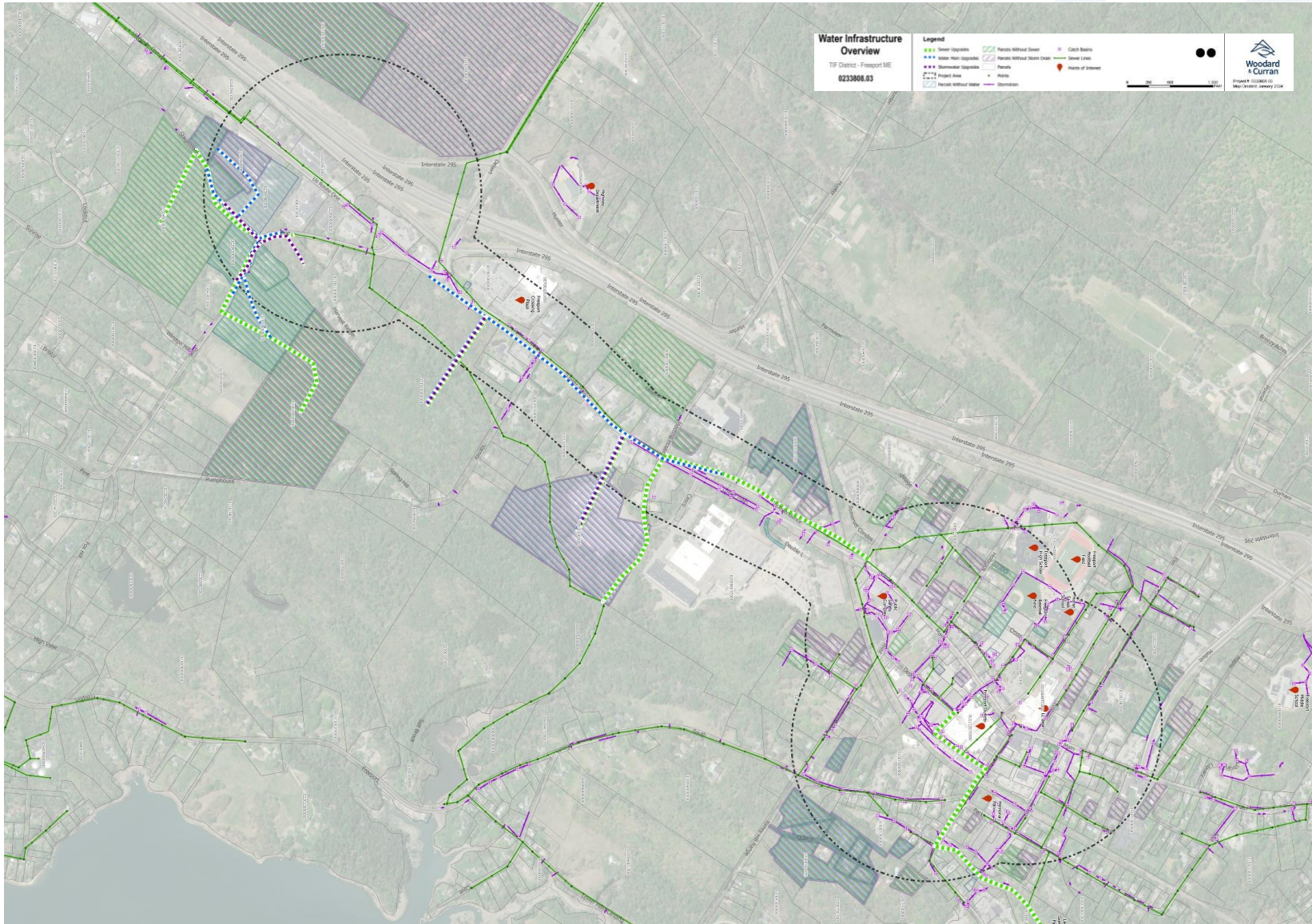


# General Overview



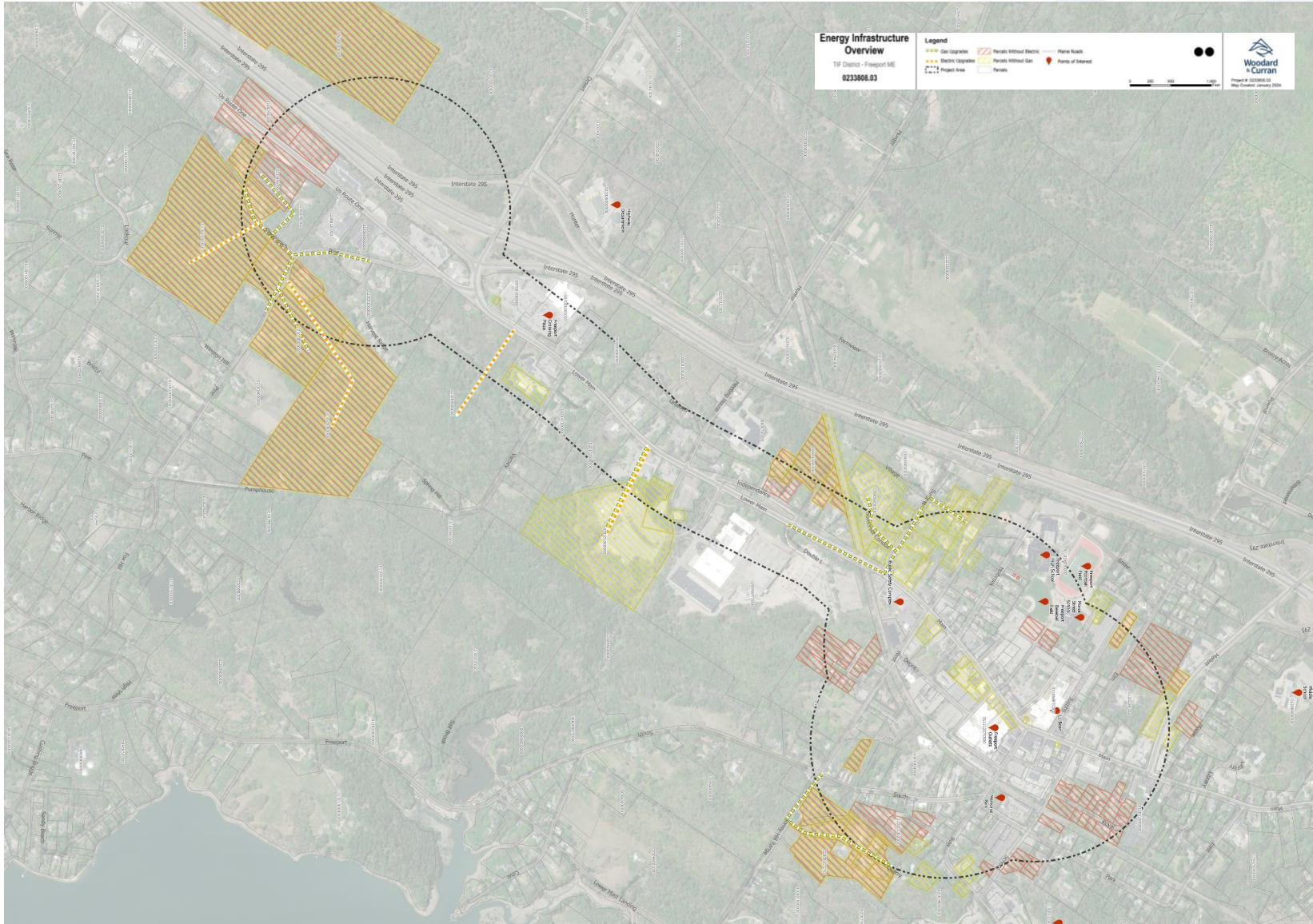


# Water Infrastructure Overview



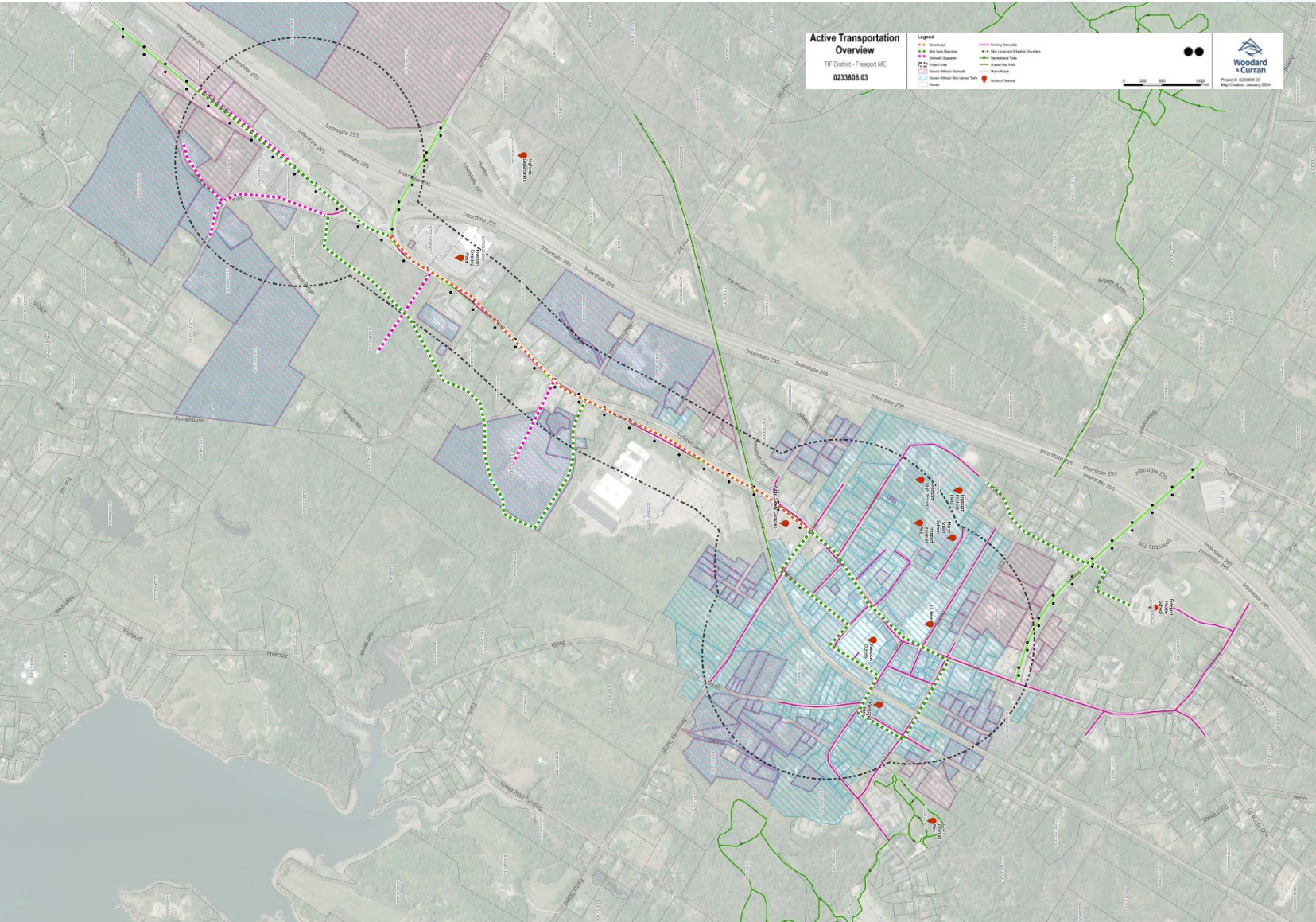


# Energy Infrastructure Overview





# Active Transportation Overview



# Summary of Costs

Summary List	
Sewer	\$5,036,000
Water	\$4,743,000
Stormwater	\$1,208,000
Gas	\$1,980,000
Electric	\$303,000
Sidewalks	\$3,256,000
Bike Paths	\$7,530,000
Streetscape	\$1,716,000
<b>Total</b>	<b>\$25,772,000</b>

# Water Infrastructure Costs

Sewer		
Item	Cost	Unit
Sewer Pipe Installation	\$150	LF
Structure	\$6,000	EA
Structure Spacing	200	ft
Structure Cost/LF	\$30	\$/LF
Pavement Cost/LF	\$44	\$/LF
Expansive Sewer Eq. Unit Cost	\$290	\$/LF
Sewer Connection Property Cost	\$4,000	EA/parcel

Water		
Item	Cost	Unit
Water Pipe Cost	\$100	LF
Valve	\$2,000	EA
Valve Spacing	500	ft
Structure Cost/LF	\$4	\$/LF
Pavement Cost/LF	\$44	\$/LF
Water Eq. Unit Cost	\$190	\$/LF
Water Connection Property Cost	\$3,000	EA/parcel

Stormwater		
Item	Cost	Unit
Stormwater Pipe Cost	\$125	LF
Catch Basins & Drain MHs	\$5,000	EA
Structure Spacing	100	ft
Structure Cost/LF	\$50	\$/LF
Pavement Cost/LF	\$44	\$/LF
Stormwater Eq. Unit Cost	\$290	\$/LF
Detention Pond Cost	\$20,000	EA/parcel

Common		
Item	Cost	Unit
Paving	\$50	SY
Concrete	150	\$/CY
Design & Contingency	30%	pct
Trench Width	8	ft

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# Energy Infrastructure Costs

Gas		
Item	Cost	Unit
New Gas Pipe	\$80	LF
Gas Valves	\$2,000	EA
Valve	200	ft
Structure Cost/LF	\$10	\$/LF
Pavement Cost/LF	\$44	\$/LF
Gas Line Unit Cost	\$170	\$/LF
Gas Connection Cost	\$5,000	EA/parcel

Electric		
Item	Cost	Unit
New Electric Wire	\$30	LF
Pole Cost	\$3,000	EA
Pole Spacing	200	ft
Pole Cost/LF	\$15	\$/LF
Electrical	\$60	\$/LF
Electrical Connection Cost	\$2,000	EA/parcel

Common		
Item	Cost	Unit
Paving	\$50	SY
Concrete	150	\$/CY
Design & Contingency	30%	pct
Trench Width	8	ft

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# Transportation Infrastructure Costs

Bike Trails		
Item	Cost	Unit
Width	10	ft
Paving Cost	\$17	LF
Site Work Cost	\$250	LF
Painting	\$10	\$/SF
Linear Footage Cost	\$350	\$/LF

Sidewalk		
Item	Cost	Unit
Width	5	ft
Thickness	0.666	ft
Volume/LF	0.12333	CY/LF
Concrete Cost/LF	\$18.5	\$/LF
Curb	\$100	\$/LF
Site Work Cost	\$80	\$/LF
Total Cost/LF	\$200	\$/LF

Streetscape		
Item	Cost	Unit
Route 1 Estimated Average Width	50	ft
Streetscape Project Length	5,400	ft
Vegetation	\$190,000	LS
Lighting	\$190,000	LS
Amenities	\$190,000	LS

Common		
Item	Cost	Unit
Paving	\$50	SY
Concrete	150	\$/CY
Design & Contingency	30%	pct
Trench Width	8	ft

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# Water Infrastructure Upgrades

Sewer Upgrades			
Area	Length (LF)	# of Properties	Estimated Cost
Main Street Replacement	2,144	5	\$642,000
Cross Country Replacement	1,567	0	\$454,000
Southern Growth Expansion	4,414	20	\$1,360,000
Main Street Development Expansion	2,000	10	\$620,000
Village Sewer Replacement	6,688	5	\$1,960,000
<b>Total</b>			<b>\$5,036,000</b>

Water Upgrades			
Area	Length (LF)	# of Properties	Estimated Cost
Main Street Replacement	3,352	10	\$667,000
Southern Growth Expansion	3,189	20	\$666,000
Main Street Development Expansion	2,000	10	\$410,000
New Water Source in Freeport	n/a	n/a	\$3,000,000
<b>Total</b>			<b>\$4,743,000</b>

Sewer Upgrades			
Area	Length (LF)	# of Properties	Estimated Cost
Southern Growth Expansion	1,475	n/a	\$428,000
Main Street Development Expansion	2,000	n/a	\$580,000
Main Street Stormwater Retention Ponds	n/a	n/a	\$200,000
<b>Total</b>			<b>\$1,208,000</b>

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# Energy Upgrades

Gas Upgrades			
Area	Length (LF)	# of Properties	Estimated Cost
Main Street Replacement	2,000	10	\$380,000
South End Development	3,646	20	\$700,000
Summer Street Area	2,968	16	\$569,000
Quarry Lane Area	1,714	10	\$331,000
<b>Total</b>			<b>\$1,980,000</b>

Electrical Upgrades			
Area	Length (LF)	# of Properties	Estimated Cost
Main Street Replacement	2,000	10	\$140,000
South End Development	2,388	10	\$163,000
<b>Total</b>			<b>\$303,000</b>

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# Transportation Upgrades

Sidewalk		
Area	Length (LF)	Estimated Cost
South End Development	2,230	\$580,000
Route 1 Extension	1,212	\$315,000
Main Street Developments	2,000	\$520,000
Downtown Sidewalk Upgrades	5,280	\$1,373,000
Route 1 Streetscape	1,800	\$468,000
<b>Total</b>		<b>\$3,256,000</b>

Bike Path		
Area	Length (LF)	Estimated Cost
Route 1 Extension	1,212	\$551,000
Town Center Loop Trail	3,119	\$1,419,000
School Connector	2,220	\$1,010,000
Concord Brook Bike Trail	4,600	\$2,093,000
Route 1 Streetscape	5,400	\$2,457,000
<b>Total</b>		<b>\$7,530,000</b>

Streetscape Upgrades			
Area	Value	Unit	Estimated Cost
Pavement	15,000	SY	\$975,000
Vegetation	1	LS	\$247,000
Lighting	1	LS	\$247,000
Benches	1	LS	\$247,000
<b>Total</b>			<b>\$1,716,000</b>

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# Thank You!

Questions?