

# Edison Neighborhood Development

May 10, 2021

Prepared for: City of Waterloo, IA





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# Overview

- Goals
- Design Criteria
- Constraints
- Challenges
- Overall Design
- Design Elements
- Construction Cost
- Conclusion
- Questions



## GOALS

- 10 years from now...
- Match the surrounding infrastructure

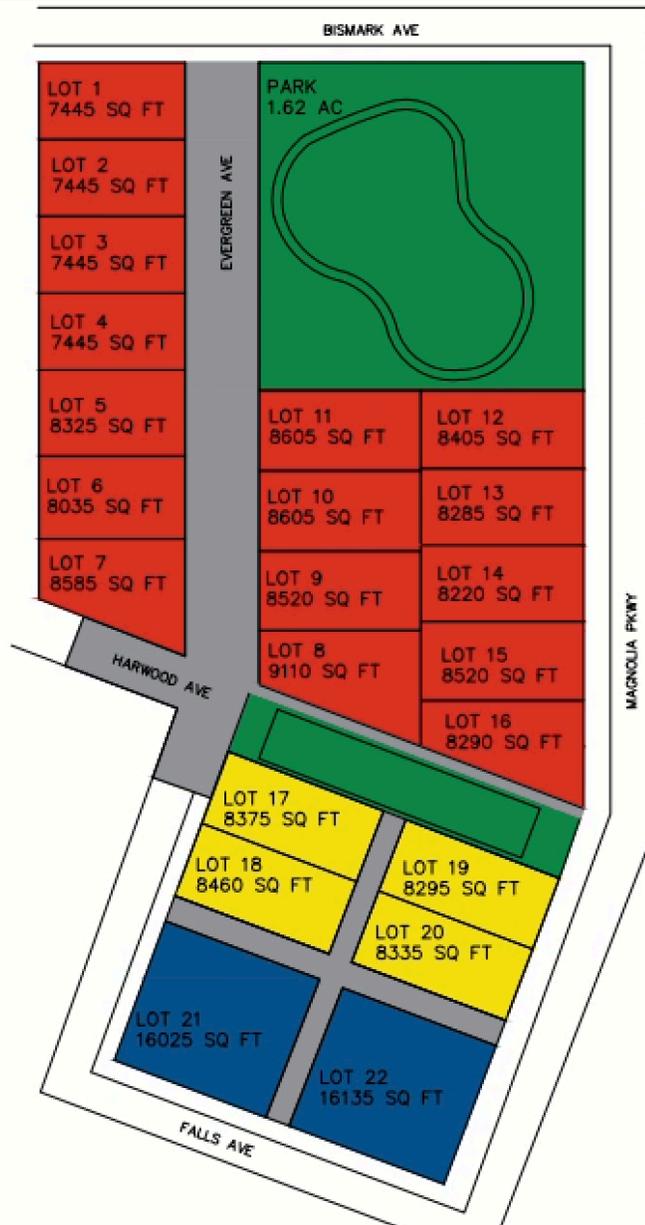
## MUST INCLUDE

- Park, 1.5 - 2 acres
- Commercial Zone

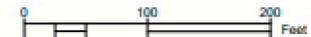
# Constraints and Challenges

- ▶ No physical site survey
- ▶ Fit in with existing infrastructure
- ▶ Flat site and shallow storm sewer
- ▶ Time
  
- ▶ Positive return-on-investment
- ▶ Stormwater management
- ▶ Preserve healthy trees

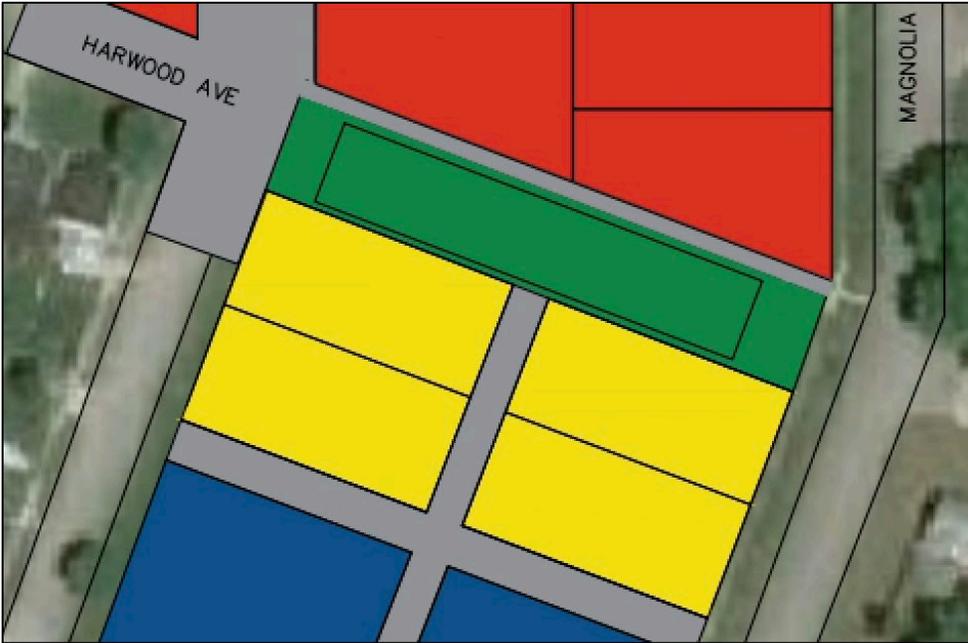
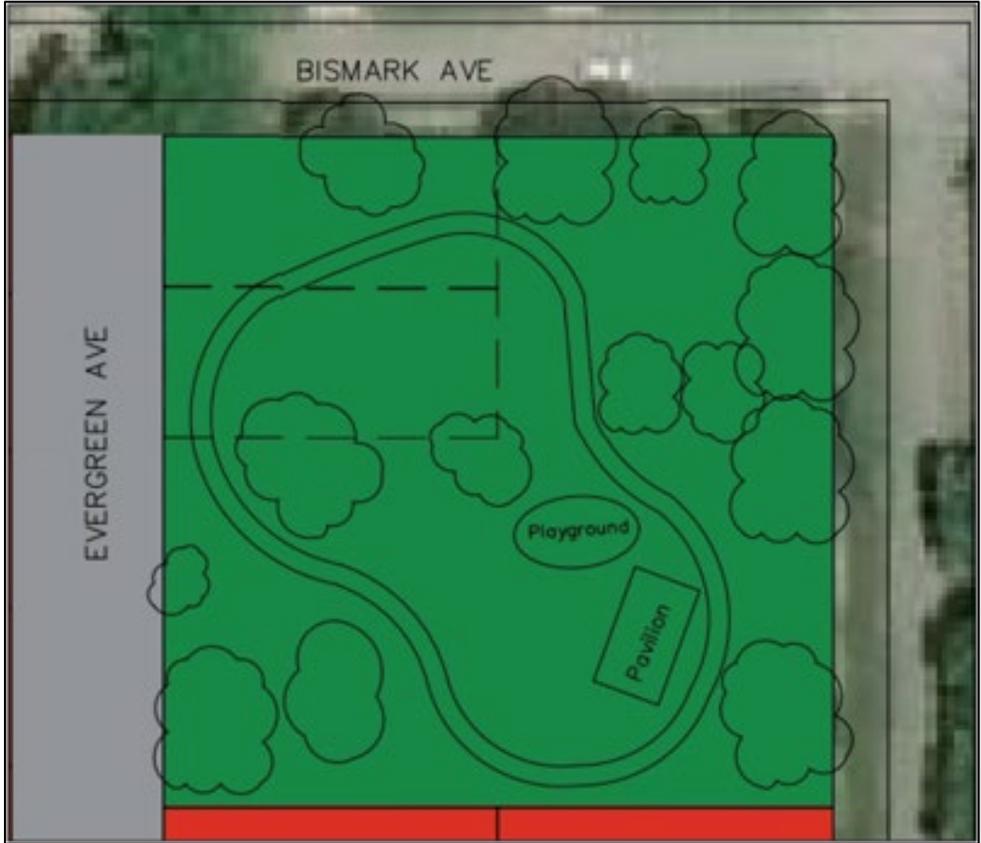


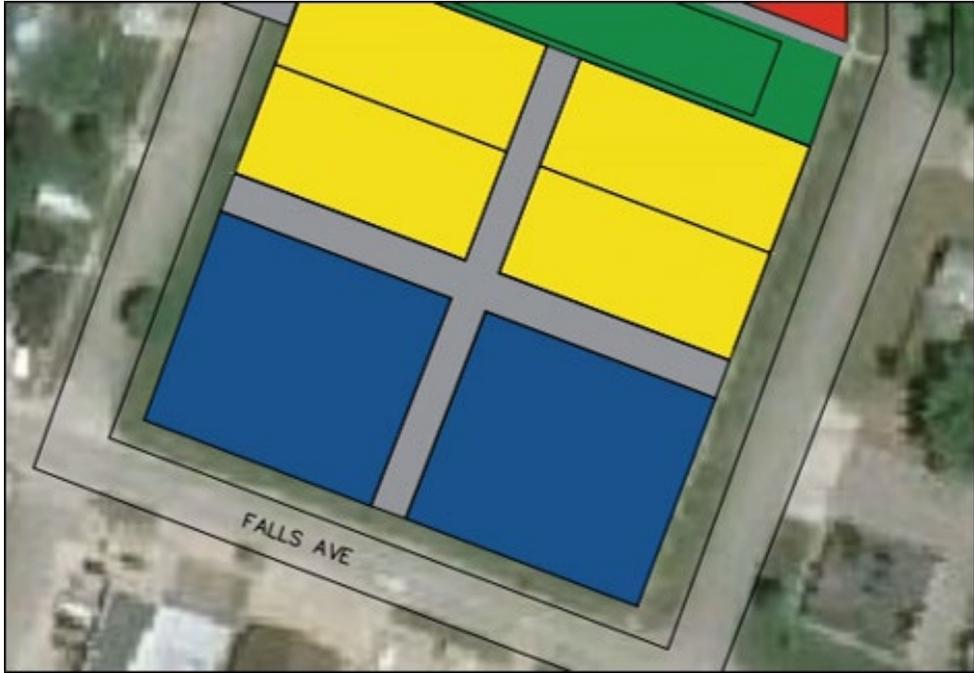


-  RESIDENTIAL LOTS (3.01 AC)
-  TRANSITIONAL LOTS (0.77 AC)
-  PARK AND BASIN (1.96 AC)
-  COMMERCIAL LOTS (0.74 AC)
-  STREETS AND ALLEYS









Front to Back Duplex



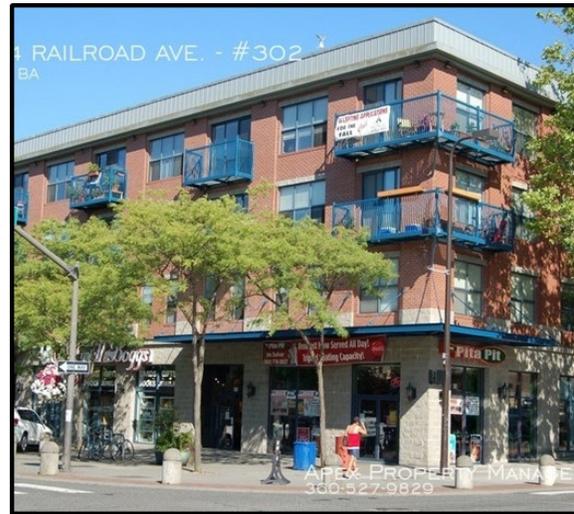
Front to Back Duplex



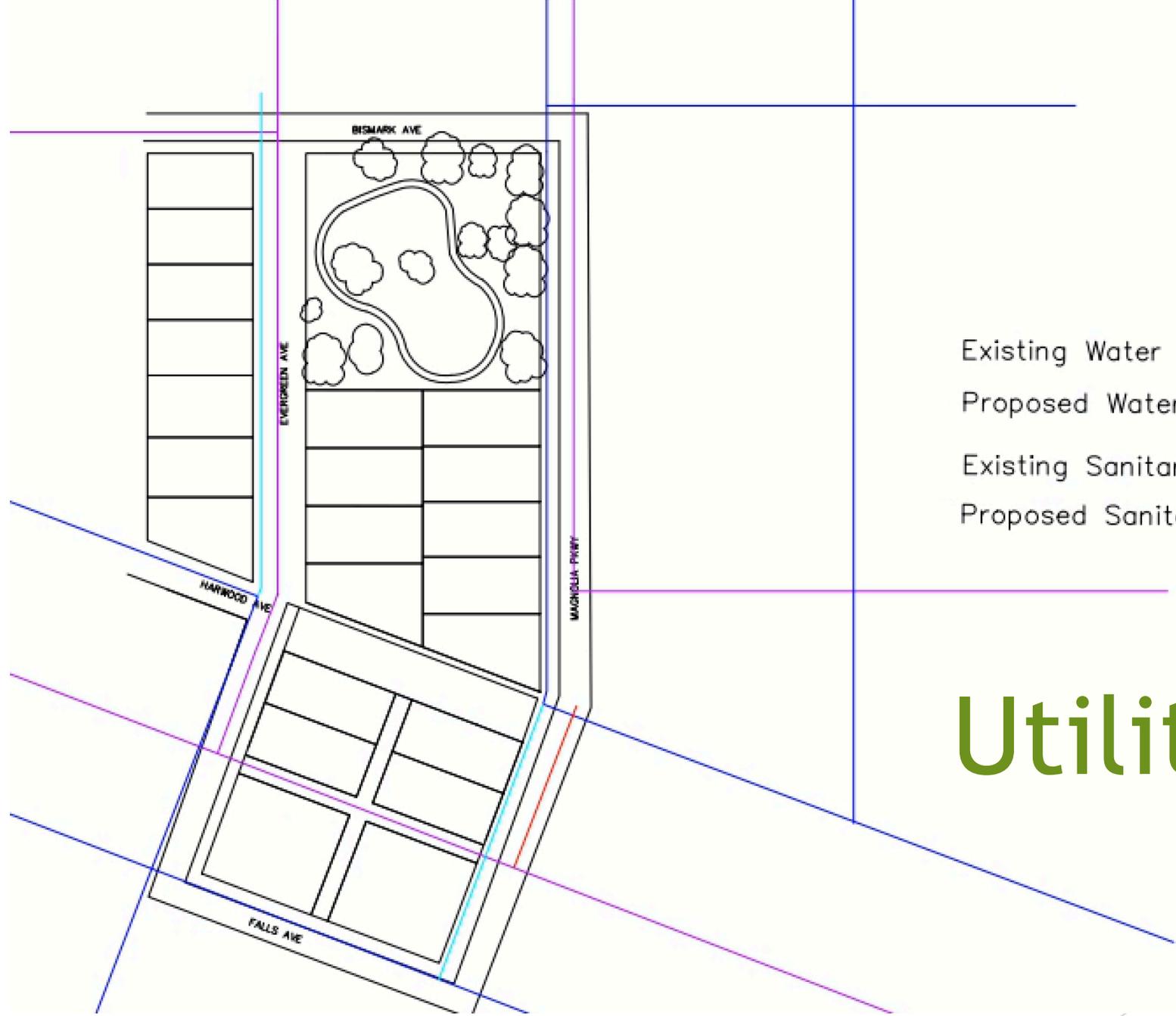
1374 sq. ft. 3 bed 2 bath 2 storey 0 car



1254 sq. ft. 3 bed 2 bath 2 storey 0 car



APEX PROPERTY MANAGER  
300-527-9829

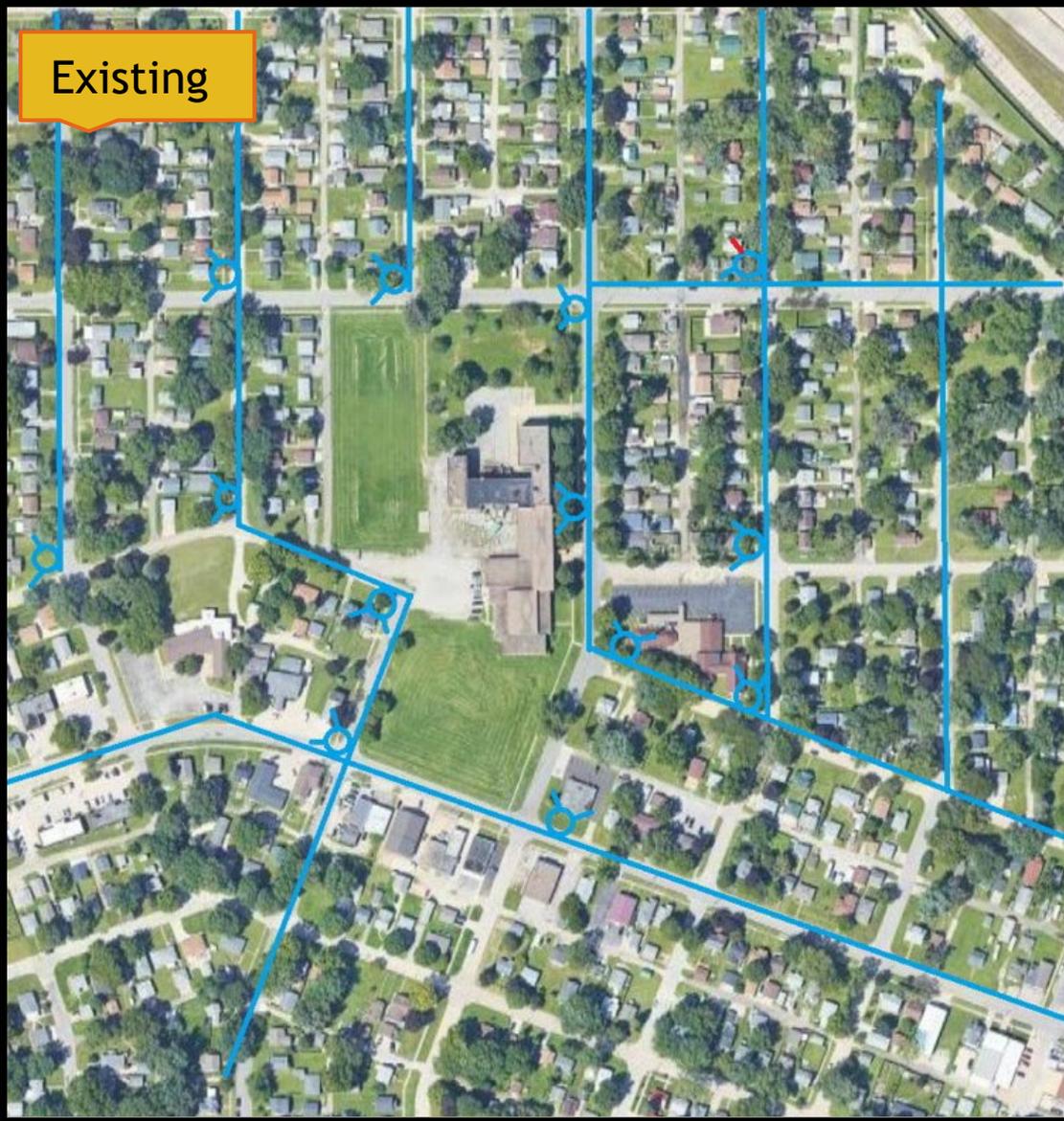


- Existing Water ———
- Proposed Water ———
- Existing Sanitary ———
- Proposed Sanitary ———

# Utilities

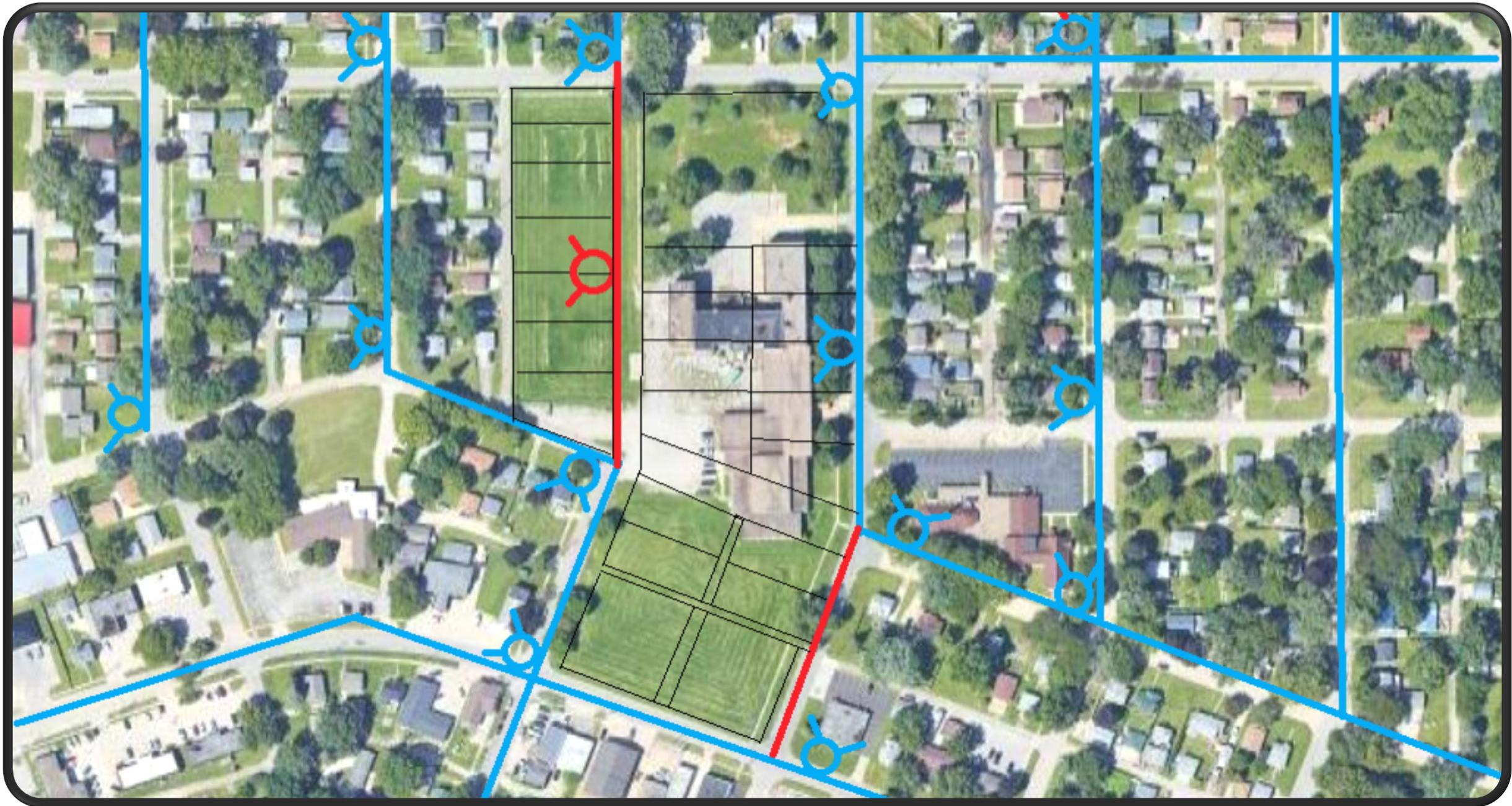
# Water Main

Existing



Proposed





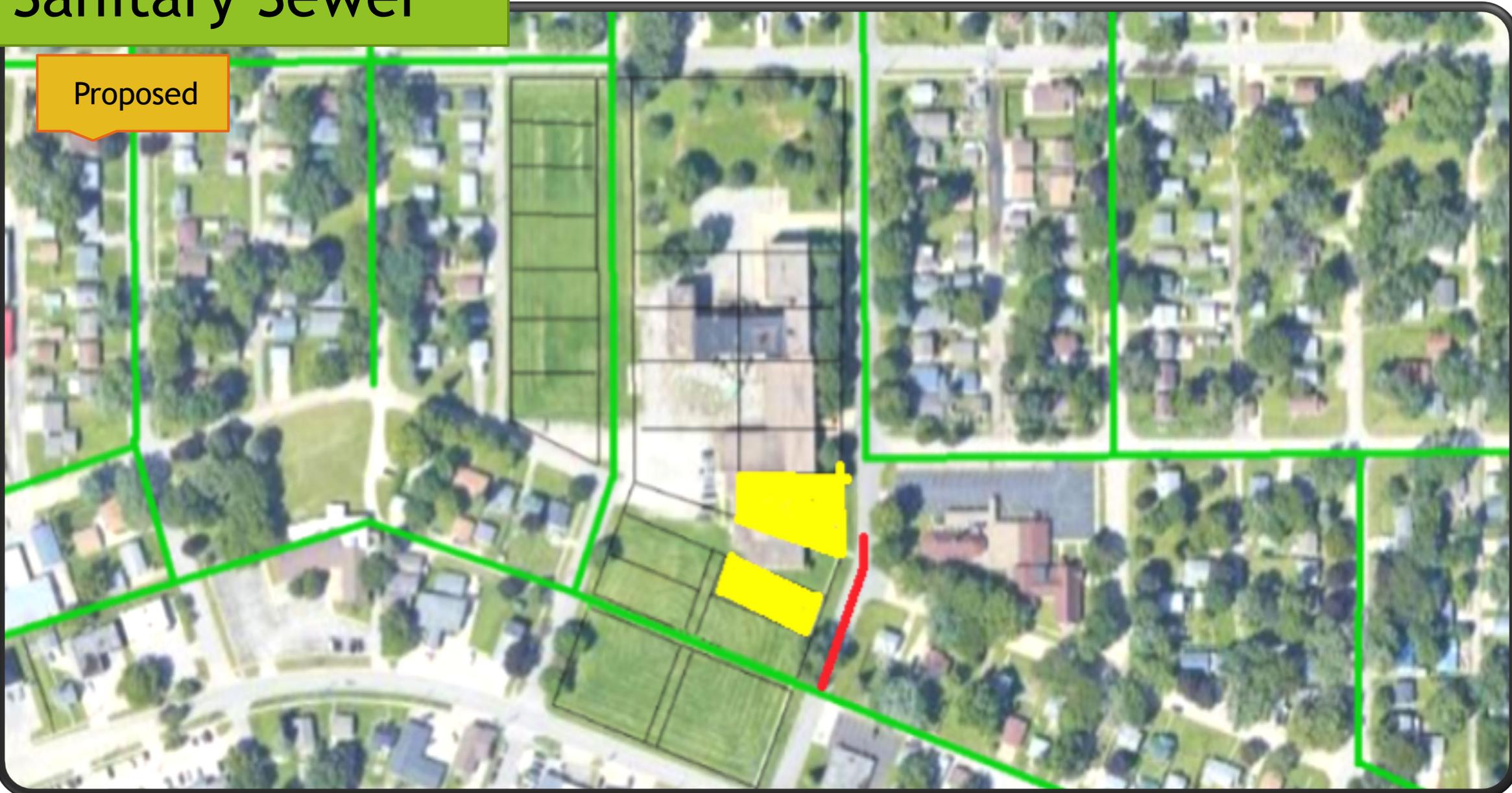
# Sanitary Sewer

Existing



# Sanitary Sewer

Proposed

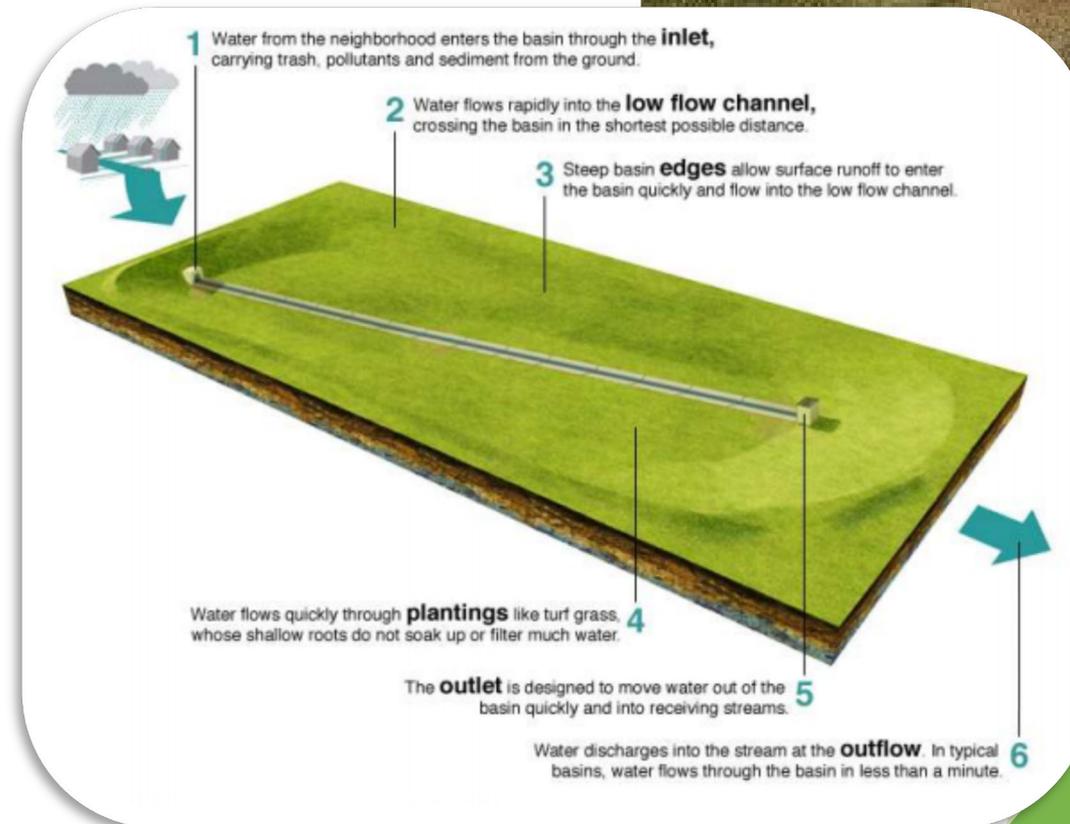


# Stormwater Management



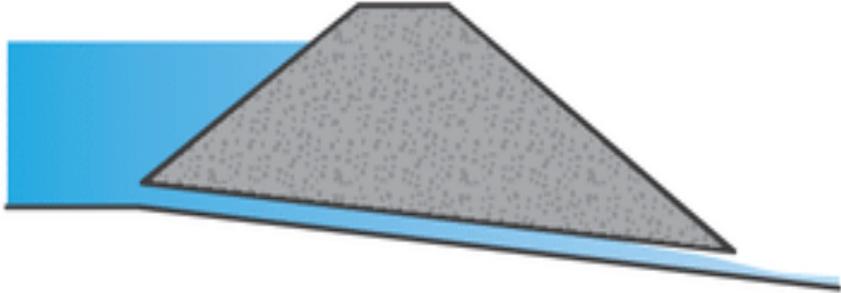
# Dry Detention Basin

- ▶ Maximum Storage
- ▶ Outlet Size
- ▶ Emergency Spillway

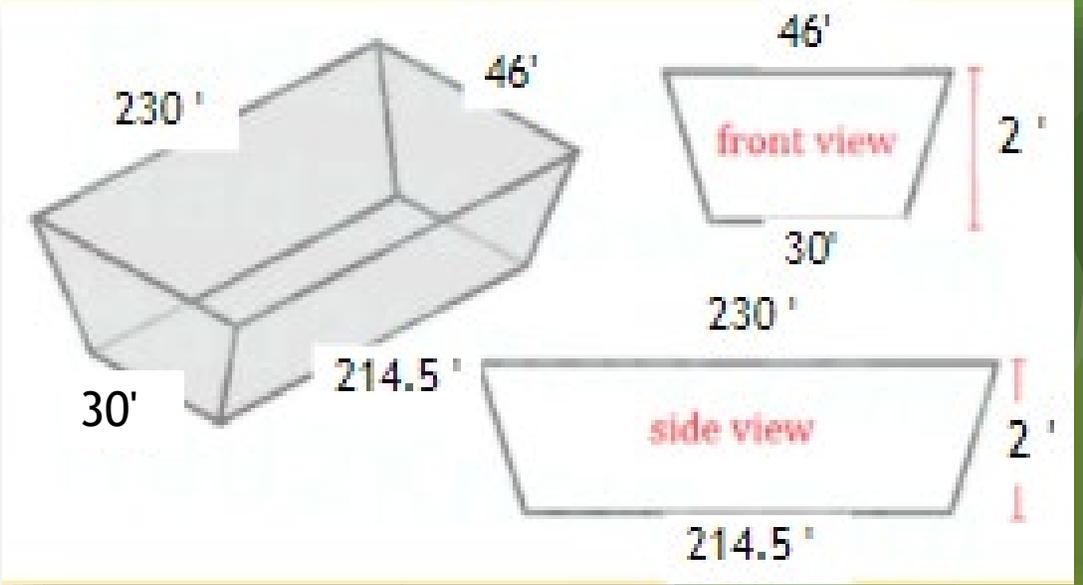
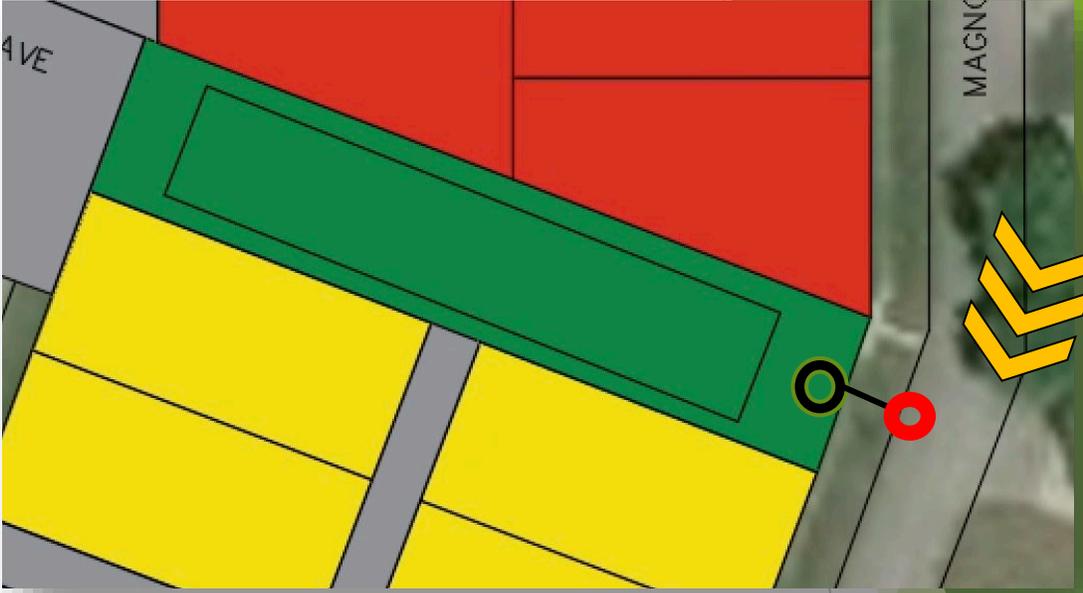


# Dry Detention Basin

- ▶ Basin Size
- ▶ Outlet Size
- ▶ Emergency Spillway



Outlet Diameter = 12 in.

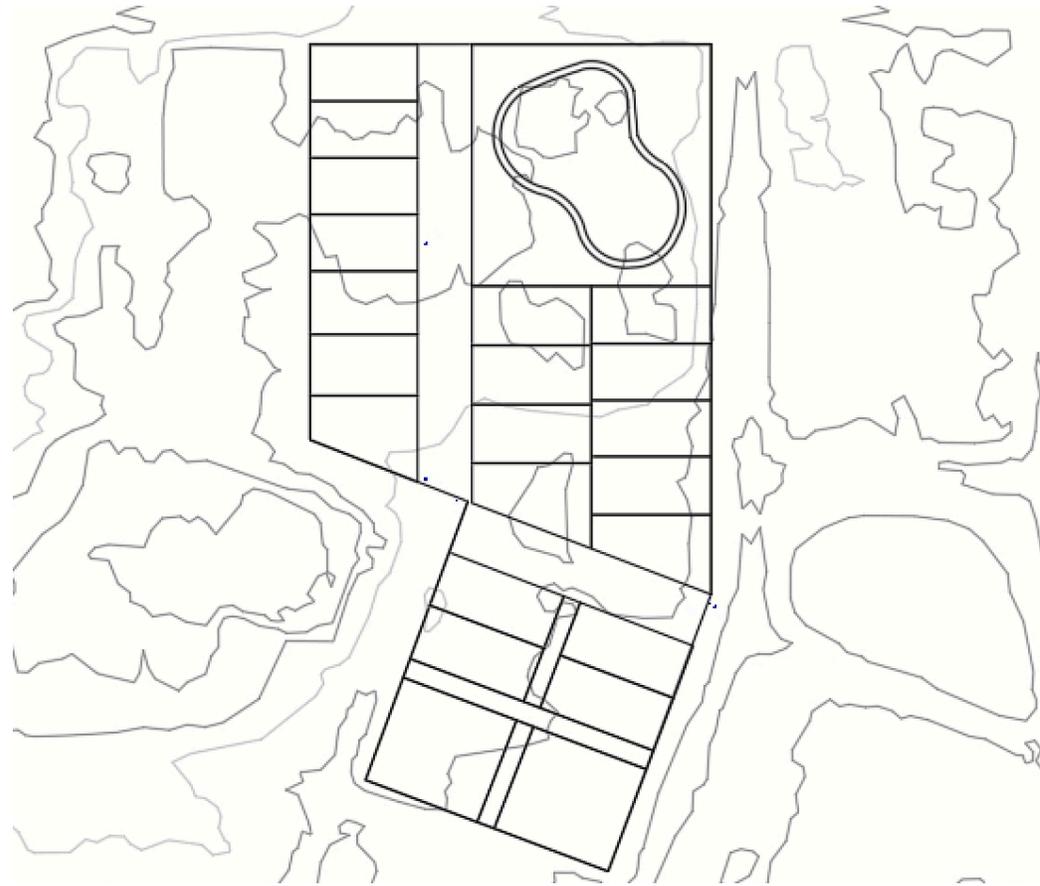


# Surface Flows

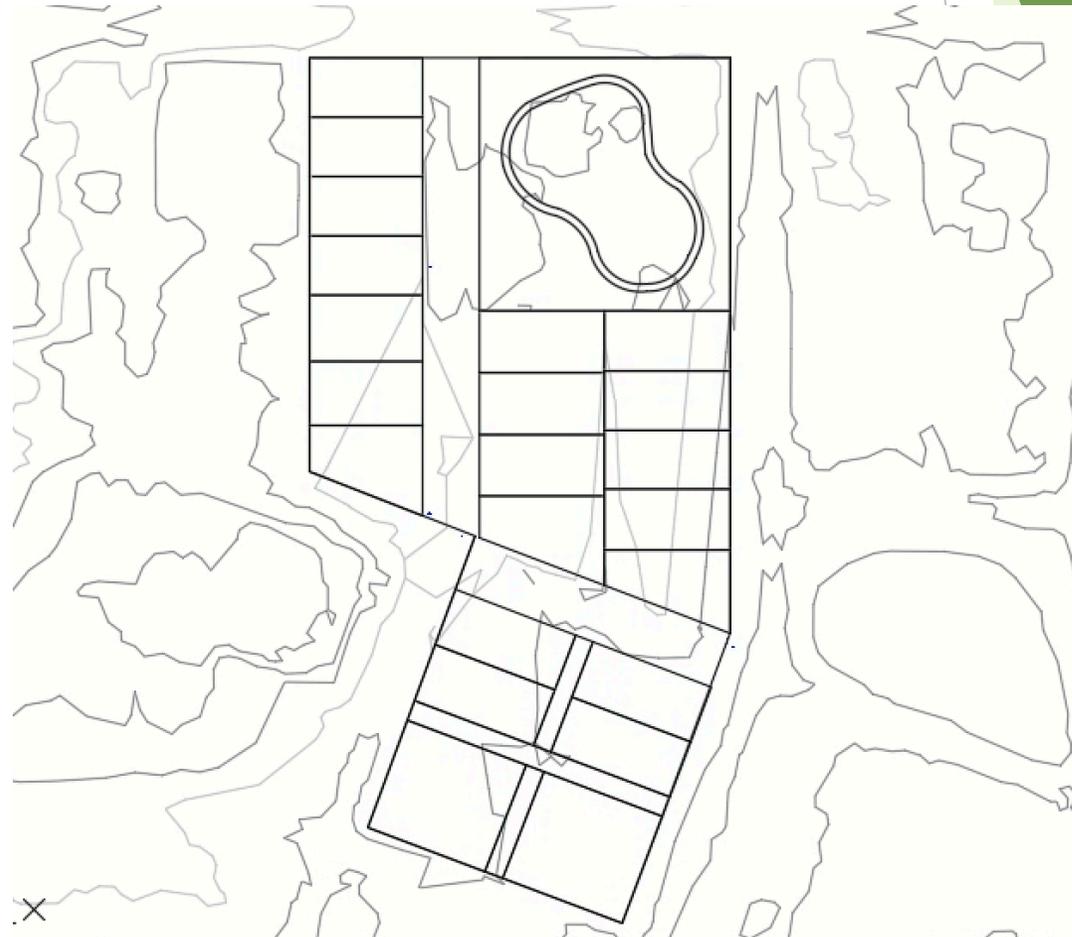


# Grading Plan

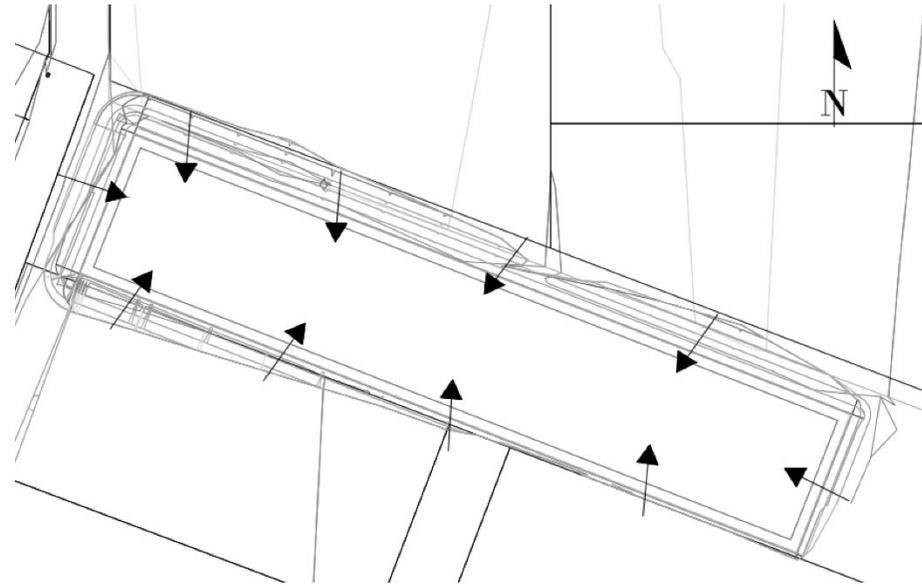
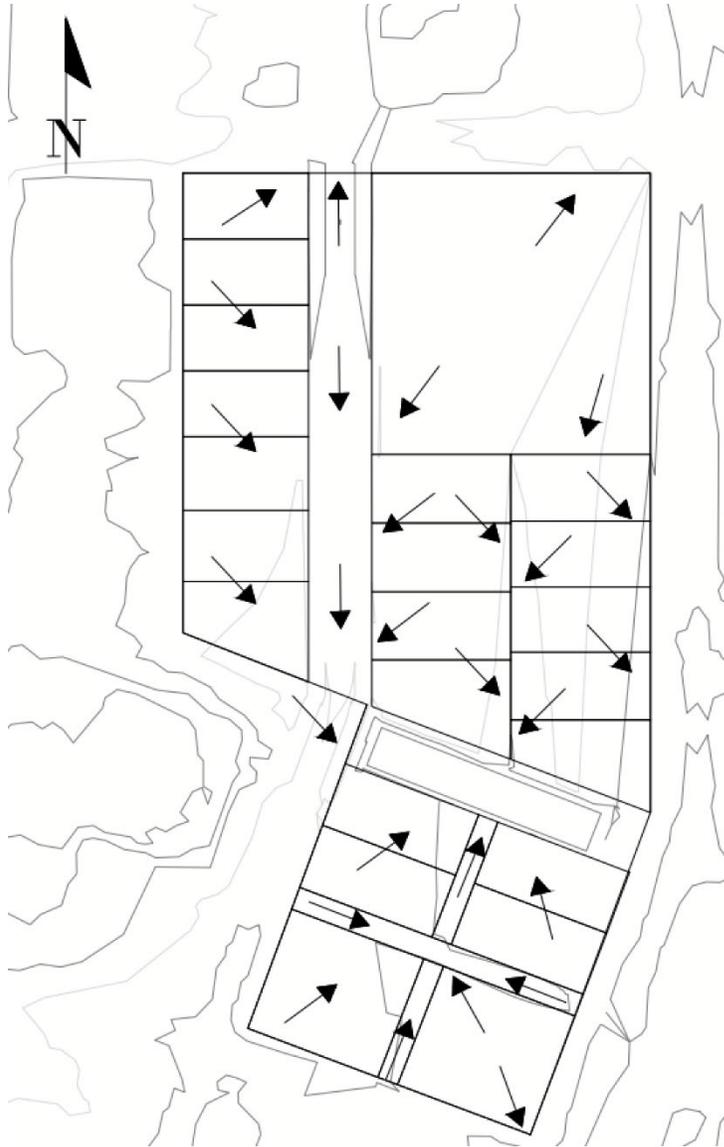
PROPOSED



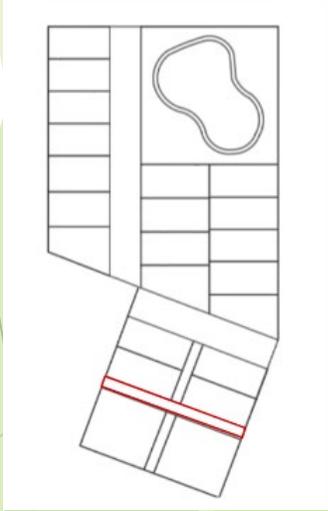
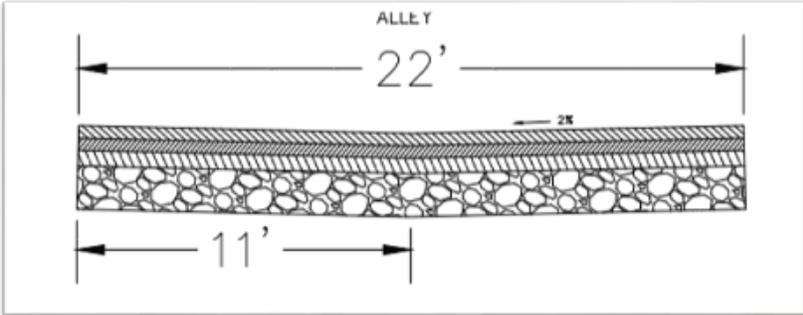
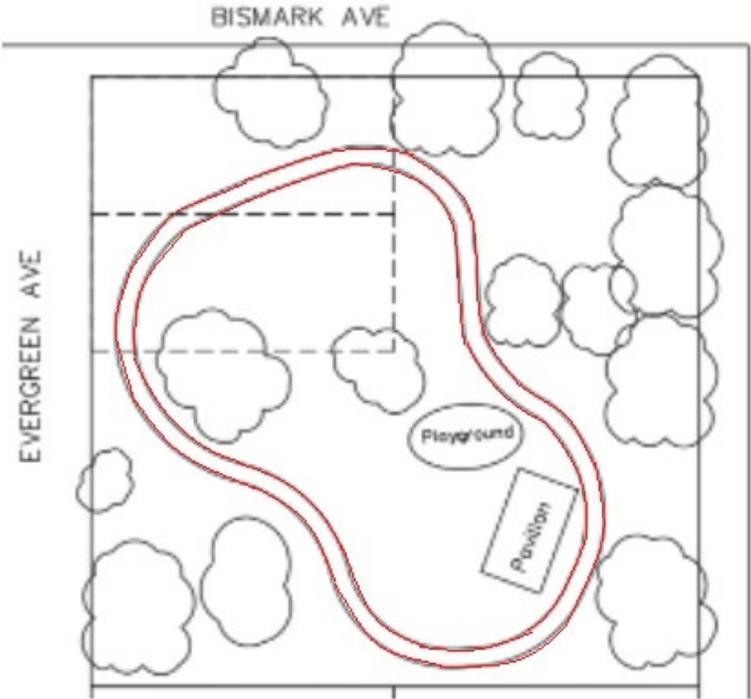
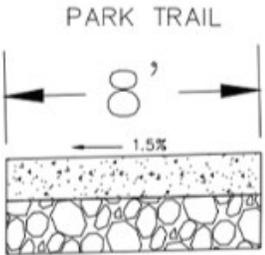
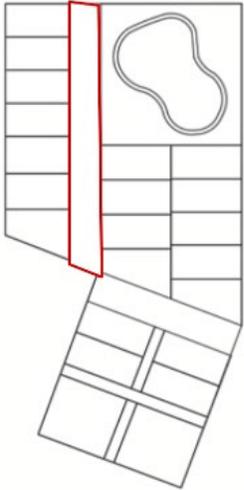
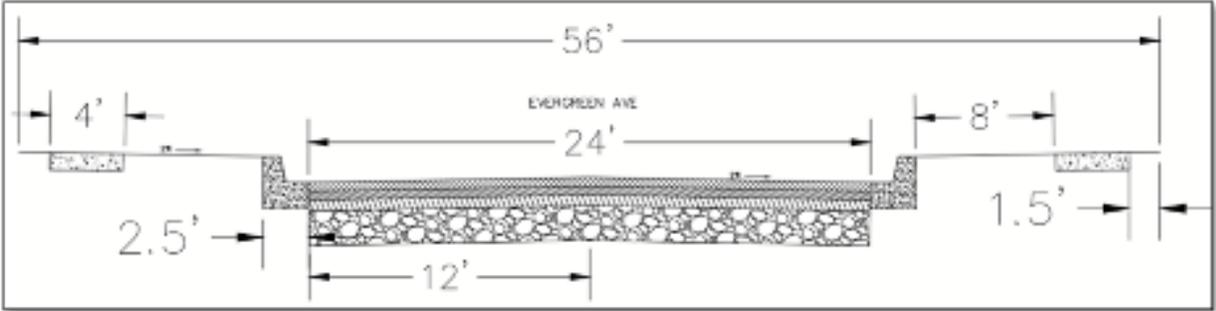
EXISTING



# Grading Plan with Surface Flow Routes

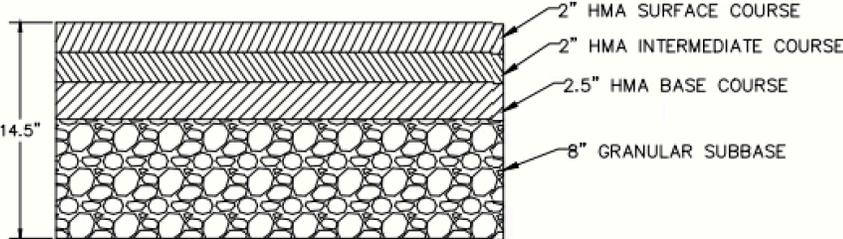


# Road and Pavement

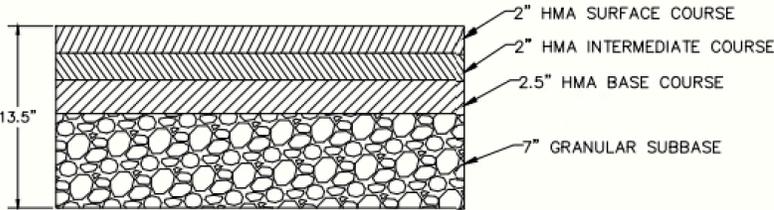


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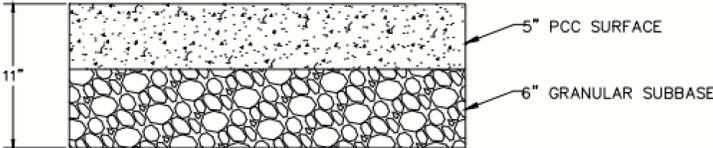
EVERGREEN AVE



ALLEY



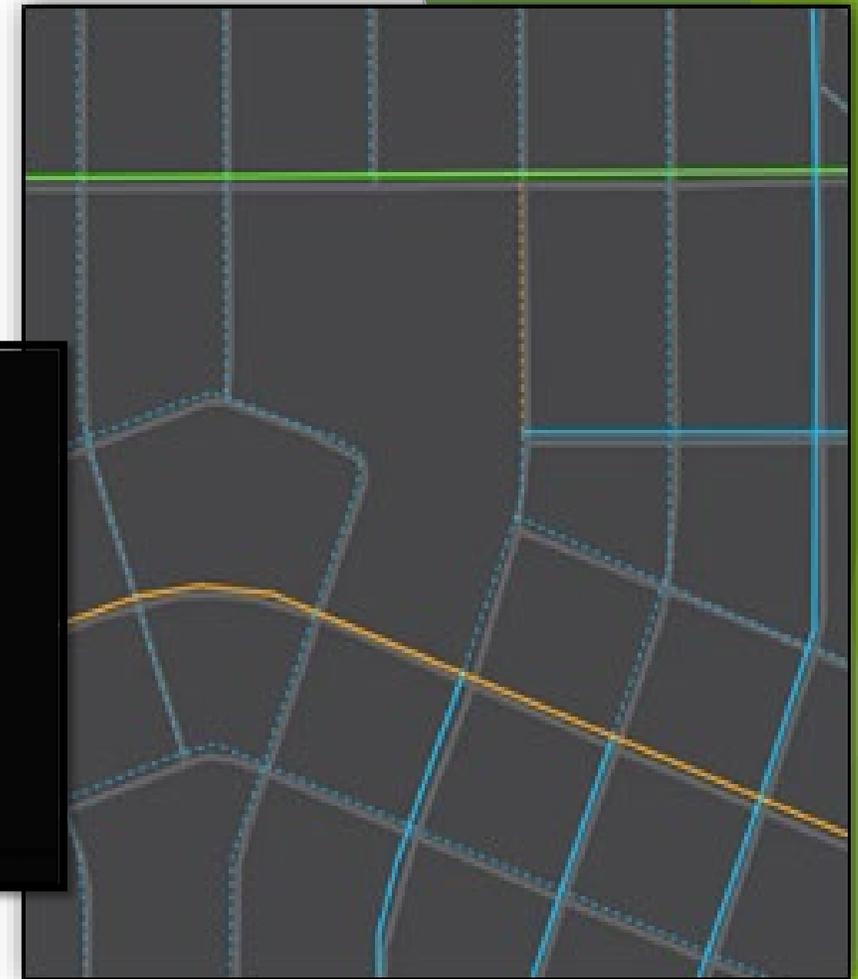
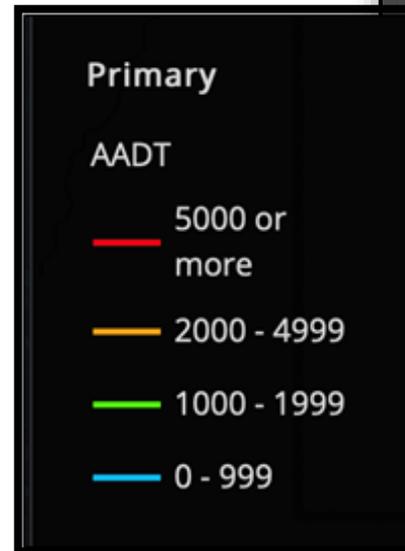
PARK TRAIL



# Traffic Control



-  Existing Stop Sign
-  Proposed Stop Sign
-  Proposed Yield Sign



Iowa Traffic Data	
Road	AADT
Bismark Ave	1120
Falls Ave	2330

# Intersection



ITEM NO	ITEM NAME	UNIT PRICE	UNIT	VALUE	PRICE
2102-2710070	CLASS 10 EXCAVATION	\$11.14	CY	7515.15	\$83,718.77
2105-8425015	TOP SOIL, STRIP, SALVAGE, SPREAD	\$6.12	CY	3757.58	\$22,996.36
2111-8174100	GRANULAR SUBBASE	\$6.00	SY	1934.42	\$11,606.52
2122-5500060	PAVED SHOULDER, HMA 6 IN	\$24.60	SY	144.89	\$3,564.27
2213-6745500	REMOVAL OF CURB	\$370.28	STA	1.73	\$640.58
2303-1031500	HMA BASE COURSE 1/2 IN	\$41.75	TON	66.32	\$2,768.86
2303-1032500	HMA INTERMEDIATE COURSE 1/2 IN	\$40.25	TON	66.32	\$2,669.38
2303-1033504	HMA SURFACE COURSE 1/2 IN	\$38.50	TON	66.32	\$2,553.32
2435-0130160	MAHOLE SANITARY SEWER 60 IN	\$125.00	EACH	3.00	\$375.00
2435-0250100	INTAKE, SW-501	\$4,000.00	EACH	2.00	\$8,000.00
2435-0600020	MANHOLE LID ADJUSTMENT	\$2,485.85	EACH	3.00	\$7,457.55
2435-0600120	INTAKE ADJUSTMENT	\$950.00	EACH	4.00	\$3,800.00
2435-0700020	CONNECTION TO EXISTING INTAKE	\$500.00	EACH	5.00	\$2,500.00
2502-8221006	SUBDRAIN RISER, 6 IN	\$142.00	EACH	1.00	\$142.00
2504-0114008	SANITARY SEWER TRENCHED, PVC PIPE 8 IN	\$67.79	LF	405.00	\$27,454.95
2504-0200404	SANITARY SEWER SERVICE STUB, PVC PIPE 4 IN	\$60.70	LF	60.00	\$3,642.00
2505-0112008	STORM SEWER PVC PIPE 8 IN	\$92.56	LF	60.00	\$5,553.60
2510-6745850	REMOVAL OF PAVEMENT	\$10.93	SY	1820.00	\$19,892.60
2511-0302500	REC TRAIL PCC 5 IN	\$48.49	SY	590.42	\$28,629.36
2512-1725256	CURB & GUTTER PCC 2.5 FT	\$47.30	LF	1181.00	\$55,861.30
2524-9275100	WOOD POSTS FOR TYPE A SIGN, 4 IN X 4 IN	\$15.00	LF	14.00	\$210.00
2524-9325150	INTSTALL TYPE A SIGN	\$45.00	EACH	2.00	\$90.00
2527-9263112	PAINTED PAVEMENT MARKINGS	\$22.81	STA	504.00	\$11,496.24
2554-0114006	WATER MAIN PVC PIPE 6 IN	\$60.27	LF	875.00	\$52,736.25
2554-0207006	GATE VALVE 6 IN	\$950.00	EACH	6.00	\$5,700.00
2554-0208006	TAPPING VALVE ASSEMBLY, 6 IN	\$3,000.00	EACH	4.00	\$12,000.00
2554-0210201	FIRE HYDRANT ASSEMBLY, WM-201	\$3,500.00	EACH	1.00	\$3,500.00
2554-0212030	VALVE ADJUSTMENT	\$110.00	EACH	1.00	\$110.00
2601-2636015	HEXPAVE GRASS PAVING SYSTEM	\$199.00	EACH	1.00	\$199.00
2601-2636041	SEEDING AND FERTILIZING	\$3,500.00	ACRE	0.46	\$1,610.00
2602-0010010	MOBILIZATION, EROSION CONTROL	\$500.00	EACH	5.00	\$2,500.00
2610-0000120	TREE REMOVAL	\$1,050.00	EACH	1.00	\$1,050.00
	20% CONTINGENCIES FEE	\$77,005.58	EACH	1.00	\$77,005.58
				TOTAL	\$385,028

**Total Estimated  
Construction Cost:  
\$385,028**



## GOALS

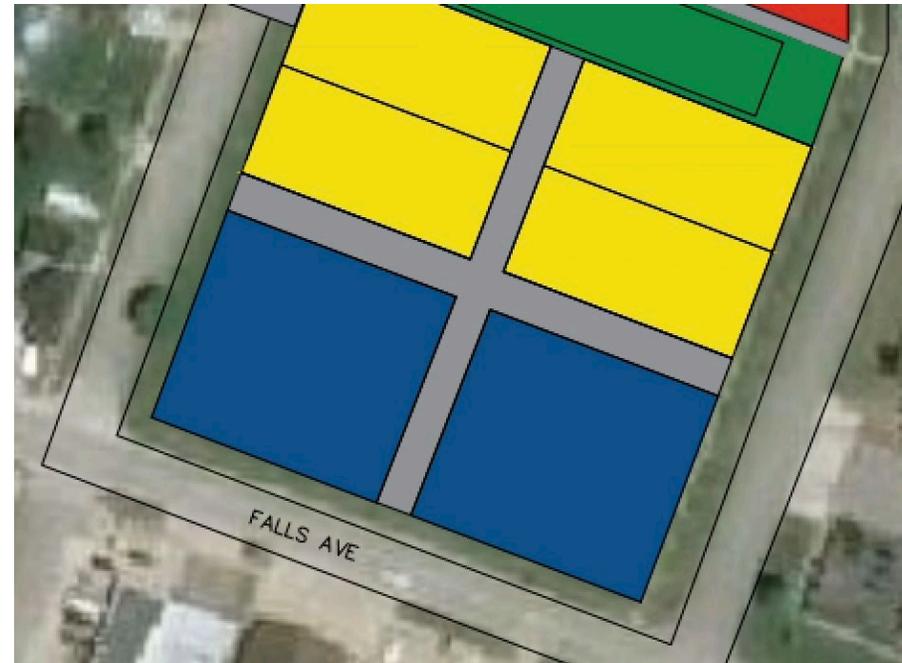
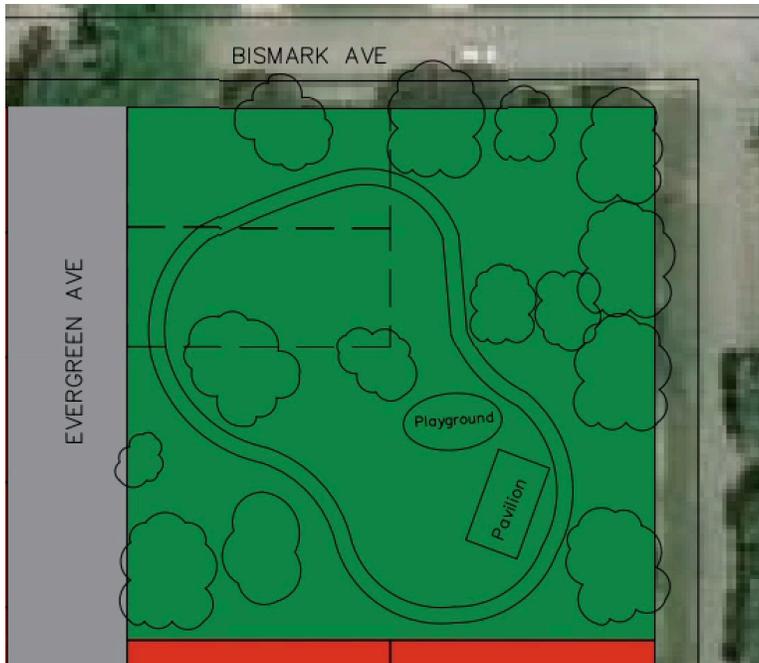
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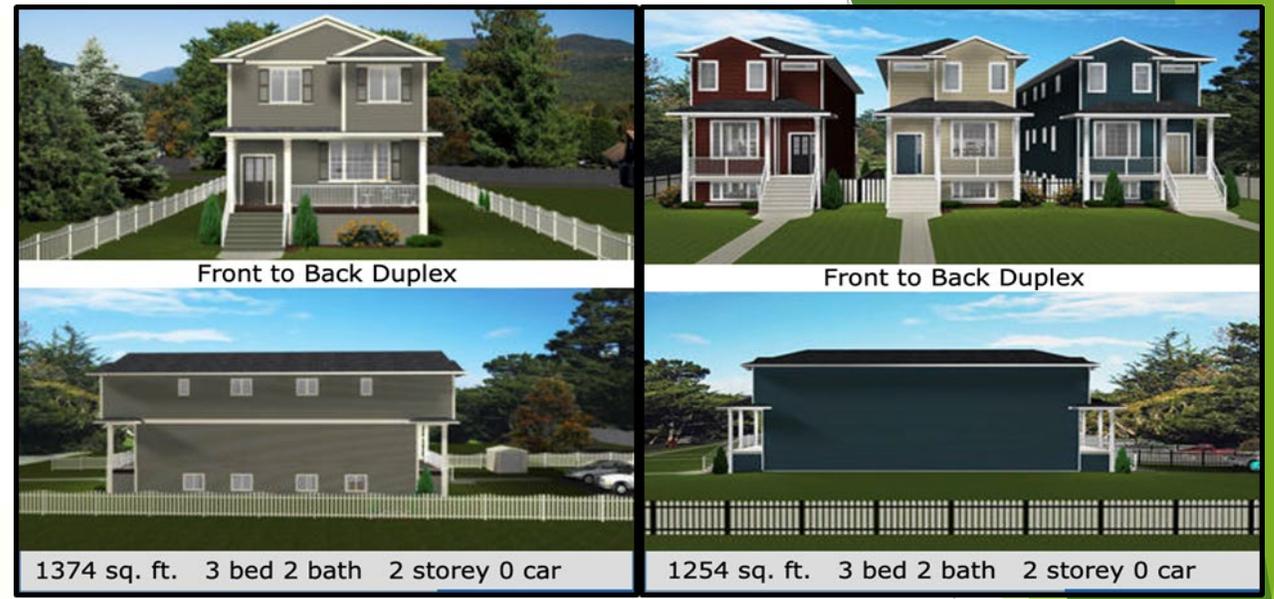
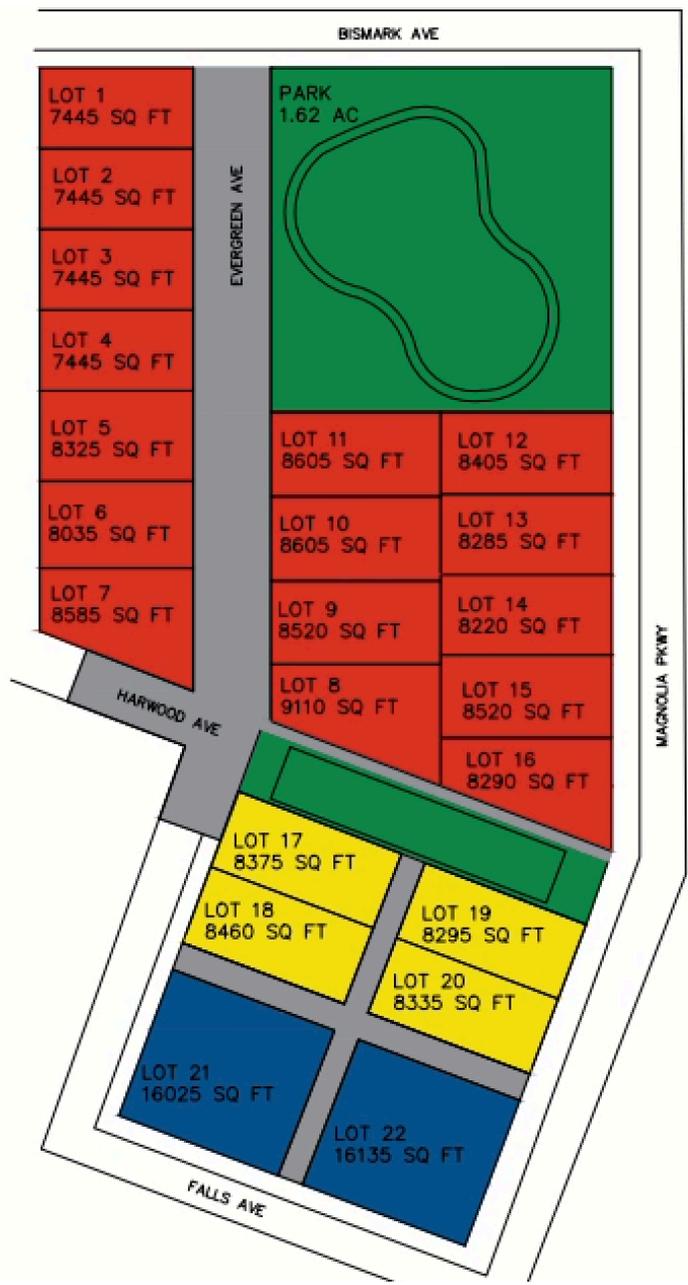




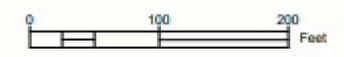
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