

RVTD Operations, Administration & Maintenance Campus Master Plan Report *DRAFT*



02.19.2021

PIVOT
ARCHITECTURE

TABLE OF CONTENTS

SECTION A - GENERAL CONSIDERATIONS

ACKNOWLEDGEMENTS – LIST OF STAFF AND DESIGN TEAM MEMBERS

EXECUTIVE SUMMARY

- Overview of Project
- Purpose of this Study
- Process
- Current Project Status

RELATED DOCUMENTS

- FTA NEPA Documented Categorical Exclusion Checklist

SECTION B - EXISTING CONDITIONS

LAND-USE OVERVIEW

BUILDING AND SITE ASSESSMENTS

ENVIRONMENTAL CONDITIONS SUMMARY

SECTION C - PHASE 1

OVERVIEW

- Existing Parcel and New Parcel
- Master Plan for the Entire Site
- New Admin and Transportation Building
- Space for More Fleet Parking
- Reasons for Selecting the Preferred Concept
- Sustainability

PHASE 1 - SITE PLANS

- Previous Options

SPACE NEEDS PROGRAM

- Programming Space Diagrams
- Department Spatial Relationships Diagram

PRELIMINARY PROJECT DESCRIPTION NARRATIVE

SITE PLAN - PHASES 1A-1D

CONSTRUCTION COST ESTIMATE

PRELIMINARY PROJECT COST PROJECTION

SECTION D - PHASE 2

OVERVIEW

SPACE NEEDS PROGRAM

MAINTENANCE EXPANSION DIAGRAMS

COST ESTIMATE (ROM) - PENDING

APPENDIX

PHOTOS OF EXISTING SITE AND BUILDINGS

SECTION A - GENERAL CONSIDERATIONS

SECTION A - GENERAL CONSIDERATIONS

ACKNOWLEDGMENTS

The design team would like to thank the following Rogue Valley Transportation (RVT) staff members who participated in the interviews and workshops for their time and input which made possible the development of the data contained herein.

Rogue Valley Transportation District (RVT)

Julie Brown	General Manager
Tim D'Alessandro	Operations Manager
Paige West	Planning & Strategic Programs Manager
Scott Eason/Josh Barth	Transportation Manager
Nick Black	Fleet Maintenance Supervisor
Sean Eisman	Planning & Strategic Programs
Deb Wilbur	Finance Manager
Matt Christiansen	IT Manager

Design Team

PIVOT Architecture

Kari Turner	Principal-In-Charge
John Stapleton	Master Plan Lead
Burke Wardle	Project Manager
Theresa Maurer	Interior Designer

WSP Engineering

Mark Probst	Maintenance Facility Specialist
Pete Geiger	Environmental Planner
Chris Hemmer	Quality Control

Cameron McCarthy Landscape Architects

Matt Koehler	Landscape Architect
Zach Rix	Landscape Architect
Colin McArthur	Land-Use Planner

Systems West Engineers

Jose Guerrero	Electrical Engineer
Steve Schual	Mechanical Engineer

SECTION A - GENERAL CONSIDERATIONS

ZCS Engineers

Josh Modin	Civil Engineer
Malia Waters	Civil Designer
Sylas Allen	Structural Engineer
Matt Smith	Structural Engineer
Joey Gipner	Structural Designer

Construction Focus

Steve Gunn	Lead Cost Estimator
Bjorn Carlson	Cost Estimator

Wallace Leake – ES&A.....

Michael Minor – Michael Minor Associates	Biology
Kathryn Toepel- Heritage Research Associates	Noise Analysis
	Archaeology and History

SECTION A - GENERAL CONSIDERATIONS

OVERVIEW OF PROJECT

Rogue Valley Transportation District (RVT) is a Special Public Transportation District formed in 1975 that serves eight cities within Jackson County, Oregon. RVT operates 13 routes, and its fixed route 2018-2019 annual ridership was roughly 1.2 million unlinked passenger trips.

RVT's campus is located at 3200 Crater Lake Ave. and facilitates all of RVT's primary functions including administration, maintenance, operations, fueling, employee parking, bus parking, facilities maintenance (bus stops), storage of support vehicles, vehicle part inventory, tires and other equipment. An adjoining vacant property was purchased in 2018 to allow for expansion with a growing public transit operation.

The current fleet size is 36 buses, 33 of which are in daily service at any one time. Buses enter and exit the current facility via Ford Drive on the north side of the campus. Parking for bus operators, administrative & visitors, operations, and non-revenue vehicles is distributed around the entire facility with some parking accessed from Ford Drive and comingled with bus operations and storage. Other parking for maintenance and administrative & visitors is accessed from Crater Lake Avenue along the west side of the facility.

RVT, working with a consultant team led by PIVOT Architecture, is preparing a Master Plan for the development and construction of facilities on RVT's campus necessary to accommodate future growth through 2040. This project intends to evaluate the short and long term needs for the growth of RVT over the next 10 and 20 years and develop a phased masterplan to meet the needs of the District.

PROCESS

The Master Planning process began with a series of information gathering sessions to identify the constraints of the existing facilities, the needs of the future campus, and the planning horizon. The Design Team assessed the specific program needs of each department, how many people they will support, the number of required fleet parking stalls, and their spatial relationships. The campus was assessed through reviewing drawings of existing facilities, questionnaires completed by RVT staff, site visits, and photographs to understand everyday operations. The information collected from that process was developed into a program document that summarizes space needs, fleet size and mix, and determined the planning horizon of 10 and 20 years. This document was used as the basis of

design for the Master Plan Design Process.

In addition to the program space needs for the new campus, the existing facilities were assessed to determine whether the existing buildings could be remodeled and re-purposed or if it would be most efficient and economical to replace them.

The initial Master Plan design began with determining space adjacencies, and creating a building and site design concept. Design workshops were conducted with RVT and the Design Team to generate several preliminary design options for the layout of primary elements on the site. Preliminary options were refined with input from RVT, resulting in the optimal campus layout given the current site constraints and configuration.

Due to impact of COVID-19, the design process relied more on virtual meetings, and only a few onsite visits for tours and design workshops.

CURRENT PROJECT STATUS

The Master Plan includes the development of the recently acquired vacant parcel abutting the south side of the existing facility. In Phase 1, a new Administrative and Transportation Operations building is planned to be constructed on the vacant parcel along with additional parking for administrative, visitor and transit operators, freeing up space within the existing facility. Access to the new building and parking is proposed to be provided by two new driveways on Forest Hills Drive, south of the existing facility. These changes will allow RVT to expand the bus fleet to 48 buses and accommodate additional transit services. RVT will continue to use the existing maintenance, fueling, and wash buildings during Phase 1. The existing office and warehouse buildings will also remain to support maintenance activities. The building currently housing Operations will be demolished.

Entrance and exit access to the fleet parking and maintenance facilities will continue to be accessed from Ford Drive.

Future phases of the Master Plan will involve redevelopment of the existing campus with possible additional expansion to the south. Future phases will aspire to consolidate and expand fueling and washing, expand the existing maintenance building, modify internal parking and circulation, and allow for an eventual fleet expansion of up to 60 buses, including overnight parking. The existing campus site provides opportunities to improve physical

SECTION A - GENERAL CONSIDERATIONS

connection to Crater Lake Avenue while also improving visual connection to Crater Lake Highway (HWY 62). This visual connection is critical for RVTD to better connect with the surrounding context and neighborhood. Visibility from HWY 62 will provide RVTD an opportunity to be seen by the Medford community and the transit district's users.

PROJECT COSTS

A Construction Cost estimate was developed for the Phase 1 scope of work. A detailed Preliminary Project Description that included assumptions about materials and systems for the building and site development was prepared as part of the cost estimating effort. Based on the Construction Cost estimate, a Preliminary Project Cost Projection was developed using a template project estimating tool developed by PIVOT. The current project cost is estimated to be between \$14-16 million depending on which additional sustainable design strategies RVTD chooses to implement.

RVTD is using the Project Cost projection to apply for grants and other federal funding that could be used for the project.

SECTION B - EXISTING CONDITIONS

SECTION B - EXISTING CONDITIONS



Existing RVTD Campus and recently acquired vacant parcel.

LAND-USE OVERVIEW

The subject site is identified on Assessor's Map 37-1W-08CC as Tax Lots 500 and 800. The site is 5.62 acres in size and is within the City of Medford. The site is designated General Industrial (GI) by the Medford Comprehensive Plan and Light Industrial (I-L) by the Medford Zoning Ordinance. The site has two overlay designations, the Enterprise Zone, and the Opportunity Zone. Both of these zones pertain to economic incentives regarding taxes for businesses, which are not applicable to RVTD. Property to the north of the subject site is also zoned Light Industrial (I-L), property to the south is zoned Light Industrial (I-L) property to the east is zoned Multiple Family Residential (30 Units), and property to the west is zone Regional Commercial.

The site is developed with a 10,250 SF Administration and Warehouse building, 1,500 SF Transportation/Operation Building, a 10,300 SF Maintenance building, and a paved parking lot. The site is bounded by Ford Drive to the north, Forest Hills Drive to the south, Crater Lake Avenue to the west, and multiple-family residential development to the east. Access to the site is currently provided from Ford Drive and Crater Lake Avenue. The Medford Street Functional Classification Plan and the North Medford Circulation Plan assign the following classifications to the streets:

- Crater Lake Avenue; Major Arterial
- Ford Drive; Standard Residential
- Forest Hills Drive; Other (Private Street)

Development standards for Right of Way improvements will be further defined following a pre-application meeting with the City of Medford.

ENVIRONMENTAL CONDITIONS SUMMARY

The RVTD campus is located to the southeast of the Rogue Valley International Medford Airport and just to the east of the Crater Lake Highway (OR 62). Prior to the 1960s, the area was agricultural land, with farmed fields and orchards. Much of the area surrounding the project APE has been converted to commercial and residential developments over the last 60 years. Most of the area of potential effect (APE) is covered by buildings and impervious paved or graveled surfaces. The only portion of the APE that remains unpaved is a small (0.4-acre) parcel along Forest Hills Drive and it is on this south parcel where future developments are planned.

The entire RVTD site, comprised of two tax lots (TL# 371W08CC 500 and 800), totals 5.7-acres. The RVTD facility is zoned Light Industrial. Immediately to the east is Multifamily Residential Planned Unit Development with 20 units per acre. Other zoning in the area includes Regional Commercial and Single Family Residential with 4 units per acre south of Delta Waters Road. No property is proposed for acquisition; the two parcels that make up the RVTD campus are under RVTD's ownership.

The project is within the Midway Basin, which is the northern-most drainage basin within the City of Medford. Since 1981, on-site detention for all industrial and commercial development in the basin has been required. Projects that will develop or redevelop more than 2,500 square feet of impervious surfaces (buildings, roads, parking lots, etc.) on a site must manage stormwater runoff in compliance with the Rogue Valley Stormwater Quality Design Manual

Site investigation determined a small wetland – Wetland A (333 square feet) on the western edge of southern parcel. No other wetland or waters are present on site and the wetland was determined to not be connected via surface channel or pipe to a downstream waterway or wetland. The wetland is subject to the jurisdiction with Oregon Department of State Lands (DSL) Removal-Fill Law rules. The wetland is likely not jurisdictional US Army Corps of Engineers (USACE) Clean Water Act rules due to a lack of hydrologic connection to downstream waters.

The RVTD facility also has five permitted and active underground storage tanks and two decommissioned underground storage tanks. The RVTD subject property has

experienced three Leaking Underground Storage Tank (LUST) incidents since 1993. All three incidents have resulted in cleanup actions and have received determinations of no further remedial action from Oregon Department of Environmental Quality. However residual soil contamination could remain within potential construction areas beneath the footprint of current operations.

The US Census data indicate that the project area is reflective of the City of Medford as a whole and will not have disproportionately high and adverse impacts on environmental justice populations.

A cultural resource inventory of the RVTD's Crater Lake Avenue Campus to identify potentially eligible historical or archaeological properties that may meet National Register criteria. As a result of the records review and field inventory, the following findings are made as part of this assessment:

- No evidence of prehistoric or early historic archaeological materials or deposits was observed during the archaeological survey.
- No indication of the former Hopkins Canal was observed on the ground in the extreme southeastern corner of the APE where earlier aerial photographs indicate that the canal, now relocated, was previously aligned.
- No historic-era resources in the APE were identified as potentially meeting National Registry of Historical Properties eligibility criteria.

BUILDING AND SITE ASSESSMENT



Rogue Valley Transportation District Existing Conditions Assessment

October 09, 2020

Contents

Architectural Assessment
Structural Assessment
Mechanical / Electrical Assessment
Site Assessment

Rogue Valley Transportation District Existing Conditions Assessment October 09, 2020

As part of our work for the Rogue Valley Transportation District, PIVOT Architecture, ZCS, Systems West and Cameron McCarthy have assessed the existing conditions, finishes, and systems of the building. Our assessment is based on 3-4 hour walk-throughs of the building and visual observations of exposed materials and equipment. We were able to look above ceiling tiles but did not open any walls concealed spaces. The Civil, Structural, MEP assessments are included as appendixes to this report.

Site Overview

The 4.23 Acre site, located at 3200 Crater Lake Ave, Roseburg Oregon 97504, is on the north east corner of Crater Lake Ave and Ford Drive. There are 5 building located on the site, they include Administration office and adjoined warehouse, Operations, Fleet Maintenance, Fueling Canopy, and Bus Wash.



Administration Office & Warehouse

The Main Office & Warehouse building original construction year is unknown but it has received remodels in 1986, 1989, and 2009 and 2020. The remodel in 2009, replaced the roofing system and mechanical systems and the 2020 remodel focused on interior improvements by adding a large board room, new carpet and paint in the office building.

Interior finishes include some newly carpeted areas in the roughly half of the hallway, offices, and the board room, which are in excellent condition from being installed within the last year. Other Vinyl tile flooring in the restrooms and breakroom appear to be from a remodel in the 80's and are showing wear consistent with their age and use. The western half of office building ceiling areas are gypsum board and the remaining ceilings in the office are acoustic tile. No noticeable water stains were present in the ceilings, and the acoustic tile ceilings show wear consistent with their age. The eastern side of the office included a recent addition of a board room and 3 office rooms, doors, finishes, and ceilings in these spaces are in excellent condition.



Breakroom



Main Hallway



Recent addition - Flex Space



Recent addition – Office Room

The exterior of the building is constructed primarily of wood stud walls with R-19 batt insulation and painted cedar siding, above masonry veneer base. Overall, the exterior of the building appears to be in good condition. There are a few minor areas of dry rot at the base of the wood siding on the east portion of the warehouse building. Our observations were limited to a visual inspection of the interior and exterior conditions and did not include any destructive testing or investigation to determine the conditions of the wall cavities. The roofing systems consist of low slope single-ply PVC and roof drains tied to the underground stormwater system. Mansard roofs wrap the perimeter of the front office area and are roofed with standing seam metal roofing. It appears to be well maintained and in good condition.



Admin Office – Main Entrance



Northside of Warehouse



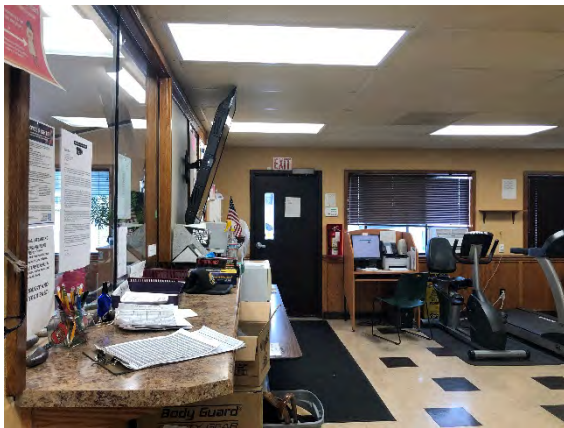
Worn siding (east side)



Admin Office & Warehouse Roof

Operations Office

The Operations office building is roughly 1,370 sf and constructed at an unknown year. The building has had an addition to the north side and interior renovations since originally constructed. Interior finishes range from carpet, vinyl flooring, suspended acoustic tile ceilings, and painted drywall. Finishes show typical wear for their age and in need of replacement. Several areas of existing vinyl flooring are worn and should be replaced. Doors are hollow metal with steel frames, in good condition. Exterior wood siding is worn and appears to have some drainage issues on the west side of the building.



Dispatch Counter



Operators Lockers



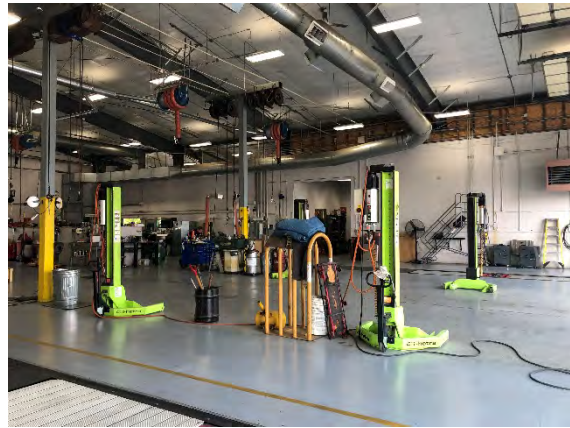
Operations East Entrance



Operations North side

Fleet Maintenance Building

The Fleet maintenance building was observed for general conditions. The original date of construction is unknown but there were remodels completed in 1989 and 2009. The most recent remodel added an exterior column structure and roof around the existing unreinforced masonry walls.



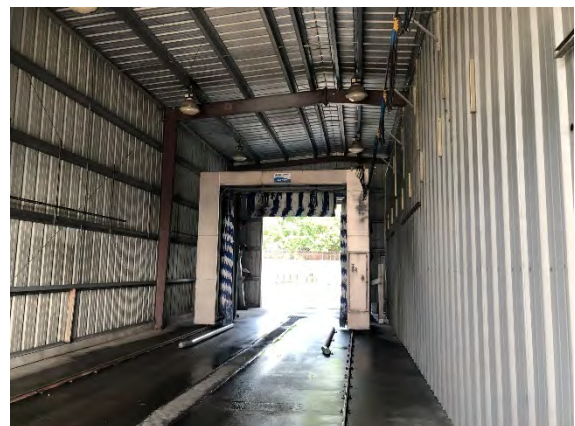
Fleet Maintenance - eastern face

Bus Wash Building

The Bus Washing building is a manufactured steel building. The exterior envelope is steel panel siding in good condition. The run-off from the bus washing process is unfiltered and drains into the sanitary sewer system which does not meet current code requirements.



West Face of Bus Wash



Bus Wash interior

Code Summary – All Buildings

- Construction Type: Admin Office & Warehouse: Type V-B not sprinklered
 Operations Building: Type V-B not sprinklered.
 Fleet Maintenance: Type II non combustible
 Fuel/Wash Buildings: Type II non combustible.

- Building Areas:

Fleet Maintenance Building:	10,300 SF
Admin Office & Warehouse Building:	9,700 SF
Operations Building:	1,500 SF
Fuel & Wash Building:	1,600 SF

Memo

To: Burke Wardle, AIA
From: Joseph Gipner
CC: Sylas E. Allen, PE, Mathew R. Smith, PE, SE, & Josh Modin – ZCS
Date: 10-27-2020
Re: Rogue Valley Transit District Operations Facility Master Plan
ZCS Structural Pre-Design Narrative

ZCS Engineering & Architecture, Inc. has prepared the following predevelopment study for the existing Rogue Valley Transit District (RVTD) Operations Facility located at 3200 Crater Lake Avenue in Medford. This summary is being provided to assist you in determining the potential structural challenges and issues to be considered during master planning and programming activities for the property.

Main Office & Warehouse Building:

Existing Conditions:

The Main Office & Warehouse building is approximately 9,000 sf and was constructed in an unknown year. There has been at least a single addition to the warehouse section on east end and two known remodels in 1986 and 1989. The building is constructed of conventional light timber framed stud walls with the exterior stud walls sheathed with plywood. The south exterior wall is the one exception and is composed of reinforced CMU. The roof framing consists of pre-manufactured light timber gang nailed trusses with plywood sheathing and the 2nd floor is composed of 2x framing with plywood sheathing. The base level throughout is slab on grade with typical concrete strip footing foundation.

Deficiencies:

- The Main Office building's exterior plywood sheathing does not run full height to the bottom of roof sheathing, creating an incomplete load path to transfer lateral forces to the foundation.
- Large windows on the west end of the building reduce the available shear wall lengths.
- The roof diaphragms are not properly attached to the perimeter walls for in-plane lateral forces.
- The full height CMU wall lacks adequate anchorage connection to roof diaphragm.
- The roof and floor diaphragms do not meet the prescribed span lengths. The code limits the span lengths to minimize the shear demands and deflection.
- Overall, the gravity system is in good shape with exception of a single truss in the warehouse that had been damaged by over nailing.

Dispatch Building:**Existing Conditions:**

The Dispatch building is approximately 1,370 sf with a single addition on the North side. It consists of 2x roof and ceiling framing supported by typical light timber framed stud walls. The exterior shear walls are sheathed with T1-11 siding. The interior floor is concrete slab on grade with standard strip footing foundation.

Deficiencies:

- The roof diaphragm is not properly attached to the perimeter walls for in-plane and out-of-plane lateral forces
- The roof framing system is inadequate to resist code level gravity loads. The 2x rafters are over spanned and ridge board is insufficient to support the roof rafters at the mid span of the structure.

Fuel Facility:**Existing Conditions:**

The fuel facility is an approximately 1,400 sf manufactured steel building. The roof system is composed of steel framing and steel decking supported by structural steel beams. The steel beams rest on steel columns embedded in concrete footings creating a cantilevered column lateral system.

Deficiencies:

- The Fuel Facility is a benchmark structure with no observed gravity or lateral deficiencies.

Bus Wash Facility:**Existing Conditions:**

The Bus Wash structure is an approximately 1,600 sf manufactured steel building. The roof system is composed of light gauge steel framing with steel decking supported by structural steel frames. The exterior walls consist of steel columns supporting light gauge steel girts with steel siding. The foundation is a standard concrete strip footing with interior slab on grade.

Deficiencies:

- The Bus Wash building is a benchmark structure with no observed gravity or lateral deficiencies

If you have any questions, comments, or require additional information, please feel free to contact our office.

Thank you.

Joseph Gipner



INTRODUCTION

Systems West Engineers was retained to perform an existing conditions evaluation of mechanical, electrical, plumbing, and fire protection systems at the Rogue Valley Transit District facility. The three buildings evaluated were the office and warehouse building, dispatch building, and bus wash facility. A site visit was performed on October 9, 2020. Plans of the facility showing existing conditions were obtained and reviewed as part of the evaluation. Documentation showing existing conditions is limited.

FIRE SUPPRESSION

The office and warehouse, dispatch, and bus wash buildings are not currently equipped with fire suppression systems. If the building is reused without increasing the floor area or changing building occupancy, a new system will not be required.

PLUMBING

Following is a description of existing systems, equipment, and notable conditions:

OFFICE AND WAREHOUSE BUILDING

Storm Drainage

Roof drains and sidewall scupper overflows provide storm drainage for flat roof sections.

Sanitary Waste and Vent

Sanitary waste and vent piping is primarily DWV PVC pipe. Sanitary waste throughout the facility is conventional gravity-drainage type, with sanitary vents extended through the roof. Existing plans indicate a 4-inch sewer main for the building, which is adequate for expected uses of the building.

Potable Water Systems

Service size and entrance location to the office building are not known. Available plans show a 3/4" domestic cold-water pipe connected to existing piping west of the restrooms. Piping within the building is type L copper. A backflow prevention device was not observed for the service to the building. Plumbing fixtures are generally commercial grade, of good quality, and in good condition.

- Water closets are floor mounted tank-type with manual valves.
- Lavatory faucets are manual type.
- Urinals are automatic flush valve-type.
- Stainless steel kitchen sink.
- Exterior hose bibbs are standard non-frost proof.

- Drinking fountain is a wall mounted type with a bottle filler.

Water Heaters and Recirculation

A 4.5 kW electric water heater with a 40-gallon storage capacity provides hot water to plumbing fixtures. The hot water system does not have a recirculation system to maintain a constant hot-water temperature in the supply water piping when fixtures are not in use. This water heater was installed in 2005 and is near the end of its expected service life.

Natural Gas

A natural gas utility meter is located on the north side of the office building. Current distribution pressure is not known. The meter and piping are not labeled, and no pressure gauges were noted; however, given that the buildings are of light commercial use, existing distribution pressure is expected to be 14 in WC on the customer side of the meter. Gas piping serves packaged rooftop HVAC equipment furnaces at the office building and the dispatch building. Piping is threaded black steel painted with small service branches to equipment unpainted.

A second natural gas utility meter is located on the east side of the dispatch building. Current distribution pressure is not known. The meter and piping are not labeled, and no pressure gauges were noted; however, given that the buildings are of light commercial use, existing distribution pressure is expected to be 14 in WC on the customer side of the meter. Gas piping is routed above grade behind the dispatch building through the east wall of the warehouse and serves the gas furnace hanging inside the space. Piping is threaded black steel painted with short unpainted sections.

Notable Conditions:

- Plumbing systems appear to be in good to fair condition.
- Below-grade sanitary sewer piping type and condition is not known.
- Existing domestic water piping service size is adequate for use with flush tank fixtures but will not be adequate for restroom fixtures with flushometer valves.
- Major renovations to the building may require installation of a new backflow preventer on the building water service.
- The warehouse portion of the building does not include any plumbing fixtures. Waste, vent, and domestic water piping serve the office area only.
- Exposed unpainted natural gas piping is showing signs of corrosion.

DISPATCH BUILDING

Storm Drainage

A gutter and downspout system serves the dispatch building. Downspouts discharge on grade to paved areas without a connection to a storm sewer.

Sanitary Waste and Vent

Sanitary waste and vent piping is primarily DWV PVC pipe. Sanitary waste throughout the facility is conventional gravity-drainage type, with sanitary vents extended through the roof. Existing plans indicate a 4-inch sewer main for the building, which is adequate for expected uses of the building.

Potable Water Systems

Service size and entrance location to the dispatch building are not known. Piping appears to be type L copper. A backflow prevention device was not observed for the service to the building. Plumbing fixtures are generally light commercial grade, and in fair to good condition, but some restroom fixtures may not meet current ADA requirements.

- Restroom fixtures are vitreous china.
- Lavatories and sinks have manual faucets.
- Water closets are floor-mount tank-type.
- Urinals are automatic flush valve-type.
- Exterior hose bibbs are standard non frost proof.

Water Heaters and Recirculation

A 2-kW electric water heater with a 6-gallon storage capacity provides hot water to plumbing fixtures. The hot water system does not have a recirculation system to maintain a constant hot water temperature in supply water piping when fixtures are not in use. This water heater was installed in 2004 and is near the end of its expected service life.

Natural Gas

Natural gas appears to be connected to the office building gas piping. Gas piping appears to be routed below grade between buildings and is routed up along the south exterior wall of the dispatch building. Gas piping serves the furnaces in the dispatch building. Piping is painted, threaded, black steel.

Notable Conditions:

- Plumbing systems appear to be in good to fair condition.
- Existing domestic water piping service size is adequate for use with flush tank fixtures but is not be adequate for restroom fixtures with flushometer valves.
- Major renovations to the building may require installation of a new backflow preventer on the building water service.

BUS WASH BUILDING

Storm Drainage

No storm drainage is provided for the bus wash building.

Sanitary Waste and Vent

Sanitary waste and vent piping is primarily DWV PVC pipe. Sanitary waste throughout the facility is conventional gravity-drainage type, with sanitary vents extended through the roof. Existing plans indicate a 4-inch sewer main for the building, which is adequate for expected uses of the building.

Potable Water Systems

A 2-inch potable water service enters the building at the south side. A reduced-pressure backflow preventer is provided inside the building at the service entrance location. Piping appears to be type L copper. Water is supplied to a clothes washer, water heater, emergency eyewash, and hose bibbs.

Water Heaters and Recirculation

A 4.5 kW electric water heater with a 60-gallon storage capacity provides hot water to a clothes washer. The hot water system does not have a recirculation system to maintain a constant hot water temperature in supply water piping when fixtures are not in use. This water heater appears to be recently installed and in good condition.

Notable Conditions:

- Plumbing systems appear to be in good to fair condition.

HEATING, VENTILATING, AND AIR-CONDITIONING

OFFICE AND WAREHOUSE BUILDING

Air Distribution Systems

A variety of heating, cooling, and ventilation equipment serves the building. A summary of air-distribution systems is included in the table on the following page.

Rooftop Heating and Cooling Units

Two packaged rooftop heating and cooling units serve a variety of spaces throughout the building. The units generally include a supply fan, natural gas standard-efficiency furnace, and self-contained direct expansion cooling system. The units are controlled by local electronic programmable thermostats.

- The unit capacity appears to be appropriate for the type and size of facility.
- There is no individual temperature control for the office spaces, break room, and conference room served by these rooftop units.
- Rooftop units appear to be in fair condition. The date of manufacture for the two units is 2004 and 2005. According to ASHRAE, the equipment life expectancy for rooftop air conditioners is 15 years.
- The units have R-22 refrigerant. The production and import of R-22 will be discontinued in 2020. Only reclaimed refrigerant will be available commercially beyond 2020, which will result in significant price increases. Consideration should be given to replacing the R-22 rooftop units as part of any major addition.
- Generally, heating and cooling systems do not conform to current Codes for equipment efficiency, type of refrigerant, and system control.

Split-System Heating and Cooling Units

A multi-split heat pump system provides cooling and heating to individual office spaces east of the conference room. The system includes one ducted fan coil unit, three ceiling-mounted ductless fan coil units, and a roof-mounted, air-cooled condenser unit. The units are controlled by local electronic programmable thermostats.

- Unit capacity appears to be appropriate for the three offices.
- This system appears to be in generally good condition. The date of manufacture is 2019.
- A break room in the remodeled portion of the building does not appear to include any heating, cooling, or ventilation system.

Split System Cooling Unit

A split system cooling-only system provides cooling for the server room. The system includes a wall-mounted ductless fan coil unit and an outdoor air-cooled condenser unit. The unit is controlled by a local programmable thermostat.

- The ductless split system appears to have replaced an older ducted split system. The fan coil for the older split system in the mezzanine mechanical equipment room and not in use.
- The system appears to be in generally good condition. The date of manufacture of the ductless split system is 2013.

Gas-Fired Unit Heater

A power-vented, natural gas-fired unit heater is provided in the east bay of the warehouse area. The unit is controlled by a local programmable thermostat.

- The system appears to be in good condition.
- No ventilation has been provided for the warehouse storage areas.

Exhaust Systems

Exhaust for the restrooms is provided by ceiling-mounted exhaust fans. Each fan discharges through exhaust grilles in the exterior overhang.

AIR DISTRIBUTION SYSTEMS					
Unit ID	Area Served	System Type	Unit Location	Manufacturer & Model	Capacity
AC-1	Office 3, Office 4, Lunch Room, Open Office, Restrooms	Rooftop heating and cooling unit	Roof	Bryant 582APW060090 AAAG	Cooling: 5-Ton Heating: 90,000 btu/hr Airflow: 2,000 cfm R-22 Nat. Gas
AC-2	Office 1, Office 2, Office 5, Office 6, Reception, Workstation	Rooftop heating and cooling unit	Roof	Bryant 582ANW03609 OABAF	Cooling: 3-Ton Heating: 90,000 btu/hr Airflow: 1,200 cfm R-22 Nat. Gas
ACU	Server Room	Split-System Cooling	South of Building	Daikin RXTQ	Cooling: 1.5 ton R-410A
FC	Server Room	Split-System Cooling	Server Room	Daikin FTXN18KVJU	Cooling: 1.5 ton R-410A
AC-2	Offices east of conference room	Split-System Heat Pump	Roof	Daikin RXTQ60TAVJU	Cooling: 5-ton Heating: 57,000 btu/hr R-410A
FC-1 / FC-2/ FC-3	Offices east of conference room	Split-System Heat Pump	Offices	Daikin FXZQ09	Cooling: 0.75 ton Heating: 7,000 btu/hr R-410A
FC-4	Corridor	Split-System Heat Pump	Corridor/ Conference	Daikin FXMQ	Cooling: 3 ton Heating 33,000 btu/hr R-410A
UH-1	East Warehouse Bay	Gas-Fired Unit Heater	East Warehouse Bay	Modine PDP	Heating:150,000 btu/hr

DISPATCH BUILDING

Split-System Air-conditioning System

A split-system heating and cooling unit serves the dispatch building. The system includes an indoor fan coil unit and an outdoor air-cooled condenser unit. The fan coil is located above the ceiling and is ducted to supply and return grilles in the spaces. The units are controlled by local electronic programmable thermostats. Window and portable type AC units are currently installed and operating to cool the space.

- The system appears to be non-operable. The date of manufacture for the unit is 1996. According to ASHRAE, the equipment life expectancy for rooftop air conditioners is 15 years. This unit is beyond its expected service life.
- The portable air conditioning unit serves the north office area and is ducted to reject heat out of the window. The window is not completely sealed.

Furnace Unit

A packaged natural gas furnace unit provides heating for the building. The unit generally includes a supply fan and a natural gas standard-efficiency furnace. The units are controlled by local electronic programmable thermostats.

- The unit appears to be of vintage construction and past its expected functional life expectancy.

Exhaust Systems

Exhaust for the restrooms is provided by ceiling-mounted exhaust fans. Each fan discharges through exhaust grilles in the exterior wall.

AIR DISTRIBUTION SYSTEMS					
Unit ID	Area Served	System Type	Unit Location	Manufacturer & Model	Capacity
ACU	Dispatch Building	Split System	West Side of Building	RUUD UAKA-037JAZ	Cooling: 3-Ton

BUS WASH BUILDING

Waste Oil Heater

A power-vented waste oil-fired unit heater is provided in the bus wash building. Waste oil stored in a tank exterior of the building is pumped to the waste oil heater.

- The system appears to be of vintage construction and is likely past service life expectancy.
- The waste oil storage tank exterior is completely rusted.

ELECTRICAL

Following is a description of existing systems, equipment, and notable conditions:

OFFICE AND WAREHOUSE BUILDING

Electrical Power

The existing service to the building is 120/208V, three-phase, four-wire delta service. Service is derived off PPL medium-voltage service. Medium-voltage service feeders terminate on the sectionalizing cabinet on the north side of the office building where it splits the main and medium-voltage feeder into two services. One feeder serves the step-down, pad-mount transformer that feeds the shop and the second serves the step-down, pad-mount, transformer feeding the office building. The transformer serving the office building is located next to the sectionalizing cabinet.

The main service panel consists of a 3-phase/4-wire 120/208V 400-amp panelboard located in the closet space off the large conference room. There are a total of three additional panels served from the main panel. Panel B located next to the main is a small 100A load center that serves mostly mechanical equipment. There are two other panels also labeled as A and B located in the break room. It is not documented where these panels are fed from. All electrical loads in the office and warehouse buildings are served from the three panels.

Notable Conditions:

- The existing system's main distribution assembly is old and near, or at the end of, its life span. There is no more room in the panelboard for future expansion.
- Panels A and B in the break room are in good condition but it is not known how they are fed.
- Romex cabling is used in the warehouse where the ceiling is open. Exposed cabling is not recommended as it could be easily damaged.

Lighting and Controls

Existing interior lighting consists of mostly recessed fluorescent fixtures. The existing emergency lighting consists of wall-packs with integral batteries.

The interior lighting is a combination of LED lights and fluorescent. Most of the renovated spaces have replaced the existing fluorescent lights with LEDs. The fluorescent lamps, in 2x4 fixtures in the older spaces, have been replaced with LED tube lamps and downlights with screw-in LED bulbs.

The existing interior controls consist of manual switches at each room with no automatic off controls such as occupancy sensors. The renovated spaces on the west side have occupancy sensors with override switches.

The existing exterior control is a time clock/photo cell-based system controlling contactors serving various zones. The existing original system appears to be satisfactory.

Notable Conditions:

- The existing lighting controls are not Code-compliant. We recommend adding occupancy sensors as required by Oregon Energy Code.

Fire Alarm

The office and warehouse buildings are not currently equipped with fire alarm systems. If the building is reused without increasing the floor area or changing building occupancy, a new system will not be required.

Notable Conditions:

- The existing buildings have standalone, battery smoke detectors but not an addressable system. This type of building with less than 500 occupants does not require a fire alarm system but depending on changes to the building, an addressable system may be required if smoke detectors are to remain.

Access Control and Security

There is no existing building access control system identified. The existing security system consists of video cameras and an intrusion alarm system.

Notable Conditions:

- No notable conditions were identified.

Voice/Data Communications

The existing utility service to the building appears to be a T1 copper service. There are existing data/comm outlets throughout the space and wireless access points in selected areas.

Notable Conditions:

- No notable conditions were identified.

DISPATCH BUILDING

Electrical Power

The existing service to the building is 120/240V, single phase service. Service is derived off PPL medium-voltage service. It serves a single-phase transformer located on the west side of the building.

The main service panel consists of a 1-phase/3-wire 120/240 200 amp panelboard. The panel serves all the loads in the dispatch building and fuel bay.

Notable Conditions:

- The existing panelboard is old and near, or at the end of, its life span. There is no more room in the panelboard for future expansion.

Lighting and Controls

The existing lighting system consists mostly of fluorescent lights with a few LED lights in the office. There is no egress lighting or exit lighting available in the building.

The existing interior control consists of manual switches at each room with no automatic off controls such as occupancy sensors.

The existing exterior fixtures are building-mounted metal halide fixtures.

The existing exterior control is a time clock/photocell-based system controlling contactors serving various zones. The existing original system appears to be satisfactory.

Notable Conditions:

- There is no exit lighting available. New exit lights should be provided to meet Code.
- The existing lighting controls are not Code-compliant. We recommend adding occupancy sensors as required by Oregon Energy Code.

Fire Alarm

The dispatch building is not currently equipped with a fire alarm system. If the building is reused without increasing the floor area or changing building occupancy, a new system will not be required.

Notable Conditions:

- The existing buildings have standalone, battery smoke detectors but not an addressable system. This type of building with less than 500 occupants does not require a fire alarm system but depending on changes to building, an addressable system may be required if smoke detectors are to remain.

Access Control and Security

There is not an existing building access control system identified.

Notable Conditions:

- No notable conditions were identified.

Voice/Data Communications

The existing utility service to the building appears to be a T1 copper service. There are existing data/comm outlets throughout the space and wireless access points in selected areas.

Notable Conditions:

- No notable conditions were identified.

BUS WASH FACILITY

Electrical Power

The existing service to the building is 480/277V, 3-phase service. Service is derived off PPL medium voltage service. It serves a single-phase transformer located on the west side of building, next to the transformer feeding dispatch building.

The main service panel consists of a 3-phase/4-wire 480/277 400-amp rating panelboard. This panel serves all the lighting, blower motor, wash equipment, and mechanical equipment. It also serves a 120/208V, 3Ph/4W 225 amp panelboard that is used for block heaters and general outlets. The 120/208V panel is fed through a dry-type transformer. All distribution equipment is located outdoors and enclosed in weatherproof enclosures.

Notable Conditions:

- The existing panelboards are in good condition, but the transformer looks to be weathered and may need replacing.
- There is exposed surface-mount PVC conduit from the transformer secondary to the 120/208V panelboard that needs to be replaced.

Lighting and Controls

The existing lighting system consist of high-bay metal halide fixtures. The existing interior control consists of manual switches. The existing exterior fixtures are building-mounted metal halide fixtures.

The existing exterior control is a time clock/photocell-based system controlling contactors serving various zones. The existing original system appears to be satisfactory.

Notable Conditions:

- The existing lighting controls are not Code-compliant. We recommend adding occupancy sensors as required by Oregon Energy Code.

Fire Alarm

The existing building does not have a fire alarm system and does not require one.

Access Control and Security

There is no existing building access control system identified.

Notable Conditions:

- No notable conditions were identified.

Voice/Data Communications

The existing building does not have a voice/data communication system.

Notable Conditions:

- No notable conditions were identified.

Memo

To: Burke Wardle, AIA
From: Malia Waters *MW*
CC: Sylas E. Allen, PE & Josh Modin – ZCS
Date: 10-26-2020
Re: Rogue Valley Transit District Operations Facility Master Plan
ZCS Civil Pre-Design Narrative

ZCS Engineering & Architecture, Inc. has prepared the following predevelopment study for the existing Rogue Valley Transit District (RVTD) Operations Facility located at 3200 Crater Lake Avenue in Medford. This summary is being provided to assist you in determining the potential site challenges and issues to be considered during master planning and programming activities for the property.

Existing Conditions

The existing site is comprised of one fully developed tax lot (TL 500, 4.28 acres) located at the southeast corner of the intersection of Ford Drive and Crater Lake Avenue and a second undeveloped parcel (TL 800, 1.34 acres) abutting the south property line of TL 500 with frontage along Forest Hills Drive within City of Medford limits (tax map T37S-R01W-S08CC, tax lots 500 and 800). The property is zoned Limited Industrial (I-L) which supports a wide variety of light industrial uses adjacent to commercial and residential zones, including the operations facility, storage, and office buildings currently existing on site. Properties to the north and south of the site are zoned I-L, with multi-family residential (MFR-20) to the west and regional commercial (CR) across Crater Lake Highway to the east; all adjacent properties to tax lots 500 and 800 are fully developed.

The property has a gradual slope from south to north with a large stormwater detention swale located in the northeast corner of tax lot 500. Aside from curb and gutter, there are no frontage improvements on Crater Lake Avenue, Ford Drive, or Forest Hills Drive adjacent to the site; it is anticipated that full frontage improvements along Crater Lake Avenue may be required based on future site programming.

Access

Adequate access to the site is available via Crater Lake Avenue (one driveway), Ford Drive (two driveways), and Forest Hills Drive (one driveway).

Site / Surface Pavement

The asphalt parking lot serving the administration building appears to be in good conditions and exhibits signs of routine crack-seal/seal-coat maintenance. No significant cracking or other damage patterns were observed.

At this time, no asphalt pavement repair or replacement is recommended. Asphalt pavement west, south, and north of the main operations building appear to be in similar condition. The asphalt paved parking lot along the north property line has recently undergone maintenance/restriping and appears to be in good condition. At this time, no asphalt pavement repair or replacement is recommended across the site.

Vast portions of the site are paved with reinforced vehicular concrete and pavement generally appears to be in good condition. There are several individual concrete panels that show signs of cracking or other damage. In total, it is recommended that roughly 1,000-square feet of reinforced concrete pavement be removed and replaced with new 6" to 8" thick reinforced concrete pavement utilizing the existing underlying base rock and geotextile support fabric.

Areas of pedestrian concrete throughout the site generally appear to be in good condition with allowable slopes meeting current accessibility standards. The existing accessible ramp between the parking lot and front entry of the administration building does not have a top landing/walk-around and therefore does not comply with current accessibility standards; replacement is recommended. No other pedestrian concrete replacement is recommended at this time.

Accessible parking striping within the administration parking lot do not appear to meet dimensional standards and no signage was observed. It is recommended that accessible parking be restriped, and appropriate signage added. By observation, it appears that surface grading within the limits of accessible parking stalls and access aisles are within allowable standards, therefore, no modifications to grading is suggested.

Grading and Drainage (Stormwater Infrastructure)

Based on existing pavement and overall topography it appears that the site is graded to provide adequate drainage across the development. Various localized catch basins and trench drains function as intended. No issues with site drainage have been voiced, and therefore changes to on-site storm infrastructure is not recommended.

In general, the following recommendations will help maintain the condition of existing stormwater conveyance networks and detention/treatment facilities. It is recommended the following inspection and maintenance program be performed twice annually, in April and October.

- Paved parking and maneuvering areas – prior to cleaning the pipe network, all paved parking and maneuvering areas shall be swept or washed clean.
- Area inlets – inspect and clean each inlet grate and sump, clean and repair as needed. Do not allow sediment material to wash downstream from this point.
- Stormwater pipe network – inspect conveyance pipes for sediment buildup. If sediment is present, high pressure wash each pipe into adjacent downstream catch basin/control structure, taking care not to allow material to wash downstream. All sediment shall be extracted from structures/pipes and disposed of at an approved location

- Stormwater detention swale – Inspect and clean swale. Remove any accumulated garbage/debris. Inspect swale for any signs of erosion; repair any found defects. Review condition of plantings; any plantings that are found to be dead or dying shall be replaced. Remove discharge structure grate to wash and vacuum sump. Do not allow sediment material to wash downstream from this point. All sediment to be extracted from structures and disposed of at an approved location. Examine orifice, remove any blockages to allow for proper operation and drainage.

Additionally, review of available wetland and sensitive area mapping shows that there are no mapped wetlands on site. The site is located within City of Medford stormwater management jurisdiction.

Sanitary Sewer

Based on available utility mapping and as-built information it appears that sanitary sewer facilities on-site function as intended and do not warrant replacement or upgrade. Sanitary sewer is directed to a pump station located at the northwest corner of the administrative parking lot and discharges to the public system running under Crater Lake Avenue. The site is located within City of Medford sanitary sewer jurisdiction.

Fire Water / Domestic Water

Based on available utility mapping and as-built information it appears that domestic and fire water facilities on-site function as intended and do not warrant replacement or upgrade. Multiple fire hydrants were observed on and adjacent to the site which appear to provide appropriate coverage to critical infrastructure on-site including the fueling station and natural gas storage. The site is located within Medford Water Commission jurisdiction, with fire protection provided by Medford Fire Department Station #5.

Power / Data and Communications

Based on available utility mapping and as-built information it appears that power and data/communications services on-site function as intended and do not warrant replacement or upgrade. Primary power service to the site is accessed from overhead power running along the east side of Crater Lake Avenue; service to the site is buried with a primary transformer located east of the administrative parking lot. Data/communications services (various utility companies) are accessed from buried and overhead lines running along the east side of Crater Lake Avenue. Services to the site are provided by Pacific Power (power); specific data/communications providers will be identified during later planning efforts.

Natural Gas (exclusive of fuel)

Based on available utility mapping and as-built information it appears that natural gas services on-site function as intended and do not warrant replacement. A gas meter located near the southeast corner of the dispatch building does not appear to be appropriately supported; recommend replacement of meter supports. Service to the site is provided by Avista Utilities via a regular station located at the northeast corner of the site along the south side of Ford Drive.

Fuel (diesel / natural gas)

Based on available utility mapping and as-built information it appears that diesel and natural gas fueling facilities on-site function as intended and do not warrant replacement or upgrade.

Diesel fuel is stored in an underground storage tank situated east of the primary operations building and liquid natural gas is stored in three above ground pressurized tanks northeast of the fueling station. Waste oil and chemicals are stored in a series of underground storage tanks located north of the primary operations building.

If you have any questions, comments, or require additional information, please feel free to contact our office.

Thank you.

Memorandum

To: Burke Wardle, PIVOT Architecture

CC: Kari Turner, John Stapleton, Matt Koehler

From: Zach Rix, Cameron McCarthy

Date: October 27, 2020

RVTD Operations, Administration and Maintenance Campus Master Plan

Site Assessment

8. ASTM E2018—15: Walk-Through Survey

8.1. Objective (no content)

8.2. Frequency (no content)

8.3. Photographs

- See Attachment CM-2.

8.4. Scope

8.4.1. Site:

- See Attachment CM-1.

8.4.1.2. Topography

- Generally, the site slopes from southeast to northwest with approximately 7-ft of elevation change and slopes ranging from <4% to 1% across paved surfaces. The site visually appears flat, without many abrupt changes in elevation. Some are noted on Attachment CM-1.
- The unimproved gravel lot slopes from south to northeast with approximately 7-ft of elevation change.

8.4.1.3. Storm Water Drainage

- A part of the Midway Basin, stormwater is intercepted into storm drains or roadside channels, ending up in *Midway Creek* and ultimately the *Rogue River*. The visitor parking area mostly drains to a single catch basin with the remainder appearing to drain out to Crater Lake Avenue's drainage channel.
- The 2009 addition to the bus parking area drains north to a grass water quality swale that appears to be maintained by regular mowing.
- The unimproved gravel lot drains to the northwest corner of the lot where an invert collects and routes through the current campus to Ford Drive and ultimately to Crater Lake Avenue.
- Curb openings at grassy water quality swale have sediment buildup, potentially limiting stormwater flow to swale.

8.4.1.4. Ingress and Egress

- Two-way Access/Egress at Crater Lake Avenue: Provides access to a parking area with visitor and administrative staff parking.
- Two-way Access/Egress at Ford Drive (west): Provides access to secured lot for bus fueling, maintenance, parking, and other maintenance or RVTD electric vehicle parking. The main lot connects to the unimproved gravel lot. There is a rolling gate at the southwest corner of lot, at Forrest Hills Drive, with no driveway apron or improved access for vehicles.
- Two-way Access/Egress at Ford Drive (east): Provides access to secured parking lot for majority of staff parking. Parking Lot has no through access.

- Pedestrian access is limited by lack of sidewalk on Crater Lake Avenue and south side of Ford Drive. No accessible pathway is marked between right-of-way and public building entry facing Crater Lake Avenue.
- Crater Lake Avenue paving ends on other side of fog line, no bicycle accommodations such as bike lanes, shared use markings, or multiuse sidewalks are present. 35MPH speed sign indicates an unsafe speed for mixed vehicle/bicycle traffic.

8.4.1.5. Paving, Curbing, and Parking

- Asphalt paving onsite appears to have received a recent seal coat. Repaired cracks are visible in parking lots where seal coat was applied. Some areas of asphalt appear to be heaving possibly due to adjacent tree roots. Damage due to tree roots has been observed at existing concrete paving areas and may be indicating poor soil drainage on site.
- Curbs at visitor parking area appear in fair condition, however curb height is shallow in some areas and curb ramps appear non-compliant to ADA guidelines.
- No curbs or sidewalks are present at driveway entry from Crater Lake Avenue. Curb and gutter are existing along parts of Ford Drive, but no sidewalk is present on the south side of the street.
- No curb present at enclosed staff parking area, concrete wheel stops have been installed.
- Gutter behind Service building appears to be non-functioning or ponding water prior to reaching a storm drain.
- Vehicle Parking and Bicycle Parking quantities as observed are tallied in the quantities table on Attachment CM-1.
- Bicycle Parking is provided by three covered “U” racks. One rack is oriented to allow only one space, the other two allow for two spaces each, however only one rack (two spaces) appears to comply with guidelines for space dimensions and clearance from a building wall.

8.4.1.6. Flatwork

- Concrete paving shows signs of failure at bus access driveway apron. Other areas within the lot interior show spalling possibly due to heavy traffic over areas that were previously patched.
- A doorway to the warehouse building has a grade change between finish grade and finish floor greater than ¼ inch. This transition may limit access.

8.4.1.7. Landscaping and Appurtenances

- At the visitor entry, the parking lot landscape buffer to Crater Lake Avenue is dense and tall, obscuring the main building entry.
- Many of the street/parking lot trees appear to be in fair, poor, or in declining condition. Possibly poor draining soil, compacted soil, and minimal area for root establishment has caused stunted growth, and lead to pavement heaving and surface roots.
- Some trees and large shrubs have drip rings for irrigation. Other irrigation is not visible above ground or is non-existent.
- Site fencing appears in fair to good condition, with some areas looking recently installed. Fencing is 6’ to 8’ chain link fence with sections around the perimeter having barbed security wire along the top.

8.4.1.8. Recreational Facilities

- There are two covered picnic areas within the secured lot, one free standing shelter near the Administration building across from bicycle parking and the other under an attached shed roof connecting a warehouse structure to the dispatch structure. Each have one picnic table, seating approximately 4 adults, no accessible features are present.

8.5. Additional Considerations

8.5.3. Additional Issues

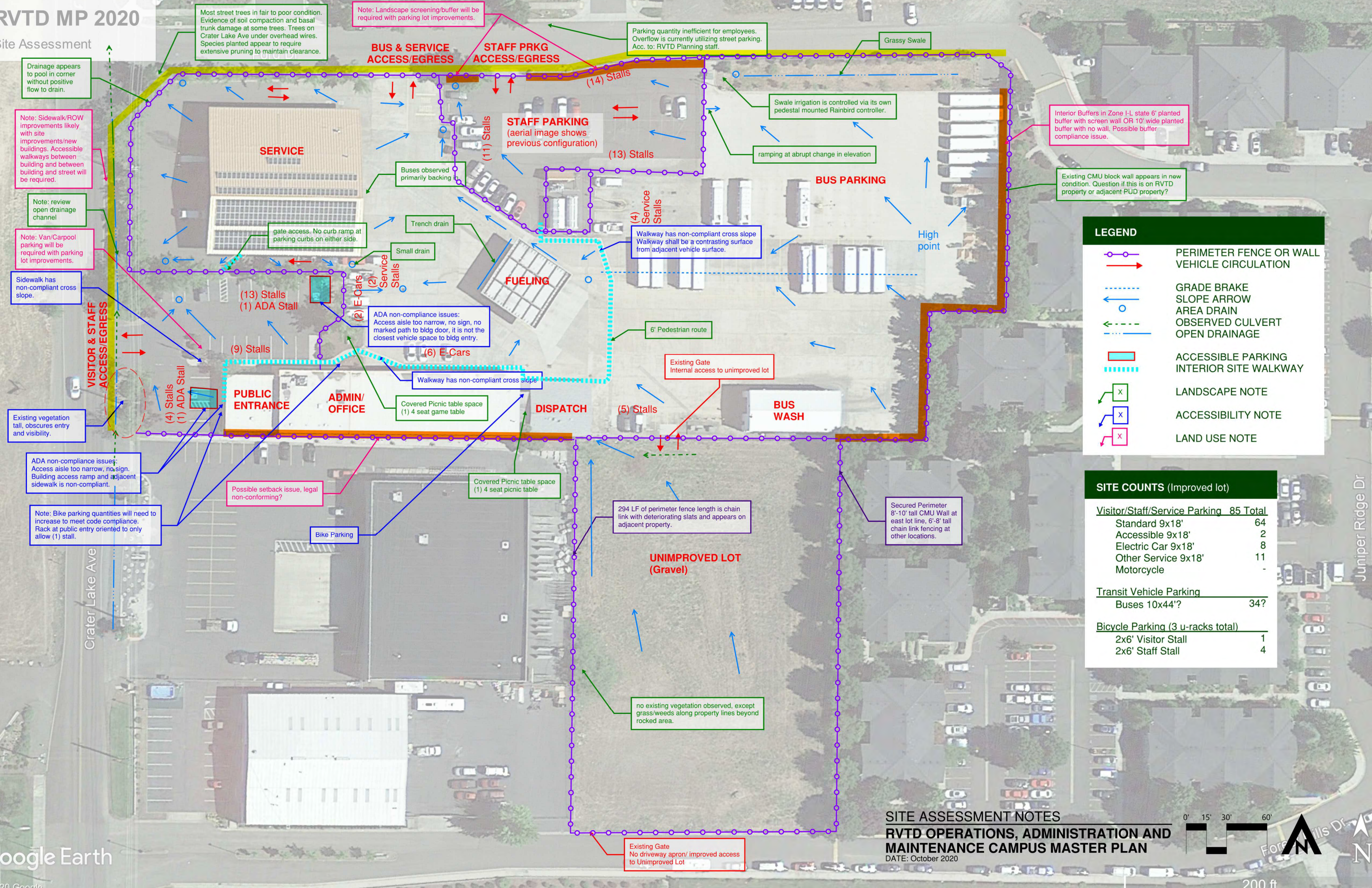
8.5.3.5. ADA Requirements

- Accessible parking stalls are observed to have non-compliant access aisle width and signage. Stall width and depth appear within compliant range. Accessible paths from parking stalls to building entries appear non-compliant due to non-compliant ramp and/or cross slope over 2.08%.

- Accessible paths from building entry to public right-of-way is non-existent at visitor entry/Administration building. Accessible pathways between staff parking area and between site buildings do not comply with surface contrast and cross slope guidelines. Barriers such as curbs are noted at one existing pathway location between Service building and Administration building.

Additional Notes:

- There are a few concerns regarding existing non-compliance of Medford Municipal Code. Notes related to improvements anticipated to bring any existing issues into full compliance are provided on Attachment CM-1. This is not a land use review and should only be included here for the purposes of understanding current site conditions.



Drainage appears to pool in corner without positive flow to drain.

Note: Sidewalk/ROW improvements/new buildings. Accessible walkways between building and between building and street will be required.

Note: review open drainage channel

Note: Van/Carpool parking will be required with parking lot improvements.

Sidewalk has non-compliant cross slope.

Existing vegetation tall, obscures entry and visibility.

ADA non-compliance issues: Access aisle too narrow, no sign. Building access ramp and adjacent sidewalk is non-compliant.

Note: Bike parking quantities will need to increase to meet code compliance. Rack at public entry oriented to only allow (1) stall.

Most street trees in fair to poor condition. Evidence of soil compaction and basal trunk damage at some trees. Trees on Crater Lake Ave under overhead wires. Species planted appear to require extensive pruning to maintain clearance.

Note: Landscaping screening/buffer will be required with parking lot improvements.

Parking quantity inefficient for employees. Overflow is currently utilizing street parking. Acc. to: RVTD Planning staff.

Grassy Swale

Interior Buffers in Zone I-L state 6' planted buffer with screen wall OR 10' wide planted buffer with no wall. Possible buffer compliance issue.

Existing CMU block wall appears in new condition. Question if this is on RVTD property or adjacent PUD property?

Swale irrigation is controlled via its own pedestal mounted Rainbird controller.

ramping at abrupt change in elevation

High point

(14) Stalls

(11) Stalls

(13) Stalls

(4) Service Stalls

Trench drain

Small drain

(13) Stalls
(1) ADA Stall

ADA non-compliance issues: Access aisle too narrow, no sign, no marked path to bldg door, it is not the closest vehicle space to bldg entry.

(6) E-Cars

(9) Stalls

(4) Stalls
(1) ADA Stall

ADMIN/OFFICE

Covered Picnic table space
(1) 4 seat game table

DISPATCH

(5) Stalls

BUS WASH

UNIMPROVED LOT
(Gravel)

294 LF of perimeter fence length is chain link with deteriorating slats and appears on adjacent property.

Secured Perimeter 8'-10" tall CMU Wall at east lot line, 6'-8" tall chain link fencing at other locations.

no existing vegetation observed, except grass/weeds along property lines beyond rock area.

Existing Gate
No driveway apron/ improved access to Unimproved Lot

LEGEND

PERIMETER FENCE OR WALL

VEHICLE CIRCULATION

GRADE BRAKE

SLOPE ARROW

AREA DRAIN

OBSERVED CULVERT

OPEN DRAINAGE

ACCESSIBLE PARKING

INTERIOR SITE WALKWAY

LANDSCAPE NOTE

ACCESSIBILITY NOTE

LAND USE NOTE

SITE COUNTS (Improved lot)

<u>Visitor/Staff/Service Parking 85 Total</u>	
Standard 9x18'	64
Accessible 9x18'	2
Electric Car 9x18'	8
Other Service 9x18'	11
Motorcycle	-
<u>Transit Vehicle Parking</u>	
Buses 10x44'?	34?
<u>Bicycle Parking (3 u-racks total)</u>	
2x6' Visitor Stall	1
2x6' Staff Stall	4

SECTION C - PHASE 1

SECTION C - PHASE 1

OVERVIEW

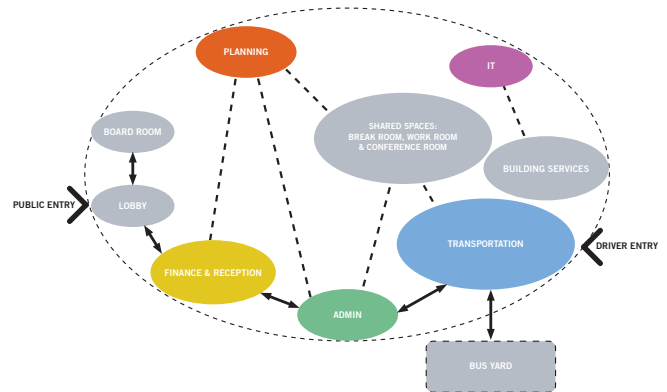
The initial Master Plan design began with determining space adjacencies and creating a building and site design concept. A design workshop with the Design Team and RVTD's management team of all departments was held with the goal of generating a handful preliminary concepts.

At the workshop, color blocks representing primary program functions were moved around a site plan to assess ideal site circulation patterns, layout of spaces, and preferred adjacencies. The component that required the largest space was overnight Fleet parking and circulation.

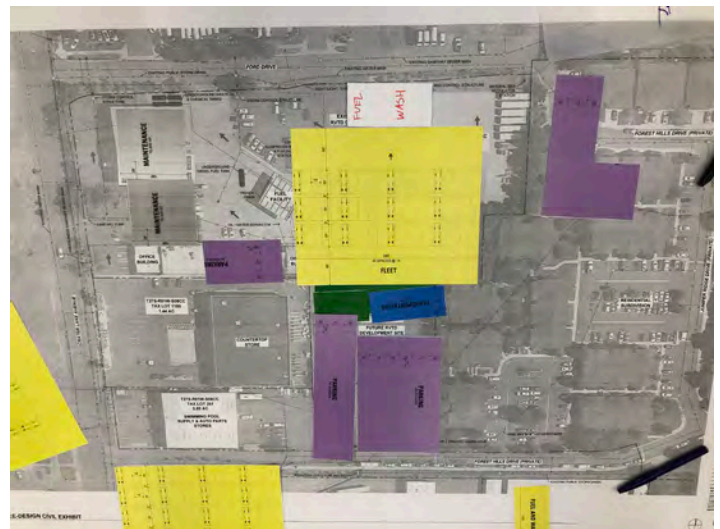
For the site, the most efficient layout was determined to be stacked parking and modifying the current flow of operations for returning buses as well as the fuel & wash. In order to store up to 48 buses on the site (an increase from 36 buses under current operations), RVTD has agreed to utilize stacked parking. This requires a change to the operations used for buses returning to the site and the fueling and washing procedure. Instead of buses queuing up at the Fuel Island upon their return to the site, operators will pull into the stacked fleet parking. Maintenance staff will retrieve buses from the fleet parking, route them through the fuel and wash, and return them to the parking area. Buses will be parked facing north eliminating the need for backing of buses into parking stalls and allowing counter-clockwise bus circulation which is easier for operators.

Out of the workshop several site plan configurations were investigated and refined to three preliminary layouts. The three refined options were presented to RVTD, and one was selected to move forward with as the campus layout for Phase 1. The preferred concept includes construction of a new building for the Administration and Operations Departments on the new vacant parcel. This preferred concept was chosen because of its street presence on Forest Hills Drive, visibility from Crater Lake Avenue, clean separation of public vs private space, and adjacencies for Departments to visitors and Operations to the Fleet.

Sustainable methods of development for Phase 1 are being evaluated. Initial concepts include storm water management through providing additional pervious surfaces and green roofs, roof mounted solar panel systems, electric vehicle charging, and the use of Cross Laminated Timber (CLT) construction which is an emerging industry in Oregon.



Department spatial relationship diagram



Workshop color block explorations

SECTION C - PHASE 1

RVTD MASTER PLAN

Opportunities

- Admin building separates parking areas.
- Multiple entrances and exits (including emergency bus exit).
- Admin building conforms to site grading for a single floor level.
- Strong visual presence from Forest Hills Dr.

Constraints

- Transportation further from fleet.
- Fuel & Wash renovation would be challenging for continuing operations during construction.

Building Square Footage:

Admin & Transportation	19,500 SF
(E) Fuel & Wash	2,000 SF
(E) Maintenance	10,300 SF

Parking:

	Provided	Desired
Fleet	48	
Contingency	0	
Down line (Included above)	0	
Administration		
Admin	27	
Visitor	10	
	37	37
Transportation & Operations		
Drivers	57	
Operations	8	
	65	101
(E) Maintenance	38	
(E) NRV	10	
Total	150	138



SECTION C - PHASE 1

NON-SELECTED SITE CONCEPTS

RVTD MASTER PLAN
3200 CRATER LAKE AVE, MEDFORD OR

Opportunities

- Operations closer to fleet.
- Fuel and Wash further from residential.

Constraints

- Admin building finished floor requires steps due to grading.
- Buses cannot exit to Forest Hills Dr.
- Fuel & Wash renovation would be challenging for continuing operations during construction.

Building Square Footage:

Admin & Transportation	19,500 SF
Fuel & Wash	7,200 SF
(E) Maintenance	10,300 SF
Future Maintenance	10,000 SF

Parking:

	Provided	Desired
Fleet	54	60
Contingency	0	8
Down line	0	10
	54	78 (-24)
Administration		
Admin	27	
Visitor	10	
	37	37
Transportation & Operations		
Drivers	57	72
Operations	8	8
Maintenance	18	21
NRV	23	25
	106	126
Total	143	163 (-20)



OPTION 1

12.14.2020



RVTD MASTER PLAN
3200 CRATER LAKE AVE, MEDFORD OR

Opportunities

- Strong visual presence from Crater Lake Dr.
- Multiple entrances and exits (including emergency bus exit).
- Fuel & Wash replacement less impact on operations.

Constraints

- Admin building finished floor requires steps due to grading.
- Requires replacement of fuel building.
- Fuel & Wash close to residential.

Building Square Footage:

Admin & Transportation	19,500 SF
Fuel & Wash	7,200 SF
(E) Maintenance	10,300 SF
Future Maintenance	10,000 SF

Parking:

	Provided	Desired
Fleet	60	60
Contingency	0	8
Down line	0	10
	60	78 (-18)
Administration		
Admin	27	
Visitor	10	
	37	37
Transportation & Operations		
Drivers	57	72
Operations	8	8
Maintenance	18	21
NRV	23	25
	106	126
Total	143	163 (-20)



OPTION 2

12.14.2020



Rogue Valley Transportation District
Space Needs Program

Date: 02.15.2020



Space	Space Components	Needs			Room Dims		GSF	Calculated SF	Notes
		Current Quant. (2020)	Future Quant. (2040)	Total	Width	Length			
Department:	Administration	1,361							
Department:	Transportation/Operations	5,819							
Department:	IT	971							
Department:	Finance	2,530							
Department:	Planning and Strategic Programs	2,529							
Shared Spaces	Shared Spaces	5,353							
Building Service Spaces	Building Service Spaces	2,109							
Total Required Building Area								20,670	Not including Maintenance Building SF
Existing Building Area								11,750	
	Administration & Warehouse Bldg	10,250							Combined SF of spaces
	Administration Building	5,670							
	Fleet Storage	3,280							
	Maintenance Shop	1,300							
	Transportation/Operation Building	1,500							
	Maintenance Building	-							10,300 SF of (e) building to remain
Additional SF Needed								8,920	
Department:	Administration								
1.01	General Manager Office	1	0	1	12	16	192	192	
1.02	Executive Secretary / Human Resource Office	1	0	1	12	16	192	192	
1.03	Human Resource Office	0	2	2	10	12	120	240	
1.04	Assistant General Manager Office	0	1	1	12	16	192	192	
1.05	Secure Storage Room	0	1	1	12	16	192	192	Sensitive Personnel Files
Subtotal								1,008	
Grossing Factor								35%	
Total Area								1,361	
Staff Total				6					

Space	Space Components	Needs			Room Dims		GSF	Calculated SF	Notes
		Current Quant. (2020)	Future Quant. (2040)	Total	Width	Length			
Department:	Transportation/Operations								
3.01	Manager Office	1	0	1	10	12	120	120	Locate with window to bus yard
3.02	Support Staff Office	1	0	1	10	10	100	100	
3.03	Office - Future Staff	0	4	4	8	10	80	320	Could be shared or open office
3.04	Training Office	0	1	1	10	22	220	220	Shared office for 2 people
3.05	Field Supervisors	1	0	1	0	0	0	-	Offsite location
3.06	Dispatch - Call Center	1	0	1	0	0	0	-	Offsite location
3.07	Secured Storage	0	1	1	10	12	120	120	Near transporation office
3.08	Conference Room	0	1	1	15	24	360	360	Shared with other Departments
3.09	Copy Workroom	0	1	1	10	15	150	150	Shared with other Departments
3.10	Break Area / Lounge /Ready Room	0	1	1	25	30	750	750	Includes area for 30 seats at tables and lounge space. 80-100 operators (including growth). Includes sign in area, game table, and cell phone charging area.
3.11	Vending / Kitchenette	0	1	1	12	20	240	240	Coffee, hot water, water cooler.
3.12	TV Area	0	1	1	12	20	240	240	
3.13	Men's Restrooms / Shower	0	1	1	10	30	300	300	2 WC + 2 U + 3 Lav + 2 showers
3.14	Women's Restrooms / Shower	0	1	1	10	30	300	300	3 WC + 3 Lav + 2 showers
3.15	Lockers	1	0	1	15	30	450	450	Accommodate for 1/2 height lockers for all the operators and
3.16	Misc. Storage Room	0	1	1	10	12	120	120	For uniforms, back stock of coats, hats, shirts, etc
3.17	Quiet Room	0	1	1	12	20	240	240	Space for 4 recliners
3.18	Exercise Room	0	1	1	10	20	200	200	2 to 3 pieces of equipment
3.19	Janitor Closet	0	1	1	8	10	80	80	
Subtotal								4,310	
Grossing Factor								35%	
Total Area								5,819	
Staff Total				8					

Space	Space Components	Needs			Room Dims		GSF	Calculated SF	Notes
		Current Quant. (2020)	Future Quant. (2040)	Total	Width	Length			
Department:	IT								
4.01	IT Systems Manager	1	0	1	10	15	150	150	Current shared office. Needs to have room for small meeting table and 2 guest chairs. Currently housed in another building. Would prefer to have location at the main complex
4.02	Technical Support Administrator	1	0	1	10	10	100	100	
4.03	Office - Future Staff	0	1	1	10	10	100	100	Depends on overall growth of company or services
4.04	Workbench Area	0	1	1	10	12	120	120	Adjacent to offices in open area. Bring vendors back to work on equipment.
4.05	Hotel Desk	0	1	1	4	6	24	24	Intern or outside vendor short-term use
4.06	Secure Storage	0	1	1	15	15	225	225	Enclosed room for IT equipment
Subtotal								719	
Grossing Factor								35%	
Total Area								971	
Staff Total				3					
Department:	Finance								Needs quiet space removed from lobby adjacent
5.01	Finance Manager	1	0	1	22	12	264	264	
5.02	Accounting/Procurement Specialist	1	0	1	20	20	400	400	
5.03	Accounting Specialist II	1	0	1	12	12	144	144	
5.04	Finance Accounting Specialist	1	0	1	10	12	120	120	
5.05	Receptionist	1	0	1	10	11	110	110	At front lobby space. Rest of finance plays backup
5.06	Future Positions	0	2	2	10	10	100	200	
5.07	Secured File Storage	0	1	1	20	30	600	600	3 years worth of files
5.08	Small Secured Room	0	1	1	6	6	36	36	For cash and checks temp storage, tokens, passes, titles to vehicles, etc
5.09	Printing and Copy room (department specific)		1		10	15	150		
Subtotal								1,874	
Grossing Factor								35%	
Total Area								2,530	
Staff Total				7					

Space	Space Components	Needs			Room Dims		GSF	Calculated SF	Notes
		Current Quant. (2020)	Future Quant. (2040)	Total	Width	Length			
Department:	Planning and Strategic Programs								
6.01	Manager Private Office	1	0	1	12	20	240	240	Planning and Strategic Programs Manager. Includes table and 4 guest chairs
6.02	Office assistant		1		10	10			
6.03	Shared Office for 2 staff	2	1	3	14	22	308	924	Associate Planner, Planning Tech, TDM Manager/Marketing Coordinator, Travel Trainer, Veterans Transportation Coordinator. Includes 2 guest chairs at each staff desk
6.04	Shared Office - Future Positions	0	1	1	10	22	220	220	2 Future positions, assumed 1 shared office
6.05	Hotel desk	0	1	1	4	6	24	24	
6.06	Fulfillment Center	0	1	1	12	20	240	240	Includes area for storage. Should be located near or with direct access to event vehicle
6.07	Dedicated Conference Room	0	1	1	15	15	225	225	Room for 6-15 seats. Can be shared with others
Subtotal								1,873	
Grossing Factor								35%	
Total Area								2,529	
Staff Total				9					

Space	Space Components	Needs			Room Dims		GSF	Calculated SF	Notes
		Current Quant. (2020)	Future Quant. (2040)	Total	Width	Length			
Shared Spaces									
8.01	Break Room & Eating Area	0	1	1	20	20	400	400	Shared for all staff
8.02	Training Room	0	1	1	30	20	600	600	Tables and chairs with computer setup. Dedicated training room shared between all staff. Room for 10-15 seats. Includes SF for adjacent storage room
8.03	Conference Room - Small	0	0	0	10	15	150	0	Room for 2-6 seats
8.04	Conference Room - Medium	0	0	0	20	15	300	0	Room for 6-15 seats
8.05	Conference Room - Large	0	0	0	35	28	980	0	Room for 15+ seats. Includes small AV closet. This is an existing large conference room, but will be combined with board room in future.
8.06	Community / Board Room	0	1	1	30	30	900	900	Room for 35-45 seats. Includes adjacent storage room
8.07	Copy / Work Room / Mail	1	0	1	26	15	390	390	Existing SF should be more than adequate, minus the breakroom and janitor supplies
8.08	Main Lobby	1	0	1	10	14	140	140	
8.09	Vault	1	0	1	12	15	180	180	
8.10	Misc. Storage Spaces	1	0	1	37	15	555	555	(E) Storage room.
8.11	Connex Storage Boxes	5	0	5	20	8	160	800	Located in warehouse. (4) for Admin, (1) for P&SP.
Subtotal								3,965	
Grossing Factor								35%	
Total								5,353	
Building Service Spaces									
9.01	Men's Restrooms	1	0	1	10	15	150	150	Existing restroom isn't this large
9.02	Women's Restrooms	1	0	1	10	15	150	150	Existing restroom isn't this large
9.03	Single Occupant Restroom	0	2	2	8	8	64	128	
9.04	Mechanical Room	0	1	1	20	30	600	600	
9.05	Janitor Room	0	1	1	8	8	64	64	
9.06	Electrical Room	0	1	1	10	15	150	150	
9.07	Janitor Supply Storage	0	1	1	10	20	200	200	
9.08	Computer Center / Server Room	1	0	1	10	12	120	120	Includes workstation in room
Subtotal								1,562	
Grossing Factor								35%	
Total								2,109	

Rogue Valley Transportation District
Space Needs Program

Date: 02.15.2020



Space	Space Components	Needs			Room Dims		GSF	Calculated SF for Current Quantites (2020)	Calculated SF for Future Quantites (2040)	Notes
		Current Quant. (2020)	Future Quant. (2040)	Total	Width	Length				
Type:	Agency Vehicle Parking									
1.01	Fixed Route Bus Parking									
	30-Foot Buses	10	-10	0	14	30	420	4,200	-	Not shown as being needed for 2040
	35-Foot Buses	35	25	60	14	35	490	17,150	29,400	Could be BEB in future
1.02	Paratransit Parking									
	20-Foot Vehicles	24	11	35	14	20		-	-	Stored offsite
	24-Foot Vehicles	5	0	5	14	24		-	-	Stored offsite
1.03	Down Line									10% of total revenue fleet
	Fixed Route Buses	5	1	6	12	35	420	2,100	2,520	
	Paratransit Vehicles	3	1	4	12	24	288	864	1,152	
1.04	Contingency Fleet									
	Standard Bus	8	0	8	12	35	420	3,360	3,360	
1.05	Non-Revenue Vehicles (NRV's)									
	Pool Vehicles	16	2	18	10	20	200	3,200	3,600	Incl. 8 EV now. Assume 100% EV in future.
	Maintenance	6	1	7	10	20	200	1,200	1,400	Diesel
Subtotal								32,074	41,432	
Circulation Factor								50%	50%	Assumes access to every vehicle (i.e. not stack parked)
Total Agency Vehicle Parking								48,111	62,148	
Type:	Employee / Visitor Parking									
2.01	Employee Parking									
	Administration	10	17	27	10	20	200	2,000	5,400	Future growth makes staff count +/- 25.
	Operations	4	4	8	10	20	200	800	1,600	
	Drivers	54	18	72	10	20	200	10,800	14,400	1.2 per bus.
	Maintenance	15	6	21	10	20	200	3,000	4,200	Based on response to programming questionnaire
2.02	Visitor Parking	10	0	10	10	20	200	2,000	2,000	
Subtotal		93	45	138				18,600	27,600	
Circulation Factor								100%	100%	
Total Employee / Visitor Parking								37,200	55,200	Accounts for ADA parking + landscaping in parking lot

Space	Space Components	Needs			Room Dims		GSF	Calculated SF for Current Quantities (2020)	Calculated SF for Future Quantities (2040)	Notes
		Current Quant. (2020)	Future Quant. (2040)	Total	Width	Length				
Type:	Other									
3.01	Emergency Generator	1	0	1	15	30	450	450	450	
3.02	Dumpsters									
	Trash	1	0	1	10	20	200	200	200	
	Recycle Metal	1	0	1	10	10	100	100	100	
	Recycle Paper	1	0	1	10	10	100	100	100	
Subtotal								850	850	
Circulation Factor								10%	10%	
Total Other								935	935	
Summary										
	Admin and Transportation/Operation Buildings							20,670		
	Maintenance Building							32,046		(including Warehouse/Parts Storage + Detailed Clean)
	Fuel & Wash							15,789		(including Chassis Wash Bay and Water Reclaim)
Total Building Area Needed								68,505		
	Agency Vehicle Parking							62,148		
	Employee / Visitor Parking							55,200		
	Other							935		
Subtotal Parking / Other								118,283		
Subtotal Building /Parking / Other								186,788		
	Site Circulation						50%	93,394		To be verified in design
	Landscape / Setbacks						15%	28,018		To be verified in design
	Stormwater Management						10%	18,679		To be verified in design
Additional Site Elements								140,092		
Total Site Area Needed								SF Acres	326,879 7.50	
Existing Site Area Available:										
	Existing (Tax Lot 500)						Acres	4.28		
	Adjacent Parcel (Tax Lot 800)						Acres	1.34		
Total Site Area Available									5.62	

SECTION C - PHASE 1

PROGRAMMING SPACE DIAGRAMS

ENVIRONMENT

Welcoming, collaborative, & organized department relationships were among strongly desired elements of a new campus atmosphere. These values align well with RVTD's branding, which emphasizes efficiency and improving quality of life in the Rogue Valley.

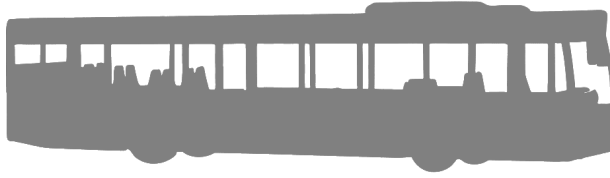
OFFICE CHALLENGES

While some spaces need privacy or secure document storage, other space can embrace a new environment with less physical barriers between people, which allows for collaboration when needed.

Privacy - particularly related to secured information, and phone conversations - is important to many staff.

GROWTH FOR THE FUTURE

As an organization, RVTD has grown faster than expected in the last 10 years. In order to accommodate the previous and future growth, more spaces that allow flexibility for future needs must be considered, while meeting the immediate needs of the staff.



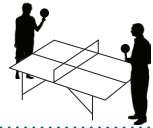
SERVICE



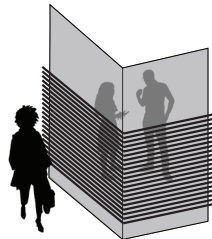
COLLABORATIVE



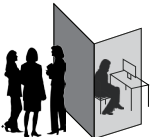
FLEXIBLE



FUN



PRIVACY



FOCUS



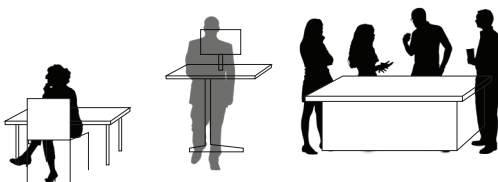
SECURITY



NOISE



SAFETY



FLEXIBILITY



GROWTH



STORAGE



PAPERLESS

SECTION C - PHASE 1

PROGRAMMING SPACE DIAGRAMS

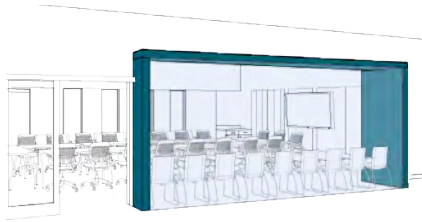
CONFERENCE ROOMS

There is a clear desire for adequate, available, and variable conference rooms.

SMALL rooms: employee interviews, & small staff meetings with 1-4 people.

MEDIUM room: team meetings, and staff trainings.

LARGE conference/board room: all-staff meetings, staff trainings, board meetings, and other large meetings throughout the year.



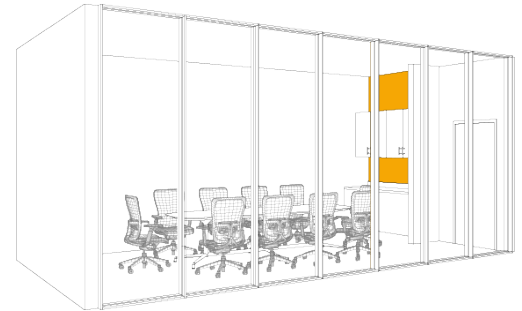
LARGE/BOARD ROOM (15+ SEATS)



TRAINING CLASSROOMS



SMALL (2-6 SEATS)



MEDIUM (6-15 SEATS)

WORK SPACES

A variety of work spaces were desired by each department, including private offices for sensitive information of shared offices for brainstorming, & accesible storage.



STORAGE



OFFICE (2 SEATS)



COLLABORATION

SHARED SPACES

There is a distinct desire for shared social spaces that will encourage cross-department collaboration and familiarity. These include:

- Break Room
- Lounge space
- Informal social spaces

Shared resources like a substantial copy/print/mail room and secure storage will be in high demand.



BREAK ROOM



COPY/PRINT



PRELIMINARY PROJECT DESCRIPTION

Project: Rogue Valley Transit District Master Plan (#2017)

Date: January 5, 2021

Introduction

The following is a preliminary project description of the building materials and systems envisioned for a new Admin & Operations building and associated site development for RVTDD, for use in the preparation of early cost estimates. PIVOT Architecture provided the information, in consultation with design team members including ZCS Engineering (Civil and Structural engineering), Systems West Engineers (Mechanical, Plumbing, and Electrical engineering) and Cameron McCarthy (Landscape Architecture). The materials and systems described here represent probable levels of scope, effort, and quality for the project based on our assessment of preliminary goals and prior to more detailed design. The information is organized using CSI Uniformat. Uniformat describes building and site systems (rather than organizations by product as in CSI Masterformat).

Assumed Construction start: Q2 2022

Assumed Design-Bid-Build construction contract with BOLI wage rates and other applicable public agency procurement laws

Information about the site and each of the building structure is provided below based on assumptions developed in the early design stages. The format is loosely based on CSI Unifomat, commonly referred to as the Outline Specifications.

Building: Administration and Operations Building

Code Summary

- Construction Type: Type V-B, non-separated
- Fire Sprinklered
- Number of Stories: Two stories
- Building Areas:
- Seismic Design Risk Category: Type II for administration & operations building. Type IV for Fuel Station (may be lowered with Risk Management Plan and local jurisdiction approval)
- First floor to second floor height: 14'
- Second floor to exterior wall top plate height: 12' (assume a pitched roof)

A. Substructure

A10. Foundations

1. Concrete
 1. 3,500 psi
2. Excavation
 1. Over excavate minimum 6" past bottom of footing for minimum 6" of structural fill.
3. Grading
 1. Perform grading in the dry summer months
 2. Slope subgrade as required to eliminate standing water during earthwork procedures.
4. Fills
 1. Material:
 2. Compaction: 95 percent of maximum dry density
 3. Maximum lifts: 8 inches
5. Strip Footings
 1. Dimensions: 36" wide x 15" deep x length of exterior walls
 2. Reinforcing:
 3. Extent: Provide at all exterior walls
6. Spread Footings
 1. Dimensions: 48" square x 24" deep
 2. Reinforcing:
 3. Extent: Provide at all column locations
7. Slab on Grade
 1. Thickness: 6"
 2. Reinforcing:
 3. Finish: Assume slab will be covered with flooring materials
 4. Slope: Slope to drain at rest rooms. Level all other locations

5. Provide Underslab Vapor Barrier; 15 mil thickness, directly over subgrade.
8. Perimeter foundation drain
 1. Slope to drain. Civil to pick-up.
9. Elevator pit
 1. Bentonite water-proofing, lighting, access ladder, sump.

B. Shell**B10. Superstructure**

1. Columns
 1. Wideflange or HSS columns at primary grid lines
2. Load Bearing Walls
 1. Structure: wood stud between steel columns
 2. Sheathing: exterior plywood
3. Floors
 1. 1st floor
 - a. Structure: Concrete slab – see above
 2. 2nd floor
 - a. Structure: Glu-lam beams with open web wood truss purlins
 - b. Sheathing: T&G plywood
4. Roof:
 1. Structure: Glu-lam beams with open web wood truss purlins
 2. Sheathing: 2 ½” metal decking, acoustical type – Epic dovetail style. (Or wood T&G decking)

B20. Exterior Closure

1. Walls
 1. Structure: Light wood framing
 2. Sheathing: Plywood
 3. Insulation: R-21 batt insulation at studs, 1 ½” continuous rigid insulation
 4. Weather barrier: Liquid applied
 5. Flashing: as needed
 6. Exterior Finish:
 - a. Assume brick veneer for 70% of building
 - b. Assume concealed fastener metal panel system, for 30% of building
 7. Interior Finish: 5/8” gypsum board
2. Windows
 1. Glazing: Standard high-performance glazing, minimal tinting
 2. Frame System: Aluminum storefront
 3. Window operation: 50% operable, 50% fixed
3. Doors
 1. Door: Aluminum storefront

2. Door Frame: Aluminum storefront
 3. Door Hardware: High-quality commercial hardware
 4. Glazing: Full-lite
 5. Access Control: Provide at all exterior doors (assume 4)
4. Skylight
 1. Assume standard-sized unit skylights with standard commercially rated insulation. Non-operable.
 2. Assume up to 8 unit skylights
5. Sunshade
 1. Frame/structure: Aluminum assembly by storefront manufacturer
 2. Extent: Windows on south side of building
 3. Finish: Matching Aluminum Storefront system

B30. Roofing

1. Roofing: Standing-Seam metal roofing
2. Slope: Assume 2:12 minimum, 5:12 maximum
3. Insulation: Rigid insulation, R-39 above roof structure
4. Drainage: Water directed to perimeter gutters and downspouts

C. Interiors**C10. Interior Construction**

1. Interior frame partitions:
 1. Frame/structure: Light wood framing
 2. Acoustical control: Extend walls to structure, and acoustical insulation at all offices, conference rooms, and meeting rooms.
 3. Finish: See "Interior Finishes" below.
2. Interior Doors:
 1. Door: Wood
 2. Door Frame: Hollow Metal
 3. Door Hardware: High-quality commercial hardware
 4. Glazing: assume half-lite glazing at 50% of interior doors
 5. Access Control: none
3. Casework
 1. Cabinet: Plastic laminate
 2. Counters: Solid surface
4. Interior Specialities – Toilet Rooms
 1. Restroom accessories: standard components
 2. Toilet partitions: solid phenolic partitions
 3. Shower enclosure: tiled enclosures, glass doors (assume 6 showers)
5. Interior Specialties - Misc
 1. Fire extinguishers and cabinets: Provide fire extinguisher and cabinet for every 3,000 sf

2. Marker boards: Provide 4 ft x 12 ft at all conference rooms and meeting rooms
3. Tack boards: Provide 4 ft x 6 ft at all conference rooms and meeting rooms. Provide 4 ft x 12 ft at all Break Rooms and Copy Rooms

C20. Stairways

1. Open Stair(s) – assume 2:
 1. Treads: tbd
 2. Railings: Steel frame with cable infill
 3. Railing Cap: wood
 4. Handrail: wood
 5. Support: steel stringer

C30. Interior Finishes - tbd

1. Floors
 1. Porcelain tile: --
 - a. Location(s): -
 2. Linoleum: --
 - a. Location(s): -
 3. Rubber Tile: -
 - a. Location(s): -
 4. Carpet Tile:
 - a. Location(s): -
 5. Base: -
 - a. Location(s): -
2. Walls
 1. Material: Gypsum board
 2. Finish: standard
3. Ceilings
 1. Offices and Conference rooms
 - a. Ceiling material: Acoustic Ceiling
 - b. Ceiling support: Support ceiling grid from structure; provide seismic support/bracing per building code.
 2. Operators report, break rooms: Open to structure with suspended acoustical ceiling clouds
4. Trim
 1. Material: Birch 1x base, chair rail, and window sills at conference rooms.
5. Showers
 1. Walls: porcelain tile
 2. Floor: porcelain tile

D. Services

D10. Conveying Systems

1. Elevator – assume 1 elevator, code required size to fit emergency responder gurney and other Code requirements

1. Operation: -
2. Cab Size: -
3. Finishes: -

D20. Plumbing Systems

1. Sanitary:

1. Material: Cast iron,

All sanitary waste, storm water, and underground vent piping shall be the following:

1. Hubless, cast-iron soil pipe and fittings; CISPI hubless-piping couplings; and coupled joints.

Aboveground, vent piping shall be[any of] the following:

1. Galvanized-steel pipe, drainage fittings, and threaded joints.
2. Solid-wall ABS pipe, ABS socket fittings, and solvent-cemented joints.
3. Solid-wall PVC pipe, PVC socket fittings, and solvent-cemented joints.
4. Dissimilar Pipe-Material Couplings: Unshielded, Non-pressure transition couplings.

2. Floor Drains:

- Finished floor - Josam Series 30000-S coated cast-iron floor drain. Two-piece body with double drainage flange. Invertible non-puncturing flashing collar, weepholes, bottom outlet and adjustable satin Nikaloy 5-inch round strainer. Primer tapping.

Provide floor drains in restrooms and Janitors closet.

3. Water heating

1. Heat Source: Heat Source: - An electric storage tank-type water heater will be provided to serve restroom lavatories, mop sink and kitchen sink in the new admin building.
2. Capacity: -40 gallon

4. Fixtures:

1. Urinals: Wall-mounted porcelain, waterless.
2. Water Closets: Wall-mounted porcelain
3. Lavatories: Counter supported at break room
4. Janitors Sink: floor mounted stainless steel

5. Hose bibs: 3/4"

1. Location(s)/quantity: - 4 hose bibbs one on each corner of the building.

6. Roof drains

1. J.R. Smith Fig. 1010 coated cast-iron roof drain, large polypropylene locking dome, underdeck clamp ring, gravel stop, large sump with wide roof flange sump receiver and bottom outlet.

D30. HVAC Systems

1. Heating
 1. -Rooftop packaged units with natural gas heating.
2. Cooling
 1. -Rooftop Packaged units.
3. Ventilation
 1. -Rooftop unit with full economizer
4. Ductwork
 1. -Galvanized steel rectangular and round duct.
5. Diffusers/Grilles
 1. -Supply diffusers similar to Titus TDC.
 2. -Return/exhaust grilles similar to Titus 350 RL.
6. Balancing
 1. -Manual balancing dampers on supply and return branch ducts serving spaces.
7. Commissioning:
 1. -

D40. Fire Protection Systems

1. Fire Sprinklers
 1. Riser: 4" wet system fire riser including control valve, alarm check valve, flow switch, and test and drain assembly. Assumes a backflow prevention device and fire department connection are located on site.
 2. Heads: Quick response upright, pendent, and sidewall sprinklers. Chrome plated in finished spaces exposed to view; rough bronze in unfinished spaces not exposed to view.
2. Fire Alarm
 1. Manual system.
 2. Fire Alarm Panel:
 - a. Digital fully addressable
 - b. Listed for connection with central station
 3. Detectors: Integral addressable module.
 4. Pull Stations: Double action with key operated switch. Clear plastic enclosure.
 5. Horn: Electric vibrating polarized. Sound level of 90dBA measured 10 ft from device.
 6. Strobes: Flashing shall be in a temporal pattern, synchronized with other units. 15/3075/100cd, selectable in the field.

D50. Electrical Systems

1. Power Distribution
 1. Main switchboard: Utility section and distribution section. Copper bussing, group mounted, full rated, circuit breakers. Assume 3Phase, 4-Wire, 480/277V, 1000A, 42KAIC rating.
 2. Dry Type Transformers: Copper winding, Class 220.

3. Automatic transfer Switch: 4-pole, non-maintenance bypass.
4. Panelboards: Copper bussing, door in door, bolt on fully rated molded case breakers.
5. Wiring: Copper, THNN and THWN.
6. Conduit:
 - a. Underground: PVC
 - b. Indoor: EMT
 - c. No MC cabling
2. Generator: Diesel, 3Ph4W, 480/277V, 800KW, Stand by with 24 hour belly tank.
3. Lighting – Interior
 1. LED
 - a. Drivers: 85% efficient, PF \geq 0.95, 0-10V Dimming.
 - b. Modules: Minimum CRI 80, 4000K color temp, minimum rated life of 50,000 hours.
4. Lighting – Exterior
 1. LED
 2. Low temperature ballast/drivers, 0-degree F start.
5. Site Lighting
 1. See Site Development
6. Lighting Controls
 1. Digital Lighting System: Base of design – Acuity n-Light system. Assume occupancy sensors with 0-10V digital dimmer in all spaces.
7. Devices
 1. Receptacles: 125V, 20A heavy duty.
 2. Disconnects:
 - a. Mechanical Equipment: 600V Heavy duty
 - b. Elevator: Fused, shunt trip with fire alarm aux contacts.
 3. Wall Plates: Stainless steel.

D60. Low Voltage Systems

1. Data/Phone.
 1. Assume (2) 4-post relay rack with double sided vertical cable management.
 2. Cable Tray: 12" ladder type in IT room, 12"x2" basket type in hallways.
 3. Assume Cat 6a cable:
 - a. Plenum Rated
 - b. 100—ohm, 23 AWG solid copper.
 4. Wireless Access Point: Integral antenna, 5Ghz Peak. 2-port module.
2. Access Control
 1. Controller board
 - a. Microprocessor based with on-board battery backed RAM.
 - b. Minimum of 8 supervised alarm inputs.

- c. Minimum of 4 Form C relay outputs.
- 2. Card Readers (Assume on all exterior doors)
 - a. Weather resistant.
 - b. Adjustable range
 - c. Uni-directional or bi-directional.
- 3. Security
 - 1. Assume exterior security cameras on all sides of building and on site light poles capturing primary vehicle drive and site access points.
- 4. Cable TV
 - 1. Equipment by Cable TV provided. Distribution of coax cable from head in equipment to each outlet by contractor-
- 5. Paging
 - 1. Assume owner provided paging equipment. Speakers in designated areas by contractor.

E. Equipment & Furnishings

E10. Equipment

- 1. -

E20. Furnishings

- 1. Blinds
 - 1. Mecho type bottom up blinds at 50% of all exterior windows at all spaces, except vehicle and shop spaces.
- 2. Workstations
 - 1. Owner Furnished, Owner Installed
- 3. Furniture
 - 1. Owner Furnished, Owner Installed

F. Other Building Construction

F10. Special Construction

- 1. --

F20. Selective Demolition

- 1. See phasing plan, demo existing Operations building.

G. Building Site work

G10. Site Preparation

- 1. Site Demolition
 - 1. Building demo – 14,350-sf
 - 2. Buried tanks – assume 4 total
 - 3. Above ground tanks – assume 3 total
 - 4. All other demo/clearing – 165,650-sf
- 2. Excavation:
 - 1. Approximate exaction area (building) – 27,000 sf

2. Approximate excavation area (all other areas) – 153,000-sf
3. Grading
 1. Approximate area (without building footprints) – 160,000-sf
4. Fills:
 1. Materials: $\frac{3}{4}$ minus to 4 inch minus
 2. Placement: 8" lifts max
 3. Compaction: 95% ASTM D698
5. Erosion Control Procedures:
 1. Erosion control (ESC) measures:
 - a. 2000-LF Sediment fence,
 - b. (20) catch basin protection,
 - c. (2) 25' x 100' construction entrances,
 - d. (1) 18' x 18' concrete wash outs
 2. Duration: maintain all ESC measures until final stabilization of the site accepted by DEQ (after construction is complete)

G20. Site Improvements

1. Vehicle Drives
 1. Material: Primary access drive. 8" thick, reinforced concrete
 2. Fills: 12" minimum ODOT spec $\frac{3}{4}$ " minus
 3. Extent: Where shown on drawings
2. Parking Lots
 1. Material: 3" of level 2 ~ $\frac{1}{2}$ " dense asphalt with 64-22 binder
 2. Fills: 12" minimum ODOT spec $\frac{3}{4}$ " minus
 3. Extent: Where shown on drawings
3. Sidewalks/Pedestrian Paving
 1. Material: 3,500 psi, 4" thick
 2. Reinforcing: No reinforcing for non-vehicular areas
 3. Finish: Broom finish, curing agent
 4. Fills: 4" of $\frac{3}{4}$ " minus typical
 5. Extent: Where shown on drawings. (Drawing needs to show a sidewalk connection from building entry to street frontage. Assume and additional 500sf of pavement for this walkway.)
4. Exterior Steps and Ramps
 1. Material: 3,500 psi, 5" thick
 2. Reinforcing: #4 @ 24" o.c., e.w
 3. Finish: Broom finish, curing agent
 4. Fills: 4" of $\frac{3}{4}$ " minus typical

5. Extent: Where shown on the drawings
5. Site Markings
 1. Painted parking lot striping and markings

G30. Site Development

1. Fences and Gates
 1. Gates:
 - a. Material: same as fence
 - b. Height: same as fence
 - c. Operation: Motorized cantilever
 - d. Quantity: two
 2. Fence:
 - a. Material: Vinyl coated chain link
 - b. Height: 7 feet
 - c. Extent: As shown on the drawings
2. Retaining Walls
 1. Foundation: 12" deep by 5 ft wide.
 2. Materials:
 - a. Under 4' – unreinforced stack block walls (8" x 16" units)
 - b. Over 4' – reinforced stack block walls or cast-in-place concrete
 - c. 4,000 psi concrete
 3. Thickness: Varies, 6" minimum, 8" typical
 4. Reinforcing
 - a. #4 and/or #5 at 12" – 18" o.c., e.w.
 5. Waterproofing: Sheet bentonite waterproofing, protection board, drainage
Retaining wall at stormwater planters will be an 8" pcc wall with reinforcement, 12" height above finish grade of planter soil, curb height at adjacent surfaces, and 18" minimum below grade to top of footing. Planting soil description below
3. Trash Enclosures
 1. Foundation: Concrete; 8 inch slab on grade with 16 inch thickened edge.
 2. Structure: HSS columns and roof structure with metal roofing. 7'-4" CMU walls on three sides, chain link fence with slats on open end.
 - a. 8" x 16" units (i.e. 8" thick walls)
 3. Size: approximately 10 ft x 12 ft
 4. Pavement: 6" thick reinforced concrete with turndown edge
 5. Roofing: Standing seam metal, free spanning.

4. Bike Enclosures – same as trash enclosure
 1. Foundation:
 2. Structure:
 3. Pavement:
 4. Roofing:
5. Site Lighting:
 1. Pole/fixture: 20 ft high pole mounted LED luminaires
 2. Base: 6' deep, 24" dia. with standard reinforcing base

G40. Site Amenities

1. Site Furnishings
 1. Benches: 6 ft metal bench, galvanized and painted (2)
 2. Trash Receptacles: 6 ft metal bench, galvanized and painted (2)
2. Bike Racks
 1. Style: Single loop, stainless steel
 2. Extent/Quantity: Assume 8
3. Exterior Signs
 1. Monument Sign: Assume one, CMU base, 4 ft high by 12 ft wide; raised metal letters (assume 30); base lighting.
 2. Directional Sign(s): Assume 24 standard metal signs on 7 ft pole.
4. Flag Poles
 1. Height: 30 ft for American flag, and 25 ft for Oregon flag.
 2. Foundation: 3 ft by 5 ft by 3 ft
 3. Operation: Internal halyard
 4. Lighting: Ground lighting
 5. Quantity: Two; (1) for American flag, and one for Oregon flag.

G50. Site Utilities

1. Storm Sewer System
 1. Piping/Conveyance:
 - a. 'HDPE' pipe, 6" to 18" diameter, 12" typical
 - b. 'PVC' pipe within 5' of buildings, 6" diameter typical
 - c. Perforated 'PVC' for foundation drains and underlying swales, 6" diameter typical
 - d. Cleanout risers (6" diameter typical), spaced every 100' max. along pipe runs and at the upstream end of each pipe
 2. Collection:
 - a. Vehicular areas: 24" square pre-cast concrete catch basins with H-20 load rated grates, equipped with hood & trap

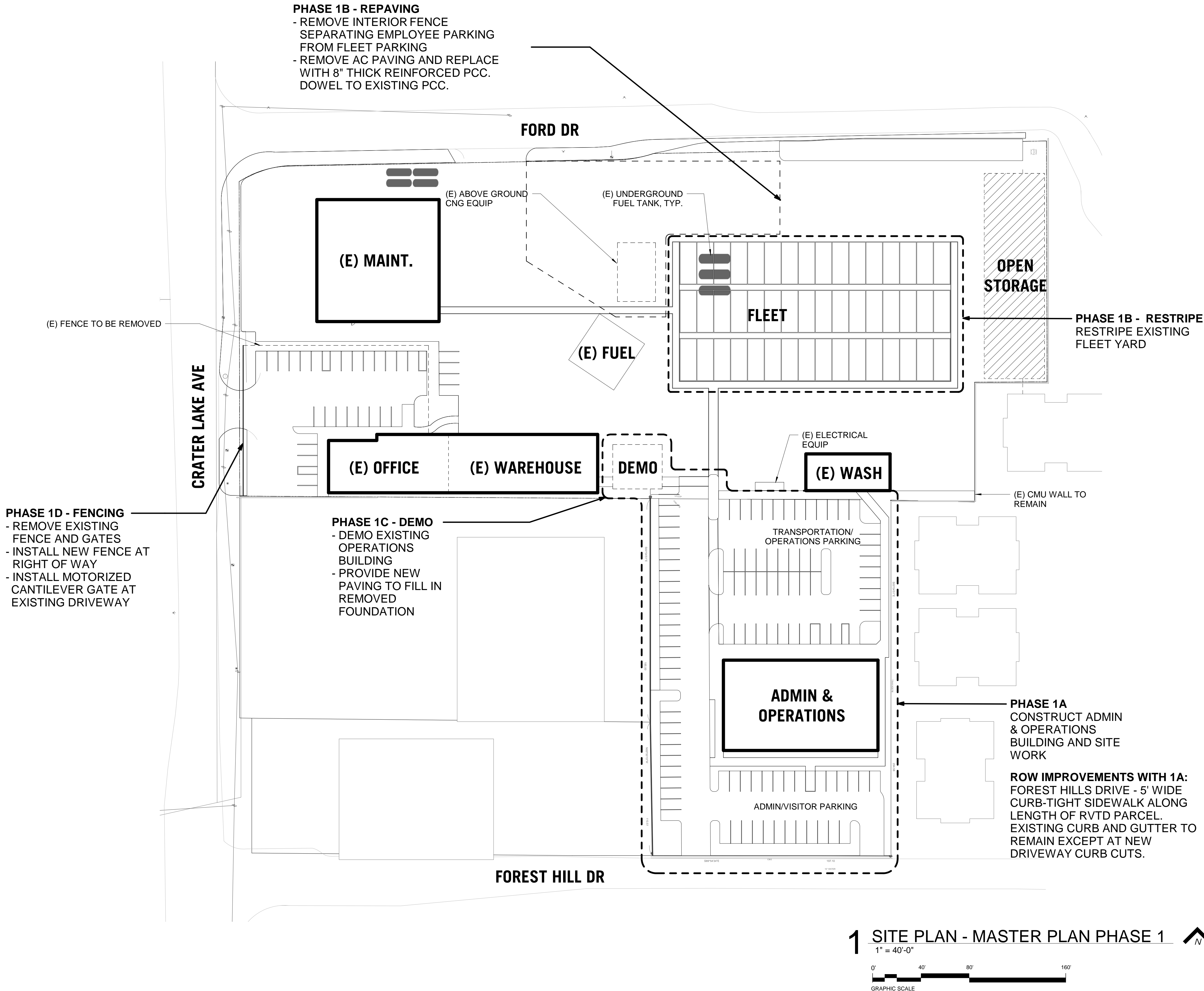
- b. Landscape areas: 18" diameter nyloplast area drains with atrium grates, equipped with hood & trap
 - c. At fueling station: 4" wide heavy duty trench drain (assume 'NDS' duraslope) with heavy duty steel grates
 - d. Oil/water separator: assume 'Oldcastle' pre-cast concrete 1,000 gal, model 576-SA-1000
 - e. No flow through area drains in system
 - 3. Extent: Where shown on drawings
- 2. Storm Water management
 - 1. At grade option:
 - a. Primary treatment/detention: filtration swale/pond, assume 15' width, assume 100' length, 2' depth, 3" topping, 18" amended soil media, 12" round drain rock <4", unlined
 - b. Preliminary treatment/conveyance: parking lot bioswales, 8' wide, 12" deep, 12" amended soil media, 12" round drain rock <4", unlined
 - 2. Below grade option:
 - a. 'Stormtech' model SC-740 arched chambers, 12" stone encasement, all sides, fully lined, assume treatment with proprietary 'isolation' row (assume 2200 sf, 1/3 of which is isolation treatment row)
 - 3. Extent: not shown on drawings, refer to areas listed herein
- 3. Sanitary Sewer
 - 1. Schedule 40 'PVC' piping; 6" typical
 - 2. Cleanout risers (6" diameter typical), spaced every 100' max. along pipe runs and at the upstream end of each pipe
 - 3. Manholes – pre-cast 48" diameter concrete manholes at an average depth of 6 to 7 feet, assume 5 total
 - 4. Extent: Where shown on the drawings
- 4. Domestic Water
 - 1. Piping
 - a. Schedule 40 pressure rated 'PVC' piping; 2" typical for standard services
 - 2. Approved backflow prevention assembly (approved by OHA, MWC, sized to match domestic service)
 - 3. 36" cover, typical (30" minimum)
 - 4. Extent: Where shown on the drawings
- 5. Fire Suppression Water
 - 1. Hydrants:
 - a. Mueller 'Super Centurion' hydrant or similar (as approved by MWC)
 - 2. Fire suppression supply:
 - a. Public (assume on-site fire hydrants served by public lines): Class 54 'DIP', assume 8" diameter
 - b. Private (service between fire vault and building): Class 150 'DR-18 C900' pipe, assume 6" diameter

3. Extent: Where shown on the drawings
6. Power
 1. Schedule 40 'PVC' conduit, 4" diameter typical
 2. Extent: Where shown on the drawings
7. Gas
 1. ASTM D2513 polyethylene piping, 1" diameter
 2. Extent: Where shown on the drawings
8. Phone
 1. Schedule 40 'PVC' conduit, 4" diameter typical
 2. Extent: Where shown on the drawings
9. Cable
 1. Schedule 40 'PVC' conduit, 4" diameter typical
 2. Extent: Where shown on the drawings
10. Data/Fiber
 1. Schedule 40 'PVC' conduit, 4" diameter typical
 2. Extent: Where shown on the drawings
11. Power Generator
 1. Per electrical (outside of ZCS scope and knowledge)

G60. Landscaping and Irrigation

1. Soil Prep
 1. 18" imported loam at plant beds and stormwater planters, 9" imported loam at lawns. 3" mulch, typical.
 2. Imported soil shall be amended on-site with select fertilizer, compost and other organics.
2. Irrigation
 1. Supply: 2" BFP in underground vault, stubbed off of potable service to new building or fire. Master valve and flow sensor downstream of irrigation BFP.
 2. Controls: All new irrigation shall be 2-wire with decoders. Controller shall be commercial rated smart technology connected to ethernet and allow for both 2-wire and conventional wire conversion. Assume wall mounted within building. Baseline's BaseStation 3200 may be used as an example for pricing.
 3. Zones: Industrial strength globe valve with electric solenoid powered control and pressure regulating device. Assume 10 zones at new site with 50 zone minimum capacity.
 4. Piping: Sch40 mainline and lateral line. Mainline will loop full perimeter of improvement area. Sch40 sleeves under pavement, two at each location.
 5. Heads: All heads shall be pop-up on swing riser with stream rotary nozzles or subsurface drip line. Drip lines shall have (1) 4" indicator pop-up micro-spray nozzle per zone. All rotary heads shall be pressure regulating at the body. Stormwater Planters will be rotary heads, other plant bed may be drip irrigation. Drip rings at all new tree plantings (20).
 6. Provide allowance for trenching on existing site to connect existing irrigation to remain to the new controller.
3. Planting

1. Lawn: Hot and cool season blend from Pickseed or Sunmark. Seeded with top dressing or hydroseeded (no top dressing). I think we only have plant bed identified on plan, but good to have in case we add it.
2. Shrubs:
 - a. Parking Lot Screening and at building: Mix of 24" to 36" tall shrubs, ornamental grasses, and groundcovers. All hardy to southern Oregon, requiring minimal watering and maintenance. Assume a 24-36" on-center spacing, 1-gallon minimum size.
 - b. Stormwater Planters: Native grasses, sedges, rushes, and groundcover per local stormwater management manual recommendations and required quantities. Assume a 12" on-center spacing, 1-gallon minimum size.
3. Trees: 2" Caliper or larger deciduous, or 8' height coniferous. Assume deciduous trees spaced 30-ft on-center along frontage and sideyard lot lines. Assume no trees in stormwater planters or within 10-ft of driveway aprons. Assume each parking lot island or plant bed has at least one tree. Total quantity: 20 trees minimum.



ROGUE VALLEY TRANSPORTATION DISTRICT MASTER PLAN PHASE ONE



STATEMENT OF PROBABLE COST

Prepared for:
PIVOT Architecture
Eugene, OR

Prepared by:
Steve Gunn

President
Construction Focus, Inc.

ROGUE VALLEY TRANSPORTATION DISTRICT
MASTER PLAN PHASE ONE
Summary of Probable Cost

1/2

BASE BID	QTY	UNIT	\$/UNIT	TOTAL \$	1A Bldg	1A Site	1A ROW	1B	1C	1D
The Building					19,500					
STANDARD FOUNDATIONS	9,750	SF	17.57	171,296	171,296					
SLAB ON GRADE	9,750	SF	12.23	119,263	119,263					
FLOOR & COLUMN CONSTRUCTION	9,750	SF	28.00	273,000	273,000					
ROOF & COLUMN CONSTRUCTION	9,750	SF	23.00	224,250	224,250					
EXTERIOR WALLS	19,500	SF	27.70	540,145	540,145					
EXTERIOR WINDOWS	19,500	SF	12.71	247,845	247,845					
EXTERIOR DOORS	19,500	SF	2.51	48,945	48,945					
ROOF COVERINGS & FLASHINGS	9,750	SF	24.02	234,183	234,183					
ROOF OPENINGS	19,500	SF	1.28	25,000	25,000					
INTERIOR PARTITIONS	19,500	SF	25.17	490,815	490,815					
INTERIOR WINDOWS	19,500	SF	1.13	22,035	22,035					
INTERIOR DOORS	19,500	SF	11.02	214,890	214,890					
FITTINGS AND SPECIALTIES	19,500	SF	2.49	48,555	48,555					
STAIR CONSTRUCTION	19,500	SF	2.66	51,870	51,870					
WALL FINISHES	19,500	SF	2.82	54,990	54,990					
FLOOR COVERINGS	19,500	SF	8.74	170,430	170,430					
CEILING FINISHES	19,500	SF	9.54	186,030	186,030					
ELEVATORS AND LIFTS	19,500	SF	4.15	81,000	81,000					
PLUMBING	19,500	SF	19.00	370,500	370,500					
HVAC DISTRIBUTION SYSTEMS	19,500	SF	29.00	565,500	565,500					
FIRE SPRINKLERS	19,500	SF	5.35	104,325	104,325					
ELECTRICAL	19,500	SF	38.03	741,585	741,585					
LOW VOLTAGE	19,500	SF	10.07	196,365	196,365					
OTHER EQUIPMENT	19,500	SF	0.06	1,170	1,170					
FIXED FURNISHINGS	19,500	SF	11.02	214,890	214,890					
The Building Hardcost:				5,398,878	5,398,878					

ROGUE VALLEY TRANSPORTATION DISTRICT
MASTER PLAN PHASE ONE
Summary of Probable Cost

2/2

BASE BID					QTY	UNIT	\$/UNIT	TOTAL \$	1A Bldg	1A Site	1A ROW	1B	1C	1D
Site Development														
SITE DEMOLITION & RELOCATIONS				53,438							399	40,667	11,237	1,135
SITE EARTHWORK				135,928						105,562	1,940	26,788	1,638	
PAVING & CURBS				761,709						339,484	79,296	312,547	30,382	
SITE DEVELOPMENT				82,756						67,500				15,256
LANDSCAPING				94,282						94,282				
SITE UTILITIES				218,190						218,190				
SITE ELECTRICAL				217,750						213,000				4,750
Site Development Hardcost:				1,564,052						1,038,017	81,634	380,002	43,257	21,141
HARDCOST TOTAL:									5,398,878	1,038,017	81,634	380,002	43,257	21,141
Markups to the Hardcost														
Estimating Contingency				18.00%	1,253,327				971,798	186,843	14,694	68,400	7,786	3,805
General Conditions				7.00%	575,138				445,947	85,740	6,743	31,388	3,573	1,746
Insurance				0.40%	35,166				27,266	5,242	412	1,919	218	107
Profit & Overhead				6.00%	529,594				410,633	78,951	6,209	28,903	3,290	1,608
Performance Bond				1.20%	112,274				87,054	16,738	1,316	6,127	698	341
Escalation				5.00%	473,421				367,079	70,577	5,550	25,837	2,941	1,437
Solar & Green Energy				1.50%	149,128				115,630	22,232	1,748	8,139	926	453
OR Gross Receipts Tax				0.57%	57,519				44,598	8,575	674	3,139	357	175
Markups Total:					3,185,566				2,470,007	474,897	37,348	173,853	19,790	9,672
BASE BID TOTAL:									7,868,884	1,512,914	118,982	553,855	63,048	30,814
<p>NOTES</p> <p>Wage rates: BOLI</p> <p>This estimate assumes competitive bidding by local contractors</p> <p>Use of a CMGC or special selection process for bidders will increase the estimated cost</p> <p>EXCLUSIONS</p> <p>Design fees, permit fees, system development fees, utility hookup charges, testing, BOLI fee.</p> <p>Hazardous materials abatement, moving expenses, anti-graffiti coating, fireproofing, & commissioning.</p> <p>Overexcavation, rock excavation, wet weather sitework.</p>														

ROGUE VALLEY TRANSPORTATION DISTRICT
MASTER PLAN PHASE ONE
Summary of Alternates

1/1

ALTERNATES		TOTAL \$
The Building		
ALT-1: CLT CONSTRUCTION	Add CLT decking in lieu of trusses & plywood	510,447
ALT-2: SOLAR PANELS	Add 100kW solar panel system to 2/3 of roof area	400,814
ALT-3: GREEN ROOF	Add vegetative & PVC roofing in lieu of standing seam to 1/3 of roof area	100,927
Site Development		
ALT-4: PERVIOUS CONCRETE PAVING	Add 4,050 SF pervious concrete in lieu of asphalt in parking lot	72,999
ALT-5: EV CHARGING STATIONS	Add 16 ea Bosch EV800 electric vehicle charging bollards	116,465
<p>NOTES All Alternate Totals include Markups to the Hardcost as shown on Summary of Probable Cost. Pursuit of ALT-2 would reduce or eliminate "Solar & Green Energy" Markup to Base Bid. Savings not reflected in Alternate Total. Wage rates: BOLI This estimate assumes competitive bidding by local contractors Use of a CMGC or special selection process for bidders will increase the estimated cost</p> <p>EXCLUSIONS Design fees, permit fees, system development fees, utility hookup charges, testing, BOLI fee. Hazardous materials abatement, moving expenses, anti-graffiti coating, fireproofing, & commissioning. Overexcavation, rock excavation, wet weather sitework.</p>		

Commercial charging solutions



Specifications	Single Pedestal	Dual Pedestal	Single Pedestal	Dual Pedestal
Adjustable Amperage	12-32 Amps	12-32 Amps x2	Input Current	30 Amps
Voltage	96-264 VAC	96-264 VAC x2	Breaker Size	40 Amps
Cord Length	23 ft	23 ft x2	Temperature Rating	-40°F to +122°F (-40°C to +50°C)
Weight	125 lbs	150 lbs	Enclosure	NEMA Type 4X; rain, sleet, snow, ice, cold, and heat resistant
Dimensions	Diameter 7.2" Height 58"	Diameter 7.2" Height 68"	Input/Output Power	7.2 kW

EV810 Wall Mount Specifications			
Adjustable Amperage	12-32 Amps	Input/Output Power	7.2 kW
Voltage	96-264 VAC	Wall Plug	6-50P
Cable length	18 ft	Enclosure	NEMA 4X Type 4; rain, sleet, snow, ice, dust, cold, and heat resistant
Weight	14 lbs	Mounting	Wall or Pedestal
Dimensions	14"L x 5"W x4"D		



EV800 Series

EV800 Series charger stations provide reliable, safe EV charging in all conditions.

Available as a single pedestal, dual pedestal, or wall mount charging station, the 1/4" gauge steel bollard protects your investment and is impact resistant.

Each charger features the same fully weatherproof, adjustable output with 18-foot or 23-foot cables and galvanized steel construction. The EV800 Dual Bollard can charge 2 vehicles simultaneously at full power.

The EV810 charging station is wind, rain, snow, sleet, ice, cold and heat resistant, making it ideal for indoor or outdoor installation. It meets or exceeds NEMA 4X, NEC 625, SAE J1772 standards and is ETL and cETL listed.

Commercial charging solutions

EV2000 Series

The EV2000 can charge compatible vehicles to 80 percent in as little as 30 minutes. Manufacturers are building more electric vehicles with DC charging capability to provide more convenience and faster charging to their customers.

The compact, lightweight design can be pedestal or wall-mounted and can be operated as a standalone unit or connected to an OCPP compatible back end network. The 25kW EV2000 can reduce installation costs by only requiring a 240V circuit compared to other stations needing a 480v 3 phase circuit.



Specifications	
Part Number ¹	EL-52240
Input Voltage	208v, 240v, 277v single phase
Cord Length	20 ft
Weight	104 lb assembled (65 lb with modules removed)
Dimensions	600mm x 250mm x 450mm (23"x 10" x 18")
Mounting	Wall or Pedestal
Input Current	165 Amps max
Connector	J1772 SAE DC Combo
Enclosure	IP54: indoor / outdoor
Power Output	25kW
Optional Additions	Pedestal - EL-52240-GNT Cable Dock - EL-52240-DOCK

To purchase a Bosch charging station, visit boschevsolutions.com or call +1 877 805-3873

Robert Bosch GmbH
Bosch Automotive Service Solutions
28635 Mound Road
Warren, MI 48092

boschevsolutions.com
+1 877 805-3873



BOSCH
Invented for life

Electric vehicle charging solutions

boschevsolutions.com

Bosch Level 2 and DC Combo Fast Charging for your home or business.



BOSCH
Invented for life

RVTD Phase 1 Master Plan
Preliminary Project Cost Projections

1.20.2021

		unit		low end		high end
Construction Costs (see attached cost estimate for breakdown)		SF	\$/SF		\$/SF	
Building and Site Construction						
	New Office Building, 19,500 SF	19500		\$5,398,878		
	Site Development			\$1,564,052		
	Subtotal Construction			\$6,962,930		
	Mark-ups to the Construction Cost			\$3,185,566		
	Total Construction			\$10,148,496		\$0
Soft Costs						
Regulatory Agencies and Permits and Fees						
	Building Permit Costs	2%		\$202,970	3.0%	\$304,455
	Systems Development Charges	2%		\$202,970	4.0%	\$405,940
	Utility Connections	Allowance		\$50,000		\$100,000
Architect Engineer Fees						
	A/E Fees - all disciplines	15%		\$1,522,274	18.0%	\$1,826,729
Owner Services						
	Geotechnical Engineering	Allowance		\$25,000		\$40,000
	Site Surveying	Allowance		\$15,000		\$25,000
	Testing & Inspection Services (code required)	0.5%		\$50,742.48	0.5%	\$50,742.48
	Systems Commissioning	0.5%		\$50,742.48	0.5%	\$50,742.48
	Owner's Insurance - Builder's Risk, etc.	1.0%		\$101,484.96	1.0%	\$101,484.96
	Hazmat Abatement	Allowance		\$0		\$0
	Legal Services	Allowance		\$25,000		\$35,000
	Moving Expenses	Allowance		\$15,000		\$25,000
	Temporary Storage Facilities - lease	Allowance		\$15,000		\$25,000
	Furniture: offices, conferences, operator break	Allowance		\$100,000		\$175,000
	Total Soft Costs			\$2,376,184		\$3,165,094
	Subtotal Project (Construction and Soft Costs)			\$12,524,680		\$13,313,590
	Owner's Overall Project Contingency	12%		\$1,502,962	15.0%	\$1,997,038
	Total Project costs			\$14,027,642		\$15,310,628
<p><i>Note: All "Soft Costs" are rough allowances of typical expenses based on similar experience, no estimates have been obtained. They should be considered in the aggregate and are typically 25-30% of a project's construction costs.</i></p>						

SECTION D- PHASE 2

SECTION D - PHASE 2

OVERVIEW OF PROJECT

Additional masterplan studies were explored for phase 2 to address future needs and expansion of the fleet maintenance spaces. A full evaluation of the fleet maintenance building and operations was not scoped as part of the masterplan study. Instead, a high-level program was developed by WSP to identify the space needs and help evaluate the existing Maintenance and Fuel & Wash operations while planning for a future expansion. The conclusion is that the existing maintenance building will not be able to meet the needs of the district within 10 years. Some aspects of the existing facility are already strained or performing below industry standards.

To test the master plan configuration and the location of the new Administration and Operations building, several layouts were developed to accommodate the 20 year and beyond growth needs for the maintenance shop. This study assumed an idealized layout and size for the maintenance shop, fuel, and wash facilities. The various maintenance options validated the location of Phase 1 building and determined that additional property to the south of the campus would be needed to meet the 2040 program needs of the Fleet Maintenance, Fuel & Wash, and Fleet Parking.

Preliminary Space Program (see Pivot program for administrative and transportation spaces)

A	B	C	D	E	F	G	H	I	J
Description	Space Standard	Existing 2020		Needed 2020 (Baseline)		2040 (20 Years)		Remarks	
		Qty	Area	Qty	Area	Qty	Area		
Fleet	Fixed Route 30' CNG	4		10				Could be BEB in future	
	Fixed Route 35' CNG	23		22		60			
	Fixed Route 35' Diesel	13		13					
	Total Fixed Route	40		45		60			
	Paratransit 20' Cutaway	24		27		35		Only Maintained on site (not parked or operated) Incl. 8 EV now. Assume 100% EV in future. Diesel	
	Paratransit 24' Cutaway	5		5		5			
	Total Paratransit	29		32		40			
	Pool Vehicles (NRV)	16		18		18			
	Maintenance NRV	6		6		7			

1	Maintenance												
2	Maintenance Manager	[PO]	12	x	12	144			1	144	1	144	
3	Maintenance Office	[PO]	15	x	20	300			1	300	1	300	Including maintenance manual library + files
4	Copy / Workroom	[E]	10	x	10	100			1	100	1	100	Including office storage
5	Service Desk Area		6	x	10	60			1	60	1	60	Adj. to Maintenance Office
6	Men's Restroom / Locker / Shower	[E]	15	x	25	375			1	375	1	375	1 WC + 2 U + 2 Lav + 2 showers + 22 full lockers
7	Women's Restroom / Locker / Shower	[E]	10	x	15	150			1	150	1	150	1 WC + 1 Lav + 1 shower + 4 full lockers
8	Custodial Room	[E]	8	x	10	80			1	80	1	80	
9	Mechanic Breakroom	[E]	20	x	30	600			1	600	1	600	12 to 15 people + vending
10	Parts Storage												
11	Parts Office	[PO]	10	x	12	120			1	120	1	120	
12	Shipping & Receiving		20	x	20	400			1	400	1	400	
13	Parts Storeroom		50	x	85	4,250			1	3,850	1	5,000	50 square feet per bus, ultimate built in Phase 2
14	Tire Storage		20	x	40	800			1	800	1	800	Storage for 100 bus tires (1-year supply).
15	Tool Crib	[E]	10	x	15	150			1	150	1	150	
16	Repair Bays												
17	Preventive Maintenance Bays, Bus		20	x	50	1,000			1	1,000	1	1,000	1 per 50 buses
18	Preventive Maintenance Bays, Paratransit		20	x	50	1,000			1	1,000	1	1,000	1 per 50 buses
19	Running Repair Bays, Bus		20	x	50	1,000			2	2,000	3	3,000	1 per 20 buses
20	Running Repair Bays, Paratransit		20	x	50	1,000			2	2,000	2	2,000	1 per 20 buses
21	NRV Repair Bay		20	x	35	700	1						To be accommodated in a Paratransit Repair Bay
22	Multi-Purpose Bay		30	x	80	2,400			1	2,400	1	2,400	Training, advertising, campaign, new bus processing.
23	Existing Bus Repair Bays						4						
24	Detail Clean Bays	[E]	20	x	75	1,500			1	1,500	2	3,000	1 per 50 buses
25	Cleaning Equipment Room	[E]	10	x	15	150			1	150	1	150	Near Detail Clean Bays

Preliminary Space Program (see Pivot program for administrative and transportation spaces)

A		B		C		D		E		F		G		H		I		J	
Description				Space Standard		Existing 2020		Needed 2020 (Baseline)		2040 (20 Years)		Remarks							
						Qty	Area	Qty	Area	Qty	Area								
Fleet				Fixed Route 30' CNG		4		10								Could be BEB in future			
				Fixed Route 35' CNG		23		22				60							
				Fixed Route 35' Diesel		13		13											
				Total Fixed Route		40		45				60							
				Paratransit 20' Cutaway		24		27				35		Only Maintained on site (not parked or operated) Incl. 8 EV now. Assume 100% EV in future. Diesel					
				Paratransit 24' Cutaway		5		5				5							
				Total Paratransit		29		32				40							
				Pool Vehicles (NRV)		16		18				18							
				Maintenance NRV		6		6				7							
Electronics / Farebox Repair Shop				10	x	15	150			1	150	1	150						
Common Work Area / Rebuild Area				20	x	50	1,000			1	1,000	1	1,000						
Welding Shop				20	x	30	600			1	600	1	600						
Component Clean														See Chassis Wash under Fuel and Wash					
Handwash / Safety Shower / Used Oil Drop				8	x	12	96			1	96	1	96						
Floor Scrubber Parking / Dump Area				8	x	10	80			1	80	1	80						
Portable Equipment Storage				20	x	50	1,000			1	1,000	1	1,000						
Tool Box Storage				20	x	25	500			1	500	1	500	10 tool boxes					
Body Repair and Paint														Not required					
Tire Repair																			
Tire Repair Bay														Done in Running Repair Bays					
Tire Shop / Storage				20	x	40	800							See Parts Storeroom. Tire work contracted off-site					
Building Maintenance																			
Building Maintenance Shop		[E]	20	x	50	1,000			1	1,000	1	1,000							
Building Maintenance Storage		[E]	20	x	50	1,000			1	1,000	1	1,000							
Lube / Compressor Room		[E]	15	x	30	450			1	450	1	450	ATF, EC, EO, CG, GO, WO						
Subtotal										23,055		26,705							
Circulation Factor				20%						4,611		5,341							
Total Maintenance										27,666		32,046							

Existing Maintenance Facility

First Floor	9,996	Not ADA accessible
Upper Level	1,099	
Warehouse	5,400	
Total Maintenance	16,495	

Preliminary Space Program (see Pivot program for administrative and transportation spaces)

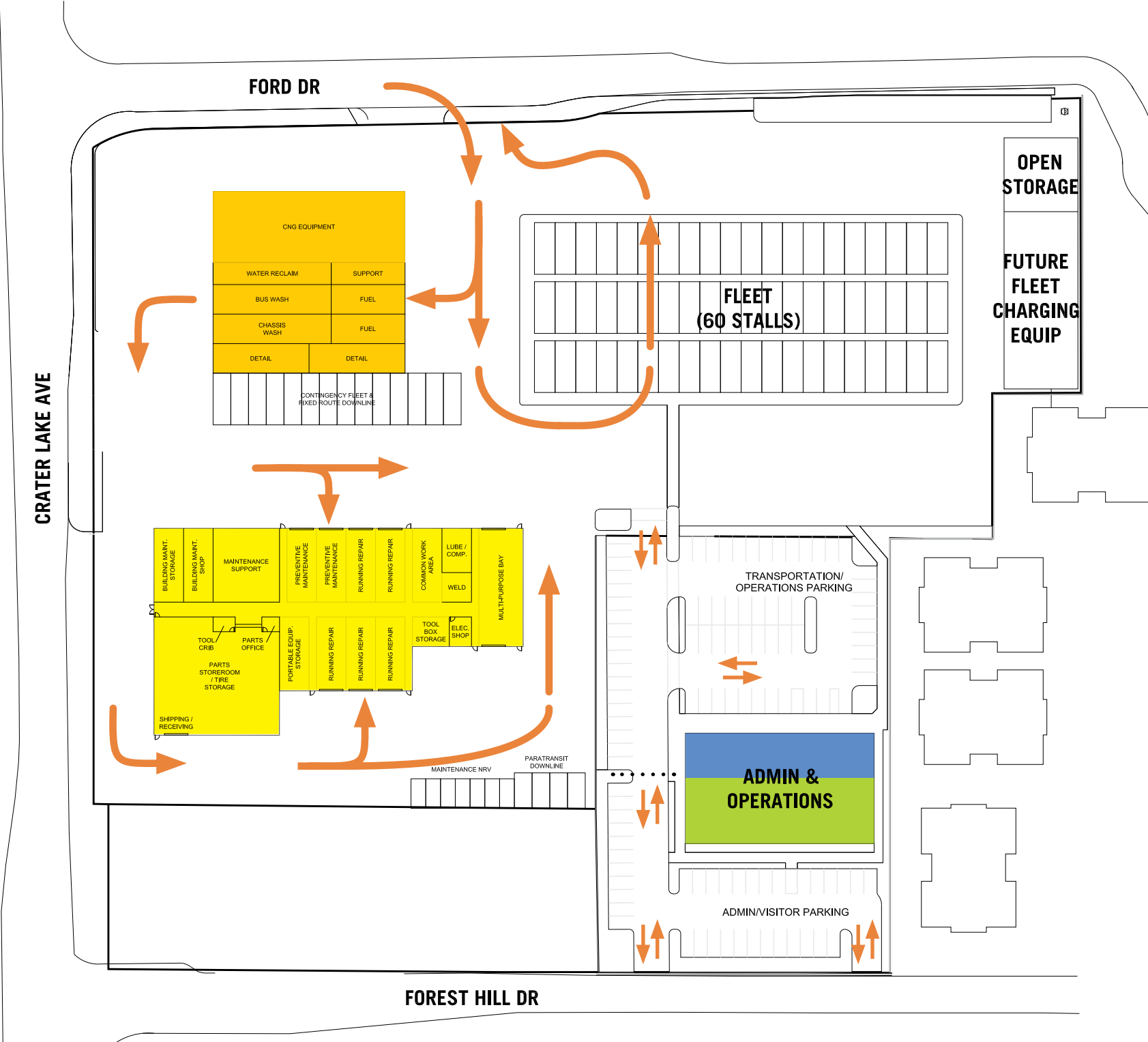
A	B	C	D	E	F	G	H	I	J
Description	Space Standard	Existing 2020		Needed 2020 (Baseline)		2040 (20 Years)		Remarks	
		Qty	Area	Qty	Area	Qty	Area		
Fleet	Fixed Route 30' CNG	4		10				Could be BEB in future	
	Fixed Route 35' CNG	23		22		60			
	Fixed Route 35' Diesel	13		13					
	Total Fixed Route	40		45		60		Only Maintained on site (not parked or operated) Incl. 8 EV now. Assume 100% EV in future. Diesel	
	Paratransit 20' Cutaway	24		27		35			
	Paratransit 24' Cutaway	5		5		5			
	Total Paratransit	29		32		40			
	Pool Vehicles (NRV)	16		18		18			
	Maintenance NRV	6		6		7			

1	Fuel and Wash												
2	Fuel Postions	[C]	20	x	50	1,000			2	2,000	2	2,000	Articulated bus will not be fully covered
3	Control Room	[E]	8	x	10	80			1	80	1	80	
4	Vault / Money Counting Room	[E]	15	x	20	300			1	300	1	300	
5	Vacuum Equipment Room	[E]	10	x	15	150			1	150	1	150	
6	Lube / Compressor Room	[E]	10	x	20	200			1	200	1	200	Assuming separate from Maintenance Building
7	Gender Neutral Restroom	[E]	8	x	8	64			1	64	1	64	
8	Bus Washer	[E]	20	x	80	1,600			1	1,600	1	1,600	
9	Water Reclaim / Wash Equipment Room	[E]	15	x	80	1,200			1	1,200	1	1,200	
10	Chassis Wash	[E]	20	x	50	1,000			1	1,000	1	1,000	With vehicle lift
11	CNG Compressor / Storage Equipment	[X]	48	x	105	5,040			1	1,100	1	5,040	
12	Emergency Generator for CNG Equipment	[X]	8	x	25	200			1	200	1	200	
13	CNG Equipment Electrical Room	[E]	15	x	48	720			1	720	1	720	
14	BEB Charging System Component Area	[X]	15	x	120	1,800			1	1,800	1	1,800	Transformers, switchgear, chargers

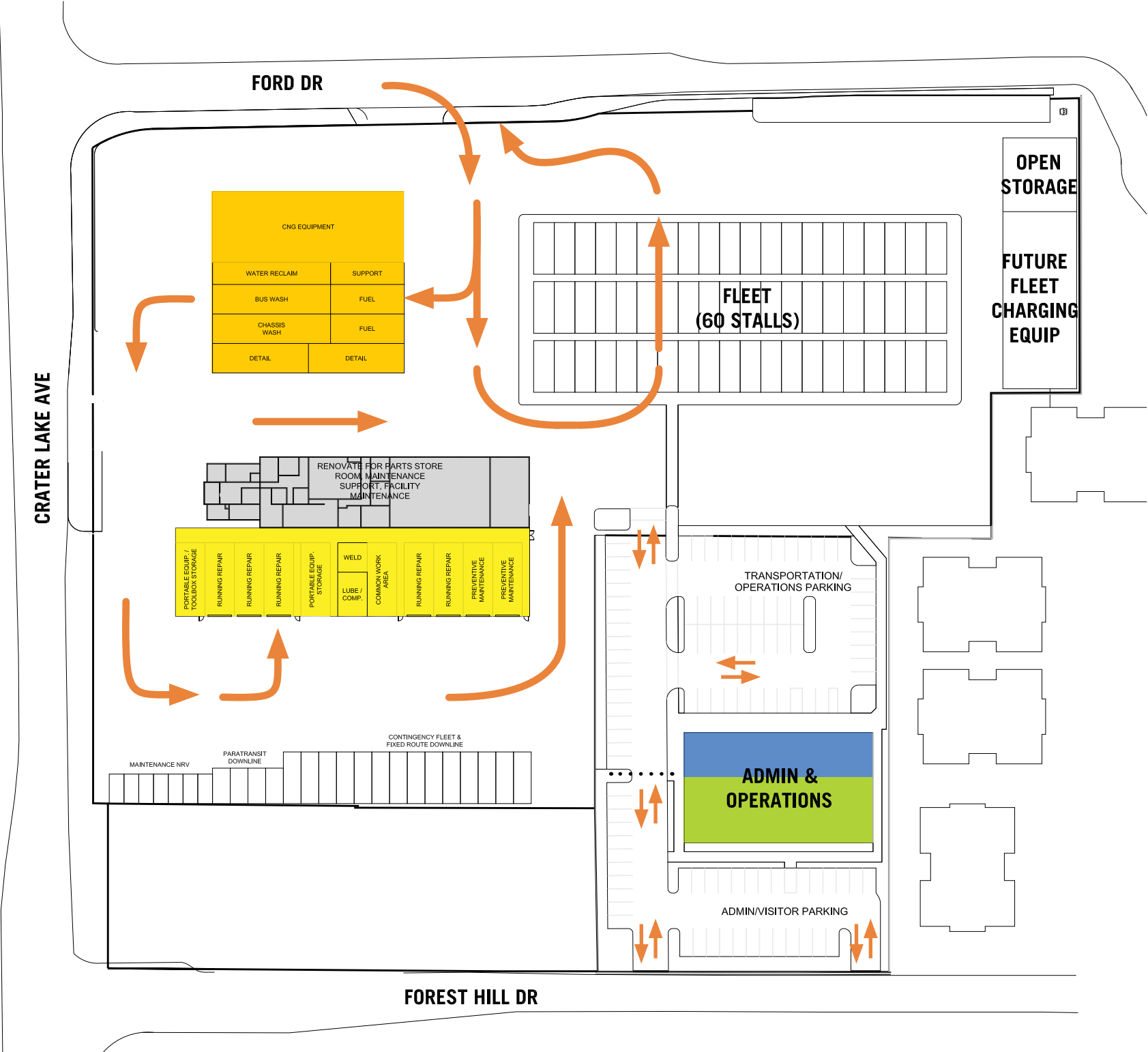
15	Subtotal								10,414		14,354
16	Circulation Factor			10%					1,041		1,435
17	Total Fuel and Wash								11,455		15,789

18	<u>Existing Fuel and Wash Facility</u>			
19	Fuel Canopy	1,400	30' x 46'-6"	
20	Wash Building	2,100	30' x 70'	
21	CNG Equipment Area	1,100		
22	Total Maintenance	4,600		

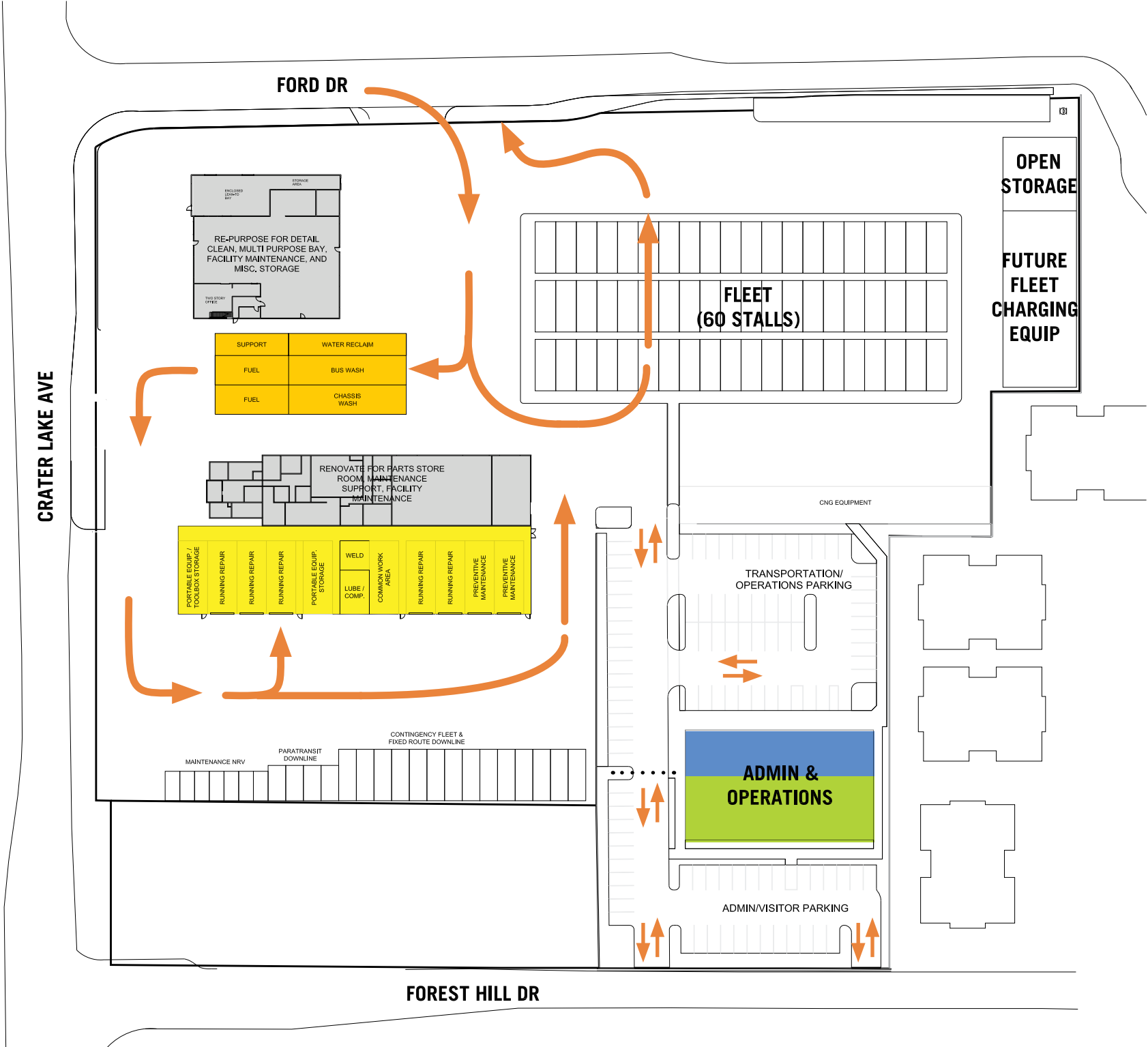
RVTD MASTER PLAN
3200 CRATER LAKE AVE, MEDFORD OR



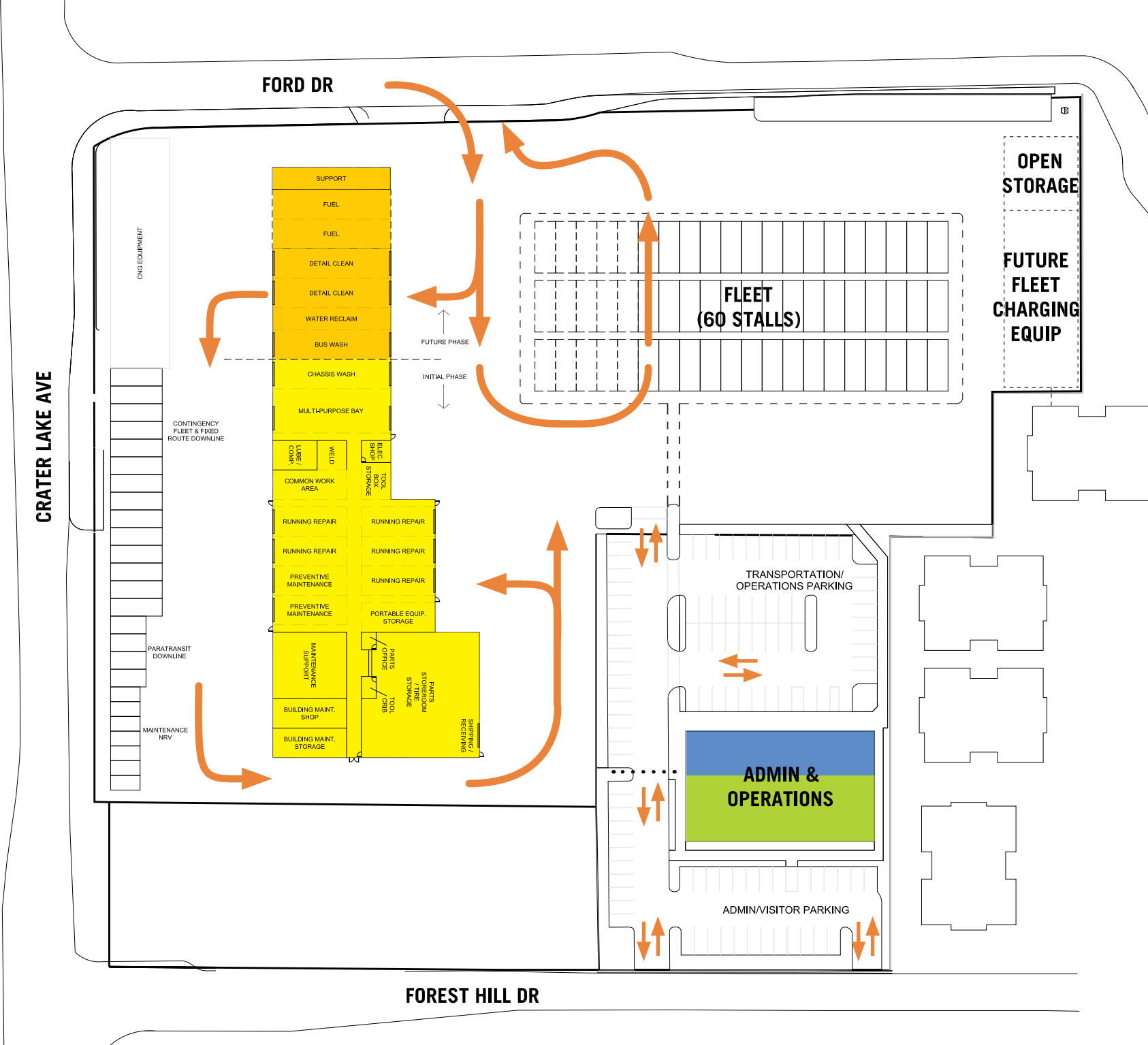
RVTD MASTER PLAN
3200 CRATER LAKE AVE, MEDFORD OR



RVTD MASTER PLAN
3200 CRATER LAKE AVE, MEDFORD OR



RVTD MASTER PLAN
3200 CRATER LAKE AVE, MEDFORD OR



APPENDIX

APPENDIX

PHASE 1A: CONSTRUCT NEW ADMIN & OPERATIONS SITE



APPENDIX

PHASE 1B: RESTRIPE EXISTING FLEET YARD AND REPAVING



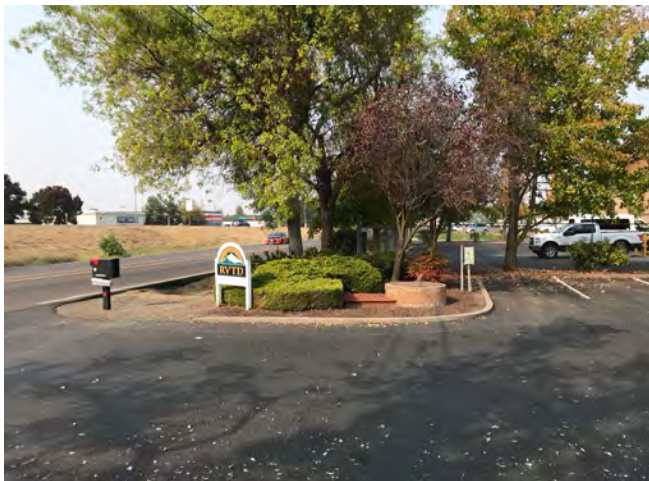
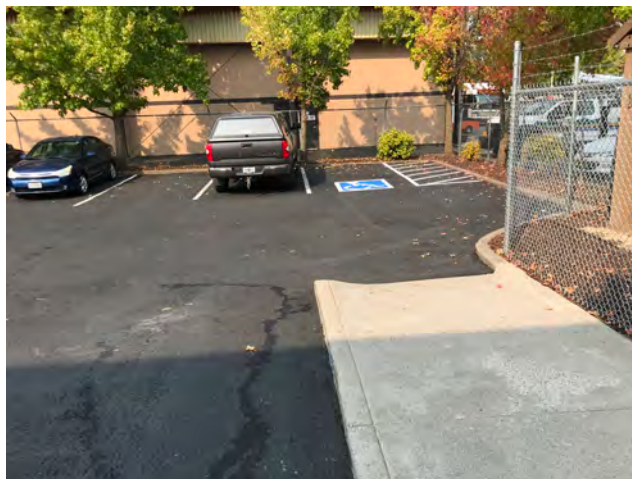
APPENDIX

PHASE 1C: DEMO EXISTING OPERATIONS BUILDING



APPENDIX

PHASE 1D: REPLACE FENCING AND INSTALL NEW GATE





PIVOT Architecture

44 West Broadway, Suite 300
Eugene, OR 97401

t. 541.342.7291

pivotarchitecture.com