

CITY OF SAGINAW

CENTRAL FIRE STATION SCHEMATIC DESIGN

OCTOBER 6, 2020





O1

OPERATIONAL NEEDS



NEW CENTRAL FIRE STATION & ADMINISTRATION

- 5 APPARATUS BAYS
- 9 BEDROOMS
- ADMINISTRATION
- TRAINING ROOM [50]
- EMERGENCY OPERATIONS CENTER [6]



Saginaw Central Fire Station

Preliminary Building Space Program

July 22, 2020

PROGRAM NEED	FLOOR AREA (square feet)	FLOOR AREA (PGAL)	OCC LOAD	ADDITIONAL NOTES	SPECIAL REQUIREMENTS / NOTES
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	Watch Room / Report Writing	120	247	0.8	Staff mailboxes	# workspaces: <u>3</u> Adjacent to Lobby / Bay (Preferable) Direct access to Bay required? Y / N
	Captain's Office / Sleeping	300		2.0		Separate office and dormitory
	Batalion Chief's Office	200		1.3		Between two dormitories
	Dormitory / Sleeping Rooms	950	840	19.0	3' wide wardrobe lockers	# of Beds: <u>9</u> ([5] single-bed dorms) ([2] two-bed dorms) Study Desks: Y / N Captain Bed: Y / N Lockers in each area: Y / N Storage underneath beds

Spaces	Decontamination Room	0	170		Combined with Extractor Room	Deep sink with shelf above
	Hazardous Storage	100		0.3		Hazmat storage &/or palette of absorbents storage
	Stair	160		0.5		To mechanical/storage mezzanine
	Mechanical Room / Mezzanine	820	750	2.7		Air Conditioning air handlers (for stations using split systems, usually on mezzanine)
	Electrical (Main)	150	0	0.5		ATS, Main Boards
	Fire / Domestic Risers	0	60			Alcove within bay
	Hose Storage	0				Mount on apparatus bay walls & exterior rack

SUB-TOTAL	15,795	13,872	86
Sub-Total Net SF	21,625	18,632	
Subtotal of Gross SF (15% of NET SF)	3,244		205
TOTAL FLOOR AREA (Square Feet)	24,869	25,088	



BEST PRACTICES | DAYLIGHT IN APP BAY



BEST PRACTICES | OPEN LIVING SPACES







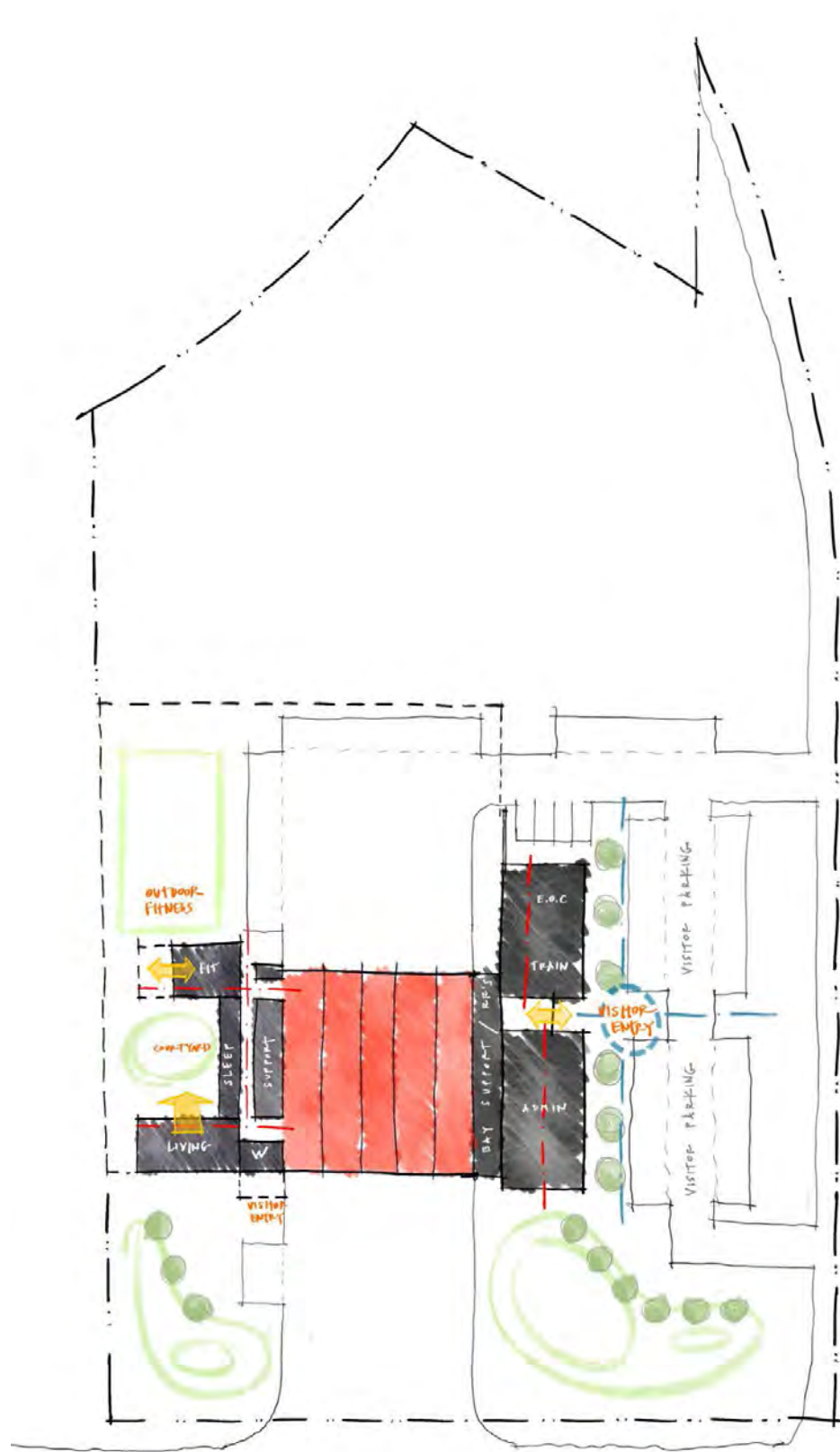
BEST PRACTICES | PRIVATE COURTYARD

O2

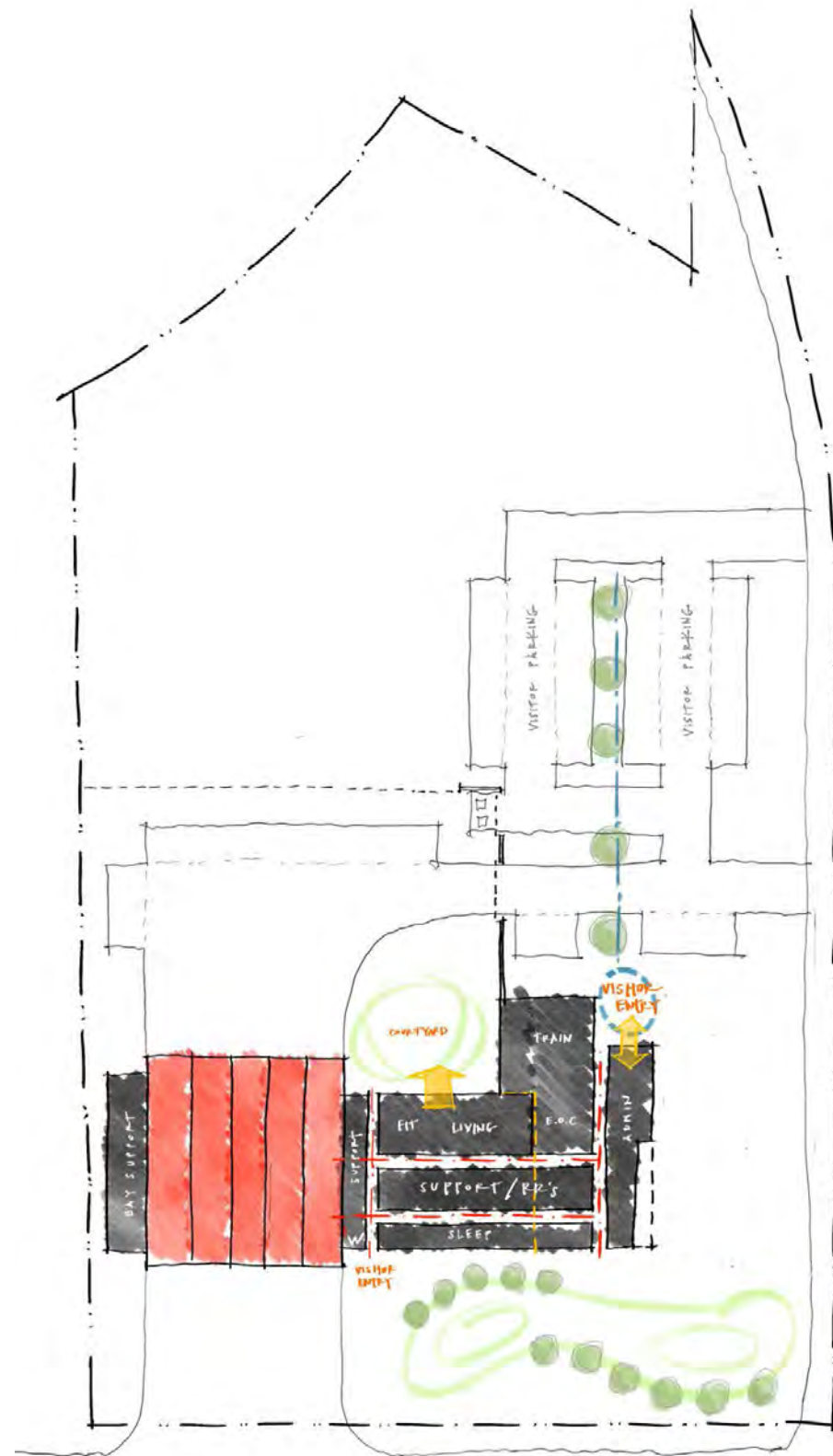
PLANNING



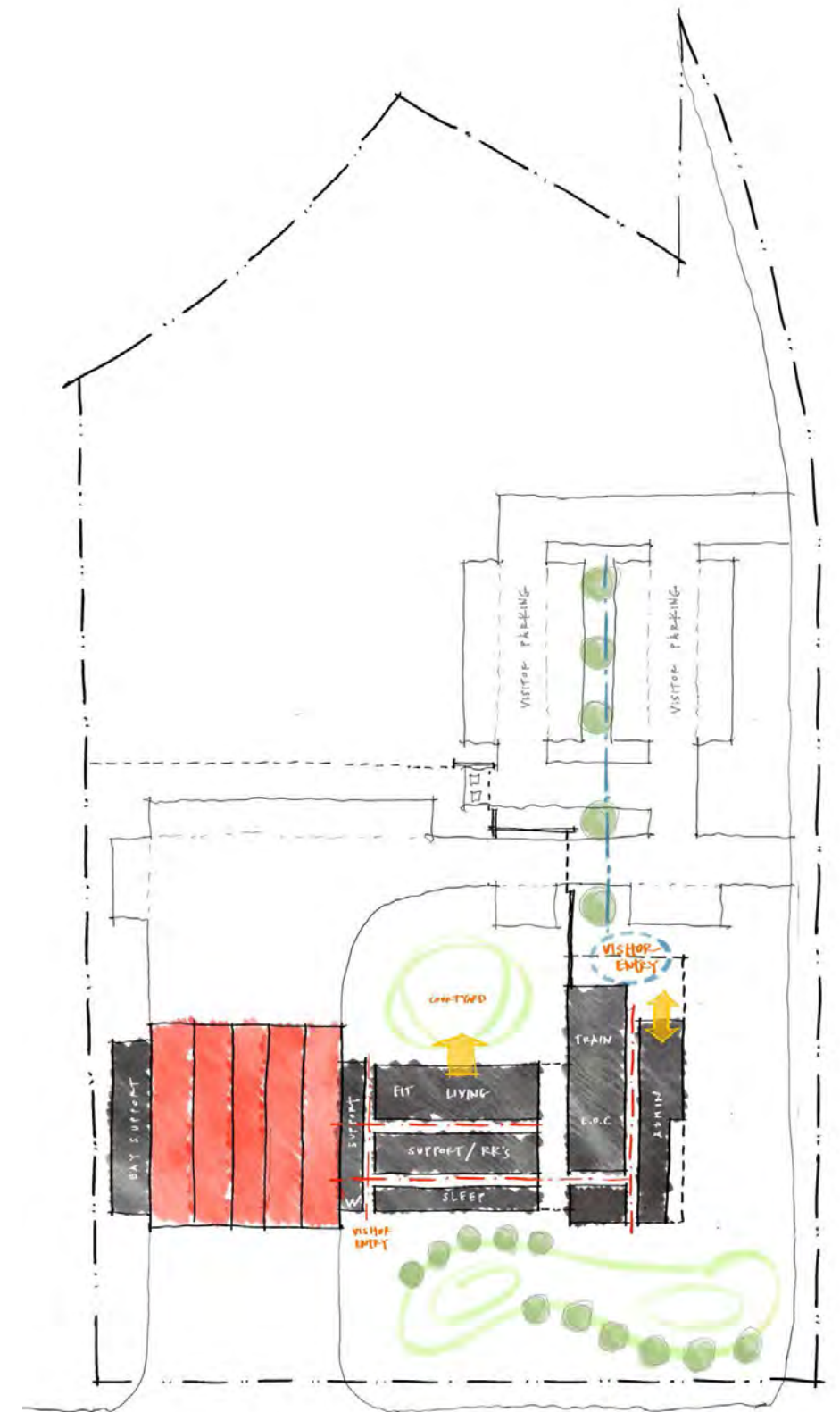
SITE | EXISTING CONDITIONS



OPTION A



OPTION B



OPTION C

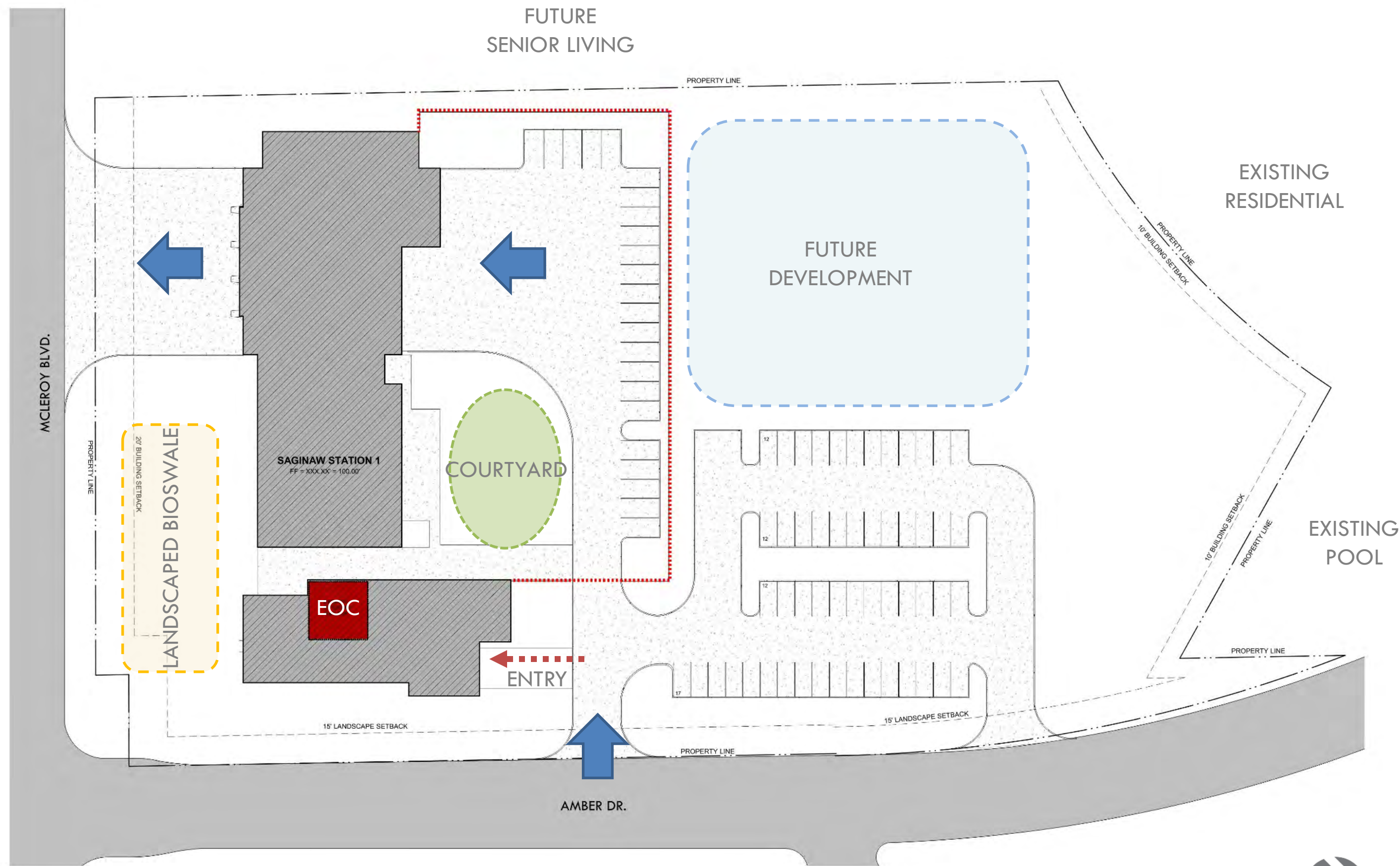


SITE | OPTION A



SITE | OPTION B



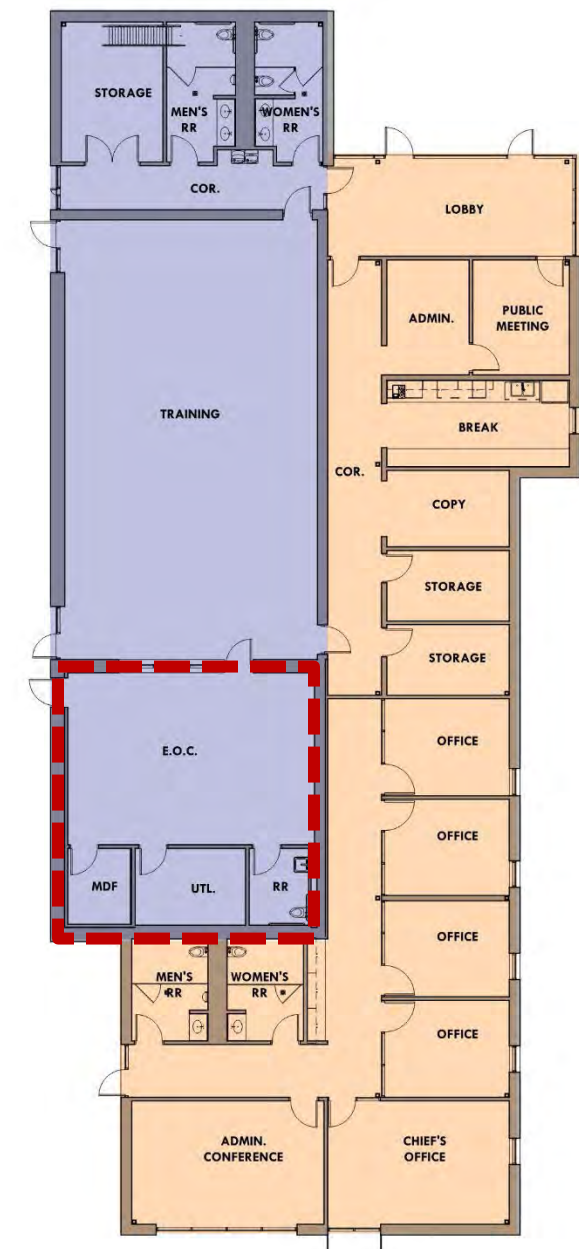




APPARATUS BAYS

LIVING QUARTERS

TRAINING/EOC



ADMINISTRATION



O3

CONTEXT



CONTEXT | RECREATION CENTER

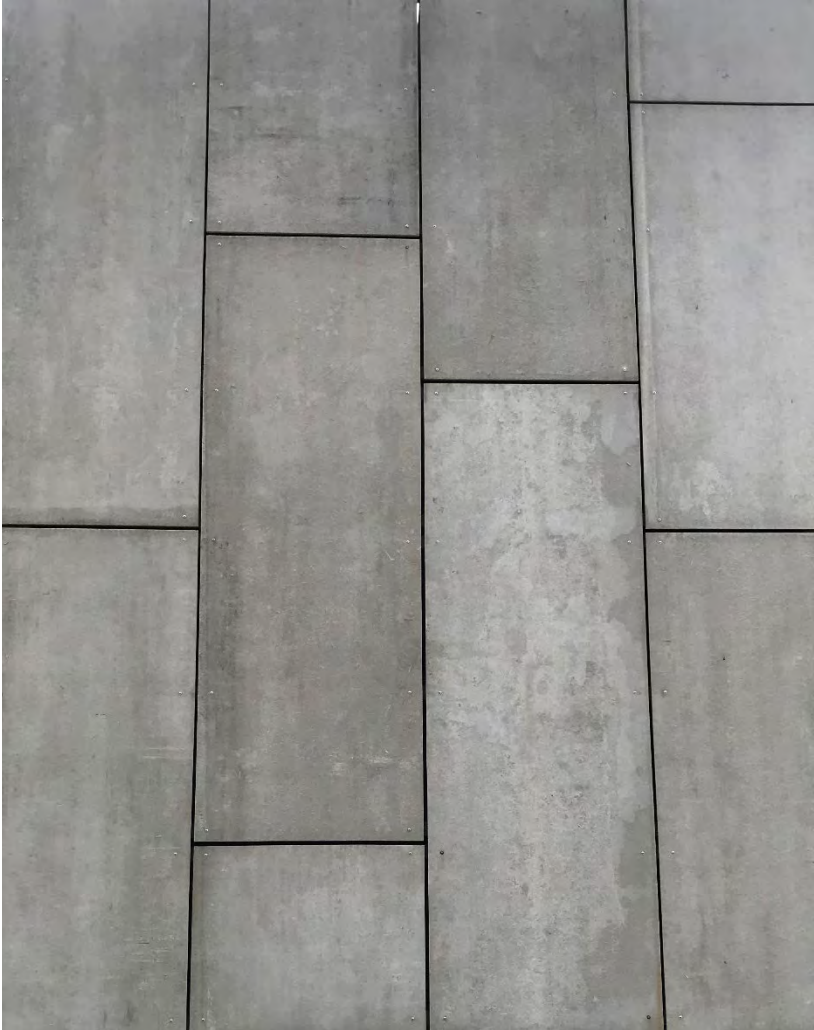


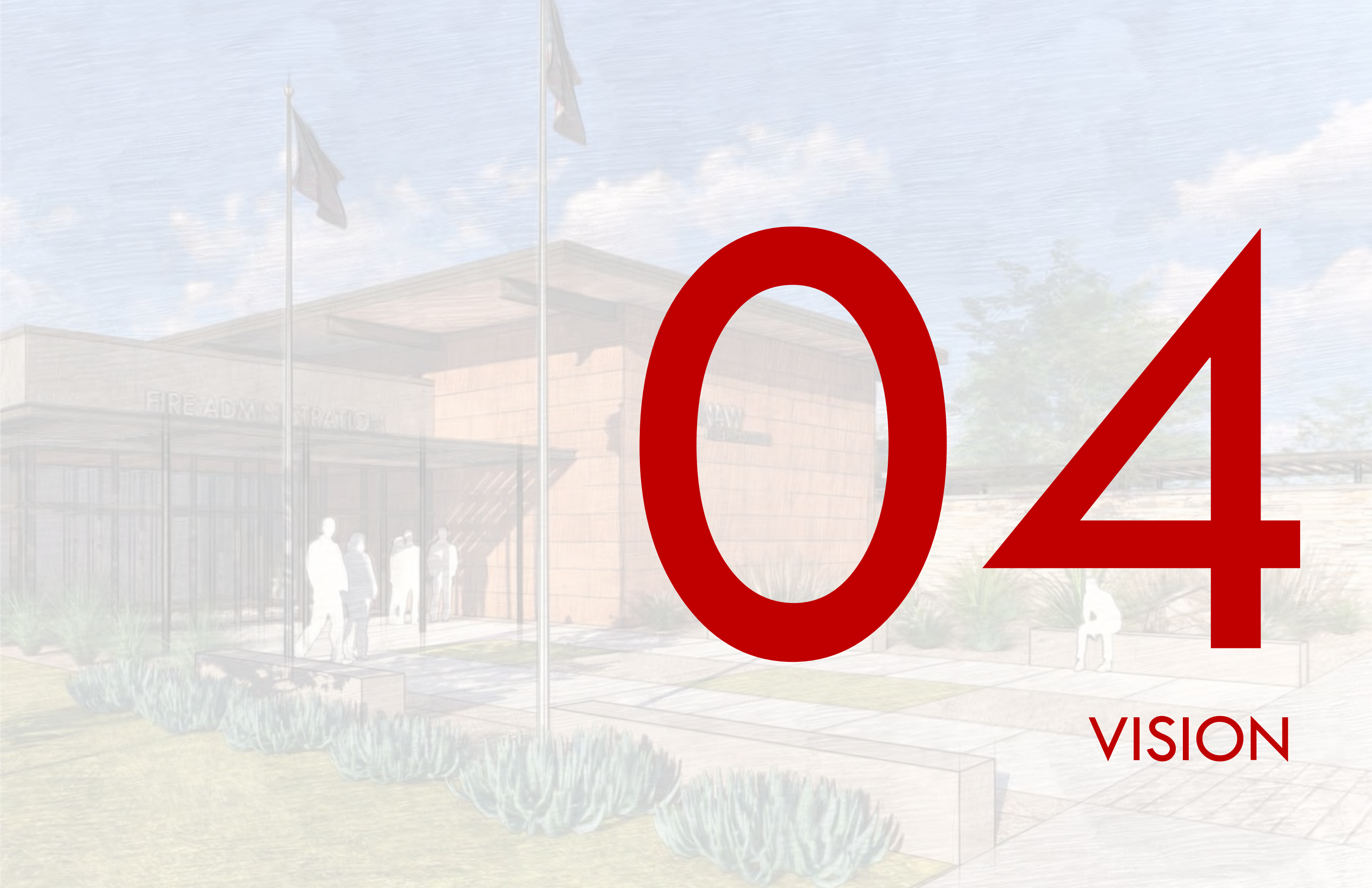
CONTEXT | CITY HALL



CONTEXT | WILLOW CREEK ES

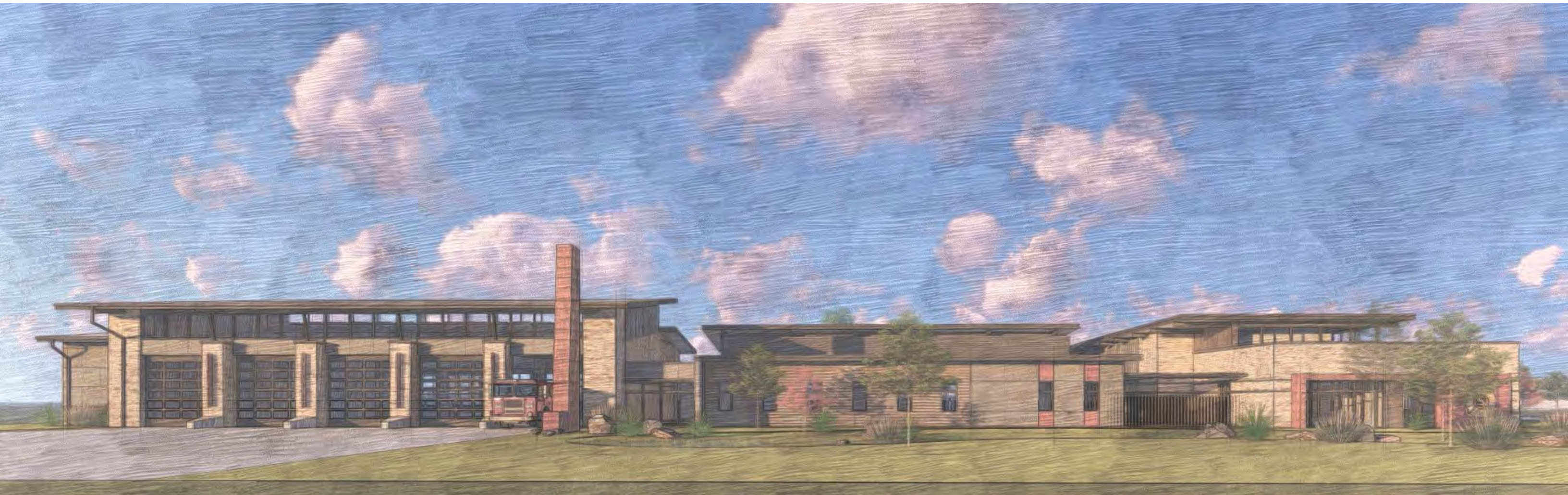






VISION







VISION | ENTRY PLAZA





05

BUDGET + SCHEDULE



WHY ARE FIRE STATIONS RELATIVELY EXPENSIVE BUILDINGS?

STRUCTURAL SYSTEMS

- Expansive Soils | Structured Slabs
- Heavy Loads | Apparatus
- Critical Facility | Survivability
- Higher Importance Factor
(mandated safety margins)

REGULATORY

- Increasingly Stringent Codes
- ICC-500 Storm Shelters
- NFPA Standards for Fire Stations
- Energy Codes



WHY ARE FIRE STATIONS RELATIVELY EXPENSIVE BUILDINGS?

OTHER FACTORS

- Energy Use Intensive + Backup Generator
- Heavy Duty Paving
- Inherently Complex Design | Requirements
- Semi-Commercial Kitchen
- Special Systems
- 50+ Year Quality Finishes



WHY ARE FIRE STATIONS RELATIVELY EXPENSIVE BUILDINGS?

CONSTRUCTION MARKET

- 8%-10% Annual Construction Cost Escalation in 2019 but flattening in 2020. 2021 unknown...
- Material Availability | Shortages
- Material Costs | Tariffs
- Bid Procurement



VALUE ENGINEERING ITEMS

- REPLACE STANDING SEAM METAL ROOF W/TPO
- REPLACE TONGUE & GROOVE CEDAR SOFFITS W/METAL SOFFIT PANELS
- PROVIDE CUSTOM CANOPIES ILO PREMANUFACTURED
- REPLACE POLISHED CONCRETE IN APP. BAY. W/SEALED CONCRETE
- PROVIDE 3 TOTAL SECURITY GRILLES ILO 8 TOTAL
- POTENTIAL “ADD ALTERNATES”
- **CONTINUAL PROCESS OF VALUE-BASED DECISIONS**



PROJECT SCHEDULE

- DESIGN START: JUNE 23, 2020
- DESIGN FINISH: MARCH 1, 2021
- CONSTRUCTION START: JUNE 2021
- CONSTRUCTION FINISH: AUGUST 2022



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BROWN REYNOLDS WATFORD
ARCHITECTS

