



NORTH CASCADE DISTRICT MASTER PLAN

OREGON DEPARTMENT OF FORESTRY

REVISION DATE: 11 FEBRUARY 2022

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EXECUTIVE SUMMARY

Attributions

Steering Committee:

Andy White – Northwest Oregon Area Director

Steve Wilson – North Cascade District Forester

Chris Stewart – Facilities Manager

Joseph Pfau – Facilities Project Manager

Unit Office Leadership:

Chad Montoya – North Cascade District Business Operations Manager

Kyle Kaupp – Santiam Unit Forester

Levi Hopkins – Santiam Unit Wildland Fire Supervisor

Scott West – Molalla Unit Forester

Ryan Andrade – Molalla Unit Wildland Fire Supervisor

Hennebery Eddy Architects:

Michelle Vo – Principal in Charge

Gregg Sanders – Planner and Project Manager

Andrew O'Toole – Project Architect

Jessy Miguel – Interior Designer

Photo credits Hennebery Eddy Architects unless noted otherwise



Santiam Administration Building, 2013 (a)



Aftermath of Labor Day fires, 2020 (b)



Administration building site in June, 2021

PROJECT GOALS AND OBJECTIVES

During the 2020 Labor Days fires, the Oregon Department of Forestry (ODF) experienced catastrophic damage to the administrative building on the North Cascade District (NCD) Santiam Unit Office. The Department used this tragedy as an opportunity to broadly evaluate the physical plan supporting the NCD. The NCD currently has two unit offices to support the staff, the Clackamas-Marion Forest Protective Association (CMFPA), cooperators, and the communities, one in Molalla and one in Lyons. Each unit office includes a campus of small buildings of varying age and condition. Prior to this study, these facilities were evaluated by Faithful & Gould, who produced the 2017 Facilities Condition Assessment (FCA). To augment the FCA, ODF engaged Hennebery Eddy Architects to perform a district-wide program and master plan. The primary goal of the plan has been to establish the physical space needs and other facilities improvements necessary for efficient and effective district operations. A secondary goal has been to evaluate whether the district is best served by two independent unit offices or a single combined unit office at another strategically located site.

OVERALL PROCESS AND FINDINGS

The project followed a four-step iterative design process. The initial step established the project parameters, including a charter process where the primary purpose, key priorities, and decision-making process were defined. The second step gathered information and feedback from area/district leadership and staff, and the CMFPA to understand the current operational needs of the unit offices. The third step explored alternative design options, resulting in design recommendations for improved independent unit offices as well as a new combined District office including both unit offices. The recommendations were cost-neutral and based solely on operational and performance objectives. Future studies performed by others will evaluate the project cost of the improvement recommendations and the service impact of a single unit office versus the current two-unit model.

FINAL RECOMMENDATIONS

The program analysis found significant operational deficiencies at both the Santiam and Molalla unit offices. Both units were found to be under-sized to serve staff and public users effectively. The Santiam facility was estimated to require a 67% increased area (excluding the destroyed administration building) and the Molalla facility was estimated to require a 54% increase. Substantial space efficiency could be realized if the two units were combined into a single unit office, resulting in an overall space savings of 25% for the building area and 47% for the site area. However, space efficiency was determined to be only one factor in overall operational effectiveness. Other considerations, including event response time, public and CMFPA access, and department culture, were also determined to be important factors in any final recommendation. While the original expectation was to arrive at a single recommendation for facilities improvements, over the course of the study it became clear these additional factors would be vital to the final decision. Since these factors were beyond the scope of this work, the report concludes with two recommendations—a recommendation for “right-sized” facility improvements at the existing Santiam and Molalla unit offices, as well as a recommendation for a new centrally located facility combining both units on a single campus.

PROCESS AND PARAMETERS



A member of the design team performing field measurements.

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DESCRIPTION OF PROJECT CHARTER AND WORKSHOP PROCESS

The Oregon Department of Forestry (ODF) North Cascade District (NCD) includes two Unit Offices: the Molalla Unit Office and the Santiam Unit Office. The wildfires of 2020 had significant impact to the District, burning more than half of the 47,465-acre Santiam State Forest, and destroying the ODF Santiam Unit Office Administrative Headquarters located in Lyons, Oregon. The fire cache and workshop building, tree seedling refrigerator and fuel storage building, and State Forests Program shop building on the same site were all spared. During the time of this planning effort, the Santiam Unit staff were initially housed at ODF's Salem Campus HQ, and subsequently moved to Stayton in December 2021, where they will be stationed until a replacement facility can be established.

ODF had previously planned to replace the Santiam Unit administration headquarters office building on its original site. However, this tragedy prompted ODF to take a broader look at the NCD's operational and physical space needs to serve their mission most efficiently and effectively. To this end, ODF engaged Hennebery Eddy Architects to perform a District Needs Assessment and prepare a District Master Plan. ODF will use the findings and recommendations from this master plan to determine the best course forward for replacement of the destroyed administrative headquarters office building.

Over the course of approximately six months, the ODF held a series of workshops facilitated by Hennebery Eddy Architect to determine the needs of the NCD. The process was separated into five phases of work:

- District Needs Assessment
- Existing Facilities Assessment
- District Space Program
- Conceptual Design Recommendations
- Documentation

ROLE OF STEERING COMMITTEE

A steering committee was comprised of district and facilities leadership, supplemented by unit office leadership at the early stages of the work. As part of the initial meeting with the steering committee, a set of guiding principles was created for the process. These principles are summarized below:

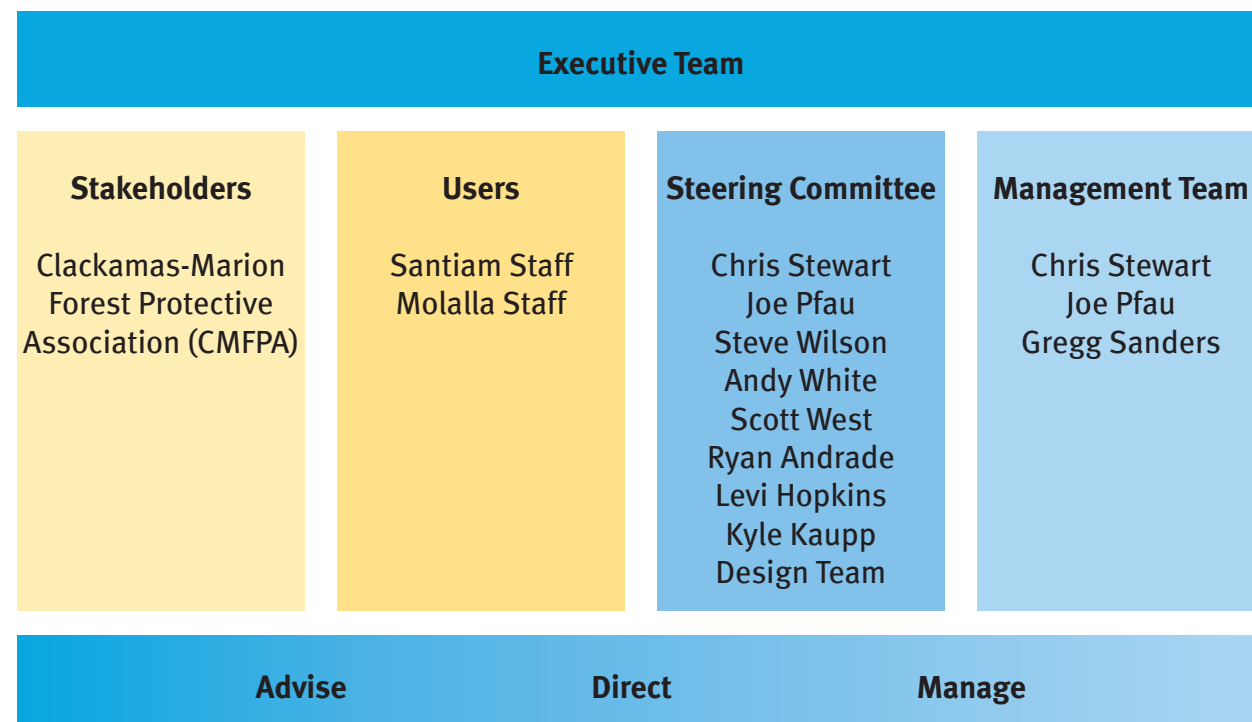
- Recommendations for change are generated at the user and stakeholder level
- Recommendations are reviewed and approved at the steering committee level
- All work should be consensus-based to the greatest extent possible (although compromise among decision makers is expected and should be embraced)

ROLE OF USERS

Follow up workshops were held with ODF district staff to create the recommended future program requirements. Representatives from both the Santiam and Molalla Unit Offices were interviewed to better understand how each program functioned today and how they could be improved in the future. Program representatives were asked to describe their workflow, short term growth expectations, and opportunities for improved efficiency.

ROLE OF STAKEHOLDERS

ODF invited the Clackamas-Marion Protective Association (CMFPA) to provide feedback on the program improvement assessment and recommendations. Participation was voluntary and initial participation included CMFPA representatives from Weyerhaeuser, Frank Lumber, and Freres Lumber. This was followed by a site tour of both Santiam and Molalla Unit Offices, where participation was expanded to involve representatives from Port Blakely and RW Beyer. The landowners were provided an assessment of existing conditions, recommendations for facility improvements, and recommendations for space changes to improve operational efficiency and effectiveness of the district.



DISTRICT AND CMFPA FEEDBACK

District leadership was not surprised by the findings of the architectural team. The previous 2017 Facilities Conditions Assessment (FCA) had already established that the existing buildings needed repair due to age and deferred maintenance. The observations that there were apparent space efficiencies when the two units were combined was also expected. No conclusions were drawn by leadership, pending input from the CMFPA and analysis of fire response data.

Based on discussions in the review meeting, an opportunity to tour both Santiam and Molalla sites to see the current conditions firsthand was provided to CMFPA members by the project team. Tour participation included CMFPA representatives from Weyerhaeuser, Frank Lumber, Freres Lumber, Port Blakely, and RW Beyer. Participating CMFPA members appeared skeptical about the conclusions that department staff needed additional space to perform their jobs safely and efficiently, and that department facilities needed significant modification to accommodate these needs based on the level of service still being provided by the District. CMFPA members raised concerns that the prospect of combining the two current unit offices into a single unit office may make public and CMFPA interaction with the department less convenient. There was also concern that combining the two sites could result in increased response time for fire or other forest-related emergencies.



Santiam site visit with the CMFPA members.



Santiam site visit with the CMFPA members.

DEVELOPMENT OF FINAL RECOMMENDATION

After reviewing the proposed master plan concepts, the Steering Committee took a step back to balance the user and landowner feedback requests with overall operational goals for the district. The recommendations in this report follow the balanced program priorities identified by the Steering Committee.

PROJECT CHARTER

The first phase of work focused on the development of a Project Charter, outlining the purpose, principles, and process to be used for the master plan study. The Steering Committee established the charter outlined below. The charter was periodically reviewed and adjusted to ensure that the guidelines remained accurate to the project goals over the course of the project.

PURPOSE OF THE MASTER PLAN

The North Cascade District Master Plan will use the loss of the Santiam Unit Office to broadly examine district service/operational needs and develop a replacement plan that unites District services, improves operational efficiency, enhances community and public connection, and provides a foundation for decades of effective forest management.

PRIORITIES OF THE MASTER PLAN

- Reduced Operational Cost
- Improved Operational and Response Time Effectiveness
- Improved Public Access and Interface
- Improved Equipment Storage Flexibility
- Enhanced Safety/Security
- Improved Connection with Partner Agencies/Fire Districts (including potential for co-location)
- Improved Consideration of Reduced Disruptions to Urban/Residential Neighboring Properties

PROCESS OF THE MASTER PLAN

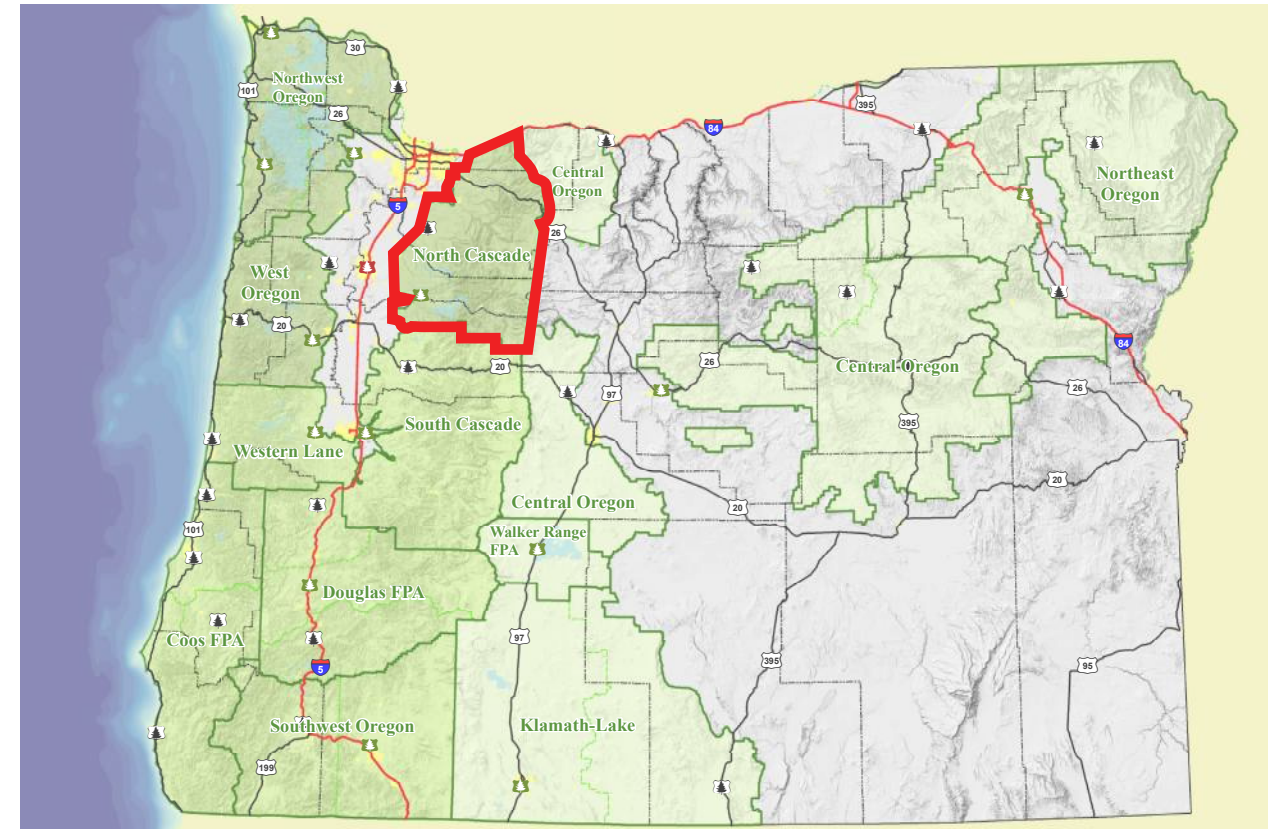
- All communication with ODF will go through Chris Stewart
- Digital tools will be utilized to improve communication efficiency
- Decisions will be consensus-based whenever possible; when consensus is not possible, Andy White will make final decisions

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ASSESSMENTS AND FEEDBACK

DISTRICT LOCATION

The North Cascade District spans several counties in northwest Oregon, ranging from the Columbia River to the Santiam Forest and from the Willamette Valley to the Cascade Range.



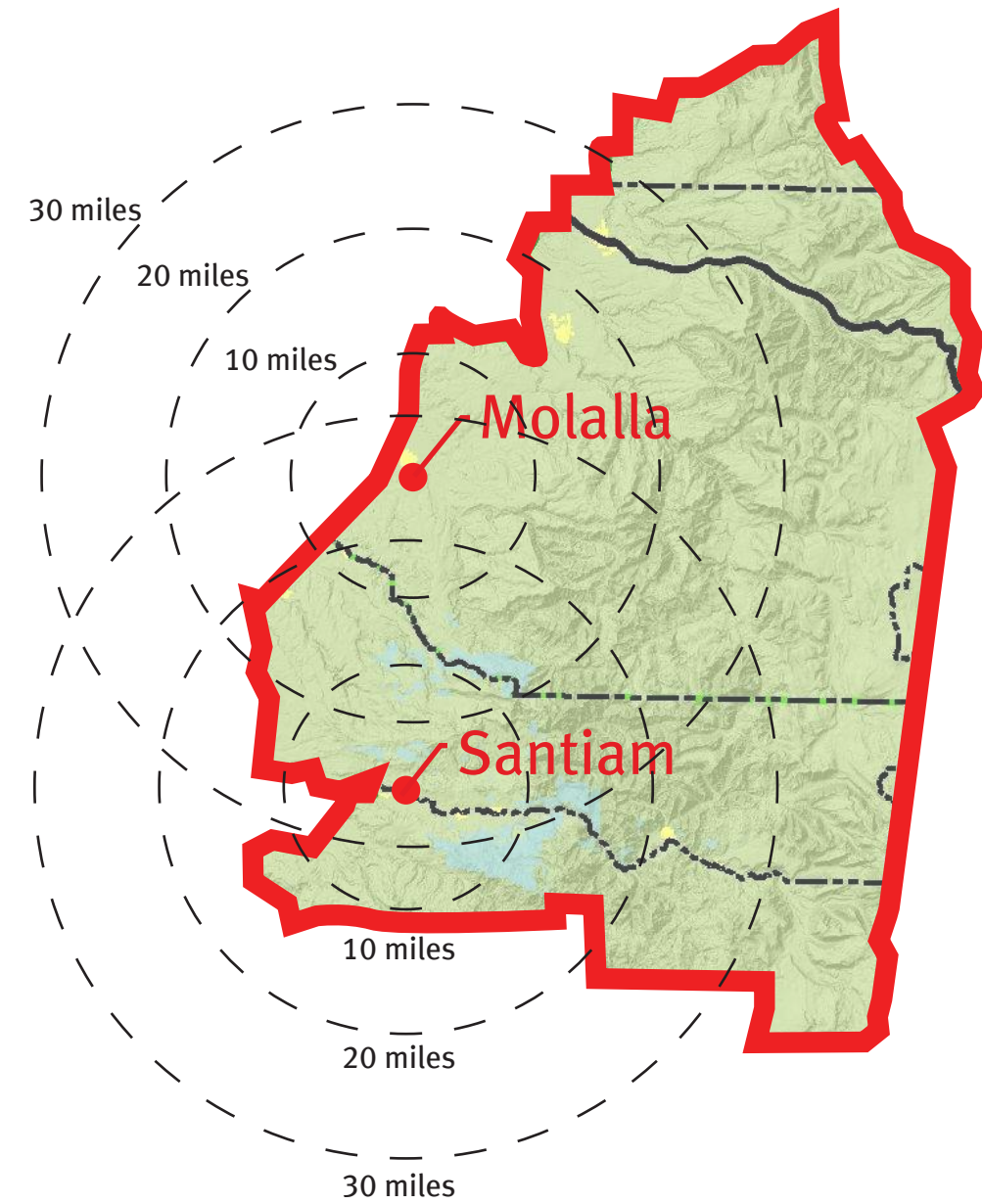
Location of North Cascade District within Oregon.

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UNIT OFFICE LOCATIONS

The North Cascade District has two unit offices, one in Molalla and one in Lyons (called the Santiam Unit Office). Although the offices are less than 25 miles away from each other, they are separated by rough, mountainous terrain which makes travel between the offices take between 45 minutes and an hour.



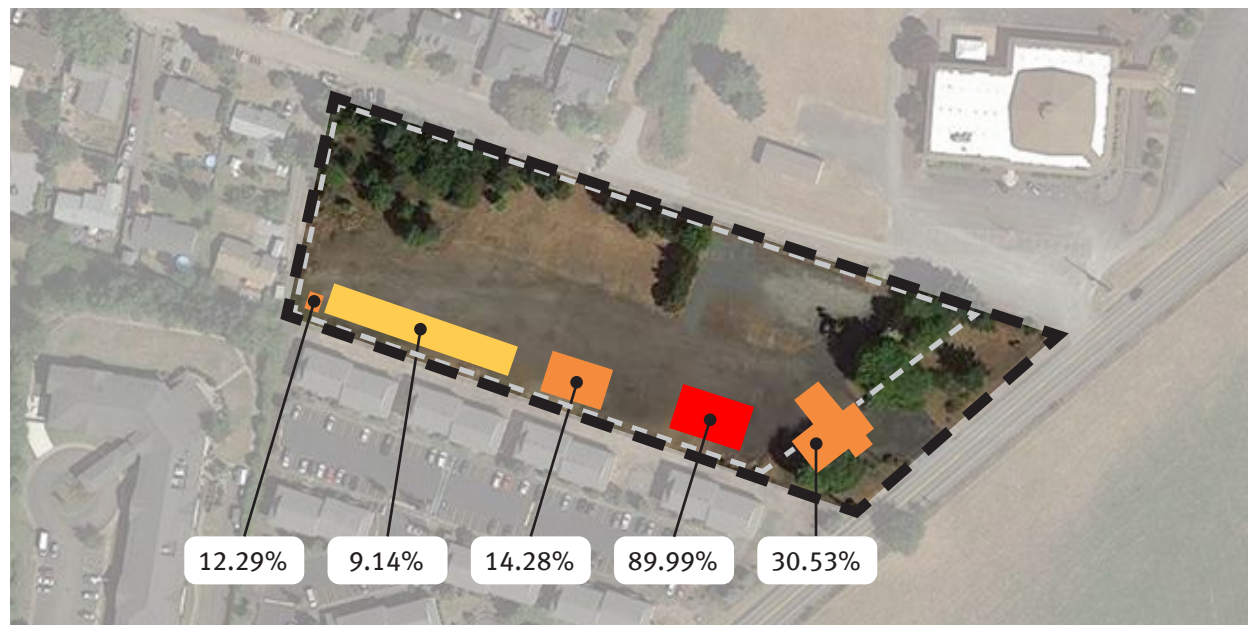
Location of Molalla and Santiam Unit Offices within the District.

DISTRICT NEEDS AND EXISTING CONDITION ASSESSMENT

At the onset of this plan, the design team performed an on-site assessment of the current condition and operational workflow for the Santiam and Molalla unit offices. The unit offices are similar in size, age, and configuration, but located in very different areas. Evaluation was augmented by a 2017 Facilities Condition Assessment provided by ODF and completed by Faithful and Gould. The on-site assessment generally confirmed the findings of the Faithful and Gould report, which ranked existing buildings on a scale of “Good” to “Very Poor”, based on an evaluation of cost for repair as compared to replacement value. None of the buildings on either unit office campus ranked above a rating of “Fair”. A color-coded diagram for each campus is illustrated below, and photographs, descriptions, and diagrams of observed site conditions can be found on the following pages.



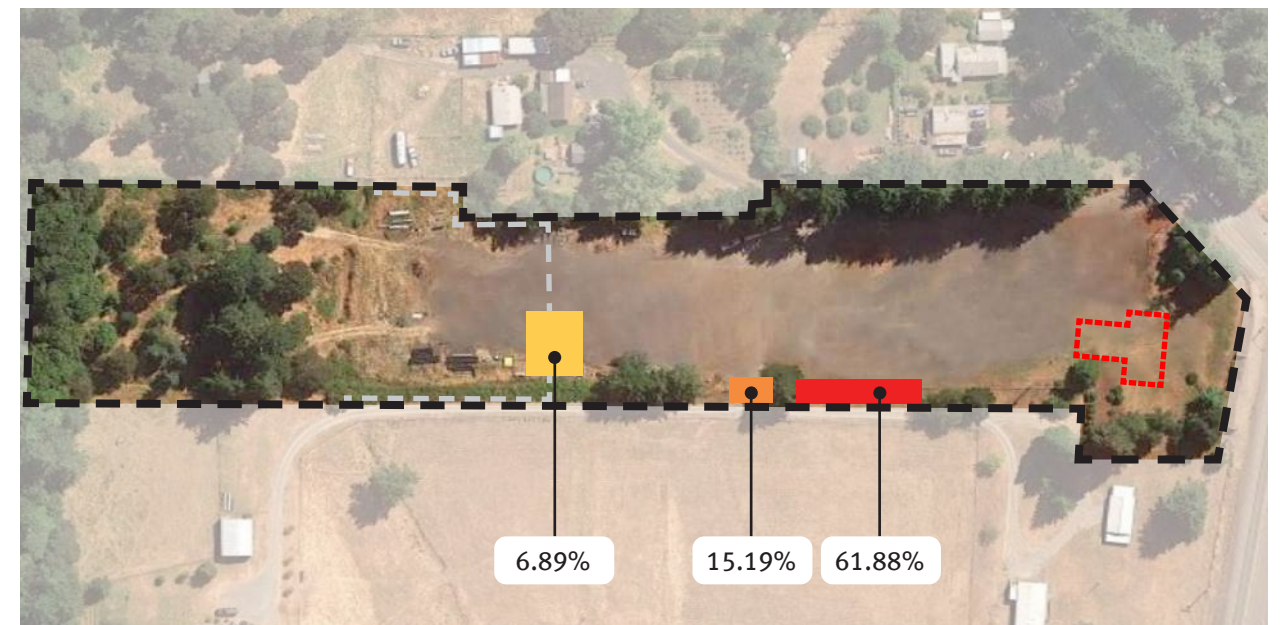
Condition assessment visual observations were performed on site and were augmented by 2017 Facility Condition Assessments by Faithful and Gould.



Molalla Building Conditions

LEGEND:

- GOOD (0-5%)
- FAIR (5-10%)
- POOR (10-60%)
- VERY POOR (>60%)
- PROPERTY LINE
- FENCE LINE



Santiam Building Conditions

LEGEND:

- GOOD (0-5%)
- FAIR (5-10%)
- POOR (10-60%)
- VERY POOR (>60%)
- PROPERTY LINE
- FENCE LINE
- LOST TO FIRE

MOLALLA UNIT OFFICE

The Molalla Unit Office was developed over time, with construction beginning in the 1950s. The site is located in an urban area, and surrounded by high density residential areas. The site contains an administration building, a fire cache and workshop building, a district mechanics building, a 3-sided covered storage building, and a wood-framed non-compliant fuel and hazardous materials building. The site has clear circulation and parking, but circulation is restricted and easily compromised by an improperly parked vehicle. The site is enclosed by a chain link fence and gate, but the site has also had a history of trespass and theft.

Access to the site is off Highway 211. Highway 211 is a low traffic two-lane road, but visibility from the ODF site is limited due to a slight rise in the road grade. Anecdotal stories were provided of vehicles attempting to access the highway being forced off the road by unseen oncoming traffic. The northern edge of the site abuts Patrol Street. The street is currently a limited access roadway, but the City of Molalla plans to improve the street and connect it to the adjacent neighborhood, which will likely result in traffic congestion when leaving or entering the ODF site. The access to Highway 211 is not signalized and it does not appear that the improvement of Patrol Street is likely to include plans for signalization.

The site is fully utilized except for a memorial tree grove at the northwest corner of the site.



Molalla Assessment Diagram

1. Adjacent Residential Properties (ODF has 24/7 operations during fire events)
2. Memorial Arboretum
3. Shop access requires entry through neighboring property
4. Patrol Street is slated to connect to HWY 211 and increase traffic
5. Narrow entry for large vehicles and potential ditch falls
6. Hill Northeast of Highway 211 entrance blocks view

SANTIAM UNIT OFFICE

The Santiam Unit Office was developed over time, with construction beginning in the 1950s. The site is located in a rural area, and surrounded by low density residential and agricultural use. The site contains a fire cache and workshop building, a tree seedling and refrigeration building combined with a fuel and hazardous materials building, a high-bay shop building housing the State Forest Program, a non-compliant open vehicle wash pad, and the former site of the administration building, a casualty of the 2020 Labor Day Fire.

Access to the site is off Highway 22. During the weekday time of the observation, traffic on Highway 22 was light, but weekend traffic is very crowded. Without a signal at the intersection of North Fork Road and Highway 22, access to and from the site during weekends and high traffic times is very difficult.

The site is divided into a developed southern half and an undeveloped northern half. The southern half is further divided by an accessway and informal easement to the western neighboring property, and an access along its eastern edge serving two adjacent properties. These accessways significantly compromise the utilization of the property, as well as the ability to circulate and secure the property. A 53-foot tractor-trailer is needed to service the tree seedling facility and the narrowness of the site creates a significant problem for truck maneuvering. The lack of security fencing has resulted in vandalism and theft issues.



Santiam Assessment Diagram

1. Swale (floods in winter)
2. Neighboring residents must cross campus to access their property
3. Access constrained at intersection of North Fork Road and Highway 22

OBSERVED SITE CONDITIONS: MOLALLA



SMALL ENTRY LOBBY

- Not enough space to accommodate people waiting, filling out documents, and interacting with clerical staff
- Inadequate security preventing entry from lobby to the rest of the building



ARCHIVE AND ADMIN. BUILDING STORAGE

- Storage in the flood-prone basement not ideal
- Additional space for shelves needed for file and equipment storage



VEHICLES PARKED OUTSIDE THE FIRE CACHE BUILDING

- The Molalla site is wider and better secured than Santiam, but it is still crowded and susceptible to bottlenecks

OBSERVED SITE CONDITIONS: MOLALLA

CONFERENCE ROOM

- Space too small to act as large fire event headquarters or for all-district meetings
- Inadequate wall space and equipment for maps and planning during fire events



FIRE DISPATCH

- Small space is crowded and difficult to accommodate extra people during a large fire event



BREAKROOM WITH AGING RESIDENTIAL APPLIANCES

- Aging residential appliances inadequate for heavy-duty use in an office environment
- Catering kitchen setup would be preferred for large events





ATTIC STORAGE ABOVE THE FIRE CACHE BUILDING

- Low head height makes storage difficult
- Lacks adequate climate control
- Storage of heavy and bulky items in a space only accessible by a narrow stairwell poses a safety risk



HOSE STORAGE, SAND TABLE, AND VEHICLE PARKED IN THE FIRE CACHE

- Insufficient space to move around vehicles and access stored items

SEMI-ENCLOSED STORAGE SPACE IN THE COVERED STORAGE BUILDING

- Storage space too small and lacks adequate shelving and racks for equipment
- Enclosed storage area lacks proper lighting, ventilation, and enclosure



AGING COVERED STORAGE

- Vehicle bays are neither tall nor deep enough to fit many of ODF's larger vehicles
- Building lacks the ability to be closed off, creating a safety and security risk



PUBLIC INFORMATION KIOSK

- Kiosk not accessible



UNSECURED PARKING

- Parking area unable to be properly secured to allow neighbors access to their property through the campus
- ODF employees who leave their vehicles on campus for extended periods during fire events have had their vehicles broken into and property stolen



TRACTOR-TRAILER LOADING DOCK

- The narrowness of the site and space required for the loading dock makes backing in a tractor-trailer challenging



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OBSERVED SITE CONDITIONS: SANTIAM



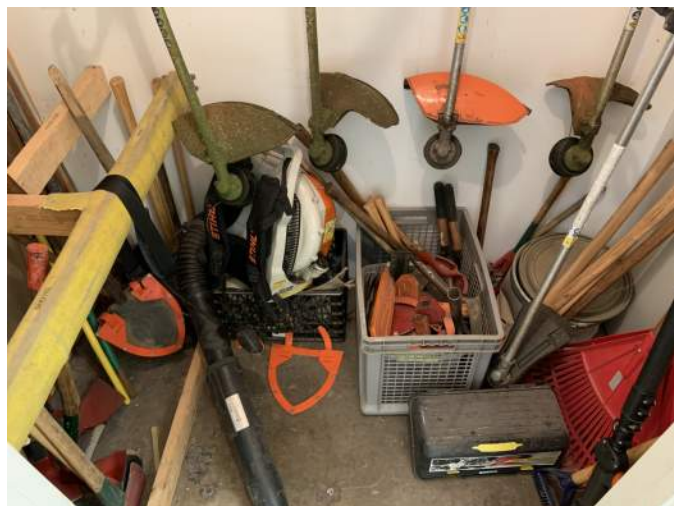
DISTRICT MECHANIC STORAGE IN STATE FOREST BUILDING

- District mechanic equipment and materials lack adequate storage



STATE FOREST SEMI-ENCLOSED EQUIPMENT STORAGE

- Small covered storage space requires high storage racks which are difficult to use
- Chain link enclosure is easy to compromise, equipment and materials have been stolen from this location



GROUNDS MAINTENANCE STORAGE

- Inadequate shelves and racks for grounds maintenance equipment

OBSERVED SITE CONDITIONS: SANTIAM

PORTABLE RESTROOM

- Portable restrooms located on site to augment inadequate restroom facilities
- Frequently used by members of the public because the site is not able to be secured



DISTRICT MECHANIC IN STATE FOREST BUILDING

- The State Forest Building is the newest building and is in the best condition between the two campuses
- The district mechanic, who is regularly located in Molalla, occupies a vehicle bay within the building



FIRE CREW MEMBER WORKING AT HIS COMPUTER IN THE COMBINED WOOD AND METAL SHOP

- Fire and wood shops should be separated to reduce fire risk
- Several fire crew lockers are also located in this space instead of a cleaner room



OBSERVED SITE CONDITIONS: SANTIAM



STORAGE CLOSET

- Inadequate storage for signs, maps, and office supplies



FIRE CREW OFFICE / FIRE CACHE BREAKROOM

- Space shares incompatible uses



NON-FUNCTIONING RESTROOM FACILITIES

- Fire Cache Building does not have gender-separated restrooms
- Aging restroom fixtures are frequently out of service and require maintenance

OBSERVED SITE CONDITIONS: SANTIAM

LOCKER/DRYING ROOM

- Exposed equipment and loose wires in the locker room



NOT ENOUGH SPACE FOR EQUIPMENT, STORAGE, AND PARKING IN VEHICLE BAYS

- Material and equipment storage needs to be more secure
- Storage needs better enclosure and protection from the elements



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OPERATIONAL AND SAFETY PRINCIPLES

The project identified a series of operational and safety principles based on the review of several regional fire and emergency response facilities. These operational principles, as well as corresponding design priorities, became the guide to evaluate the operational effectiveness of the existing unit office campus conditions.

OPERATIONAL AND SAFETY

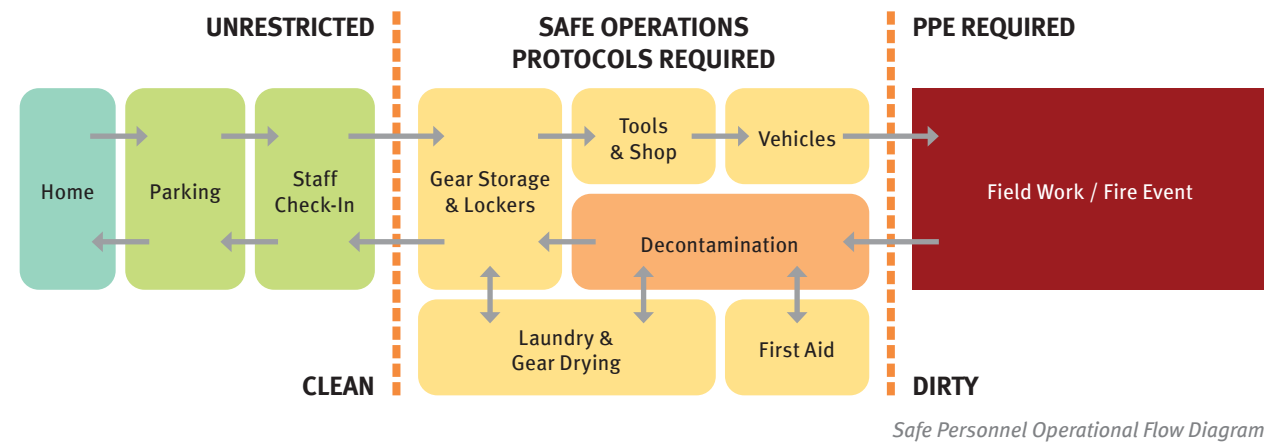
- Align programs to avoid pedestrians crossing vehicle traffic
- Pull-through vehicle bays with adequate clearance
- Separation of spaces and programs
- Proper program adjacencies
- One-way traffic circulation grid
- Secure and unsecured site areas
- Right-sized spaces

DESIGN REQUIREMENTS

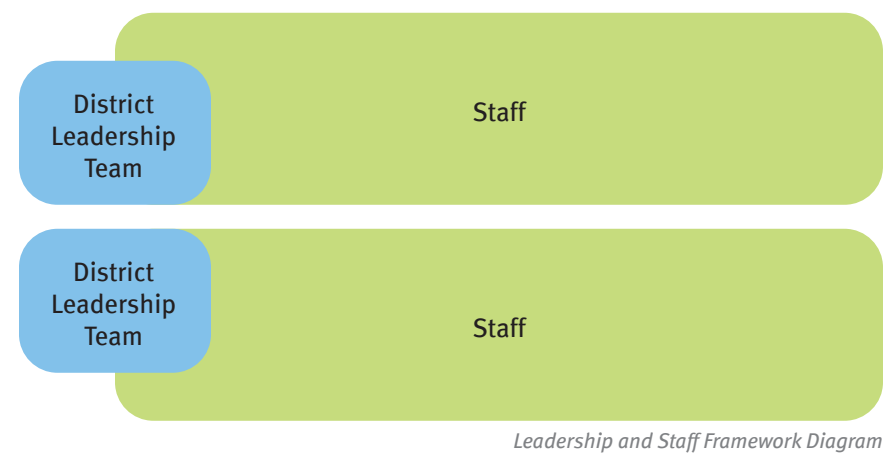
- Reduced operational costs
- Improved operational and response time effectiveness
- Improved public access and interface
- Improved equipment storage flexibility
- Enhanced safety and security
- Improved connection with partner agencies or fire districts
- Flexible and adaptable to future change
- Accommodate remote work potential
- Provide equal or better service delivery to constituents and customers
- Accessible Facilities

WORKFLOW AND ADJACENCY

These safety principles were further translated to the level of an individual staff member workflow and corresponding architectural space flow requirements. To illustrate these principles, a Safe Personnel Operational Flow Diagram was created as a model for optimized spatial adjacencies.

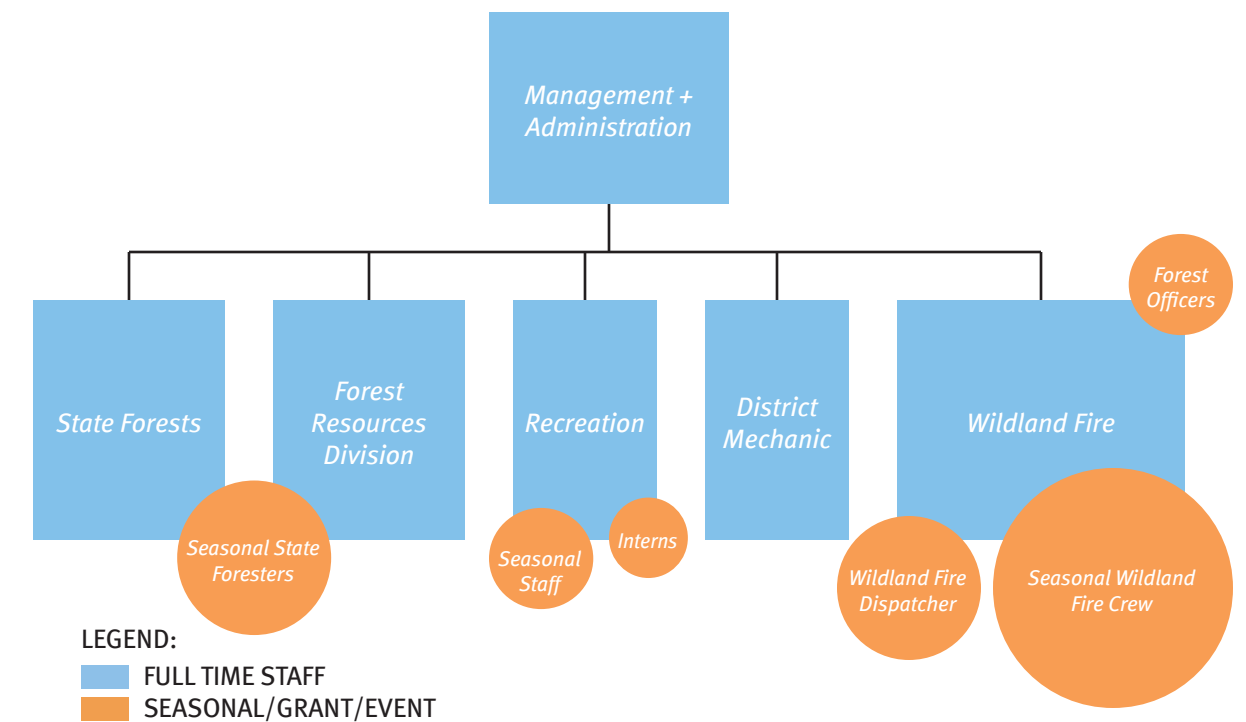


Similarly, unit staff was interviewed to understand how staff worked together and where separation was required to perform effectively. Four leadership and staff adjacency models were tested, with each illustrating a field staff and administrative staff working relationship. The ideal leadership and staff framework illustrated that the field and administrative leaders should be closely adjacent, with the field and administrative staff also closely adjacent—thus providing opportunities for both collaborating and cross training to provide continuity during the fire season where personnel often must divert efforts to respond to emergency conditions.



SEASONAL AND ANNUAL STAFF FLUCTUATIONS

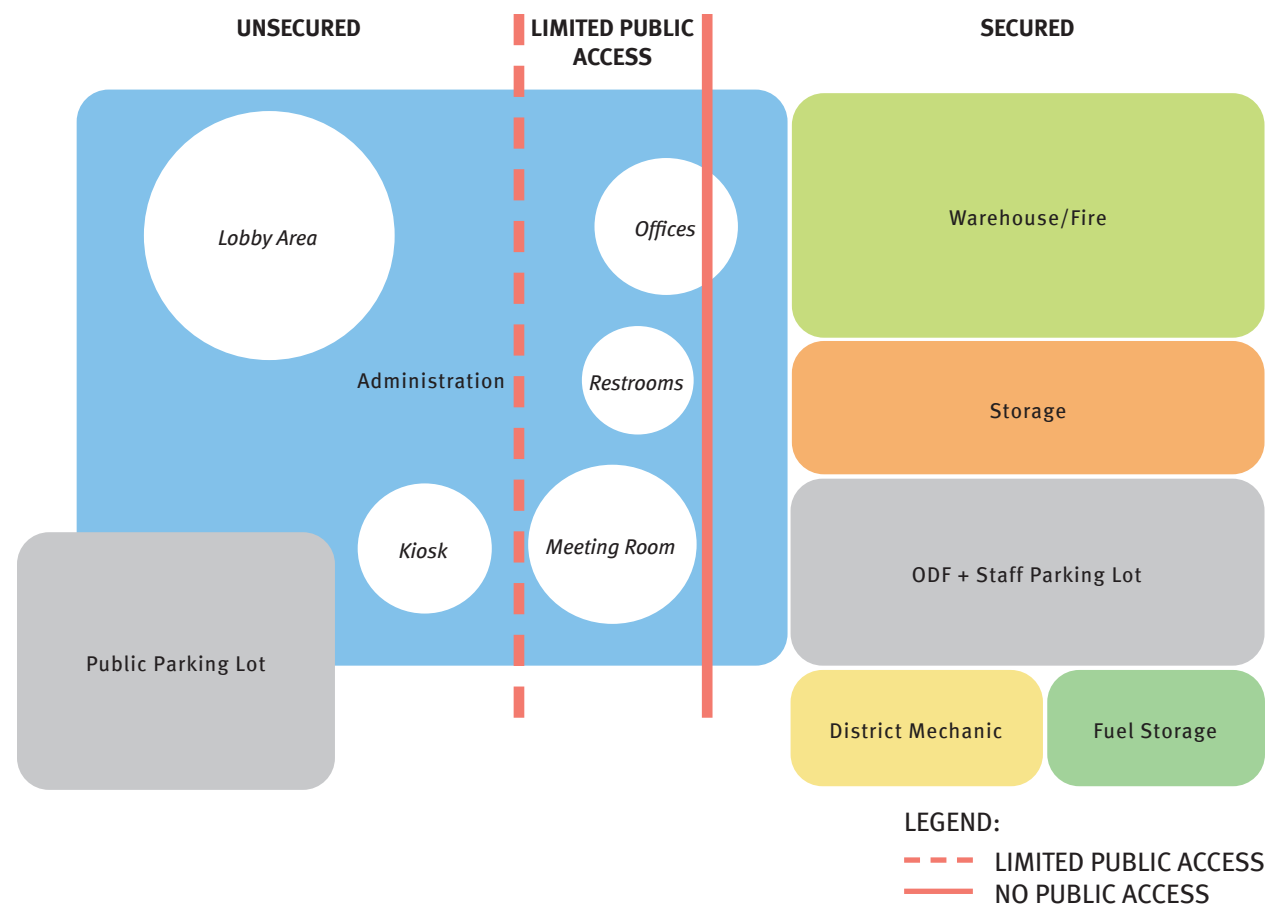
The design team developed a staff size diagram to understand and illustrate the fluctuations of seasonal staff members compared to the full-time, year-round staff. The Wildland Fire Crew, Forestry Management, and Recreation teams in particular were found to grow every summer with increased activity in the State Forests and with the fire season.



SAFETY AND SECURED ACCESS

Public access to the different program spaces within the District Office campuses was also analyzed from a safety and security standpoint. When the office is open, there are certain functions that are freely accessible to the public in an “unsecured” zone, such as access to the building lobby where the public can speak to the administrative staff, purchase recreation maps and forestry permits, and fill out necessary paperwork. A “limited public access” zone was also identified which members of the public can access with the permission and supervision of ODF staff. This includes the offices of the state foresters, meeting rooms where timber auctions and information sessions are held, and certain amenity spaces like restrooms. A third “secured” zone is the portion of the campus where safety and operational concerns require that public access is not needed and could hinder ODF operations.

These principles and priorities were applied to the conditions of the existing unit offices to establish a series of common operational, staff, and public support improvement needs as shown on the following pages.



DISTRICT MECHANIC SHOP

- Brighter lighting for detailed tasks
- Additional bay for workspace
- Pit in addition to the lift to increase safety
- Picture illustrates condition at Molalla Unit Office



FLEXIBLE RECREATION STORAGE

- Enclosed storage to keep items from getting damaged
- Designated space for recreational storage only
- Storage for seasonal use vehicles and tools
- Picture illustrates condition at Santiam Unit Office



METAL AND WOODSHOP

- Separate the spaces to its specific uses
- Move lockers and other incompatible uses out of shop space
- Picture illustrates condition at Molalla Unit Office



COMMON IMPROVEMENT NEEDS



VEHICLE BAYS

- Large enough to fit modern vehicles
- Additional bays to house vehicles
- Pass-through preferred over back-in
- Picture illustrates condition at Molalla Unit Office



HOSE DRYING

- Vertical hose tower, horizontal drying doesn't allow proper hose drainage
- Covered hose drying to allow hoses to dry in wet, rainy conditions
- Picture illustrates condition at Santiam Unit Office



MUD/LAUNDRY ROOM

- Commercial laundry equipment
- Capacity for larger amount of soiled clothing
- Picture illustrates condition at Santiam Unit Office

COMMON IMPROVEMENT NEEDS



WASTE TRANSFER PROGRAM

- A better system for receiving, storing, and disposing of waste
- Picture illustrates condition at Santiam Unit Office



SAFETY AND SECURITY

- Secure material and equipment storage
- Storage needs better enclosure and protection from the elements
- Picture illustrates condition at Santiam Unit Office



ADEQUATE HAZARDOUS MATERIAL STORAGE

- Hazardous material storage needs to be brought up to current codes in a safer location
- Picture illustrates condition at Molalla Unit Office

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PROGRAM ANALYSIS

Based on field observations and review of existing plan documentation where available, Hennebery Eddy created an existing conditions numeric space program. To develop the initial user driven space needs analysis, staff was interviewed from both Santiam and Molalla Unit Offices. Program representatives were asked to confirm existing space needs where appropriate and to predict short term growth needs for the next five years to “Right-Size” the program.

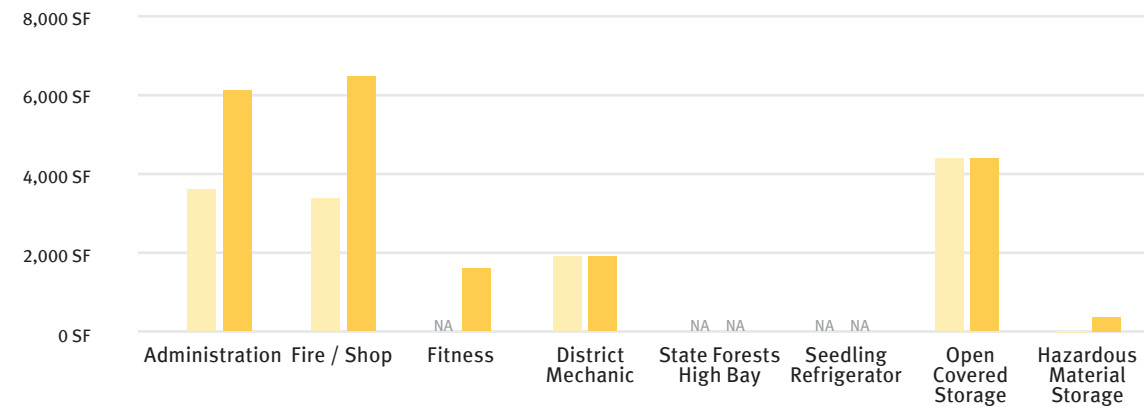
This information was used to create a baseline space needs analysis for “Right-Sized” program elements for each unit office campus as a separate entity. Staff was also asked to speculate about where there were opportunities for shared resources and/or gained efficiencies if the two-unit offices were combined into a single unit office at a hypothetical new site located somewhere in the district.

The study found that overall, both the Santiam and Molalla unit offices were significantly undersized based on current and short-term operational effectiveness needs. This was particularly evident in the administrative and fire cache/shop areas, where growth needs were indicated as nearly double existing area allotments. Vehicle parking and staging were also uniformly compromised on both sites. Total “right-sized” building areas for the two sites combined indicated an overall increase of 60% for building and 20% for site area.

BUILDING AREA			
	Existing	Right-Sized	Percent Change
Santiam	11,080 SF	18,560 SF	68%
Molalla	16,685 SF	25,775 SF	54%
TOTAL (Separate)	27,765 SF	44,335 SF	60%
TOTAL (Combined)		33,160 SF	-25%
SITE AREA			
	Existing	Right-Sized	Percent Change
Santiam	234,353 SF	261,641 SF	12%
Molalla	188,615 SF	243,904 SF	29%
TOTAL (Separate)	422,968 SF	505,544 SF	20%
TOTAL (Combined)		268,298 SF	-47%

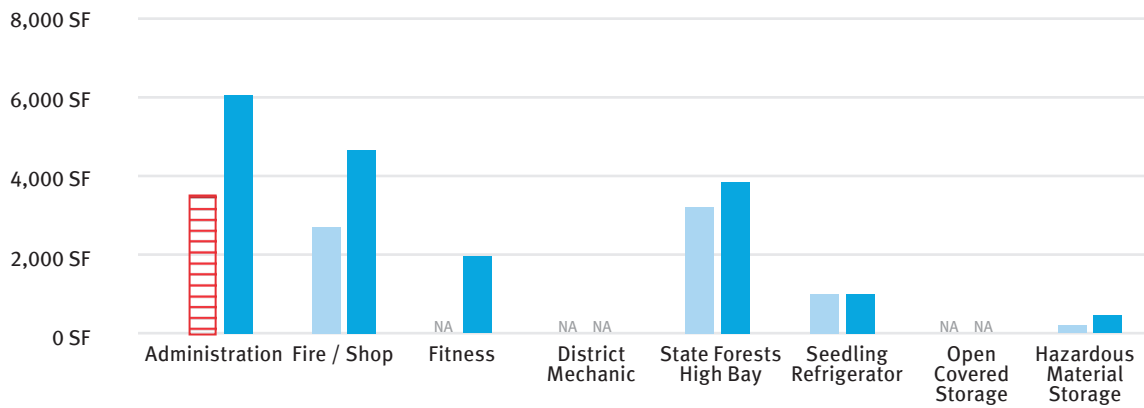
However, when analyzed as a single combined site, the resulting “Right-Sized” program was significantly less than the space needed to operate the two units independently. The resulting “Right-Sized” single site was found to be roughly two-thirds the size of the combined program for the independent sites for both administrative and fire cache/shop uses. It’s notable that the “Right-Sized” equipment storage, parking, and other uses was roughly equivalent for the two-site and one site option, indicating that the increased area for the two-site option is mostly due to duplication of operational space needs rather than duplication of personnel. The total “Right-Sized” combined building area was projected to be 25% less than the “Right-Sized” independent units, and the “Right-Sized” combined site was projected to be 47% smaller overall.

MOLALLA INDIVIDUAL BUILDINGS



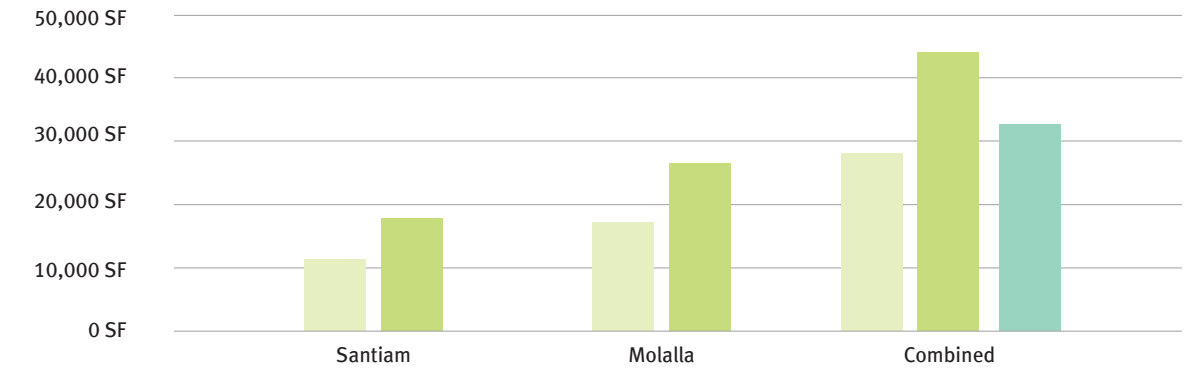
LEGEND:
■ EXISTING
■ RIGHT-SIZED

SANTIAM INDIVIDUAL BUILDINGS



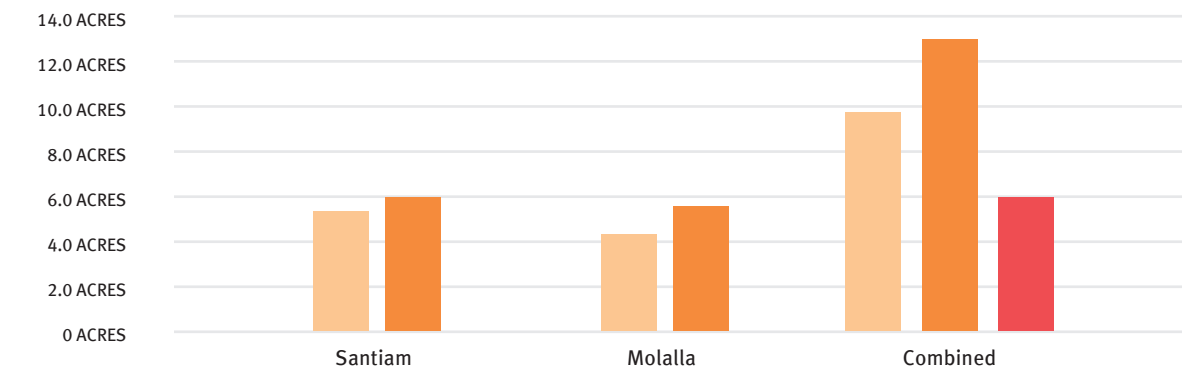
LEGEND:
▨ BUILDING LOST TO FIRE
■ EXISTING
■ RIGHT-SIZED

BUILDING SIZE



LEGEND:
■ EXISTING
■ RIGHT-SIZED
■ COMBINED UNIT OFFICES

SITE SIZE



LEGEND:
■ EXISTING
■ RIGHT-SIZED
■ COMBINED UNIT OFFICES

CAMPUS STRUCTURE FRAMEWORK

In addition to a space needs analysis, a campus structure framework analysis was performed. Both the Santiam and Molalla unit offices use an independent building framework, meaning that each function is housed in an independent structure. Not all ODF unit office campuses use this configuration. The John Day Unit Office combines uses into a two-building configuration (a separate administration and shop building) while Sisters combines all functions into a single building. The design team analyzed the potential for an independent building, two-building, and single building option and presented these options to both users and leadership. Benefits and drawbacks were observed for all three structures. In general, the advantages of the independent configurations was that each function had a “home” and that dirty or noisy functions were kept separate from clean and quiet functions. However, construction, maintenance, and operations were judged to be more expensive for the independent configuration. Conversely, the single building model allowed reduced travel time between functions and operational/maintenance efficiency, but at the cost of concern for noise isolation.

A: SEPARATE BUILDINGS PER PROGRAM

MOLALLA



SANTIAM



TILLAMOOK



B: PROGRAMS COMBINED IN GROUPS

JOHN DAY

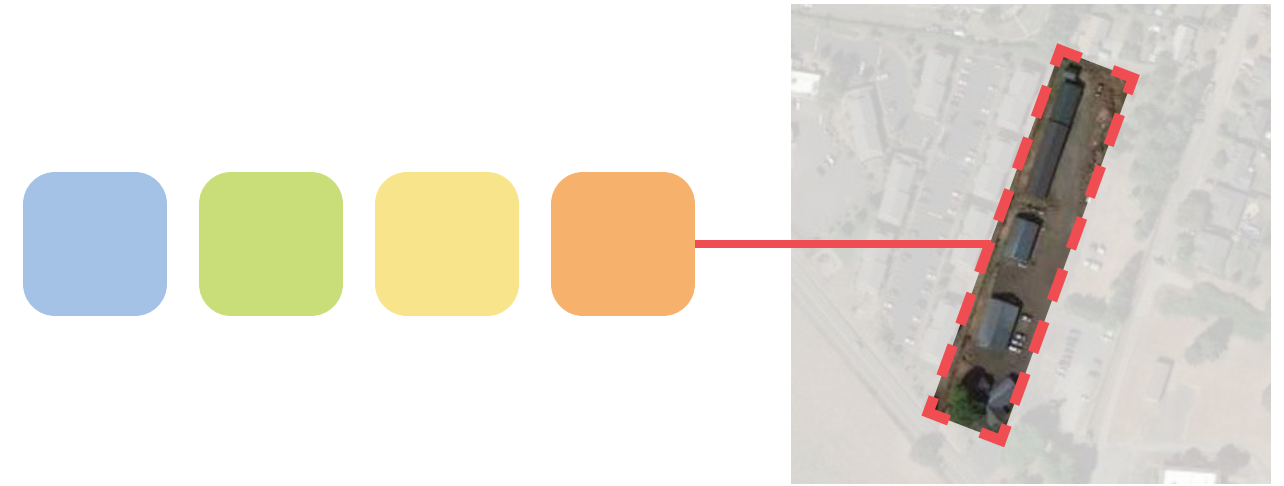


C: PROGRAMS COMBINED IN ONE BUILDING

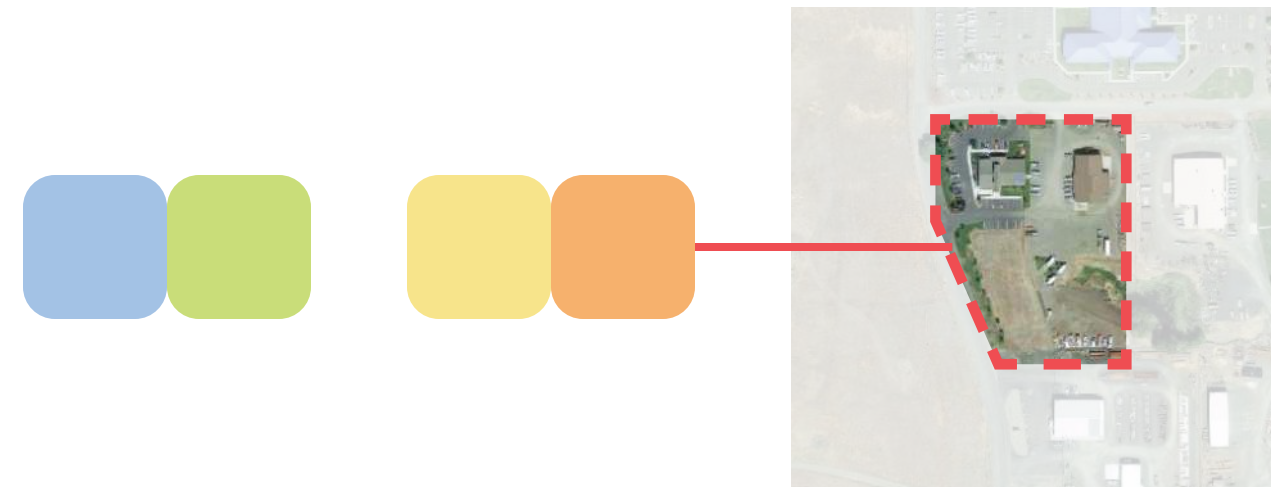
SISTERS



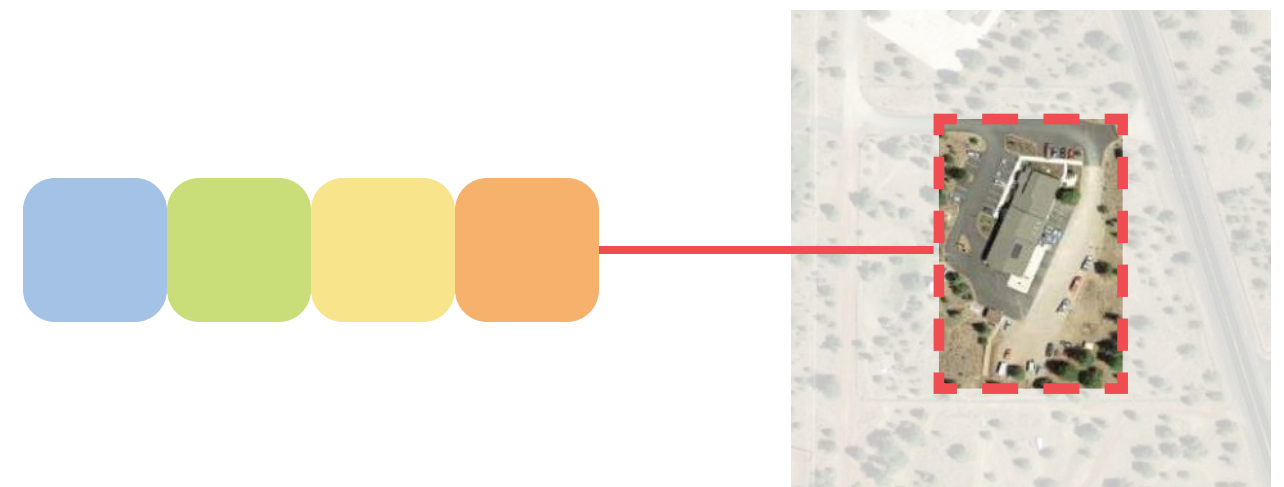
- LEGEND:**
- ADMINISTRATIVE BUILDING
 - WAREHOUSE/FIRE
 - STORAGE
 - DISTRICT MECHANIC



Separate Buildings per Program, Molalla Unit Office pictured



Programs Combined in Groups, John Day Unit Office pictured



Programs Combined in one Building, Sisters Sub-Unit Office pictured

DISTRICT MASTER PLAN RECOMMENDATIONS

OPTIONS STUDIED

The design team evaluated several plan option configurations for each existing unit office site, as well as developed a plan for a combined single unit office on a hypothetical site. For each of the existing unit offices, three scenarios were further developed, accounting for existing building conditions and operational continuity during renovation/replacement. The “Expand in Place” scenario explored how to modify existing buildings to accommodate updated program needs. The “Staged Replacement” scenario explored how to replace the most compromised buildings with new structures located to allow operational continuity while the replacement was being constructed. The “Full Replacement” option studied the potential for maximizing efficiency with a single-building configuration designed within the context of the existing site. In each case the design team recommended a scenario that appeared to best meet the efficiency/effectiveness goals of this study as well as maximum achievement of the operational and safety principles.

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Molalla - Expand in Place



Santiam - Expand in Place



Molalla - Staged Replacement



Santiam - Staged Replacement



Molalla - Full Replacement



Santiam - Full Replacement

RECOMMENDED CONFIGURATIONS

The focus of this study has been to establish the physical planned improvements necessary to provide efficient and effective service for the North Cascade District. This includes supporting the on- and off-campus work needs of the ODF staff, access and assistance to the public, engagement and support to the CMFPA and the community, and the responsiveness to fire and forest maintenance events. The purpose of the study was to provide an objective analysis of the current conditions and provide recommendations for their improvement on a district basis. Both Santiam and Molalla campuses were found to require additional facilities to effectively serve staff and public users. Additionally, both the Santiam and Molalla campuses were determined to have deferred maintenance issues that would require substantial capital improvement (based on findings from the 2017 Facilities Condition Assessment by Faithful & Gould).

Originally, the expectation of this study was to arrive at a single recommendation for facilities improvement. Over the course of the study, the ODF realized that space efficiency was not the only determinant of operational effectiveness. Other considerations included fire event response time, public and landowner access, and department culture. Additionally, since both campuses were found to need major programmatic improvements in addition to the previously determined deferred maintenance needs, cost of improvements became an additional driver.

Following this study, the ODF intends to perform an independent cost analysis on the two-campus and combined campus options. Additionally, the department will analyze district fire events over the previous five years. The district will assess the locations and forest damage experienced and use that information to determine whether a single centrally located unit office would serve the district better than the current two unit model.

Since these factors will be assessed following this study, the report concludes with two recommendations—a recommendation for “Right-Sized” facility improvements at the existing Santiam and Molalla unit offices, as well as a recommendation for a new centrally located facility combining both units on a single campus. Each recommendation is considered equally viable from the perspective of operational efficiency and program “Right-Sizing”. However, each also comes with its own hurdles as well as its own benefits which need to be weighed in a broader context once additional context is provided. The diagrams on the following pages illustrate the three recommendations in detail as well as their relative benefits and drawbacks.

MOLALLA PHASED FULL REPLACEMENT

For the Molalla campus, the recommended scenario is the “Full Replacement” strategy. The width of the Molalla site and general configuration allow for a one-way traffic pattern as well as vehicle pull-through bays when a new single building is provided. Since these two elements were considered the most important safety principles, the long-term benefits of the “Full Replacement” model appear to outweigh the challenges of operational continuity and initial cost.



OPERATIONAL AND SAFETY PRINCIPLES ACHIEVED:

- ✓ Align programs to avoid pedestrians crossing vehicle traffic
- ✓ Pull through vehicle bays
- ✓ Separation of spaces and programs
- ✓ Proper program adjacencies
- ✓ One-way grid
- ✓ Secure or un-secure site areas
- ✓ Right-sized spaces

LEGEND:

- — — PROPERTY LINE
- - - FENCE LINE
- - - EXISTING BUILDING OUTLINE
- — — PROPOSED OUTLINE

MOLALLA PHASED FULL REPLACEMENT



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BENEFITS

1. Replaces poor condition, aging, and undersized buildings.
2. Improves site flow and organization.
3. Combined-program buildings improve adjacency, systems, and cost efficiency.
4. Established location that stakeholders already know and ODF already owns.
5. Allows ODF to achieve some, but not all operational and safety principles, such as one-way grid and pull-through vehicle bays.

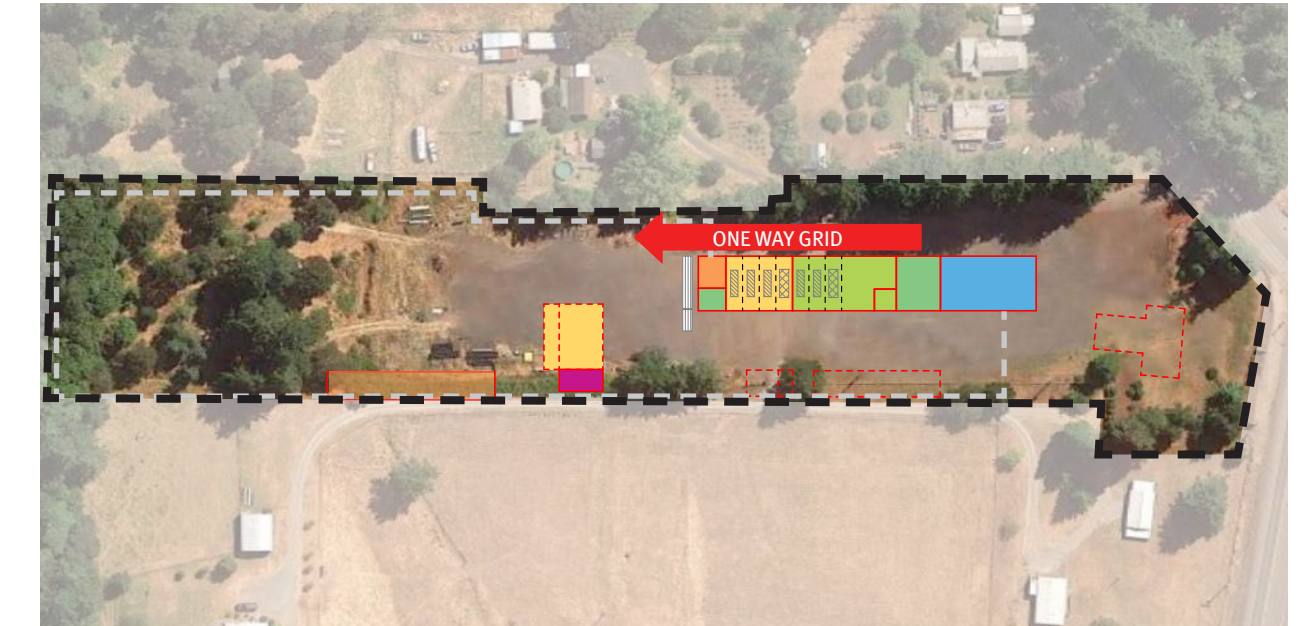
DRAWBACKS

1. Existing site constraints prohibit accomplishing all best practice principles
2. Site constraints related to neighboring properties and site access from Highway 211 remain.
3. Operational continuity during phased construction is challenging.
4. Phased construction more expensive than building all at once.
5. Increased cost associated with improving two campuses.

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SANTIAM STAGED REPLACEMENT

For the Santiam campus, the recommended scenario is “Staged Replacement”. The narrow configuration and accessway issues of the Santiam site make the primary safety principles unachievable. By selecting a “Staged Replacement” plan, operational continuity is maximized, and long-term benefit can still be achieved, although vehicles will still need to back into bays.



OPERATIONAL AND SAFETY PRINCIPLES ACHIEVED:

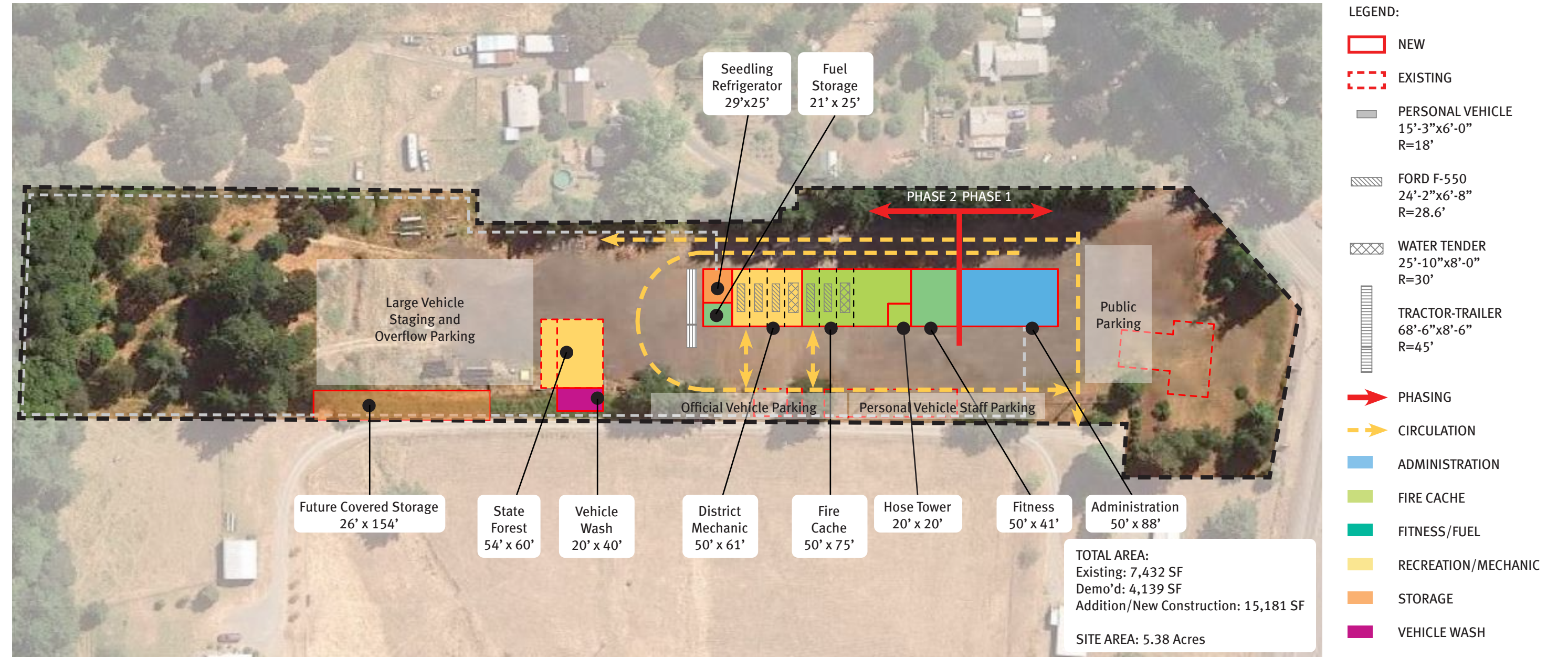
- X Align programs to avoid pedestrians crossing vehicle traffic
- X Pull through vehicle bays
- ✓ Separation of spaces and programs
- ✓ Proper program adjacencies
- ✓ One-way grid
- ✓ Secure or un-secure site areas
- ✓ Right-sized spaces

LEGEND:

- — — PROPERTY LINE
- - - FENCE LINE
- ⋯ EXISTING BUILDING OUTLINE
- ▭ PROPOSED OUTLINE

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SANTIAM STAGED REPLACEMENT



BENEFITS

1. Replaces poor condition, aging, and undersized buildings.
2. Improves site flow and organization.
3. Combined-program buildings improve adjacency, systems, and cost efficiency.
4. Established location that stakeholders already know and ODF already owns.
5. Allows ODF to achieve some, but not all operational and safety principles, such as one-way grid and improved site security.

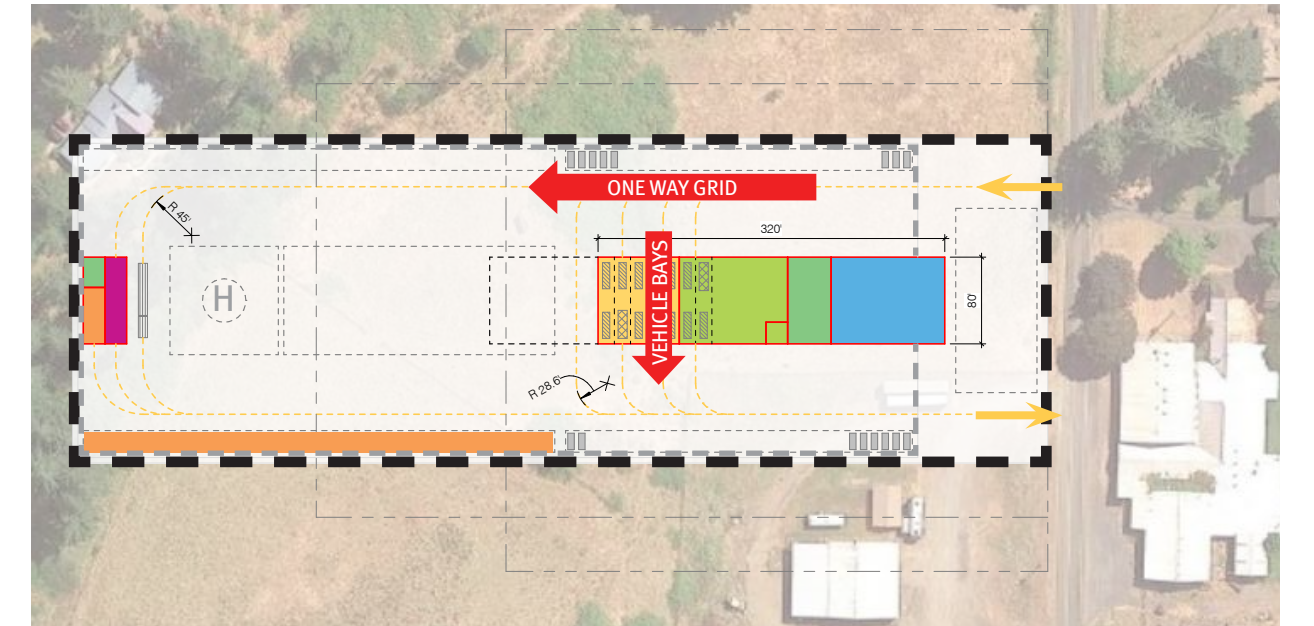
DRAWBACKS

1. Existing site constraints prohibit accomplishing all best practice principles.
2. Site constraints related to neighboring properties and site access from Highway 22 remain.
3. Operational continuity during phased construction is challenging.
4. Phased construction more expensive than building all at once.
5. Increased cost associated with improving two campuses.

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COMBINED UNIT OFFICE

A single study was performed to illustrate the combined unit office configuration, although multiple site shapes were considered. As a new site and building, all elements of the operational safety principles can be achieved, while also providing for growth, improved safe highway access, helicopter landing, and improved campus security.



OPERATIONAL AND SAFETY PRINCIPLES ACHIEVED:

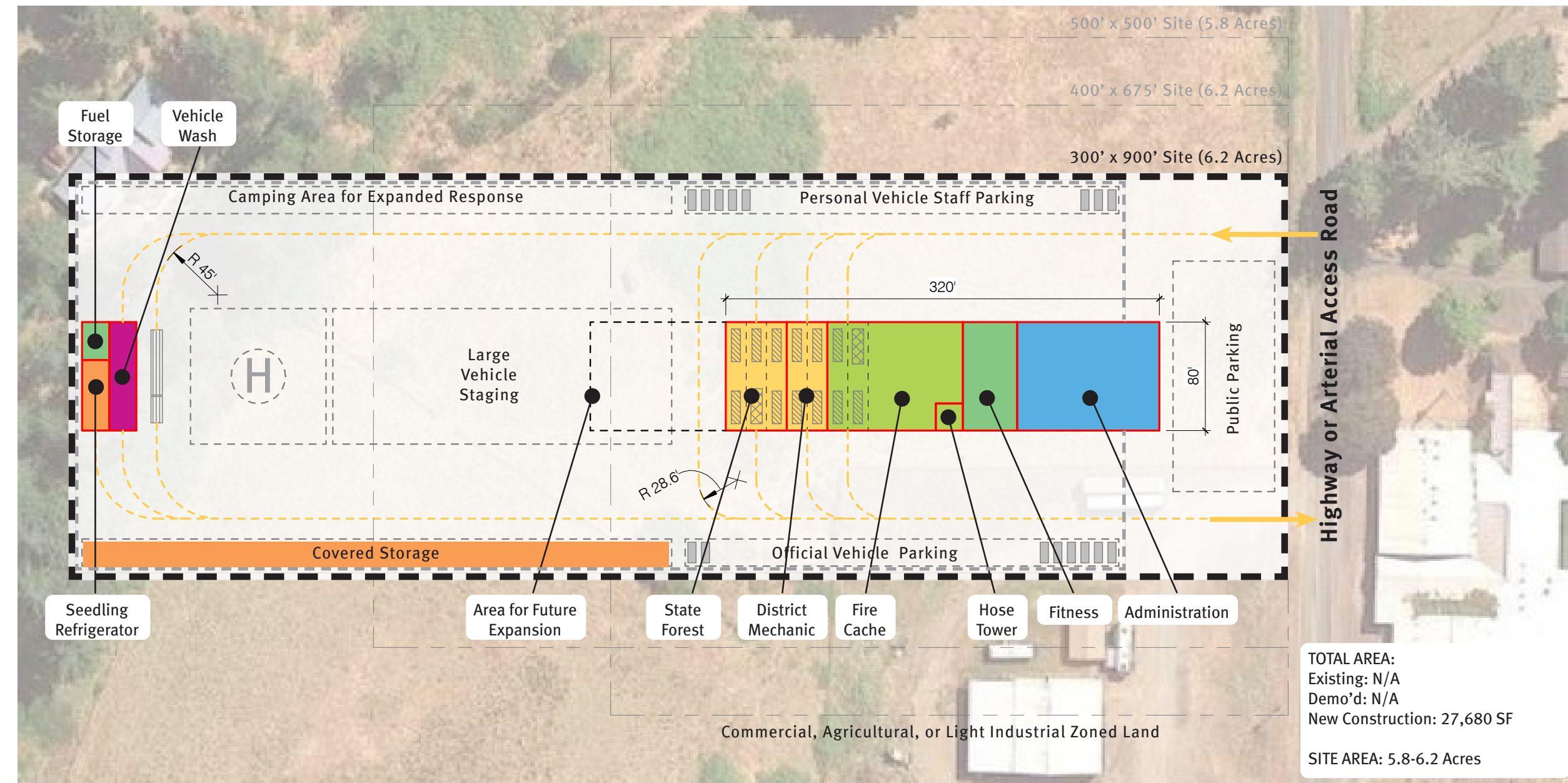
- ✓ Align programs to avoid pedestrians crossing vehicle traffic
- ✓ Pull through vehicle bays
- ✓ Separation of spaces and programs
- ✓ Proper program adjacencies
- ✓ One-way grid
- ✓ Secure or un-secure site areas
- ✓ Right-sized spaces

LEGEND:

- — — PROPERTY LINE
- - - FENCE LINE
- ▭ PROPOSED OUTLINE

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COMBINED UNIT OFFICE



BENEFITS

1. Combining campuses results in a less site and building to construct/maintain compare to two sites and two buildings.
2. Allows for best practice principles to be incorporated into new building design.
3. New construction would makes costly project phasing unnecessary.
4. No operational downtime.

DRAWBACKS

1. Finding an appropriate site could be challenging or expensive.
2. Combined site may be more convenient for some stakeholders, but less convenient for others.

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