

City of Valdez

212 Chenega Ave.
Valdez, AK 99686

Meeting Agenda - Final

City Council

Tuesday, July 30, 2019

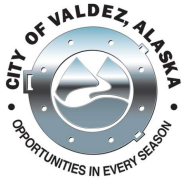
6:00 PM

Council Chambers

Work Session (Future Planning for Fire Station 1)

WORK SESSION AGENDA - 6:00 pm

[Future Planning for Fire Station 1](#)



Legislation Text

File #: 19-0313, **Version:** 1

ITEM TITLE:

Future Planning for Fire Station 1

SUBMITTED BY: Tracy Raynor, Fire Chief and Nathan Duval, Capital Facilities Director

FISCAL NOTES:

Expenditure Required: [Click here to enter text.](#)

Unencumbered Balance: [Click here to enter text.](#)

Funding Source: [Click here to enter text.](#)

RECOMMENDATION:

[Click here to enter text.](#)

SUMMARY STATEMENT:

Staff providing Council with attached reference documents relative to the Fire Station 1 project. Information covers past progress and current status to determine path forward.



Nathan Duval
Capital Facilities Director
212 Chenega Avenue
Valdez, AK 99686

July 22, 2019

Mr. Duval—

Subject: Existing Fire Station 1 Assessment

Attached find Structural and Mechanical evaluations, completed by consulting engineers, PND Engineers and RSA Engineers respectively, documenting conditions at the existing Fire Station 1 at 212 Chenega Avenue. Additionally, below are a short list of known and reported fire and building code and regulatory deficiencies present at the Station. These findings add to known deficiencies relative to both overall condition and specific occupancies of the structure.

This collective review joins those of prior consultants in finding the building fails to meet many standards and codes for a modern fire and emergency services facility. Along with structural and ventilation conditions, many industry standards governing emergency response facilities are not being met at the current station. As was summarized in *City of Valdez HQ Fire Station—Programming and Site Evaluations, 2018*, "not meeting these standards increases risks to not only personnel but also to equipment, apparatus, and community safety."

Codes governing fire department operational and facility standards include:

- NFPA 1581—Infection Control
- NFPA 1851—Care of Fire Fighting Equipment
- NFPA 403—Standard for AFF Services
- NFPA 1500—Occupational Safety
- OSHA 1910—Construction & Maintenance
- IBC—International Building Code, Essential Facility
- ADA—Americans with Disabilities Act



Specific Areas of Deficiency—

Infection and Toxic Contamination Control

Currently, the facility falls short of multiple standards established by the National Fire Protection Association (NFPA). Key among the problems is a lack of space to house proper facilities for cleaning, decontaminating and storing equipment and personal protection ensembles (PPE) gear which each fire fighter wears when responding to an incident. NFPA 1500—10.1.2 states, "*Fire departments shall provide facilities for disinfecting, cleaning and storage in accordance with NFPA 1581.*" The station currently has no functioning Decontamination Room. Soiled PPE returning from a call are either cleaned in the Apparatus Bays or laundered in the repurposed holding bay at the Police Department and brought back to the Station for drying and storage. There is no contained area for cleaning air masks, helmets, backboards, medical equipment and other gear contaminated by infectious bodily fluids or by toxic compounds from burning materials. Once such gear returns from a call and enters the Apparatus bays, it risks cross contaminating other parts of the Station and beyond—including Crew quarters, areas of the building housing non-departmental City personnel, and the public.

Fire and EMS personnel returning from a fire may also have toxic or infectious materials on their undergarments or skin. Separated laundering and showering are not supported within the facility for either gender. Men may use the bathroom and shower adjacent to the Apparatus Bay for cleaning. There is no such equivalent facility for women responders on site. To use the bathroom, women must enter the Crew Dormitory or the Public hall outside the area, breaching containment and risking contamination of other parts of the building (NFPA 1581, 5.4).

In some instances, female responders have traveled home after a fire--in their personal vehicles--to clean themselves and their clothing, risking spreading contaminants and toxins. This practice not only violates NFPA standards for occupational safety and infection control (NFPA 1581, 8.4.5.2) but unfairly burdens female staff, volunteers, and their families over their male counterparts.

While remediating mold from the Decontamination Room and placing this area back in service will help, the department will continue struggling to find adequate space to temporarily store, clean, and disinfect gear thereby failing to limit contamination risks (NFPA 1581, 5.5.5, 5.6, 5.7). Absent properly sized and located cleaning and bathing facilities for both genders, risks of contamination remain elevated at the station and beyond.

Fire Fighting Gear

Firefighting equipment and PPE gear require specialized care, cleaning, repair and storage. (NFPA 1851). Contaminated gear shall be isolated during the incident personnel decontamination process and removed from service until the elements can receive specialized cleaning. (NFPA 1851, 7.1.4.1) Isolating gear for specialized cleaning is not currently possible given the lack of available area.

Vehicle Exhaust and Station Ventilation

Contaminants, other than those from outside the station are also highly problematic and Valdez Station 1. Exhaust from Apparatus preparing to depart or returning from a call foul the air and leave greasy and toxic particulates on the walls, floor and on every surface and item exposed to the fumes. NFPA 1500, 10.1.5 states, *"The fire department shall prevent exposure to fire fighters and contamination of living and sleeping areas to vehicle exhaust."* The facility lacks both carbon monoxide and nitrous oxide detectors commonly used to monitor levels and switch on fans to evacuate vehicle exhaust (NFPA 1500 10.1.3.4). Furthermore, since the only access to the Crew dayroom, kitchen or dormitory is through an Apparatus Bay, vehicle exhaust fall-out enters these areas every time a door is opened, and someone walks through.

Station ventilation and exhaust issues and recommendations are covered in the accompanying report by RSA. Modernizing the 53-year-old air handling unit and installing a proper exhaust monitoring and evacuation system are necessary for meeting the NFPA 1500 standards. However, the immediate adjacency of crew areas to Apparatus Bays will remain a problem even with these upgrades.

Life Safety

NFPA 1500 10.1.4 requires all new buildings housing fire, rescue or ambulance services be protected throughout by an approved automatic sprinkler system. Sprinklers provide an elevated level of protection to occupants, building and apparatus regardless of facility age or condition. While the adjoining City Hall administration and Police Department are so protected, Station 1 has no sprinklers. While not code required, such protection is highly advised, particularly for facilities essential to the public and commercial infrastructure of the community.

Built in 1966, well prior to adoption of modern codes governing safe egress for occupants, Station 1 lacks required life safety and accessibility attributes. Changes in area function have created egress and exiting violations. For example, both current second floor uses—Crew Sleeping (R2) and Training (B)—require two exits to conform to the State-adopted, International Building Code. IBC 2012, Chapter 10, Section 1021 requires second floor, R2 and B occupancies provide two exits unless protected by an automatic sprinkler system. The single exit stairs which descend from these areas fail to qualify as acceptable egress pathways on multiple accounts:

	Code Standard (IBC 2012)	Actual
Stair width (accessible)	48" clear (IBC 1007.3)*	32"
Stair width regular	44" clear (IBC 1009.4)	32"
Stair rise/run	7"max/11" min (IBC 1009.7.2)	8"*/11"; 6.5"/10.5"*
Handrails	Both sides (IBC 1009.15) w/extensions	One side, no extensions
Exit Signage	Required for B occupancy (IBC 1011)	None

**unless protected by an automatic sprinkler system*

*** does not meet standard*

Other IBC and Americans with Disabilities Act (ADA 2010) standards for life safety and accessibility are not being met at Station 1. As a public building, the fire station is obligated to provide accessible accommodations for personnel, volunteers, and visitors who may be sight, hearing or ambulatorily impaired. The ADA provides direction for all public facilities to be surveyed for accessibility barriers and to have a plan formulated for their remedy. *"A fire station is a public building and must be designed, built, and maintained with public use in mind,"* (NFPA 1500 Handbook, Chapter 10).

Tsunami Inundation

Along with these facility conditions, recent USGS mapping shows the site subject to tsunami inundation further complicating compliance and functionality as an essential facility or emergency operations center.

Conclusion

As demonstrated above and in the attached reports, the facility housing Valdez Fire Station 1 is deficient in construction, size, and functionality. Structural, life safety, occupational, and accessibility defects create an environment unfit for the essential functions of the department and the public they serve. At a minimum, additional structural and life safety analysis and a mitigation plan are recommended for the facility to be considered compliant for occupancy. Ongoing occupancy as an essential emergency facility would require a higher and likely cost prohibitive degree of upgrade. Given the construction type, mechanical and space limitations and overall site size/location, it is our professional opinion the existing facility is unsuitable for continued use as an essential facility.

Sincerely,



Gary S. Wolf, AIA



July 15, 2019

PND Project No. 181184

Chris Whittington Evans
Wolf Architecture
625 S. Cobb Street
Palmer, Alaska 99645

Subject: Structural Evaluation of the Fire Station 1, Valdez Alaska

At your request, PND has modified our previous structural evaluation to include additional information concerning governing codes for existing buildings and established procedures for seismic evaluation thereof. We also have included more information on the increased loading requirements for essential emergency response facilities.

Scope of Structural Evaluation

The scope of the structural evaluation was performed from an inspection of the existing drawings for the fire station portion of the building located at 212 Chenega. As most structural members cannot be examined from a visual inspection, a study of available plans was used to perform the evaluation. The findings which follow are based on the examination of a partial set of plans which are dated April 1966. Calculations were performed on roof rafters to estimate snow load capacity. A quick screening of seismic systems was performed using the FEMA P-154 *Rapid Visual Screening of Building for Seismic Hazards*. No calculations were performed on the seismic capacity of shear walls or diaphragms as that was considered to be beyond the scope of this report.

Description of Existing Structure

The focus of the evaluation is on the original wood-framed fire station consisting of apparatus bays, crew quarters, and offices with a second floor mezzanine for training and dormitory functions. Plans for both structural and architectural were combined into a few sheets of drawings as was common in the 1960's. Review of the adjacent office wing was not part of this analysis as no plans were available.

The original building is essentially a wood stick-framed structure. The floor is a concrete slab on-grade. The mezzanine is constructed of 2x12 wood joists. The roof consists of 2x12 wood rafters at 1'-4" centers at 4 to 12 pitch spanning approximately 18-feet. The walls are constructed of 2x6 wood studs with 3/8" plywood sheathing. PND could find no information on the plans for design loads. No information on the plans was evident for lateral wind and seismic design such as shear wall and diaphragm nailing.

Relevant Structural Codes

If adopted by the City of Valdez, the building is governed by the 2009 *International Building Code (IBC)* and the local amendments adopted by the City. The IBC series of codes also

includes the *International Existing Building Code* (IEBC). Although it does not appear that the City has adopted the IEBC, language from the IEBC has been incorporated into the City of Valdez local amendments for section 116 dealing with unsafe and dangerous structures.

Essential Facilities

This building is being operated as an emergency response facility or essential facility. This occupancy is designated a Risk Category IV. Risk Category IV facilities requires higher levels of safety for snow, ice and seismic loads. These loads are amplified by importance factors. For a Risk Category IV fire station, loads are amplified according to the IBC as follows:

Snow	1.2
Seismic	1.5

Should the building change occupancy, and be repurposed for storage or warehouse, the Importance Factors for the loads on essential facilities are not required. Importance Factors become 1.0.

Snow Loads

Snow loads in Valdez have been incrementally increased over the last 20-years. The local code for ground snow load is now 160 psf. Using ASCE 7 snow load formulas for a warm sloping roof, the minimum roof snow load for the Valdez Fire Station with the 1.2 Importance Factor should be 126 psf.

Provisions of the International Building Code and Local Amendments

City of Valdez local amendments to Section 116 of the IBC deal with unsafe and dangerous buildings. The terms *unsafe* and *dangerous* are defined in the amendments as a structural condition where the stress in any material, member or portion thereof due to all dead and live loads, is more than one and one half times the working stress or stresses allowed in the IBC code.

Structural Deficiencies

From PND's examination of the building and plans we have identified some structural deficiencies. The following items have been identified as deficient and possibly dangerous.

Roof Framing:

Using the City of Valdez Snow loads multiplied by the essential facility Importance Factor, PND's calculations show the existing roof rafters are stressed to more than 1.8 times allowable stress in bending. This is assuming the wood to be Douglas Fir

No. 1 grade. Other grades or species would result in even more overstress. PND finds the roof rafters under full snow load to be stressed significantly more than 150% of their capacity. This means the roof structure may be categorized as dangerous or unsafe unless snow is routinely removed by shoveling during the winter months.

Lateral Loads:

Plywood sheathing on the walls and roof of the structure provide resistance to lateral loads such as wind and seismic. Methods for the seismic evaluation and strengthening of existing buildings is contained in both the IEBC code and in the *Seismic Evaluation and Retrofit of Existing Buildings* (ASCE 41-13). PND recommends an ASCE 41-13 Tier 1 seismic evaluation of this building. We have attached the forms that are used to conduct that evaluation. (The Tier 1 evaluation take time and effort to complete and is considered beyond the scope of this report.)

Using the less comprehensive Rapid Visual Screening techniques developed by FEMA P-154 for seismic hazards, PND has determined that the fire station is may be deficient for the high seismic loads in Valdez and the 1.5 Importance Factor that should be applied to seismic loads for essential facilities. The lateral deficiencies are primarily due to the age of the code under which the building was designed. FEMA P-154 uses a Benchmark Code for different types of structural systems to assist in determining a score. The benchmark code for wood-framed structures is 1976. Any building constructed before the benchmark code receives a lower score due to the changes in code since the Benchmark. This building predates that code by 10-years. Essential facilities with FEMA P-154 scores less than 2.5 are recommended for further Tier 1 seismic evaluations. The Fire Station score is 1.7.

Conclusions and Recommendations

Structural remediation or shoveling of the roof is probably needed even if this building is repurposed. The roof snow load capacity may present an unsafe condition and could pose a risk to occupants if snow is not removed during the winter. If there are unsafe or dangerous conditions, the code official is required to issue orders to abate the illegal or unsafe conditions.

Seismic and wind design criteria was not indicated on the original drawings. For evaluation of existing buildings, ASCE 41-13 "*Seismic Evaluation and Retrofit of Existing Buildings*" should be used for an evaluation. PND recommends a Tier 1 evaluation be performed.

Even if the occupancy of the building is changed to a lower risk category, the evaluation should be performed based upon the age of the facility and the code under which it was designed. The lateral deficiencies may be serious enough that corrective measures may

need to be taken. Any retrofit for lateral loads should be done in accordance with the ASCE 41-13 or the EIBC.

PND Engineers, Inc.

A handwritten signature in black ink, reading "F. Charles Kenley". The signature is fluid and cursive, with the first name "F. Charles" and last name "Kenley" clearly legible.

F. Charles Kenley, P.E., S.E.
Principal Engineer

Rapid Visual Screening of Buildings for Potential Seismic Risk

FEMA-154 Data Collection Form

HIGH Seismicity

	<p>Address: 212 Chenega Street Zip: 99686 Other Identifiers: No Stories: 2 Year Built: 1966 Screener: 5 Date: None Total Floor Area (sq. ft.): 10000 Building Name: Valdez Fire Station Use: None</p>
	 <p style="font-size: small;">Name: Valdez Fire Station Screener: 5 Date: 2019-07-11 20:28:46</p>

Occupancy				Soil Type						Falling Hazard				
<input type="checkbox"/> Assembly	<input checked="" type="checkbox"/> Govt	<input checked="" type="checkbox"/> Office	Number of Persons	<input type="checkbox"/> A Hard Rock	<input type="checkbox"/> B Avg. Rock	<input checked="" type="checkbox"/> C Dense Soil	<input type="checkbox"/> D Stiff Soil	<input type="checkbox"/> E Soft Soil	<input type="checkbox"/> F Poor Soil	<input type="checkbox"/> Unreinforced Chimneys	<input type="checkbox"/> Parapets	<input type="checkbox"/> Cladding		
<input type="checkbox"/> Commercial	<input type="checkbox"/> Historic	<input type="checkbox"/> Residential	0-10 <input checked="" type="checkbox"/> 11-100							Other:				
<input type="checkbox"/> Emer. Services	<input checked="" type="checkbox"/> Industrial	<input type="checkbox"/> School	101-1000 <input type="checkbox"/> 1000+											

Basic Scores, Modifiers, and Final Score, S																
Building Type	W1	W2	S1 (MRF)	S2 (BR)	S3 (LM)	S4 (RC SW)	S5 (URM INF)	C1 (MRF)	C2 (SW)	C3 (URM INF)	PC1 (TU)	PC2	RM1 (FD)	RM2 (RD)	URM	
Basic Score	4.3	3.6	2.7	2.9	3.1	2.7	1.7	2.4	2.7	1.3	2.5	2.3	2.7	2.7	1.5	
Mid Rise(4-7 stories)	NA	NA	0.2	0.4	NA	0.4	0.4	0.4	0.4	0.2	NA	0.2	0.4	0.4	0.0	
High Rise(>7 stories)	NA	NA	0.6	0.8	NA	0.8	0.8	0.6	0.8	0.3	NA	0.4	NA	0.6	NA	
Vertical Irregularity	-2.5	-2.0	-1.0	-1.5	NA	-1.0	-1.0	-1.5	-1.0	-1.0	NA	-1.0	-1.0	-1.0	-1.0	
Plan Irregularity	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	
Pre-Code	0.0	-1.0	-1.0	-0.8	-0.6	-0.8	-0.2	-1.2	-1.0	-0.2	-0.8	-0.8	-1.0	-0.8	-0.2	
Post-Benchmark	2.4	2.4	1.4	1.4	NA	1.6	NA	1.4	2.4	NA	2.4	NA	2.8	2.6	NA	
Soil Type C	0.0	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	
Soil Type D	0.0	-0.8	-0.6	-0.6	-0.6	-0.6	-0.4	-0.6	-0.6	-0.4	-0.6	-0.6	-0.6	-0.6	-0.6	
Soil Type E	0.0	-0.8	-1.2	-1.2	-1.0	-1.2	-0.8	-1.2	-0.8	-0.8	-0.4	-1.2	-0.4	-0.6	-0.6	
Final Scores	1.7															

Comments:	Detailed Evaluation Required <input checked="" type="checkbox"/>
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* = Estimated, subjective or unreliable data
 DNK - Do Not Know

BR = Braced Frame
 FD = Flexible
 Diaphragm
 LM = Light Metal

MRF = Moment-resisting frame
 RC = Reinforced concrete
 RD = Rigid diaphragm

SW = Shear Wall
 TU = Tilt Up
 URM INF = Unreinforced masonry infill

Project Name _____
Project Number _____

ASCE 41-13 Tier 1 Checklists

FIRM:	
PROJECT NAME:	
SEISMICITY LEVEL:	
PROJECT NUMBER:	
COMPLETED BY:	
DATE COMPLETED:	
REVIEWED BY:	
REVIEW DATE:	

Legend: C = Compliant, NC = Noncompliant, N/A = Not Applicable, U = Unknown

16.310 Immediate Occupancy Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial

Very Low Seismicity

Seismic-Force-Resisting System

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U	REDUNDANCY: The number of lines of shear walls in each principal direction is greater than or equal to 2. (Commentary: Sec. A.3.2.1.1. Tier 2: Sec. 5.5.1.1)	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
C	NC	N/A	U	SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 4.5.3.3, is less than the following values (Commentary: Sec. A.3.2.7.1. Tier 2: Sec. 5.5.3.1.1): Structural panel sheathing 1,000 lb/ft Diagonal sheathing 700 lb/ft Straight sheathing 100 lb/ft All other conditions 100 lb/ft	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
C	NC	N/A	U	STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings do not rely on exterior stucco walls as the primary seismic-force-resisting system. (Commentary: Sec. A.3.2.7.2. Tier 2: Sec. 5.5.3.6.1)	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
C	NC	N/A	U	GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard is not used as shear walls on buildings more than one story high with the exception of the uppermost level of a multi-story building. (Commentary: Sec. A.3.2.7.3. Tier 2: Sec. 5.5.3.6.1)	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Legend: C = Compliant, NC = Noncompliant, N/A = Not Applicable, U = Unknown

C <input type="checkbox"/>	NC <input type="checkbox"/>	N/A <input type="checkbox"/>	U <input type="checkbox"/>	NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 are not used to resist seismic forces. (Commentary: Sec. A.3.2.7.4. Tier 2: Sec. 5.5.3.6.1)	
C <input type="checkbox"/>	NC <input type="checkbox"/>	N/A <input type="checkbox"/>	U <input type="checkbox"/>	WALLS CONNECTED THROUGH FLOORS: Shear walls have an interconnection between stories to transfer overturning and shear forces through the floor. (Commentary: Sec. A.3.2.7.5. Tier 2: Sec. 5.5.3.6.2)	
C <input type="checkbox"/>	NC <input type="checkbox"/>	N/A <input type="checkbox"/>	U <input type="checkbox"/>	HILLSIDE SITE: For structures that are taller on at least one side by more than one-half story because of a sloping site, all shear walls on the downhill slope have an aspect ratio less than 1-to-2. (Commentary: Sec. A.3.2.7.6. Tier 2: Sec. 5.5.3.6.3)	
C <input type="checkbox"/>	NC <input type="checkbox"/>	N/A <input type="checkbox"/>	U <input type="checkbox"/>	CRIPPLE WALLS: Cripple walls below first-floor-level shear walls are braced to the foundation with wood structural panels. (Commentary: Sec. A.3.2.7.7. Tier 2: Sec. 5.5.3.6.4)	

Legend: C = Compliant, NC = Noncompliant, N/A = Not Applicable, U = Unknown

Project Name _____
 Project Number _____

C <input type="checkbox"/>	NC <input type="checkbox"/>	N/A <input type="checkbox"/>	U <input type="checkbox"/>	OPENINGS: Walls with openings greater than 80% of the length are braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or are supported by adjacent construction through positive ties capable of transferring the seismic forces. (Commentary: Sec. A.3.2.7.8. Tier 2: Sec. 5.5.3.6.5)	
C <input type="checkbox"/>	NC <input type="checkbox"/>	N/A <input type="checkbox"/>	U <input type="checkbox"/>	HOLD-DOWN ANCHORS: All shear walls have hold-down anchors, constructed per acceptable construction practices, attached to the end studs. (Commentary: Sec. A.3.2.7.9. Tier 2: Sec. 5.5.3.6.6)	

Connections

RATING				DESCRIPTION	COMMENTS
C <input type="checkbox"/>	NC <input type="checkbox"/>	N/A <input type="checkbox"/>	U <input type="checkbox"/>	WOOD POSTS: There is a positive connection of wood posts to the foundation. (Commentary: Sec. A.5.3.3. Tier 2: Sec. 5.7.3.3)	
C <input type="checkbox"/>	NC <input type="checkbox"/>	N/A <input type="checkbox"/>	U <input type="checkbox"/>	WOOD SILLS: All wood sills are bolted to the foundation. (Commentary: Sec. A.5.3.4. Tier 2: Sec. 5.7.3.3)	

Legend: C = Compliant, NC = Noncompliant, N/A = Not Applicable, U = Unknown

Project Name _____
 Project Number _____

C	NC	N/A	U		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	GIRDER-COLUMN CONNECTION: There is a positive connection using plates, connection hardware, or straps between the girder and the column support. (Commentary: Sec. A.5.4.1. Tier 2: Sec. 5.7.4.1)	

Foundation System

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U	DEEP FOUNDATIONS: Piles and piers are capable of transferring the lateral forces between the structure and the soil. (Commentary: Sec.A.6.2.3.)	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
C	NC	N/A	U	SLOPING SITES: The difference in foundation embedment depth from one side of the building to another shall not exceed one story high. (Commentary: Sec. A.6.2.4)	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Low, Moderate, and High Seismicity

Seismic-Force-Resisting System

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U	NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 1.5-to-1 are not used to resist seismic forces. (Commentary: Sec. A.3.2.7.4. Tier 2: Sec. 5.5.3.6.1)	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

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Diaphragms

RATING				DESCRIPTION	COMMENTS
C <input type="checkbox"/>	NC <input type="checkbox"/>	N/A <input type="checkbox"/>	U <input type="checkbox"/>	DIAPHRAGM CONTINUITY: The diaphragms are not composed of split-level floors and do not have expansion joints. (Commentary: Sec. A.4.1.1. Tier 2: Sec. 5.6.1.1)	
C <input type="checkbox"/>	NC <input type="checkbox"/>	N/A <input type="checkbox"/>	U <input type="checkbox"/>	ROOF CHORD CONTINUITY: All chord elements are continuous, regardless of changes in roof elevation. (Commentary: Sec. A.4.1.3. Tier 2: Sec. 5.6.1.1)	
C <input type="checkbox"/>	NC <input type="checkbox"/>	N/A <input type="checkbox"/>	U <input type="checkbox"/>	PLAN IRREGULARITIES: There is tensile capacity to develop the strength of the diaphragm at reentrant corners or other locations of plan irregularities. (Commentary: Sec. A.4.1.7. Tier 2: Sec. 5.6.1.4)	
C <input type="checkbox"/>	NC <input type="checkbox"/>	N/A <input type="checkbox"/>	U <input type="checkbox"/>	DIAPHRAGM REINFORCEMENT AT OPENINGS: There is reinforcing around all diaphragm openings larger than 50% of the building width in either major plan dimension. (Commentary: Sec. A.4.1.8. Tier 2: Sec. 5.6.1.5)	

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C <input type="checkbox"/>	NC <input type="checkbox"/>	N/A <input type="checkbox"/>	U <input type="checkbox"/>	STRAIGHT SHEATHING: All straight sheathed diaphragms have aspect ratios less than 1-to-1 in the direction being considered. (Commentary: Sec. A.4.2.1. Tier 2: Sec. 5.6.2)	
C <input type="checkbox"/>	NC <input type="checkbox"/>	N/A <input type="checkbox"/>	U <input type="checkbox"/>	SPANS: All wood diaphragms with spans greater than 12 ft consist of wood structural panels or diagonal sheathing. Wood commercial and industrial buildings may have rod-braced systems. (Commentary: Sec. A.4.2.2. Tier 2: Sec. 5.6.2)	
C <input type="checkbox"/>	NC <input type="checkbox"/>	N/A <input type="checkbox"/>	U <input type="checkbox"/>	DIAGONALLY SHEATHED AND UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms have horizontal spans less than 30 ft and aspect ratios less than or equal to 3-to-1. (Commentary: Sec. A.4.2.3. Tier 2: Sec. 5.6.2)	
C <input type="checkbox"/>	NC <input type="checkbox"/>	N/A <input type="checkbox"/>	U <input type="checkbox"/>	OTHER DIAPHRAGMS: The diaphragm does not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Commentary: Sec. A.4.7.1. Tier 2: Sec. 5.6.5)	

Legend: C = Compliant, NC = Noncompliant, N/A = Not Applicable, U = Unknown

Project Name _____
 Project Number _____

Connections

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U	WOOD SILL BOLTS: Sill bolts are spaced at 4 ft or less, with proper edge and end distance provided for wood and concrete. (Commentary: Sec. A.5.3.7. Tier 2: Sec. 5.7.3.3)	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Legend: C = Compliant, NC = Noncompliant, N/A = Not Applicable, U = Unknown

October 7, 2016

Arcadis U.S., Inc.
880 H Street, Suite 101
Anchorage, AK 99501

ATTENTION: Matt Yeomans

Dear Matt,

**REFERENCE: Valdez Fire Station
Mechanical Site Investigation Report**

As requested, RSA engineering traveled to Valdez September 27, 2016 to investigate reported HVAC issues at the City Fire Station and the needs of Fire Department personnel. Accompanying this inspection were Matt Yeomans from Arcadis, Tracy Raynor and Mike Weber from the Valdez Fire Department, and Brad Sontag from the City of Valdez Building Maintenance. At the time of this inspection there was no precipitation, temperature was approximately 54°F and winds were calm.

Noted issues and recommendations:

- A. Issue: Significant black mold is present behind fiberglass reinforced wall paneling, above ceiling in the truss work and within walls.

I. Observations:

- a. This mold was visually apparent largely in the bio-hazard/decontamination. Some discoloration was apparent in the three vehicle bay and adjacent boiler room walls. Discoloration of the walls appeared to also be due to water damage.
- b. It was reported by the fire department personnel that there are significant leaks in the roofing system which allows moisture into the walls and attic spaces.
- c. The ventilation systems serving the apparatus bay are typical for the occupancy and are not a contributing factor to mold growth.
- d. The heat recovery ventilator (HRV) dedicated to the bio-hazard/decontamination room is out of service.
- e. Testing of bulk material samples from the bio-hazard/decontamination area was performed by White Environmental Consultants February 23rd 2016, the lab results indicated moderate to high *Stachybotrys* and *Chaetomium* mold growth.

II. Recommendations:

- a. Water infiltration into the attic space and walls is the major contributing factor with this mold issue. Additional HVAC equipment or upgrades to the existing equipment will not solve this issue. It is recommended that the roof be repaired and the mold affected building materials be demolished and replaced.
- b. If the bio-hazard/decontamination is to be occupied, the existing HRV unit should be repaired or replaced to return it to operating condition.

- B. Issue: Air quality in sleeping quarters located upstairs of the residential area is reported to be poor, causing respiratory issues with the occupying personnel.

I. Observations:

- a. The existing air handler (AHU-1) serving the administration and residential areas of the fire department area is located in the attic space adjacent to the training area. This unit is original to the building and beyond its useful life.
- b. The air handler (AHU-1) outside air damper was in the closed position at the time of this inspection, and no fresh air was being delivered to the served areas. Investigation of the direct digital control (DDC) of the unit indicated that AHU-1 was under command to provide significant outside air both for ventilation and

cooling, but the damper remained closed. DDC notes from the time of inspection follow:

1. Supply air temperature reset setpoint: 53.5 °F.
 2. Space temperature: 73.5 °F.
 3. Supply air temperature: 78.3 °F.
 4. Outside air temperature: 53.8 °F.
- c. AHU-1 has a single return air opening at the wall of the stairwell serving the training area. This return air opening is extremely close (within 8') to the main supply air opening within the same stairwell. It is apparent that this air handler is short circuiting and supplying little ventilation to the connected areas. The net result of the closed outside air damper and short circuiting of the unit is only a small amount of indoor air is being re-circulated throughout the area. It should be noted that the return air grill is near the vehicle bay and exhaust fumes may be drawn into the air handler return grill.
 - d. Supply air to the residential area is provided from AHU-1. The supply air ductwork from this air handler to the residential area is a single 8" branch supply air duct routed over head in the three vehicle bay area. This supply duct has a small inline booster fan installed to overcome the pressure losses associated with extended duct run and increase the overall air flow to the residential space.
 - e. The 8" residential area supply duct terminates at two supply registers, one in the ceiling of the kitchen/lounge and one in the sleeping quarters area. The adjustable face damper on the sleeping quarter grill has been closed completely off by the occupants. The grill to the kitchen/lounge remains open and was observed to be supplying significant air volume.
 - f. No return air ductwork is present from the residential area, resulting in positive pressurization the residential area. This is desirable to mitigate direct migration of diesel fumes to the residential area from the adjacent vehicle bays, however may be a contributing factor for diesel fumes migration back into the AHU-1 return duct.
 - g. An investigation of airborne mold spores in the kitchen/lounge area was performed by White Environmental Consultants May 20th 2015, the investigation reported "The air quality at the time of the inspection was acceptable, with no discernable amounts of fungal spores present in the sampling locations."
- II. Recommendations:
- a. If within budget, AHU-1 and supply ductwork should be demolished and replaced with a new unit and the supply ductwork re-routed to supply directly to individual occupied spaces to avoid short-circuiting and maintain space pressurization to mitigate odor migration.
 - b. If the unit is to remain, the AHU-1 controls should be troubleshot and repaired to re-establish control of the damper actuators and provide outside air mixing with the return air stream.
 - c. AHU-1 supply air to the residential quarters should remain in place supplying air to the kitchen/lounge area on the 1st floor. The supply air ductwork to the 2nd floor sleeping quarters should be capped.
 - d. It is recommended a new residential type heat recovery ventilator be supplied and installed in the attic space adjacent to the sleeping quarters. This unit will be utilized to supply 100% fresh outside air to the sleeping quarters and will exhaust air from the lounge/kitchen area below. In addition to providing only clean, fresh air to the sleeping space, it will serve to pressurize the space relative to the kitchen/lounge and the adjacent vehicle bays to mitigate direct diesel fume migration into the residential area. The AHU outside air and exhaust air duct terminations will be out the exterior wall above the residential sleeping quarters windows. A small soffit may be required overhead to conceal duct routing, and the condensate from the unit will be drained to the kitchen sink tailpiece below.

- e. As a betterment for the residential HRV installation, a small heating coil can be provided on the outside air duct to temper the air entering the space to give the occupants temperature control of the sleeping quarter space during the heating months.
- C. Issue: Vehicle exhaust systems are not functioning automatically to exhaust diesel fumes when engines are run within the vehicle bays.
- I. Observations:
 - a. Both the two vehicle and three vehicle bay exhaust fans are in working order and are suitably size for general area exhaust operation. Both fans are manually controlled by a wall timers to be operated by the fire station personnel when needed.
 - b. There is no makeup air into either vehicle bay.
 - II. Recommendations:
 - a. All vehicle bay doors should be fit with optical eyes to trigger automatic operation of the vehicle bay exhaust systems for an adjustable amount of time. The vehicle optical eyes shall be selected and installed to trigger the exhaust fans only upon the crossing of a vehicle, and not upon personnel or other similar brief interruptions.
 - b. Both the three vehicle bay and the two vehicle bays should be fit with Carbon Monoxide (CO) and Nitrogen Dioxide gas (NO2) gas detectors with sensors located near to the exhaust outlets of the stationary vehicles. This CO/NO2 sensor will serve to trigger the exhaust systems upon detection if the vehicles are run without opening the doors or leaving the bays. A CO/NO2 detector is required in vehicle parking bays per current mechanical code.
 - c. New air openings with motorized insulated dampers into each vehicle bay should be installed to provide for makeup air during fan operation. The motorized dampers will be interlocked to open upon exhaust fan operation.

If you have any questions concerning the above, please do not hesitate to call me.

Sincerely,



Tyler T. Gray, PE
Project Engineer

ttg/hhm
16-0618/L6192

Karen Feero

From: Stanley Porritt
Sent: Friday, February 26, 2016 9:39 AM
To: Ashley Briggs; George Keeney; Karen Feero; Tina Fifarek
Subject: FW: Mold Report: Fire Station 1
Attachments: 101611734.pdf

Attached please find the Mold Test results for the whit room at the Fire Station #1

-----Original Message-----

From: Frontdesk [<mailto:frontdesk@whitelabsllc.com>]
Sent: Friday, February 26, 2016 9:36 AM
To: Jodi Fowler; Stanley Porritt
Subject: Mold Report: Fire Station 1

To valued clients,
Please note that we have changed e-mail addresses (see below) from frontdesk@whitelabsllc.com to frontdesk@wecenv.com.

Thank-you,

White Environmental Consultants, Inc.
383 Industrial Way, Suite #300
Anchorage, AK 99501
Office: (907) 258-8661
Fax: (907) 258-8662
frontdesk@wecenv.com

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May 29th, 2015

City of Valdez
212 Chenega Ave
Valdez, AK 99686

Attn: Jennifer Smith

RE: Fire Station One – Microbial IAQ Screening

On May 20th, 2015 White Environmental Consultants (WEC) performed IAQ (indoor air quality) inspection and sampling within the living quarters and day room of Fire Station One located in Valdez, Alaska. Air samples were collected at the request of our client, The City of Valdez. WEC spread representative sampling in and around the offices of concern. There was no visible microbial growth within the areas of concern at the time of inspection.

Microbial IAQ air samples were collected from the first and second floors of the structure, and one microbial IAQ air sample was collected outdoors for comparison purposes. Allergenco D cassettes were utilized for all air samples collected at the property. The air quality at the time of inspection was acceptable, with no discernable amounts of fungal spores present in the sampling locations.

Particulate Air Sampling – Allergenco D Cassette

The Allergenco D air quality sampler is a particulate sampling cassette designed for the rapid collection and analysis of a wide range of airborne aerosols including mold spores, pollen, insect parts and skin fragments. This sampling device is useful in providing rapid analysis of airborne contaminants in indoor air quality testing, allergy testing and flood restoration monitoring. The results are reported as a total, meaning spores counted can include both viable and non-viable fungal spores.

WEC collected six Allergenco D indoor air quality samples total. (See attached analytical results)

Air Sample Results

Client ID #	Collection Date	Sample Description	Sample Location	<u>Results</u> Total Fungal Spores Count/M ³
001	05/20/15	Allergenco D	Outside Building	
002	05/20/15	Allergenco D	2 nd Floor Living Quarters	1,700
003	05/20/15	Allergenco D	2 nd Floor Living Quarters Bath	270
004	05/20/15	Allergenco D	Dayroom	320
005	05/20/15	Allergenco D	Dayroom	110
006	05/20/15	Allergenco D	Bay 1,2 & 3	110

Conclusions

The following conclusions are based on our inspection of visually accessible areas and the results of microscopic examination of air samples:

- No Signs of visible microbial growth were detected at the time of inspection.
- Areas of concern were dry.
- Fungi and fungi levels found during sampling are typical and does not represent current active fungal amplification within the areas of concern.
- Relative humidity levels were at acceptable levels at all sampling locations.
- Sample correlation show fungal types extremely similar to what would be typical for the weather conditions and the season of the year and building conditions. All other fungi types illustrate non-significant amounts of fungal spore that typically would be seen at the current season and time of year. In summary, on the basis of this mold screening investigation, WEC offers the following recommendations:
- If MVOC's are detected in the future search for possible water intrusion and repair under restoration conditions by a licensed certified remediation firm.
- Maintain humidity levels below 60% to discourage mold growth.

Respectfully,



Brett O'Bray - CMC (Board Certified Microbial Consultant)
Vice President
White Environmental Consultants Inc.



Analysis Report Direct Microscopic Exam

SW

Client: White Environmental Consult
Address: 383 Industrial Way Suite 300
Anchorage, AK 99501

SOP: Tape 4.3.25 Swab 4.3.26 Bulk 4.3.27

Date Sampled: 2/19/2016
Date Received: 2/24/2016
Date Reported: 2/25/2016
Project Number: City of Valdez
Project: Fire Station 1

Lab Number	Sample Type	Description	Background Debris (1)	Mold Growth (2)	Comments
101600732	BULK MATERIAL	FS-1 De-Con Inside Chase	2	2 Stachybotrys	
101600733	BULK MATERIAL	FS-1 De-Con 10:20	2	4 Stachybotrys	
101600734	BULK MATERIAL	FS-1 De-Con 10:30	2	1 Chaetomium 4 Stachybotrys	

Qualitative Scale: N.D. = Not Detected; 1 = Lowest (Trace); 5 = Highest (Heavy or Highly Abundant Presence)
*= Spores only, no growth structures present.

(1) Background particles include organic and inorganic debris from a variety of sources, and generally occur as a result of settling from an airborne state.

(2) Mold observed with associated vegetative structures (unless otherwise indicated). In addition to a relative numerical abundance rating, molds present are identified to the highest level possible. Mold growing at level 4 or above could obscure the visibility of other, smaller mold growing under and/or within the heavily growing mold.

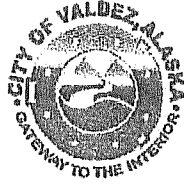
Report Reviewed By:

Brett Goodrich

Brett Goodrich, Manager, Environmental Microbiology Dept.

Analytical results and reports are generated by NEL at the request of and for the exclusive use of the person or entity (client) named on this report. Results, reports or copies of same will not be released by NEL to any third party without the prior express written consent from the client named in this report. This report applies only to those samples taken at the time, place and location referenced by the client. This report makes no express or implied warranty or guarantee as to the sample methodology used by the individual performing the sampling unless sampling was performed by NEL. The client is solely responsible for the use and interpretation of these results and NEL makes no express or implied warranties as to such use or interpretation. NEL is not able to make and does not make a determination as to the soundness or safety of a product, environment or property from only the samples sent to their laboratory for analysis. Unless otherwise specified by the Client, NEL reserves the right to dispose of all samples after the testing of such samples is sufficiently completed or after a thirty-day period, whichever period is greater. Samples for Microbiology that degrade rapidly or pass their hold times will be retained for shorter periods or not at all. NEL liability extends only to the cost of the testing.





LA- 016933

Memorandum

To: White Environmental

From: Jodi Fowler, Sr. Office Assist, Building Maintenance Dept, City of Valdez

Date: February 19, 2016

Subject: Mold testing

Enclosed are samples taken from the City of Valdez Fire Station 1 that we would like tested to see what kind of mold they contain so we can figure out the correct way to remove it.

Please contact either myself or Stan Porritt, Building Maintenance Superintendent, with any questions you may have and for billing.

Thank you,

Jodi Fowler
Sr. Office Assist
Building Maintenance
City of Valdez
PO Box 307
Valdez, AK 99686
Ph: 907-835-5411
Email: jfowler@ci.valdez.ak.us

Rec'd: JHicklin
2.22.16

Stan Porritt
Building Maintenance Superintendent
Building Maintenance
City of Valdez
PO Box 307
Valdez, AK 99686
Ph: 907-835-5412; Cell: 907-831-0112
Email sporritt@ci.valdez.ak.us.

**NORTHEAST LABORATORY SERVICES
SAMPLE RECEIPT CONDITION REPORT**

Client: White End

Date/Time

Received: 2/24/16 11:00m

Initials: MB

Project: City of Valdez

Rush? Yes No TAT

NEL Sample

Numbers: 101600732-34

Delivered by: _____

Tracking Number: 62683787-4583

FOOD AND WATER

Yes No

1. Are custody seals present? _____

2. Is the COC properly filled out? _____

3. Do sample labels match the COC? _____

4. Are samples within the analytical hold time? _____

5. Is there sufficient volume to perform tests? _____

6. Are samples in good condition? _____

7. Is temperature between 4 +/- (2) C° _____

TEMP _____

Comments: _____

INDOOR AIR QUALITY

Yes No

1. Is the COC properly filled out? ✓ _____

2. Do sample labels match the COC? ✓ _____

3. Are samples in good condition? ✓ _____

Comments: _____

CONTROLLED

Fire Station Deficiencies

Space

Training Room too small and does not function as a training room
Space around apparatus (safety)
Work bench area (new engine will block more of the bench area)
Air room fill/service test/maintenance (Clean area)
Training area around fire station
Apparatus areas – Not large enough for future apparatus and weight of apparatus
No workout area in the station
Overall kitchen and day room space is too small
Bathroom facilities not large enough to accommodate large groups
Inadequate office space

Storage Needs

PPE
EMS supplies
Secure Drug storage (DEA)
Training equipment
Communications/storage/maintenance
SAR Equipment
Hose Storage

Dorms / crew storage

Gender neutral facilities

Proper decon areas

EMS (Bio hazard)
Firefighting PPE/equipment

Health and safety issues

Clothes washer in apparatus bay	PPE in apparatus bay
Cracked apparatus ramp that heaves in the winter	Apparatus exhaust
Sleeping quarters egress	Asbestos
Stairs @ night	HVAC System
Radio traffic is unreadable	Water leaks
No station notification system	Back in bays
Stove/oven does not shut off during a call	

Fire Station Needs

In addressing the fire department needs, we must consider planning for the future; this building should be designed to meet our needs for the next 20 to 30 years. Station should be located with access to a main road, located in the Valdez downtown area. (Majority of incidents are in this area) Training tower should be co-located with station. Other training props and burn facility located out the road. Location should also be located on the east of downtown.

(Extended response times out the road and future city growth)

Requirements for the fire station should include all of the following;

- Main station areas, to include adequate office space for fire department personnel, current and future fire department staff.
- Lobby area for greeting and assisting community members.
- Living area for on-duty department members, which includes gender separation facilities and dorms. A kitchen and lounge area, all which should be located near the apparatus floor.
- Dedicated training room for fire department training, this should be separate from public use area to avoid scheduling conflicts of fire department training and community use needs.
- Training room storage.
- Separate community use area, for holding meetings and other community type events. Area should have storage for table and chairs and small kitchen/beverage space. This area to have separate rest room facilities and can be closed off from the rest of the fire station.
- Physical fitness area for fire department members and other city employee's.
- Apparatus floor (six bays), large enough to accommodate current and future apparatus, drive-through style bays, apparatus exhaust systems, shore power for apparatus, in-line air for apparatus. Personal protective clothing area located next to apparatus floor.
- Separate decontamination for cleaning personal protective equipment which includes an extractor and dryer
- Decontamination area for small fire equipment.
- Separate decontamination area for emergency medical equipment (EMS) with secured storage for extra EMS equipment.
- SCBA area for filling self-contained breathing apparatus (SCBA) with storage area and a work area for repair and maintenance of SCBA's.
- Storage areas for fire department equipment and supplies.
- Maintenance area for fire department small equipment.
- Laundry and janitorial service areas

Requirements for fire station outside area

- Large parking area for citizens that are using the station.
- Parking area for fire department members and staff.

- Drive areas to allow apparatus to utilize drive-through bays.
- Large open area surrounding Multi-story training tower (2 to 2.5 acres). This would allow for high and low angle rope rescue training, hose line deployment training, search and rescue training, Rapid Intervention Training, forcible entry training, ventilation training.
- Area for emergency power.
- Provide for ease of snow removal and retention.

Training Facility Area

- Out the road, area in front of bailer, 5 acres
- Secured area (fence/gate), utilities – power and water, hydrants
- Large open area for training props and area for department training (Burn building, extrication training area, Haz Mat training prop, Marine Firefighting training prop, vehicle fire prop, fire extinguisher training area and other types of training) Some prop areas to have solid surfaces
- Covered area for classroom discuss, training debrief, food services, and bathrooms
- Storage area for training equipment and supplies

The new fire station should be designed to be low maintenance and cost effective to operate. Construction materials should allow for long term use (masonry versus wood). Hard surface floors (versus carpeting) will last longer and provide for easier disinfecting of biological hazards. Outside areas should also be low maintenance and provide for water runoff from fire training.

A well planned building reduces cost overruns and potential change orders costs. The design of the building should allow for future expansion. This would include the ability to add additional apparatus bays, office space and living quarters for fire department members.

Plans should follow all building and fire codes.

City of Valdez HQ Fire Station

Programming and Site Evaluations



BETTISWORTH^{NORTH}

T C A
architecture • planning

Draft Report
March 28, 2018

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- 1 Participants

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- 7 Fire Station Budget Summary

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 - Valdez Fire Station Area Matrix
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 - Shortlist Sites for New Valdez Fire Station
 - Preliminary Sites for New Valdez Fire Station

PROCESS



Participants

This planning effort is based on the work of the following people representing the City of Valdez and the Bettisworth North Architects and Planners & TCA Architecture + Planning consultant team.

City of Valdez

- + Tracy Raynor,
City of Valdez Fire Chief
- + Nathan Duval,
City of Valdez Capital
Facilities Director
- + Scott Benda,
City of Valdez Assistant
Building Inspector

Consultant Team

- + Roy Rountree,
BNAP- Anchorage Alaska
- + Brian Harris,
TCA- Seattle, WA

Objectives & Process

The study's purpose is to define the operational space needs for a new City of Valdez Headquarters Fire Station, provide conceptual site planning studies for (4) shortlisted sites recommending a preferred site, and identify order of magnitude budget estimates for the development of each of the four shortlisted sites.

To support this study, numerous site locations for the replacement fire station were identified by the City of Valdez based on prior work performed by Arcadis. From this information, the City narrowed down the sites to (4) preferred locations which were evaluated as part of this study. Using the identified sites, Bettisworth North Architects and Planners (BNAP), and TCA Architecture + Planning (TCA), fire station design specialists, performed alternative test-to-fit studies based on the development of projected space needs. Site engineering and technical studies such as: Geotechnical Engineering, Site Surveying, Phase 1 Environmental Studies, etc. are not part of this scope. For the order of magnitude estimates, identified space needs, available site information, best practices relative to current and projected fire station operational and safety requirements, technology systems, quality goals, and recently designed and constructed facilities in the region were used to develop facility and site development costs. The space needs identified in the study provide for a resilient facility which is operationally sound, durable, low maintenance, energy efficient, sustainable, and can accommodate growth and change over the next 30+ years.

Timeline

At the onset of the project, a project execution approach was developed and approved. The following identifies milestone tasks which occurred during the study process:

- + **February 13-14, 2018** - BNAP and TCA traveled to Valdez for a two-day fact-finding effort meeting with City and Fire Department staff, touring the existing facilities, and understanding the current operations and supported equipment. A preliminary program was discussed and candidate project sites were reviewed to get a better understanding of the site constraints. Following the site visit, the facility program was refined and the program space needs were used to generate concept test-to-fit options for suitability on (4) potential project sites.
- + **March 07, 2018** - Our team led a call in meeting to review the updated program, planning concepts, and site test-to-fit studies for each location.
- + **March 22, 2018** - Our team led a call in meeting to review the updated site test-to-fit studies for each location and refined the preferred options.
- + **March 29, 2018** - Draft Report Submission
- + **April 3, 2018** - Draft Report Presentation

EXECUTIVE SUMMARY

Primary Influences on Operational Needs of Fire Stations

After a review and analysis of the identified project deficiencies identified by the City, our team found that many industry wide standards and codes are not being met within the current station due to its age, size, and configuration. Not meeting these standards increases risks to not only personnel but also to personal protective equipment, apparatus, and community safety.

The key drivers to this space needs assessment was compliance with regulatory requirements, having the ability to support the operational needs of a modern fire station in an uncompromised, permanent way, and strategically locating the stations in their target response areas. While cost is always a key consideration, it was not a driving factor in the development of space needs. Station sizing has been based on operational needs as influenced by call demand, staffing, regulatory compliance, national standards, and trends in the fire service.

Regulatory Compliance

- + NFPA 1581- Infection Control
- + NFPA 1851- Care of Fire Fighting Equipment
- + NFPA 403- Standard for AFF Services
- + NFPA 1500- Occupational Safety
- + OSHA- 1910- Construction & Maintenance
- + International Codes- Essential Facility
- + Americans with Disabilities Act

Standards / Trends

- + Decontamination and Cleaning
- + Support of Specialized Equipment & Technology
- + Cross-contamination Reduction
- + Response Efficiency
- + Fire Suppression
- + Gender Neutrality
- + Durable, Low Maintenance
- + Sustainability & Energy Usage



Space Deficiencies

The current apparatus bay configuration does not allow adequate space for personnel to efficiently and safely navigate around the emergency apparatus.

Fire Station Operational Space Needs Summary

In the space needs study process, the following primary components have been identified and sized to meet the programmatic needs to support operations for the foreseeable future.

Area Summary		
Number	Area	Net SF
1.000	Public Area	1,062
2.000	Admin / Crew Office Area	2,639
3.000	Crew Living Area	4,261
4.000	Apparatus Area	8,977
5.000	Systems	2,867
6.000	Other	-
	Subtotal NSF	19,806
	Grossing Factor	25%
	Total Gross SF	24,758

**The fire station project includes a pre-manufactured training tower in the rear drill area.*

Fire Station Site Evaluations and Test-to-Fit Studies

The following primary considerations were discussed and considered when analyzing the site location options and in the development of the site test-to-fit studies.

- + Strategically Located Relative to their Target Response Areas
- + Neighborhood Related Issues
- + Landuse / Code Issues
- + Property Issues
- + Program Issues
- + Site Vulnerability
- + Construction Issues
- + Financial Issues

The chart on the following page shows the evaluation of these considerations for each site.

Alternative Site Ranking

	Site A	Site C	Site K	Site M
Criteria				
Response				
Delivery of service- long term (20 yr. Planning Horizon)	5	10	5	5
Location relative to target response area	5	10	5	1
Location relative to Increased growth	10	10	10	10
Location relative to liquefaction areas- response related	10	10	5	1
Street configuration/Accessibility- response related	10	10	5	5

Neighborhood Issues				
Noise	10	5	5	10
Traffic	10	10	10	5
Public safety-stewards	5	10	5	5

Landuse/Code Issues				
Zoning	10	5	10	10
Height limit	10	10	10	10
Property assemblage required	10	10	10	10

Property Issues				
Dimensions	5	10	5	5
Size	5	10	10	10
Street Frontage	5	10	10	10
Topography	10	10	5	10

Program Issues				
Dimensions	10	10	5	10
Accommodates building program	10	10	10	10
Accommodates training area program	5	10	5	10
Training area security	10	5	5	10
Site circulation and response	10	10	5	5
Supports snow storage	10	5	5	10

Site Vulnerability				
Avalanche hazard	10	10	5	1
Tsunami inundation hazard	10	10	1	1
Utility Access	10	10	10	5
Liquefaction - vertical/horizontal soil displacement	10	10	5	1
Differential Settlement	10	10	5	5
Location relative to man-made hazardous areas	10	10	10	10
Potential for rising ground water	10	10	10	1

Construction Issues				
Demolition requirements	10	10	10	10
Environmental remediation requirements	10	10	10	10

Financial Issues				
Development cost	10	10	5	1
Increased insurance costs or uninsurable	10	10	5	1
Site acquisition costs	10	10	10	10

Total Score	295	310	231	218
--------------------	-----	-----	-----	-----

Key	
Meets targeted planning objective	10
Generally meets targeted planning objective	5
Does not meet planning objective, significant problem	1

Evaluation Approach

The site evaluation strategy began with the development of site ranking criteria based on national standards relative to fire station placement, local circumstances, and our team's expertise in fire station planning. This criterion identifies information which should be considered to meet the response and operational requirements for a new fire station location and its function as an essential facility.

Findings

From the site-specific test-to-fit “concept site layout diagrams” prepared by the consultant team, each of the four alternative sites were ranked relative to meeting or not meeting such criteria based on a green, yellow, red rating system.

 - Meets targeted planning objective

 - Generally meets targeted planning objective

 - Does not meet planning objective, and may be a significant problem

Site- C- (Highest ranking site)

The factors which make this a preferred site location can be distilled down to a few primary factors. Since this is an essential facility, ensuring the site is not vulnerable to natural events is critical. The site can additionally accommodate the overall program, is central to the overall target response area, and brings fire service presence to the downtown core. Snow management will need to be reviewed in more detail and the limitations of DOT street access at this location is a consideration but should be manageable.

Site- A- (Second highest ranking site)

The primary factors which make this a high-ranking site location are very similar to site C in several aspects. Since this is an essential facility, ensuring the site is not vulnerable to hazardous natural events is critical. This facility should have the ability to remain operational after any significant event. While the site can also accommodate the overall program, the topography of the hillside moderately impacts the site. This site is not as optimal relative to the target response area compared to site C, however, the coverage area is not significantly impacted. One of the greatest draw backs to site A is that the station is a bit more tucked away from the downtown core and its presence will not have any significant impact of the revitalization that a new public building brings to an area. This location is somewhat disconnected from downtown activity and the potential of drawing volunteers to the Department would potentially be more limited.

Site- K- (Middle ranking site)

The primary factors which make this site less desirable than sites C and A include its location in the tsunami inundation area, the decentralized volunteer response, and use compatibility adjacent to the hospital and future planning goals identified for this location.

Site- M- (Lowest ranking site)

The primary factors which make this the lowest ranking site are not only site vulnerabilities, which we consider a fatal flaw, but also due to site development costs, soil issues, and water mitigation. Additionally, this location requires volunteers to drive away from the service area to the station then back to the target response area, which adds critical time to a response if they can't get to the station in a major natural disaster.

Conclusion

While none of the four identified sites for study meet all the conditions optimally set for evaluation, sites C and A rank the highest and sites K and M both have fatal flaws relative to the most recently mapped tsunami inundation zone and potential avalanche area at site M.

Fire Station Budget Summary

Concept Site Cost Summary				
Site Name	Construction Cost	Cost/SF	Project Cost	Remarks
Site A	\$16,795,160	\$647	\$23,286,221	Nothing unusual noted
Site C	\$16,545,061	\$637	\$23,175,184	Replatting and moving ice rink
Site K	\$17,374,486	\$669	\$24,395,049	More land is available on this site
Site M	\$18,569,148	\$715	\$25,717,634	Foundations increase cost, replatting required

Concept Site A

Development Area	170,000	GSF			
Element	Quantity	Rate	Cost	Unit	Remarks
Site Waste Overburden	3.90	\$6,105.00	\$23,826	ACRE	
Site Waste	62,900	\$7.88	\$495,366	CY	Assume 10 foot excavation, geotech confirm
Site Filling	62,900	\$28.69	\$1,804,821	CY	Assume 10 foot excavation, geotech confirm
2 in Leveling course under paving	114,042	\$0.66	\$75,682	SF	
Asphalt paving	114,042	\$5.92	\$675,340	SF	
Landscaping, average trees, shrubs, lawn	30,000	\$3.66	\$109,890	SF	Average, allowance
New building construction cost	24,758	\$446.19	\$11,046,773	SF	Based on similar buildings
Tower construction cost	1	\$1,000,000	\$1,000,000	EA	Based on average list price
Tower foundation cost	1,200	\$31	\$36,630	SF	
Subtotal			\$15,268,327		
Estimating Contingency		10%	\$1,526,833		
Subtotal			\$16,795,160		
Cost per Gross Square Foot of Bldg			\$647		
Project Cost Factor		38%	\$6,382,161		
Site Purchase Cost			\$108,900		From Arcadis Criterial Matrix, 01/06/18
Project Total			\$23,286,221		

Concept Site C

Development Area	143,500	GSF			
Element	Quantity	Rate	Cost	Unit	Remarks
Site Waste Overburden	3.29	\$6,105.00	\$20,112	ACRE	
Site Waste	53,095	\$7.88	\$418,147	CY	Assume 10 foot excavation, geotech confirm
Site Filling	53,095	\$28.69	\$1,523,481	CY	Assume 10 foot excavation, geotech confirm
2 in Leveling course under paving	87,542	\$0.66	\$58,096	SF	
Asphalt paving	87,542	\$5.92	\$518,411	SF	
Landscaping, average trees, shrubs, lawn	30,000	\$3.66	\$109,890	SF	Average, allowance
New building construction cost	24,758	\$446.19	\$11,046,773	SF	Based on similar buildings
Tower construction cost	1	\$1,000,000	\$1,000,000	EA	Based on average list price
Tower foundation cost	1,200	\$31	\$36,630	SF	
Relocated Ice Rink	7,778	varies	\$309,425		Rough estimate, including lighting, no roof
Subtotal			\$15,040,965		
Estimating Contingency		10%	\$1,504,096		
Subtotal			\$16,545,061		
Cost per Gross Square Foot of Bldg			\$637		
Project Cost Factor		38%	\$6,287,123		
Site Purchase Cost			\$343,000		From Arcadis Criterial Matrix, 01/06/18
Project Total			\$23,175,184		

Concept Site K

Development Area	196,000	GSF			
Element	Quantity	Rate	Cost	Unit	Remarks
Site Waste Overburden	4.50	\$6,105.00	\$27,470	ACRE	
Site Waste	72,520	\$7.88	\$571,128	CY	Assume 10 foot excavation, geotech confirm
Site Filling	72,520	\$28.69	\$2,080,853	CY	Assume 10 foot excavation, geotech confirm
2 in Leveling course under paving	140,042	\$0.66	\$92,937	SF	More paving is possible on this site
Asphalt paving	140,042	\$5.92	\$829,308	SF	More paving is possible on this site
Landscaping, average trees, shrubs, lawn	30,000	\$3.66	\$109,890	SF	Average, allowance
New building construction cost	24,758	\$446.19	\$11,046,773	SF	Based on similar buildings
Tower construction cost	1	\$1,000,000	\$1,000,000	EA	Based on average list price
Tower foundation cost	1,200	\$31	\$36,630	SF	
Subtotal			\$15,794,987		
Estimating Contingency		10%	\$1,579,499		
Subtotal			\$17,374,486		
Cost per Gross Square Foot of Bldg			\$669		
Project Cost Factor		38%	\$6,602,305		
Site Purchase Cost			\$418,258		From Arcadis Criterial Matrix, 01/06/18
Project Total			\$24,395,049		

Concept Site M

Development Area	181,600	GSF			
Element	Quantity	Rate	Cost	Unit	Remarks
Site Waste Overburden	4.17	\$6,105.00	\$25,452	ACRE	
Site Waste	80,711	\$7.88	\$635,636	CY	Assume 12 foot excavation, geotech confirm
Site Filling	80,711	\$28.69	\$2,315,884	CY	Assume 12 foot excavation, geotech confirm
2 in Leveling course under paving	125,642	\$0.66	\$83,381	SF	More paving is possible on this site
Asphalt paving	125,642	\$5.92	\$744,033	SF	More paving is possible on this site
Landscaping, average trees, shrubs, lawn	30,000	\$3.66	\$109,890	SF	Average, allowance
Steel Piling Foundation System	24,758	\$35.68	\$883,365	SF	Based on similar buildings in KTN
New building construction cost	24,758	\$446.19	\$11,046,773	SF	Based on similar buildings
Tower construction cost	1	\$1,000,000	\$1,000,000	EA	Based on average list price
Tower foundation cost	1,200	\$31	\$36,630	SF	
Subtotal			\$16,881,044		
Estimating Contingency		10%	\$1,688,104		
Subtotal			\$18,569,148		
Cost per Gross Square Foot of Bldg			\$715		
Project Cost Factor		38%	\$7,056,276		
Site Purchase Cost			\$92,209		From Arcadis Criterial Matrix, 01/06/18
Project Total			\$25,717,634		

APPENDIX A

Fire Station Space Needs Diagrams

VALDEZ FIRE STATION AREA MATRIX

NUMBER	ROOM NAME	QTY	NET SF	NET SF TOTAL	COMMENTS
1.000	PUBLIC AREA				
1.001	VESTIBULE	1	64	64	
1.002	LOBBY/ WAITING / DISPLAY	1	890	890	Museum Area
1.003	PUBLIC RESTROOM MEN	1	54	54	
1.004	PUBLIC RESTROOM WOMEN	1	54	54	
				1,062	
2.000	ADMIN/CREW OFFICE AREA				
2.001	CHIEF'S OFFICE	1	198	198	
2.002	DEPUTY CHIEF'S OFFICE - FUTURE	1	150	150	
2.003	FIRE MARSHAL/ INSPECTOR FUTURE OFFICE	1	120	120	
2.004	ADMIN ASSISTANT/ RECEPTION	1	120	120	
2.005	CONFERENCE	1	350	350	Seating for (10)
2.006	COPY ROOM / FILE STORAGE	1	171	171	
2.007	CUSTODIAL	1	48	48	
2.008	TRAINING ROOM	1	1,428	1,428	Potential back-up EOC
2.009	RESTROOM	1	54	54	
				2,639	
3.000	CREW LIVING AREA				
3.001	CAPTAINS OFFICE	1	120	120	
3.002	FIREFIGHTER WORK AREA	1	421	421	
3.003	KITCHEN/ DINING	1	559	559	Seating for (8)
3.004	DAYROOM	1	663	663	(4) Recliners, sofa, play area
3.005	OFFICERS SLEEPING ROOM W/ RR	1	217	217	(1) Sleeping Room @ 217 sqft, 3 Lockers, plus shower and toilet
3.006	SLEEPING ROOM- DOUBLE	4	180	720	4 @ 180 sqft, 6 Lockers
3.007	MEN TOILET/SHOWER/ LOCKER	1	372	372	(20) 12"x12" lockers, (2) showers, (2) toilets, (2) urinals
3.008	WOMEN TOILET/SHOWER/ LOCKER	1	339	339	(20) 12"x12" lockers, (2) showers, (2) toilets
3.009	PHYSICAL TRAINING	1	750	750	
3.010	LAUNDRY	1	100	100	w/ Mop Sink
				4,261	
4.000	APPARATUS AREA				
4.001	APPARATUS ROOM	1	7,136	7,136	(6) Drive through bays w/ diesel exhaust recovery
4.002	BAY TOILET	1	54	54	
4.003	SHOP/ MAINT.	1	150	150	
4.004	EMS STORAGE	1	108	108	
4.005	OPERATIONAL STORAGE	1	400	400	
4.006	EQUIPMENT DECON	1	149	149	W/ wash alcove
4.007	CLEANING EXTRACTOR	1	130	130	
4.008	TURNOUT GEAR STORAGE/ DRYING	1	360	360	(35) 24"x20" lockers
4.009	DISASTER RELIEF SUPPLY ROOM	1	100	100	
4.010	WASH ALCOVE - APPARATUS	1	40	40	
4.011	SCBA FILL STATION/ COMPRESSOR	1	150	150	
4.012	SCBA MAINT.	1	100	100	
4.013	HOSE STORAGE/ DRYER	1	40	40	
4.014	BIKE STORAGE	1	60	60	
				8,977	
5.000	SYSTEMS				
5.001	STAIR	2	396	792	Assumes two flights as required for egress
5.002	ELEVATOR	2	42	84	
5.003	ELEVATOR MACHINE ROOM	1	51	51	
5.004	IT ROOM	1	180	180	Rack for phone and alerting 3'-0" required clearance
5.005	ELECTRICAL ROOM	1	120	120	
5.006	FIRE SPRINKLER	1	40	40	
5.007	MECHANICAL/ FAN ROOM	1	1,600	1,600	

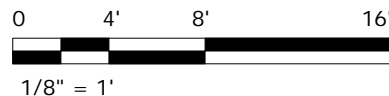
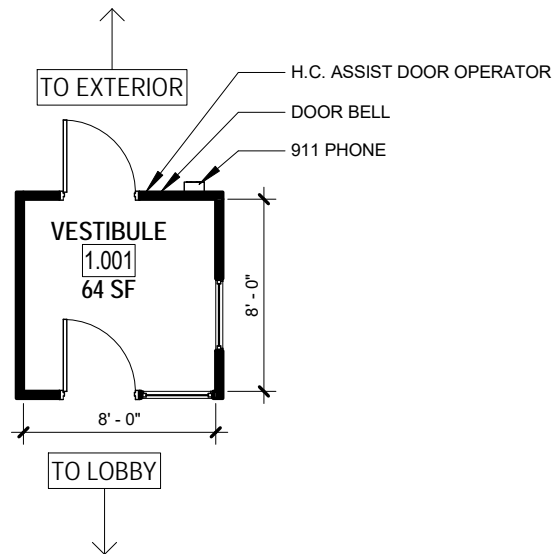
	2,867
	-
	-
SUBTOTAL NET SF	19,806

AREA SUMMARY			COMMENTS
NUMBER	AREA	NET SF	
1.000	PUBLIC AREA	1,062	
2.000	ADMIN/CREW OFFICE AREA	2,639	
3.000	CREW LIVING AREA	4,261	
4.000	APPARATUS AREA	8,977	
5.000	SYSTEMS	2,867	
6.000	OTHER	-	
	SUBTOTAL NSF	19,806	
	GROSSING FACTOR	25%	Walls, circulation
	TOTAL GROSS SF	24,758	

1.001

VESTIBULE

03.07.18

**CONSIDERATIONS****MATERIALS**

CEILINGS: ACT

WALLS: GWB

FLOORS: LVT/ POLISHED CONCRETE

BASE: RUBBER

WINDOWS: NA

DOORS: STOREFRONT

CASEWORK: NA

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER: WALKOFF MAT

FURNISHINGS**OTHER****GENERAL**

AREA 64 SF

OPERATIONAL CRITERIA Space to provide weather protection. Exterior door and interior vestibule door secured, ADA assist., doorbell, exterior phone.

SPECIALTY SPACE No

PREFERRED FLOOR

CONSIDERATIONS**MATERIALS**

CEILINGS: METAL GRID

WALLS: GWB

FLOORS: LVT/ POLISHED CONCRETE

BASE: RUBBER

WINDOWS: STOREFRONT

DOORS: STOREFRONT

CASEWORK: DISPLAY CASE

SYSTEMS

HVAC: TBD

LIGHTING: LED

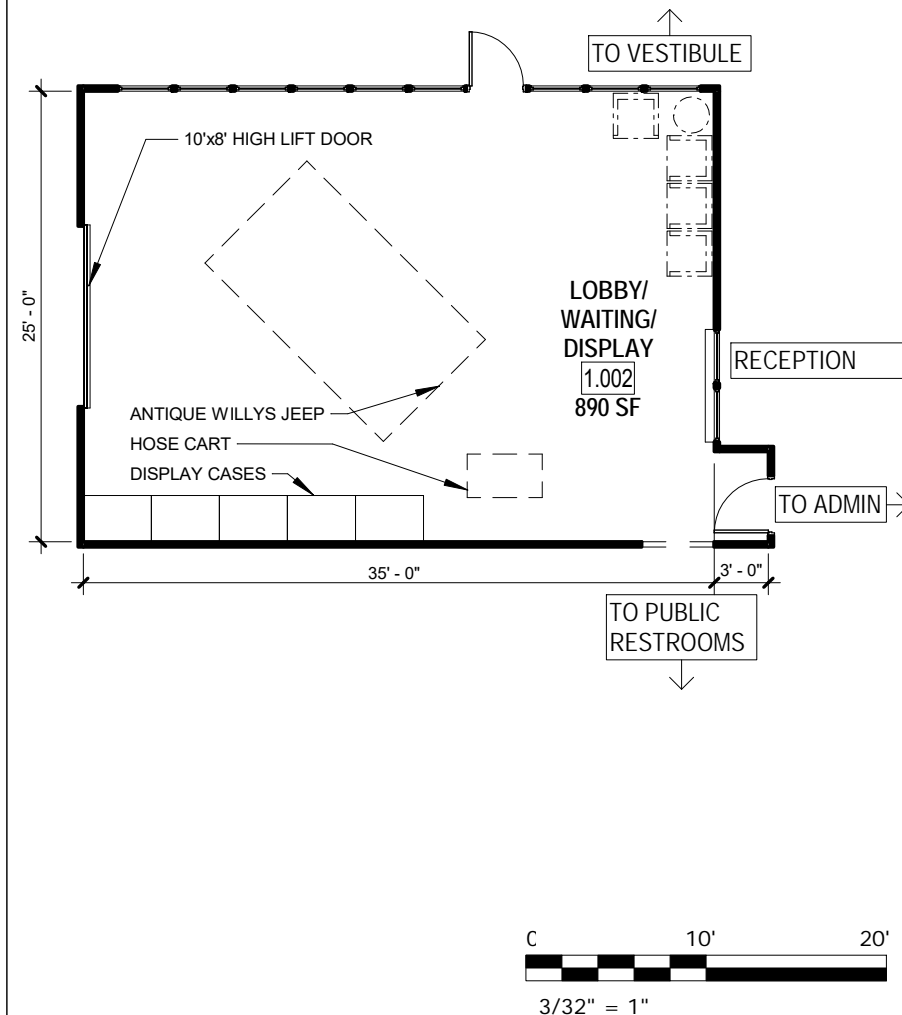
OTHER:

FURNISHINGS

(4) CHAIR, TABLE, DISPLAY CASE

OTHER

FIRE ANTIQUES

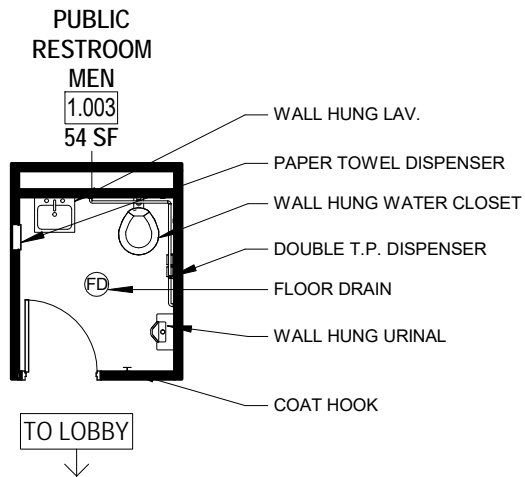
**GENERAL**

AREA 890 SF

OPERATIONAL CRITERIA Supports public information distribution, blood pressure checks, walk-in aid, station tours and general visitors. Direct access to public restrooms. Secure from operational portion of facility. Adjacent to office areas. Museum / Display

SPECIALTY SPACE No

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: GWB

WALLS: GWB W/ TILE WAINSCOT

FLOORS: TILE

BASE: TILE

WINDOWS: N/A

DOORS: SOLID CORE WOOD

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGS

N/A

OTHER

SOUND BATTS

GENERAL

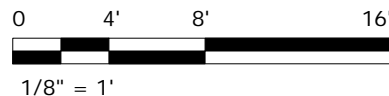
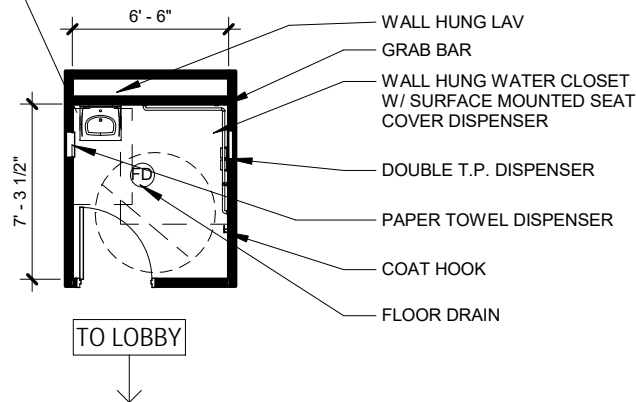
AREA 54 SF

OPERATIONAL CRITERIA Supports public visitors. Direct Access from lobby. Secure from operational portion of the facility.

SPECIALTY SPACE No

PREFERRED FLOOR

PUBLIC
RESTROOM
WOMEN
1.004
54 SF



CONSIDERATIONS

MATERIALS

CEILINGS: GWB

WALLS: GWB W/ TILE WAINSCOT

FLOORS: TILE

BASE: TILE

WINDOWS: N/A

DOORS: SOLID CORE WOOD

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGS

N/A

OTHER

SOUND BATTS

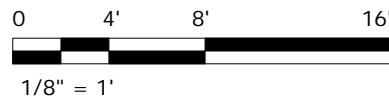
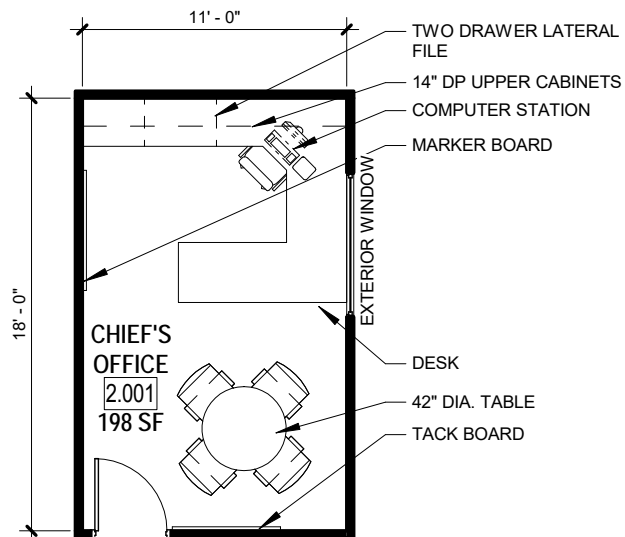
GENERAL

AREA 54 SF

OPERATIONAL CRITERIA Supports public visitors. Direct Access from lobby. Secure from operational portion of the facility.

SPECIALTY SPACE No

PREFERRED FLOOR



CONSIDERATIONS

MATERIALS

CEILINGS: ACT

WALLS: GWB

FLOORS: CARPET/ LVT

BASE: RUBBER

WINDOWS: FIBERGLASS

DOORS: SOLID CORE WOOD

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGS

WORKSTATION, FILE CABINET, SMALL CONFERENCE TABLE, GUEST CHAIRS

OTHER

SOUND BATTS

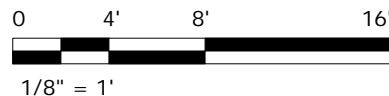
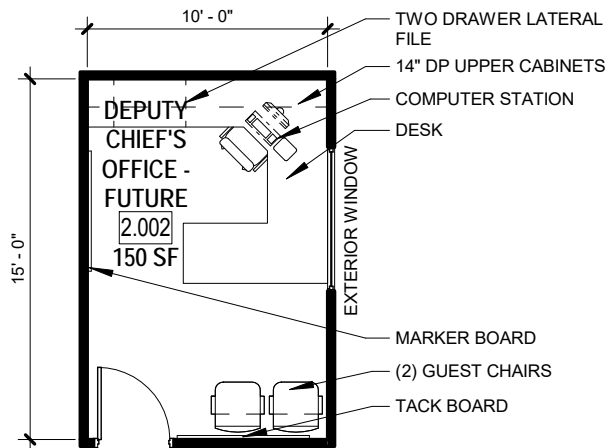
GENERAL

AREA 198 SF

OPERATIONAL CRITERIA Private office for departmental work. Flexible layout to accommodate change over time. Adjacent to office areas.

SPECIALTY SPACE No.

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: ACT

WALLS: GWB

FLOORS: CARPET/ LVT

BASE: RUBBER

WINDOWS: FIBERGLASS

DOORS: SOLID CORE WOOD

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGS

WORKSTATION, FILE CABINET, GUEST CHAIRS

OTHER

SOUND BATTS

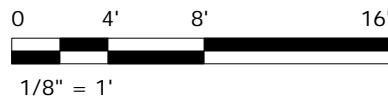
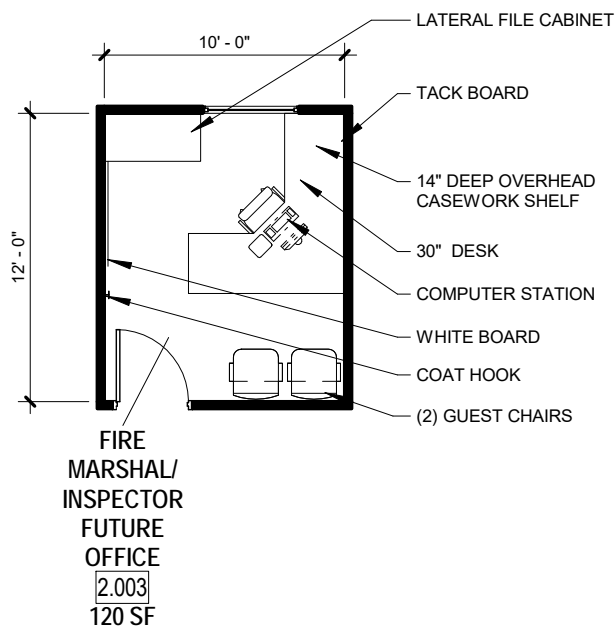
GENERAL

AREA 150 SF

OPERATIONAL CRITERIA Private office for departmental work. Flexible layout to accommodate change over time. Adjacent to office areas.

SPECIALTY SPACE No.

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: ACT

WALLS: GWB

FLOORS: CARPET/ LVT

BASE: RUBBER

WINDOWS: FIBERGLASS

DOORS: SOLID CORE WOOD

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGS

WORKSTATION, FILE CABINET, GUEST CHAIRS

OTHER

SOUND BATTS

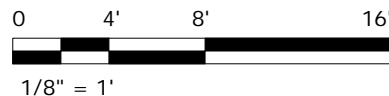
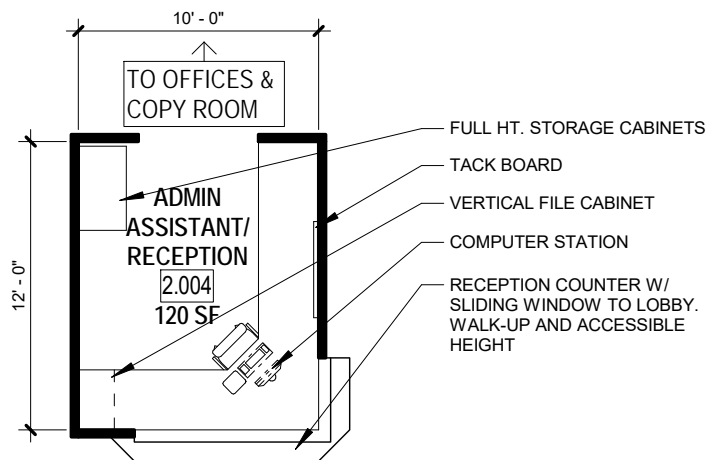
GENERAL

AREA 120 SF

OPERATIONAL CRITERIA Private office for departmental work. Flexible layout to accommodate change over time. Adjacent to office areas and close proximity to lobby.

SPECIALTY SPACE No

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: ACT

WALLS: GWB

FLOORS: CARPET/ LVT

BASE: RUBBER

WINDOWS: N/A

DOORS: SOLID CORE WOOD

CASEWORK: RECEPTION COUNTER

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

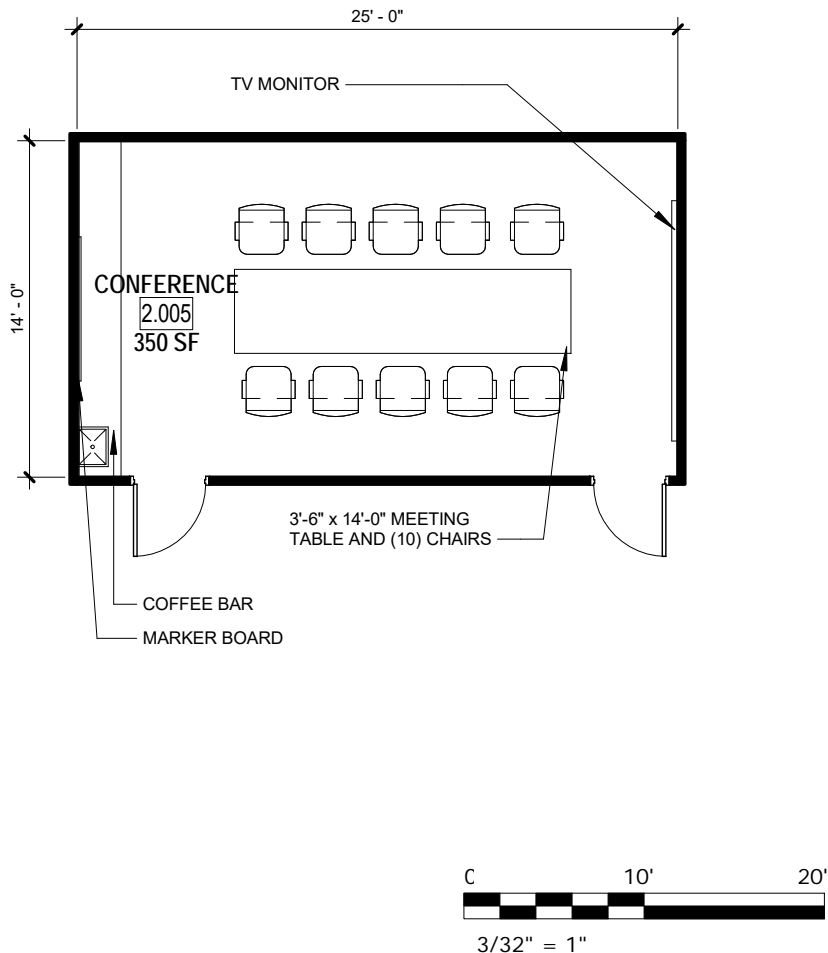
FURNISHINGSWORKSTATION, FILE CABINET,
RECEPTION DESK CHAIR**OTHER****GENERAL**

AREA 120 SF

OPERATIONAL CRITERIA Adjacent to public entrance lobby, admin offices and copy/work room.
Provides for interface with public. Near conference room

SPECIALTY SPACE No

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: ACT

WALLS: GWB

FLOORS: CARPET/ LVT

BASE: RUBBER

WINDOWS: FIBERGLASS

DOORS: SOLID CORE WOOD

CASEWORK: MANUFACTURED WITH QUARTZ
COUNTERTOP**SYSTEMS**

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGS3'-6" x 14'-0" MEETING TABLE AND (10)
CHAIRS**OTHER**

SOUND BATTS

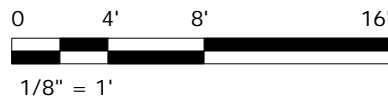
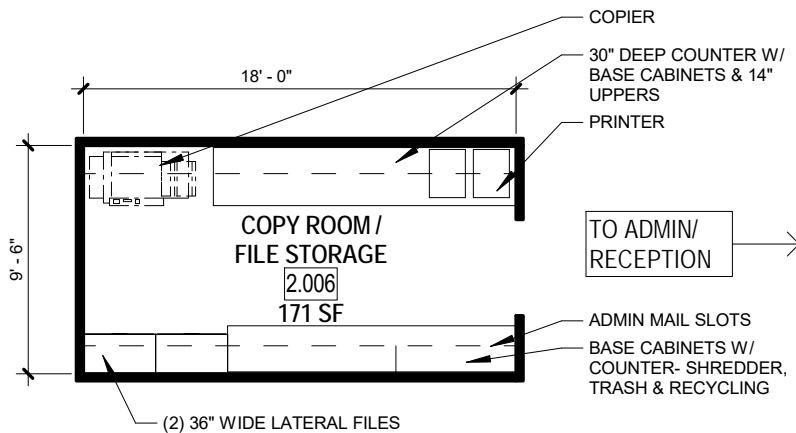
GENERAL

AREA 350 SF

OPERATIONAL CRITERIA Supports small fire department training or meetings for up to (10) seated at a table. Allows for multimedia capabilities.

SPECIALTY SPACE No

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: ACT

WALLS: GWB

FLOORS: LVT

BASE: RUBBER

WINDOWS: N/A

DOORS: N/A

CASEWORK: MANUFACTURED WITH QUARTZ COUNTERTOP

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGS

(2) 36" WIDE LATERAL FILES

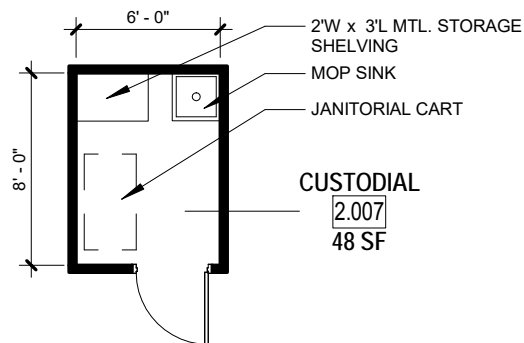
OTHER**GENERAL**

AREA 171 SF

OPERATIONAL CRITERIA Provide space for copy machine and copy organization. Storage for general office supplies. Mail slots for admin.

SPECIALTY SPACE No

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: GWB

WALLS: GWB

FLOORS: LVT

BASE: RUBBER

WINDOWS: N/A

DOORS: SOLID CORE WOOD

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGS

MTL STORAGE SHELVING

OTHER

WALL PROTECTION

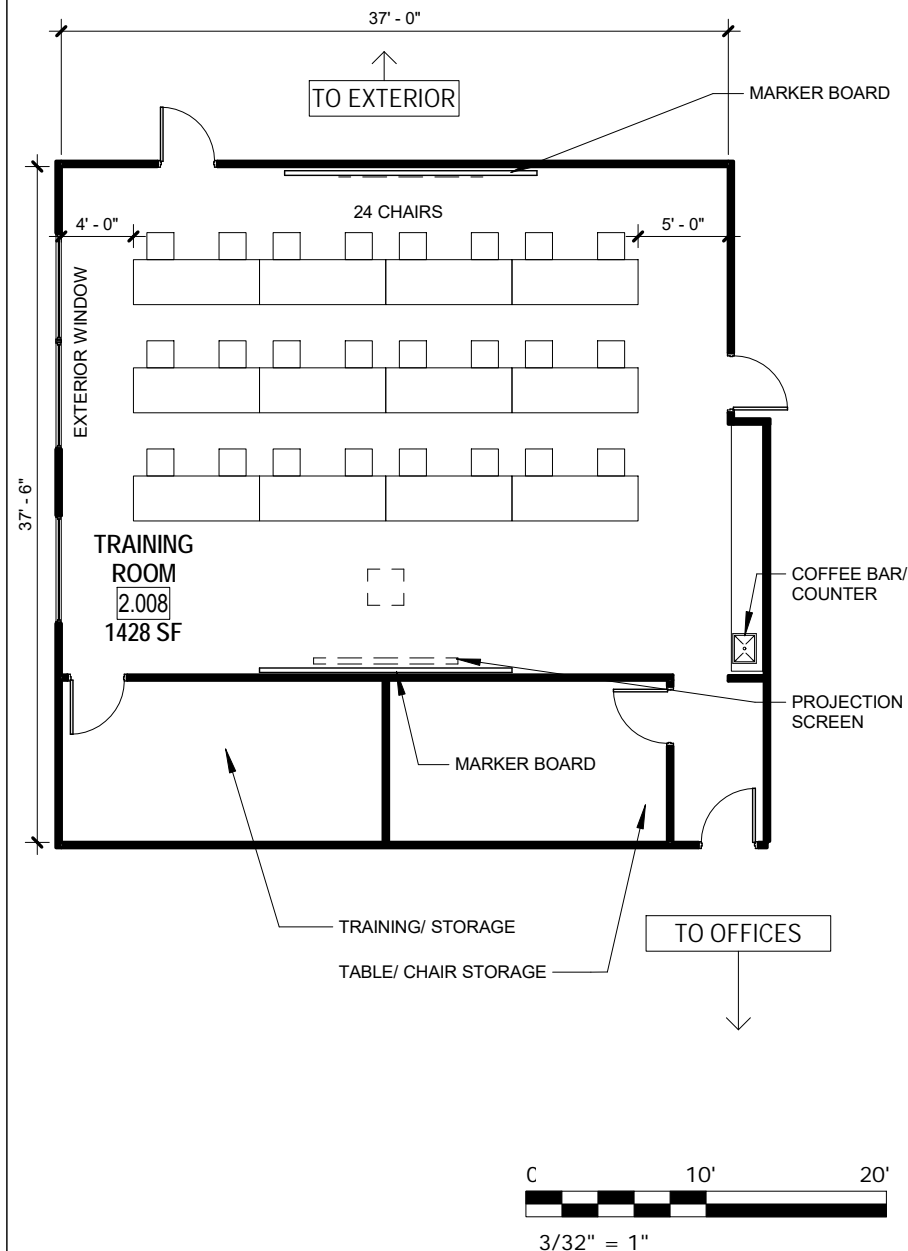
GENERAL

AREA 48 SF

OPERATIONAL CRITERIA Supports Admin area maintenance by users.

SPECIALTY SPACE No.

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: ACT

WALLS: GWB

FLOORS: LVT/ POLISHED CONCRETE

BASE: RUBBER

WINDOWS: FIBERGLASS

DOORS: SOLID CORE WOOD

CASEWORK: MANUFACTURE W/ QUARTZ
COUNTER**SYSTEMS**

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGSTABLE, CHAIRS, MARKER BOARD,
PROJECTOR, MONITOR**OTHER**

BACK UP EOC

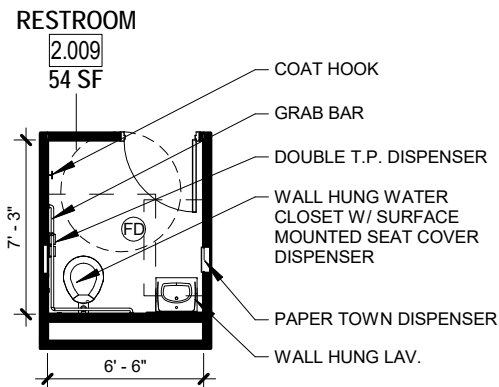
GENERAL

AREA 1428 SF

OPERATIONAL CRITERIA Supports meetings and classes for up to (50) in chairs and (24) at
tables seated in chairs. Potential access to drill grounds.

SPECIALTY SPACE YES POTENTIAL BACK UP EOC

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: GWB

WALLS: GWB W/ TILE WAINSCOT

FLOORS: TILE

BASE: TILE

WINDOWS: N/A

DOORS: SOLID CORE WOOD

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGS

N/A

OTHER

SOUND BATTS

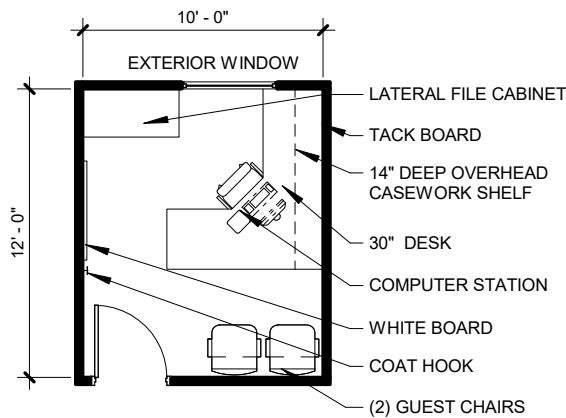
GENERAL

AREA 54 SF

OPERATIONAL CRITERIA Supports administrative staff. Direct access to offices. Secure from lobby and public.

SPECIALTY SPACE No

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: ACT

WALLS: GWB

FLOORS: LVT/ POLISHED CONCRETE

BASE: RUBBER

WINDOWS: FIBERGLASS

DOORS: SOLID CORE WOOD

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGS

WORKSTATION, FILE CABINET, GUEST CHAIRS

OTHER

SOUND BATTS

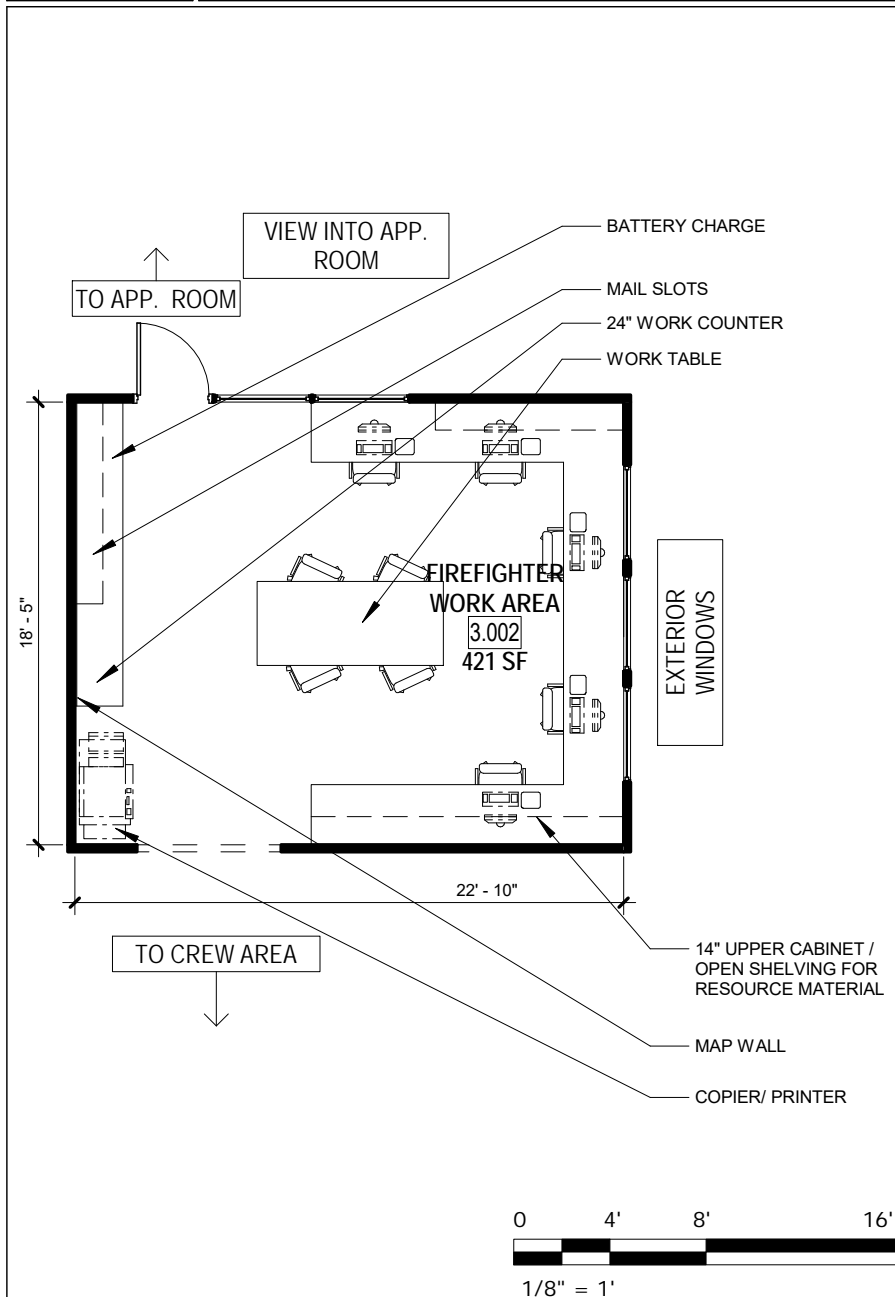
GENERAL

AREA 120 SF

OPERATIONAL CRITERIA Private office for departmental work. Flexible layout to accommodate change over time. Adjacent to firefighter work area.

SPECIALTY SPACE No

PREFERRED FLOOR



CONSIDERATIONS

MATERIALS

CEILINGS: ACT

WALLS: GWB

FLOORS: LVT/ POLISHED CONCRETE

BASE: RUBBER

WINDOWS: FIBERGLASS

DOORS: HOLLOW METAL

CASEWORK: MANUFACTURED WITH QUARTZ COUNTERTOP

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGS

WORK TABLE, CHAIR, COPIER

OTHER

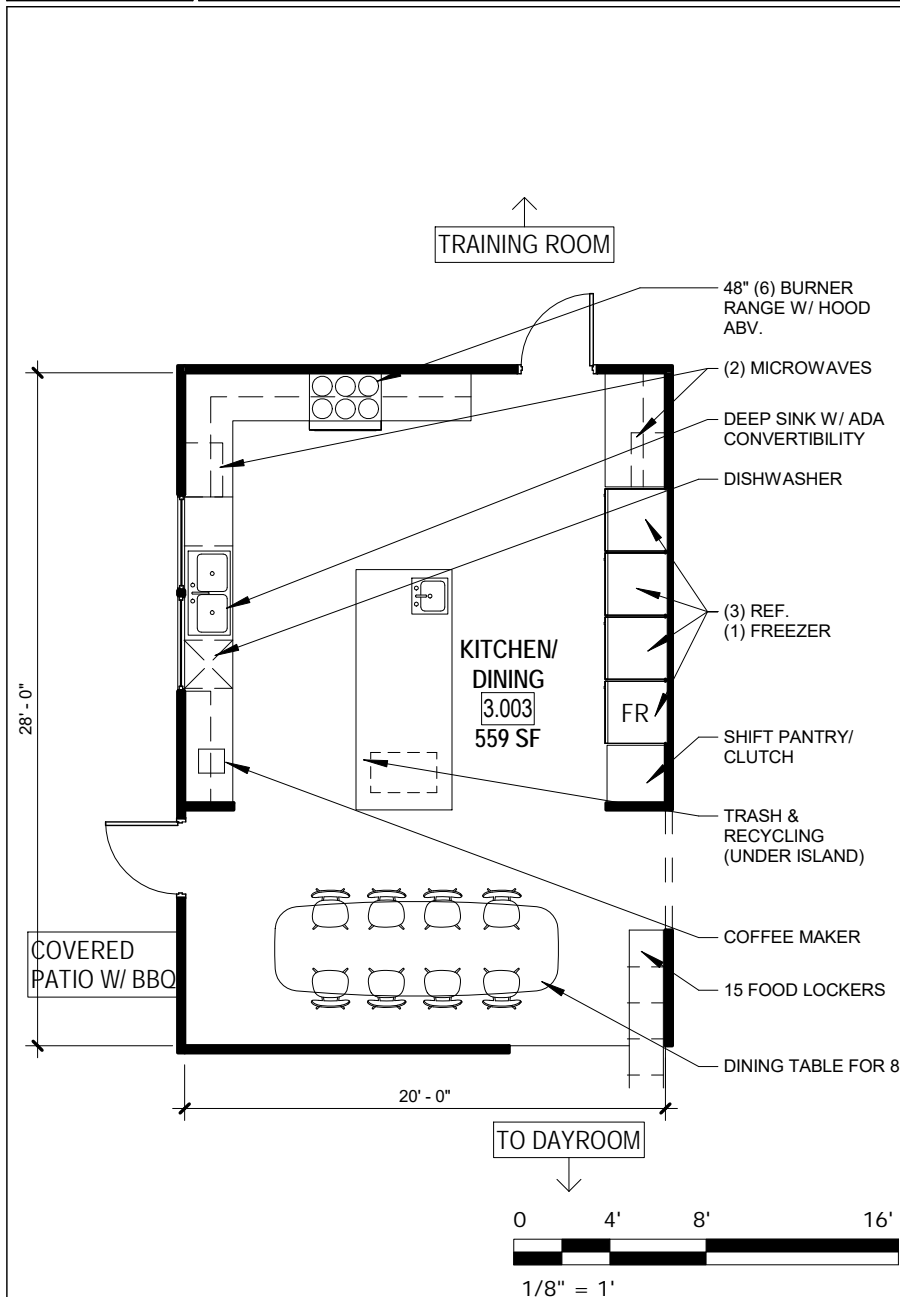
GENERAL

AREA 421 SF

OPERATIONAL CRITERIA Supports daily firefighter shift work, including training, report writing, conferences, dispatch and radio charging. Work stations for (5) firefighters. Adjacent to apparatus bay.

SPECIALTY SPACE No.

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: ACT

WALLS: GWB

FLOORS: LVT/ POLISHED CONCRETE

BASE: RUBBER

WINDOWS: FIBERGLASS

DOORS: STOREFRONT

CASEWORK: MANUFACTURED WITH QUARTZ
COUNTERTOP**SYSTEMS**

HVAC: TBD

LIGHTING: LED

OTHER: DINING TABLE FOR 8 (10'x4')

FURNISHINGS

N/A

OTHER**GENERAL**

AREA 559 SF

OPERATIONAL CRITERIA Supports crew of (8), located near apparatus room and training room.
Expandable into training room for larger dining and events.

SPECIALTY SPACE No.

PREFERRED FLOOR

CONSIDERATIONS**MATERIALS**

CEILINGS: ACT

WALLS: GWB

FLOORS: LVT/ POLISHED CONCRETE

BASE: RUBBER

WINDOWS: FIBERGLASS

DOORS: STOREFRONT

CASEWORK: MANUFACTURED WITH QUARTZ
COUNTERTOP**SYSTEMS**

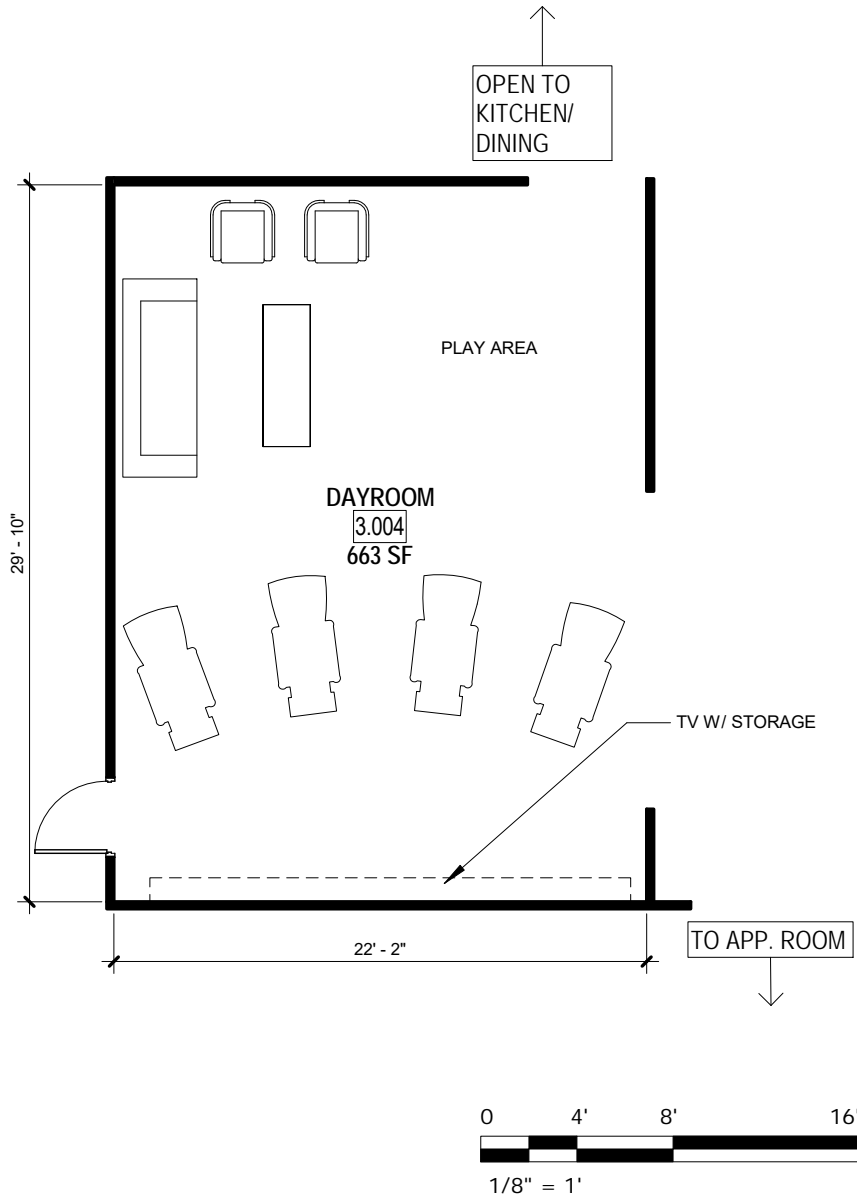
HVAC: TBD

LIGHTING: LED - DIMMER

OTHER:

FURNISHINGS

SOFAS, RECLINERS, COFFEE TABLE

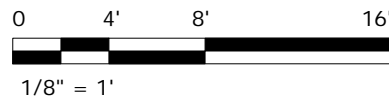
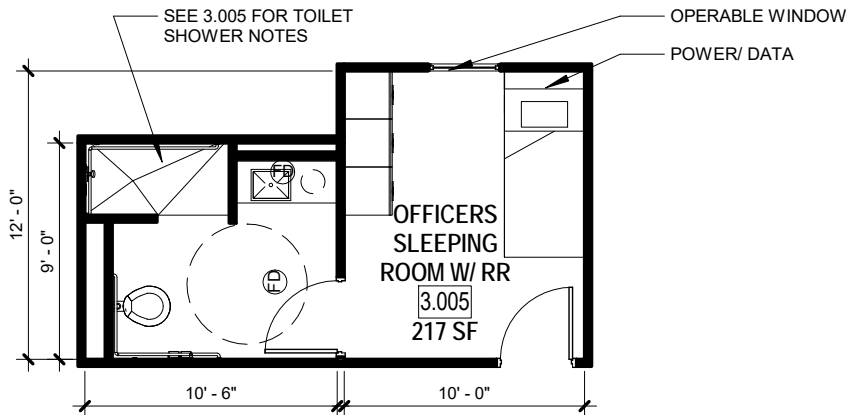
OTHER**GENERAL**

AREA 663 SF

OPERATIONAL CRITERIA Supports crew living area and visting family. Provides space to decompress and rehab following a call. Close access to apparatus bay.

SPECIALTY SPACE No.

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: ACT

WALLS: GWB

FLOORS: LVT/ POLISHED CONCRETE

BASE: RUBBER

WINDOWS: FIBERGLASS

DOORS: SOLID CORE WOOD

CASEWORK: MANUFACTURED WARDROBE
UNITS AND HEADBOARD**SYSTEMS**

HVAC: TBD - INDIVIDUAL CONTROL

LIGHTING: LED - DIMMER

OTHER:

FURNISHINGS

BED

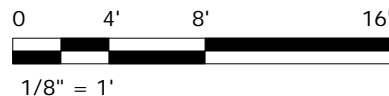
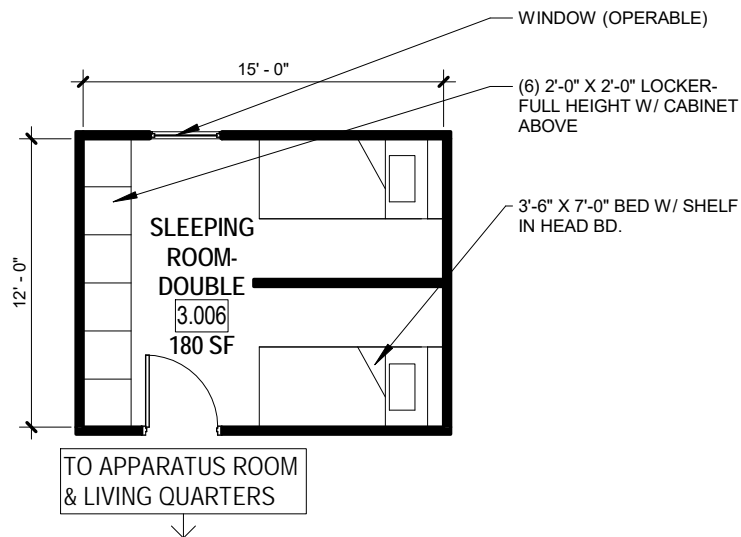
OTHER**GENERAL**

AREA 217 SF

OPERATIONAL CRITERIA Individual sleeping room with (1) wardrobe unit per shift. Individual room with privacy lock. Provide acoustical separation between sleeping rooms. Attached toilet/ shower room adjacent to officers sleeping room.

SPECIALTY SPACE No.

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: ACT

WALLS: GWB

FLOORS: LVT/ POLISHED CONCRETE

BASE: RUBBER

WINDOWS: FIBERGLASS

DOORS: SOLID CORE WOOD

CASEWORK: MANUFACTURED WARDROBE
UNITS AND HEADBOARD**SYSTEMS**

HVAC: TBD - INDIVIDUAL CONTROL

LIGHTING: LED - DIMMER

OTHER:

FURNISHINGS

BEDS

OTHER

SOUND BATTS

GENERAL

AREA 180 SF

OPERATIONAL CRITERIA Double sleeping room with (2) wardrobe units per shift. Provide door with privacy lock. Provide acoustical separation between sleeping rooms.

SPECIALTY SPACE No

PREFERRED FLOOR

CONSIDERATIONS**MATERIALS**

CEILINGS: GWB

WALLS: TILE

FLOORS: TILE

BASE: TILE

WINDOWS: N/A

DOORS: SOLID CORE WOOD

CASEWORK: MANUFACTURED WITH QUARTZ
COUNTERTOP**SYSTEMS**

HVAC: TBD - GOOD VENTILATION

LIGHTING: LED

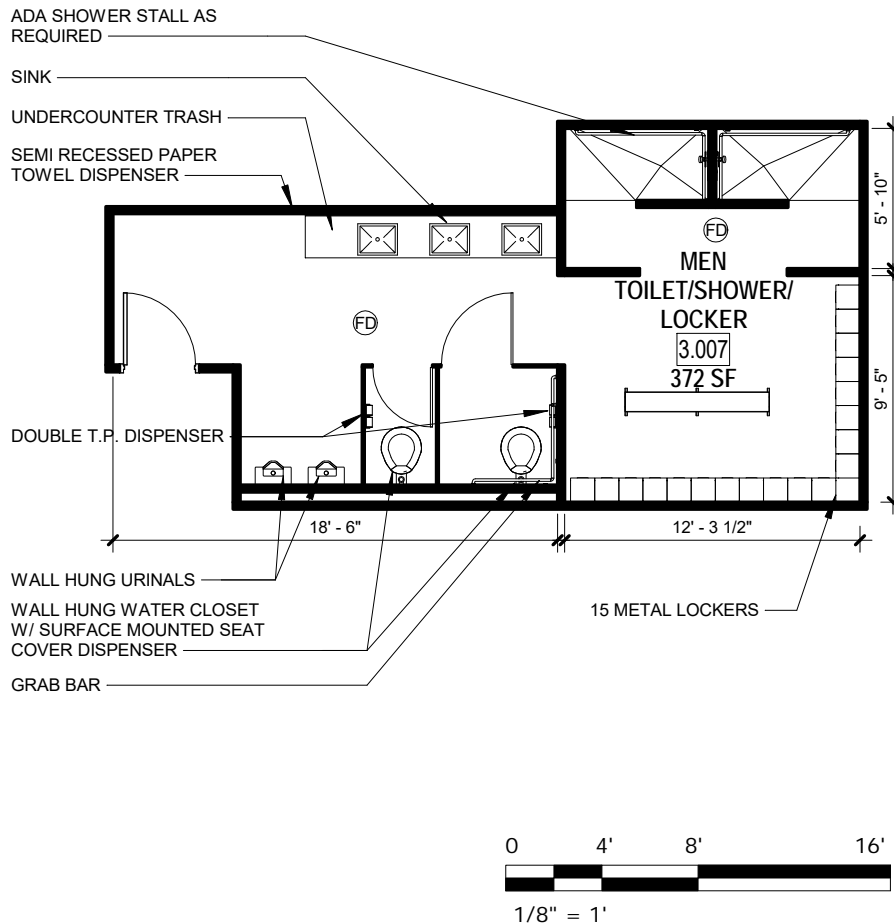
OTHER: N/A

FURNISHINGS

20 LOCKERS, BENCH

OTHER

SOUND BATTS

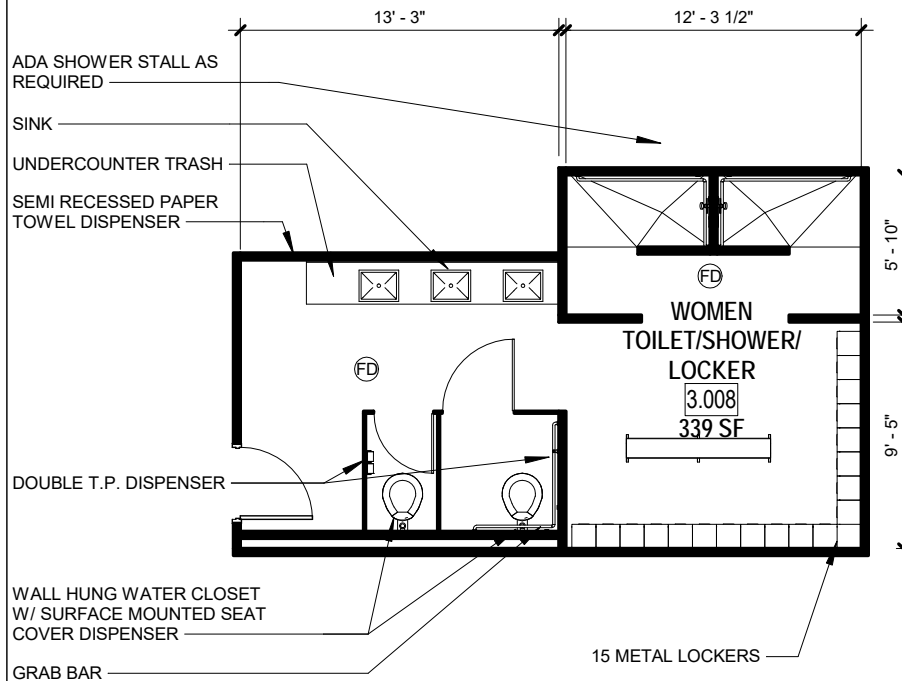
**GENERAL**

AREA 372 SF

OPERATIONAL
CRITERIA

SPECIALTY SPACE No.

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: GWB

WALLS: TILE WAINSCOT

FLOORS: TILE

BASE: TILE

WINDOWS: N/A

DOORS: SOLID CORE WOOD

CASEWORK: MANUFACTURED WITH QUARTZ COUNTERTOP

SYSTEMS

HVAC: TBD - GOOD VENTILATION

LIGHTING: LED W/ MOTION SENSOR TIMER

OTHER: N/A

FURNISHINGS

20 LOCKERS, BENCH

OTHER

SOUND BATTS

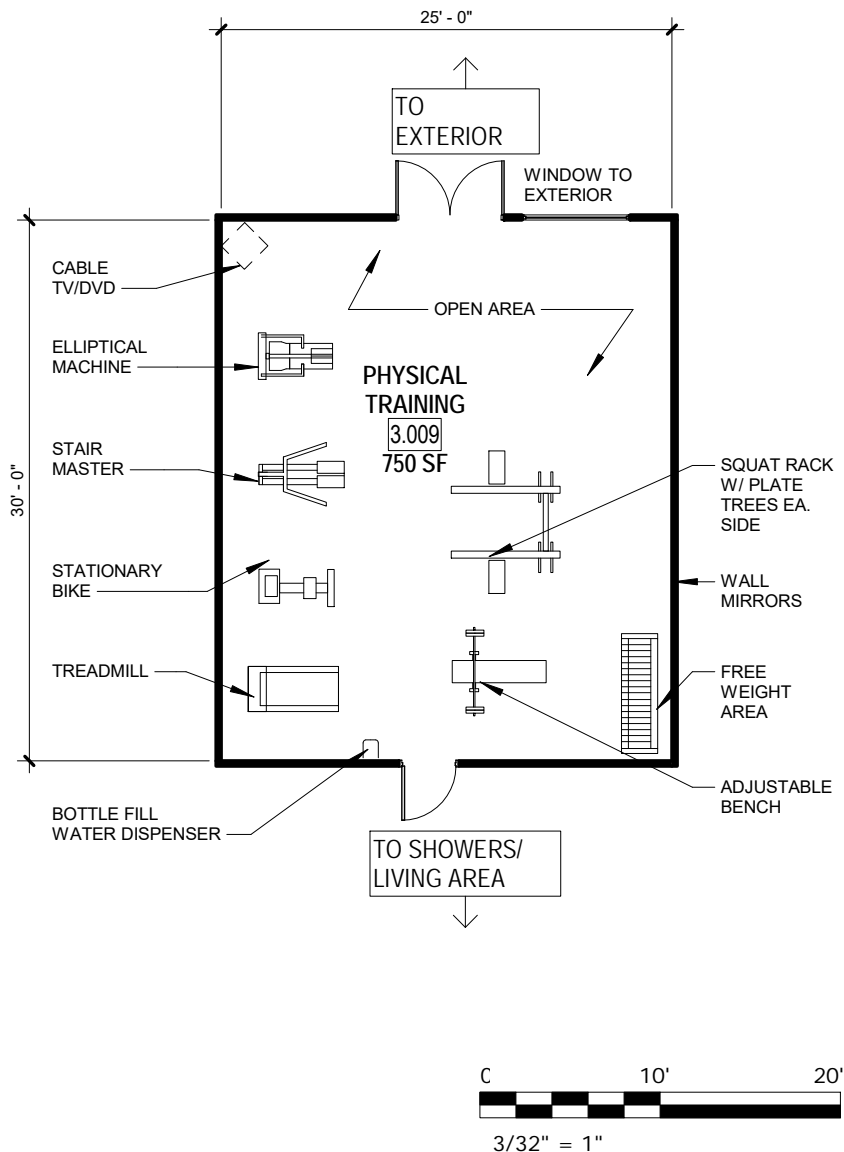
GENERAL

AREA 377 SF

OPERATIONAL
CRITERIA

SPECIALTY SPACE NO

PREFERRED FLOOR

**GENERAL**

AREA 750 SF

OPERATIONAL CRITERIA Area for mandated physical training. Configuration based on equipment requirements. 4-6 working out.

SPECIALTY SPACE No

PREFERRED FLOOR

CONSIDERATIONS**MATERIALS**

CEILINGS: ACT

WALLS: IMPACT RESISTANT

FLOORS: RUBBER

BASE: RUBBER

WINDOWS: FIBERGLASS

DOORS: SOLID CORE WOOD, STOREFRONT

CASEWORK: N/A

SYSTEMS

HVAC: TBD - GOOD VENTILATION CEILING FAN

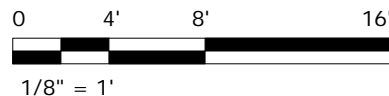
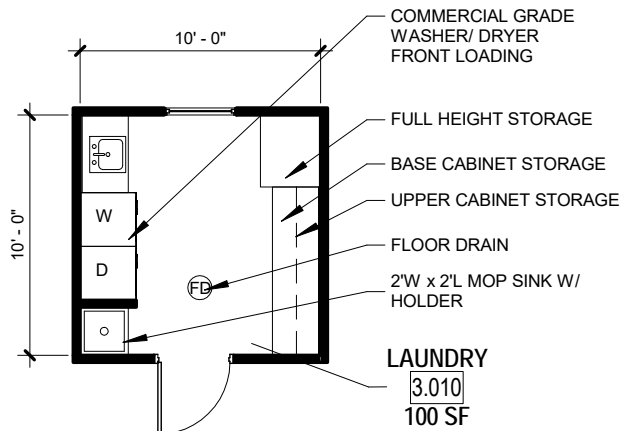
LIGHTING: LED

OTHER: SOUND ISOLATE

FURNISHINGS

EXERCISE EQUIPMENTS (4) CARDIO, FREE WEIGHTS, WALL MIRROR, BALL.

OTHER12'-0" HIGH CEILING MIN.
SOUND BATTS
ISOLATE SLAB



CONSIDERATIONS

MATERIALS

CEILINGS: GWB

WALLS: GWB

FLOORS: LVT OR POLISH CONCRETE

BASE: RUBBER

WINDOWS: FIBERGLASS (IF ANY)

DOORS: SOLID CORE WOOD

CASEWORK: MANUFACTURED WITH QUARTZ COUNTERTOP

SYSTEMS

HVAC: TBD - GOOD VENTILATION

LIGHTING: LED W/ MOTION SENSOR TIMER

OTHER: SOUND ISOLATED

FURNISHINGS

ELECTRIC WASHER AND DRYER

OTHER

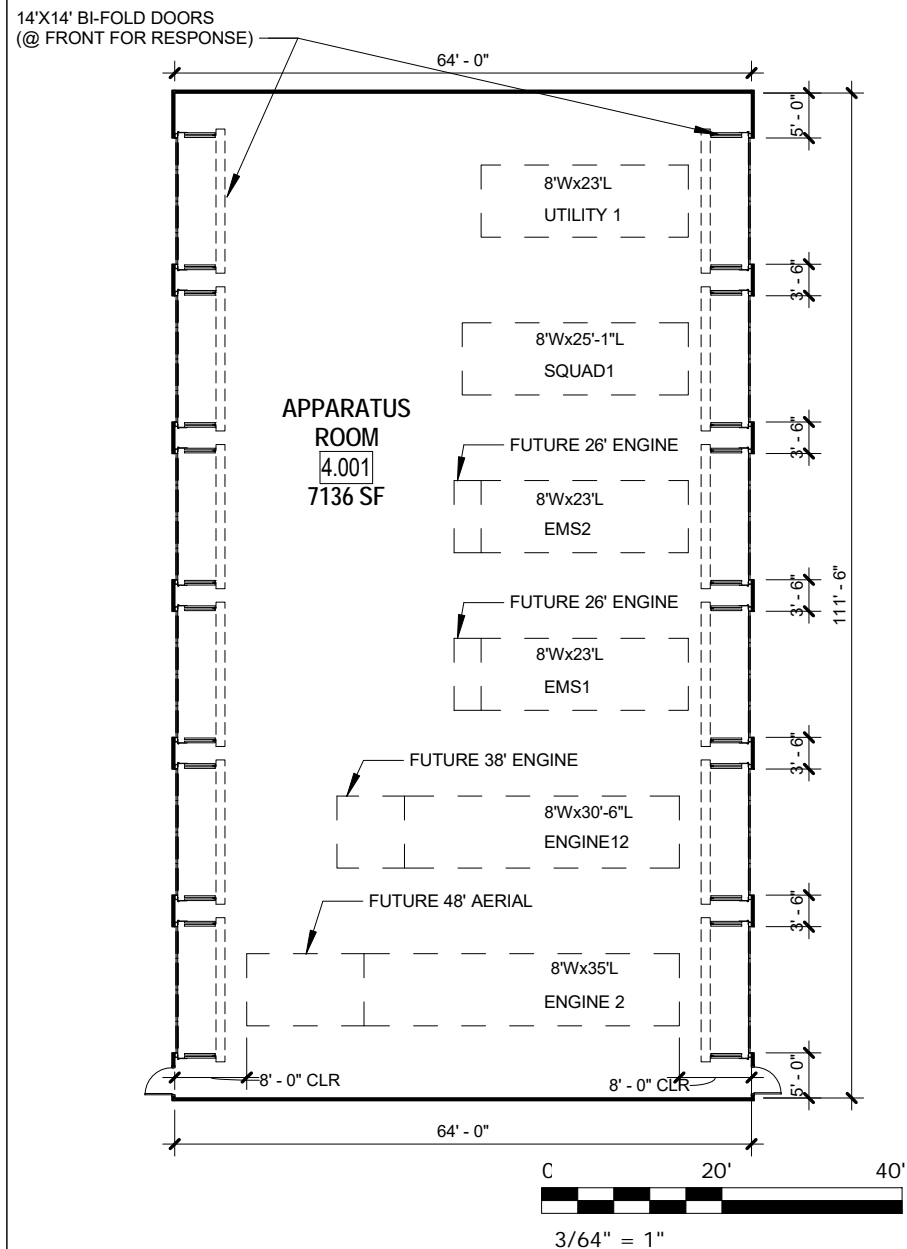
GENERAL

AREA 100 SF

OPERATIONAL CRITERIA Supports ability to clean personal and in-house linens. Separate room avoids potential cross-contamination issue with cleaning of personal protective equipment. Limited linen and custodial storage supplies. Locate on or near an exterior wall for dryer venting and away from sleeping rooms.

SPECIALTY SPACE No.

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: EXPOSED SOUND INSULATED DECK

WALLS: MOISTURE PROOF, CONC, MASONRY

FLOORS: 5,000# PSI POLISHED CONCRETE,
SLIP RESISTANT

BASE: DUMAPLAST MOISTURE PROOF

WINDOWS: TBD

DOORS: HOLLOW METAL

CASEWORK: N/A

SYSTEMSHVAC: RADIANT FLOOR, SOURCE CAPTURE
EXHAUST, PADDLE FAN

LIGHTING: LED

OTHER: N/A

FURNISHINGS

N/A

OTHER

PROVIDE OVERHANG FRONT AND BACK

GENERAL

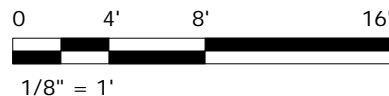
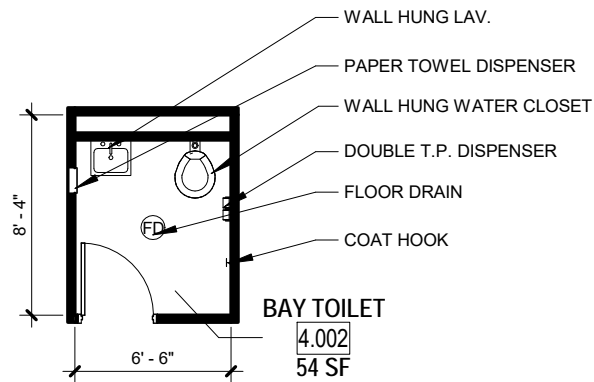
AREA 7136 SF

**OPERATIONAL
CRITERIA**

Space for current and projected apparatus needs. Drive through capabilities on all bays preferred for safety. Bay depth is consistent to allow for move up coverage and daily equipment checks. Ability to wash apparatus inside bays. 6 total bays.

SPECIALTY SPACE

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: GWB

WALLS: TILE

FLOORS: POLISHED CONCRETE

BASE: TILE

WINDOWS: N/A

DOORS: HOLLOW METAL

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER: N/A

FURNISHINGS

N/A

OTHER

SOUND BATTS

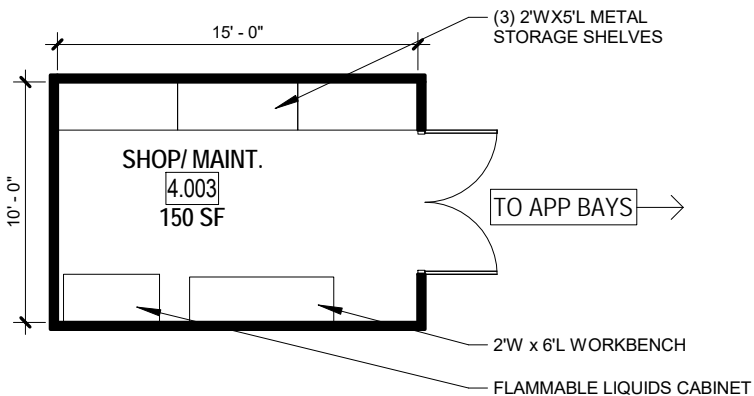
GENERAL

AREA 54 SF

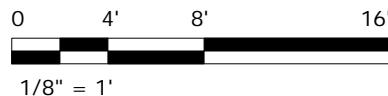
OPERATIONAL CRITERIA Unisex toilet room, accessible restroom for personnel to use without cross contaminating facility. Direct access from apparatus bay.

SPECIALTY SPACE No.

PREFERRED FLOOR



NOTE: SCBA MAINTENANCE
AND COMPRESSOR CAN BE
COMBINED WITH SHOP



CONSIDERATIONS

MATERIALS

CEILINGS: GWB/ EXPOSED

WALLS: IMPACT RESISTANT

FLOORS: POLISHED CONCRETE

BASE: N/A

WINDOWS: N/A

DOORS: HOLLOW METAL

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER: N/A

FURNISHINGS

WORKBENCH, SHELVING, FLAMMABLE
LIQUIDS, CABINET

OTHER

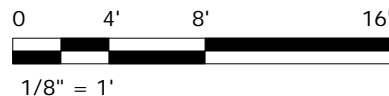
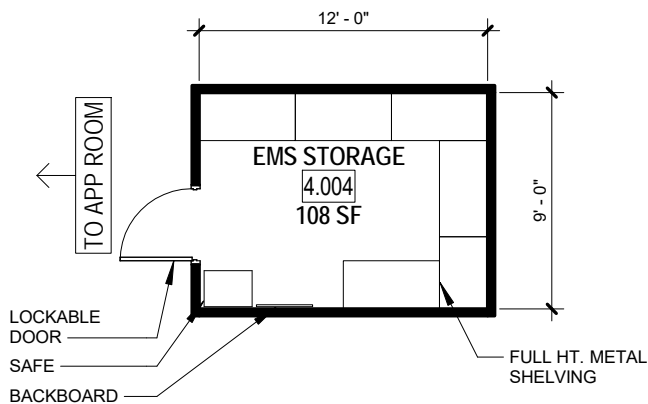
GENERAL

AREA 150 SF

OPERATIONAL CRITERIA Supports for daily equipment checks, maintenance and tool repair.
Hand tools. No rolling stock maintenance.

SPECIALTY SPACE No.

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: GWB/ EXPOSED

WALLS: IMPACT RESISTANT

FLOORS: POLISHED CONCRETE

BASE: RUBBER

WINDOWS: N/A

DOORS: HOLLOW METAL

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGS

SAFE METAL SHELVING

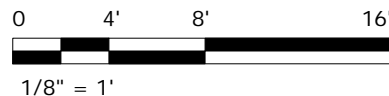
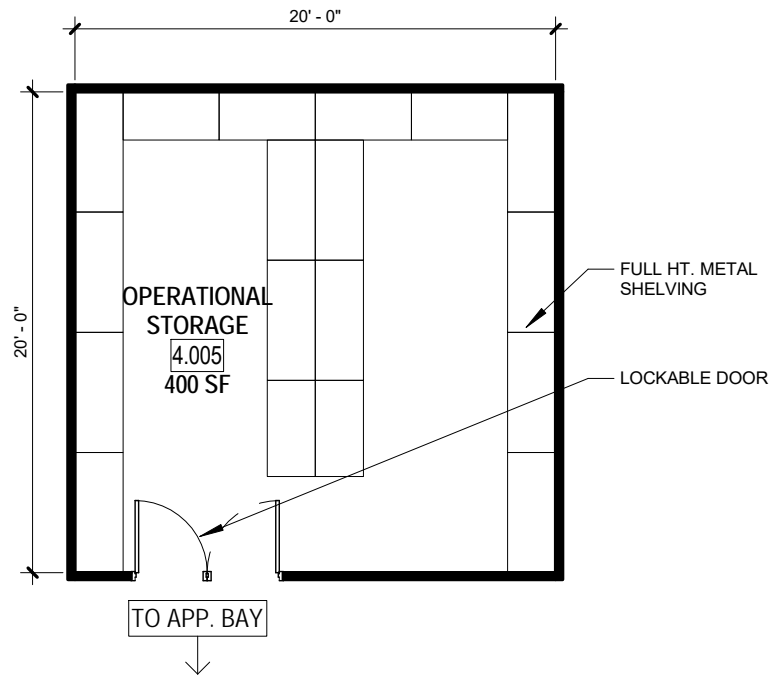
OTHER**GENERAL**

AREA 108 SF

OPERATIONAL CRITERIA Supports storage of supplies. Adjacent to Apparatus Room and ambulance bays. No refrigeration, small safe, Class 1 DEA requirement - double locked, Narcotics storage.

SPECIALTY SPACE No.

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: EXPOSED

WALLS: IMPACT RESISTANCE

FLOORS: POLISHED CONCRETE

BASE: RUBBER

WINDOWS: N/A

DOORS: HOLLOW METAL

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGS

METAL SHELVING

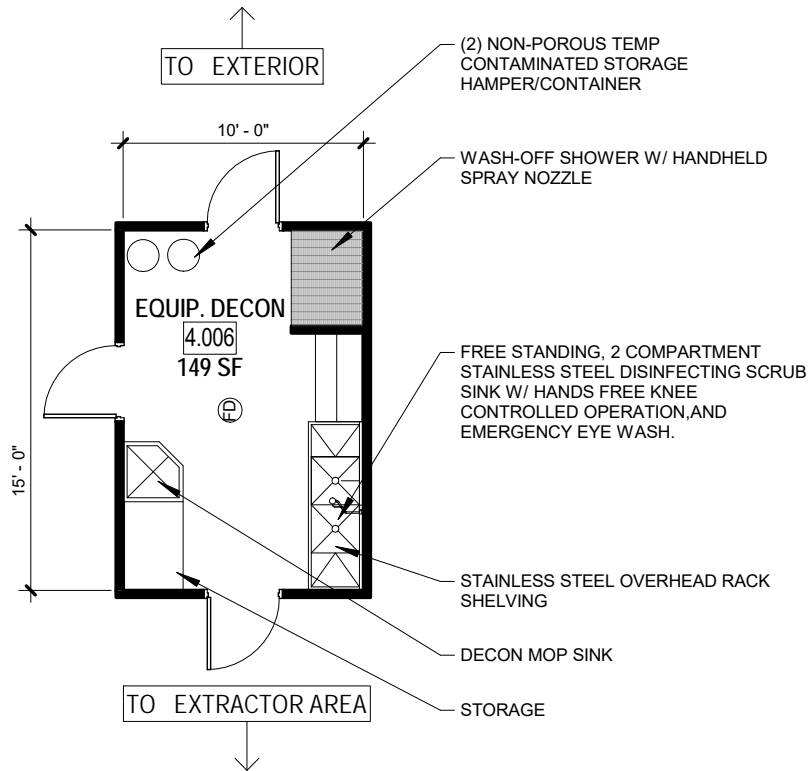
OTHER**GENERAL**

AREA 400 SF

OPERATIONAL CRITERIA Supports general equipment storage, homeland security storage, public education storage, new turnout gear, city and FD radio storage. Locate on opposite side of apparatus bay from offices / living.

SPECIALTY SPACE No.

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: GWB/ EXPOSED

WALLS: MOISTURE PROOF

FLOORS: POLISHED CONCRETE

BASE: MOISTURE PROOF

WINDOWS: N/A

DOORS: HOLLOW METAL

CASEWORK: STAINLESS STEEL SHELVING

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGS

METAL STORAGE, CABINET

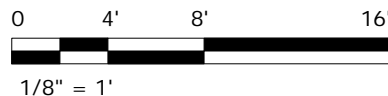
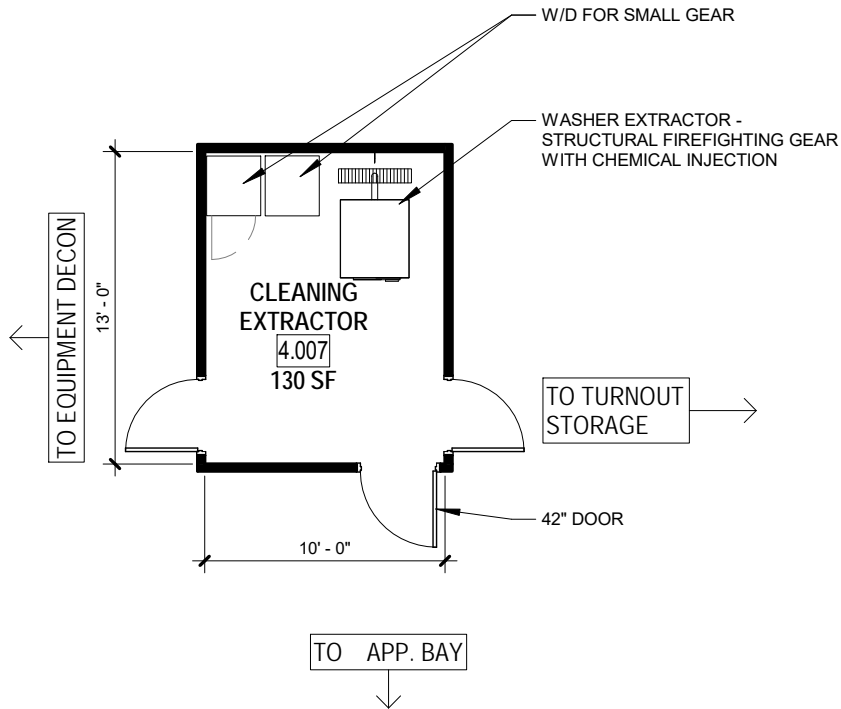
OTHER**GENERAL**

AREA 149 SF

OPERATIONAL CRITERIA Supports the decontamination of personnel, personal protective equipment and tools after incidents. Supports the cleaning personal protective equipment.

SPECIALTY SPACE No.

PREFERRED FLOOR



CONSIDERATIONS

MATERIALS

CEILINGS: GWB/ EXPOSED

WALLS: MOISTURE PROOF

FLOORS: POLISHED CONCRETE

BASE: MOISTURE PROOF

WINDOWS: N/A

DOORS: HOLLOW METAL

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGS

EXTRACTOR, WASHER AND DRYER

OTHER

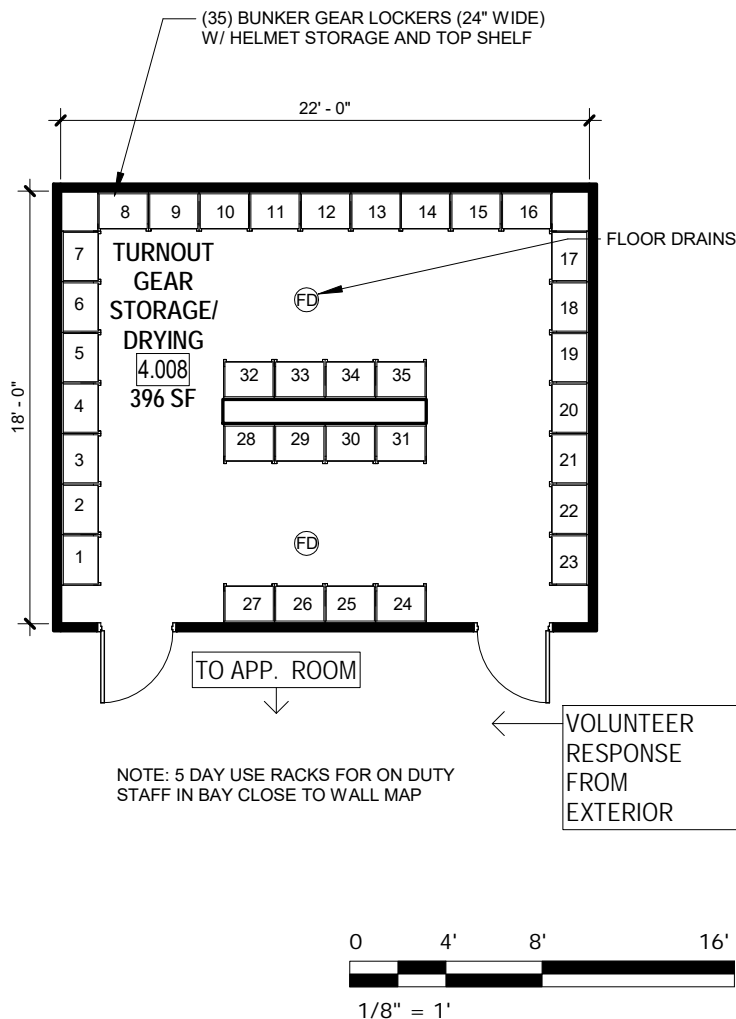
GENERAL

AREA 130 SF

OPERATIONAL CRITERIA Supports the decontamination of personnel, personal protective equipment and tools after incidents. Supports the cleaning of bunker gear.

SPECIALTY SPACE No

PREFERRED FLOOR



CONSIDERATIONS

MATERIALS

CEILINGS: GWB/ EXPOSED

WALLS: MOISTURE RESISTANCE

FLOORS: POLISHED CONCRETE

BASE: MOISTURE RESISTANCE

WINDOWS: N/A

DOORS: HOLLOW METAL

CASEWORK: N/A

SYSTEMS

HVAC: MULTI-STAGED HEAT AND VENTILATION

LIGHTING: LED

OTHER:

FURNISHINGS

MANUFACTURED TURNOUT RACKS
WITH TOP SHELF

OTHER

CLOSE TO MAP AND DISPATCH RADIO

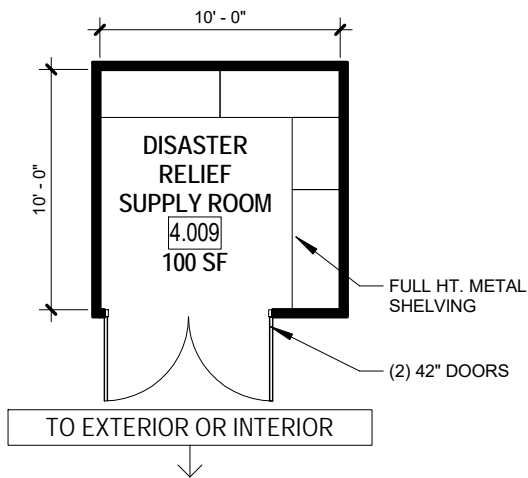
GENERAL

AREA 396 SF

OPERATIONAL CRITERIA Supports the storage and drying of personal bunker gear, helmets, boots, and wildland gear. Storage for (25) Volunteers racks and (10) paid.

SPECIALTY SPACE No.

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: EXPOSED

WALLS: IMPACT RESISTANT

FLOORS: POLISHED CONCRETE

BASE: RUBBER

WINDOWS: N/A

DOORS: HOLLOW METAL

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGS

METAL SHELVINGS

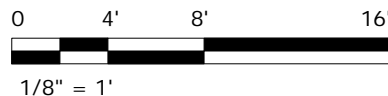
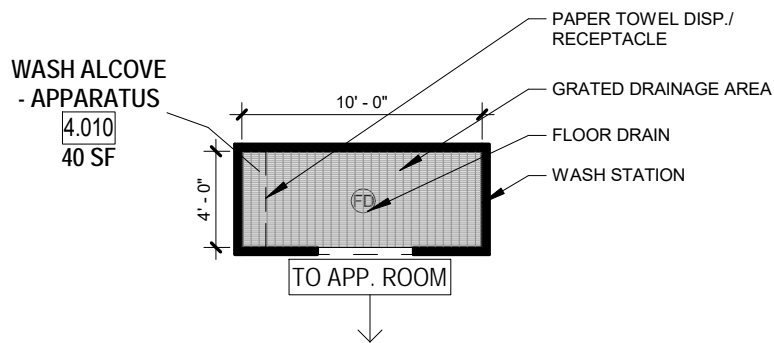
OTHER**GENERAL**

AREA 100 SF

OPERATIONAL CRITERIA Supports storage of disaster relief supplies. Adjacent to Apparatus Room.

SPECIALTY SPACE No.

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: OPEN

WALLS: IMPACT RESISTANT/ WATERPROOF

FLOORS: GRATED

BASE: N/A

WINDOWS: N/A

DOORS: N/A

CASEWORK: N/A

SYSTEMS

HVAC: FAN

LIGHTING: LED

OTHER:

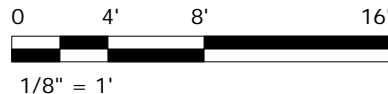
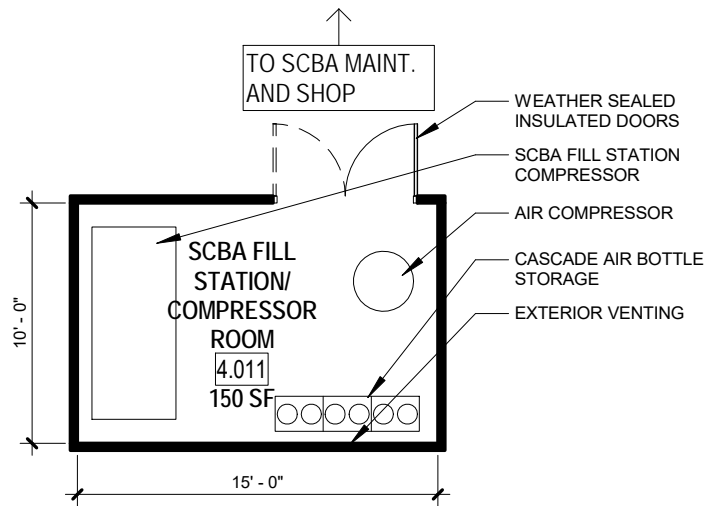
FURNISHINGS**OTHER****GENERAL**

AREA 40 SF

OPERATIONAL CRITERIA Supports the storage of apparatus cleaning equipment including brushes and squeegees to avoid cross contamination with living area equipment. Locate adjacent to bay.

SPECIALTY SPACE No.

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: EXPOSED

WALLS: IMPACTED RESISTANCE

FLOORS: POLISHED CONCRETE

BASE: RUBBER

WINDOWS: N/A

DOORS: HOLLOW METAL

CASEWORK: N/A

SYSTEMS

HVAC: GOOD VENTILATION

LIGHTING: LED

OTHER: SOUND ISOLATED

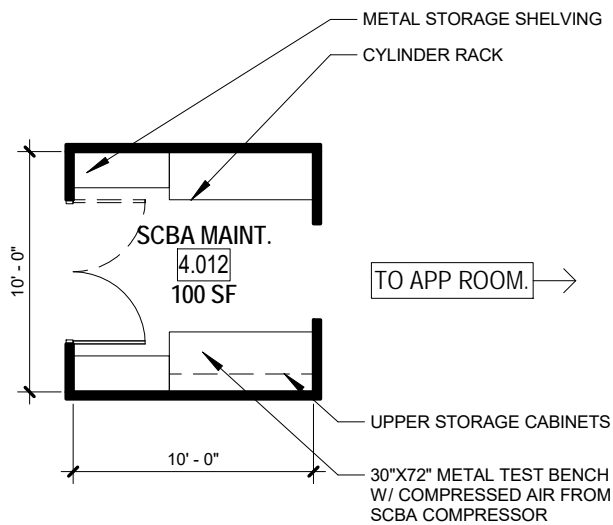
FURNISHINGS**OTHER**SCBA COMPRESSOR WITH CASCADE & FILL
STATION, HOUSE AIR COMPRESSOR**GENERAL**

AREA 150 SF

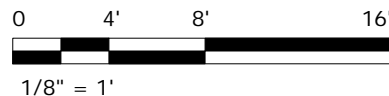
OPERATIONAL CRITERIA Supports storage and fill of self-contained breathing apparatus. Locate adjacent to bay and SCBA Maintenance and Shop.

SPECIALTY SPACE No

PREFERRED FLOOR



NOTE: CAN BE ADDED TO SHOP AREA



CONSIDERATIONS

MATERIALS

CEILINGS: EXPOSED

WALLS: IMPACTED RESISTANT

FLOORS: POLISHED CONCRETE

BASE: RUBBER

WINDOWS: N/A

DOORS: HOLLOW METAL

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGS

METAL WORKBENCH, SHELVING AND
RACK BOTTLE STORAGE

OTHER

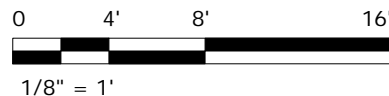
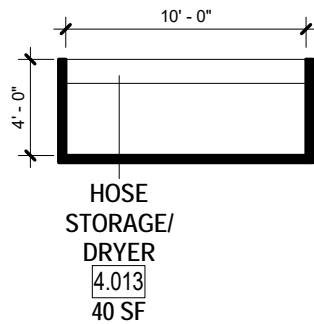
GENERAL

AREA 100 SF

OPERATIONAL CRITERIA Supports minor maintenance and storage of self-contained breathing apparatus. Locate adjacent to bay and SCBA Fill Station.

SPECIALTY SPACE No

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: EXPOSED

WALLS: IMPACTED AND WATER RESISTANT

FLOORS: POLISHED CONCRETE

BASE: WATER RESISTANT

WINDOWS: N/A

DOORS: N/A

CASEWORK: N/A

SYSTEMS

HVAC: N/A

LIGHTING: N/A

OTHER:

FURNISHINGS

(3) TIER HOSE RACK

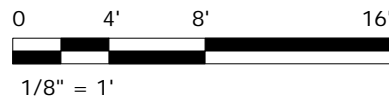
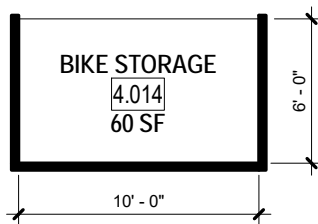
OTHER**GENERAL**

AREA 40 SF

OPERATIONAL CRITERIA Supports hose storage. Locate adjacent to bay.

SPECIALTY SPACE No

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: EXPOSED

WALLS: IMPACTED AND WATER RESISTANT

FLOORS: POLISHED CONCRETE

BASE: WATER RESISTANT

WINDOWS: N/A

DOORS: N/A

CASEWORK: N/A

SYSTEMS

HVAC: N/A

LIGHTING: LED

OTHER:

FURNISHINGS**OTHER**

BIKE HOOKS

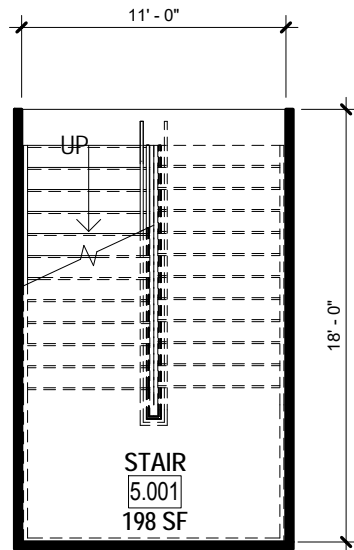
GENERAL

AREA 60 SF

OPERATIONAL CRITERIA Sized to support facility. Supports storage of bicycles

SPECIALTY SPACE No

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: GWB

WALLS: GWB

FLOORS: RUBBER/ POLISHED CONCRETE

BASE: RUBBER

WINDOWS: N/A

DOORS: N/A

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

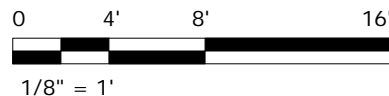
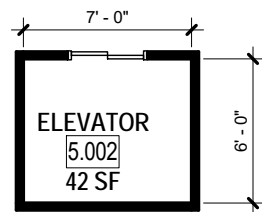
FURNISHINGS**OTHER****GENERAL**

AREA 198 SF

OPERATIONAL CRITERIA Supports circulation in the facility.

SPECIALTY SPACE No

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: MANUFACTURER

WALLS: METAL/ LAMINATE

FLOORS: RUBBER

BASE: METAL/ LAMINATE

WINDOWS: N/A

DOORS: METAL

CASEWORK: N/A

SYSTEMS

HVAC:

LIGHTING: LED

OTHER:

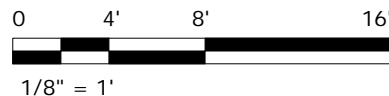
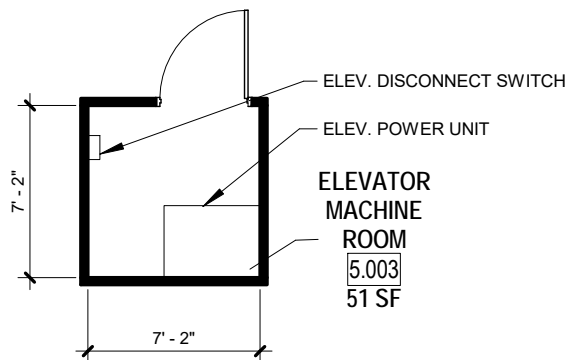
FURNISHINGS**OTHER****GENERAL**

AREA 42 SF

OPERATIONAL CRITERIA Supports circulation in the facility. ADA required.

SPECIALTY SPACE No

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: GWB

WALLS: GWB

FLOORS: RUBBER/ POLISHED CONCRETE

BASE: RUBBER

WINDOWS: N/A

DOORS: SOLID CORE WOOD

CASEWORK: N/A

SYSTEMS

HVAC: AIR CONDITIONING

LIGHTING: LED

OTHER:

FURNISHINGS**OTHER**

ELEVATOR EQUIPMENT

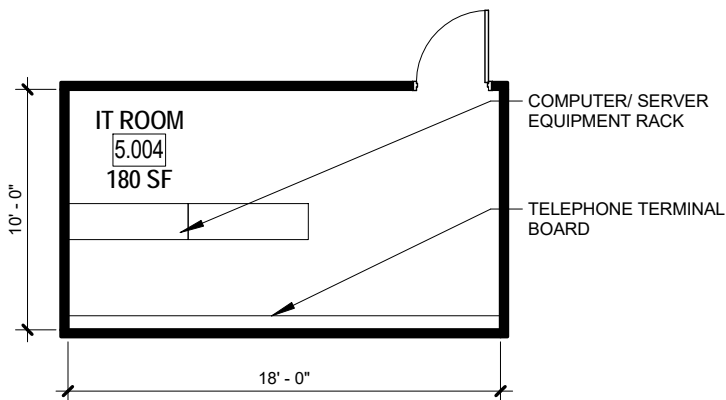
GENERAL

AREA 51 SF

OPERATIONAL CRITERIA Supports operation of elevator.

SPECIALTY SPACE No

PREFERRED FLOOR



NOTE: IF CITY WIDE SYSTEM INCORPORATED
ADD WORKSTATION AND ADDITIONAL SQUARE
FOOTAGE 200SF TOTAL

CONSIDERATIONS

MATERIALS

CEILINGS: EXPOSED

WALLS: GWB/ FIREPROOF PLYWOOD

FLOORS: STATIC PROOF

BASE: RUBBER

WINDOWS: N/A

DOORS: SOLID CORE WOOD

CASEWORK: N/A

SYSTEMS

HVAC: AIR CONDITIONING

LIGHTING: LED

OTHER:

FURNISHINGS

POSSIBLE WORKSTATION

OTHER

SERVER RACKS

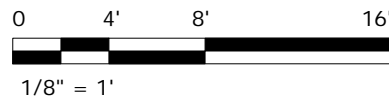
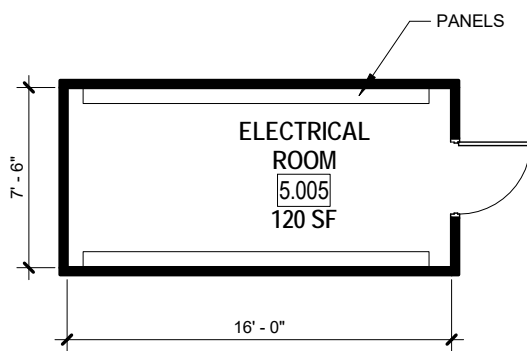
GENERAL

AREA 120 SF

OPERATIONAL
CRITERIA

SPECIALTY SPACE No

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: EXPOSED

WALLS: GWB

FLOORS: POLISHED CONCRETE

BASE: RUBBER

WINDOWS: N/A

DOORS: HOLLOW METAL

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

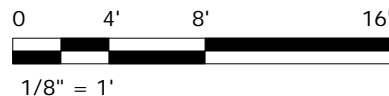
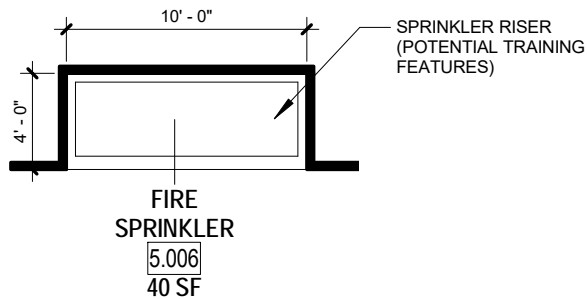
FURNISHINGS**OTHER****GENERAL**

AREA 120 SF

OPERATIONAL CRITERIA Sized to support facility

SPECIALTY SPACE No

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: EXPOSED

WALLS: IMPACT AND WATER RESISTANT

FLOORS: POLISHED CONCRETE

BASE: WATER RESISTANT

WINDOWS: N/A

DOORS: N/A

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

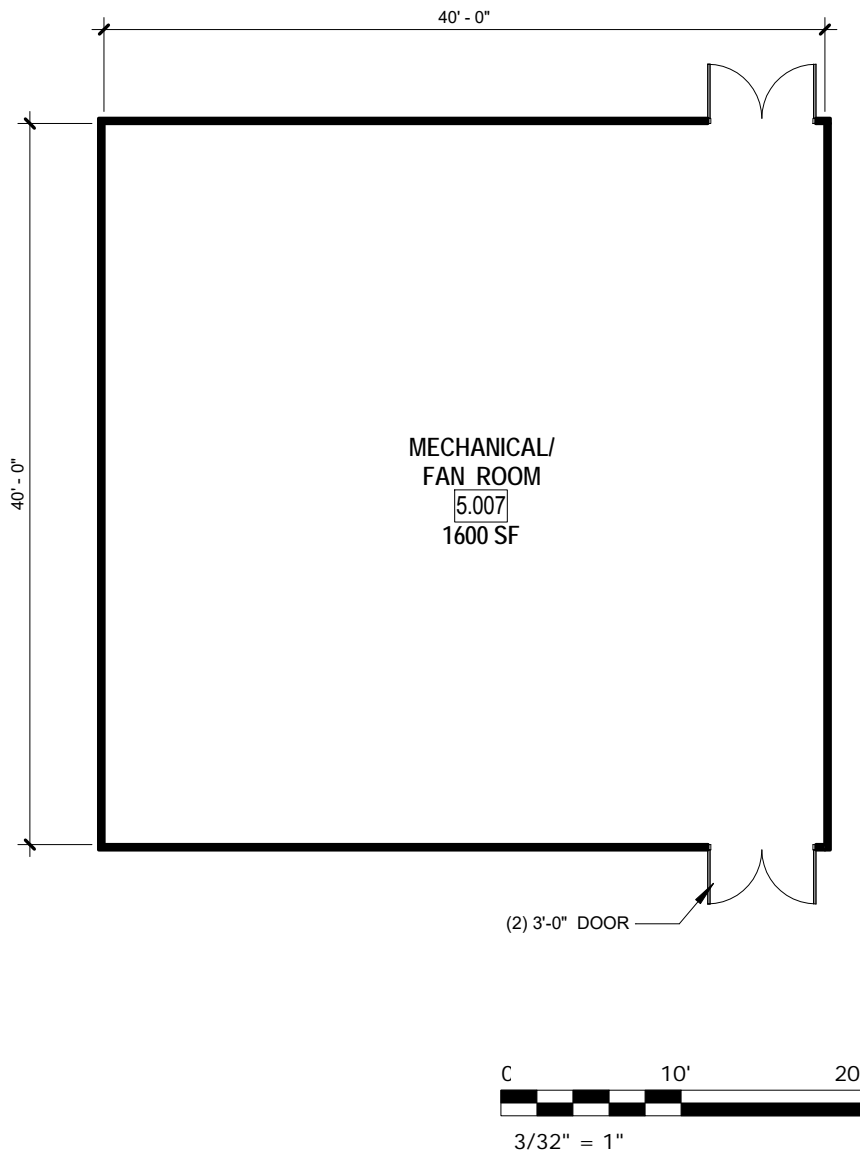
FURNISHINGS**OTHER****GENERAL**

AREA 40 SF

OPERATIONAL CRITERIA Supports sprinkler riser assembly and suppression equipment to limit obstruction path of travel and required clearances in bay.

SPECIALTY SPACE No.

PREFERRED FLOOR

**CONSIDERATIONS****MATERIALS**

CEILINGS: EXPOSED

WALLS: IMPACT AND WATER RESISTANT

FLOORS: POLISHED CONCRETE

BASE: WATER RESISTANT

WINDOWS: N/A

DOORS: HOLLOW METAL

CASEWORK: N/A

SYSTEMS

HVAC: TBD

LIGHTING: LED

OTHER:

FURNISHINGS**OTHER****GENERAL**

AREA 1600 SF

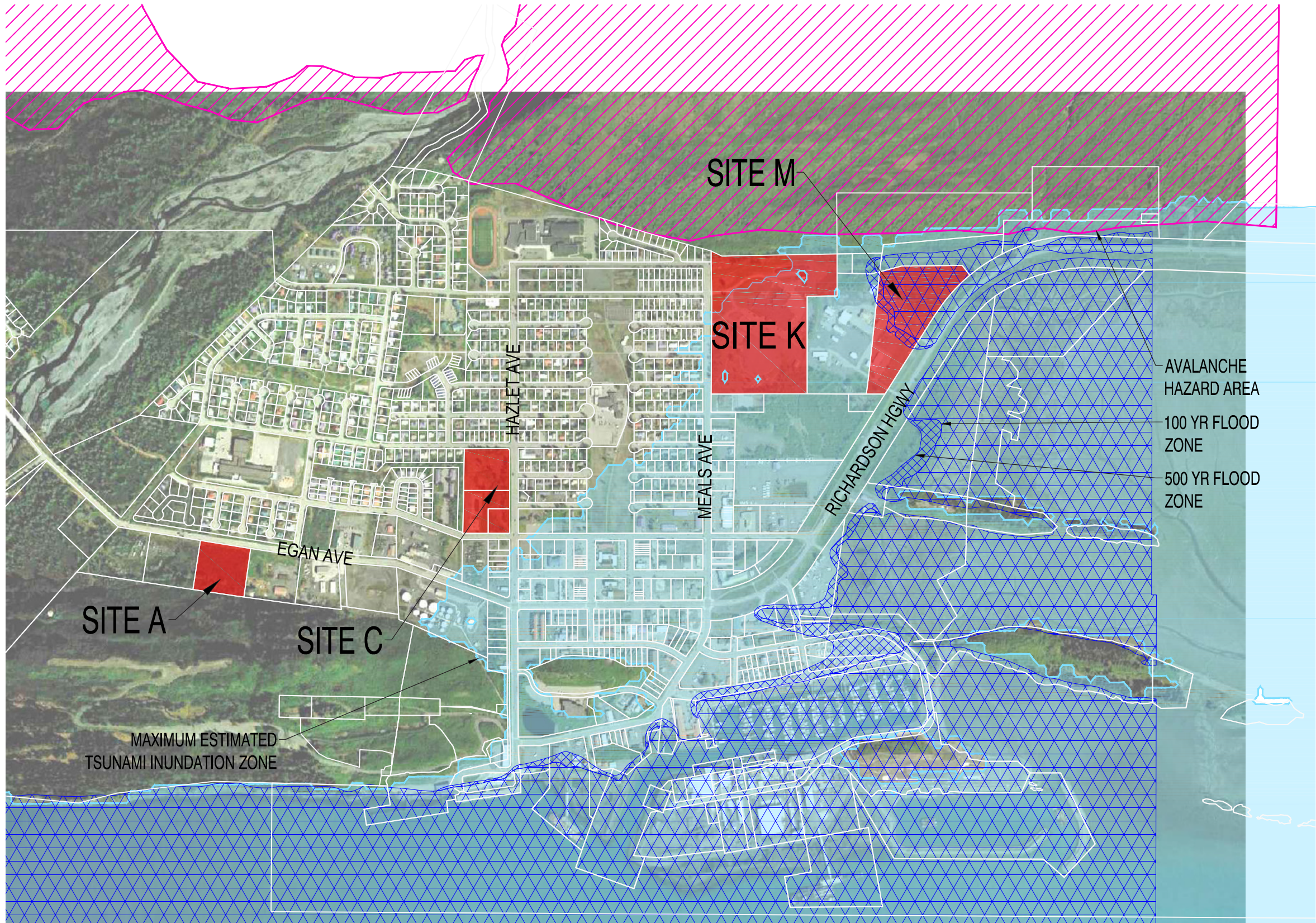
OPERATIONAL CRITERIA Sized to support facility

SPECIALTY SPACE No

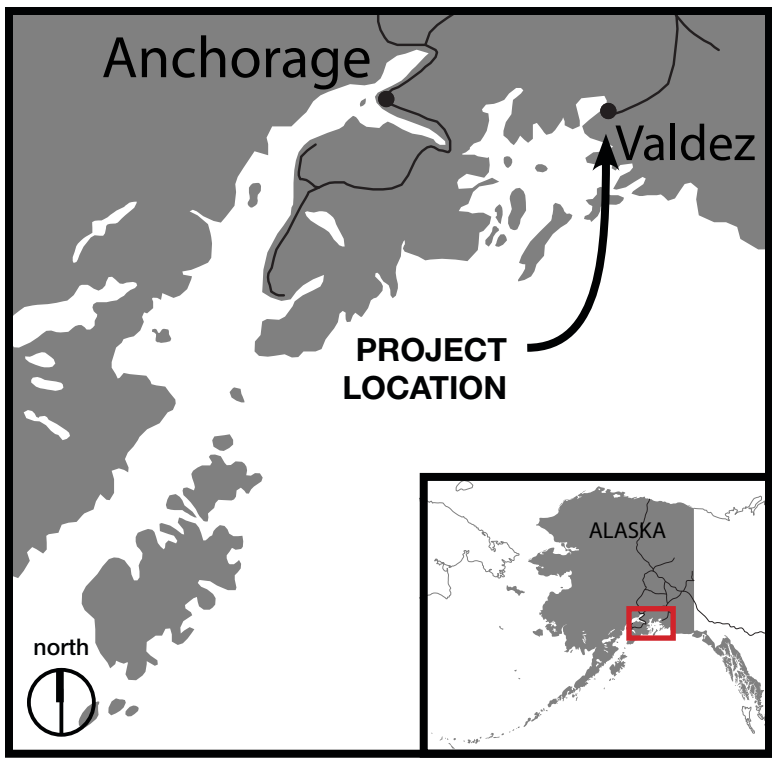
PREFERRED FLOOR

APPENDIX B

Valdez Fire Station Concept Site Layout

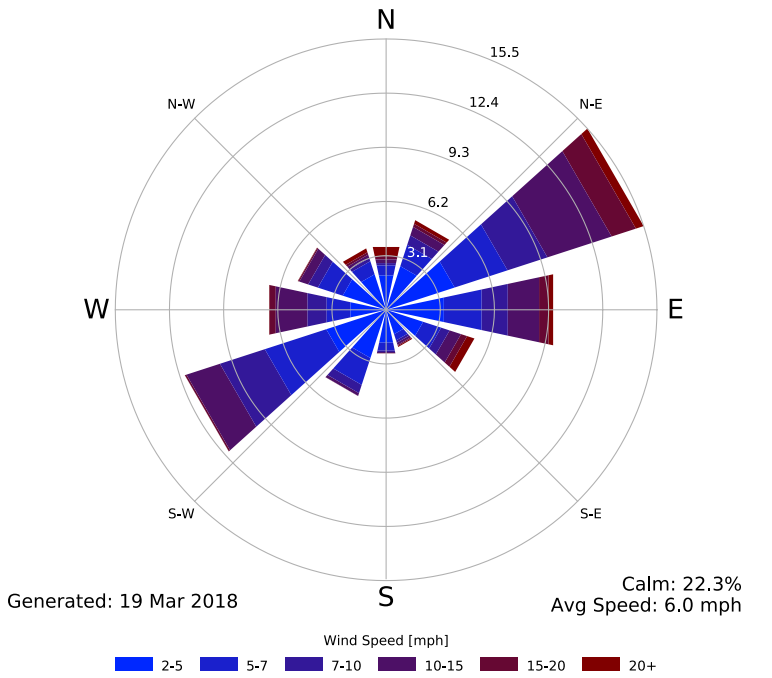


GIS data requested from Valdez GIS Manager
 Flood data downloaded from <https://www.fema.gov/national-flood-hazard-layer-nfhl>



Prevailing Winds

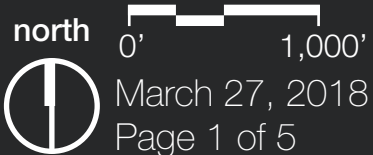
[PAVW] VALDEZ
 Windrose Plot [All Year]
 Period of Record: 01 Aug 1967 - 06 Mar 2007

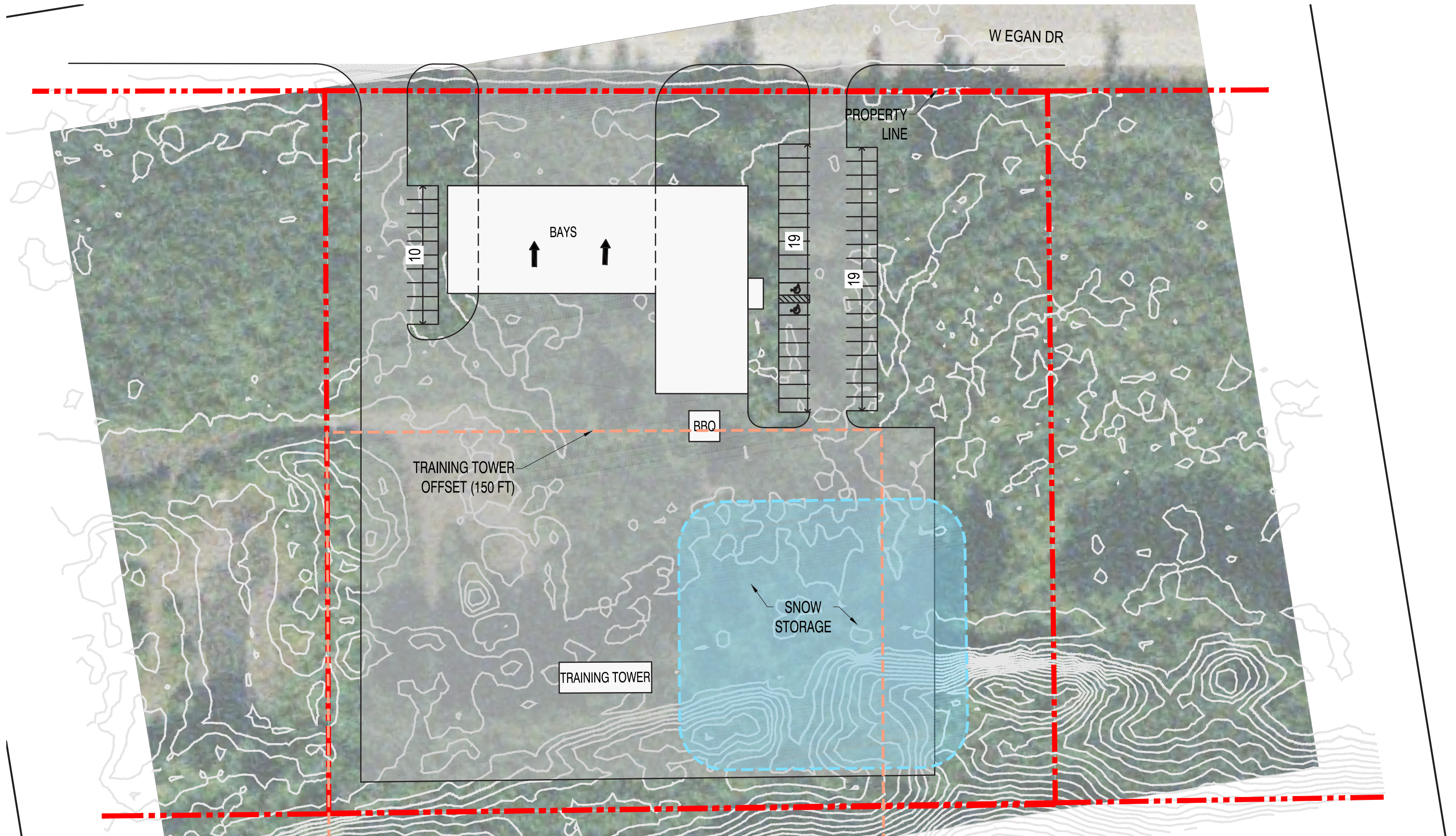


Wind data generated from: <http://mesonet.agron.iastate.edu/>

VALDEZ FIRE STATION CONCEPT SITE LAYOUT

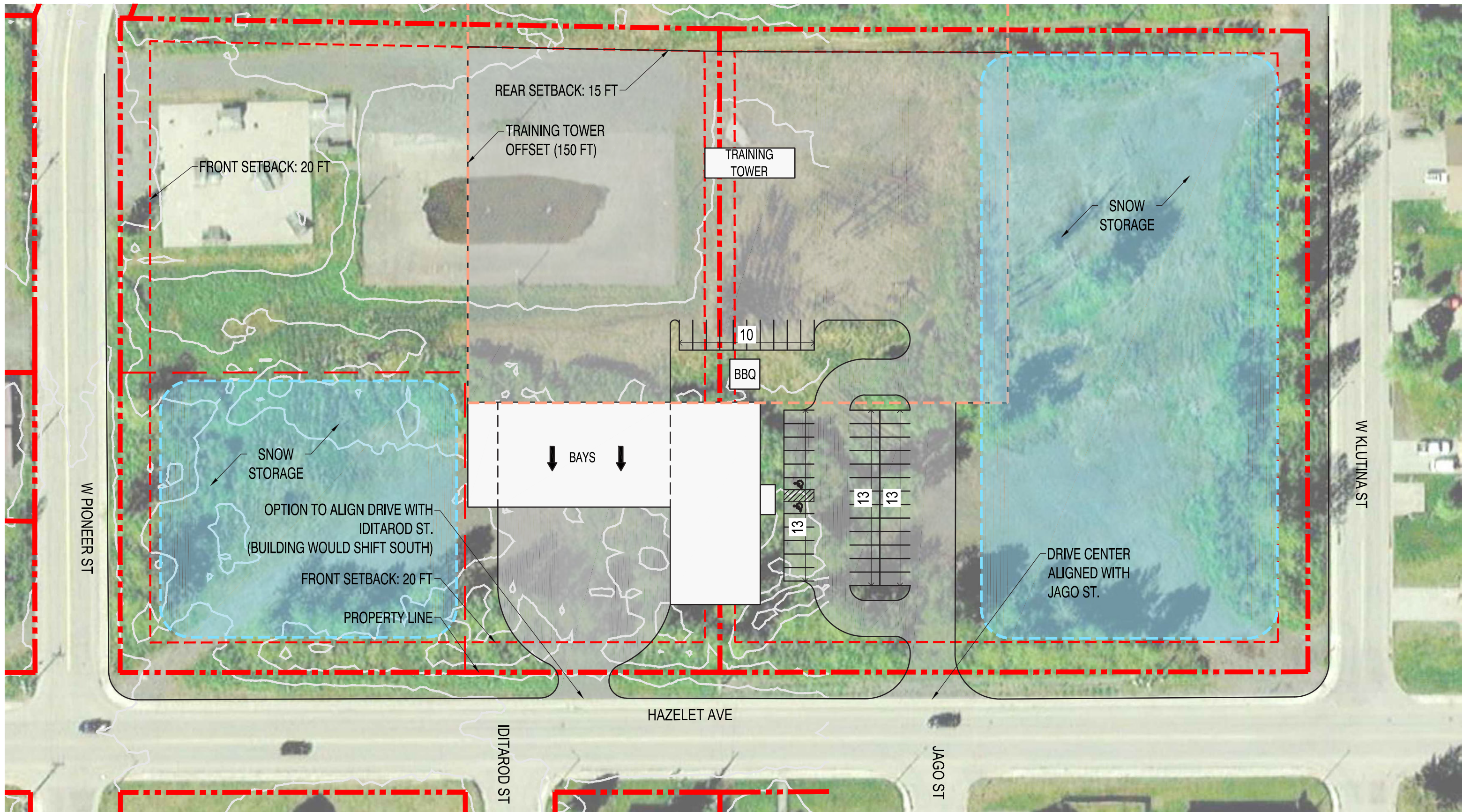
Site Locations and Context





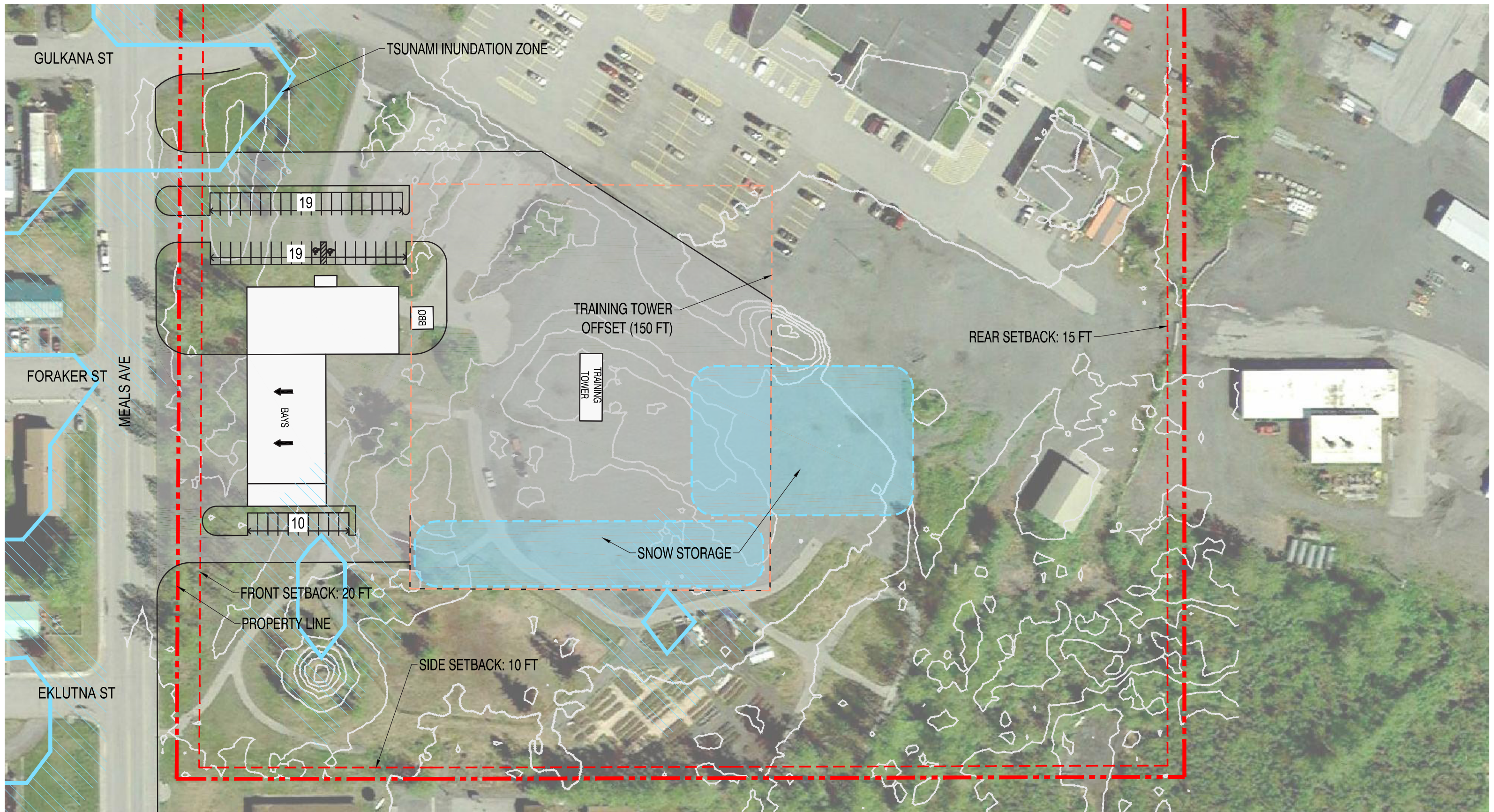
VALDEZ FIRE STATION CONCEPT SITE LAYOUT

Site A



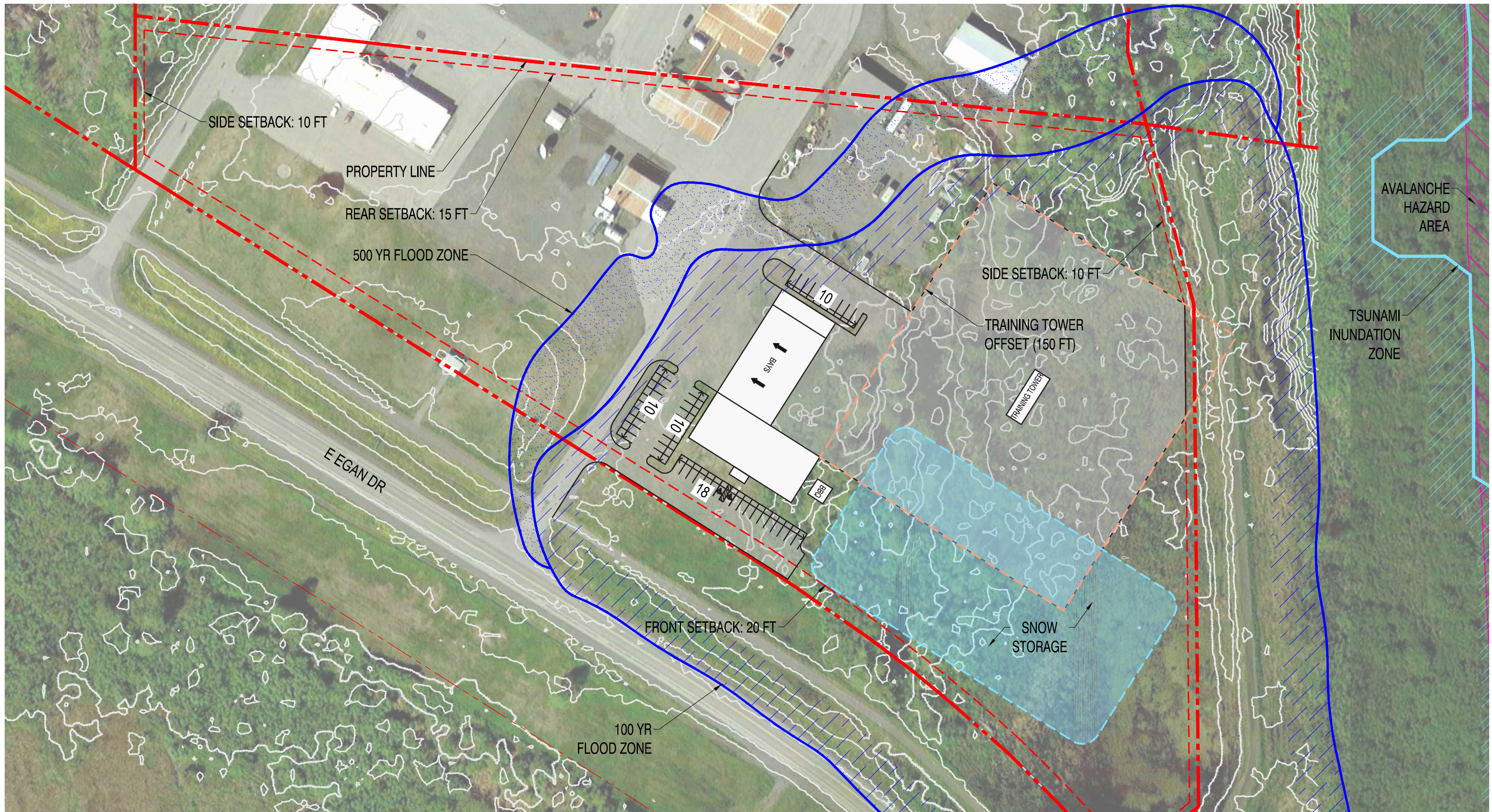
VALDEZ FIRE STATION CONCEPT SITE LAYOUT

Site C



VALDEZ FIRE STATION CONCEPT SITE LAYOUT

Site K



VALDEZ FIRE STATION CONCEPT SITE LAYOUT

Site M

APPENDIX C

Preliminary Sites

City of Valdez Fire Station Site Selection Criteria Matrix

Potential Sites	Weight	Priority	A	B	C	D	E	F	G	H	I	J	K	L	N	M	O	P	Q
Common Name / Description			W Egan / Industry park	Pt. Valdez lot west of VCS Maint. Shop	Luke Horning SK8 Park	Keystone Hotel	Playground + courts	Exiting Fire Station	1/3 Park Strip at Pioneer Dr	Old Prospector site + Pipeline Club	Snow storage at Pioneer and Chenega	Old 3 Bears + No Name Pizza	Dog Park + Community Garden	Gavora parcel	New Harbor west parking area	DOT property NE USS 349	Ball Field & Snow lot	J&R Plumbing & commercial lots near tank farm	Sea Otter
Street Address (from City address map book)			802 W Egan Dr	501 Clark Ave	401 W Pioneer Street	400 Egan Dr	250 Hanagita St	220 Pioneer Dr	251 Pioneer Dr	128, 141, 142 Egan Drive	150 Pioneer Dr	137 & 121 Egan Drive	911 Meals Ave (South portion)	241 E Egan Drive	196 S Harbor Drive	351 Richardson Highway	251 Hanagita Street	201, 181, 151, 121, 101 & 91 S Hazelet Ave	226 S Harbor Drive
Parcel Number (from City Tax Roll)			70550000030	71030010000 *700 on lot map	70400200060	70400340080	No parcel #	No parcel #	70400020020	70400330070 70400330100 70400332070	70400250030 70400250040 70400250050 70400250060 70400250070	70400290010 70400290012	0082141011 (part of 26 AC)	70600050020	70300170000	34900000000	70400010010	71200080000 71200080001 71200080030 71200080040 71200080050 71200080060	70300460040
Site Features	30	1																	
Lot size and configuration (Est by Rozak)			5.04 AC rectangle	2.50 AC rectangle	Est 3.9 AC square	1.78 AC rectangle	Est 2.4 AC rectangle	Est 0.25 AC rectangle	Est 2.5 AC rectangles	1.03 AC square +rectangle	0.48 AC square	1.39 AC rectangle	Est 8.6 AC rectangle	Est 14 AC rectangular	Est 1.7 AC rectangle	Est 9.8 AC Rectangular	Est 2.6 AC rectangle	2.67 AC rectangle	Est 7 AC irregular
Topography / slope			Uniform, flat	Uniform, flat	Uniform / south	Uniform, flat / south	Uniform, flat / south	Improved, flat,	Uniform / south	Uniform, flat	Uniform, flat	Uniform, flat	Mounds / south	Moderate slope south	Uniform, flat / south	Need City input	Uniform, flat	Uniform / south	Uniform, slope NW & south
Main Road access/ drive through			north	south & west	south & east	north, west & south	north, SE & SW	north & west	south, NE & NW	north & south	north & west	north & south	west	east	west & east	south & east	north & south	north & east	north
Utilities available (City must verify)			Yes	Yes	Yes	Yes	(probable, must confirm)	Yes	Yes	Yes	Yes	Yes	(probable, must confirm)	(uncertain)	(Need City input)	(uncertain)	Yes	Yes	Need City input
Snow storage			Yes	No	Yes	No	No	at Park Strip	No	No	No	No	Yes	Yes	No, maybe on adjacent land	Yes	No	Yes	Yes
Room for future expansion			Yes	No	No	No	Maybe, to south	No	Maybe, to north	Maybe, on private lot	No	No	Yes	Yss	Not practical, need City input	Yes	No	No	Yes
Site Compatibility	25	2																	
Compatible with Fire Dept. (City to confirm)			Yes, except shaded by hill	Minimum size, shaded by hill	Yes	Undersize	Mimimum size	Undersize	Minimum size	Undersize	Undersize	Undersize	Yes	Yes	Undersize	Yes	Minimum size	Need FD input	Need FD input
Compatible with adjacent uses				Yes	Yes	Yes	Yes	Yea	Yes	Yes	Yes	Yes	Hospital nearby Need City Input	Yes	Need City input	Yes	Yes	No	Need City input
Conformance with COV zoning			LI, sub V	RC, sub X	RA, sub V	C, sub C	Need City input	CBD, sub X	P, sub X	C, sub C	CBD, sub V	CBD, sub C	P	C, sub V	LI, sub X	C, sub V	P, sub NA	C, sub C/R	LI, sub P
Natural/ Physical Environmental	20	3																	
Tsunami/ Avalanche			No	No	No	No	No	No	No	No	No	No	No	No	No	No / Unknown	No	No	No
Surface water			No	No	No	No	No	No	No	No	No	No	No	No	No	Creek at north ?	No	No	No
Subsurface investigation (info / reports available)			?	?	?	?	?	Assume Yes	?	?	?	?	?	maybe partial	Yes, bedrock	?	?	?	maybe, RV park demolition
Archeological/ historical site			No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Threatened/ endangered species			Unknown	No	No	No	No	No	No	No	No	No	No	Unknown	No	Unknown	No	No	No
Purchase Cost/Terms	15	4																	
(Cost = 2017 City Tax Role Gross Market Value)			\$ 108,900	\$ 161,200	\$ 343,000	\$ 997,100	Need City input	Need City input	\$ 783,700	\$ 734,100	\$ 59,400	\$ 358,000	\$ 418,258	\$ 200,900	\$ 108,877	\$ 92,209	\$ 182,600	\$ 476,800	\$ 809,000
Approximate Purchase Cost Category			Low	Low	Med	High-Very High	Need City input	Need City input	High	High	Low	Med	Med	Low-Med	Low	Low	Low	Med	High
City-owned				X	X		X	X	X		X		X		X		X		X
State of Alaska																X			
Private/ Commercial			The Port Valdez Co, INC.			Valdez Properties Inc.				Valdez Motel Corp and Valdez Prospector Outfitters Inc.		Reynolds, Janice and Valdez Center Company		Suzanne Waugaman & Linda Colledge				Kelsey, John and Jenette; Kelsey Trust-Thomas Duncan; Valdez Dock Company	
Site Development Costs	10	5																	
Access costs			Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Med	Low	Low-Med	Low	Low	Low
Utility costs			Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Med	Med, bedrock	Low-Med	Low	Low	Low-Med
Preparation costs			Low	Low	Low-Med	Med	Low-Med	Med, remodel	Must evaluate	Must evaluate	Low	Low	Low-Med	Med ?	Low	Med	Low-Med	Low-Med	Low-Med
Mitigation costs			Low	Low	Relocate rink	Demo. Bldgs.	Replace court & playground	Remodel issues	Must evaluate	Demo. Bldgs	Low	Demo. Bldg	Replace Dog Park	Low-Med	Low	Med-unknown	Replace ball field & snow storage	Relocate structures	Relocate rock & crushed material
TOTAL SCORE	100		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Site Purchase Cost Category:

- Low: <\$250,000
- Med: \$250,000-\$500,000
- High: \$500,000-\$1,000,000
- Very High: >\$1,000,000

Site Preparation Cost Category:

- Low: Minimal clearing, unsuitable material or fill
- Med: Partial clearing, some unsuitable material and fill, no bedrock removal
- High: All clearing, extensive unsuitable material and fill, bedrock blasting/ripping and removal

City of Valdez Fire Station Site Selection Criteria Matrix

Updated 1/11/18

Potential Sites	Weight	Priority	Row Average	A	B	C	K	L
Common Name / Description				W Egan / Industry park	Pt. Valdez lot west of VCS Maint. Shop	Luke Horning SK8 Park	Dog Park + Community Garden	Gavora parcel
Street Address (from City address map book)				802 W Egan Dr	501 Clark Ave	401 W Pioneer Street	911 Meals Ave (South portion)	241 E Egan Drive
Parcel Number (from City Tax Roll)				70550000030	71030010000 *700 on lot map	70400200060	0082141011 (part of 26 AC)	70600050020
Site Features	30	1	19	26	25	24	21	25
Site Compatibility	25	2	14	17	14	16	14	20
Natural/ Physical Environmental	20	3	14	17	16	16	17	12
Purchase Cost/Terms	15	4	10	11	11	12	13	8
Site Development Costs	10	5	6	8	9	6	8	6
TOTAL SCORE	100		64	80	75	73	73	72

RANKING BY SCORE

1

2

3

3

4



CITY OWNED PROPERTY

- Site C**
Luke Horning SK8 park
- Site K**
Dog Park + Community Garden

PRIVATELY OWNED PROPERTY

- Site A**
802 W Egan/Industrial Park
- Site B**
Pt Valdez Lot west of VCS Maint. shop
- Site L**
Gavora Property



CITY OWNED PROPERTY

- Site C**
Luke Horning SK8 park
- Site E**
Playground + Courts
- Site F**
Existing Fire Station
- Site G**
1/3 Parkstrip at Pioneer Dr.
- Site I**
Snow storage at Pioneer and Chenega
- Site K**
Dog Park + Community Garden
- Site N**
New harbor parking area
- Site O**
Ball Field and Snow Lot
- Site Q**
Sea Otter

STATE OWNED PROPERTY

- Site M**
DOT property

PRIVATELY OWNED PROPERTY

- Site A**
802 W Egan/Industrial Park
- Site B**
Pt Valdez Lot west of VCS Maint. shop
- Site D**
Keystone Hotel
- Site J**
Old 3 Bears + No Name Pizza
- Site H**
Old Prospector Site + Pipeline Club
- Site L**
Gavora Property
- Site P**
J&R Bldg/Comm Lots near Tank Farm

**CITY OF VALDEZ, ALASKA
CONDITIONAL USE PERMIT**

CUP Number: 19-02
Legal Description: Lot 1, Block 6, Block 20, Mineral Creek Subdivision
Street Address: 401 West Pioneer Drive
Owners of Record: City of Valdez
Approving Authority: Valdez Planning & Zoning Commission
Date of Approval: March 13, 2019
Zoning District: Single-family residential

Conditions of the Permit:

1. The Conditional Use Permit (CUP) is granted to the City of Valdez for the use of community building and halls in accordance with Valdez Municipal Code Section 17.14.040, for the proposed fire hall project, as detailed in their application.
2. The term of the CUP has no expiration.
3. Use of the CUP within twelve months of date of issuance is required. In accordance with Valdez Municipal Code Section 17.06.070 (B), any conditional use, variance or exception approved by the Planning & Zoning Commission shall be conditional upon the privilege granted being utilized within twelve months after the effective date of approval.

Recording Procedure: Valdez Municipal Code Section 17.06.090(C)

The City shall be responsible for recording actions by the Planning and Zoning Commission on zoning variances, zoning changes, text amendments, exceptions or conditional uses to the title record of the affected parcel(s). The applicant shall be responsible for payment of recording fees.

Authorizing Signature: _____

Jess Gondek

City of Valdez Planning and Zoning Commission Chairman

STATE OF ALASKA)
) SS.
THIRD JUDICIAL DISTRICT)

THIS IS TO CERTIFY that on this 18th day of April, 2019, before me, the undersigned, a Notary in and for the State of Alaska, duly commissioned and sworn as such, personally appeared Jess Gondek known to me and to me known to be the Planning and Zoning Chairman of the City of Valdez, and the individual named in and who executed the forgoing instrument, and they acknowledged to me the they did sign and seal the name as their voluntary act and deed and was authorized to do so by action of the Planning & Zoning Commission of the City of Valdez, Alaska for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set and notarial seal in the day and year first hereinabove written.



Ni 2
Notary Public in and for Alaska
My Commission expires: 1-19-2022

VALDEZ RECORDING DISTRICT
Return to: City of Valdez- CEDD
P.O. Box 307
Valdez, AK 99686

VALDEZ STATION 1 REPLACEMENT

CITY OF VALDEZ

OWNER

CITY OF VALDEZ
212 CHENEGA
VALDEZ
907-835-5478
NATHAN DUVAL

AK 99686

ARCHITECT

WOLF ARCHITECTURE, INC.
625 SOUTH COBB
PALMER
907-746-6670
GARY WOLF

AK 99645

STRUCTURAL ENGINEER

PND ENGINEERS
1506 W. 36TH AVE.
ANCHORAGE
907-561-1011
CHUCK KENLEY

AK 99503

MECHANICAL ENGINEER

RSA ENGINEERS
670 WEST FIREWEED LANE
ANCHORAGE, AK 99503
907-276-0521
BRIAN PEKAR

SUITE 200

ELECTRICAL ENGINEER

RSA ENGINEERS
670 WEST FIREWEED LANE
ANCHORAGE, AK 99503
907-276-0521
CHANNING LILIO

SUITE 200

CIVIL ENGINEER

PND ENGINEERS
1506 W. 36TH AVE.
ANCHORAGE, AK 99503
907-561-1011
DOUG KENLEY

LANDSCAPE ARCHITECT

CORVUS DESIGN
2506 FAIRBANKS ST. UNIT B
ANCHORAGE, AK 99503
907-222-2859
PETER BRIGGS

PROJECT INFORMATION

PROJECT NAME: VALDEZ STATION 1 REPLACEMENT
PROJECT ADDRESS: 401 WEST PIONEER DRIVE, VALDEZ, ALASKA 99686
ARCHITECT: WOLF ARCHITECTURE, INC. CONTACT: GARY WOLF
625 SOUTH COBB PHONE: 907-746-6670
PALMER AK 99645 FAX: 907-746-6680
DESCRIPTION: PUBLIC SAFETY BUILDING
ZONING: RA

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G1.05 TYPICAL ADA DETAILS
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C1.1 EXISTING CONDITIONS
C1.2 FIRE STATION SITE PLAN
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L102 BELL PLAZA ENLARGEMENT
L501 DETAILS
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A1.2 FIRST FLOOR DIMENSION PLAN
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A1.4 SECOND FLOOR DIMENSION PLAN
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A3.1 BUILDING SECTIONS
A3.2 BUILDING SECTIONS

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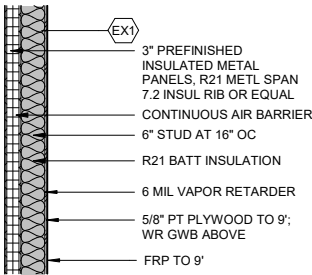
A4.0 INTERIOR ELEVATIONS
A4.1 INTERIOR ELEVATIONS
A4.2 INTERIOR ELEVATIONS
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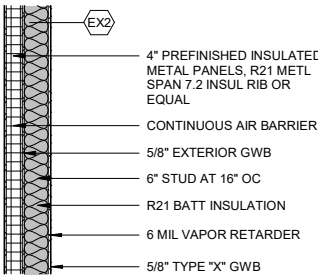
M2.2 SECOND FLOOR WASTE PIPING PLAN
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E6.5 ELECTRICAL DETAILS
E7.1 ELECTRICAL DETAILS

2.25.2019 SCHEMATIC DESIGN 35%

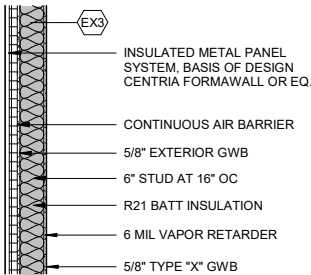
EXTERIOR WALL ASSEMBLIES



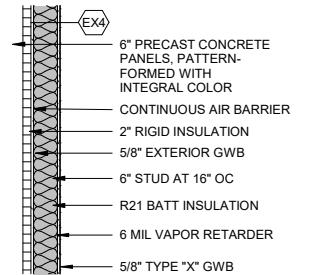
EX1_ IMP1 + 6" MTL STUD



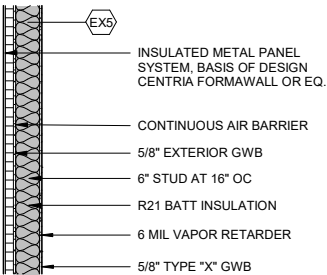
EX2_MTL + 6" MTL STUD



EX3/6_ IMP2 + 6" MTL STUD

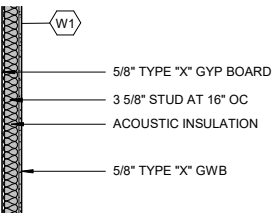


EX4_ PRECAST + 6" MTL STUD

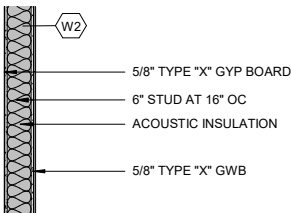


EX5_ IMP3 + 6" MTL STUD

INTERIOR WALL ASSEMBLIES



W1_ WALL - 3 5/8" STUD



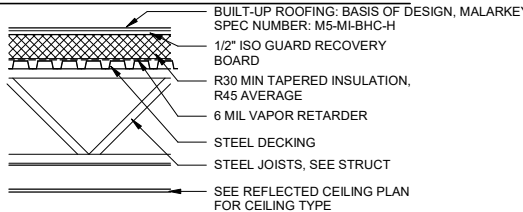
W2_ WALL - 6" STUD
@ PLUMBING

WALL ASSEMBLIES

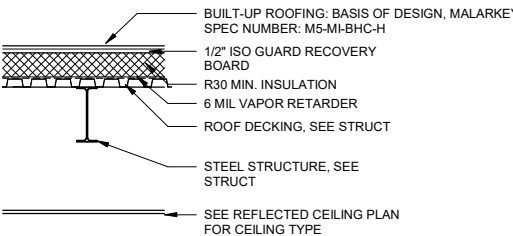
NOTES

- TYPICAL INTERIOR WALL ASSEMBLY IS TYPE W1 AND TYPICAL EXTERIOR WALL ASSEMBLY IS EX1 UNLESS SHOWN OTHERWISE. THE TYPICAL INTERIOR AND EXTERIOR WALL ASSEMBLIES ARE NOT FLAGGED EXCEPT FOR CLARITY. ALL NON-TYPICAL ASSEMBLIES ARE CALLED OUT.
- A WALL ASSEMBLY CONTINUES THE FULL ROOM LENGTH, INCLUDING ANY JOGS, ANGLES, RECESSES, OR STUB WALLS FOR THE SIDE OF THE WALL UPON WHICH THE FLAG OCCURS.
- WHERE DIFFERENT STUD SIZES OCCUR ALONG A CORRIDOR WALL, IT IS INTENDED THAT THE CORRIDOR SIDE FINISHES ALIGN
- ALL INTERIOR STUD FRAMING AND FURRING IS 16" O.C. UNO.
- SEE SHEETS G1.3 & G1.4 FOR FIRE RATING CLASSIFICATIONS OF WALLS.
- EXTEND FRAMING, INSULATION, & SHEATHING COMPONENTS TO BOTTOM OF DECK ABOVE UNO.
- PROVIDE FS25 VAPOR BARRIER AT ALL WALLS/LOCATIONS NOTED WITH VAPOR BARRIER WHERE VAPOR BARRIER IS NOT COVERED BY SHEATHING (I.E., SHELL SPACES, INTERSTITIAL SPACES ABOVE CEILINGS).
- COMBINATION SHEATHING SUCH AS "B,C" INDICATES ONE SHEATHING MATERIAL ABOVE OR BELOW THE OTHER. SEE INTERIOR ELEVATIONS FOR EXTENT REFER TO STRUCTURAL DRAWINGS AND NOTES FOR PROPER INSTALLATION OF MATERIALS LISTED IN WALL ASSEMBLIES, INCLUDING INFILL CONNECTIONS AND CONNECTIONS TO FOUNDATION AND DECK.
- PROVIDE R-11 ACOUSTIC INSULATION IN ALL INTERIOR FRAMED WALLS. ACOUSTIC INSULATION IS NOT REQUIRED AT PARTIAL HEIGHT AND PARTIAL LENGTH WALLS, WALLS BETWEEN STORAGE ROOMS AND HALLWAYS, OR ELECTRICAL ROOMS.
- ALL GYPSUM BOARD TO BE TYPE "X" UNO. ALL GYPSUM BOARD IN "WET" ROOM WALLS (TOILET ROOMS, CUSTODIAL ROOMS) TO BE WATER RESISTANT TYPE EXCEPT AS NOTED. DO NOT USE WATER RESISTANT GYPSUM BOARD ON CEILINGS. WALLS BEHIND CERAMIC TILE FINISH TO RECEIVE CEMENT BACKER BOARD.
- ALL GYPSUM BOARD SURFACES TO BE PREPARED FOR PAINT GRADE FINISH UNO.
- FOR FINISHES, REFER TO FINISH SCHEDULE AND INTERIOR ELEVATIONS.
- WALL ASSEMBLY TAGS DESCRIBE MAJOR EXTENT OF EXTERIOR WALL ASSEMBLY, SEE ELEVATIONS AND DETAILS FOR TRANSITIONS IN, AND LOCATIONS OF, CHANGES IN EXTERIOR WALL ASSEMBLIES.
- PROVIDE ABUSE RESISTANT GYPSUM BOARDS WHERE NOTED ON INTERIOR ELEVATIONS.
- ON EXTERIOR WALLS, SEE ELEVATIONS FOR LOCATION OF TRANSITION OF EXTERIOR CLADDING. WALL ASSEMBLY REFLECTS GENERAL WALL CONDITION, DETAILS & ELEVATIONS WILL INDICATE CHANGES.

ROOF ASSEMBLIES

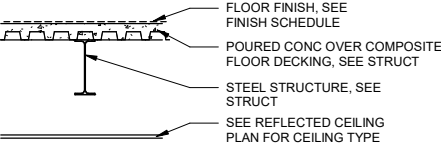


R1_ LOW-SLOPE ROOF ASSEMBLY

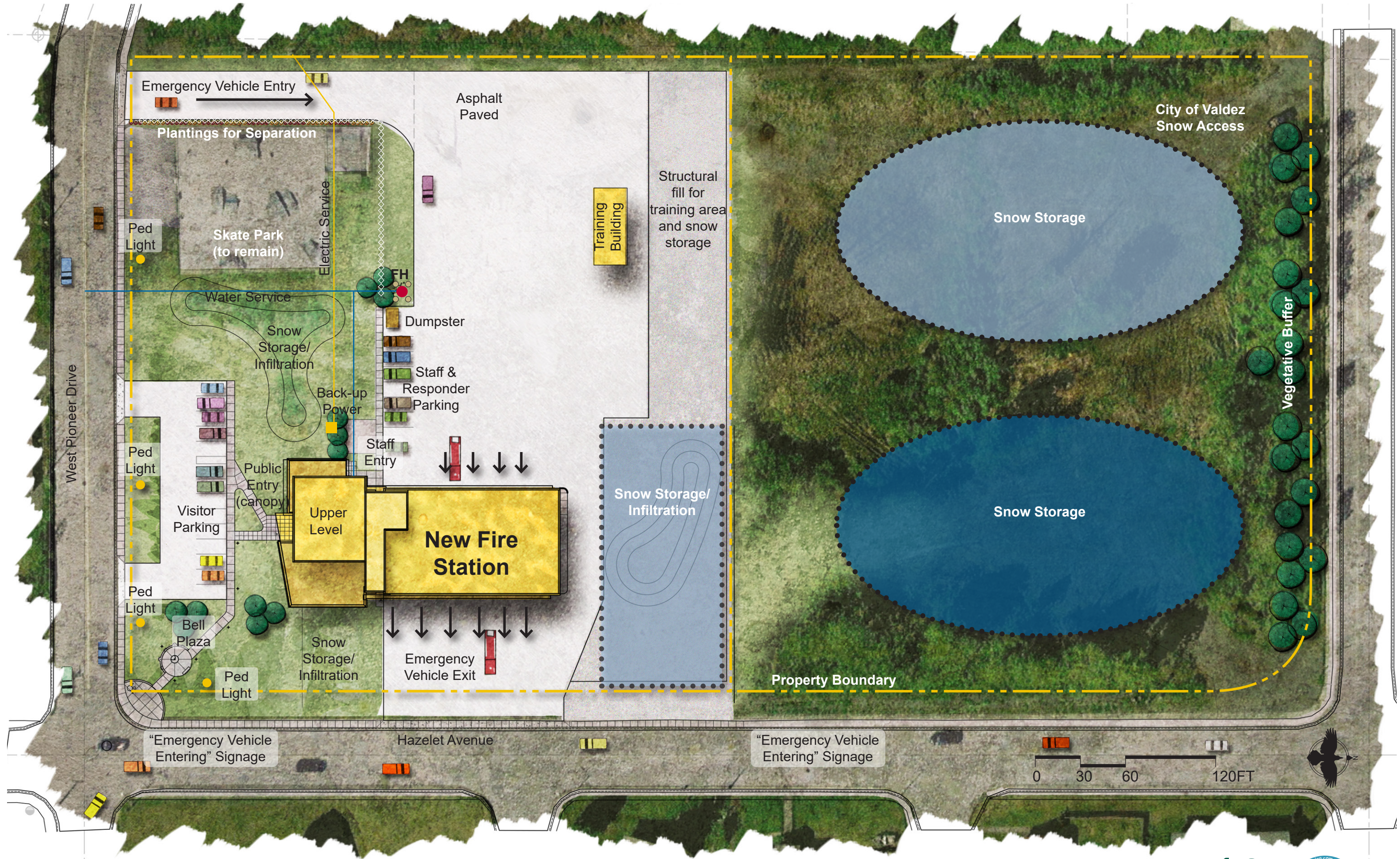


R2_ SLOPED ROOF ASSEMBLY

FLOOR / CEILING ASSEMBLIES



F2_FLOOR ASSEMBLY



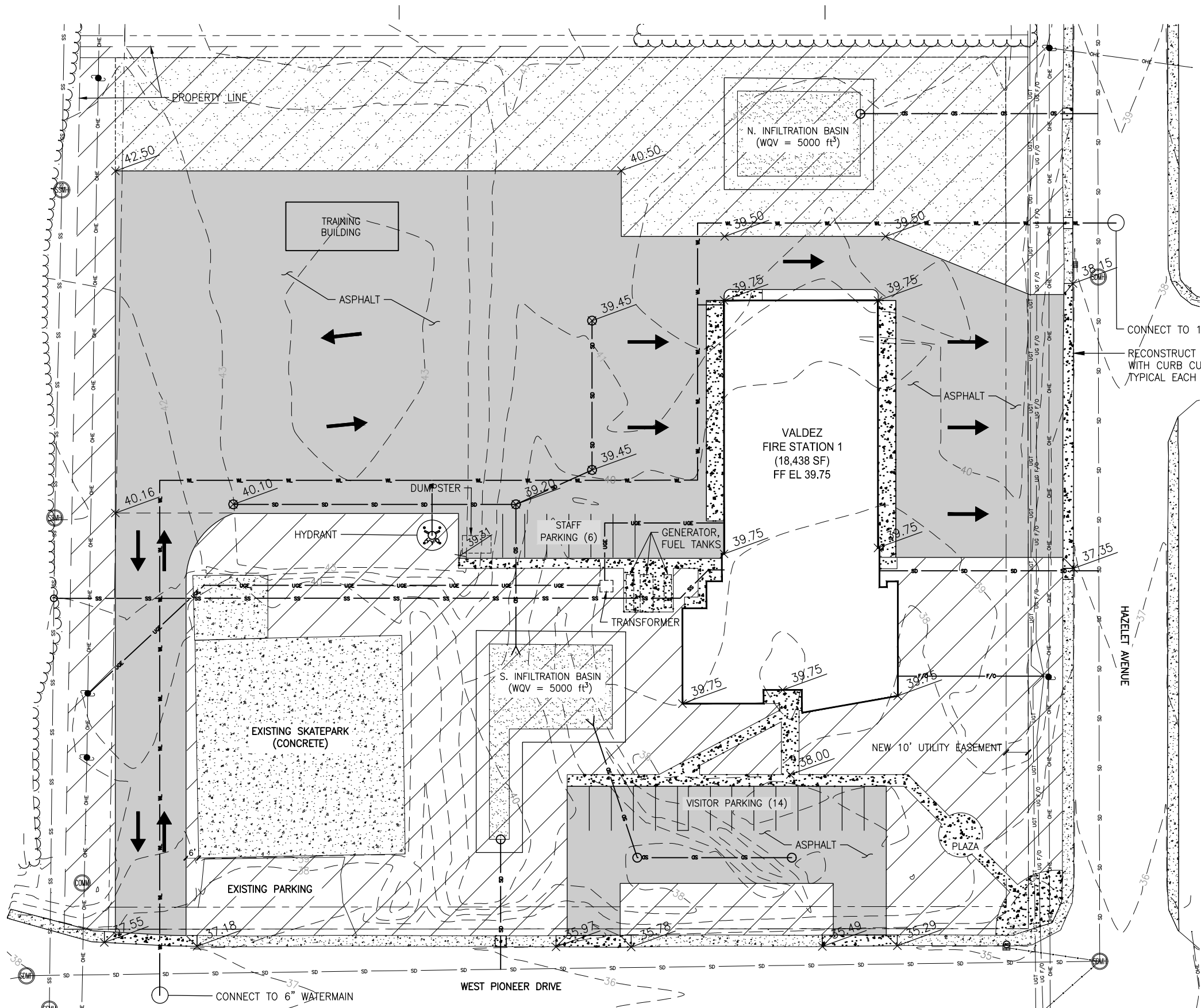
Valdez Fire Station Schematic Design

Site Layout

REV: 2019-03-14

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Corvus
Design
Landscape Architecture • Planning • Industrial Design



LEGAL DESCRIPTION:
LOT 1, BLOCK 6 OF BLOCK 20 ADDITION NO. 2, MINERAL CREEK SUBDIVISION

LOCATION:
3.977 AC. M/L WITHIN SECTION 31, TOWNSHIP 008 SOUTH, RANGE 006 WEST, COPPER RIVER MERIDIAN, ALASKA AND THE CITY OF VALDEZ, IN THE VALDEZ RECORDING DISTRICT, THIRD JUDICIAL DISTRICT, STATE OF ALASKA.

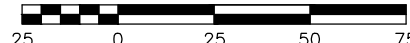
- NOTES:**
- 1. STORMWATER INFILTRATION BASINS SIZED TO CAPTURE AND TREAT THE WATER QUALITY VOLUME AS DEFINED IN THE ALASKA DEC'S STORMWATER MANUAL. RUNOFF VOLUME IN EXCESS OF THE WATER QUALITY VOLUME TO BE DISCHARGED TO EXISTING STORM DRAINS ALONG HAZELET AVE OR PIONEER DRIVE.
 - 2. SNOW STORAGE TO BE PROVIDED AT THE NORTH END AND SOUTHEAST CORNER OF LOT 1, BLOCK 6.
 - 3. LOCATION OF CATCH BASINS AND STORM SEWER LINES APPROXIMATED TO COMMUNICATE HANDLING AND TREATMENT OF SITE RUNOFF. EXACT LOCATIONS OF INLETS TO BE FINALIZED WITH FINAL DESIGN.

LEGEND:

- ML — ML — WATER SERVICE LINE
- SD — SD — STORM SEWER LINE
- SS — SS — SANITARY SEWER LINE
- UGE — UGE — UNDERGROUND ELECTRIC
- F/O — F/O — FIBER OPTIC CABLE
- - - 40 - - - EXISTING MINOR CONTOUR
- - - 37 - - - EXISTING MAJOR CONTOUR
- ➔ INGRESS & EGRESS VEHICULAR TRAVEL ROUTES
- ▨ PERMEABLE / INFILTRATION AREAS

LOT 1, BLOCK 6 COVERTYPE SUMMARY (sf)	
EXISTING SKATEPARK	9,300
PROPOSED FIRE STATION 1 BUILDING	13,958
PROPOSED FEATURES - IMPERVIOUS	
PAVED SURFACES & PARKING	68,500
CONCRETE SIDEWALKS & SURFACES	5,700
SUBTOTAL, IMPERVIOUS AREAS:	74,200
PROPOSED FEATURES - PERVIOUS	
GRAVEL TRAINING AREA	24,400
INFILTRATION BASINS	4,800
GREEN SPACE	46,542
SUBTOTAL, PERVIOUS AREAS:	75,742

**MINERAL CREEK SUBDIVISION LOT 1 BLOCK 6,
CONDITIONAL USE PERMIT - SITE PLAN**



1830
PROJ. NO.
SBA
DRAWN
DK
CHECKED
2.25.2019
DATE
FULL SIZE DRAWINGS 22" x 34"

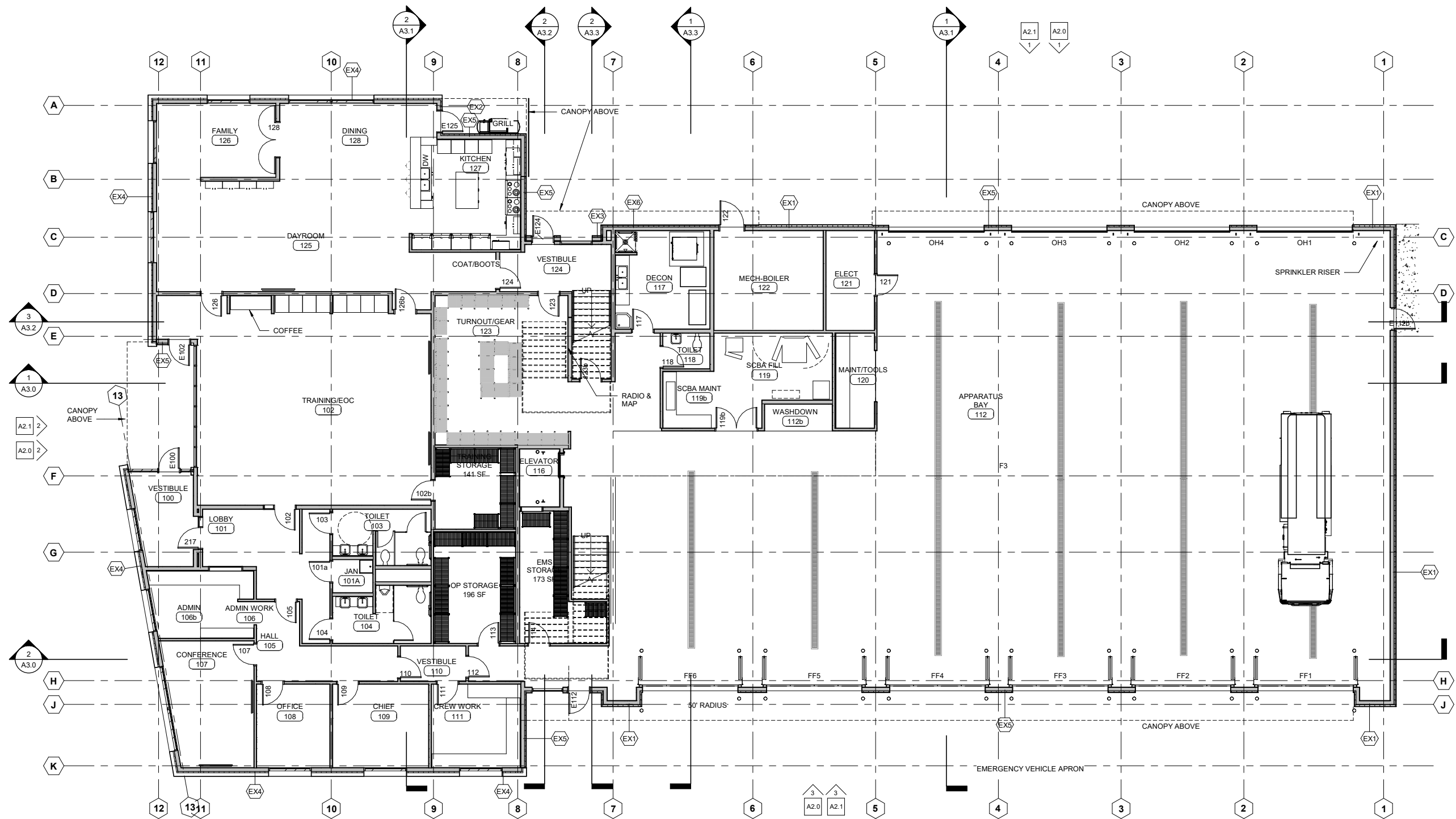
**VALDEZ STATION 1 REPLACEMENT
CONDITIONAL USE PERMIT - SITE PLAN**
401 WEST PIONEER DRIVE
VALDEZ, ALASKA 99686

625 S COBB ST
PALMER, AK
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SHEET CONTENTS
CONDITIONAL
USE PERMIT
SITE PLAN

C1.0



GROSS SF ALT 1: 13958 SF
4480 SF
18438 SF

FIRST FLOOR PLAN
Scale: 1/8" = 1'-0"



PROJ NO 1830
DRAWN
CHECKED
DATE 2.25.2019
FULL SIZE DRAWING: 27" x 34"

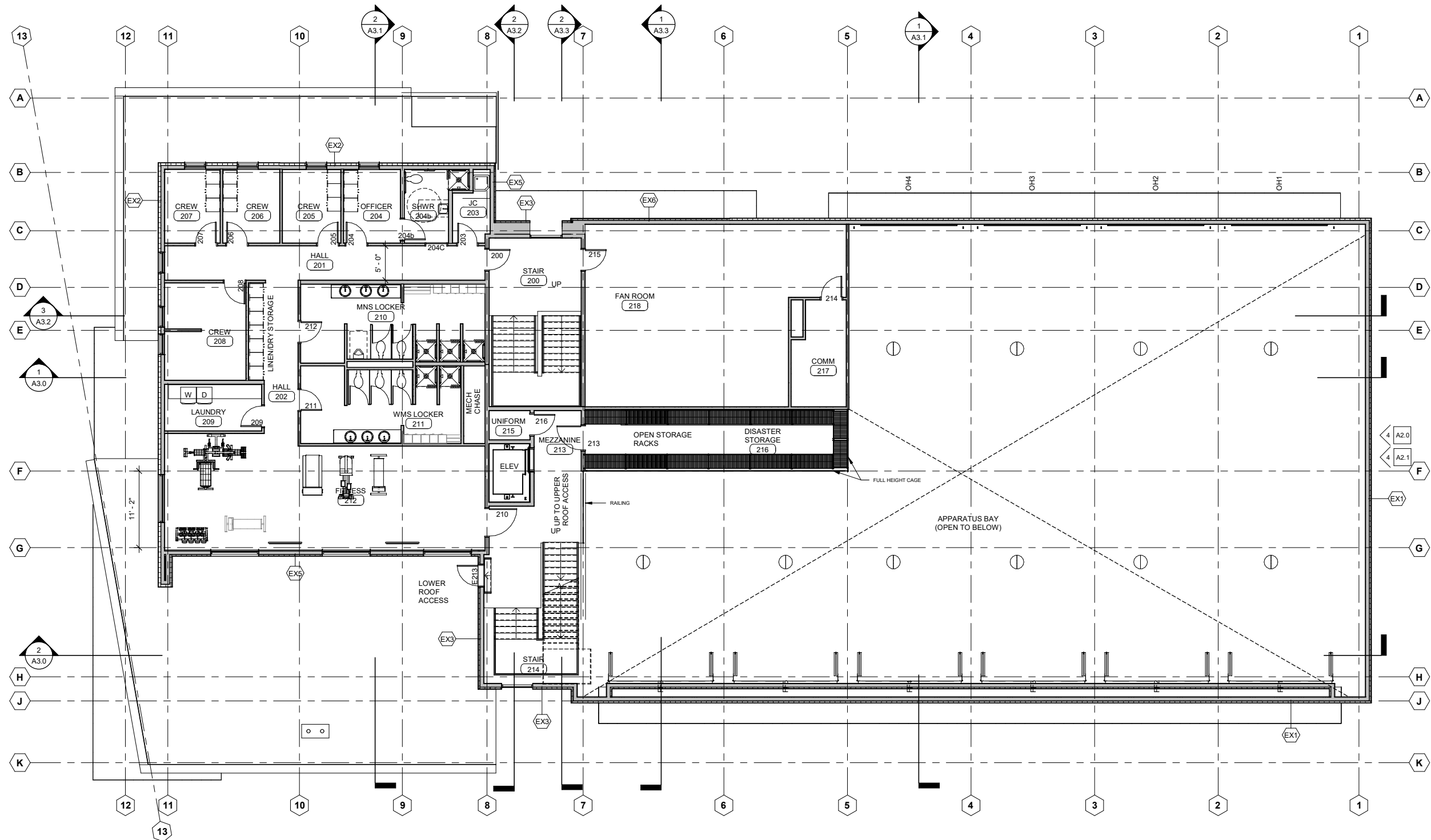
VALDEZ STATION 1 REPLACEMENT
SCHEMATIC DESIGN 35%
401 WEST PIONEER DRIVE
401 WEST PIONEER DRIVE, VALDEZ, ALASKA 99666

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SHEET CONTENTS
FIRST FLOOR PLAN

A1.1
106



SECOND FLOOR PLAN
Scale: 1/8" = 1'-0"





FIRST FLOOR FURNISHINGS AND EQUIPMENT PLAN

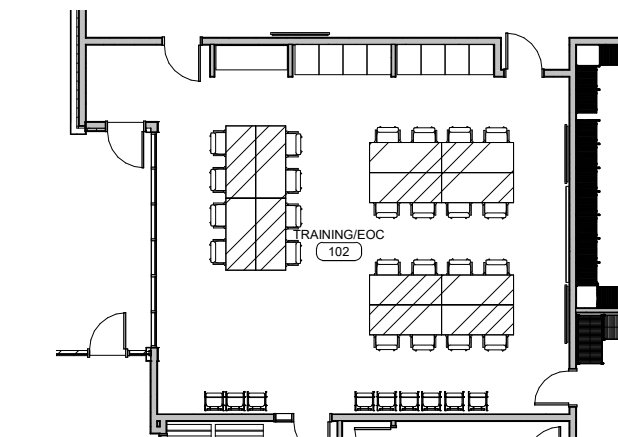
Scale: 1/8" = 1'-0"

SYMBOL	ROOM	ITEM	BASIS OF DESIGN	MODEL	NOTES
FS-1	DECON 117	EXTRACTOR/WASHER	UNIMAC	UWT045D4	14" RIGID DUCT MAX. (12" DIA); CONFIRM PROPANE
FS-2		TUMBLE DRYER	UNIMAC	UT050N	
FS-3		PPE DRYING CABINET	UNIMAC	UTG6DG44	
FS-4	SCBA 119	SCBA COMPRESSOR	SCOTT SAFETY HUSH AIR CONNECT 7500 10 HP	43"X43"X63"	30"X21"X66" 4 BANK STORAGE 30"X23"X66" 4 BOTTLE
FS-5		SCBA CHARGE STATION	HUSH AIR CONNECT 7500	REVOLVE AIR	
FS-6		SCBA RACK STORAGE		4 BANK STORAGE	
FS-7		CASCADE FILL		4 BOTTLE	
FS-25	TURNOUT 123	TURNOUT LOCKER	GEARGRID OR EQ.	WALL MOUNT	24"X24"X74"
FS-24	EMS 114	DEA LOCKER			
FS-10	KITCHEN 127	RANGE (PROVIDE 2)	SAMSUNG CHEF GAS RANGE	NX58H9500W	PROVIDE SHUT OFFS
FS-11		REFRIGERATOR (PROVIDE 3)	FRIGIDAIRE GALLERY	FGVU21F8QF	
FS-12		FREEZER	FRIGIDAIRE GALLERY	FGVU21F8QF	
FS-13		DISHWASHER	FRIGIDAIRE GALLERY	FPID2498SF	
FS-14		MICROWAVE	BY OTHERS		
		COFFEE MAKER	BY OTHERS		
FS-27		BBQ GRILL--PROPANE	WEBER JH.	GENESIS II LX S-640	
FS-16	DAYROOM 125	MONITOR--EAST WALL	DELL 70 MONITOR	C7016H	
FS-15	CONFERENCE 107	MONITORS	DELL 55 MONITOR	C5519Q	
FS-17	TRAINING 102	MONITORS	DELL 70 INTERACTIVE TOUCH	C7017T	
FS-8	LAUNDRY 209	WASHER	FRONT LOAD--WHIRLPOOL	WFW92HEFW	27"X34"X39"; HD RESIDENTIAL HD RESIDENTIAL; CONFIRM PROPANE; SHUT OFF?
FS-9		CREW DRYER	FRONT LOAD--WHIRLPOOL	WGD75HEFW	
FS-18	FITNESS 212	TREADMILL	LIFE FITNESS	95T	PREMIUM
FS-19		ELLIPTICAL	LIFE FITNESS	95XSE	
FS-20		CLIMBER	LIFE FITNESS	CLPM	
FS-21		BENCH	LIFE FITNESS	SMAB	
FS-22		RACK	LIFE FITNESS	SDR1	
FS-23		MULTI JUNGLE	LIFE FITNESS	CMMJ-4	
FS-26		FOLDING GYM MATS		1-3/8"X4"X8'	

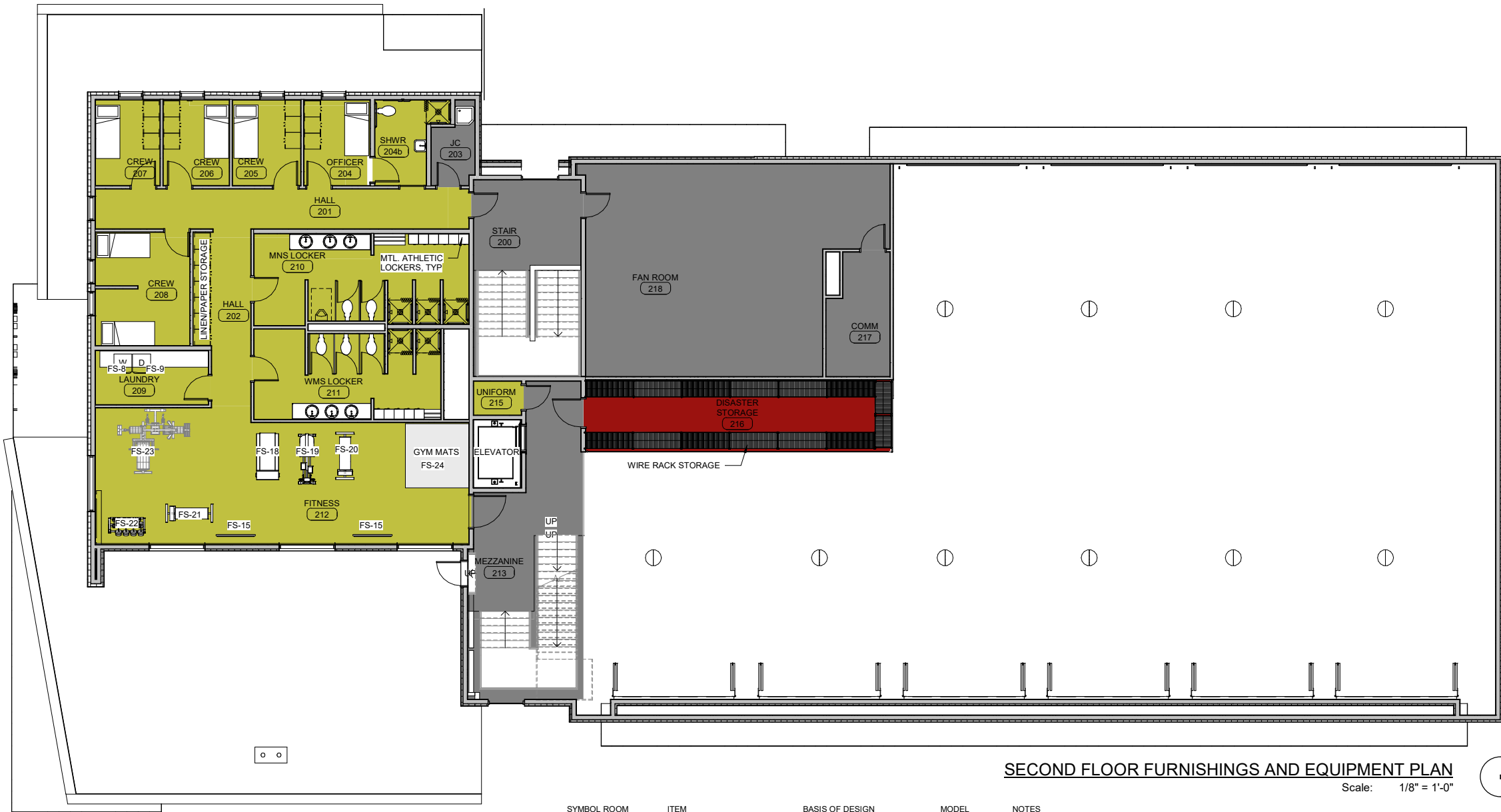
NOTE: FURNISHINGS ARE BY OWNER AND ARE INDICATED HERE FOR REFERENCE AND REVIEW.

LEGEND

- ADMIN
- APPARATUS
- CIRCULATION
- CREW QUARTERS
- PUBLIC
- UTILITY
- Calculating...



2 ALTERNATE PLAN - EOC LAYOUT
Scale: 1/8" = 1'-0"



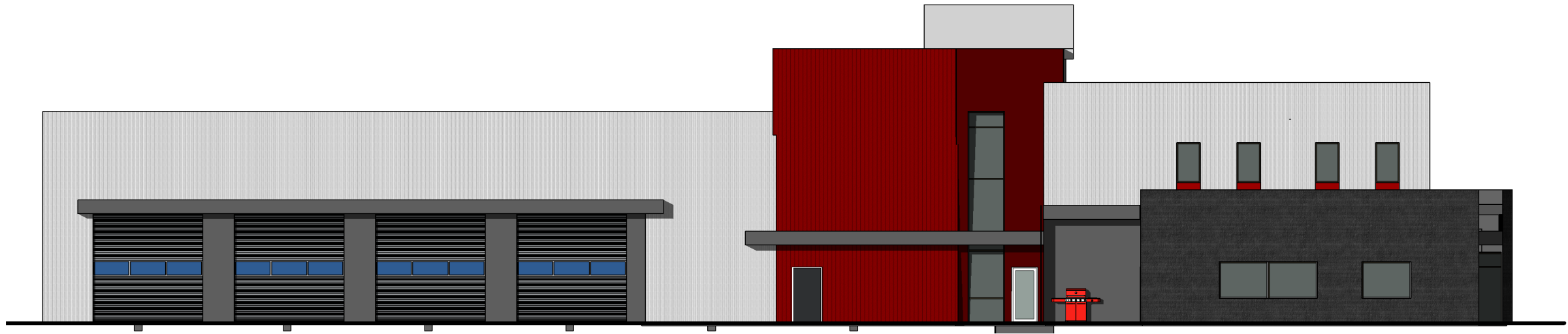
SECOND FLOOR FURNISHINGS AND EQUIPMENT PLAN

Scale: 1/8" = 1'-0"

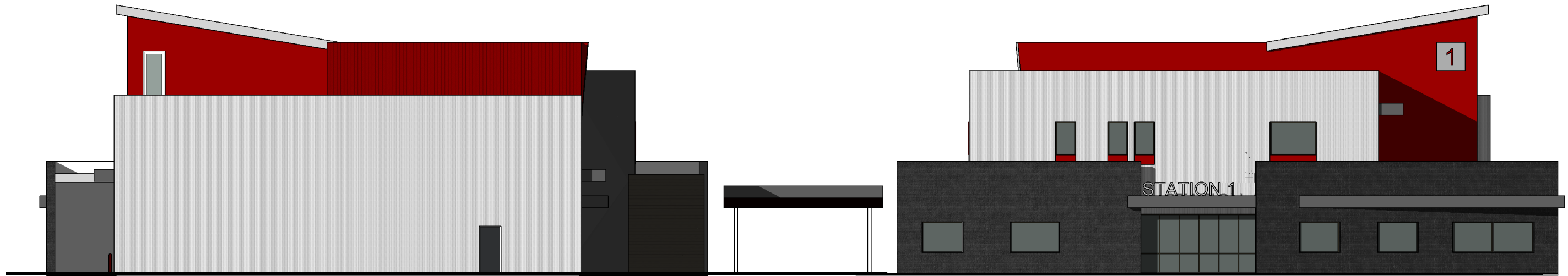
LEGEND

- ADMIN
- APPARATUS
- CIRCULATION
- CREW QUARTERS
- PUBLIC
- UTILITY
- Calculating...

SYMBOL	ROOM	ITEM	BASIS OF DESIGN	MODEL	NOTES
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FS-2		TUMBLE DRYER	UNIMAC	UT050N	14" RIGID DUCT MAX. (12" DIA); CONFIRM PROPANE
FS-3		PPE DRYING CABINET	UNIMAC	UTG68DG44	OWNER PROVIDED; 61"W, 30"D, 83"H
FS-4	SCBA 119	SCBA COMPRESSOR	SCOTT SAFETY HUSH AIR CONNECT 7500 10 HP	43"X43"X63"	
FS-5		SCBA CHARGE STATION	HUSH AIR CONNECT 7500	REVOLVE AIR	30"X21"X66"
FS-6		SCBA RACK STORAGE		4 BANK STORAGE	30"X23"X66"
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FS-25	TURNOUT 123	TURNOUT LOCKER	GEARGRID OR EQ.	WALL MOUNT	24"X24"X74"
FS-24	EMS 114	DEA LOCKER			
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FS-11		REFRIGERATOR (PROVIDE 3)	FRIGIDAIRE GALLERY	FGVU21F8QF	
FS-12		FREEZER	FRIGIDAIRE GALLERY	FGVU21F8QF	
FS-13		DISHWASHER	FRIGIDAIRE GALLERY	FPID2498SF	
FS-14		MICROWAVE	BY OTHERS		
		COFFEE MAKER	BY OTHERS		
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FS-20		CLIMBER	LIFE FITNESS	CLPM	
FS-21		BENCH	LIFE FITNESS	SMAB	
FS-22		RACK	LIFE FITNESS	SDR1	
FS-23		MULTI JUNGLE	LIFE FITNESS	CMMJ-4	
FS-26		FOLDING GYM MATS	PREMIUM	1-3/8"X4"X8'	
FS-15		MONITORS	DELL 55 MONITOR	C5519Q	



1 WEST ELEVATION - COLOR
Scale: 1/8" = 1'-0"

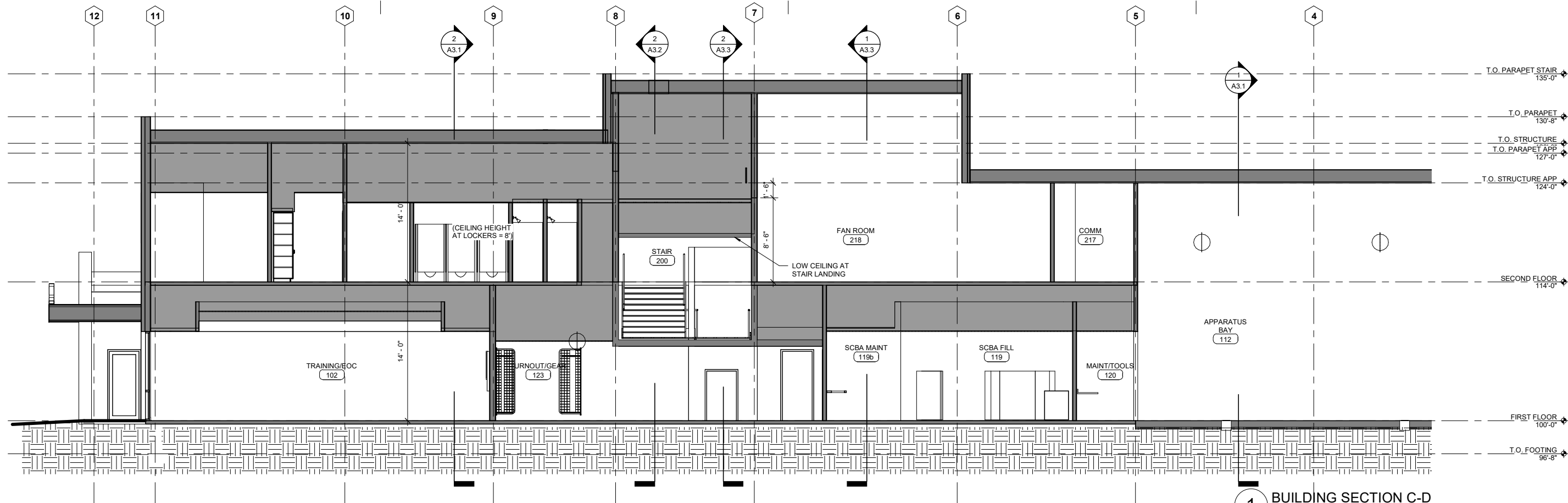


4 NORTH ELEVATION - COLOR
Scale: 1/8" = 1'-0"

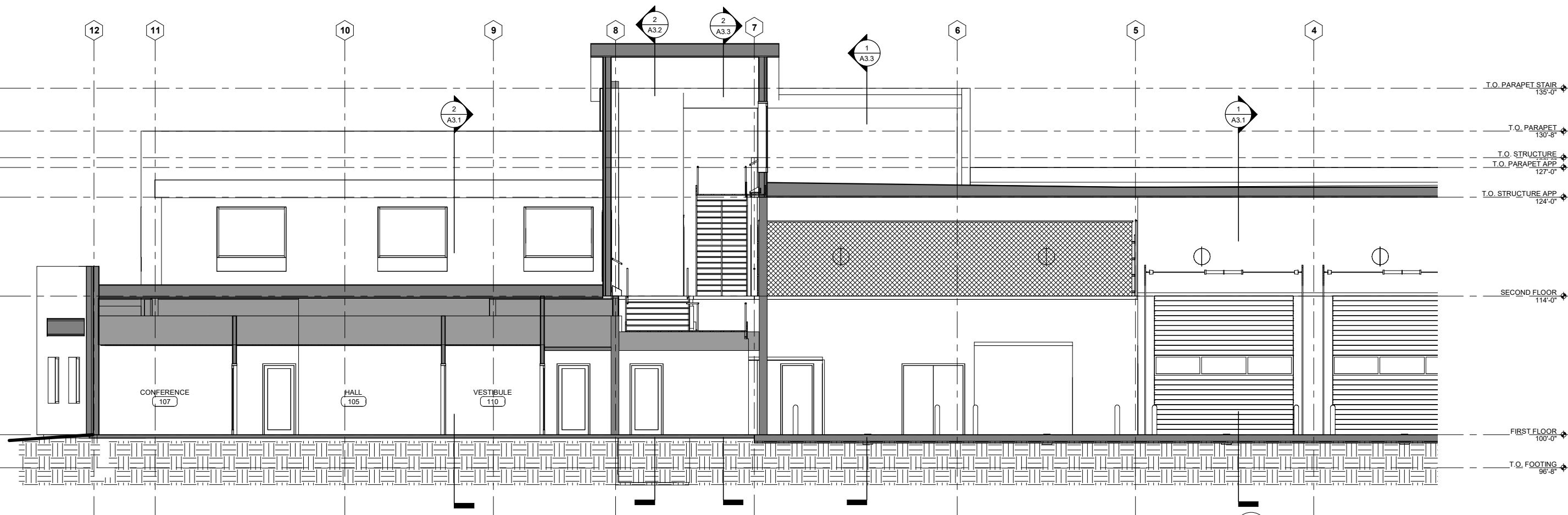


3 EAST ELEVATION - COLOR
Scale: 1/8" = 1'-0"

2 SOUTH ELEVATION - COLOR
Scale: 1/8" = 1'-0"



1 BUILDING SECTION C-D
Scale: 3/16" = 1'-0"



2 BUILDING SECTION D-E
Scale: 3/16" = 1'-0"

PROJ NO 1830
DRAWN
CHECKED
DATE 2.25.2019
FULL SIZE DRAWINGS: 27" x 34"

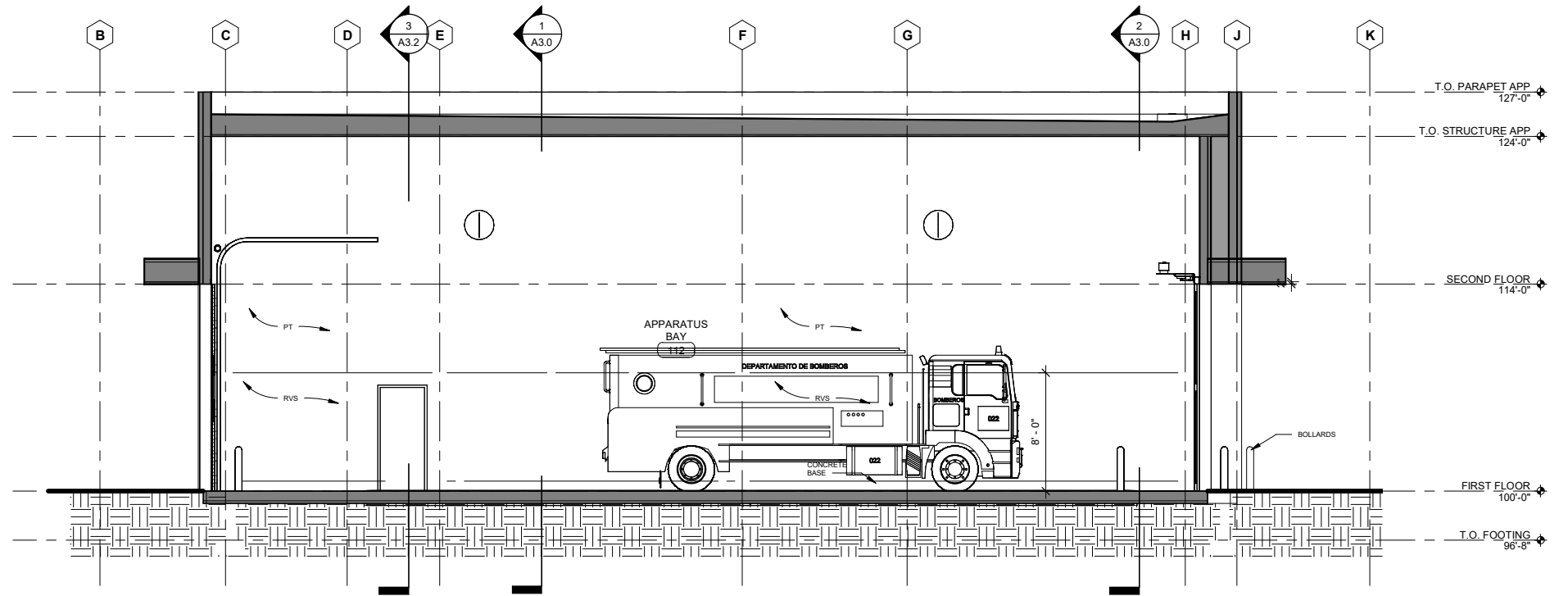
VALDEZ STATION 1 REPLACEMENT
SCHEMATIC DESIGN 35%
401 WEST PIONEER DRIVE
401 WEST PIONEER DRIVE, VALDEZ, ALASKA 99686

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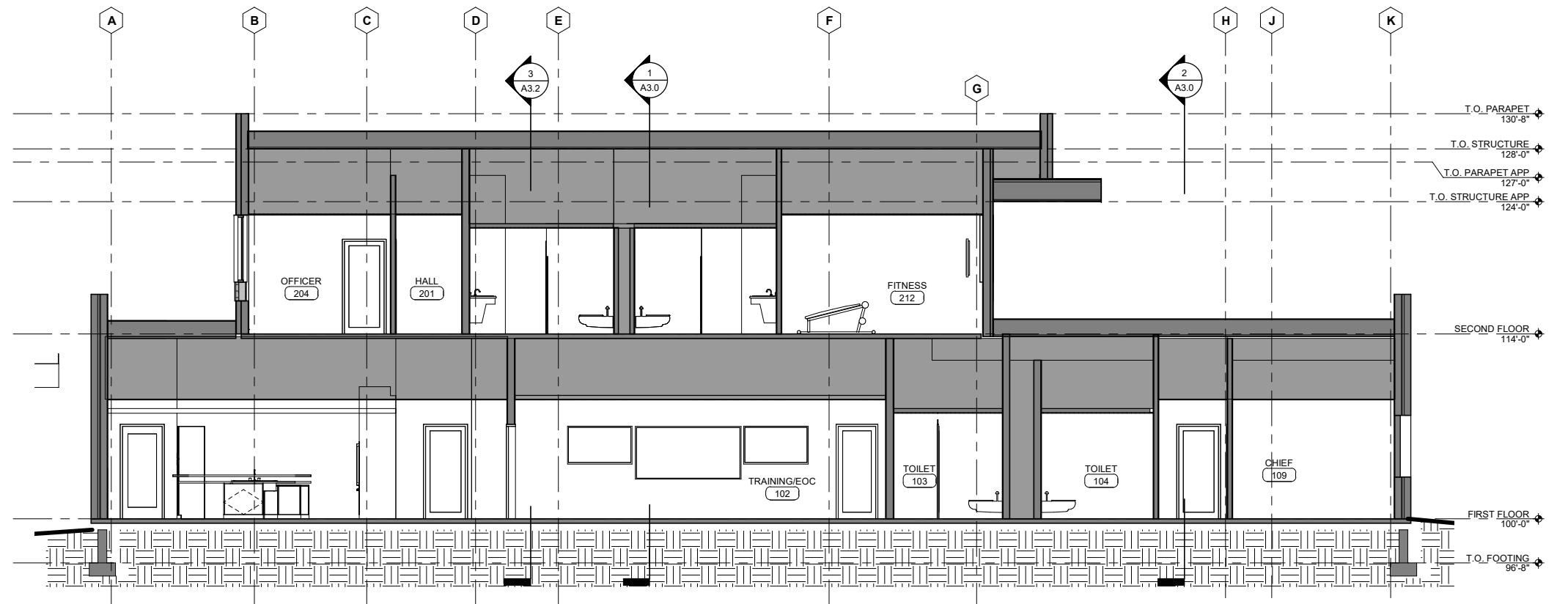
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SHEET CONTENTS
BUILDING SECTIONS

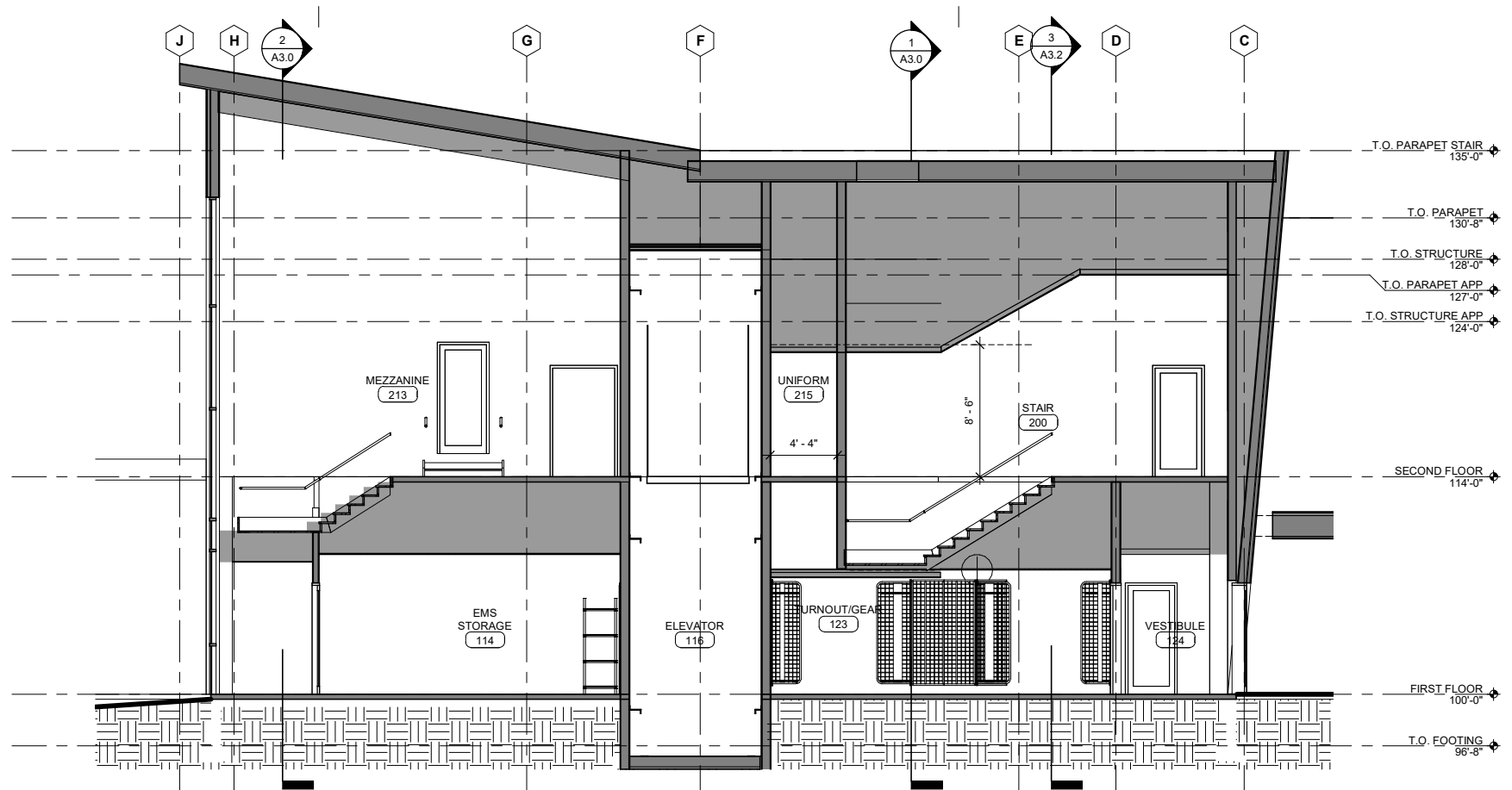
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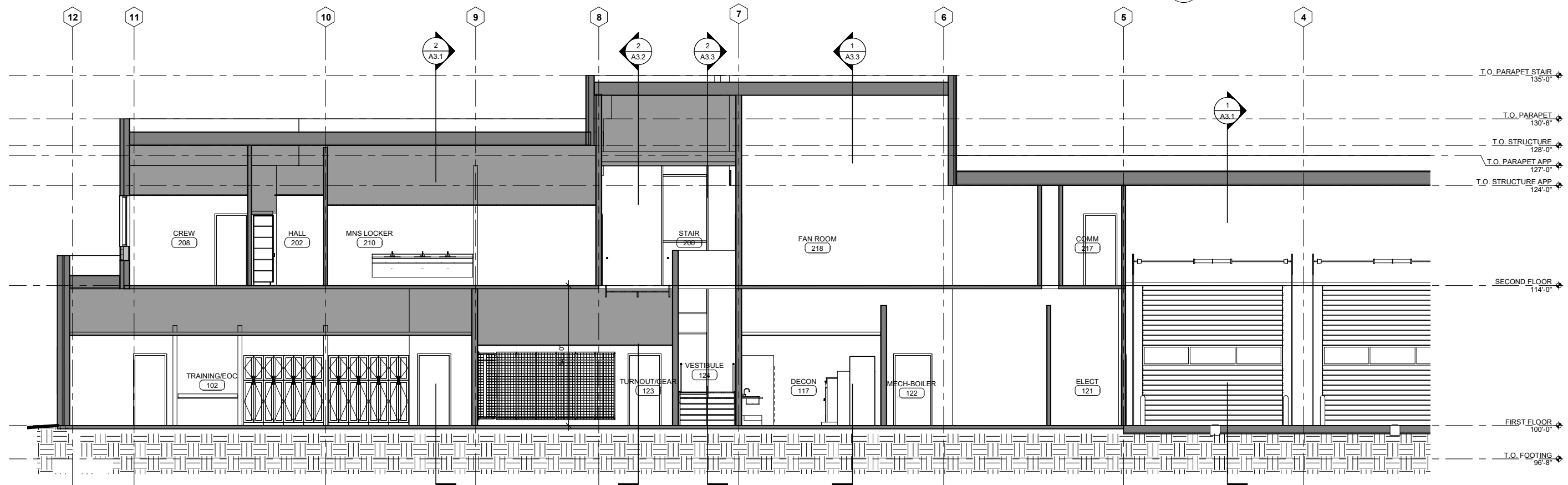
1 BUILDING SECTION 4-5
Scale: 3/16" = 1'-0"



2 BUILDING SECTION 10-11
Scale: 3/16" = 1'-0"



2 SECTION AT STAIRS
Scale: 3/16" = 1'-0"



3 SECTION AT FAN ROOM
Scale: 3/16" = 1'-0"

PROJ NO 1830
DRAWN Author
CHECKED Checker
DATE 2.25.2019
FULL SIZE DRAWINGS: 22" x 34"

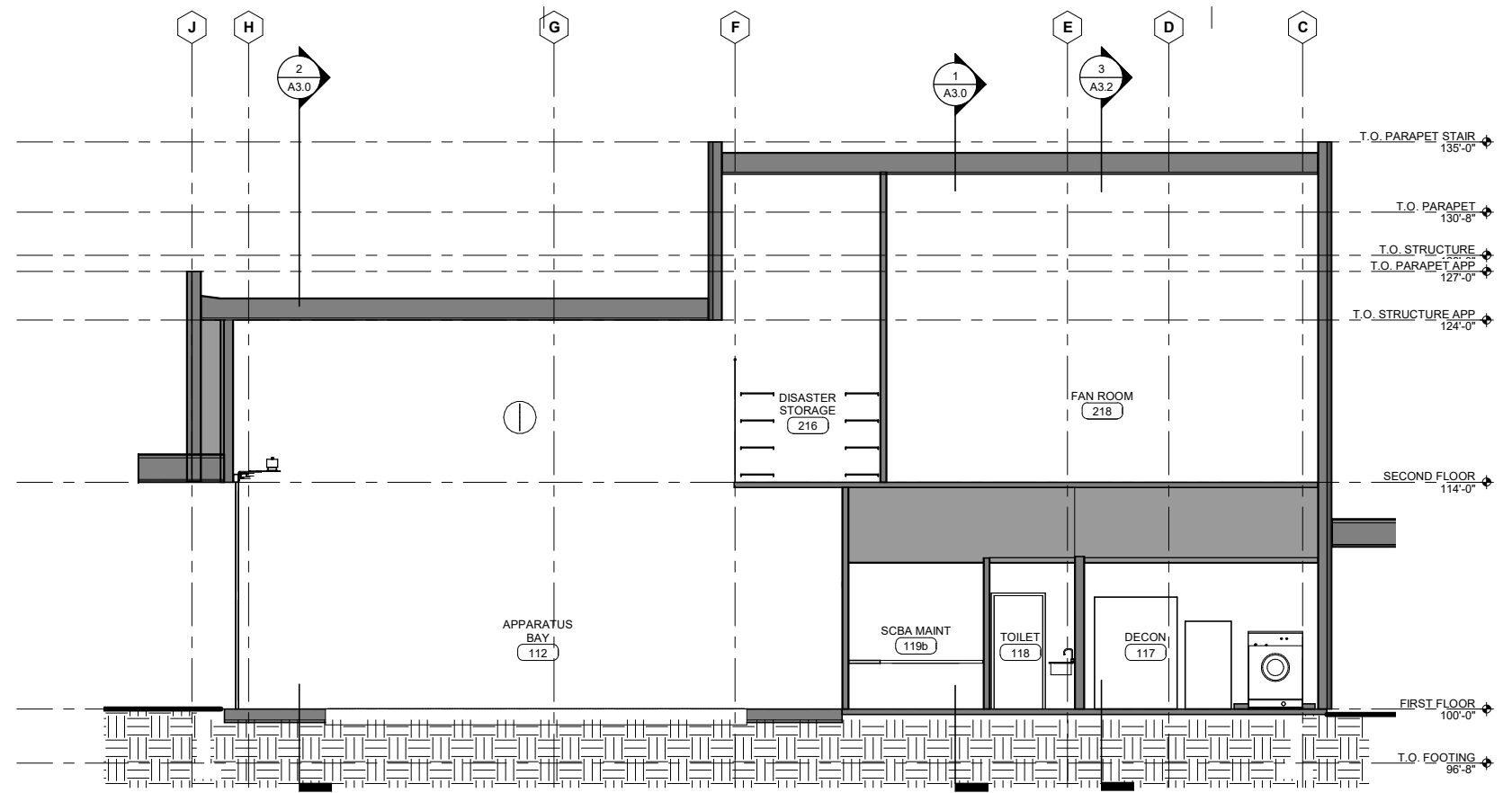
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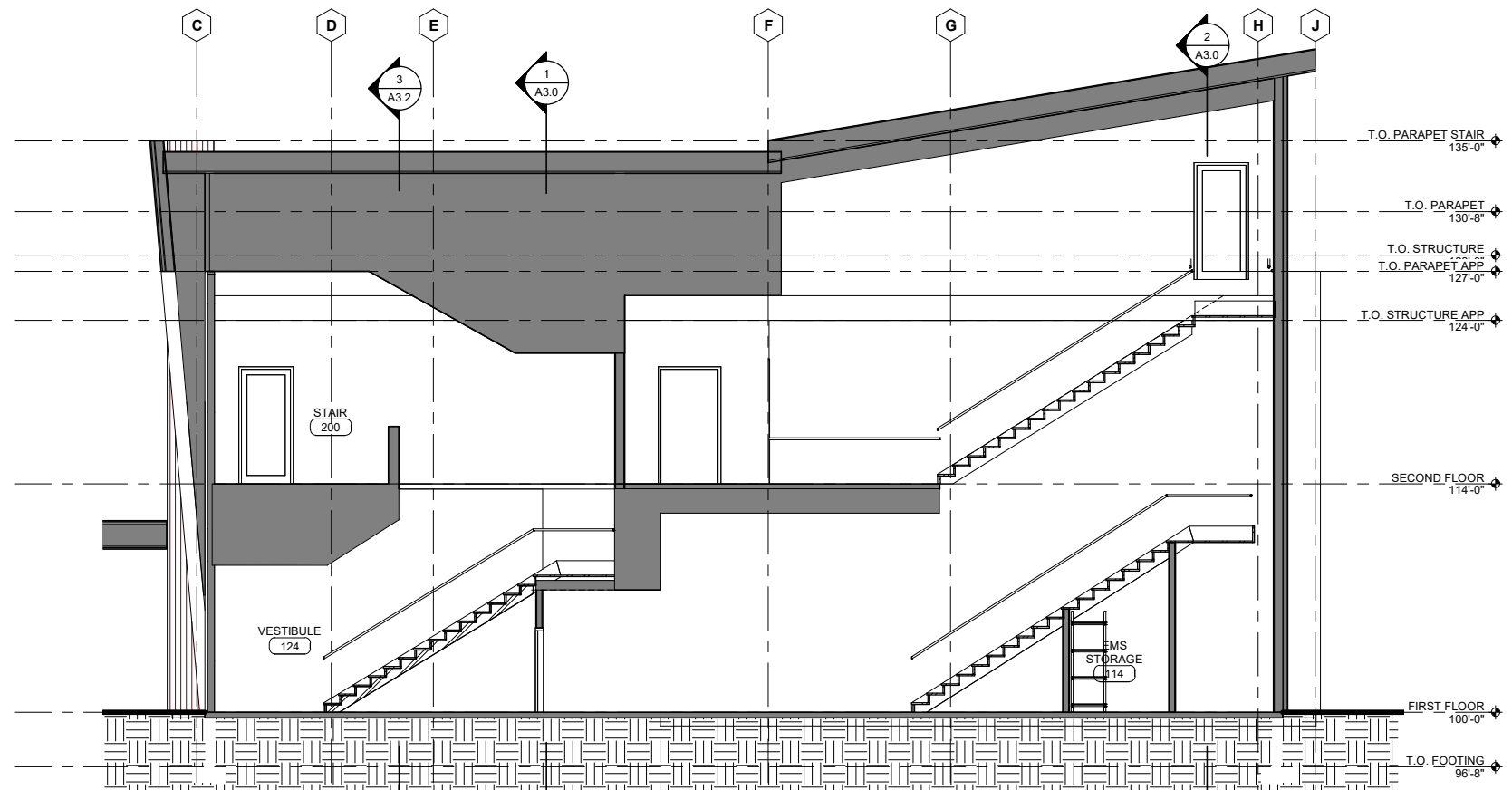
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SHEET CONTENTS
BUILDING SECTIONS

A3.2



1 SECTION AT FAN ROOM E/W
Scale: 3/16" = 1'-0"



2 SECTION AT STAIRS 2
Scale: 3/16" = 1'-0"

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DRAWN
CHECKED
DATE 2.25.2019
FULL SIZE DRAWINGS: 27" x 34"

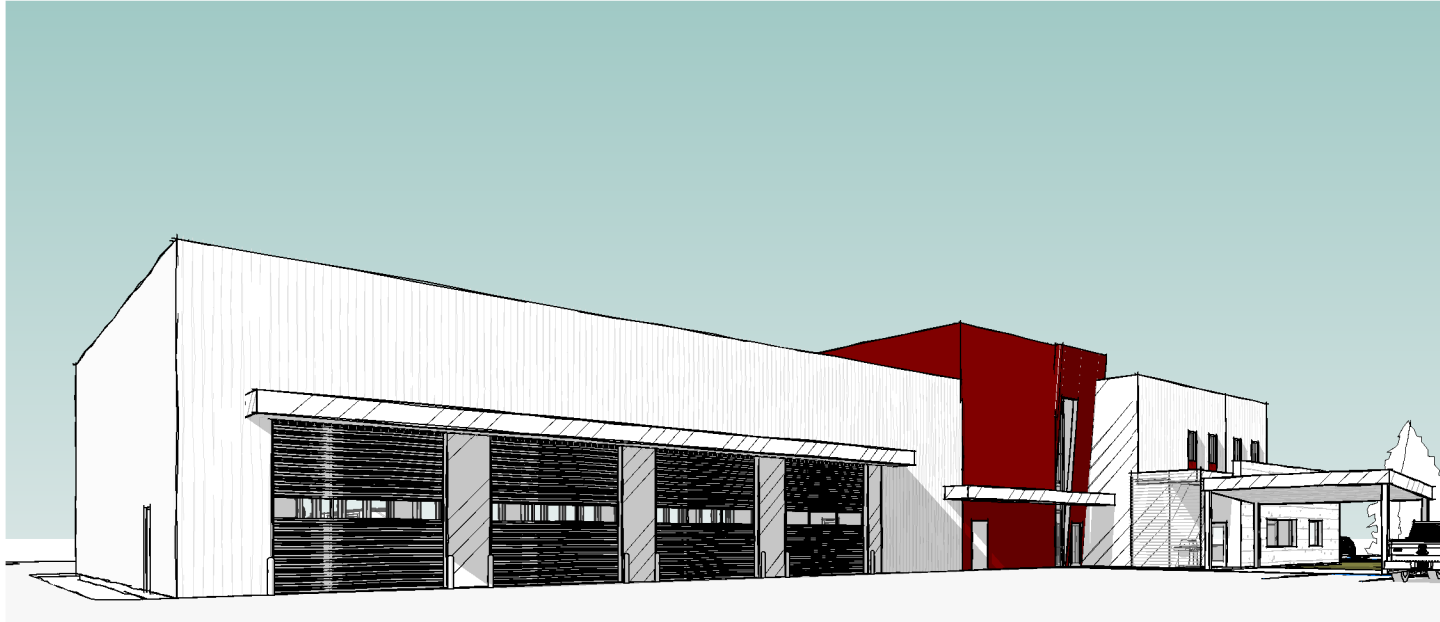
VALDEZ STATION 1 REPLACEMENT
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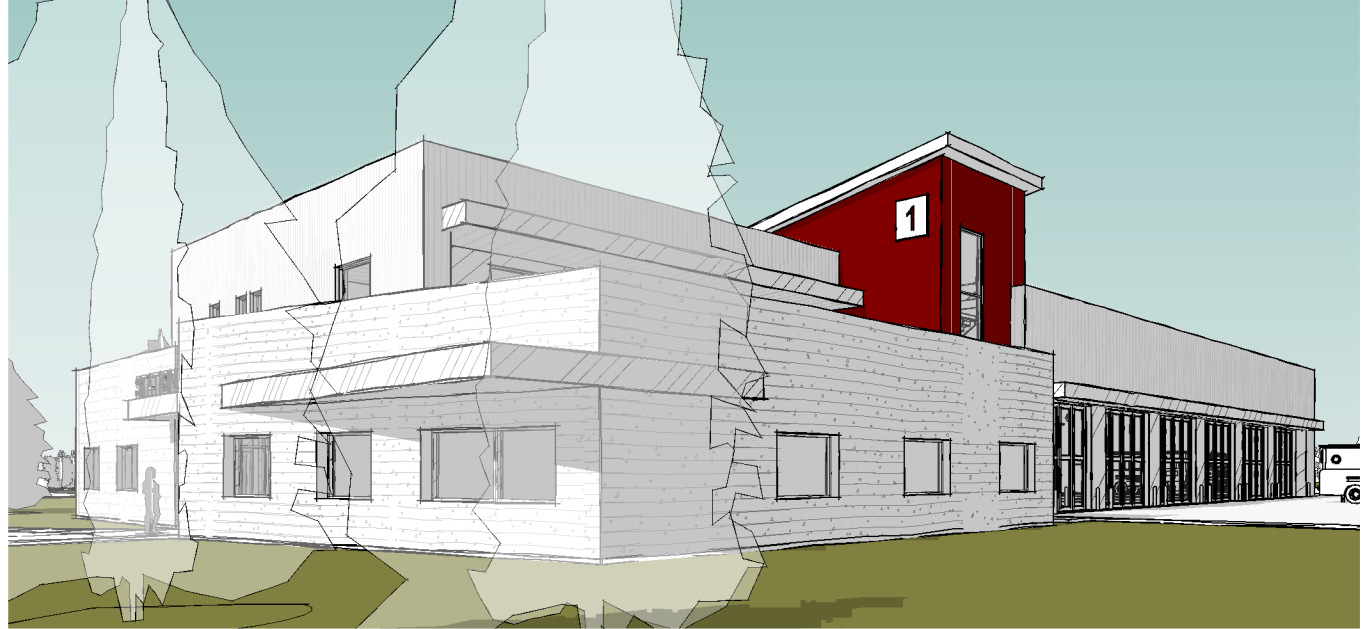
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SHEET CONTENTS
BUILDING SECTIONS

A3.3



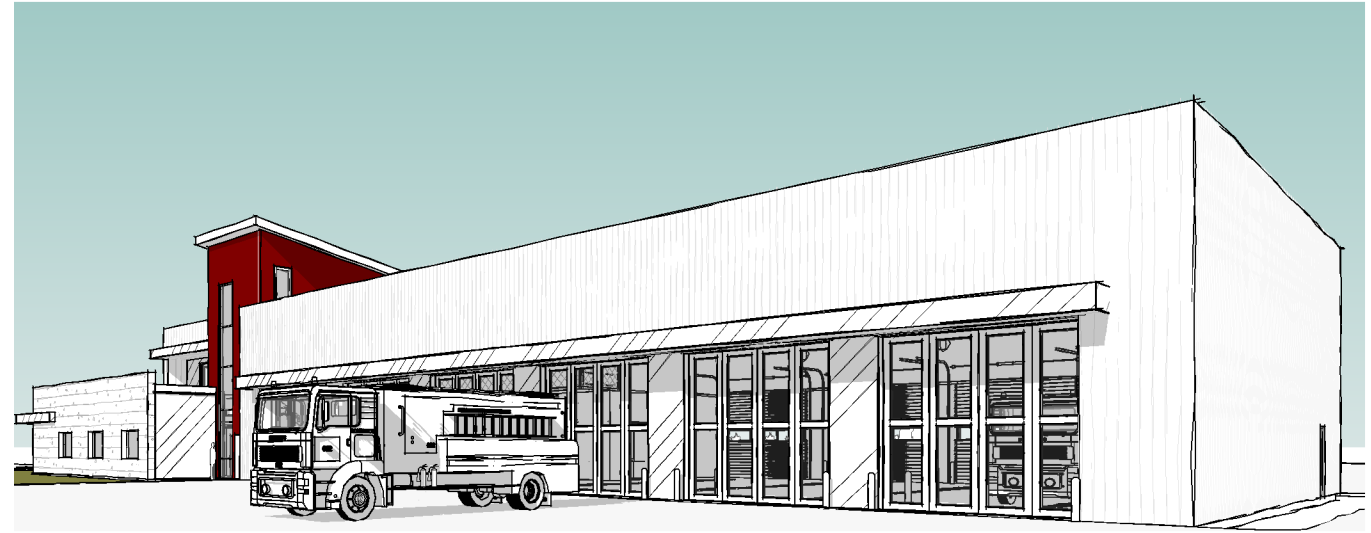
3 PERSPECTIVE 3
Scale:



1 PERSPECTIVE 1
Scale:



4 PERSPECTIVE 4
Scale:



2 PERSPECTIVE 2
Scale:

PROJ NO 1830
DRAWN WAJ
CHECKED
DATE 2.25.2019
FULL SIZE DRAWINGS 22" x 34"

VALDEZ STATION 1 REPLACEMENT
SCHEMATIC DESIGN 35%
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SHEET CONTENTS
BUILDING
AXONOMETRIC VIEWS

A9.0

35% DESIGN SUBMITTAL
CONSTRUCTION COST ESTIMATE

CITY OF VALDEZ
FIRE STATION #1 REPLACEMENT
401 WEST PIONEER DRIVE - VALDEZ, ALASKA

PREPARED FOR:

Wolf Architecture
625 South Cobb Street, Suite 200
Palmer, Alaska 99645

March 12, 2019



4103 Minnesota Drive • Anchorage, Alaska 99503 p: 907.561.1653 • f: 907.562.0420 • e: mail@hmsalaska.com

NOTES REGARDING THE PREPARATION OF THIS ESTIMATE

DRAWINGS AND DOCUMENTS

Level of Documents: (83) 35% design drawings, including design narratives
Date: February 25, 2019
Provided By: Wolf Architecture and their subconsultants of Anchorage and Palmer, Alaska

RATES

Pricing is based on current material, equipment and freight costs.

Labor Rates: A.S. Title 36 working 60 hours per week
Premium Time: 16.70%

BIDDING ASSUMPTIONS

Contract: Standard construction contract without restrictive bidding clauses
Bidding Situation: Competitive bids assumed
Bid Date: January 1, 2020
Start of Construction: Spring 2020
Months to Complete: Within (15) months, including materials procurement, submittals, etc.
Construction Time: (13) months

EXCLUDED COSTS

1. A/E design fees
2. Administrative and management costs
3. Furniture, furnishings and equipment (except those specifically included)
4. Demolition of existing fire station

NOTES REGARDING THE PREPARATION OF THIS ESTIMATE (Continued)

GENERAL

When included in HMS Inc.'s scope of services, opinions or estimates of probable construction costs are prepared on the basis of HMS Inc.'s experience and qualifications and represent HMS Inc.'s judgment as a professional generally familiar with the industry. However, since HMS Inc. has no control over the cost of labor, materials, equipment or services furnished by others, over contractor's methods of determining prices, or over competitive bidding or market conditions, HMS Inc. cannot and does not guarantee that proposals, bids, or actual construction cost will not vary from HMS Inc.'s opinions or estimates of probable construction cost.

This estimate assumes normal escalation based on the current economic climate. While the global economic downturn appears to be moderating, it remains unclear how its effects and subsequent economic recovery will affect construction costs. HMS Inc. will continue to monitor this, as well as other international, domestic and local events, and the resulting construction climate, and will adjust costs and contingencies as deemed appropriate.

GROSS FLOOR AREA

First Level	13,958 SF
Second Level	<u>4,480 SF</u>

TOTAL GROSS FLOOR AREA:	<u>18,438 SF</u>
--------------------------------	-------------------------

(3) SECTION FIRE TRAINING SIMULATOR (NOT IN GFA)

Section A - Three-Story Tower	770 SF
Section B - Two-Story Residential/Industrial	1,090 SF
Section C - One-Story Annex	<u>320 SF</u>

TOTAL FIRE TRAINING SIMULATOR:	<u>2,180 SF</u>
---------------------------------------	------------------------

HMS Project No.: 19027

35% DESIGN COST SUMMARY

	<i>Material</i>	<i>Labor</i>	<i>Total</i>
01 - SITE WORK	\$ 1,553,020	\$ 1,269,993	\$ 2,823,013
02 - SUBSTRUCTURE	321,326	221,287	542,613
03 - SUPERSTRUCTURE	731,428	461,267	1,192,695
04 - EXTERIOR CLOSURE	555,730	271,153	826,883
05 - ROOF SYSTEMS	183,623	153,939	337,562
06 - INTERIOR CONSTRUCTION	350,824	377,355	728,179
07 - CONVEYING SYSTEMS	68,400	39,211	107,611
08 - MECHANICAL	763,345	708,948	1,472,293
09 - ELECTRICAL	279,627	354,136	633,763
10 - EQUIPMENT	206,675	20,579	227,254
11 - SPECIAL CONSTRUCTION	0	0	0
<i>SUBTOTAL:</i>	<i>\$ 5,013,998</i>	<i>\$ 3,877,868</i>	<i>\$ 8,891,866</i>
12 - GENERAL REQUIREMENTS			3,025,934
<i>SUBTOTAL:</i>			<i>\$ 11,917,800</i>
13 - CONTINGENCIES			1,266,654
TOTAL ESTIMATED CONSTRUCTION COST (BID JANUARY 1, 2020):			\$ 13,184,454
COST PER SQUARE FOOT:			\$ 715.07 /SF
GROSS FLOOR AREA:			18,438 SF

HMS Project No.: 19027

ELEMENTAL SUMMARY

<i>Element</i>	<i>Material</i>	<i>Labor</i>	<i>Total Material/Labor</i>	<i>Total Cost</i>	<i>Cost per SF</i>
01 - SITE WORK				\$ 2,823,013	\$ 153.11
011 - Hazmat Abatement	\$ 0	\$ 0	\$ 0		0.00
012 - Site Preparation and Demolition	339,781	331,152	670,933		36.39
013 - Site Structures					
• Fire Training Tower/Simulator	313,170	277,693	590,863		32.05
• Free Standing Generator/Tank Canopy	27,680	19,050	46,730		2.53
014 - Site Improvements	450,769	300,882	751,651		40.77
015 - Site Mechanical	260,207	230,875	491,082		26.63
016 - Site Electrical	161,413	110,341	271,754		14.74
02 - SUBSTRUCTURE				\$ 542,613	\$ 29.43
021 - Standard Foundations	\$ 142,785	\$ 126,070	\$ 268,855		14.58
022 - Slab on Grade	178,541	95,217	273,758		14.85
023 - Basement	0	0	0		0.00
024 - Special Foundations	0	0	0		0.00
03 - SUPERSTRUCTURE				\$ 1,192,695	\$ 64.69
031 - Floor Construction	\$ 145,823	\$ 97,197	\$ 243,020		13.18
032 - Roof Construction	552,338	350,869	903,207		48.99
033 - Stair Construction	33,267	13,201	46,468		2.52
04 - EXTERIOR CLOSURE				\$ 826,883	\$ 44.85
041 - Exterior Walls	\$ 325,669	\$ 206,089	\$ 531,758		28.84
042 - Exterior Doors and Windows	230,061	65,064	295,125		16.01
05 - ROOF SYSTEMS				\$ 337,562	\$ 18.31
051 - Roofing	\$ 183,623	\$ 153,939	\$ 337,562		18.31
052 - Skylights	0	0	0		0.00
06 - INTERIOR CONSTRUCTION				\$ 728,179	\$ 39.49
061 - Partitions and Doors	\$ 131,434	\$ 144,834	\$ 276,268		14.98

HMS Project No.: 19027

ELEMENTAL SUMMARY

<i>Element</i>	<i>Material</i>	<i>Labor</i>	<i>Total Material/Labor</i>	<i>Total Cost</i>	<i>Cost per SF</i>
062 - Interior Finishes	143,505	208,062	351,567		19.07
063 - Specialties	75,885	24,459	100,344		5.44
07 - CONVEYING SYSTEMS	\$ 68,400	\$ 39,211		\$ 107,611	\$ 5.84
08 - MECHANICAL				\$ 1,472,293	\$ 79.85
081 - Plumbing	\$ 177,614	\$ 194,472	\$ 372,086		20.18
082 - HVAC	463,693	412,386	876,079		47.51
083 - Fire Protection	54,106	70,454	124,560		6.76
084 - Special Mechanical Systems	67,932	31,636	99,568		5.40
09 - ELECTRICAL				\$ 633,763	\$ 34.37
091 - Service and Distribution	\$ 70,283	\$ 41,155	\$ 111,438		6.04
092 - Lighting and Power	129,726	202,847	332,573		18.04
093 - Special Electrical Systems	79,618	110,134	189,752		10.29
10 - EQUIPMENT				\$ 227,254	\$ 12.33
101 - Fixed and Movable Equipment	\$ 199,003	\$ 19,250	\$ 218,253		11.84
102 - Furnishings	7,672	1,329	9,001		0.49
11 - SPECIAL CONSTRUCTION	\$ 0	\$ 0		\$ 0	\$ 0.00
SUBTOTAL DIRECT WORK:	\$ 5,013,998	\$ 3,877,868		\$ 8,891,866	
12 - GENERAL REQUIREMENTS				\$ 3,025,934	\$ 164.11
121 - Mobilization			\$ 31,750		1.72
122 - Operation Costs			2,078,926		112.75
123 - Profit			915,258		49.64
13 - CONTINGENCIES				\$ 1,266,654	\$ 68.70
131 - Estimator's Contingency	7.50%		\$ 893,835		48.48
132 - Escalation Contingency	2.91%		372,819		20.22
TOTAL ESTIMATED CONSTRUCTION COST:				\$ 13,184,454	\$715.07 /SF
GROSS FLOOR AREA:					18,438 SF

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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01 - SITE WORK 012 - Site Preparation and Demolition	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

SITE PREPARATION

Note: Quantities by architect.

Site surveying and staking	3.97	AC	1000.00	3,970	6500.00	25,805	7500.00	29,775
Erosion and pollution control at paved areas	74,500	SF	0.03	2,235	0.05	3,725	0.08	5,960
SWPP plan implementation	1	LOT	1000.00	1,000	2000.00	2,000	3000.00	3,000
ROW permits at roadways	1	LOT	3500.00	3,500			3500.00	3,500
Traffic control barriers and signs	4	MOS	750.00	3,000	1250.00	5,000	2000.00	8,000
Flag person for entrance work	6	WKS	100.00	600	1400.00	8,400	1500.00	9,000
Temporary construction fencing and gates	1,200	LF	8.50	10,200	4.25	5,100	12.75	15,300

SITE DEMOLITION

Cut and remove curb and gutter	260	LF			4.80	1,248	4.80	1,248
Cut and remove sidewalks	1,040	SF			1.25	1,300	1.25	1,300
Saw cut 2" AC pavement at roadways (5)	220	LF	0.40	88	1.25	275	1.65	363
Remove AC pavement and dispose for recycling	20,474	SF			0.60	12,284	0.60	12,284
Dispose concrete and miscellaneous debris	35	TONS	80.00	2,800	50.00	1,750	130.00	4,550

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 3/12/2019

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01 - SITE WORK 012 - Site Preparation and Demolition	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

EARTHWORK

Clearing, grub up roots and dispose	1.18	AC	1500.00	1,770	6000.00	7,080	7500.00	8,850
Remove average 12" deep organics under landscape areas and dispose (65,200 SF)	2,415	CY			7.00	16,905	7.00	16,905
Excavate average 18" deep under parking/roads/walks, etc. and dispose (102,500 SF)	5,695	CY			7.50	42,713	7.50	42,713
Excavate average 30" deep under building slab and dispose (14,000 SF)	1,296	CY			7.50	9,720	7.50	9,720
Proof roll site under building	14,000	SF			0.20	2,800	0.20	2,800
Average 36" deep Type II classified fill under building, compacted (14,000 SF)	1,867	CY	27.50	51,343	8.00	14,936	35.50	66,279
Average 18" deep Type II fill at pavements and training area, compacted (102,500 SF)	6,833	CY	27.50	187,908	8.00	54,664	35.50	242,572
Rough grade pavement areas	116,500	SF			0.15	17,475	0.15	17,475
Dewatering allowance (10% of excavation)	940	CY	7.30	6,862	3.50	3,290	10.80	10,152
Soil compaction density tests (1 per 250 CY)	35	EA	225.00	7,875			225.00	7,875
SUBTOTAL:				\$ 283,151		\$ 236,470		\$ 519,621

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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01 - SITE WORK 012 - Site Preparation and Demolition	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
Labor Premium Time	16.70%					39,490		39,490
SUBTOTAL:				\$ 283,151		\$ 275,960		\$ 559,111
Subcontractor's Overhead and Profit on Material and Labor	20.00%			56,630		55,192		111,822
TOTAL ESTIMATED COST:				\$ 339,781		\$ 331,152		\$ 670,933

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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01 - SITE WORK 013 - Site Structures • Fire Training Tower/Simulator	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

Note: Budgetary tower/simulator costs provided by Alan Henderson with WHP Training Towers, 800-351-2525.

Concrete foundations, including design, soil testing, and 4" concrete fill on floor decks	1	LOT	53000.00	53,000	32000.00	32,000	85000.00	85,000
Training tower/simulator, including materials, freight, and labor	1	LOT	235170.00	235,170	233193.00	233,193	468363.00	468,363
Electrical service and LED light fixtures (allowance)	1	LOT	25000.00	25,000	12500.00	12,500	37500.00	37,500

Note: Premium time and per diem included in labor cost.

TOTAL ESTIMATED COST:	\$ 313,170	\$ 277,693	\$ 590,863
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CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
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01 - SITE WORK 013 - Site Structures • Free Standing Generator and Tank Canopy	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

18'0"x24'0" free standing canopy at generator and tanks (canopy consists of four galvanized HSS columns, galvanized roof framing, and metal roofing)

432 SF 52.50 22,680 32.00 13,824 84.50 36,504

Electrical service and LED light fixtures (allowance)

1 LOT 5000.00 5,000 2500.00 2,500 7500.00 7,500

SUBTOTAL:

\$ 27,680 \$ 16,324 \$ 44,004

Labor Premium Time

16.70% 2,726 2,726

TOTAL ESTIMATED COST: \$ 27,680 \$ 19,050 \$ 46,730

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
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01 - SITE WORK	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
014 - Site Improvements			\$	\$	\$	\$	\$	\$

AC PAVEMENTS SIGNAGE, ETC.

Note: Quantities by architect.

2" D1 leveling course at roadways and visitor parking	60	CY	40.00	2,400	8.50	510	48.50	2,910
4" D1 leveling course at fire station ingress, egress, and training area	952	CY	40.00	38,080	8.50	8,092	48.50	46,172
2" asphalt paving at roadway utility patches (13 tons)	1,000	SF	1.60	1,600	1.40	1,400	3.00	3,000
2" asphalt paving at parking (94 tons)	7,500	SF	1.60	12,000	1.20	9,000	2.80	21,000
3" asphalt paving at fire station ingress, egress, and training area (525 tons)	63,000	SF	2.20	138,600	1.60	100,800	3.80	239,400
Tack coat joint to existing pavement at roadways	450	LF	0.20	90	1.00	450	1.20	540
Cross hatch markings (2)	288	SF	0.60	173	1.00	288	1.60	461
Paint handicapped accessible curbs blue (2)	20	LF	1.50	30	2.50	50	4.00	80
Paint parking stalls	20	EA	20.00	400	30.00	600	50.00	1,000
Mark handicapped symbols on pavement	2	EA	20.00	40	45.00	90	65.00	130
Traffic directional signs, posts and bases	4	EA	155.00	620	120.00	480	275.00	1,100

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01 - SITE WORK 014 - Site Improvements	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

AC PAVEMENTS SIGNAGE, ETC. (Continued)

Two panel handicapped accessible signs, posts and bases	2	EA	138.00	276	115.00	230	253.00	506
Single panel 'No Parking, Staff Parking' signs, posts and bases at snow storage areas	6	EA	150.00	900	115.00	690	265.00	1,590

SEAT WALLS, CONCRETE CURBS AND GUTTERS

18"x12" reinforced concrete seat walls	72	LF	42.50	3,060	32.50	2,340	75.00	5,400
24"x8" thick x 6" concrete curbs and gutters at parking sidewalks	200	LF	18.50	3,700	15.20	3,040	33.70	6,740
24"x8" thick x6" concrete curbs and gutters at replaced sidewalks	260	LF	18.50	4,810	16.50	4,290	35.00	9,100
Joints to existing curbs	56	LF	10.00	560	15.00	840	25.00	1,400

PLAZA AND SIDEWALKS

4" D1 subbase under sidewalks, pads, etc. (4,000 SF)	1,632	CY	40.00	65,280	8.50	13,872	48.50	79,152
4" mesh reinforced scored concrete sidewalks and joints, broom finished	3,600	SF	5.40	19,440	3.70	13,320	9.10	32,760
Extra for ADA ramps (2)	300	SF	0.50	150	2.00	600	2.50	750

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01 - SITE WORK 014 - Site Improvements	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

PLAZA AND SIDEWALKS (Continued)

4" reinforced concrete utility pads	400	SF	5.40	2,160	3.70	1,480	9.10	3,640
Extra for thickened edges for seat walls	72	LF	3.25	234	1.70	122	4.95	356
1/2"x4" expansion joints at replaced sidewalks	60	LF	1.70	102	1.85	111	3.55	213

BOLLARDS, FENCING, AND SCREEN WALLS

6" diameter x 90" concrete filled pipe bollards with 18" diameter x 36" deep concrete bases, painted yellow above grade at overhead doors, dumpster, hydrant, and tanks	30	EA	525.00	15,750	395.00	11,850	920.00	27,600
6'0" stained wood cedar boards decorative fencing, posts and bases at fuel oil, propane tanks, and dumpster (assumed)	80	LF	52.50	4,200	22.50	1,800	75.00	6,000
10'0"x8'0" gate	1	EA	1150.00	1,150	650.00	650	1800.00	1,800
8'0"x8'0" gate	1	EA	925.00	925	540.00	540	1465.00	1,465

SITE FURNISHINGS

Seat wall mounted interpretive sign panels	3	EA	780.00	2,340	260.00	780	1040.00	3,120
5-slot bike rack	1	EA	730.00	730	190.00	190	920.00	920
20" wide x 72" fixed bench	1	EA	870.00	870	130.00	130	1000.00	1,000

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
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01 - SITE WORK 014 - Site Improvements	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

SITE FURNISHINGS (Continued)

18" square x 36" trash receptacles (assumed)	2	EA	675.00	1,350	95.00	190	770.00	1,540
25'0" flag poles and bases	2	EA	2350.00	4,700	850.00	1,700	3200.00	6,400
18'0" high x 60" diameter concrete base for bell structure	1	EA	650.00	650	350.00	350	1000.00	1,000
Bell and hanger assembly (allowance)	1	EA	2500.00	2,500	1000.00	1,000	3500.00	3,500

LANDSCAPING

Trees with Stakes and Guy Wires

6'0" tall Colorado spruce	12	EA	285.00	3,420	235.00	2,820	520.00	6,240
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Shrubs

48" tall hedge cotoneaster in #5 container	54	EA	27.00	1,458	23.00	1,242	50.00	2,700
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Miscellaneous

3" bark mulch at beds	600	SF	0.55	330	0.40	240	0.95	570
(3) 2"x2"x2" wood stakes at trees	80	LF	1.00	80	3.50	280	4.50	360
1" polypropylene webbing at trees, 1/3 height	12	EA	28.00	336	35.00	420	63.00	756

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 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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01 - SITE WORK 014 - Site Improvements	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

LANDSCAPING (Continued)

Miscellaneous (Continued)

Average 12" deep topsoil in planting beds (600 SF)	27	CY	32.00	864	8.00	216	40.00	1,080
4" topsoil at new lawn seeded areas	1,015	CY	32.00	32,480	8.50	8,628	40.50	41,108
Type A: Lawn mix grass seeding	38.00	MSF	105.00	3,990	285.00	10,830	390.00	14,820
Type B: No mow grass seeding	27.21	MSF	85.00	2,313	250.00	6,803	335.00	9,116
1-year landscape maintenance and warranty	1	LOT	500.00	500	1500.00	1,500	2000.00	2,000
SUBTOTAL:				\$ 375,641		\$ 214,854		\$ 590,495
Labor Premium Time	16.70%					35,881		35,881
SUBTOTAL:				\$ 375,641		\$ 250,735		\$ 626,376
Subcontractor's Overhead and Profit on Material and Labor	20.00%			75,128		50,147		125,275

TOTAL ESTIMATED COST:				\$ 450,769		\$ 300,882		\$ 751,651
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CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 3/12/2019

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01 - SITE WORK 015 - Site Mechanical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

WATER

6" diameter corrosion resistant DIP water line	830	LF	32.00	26,560	22.20	18,426	54.20	44,986
6" diameter DIP vertical pipe	20	LF	32.00	640	25.00	500	57.00	1,140
6" gate valves	2	EA	875.00	1,750	335.00	670	1210.00	2,420
12"x6"x12" tee	1	EA	285.00	285	180.00	180	465.00	465
6" bends with restraint joints	3	EA	225.00	675	170.00	510	395.00	1,185
6" couplings/joints	42	EA	225.00	9,450	170.00	7,140	395.00	16,590
6" building connection and sleeve	1	EA	195.00	195	220.00	220	415.00	415
6" live tap at existing including fee	1	EA	4500.00	4,500	850.00	850	5350.00	5,350
10" live tap at existing including fee	1	EA	5250.00	5,250	1050.00	1,050	6300.00	6,300
Concrete thrust blocks	4	EA	160.00	640	120.00	480	280.00	1,120
Test and disinfect piping	1	LOT	175.00	175	950.00	950	1125.00	1,125
6" fire hydrant assembly	1	EA	2875.00	2,875	1650.00	1,650	4525.00	4,525
Excavate, trench and stockpile (10'0" deep)	3,074	CY			7.00	21,518	7.00	21,518
Bedding material	150	CY	45.00	6,750	8.50	1,275	53.50	8,025

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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01 - SITE WORK 015 - Site Mechanical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

WATER (Continued)

30" deep NFS fill, compacted	1,000	CY	32.00	32,000	8.00	8,000	40.00	40,000
Stockpiled backfill, compacted	2,538	CY			8.00	20,304	8.00	20,304
Dispose surplus off site	536	CY			8.50	4,556	8.50	4,556
6" PVC marker tape	830	LF	0.52	432	0.33	274	0.85	706
Allowance for shoring (50% of trenching)	415	LF	9.75	4,046	6.00	2,490	15.75	6,536
Dewatering allowance (10% of excavation)	307	CY	7.30	2,241	3.50	1,075	10.80	3,316

SEWER

2" diameter HDPE sewer force main	230	LF	2.80	644	4.60	1,058	7.40	1,702
2" diameter HDPE vertical pipe	10	LF	2.80	28	4.80	48	7.60	76
2" fittings with restraint joints	4	EA	18.50	74	52.50	210	71.00	284
2" couplings	12	EA	14.50	174	40.00	480	54.50	654
6" diameter DIP sewer line	70	LF	21.60	1,512	22.00	1,540	43.60	3,052
6" fittings/couplings	7	EA	225.00	1,575	170.00	1,190	395.00	2,765
6"x4"x6" connection to existing sewer line including connection fee	1	EA	2150.00	2,150	770.00	770	2920.00	2,920

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 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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01 - SITE WORK 015 - Site Mechanical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

SEWER (Continued)

6" yard cleanout	1	EA	255.00	255	310.00	310	565.00	565
48" diameter x 96" deep manhole, cover and frame	1	EA	3250.00	3,250	1750.00	1,750	5000.00	5,000
Lift station assembly	1	EA	32500.00	32,500	4500.00	4,500	37000.00	37,000
6" building connection and sleeve	1	EA	148.00	148	165.00	165	313.00	313
6" manhole/cleanout connections	2	EA	98.00	196	120.00	240	218.00	436
Excavate, trench and stockpile	1,000	CY			7.00	7,000	7.00	7,000
2" rigid insulation where required	200	SF	0.98	196	0.50	100	1.48	296
Bedding material	50	CY	45.00	2,250	8.50	425	53.50	2,675
30" deep NFS fill compacted	250	CY	32.00	8,000	8.00	2,000	40.00	10,000
Stockpiled backfill, compacted	900	CY			8.00	7,200	8.00	7,200
Dispose surplus off site	100	CY			8.50	850	8.50	850
6" PVC marker tape	300	LF	0.52	156	0.33	99	0.85	255
Pressure test piping	1	LOT	100.00	100	600.00	600	700.00	700
Allowance for shoring (50% of trenching)	200	LF	9.75	1,950	6.00	1,200	15.75	3,150

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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01 - SITE WORK 015 - Site Mechanical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

SEWER (Continued)

Dewatering allowance (10% of excavation)	100	CY	7.30	730	3.50	350	10.80	1,080
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PROPANE GAS

Note: Building supply lines, connections, and propane tanks (2) by propane company.

STORM DRAINS

6" rain leader cleanout	1	EA	345.00	345	380.00	380	725.00	725
6" connections to cleanouts	2	EA	70.00	140	95.00	190	165.00	330
6" connection to building including sleeve	1	EA	185.00	185	215.00	215	400.00	400
6" HDPE rain leader piping with heat trace	100	LF	5.70	570	4.60	460	10.30	1,030
18" CPEP storm drain piping to manholes	610	LF	21.00	12,810	7.90	4,819	28.90	17,629
6" couplings and joints	5	EA	45.00	225	60.00	300	105.00	525
18" couplings and joints	31	EA	65.00	2,015	75.00	2,325	140.00	4,340
Storm drain catch basins with inlet grate	9	EA	1325.00	11,925	825.00	7,425	2150.00	19,350
18" connections to existing pipe including fee	2	EA	2750.00	5,500	800.00	1,600	3550.00	7,100
Connection to manholes and catch basins	12	EA	80.00	960	85.00	1,020	165.00	1,980

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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01 - SITE WORK 015 - Site Mechanical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

STORM DRAINS (Continued)

Test piping	1	LOT	100.00	100	600.00	600	700.00	700
Excavate, trench and stockpile	947	CY			7.00	6,629	7.00	6,629
Bedding material	70	CY	45.00	3,150	8.50	595	53.50	3,745
30" deep NFS fill at paved areas, compacted	100	CY	32.00	3,200	8.00	800	40.00	4,000
Stockpiled backfill	932	CY			8.00	7,456	8.00	7,456
Dispose surplus	15	CY			8.50	128	8.50	128
6" PVC marker tapes	710	LF	0.52	369	0.33	234	0.85	603

BUILDING FUEL OIL SYSTEM

2,500 gallon double wall fuel tank complete with gauges, alarms, vents, etc.	1	EA	18500.00	18,500	3700.00	3,700	22200.00	22,200
Fuel for testing system	300	GAL	4.15	1,245			4.15	1,245
3/4" fuel oil supply and 1" fuel oil return piping inside 4" double containment pipe	40	LF	19.70	788	23.50	940	43.20	1,728
3/4" to 1" tank connections and valves	2	EA	85.00	170	110.00	220	195.00	390
4" building connection and sleeve	1	EA	98.00	98	125.00	125	223.00	223

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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01 - SITE WORK 015 - Site Mechanical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

BUILDING FUEL OIL SYSTEM (Continued)

Trenching and backfill including marker tape	40	LF	4.80	192	12.50	500	17.30	692
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TRUCK FUELING STATION

NIC

SUBTOTAL:				\$ 216,839		\$ 164,864		\$ 381,703
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Labor Premium Time	16.70%					27,532		27,532
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SUBTOTAL:				\$ 216,839		\$ 192,396		\$ 409,235
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Subcontractor's Overhead and Profit on Material and Labor	20.00%			43,368		38,479		81,847
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TOTAL ESTIMATED COST:				\$ 260,207		\$ 230,875		\$ 491,082
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CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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01 - SITE WORK 016 - Site Electrical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

DEMOLITION

None

POWER

Remove overhead electric lines	490	LF			3.80	1,862	3.80	1,862
Remove power/light poles	4	EA			450.00	1,800	450.00	1,800
225 KVA transformer	1	EA						By Utility Company
Primary power to transformer	330	LF						By Utility Company
800 amp secondary buried service to building	70	LF	40.00	2,800	30.00	2,100	70.00	4,900
3/4"x10'0" ground rod and copper ground wire	2	EA	95.00	190	220.00	440	315.00	630
Transformer connections and bushings	2	EA	140.00	280	160.00	320	300.00	600
ATS connection	1	EA	100.00	100	250.00	250	350.00	350
Equipment grounding	1	LOT	200.00	200	700.00	700	900.00	900
Test and tag	1	LOT	50.00	50	350.00	350	400.00	400

AREA LIGHTING

7" diameter x 15'0" long driven pipe pile foundations	12	EA	635.00	7,620	730.00	8,760	1365.00	16,380
20'0" steel poles with fixture mounted arms	6	EA	1520.00	9,120	620.00	3,720	2140.00	12,840

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
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01 - SITE WORK	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE	TOTAL MATERIAL/LABOR
			RATE	TOTAL	RATE	TOTAL		
016 - Site Electrical			\$	\$	\$	\$	\$	\$

AREA LIGHTING (Continued)

14'0" steel poles with fixture mounted arms	6	EA	1140.00	6,840	510.00	3,060	1650.00	9,900
16"x16"x1 1/2" thick steel pole mounting plates, top	12	EA	118.00	1,416	102.00	1,224	220.00	2,640
1 1/8"x5" bolts and nuts fixed to slotted holes	48	EA	4.45	214	17.50	840	21.95	1,054
Type T: LED fixtures with driver	12	EA	1480.00	17,760	335.00	4,020	1815.00	21,780
LED in grade flood lights for flag poles	2	EA	525.00	1,050	210.00	420	735.00	1,470
1" diameter RGS conduit at pole bases	320	LF	4.40	1,408	10.15	3,248	14.55	4,656
1" diameter PVC buried conduits	1,070	LF	2.55	2,729	5.30	5,671	7.85	8,400
#10 copper wires (3)	7,000	LF	0.52	3,640	0.85	5,950	1.37	9,590
Trench and backfill	1,070	LF	4.50	4,815	8.50	9,095	13.00	13,910
6" PVC marker tapes	1,070	LF	0.52	556	0.33	353	0.85	909
Test and tag	1	LOT	130.00	130	520.00	520	650.00	650

HEADBOLT PLUG-INS (2)

4" diameter x 78" RGS posts buried 30" deep	2	EA	155.00	310	120.00	240	275.00	550
4" diameter O-Z Gedney post caps	2	EA	28.00	56	43.00	86	71.00	142

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
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01 - SITE WORK 016 - Site Electrical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

HEADBOLT PLUG-INS (2) (Continued)

24"x18"x18" deep quazite junction boxes with locking cover	2	EA	520.00	1,040	275.00	550	795.00	1,590
GFCI-WR receptacle with (2) active and (2) blank covers	2	EA	73.00	146	95.00	190	168.00	336
1" diameter RGS conduits	80	LF	4.50	360	10.20	816	14.70	1,176
#8 wiring (5)	400	LF	0.55	220	0.90	360	1.45	580
Panel and receptacle connections	2	EA	5.50	11	20.00	40	25.50	51
Test and tag	1	LOT	50.00	50	200.00	200	250.00	250

STANDBY DIESEL GENERATOR

150 KW diesel generator with self-contained fuel tank in arctic enclosure	1	EA	52500.00	52,500	7500.00	7,500	60000.00	60,000
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Note: Remote annunciator, ATS, disconnect, etc. with building systems.

14"x24"x18" deep junction box with lockable cover	1	EA	390.00	390	250.00	250	640.00	640
3" diameter RGS buried conduit	100	LF	24.50	2,450	26.40	2,640	50.90	5,090
500 KCMIL conductors (5)	500	LF	13.47	6,735	5.07	2,535	18.54	9,270

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 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
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01 - SITE WORK 016 - Site Electrical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

STANDBY DIESEL GENERATOR (Continued)

#1 ground wire (1)	120	LF	2.36	283	1.66	199	4.02	482
3/4"x10'0" ground rods and copper ground wire	2	EA	95.00	190	220.00	440	315.00	630
Generator grounding	1	LOT	150.00	150	300.00	300	450.00	450
Test and commission system	1	LOT	100.00	100	500.00	500	600.00	600

MISCELLANEOUS

3/4"x10'0" ground rods and copper wire for training tower	2	EA	95.00	190	220.00	440	315.00	630
Tower grounding	1	LOT	100.00	100	200.00	200	300.00	300

FLASHING WARNING SIGNALS FOR FIRE TRUCKS CROSSING

Flashing signals, power and wiring on Hazelet Avenue and West Pioneer Drive	4	EA	1750.00	7,000	1250.00	5,000	3000.00	12,000
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COMMUNICATIONS

(3) 2" diameter PVC empty conduit with pull cords	210	LF	5.30	1,113	6.50	1,365	11.80	2,478
Trenching and backfill including bedding	20	CY	4.50	90	8.50	170	13.00	260
6" PVC marker tapes (3)	210	LF	0.52	109	0.33	69	0.85	178

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
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01 - SITE WORK 016 - Site Electrical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

COMMUNICATIONS (Continued)

Telephone utility cable (1)	70	LF						By Utility Co.
25 pair Cat 5e telephone cables (2)	70	LF						By Utility Co.
SUBTOTAL:				\$ 134,511		\$ 78,793		\$ 213,304
Labor Premium Time	16.70%					13,158		13,158
SUBTOTAL:				\$ 134,511		\$ 91,951		\$ 226,462
Subcontractor's Overhead and Profit on Material and Labor	20.00%			26,902		18,390		45,292

TOTAL ESTIMATED COST:				\$ 161,413		\$ 110,341		\$ 271,754
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CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
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02 - SUBSTRUCTURE 021 - Standard Foundations	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
Excavate, backfill and dispose for foundations and isolated bases in prepared pads	680	CY			10.00	6,800	10.00	6,800
3,000 psi concrete bases (56)	130	CY	320.00	41,600	90.00	11,700	410.00	53,300
3,000 psi concrete strip footings	34	CY	320.00	10,880	85.00	2,890	405.00	13,770
Concrete pilasters (30)	15	CY	320.00	4,800	95.00	1,425	415.00	6,225
8" concrete foundation walls	51	CY	320.00	16,320	90.00	4,590	410.00	20,910
Concrete waste (5%)	12	CY	320.00	3,840	60.00	720	380.00	4,560
Pump concrete	242	CY	50.00	12,100			50.00	12,100
Bar reinforcement in footings and bases	16,400	LBS	0.80	13,120	0.70	11,480	1.50	24,600
Bar reinforcement in foundation walls and pilasters	8,250	LBS	0.80	6,600	0.75	6,188	1.55	12,788
<u>MISCELLANEOUS</u>								
Formwork to bases (56)	2,152	SF	2.10	4,519	5.20	11,190	7.30	15,709
Formwork to strip footings	900	SF	1.50	1,350	4.80	4,320	6.30	5,670
Formwork to pilasters (30)	800	SF	2.80	2,240	6.80	5,440	9.60	7,680
Formwork for foundation walls	4,067	SF	2.60	10,574	6.00	24,402	8.60	34,976
Membrane waterproofing to foundations	2,614	SF	1.95	5,097	2.70	7,058	4.65	12,155

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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02 - SUBSTRUCTURE 021 - Standard Foundations	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

MISCELLANEOUS (Continued)

2" rigid insulation to foundation walls	2,033	SF	1.05	2,135	0.65	1,321	1.70	3,456
12"x14 gauge metal flashing	581	LF	3.80	2,208	2.25	1,307	6.05	3,515
3/4"x16" embedded anchor bolts at base plates (41)	164	EA	11.50	1,886	24.50	4,018	36.00	5,904
1 1/4"x20" embedded anchor bolts at base plates (16)	64	EA	35.80	2,291	30.00	1,920	65.80	4,211
1 1/2" non-shrink grout at base plates	70	SF	17.50	1,225	18.00	1,260	35.50	2,485
SUBTOTAL:				\$ 142,785		\$ 108,029		\$ 250,814
Labor Premium Time	16.70%					18,041		18,041

TOTAL ESTIMATED COST:	\$ 142,785	\$ 126,070	\$ 268,855
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02 - SUBSTRUCTURE 022 - Slab on Grade	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
4" D1 subbase, compacted	212	CY	40.00	8,480	8.50	1,802	48.50	10,282
10 mil vapor barrier	13,958	SF	0.10	1,396	0.18	2,512	0.28	3,908
4,000 psi x 8" thick concrete slabs on grade at apparatus bays (6,477 SF)	161	CY	340.00	54,740	75.00	12,075	415.00	66,815
4,000 psi x 4" thick concrete slabs on grade elsewhere (7,481 SF)	95	CY	340.00	32,300	72.50	6,888	412.50	39,188
Thickened slabs	8	CY	340.00	2,720	80.00	640	420.00	3,360
Extra for trench drains	10	CY	340.00	3,400	85.00	850	425.00	4,250
Concrete waste (5%)	13	CY	340.00	4,420	60.00	780	400.00	5,200
Pump concrete	287	CY	50.00	14,350			50.00	14,350
Cure and finish slabs	13,958	SF	0.30	4,187	1.50	20,937	1.80	25,124
#3 and #4 bar reinforcement to slabs	19,180	LBS	0.80	15,344	0.70	13,426	1.50	28,770
1/8"x1/4" deep construction joints with filler	13,958	SF	0.15	2,094	0.35	4,885	0.50	6,979
<u>MISCELLANEOUS</u>								
2" rigid insulation at apparatus bay and bathrooms heated slabs	6,720	SF	1.05	7,056	0.55	3,696	1.60	10,752
Formwork to trench drains (6)	780	SF	1.80	1,404	2.60	2,028	4.40	3,432

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02 - SUBSTRUCTURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
022 - Slab on Grade								

MISCELLANEOUS (Continued)

6"x90" concrete filled pipe bollards with 18"x36" deep concrete bases painted yellow above grade at overhead doors	20	EA	525.00	10,500	395.00	7,900	920.00	18,400
10"x2" deep bar grate drain cover with embedded angle framing (6)	260	LF	52.50	13,650	12.20	3,172	64.70	16,822
Special inspections for all concrete	1	LOT	2500.00	2,500			2500.00	2,500
SUBTOTAL:				\$ 178,541		\$ 81,591		\$ 260,132
Labor Premium Time	16.70%					13,626		13,626

TOTAL ESTIMATED COST:				\$ 178,541		\$ 95,217		\$ 273,758
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CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
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03 - SUPERSTRUCTURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
031 - Floor Construction								

Note: Columns and base plates with roof.

SECOND FLOOR FRAMING

W-beams	41,397	LBS	1.80	74,515	1.10	45,537	2.90	120,052
4"x6"x5/16" bent plate at deck edging (440 LF)	4,565	LBS	2.10	9,587	1.25	5,706	3.35	15,293
K-type metal joists (assumed)	4,480	LBS	2.25	10,080	1.05	4,704	3.30	14,784
Miscellaneous plates, angles, closures and connections (12.50%)	6,305	LBS	2.10	13,241	1.50	9,458	3.60	22,699
1 1/2" deep Type B galvanized metal decking at second floor	4,480	SF	3.60	16,128	1.20	5,376	4.80	21,504
Overall 4" concrete topping (including waste)	47	CY	340.00	15,980	85.00	3,995	425.00	19,975
Pumping	47	CY	50.00	2,350			50.00	2,350
Cure and finish topping	4,480	SF	0.30	1,344	1.50	6,720	1.80	8,064
Mesh reinforcement	4,480	SF	0.58	2,598	0.40	1,792	0.98	4,390
SUBTOTAL:				\$ 145,823		\$ 83,288		\$ 229,111
Labor Premium Time	16.70%					13,909		13,909
TOTAL ESTIMATED COST:				\$ 145,823		\$ 97,197		\$ 243,020

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03 - SUPERSTRUCTURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE	TOTAL MATERIAL/LABOR
			RATE	TOTAL	RATE	TOTAL		
			\$	\$	\$	\$	\$	\$
032 - Roof Construction								
12"x12"x1" base plates	21	EA	80.00	1,680	60.00	1,260	140.00	2,940
14"x14"x1" base plates	20	EA	95.00	1,900	65.00	1,300	160.00	3,200
16"x16"x1" base plates	16	EA	115.00	1,840	70.00	1,120	185.00	2,960
HSS steel columns (41)	41,000	LBS	1.95	79,950	1.20	49,200	3.15	129,150
W-beam columns (16)	19,200	LBS	1.80	34,560	1.10	21,120	2.90	55,680
HSS steel bracings	12,000	LBS	1.95	23,400	1.25	15,000	3.20	38,400
W-beams at main roofs	43,794	LBS	1.80	78,829	1.10	48,173	2.90	127,002
W-beams at low roofs and mezzanine roof	15,890	LBS	1.80	28,602	1.10	17,479	2.90	46,081
C-channel overhead door jambs	10,000	LBS	1.80	18,000	1.20	12,000	3.00	30,000
W-beams at canopies (no details, 1,100 SF)	8,800	LBS	1.80	15,840	1.20	10,560	3.00	26,400
C-channel at canopies (no details, 1,100 SF)	4,000	LBS	1.80	7,200	1.30	5,200	3.10	12,400
LH metal joists	41,269	LBS	2.25	92,855	1.05	43,332	3.30	136,187
Miscellaneous plates, angles, bolts and connections (12.50%)	22,508	LBS	2.10	47,267	1.50	33,762	3.60	81,029
1 1/2" Type B galvanized metal decking at canopies	1,100	SF	3.60	3,960	1.25	1,375	4.85	5,335

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 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
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03 - SUPERSTRUCTURE 032 - Roof Construction	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
1 1/2" Type B galvanized metal decking at roofs	14,000	SF	3.60	50,400	1.25	17,500	4.85	67,900
<u>MISCELLANEOUS</u>								
30" high insulated mechanical curb assembly (4)	50	LF	26.50	1,325	15.00	750	41.50	2,075
30 ton crane and operator (for all structures)	3	MOS	17500.00	52,500	5000.00	15,000	22500.00	67,500
Special inspections and weld tests for all steel structures	1	LOT	8500.00	8,500			8500.00	8,500
Temporary shoring of structures	18,650	SF	0.20	3,730	0.35	6,528	0.55	10,258
SUBTOTAL:				\$ 552,338		\$ 300,659		\$ 852,997
Labor Premium Time	16.70%					50,210		50,210
TOTAL ESTIMATED COST:								
				\$ 552,338		\$ 350,869		\$ 903,207

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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03 - SUPERSTRUCTURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
033 - Stair Construction								
Single flight steel stair to second floor (1)	105	SF	56.50	5,933	22.00	2,310	78.50	8,243
Two flights steel stair to fan room	216	SF	56.50	12,204	22.00	4,752	78.50	16,956
1 1/2" diameter pipe railings and posts at stairs and mezzanine	170	LF	89.00	15,130	25.00	4,250	114.00	19,380
SUBTOTAL:				\$ 33,267		\$ 11,312		\$ 44,579
Labor Premium Time	16.70%					1,889		1,889

TOTAL ESTIMATED COST:	\$ 33,267	\$ 13,201	\$ 46,468
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CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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04 - EXTERIOR CLOSURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE	TOTAL MATERIAL/LABOR
			RATE	TOTAL	RATE	TOTAL		
			\$	\$	\$	\$	\$	\$
041 - Exterior Walls								
6" metal stud framing and tracks	13,470	SF	1.30	17,511	1.50	20,205	2.80	37,716
6" batt insulation	13,470	SF	0.70	9,429	0.40	5,388	1.10	14,817
2" rigid insulation at precast concrete walls	2,980	SF	0.98	2,920	0.60	1,788	1.58	4,708
Self-adhered air barrier	10,490	SF	0.85	8,917	0.75	7,868	1.60	16,785
5/8" exterior gypsum sheathing	12,270	SF	0.55	6,749	1.10	13,497	1.65	20,246
1/2" cement backer board at roof side of parapets	1,200	SF	1.33	1,596	1.65	1,980	2.98	3,576
6 mil vapor retarder	12,270	SF	0.08	982	0.12	1,472	0.20	2,454
5/8" gypsum wall board	12,270	SF	0.65	7,976	1.60	19,632	2.25	27,608
6" reinforced precast concrete wall panels, stained and patterned	2,980	SF	21.00	62,580	12.50	37,250	33.50	99,830
3" R-21 prefinished metal wall panels and trims	10,490	SF	18.50	194,065	5.20	54,548	23.70	248,613
5/8"x9'0" high pressure treated plywood sheathing at apparatus bay	1,090	SF	1.55	1,690	1.10	1,199	2.65	2,889
9'0" high FRP and trims at apparatus bay	1,090	SF	2.80	3,052	2.70	2,943	5.50	5,995
12" high 'Fire Station 1' letters	12	EA	115.00	1,380	55.00	660	170.00	2,040
Prefinished soffit panels	210	SF	4.50	945	4.00	840	8.50	1,785

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 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
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04 - EXTERIOR CLOSURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
041 - Exterior Walls			\$	\$	\$	\$	\$	\$
Prefinished soffit panels at canopy roofs	1,100	SF	4.50	4,950	3.50	3,850	8.00	8,800
Caulking and sealants at siding and soffits	11,590	SF	0.08	927	0.30	3,477	0.38	4,404
SUBTOTAL:				\$ 325,669		\$ 176,597		\$ 502,266
Labor Premium Time	16.70%					29,492		29,492

TOTAL ESTIMATED COST:	\$ 325,669	\$ 206,089	\$ 531,758
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CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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04 - EXTERIOR CLOSURE 042 - Exterior Doors and Windows	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
14'0"x14'0" overhead insulated aluminum sectional doors with glazing and electrically operated motor	4	EA	9250.00	37,000	2450.00	9,800	11700.00	46,800
14'0"x14'0" insulated four-fold sectional doors with glazing and electrically operated motor	6	EA	18750.00	112,500	3150.00	18,900	21900.00	131,400
3'0"x7'0" hollow metal insulated door frames	8	EA	180.00	1,440	110.00	880	290.00	2,320
3'0"x7'0" aluminum single door assembly	1	EA	1550.00	1,550	325.00	325	1875.00	1,875
3'0"x7'0" insulated hollow metal flush doors	6	EA	460.00	2,760	80.00	480	540.00	3,240
3'0"x7'0" insulated hollow metal flush doors with full glazing	2	EA	780.00	1,560	90.00	180	870.00	1,740
Single door hardware sets	5	SETS	785.00	3,925	390.00	1,950	1175.00	5,875
Single door hardware sets with panic bars	4	SETS	1550.00	6,200	750.00	3,000	2300.00	9,200
3'0"x5'0" aluminum egress windows	7	EA	710.00	4,970	180.00	1,260	890.00	6,230
Aluminum windows (13)	445	SF	55.00	24,475	12.25	5,451	67.25	29,926
Aluminum storefront	418	SF	68.00	28,424	14.50	6,061	82.50	34,485
Caulking and sealants, two sides	2,288	LF	0.70	1,602	2.10	4,805	2.80	6,407
Drip edge head flashings	138	LF	2.50	345	2.00	276	4.50	621

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04 - EXTERIOR CLOSURE 042 - Exterior Doors and Windows	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
Prefinished flashings	1,085	LF	2.00	2,170	1.70	1,845	3.70	4,015
1"x solid surface window sills	120	LF	9.50	1,140	4.50	540	14.00	1,680
SUBTOTAL:				\$ 230,061		\$ 55,753		\$ 285,814
Labor Premium Time	16.70%					9,311		9,311
TOTAL ESTIMATED COST:				\$ 230,061		\$ 65,064		\$ 295,125

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 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
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05 - ROOF SYSTEMS	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
051 - Roofing			\$	\$	\$	\$	\$	\$
1/2" Dens deck	14,000	SF	0.94	13,160	1.10	15,400	2.04	28,560
6 mil self-adhered vapor barrier at all roofs	14,000	SF	0.30	4,200	0.45	6,300	0.75	10,500
(2) layers 4" rigid insulation	14,000	SF	4.70	65,800	1.80	25,200	6.50	91,000
1 1/2" tapered insulation at flat roofs	14,000	SF	1.10	15,400	0.85	11,900	1.95	27,300
1/2" protection board	14,000	SF	1.05	14,700	0.90	12,600	1.95	27,300
5-ply built-up roof system	14,000	SF	3.10	43,400	2.70	37,800	5.80	81,200
5-ply built-up roof system to parapet, side walls	1,585	SF	3.10	4,914	2.95	4,676	6.05	9,590
Fire treated cant at parapets	600	LF	0.95	570	1.20	720	2.15	1,290
Parapet coping	600	LF	5.70	3,420	3.50	2,100	9.20	5,520
VTR flashings (assumed)	6	EA	42.50	255	38.00	228	80.50	483
Roof/wall flashing	361	LF	3.50	1,264	3.20	1,155	6.70	2,419
Mechanical curb flashing	50	LF	12.00	600	7.50	375	19.50	975
Drip edge flashing at high roof	105	LF	2.50	263	2.50	263	5.00	526
Work/flashings around roof drains and overflow drains	10	EA	65.00	650	60.00	600	125.00	1,250

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05 - ROOF SYSTEMS 051 - Roofing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

CANOPIES (6)

1/2" exterior grade plywood screwed to metal decking	1,100	SF	1.30	1,430	1.10	1,210	2.40	2,640
1/2" exterior grade plywood, 12" deep at fascia	337	LF	1.30	438	2.00	674	3.30	1,112
1 1/2" tapered insulation	1,100	SF	1.05	1,155	0.90	990	1.95	2,145
5-ply built-up roof system over roof and fascia	1,300	SF	3.10	4,030	2.80	3,640	5.90	7,670
5-ply built-up roof system up walls	325	SF	3.10	1,008	3.05	991	6.15	1,999
12" metal fascia	337	LF	8.50	2,865	4.40	1,483	12.90	4,348
Drip flashing	337	LF	1.80	607	2.10	708	3.90	1,315
Roof and wall flashing	324	LF	3.50	1,134	3.20	1,037	6.70	2,171
Work/flashings around roof drains	4	EA	65.00	260	60.00	240	125.00	500

MISCELLANEOUS

Temporary fall protection railings	600	LF	3.50	2,100	2.70	1,620	6.20	3,720
SUBTOTAL:				\$ 183,623		\$ 131,910		\$ 315,533
Labor Premium Time	16.70%					22,029		22,029

TOTAL ESTIMATED COST:				\$ 183,623		\$ 153,939		\$ 337,562
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06 - INTERIOR CONSTRUCTION	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
061 - Partitions and Doors								

PARTITIONS

6" CH metal studs at elevator shaft	1,368	SF	1.85	2,531	1.70	2,326	3.55	4,857
6" metal studs, 16" o/c	6,318	SF	1.50	9,477	1.50	9,477	3.00	18,954
3 5/8" metal studs, 16" o/c	9,549	SF	1.25	11,936	1.30	12,414	2.55	24,350
6" acoustical insulation	6,318	SF	0.80	5,054	0.60	3,791	1.40	8,845
3 1/2" acoustical insulation	9,549	SF	0.60	5,729	0.50	4,775	1.10	10,504
5/8" Type X gypboard	21,734	SF	0.65	14,127	1.50	32,601	2.15	46,728
(2) layers 5/8" Type X gypboard	10,000	SF	1.10	11,000	2.80	28,000	3.90	39,000
1" core board at elevator shaft	1,368	SF	1.25	1,710	1.75	2,394	3.00	4,104
Add for moisture resistant gypboard walls and ceilings	5,000	SF	0.20	1,000			0.20	1,000
2"x blocking for backing	1,000	LF	1.20	1,200	2.28	2,280	3.48	3,480

DOORS

3'0"x7'0" hollow metal frames	38	EA	105.00	3,990	75.00	2,850	180.00	6,840
6'0"x7'0" hollow metal frames	2	EA	120.00	240	95.00	190	215.00	430
3'0"x7'0" hollow metal single doors	20	EA	440.00	8,800	65.00	1,300	505.00	10,100

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
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06 - INTERIOR CONSTRUCTION	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
061 - Partitions and Doors								

DOORS (Continued)

3'0"x7'0" hollow metal double doors	1	PR	840.00	840	130.00	130	970.00	970
3'0"x7'0" hollow metal wood single doors with vision panel	18	EA	560.00	10,080	75.00	1,350	635.00	11,430
3'0"x7'0" hollow metal double doors with vision panel	1	PR	1040.00	1,040	150.00	150	1190.00	1,190

DOOR HARDWARE

Double door hardware sets	2	SETS	1280.00	2,560	850.00	1,700	2130.00	4,260
Single door hardware sets	30	SETS	680.00	20,400	350.00	10,500	1030.00	30,900
Single door hardware set with panic bars	8	SETS	1350.00	10,800	650.00	5,200	2000.00	16,000
Add for rated doors and frames	20	EA	100.00	2,000			100.00	2,000
Add for card readers	6	EA	750.00	4,500	350.00	2,100	1100.00	6,600
Relights/sidelights in aluminum frames	40	SF	60.50	2,420	14.50	580	75.00	3,000

SUBTOTAL:				\$ 131,434		\$ 124,108		\$ 255,542
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Labor Premium Time	16.70%					20,726		20,726
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TOTAL ESTIMATED COST:				\$ 131,434		\$ 144,834		\$ 276,268
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CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
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06 - INTERIOR CONSTRUCTION	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
062 - Interior Finishes								

FLOORS

Luxury vinyl plank	2,041	SF	3.20	6,531	1.80	3,674	5.00	10,205
Sealed concrete	1,978	SF	0.50	989	1.50	2,967	2.00	3,956
Carpeting	276	SY	39.00	10,764	9.50	2,622	48.50	13,386
Walk-off carpet mat	584	SF	4.60	2,686	1.20	701	5.80	3,387
Slip resistant polished concrete finish	7,003	SF	3.50	24,511	3.75	26,261	7.25	50,772
Epoxy floor system	915	SF	1.25	1,144	2.00	1,830	3.25	2,974
Resilient sheet flooring	540	SF	3.20	1,728	1.95	1,053	5.15	2,781
Porcelain tiles	838	SF	8.50	7,123	8.55	7,165	17.05	14,288
Rubber stair treads and risers	585	SF	5.20	3,042	4.00	2,340	9.20	5,382
4" rubber base	2,239	LF	1.25	2,799	1.30	2,911	2.55	5,710
4" self cove base	300	LF	2.20	660	2.60	780	4.80	1,440
4" porcelain tile base	376	LF	6.20	2,331	7.50	2,820	13.70	5,151
Stainless steel grate	37	SF	42.50	1,573	12.50	463	55.00	2,036

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06 - INTERIOR CONSTRUCTION 062 - Interior Finishes	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

WALLS

Paint doors and frames	2,960	SF	0.30	888	1.70	5,032	2.00	5,920
Paint walls	26,400	SF	0.25	6,600	1.50	39,600	1.75	46,200
FRP and trims	1,808	SF	2.70	4,882	2.60	4,701	5.30	9,583
Stainless steel wainscot	140	SF	18.00	2,520	4.50	630	22.50	3,150
9'0" high porcelain tile	3,389	SF	8.70	29,484	8.00	27,112	16.70	56,596
9'0" high FRP and trims at apparatus bay	855	SF	2.80	2,394	2.70	2,309	5.50	4,703
5/8"x9'0" high pressure treated plywood sheathing at apparatus bay	855	SF	1.55	1,325	0.90	770	2.45	2,095
Miscellaneous wall covering (allowance)	1,000	SF	3.00	3,000	2.00	2,000	5.00	5,000

CEILINGS

5/8" gypboard ceiling system and framing, painted	2,079	SF	1.85	3,846	4.25	8,836	6.10	12,682
Suspended acoustic ceiling with seismic bracings	6,654	SF	2.85	18,964	2.70	17,966	5.55	36,930
Suspended acoustic ceiling with seismic bracings, washable	461	SF	3.20	1,475	2.85	1,314	6.05	2,789
Paint exposed structures	8,020	SF	0.28	2,246	1.55	12,431	1.83	14,677

SUBTOTAL:				\$ 143,505		\$ 178,288		\$ 321,793
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 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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06 - INTERIOR CONSTRUCTION	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
063 - Specialties								

BUILT-IN CASEWORK

24" deep base cabinets	48	LF	165.00	7,920	35.00	1,680	200.00	9,600
24" deep x 24" wide full height cabinets	22	LF	270.00	5,940	60.00	1,320	330.00	7,260
12" deep wall cabinets	20	LF	128.00	2,560	32.00	640	160.00	3,200
24" deep solid surface countertop and back splash	48	LF	160.00	7,680	40.00	1,920	200.00	9,600
24" deep wall hung solid surface countertop and backsplash	32	LF	210.00	6,720	60.00	1,920	270.00	8,640
30" deep stainless steel work benches at apparatus bay	20	LF	380.00	7,600	50.00	1,000	430.00	8,600
Benches at turn out and lockers	8	EA	175.00	1,400	85.00	680	260.00	2,080
Built-in training storage	17	LF	250.00	4,250	60.00	1,020	310.00	5,270
Wall hung solid surface counter workstations	28	LF	185.00	5,180	55.00	1,540	240.00	6,720
15"x15"x84" (2) tier metal lockers at locker rooms	11	EA	375.00	4,125	50.00	550	425.00	4,675

TOILET ACCESSORIES

Toilet paper holders	10	EA	35.00	350	28.00	280	63.00	630
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06 - INTERIOR CONSTRUCTION	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
063 - Specialties								

TOILET ACCESSORIES (Continued)

Bench	6	LF	39.50	237	13.00	78	52.50	315
Robe hooks	21	EA	18.00	378	14.00	294	32.00	672
24"x36" mirrors	2	EA	210.00	420	60.00	120	270.00	540
48"x72" mirrors at fitness	4	EA	420.00	1,680	110.00	440	530.00	2,120
Towel racks	7	EA	39.00	273	32.00	224	71.00	497
Paper towel dispensers	8	EA	140.00	1,120	75.00	600	215.00	1,720
Sanitary napkin disposals	5	EA	39.00	195	30.00	150	69.00	345
Waste receptacles	6	EA	190.00	1,140	75.00	450	265.00	1,590
Soap dispensers	12	EA	36.00	432	33.00	396	69.00	828
ADA toilet partitions	2	EA	1080.00	2,160	270.00	540	1350.00	2,700
Standard toilet partitions	6	EA	870.00	5,220	230.00	1,380	1100.00	6,600
18" grab bars	2	EA	36.00	72	30.00	60	66.00	132
36" grab bars	2	EA	52.00	104	40.00	80	92.00	184
48" grab bars	2	EA	60.00	120	50.00	100	110.00	220

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06 - INTERIOR CONSTRUCTION 063 - Specialties	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

TOILET ACCESSORIES (Continued)

(3) 24" grab bars at each shower	21	EA	42.00	882	35.00	735	77.00	1,617
Folding shower seat	1	EA	270.00	270	130.00	130	400.00	400
36" shower curtains and rods	7	EA	109.00	763	60.00	420	169.00	1,183
Mop rack/shelving	2	EA	78.00	156	39.00	78	117.00	234
(5) tier shelving at janitor closets (2)	20	LF	36.00	720	6.95	139	42.95	859
Door signage	40	EA	35.00	1,400	19.00	760	54.00	2,160

MISCELLANEOUS

Fire extinguishers, bracket mounted	3	EA	75.00	225	25.00	75	100.00	300
Fire extinguishers, cabinet mounted	4	EA	167.00	668	80.00	320	247.00	988
8'0"x4'0" white board	1	EA	1075.00	1,075	130.00	130	1205.00	1,205
4'0"x4'0" tack boards	2	EA	225.00	450	105.00	210	330.00	660
Miscellaneous specialties allowance	1	LOT	2000.00	2,000	500.00	500	2500.00	2,500

SUBTOTAL:				\$ 75,885		\$ 20,959		\$ 96,844
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Labor Premium Time	16.70%					3,500		3,500
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TOTAL ESTIMATED COST:				\$ 75,885		\$ 24,459		\$ 100,344
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CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 3/12/2019

HMS Project No.: 19027

07 - CONVEYING SYSTEMS	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
6'0"x8'0" hydraulic one-stop elevator and equipment	1	EA	54500.00	54,500	28000.00	28,000	82500.00	82,500
Inspections and permits	1	LOT	2500.00	2,500			2500.00	2,500
SUBTOTAL:				\$ 57,000		\$ 28,000		\$ 85,000
Labor Premium Time	16.70%					4,676		4,676
SUBTOTAL:				\$ 57,000		\$ 32,676		\$ 89,676
Subcontractor's Overhead and Profit on Material and Labor	20.00%			11,400		6,535		17,935
TOTAL ESTIMATED COST:				\$ 68,400		\$ 39,211		\$ 107,611

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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08 - MECHANICAL 081 - Plumbing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

FIXTURES

P-1: Water closets with flush valve, wall mounted, ADA	2	EA	710.00	1,420	230.00	460	940.00	1,880
P-2: Water closet with flush valves, wall mounted	6	EA	660.00	3,960	200.00	1,200	860.00	5,160
P-3: Water closet with flush valves, floor mounted	2	EA	610.00	1,220	200.00	400	810.00	1,620
P-4: Urinal with flush valves, wall mounted, ADA	2	EA	750.00	1,500	410.00	820	1160.00	2,320
P-5: Counter mounted lavatories with faucet, ADA	4	EA	465.00	1,860	190.00	760	655.00	2,620
P-6: Counter mounted lavatories with faucet, ADA	6	EA	465.00	2,790	190.00	1,140	655.00	3,930
P-7: Wall mounted lavatories with faucet, ADA	2	EA	525.00	1,050	210.00	420	735.00	1,470
P-8: Double compartment, stainless steel kitchen sink with faucet	1	EA	750.00	750	225.00	225	975.00	975
P-9: Four compartment, stainless steel SCBA sink with faucet	1	EA	850.00	850	350.00	350	1200.00	1,200
P-10: Janitor sinks	3	EA	645.00	1,935	205.00	615	850.00	2,550

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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08 - MECHANICAL 081 - Plumbing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

FIXTURES (Continued)

P-11: Double compartment, stainless steel decontamination sink with faucet	1	EA	610.00	610	210.00	210	820.00	820
P-12: Shower valve with arm, controls and hand shower, ADA	1	EA	370.00	370	170.00	170	540.00	540
P-13: Shower valves with arm, controls and hand shower	6	EA	370.00	2,220	170.00	1,020	540.00	3,240
P-14: Single level stainless steel drinking fountain with bottle fill (assumed)	1	EA	1250.00	1,250	250.00	250	1500.00	1,500
P-15: Eye wash/shower (assumed)	1	EA	870.00	870	220.00	220	1090.00	1,090
P-16: Clothes washer box with water hammer arrestor	1	EA	72.00	72	85.00	85	157.00	157
HB-1: 3/4" non-freeze hose bibs (exterior)	5	EA	125.00	625	150.00	750	275.00	1,375
HB-2: 3/4" non-freeze hose bibs (interior)	3	EA	112.00	336	70.00	210	182.00	546
WHR-1: 50'0" water hose reels	3	EA	150.00	450	90.00	270	240.00	720
Fire hose connection hose bibs (interior)	3	EA	270.00	810	165.00	495	435.00	1,305
FD-1: 3" diameter floor drains	10	EA	125.00	1,250	130.00	1,300	255.00	2,550
FD-2: 4" diameter floor drain	1	EA	150.00	150	145.00	145	295.00	295

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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08 - MECHANICAL 081 - Plumbing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

FIXTURES (Continued)

FD-3: 2" diameter floor drains	7	EA	112.00	784	120.00	840	232.00	1,624
TD-1: Trench drains	6	EA	180.00	1,080	145.00	870	325.00	1,950
Garbage disposal	1	EA	195.00	195	120.00	120	315.00	315

EQUIPMENT

HWG-1: 67 gallon, fuel oil fired water heater	1	EA	3250.00	3,250	850.00	850	4100.00	4,100
8" diameter flue	40	LF	25.00	1,000	24.00	960	49.00	1,960
2" thick insulation	15	SF	2.10	32	5.00	75	7.10	107
Chimney top with storm collar	1	EA	145.00	145	110.00	110	255.00	255
ET-3: 14.4 gallon compression tank	1	EA	220.00	220	75.00	75	295.00	295
SI-1: 314 GPM sand interceptor with traffic grate	1	EA	7500.00	7,500	1500.00	1,500	9000.00	9,000
HCP-1: ___ GPM, ___ head, fractional HP hot water circulation pump	1	EA	550.00	550	175.00	175	725.00	725
SP-1: Elevator sump pump	1	EA	650.00	650	210.00	210	860.00	860
2" diameter water meter with remote totalizer and inlet strainer	1	EA	605.00	605	110.00	110	715.00	715

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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08 - MECHANICAL 081 - Plumbing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

UNDER FLOOR PIPING

Waste and Vent

4" diameter cast iron waste and vent pipe	330	LF	37.00	12,210	22.00	7,260	59.00	19,470
3" diameter cast iron waste and vent pipe	20	LF	24.00	480	19.50	390	43.50	870
2" diameter cast iron waste and vent pipe	260	LF	21.00	5,460	18.00	4,680	39.00	10,140
4" diameter cast iron fittings	42	EA	55.00	2,310	90.00	3,780	145.00	6,090
3" diameter cast iron fittings	3	EA	40.00	120	80.00	240	120.00	360
2" diameter cast iron fittings	33	EA	30.00	990	65.00	2,145	95.00	3,135
4" diameter floor cleanouts	12	EA	166.00	1,992	76.00	912	242.00	2,904
1/2" diameter hot and cold water PEX tubing	110	LF	1.05	116	1.95	215	3.00	331
Trenching and backfill	700	LF	3.20	2,240	5.25	3,675	8.45	5,915

Storm Drain

None

ABOVE FLOOR PIPING

Waste and Vent

4" diameter ABS waste and vent pipe	110	LF	29.00	3,190	25.00	2,750	54.00	5,940
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CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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08 - MECHANICAL 081 - Plumbing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

ABOVE FLOOR PIPING (Continued)

Waste and Vent (Continued)

3" diameter ABS waste and vent pipe	70	LF	20.00	1,400	23.00	1,610	43.00	3,010
2" diameter ABS waste and vent pipe	510	LF	10.00	5,100	20.00	10,200	30.00	15,300
1 1/2" diameter ABS waste and vent pipe	520	LF	4.40	2,288	12.10	6,292	16.50	8,580
4" diameter ABS fittings	14	EA	28.00	392	76.00	1,064	104.00	1,456
3" diameter ABS fittings	9	EA	14.00	126	60.00	540	74.00	666
2" diameter ABS fittings	64	EA	6.70	429	38.00	2,432	44.70	2,861
1 1/2" diameter ABS fittings	65	EA	10.00	650	45.00	2,925	55.00	3,575
4" diameter wall cleanout	1	EA	85.00	85	70.00	70	155.00	155
3" diameter wall cleanout	1	EA	75.00	75	65.00	65	140.00	140
4" diameter VTR	4	EA	105.00	420	150.00	600	255.00	1,020
1" thick insulation with vapor barrier	20	LF	6.10	122	6.50	130	12.60	252

Roof Drains

RD-1: 3" diameter roof and overflow drains	8	PRS	710.00	5,680	250.00	2,000	960.00	7,680
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08 - MECHANICAL 081 - Plumbing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

ABOVE FLOOR PIPING (Continued)

Roof Drains (Continued)

RD-2: 3" diameter roof drain	1	EA	350.00	350	185.00	185	535.00	535
4" diameter cast iron rain leader pipe	200	LF	37.00	7,400	22.00	4,400	59.00	11,800
3" diameter cast iron rain leader pipe	300	LF	24.00	7,200	19.50	5,850	43.50	13,050
4" diameter cast iron fittings	25	EA	55.00	1,375	90.00	2,250	145.00	3,625
3" diameter cast iron fittings	38	EA	40.00	1,520	80.00	3,040	120.00	4,560
4" diameter cleanout	1	EA	65.00	65	75.00	75	140.00	140
3/4" diameter drain valve	1	EA	32.00	32	26.00	26	58.00	58
Wall access door	1	EA	69.00	69	55.00	55	124.00	124
ON-1: 4" diameter wall nozzle	1	EA	140.00	140	70.00	70	210.00	210
2" insulation to rain leader pipe, 4" diameter	200	LF	5.65	1,130	11.90	2,380	17.55	3,510
2" insulation to rain leader pipe, 3" diameter	300	LF	4.90	1,470	9.20	2,760	14.10	4,230
Heat trace	100	LF						With Electrical

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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08 - MECHANICAL 081 - Plumbing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

ABOVE FLOOR PIPING (Continued)

Hot and Cold Water

2" diameter hot and cold water copper pipe	150	LF	22.00	3,300	14.60	2,190	36.60	5,490
1 1/2" diameter hot and cold water copper pipe	200	LF	16.00	3,200	11.70	2,340	27.70	5,540
1 1/4" diameter hot and cold water copper pipe	220	LF	15.00	3,300	11.00	2,420	26.00	5,720
1" diameter hot and cold water copper pipe	550	LF	10.20	5,610	9.15	5,033	19.35	10,643
3/4" diameter hot and cold water copper pipe	560	LF	5.70	3,192	7.50	4,200	13.20	7,392
1/2" diameter hot and cold water copper pipe	800	LF	3.70	2,960	4.50	3,600	8.20	6,560
2" diameter copper fittings	19	EA	21.50	409	52.00	988	73.50	1,397
1 1/2" to 1" diameter copper fittings	122	EA	9.00	1,098	42.55	5,191	51.55	6,289
3/4" to 1/2" diameter copper fittings	170	EA	3.20	544	31.00	5,270	34.20	5,814
Trap primers	18	EA	87.00	1,566	45.00	810	132.00	2,376
TV-1: 1 1/2" diameter tempering valve	1	EA	1950.00	1,950	210.00	210	2160.00	2,160
TV-2: 3/4" diameter tempering valve	1	EA	150.00	150	50.00	50	200.00	200
TV-3: 3/4" diameter tempering valve	1	EA	150.00	150	50.00	50	200.00	200

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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08 - MECHANICAL 081 - Plumbing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

ABOVE FLOOR PIPING (Continued)

Hot and Cold Water (Continued)

Pressure relief valves to water generator	1	EA	155.00	155	55.00	55	210.00	210
1" diameter balance valve, bronze body	1	EA	112.00	112	52.00	52	164.00	164
3/4" diameter balance valve, bronze body	1	EA	86.00	86	31.00	31	117.00	117
2" diameter check valve, bronze body	1	EA	375.00	375	56.00	56	431.00	431
1 1/2" diameter check valves, bronze body	2	EA	256.00	512	52.00	104	308.00	616
1" diameter check valves, bronze body	2	EA	153.00	306	33.00	66	186.00	372
3/4" diameter check valve, bronze body	1	EA	106.00	106	31.00	31	137.00	137
2" diameter ball valve, bronze body	1	EA	84.00	84	69.00	69	153.00	153
1 1/2" diameter ball valves, bronze body	7	EA	67.00	469	57.00	399	124.00	868
1" diameter ball valves, bronze body	5	EA	31.00	155	41.00	205	72.00	360
3/4" diameter ball valves, bronze body	7	EA	25.00	175	37.00	259	62.00	434
1/2" diameter ball valves, bronze body	4	EA	15.00	60	34.00	136	49.00	196
2" diameter pressure regulator valve	1	EA	960.00	960	110.00	110	1070.00	1,070

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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08 - MECHANICAL 081 - Plumbing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

ABOVE FLOOR PIPING (Continued)

Hot and Cold Water (Continued)

3/4" diameter drain valve	1	EA	32.00	32	26.00	26	58.00	58
Solar thermometers	3	EA	82.00	246	46.00	138	128.00	384
Pressure gauge with gate valve	1	EA	62.00	62	65.00	65	127.00	127
Hi-limit controller	1	EA	85.00	85	40.00	40	125.00	125
1" insulation to hot and cold water pipe, 2" diameter pipe	150	LF	6.10	915	5.80	870	11.90	1,785
1" insulation to hot and cold water pipe, 1 1/2" diameter pipe	200	LF	3.40	680	4.35	870	7.75	1,550
1" insulation to hot and cold water pipe, 1 1/4" diameter pipe	220	LF	3.00	660	3.40	748	6.40	1,408
1" insulation to hot and cold water pipe, 1" diameter pipe	550	LF	2.30	1,265	3.15	1,733	5.45	2,998
1" insulation to hot and cold water pipe, 3/4" diameter pipe	560	LF	2.10	1,176	2.95	1,652	5.05	2,828
1" insulation to hot and cold water pipe, 1/2" diameter pipe	880	LF	1.90	1,672	2.70	2,376	4.60	4,048

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 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
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08 - MECHANICAL 081 - Plumbing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

MISCELLANEOUS

Disinfect and test systems	1	LOT	500.00	500	1700.00	1,700	2200.00	2,200
Pipe guides, labels, etc.	1	LOT	750.00	750	2250.00	2,250	3000.00	3,000
SUBTOTAL:				\$ 148,012		\$ 138,869		\$ 286,881
Labor Premium Time	16.70%					23,191		23,191
SUBTOTAL:				\$ 148,012		\$ 162,060		\$ 310,072
Subcontractor's Overhead and Profit on Material and Labor	20.00%			29,602		32,412		62,014

TOTAL ESTIMATED COST:				\$ 177,614		\$ 194,472		\$ 372,086
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CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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08 - MECHANICAL 082 - HVAC	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

HEATING

B-1 and 2: 424 MBH dual fuel gas and fuel oil fired boilers, complete package	2	EA	6250.00	12,500	5000.00	10,000	11250.00	22,500
8" diameter flue	60	LF	25.00	1,500	24.00	1,440	49.00	2,940
2" thick insulation to flue	25	SF	2.10	53	5.00	125	7.10	178
Chimney tops with storm collar	2	EA	145.00	290	110.00	220	255.00	510
CP-1 and 1A: 72 GPM, 35'0" head, 2 HP hydronic pumps (size assumed)	2	EA	1840.00	3,680	1000.00	2,000	2840.00	5,680
CP-2 and 2A: 65 GPM, 40'0" head, 1 1/2 HP hydronic pumps (size assumed)	2	EA	1752.00	3,504	908.00	1,816	2660.00	5,320
CP-3 and 3A: 17 GPM, 14'0" head, fractional HP hydronic pumps (size assumed)	2	EA	1175.00	2,350	300.00	600	1475.00	2,950
CP-B1 and B2: 100 GPM, 15'0" head, 3 HP boiler circulation pumps (size assumed)	2	EA	2035.00	4,070	1190.00	2,380	3225.00	6,450
HX-1: 16 GPM, wall mounted, brazed plate heat exchanger (size assumed)	1	EA	4650.00	4,650	350.00	350	5000.00	5,000
ET-1: 44 gallon compression tank	1	EA	450.00	450	175.00	175	625.00	625
ET-2: 14 gallon expansion tank (size assumed)	1	EA	145.00	145	110.00	110	255.00	255

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 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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08 - MECHANICAL 082 - HVAC	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

HEATING (Continued)

GT-1: 6 gallon glycol tank and pump	1	EA	350.00	350	110.00	110	460.00	460
Glycol media	250	GALS	13.00	3,250	2.50	625	15.50	3,875
AS-1: 3" air separator	1	EA	2550.00	2,550	310.00	310	2860.00	2,860
UH-1: 72.5 MBH, fractional HP unit heaters	10	EA	1054.00	10,540	600.00	6,000	1654.00	16,540
UH-2: 32.3 MBH, fractional HP unit heater	1	EA	640.00	640	510.00	510	1150.00	1,150
UH-3: 10 MBH, fractional HP unit heater	1	EA	550.00	550	210.00	210	760.00	760
CUH-1-4: 16 MBH, fractional HP cabinet unit heaters	4	EA	990.00	3,960	350.00	1,400	1340.00	5,360
FT-1: 1.2 MBH/LF single tier fin tubes (4 each)	31	LF	25.00	775	20.00	620	45.00	1,395
Enclosure (single tier)	90	LF	17.00	1,530	10.00	900	27.00	2,430
HR-1: 24"x24" hydronic radiators	8	EA	210.00	1,680	110.00	880	320.00	2,560
1/2" diameter PEX tubing, 9" o/c for radiant floor heating at apparatus bay (7,338 SF)	10,280	LF	1.25	12,850	1.40	14,392	2.65	27,242
Manifolds and valves	5	EA	675.00	3,375	280.00	1,400	955.00	4,775

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08 - MECHANICAL 082 - HVAC	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

HEATING (Continued)

Hydronic Piping

4" diameter black steel pipe	120	LF	29.35	3,522	31.50	3,780	60.85	7,302
3" diameter hydronic polypropylene pipe	80	LF	39.36	3,149	25.20	2,016	64.56	5,165
2 1/2" diameter hydronic polypropylene pipe	200	LF	29.28	5,856	18.20	3,640	47.48	9,496
2" diameter hydronic polypropylene pipe	180	LF	22.00	3,960	14.60	2,628	36.60	6,588
1 1/2" diameter hydronic polypropylene pipe	250	LF	16.00	4,000	11.70	2,925	27.70	6,925
1 1/4" diameter hydronic polypropylene pipe	280	LF	15.00	4,200	11.00	3,080	26.00	7,280
1" diameter hydronic polypropylene pipe	350	LF	10.20	3,570	8.75	3,063	18.95	6,633
3/4" diameter hydronic polypropylene pipe	1,000	LF	5.70	5,700	7.50	7,500	13.20	13,200
4" diameter black steel fittings	15	EA	98.00	1,470	163.00	2,445	261.00	3,915
3" diameter copper fittings	10	EA	68.50	685	92.00	920	160.50	1,605
2 1/2" diameter copper fittings	25	EA	46.00	1,150	78.00	1,950	124.00	3,100
2" diameter copper fittings	23	EA	21.50	495	52.00	1,196	73.50	1,691
1 1/2" to 1" diameter copper fittings	110	EA	9.00	990	42.55	4,681	51.55	5,671

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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08 - MECHANICAL 082 - HVAC	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

HEATING (Continued)

Hydronic Piping (Continued)

3/4" diameter copper fittings	125	EA	3.20	400	31.00	3,875	34.20	4,275
Pipe anchors	4	EA	48.00	192	65.00	260	113.00	452
Pipe guides	8	EA	39.00	312	50.00	400	89.00	712
4" diameter gate valves, iron body	14	EA	1225.00	17,150	420.00	5,880	1645.00	23,030
3" diameter gate valves, iron body	4	EA	860.00	3,440	280.00	1,120	1140.00	4,560
2 1/2" diameter ball valves, iron body	2	EA	770.00	1,540	251.00	502	1021.00	2,042
2" diameter ball valves, bronze body	30	EA	84.00	2,520	69.00	2,070	153.00	4,590
1 1/2" diameter ball valves, bronze body	4	EA	67.00	268	57.00	228	124.00	496
1 1/4" diameter ball valves, bronze body	6	EA	53.00	318	48.00	288	101.00	606
1" diameter ball valves, bronze body	30	EA	31.00	930	41.00	1,230	72.00	2,160
3/4" diameter ball valves, bronze body	54	EA	25.00	1,350	37.00	1,998	62.00	3,348
4" diameter check valves, iron body	6	EA	680.00	4,080	420.00	2,520	1100.00	6,600
2" diameter check valves, bronze body	2	EA	375.00	750	56.00	112	431.00	862

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 3/12/2019

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08 - MECHANICAL 082 - HVAC	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

HEATING (Continued)

Hydronic Piping (Continued)

4" diameter flow metering	2	EA	1325.00	2,650	420.00	840	1745.00	3,490
2" diameter balance valves, bronze body	13	EA	277.00	3,601	62.00	806	339.00	4,407
1" diameter balance valves, bronze body	10	EA	112.00	1,120	35.00	350	147.00	1,470
3/4" diameter balance valves, bronze body	27	EA	86.00	2,322	31.00	837	117.00	3,159
2" diameter three-way motor operated control valves, iron body	7	EA	770.00	5,390	150.00	1,050	920.00	6,440
1" diameter two-way motor operated control valves, iron body	15	EA	405.00	6,075	70.00	1,050	475.00	7,125
3/4" diameter two-way motor operated control valves, bronze body	27	EA	350.00	9,450	45.00	1,215	395.00	10,665
3/4" diameter drain valves	35	EA	32.00	1,120	26.00	910	58.00	2,030
Pressure relief valves to boiler and heat exchanger	3	EA	320.00	960	70.00	210	390.00	1,170
Auto air vent with isolation valves	28	EA	72.50	2,030	39.00	1,092	111.50	3,122
Solar thermometers	7	EA	82.00	574	46.00	322	128.00	896

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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08 - MECHANICAL 082 - HVAC	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

HEATING (Continued)

Hydronic Piping (Continued)

Pressure gauges with (2) gate valves	4	EA	110.00	440	85.00	340	195.00	780
Pressure gauges with gate valves	6	EA	72.00	432	45.00	270	117.00	702
Pressure sensor	1	EA	85.00	85	40.00	40	125.00	125
Temperature and pressure test plugs	40	EA	23.00	920	20.00	800	43.00	1,720
2" insulation to hydronic pipe, 4" diameter	120	LF	9.15	1,098	6.68	802	15.83	1,900
2" insulation to hydronic pipe, 3" diameter	80	LF	6.60	528	6.00	480	12.60	1,008
2" insulation to hydronic pipe, 2 1/2" diameter	200	LF	6.00	1,200	5.50	1,100	11.50	2,300
2" insulation to hydronic pipe, 2" diameter	180	LF	5.25	945	4.80	864	10.05	1,809
2" insulation to hydronic pipe, 1 1/2" diameter	250	LF	4.95	1,238	4.32	1,080	9.27	2,318
2" insulation to hydronic pipe, 1 1/4" diameter	280	LF	2.95	826	4.32	1,210	7.27	2,036
2" insulation to hydronic pipe, 1" diameter	350	LF	2.68	938	4.05	1,418	6.73	2,356
2" insulation to hydronic pipe, 3/4" diameter	1,000	LF	2.40	2,400	3.70	3,700	6.10	6,100

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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08 - MECHANICAL 082 - HVAC	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

VENTILATION

AHU-1: 2,600 CFM air handling unit with ___ MBH preheating coil, ___ MBH heating coil, air cooled condenser, mixing box, and filters

1 EA 10400.00 10,400 2600.00 2,600 13000.00 13,000

AHU-2: 5,200 CFM air handling unit with ___ MBH preheating coil, ___ MBH heating coil, air cooled condenser, mixing box, and filters

1 EA 20800.00 20,800 5200.00 5,200 26000.00 26,000

AHU-3: 2,600 CFM air handling unit with ___ MBH preheating coil, ___ MBH heating coil, mixing box, and filters

1 EA 7800.00 7,800 2150.00 2,150 9950.00 9,950

1,000 CFM exhaust fans (size assumed)

3 EA 2000.00 6,000 500.00 1,500 2500.00 7,500

VF-1: 1,500 CFM, 1/6 HP supply air fan

1 EA 1925.00 1,925 520.00 520 2445.00 2,445

400 CFM VAV boxes with heating coil (size assumed)

11 EA 650.00 7,150 210.00 2,310 860.00 9,460

AC-1: 2 ton air conditioner with (2) condensation units at comm room (size assumed)

1 EA 3800.00 3,800 1100.00 1,100 4900.00 4,900

CF-1: 670 CFM fractional HP ceiling fans at apparatus bay (size assumed)

5 EA 220.00 1,100 280.00 1,400 500.00 2,500

L-1: Louvers (3 each)

43 SF 33.50 1,441 12.00 516 45.50 1,957

Wall hoods

2 EA 550.00 1,100 210.00 420 760.00 1,520

HMS Project No.: 19027

08 - MECHANICAL 082 - HVAC	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

VENTILATION (Continued)

KH-1: 36 7/16"x23 5/8" kitchen exhaust hoods	2	EA						With Kitchen Equipment
36" diameter supply air round diffusers, duct mounted	4	EA	450.00	1,800	150.00	600	600.00	2,400
Supply air round diffusers, ceiling mounted	12	EA	120.00	1,440	70.00	840	190.00	2,280
Supply air diffusers, ceiling mounted	28	EA	85.00	2,380	60.00	1,680	145.00	4,060
Supply air round diffusers, wall mounted	8	EA	140.00	1,120	75.00	600	215.00	1,720
Return air round grilles, ceiling mounted	10	EA	45.00	450	40.00	400	85.00	850
Return air grilles, ceiling mounted	15	EA	40.00	600	40.00	600	80.00	1,200
Wall caps	2	EA	110.00	220	85.00	170	195.00	390
Motor operated damper	1	EA	130.00	130	70.00	70	200.00	200
Fire/smoke dampers	11	EA	149.00	1,639	45.00	495	194.00	2,134
Volume dampers	45	EA	37.00	1,665	25.00	1,125	62.00	2,790
6" to 14" diameter flexible duct	60	LF	10.50	630	13.50	810	24.00	1,440
Sheetmetal ductwork and hangers	12,700	LBS	3.78	48,006	4.15	52,705	7.93	100,711
2" duct insulation	450	SF	2.40	1,080	2.55	1,148	4.95	2,228

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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08 - MECHANICAL 082 - HVAC	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

VENTILATION (Continued)

2" duct lining	300	SF	1.95	585	2.10	630	4.05	1,215
Test, balance and commission system	150	HRS			165.00	24,750	165.00	24,750
Direct digital control system	18,650	SF	3.45	64,343	2.70	50,355	6.15	114,698
Temperature sensors	22	EA	87.00	1,914	56.00	1,232	143.00	3,146
Outside temperature sensor	1	EA	110.00	110	75.00	75	185.00	185
Thermostats with locking cover	4	EA	113.00	452	65.00	260	178.00	712
Labels and tags	1	LOT	250.00	250	550.00	550	800.00	800

MISCELLANEOUS

Mechanical mobilization/demobilization, submittals, etc.	1	LOT	2000.00	2,000	7500.00	7,500	9500.00	9,500
Manuals and operations training	1	LOT	500.00	500	2500.00	2,500	3000.00	3,000

SUBTOTAL:				\$ 386,411		\$ 294,477		\$ 680,888
Labor Premium Time	16.70%					49,178		49,178
SUBTOTAL:				\$ 386,411		\$ 343,655		\$ 730,066

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08 - MECHANICAL 082 - HVAC	<i>QUANTITY</i>	<i>UNIT</i>	<i>MATERIAL</i>		<i>LABOR</i>		<i>TOTAL</i>	<i>TOTAL</i>
			<i>RATE</i>	<i>TOTAL</i>	<i>RATE</i>	<i>TOTAL</i>	<i>UNIT RATE</i>	<i>MATERIAL/LABOR</i>
			\$	\$	\$	\$	\$	\$

Subcontractor's Overhead and Profit on Material and Labor	20.00%	77,282	68,731	146,013
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TOTAL ESTIMATED COST:	\$ 463,693	\$ 412,386	\$ 876,079
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CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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08 - MECHANICAL 083 - Fire Protection	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
4" diameter double check valve backflow preventer valve assembly	1	EA	4250.00	4,250	330.00	330	4580.00	4,580
Wet pipe sprinkler valve riser	1	EA	2250.00	2,250	1425.00	1,425	3675.00	3,675
Wet pipe sprinkler system	18,650	SF	1.75	32,638	2.50	46,625	4.25	79,263
Fire department connection	1	EA	650.00	650	230.00	230	880.00	880
Design fee	1	LOT	5000.00	5,000			5000.00	5,000
Test and certify system	1	LOT	300.00	300	1700.00	1,700	2000.00	2,000
SUBTOTAL:				\$ 45,088		\$ 50,310		\$ 95,398
Labor Premium Time	16.70%					8,402		8,402
SUBTOTAL:				\$ 45,088		\$ 58,712		\$ 103,800
Subcontractor's Overhead and Profit on Material and Labor	20.00%			9,018		11,742		20,760
TOTAL ESTIMATED COST:				\$ 54,106		\$ 70,454		\$ 124,560

HMS Project No.: 19027

08 - MECHANICAL 084 - Special Mechanical Systems	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

LPG SYSTEM

LPG regulator	1	EA						By Utility Co.
1" diameter black steel pipe	60	LF	6.80	408	13.00	780	19.80	1,188
3/4" diameter black steel pipe	40	LF	5.50	220	11.00	440	16.50	660
1" diameter black steel fittings	8	EA	8.00	64	45.00	360	53.00	424
3/4" diameter black steel fittings	6	EA	5.35	32	37.00	222	42.35	254
1" diameter safety valves	2	EA	55.00	110	35.00	70	90.00	180
3/4" diameter safety valves	4	EA	67.00	268	40.00	160	107.00	428
Quick disconnects	3	EA	75.00	225	110.00	330	185.00	555

FUEL OIL SYSTEM

DT-1: 10 gallon fuel oil tank complete package including rupture basin, extra pipe connections, standard pump and controls, day tank controls	1	EA	4550.00	4,550	750.00	750	5300.00	5,300
1" diameter black steel pipe	20	LF	6.80	136	13.00	260	19.80	396
3/4" diameter black steel pipe	40	LF	5.50	220	11.00	440	16.50	660
1" diameter black steel fittings	4	EA	8.00	32	45.00	180	53.00	212

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08 - MECHANICAL 084 - Special Mechanical Systems	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

FUEL OIL SYSTEM (Continued)

3/4" diameter black steel fittings	6	EA	5.35	32	37.00	222	42.35	254
Connections to boilers and water heater, including valves and fittings	3	EA	240.00	720	160.00	480	400.00	1,200
Test gas and fuel oil piping	1	LOT	75.00	75	425.00	425	500.00	500

COMPRESSED AIR

AC-1: 60 gallon, 35 CFM shop air compressor	1	EA	750.00	750	210.00	210	960.00	960
3/8" quick disconnect air hose coupling	1	EA	62.00	62	71.30	71	133.30	133
1/2" diameter black steel pipe	200	LF	3.10	620	8.50	1,700	11.60	2,320
3/4" diameter black steel fittings	25	EA	3.20	80	30.00	750	33.20	830
Test and commission air system	1	LOT	70.00	70	150.00	150	220.00	220

VEHICLE EXHAUST SYSTEM

EF-1: 2,500 CFM, wall mounted, on platform exhaust fan with 60" long outlet silencer and 1" diameter flue	1	EA	7500.00	7,500	750.00	750	8250.00	8,250
Plymovent control panel	1	EA	750.00	750	220.00	220	970.00	970

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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08 - MECHANICAL 084 - Special Mechanical Systems	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

VEHICLE EXHAUST SYSTEM (Continued)

Plymovent STRA-60-1 straight rail drive-through system with 57'0" rail and one hose	4	EA	6500.00	26,000	650.00	2,600	7150.00	28,600
Plymovent SBTA-21 sliding balancer track back in system with 19'0" track and one hose	2	EA	2200.00	4,400	310.00	620	2510.00	5,020
Sheetmetal ductwork and hangers	2,200	LBS	3.78	8,316	4.15	9,130	7.93	17,446
CO ₂ detectors	2	EA	85.00	170	60.00	120	145.00	290
NO ₂ detectors	2	EA	150.00	300	75.00	150	225.00	450
Test system	1	LOT	500.00	500	1000.00	1,000	1500.00	1,500
SUBTOTAL:				\$ 56,610		\$ 22,590		\$ 79,200
Labor Premium Time	16.70%					3,773		3,773
SUBTOTAL:				\$ 56,610		\$ 26,363		\$ 82,973
Subcontractor's Overhead and Profit on Material and Labor	20.00%			11,322		5,273		16,595
TOTAL ESTIMATED COST:				\$ 67,932		\$ 31,636		\$ 99,568

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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09 - ELECTRICAL 091 - Service and Distribution	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
800 amp, 208/120 volt, 3 phase, 4 wire main distribution panel with 10 circuits	1	EA	8575.00	8,575	2500.00	2,500	11075.00	11,075
225 amp, 208/120 volt, 3 phase, 4 wire subpanel with 42 circuits	4	EA	3200.00	12,800	1980.00	7,920	5180.00	20,720
225 amp, 208/120 volt, 3 phase, 4 wire, 2 section subpanels with 84 circuits	2	EA	4750.00	9,500	2350.00	4,700	7100.00	14,200
125 amp, 208/120 volt, 3 phase, 4 wire subpanel with 42 circuits	1	EA	1150.00	1,150	840.00	840	1990.00	1,990
60 amp, 208/120 volt, 3 phase, 4 wire subpanel with 42 circuits	1	EA	810.00	810	650.00	650	1460.00	1,460
800 amp automatic transfer switch	1	EA	13000.00	13,000	1700.00	1,700	14700.00	14,700
3" diameter rigid steel conduit	20	LF	24.50	490	26.40	528	50.90	1,018
1 1/2" diameter EMT conduit	240	LF	4.93	1,183	7.34	1,762	12.27	2,945
1 1/4" diameter EMT conduit	40	LF	3.78	151	6.60	264	10.38	415
500 KCMIL copper conductors	100	LF	13.47	1,347	5.07	507	18.54	1,854
#4/0 XHHW copper conductors	1,000	LF	6.26	6,260	3.30	3,300	9.56	9,560
#1/0 XHHW copper conductors	200	LF	3.19	638	2.27	454	5.46	1,092
#3 XHHW copper conductors	210	LF	1.92	403	1.47	309	3.39	712

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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09 - ELECTRICAL 091 - Service and Distribution	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
#3/0 bare copper ground	100	LF	4.40	440	2.64	264	7.04	704
#1 bare copper ground	30	LF	2.36	71	1.66	50	4.02	121
#2 bare copper ground	60	LF	1.95	117	1.32	79	3.27	196
#4 bare copper ground	300	LF	1.23	369	1.24	372	2.47	741
#6 bare copper ground	50	LF	0.75	38	1.07	54	1.82	92
3/4" diameter x 10'0" copper ground rods	4	EA	63.00	252	150.00	600	213.00	852
Grounding to equipment	5	EA	45.00	225	85.00	425	130.00	650
Shunt trip disconnect switch	1	EA	250.00	250	110.00	110	360.00	360
MISCELLANEOUS								
Test and tag service	1	LOT	500.00	500	2000.00	2,000	2500.00	2,500
SUBTOTAL:				\$ 58,569		\$ 29,388		\$ 87,957
Labor Premium Time	16.70%					4,908		4,908
SUBTOTAL:				\$ 58,569		\$ 34,296		\$ 92,865
Subcontractor's Overhead and Profit on Material and Labor	20.00%			11,714		6,859		18,573
TOTAL ESTIMATED COST:				\$ 70,283		\$ 41,155		\$ 111,438

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 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
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09 - ELECTRICAL 092 - Lighting and Power	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

FIXTURES

Type A: 24"x24" LED light fixtures	35	EA	120.00	4,200	110.00	3,850	230.00	8,050
Type B: 24"x48" LED light fixtures	18	EA	145.00	2,610	110.00	1,980	255.00	4,590
Type B1: 24"x48" LED light fixtures	6	EA	145.00	870	110.00	660	255.00	1,530
Type C: 6" diameter round LED downlights	42	EA	110.00	4,620	90.00	3,780	200.00	8,400
Type C1: 6" diameter round LED downlights	16	EA	125.00	2,000	90.00	1,440	215.00	3,440
Type C2: 6" diameter round LED downlights	13	EA	130.00	1,690	90.00	1,170	220.00	2,860
Type C3: 6" diameter round LED downlights	10	EA	135.00	1,350	90.00	900	225.00	2,250
Type D: 6" diameter round shower LED light fixtures	7	EA	210.00	1,470	110.00	770	320.00	2,240
Type E: 12"x48" high bay LED light fixtures	24	EA	450.00	10,800	275.00	6,600	725.00	17,400
Type F: 24"x48" LED light fixtures	20	EA	165.00	3,300	110.00	2,200	275.00	5,500
Type G: Wall mounted LED vanity light fixtures	7	EA	125.00	875	90.00	630	215.00	1,505
Type H: Wall mounted LED light fixtures at crew room bedside reading light	6	EA	150.00	900	70.00	420	220.00	1,320
Type I: Wall mounted corridor LED light fixtures	6	EA	110.00	660	70.00	420	180.00	1,080

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09 - ELECTRICAL 092 - Lighting and Power	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

FIXTURES (Continued)

Type K: 48" long wall mounted LED strip light fixtures	10	EA	110.00	1,100	90.00	900	200.00	2,000
Type K2: 48" long LED strip light fixtures	36	EA	110.00	3,960	110.00	3,960	220.00	7,920
Type L: 24"x12" bathroom LED light fixtures	9	EA	145.00	1,305	110.00	990	255.00	2,295
Type M: 12"x48" LED light fixtures	2	EA	210.00	420	120.00	240	330.00	660
Type M1: 12"x48" LED light fixtures	2	EA	225.00	450	120.00	240	345.00	690
Type N: Round LED downlight fixture	1	EA	250.00	250	110.00	110	360.00	360
Type R1: Exterior wall mounted LED light fixtures	9	EA	450.00	4,050	210.00	1,890	660.00	5,940
Type WF: Exterior wall mounted LED light fixtures at overhead door	6	EA	350.00	2,100	210.00	1,260	560.00	3,360
Type V: 12"x48" under cabinet LED light fixtures	3	EA	70.00	210	70.00	210	140.00	420
Type X: Single face exit signs	12	EA	85.00	1,020	125.00	1,500	210.00	2,520
Twin head emergency light/exit sign combination units	2	EA	150.00	300	135.00	270	285.00	570
Double head emergency light fixtures	7	EA	135.00	945	125.00	875	260.00	1,820

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 3/12/2019

HMS Project No.: 19027

09 - ELECTRICAL 092 - Lighting and Power	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

FIXTURES (Continued)

Emergency light ballast and connections	50	EA	78.00	3,900	50.00	2,500	128.00	6,400
Single pole switches	14	EA	12.50	175	45.00	630	57.50	805
Pilot light switch	1	EA	25.00	25	58.00	58	83.00	83
Push buttons	10	EA	65.00	650	50.00	500	115.00	1,150
Occupancy sensors	19	EA	143.00	2,717	102.00	1,938	245.00	4,655
Occupancy sensor switches	11	EA	70.00	770	50.00	550	120.00	1,320
Dimmer switches	7	EA	26.00	182	40.00	280	66.00	462
Four-way dimmer switches	3	EA	50.00	150	65.00	195	115.00	345
Three-way switches	8	EA	27.00	216	50.00	400	77.00	616
Three-way low voltage switches	10	EA	27.00	270	50.00	500	77.00	770
Four-way low voltage switches	3	EA	39.00	117	55.00	165	94.00	282

POWER

Duplex receptacles	116	EA	12.00	1,392	40.00	4,640	52.00	6,032
Duplex receptacles, weatherproof, GFCI	14	EA	40.00	560	90.00	1,260	130.00	1,820

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

PAGE 80

DATE: 3/12/2019

HMS Project No.: 19027

09 - ELECTRICAL 092 - Lighting and Power	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

POWER (Continued)

Duplex receptacles with twist lock and flexible drop cord, ceiling mounted	10	EA	135.00	1,350	80.00	800	215.00	2,150
Duplex receptacles, GFCI	35	EA	19.00	665	55.00	1,925	74.00	2,590
Double duplex receptacles	13	EA	24.00	312	55.00	715	79.00	1,027
Double duplex receptacles, floor mounted	7	EA	170.00	1,190	110.00	770	280.00	1,960
Special receptacle (dryer)	1	EA	35.00	35	65.00	65	100.00	100
Junction boxes	17	EA	6.00	102	20.00	340	26.00	442
Heat trace to rain leader pipe	100	LF	10.00	1,000	3.20	320	13.20	1,320
Connections to rain leader pipe	8	EA	15.00	120	45.00	360	60.00	480
Push button and solenoid for gas shut down	1	EA	100.00	100	80.00	80	180.00	180
Emergency push button at mechanical room	1	EA	100.00	100	80.00	80	180.00	180
VFD connections	3	EA	25.00	75	50.00	150	75.00	225
Fractional single phase motor connections	42	EA	25.00	1,050	74.00	3,108	99.00	4,158
Fractional single phase motor connections, weatherproof	3	EA	45.00	135	110.00	330	155.00	465

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 3/12/2019

HMS Project No.: 19027

09 - ELECTRICAL 092 - Lighting and Power	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

POWER (Continued)

Air handling unit motor connections	3	EA	65.00	195	130.00	390	195.00	585
Pump motor connections	6	EA	105.00	630	210.00	1,260	315.00	1,890
Thermal overload switches	42	EA	27.00	1,134	48.00	2,016	75.00	3,150
Thermal overload switches, weatherproof	3	EA	40.00	120	60.00	180	100.00	300
Combination starter/disconnect switches	6	EA	250.00	1,500	85.00	510	335.00	2,010
Combination starter/disconnect switches, weatherproof	3	EA	310.00	930	110.00	330	420.00	1,260
20 amp, 4 pole mechanically held lighting contactor with photocell and relay	1	EA	650.00	650	225.00	225	875.00	875
20 amp, 4 pole mechanically held lighting contactor with photocell, relay, and override push button	1	EA	675.00	675	250.00	250	925.00	925
20 amp, 4 pole mechanically held lighting contactor with thermostatic switch	1	EA	650.00	650	225.00	225	875.00	875
1" diameter EMT conduit	1,550	LF	2.26	3,503	5.80	8,990	8.06	12,493
3/4" diameter EMT conduit	3,480	LF	1.29	4,489	5.12	17,818	6.41	22,307
1/2" diameter EMT conduit	2,710	LF	0.83	2,249	3.88	10,515	4.71	12,764

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 3/12/2019

HMS Project No.: 19027

09 - ELECTRICAL 092 - Lighting and Power	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

POWER (Continued)

#8 XHHW copper	7,750	LF	0.82	6,355	1.05	8,138	1.87	14,493
#10 XHHW copper	13,550	LF	0.52	7,046	0.85	11,518	1.37	18,564
#12 XHHW copper	17,400	LF	0.34	5,916	0.65	11,310	0.99	17,226

MISCELLANEOUS

Test and tag lighting and power systems	1	LOT	500.00	500	2500.00	2,500	3000.00	3,000
Electrical mobilization/demobilization, submittals, etc.	1	LOT	2500.00	2,500	7500.00	7,500	10000.00	10,000
Manuals and training	1	LOT	250.00	250	1250.00	1,250	1500.00	1,500

SUBTOTAL:				\$ 108,105		\$ 144,849		\$ 252,954
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Labor Premium Time	16.70%					24,190		24,190
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SUBTOTAL:				\$ 108,105		\$ 169,039		\$ 277,144
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Subcontractor's Overhead and Profit on Material and Labor	20.00%			21,621		33,808		55,429
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TOTAL ESTIMATED COST:				\$ 129,726		\$ 202,847		\$ 332,573
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HMS Project No.: 19027

09 - ELECTRICAL 093 - Special Electrical Systems	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

FIRE ALARM SYSTEM

Addressable fire alarm control panel with battery back up and auto dialer	1	EA	6500.00	6,500	2250.00	2,250	8750.00	8,750
Pull stations	6	EA	75.00	450	80.00	480	155.00	930
Pull station, weatherproof	1	EA	110.00	110	95.00	95	205.00	205
Horn/strobes, ceiling mounted	2	EA	165.00	330	95.00	190	260.00	520
Horn/strobes, ceiling mounted, weatherproof	5	EA	210.00	1,050	110.00	550	320.00	1,600
Horn/strobes, wall mounted	20	EA	165.00	3,300	90.00	1,800	255.00	5,100
Horn/strobes, weatherproof	2	EA	180.00	360	95.00	190	275.00	550
Strobes	3	EA	82.00	246	60.00	180	142.00	426
Strobes, weatherproof	4	EA	110.00	440	85.00	340	195.00	780
Smoke detectors	26	EA	115.00	2,990	98.00	2,548	213.00	5,538
Duct smoke detectors	3	EA	330.00	990	200.00	600	530.00	1,590
Heat detectors	11	EA	80.00	880	65.00	715	145.00	1,595
Tamper switch connection	1	EA	15.00	15	45.00	45	60.00	60
Flow switch connection	1	EA	15.00	15	45.00	45	60.00	60

HMS Project No.: 19027

09 - ELECTRICAL 093 - Special Electrical Systems	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

FIRE ALARM SYSTEM (Continued)

3/4" diameter EMT conduit	2,150	LF	1.29	2,774	5.12	11,008	6.41	13,782
Alarm wire	2,580	LF	0.48	1,238	0.95	2,451	1.43	3,689

CATV SYSTEM

CATV headend equipment toner #XQT-916 with 16 port quad tap	1	EA	250.00	250	80.00	80	330.00	330
Television outlets	7	EA	12.00	84	40.00	280	52.00	364
Junction boxes	8	EA	6.00	48	20.00	160	26.00	208
3/4" diameter EMT conduit	560	LF	1.29	722	5.12	2,867	6.41	3,589
RG-6 coaxial cable	630	LF	0.78	491	0.72	454	1.50	945

TELEPHONE/DATA

3/4" plywood backboard with two coats white latex paint	144	SF	2.75	396	3.50	504	6.25	900
Comm/data racks	2	EA	775.00	1,550	270.00	540	1045.00	2,090
48-port patch panels	4	EA	120.00	480	260.00	1,040	380.00	1,520
Wire cable management panels	8	EA	310.00	2,480	170.00	1,360	480.00	3,840

HMS Project No.: 19027

09 - ELECTRICAL 093 - Special Electrical Systems	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

TELEPHONE/DATA (Continued)

2-port combination telephone/data jacks, wall mounted	26	EA	20.00	520	35.00	910	55.00	1,430
2-port combination telephone/data jacks, wall mounted, weatherproof	2	EA	27.00	54	50.00	100	77.00	154
3-port combination telephone/data jacks, wall mounted	3	EA	30.00	90	60.00	180	90.00	270
2-port combination telephone/data jacks, floor mounted	7	EA	112.00	784	79.00	553	191.00	1,337
Wireless access points	10	EA	110.00	1,100	70.00	700	180.00	1,800
Building service entrance protective device	1	EA	150.00	150	75.00	75	225.00	225
Punch down blocks	4	EA	110.00	440	45.00	180	155.00	620
Plug strips	2	EA	35.00	70	15.00	30	50.00	100
Main ground bus bar	1	EA	210.00	210	110.00	110	320.00	320
Ground bus bars at racks	2	EA	136.00	272	60.00	120	196.00	392
3 KVA UPS	1	EA	6000.00	6,000	2700.00	2,700	8700.00	8,700
4" diameter EMT conduit	60	LF	24.00	1,440	14.69	881	38.69	2,321

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 3/12/2019

HMS Project No.: 19027

09 - ELECTRICAL 093 - Special Electrical Systems	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

TELEPHONE/DATA (Continued)

3/4" diameter EMT conduit	380	LF	1.29	490	5.12	1,946	6.41	2,436
Cat 6 cable	8,900	LF	0.38	3,382	0.70	6,230	1.08	9,612
25 pair Cat 6 cable	50	LF	3.45	173	7.50	375	10.95	548
J-hooks	520	EA	0.75	390	1.60	832	2.35	1,222
D-rings	7	EA	3.00	21	10.00	70	13.00	91

ACCESS CONTROL

Access control panel	1	EA	650.00	650	210.00	210	860.00	860
Card readers	12	EA	410.00	4,920	120.00	1,440	530.00	6,360
3/4" diameter EMT conduit	1,200	LF	1.29	1,548	5.12	6,144	6.41	7,692
Wiring	1,320	LF	0.32	422	0.80	1,056	1.12	1,478

LGP GAS SOLENOID SYSTEM

Control relays to shut gas appliances off with wiring	2	EA	150.00	300	110.00	220	260.00	520
Gas reset button with wiring	1	EA	150.00	150	135.00	135	285.00	285

HMS Project No.: 19027

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
093 - Special Electrical Systems								

SECURITY CAMERA SYSTEM (ROUGH-IN ONLY)

Note: Video storage appliance, exterior cameras, and camera field patch cords by owner.

24-port UTP patch panel	1	EA	120.00	120	110.00	110	230.00	230
24-port POE network switch	1	EA	670.00	670	76.00	76	746.00	746
RJ-45 data ports	3	EA	12.00	36	40.00	120	52.00	156
Junction boxes	2	EA	6.00	12	20.00	40	26.00	52
Junction box, weatherproof	1	EA	10.00	10	25.00	25	35.00	35
3/4" diameter EMT conduit	300	LF	1.29	387	5.12	1,536	6.41	1,923
Cat 6 cable	350	LF	0.38	133	0.70	245	1.08	378

FIRE ALERTING SYSTEM

Zone paging system headend equipment (Bogen #BCM2000)	1	EA	1850.00	1,850	630.00	630	2480.00	2,480
Speakers, ceiling mounted	43	EA	145.00	6,235	110.00	4,730	255.00	10,965
Speakers, ceiling mounted, weatherproof	3	EA	210.00	630	135.00	405	345.00	1,035
Volume controls	33	EA	20.00	660	40.00	1,320	60.00	1,980

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 3/12/2019

HMS Project No.: 19027

09 - ELECTRICAL 093 - Special Electrical Systems	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

FIRE ALERTING SYSTEM (Continued)

3/4" diameter EMT conduit	1,900	LF	1.29	2,451	5.12	9,728	6.41	12,179
Cat 6 speaker cable	2,280	LF	0.39	889	0.75	1,710	1.14	2,599

MISCELLANEOUS

Test and tag all special electrical systems	1	LOT	500.00	500	2000.00	2,000	2500.00	2,500
SUBTOTAL:				\$ 66,348		\$ 78,644		\$ 144,992
Labor Premium Time	16.70%					13,134		13,134
SUBTOTAL:				\$ 66,348		\$ 91,778		\$ 158,126
Subcontractor's Overhead and Profit on Material and Labor	20.00%			13,270		18,356		31,626

TOTAL ESTIMATED COST:				\$ 79,618		\$ 110,134		\$ 189,752
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CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 3/12/2019

HMS Project No.: 19027

10 - EQUIPMENT	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
101 - Fixed and Movable Equipment								
(4) burner gas ranges with ovens	2	EA	1480.00	2,960	120.00	240	1600.00	3,200
Stainless steel exhaust fans	2	EA	850.00	1,700	250.00	500	1100.00	2,200
Full size refrigerators	3	EA	1850.00	5,550	100.00	300	1950.00	5,850
Full size freezer	1	EA	1850.00	1,850	100.00	100	1950.00	1,950
Heavy duty dishwasher	1	EA	1275.00	1,275	150.00	150	1425.00	1,425
Heavy duty washer and dryer	1	SET	3000.00	3,000	350.00	350	3350.00	3,350
Commercial extractor at decontamination room	1	EA	8000.00	8,000	2000.00	2,000	10000.00	10,000
Commercial dryer at decontamination room	1	EA	4500.00	4,500	800.00	800	5300.00	5,300
Pre-drying cabinet at decontamination room	1	EA	600.00	600	100.00	100	700.00	700
Dell 70" LED monitor	1	EA	2400.00	2,400	300.00	300	2700.00	2,700
Dell 55" LED monitors	4	EA	1150.00	4,600	250.00	1,000	1400.00	5,600
Dell 70" interactive touch monitors	2	EA	5300.00	10,600	350.00	700	5650.00	11,300
Scuba compressor	1	EA	32600.00	32,600	750.00	750	33350.00	33,350
Scuba charge station	1	EA	26780.00	26,780	300.00	300	27080.00	27,080
Scuba storage rack	1	EA	14688.00	14,688	200.00	200	14888.00	14,888

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 3/12/2019

HMS Project No.: 19027

10 - EQUIPMENT	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
101 - Fixed and Movable Equipment			\$	\$	\$	\$	\$	\$
Cascade fill (4) bottles	1	EA	3800.00	3,800	150.00	150	3950.00	3,950
24"x24"x74" turnout lockers	38	EA	425.00	16,150	60.00	2,280	485.00	18,430
24"x48"x74" storage lockers	35	EA	370.00	12,950	65.00	2,275	435.00	15,225
Exercise/fitness equipment (7 items)	1	LOT	45000.00	45,000	4000.00	4,000	49000.00	49,000
SUBTOTAL:				\$ 199,003		\$ 16,495		\$ 215,498
Labor Premium Time	16.70%					2,755		2,755
TOTAL ESTIMATED COST:				\$ 199,003		\$ 19,250		\$ 218,253

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 3/12/2019

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10 - EQUIPMENT 102 - Furnishings	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

Note: All furniture, beds, tables, desks, file cabinets, etc. with separate contract.

Walk-off mat	150	SF	13.00	1,950	1.10	165	14.10	2,115
Exterior window black out shades at dorms (7)	105	SF	12.00	1,260	3.50	368	15.50	1,628
Exterior window blinds (13)	445	SF	9.20	4,094	1.25	556	10.45	4,650
Interior window blinds	40	SF	9.20	368	1.25	50	10.45	418
SUBTOTAL:				\$ 7,672		\$ 1,139		\$ 8,811
Labor Premium Time	16.70%					190		190

TOTAL ESTIMATED COST:				\$ 7,672		\$ 1,329		\$ 9,001
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CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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DATE: 3/12/2019

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12 - GENERAL REQUIREMENTS	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

MOBILIZATION AND DEMOBILIZATION

Mobilization and demobilization	1	LS	3000.00	3,000	5000.00	5,000	8000.00	8,000
Barge freight (incidental, rest with unit rates)	50	TONS	350.00	17,500	50.00	2,500	400.00	20,000
Miscellaneous air freight	2,500	LBS	1.25	3,125	0.25	625	1.50	3,750

SITE STAFF

Project manager (part-time)	240	HRS			115.00	27,600	115.00	27,600
Superintendent	15	MOS	200.00	3,000	13500.00	202,500	13700.00	205,500
Quality control (part-time)	12	MOS	150.00	1,800	6000.00	72,000	6150.00	73,800
Expediting (part-time)	13	MOS	150.00	1,950	3500.00	45,500	3650.00	47,450
Scheduling and estimating	13	MOS	150.00	1,950	3750.00	48,750	3900.00	50,700
Clerical/timekeeper	13	MOS	150.00	1,950	2850.00	37,050	3000.00	39,000

TEMPORARY CONSTRUCTION

Site trailer/office and equipment	13	MOS	1250.00	16,250	350.00	4,550	1600.00	20,800
Staging areas, signs, temporary protection, etc.	13	MOS	300.00	3,900	500.00	6,500	800.00	10,400
Utilities	13	MOS	1500.00	19,500	100.00	1,300	1600.00	20,800
Communications, faxes, etc.	13	MOS	600.00	7,800	50.00	650	650.00	8,450

HMS Project No.: 19027

12 - GENERAL REQUIREMENTS	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

EQUIPMENT AND TOOLS

Earthwork equipment, pick-ups, trucks, pumps, welders, compressors, hoisting equipment, etc.	13	MOS	5200.00	67,600	500.00	6,500	5700.00	74,100
Scaffolding	6	MOS	1250.00	7,500	150.00	900	1400.00	8,400
Hand tools	13	MOS	1200.00	15,600			1200.00	15,600
Consumables: cleaning products, safety equipment, etc.	13	MOS	1750.00	22,750	100.00	1,300	1850.00	24,050
Fuel for equipment (400 gallons/month)	13	MOS	1400.00	18,200			1400.00	18,200
Equipment labor	240	HRS			65.00	15,600	65.00	15,600

MISCELLANEOUS

Miscellaneous materials testing	1	LOT	3500.00	3,500			3500.00	3,500
Regular clean-up	13	MOS	150.00	1,950	1250.00	16,250	1400.00	18,200
Final clean-up and punch list	18,438	SF	0.12	2,213	0.28	5,163	0.40	7,376
Dumpsters (2)	13	MOS	800.00	10,400			800.00	10,400
Porta cans and cleaning (3)	13	MOS	250.00	3,250	50.00	650	300.00	3,900
Regular debris disposal	13	MOS	350.00	4,550	750.00	9,750	1100.00	14,300
Daily loading and unloading	13	MOS	150.00	1,950	1300.00	16,900	1450.00	18,850

CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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12 - GENERAL REQUIREMENTS	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

LABOR EMPLOYMENT COSTS

Per diem (85% imported crew)	4,385	MD	165.00	723,525			165.00	723,525
Travel costs (85% imported crew)	130	RT	500.00	65,000			500.00	65,000

MISCELLANEOUS

State of Alaska Dept. of Labor filing fee (1% of labor)	1	LOT	5000.00	5,000			5000.00	5,000
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SUBTOTAL:				\$ 1,034,713			\$ 527,538	\$ 1,562,251
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Home Office	3.00%							313,624
Overhead and Profit	8.50%							915,258
Bonds	0.85%							99,305
Insurances	1.15%							135,496

TOTAL ESTIMATED COST:								\$ 3,025,934
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CITY OF VALDEZ FIRE STATION #1 REPLACEMENT
 401 WEST PIONEER DRIVE - VALDEZ, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

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13 - CONTINGENCIES	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

131 - ESTIMATOR'S CONTINGENCY

The estimator's allowance for architectural and engineering requirements that are not apparent at this level of design documentation

7.50%

\$ 893,835

132 - ESCALATION CONTINGENCY

The allowance for escalation from the date of estimate to the proposed bid date of January 1, 2020 at the rate of 3.50% per annum (10 months)

2.91%

\$ 372,819

TOTAL ESTIMATED COST:

\$ 1,266,654