



Cascade Charter Township

5920 Tahoe Dr, Grand Rapids Michigan 49546

Date: April 20, 2021
To: Treasurer Ken Peirce (Chair)
Trustee John Shipley (Vice Chair)
Trustee Timmy Noordhoek
From: Ben Swayze, Township Manager
Adam Magers, Fire Chief

Subject: Public Safety Advisory Committee Meeting Agenda – April 21, 2021 (9:00a)

The Public Safety Advisory Committee is to meet in the Township Hall Large Conference Room of the Township Office to discuss the following:

1. **Approval of the March 17, 2021 Meeting Minutes** – The Committee is responsible for approving the previous meeting notes

Recommended Action – Approve Minutes

2. **Fire Station #1 Development Process** – At the March 24 Township Board meeting the request was made of the PSAC Committee to make a recommendation to the Township Board on a process for to be used moving the Fire Station #1 project forward. Attached you will find a document put together by Chief Magers detailing the work that has been completed up to this point, as well as the presentation that was made to the Board in March. Chief Magers and myself will be able to answer any questions the committee may have.

Recommended Action – Recommendation to the Township Board regarding the process for Fire Station #1 project

CASCADE CHARTER TOWNSHIP
PUBLIC SAFETY ADVISORY COMMITTEE MEETING
March 17, 2021 at 9:00am
Training Conference Room at Township Hall
5920 Tahoe SE, Grand Rapids, MI 49546

Members Present: Treasurer Peirce, Trustee Shipley, Trustee Noordhoek

Others Present: Township Manager (TM) Ben Swayze, Fire Chief Adam Magers

Call to Order: Treasurer Peirce called the meeting to order at 9:00 a.m.

Business: The Public Safety Advisory Committee discussed the following items:

1. Approval of the February 18, 2021 Meeting Minutes

TM Swayze explained that per the committee policy, the committee is responsible for approving the minutes of the previous meeting.

Motion by Trustee Shipley, supported by Trustee Noordhoek to approve the minutes as presented. Motion carried.

2. PSAC Committee/Board Visit to Portage Fire Station #2

TM Swayze explained that Trustee Noordhoek has requested that we look into a possible visit to Portage Fire Station #2, which was highlighted during the Fire Station #1 presentation at the last Township Board meeting. Chief Magers reviewed the conversation he had with the Portage Chief regarding possible visits.

Discussion ensued. The general consensus was that the entire Board will be invited to the Portage Station walk through. Chief will follow up with the committee after the meeting to confirm the visit day/time.

No action, discussion only

3. Fire Station #1 Design/Bid/Build Process

TM Swayze and Chief explained that at the March 10 Township Board meeting the Township Board reviewed the presentation on Station #1 and approved a design/build contract with Progressive AE for the Fire Station #2 outbuilding. In order to move the Fire Station #1 project forward we will need to determine the process to be used (Design/Bid vs. Design/Build) and the process to be used for the procurement of those services. Discussion ensued. TM Swayze reviewed the different processes that could be considered.

The committee discussed the pros and cons of the different processes and agreed a design/bid process would be the best fit for this project. Discussion ensued on whether the design Chief

Magers indicated he has been happy with Progressive AE/Redstone thus far. The committee requested staff engage Progressive AE/Redstone for a design/bid proposal.

No action, staff direction only.

Adjournment: Motion by Trustee Noordhoek, supported by Treasurer Peirce to adjourn the meeting. Motion carried. Meeting adjourned at 9:28 am

DRAFT

CASCADE TOWNSHIP  FIRE DEPARTMENT

Dedicated to Serving You

PSAC Meeting

4-21-21

Station 1 Timeline Review

Committee Members,

Given the current state of the Fire Station project, I think it might be helpful to provide a timeline of the process to date.

2018

January: Analysis and review of previous facility/fire service studies in 1999 and 2000. Develop and implement mutual aid plan to improve deficiencies.

May: Township Board approval of Space Needs/Facilities Study

June: Fire Dept. identifies internal station design team. Begins internal analysis/needs study.

August: Progressive A&E meets with Fire Station Design Team to begin joint study/analysis.

October: PSAC review/input of facility study progress

November: Public presentation/input session of facilities study. (Wisner)

2019

January: Progressive A&E public presentation/input session of phase I analysis.

February: Fire Station Design Team collaborates with Coldwater Fire Chief on Kramer report/analysis process.

March: PSAC meeting considering geographic response considerations.

April: Chief Magers/Manager Swayze begin joint analysis on all potential station locations.

Township Board presentation by Progressive A&E on Facility Study.

May: Township Board and Planning Commission hold joint meeting to discuss project priorities.

Chief Magers/Manager Swayze tour Meridian Township Fire Station (Recent Build)

June: Manager Swayze/Fire Station Design Team tours Spring Lake Fire Station (Recent Build)

July: Fire Dept. continues call mapping/NFPA 1710 response documentation.

July: PSAC meeting reviewing Progressive A&E facilities study, phase II. PSAC direction to Progressive is to retain an architect with public safety building design expertise.

September: Township Board approval for Fire Station Study as recommended by PSAC.

October: Communications Director Fast puts out information campaign for public dissemination on station progress.

November: Progressive A&E finalizes RFPs for architect bids.

December: Public Engagement session. Proposal review.

2020

January: PSAC chooses Redstone Architects MI, from three qualified bids. Others were Pacheco Ross NY, and CR Architects OH.

Fire Station Design Team tours Spring Lake Fire Station a 2nd time.

February: Township Board approval of Redstone/Progressive study.

March: Kickoff of 16-week fire station concept/design study.

April: Design study phase II

May: Design study phase III

June: Design study phase IV

July: Station locations narrowed to final three.

August: Fire Station Design Team/Redstone/Progressive finalize design/concept

September: Progressive/Redstone present final study/recommendation

November: Manager Swayze/Chief Magers/Supervisor Lesperance meet to review project.

2020 North American Station design study analyzed/compared.

December: Public information campaign rollout.

2021

January: Public input session.

February: Public input analysis/review.

PSAC recommendation to the board.

March: Township Board final presentation. Voted to proceed with station 2 building, tabled fire station.

Board Members tour Portage Fire Station.

- Other stations analyzed/toured, or Chiefs interviewed since 2018:
 - Kentwood, Caledonia, Alto, Ada, Walker, Wyoming, City of GR, GR Twp, Plainfield, Lowell, Dutton, Dexter, Highland, Monroe, Battle Creek PD.

Thank you for your time on this. Please let me know if there is anything I can do to facilitate this process going forward. I look forward to seeing you at the meeting!



Chief Magers



Fire Station 1

**FACILITIES STUDY AND NEW FACILITY STUDY
MARCH 10, 2021**

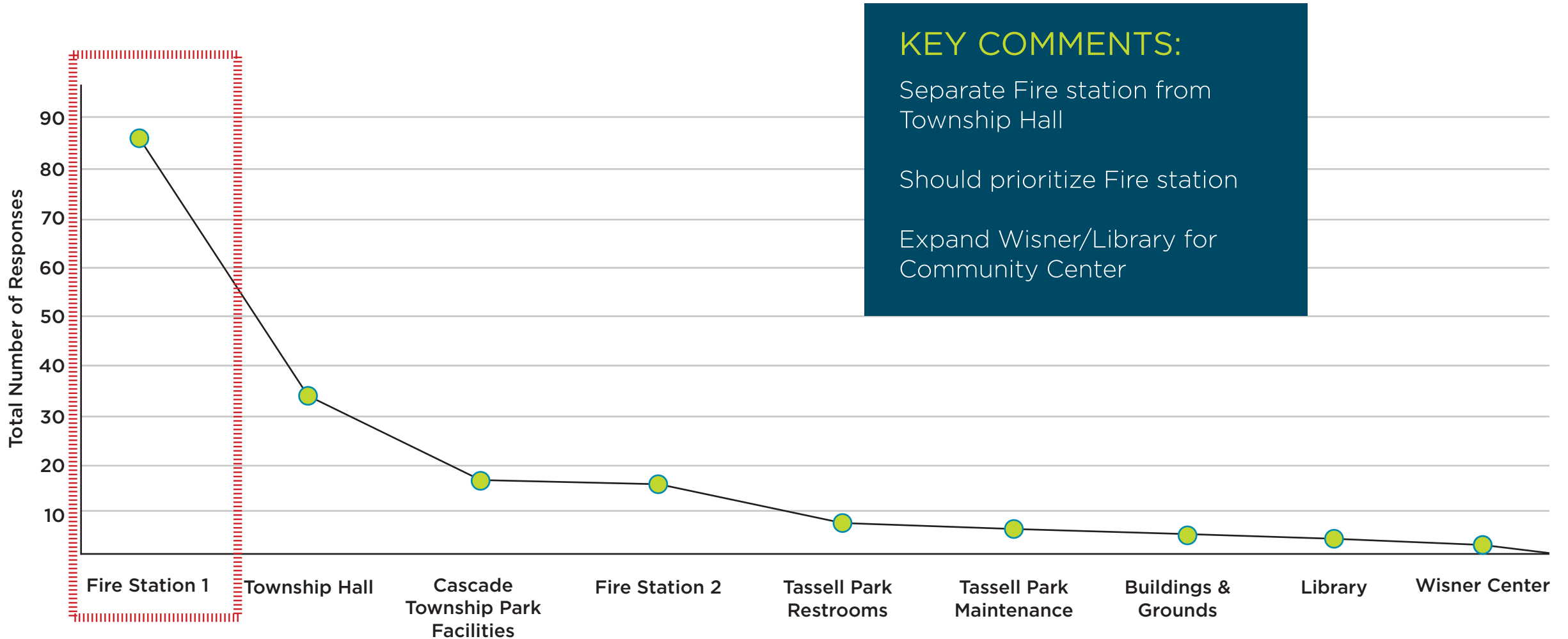
MEETING **AGENDA**

- Facilities Study (2019)
- Township Growth Curve
- Facilities Assessments and Prioritization
- Site Selection Process, Operation Ramifications
- Design Process
- Temporary Operations Plan
- Financial Considerations
- Project(s) Schedule
- Comparative Station Projects
- Presentation completed in January 2021
- Public Input
- Recommendations

FACILITIES STUDY

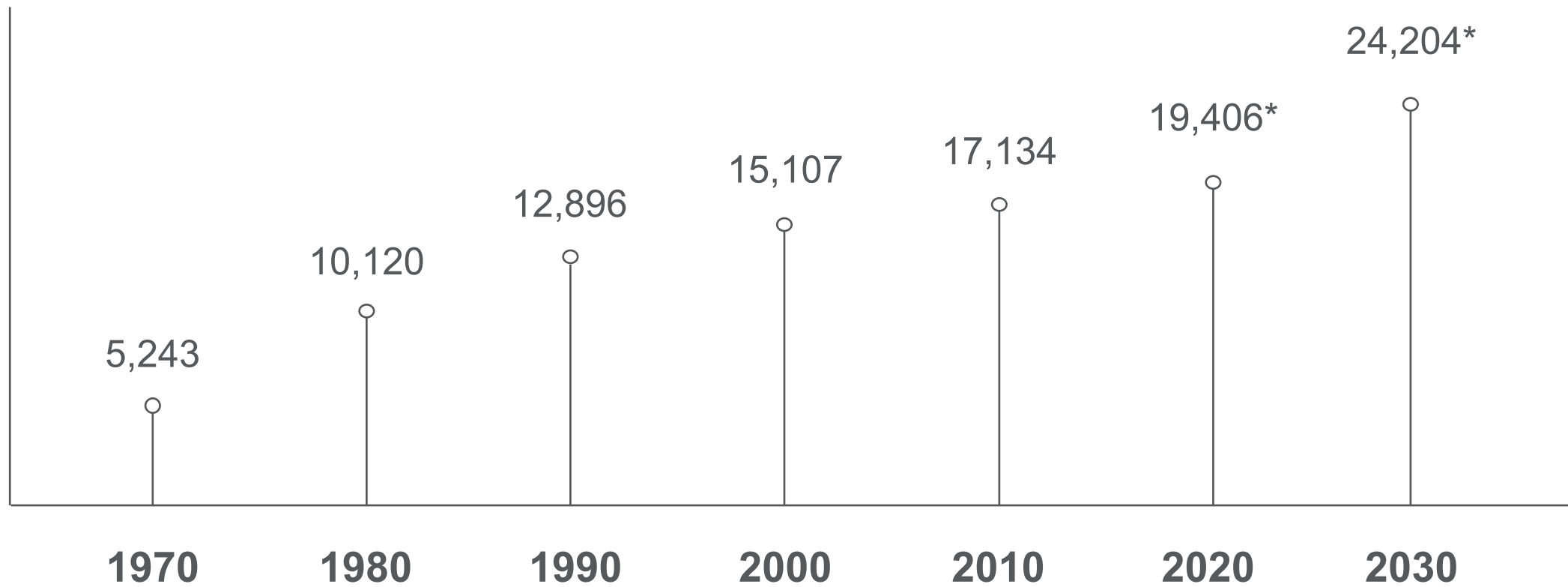
COMMUNITY ENGAGEMENT

Where should priority be placed?



TOWNSHIP GROWTH

CASCADE TOWNSHIP POPULATION GROWTH



* Based on estimates from the West Michigan Regional Planning Commission

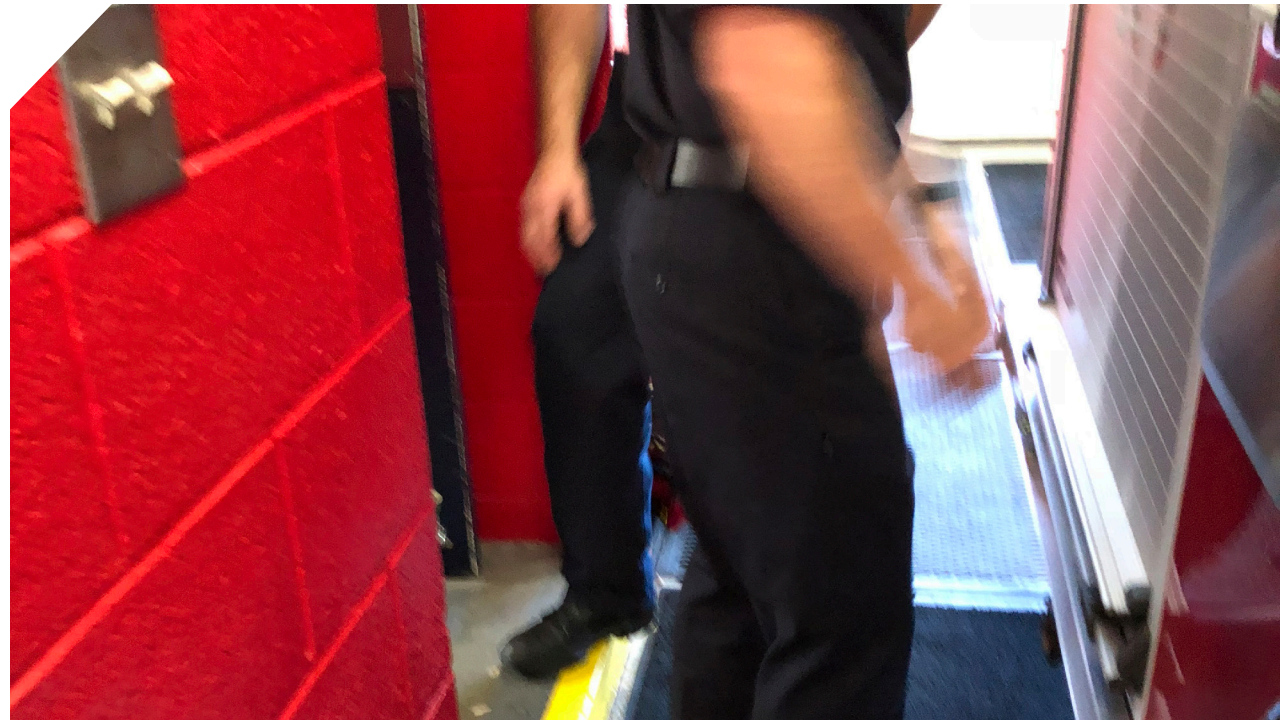
FACILITY STUDIES AND PRIORITIZATION

FIRE STATION 1

This building is old, needs significant repair, and doesn't function well for the fire department.

- Positioning behind township hall on the site poses safety concerns in emergencies.
- Lack of visibility and separation at entry are security risks.
- Apparatus bays are too small and don't comply with current requirements.
- Mechanical systems are not operating adequately and efficiently.
- Interior spaces and circulation are tight for fire fighters to move quickly and safely when preparing for emergency.
- Staff living quarters are undersized and don't provide for gender separation.
- Undersized living quarters limit the firefighter's ability to navigate safely in emergencies.

OVERALL CONDITION:





Based on the results of the investigation, observation, interviews, and community input gathered in this study, Progressive AE has developed the following recommended priorities for future investment in the township:

1 FIRE STATION **1**

2 TOWNSHIP **HALL**

3 ENHANCED EMERGENCY **COVERAGE**

4 TOWNSHIP **CENTER**

These are listed in order of importance with replacement of Fire Station 1 being our highest priority.

1 FIRE STATION 1

Fire Station 1 needs additional building area to provide a safe environment and meet National Fire Protection Association standards.

- The department has outgrown a facility that currently does not meet all building codes.
- A safe separation does not exist between the visitor entry and the internal operational area of the fire station.
- Vehicular and pedestrian traffic on the site creates conflict and is unsafe.
- Staff living quarters are undersized and do not allow for separation between genders and adequate circulation during emergencies.
- Vehicle apparatus bays are too low for trucks and cannot accommodate all equipment. This requires extra time to keep outdoor vehicles clear and ready for emergency response.
- Mechanical systems and building envelope are not adequate.



1 FIRE STATION 1

COVID-19 has further highlighted station deficiencies.

- Tight quarters for required 24/7 team, requiring some to work remotely to comply with CDC requirements
- Limited showers, wash areas for decontamination, which often means a wait
- No washer/dryer for contaminated uniforms, turnout gear, or bedding
- No sanitation or decontamination area for used medical equipment
- Common bunkroom without adequate space for required physical distancing
- Combined Gym/TV room also without adequate space for physical distancing



1 FIRE STATION 1

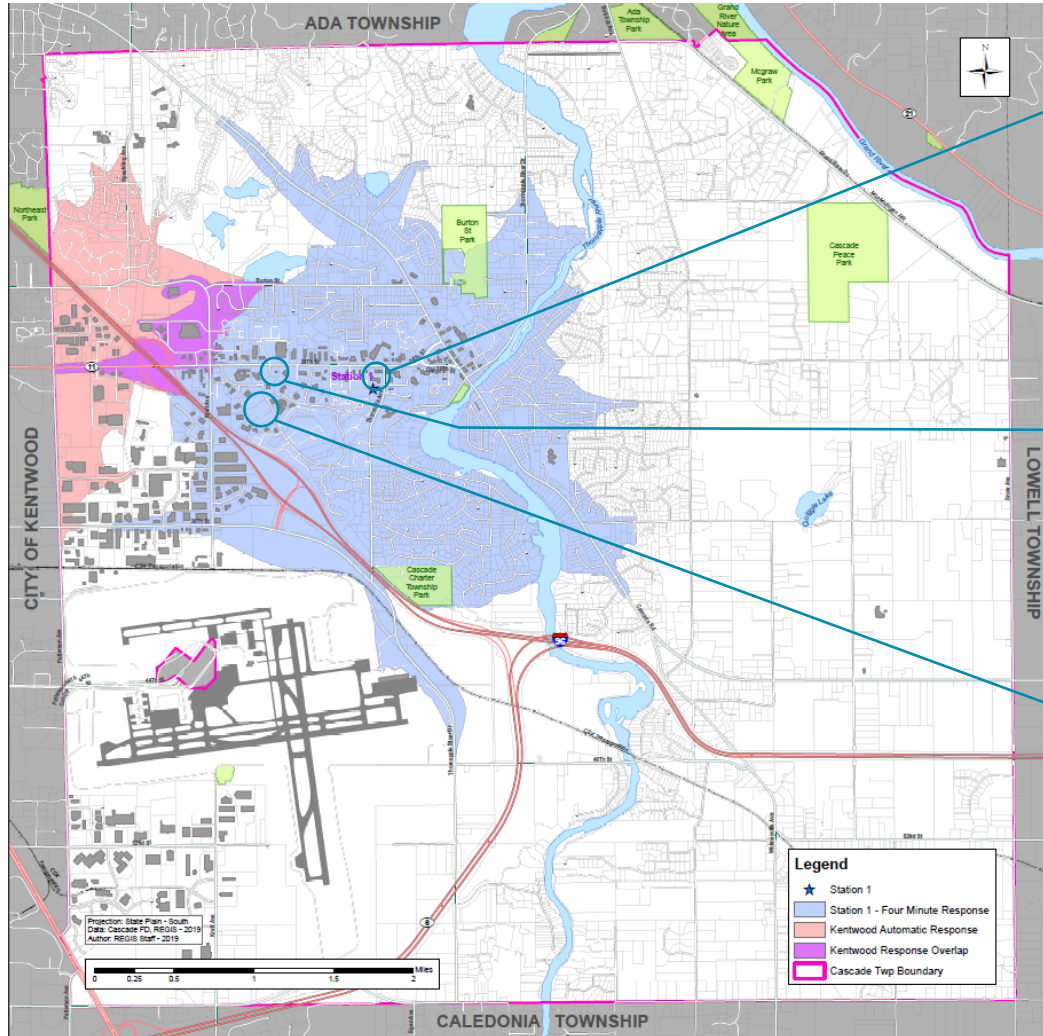
Fire Station 1 needs additional building area to provide a safe environment.

- A. Relocate the connected township hall to allow the fire station to expand.
 - + Makes use of township property for emergency services.
 - Location is not as visible or directly accessible from major roadways.
- B. Identify an alternate location for the station between I-96 and the Thornapple River.
 - Reduces coverage area from current
 - Decreases visibility and access



SITE SELECTION PROCESS,
AND OPERATION
RAMIFICATIONS

TOWNSHIP SERVICE AREA



THORNHILLS AVENUE PROPERTY

CHARLEVOIX DRIVE
& 28TH PROPERTY

CHARLEVOIX DRIVE
& ORCHARD VISTA
PROPERTY

OUTLINE MAP - CHARLEVOIX DRIVE & ORCHARD VISTA

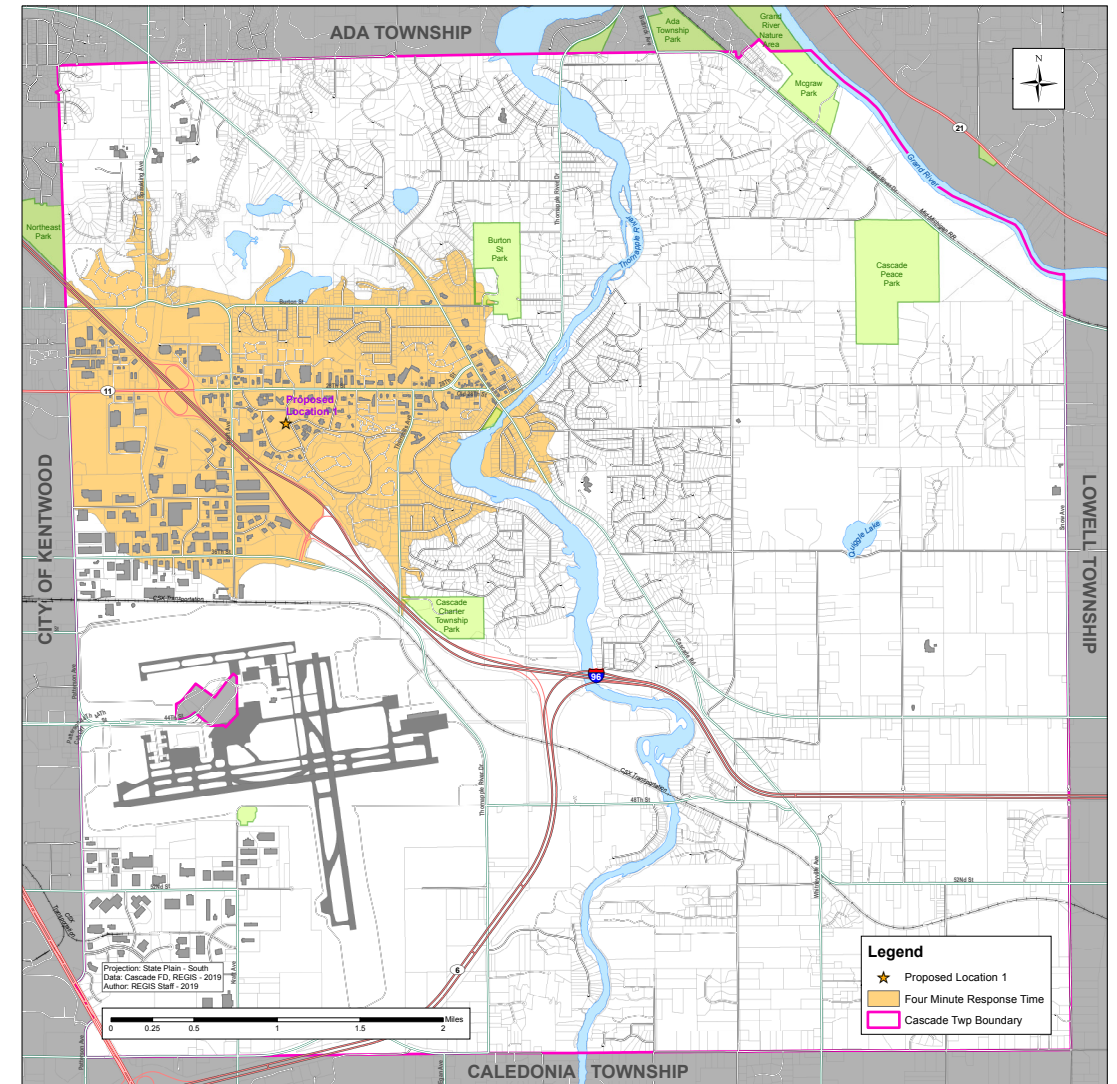
Proposed Location 1: Charlevoix Drive & Orchard Vista

Pros:

- Available with plenty of acreage
- Adds primary coverage to more commercial and industrial areas
- No need for temporary coverage during construction

Cons:

- High acquisition cost
- Delays response time due to location on a boulevard with a residential speed limit
- Delays response and support for Fire Station 2 area
- Delays response and support for area south of the airport
- Violates National Fire Protection Agency code/standard 1710, which specifies requirements for effective and efficient fire suppression/emergency operations to the public and protects firefighting staff
- Negates four-minute response time to several critical neighborhoods



OUTLINE MAP - CHARLEVOIX DRIVE & 28TH STREET

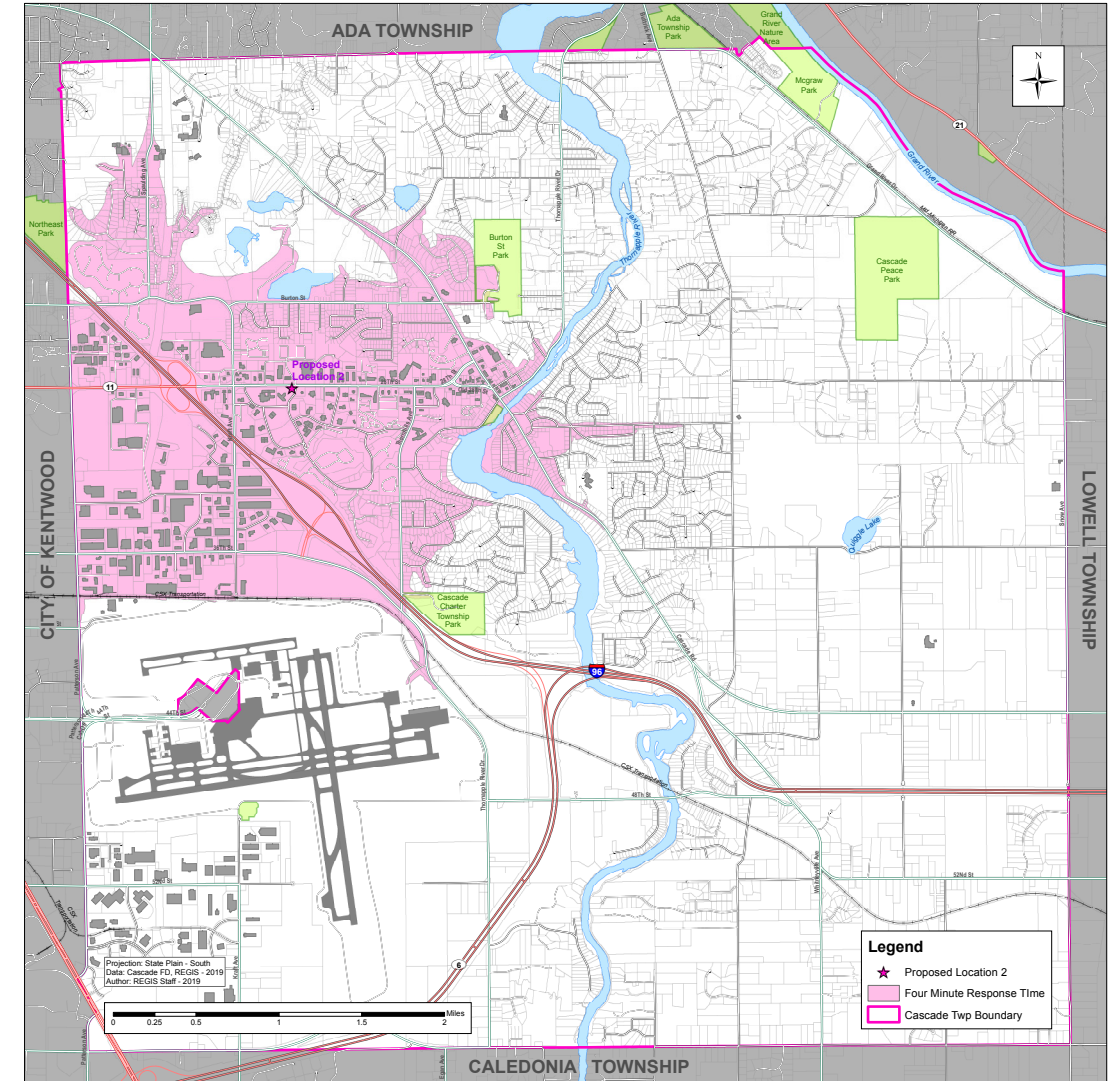
Proposed Location 2: Charlevoix Drive & 28th Street

Pros:

- Good public visibility
- Adds primary coverage to more commercial and industrial areas
- No need for temporary coverage during construction

Cons:

- Parcel is less than two acres (three is ideal)
- High acquisition cost
- Creates traffic and accessibility issues to 28th Street
- Delays response and support for area south of airport
- Violates National Fire Protection Agency code/standard 1710, which specifies requirements for effective and efficient fire suppression/emergency operations to the public and protects firefighting staff



OUTLINE MAP - THORNHILLS AVENUE

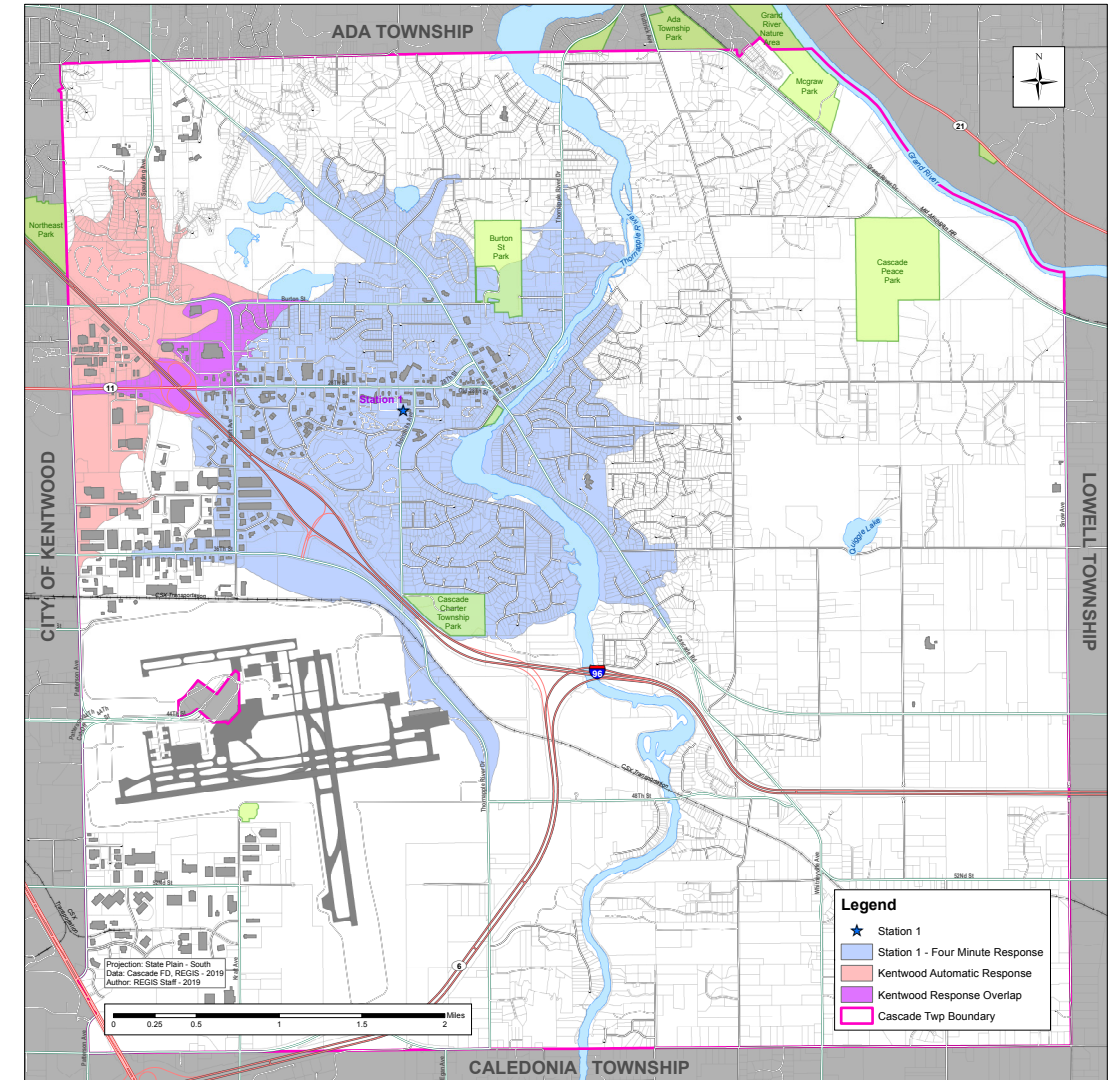
Proposed Location 3: 2865 Thornhills Ave.

Pros:

- Easy access to north/south/east/west response routes
- Ideal three-acre lot
- Maximizes automatic aid from the Kentwood Fire Department
- Township-owned and already zoned for a fire station
- Adequate coverage for both commercial and residential properties
- Suitable location to accommodate Township growth
- Eliminates relocation expenses

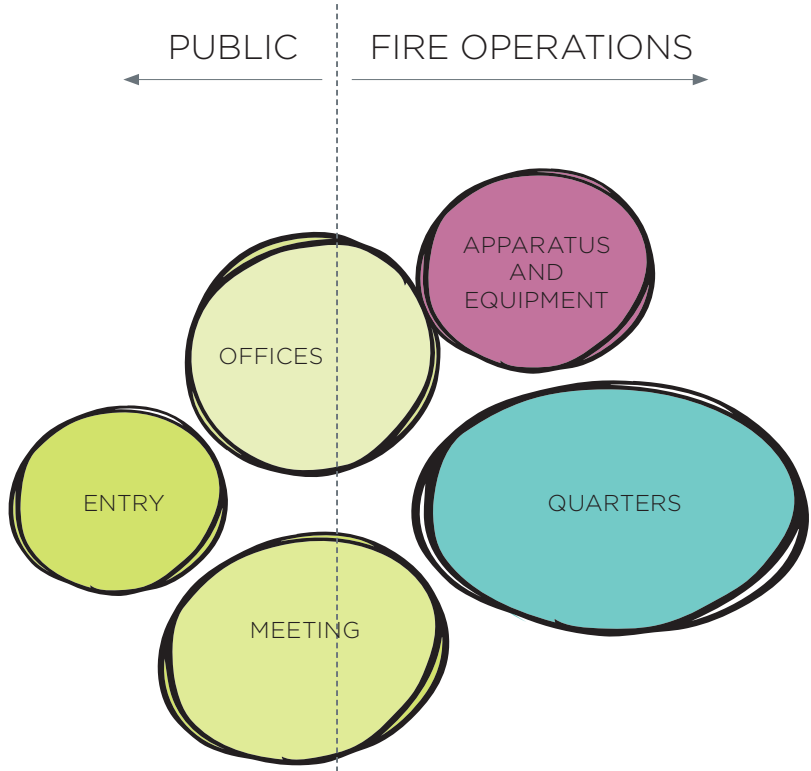
Cons:

- Requires demolition of existing station, which means Station 1 would move to a temporary location
- Reliance on mutual aid to cover southwest commercial and industrial areas



DESIGN PROCESS AND CONSIDERATIONS

PROJECT SPACE REQUIREMENTS



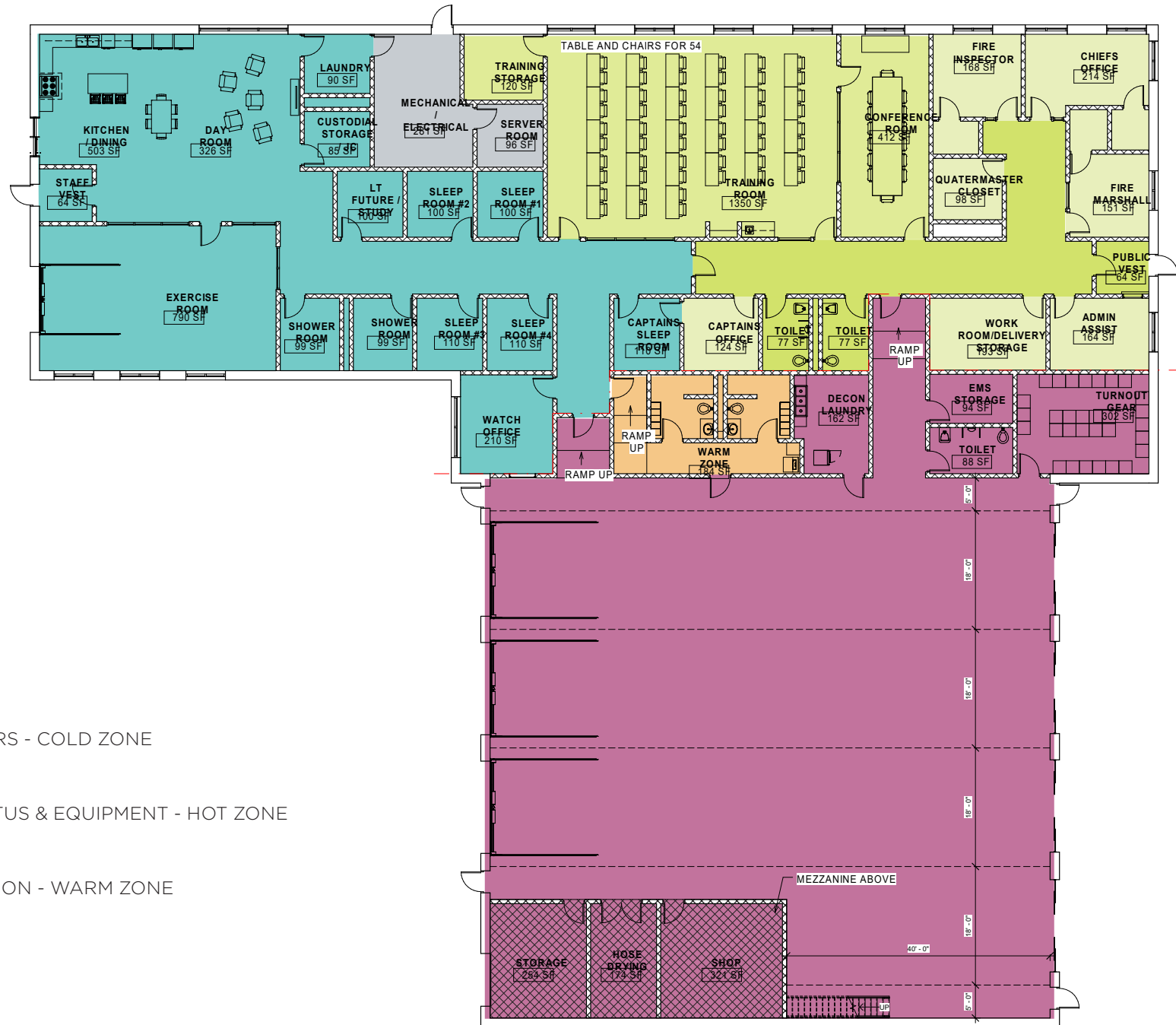
ADJACENCY DIAGRAM
Adjacency Diagrams use scaled bubbles to illustrate scale and relationships between spaces. Spaces that are touching have a critical relationship. The diagram does not indicate a floor plan.

Redstone Architects, Inc.
 Public Safety Consultant

Fire Station
 Space Needs Assessment- March 2020

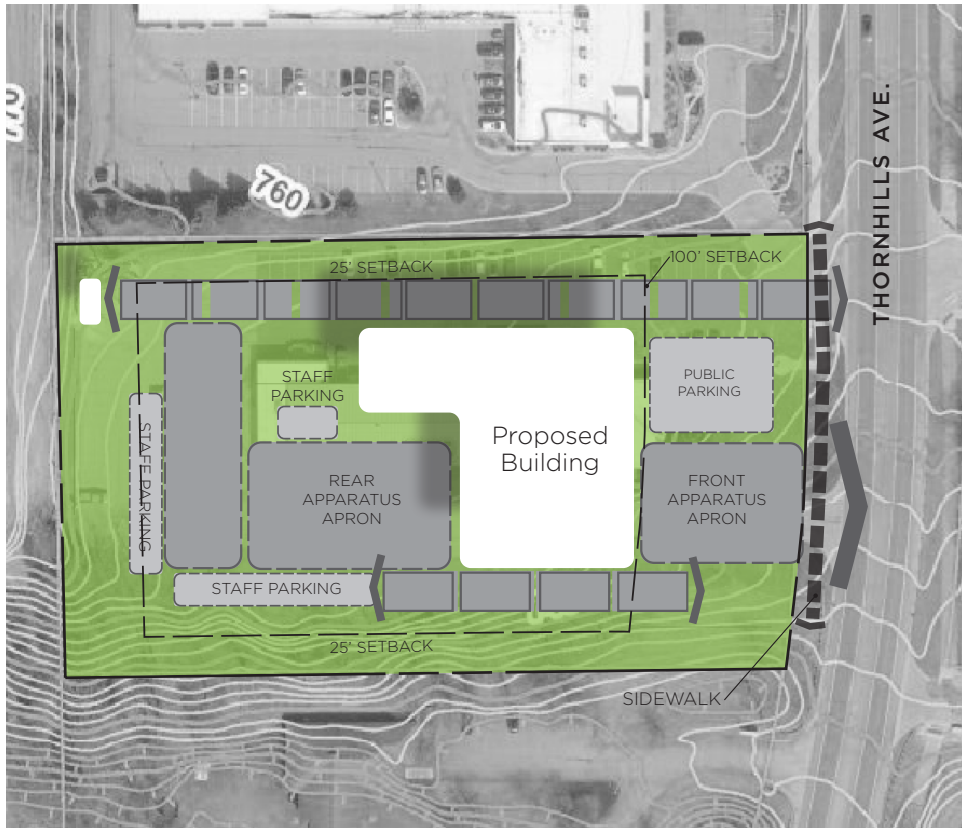
Building Area Calculations		Current Staff	Planned Staff	Area Required
1. Public Spaces		0	0	2435
2. Fire Administration		4	5	2059
3. Suppression Operations		3	3	581
4. Staff Commons		12	12	4038
5. Apparatus Bay		0	0	6331
6. Maintenance and Support		0	0	360
7. Building Support Area		0	0	480
Total		19	20	
Subtotal				16284
10% Gross-Up Factor (Common circulation, structure, shafts, etc.)				
(Use additional 5% Gross-Up Factor for Renovation)				1628
Total Main Building Area				17912
				with Mezzanine
				19620
CONDITIONED STORAGE BUILDING: NEEDS TO BE DETERMINED; SEPARATE FROM MAIN BUILDING				70' x 45'
Lawn Equipment:				
2 Blowers				
Standing Lawn Mower				
Trimmers				
Plow (possible on pallet rack)				
Truck spreader				
Event materials:				
Room inside storage building with shelving to keep event materials clean				
Generator				
Generator on double axel trailer				
Search Training Materials				
Items that can be stored on pallet racks				
Seasonal Storage-Salt				
Reserve Brush Truck and Boat for seasonal storage				
SUV				
SUv				
Plow Truck with plow and spreader attached approx. 30'				
Plow Truck with plow and spreader attached approx. 30'				
Extra Hoses				

CONCEPT PLAN



- ENTRY
- OFFICES
- MEETING
- QUARTERS - COLD ZONE
- APPARATUS & EQUIPMENT - HOT ZONE
- TRANSITION - WARM ZONE

THORNHILLS AVENUE



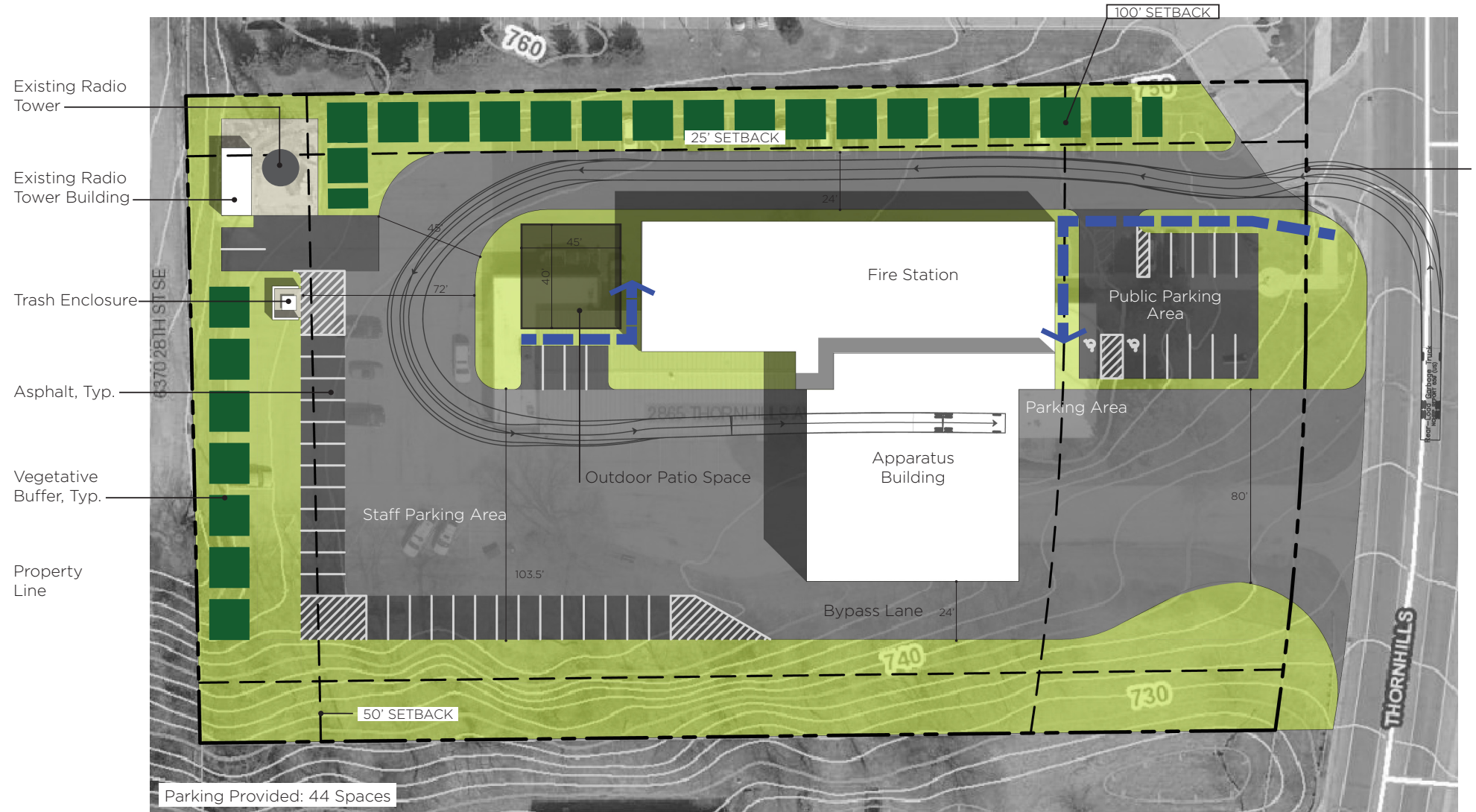
PROS:

- The existing fire station is currently located on this parcel
- The parcel is in close proximity to 28th Street
- The parcel is large enough to support the stations program requirements
- Land use for the parcel complements surrounding land uses
- Parcel does not have any unique requirements or restrictions
- The parcel is large enough to support the separation of public and staff parking and navigate an apparatus vehicle without major restrictions
- Quick access to main response routes (North, South, East, West, Highway)
- Access to traffic light at 28th Street

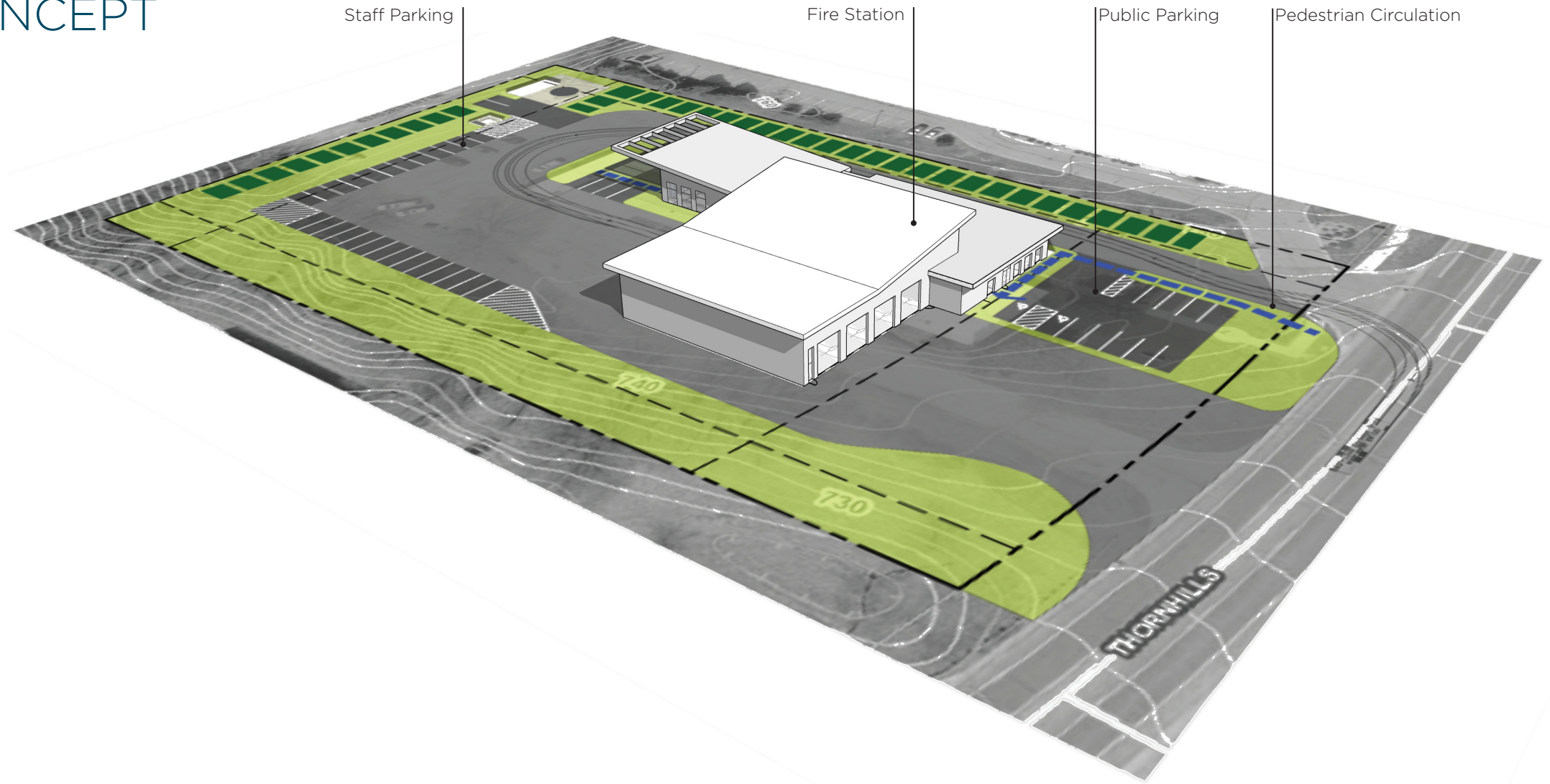
CONS:

- The existing radio antenna will not allow for another support building on the parcel without a variance
- Topography at the southern edge of the parcel poses challenges for construction
- Temporary operations shift during construction

POTENTIAL SITE PLAN



CONCEPT



TEMPORARY OPERATIONS PLAN

OUTLINE MAP - TEMPORARY STATION 1

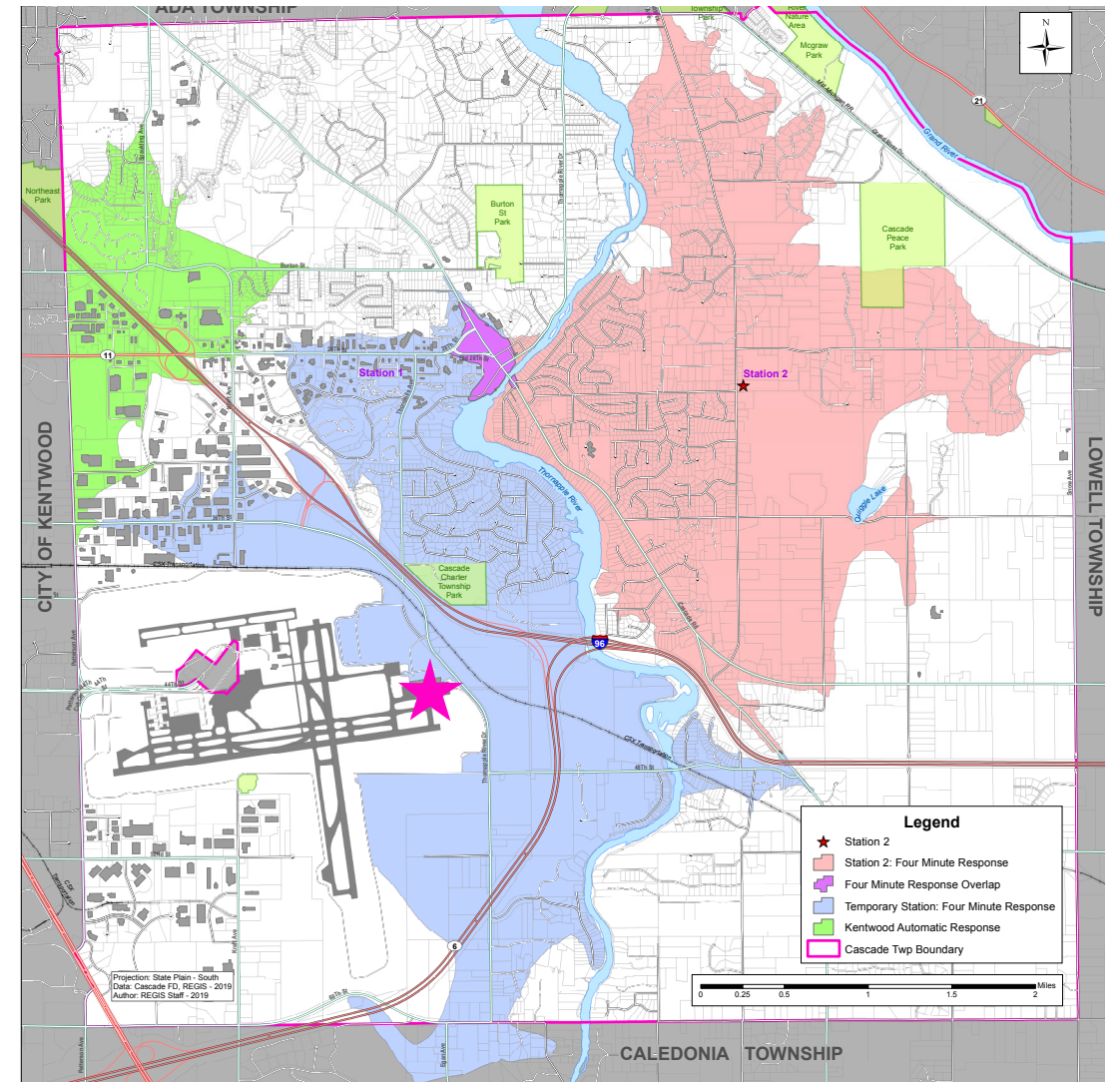
Proposed Temporary Fire Station 1 Location: Gerald R. Ford International Airport Air Cargo Facility

Pros:

- Is readily available to rent in Station 1's response area
- Can house one fire engine, one medic vehicle, four firefighters, one fire chief and one inspector
- Would rent for 12-18 months
- Best option of numerous sites studied

Cons:

- Shifts coverage 60-90 seconds to the south – can post a fire crew/ vehicle to augment coverage

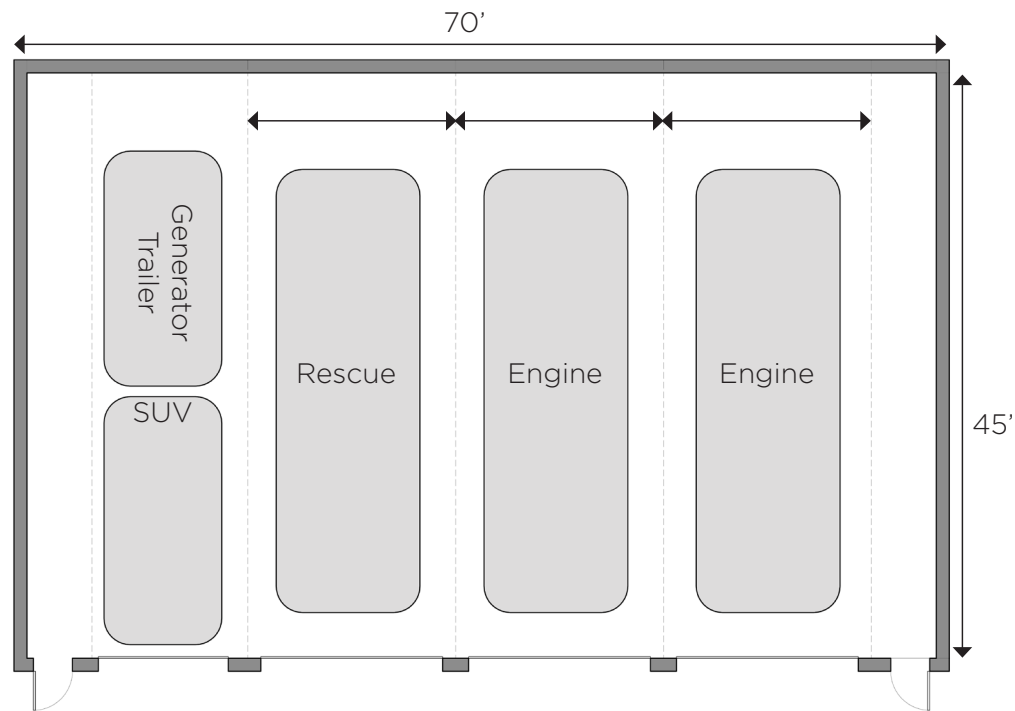


OUTBUILDING INTERIM AND LONG TERM USE

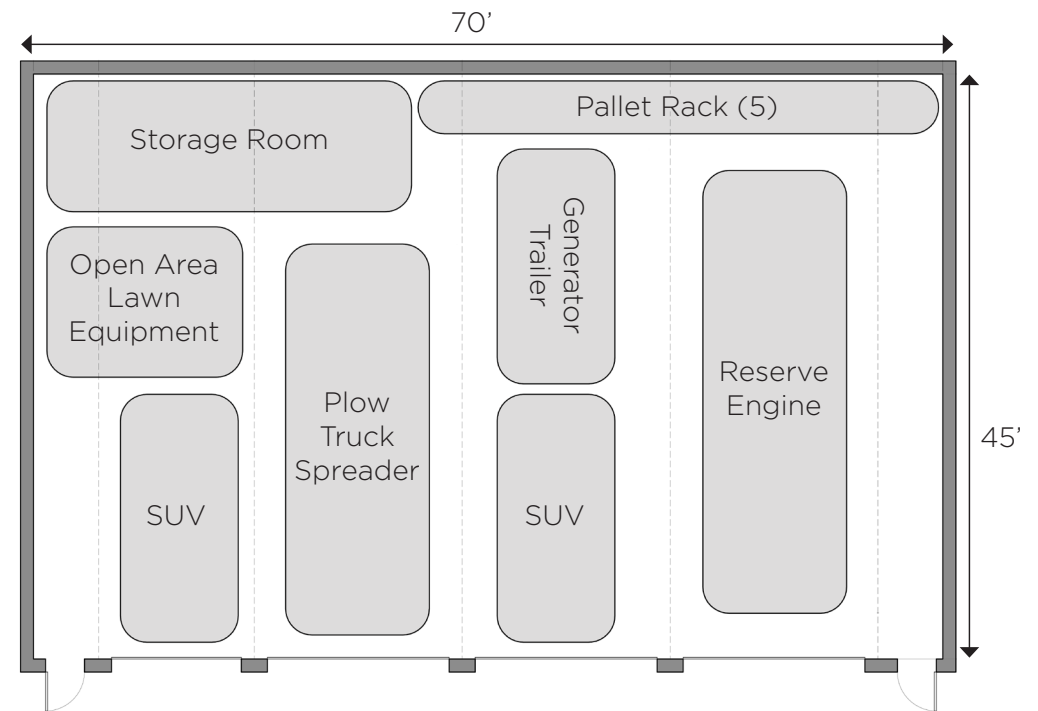


OUTBUILDING INTERIM AND LONG TERM USE

An outbuilding was identified to meet all the needs of Fire Station Number 1, however the ordinance did not allow for the scale of building required on the Thornhill's site based on current zoning designations. With further review, the outbuilding was located at Fire Station Number 2 where it met ordinance requirements. In addition, by locating the building at the Buttrick site, the outbuilding can be used to temporarily house the apparatus from Fire Stations Number 1 while the new building is under construction. Therefore, phase one would be the outbuilding on Buttrick, and phase two would be the new building on Thornhills.



Outbuilding Planning - Phase I - Immediate Use



Outbuilding Planning - Phase II - Long Term Use

FINANCIAL CONSIDERATIONS

OPINION OF PROBABLE COST

Cascade Charter Township Fire Station - Concept B		Estimated Square Foot:	17,912
		Low Range	High Range
Construction Cost (Div. 02 through Div. 28)	\$	3,096,900.00	\$ 3,585,800.00
Construction Site Development (Div. 31 through Div. 34)	\$	668,100.00	\$ 773,600.00
General Conditions	\$	339,500.00	\$ 393,100.00
General Requirements	\$	316,500.00	\$ 366,500.00
Potential Construction Cost = \$		4,421,000.00	\$ 5,119,000.00
Construction Costs Sqft = \$		262.61	\$ 304.07
Contingency			
Contingency - Design (10%)	\$	442,200.00	\$ 512,000.00
Contingency - Construction (5%)	\$	221,100.00	\$ 256,000.00
Escalation - Beyond Calendar Year (Assumed Construction 2021)	\$	176,900.00	\$ 204,900.00
Potential Construction (with Contingency) Cost = \$		5,261,200.00	\$ 6,091,900.00
Construction (with Contingency) Costs Sqft = \$		312.52	\$ 361.86
Soft Cost (by Percentage of Potential Construction Cost)			
Wayfinding, Special Inspections, A/E Reimbursables and Expenses, A/E Design Services and Fees, Specialty Equipment, FFE (Furniture, Fixtures and Equipment), Security and AV Equipment		15%	20%
Total Project Cost Range - Fire Station (excludes outbuilding)		\$ 6,050,380.00	\$ 7,310,280.00

Project Schedules

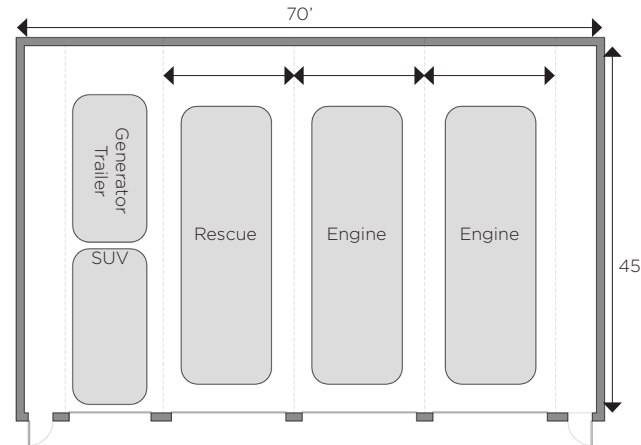
Fire Station #2: Storage Building

2021

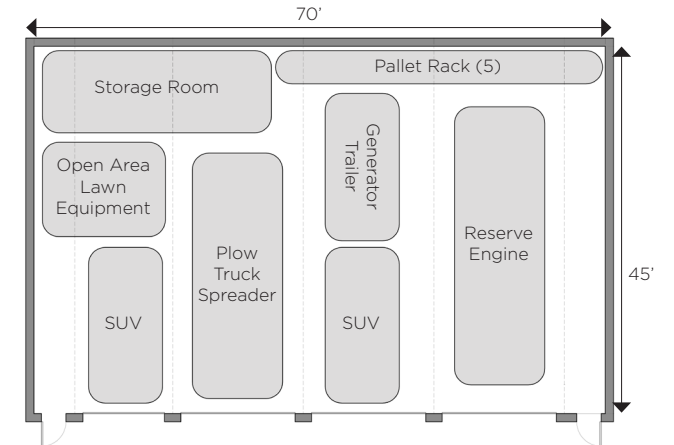
March	Design and Construction Documentation
May	Construction Bidding & Awards
June	Shop Drawing Submittals
July	Building Fabrication
August	Construction Commencement

2022

February	Construction Completion
March	Occupancy



Outbuilding Planning - Phase I - Immediate Use



Outbuilding Planning - Phase II - Long Term Use

Project Schedules

Fire Station #1: New Station

2021

May Design and Construction Documentation

November Construction Bidding & Awards

2022

January Shop Drawing Submittals

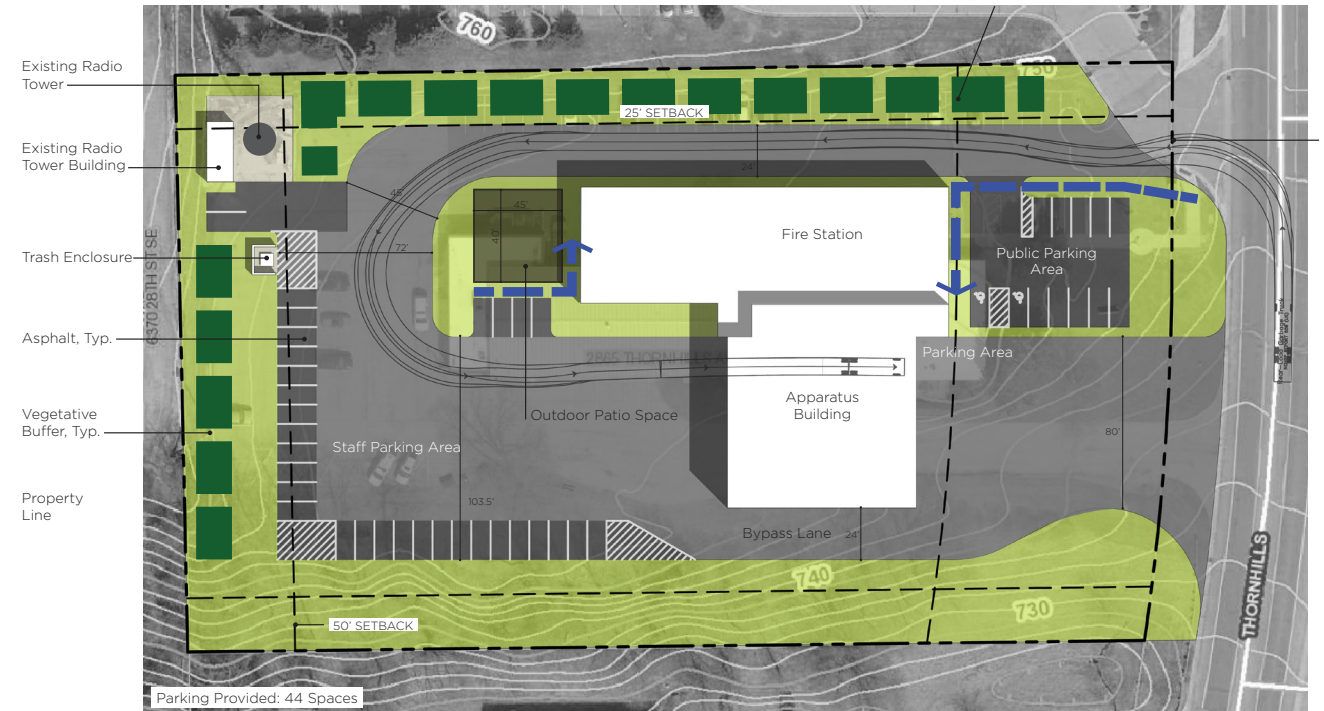
March Mobilization & Existing Building Demolition

April Construction Commencement

2023

February Construction Completion

March Occupancy



Financial

Estimated FY20 Fund Balances:

- General Fund - \$6.9 million
- Fire Fund - \$2.4 million

Bond Funding:

- \$4 – \$6 million based on final construction costs
- Annual debt service - \$270k – \$400k for 20 years
 - To be paid from existing revenues



COMPARATIVE STATION PROJECTS

COMPARATIVE STATION PROJECTS



PORTAGE FIRE
PORTAGE, MI
18,000 SQ.FT.
\$6.1 MILLION
BUILT 2020



MONROE FIRE
MONROE, MI
15,560 SQ.FT.
\$6.4 MILLION
BUILT 2019



HIGHLAND FIRE
HIGHLAND, MI
14,000 SQ.FT.
\$5.6 / 7.6 MILLION
2021



DEXTER FIRE
DEXTER, MI
31,000 SQ.FT.
\$7+ MILLION
2021

Firehouse Magazine. Station Design Study

November 2020 Issue Vol. 45, No. 11

58 Newly Constructed Fire Stations in North America in 2020.

Average Size – 16,728 square feet

Average Cost - \$ 6,628,000

NEXT STEPS

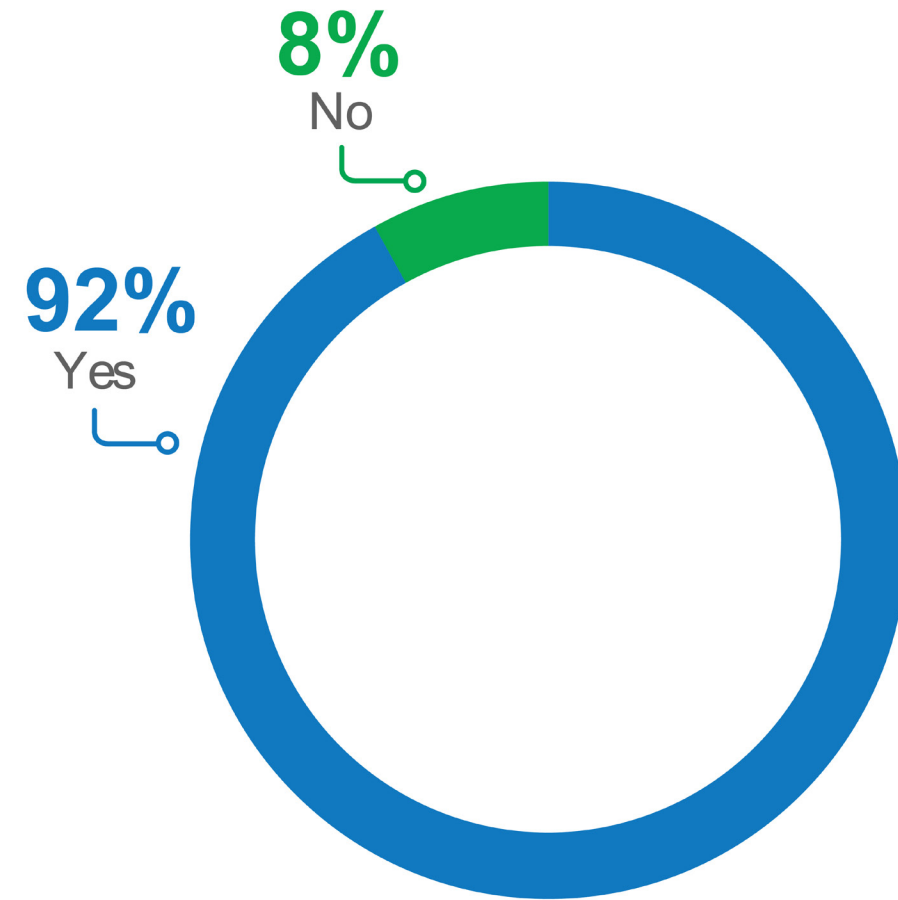
Public Input

- Held a virtual public engagement meeting on Jan. 19 and provided the meeting recording and a feedback survey after
- Communicated information about the meeting and survey through:
 - Social media (organic and sponsored posts)
 - Website
 - Postcard
 - Print newsletter
 - E-newsletter
 - Press release



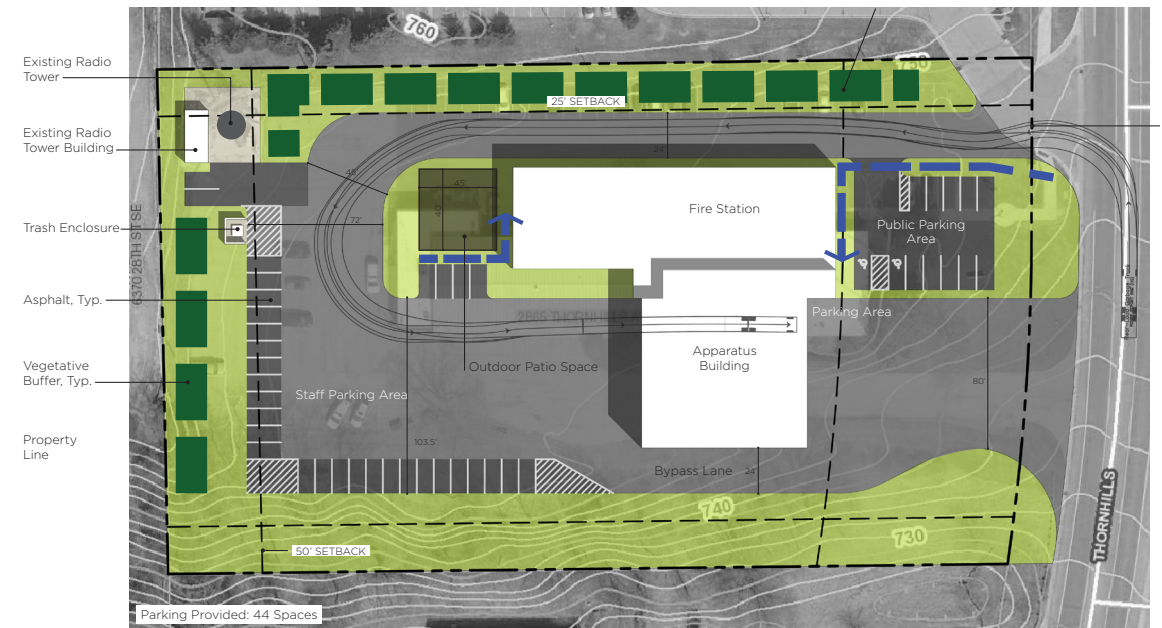
Public Input

Q: Do you agree with the findings for a new Fire Station 1?



Recommended Next Steps

- Design/build contract from Progressive AE for Station 2 Outbuilding (3/10/21)
- Design/build contract from Progressive AE/Redstone for Station 1 (3/24/21)



progressive|ae