

ROSEVILLE
REQUEST FOR COUNCIL ACTION

Date: December 12, 2011
Item No.: 12.e

Department Approval



City Manager Approval



Item Description: Request For Conceptual Fire Station Plan Approval

1 **BACKGROUND**

2 On March 21, 2011 the Fire Department Building Facility Needs Committee presented the
3 following recommendations to the City Council regarding direction for future fire stations:
4

5 After an extensive evaluation of fire department operations, services offered, current
6 building conditions and shortcomings, station locations, and future shared services the
7 committee made a recommendation that the fire department move to a single new fire
8 station on the grounds of the current Fire Station #1 at 2701 Lexington Ave. This
9 recommendation would consolidate the department's current three station out-dated model
10 into a centrally located station that would better serve the community both today and into
11 the future.
12

13 At the September 26, 2011 City Council meeting, approval was given to the Fire Department to
14 enter into contract for architectural services using CNH Architects. Over the past two months the
15 Fire Department along with our planning team have provided Council with conceptual site
16 drawings, floor plans, and exterior conceptual views of the proposed fire station. The next step
17 of the process is for Council to approve the conceptual plans for the fire station and Phase II
18 services for both architectural and construction management services.

19 **FINANCIAL IMPACTS**

20 As funding for the project has been approved through the bonding process, there is no direct
21 financial impact to conceptual plan approval.

22 **STAFF RECOMMENDATION**

23 Staff recommends Council authorize the fire department to move forward into schematic and
24 construction document design phase utilizing the conceptual plans as presented.

25 **REQUESTED COUNCIL ACTION**

26 Motion to authorize the fire department to move forward into schematic and construction
27 document design phase utilizing the conceptual plans as presented.
28

29 **Prepared by: Timothy O'Neill, Fire Chief**
30 **Attachment A: Fire Station Design Presentation**
31

Roseville City Council

Fire Station Design Presentation

December 12, 2011

Presentaton Topics:

- Updated Site Plan
- Updated Floor Plans
- Exterior Image Perspectives
- Training by Design Summary
- Sustainability Update



Roseville Fire Station



Schematic Design Summary

The Fire Station project has reached 75% completion of the schematic design portion of the project representing Phase I of the design process. This phase includes the development of the following items presented to the City Council at previous meetings:

- Project Space Needs Program (based on Project Planning Team and Staff input)
- Sustainability Review and certification approach decision
- Site Plan showing apparatus, firefighter and pedestrian circulation, parking, and building placement
- Preliminary Floor Plan development
- Training Feature development
- Exterior Image development
- Preliminary mechanical system review (geothermal meetings)
- Preliminary project cost review

There are several updates that have been included in this week's presentation that address either additional schematic design development or issues presented by the City Council or city staff. These changes as well as a quick summary of each of the design elements are outlined below followed by images of the current schematic design progress.

Space Needs Program

The space needs program was developed based on the document provided by the Project Planning Team and Fire Department staff resulting from the requirements of the merger of the existing fire stations and the fire administration offices. The Project Planning Team document also took into account the experience gained from touring many existing fire stations within the metropolitan area. Our design team developed appropriate sizes for each space and adjusted the program based on our experience in past fire station designs, both by CNH Architects and by the Fire Safety Designer, Dave Acomb from the Stony Brook Design Studio.

Sustainability

The list of potential sustainable design features was reviewed with many items selected to be included or to be further considered as the project progresses. The three options for approaching certification were reviewed with the City Council directing the design team to design for sustainability but not pursue 3rd-party certification.



Site Design

The site, while tight, has shown to work well for the needs of the Fire Station and will provide an opportunity to enhance the overall City Campus in many ways. It was determined that the apparatus should respond to calls directly onto Lexington Avenue and then return to the station off of Woodhill Drive. This resulted in a building footprint elongated in the north-south axis with the apparatus on the north end and main building entrance on the south closest to City Hall.

The site plan attached has been revised to provide for access to the parking lot from the existing City Hall lot. The south end of the fire station parking will be labeled for Fire Station visitors during business hours. While of some concern for firefighter parking on Call Backs, this change allows better access for the public coming to the Fire Station during business hours as well as providing handicap parking immediately adjacent to the front entrance.

Also revised is the access apron in front of the apparatus bays abutting Lexington Avenue. This apron area was divided into two sections by adding brick pavers and a landscape area directly in front of the tower element. This addresses two goals - first visually dividing the large apron into two smaller sections and, second reducing the width of the street curb cuts to bring them closer to the typical city standards.

Schematic Floor Plans

The floor plan is organized into two major sections - the apparatus bays with support mezzanine and the two story administrations / dorm wing. The main floor is organized along a single corridor / history wall area directly connecting all main floor elements from the front entry to the apparatus bays. A partial basement has also been included as a cost effective space to house mechanical spaces, storage and workout space. The attached plans have some minor development since previously presented, but in general matches the conceptual approach originally shown.

Training Features

Firefighter certification training features have been planned to be incorporated into the building, many using portions of the building already required for other functions. Among other things, these training features provide for better trained firefighters, assist in recruitment of volunteers, reduce risk of line of duty tragedy, and save off-sight training costs. As noted, 11 of the 12 recertification requirements will be able to be obtained within the new Fire Station facility.



Exterior Building Image Development

The exterior of the building has been designed to provide a quality municipal building that provides an attractive and distinctive entrance to the City Campus from the north on Lexington Avenue while complementing the existing City Campus buildings through use of similar durable materials and vertical design elements. Large windows and clerestories provide daylighting and views in the building design addressing both sustainability goals and interior / exterior value. The attached updated renderings provide a more accurate view of the potential materials and project aesthetic; however, additional development and material investigation will continue as part of Phase II Design Development.

Preliminary Mechanical System Overview

The existing City Campus geothermal masterplan was reviewed with city staff and the city's consultant. The Fire Station provides an excellent opportunity to expand the Campus Geothermal infrastructure resulting in benefits to the overall campus as well as the Fire Station. In particular, the current Ice Arena creates significant excess heat in the winter which can be used to heat the Fire Station building. This is particularly a good fit as the heating / cooling profile of a fire station is heat dominant. This will result in a significantly reduce amount of geothermal wells required to meet only the summer cooling loads of the Fire Station. Consequently, the Fire Station will show cost savings both in initial construction as well as reduced energy costs for operation. Our design team will continue to develop an expanded campus geothermal design to serve the new Fire Station and prepare the campus for further geothermal expansion.

Preliminary Project Cost Review

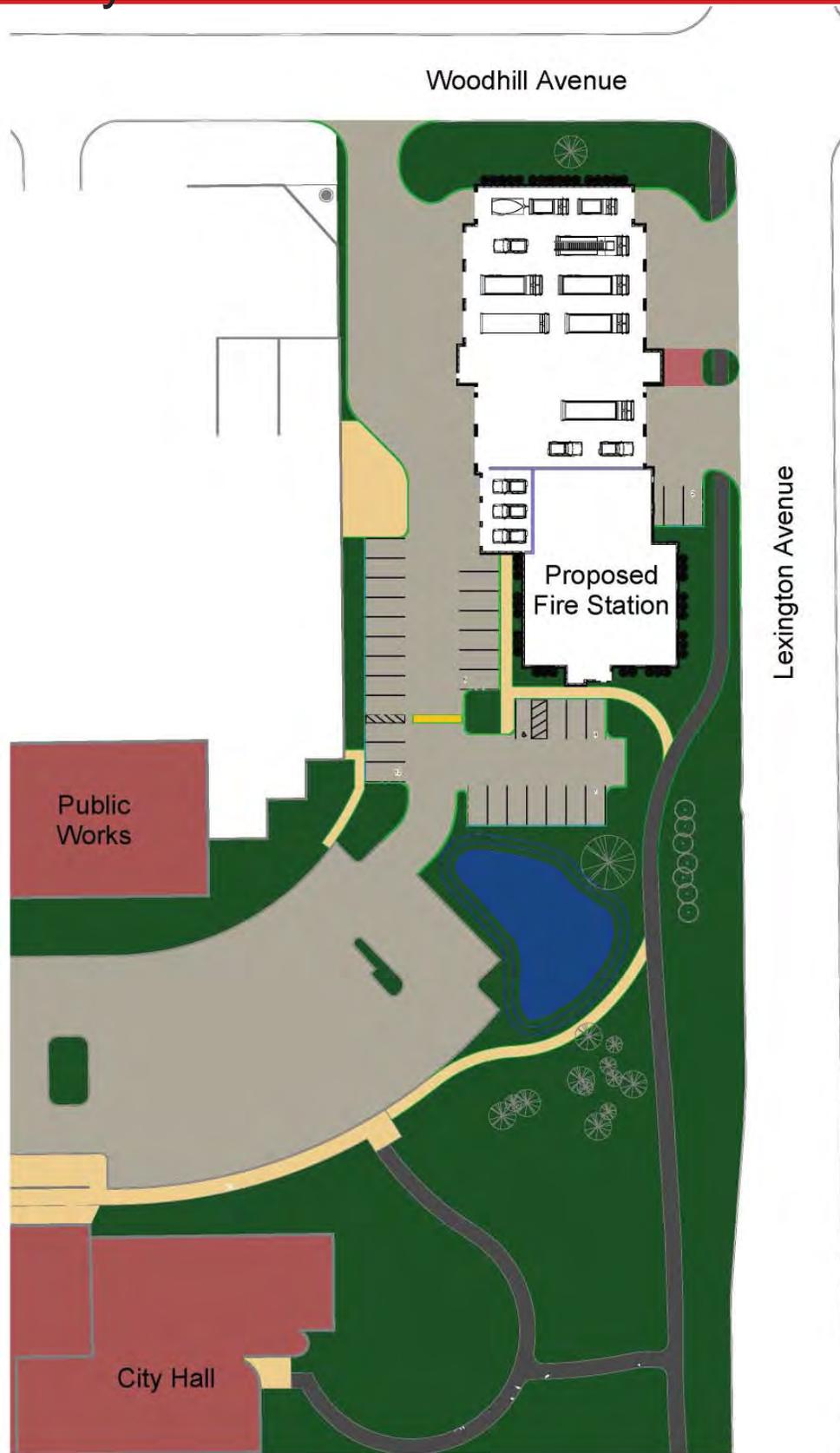
During this schematic design phase the construction management consultant, Bossardt Corporation, has been developing the overall project budget review and provided recommendations to staff and the design team working to remain within the designated project budget. The following is a preliminary breakout of the budget into the basic project categories. The costs will be regularly updated as the project design progresses providing scope and value engineering feedback to assist in making both design and program decisions. The construction cost listed is assuming an early April bid both for best bid environment and maximized construction season.

Total Project Budget @ \$8,000,000

- Construction Cost @ \$6,491,000
- Furniture & Equipment @ \$250,000
- Technology & Communication @ \$250,000
- Project Soft Costs @ \$709,000
- Contingency @ \$300,000



Preliminary Site Plan



Roseville Fire Station



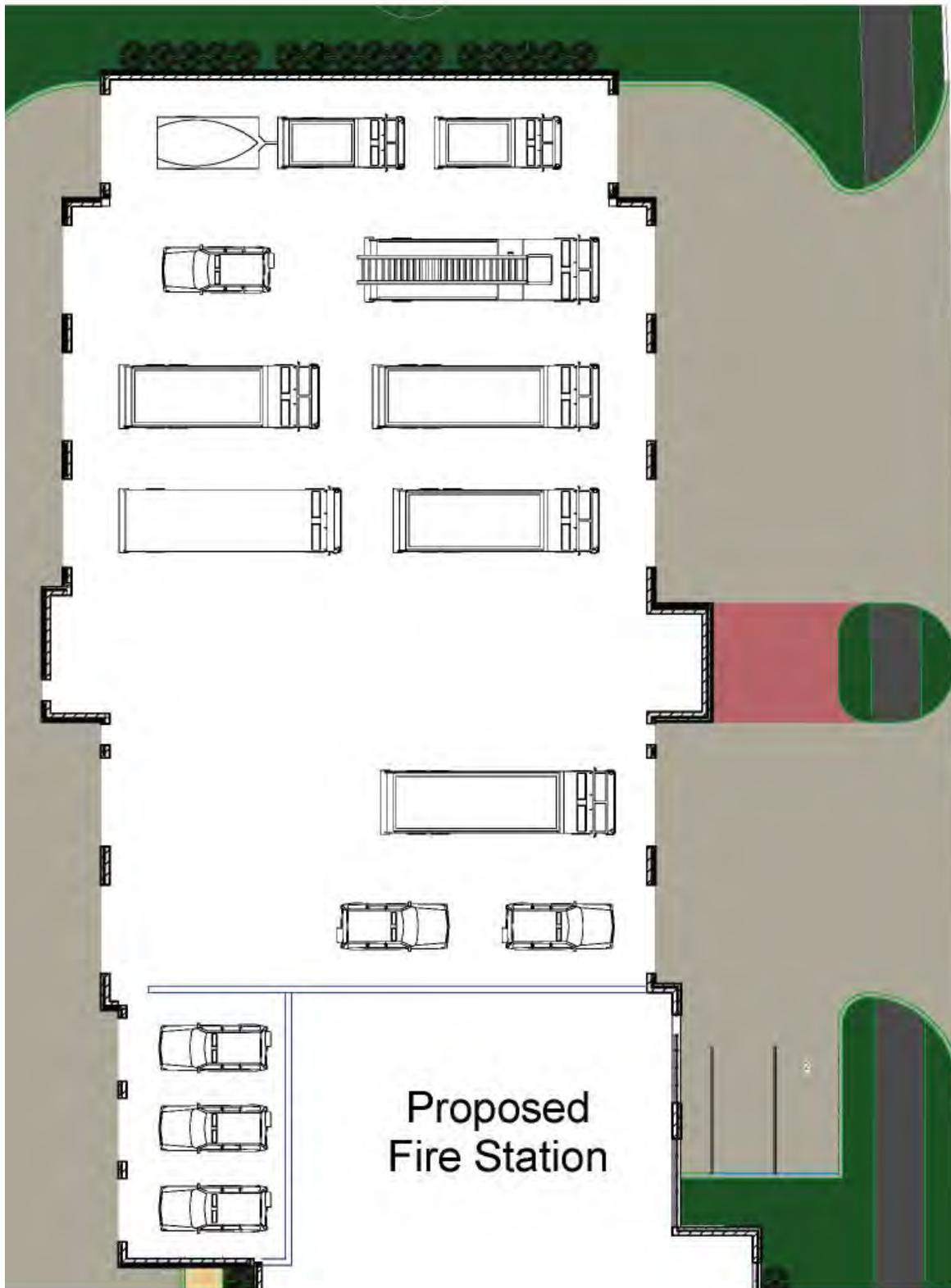
Preliminary Site Plan



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Preliminary Site Plan



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Preliminary Floor Plans

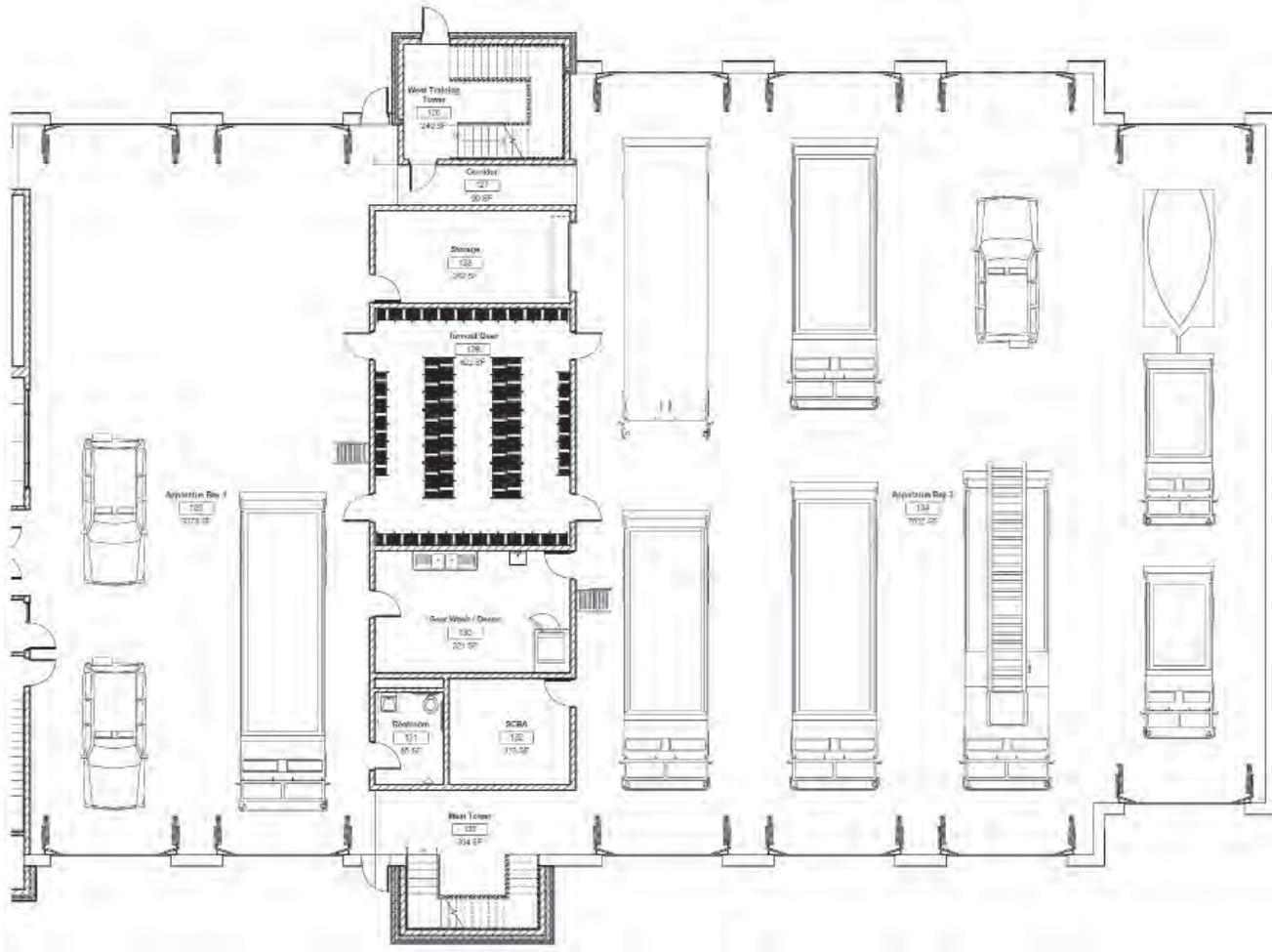
The following floor plan diagrams are also included in larger, scaled plans that are attached to the end of this packet.



First Floor Plan - Administration



Preliminary Floor Plans



First Floor Plan - Apparatus Bays



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Preliminary Floor Plans



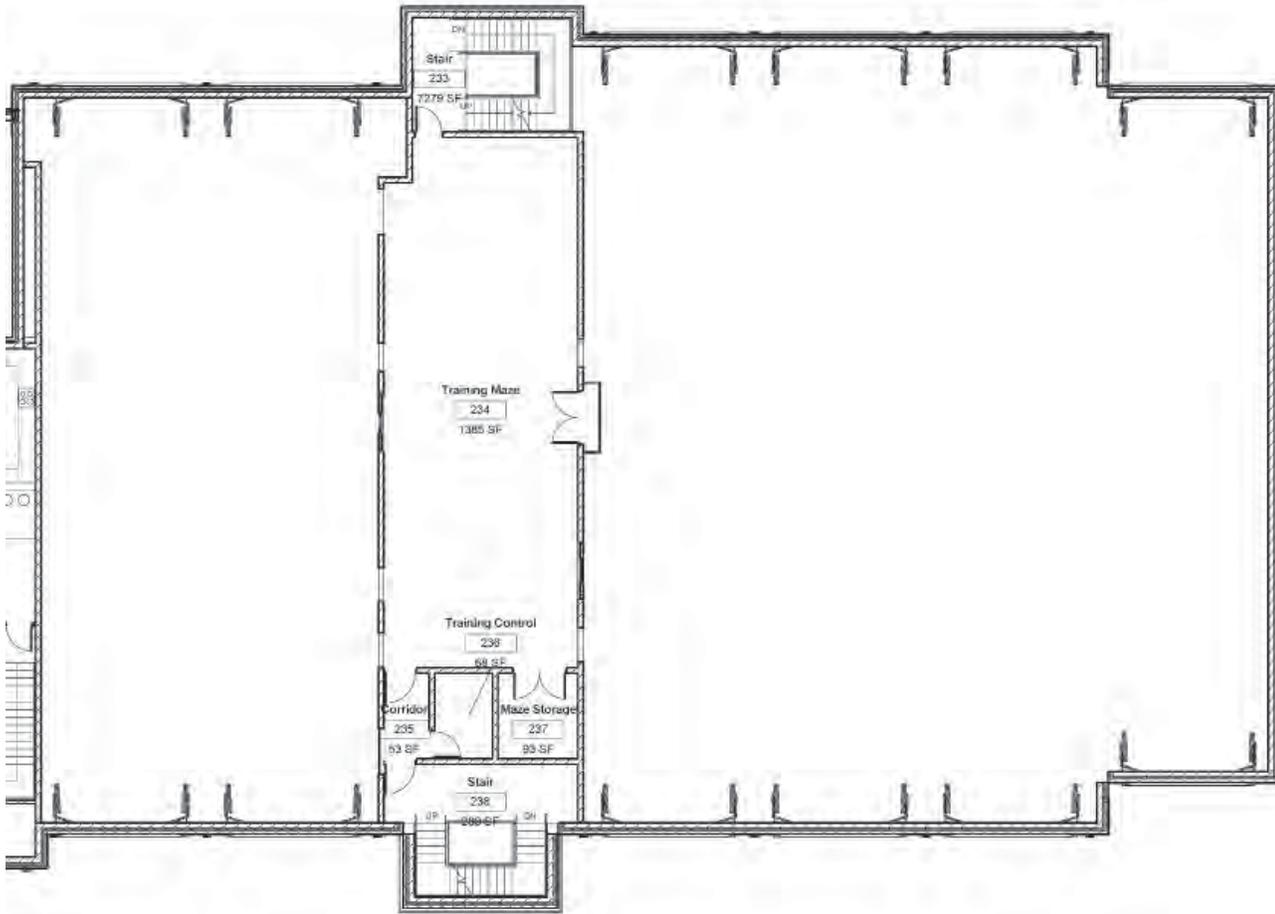
Second Floor Plan - Administration



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Preliminary Floor Plans



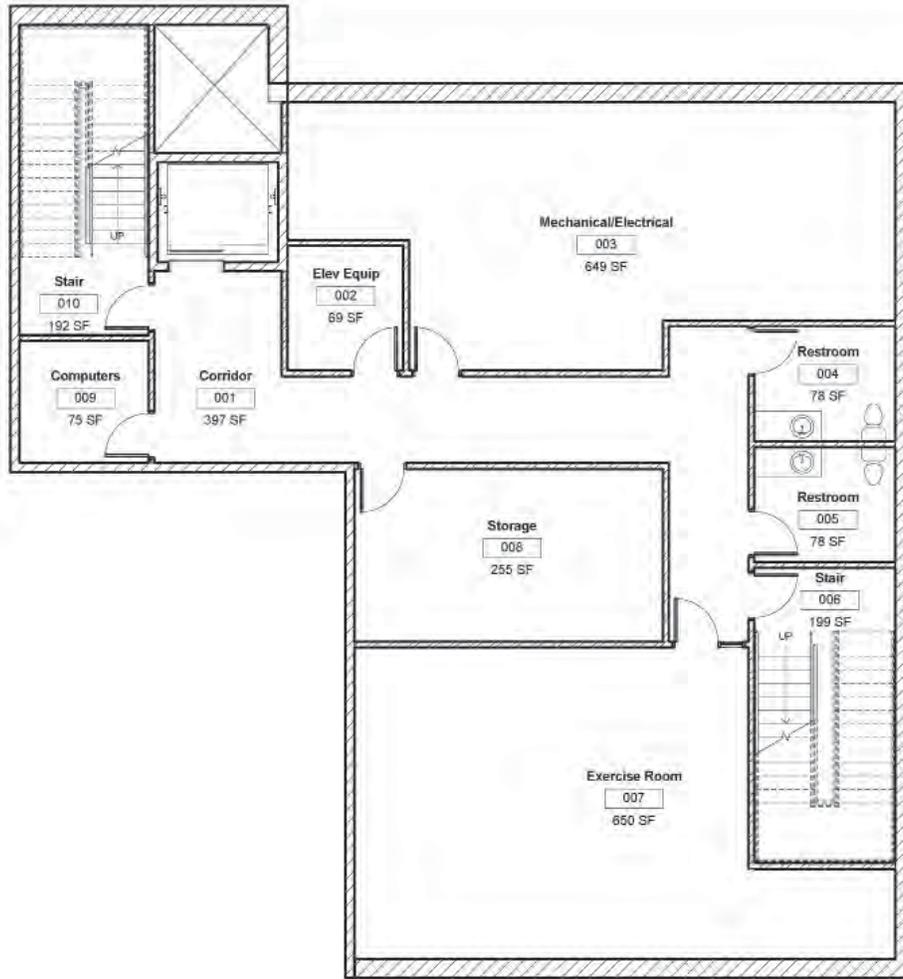
Second Floor Plan - Mezzanine



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Preliminary Floor Plans



Basement Floor Plan



Preliminary Exterior Rendering - SE



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Preliminary Exterior Rendering - NE



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CNH
ARCHITECTS

Preliminary Exterior Rendering - NW



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Preliminary Exterior Rendering - SW



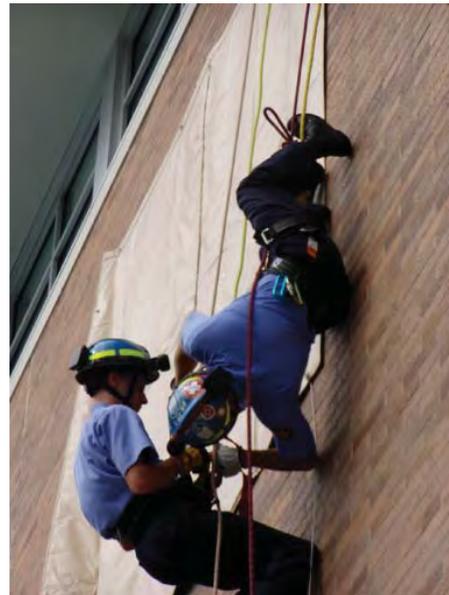
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CNH
ARCHITECTS

Training By Design Summary

Training at the Station

- Convenient and efficient for volunteers
- Maintains volunteer base and assists with recruitment
- Keeps training central and not outside of Roseville, community risk reduced
- Gives Roseville better prepared firefighters
- Reduces potential for line of duty tragedy
- Train inside during bad weather
- Saves \$\$\$\$ from not having to pay for training at other facilities



Roseville Fire Station



Training By Design Summary

Recertification Training Requirements

- Ground ladder training/evolutions
- Confined space rescue
- Hose advancement/stairwell evolutions
- Search & rescue maze
- ATR training (rope rescue/rappelling)
- Salvage operations
- High rise training
- Fire attack
- Elevators
- Fire suppression
- Wall breach
- Alarm panel training
- Sprinkler system training
- Positive pressure ventilation
- Vertical ventilation
- Forcible entry prop
- Wall/floor breach

11 of 12 recertification requirements will be designed into the new station.



Roseville Fire Station



Sustainable Design - Potential Features

The following are areas that the project team has identified as sustainable design features that are being considered for the Fires Station project. Items in “green” are required if project is to be certified by LEED or Green Globes. Items in “black” are very likely to be included while items in “blue” are features that will be considered as possible components as the design progresses.

Sustainable Sites

- Construction Activity Pollution Prevention
- Public Transportation Access
- Bicycle Storage and Changing Rooms
- Alternative Fuel Stations
- Stormwater - reduction in rate and quantity
- Stormwater - treatment
- Reduce Heat Islands - roof
- Light Pollution
- Site Selection
- Parking Capacity
- Site - protect or restore open space
- Site - development footprint 25% open space

Water Efficiency

- Efficient Landscaping - 50% reduction water
- 20% Reduction in facility water usage
- 30% Reduction in facility water usage
- Innovative Wastewater Technologies

Energy and Atmosphere

- Fundamental Commissioning
- Minimum Energy Performance
- Fundamental Refrigerant Management
- Optimize energy usage - 30% better than code
- Renewable energy usage - 2.5%
- Enhanced Refrigerant Management
- Optimize energy usage - up to 60% better than code
- Additional Commissioning



Sustainable Design - Potential Features

Materials and Resources

Storage and Collection of Recyclables

50% Divert Construction Waste

75% Divert Construction Waste

10% Recycled Content (post consumer + 1/2 pre-consumer)

10% Regional Materials

Certified Wood

5% Resource Reuse

10% Resource Reuse

20% Recycled Content (post consumer + 1/2 pre-consumer)

20% Regional Materials

Rapidly Renewable Materials

Indoor Environmental Quality

Minimum Indoor Air Quality

Tobacco Control

CO2 Monitoring

Construction Indoor Air Quality - during construction

Construction Indoor Air Quality - before occupancy

Adhesives and Sealants - low VOC content

Paints & Coatings - low VOC content

Carpet

Composite Woods & Agrifiber Products

Controllability Systems - Lighting

Thermal Comfort - Design

75% Daylighting of Occupied Space

Increase Ventilation Effectiveness

Indoor Pollutant Source Control

Thermal Comfort - Verification

Controllability Systems - Thermal Comfort

90% of Occupied Space with Outside Views

Innovation and Design Process

LEED Accredited Professionals

Innovation in Design - unique sustainable features



Roseville Fire Station

