



# PROGRAMMING REPORT

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**City of Bend Public Works  
Facility Study**  
Bend, Oregon

February 2, 2015



**BLRB** architects



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# Section One

## Project Overview



## Introduction

The City of Bend Public Works Facility Study Design Team of BLRB Architects and Maintenance Design Group has been tasked with documenting the City's existing sites, facilities, and functions performed by the following departments:

- Right of Way (Street) Operations and Maintenance
- Facilities Division
- Fleet Maintenance
- Fire Department
- Police Department
- Utilities
  - ✓ Utility Support Services
  - ✓ Environmental Services
  - ✓ Operations and Maintenance

Each department has completed programming questionnaires distributed by the Design Team. These questionnaires were followed up with a series of programming interviews with key staff to stimulate dialogue relating to staff, vehicle projections, office, shop, and storage space requirements, as well as general operating practices. The interviews allow the Design Team the opportunity to gain valuable insight for the development of this Programming Report to generate design data.



## Background

The City of Bend Public Works has realized their existing facilities and working conditions do not meet their standards. The City population is 80,000 and is expected to reach nearly 120,000 by 2030 and the City of Bend Public Works will require facilities which are capable of supporting their provided services.

## Project Objectives

The focus of the study is to evaluate and determine if the departments listed above can be centrally located at one site to provide better facilities to increase operational efficiency and improved working environments. Although it may not be feasible within the existing site constraints, it is ideal to keep Right of Way, Facilities Division, and Fleet Maintenance together. The Public



Work staff does not expect to fit the Utilities department on the existing 15th Street site. Each department will be included in the master planning sessions to provide the Design Team with valuable feedback.

The Design Team will also look to reuse the existing sites and include the department listed below. The reuse of existing sites will save the City of Bend site acquisition costs and are currently in ideal locations following interviews with each department. However, the construction will likely require phasing and impact the operations and layout of each site.

- Public Works 15th Street Site (Right of Way, Facilities Management, Fleet Maintenance, Police Department)
  - ✓ Fire Department is seeking to add a new fire station at this location
- Boyd Acres (Utilities)

## Purpose and Use

The purpose of this document is to define operational and maintenance tendencies, future staffing needs, functional requirements, and space needs by way of programming planning, which will serve as a general basis for design of the new facilities. The Design Team interviewed the City of Bend Right of Way, Facilities Management, Fleet Maintenance, Fire Department, Police Department, and Utilities to ensure that the functional requirements, including circulation and proximity relationships are appropriately addressed in the Conceptual Design.



## Methodology

The best facility design projects begin with the Design Team gaining or already having an understanding of the functions or operations to be performed within the facility. To prepare this report, information was gathered through programming questionnaires, facility tours, staff interviews, data collection, observations, and other discussions. This approach provides the Team with valuable insight and direction to include all stakeholders in the design of the facilities.

## Report Overview

This Programming Report consists of the following chapters:



## **Section One - Project Overview**

Describes the background and gives an overview of the project.

## **Section Two - Basis for Design**

Provides a summary of the more qualitative planning issues that were noted during interview sessions with each stakeholder. The summary includes a description of each group's responsibilities, hours of operation, staffing counts, vehicle parking, vehicles maintained, affinities, and a list of key planning issues. All of this is compiled for consideration during future planning and design efforts.

## **Section Three - Space Needs Program**

Presents a detailed listing of space requirements for each department included in this study. The intent of the program is to identify program spaces to fulfill the current and future facility needs. Programmed spaces are further defined by their quantity, area, and any remarks significant to design.

## **Section Four - Design Charrette - Pilot Butte**

Presents site concepts for Pilot Butte developed and presented at on-site design charrette. The purpose of the design charrette is to bring each key stakeholder together to provide feedback on design concepts developed by the Design Team.

## **Section Five - Design Charrette - Boyd Acres**

Presents site concepts for Boyd Acres developed and presented at on-site design charrette. The purpose of the design charrette is to bring each key stakeholder together to provide feedback on design concepts developed by the Design Team.

## **Section Six - Opinion of Cost**

Presents a preliminary estimate of construction cost prepared by BLRB Architects and MDG.



# Section Two

## Basis for Design



## Right of Way (Streets) Operations and Maintenance

### Function

The Right of Way (Streets) Operations and Maintenance Department provides street maintenance services to Bend. This department performs a wide array of work and services throughout the year. These services include: fleet maintenance, street preservation, striping, sign and marking maintenance, concrete repair and construction, street sweeping, snow and ice control, landscaping, and support for other divisions. Transportation operations engineering, signal maintenance, bridge maintenance, and municipal cemetery services are also provided.

Currently, Right of Way (ROW) Operations and Maintenance operates out of the Public Works 15th Street site. This site is not completely secured and is prone to theft. The ROW department alone is responsible for various vehicles, materials, and storage requirements due to the wide-ranging tasks.

### Staffing

Current hours of operations for Right of Way staff are 6:00 AM to 5:00 PM, Monday through Friday. Table 2.A indicates staffing levels.

**Table 2.A - Right of Way Operations and Maintenance Staff Summary**

<b>Staffing</b>			
	<b>Existing</b>	<b>2024 Program</b>	<b>2034 Program</b>
Director	1	1	1
Manager	1	1	1
Supervisor	3	4	4
Program Tech II	1	1	1
Transportation Eng	1	2	2
Executive Asst	1	1	1
OS I & OS III	2	3	3
Crew Leads	4	5	6
Sexton	1	1	1
Eng. Associate	1	2	2
Utility Workers	26	30	36
Temp Help	16	20	22
Sweep Crew (PT)	6	6	6
<b>Total</b>	<b>64</b>	<b>77</b>	<b>86</b>

### Right of Way Vehicles

Table 2.B lists Right of Way Vehicles.

**Table 2.B - Right of Way Operations and Maintenance Vehicle Summary**

<b>Parking Requirements</b>			
	<b>Existing</b>	<b>2024 Program</b>	<b>2034 Program</b>
Sm Misc Vehicle	18	22	26
Md Misc Vehicle	5	6	10
5-Yarder Chassis	22	23	26
10-Yarder Chassis	0	14	16
Paint Truck	1	1	1
Pick-up Trucks	29	33	40
Backhoe	2	2	2
Graders	2	2	2
Loaders	2	2	2
Md Trailers	12	12	12
Extra Lg Trailers	1	1	1
<b>Total</b>	<b>94</b>	<b>118</b>	<b>138</b>

## Key Planning Issues

The following key planning issues need to be considered during the design of the Right of Way spaces:

### Office Areas

- Director and Manager offices should be sized to include a desk, files, computer, and small meeting area
- Transportation Engineer office should be sized to include desk, files, computer, and layout table
- Offices should be sized to include a desk, files, and computer

### Support Areas

- Provide multiple conference rooms for small staff meetings
- Provide computer workstations adjacent to the Crew Room
- Provide Men's and Women's Locker Room
  - ✓ Can be shared with other departments, if necessary

### Shop Areas

- Provide Sign Shop with Bench for layout; Material and record storage; Capability to drive truck (rig) in
- Provide Welding Shop with electrical utilities, bench space, staging floor space; Material Storage
- Provide Paint Shop and Storage for walk behind paint equipment; Storage for thermal plastic

## Facilities Division (Building Maintenance)

### Function

The Facilities Division is responsible for cleaning, maintaining, repair, and small construction projects in City-owned facilities as well as assisting in planning of future City facilities. Examples of City-owned facilities include: City Hall, Bond Annex, Franklin Annex, Wall Annex, Bend Centennial Parking Plaza, Public Works 15th Street, Police Department, and Public Works Utilities Annex. Facilities does not maintain the Fire Department or water reclamation facilities.

Currently, Facilities Division operates out of the Public Works 15th Street site. The Facilities Division areas of the facility study will include offices, shared areas, and shop and storage areas.

### Staffing

Current hours of operations for Facilities Division staff are 7:00 AM to 4:00 PM, Monday through Friday. Table 2.C indicates staffing levels.

**Table 2.C - Facilities Division Staff Summary**

Staffing			
	Existing	2024 Program	2034 Program
Division Manager	1	1	1
Maint Lead	1	2	2
Maint Tech	2	4	6
<b>Total</b>	<b>4</b>	<b>7</b>	<b>9</b>

### Facilities Division Vehicles

Table 2.D lists Facilities Division vehicles.

**Table 2.D - Facilities Division Vehicle Summary**

Parking Requirements			
	Existing	2024 Program	2034 Program
Pick-up Trucks	2	3	4
Trailer w/scis. lift	1	1	1
<b>Total</b>	<b>3</b>	<b>4</b>	<b>5</b>

### Key Planning Issues

The following key planning issues need to be considered during the design of the Facilities Division spaces:

#### Office Areas

- Manager office should be sized to include a desk, files, computer, small meeting area and drafting table
- Maintenance Lead and Techs should be provided with computer workstations

#### Support Areas

- Crew Room should be sized to include computer workstations, files, and layout table
- Provide Men’s and Women’s Locker Room
  - ✓ Can be shared with other departments, if necessary



- Provide Facility Division Library adjacent to Crew Room and sized to include files, layout table, shelving for plans, deliverables, and products

### Shop Areas

- Shop Area should be sized to include table saw, cut off saw, drill press, sanders, dust collection system, air compressor, materials storage areas, flammable materials storage, workbenches, large workbench for cabinetry
- Secure Tool Crib should be sized to include storage cabinets
- Provide Portable Equipment Storage dedicated to all portable equipment
- Provide miscellaneous storage areas for wood stock, carpet, sheet stock, fasteners, plumbing, paint, adhesives, and roofing products

## Fire Department

### Planning Issues

The Fire Department currently has five existing facilities located throughout the City of Bend. Four of the facilities are roughly 12,000 square feet and is the ideal size for a new station. The other station is 7,000 square feet and inadequately sized for the Fire Department's station needs. Each site varies between one and seven acres. However, the Fire Department believes that a 7,000 square foot fire station would be of adequate size for a new station in this area.

The one acre site is too constrained and a new site will need to be 1.5 acres, minimum.

The Fire Department prefers to be located near the current Public Works 15th Street site if not located on the same site. The new fire station will include offices, shared spaces, storage, apparatus (vehicle) storage, and emergency event facilities and supplies.

The station will be occupied at all times to respond to emergencies. The entire station will be required to be connected to an emergency generator with fuel for three days.

The following key planning issues need to be considered during the design of the Fire Department spaces:

- Need quick access to City street to respond to emergencies
- Access to Fuel Lanes to fuel vehicles

## Fire Department Parking Requirements

The Fire Department will require six (6) parking spaces at future Fire Station. See the Space Needs Program in Section Three for details.

## Police Department

### Planning Issues

The Police Department was recently relocated to a new Administration Building adjacent to the Public Works 15th Street site. Although current and future office needs have been satisfied, employee and patrol vehicle parking is inadequate and needs to be addressed with this study. The existing building includes training and municipal court functions. These functions require 100 parking spaces minimum for staff or visitors when at full capacity. The Police Department anticipates the fleet vehicles to increase to keep up with the City's population growth.

The following key planning issues need to be considered during the design of the Police Department spaces:

- Need sufficient storage space for all patrol vehicles
- Need storage space for seized vehicles
  - ✓ Can be located offsite

### Police Department Vehicles

The Police Department will require parking for up to 175 vehicles. See the Space Needs Program in Section Three for details.

## Fleet Maintenance

### Function

The Fleet Maintenance division is responsible for routine repair, maintenance and cleaning of all City vehicles and light and heavy duty equipment. This group utilizes a wide variety of vehicles and equipment to perform daily duties and performs service calls to remote sites and in the street. Fleet Maintenance also manages and maintains the fuel system for City-owned vehicles and equipment.

The Fleet Maintenance division currently operates from the Public Works 15th Street site. The areas of the facility study will include offices, shared areas, and shop and storage areas.

The current site does not allow for the dedicated storage of all vehicles and equipment. The site also lacks adequate circulation space around vehicles and equipment storage areas.

Maintenance Staff will benefit from improved working and meeting spaces and individual crew shop spaces with equipment storage and workspace. Currently, shop space is at a premium and not all equipment can be repaired within the facility. There is one bay with a shortened pit to inspect the undercarriage of vehicles, however the pit is not long enough to inspect heavy trucks.

The Parts Room is undersized and requires some parts storage to be located in the employee Library/Break Room and Locker area, resulting in unsecured parts inventory. The Locker and Laundry areas are also shared with the Streets Department.

There are two fueling lanes adjacent to the existing building. The limited number of fueling lanes results in idling crews, vehicles, and equipment. The existing fuel storage tanks are below grade and include: one 20,000 gallon diesel tank, one 20,000 gallon unleaded tank, and one 10,000 gallon bio-diesel tank. The City is looking to purchase new above ground tanks which will require space on-site and security. The Fleet Maintenance Department needs a Fluid Management System and room to manage fuel and lubrication fluids.

### Staffing

Current hours of operations for Fleet Maintenance staff are 7:00 AM to 4:00 PM, Monday through Friday. Table 2.E indicates staffing levels.

With PPP can fuel be public too?

**Table 2.E - Fleet Maintenance Staff Summary**

<b>Staffing</b>			
	<b>Existing</b>	<b>2024 Program</b>	<b>2034 Program</b>
Supervisor	1	1	1
Admin Asst (FT)	1	2	2
Admin Asst (PT)	1	0	0
Technician	4	6	6
Fleet Manager	0	1	1
<b>Total</b>	<b>7</b>	<b>10</b>	<b>10</b>

**Fleet Maintenance Vehicles**

Table 2.F lists Fleet Maintenance vehicles.

**Table 2.F - Fleet Maintenance Vehicle Summary**

<b>Parking Requirements</b>			
	<b>Existing</b>	<b>2024 Program</b>	<b>2034 Program</b>
Sm Misc Equip	3	3	3
<b>Total</b>	<b>3</b>	<b>3</b>	<b>3</b>

**Key Planning Issues**

The following key planning issues need to be considered during the design of the Fleet Maintenance spaces:

**Office Areas**

- Supervisor office should be sized to include a desk, files, computer, and small meeting area
- Fleet Manager should be sized to include a desk, files, computer, and small meeting area
- Technician workstations should be sized to include a desk and computer
- Administrative Assistants office should be sized to include desks, files, and computers

**Support Areas**

- Copy/File/Supply area should be located adjacent to Administrative Assistants
- Provide Men’s and Women’s Locker Room
  - ✓ Can be shared with other departments, if necessary
- Provide Laundry facilities

- ✓ Can be shared with other departments, if necessary

### Shop Areas

- Provide a Storeroom with bulk storage racks and drawer cabinets for parts inventory. Provide direct access to the exterior through an overhead door.
- Parts Room shall have a Parts Counter and only provide access to Parts staff.
- Provide a Tool Crib with peg boards and cabinets for tool storage.
- Provide a computer workstation for the Parts Staff.
- Parts Room should have a ground level shipping and receiving area with overhead door access to the exterior.
- Provide a designated storage area for portable equipment for each shop. Equipment in this area will include jack stands, floor jacks, etc. Locate storage areas in open areas and adjacent to the Repair Bays.
- Provide a dedicated space adjacent to the Shop floor for tool box storage.
- Dedicated Common Work Areas are required. Locate centrally and open to all Repair Bays. This area includes fixed equipment such as parts washer, drill press, buffer/grinder, workbench with vise, abrasive blast cabinets, etc.
- Size Repair Bays to accommodate wide variety of vehicles to be serviced.
- Secure Fuel Yard to protect above ground fuel tanks.

## Utilities Department

### Function

The Utilities Department is currently located at the Boyd Acres site and includes Utility Support Services, Environmental Services, and Operations and Maintenance. The Utilities Department is dedicated to providing the City of Bend with potable water, wastewater, and storm water services. This includes operations and maintenance of these systems, a laboratory for quality testing, environmental and industrial regulatory compliance, mapping and recordkeeping, and administrative support. The existing facility layout does not support the current operations of the Utilities Department.

### Staffing

Current hours of operations for Utilities Department staff are 6:00 AM to 5:00 PM, Monday through Friday. Table 2.G indicates staffing levels.

### Utility Support Services

The Utilities Services department hours of operation are between 6:00 AM and 5:00 PM and supports Environmental Services and Operations and Maintenance.

### Environmental Services

The Environmental Services department hours of operation are between 7:00 AM and 4:00 PM.

### Operations and Maintenance

The Operations and Maintenance department hours of operation are between 7:00 AM and 4:00 PM.

**Table 2.G - Utilities Support Services**

<b>Staffing</b>			
	<b>Existing</b>	<b>2024 Program</b>	<b>2034 Program</b>
Utility Director	1	1	1
Util Support Svcs Mgr	1	1	1
Data Services	6	7	8
Customer Service	3	5	6
Analytical Services	5	6	6
Admin Service	4	5	6
Water Resources	2	4	5
Utility Billing	0	6	6
<b>Total</b>	<b>22</b>	<b>35</b>	<b>39</b>

**Table 2.L - Environmental Services**

<b>Staffing</b>			
	<b>Existing</b>	<b>2024 Program</b>	<b>2034 Program</b>
Water Quality Manager	1	1	1
IPP Manager	1	1	1
IPP Technicians	2	3	3
Lab Manager	1	1	1
Senior Lab Analysts	4	6	7
Safe Drinking Coord	1	1	1
Safe Drinking Techs	0	1	1
Stormwater Qual Mgr	1	1	1
Stormwater Prog Analyst	1	2	2
Stormwater ROW Officer	1	1	1
Field Samp & Monitor Program Manager	0	1	1
<b>Total</b>	<b>13</b>	<b>19</b>	<b>20</b>

Table 2.M - Operations and Maintenance

Staffing	Existing	2024 Program	2034 Program
Utility Ops Manager	1	1	1
Tech Svcs Supervisor	1	1	1
Tech Svcs Lead Worker	2	3	3
Tech Svcs Tech 2	2	3	3
Tech Svcs Tech 1	1	2	2
Tech Svcs Util 1	5	6	6
Tech Svcs Storm 2	1	2	2
Tech Svcs Storm 1	2	2	3
Water Ops Supervisor	1	1	1
Water Distr Lead	1	1	1
Water Treatment Lead	0	1	1
Water Operators	6	8	10
R&R Supervisor	1	1	1
R&R Utility Lead	3	4	4
R&R Utility Worker	13	15	16
Project Manager	1	1	1
EIC Supervisor	1	1	1
Telemetry/SCADA	2	2	2
Lead Electrician	1	1	1
Electricians	1	2	2
Utility Lead - Maint	1	2	2
Senior System Maint	2	4	5
Maintenance Super	1	1	1
Seasonal Employees	10	10	10
<b>Total</b>	<b>60</b>	<b>75</b>	<b>80</b>



### Utilities Department Vehicles

Table 2.H lists Utilities Department vehicles.

Table 2.H - Utilities Department Vehicle Summary

Parking Requirements			
Parking Type	Existing	2024 Program	2034 Program
Work Trucks for Customer Service	0	3	4
Lab Mobile Lab-Van	1	1	1
Tech Services Vactor	4	6	8
Pool Vehicle	0	1	1
Tech Srvcs Pick-Up	4	10	12
Tech Srvcs Service Rig	1	7	9
Tech Srvcs TV Van	2	4	5
Water Resources Vehicles	0	3	3
Lab SUV	1	2	3
SWQP Sedan	1	2	2
Lab Utility Trailer	1	2	2
SDWP SUV	1	3	3
SWQP Spill Trailer	1	2	2
FSMP SUV	0	2	2
IPP Pick-Up Truck/Vans	2	4	4
Generators (Sm)	3	7	10
Water Ops Pick-up Trucks	8	10	12
Pumps	4	6	8
Main Vehicles	8	12	15
RR Small Equipment	5	9	16
Generators (Lg)	4	7	10
RR Heavy Equipment	10	13	16
<b>Total</b>	<b>61</b>	<b>116</b>	<b>148</b>

### Key Planning Issues

The following key planning issues need to be considered during the design of the Utilities Department spaces:

#### Office Areas

##### Utility Support Services

- Private Offices should be sized to include a desk, files, and computer

- Manager Offices should be sized to include small meeting table and chairs
- Workstations should be sized to include desks, files, and computers
- May need to include spaces for 5-6 workstations for Utility Billing Call Center staff
  - ✓ Workstations should be located adjacent to Lobby

### **Environmental Services**

- Water Quality Offices are required to be operated as a secure office environment
- Private Offices should be sized to include a desk, files, and computer
- Manager Offices should be sized to include small meeting table and chairs
- Workstations should be sized to include desks, files, and computers
- In addition to office requirements, the Water Quality Manager, Safe Drinking Water Coordinator, Stormwater Program Manager, Lab Supervisor and IPP Program Manager should have a small seating area for meetings in each office

### **Operations and Maintenance**

- Private Offices should be sized to include a desk, files, and computer
- Manager Offices should be sized to include small meeting table and chairs
- Workstations should be sized to include desks, files, and computers
- Supervisor offices should be located near staff

### **Support Areas**

#### **Utility Support Services**

- The Lobby should be designed to be welcoming to receive visitors and located near the visitor parking
  - ✓ Provide small seating area for customers and/or guests
- Provide sufficient wall space to display utility information
- Provide small meeting area adjacent to Utility Billing Call Center to all staff to meet with customers

- Lactation/Quiet Room should be isolated
- Copy/File/Supply area should be centrally located
- Space for plotter(s) and plotter supplies
- Provide Men's and Women's Locker Room
  - ✓ Can be shared with other departments, if necessary
- Provide Laundry facilities
  - ✓ Can be shared with other departments, if necessary

#### Environmental Services

- Laboratory is required to be operated as a secure facility
- Provide countertops for lab equipment and instruments in Laboratory
- Chemical and flammable materials storage area should be well-ventilated
- Wash-out sink for Stormwater Monitoring Work Area
- Provide Men's and Women's Locker Room
  - ✓ Can be shared with other departments, if necessary
- Provide Mud Room adjacent to Men's and Women's Locker Room with exterior access
  - ✓ Can be shared with other departments, if necessary

#### Operations and Maintenance

- Provide Men's and Women's Locker Room
  - ✓ Can be shared with other departments, if necessary
- Provide Mud Room adjacent to Men's and Women's Locker Room with exterior access
  - ✓ Can be shared with other departments, if necessary
- Common/Shared File Storage
  - ✓ Can be shared with other departments, if necessary
- Provide compressed air, specialized electrical and water to various workbenches

#### Storage Areas

- Investigate possibility of combining all storage (parts, tools, bulk materials, etc) into one, secure warehouse for all Utility Divisions.



# Section Three

## Space Needs Program



## Introduction

The Space Needs Program begins with the identification of each space by name and a Space Standard (if applicable). The 2014 Program represents the existing spaces for each group. The 2034 Program heading represents spaces required to accommodate the full build-out of the combined public works operation on the site(s) and the future growth needs of the groups. The Remarks heading represents listed notes about each space if required.

The Space Needs Program will be used by the Design Team to develop conceptual site plans, which lead to the selected Site Master Plan Concept, and conceptual building plans.

## Space Needs Program Summary

A summary of the Space Needs Program for the newly developed Municipal and Transportation Centers is included on the following page. This summary includes all building and site areas of each group including Right of Way Operations and Maintenance, Facilities Division, Fleet Maintenance, Fire Department, Police Department, Utilities, and parking/yard storage areas. Site circulation, setbacks, landscaping requirements, and total acres required are also shown.

**Table 3.A - Pilot Butte Staff Summary**

Staffing			
	Existing	2024 Program	2034 Program
Right of Way	64	77	86
Facilities	4	7	9
Fleet Maintenance	7	9	9
<b>Total</b>	<b>75</b>	<b>93</b>	<b>104</b>

**Table 3.B - Boyd Acres Staff Summary**

Staffing			
	Existing	2024 Program	2034 Program
Utility Support	22	35	39
Environmental Services	13	19	20
Operations and Maintenance	60	75	80
<b>Total</b>	<b>95</b>	<b>129</b>	<b>139</b>

**Table 3.C - Pilot Butte Vehicle Summary**

<b>Vehicles</b>			
	<b>Existing</b>	<b>2024 Program</b>	<b>2034 Program</b>
Right of Way	94	118	138
Facilities	3	4	5
Fire Department	6	6	6
Police Department	116	149	175
Fleet Maintenance	3	3	3
<b>Total</b>	<b>222</b>	<b>280</b>	<b>327</b>

**Table 3.D - Boyd Acres Vehicle Summary**

<b>Vehicles</b>			
	<b>Existing</b>	<b>2024 Program</b>	<b>2034 Program</b>
Utility Support	0	7	8
Environmental Services	8	18	21
Operations and Maintenance	53	120	144
<b>Total</b>	<b>61</b>	<b>145</b>	<b>173</b>

### Space Needs Programming

The Design Team has progressed to developing more detail on groups to be located at a new facility and the associated space requirements.

The project programming is important for several reasons:

- It requires visualization and development of assumptions from each group involved on how the operations would be centralized as the operating locations move to a central location instead of being dispersed. The program takes into consideration those divisions as decided by group Directors, Managers, and Supervisors.
- The program validates and defines site size requirements.
- Preliminary construction cost estimates can be developed once the various parameters are quantified: the size of the building(s) required, number of vehicles parked on-site at any given time, outdoor storage areas, covered storage areas, service areas and site required features.

### Data Resources

Materials referenced during the space programming work include:



- Organization charts
- Programming Questionnaires
- Vehicle and equipment inventory listings
- Existing Facility Space Inventory
- Existing and Proposed Floor Plans (if available from individual group)

### Methodology

An interactive approach was utilized in the data collection of this task. Each of the groups participating has their own unique requirements relating to the areas of the city served, and how the growth of the metropolitan region will affect their workloads. Programming Interviews were held with each group to discuss their unique needs, and develop assumptions about how the operations would be divided among the various facilities, specifically their staff and specific operations being placed at a new central site.

The development of detailed space needs requirements satisfies the functional areas for each of the groups to allow for flexibility in the site selection process.

Consideration of space needs has been extrapolated for a determination of the evaluated Public Works departments and includes all enclosed building spaces, and exterior staging, parking and storage areas. Site sizes have been calculated to include all of the previously listed areas and increased proportionally to include area for site circulation, easements, setbacks, buffers and storm retention.

During the space programming sessions with each of the groups a determination and comparison was made based on the three following parameters:

1. Current area or the amount of area each of the departments is presently operating in
2. Required area which is the amount of area the department should currently have to operate effectively and meet general space standards and alleviate overcrowding and
3. 20 year projection or the amount of area that will be required by each of the departments based on the anticipated growth.

**Rule of Thumb Planning Ratio**

Methods of applying planning ratios to vehicle quantities has always been an effective way to calculate the number of repair bays required to maintain those vehicles. These ratios are derived from data and space utilization information gathered from numerous other successful maintenance facilities analyzed throughout the country by Maintenance Design Group (MDG) and its staff over a 20-year period. The repair bay ratios are as follows:

**Table 3.B - Rule of Thumb Planning Ratios**

Space	Ratio or Space Standard
Repair Bays, Heavy Duty (20 feet x 55 feet)	1 bay for every 25 vehicles to be maintained
Repair Bays, Light/Medium Duty (16 feet x 35 feet)	1 bay for every 70 vehicles to be maintained
PM/Inspection Bays, Heavy Duty (20 feet x 55 feet)	1 bay for every 75 vehicles to be maintained
PM/Inspection Bays, Light/Medium Duty (16 feet x 35 feet)	1 bay for every 250 vehicles to be maintained
Chassis Wash Bay, Heavy Duty (25 feet x 55 feet)	1 bay for every 300 vehicles to be maintained or as necessary
Tire Shop/Repair	600 SF (subject to adjustment depending on level and type of operation)
Large Tire Storage	4 SF per tire stored
Small Tire Storage	3 SF per tire stored
Materials Handling (Parts Storage)	2 SF per vehicle (based on fleet mix and use of some high density storage systems and mezzanine area)
Materials Handling (Large Parts Storage Mezzanine or slow moving parts)	1.5 SF per vehicle (based on fleet mix and final parts room configuration)

## Space Standards

Space standards were applied to the Space Needs Program and generally apply to the office and vehicle parking areas. Area requirements in Shops and Storage Areas were derived from functional requirements and equipment space needs. The space standards listed below were utilized to develop the Master Plan Program and overall area requirements. The space standards are based on functional needs and requirements established through the design of other facilities, rules of thumb, and specific requirements of each functional group, provided by the City of Bend Staff.

**Table 3.C - Space Standards**

Space Standards	
Area	Space Requirement
<b>Office:</b>	
Manager	180 SF office
Supervisor	168 SF office
General Office	144 SF office
Support Office	120 SF office
Administrative Assistant	80 SF workstation
Workstations	80 SF workstation
Workstations	48 SF workstation
<b>Shop and Service:</b>	
Running Repair Bay - HD	1,100 SF (20' x 55')
PM/Inspection Bay - HD	1,100 SF (20' x 55')
Running Repair Bay - Light	560 SF (16' x 35')
PM/Inspection Bay - Light	560 SF (16' x 35')
Chassis Wash Bay	1,375 SF (25' x 55')
Auto Drive-Through Wash Bay	900 SF (20' x 45')
Truck Drive-Through Wash Bay	1,500 SF (20' x 80')
Fuel Service Lane	1,800 SF (15' x 50')
<b>Vehicle Parking:</b>	
Support Vehicles	162 SF (9' x 18')
City Vehicle - XLarge	480 SF (12' x 40')
City Vehicle - Medium	360 SF (12' x 30')
City Vehicle - Standard	200 SF (10' x 20')
City Vehicle - Small	80 SF (8' x 10')
Employee/Visitor	162 SF (9' x 18')
Accessible Parking	234 SF (13' x 18')
<b>*Square Feet (SF)</b>	

## Circulation Factors

The space requirements shown for each function are net usable areas. The Design Team will work to minimize the amount of circulation necessary for an efficient site and facility. There are three Circulation Factors utilized in the Space Needs Program. These factors are:

### Interior or Building Circulation

This factor is applied to the program as a percentage of the total building square footage. It accounts for miscellaneous building spaces such as hallways, stairwells, custodial closets, mechanical, plumbing, and electrical rooms, wall thickness, structure (CMES. - Net: Gross), and access requirements. On the following page is a list of the factors (in general) that have been applied to the program but may or may not directly reflect actual design:

- Office Areas 35%
- Shared Support Areas 35%
- Shop and Bay Areas 20%

### Parking Circulation

This factor is included to account for the drive aisles, walkways, islands, and other areas created by site and access requirements. This factor can vary from 15% to 100% of the actual space occupied by a certain functional requirement or vehicle. For this project the following factors were applied:

- City Vehicle Parking areas 100%
- Employee Parking areas 100%
- Interior Parking 125% (minimum)

### Site Circulation Factor

This factor is also applied to the program as a percentage of the total program square footage. It accounts for areas around buildings, site drive aisles, building access, and site access. For new construction, a 100% factor is normally applied to account for all site inefficiencies. As such, the better the site conditions, access, easement, etc., the more efficient the site layout can become, reducing this factor to as low as 50%. For the Public Works Facility Study 100% has been used to account for site requirements. It will be the goal of the Design Team to reduce this

percentile figure as the site is further developed and site constraints are dealt with through efficient site design.

**City of Bend Public Works - Pilot Butte Site**  
**Bend, Oregon**  
 January 30, 2015

**SPACE NEEDS PROGRAM SUMMARY**

City of Bend Public Works Facility - Pilot Butte Site		Existing Conditions	2024 Program	2034 Program
		(Square Feet)		(Square Feet)
<b>Building Areas</b>				
RIGHT OF WAY OPS & MAINT	ADMINISTRATION	3,839	14,153	14,844
	REPAIR/SHOPS	6,720	14,040	17,100
	ENCLOSED VEHICLE PARKING	3,504	17,856	20,544
		14,063	46,049	52,488
FACILITIES DIVISION	ADMINISTRATION	130	1,110	1,293
	REPAIR/SHOPS	10,841	5,364	6,060
	ENCLOSED VEHICLE PARKING	0	0	0
		10,971	6,474	7,353
FIRE DEPARTMENT	FIRE STATION	0	10,056	10,056
		0	10,056	10,056
POLICE DEPARTMENT	ENCLOSED VEHICLE PARKING	1,642	2,419	2,419
		1,642	2,419	2,419
FLEET MAINTENANCE	ADMINISTRATION	1,617	4,028	2,230
	REPAIR/SHOPS	17,323	35,671	35,440
	ENCLOSED VEHICLE PARKING	1,296	1,296	1,296
		20,236	40,995	38,966
<b>Total Building Areas</b>		<b>46,912</b>	<b>105,993</b>	<b>111,283</b>
<b>Covered Areas</b>				
RIGHT OF WAY OPS & MAINT	COVERED VEHICLE PARKING	19,632	16,704	19,680
	COVERED AREAS	9,439	8,690	8,690
		29,071	25,394	28,370
FACILITIES DIVISION	COVERED VEHICLE PARKING	0	0	0
	COVERED AREAS	0	0	0
		0	0	0
FLEET MAINTENANCE	COVERED VEHICLE PARKING	0	1,296	1,296
	COVERED AREAS	1,500	3,300	3,300
		1,500	4,596	4,596
<b>Total Covered Parking Areas</b>		<b>30,571</b>	<b>29,990</b>	<b>32,966</b>
<b>Exterior Areas</b>				
RIGHT OF WAY OPS & MAINT	EXTERIOR AREAS	47,585	148,800	148,800
	UNCOVERED VEHICLE PARKING	12,480	12,480	12,480
	EMPLOYEE/VISITOR PARKING	20,736	24,948	27,864
		80,801	186,228	189,144
FACILITIES DIVISION	EXTERIOR AREAS	0	0	0
	UNCOVERED VEHICLE PARKING	1,200	1,600	2,000
	EMPLOYEE/VISITOR PARKING	1,296	2,268	2,916
		2,496	3,868	4,916
FIRE DEPARTMENT	EXTERIOR AREAS	0	1,650	1,650
	EMPLOYEE/VISITOR PARKING	0	1,296	1,620
		0	2,946	3,270
POLICE DEPARTMENT	UNCOVERED VEHICLE PARKING	35,640	32,400	38,232
	EMPLOYEE VEHICLE PARKING	49,032	62,928	62,928
		84,672	95,328	101,160
FLEET MAINTENANCE	EXTERIOR AREAS	0	10,000	10,000
	UNCOVERED VEHICLE PARKING	7,200	0	10,800
	EMPLOYEE VEHICLE PARKING	2,268	3,240	3,240
		9,468	13,240	24,040
<b>Total All Exterior Areas</b>		<b>177,437</b>	<b>301,610</b>	<b>322,530</b>
<b>Subtotal All Areas</b>		<b>254,920</b>	<b>437,593</b>	<b>466,779</b>
	Site Circulation (setbacks, landscaping, etc.)	100%	254,920	466,779
<b>GRAND TOTAL FOR ALL AREAS</b>		<b>509,839</b>	<b>875,186</b>	<b>933,558</b>
<b>ACRES</b>		<b>11.70</b>	<b>20.09</b>	<b>21.43</b>

**City of Bend Public Works - Pilot Butte  
RIGHT OF WAY OPS & MAINT**

Existing Conditions	
Qty.	Area
Staff	Space (SF)

Space Standard	2024 Program		2034 Program	
	Qty.	Area	Qty.	Area
	Staff	Space (SF)	Staff	Space (SF)

Remarks
---------

ADMINISTRATION	
Office Areas	
Director	
Manager	
Supervisors	
Program Tech II	
Transportation Engineer	
Executive Assistant	
OSI & OS III	
Crew Leads	
Sexton	
Engineering Associate	
Utility Workers I, II, III	
Temporary Help (Part Time)	
Sweep Crew (Part Time)	
Small Conference Room	
Small Conference Room	
Large Conference Room	
Subtotal	

1	-
1	-
3	-
1	-
1	-
1	-
2	-
4	-
1	-
1	-
26	-
16	-
6	-
	-
	-
	-
64	0

220	1	220
220	1	220
200	4	800
180	1	180
200	2	400
160	1	160
144	3	432
100	5	500
100	1	100
160	2	320
	30	0
	20	0
	6	0
20 /person	8	160
		-
20 /person	14	280
	77	3,772

1	220
1	220
4	800
1	180
2	400
1	160
3	432
6	600
1	100
2	320
36	0
22	0
6	0
	160
	-
	280
	3,872

Private Office
Private Office
Private Office
Private Office
Private Office
Private Office
Shared Office
Workstations
Private Office
Private Office





**City of Bend Public Works - Pilot Butte  
RIGHT OF WAY OPS & MAINT**

Existing Conditions	
Qty.	Area
Staff	Space (SF)

Space Standard	2024 Program		2034 Program	
	Qty.	Area (SF)	Qty.	Area (SF)
	Staff	Space	Staff	Space

Remarks
---------

REPAIR/SHOPS	
Bay and Shop Areas	
Sign Shop	2,400
Welding Shop	2,400
Paint Shop	-
Subtotal	0 4,800
Shop Storage Areas	
Safety Equipment	-
Sign Storage	-
Landscape Equipment	-
Full Paint Totes	800
Concrete Storage	-
Fertilizer Storage	-
Herbicide Storage	-
Custodial Room	-
Subtotal	0 800
Subtotal	0 5,600
Circulation Factor (includes Circ, MEP, Struct)	1,120
<b>TOTAL REPAIR/SHOPS</b>	<b>6,720</b>

		2,400
		2,400
		-
0		4,800
		-
		-
		-
		800
		-
		-
		-
		100
0		800
0		5,600
		1,120
		6,720

60 x 60		1	3,600
60 x 60		1	3,600
60 x 60		1	3,600
	0		10,800
10 x 20		1	200
20 x 20		1	400
10 x 20		1	200
10 x 80			0
40 x 40			0
10 x 10			0
5 x 10			0
100		1	100
	0		900
	0		11,700
20%			2,340
			14,040

	1	3,600
	1	3,600
	1	3,600
0		10,800
	1	200
	1	400
	1	200
		800
		1,600
		100
		50
	1	100
		3,450
0		14,250
		2,850
		17,100

Bench for layout; Material and record storage; Capability to drive truck (rig) in
Electrical, bench space, staging floor space; Material Storage
Walk behind paint equipment; Storage for thermal plastic
Rain gear, safety supplies, water pallets, hard hats, flashlights; Enclosed, Secured
Heated and Enclosed; Conex box and Y2K trailer to transport traffic control signs; Secured
Equipment, workbench, tools; Secured
Enclosed (Conditioned); Secured
Form boards, tools, etc; Secured
Enclosed (Conditioned); Secured
Enclosed (Conditioned); Secured; Store small amounts only

City of Bend Public Works

Bend, Oregon

Space Needs Program  
Bend Public Works Facility Study

City of Bend Public Works - Pilot Butte  
RIGHT OF WAY OPS & MAINT

COVERED AREAS	
Mag Tanks and Loading	
Sweeper Decant Area	
Wash Rack	
Conex Boxes	
<b>Subtotal</b>	<b>9,439</b>
<b>Circulation Factor (includes Circ, MEP, Struct)</b>	
<b>TOTAL COVERED AREAS</b>	<b>9,439</b>

Existing Conditions		
Qty.	Area	
Staff	Space	(SF)

2024 Program					
Space Standard	Qty.		Area (SF)	2034 Program	
	Staff	Space		Qty.	Area (SF)
30 x 100		1	3,000		
40 x 60		1	2,400		
			2,500		
			<b>7,900</b>		
	10%		<b>790</b>		
			<b>8,690</b>		

2034 Program	
Qty.	Area (SF)
Staff	Space
1	3,000
1	2,400
	2,500
	<b>7,900</b>
	<b>790</b>
	<b>8,690</b>

Remarks
To oil/water separator; Enclosed (Conditioned); Vector Decant at Boyd Acres Site Shared with Fleet Maintenance Racks 12-feet high

EXTERIOR AREAS	
Fenced Storage	8,750
Fabric Sheds	10,200
Storm Water Conex	2,310
Sand Pile	17,500
Gravel Storage	5,625
Bins	---
Debris	---
Dumpsters	---
Crack Seal Material	2,400
Empty Paint Totes	800
Loading Area	---
<b>Subtotal</b>	<b>47,585</b>
<b>Circulation Factor (Includes Exterior Circ)</b>	
<b>TOTAL EXTERIOR AREAS</b>	<b>47,585</b>

		8,750
		10,200
		2,310
		17,500
		5,625
		---
		---
		---
		2,400
		800
		---
		<b>47,585</b>
		<b>47,585</b>

			5,000
			10,200
			-
220 x 220			48,400
40 x 40			1,600
40 x 40			1,600
40 x 40			1,600
40 x 40			1,600
40 x 60			2,400
10 x 80			800
15 x 80		1	1,200
			<b>74,400</b>
	100%		<b>74,400</b>
			<b>148,800</b>

			5,000
			10,200
			-
			48,400
			1,600
			1,600
			1,600
			1,600
			2,400
			800
		1	1,200
			<b>74,400</b>
			<b>74,400</b>
			<b>148,800</b>

Secured
Relocate to Utilities
Secured

**City of Bend Public Works - Pilot Butte  
RIGHT OF WAY OPS & MAINT**

ENCLOSED VEHICLE PARKING	
Small Miscellaneous Equipment	
Medium Miscellaneous Equipment	
5-Yarder Chassis	
10-Yarder Chassis	
Paint Truck	
<b>Subtotal</b>	
<b>Circulation</b>	
<b>TOTAL ENCLOSED VEHICLE PARKING</b>	

Existing Conditions		
Qty.	Area	
Staff	Space	(SF)

2024 Program			2034 Program			
Space Standard	Qty.		Area (SF)	Staff	Space	Area (SF)
	Staff	Space				

2024 Program			2034 Program			
Space Standard	Qty.		Area (SF)	Staff	Space	Area (SF)
	Staff	Space				

Remarks
---------

	18	1,440
	5	1,000
	0	0
	0	0
	1	480
	<b>24</b>	<b>2,920</b>
		<b>584</b>
		<b>3,504</b>

8 x 10	22	1,760
10 x 20	6	1,200
12 x 30	10	3,600
14 x 40	14	7,840
12 x 40	1	480
	<b>53</b>	<b>14,880</b>
20%		<b>2,976</b>
		<b>17,856</b>

	26	2,080
	10	2,000
	10	3,600
	16	8,960
	1	480
	<b>63</b>	<b>17,120</b>
		<b>3,424</b>
		<b>20,544</b>

Sweepers and other equip.
Does not incl. drive aisles

COVERED VEHICLE PARKING	
Pick-up Trucks	
Backhoe	
5-Yarder Chassis	
Graders	
Loaders	
<b>Subtotal</b>	
<b>Circulation</b>	
<b>TOTAL COVERED VEHICLE PARKING</b>	

	29	5,800
	2	720
	22	7,920
	2	960
	2	960
	<b>57</b>	<b>16,360</b>
		<b>3,272</b>
		<b>19,632</b>

10 x 20	33	6,600
12 x 30	2	720
12 x 30	13	4,680
12 x 40	2	960
12 x 40	2	960
	<b>52</b>	<b>13,920</b>
20%		<b>2,784</b>
		<b>16,704</b>

	40	8,000
	2	720
	16	5,760
	2	960
	2	960
	<b>62</b>	<b>16,400</b>
		<b>3,280</b>
		<b>19,680</b>

Sweepers and other equip.
Does not incl. drive aisles

UNCOVERED VEHICLE PARKING	
Medium Trailers	
Extra Large Trailers	
Down and Ready Vehicle Parking	
<b>Subtotal</b>	
<b>Circulation</b>	
<b>TOTAL UNCOVERED VEHICLE PARKING</b>	

	12	5,760
	1	480
		-
	<b>13</b>	<b>6,240</b>
		<b>6,240</b>
		<b>12,480</b>

12 x 40	12	5,760
12 x 40	1	480
		-
	<b>13</b>	<b>6,240</b>
100%		<b>6,240</b>
		<b>12,480</b>

	12	5,760
	1	480
		-
	<b>13</b>	<b>6,240</b>
		<b>6,240</b>
		<b>12,480</b>

See Fleet Maintenance

**City of Bend Public Works**

Bend, Oregon

**Space Needs Program  
Bend Public Works Facility Study**

City of Bend Public Works - Pilot Butte RIGHT OF WAY OPS & MAINT	Existing Conditions		2024 Program			2034 Program			Remarks
	Qty.		Space Standard	Qty.		Qty.		Area (SF)	
	Staff	Space		Staff	Space	Staff	Space		
<b>EMPLOYEE/VISITOR PARKING</b>									
Full-time Employees	42	6,804	9 x 18	51	8,262	58	9,396		
Part-Time Employees	22	3,564	9 x 18	26	4,212	28	4,536		
<b>Subtotal</b>	<b>64</b>	<b>10,368</b>		<b>77</b>	<b>12,474</b>	<b>86</b>	<b>13,932</b>		
Circulation		10,368	100%		12,474		13,932		
<b>TOTAL EMPLOYEE/VISITOR PARKING</b>		<b>20,736</b>			<b>24,948</b>		<b>27,864</b>		
<b>TOTAL RIGHT OF WAY OPS &amp; MAINT</b>		<b>123,935</b>			<b>257,671</b>		<b>270,002</b>		
Site Circulation (setbacks, landscaping, etc.)			100%		257,671		270,002		
<b>GRAND TOTAL FOR ALL AREAS</b>		<b>123,935</b>			<b>515,342</b>		<b>540,004</b>		
ACRES					11.83		12.40		

**City of Bend Public Works**

Bend, Oregon

**Space Needs Program**  
**Bend Public Works Facility Study**

City of Bend Public Works - Pilot Butte FACILITIES DIVISION	Existing Conditions		2024 Program				2034 Program			Remarks
	Qty.		Space Standard	Qty.		Area (SF)	Qty.		Area (SF)	
	Staff	Space		Staff	Space		Staff	Space		
<b>ADMINISTRATION</b>										
<b>Office Areas</b>										
Facilities Division Manager	1	130	180	1	1	180	1	1	180	Private Office
Facilities Maintenance Lead	1	---	8 x 10	2	1	160	2	1	160	Workstation
Facilities Maintenance Tech	2	---	6 x 8	4	1	192	6	1	288	Workstation
Subtotal	4	130		7		532	9		628	
<b>Support Areas</b>										
Crew Room		---	20 sf/stf		7	140		9	180	Can be combined with Break Room if necessary
Break Room		---	150		1	150		1	150	Can be combined with Crew Room if necessary
Women's Restroom		---				---			---	Can be shared with ROW if necessary
Women's Locker Room		---				---			---	Can be shared with ROW if necessary
Men's Restroom		---				---			---	Can be shared with ROW if necessary
Men's Locker Room		---				---			---	Can be shared with ROW if necessary
Subtotal		0				290			330	
<b>Subtotal</b>	<b>4</b>	<b>130</b>				<b>822</b>	<b>9</b>		<b>958</b>	
<b>Circulation Factor (includes Circ, MEP, Struct)</b>			<b>35%</b>			<b>288</b>			<b>335</b>	
<b>TOTAL ADMINISTRATION</b>	<b>4</b>	<b>130</b>				<b>1,110</b>	<b>9</b>		<b>1,293</b>	

**City of Bend Public Works - Pilot Butte  
FACILITIES DIVISION**

Existing Conditions		
Qty.	Area	
Staff	Space	(SF)

Space Standard	2024 Program			2034 Program		
	Qty.		Area (SF)	Qty.		Area (SF)
	Staff	Space		Staff	Space	

Remarks
---------

REPAIR/SHOPS		
<b>Bay and Shop Areas</b>		
Manuals Library	-	-
Common Work Area	1,984	-
<b>Subtotal</b>	<b>2,244</b>	-
<b>Shop Storage Areas</b>		
Receiving Area	-	-
Tool Storage	-	-
Materials Storage	-	-
Mezzanine	390	-
Bond Annex Building	6,400	-
Portable Equipment Storage	-	-
Miscellaneous Storage	-	-
Downtown Bend Business Association Storage	-	-
<b>Subtotal</b>	<b>6,790</b>	-
<b>Subtotal</b>	<b>9,034</b>	-
<b>Circulation Factor (includes Circ, MEP, Struct)</b>	<b>1,807</b>	-
<b>TOTAL REPAIR/SHOPS</b>	<b>10,841</b>	-

-	-	-
1,984	-	-
2,244	-	-
-	-	-
-	-	-
390	-	-
6,400	-	-
-	-	-
-	-	-
-	-	-
6,790	-	-
9,034	-	-
1,807	-	-
10,841	-	-

120	1	120	-	-	-
1,000	1	1,000	-	-	-
1,120	-	1,120	-	-	-
20	1	20	-	-	-
150	1	150	-	-	-
500	1	500	-	-	-
500	1	500	-	-	-
1,000	-	1,000	-	-	-
200	1	200	-	-	-
600	1	600	-	-	-
500	1	500	-	-	-
3,470	-	3,470	-	-	-
0	-	4,470	0	-	-
894	-	894	20%	-	-
5,364	-	5,364	-	-	-

1	120	-	-	-
1	1,000	-	-	-
1,120	-	-	-	-
1	600	-	-	-
1	150	-	-	-
1	500	-	-	-
1	500	-	-	-
1,000	-	-	-	-
1	200	-	-	-
1	600	-	-	-
1	500	-	-	-
4,050	-	-	-	-
0	5,050	0	-	-
1,010	-	1,010	-	-
6,060	-	6,060	-	-

Table saw, cut off saw, drill press, sanders, dust collection system, air compressor, workbenches, large cabinetry workbench
Enclosed, Secured
Secured
Secured
Snow blower, ladders, etc
Enclosed, Secured
Storage for general items for public benefit such as Christmas decorations; First floor preferred

City of Bend Public Works

Bend, Oregon

Space Needs Program  
Bend Public Works Facility Study

City of Bend Public Works - Pilot Butte FACILITIES DIVISION	Existing Conditions			2024 Program			2034 Program			Remarks	
	Qty.		Area (SF)	Space Standard	Qty.		Area (SF)	Qty.			Area (SF)
	Staff	Space			Staff	Space		Staff	Space		
<b>COVERED AREAS</b>			0			0			0		
N/A			0			0			0		
Subtotal			0			0			0		
Circulation Factor (includes Circ, MEP, Struct)				10%		0			0		
<b>TOTAL COVERED AREAS</b>			0			0			0		
<b>EXTERIOR AREAS</b>			0			0			0		
N/A			0			0			0		
Subtotal			0			0			0		
Circulation Factor (Includes Exterior Circ)				100%		0			0		
<b>TOTAL EXTERIOR AREAS</b>			0			0			0		
<b>ENCLOSED VEHICLE PARKING</b>			0			0			0		
N/A			0			0			0		
Subtotal			0			0			0		
Circulation			0	20%		0			0	Does not incl. drive aisles	
<b>TOTAL ENCLOSED VEHICLE PARKING</b>			0			0			0		

City of Bend Public Works

Bend, Oregon

Space Needs Program  
Bend Public Works Facility Study

**City of Bend Public Works - Pilot Butte  
FACILITIES DIVISION**

COVERED VEHICLE PARKING	
N/A	
Subtotal	
Circulation	
<b>TOTAL COVERED VEHICLE PARKING</b>	

Existing Conditions		
Qty.	Area	
Staff	Space	(SF)
		0
0		0
		0
		0

2024 Program					
Space Standard	Qty.		Area (SF)	2034 Program	
	Staff	Space		Staff	Space
			0		0
			0		0
20%			0		0
			0		0

2034 Program					
Space Standard	Qty.		Area (SF)	2034 Program	
	Staff	Space		Staff	Space
			0		0
			0		0
			0		0
			0		0

Remarks
Does not incl. drive aisles

UNCOVERED VEHICLE PARKING	
Pick-up Trucks	
Trailer w/Scissor Lift	
Subtotal	
Circulation	
<b>TOTAL UNCOVERED VEHICLE PARKING</b>	

2	400
1	200
3	600
	600
	1,200

10 x 20	3	600
10 x 20	1	200
	4	800
100%		800
		1,600

4	800
1	200
5	1,000
	1,000
	2,000


EMPLOYEE/VISITOR PARKING	
Full-time Employees	
Part-Time Employees	
Subtotal	
Circulation	
<b>TOTAL EMPLOYEE/VISITOR PARKING</b>	

4	648
0	0
4	648
	648
	1,296

9 x 18	7	1,134
9 x 18	0	0
	7	1,134
100%		1,134
		2,268

9	1,458
0	0
9	1,458
	1,458
	2,916


<b>TOTAL FACILITIES DIVISION</b>	<b>13,467</b>	<b>10,342</b>	<b>12,269</b>
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Site Circulation (setbacks, landscaping, etc.)		100%	10,342	12,269
--	--	------	--------	--------

<b>GRAND TOTAL FOR ALL AREAS</b>	<b>13,467</b>	<b>20,683</b>	<b>24,539</b>
<b>ACRES</b>		0.47	0.56



City of Bend Public Works - Pilot Butte FIRE DEPARTMENT	Existing Conditions		2024 Program			2034 Program			Remarks
	Qty.	Area	Space Standard	Qty.		Qty.		Area (SF)	
	Staff	Space (SF)		Staff	Space	Staff	Space		
<b>FIRE STATION</b>									
<b>Office Areas</b>									
Offices		---			200			200	
Subtotal	0	0			200			200	
<b>Support Areas</b>									
Bedrooms		---	100	8	800		8	800	
Kitchenette		---			150			150	
Day Room		---			300			300	
Fitness Room		---			500			500	
Operations Area		---			200			200	
Conference Room		---	20 /staff	10	200		10	200	
Women's Restroom		---			250			250	
Women's Locker Room		---			150			150	
Men's Restroom		---			250			250	
Men's Locker Room		---			150			150	
IT Room		---			150			150	
Subtotal	0	0			3,500			3,500	
<b>Storage Areas</b>									
Prevention Supplies		---			600			600	Secured, enclosed
Receiving Area		---			400			400	Secured, enclosed
Custodial Room		---			100			100	
Subtotal		0			1,100			1,100	
<b>Vehicle Bays</b>									
Ambulances		---	14 x 30	4	1,680		4	1,680	
Fire Trucks (w/Ladder)		---	14 x 75	2	2,100		2	2,100	
Subtotal		0			3,780			3,780	
<b>Subtotal</b>	0	0			8,380			8,380	
<b>Circ/Mech/Elec/Struc (Net: Gross)</b>		0	20%		1,676			1,676	
<b>TOTAL FIRE STATION</b>	0	0		0	10,056		0	10,056	See Existing Floor Plan Example

City of Bend Public Works - Pilot Butte FIRE DEPARTMENT	Existing Conditions		2024 Program			2034 Program			Remarks
	Qty.		Space Standard	Qty.		Qty.		Area (SF)	
	Staff	Space		Staff	Space	Staff	Space		
<b>EXTERIOR AREAS</b>									
<b>Storage Areas</b>									
Outdoor Patio							600	600	Secured, enclosed
Emergency Generator							400	300	Secured, enclosed
Trash Enclosure							100	200	
							0	0	
<b>Subtotal</b>							1,100	1,100	
<b>Circulation Factor (Includes Exterior Circ)</b>			50%				550	550	
<b>TOTAL EXTERIOR AREAS</b>							1,650	1,650	
<b>EMPLOYEE/VISITOR PARKING</b>									
Full-time Employees			9 x 18		4		648	810	
<b>Subtotal</b>		0			4		648	810	
<b>Circulation</b>			100%				648	810	
<b>TOTAL EMPLOYEE/VISITOR PARKING</b>		0			4		1,296	1,620	
<b>TOTAL FIRE DEPARTMENT</b>							13,002	13,326	
<b>Site Circulation (setbacks, landscaping, etc.)</b>						100%	13,002	13,326	
<b>GRAND TOTAL FOR ALL AREAS</b>							26,004	26,652	
<b>ACRES</b>							0.60	0.61	

City of Bend Public Works - Pilot Butte POLICE DEPARTMENT	Existing Conditions		2024 Program			2034 Program			Remarks
	Qty.		Space Standard	Qty.		Qty.		Area (SF)	
	Staff	Space		Staff	Space	Staff	Space		
<b>ENCLOSED VEHICLE PARKING</b>									
Small Evidence/Seized Vehicles	4	648	9 x 18	8	1,296	8	1,296		
Large Evidence/Seized Vehicles	2	720	12 x 30	2	720	2	720		
<b>Subtotal</b>		<b>1,368</b>		<b>10</b>	<b>2,016</b>	<b>10</b>	<b>2,016</b>		
<b>Circulation</b>		<b>274</b>	<b>20%</b>		<b>403</b>		<b>403</b>		Does not incl. drive aisles
<b>TOTAL ENCLOSED VEHICLE PARKING</b>		<b>1,642</b>			<b>2,419</b>		<b>2,419</b>		
<b>UNCOVERED VEHICLE PARKING</b>									
Patrol Vehicles	79	12,798	9 x 18	100	16,200	118	19,116		
Other Vehicles	31	5,022	9 x 18	39	6,318	47	7,614		
<b>Subtotal</b>	<b>110</b>	<b>17,820</b>		<b>139</b>	<b>16,200</b>	<b>165</b>	<b>19,116</b>		
<b>Circulation</b>		<b>17,820</b>	<b>100%</b>		<b>16,200</b>		<b>19,116</b>		
<b>TOTAL UNCOVERED VEHICLE PARKING</b>		<b>35,640</b>			<b>32,400</b>		<b>38,232</b>		
<b>EMPLOYEE VEHICLE PARKING</b>									
Staff	47	7,614	9 x 18	87	14,094	87	14,094		
Accessible	3	702	13 x 18	5	1,170	5	1,170		
Visitor	100	16,200	9 x 18	100	16,200	100	16,200		For Municipal Court and PW Training (100% attendance)
<b>Subtotal</b>	<b>150</b>	<b>24,516</b>		<b>192</b>	<b>31,464</b>	<b>192</b>	<b>31,464</b>		
<b>Circulation</b>		<b>24,516</b>	<b>100%</b>		<b>31,464</b>		<b>31,464</b>		
<b>TOTAL EMPLOYEE VEHICLE PARKING</b>		<b>49,032</b>			<b>62,928</b>		<b>62,928</b>		
<b>TOTAL POLICE DEPARTMENT</b>		<b>86,314</b>			<b>97,747</b>		<b>103,579</b>		
Site Circulation (setbacks, landscaping, etc.)			<b>100%</b>		<b>97,747</b>		<b>103,579</b>		
<b>GRAND TOTAL FOR ALL AREAS</b>		<b>86,314</b>			<b>195,494</b>		<b>207,158</b>		
<b>ACRES</b>					4.49		4.76		



**City of Bend Public Works - Pilot Butte  
FLEET MAINTENANCE**

Existing Conditions		
Qty.	Area	
Staff	Space	(SF)

2024 Program				
Space Standard	Qty.		Area	
	Staff	Space	(SF)	

2034 Program				
	Qty.		Area	
	Staff	Space	(SF)	

Remarks
---------

REPAIR/SHOPS
<b>Bay and Shop Areas</b>
Manuals Library
<b>Shop Areas</b>
Light/Medium-Duty Repair Bay
Light/Medium-Duty PM Inspection Bay
Heavy Repair Bay
Heavy-Duty PM Inspection Bay
Chassis Wash Bay
Light/Medium Drive-Through Wash Bay
Heavy Vehicle Drive-Through Wash Bay
Wash Equipment Room
Tire Shop
Common Work Area
Subtotal

4		5,700
3		8,316
0		14,016

100		1		0
16 x 35		6		3,360
70 vehicles/ bay				
16 x 35		2		1,120
250 vehicles/ bay				
20 x 55		11		12,100
20 vehicles/ bay				
20 x 55		3		3,300
75 vehicles/ bay				
25 x 55		1		1,375
20 x 45		1		900
20 x 80		1		1,600
600 sf/wash		2		0
600				-
400		1		0
		0		23,755

		1		100
		6		3,360
		2		1,120
		11		12,100
		3		3,300
		1		1,375
		1		900
		1		1,600
		2		1,200
				-
		1		400
		0		25,455

Adjacent to Admin Asst.
Prefer Drive-through
Prefer Drive-through (does not include Trailers)
(does not include Trailers)
No Tire Shop required

**City of Bend Public Works - Pilot Butte  
FLEET MAINTENANCE**

Existing Conditions		
Qty.	Area	
Staff	Space	(SF)

2024 Program				
Space Standard	Qty.		Area	
	Staff	Space	(SF)	

2034 Program				
Space Standard	Qty.		Area	
	Staff	Space	(SF)	

Remarks
---------

Shop Storage Areas	Existing Conditions	2024 Program	2034 Program	Remarks
	Qty. Area (SF)	Space Standard Qty. Staff Space Area (SF)	Qty. Staff Space Area (SF)	
Parts Room	420	2 sf/vehicle 655 1,310	655 1,310	Near Admin Asst. (includes Trailers)
Mezzanine Storage	---	1.5 sf/vehicle 655 983	655 983	(includes Trailers)
Common/Shared File Storage	---	100 1 100	1 100	Adjacent to Admin Asst.
Ladders	---	100 1 100	1 100	
Battery Storage	---	100 1 100	1 100	
Portable Equipment Storage	---	200 2 400	2 400	Wheel jacks
Toolbox Storage	---	6 x 6 6 216	6 36	
Small Tire Storage	---	6 sf/tire 0 0	0 0	No tire storage required
Large Tire Storage	---	8 sf/tire 0 0	0 0	No tire storage required
<b>Subtotal</b>	<b>0 420</b>	<b>0 3,209</b>	<b>0 3,029</b>	
<b>Support Areas</b>				
Lube/Compressor Room	---	600 1 600	1 600	
Fluid Management Room	---	150 1 150	1 150	Includes equipment for Fuels and Lubrication Fluids
Custodial Room	---	100 1 100	1 100	
IT Room	---	200 1 200	1 200	
<b>Subtotal</b>	<b>0</b>	<b>0 4,475</b>	<b>1,050</b>	
<b>Subtotal</b>	<b>0 14,436</b>	<b>0 29,726</b>	<b>0 29,534</b>	
<b>Circulation Factor (includes Circ, MEP, Struct)</b>	<b>2,887</b>	<b>20% 5,945</b>	<b>5,907</b>	
<b>TOTAL REPAIR/SHOPS</b>	<b>17,323</b>	<b>35,671</b>	<b>35,440</b>	

City of Bend Public Works

Bend, Oregon

Space Needs Program  
Bend Public Works Facility Study

**City of Bend Public Works - Pilot Butte  
FLEET MAINTENANCE**

Existing Conditions		
Qty.	Area	
Staff	Space	(SF)

2024 Program					
Space Standard	Qty.		Area (SF)	2034 Program	
	Staff	Space		Qty.	Area (SF)

2034 Program					
Space Standard	Qty.		Area (SF)	2034 Program	
	Staff	Space		Qty.	Area (SF)

Remarks
---------

COVERED AREAS		
Fuel Lanes	2	1,500
<b>Subtotal</b>		<b>1,500</b>
Circulation Factor (includes Circ, MEP, Struct)		
<b>TOTAL COVERED AREAS</b>		<b>1,500</b>

	2	1,500
		<b>1,500</b>
		<b>1,500</b>

15 x 50		4	3,000
			<b>3,000</b>
10%			300
			<b>3,300</b>

	4	3,000
		<b>3,000</b>
		300
		<b>3,300</b>


EXTERIOR AREAS		
Fuel Yard		---
CNG Equipment Yard		---
<b>Subtotal</b>		<b>0</b>
Circulation Factor (Includes Exterior Circ)		
<b>TOTAL EXTERIOR AREAS</b>		<b>0</b>

		---
		---
		<b>0</b>
		<b>0</b>

25 x 100		1	2,500
25 x 100		1	2,500
			<b>5,000</b>
100%			5,000
			<b>10,000</b>

	1	2,500
	1	2,500
		<b>5,000</b>
		5,000
		<b>10,000</b>

Space for above ground tanks: 20,000 gal diesel, 20,000 gal unleaded, 10,000 gal biodiesel

ENCLOSED VEHICLE PARKING		
Small Miscellaneous Equipment	3	1,080
<b>Subtotal</b>	<b>3</b>	<b>1,080</b>
Circulation		216
<b>TOTAL ENCLOSED VEHICLE PARKING</b>		<b>1,296</b>

	3	1,080
	<b>3</b>	<b>1,080</b>
		216
		<b>1,296</b>

12 x 30		3	1,080
		3	1,080
20%			216
			<b>1,296</b>

	3	1,080
	<b>3</b>	<b>1,080</b>
		216
		<b>1,296</b>

Does not incl. drive aisles

City of Bend Public Works - Pilot Butte FLEET MAINTENANCE	Existing Conditions		2024 Program			2034 Program			Remarks	
	Qty.		Space Standard	Qty.		Area (SF)	Qty.			
	Staff	Space		Staff	Space		Staff	Space		Area (SF)
<b>COVERED VEHICLE PARKING</b>										
N/A		0	0	12 x 30	3	1,080		3	1,080	
Subtotal		0	0		3	1,080		3	1,080	
Circulation			0	20%		216			216	Does not incl. drive aisles
<b>TOTAL COVERED VEHICLE PARKING</b>			0			1,296			1,296	
<b>UNCOVERED VEHICLE PARKING</b>										
Down and Ready Vehicle Parking		10	3,600	12 x 30	15	0		15	5,400	Back-to-back to allow for Fire Apparatus Vehicles; Provide 4 plug-ins
Subtotal		10	3,600		15	0		15	5,400	
Circulation			3,600	100%		0			5,400	
<b>TOTAL UNCOVERED VEHICLE PARKING</b>			7,200			0			10,800	
<b>EMPLOYEE VEHICLE PARKING</b>										
Full-time Employees		6	972	9 x 18	10	1,620		10	1,620	
Part-Time Employees		1	162	9 x 18	0	0		0	0	
Subtotal		7	1,134		10	1,620		10	1,620	
Circulation			1,134	100%		1,620			1,620	
<b>TOTAL EMPLOYEE VEHICLE PARKING</b>			2,268			3,240			3,240	
<b>TOTAL FLEET MAINTENANCE</b>			31,204			58,831			67,602	
Site Circulation (setbacks, landscaping, etc.)				100%		58,831			67,602	
<b>GRAND TOTAL FOR ALL AREAS</b>			31,204			117,663			135,205	
ACRES						2.70			3.10	



**City of Bend Public Works - Boyd Acres Site  
 Bend, Oregon**

January 30, 2015

**SPACE NEEDS PROGRAM SUMMARY**

City of Bend Public Works Facility - Boyd Acres Site		Existing Conditions	2024 Program	2034 Program
		(Square Feet)	(Square Feet)	(Square Feet)
<b>Building Areas</b>				
UTILITIES	ADMINISTRATION	3,547	11,182	11,548
	OPERATIONS	1,141	5,531	5,905
	REPAIR/SHOPS	9,598	3,264	3,264
	WATER QUALITY LAB	966	9,262	9,358
	WAREHOUSE MATERIAL STORAGE	7,158	9,900	9,900
	WASH AREAS	0	2,420	2,420
	ENCLOSED VEHICLE PARKING	2,544	4,416	4,608
<b>Total Building Areas</b>		<b>24,953</b>	<b>45,974</b>	<b>47,002</b>
<b>Covered Areas</b>				
UTILITIES	COVERED VEHICLE PARKING	2,688	8,976	11,184
	COVERED AREAS	0	13,310	13,310
<b>Total Covered Areas</b>		<b>2,688</b>	<b>22,286</b>	<b>24,494</b>
<b>Exterior Areas</b>				
UTILITIES	EXTERIOR AREAS	0	1,000	1,000
	UNCOVERED VEHICLE PARKING	26,368	42,696	54,260
	EMPLOYEE VEHICLE PARKING	32,688	39,600	42,840
<b>Total All Exterior Areas</b>		<b>59,056</b>	<b>83,296</b>	<b>98,100</b>
<b>Subtotal All Areas</b>		<b>86,697</b>	<b>151,556</b>	<b>169,596</b>
	Site Circulation (setbacks, landscaping, etc.)	100%	86,697	169,596
<b>GRAND TOTAL FOR ALL AREAS</b>		<b>173,394</b>	<b>303,112</b>	<b>339,193</b>
<b>ACRES</b>		<b>3.98</b>	<b>6.96</b>	<b>7.79</b>

**City of Bend Public Works**

Bend, Oregon

**Space Needs Program  
Bend Public Works Facility Study**

**City of Bend Public Works - Boyd Acres  
UTILITIES**

Existing Conditions	
Qty.	Area
Staff	Space (SF)

2024 Program			2034 Program		
Space	Qty.	Area	Qty.	Area	
Standard	Staff	Space (SF)	Staff	Space	(SF)

**Remarks**

<b>ADMINISTRATION</b>	
<b>Office Areas</b>	
Utility Support Services	
Utility Director	
Utility Support Services Manager	
Data Services	
Customer Service	
Analytical Services	
Administrative Service	
Water Resources	
Utility Billing	
Environmental Services	
Water Quality Manager	
Operations and Maintenance	
Utility Operations Manager	
Subtotal	

1	225	
1	131	
6	603	
3	86	
5	480	
4	537	
2		
0	---	
1	140	
1	170	
24	2,372	

210	1	1			210
10 x 12	1	1			120
6 x 8	7	1			336
10 x 12	1	1			120
6 x 8	4	1			192
10 x 12	3	3			360
6 x 8	3	1			144
10 x 12	2	2			240
6 x 8	3	1			144
10 x 12	2	2			240
6 x 8	2	1			96
6 x 8	6	1			288
180	1				180
180	1				180
	37				2,850

1	1				210
1	1				120
8	1				384
1	1				120
5	1				240
3	3				360
3	1				144
2	2				240
4	1				192
2	2				240
3	1				144
6	1				288
1					180
1					180
	41				3,042

Private Office
Private Office
Shared Office, space for plotter, plotter supplies, GPS equipment
Private Offices
Shared Office
Private Offices
Shared Office
Private Offices
Shared Office
Private Offices
Private Offices
Private Offices
Shared Office
Locate adjacent to Lobby
Private Office, w/Small Meeting Table
Private Office, w/Small Meeting Table

City of Bend Public Works - Boyd Acres UTILITIES	Existing Conditions		2024 Program			2034 Program			Remarks
	Qty.	Area	Space Standard	Qty.		Qty.		Area (SF)	
	Staff	Space (SF)		Staff	Space	Staff	Space		
<b>Shared Areas</b>									
Small Conference Room		200	20 sf/stf	10	200		10	200	Coordination meetings with other divisions
Medium Conference Room		225	20 sf/stf	20	400		20	400	
Large Conference Room		---			---			---	See Training Room; Training events, workshops, public meetings
Meeting Rooms for City		---			4,000			4,000	For City use
Kitchenette		---	2 sf/stf	37	56		41	62	Include dishwasher, refrigerator, microwave, sink, and storage
Break Room		152	3 sf/stf	37	93		41	103	
Women's Restroom	3	194	2.5 sf/stf	37	93		41	103	100% of Staff
Women's Locker Room		---	8 /staff	4	30		4	33	
Men's Restroom	3	194	2.5 sf/stf	37	93		41	103	100% of Staff
Men's Locker Room		---	8 /staff	37	296		41	328	
Lactation Room		---	100	1	100		1	100	
Copy/File/Supply Room		210	2 sf/stf	37	74		41	82	
Subtotal	0	1,175		0	5,433		0	5,512	
<b>Subtotal</b>	<b>24</b>	<b>3,547</b>		<b>37</b>	<b>8,283</b>		<b>41</b>	<b>8,554</b>	
<b>Circulation Factor (includes Circ, MEP, Struct)</b>			<b>35%</b>		<b>2,899</b>			<b>2,994</b>	
<b>TOTAL ADMINISTRATION</b>	<b>24</b>	<b>3,547</b>		<b>37</b>	<b>11,182</b>		<b>41</b>	<b>11,548</b>	

**City of Bend Public Works - Boyd Acres UTILITIES**

Existing Conditions		
Qty.	Area	
Staff	Space	(SF)

2024 Program						2034 Program			
Space Standard	Qty.		Area (SF)	Qty.		Area (SF)			
	Staff	Space		Staff	Space				

Remarks
---------

**OPERATIONS**

Office Areas	Existing Conditions		2024 Program				2034 Program				Remarks
	Qty.	Area (SF)	Space Standard	Qty.	Space	Area (SF)	Qty.	Space	Area (SF)		
Leads and Supervisors Office		441				---			---	See below	
Crew Meeting Room (O&M)	1	315				---			---	See below	
Operations and Maintenance											
<b>Tech Services</b>											
Tech Services Supervisor	1		12 x 14	1		168	1		168	Private Office, near staff	
Tech Services Lead Worker	2		6 x 8	3	1	144	3	1	144	Shared Office, near staff	
Tech Services Tech 2	2		6 x 8	3		144	3		144	Workstation	
Tech Services Tech 1	1		6 x 8	2		96	2		96	Workstation	
Tech Services Utility 1	5		6 x 8	6		288	6		288	Workstation	
Tech Services Storm 2	1		6 x 8	2		96	2		96	Workstation	
Tech Services Storm 1	2		6 x 8	2		96	3		144	Workstation	
<b>Water Operations</b>											
Water Operations Supervisor	1	140	12 x 14	1		168	1		168	Private Office, near staff	
Water Distribution Lead	1		10 x 12	1		120	1		120	Private Office	
Water Treatment Lead	0		10 x 12	1		120	1		120	Private Office	
Water Operators	6		6 x 8	8	1	384	10	1	480	Shared Office/Crew Office	
<b>Repair and Replacement</b>											
Repair and Replacement Supervisor	1		12 x 14	1		168	1		168	Private Office, near staff	
Repair and Replacement Utility Lead	3		6 x 8	4	1	192	4	1	192	Shared Office, near staff	
Repair and Replacement Utility Worker	13		3 x 6	15	1	270	16	1	288	Shared Office/Crew Office	
Project Manager	1		180	1		180	1		180	Private Office, w/Small Meeting Table	
EIC Supervisor	1		12 x 14	1		168	1		168	Private Office, near staff	
Telemetry/SCADA Specialist	2		8 x 10	2	1	160	2	1	160	Shared Office/Crew Office	
Lead Electrician	1		8 x 10	1		80	1		80	Workstation	
Electricians	1		6 x 8	2	1	96	2	1	96	Shared Office	
Utility Lead - Maintenance	1		8 x 10	2		160	2		160	Shared Office, near staff	
Senior System Maintenance	2		6 x 8	4		192	5		240	Shared Office/Crew Office	
Maintenance Supervisor	1		12 x 14	1		168	1		168	Private Office, near staff	
Leads and Supervisor Office (O&M)		441	400			---			---	Captured above	
Seasonal Employees	10		3 x 6	10		180	10		180	Shared Office/Crew Office	

City of Bend Public Works - Boyd Acres UTILITIES	Existing Conditions		2024 Program			2034 Program			Remarks
	Qty.	Area	Space	Qty.	Area	Qty.	Area		
	Staff	(SF)	Standard	Staff	(SF)	Staff	(SF)		
<b>Shared Areas</b>									
Lobby	1	250	300	1	300	1	300		
Training Room	1	571	15 sf/stf		111	120	1,800	Includes space for tables and chairs; Dividable into two or three rooms	
Table/Chair Storage		---	15% Training		250		270		
Training Center Break Room	1	123			---		---		
Women's Restroom		-	2.5 sf/stf		74	79	198	100% of Staff	
Women's Locker Room		-	8 /staff		7	8	63		
Men's Restroom		-	2.5 sf/stf		74	79	198	100% of Staff	
Men's Locker Room		-	8 /staff		74	79	632		
Mud Room		-	200		1	1	200	Adjacent to Locker Rooms, Exterior access	
Laundry Room		-	200		1	1	200	Two washers, two dryers, countertop	
Kitchenette		-	2 sf/stf		74	98	147	Include dishwasher, refrigerator, microwave, sink, and storage	
Break Room		-	3 sf/stf		74	98	245		
Lactation Room		-	100		1	1	100		
Copy/File/Supply Room		-	1 sf/stf		74	98	98		
IT Room		-	250		1	1	250		
<b>Subtotal</b>	<b>59</b>	<b>1,141</b>		<b>74</b>	<b>4,097</b>	<b>79</b>	<b>4,374</b>		
<b>Circulation Factor (includes Circ, MEP, Struct)</b>			<b>35%</b>		<b>1,434</b>		<b>1,531</b>		
<b>TOTAL OPERATIONS</b>	<b>59</b>	<b>1,141</b>		<b>74</b>	<b>5,531</b>	<b>79</b>	<b>5,905</b>		

**City of Bend Public Works - Boyd Acres UTILITIES**

REPAIR/SHOPS	
<b>Bay and Shop Areas</b>	
<b>Office/Crew Areas</b>	
Meter Group Office	
Water Ops Crew Office	
<b>Shop Areas</b>	
Welding Shop	
Hydrant Shop	
Main Shop	
Common Work Area	
Subtotal	
<b>Shop Storage Areas</b>	
Stormwater Educational/Outreach Materials	
Safe Drinking Water Program (SDWP)	
Water Ops Closet	
Stormwater Monitoring Area	
Subtotal	
<b>Support Areas</b>	
Compressor Room	
Custodial Room	
Subtotal	
<b>Subtotal</b>	<b>7,998</b>
<b>Circulation Factor (includes Circ, MEP, Struct)</b>	<b>1,600</b>
<b>TOTAL REPAIR/SHOPS</b>	<b>9,598</b>

Existing Conditions		
Qty.	Area	
Staff	Space	(SF)

2024 Program				
Space Standard	Qty.		Area (SF)	
	Staff	Space		

2034 Program				
Space Standard	Qty.		Area (SF)	
	Staff	Space		

Remarks
---------

	1	240
	1	228
	1	286
	1	760
	1	6,300
		-
0		7,814
	1	160
		---
	1	24
0		184
0		0
0		7,998
		1,600
0		9,598

240		1		240
				0
400		1		400
800		1		800
500		1		500
	0			1,940
150		1		150
200		1		200
80		1		80
10 x 10		1		100
	0			530
150		1		150
100		1		100
	0			250
20%	0			2,720
				544
	0			3,264

	1			240
				0
	1			400
	1			800
	1			500
0				1,940
	1			150
	1			200
	1			80
	1			100
0				530
	1			150
	1			100
0				250
0				2,720
				544
0				3,264

See Water Operators
Distributed through Repair/Shops and Warehouse
Storage for Maintenance Tools
Wash sink with deionized water filter for sample prep
For compressed shop air

City of Bend Public Works - Boyd Acres UTILITIES	Existing Conditions		2024 Program			2034 Program			Remarks	
	Qty.	Area	Space Standard	Qty.		Area (SF)	Qty.			Area (SF)
	Staff	Space		Staff	Space		Staff	Space		
<b>WATER QUALITY LAB</b>										
<b>Water Quality Lab (Environmental Services)</b>										
IPP Manager	1		180	1	180	1		180	Private Office, w/Small Meeting Table	
IPP Technicians	2		8 x 10	3	240	3		240	Workstations	
Laboratory Manager	1		180	1	180	1		180	Private Office, w/Small Meeting Table	
Senior Lab Analysts	4		8 x 10	6	480	7		560	Workstations	
Safe Drinking Water Coordinator	1		10 x 12	1	120	1		120	Private Office	
Safe Drinking Water Program Techs	0		6 x 8	1	48	1		48	Workstations	
Stormwater Quality Manager	1	140	180	1	180	1		180	Private Office, w/Small Meeting Table	
Stormwater Program Analyst	1		8 x 10	2	160	2		160	Workstations	
Stormwater ROW Officer	1		8 x 10	1	80	1		80	Workstations	
Field Sampling & Monitoring Program Manager	0		180	1	180	1		180	Private Office, w/Small Meeting Table	
Laboratory (Building C)		665								
Laboratory Storage			520	2	1,040		2	1,040	Locate in Laboratory; Chemicals, flammables, acid/base, shelves; must be enclosed	
Meter and Double Check Facility			50 x 50	1	2,500		1	2,500	Must be enclosed, Adjacent to Lab	
Lab Tech Workstation			8 x 10	1	80		1	80	Shared; under desk file space, workstation PCs	
IPP			30 x 30	1	900		1	900		
Wet Chem Laboratory			1,350	1	1,350		1	1,350		
Microbiology Laboratory										
Instrument Laboratory										
Metals Laboratory										
Sample Prep / Receiving										
<b>Subtotal</b>	<b>12</b>	<b>805</b>		<b>18</b>	<b>7,718</b>		<b>19</b>	<b>7,798</b>		
<b>Circulation Factor (includes Circ, MEP, Struct)</b>		<b>161</b>	<b>20%</b>		<b>1,544</b>			<b>1,560</b>		
<b>TOTAL WATER QUALITY LAB</b>	<b>12</b>	<b>966</b>		<b>18</b>	<b>9,262</b>		<b>19</b>	<b>9,358</b>		

City of Bend Public Works - Boyd Acres UTILITIES	Existing Conditions		2024 Program			2034 Program			Remarks
	Qty.	Area	Space	Qty.		Qty.		Area	
	Staff	Space (SF)	Standard	Staff	Space	Staff	Space	(SF)	
<b>WAREHOUSE MATERIAL STORAGE</b>									
<b>Storage Areas</b>									
Parts and Material Storage									
IPP Storage (Building C)		560	600	1	600		1	600	
Construction Storage (Building C)		1,440		1	1,500			1,500	
Pipe Fittings Supplies (Building C)		2,088		1	2,000			2,000	
Tool, Pipe Fittings (Building D)	1	441		1	500		1	500	
Specialty Fittings (Building D)		600		1	600			600	
Tool Storage (Building D)	1	1,364	1,500	1	1,500		1	1,500	
Water Meter Storage		665		1	700			700	
<b>Subtotal</b>	<b>0</b>	<b>7,158</b>		<b>0</b>	<b>7,400</b>		<b>0</b>	<b>7,400</b>	
<b>Support Areas</b>									
Loading Dock		---	15 x 80	1	1,200		1	1,200	
Loading Area		---		1	400		1	400	
<b>Subtotal</b>	<b>0</b>	<b>0</b>		<b>0</b>	<b>1,600</b>		<b>0</b>	<b>1,600</b>	
<b>Subtotal</b>	<b>0</b>	<b>7,158</b>		<b>0</b>	<b>9,000</b>		<b>0</b>	<b>9,000</b>	
<b>Circulation Factor (includes Circ, MEP, Struct)</b>			<b>10%</b>		<b>900</b>			<b>900</b>	
<b>TOTAL WAREHOUSE MATERIAL STORAGE</b>	<b>0</b>	<b>7,158</b>		<b>0</b>	<b>9,900</b>		<b>0</b>	<b>9,900</b>	
<b>WASH AREAS</b>									
<b>Operations and Maintenance</b>									
Heavy Vehicle Drive-Through Wash Bay			20 x 80	1	1,600		1	1,600	Includes Utility Vehicles only; Enclosed Located at Pilot Butte Campus
Wash Equipment Room			15 x 40	0	600		0	600	
<b>Subtotal</b>		<b>0</b>			<b>2,200</b>			<b>2,200</b>	
<b>Circulation Factor (includes Circ, MEP, Struct)</b>			<b>10%</b>		<b>220</b>			<b>220</b>	
<b>TOTAL WASH AREAS</b>		<b>0</b>			<b>2,420</b>			<b>2,420</b>	



City of Bend Public Works

Bend, Oregon

Space Needs Program  
Bend Public Works Facility Study

City of Bend Public Works - Boyd Acres  
**UTILITIES**

Existing Conditions			2024 Program			2034 Program			Remarks
Qty.		Area (SF)	Space Standard	Qty.		Area (SF)	Qty.		
Staff	Space			Staff	Space		Staff	Space	

COVERED AREAS	Existing Conditions			2024 Program			2034 Program			Remarks	
	Qty.		Area (SF)	Space Standard	Qty.		Area (SF)	Qty.			
	Staff	Space			Staff	Space		Staff	Space		Area (SF)
<b>Utility Support Services</b>											
N/A			---								
<b>Environmental Services</b>											
N/A			---								
<b>Operations and Maintenance</b>											
Fuel Area				15	x	50		2		1,500	
Heavy Vehicle Drive-Through Wash Bay				20	x	80		1		1,600	
Vactor Dump (Decant) Area				20	x	40		0		0	
Material Storage	0		0	40	x	50		1		2,000	
Pipe Storage	0		0	25	x	200		1		5,000	
Bulk Odor Chemical Storage	0		0	2,000				1		2,000	
<b>Subtotal</b>			<b>0</b>							<b>12,100</b>	
Circulation Factor (includes Circ, MEP, Struct)				10%						1,210	
<b>TOTAL COVERED AREAS</b>			<b>0</b>							<b>13,310</b>	

Includes Utility Vehicles only; Enclosed  
 Located at Pilot Butte Campus  
 Rock material, cold mix  
 Keep out of sunlight  
 Mostly tote storage, some require heated enclosure

**EXTERIOR AREAS**

EXTERIOR AREAS	Existing Conditions			2024 Program			2034 Program			Remarks		
	Qty.		Area (SF)	Space Standard	Qty.		Area (SF)	Qty.				
	Staff	Space			Staff	Space		Staff	Space		Area (SF)	
<b>Utility Support Services</b>												
Emergency Generator			---			1		500		1	500	
<b>Environmental Services</b>												
N/A			---									
<b>Operations and Maintenance</b>												
N/A			---									
<b>Subtotal</b>			<b>0</b>							<b>500</b>		
Circulation Factor (Includes Exterior Circ)				100%						500		
<b>TOTAL EXTERIOR AREAS</b>			<b>0</b>							<b>1,000</b>		

**City of Bend Public Works - Boyd Acres  
UTILITIES**

Existing Conditions		
Qty.	Area	
Staff	Space	(SF)

2024 Program					
Space Standard	Qty.		Area (SF)	2034 Program	
	Staff	Space		Qty.	Area (SF)

2034 Program					
Space Standard	Qty.		Area (SF)	2034 Program	
	Staff	Space		Qty.	Area (SF)

Remarks
---------

ENCLOSED VEHICLE PARKING		
<b>Utility Support Services</b>		
Work Trucks for Customer Service	0	0
<b>Environmental Services</b>		
Laboratory Mobile Lab-Van	1	200
<b>Operations and Maintenance</b>		
Tech Services Vactor	4	1,920
<b>Subtotal</b>	<b>5</b>	<b>2,120</b>
<b>Circulation</b>		<b>424</b>
<b>TOTAL ENCLOSED VEHICLE PARKING</b>		<b>2,544</b>

	0	0
	1	200
	4	1,920
	<b>5</b>	<b>2,120</b>
		<b>424</b>
		<b>2,544</b>

10 x 20		3	600	
10 x 20		1	200	
12 x 40		6	2,880	
		<b>10</b>	<b>3,680</b>	
20%			<b>736</b>	
			<b>4,416</b>	

	4	800		
	1	200		
	8	3,840		
	<b>13</b>	<b>3,840</b>		
		<b>768</b>		
		<b>4,608</b>		

Located in Lab
Does not incl. drive aisles

COVERED VEHICLE PARKING		
<b>Utility Support Services</b>		
Pool Vehicle	0	0
<b>Environmental Services</b>		
N/A	---	---
<b>Operations and Maintenance</b>		
Tech Services Pick-up	4	800
Tech Services Service Rig	1	480
Tech Services TV Van	2	960
<b>Subtotal</b>	<b>7</b>	<b>2,240</b>
<b>Circulation</b>		<b>448</b>
<b>TOTAL COVERED VEHICLE PARKING</b>		<b>2,688</b>

	0	0
	---	---
	4	800
	1	480
	2	960
	<b>7</b>	<b>2,240</b>
		<b>448</b>
		<b>2,688</b>

10 x 20		1	200	
		---	---	
10 x 20		10	2,000	
12 x 40		7	3,360	
12 x 40		4	1,920	
		<b>22</b>	<b>7,480</b>	
20%			<b>1,496</b>	
			<b>8,976</b>	

	1	200		
	---	---		
	12	2,400		
	9	4,320		
	5	2,400		
	<b>27</b>	<b>9,320</b>		
		<b>1,864</b>		
		<b>11,184</b>		

Does not incl. drive aisles



**City of Bend Public Works**

Bend, Oregon

**Space Needs Program  
Bend Public Works Facility Study**

City of Bend Public Works - Boyd Acres UTILITIES	Existing Conditions		2024 Program				2034 Program				Remarks
	Qty.		Space Standard	Qty.		Area (SF)	Qty.		Area (SF)		
	Staff	Space		Staff	Space		Staff	Space			
<b>TOTAL UTILITIES</b>		86,697			151,556		169,596				
Site Circulation (setbacks, landscaping, etc.)			100%		151,556		169,596				
<b>GRAND TOTAL FOR ALL AREAS</b>		86,697			303,112		339,193				
<b>ACRES</b>		1.99			6.96		7.79				

# Section Four

## Design Charrette - Pilot Butte



## Introduction

This section highlights the process and results of the design charrette for City of Bend Public Works Facility Study.

The purpose of the design charrette was to bring all users of the facilities together to develop Site Master Plan concepts for each site by utilizing the Space Needs Program and valuable input from key stakeholders.

BLRB and MDG met with staff at the Pilot Butte site on December 2 and 3, 2014 to present site concepts involving Right of Way Operations and Maintenance, Facilities Management, Fire Department, Police Department, and Fleet Maintenance.

## Charrette Goals

Several goals were set for each site and department to improve the operational efficiencies. A list of these goals include:

### Pilot Butte

- More efficient parking for staff and visitors
- Better circulation and flow through site
- More secure site
- Fire Station on/near site to better serve central area of city
- Determine if existing site could support programmed departments
- Allow for CNG fueling
- Develop proposed phasing plan to limit impact to operations

## On-site Charrette

The Design Team met with members of Bend Public Works to present various concepts hoping to receive, input, insight, and direction to develop concepts further. Each concept developed during and after the charrette has been included in this section, helping to represent a synopsis of the week's activities.

In conjunction with reviewing these concepts, MDG reviewed the most recent version of the Space Needs Program with the Public Works staff based on comments provided by the staff during their initial Draft review. The Design Team updated and incorporated the program into the newly developed concepts.



December 2, 2014  
 Day One

BLRB and MDG gathered at the Pilot Butte site to set up the on-site studio for the charrette workshop in the Washington conference room. Key stakeholders for the Pilot Butte site arrived at 10 am for the first of two review sessions. Ken Booth (Maintenance Design Group) began by stating the purpose of the design charrette and how the Design Team used the Space Needs Program to develop the various site concepts. The existing site is roughly 19.6 acres (not including bus facilities) and the Space Needs Program will require nearly 22 acres. Through efficient planning, the Design Team is confident the facility program will be accommodated on the existing property. Ken then introduced the Design Team's initial site concepts:



- **Concept A (see Exhibit 4.A):**
  - ✓ Demolish existing Public Works facility and replace with parking structure. A majority of the parking structure would be utilized by the Police Department
  - ✓ Keep existing Courthouse and Police Department
  - ✓ Fire Station located where existing parking is for Police Department to allow for quick access to 15<sup>th</sup> Street
  - ✓ Fuel lanes located on access road off of 15<sup>th</sup> Street
    - CNG station incorporated for future
  - ✓ Right of Way Operations and Maintenance and Facilities Management located in new, single-story building on east-central area of site
  - ✓ Covered vehicle and storage areas located along west property line near cemetery
  - ✓ Bulk materials stored in southeast corner of site
  - ✓ New Fleet Maintenance building located on southern portion of site
  - ✓ New vehicle/truck wash bays located on southern portion of site
    - Each Wash Bay includes automatic vehicle washing equipment
- **Concept B (see Exhibit 4.B):**
  - ✓ Keep existing Courthouse and Police Department





- ✓ Renovate existing Right of Way and Facilities Management Building to be used for Police Parking and Evidence Storage
- ✓ Fire station located on west central area of site, south of Police Parking
- ✓ New Fuel, CNG Fueling, and Mag Chloride located off 15th Street
- ✓ Employee parking south of Fueling area
  - MDG noted parking structure could be built over Police parking for Employee parking to free up acre of space
- ✓ Right of Way Operations and Maintenance and Facilities Management located in new, two-story building on east-central area of site
- ✓ Fleet Building located on southern portion of site with sufficient circulation around building
- ✓ New vehicle/truck wash bays located on southern portion of site
  - Each Wash Bay includes automatic vehicle washing equipment
- ✓ Sand pile not located onsite



### Stakeholder Comments

Comments from the stakeholders for **Concept A** included:

- Like circulation around Fleet Building (70'-0" in front of Repair Bays)
- Like the orientation of the Fleet Building (north to south) to allow winter sun to melt ice buildup in front of building
- Prefer to use southeast corner of site for storage instead of buildings due to uncertainty of rock outcroppings
- Sand pile requires significant site area for storage and access
  - ✓ Sand pile can be organic in shape and Right of Way suggested utilizing a more vertical storage method
- Fire Station in good location, but concerned about construction sequencing
  - ✓ Fire Station has near-future need
    - Public Works investigated locating Fire Station near roundabout near southeast corner of site. This location

would be difficult to build given the rock outcroppings, engineering and construction required.

- Stakeholders noted the area required for the Fire Station takes up significant area of site to incorporate drive-through access and circulation
- Public Works proposed locating the Fire Station across 15<sup>th</sup> Street

Comments from the stakeholders for **Concept B** included:

- Sand pile not located onsite
  - ✓ Although it is not necessary, Public Works prefers sand pile located on same site as operations
  - ✓ Staff confirmed efficiency would not be lost if there were two smaller Sand Piles on the same or two different sites
- Fire Station location in west-central area of site makes maneuvering apparatus trucks difficult
- Fire Station is not critical aspect of site functionality, but takes up significant site area
  - ✓ Stakeholders asked if Fire Station could be located across 15th Street
  - ✓ Allows site area for sand pile to be located onsite which is preferred onsite over Fire Station
  - ✓ If Fire Station needs to be onsite, preferred location is near 15th Street near roundabout
  - ✓ City performed study showing most Fire Department responses are to north of
- Prefer solution which reuses existing Right of Way building to reduce overall construction cost
  - ✓ Design Team to determine if renovated building would accommodate required program for Right of Way and Facilities Management
  - ✓ City performed analysis on existing building and found it was in good structural shape and building exterior is in good condition
  - ✓ MDG noted City staff would likely be required to work in trailers during renovation
- Right of Way prefers vehicles, trailers, and other equipment parking is located near building
- Public Works asked if site access from north was possible

- ✓ Determined the state would be unlikely to allow access from north
- Like the location of Fleet Building; away from other activity onsite
- Like adjacency of Fleet Building and Right of Way
  - ✓ Right of Way is biggest customer of Fleet
- Concerned about ice buildup on northern side of Fleet Building
- Back-in enclosed or covered vehicle parking is acceptable, but drive-through is preferred
  - ✓ MDG noted drive-through requires additional drive aisles and site circulation
- Unable to locate Decant
  - ✓ Could be located at Boyd Acres, but preferred location is on same site as operations
- Parking structure could be incorporate to free up site space
  - ✓ Staff noted this would increase construction costs but may be necessary to achieve functional requirements of site
- Facilities storage (for Bond Annex) could be reduced from 8,000 square feet to 1,000 square feet to reduce site and building square footage requirements
- Like Fuel area as shown in both concepts adjacent to 15th Street
  - ✓ Good location for future flexibility if other agencies choose to fuel onsite
  - ✓ Police Department may be concerned with Fuel location if located any closer to Police building and Courthouse
- Southwest corner of Heated Vehicle Storage may conflict with underground well
- Stakeholders noticed Space Needs Program for Right of Way and Facilities Management showed separate Restrooms/Lockers/Showers; City prefers these departments share these functions if located in same building
- Fleet prefers access drive aisle is not located directly in front of Fleet Building due to safety concerns

### Direction

Direction for the following concept(s) was to include the following:

- Show Fire Station located across 15<sup>th</sup> Street

- ✓ City to research possibility of relocating Fire Station to proposed area
- Reuse of existing Right of Way and Facilities Management building, plan for renovation
- Show Right of Way vehicle and equipment parking/storage near Right of Way building
- Simplify the circulation path through site
- Modify Sand Pile footprint as needed but maintain programmed square footage
- Maintain existing Police Department and Courthouse building
- Try to avoid using parking structure, but show if necessary

Following the conclusion of the meeting, MDG and BLRB updated the Space Needs Program and developed new site concepts based on comments and direction received from the stakeholders.

### December 3, 2014 Day Two

The key stakeholders, BLRB, and MDG reconvened in the Washington conference room to review the newest concepts developed the previous day.

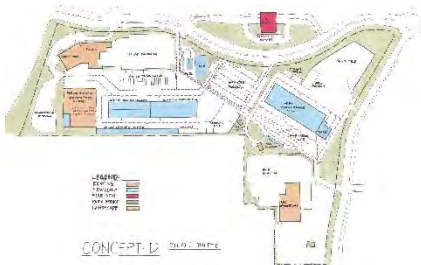
Brad Emerson began the meeting stating he had researched locating the Fire Station across 15th Street and did not find any documentation indicating a structure could not be located there. The City is required to provide a trail and maintain adequate distance from the rear (east) property line, which would increase the buffer distance to the adjacent neighbors.

Following Brad's opening remarks Ken introduced the Design Team's newest site concepts:

- **Concept C (see Exhibit 4.C):**
  - ✓ Keep existing Courthouse and Police Department
  - ✓ Renovate existing Right of Way and Facilities Management Building
    - Includes minimal (7,000 sf) addition to meet program square footage
  - ✓ Fire station located across 15th Street
  - ✓ New Fuel and CNG Fueling area located off 15th Street
    - Includes underground fuel tanks



- ✓ Employee parking south of Fueling area
- ✓ Fleet Building located south of Employee parking with north-south building orientation
- ✓ Sand pile located in southeast corner of site near roundabout
- ✓ Covered truck storage south of Right of Way building
  - Each space was sized to accommodate 12-feet by 40-foot vehicles (largest programmed vehicle under Covered parking)
  - Allows for drive-through configuration
- ✓ Enclosed Vehicle parking south of Covered parking
  - Allows for drive-through configuration
- ✓ Large Yard Storage area west of Material Bins south of Enclosed Storage
- ✓ Wash Building located on south portion of site near Fleet Maintenance
  - Vehicles/Trucks will likely enter site from south to enter Wash Building
  - Each Wash Bay includes automatic vehicle washing equipment
- ✓ Police parking expanded between existing Police/Courthouse and renovated Right of Way Buildings
  - Police parking capacity was revised from the previous day
  - Police parking still allows access to Right of Way shops on southeast corner of Right of Way Building
- ✓ No parking structure shown
  - MDG noted parking structure could be included above existing Police parking to free up area shown as Employee parking



- **Concept D (see Exhibit 4.D):**
  - ✓ Keep existing Courthouse and Police Department (similar to Concept C)
  - ✓ Renovate existing Right of Way and Facilities Management Building (similar to Concept C)
    - Includes minimal (7,000 sf) addition to meet program square footage
  - ✓ Fire station located across 15th Street (similar to Concept C)

- ✓ New Fuel and CNG Fueling area located off 15th Street (similar to Concept C)
- ✓ Includes underground fuel tanks (similar to Concept C)
- ✓ Employee parking south of Fueling area with dedicated access to/from 15th Street
- ✓ Fleet Building located south of Employee parking with angled building orientation
  - Down and Ready vehicle parking northwest of Fleet Building to serve as informal barrier between site circulation lane and circulation area in front of Fleet Building
- ✓ Sand pile located in southeast corner of site near roundabout (similar to Concept C)
- ✓ Covered truck storage south of Right of Way building
  - Each space was sized to accommodate 12-feet by 40-foot vehicles (largest programmed vehicle under Covered parking)
  - Allows for drive-through configuration
  - Provided walkway in middle to provide covered walkway between Employee parking and Right of Way building
- ✓ Smaller Covered truck storage located along west property line
  - Requires back-in parking
- ✓ Enclosed Vehicle parking south of Right of Way Building
  - Allows for drive-through configuration
- ✓ Yard Storage located near Sand Pile
- ✓ Wash Building combined with Fleet Maintenance Building
  - Vehicles/Trucks will likely enter site from south to drive through Wash Building
  - Each Wash Bay includes automatic vehicle washing equipment
- ✓ Police parking expanded west of existing Police parking area
  - Police parking capacity was revised from the previous day (similar to Concept C)
  - Police parking allows for more access to Right of Way shops on southeast corner of Right of Way Building compared to Concept C



- ✓ Additional Court parking reserved for parking lot north of Right of Way building
- ✓ No parking structure shown
  - MDG noted parking structure could be included above existing Police parking to free up area shown as Employee parking

### Stakeholder Comments

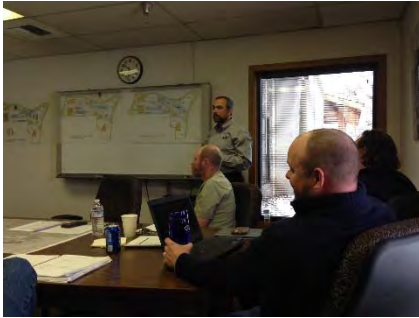
Comments from the stakeholders for **Concept C and D** included:

- Do not want underground fuel tanks
  - ✓ MDG noted largest above ground tank is typically 12,000 gallons; Space Needs Program shows requirement for 20,000 gallons
- CNG Fueling station will be designed and furnished though a separate contract; Design Team to continue planning for CNG equipment area
- Like the circulation in front of Material Bins which allow trucks sufficient space to turn and back up to bins for delivery or pick up
- Staff do not mind angled Fleet Maintenance Building as this simplifies site circulation
- Like circulation around entire Fleet Maintenance Building
- Material Bins could be located near Sand Pile to make deliveries and loading easier
- Need a Decant Facility
  - Could be located at Boyd Acres
  - ✓ Staff concerned about travel time between sites
    - MDG suggested one Decant for each site (Pilot Butte and Boyd Acres)
    - Staff prefer one Decant; trucks can be dumped at Boyd Acres and cleaned at Pilot Butte site
    - Trucks will be dumped daily and the operation lasts between 10 and 15 minutes
  - ✓ MDG noted there is not a dedicated Clean Bay to wash vehicles/sweepers
    - Space not included in Space Needs Program
    - Stakeholders would like to add this function to the Program and site



- Space to be enclosed, with multiple wash areas with platforms and catwalks
- Space should allow sufficient clear height (19-feet +/-) to allow trucks to tilt bins to wash out
- ✓ Staff like adjacency of trucks/equipment to Right of Way building
- ✓ Circulation paths are clear and efficient
- ✓ Like additional site access created for Employee Parking lot
  - This will minimize the number of personal vehicles in secure yard areas; this has been a safety and security issue in the past
- ✓ Suggest relocating Material Bins and Yard Storage to southeast area of site near Sand Pile
- ✓ Suggest maintaining existing Police parking orientation but include an extension to accommodate additional parking
- ✓ Reconfigure north parking lots to increase the amount of visitor parking
- ✓ Police Department want a secured parking lot for patrol vehicles
- ✓ Like vehicle access provided to west side of Police/Courthouse Building and east side of Right of Way Building
  - Allows for flexibility
- ✓ Need area to store paint totes
  - Full totes to be stored inside Fleet Maintenance Building
  - Empty totes to be stored in Yard Storage
- ✓ Police need secured area to store seized vehicles
  - Discussed adding on to Right of Way Building once fuel station is relocated; however this would not allow for access requirements to east side of building as noted above
- ✓ If Fire Station cannot be located across 15th Street, will need to include parking structure and locate Fire Station between Fuel area and Fleet Maintenance Building
  - May need to reduce onsite sand storage requirements as well





- ✓ City will contact neighboring bus operations to discuss temporarily storing trailers and/or vehicles at their site

### Direction

Direction for the following concept(s) was to include the following:

- Staff prefer Concept D with changes noted above
- Add Wash Areas/Pads to Space Needs Program and final site concept
- Full Decant Facility to be located at Boyd Acres
- Assume Fire Station will be located across 15th Street as shown in Concepts C and D

### Phasing Plan

Following the site concept discussion, the attendees discussed the potential phasing plan for Pilot Butte site. The proposed phasing plan was:

- **Phase I:**
  - ✓ Construct Fuel Area; Remove existing underground fuel tanks
    - CNG system to be provided under separate contract
- **Phase II:**
  - ✓ Add site/perimeter fencing to secure site
  - ✓ Grading/Paving in southeast corner of site; Area will initially be used for Yard Storage and vehicle parking; Existing Sand Pile to remain
- **Phase III:**
  - ✓ Construct Covered Vehicle Parking,
  - ✓ Construct Mag Chloride Facility, Vector Dump/Decant
  - ✓ Expand Police Parking
  - ✓ Complete site work
- **Phase IV:**
  - ✓ Construct Fleet Maintenance Building
    - Building can be phased; Not all Repair Bays will be required initially and can be constructed as fleet size increases
    - Staff to work in trailers during construction

- Construct Truck Wash

- **Phase V:**

- ✓ Renovate Right of Way and Facilities Management Building
  - Staff to work in trailers during construction
- ✓ Reconfigure parking lot adjacent to the Right-of-Way Building.

- **Phase VI:**

- ✓ Relocate the Sand Pile

- **Phase VII:**

- ✓ Construct the new employee parking lot

### Post-Charrette Activities

The Design Team updated and prepared the final site master plan concept (Exhibit 4.E), Space Needs Program (Section Three), and Phasing Plan included in this report.

Exhibit 4.A  
 Concept A

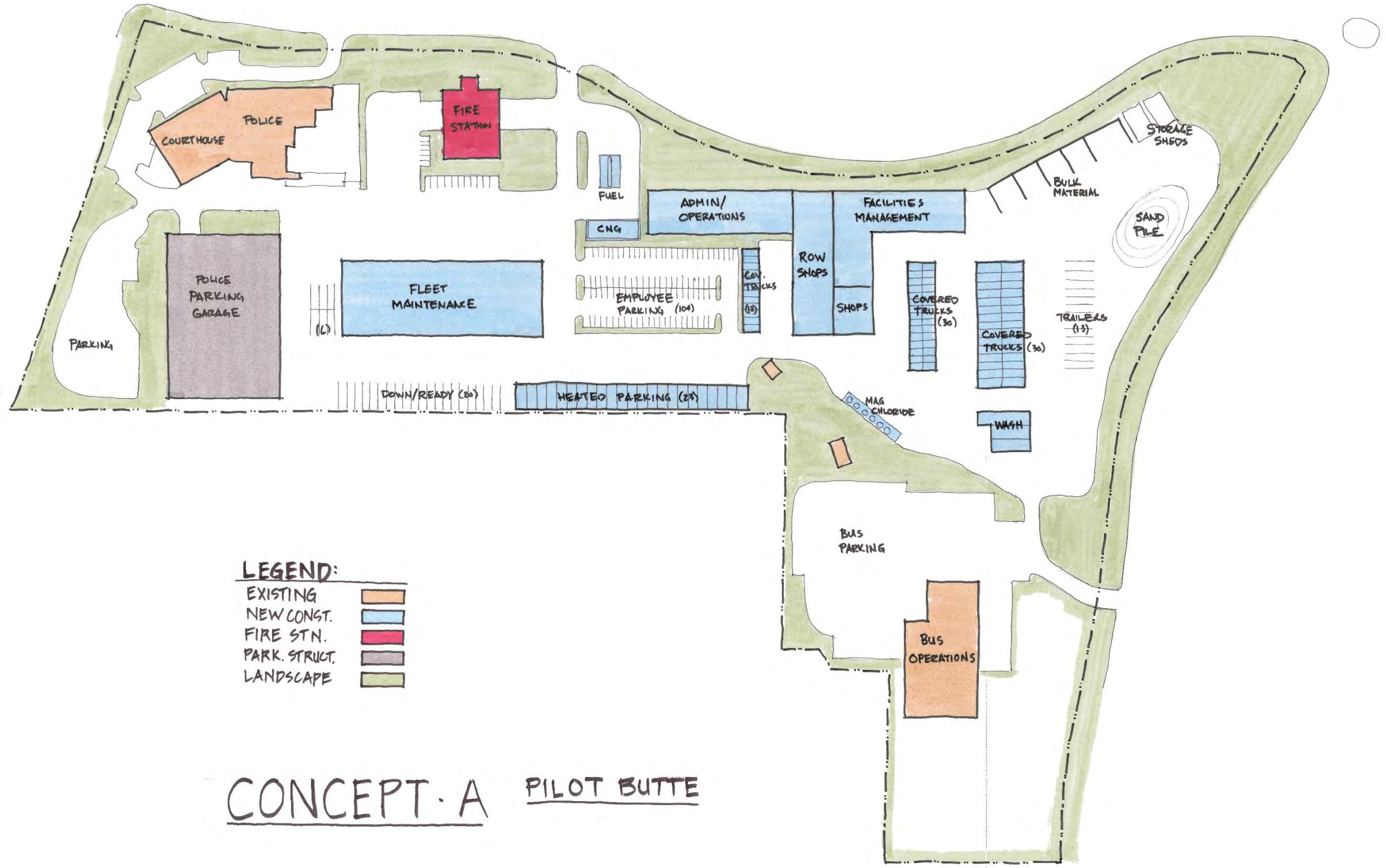




Exhibit 4.B  
 Concept B

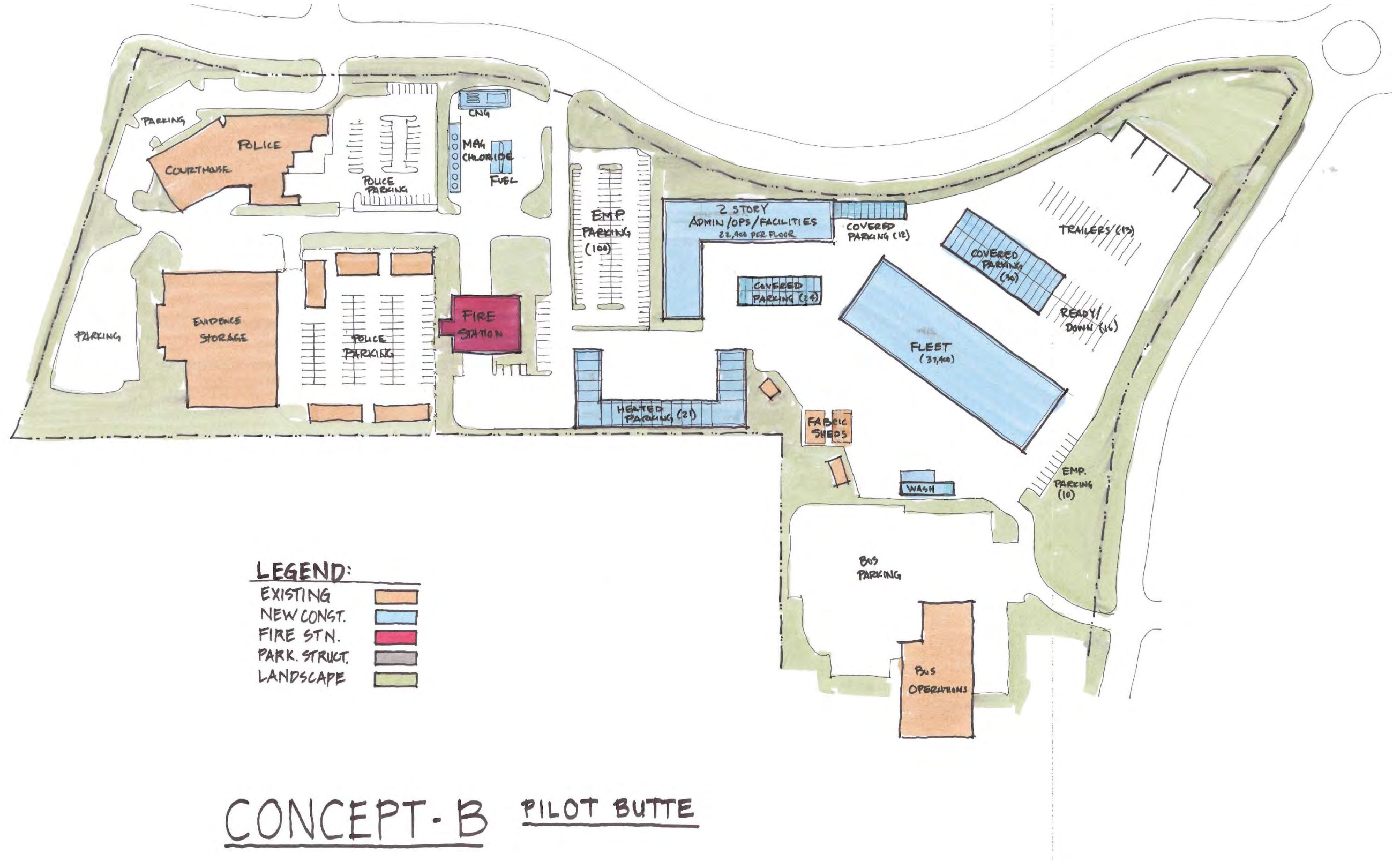




Exhibit 4.C  
 Concept C

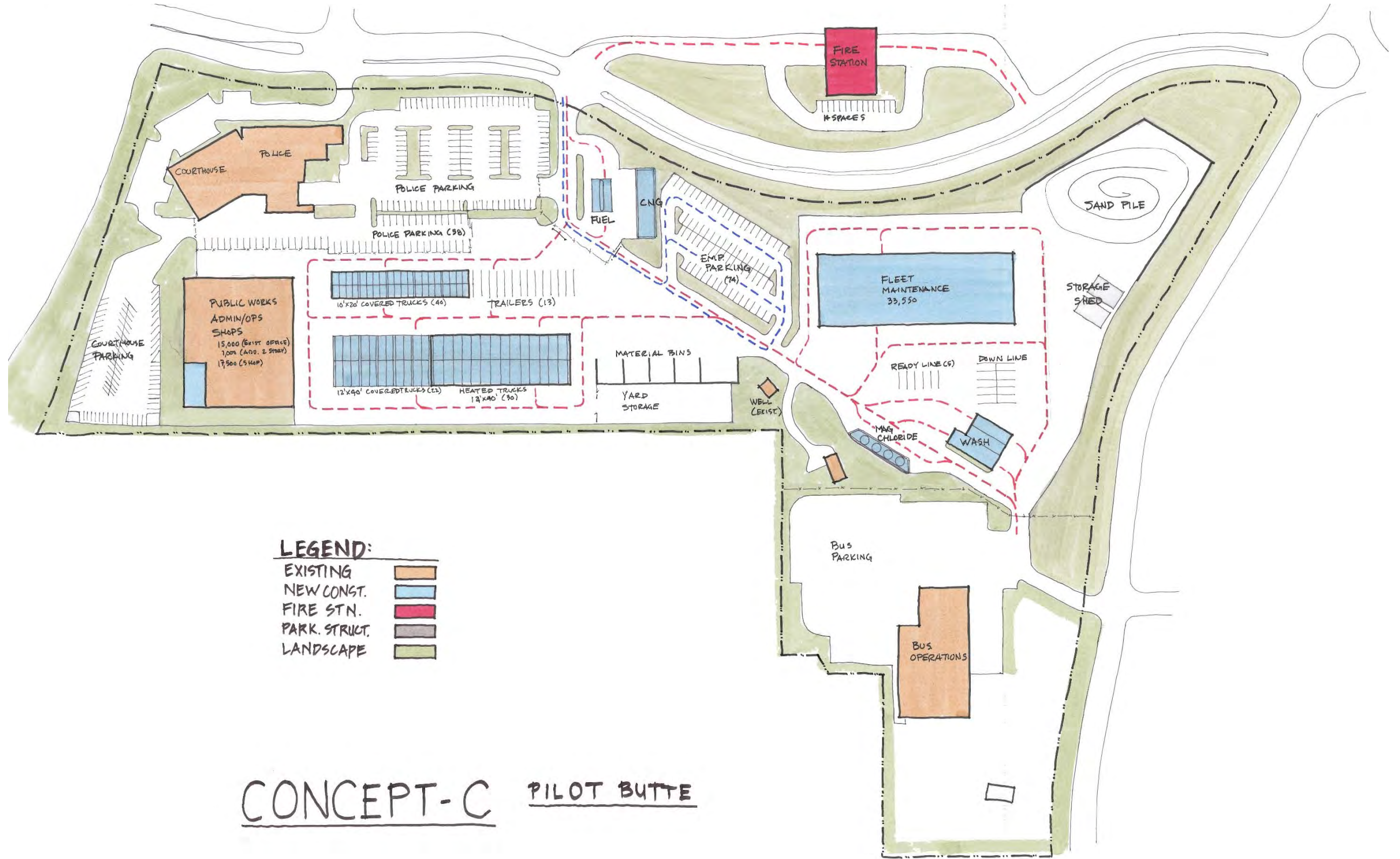
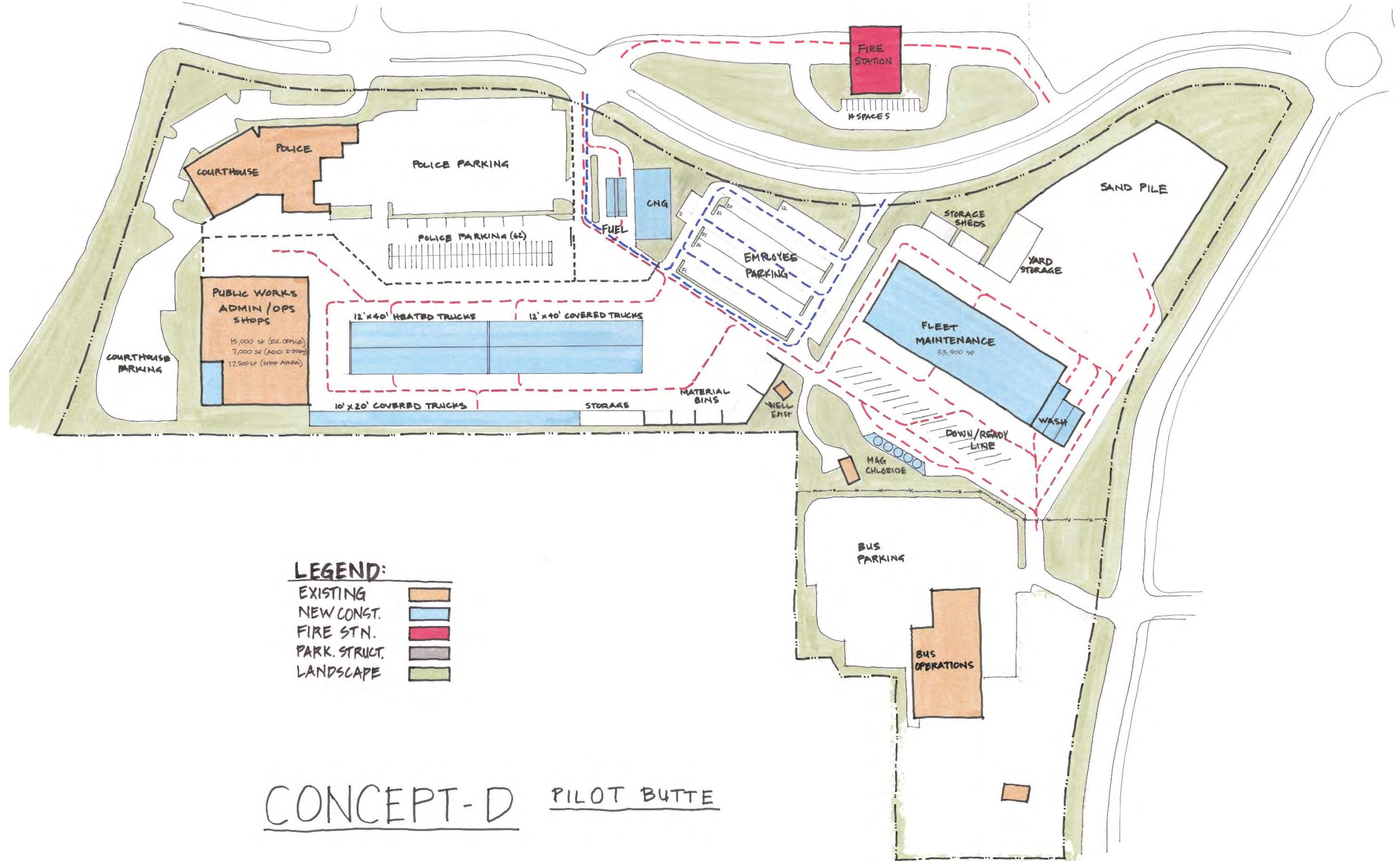






Exhibit 4.D  
 Concept D



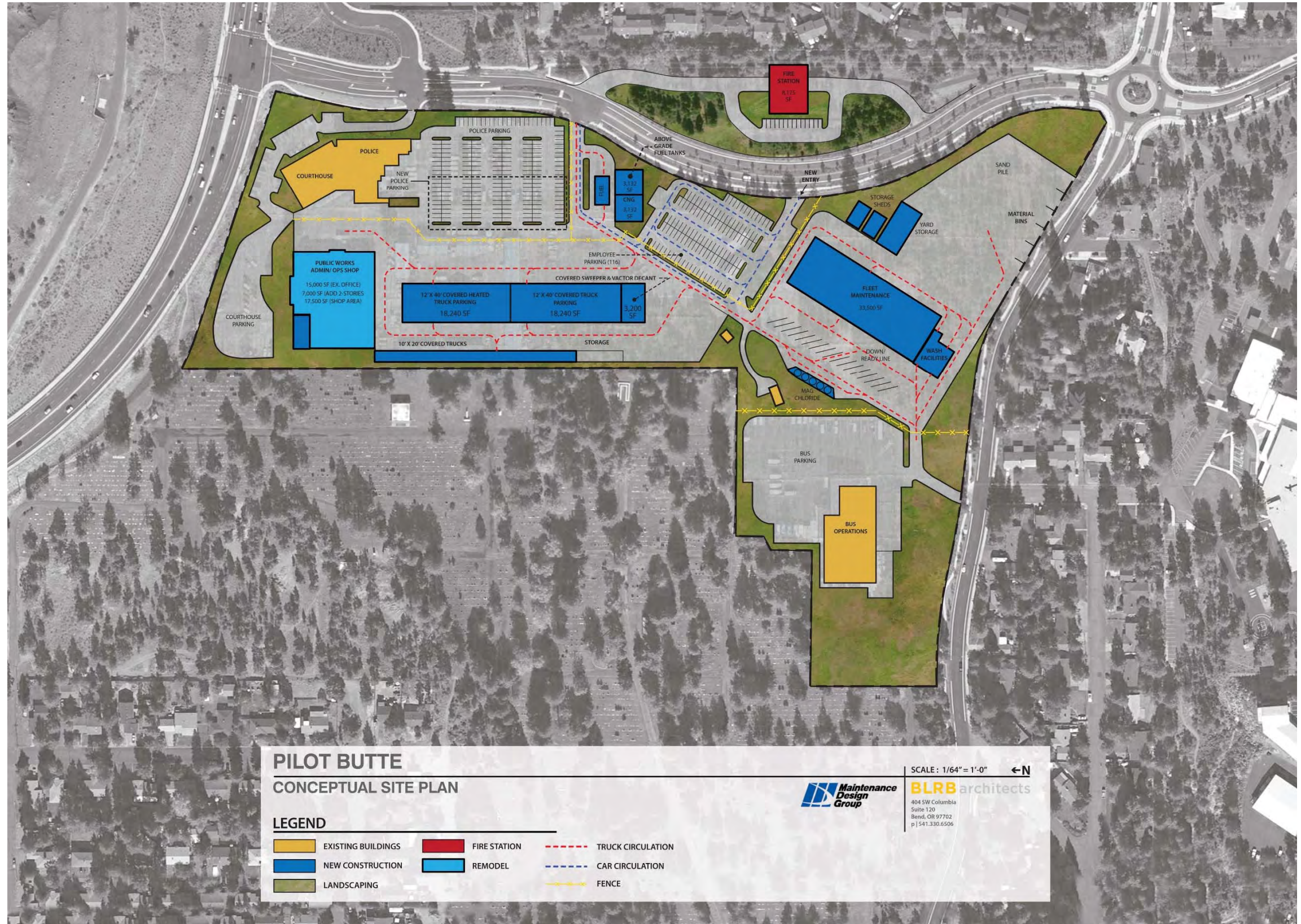
**LEGEND:**

EXISTING	<span style="display:inline-block; width:15px; height:15px; background-color:orange;"></span>
NEW CONST.	<span style="display:inline-block; width:15px; height:15px; background-color:lightblue;"></span>
FIRE STN.	<span style="display:inline-block; width:15px; height:15px; background-color:red;"></span>
PARK. STRUCT.	<span style="display:inline-block; width:15px; height:15px; background-color:gray;"></span>
LANDSCAPE	<span style="display:inline-block; width:15px; height:15px; background-color:lightgreen;"></span>

CONCEPT-D     PILOT BUTTE



Exhibit 4.E  
 Final Site Master  
 Plan Concept





# Section Five

## Design Charrette - Boyd Acres



## Introduction

This section highlights the process and results of the design charrette for City of Bend Public Works Facility Study.

As noted in Section 04, the purpose of the design charrette was to bring all Public Works Utilities staff together to develop Site Master Plan concepts for each site by utilizing the Space Needs Program and valuable input from key stakeholders.

BLRB and MDG met with staff to present site concepts involving Utilities at Boyd Acres on December 4 and 5, 2014.

## Charrette Goals

Several goals were set for each site and department to improve the operational efficiencies. A list of these goals include:

### Boyd Acres

- Make best use of existing buildings
- More efficient, consolidated parking for staff and visitors
- Better circulation and flow through site
- More secure site
- Determine if existing site could support Utilities
- Develop proposed phasing plan to limit impact to operations

## On-site Charrette

The Design Team met with Bend Public Works Utilities staff to present various concepts to receive, input, insight, and direction to develop concepts further. Each concept developed during and after the charrette has been included in this section, helping to represent a synopsis of the week's activities.

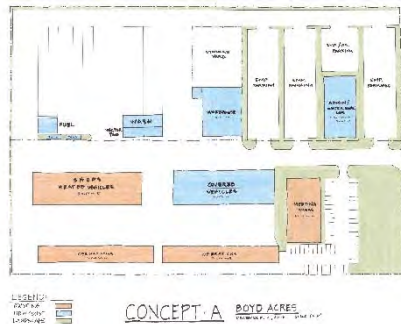
In conjunction with reviewing these concepts, MDG reviewed the most recent version of the Space Needs Program with the Public Works staff based on comments provided by the staff during their initial Draft review. The Design Team updated and incorporated the program into the newly developed concepts.



**December 4, 2014  
 Day One**

BLRB and MDG presented to Public Works Utilities key stakeholders in the Eisenhower Training Center. Ken Booth (Maintenance Design Group) stated the purpose of the design charrette and how the Design Team used the Space Needs Program to develop the various site concepts. The existing site is roughly 5 acres and the Space Needs Program will require nearly 9 acres. The Design Team’s task was to develop multiple site concepts reusing the existing site and possibly using the adjacent, north vacant property.

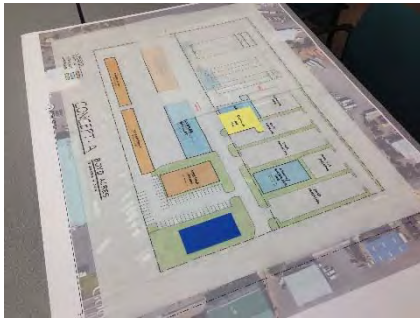
Ken then introduced the Design Team’s initial site concept:



- **Concept A (see Exhibit 5.A):**
  - ✓ Assumes acquisition of adjacent, north vacant property
  - ✓ Renovate existing Admin Building for multiple Meeting Rooms/Areas to serve the City and various departments
    - During Programming Interviews, the Design Team heard the City does not have sufficient meeting spaces
  - ✓ Construct new Admin and Water Quality Lab building adjacent to street front to give public presence
  - ✓ Construct new Materials Warehouse building to serve as a central receiving and distribution facility for Utilities
    - Adjacent exterior Material Storage Yard to control consolidate materials scattered throughout site
  - ✓ Construct new Covered Vehicle Parking east of existing Shops/Enclosed Vehicle Parking (Building D)
  - ✓ Partially renovate Buildings B & C to accommodate all Operations areas
    - These buildings recently underwent updates and renovations
  - ✓ Relocate Operations areas in Building D to Buildings B & C
  - ✓ Relocate Vehicle Parking in front of Building B & C to northwest corner of site
  - ✓ Locate water retention area west of Vehicle Parking
  - ✓ New Fuel and Wash Buildings located north of existing Shop/Enclosed Vehicle Parking (Building D)
  - ✓ Employee Parking in northeast corner of site
  - ✓ Design Team noted challenges with existing and adjacent site grading



- Boyd Acres site would require more sitework compared to Pilot Butte site
- Design Team will look to create access points to provide easy access between each property
- ✓ Design Team noted another option is to renovate and reuse the existing Admin Building (Building A) for Admin and Water Quality Lab
  - Based on the Space Needs Program, the existing building square footage is under program and spaces would be tight



### Stakeholder Comments

Comments from the stakeholders for **Concept A** included:

- Staff questioned if Design Team evaluated incorporating site access from west of existing property
  - ✓ Staff noted the problem with current site is the bottleneck at the entry
  - ✓ Design Team did not look at access point from west because a second entrance was included north of the existing entry
  - ✓ Access from west would all require circulation through neighboring property not owned by Public Works
- Staff noted the Fuel area, especially with CNG, should be kept away from railroad spur
  - ✓ MDG noted the fuel equipment typically must be kept 30-feet from property line
- Staff commented the Admin and Water Quality Lab spaces did not need to be combined
  - ✓ Both departments need new facilities, but the Design Team should look at reusing the existing Admin Building for one or both functions
- Water Quality Lab has public component which should be located close to Visitor parking and not in secure area of site
  - ✓ Water Quality Lab storage could be located within site, but is not preferred
- Water Quality Lab spaces should not be separated; All spaces should be located on same floor
- Concept A works well, but appears it will require more funds that what may be available to the Utilities department

- Like the Warehouse function; Will improve organization, inventory, and operations for Utilities
- Staff concerned about long walk from Employee Parking area to Buildings, especially B, C and D
  - ✓ Some staff will then walk out to Vehicle Parking in northwest corner of site
  - ✓ Design Team has similar concerns but it keeps proximity between buildings which was more critical based on Programming Interviews
- Staff suggested relocating as many Public Works trucks from northwest Vehicle Parking area to area in front of Buildings B & C (similar to existing conditions)
- Staff questioned if Utilities needed amount of vehicles shown on site concept
  - ✓ Design Team noted the quantity shown matches the Space Needs Program which was confirmed through Programming Interviews
- Employee Parking should exclude offsite employees
  - ✓ Determined the total offsite employees in the 2034 Program will be 19
- Discussed a new, three-story building for Admin, Water Quality Lab, and Meeting Area
  - ✓ This was deemed unnecessary and an expensive option which was not required due to available space between the two properties
- Design Team noted the Employee Parking could be phased over time in effort to save initial construction costs
- Site may require additional emergency generator
- Staff concerned about traffic flow at main access
  - ✓ Existing main parking will be used for Visitor, Accessible, and overflow staff parking which will limit the amount of vehicles using main access
  - ✓ Employees and work trucks will primarily use new access north of existing
- Staff asked if the existing Admin Building was worth reusing
  - ✓ Design Team believes there is sufficient space to accommodate several functions in the Program
  - ✓ Design would focus on improving spatial layouts and energy efficiency

- Work vehicles should be in secure area within site
  - ✓ Should be separate from personal, visitor, and delivery vehicles
- Staff questioned if basement was possible for some programmed spaces
  - ✓ Determined basements are not typical in central Oregon due to rock formations
- Staff concerned about walking between building and grade changes onsite
- Site design should allow for sufficient space north of Building D to provide sufficient space for vector trucks to easily make turn when entering/existing building
  - ✓ Design Team will show retaining wall 60-feet from face of building
- Staff questioned if entire Utilities program could be accommodated on existing site without acquisition of adjacent property to the north
  - ✓ Design Team believes construction and operational costs incurred would be significantly more by remaining on existing site
  - ✓ The Space Needs Program and Master Plan validate acquisition of adjacent site to north of existing site
- Staff believe end product, when construction is completed, should serve as sustainable example to community

### Direction

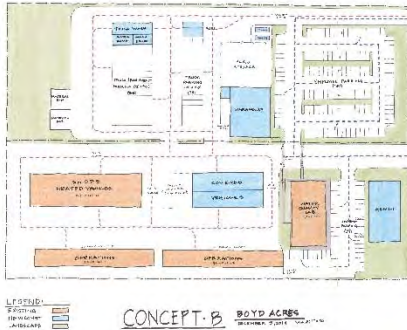
Direction for the following concept was to include the following:

- Continue developing concepts assuming Public Works will purchase adjacent property to the north of existing Boyd Acres site
- Develop concept(s) which reuse existing Admin Building
- Show Truck Parking north of Building B & C to reduce new parking requirements on adjacent property

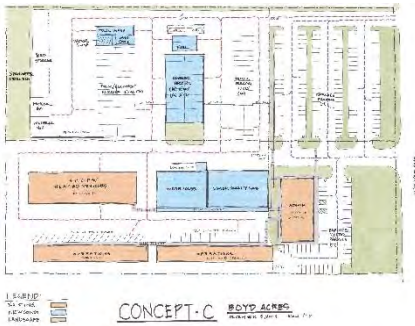
Following the conclusion of the meeting, MDG and BLRB updated the Space Needs Program and developed new site concepts based on comments and direction received from the stakeholders.

December 5, 2014  
Day Two

The key stakeholders, BLRB, and MDG reconvened in the Eisenhower Training Center room to review the refined concepts developed the previous day. Ken introduced the Design Team's newest site concepts:



- **Concept B (see Exhibit 5.B):**
  - ✓ Assumes acquisition of adjacent, north vacant property (similar to Concept A)
  - ✓ Construct new Admin Building closer to Boyd Acres Road for public presence (similar to Concept A)
    - Potentially increase square footage to include Meeting Rooms/Areas for City
  - ✓ Relocate Water Quality Lab to renovated existing Admin Building
    - Based on the Space Needs Program, this square footage is capable of supporting Water Quality Lab
  - ✓ Construct new Materials Warehouse building to serve as a central receiving and distribution facility for Utilities (similar to Concept A)
    - Adjacent exterior Material Storage Yard to control consolidate materials scattered throughout site
  - ✓ Construct new Covered Vehicle Parking east of existing Shops/Enclosed Vehicle Parking (Building D) (similar to Concept A)
  - ✓ Relocate Operations areas in Building D to Buildings B & C (similar to Concept A)
  - ✓ Some Truck Parking north of Buildings B & C
  - ✓ Locate water retention area west of remaining Vehicle Parking on northwest portion of site
    - Vehicles in secured site/yard
  - ✓ New Fuel and Wash Buildings along north property line of newly acquired site
    - Allows trucks to turn onto site, enter yard, fuel, wash, then park
  - ✓ Employee Parking in northeast corner of site (similar to Concept A)
    - Shows roughly 170 total employee/visitor parking spaces



- **Concept C (see Exhibit 5.C):**
  - ✓ Construct new Warehouse and Water Quality Lab east of Building D
    - Allows for easy access for deliveries and pick-ups
    - Incorporated enclosed walkway on south of building to provide mostly covered connection between buildings
  - ✓ Employee Parking in northeast corner of site (similar to Concept A)
    - Shows roughly 190 total employee/visitor parking spaces
  - ✓ Renovate existing Admin Building
    - Based on Space Needs Program, this leaves over 2,000 square feet available for Meeting Rooms/Areas for City (similar to Concept B)
    - Design Team noted additional 2,000-plus square feet could be added to south of existing building to provide additional space if needed
  - ✓ New Fuel and Wash Buildings along north property line of newly acquired site (similar to Concept B)
    - Allows trucks to turn onto site, enter yard, fuel, wash, then park
  - ✓ Vector dump pad in Wash Building for construction trucks only; Not for wet/well vehicles due to foul odors; Wet/well vehicles would be dumped at Water Reclamation Facility
    - Vector dump has to be located at Pilot Butte, because the sewer system at Boyd Acres cannot handle it at this site
    - Decant area for Sweepers and Vacuum Trucks will be located at Pilot Butte site
  - ✓ Warehouse Yard Storage located in northwest portion of site
    - Design Team questioned if Warehouse and Yard Storage need to be adjacent



**Stakeholder Comments**

Comments from the stakeholders for **Concepts B and C** included:

- Utilities prefers Vector Dump Pad located at Pilot Butte site



- Staff noted it would be beneficial to have connection to west property
  - ✓ Design Team noted each concept allows for north drive aisle to continue to west property to provide connection
- Staff concerned about quantity of vehicles entering/exiting current site
  - ✓ Design Team noted there are separate entrances for personal vehicles and work trucks
- Concept C appears to reuse existing site the best
- Concerned about dead-end for vehicle circulation between Water Quality Lab and Building B
  - ✓ Staff prefer the continuous circulation around building in this area similar to Concept B
- Appreciate the enclosed walkway in the Warehouse and Water Quality Lab in Concept C
  - ✓ Design Team noted a covered walkway is shown in Concept B
- Like that Concept C leaves “front yard” adjacent to Boyd Acres Road open for future flexibility
- Like Concept C with 2,000 square foot expansion to south for Meeting Rooms/Areas for City
- Design Team noted Concept B may cost more, but it provides better presence to community with Admin Building
- Staff prefer Concept C for Warehouse location because it is more central to site
  - ✓ Warehouse is not adjacent to Yard Storage
  - ✓ Staff confirmed Warehouse and Yard Storage do not need to be adjacent for daily operations
- Water Quality Lab prefers utilizing the existing Admin Building for the lab in Concept B because it addressed the public component requirement of the Lab and is great location for deliveries
- Prefer Employee Parking arrangement in Concept C
  - ✓ Can easily be expanded in future
- Like new Admin Building; If two-story, could make Meeting Rooms/Area on ground level with Admin spaces on second level; Allows for space around building for future growth if needed
- Do not believe Boyd Acres has capacity for Vector Dump Pad

- Appreciate the site/yard is secured west of Building A
- Yard Storage needs clearance/access for forklift with long pipes
- Design Team questioned if Fueling station was needed at Boyd Acres
  - ✓ Staff do not believe it is requirement if new station is in plan for Pilot Butte
- Need to add Archive Record Storage to Admin program

### Direction

Direction for the following concepts was to include the following:

- Develop updated design with assumption Utilities acquires property to north of existing site
- New concept should be similar to Concept B but with Employee Parking in Concept C
- Secure site west of Building A
- Show three Material Storage Bins west of Vehicle Parking

### Phasing Plan

Following the site concept discussion, the attendees discussed the potential phasing plan for Boyd Acres site. The proposed phasing plan was:

- **Phase I:**
  - ✓ Purchase adjacent property
- **Phase II:**
  - ✓ Construct new employee and vehicle parking
  - ✓ Construct new Fuel Canopy and Vehicle Wash Building
- **Phase III:**
  - ✓ Renovate Building B for Operations staffing needs
  - ✓ Relocate Operations staff to Buildings B and C
  - ✓ Renovate Building D for Shops and Heated Vehicle Storage
- **Phase IV:**
  - ✓ Construct new Admin Building
- **Phase V:**
  - ✓ Renovate existing Admin Building for Water Quality Lab

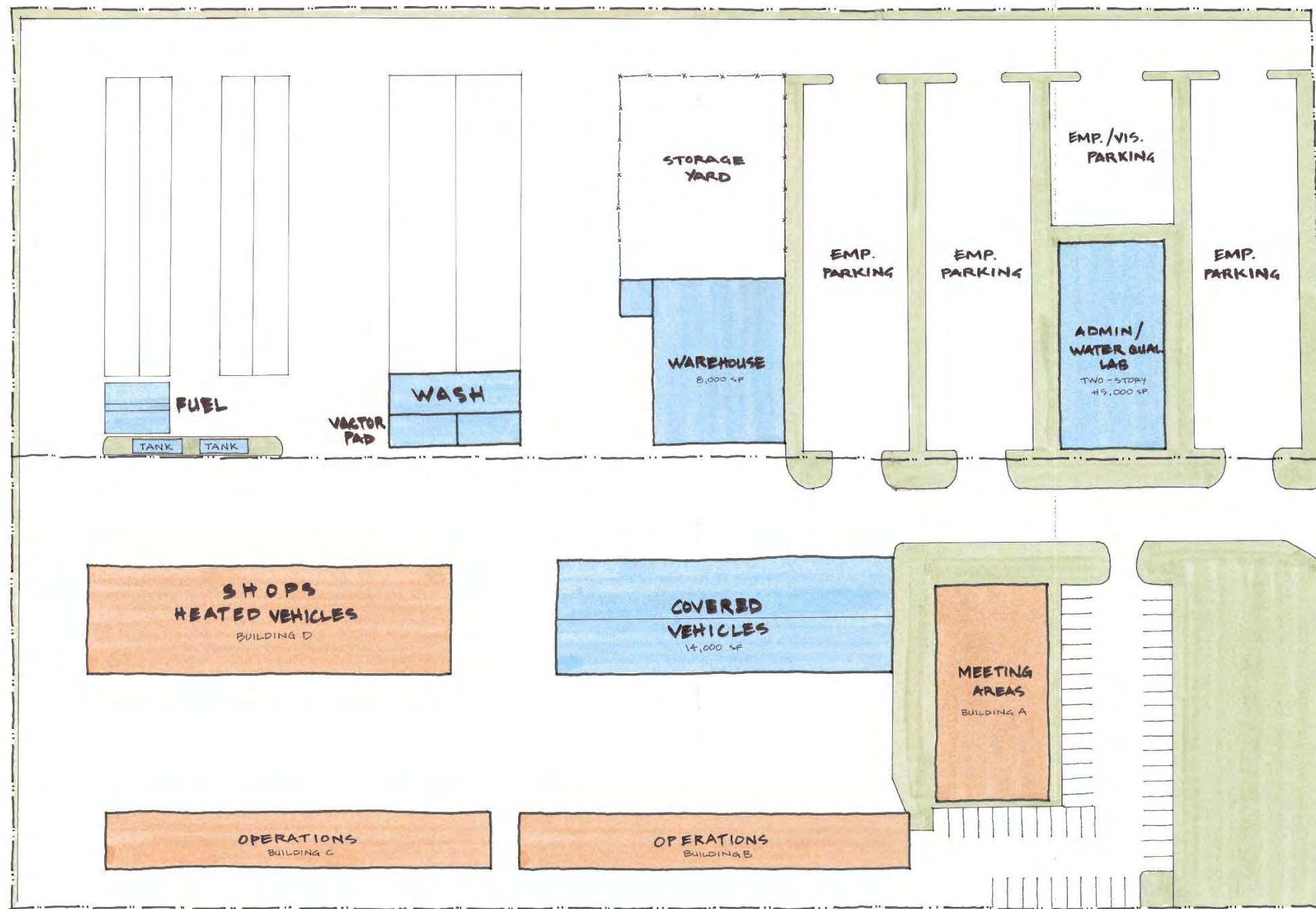
- **Phase VI:**
  - ✓ Construct new Warehouse and Covered Pipe Storage
  - ✓ Construct Covered Vehicle Parking canopy

#### **Post-Charrette Activities**

The Design Team updated and prepared the final site master plan concept (Exhibit 5.D), Space Needs Program (Section Three), and Phasing Plan included in this report.



Exhibit 5.A  
 Concept A

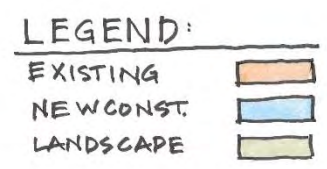
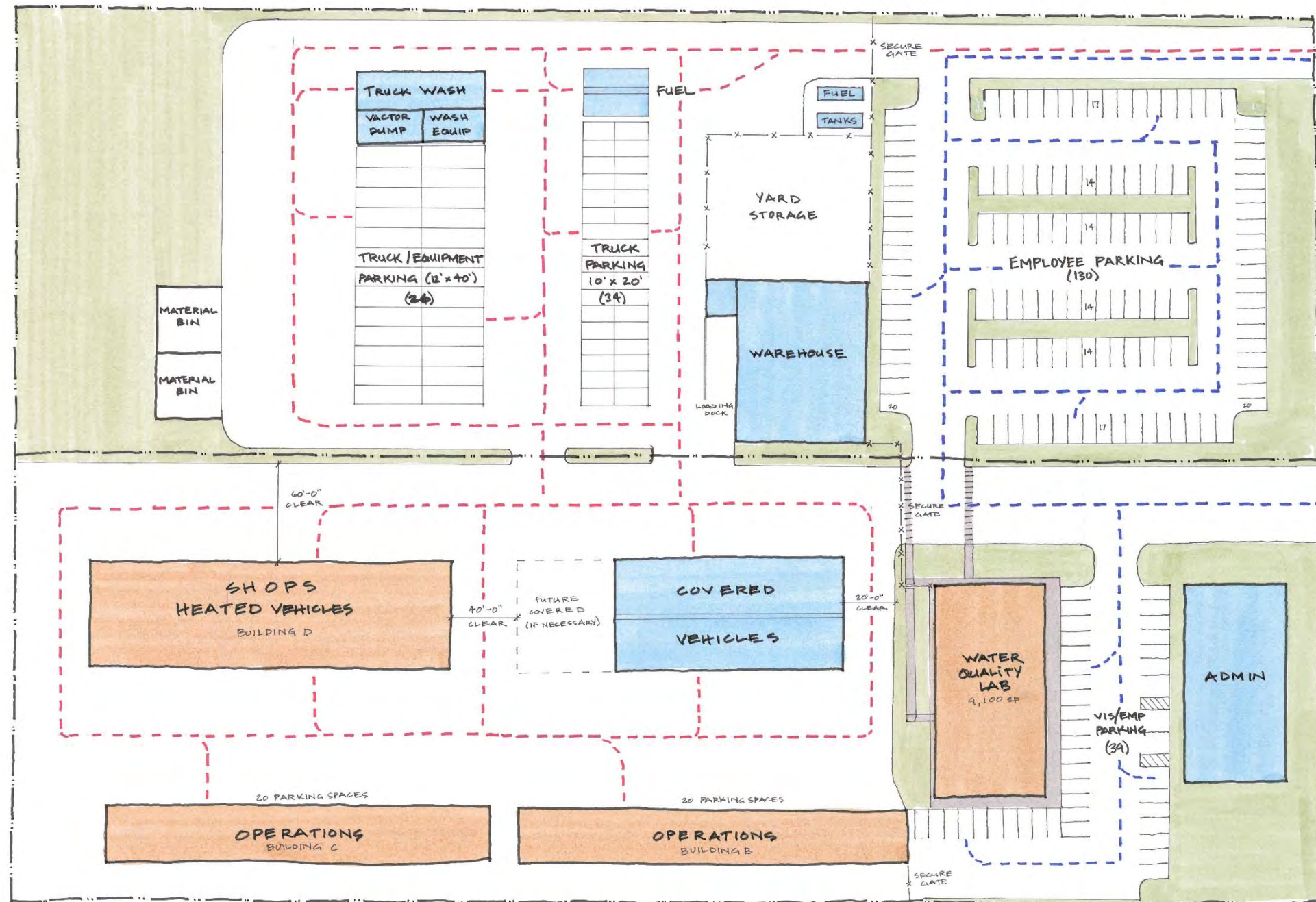


LEGEND:  
 EXISTING [Orange box]  
 NEW CONST. [Blue box]  
 LANDSCAPE [Green box]

**CONCEPT A** **BOYD ACRES**  
 DECEMBER 4, 2014 SCALE: 1" = 30'



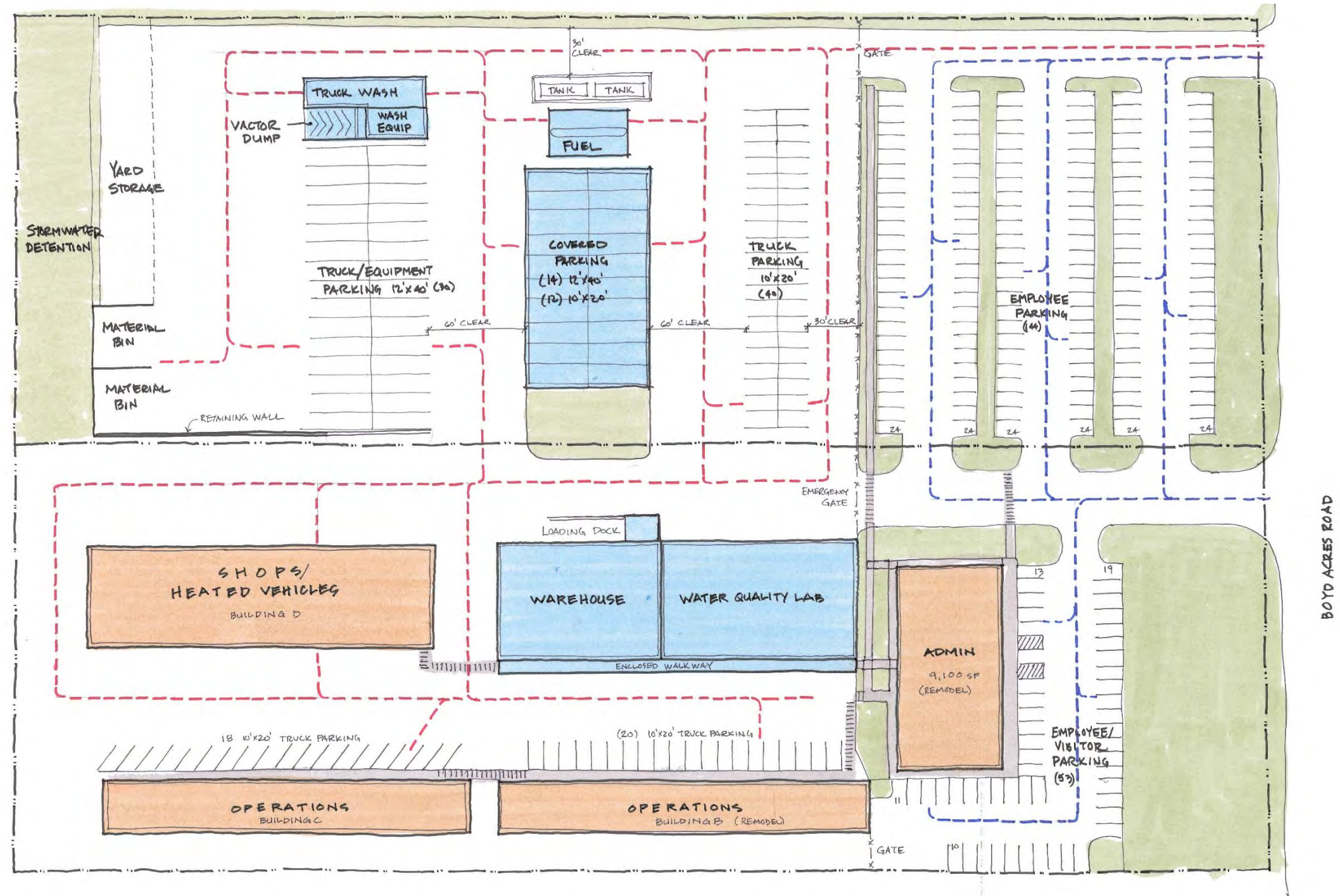
Exhibit 5.B  
 Concept B



**CONCEPT-B** **BOYD ACRES**  
 DECEMBER 9, 2014 SCALE: 1" = 30'



Exhibit 5.C  
 Concept C



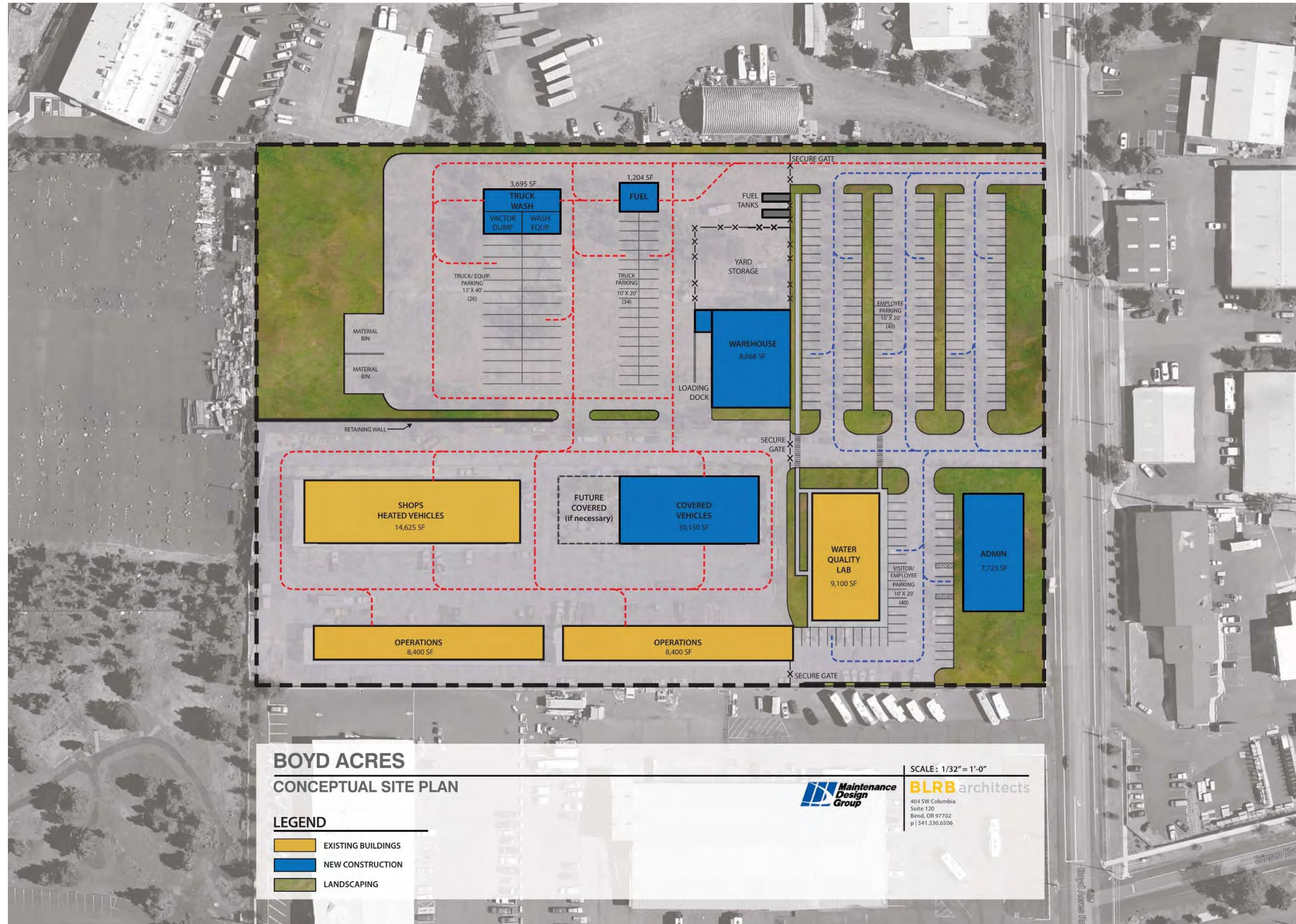
LEGEND:  
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 NEW CONST. [Blue Box]  
 LANDSCAPE [Green Box]

**CONCEPT-C**

**BOYD ACRES**  
 DECEMBER 5, 2014 SCALE: 1" = 30'



Exhibit 5.D  
 Final Site Master  
 Plan Concept







# Section Six Opinion of Cost



## Introduction

The preliminary construction cost estimate was prepared by BLRB Architects and MDG based on similar recently constructed facilities in the area. The values were derived from information in the drawings developed during the design charrette and discussions with local contractors.

## Assumptions and Qualifications

The estimate has been prepared using accepted practices and it represents the Design Team's opinion of probable construction costs. It is intended to be a determination of fair market value for the project construction. It is not a prediction of low bid. Since the Design Team has no control over market conditions (such as surges in steel and cement prices) and other factors which may affect the bid prices, the Team cannot and does not warrant nor guarantee that bids or ultimate construction costs will not vary from the cost estimate.

Essential services such as electrical, telephone, water, natural gas, storm drainage, and sanitary sewer systems are assumed already on the site and can be readily tapped into without upgrading the existing main systems.

The estimate includes the following:

- Foundations, superstructure, exterior closure, roofing, interior construction, interior finishes, mechanical, electrical, plumbing, and site work as included in documents referred to herein
- Subcontractor and general contractor mark ups
- Design Contingency
- Bonds, insurance, and mobilization
- Demolition
- Industrial Shop Equipment

The estimate specifically excludes the following:

- Removal of toxic hazardous materials (if any)
- Real Estate/Right-of-Way Acquisition
- Legal and finance fees
- Owner's administration costs

It is assumed that the above items, if needed, are included elsewhere in the owner's overall project budget.

FFE  
Change  
mngmt

The estimate is based on all work to be performed during regular working hours. No premium allowance is included for overtime, working at nights or weekends.

Items potentially affecting the cost estimate:

- Modifications to the scope of work included in this estimate
- Unforeseen sub-surface conditions
- Restrictive technical specifications or excessive contract conditions
- Any specified item of equipment, material, or product that cannot be obtained from at least three different sources
- Any other non-competitive bid situations

### **Materials and Quality of Construction**

It is anticipated that City of Bend desires quality materials that are durable for new construction. Funding priorities rarely allow replacement for these types of facilities in less than a 30 to 40-year cycle. Inexpensive materials such as corrugated steel siding and wood construction have a service life of no more than 20 years. Inexpensive systems also cost more to maintain and operate.

### **Soft Costs**

Soft Costs are included in the Opinion of Probable Cost to ensure that there are adequate available funds to cover the costs of necessary contingencies, project construction management, permitting, insurance, materials testing, design services, surveying, and other miscellaneous items. These soft costs are figured as a percentage of the total construction cost and have likewise been based on historical data from other projects of similar characteristics.

### **Phased Construction Schedule**

Construction will be phased for each of the City of Bend Campus sites design. The projected schedule for the Pilot Butte Campus phased construction will allow operations to continue on site during construction. The projected construction schedule and cost for the Boyd Acres campus assumes that the City is able to purchase the adjacent property.

### Escalation Costs

For each of Phases, the Design Team has included an anticipated start of year construction and a respective start date is given a percentage allowance for escalation on a average about 2% -3% per year.

### Opinion of Probable Cost

Tables 6.A and 6.B are the cost summaries for the Pilot Butte Campus and the Boyd Acres Campus. The detailed cost estimate, is located in Exhibit 6.A and 6.B at the end of this section. Please note that the estimate has been based on preliminary and limited information and it only serves as a general guideline for more specific and detailed studies in the future. An updated estimate should be prepared when more specific and detailed design information is available.

**Table 6.A - Pilot Butte Cost Summary**

<b>Pilot Butte Cost Summary</b>		
<b>Construction Item</b>	<b>Year</b>	<b>Estimate</b>
Fuel Island	2016	\$1,988,892
Site Paving/Grading	2017	\$5,876,640
Vehicle Storage/Parking	2018	\$5,709,420
Fleet Building/Truck Wash	2020	\$12,877,988
Operations (ROW) Building Remodel	2023	\$3,234,125
Relocate Sand Pile	2024	\$864,000
Employee Parking	2025	\$1,141,920
<b>Total</b>		<b>\$31,692,985</b>

**Table 6.B - Boyd Acres Cost Summary**

<b>Boyd Acres Cost Summary</b>		
<b>Construction Item</b>	<b>Year</b>	<b>Estimate</b>
Site Development Fuel Island	2018	\$3,359,598
Operations Building B Remodel	2020	\$1,043,280
New Utilities Admin Building	2022	\$4,248,000
Water Quality Lab (Remodel Admin)	2023	\$1,459,350
Warehouse/Covered Storage	2025	\$2,805,390
<b>Total</b>		<b>\$12,915,618</b>

## Conclusion

The Opinion of Probable Cost presented in this section for the renovations and new construction will assist the City of Bend to make strategic decisions about funding the different phases of the project. It is by no means a final cost, and is intended to be a flexible document with heavy contingency that will represent changing information based on City of Bend and the Design Team's decisions throughout the planning process. If the City is able to get larger portions of funding some of the construction phasing may be combined to reduce the amount of time to build out both campuses.

**City of Bend Public Works  
Facility Study  
Facility Programming Study**

**Section Six  
Option of Cost**

Exhibit 6.A Pilot Butte Detailed Cost Estimate

**Pilot Butte Campus**

Phase	Area	Size (in feet)	SF Total		Cost	Total	Additional Information	
I	<b>Fuel Island</b>							
		General Site Work	80,000	SF	\$ 5.00	\$ 400,000		
		Decommissioning Ex Fuel Area		LS		\$ 80,000		
		Site Fencing	3,500	LF	\$ 25.00	\$ 87,500	Plus access gates	
		Fuel Island		LS		\$ 800,000		
						\$ 1,367,500		
		Contingency	20%			\$ 273,500		
		Soft Cost	20%			\$ 328,200	A&E, permits, fees, inspections, furniture	
						\$ 1,969,200		
		Escalation	1%	1 year		\$ 19,692		
					<b>\$ 1,988,892</b>			
II	<b>Site Grading/Paving</b>							
		General Site Work	650,000	SF	\$ 5.00	\$ 3,250,000		
		Miscellaneous Paving and Drainage	200,000	SF	\$ 3.00	\$ 600,000		
						\$ 3,850,000		
		Contingency	20%			\$ 770,000		
		Soft Cost	20%			\$ 924,000	A&E, permits, fees, inspections, furniture	
					\$ 5,544,000			
	Escalation	6%	2nd Year		\$ 332,640			
					<b>\$ 5,876,640</b>			
III	<b>Vehicle Storage/Parking</b>							
		Covered Truck Parking Building #1	20 x 220	4,400	SF	\$ 55.00	\$ 242,000	Open, some power
		Covered Truck Parking Building #2	20 x 220	4,400	SF	\$ 55.00	\$ 242,000	Open, some power
		Heated Parking Building #1	40 x 220	8,800	SF	\$ 90.00	\$ 792,000	36 14 w doors, power, heat
		Covered Parking Building #1	40 x 220	8,800	SF	\$ 75.00	\$ 660,000	
		Yard Area - Material Bin, Vector Dump		12,000	SF	\$ 10.00	\$ 120,000	
		Mag Chloride Area	20 x 50	1,000	LS		\$ 100,000	Ex tanks, concrete pad
		Decant Facility	40 x 80	3,200	SF	\$ 40.00	\$ 128,000	
		Police Parking Lot Revised	200 x 340	68,000	SF	\$ 6.00	\$ 408,000	Revise layout, fencing, asphalt
		Finish Site Work		400,000	SF	\$ 2.00	\$ 800,000	Paving, drainage, landscape
							\$ 3,492,000	
		Contingency	20%				\$ 698,400	
		Soft Cost	25%				\$ 1,047,600	A&E, permits, fees, inspections, furniture
						\$ 5,238,000		
	Escalation	9%	3rd Year			\$ 471,420		
						<b>\$ 5,709,420</b>		
IV	<b>Fleet Building</b>							
		Fleet Maintenance Building	110 x 310	36,300	SF	\$ 145.00	\$ 5,263,500	
		Fleet Maintenance - FYFE		36,300	SF	\$ 40.00	\$ 1,452,000	
		Finish Site Work		150,000	SF	\$ 2.00	\$ 300,000	
		Truck Wash			LS		\$ 450,000	Fencing, drainage, landscape
							\$ 7,465,500	
		Contingency	20%				\$ 1,493,100	
	Soft Cost	25%				\$ 2,239,650	A&E, permits, fees, inspections, furniture	
						\$ 11,198,250		
	Escalation	15%	5th Year			\$ 1,679,738		
						<b>\$ 12,877,988</b>		

**Pilot Butte Campus**

Phase	Area	Size (in feet)	SF Total		Cost	Total	Additional Information
<b>V</b>	<b>Operation Building (ROW) Remodel</b>						
	Office Demo and Remodel		14,000	SF	\$ 85.00	\$ 1,190,000	
	Shop Area Repurposing		16,000	SF	\$ 30.00	\$ 480,000	
	Parking Lot Revised	120 x 280	33,600	SF	\$ 6.00	\$ 201,600	
						\$ 1,871,600	Revise, some new asphalt
	Contingency	20%				\$ 374,320	
	Soft Cost	20%				\$ 449,184	A&E, permits, fees, inspections, furniture
						\$ 2,695,104	
	Escalation	20%	8th year			\$ 539,021	
						<b>\$ 3,234,125</b>	
<b>VI</b>	<b>Relocate Sand Pile</b>						
	Sand Pile Yard Relocated	320 x 250	80,000	SF	\$ 5.00	\$ 400,000	Concrete wall, asphalt
	Miscellaneous			LS		\$ 100,000	
						\$ 500,000	
	Contingency	20%				\$ 100,000	
	Soft Cost	20%				\$ 120,000	A&E, permits, fees, inspections, furniture
						\$ 720,000	
	Escalation	20%	9th Year			\$ 144,000	
						<b>\$ 864,000</b>	
<b>VII</b>	<b>Employee Parking</b>						
	Employee Parking	180 x 250	55,000	SF	\$ 10.00	\$ 550,000	New
	Miscellaneous			LS		\$ 100,000	
						\$ 650,000	
	Contingency	20%				\$ 130,000	
	Soft Cost	20%				\$ 156,000	A&E, permits, fees, inspections, furniture
						\$ 936,000	
	Escalation	22%	10th Year			\$ 205,920	
						<b>\$ 1,141,920</b>	
<b>Total Pilot Butte Campus Cost</b>						<b>\$ 31,692,984</b>	



**City of Bend Public Works  
Facility Study  
Facility Programming Study**

**Section Six  
Option of Cost**

Exhibit 6.B Boyd Acres Detailed Cost Estimate

**Boyd Acres Campus**

Phase	Size (in feet)	SF Total		Cost	Total	Remarks
<b>I Property Purchase</b>			LS	\$	1,100,000	
<b>II Site Development/Fuel Island</b>						
Employee Parking Lot		50,400	SF	\$ 12.00	\$ 604,800	Site work, landscaping
Truck Wash		2,400	LS		\$ 425,000	
Site Development	500 x 220	110,000	SF	\$ 7.00	\$ 770,000	Hardscape, drainage
Fuel Island			LS		\$ 255,000	
					\$ 2,054,800	
Contingency	20%				\$ 410,960	
Soft Cost	25%				\$ 616,440	A&E, permits, fees, inspections, furniture
					\$ 3,082,200	
Escalation	9%	3 years			\$ 277,398	
					<b>\$ 3,359,598</b>	
<b>III Miscellaneous Paving and Drainage</b>						
Interior Remodel, Covered walk	30 x 240	8,640	SF	\$ 75.00	\$ 648,000	
Contingency	12%				\$ 77,760	
Soft Cost	25%				\$ 181,440	A&E, permits, fees, inspections, furniture
					\$ 907,200	
Escalation	15%	5 years			\$ 136,080	
					<b>\$ 1,043,280</b>	
<b>IV New Admin Building</b>						
New Admin Building	60 x 100	12,000	SF	\$ 200.00	\$ 2,400,000	
Contingency	20%				\$ 480,000	
Soft Cost	25%				\$ 720,000	A&E, permits, fees, inspections, furniture
					\$ 3,600,000	
Escalation	18%	7			\$ 648,000	
					<b>\$ 4,248,000</b>	
<b>V Water Quality Lab (Remodel)</b>						
Admin Building Remodel to Water Lab	72 x 140	9,400	SF	\$ 90.00	\$ 846,000	
Contingency	15%				\$ 126,900	
Soft Cost	25%				\$ 243,225	A&E, permits, fees, inspections, furniture
					\$ 1,216,125	
Escalation	20%	8			\$ 243,225	
					<b>\$ 1,459,350</b>	
<b>VI Warehouse/Covered Storage</b>						
Covered Vehicle - Open	70 x 140	9,800	SF	\$ 90.00	\$ 882,000	Open metal building
Covered Pipe Storage - Open	25 x 200	5,000	SF	\$ 90.00	\$ 450,000	Open metal building
Warehouse & Yard	80 x 100	9,900	SF	\$ 110.00	\$ 1,089,000	Metal Building High Bay
					\$ 2,421,000	
Contingency	20%				\$ 484,200	
Soft Cost	25%				\$ 726,300	A&E, permits, fees, inspections, furniture
					\$ 2,299,500	
Escalation	22%	10 years			\$ 505,890	
					<b>\$ 2,805,390</b>	
<b>Total Boyd Acres Project Cost</b>					<b>\$ 12,915,618</b>	



# Appendix A

## Programming Questionnaires



# Programming Questionnaire

## Facilities Division

City of Bend Public Works 15<sup>th</sup> Street Location

Bend, Oregon

Name: Grant Burke

Dept.: Administration

Phone: 541-317-3014

*Please provide as much information as possible for each section of this questionnaire. This information will be used in the programming effort for the new Operations Facilities. Your Participation is greatly appreciated.*

### General Information

**Function:** Please describe the primary function and activities of your department or group.

The Facilities Management program is responsible for cleaning, maintenance, repair and small construction projects in City-owned facilities as well as assisting in the planning of future City facilities. These facilities include City Hall, Bond Annex, Franklin Annex, Wall Annex, Bend Centennial Parking Plaza, Public Works 15<sup>th</sup> Street, Police Department, PW Utilities Annex and other City-owned buildings.

Our shop is located at the Public Works 15<sup>th</sup> Street site.

**Operation:** Please provide security concerns/ requirements, maximum number of simultaneous visitors and frequency of visitors to your department or group, and the necessity for after hours access to the facility.

**Security Issues:** Our shop is located within the rear compound of the 15<sup>th</sup> Street location. Gates to the compound are not automatic and security of the compound is vulnerable to human oversight. Our building is secured by lock and key.

**Simultaneous Visitors/Frequency:** Visitor frequency to our shop is minimal.

**After hours access? Why?** From time to time, we need after hours access to our tools and equipment for emergencies.

## Staffing Requirements

**Staffing:** Please provide an organization chart of your department or group (or sketch one on the back of this sheet). The Planning Team requests to determine existing staffing levels and project for the year 2034. Please list staff in your group or department.

Position	Staffing Projection				Shift Hours	Full-Time	Part-Time	Comments
	2014	2019	2024	2034				
<i>Deputy Director</i>	1	1	1	1		X		Private Office
<i>Administrative Assistant</i>	1	1	1	2		X		Workstation
Facilities Division Manager	1	1	1	1	7am-4pm	X		Private Office
Facilities Maintenance Lead	1	1	1	2	7am-4pm	X		Workstation
Facilities Maintenance Tech	2	3	4	6	7am-4pm	X		Workstations
<b>Total</b>								

## Vehicles and Parking Requirements

**Vehicles:** Please provide a detailed vehicle inventory and summarize below, by vehicle class, the vehicles or pieces of equipment used by your department or group. Be prepared to discuss size (S=8'x10', M=10'x20', L=12'x30', XL=12'x40'), quantity, preferred storage method, and growth through the year 2034.

Vehicle Type	Vehicle Projections				Size				Parking Requirements		
	2014	2019	2024	2034	S	M	L	XL	Uncovered	Covered	Enclosed
Sedan	3	3	4	5	X				X		
Pick-up Truck	1	1	2	3		X				X	
Pick-up Truck	2	3	3	4		X			X		
Trailer w/Scissor lift	1	1	1	1		X			X		
<b>Total</b>											

## Existing Space

**Existing Space:** Briefly list all spaces utilized by your department or group and be prepared to discuss your current facilities, where they are located, and any current space inadequacies, etc. **Provide a floor plan or sketch if available.** Describe your existing space and its location (include existing and proposed spaces by function).

Space	Size (L x W)	Function/Inadequacies
Shop	62' X 32'	Crew room, shop, mat. Storage. Storage is limited occasionally.
Shop mezz.	15' X 26'	Storage. 2 <sup>nd</sup> floor storage not always ideal for large items.
Fac Div Man office	10' X 13'	Office. It's ok. <i>DESK. DRAFTING TABLE.</i>
<i>BOND ANNEX BUILDING</i>	<i>7-8,000 SF</i>	<i>SHARED.</i>



## Shared Space Requirements

**Shared Space Requirements:** Please list all shared area requirements for your department/group. Please list the title of the space and the relationship/adjacency it may have to other shop spaces. Please briefly describe the special design features or finishes needed for the shop.

Shared Space Name	Number of people	Adjacency	Special Features/Furniture
<i>Crew Room</i> <span style="color: blue; font-weight: bold; font-size: 1.2em;">EXAMPLE</span>	12	<i>Supv. Office</i>	<i>Layout table and chairs for 12 people</i> <span style="color: blue; font-weight: bold; font-size: 1.2em;">EXAMPLE</span>
<b>NA-currently self-contained</b>			<b>We have crew room/break room &amp; restroom in our shop bldg. My assumption is that end product design will lend itself to our sharing with PW.</b>

## Office/Workstation Requirements

**Office/Workstation Requirements:** Please list any office requirements for your department/group. Please list the title of the office and if it is an open or closed office/workstation. Please briefly describe the filing/furniture needs, function and the amount of time each day spent in the office.

Office/Workstation Title/Position	Type	Approx. Size	Individual filing needs and furniture for the space	Work function and time spent in the office/workstation
	Open/Closed			
Office-Fac Div Man	Closed	10' X 14'	File cabs, desk, draft table, bookcases, guest chairs	4-8 hours depending
Fac Div Library	Closed	8' X 14'	File cabs, layout table, book cases, custom shelving for plans, deliverables & products	minimal
Crew Room	Closed	14' X 20'	File cabs, workstations, layout table, lockers, etc.	Time card, work orders, research on existing plans & doc's. Can function as break room. 1-3 hours a day depending on employee and work assignment.



## Shop/Work Area Requirements

**Shop/Work Area Requirements:** Please list all shop or work area requirements for your department/group. Please list the title of the space and the relationship/adjacency it may have to other shop spaces. Please briefly describe the equipment needs and any special design features or finishes needed for the shop.

Shop Name	Adjacency	Approx. Size	Specific Equipment Items	Special Features/Finishes
<b>Shop</b>	<b>None required</b>	<b>62' X 32'</b>	<b>Table saw, cut off saw, drill press, sanders, dust collection system, air compressor, materials storage areas including flammables, work benches, large work bench for building cabinetry, snow blower, ladders, etc.</b>	<b>None required</b>

## Storage Requirements

**Special Storage Requirements:** Please list any special storage requirements for your department/group. Please list types of materials, size of storage requirement, storage type, security requirements, and any special comments that you may have. Include all storage requirements that are currently off-site which you would like to move on-site and any storage on-site that could be stored off-site.

Material/Item	Approximate Size	Storage Type			Security		Comments
		Covered		Enclosed	Secure	Open	
		Yes	No				
Receiving	20' X 30'	X		X	X		
Storage-wood stock, carpet, sheet goods, fasteners, plumbing, paint, adhesives, roofing products, misc.	25' X 30'	x		X	X		STORAGE AREA IN SHED
Small tool storage					x		Lots of uppers and lowers at work benches.
							EYE WASH.

## Other Data and Information

Thank you for your time in completing this questionnaire

**Living Facilities:** Please describe the type of living spaces required to accommodate your department or group for three days after an event. (E.g. Bunk areas, Kitchen, showers)

NA

**Emergency Facility Systems:** Please describe the type of minimal functions/operations required to accommodate your department or group for three days after an event without outside assistance. (E.g. Water storage, Radio receiver, fuel)

We can share PW's

Please provide the following information to assist the Planning Team in their programming efforts.

- ✓ As-built floor plans of the current facilities.
- ✓ Site plan or survey of the current site. Please include information on other sites/facilities if they are utilized by City of Bend but not located on the site.

REVISED 10/22/2014  
OPS & MAINT.

# Programming Questionnaire Operations/Field Crews/Admin.

City of Bend Public Works  
Bend, Oregon

Name: Ken Vaughan  
Dept.: Utilities  
Phone: 541-330-4026

*Please provide as much information as possible for each section of this questionnaire. This information will be used in the programming effort for the new Operations Facilities. Your Participation is greatly appreciated.*

COLOR KEY: Utility Support Services                      Environmental Services                      Operations and Maintenance

## General Information

**Function:** Please describe the primary function and activities of your department or group.

The Utilities Department is dedicated to providing the City of Bend with potable water, wastewater, and stormwater services. This includes operation and maintenance of these systems, a laboratory for quality testing, environmental and occupational regulatory compliance, mapping and recordkeeping, and administrative support.

**Operation:** Please provide security concerns/ requirements, maximum number of simultaneous visitors and frequency of visitors to your department or group, and the necessity for after-hours access to the facility.

**Security Issues:** Front lobby access – open to angry citizens and/or disgruntled existing or former employees. Open to rest of facility, no gates or doors to main hallways.

Water Quality Laboratory is required to be operated as a secure facility. All visitors must be accompanied by an employee at all times while in the facility. Laboratory, office and storage areas are restricted. The laboratory is kept secure during off hours with an alarm system. Visitors must be accompanied by laboratory personnel when in secure areas. For the Boyd Acres site – visitor access should be restricted and materials/storage areas secure.

Malfunctioning automated door locks, poor lighting, perimeter fencing issues, and lack of vehicle locking procedures. Cameras, fencing, automatic gates, and door locks with card readers.

ENHANCED

**Simultaneous Visitors/Frequency:** No more than 2 -3 visitors in the front lobby at the time. Could have many visitors to the facility for meetings. Eisenhower Training Room can hold up to 35 people. If Utility Billing staff moves to Utility campus, there will be increased security requirements (walled off, glass front counters, etc.) – 5 years out. Cameras in front lobby, facing door, could help address security issues.

*EXISTED* Segregated/fenced public vs private areas for parking and access.

Public receiving area to facilitate Utility Billing. Secure, design for receiving/securing money and angry customers. Isolated public/work areas. Room for outreach materials and educational displays.

**After hours access? Why?:** After-hours access for Support Services staff is minimal. May have some need for staff to work hours before or after standard 7am – 4pm, or to visit facility to pick up work items (laptop, reports, etc.)

Yes. Required sampling events can occur after hours so access is needed for three of the Programs (SWQP, WQL, and WQP). After hour on-call duties fall under the SDWP so access is required. Occasionally, staff from all programs could arrive back from a school or conference after hours.



## Staffing Requirements

**Staffing:** Please provide an organization chart of your department or group (or sketch one on the back of this sheet). The Planning Team requests to determine existing staffing levels and project for the year 2034. Please list staff in your group or department.

Position	Staffing Projection				Shift Hours	Full-Time	Part-Time	Comments
	2014	2019	2024	2034				
Data Services Positions	6	6	7	8	6am – 5pm	X		1 private office, others shared
Administrative Services	4	5	6	7	6am – 5pm	X		2 private offices, other shared
Analytical Services	5	5	6	6	6am – 5pm	X		3 private offices, other shared workspaces
Customer Service	3	5	6	7	6am – 5pm	X		1 private office, other shared workspace
Water Resources	2	5	8	9	6am – 5pm	X		2 private offices, other shared workspace
Water Quality Manager	1	1	1	1	7am – 4pm	X		Private Office
IPP Manager	1	1	1	1	7am – 4pm	X		Private Office
IPP Technicians	2	3	4	4	7am – 3:30pm	X		Work Stations for each
Laboratory Manager	1	1	1	1	7am – 3:30pm	X		Private Office
Senior Lab Analysts / Analysts	4	6	8	9	7am – 3:30pm	X		Work Stations for each
Safe Drinking Water Coordinator	1	1	1	1	7am – 3:30pm	X		Private Office
Safe Drinking Water Program Technicians	0	1	2	2	7am – 3:30pm	X		Work Stations for each
Stormwater Quality Manager	1	1	1	1	7am – 4pm	X		Private Office
Stormwater Program Analyst	1	1	2	2	7am – 3:30pm	X		Work Stations for each
Stormwater ROW Officer	1	1	2	2	7am – 3:30pm	X		Work Stations for each
Field Sampling & Monitoring Program Manager	0	1	1	1	7am – 4pm	X		Private Office

REVISED

ECH SERVICES	Utility Operations Manager <i>SHANNON</i>	1	1	1	1	7am- 4pm	X		Private Office, room for small meetings
	Tech Services Supervisor <i>PEGGY</i>	1	1	1	1	7am- 3:30	X		Private Office near staff
	Tech Services Lead worker	2	3	4	4	7am- 3:30	X		Shared Private Office near staff
	Tech Services Tech 2	2	3	4	5	7am- 3:30	X		Shared Work Space
	Tech Services Tech 1	1	3	4	4	7am- 3:30	X		Shared Work Space
	Tech Services Utility 1	5	5	6	6	7am- 3:30	X		Shared Work Space
	Tech Services Storm 2	1	2	2	3	7am- 3:30	X		Shared Work Space
	Tech Services Storm 1	2	2	2	3	7am- 3:30	X		Shared Work Space
WATER OPS.	Water Operations Supervisor	1	1	1	1	7am- 3:30	X		Private Office near staff
	Water Distribution Lead	1	1	1	1	7am- 3:30	X		Private or Shared Office
	Water Treatment Lead	0	1	1	1	7am- 3:30	X		Private or Shared Office
	Water Operators	6	6	8	10	7am- 3:30	X		Share Office/Crew Office
P & P	Repair and Replacement Supervisor	1	1	1	1	7am- 3:30	X		Private Office near staff
	RR Utility Lead	3	3	4	4	7am- 3:30	X		Shared Private Office near staff
	RR Utility Worker	13	15	16	18	7am- 3:30	X		Share Office/Crew Office
	Project Manager	1	1	1	1	7am- 3:30	X		Private Office
	EIC Supervisor	1	1	1	1	7am- 3:30	X		Private office near staff
	Telemetry/SCADA Specialist	2	2	2	2	7am- 3:30	X		Share Office/Crew Office
	Lead Electrician	1	1	1	1	7am- 3:30	X		
	Electricians	1	2	2	3	7am- 3:30	X		Share Office/Crew Office
	Utility Lead- Maintenance	1	1	2	2	7am- 3:30	X		
	Senior System Maintenance <i>90% FIELD</i>	2	4	6	8	7am- 3:30	X		Share Office/Crew Office
Maintenance Supervisor	1	1	1	1	7am- 3:30	X		Private office near staff	
Seasonal Employees	10	12	14	16	7am- 3:30		X	Share Office/Crew Office	

↑ ADD PARTS CLEVER 1?

<b>TOTALS</b>	<b>93</b>	<b>117</b>	<b>143</b>	<b>160</b>				
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### Vehicles and Parking Requirements

**Vehicles:** Please **provide a detailed vehicle inventory** and summarize below, by vehicle class, the vehicles or pieces of equipment used by your department or group. Be prepared to discuss size (S=8'x10', M=10'x20', L=12'x30', XL=12'x40'), quantity, preferred storage method, and growth through the year **2034**.

Vehicle Type	Vehicle Projections				Size				Parking Requirements		
	2014	2019	2024	2034	S	M	L	XL	Uncovered	Covered	Enclosed
Work Trucks for Cust. Svc. (Add'l)	0	2	3	4		X					X
Pool Vehicle (Office staff) (Add'l)	0	0	1	1					X		

	2014	2019	2024	2034	S	M	L	XL	UNCOVERED	COVERED	ENCLOSED
✓ Water Resources Vehicles (Add'l)	0	1	3	3					X		
✓ IPP Pick-up Truck/vans	2	3	4	4			X		X		
✓ Laboratory Mobile Lab-Van	1	1	1	1		X				X	X
✓ Laboratory SUV	1	2	2	3	X				X		
✓ Laboratory Utility Trailer	✓1	1	2	✓2		✓X			✓X		
✓ SDWP SUV	✓1	2	3	✓3		✓X			✓X		
✓ SWQP Sedan	1	1	2	2	X				X		
✓ SWQP Spill Trailer	✓1	2	2	✓2		✓X			✓X		
✓ FSMP SUV	0	1	2	2		X			X		
✓ Tech Services Pick-up	✓4	7	10	✓12						✓X	
✓ Tech Services Service Rig	✓1	4	7	✓9						X	
✓ Tech Services Vector	✓4	6	6	✓8						✓X	
✓ Tech Services TV Van	✓2	3	4	✓5						✓X	
✓ Water Ops Pick-up Truck	✓8	9	11	✓13		✓X			✓X		
✓ Generators <small>NEED SWAT. HOOKUP.</small>	✓7	14	19	✓24	✓X		✓X		X		
✓ Pumps	✓4	6	8	✓10		✓X			✓X		
✓ Maintenance Vehicles	✓8	12	15	✓18		✓X			✓X		
✓ RR Heavy Equipment	✓10	15	20	✓25				✓X	✓X		
✓ RR Small Equipment	5	10	15	20		X			X		
<b>TOTALS</b>	<b>61</b>	<b>102</b>	<b>140</b>	<b>170</b>							

Casimiro

**NOTES:**

Fueling, with capacity for emergency generator re-fueling at remote sites (water wells, large lift stations).

Vactor dump pad.

Inside vehicle wash with proper wastewater pretreatment.

Vehicle parking isolated from material storage.

missed

**Existing Space**

**Existing Space:** Briefly list all spaces utilized by your department or group and be prepared to discuss your current facilities, where they are located, and any current space inadequacies, etc. **Provide a floor plan or sketch if available.** Describe your existing space and its location (include existing and proposed spaces by function).

Space	Size (L x W)	Function/Inadequacies
		Private office increase by standard size.

		Increase shared workspace requirements by workstation estimate.
Boyd Acres Laboratory	Approx. 740 sq. ft.	The Boyd Acres Laboratory is a combination of wet-chem lab, sample receiving / sample prep, storage, office space and indoor parking. Inadequacies: Small, not enough space, shared parking and sample prep space.
Stormwater Shared Office	10' x 14'	Stormwater Program Manager and Program Analyst currently share an office near the reception area at Boyd Acres Bld. The front desk noise and visitor foot traffic can be distracting. Poor HVAC system prevent leaving the door closed, and the office gets extremely hot when door is left shut.
Stormwater Educational/ Outreach Material Storage	8' X 20'	Currently stored at Boyd Acres BLD. C.
IPP	?	
SDWP	?	
Water Quality Manager Office	?	
Building (D) Crew Meeting Room	21' x 15'	Desks with filing drawers & stationer computer/Good existing placement.
Building (D) Leads and supervisor office	21' x 21'	Four desks with stationer computers/Too small of an area.
Building (D) Bay Door 4 Vactor Parking truck 656	40' x 18'	Parking for Utilities Truck 656/Good existing placement.
Building (D) Welding Room	12' x 22'	Tools and equipment for welding, plus welding operations/Too small of an area.
Building (D) Hydrant Room	25' x 22'	Pipe and Hydrant fittings for repairs/Good existing placement.

REVISE

Building (D) "Tool room" above Hydrant room	40' x 25'	Storage for parts & tools/ weight of some tools makes it difficult to walk downstairs.
Building (D) Storage above leads and supervisor office	21' x 21'	Storage for tools and pipe fittings/Negativity of being upstairs.
Building (D) Main shop area	100' x 63'	Work area, tools, storage shelving, and a couple small parking spots/could use some more main shop floor space to move the upstairs tools and parts down lower.
Building(B) Bay 13,14, and 15	116' x 37' (combined)	Storage for domestic pipe fittings/Still could use some more ground level space for large fittings.
Building (C) Meter group office	12' x 20'	Desks with filing drawers & stationer computers/Existing placement is good.
Water Operations Supervisor Office	10' x 14'	Desk, file cabinets and a small 2 person table/Must be good size.
Water Ops Crew office	12' x 19'	4 work stations, 1 SCADA HMI/Small not enough space for crew.
Water Ops Closet	4' x 6'	Lockable storage/Small.

REVISED

## Shared Space Requirements

**Shared Space Requirements:** Please list all shared area requirements for your department/group. Please list the title of the space and the relationship/adjacency it may have to other shop spaces. Please briefly describe the special design features or finishes needed for the shop.

Shared Space Name	Number of people	Adjacency	Special Features/Furniture
Training Room	150		Need meeting room to accommodate 100 existing staff, plus projections at 5, 10, 15 and 20 years.
Restrooms			Meet building requirements.
Conference Rooms			Will not need to increase conference room space until 10 – 20 years out.
Kitchen			Need functioning kitchen (dishwasher, refrigerator, sink (w/ hot tap, stove/oven combo), could be combined w/ large Training Room to accommodate tables, etc. Need storage capacity for kitchen supplies (large cups, paper towels, paper dishes, etc.).
Lactation Room			Need to always have lactation room.
Copier / Supply Room			Existing space is sufficient for future needs.
Shower/locker rooms	14	On-site Boyd Acres	Sufficient for all future employees at the Boyd Acres site.
Laundry facility areas	15	On-site Boyd Acres	Sufficient for all future employees at the Boyd Acres site.
Break / Lunch room with kitchen facilities	20	On-site Boyd Acres	Sufficient for all future employees at the Boyd Acres site.
Large Conference Rm.	30	On-site Boyd Acres	Training events, workshops, public meetings.



Small Conference Rm.	10	On-site Boyd Acres	Coordination meetings with other divisions / departments.
Lactation area	1	Must be accessible to all personnel	Absolute privacy, as mandated by federal and state laws.
Rest rooms	5 - 8	Must be accessible to personnel	Assume it must be ADA compliant.
Crew meeting room	Aprox.10	Main shop area	5 vector parking bays with tools and parts, are all tied together outside of the crews meeting room/ a separate vector parking spots would relieve the tight quarters.
Leads and supervisor office	3	Main shop area	Noise from shop activity is too loud & office quarters are too tight.
<b>TOTALS</b>	<b>258 - 261</b>		

REVISED

## Office/Workstation Requirements

**Office/Workstation Requirements:** Please list any office requirements for your department/group. Please list the title of the office and if it is an open or closed office/workstation. Please briefly describe the filing/furniture needs, function and the amount of time each day spent in the office.

Office/Workstation Title/Position	Type	Approx. Size	Individual filing needs and furniture for the space	Work function and time spent in the office/workstation
	Open/Closed			
Data Services				Plotter, plotter supplies, GPS equipment need to be accommodated in Data Services work area.
				Workstations that can accommodate both standing and sitting
Analytical Services	Closed			Need one office w/ space for 37" x 60" plan review table
IPP Program Manager	Closed	10' x 10'	Work desk, small seating area for meetings, filing cabinets, bookshelf	Private Office – 75%
IPP Technicians	Open	?	Space for 4 computer work stations	40% per employee
IPP Technicians	Open	12' x 12'	Filing cabinets	
Lab Supervisor	Closed	10' X 15'	Work desk, small seating area for meetings, filing cabinets, bookshelf	Private office – 75%

Senior Lab Analyst	Open	10' x 10'	PC work station, one large file cabinet, library space	Chemist's office, data recording - 65%
Lab tech's work station	Open	10' X 20' (shared)	Under desk file space, work station PCs and keyboards	Data entry, record keeping, communication - 50 % per employee
Water Quality Manager	Closed	10' x 10'	Work desk, small seating area for meetings, filing cabinets, bookshelf	Private Office - 75%
Safe Drinking Water Coordinator	Open	10' x 10'	Work desk, small seating area for meetings, filing cabinets, bookshelf	Data entry, record keeping, communication - 50 %
Stormwater Program Manager	Closed	12' x 12'	Work desk, small seating area for meetings, filing cabinets, bookshelf	Private Office - 75%
Stormwater Program Analyst	Open	10' x 10'	Desk, File Cabinet, Bookshelf	75 %
Stormwater ROW Enforcements	Open	10' x 10'	Desk, File Cabinet, Bookshelf	50 %
Crew Meeting Room	Existing space is closed	Existing 21' x 15' size seems adequate now	Could use some more filing space	2-3 hrs spent each day in the office space
Supervisor and leads office	Existing space is closed	Existing 21' x 21' - need more space	More filing space is needed plus wall space	2-5 hrs spent each day in the office

**NOTES:**

Supervisors, Leads, Workers housed in same area.

One conference room per work group area for work group staff meetings.

Work Space separate from material storage.

Administration building- managers with room in office for small meetings, large enough meeting space for management and supervisor teams. Conference room with video conferencing equipment.

REVISED

## Shop/Work Area Requirements

**Shop/Work Area Requirements:** Please list all shop or work area requirements for your department/group. Please list the title of the space and the relationship/adjacency it may have to other shop spaces. Please briefly describe the equipment needs and any special design features or finishes needed for the shop.

Shop Name	Adjacency	Approx. Size	Specific Equipment Items	Special Features/Finishes
IPP	On-site Boyd Acres	30' x 30'	Sampling, flow monitoring, Equipment storage	Sink, sprayer, DI water availability
Wet Chem Laboratory	In laboratory	1,350 sq. ft.	Wet chemistry lab equipment and instruments	Laboratory benchtops, lab shelves and storage, ventilation hoods
Microbiology Laboratory	In laboratory	500 sq. ft.	Microbiology lab equipment and instruments	Laboratory benchtops, minimize dust with solid ceiling
Instrument Laboratory	In laboratory	175 sq. ft.	Analytical Instruments, lab benchtops, lab shelves	Laboratory benchtops, lab shelves minimize dust with solid ceiling
Metals Laboratory	In laboratory	150 sq. ft.	Analytical Instruments, lab benchtops, lab shelves	Laboratory benchtops, minimize dust with solid ceiling
Sample Prep / Receiving	In laboratory	185 sq. ft.	Bottle storage, bottle wash bench and station	
Laboratory Storage	In laboratory	520 sq. ft.	Chemical storage, flammable storage, acid /base storages, shelves	Must be enclosed, should be fireproof
Lab Indoor parking	Close to Boyd Acres laboratory	350 sq. ft.	Specific place to park lab van containing lab instruments and equipment	NOTE: All lab areas need to have reliable heating, cooling and venting.
Safe Drinking Water Program	On-site Boyd Acres	?	Maintenance tools	

Stormwater Monitoring Work Area	Storm	10' x 10'	Sink to washout-out samplers; buckets, work area to assemble the samplers.	Wash sink with deionized water filter for sample prep.
Boyd Acres Building (D) main shop area	Sup. And leads office	Existing space that Const. Div. uses is approx. 100' x 63'		Drive through wash bay with contained filtration system
Needed at Boyd Acres Facility a covered Material Storage area (rock material, cold mix)	Existing location near Building (C)	40' x <del>40'</del> <sup>50'</sup>		Covered with lighting
Needed at Boyd Acres		Proposed size 200' x 50'	Pipe storage	Covered with lighting
Needed at Boyd Acres		Proposed size 50' x 50'	Meter and double check testing facility with drain system	Heated and inside

added

TRAINING BACKUP FACILITY  
 - TRAINING & TRAINING.  
 - PERSONAL TRAINING.

**NOTES:**

Interior workshops (meter re-build, meet loop assembly, electrical shop, metal shop, welding room)

Control Room. Location for SCADA and AMI Antennas. w/ops.

Incident Command Center designed for emergency response.

Training center large enough to house staff with food service areas. Ability to isolate training center from public/private.

Pump repair shop, with floor drain.

Break room for staff with kitchen facilities.

Laundry facility areas. 2 WASHER. 2 DRYER (EXISTING)

Small "rest" area for breaks outside break room. PATIO up YOGA ROOM

Environmental features, energy efficient, LID stormwater uses, solar panels, automatic lights, lights on timers, water saving appliances, fixtures, xeriscaped landscaping.

Workspace utilizing natural light where possible.

Locker room/showers.

Laboratory facilities onsite.

Vehicle Maintenance onsite. — NEED MECHANIC. NOT NEEDED IF COMBINED w/FEET.

Water Operations staff Location (onsite vs Outback facility).Need space for 4 Operators/1 Lead at site

Warehouse/ receiving area

Emergency Generator for building

Rail car utilization for bulk materials.

Supervisors, Leads and staff located in same area. Meeting area large enough for staff.

"War" rooms available for use by groups

WELLNESS ROOM

## Storage Requirements

**Special Storage Requirements:** Please list any special storage requirements for your department/group. Please list types of materials, size of storage requirement, storage type, security requirements, and any special comments that you may have. Include all storage requirements that are currently off-site which you would like to move on-site and any storage on-site that could be stored off-site.

Material/Item	Approximate Size	Storage Type			Security		Comments
		Covered		Enclosed	Secure	Open	
		Yes	No				
Administrative Services							See kitchen requirements
Data Services				X	X	X	Existing space requirements will accommodate 20 year growth – get measurements from Grant. Needs minimal security.
Customer Service				X	X		Currently utilize two bays; will need additional enclosed vehicle storage to match increased vehicle projections. Additional enclosed vehicle storage will allow for locate parts storage.
Analytical Services							No storage requirements
Water Resources				X	X		Need space equivalent to cargo container, with bay door to load truck/van with outreach materials as needed
Lab Chemical Stores	120 sq. ft.			X	X		All storage areas need to be within the laboratory
Lab Bottle Storage	50 sq. ft.			X	X		

Lab Flammable Cabinet(s)	12 sq. ft.			X	X		
Lab Acid Cabinet(s)	12 sq. ft.			X	X		
Lab Refrigerators	40 sq. ft.			X	X		
Lab Equipment Storage	190 sq. ft.			X	X		
Stormwater Educational/Outreach Material Storage.	10' x 20'			X	X		Brochures, Printed Materials, Outreach Displays, Canopies, Tables Chairs.
IPP Equipment Storage	?						
Safe Drinking Water Storage	?						
Rock/Cold Mix	100' x 100'	X				Open	Lighting
Expensive electronic field equipment	40' x 40'	X		X	X		CAMPRA Equip.
Vactor truck parking	40' x 60'	X		X	X		

**NOTES:**

Rock/ outside material storage.

Bulk chemical storage tank, receiving, secondary containment (odor chemicals).

\* Warehouse for central receiving, parts tracking.



## Emergency Event Requirements

**Living Facilities:** Please describe the type of living spaces required to accommodate your department or group for three days after an event. (E.g. Bunk areas, Kitchen, showers)

Covered in kitchen requirements; sleeping requirements for emergency determined by O&M staff

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**Emergency Facility Systems:** Please describe the type of minimal functions/operations required to accommodate your department or group for three days after an event without outside assistance. (E.g. Water storage, Radio receiver, fuel)

Whole building needs back-up generator to keep IT network functioning.

A reliable, redundant power supply for all facilities.

Emergency Generator Back Up sized for facility and computers

## Other Data and Information

Please provide the following information to assist the Planning Team in their programming efforts.

- ✓ As-built floor plans of the current facilities.
- ✓ Site plan or survey of the current site. Please include information on other sites/facilities if they are utilized by City of Bend but not located on the site.

**Thank you for your time in completing this questionnaire**



# Programming Questionnaire Operations Shops/Field Crews

City of Bend Public Works  
Bend, Oregon

Name: Hardy Hanson

Dept.: Right of Way Operations and Maintenance

Phone: 541-317-3015

*Please provide as much information as possible for each section of this questionnaire. This information will be used in the programming effort for the new Operations Facilities. Your Participation is greatly appreciated.*

## General Information

**Function:** Please describe the primary function and activities of your department or group.

The Right of Way Operations and Maintenance Department, Street Maintenance Division provides street maintenance services to the citizens of Bend. These services include: street preservation, striping, sign and marking maintenance, concrete repair and construction, street sweeping, snow and ice control, landscaping and support for other divisions. Transportation operations engineering, signal maintenance and bridge maintenance are provided. The division also provides Municipal Cemetery services.

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**Operation:** Please provide security concerns/ requirements, maximum number of simultaneous visitors and frequency of visitors to your department or group, and the necessity for after hours access to the facility.

**Security Issues:** The current site is not completely fenced and often has pedestrians walking through the area. This presents a potential danger as well as security issue. We often have crews working nights and weekends. This site should be looked at as operating 24/7

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**Simultaneous Visitors/Frequency:** Multiple visitors several times per week. This includes deliveries, sales people, consultants as well as other City of Bend employees

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**After hours access? Why?** As mentioned we operate multiple shifts and with different shift changes for operational reasons. We respond to on call emergencies and weather emergencies and during some situations operate 24/7

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## Staffing Requirements

**Staffing:** Please provide an organization chart of your department or group (or sketch one on the back of this sheet). The Planning Team requests to determine existing staffing levels and project for the year 2034. Please list staff in your group or department.

Position	Staffing Projection				Shift Hours	Full-Time	Part-Time	Comments
	2014	2019	2024	2034				
Director	1	1	1	1	8-5	x	na	Often attend late meetings
Manager	1	1	1	1	7-4	X	na	"
Supervisors	3	3	4	4	6-4	X	na	Shifts may vary
Program Tech II	1	1	1	1	6-4	X	na	
Transportation Engineer	1	1	2	2	8-5	X	na	
Executive assistant	1	1	1	1	8-5	X	na	Anticipate new position
OS I & OS III	2	2	3	3	7-4	X	na	
Crew Leads	4	4	5	<del>5</del> <sup>6</sup>	6-4	X	na	Shifts may vary
Utility Workers I, II's & III's	26	28	30	<del>32</del> <sup>36</sup>	6-4	X	na	Shifts may vary
Sexton	1	1	1	1	6-4	X	na	Shifts may vary
Temporary help	16	18	20	22	6-4	X	na	Shifts vary Work 8 months a year
Engineering associate	1	2	2	2	8-5	X	na	Anticipate new position
GUMEEP CROW (1 SUP. 3-6 CROW)								
								Field crews work 4-10's in the summer
								Winter hours: 3-8 hr. shifts covering 4am to 9pm
<b>Total</b>	<b>58</b>	<b>63</b>	<b>71</b>	<del>80</del> <sup>85</sup>				

## Vehicles and Parking Requirements

**Vehicles:** Please **provide a detailed vehicle inventory** and summarize below, by vehicle class, the vehicles or pieces of equipment used by your department or group. Be prepared to discuss size (S=8'x10', M=10'x20', L=12'x30', XL=12'x40'), quantity, preferred storage method, and growth through the year **2034**.

Vehicle Type	Vehicle Projections				Size				Parking Requirements		
	2014	2019	2024	2034	S	M	L	XL	Uncovered	Covered	Enclosed
Pick-up trucks (med)	29	31	33	<del>38</del> <sup>40</sup>		x				X	
5-Yarder chassis (large)	22	22	23	<del>28</del> <sup>26</sup>			x			X	10 ENCLOSED - SWEEPERS & OTHER EQ.
10-Yarder chassis (extra-large)	12	13	14	<del>18</del> <sup>16</sup>				x		X	X
Graders (extra-large)	2	2	2	2				x		X	
Paint Truck ( extra-large)	1	1	1	1				x			X
Loaders (extra-large)	2	2	2	2				x		X	
Backhoe (large)	2	2	2	2			x			X	
Trailers (extra-large)	1	1	1	1				x	X		
Trailers (med)	12	12	12	12		x			X		
Misc. Equipment (med)	5	6	6	<del>8</del> <sup>10</sup>		x					X
Misc. Equipment (small)	18	20	22	26	x						X
<b>Total</b>	<b>106</b>	<b>112</b>	<b>118</b>	<del>128</del> <sup>130</sup>							

\*BUCK HEATERS

## Existing Space

**Existing Space:** Briefly list all spaces utilized by your department or group and be prepared to discuss your current facilities, where they are located, and any current space inadequacies, etc. **Provide a floor plan or sketch if available.** Describe your existing space and its location (include existing and proposed spaces by function).

Space	Size (L x W)	Function/Inadequacies
Mag tanks and loading	30x50	Needs access to road for tanker filling, containment, light for night filling, covered?
Fenced Storage	125x70	Secured area
Decant	110x45	Should be covered, needs oil water separator (heated?)
Wash Rack	35x35	Needs oil water separator (heated?)
Conex Box's	42x42	For concrete and Cemetery equipment storage should have covered area
Fabric sheds	85x120	Could be extended
Storm Water Conex	42x55	Currently holds storage for Storm water equipment
Sand Pile	<small>CURRENT: 150 x 175</small> 220x175 <small>*GOING TO EXPAND</small>	Snow and ice sand material approximately 9-12,000 yards
Equipment storage	100x45	Parking area for rolling stock
Equipment storage	105x50	Parking area for rolling stock
Equipment storage	115x112	Parking area for rolling stock

*PARKING SPACES ONLY. NO LOT CIRCULATION.*

**Existing Space:** Briefly list all spaces utilized by your department or group and be prepared to discuss your current facilities, where they are located, and any current space inadequacies, etc. **Provide a floor plan or sketch if available.** Describe your existing space and its location (include existing and proposed spaces by function).

Space	Size (L x W)	Function/Inadequacies
Gravel storage	75x75	Back fill material, shoulder rock, etc., 3/4
Bins (9ea)	105x30	Hold and organize small amounts of materials such as, soil, rip-rap, bark, drain rock, etc.
Debris	90x50	Storage of debris and spoils until it can be hauled to the dump.
Equipment storage	50x60	Rolling stock parking
Dumpsters	30x15	For garbage and recycle materials
Sign Shop	60x40	Vehicle storage and material storage includes work space and office
Welding Shop	60x40	Work space and material storage
Lunch Room	28x30	Seating and tables for 20 to 30
Crew Room	75x30	Floor space and tables to assemble 30 people plus vending machines . COMPUTER KIOSKS.
Temp. Locker & laundry	40x12	Small <sup>12" x 12"</sup> 1/2 lockers for temporary employee's & washer, dryer
Crew locker room	30x50	Larger lockers and changing area for FTE's

. STAGING FOR GRAVEL & BINDINGS

**Existing Space:** Briefly list all spaces utilized by your department or group and be prepared to discuss your current facilities, where they are located, and any current space inadequacies, etc. **Provide a floor plan or sketch if available.** Describe your existing space and its location (include existing and proposed spaces by function).

Space	Size (L x W)	Function/Inadequacies
Men's Bath & showers	30x20	2 toilets, 2 urinals and 3 showers + <i>SMALL CHANGING AREA</i>
Women's Bath & shower room	9x21	1 toilet and 2 showers (1 is accessible)
Crack seal material	40x60	Should be covered
Full paint totes	10x80	Heated space
Empty paint totes	10x80	Can be outside
Women' locker room	10x20	Currently share locker room or use women's bath room
Cemetery Office	15x20	Off site on cemetery grounds



## Shared Space Requirements

**Shared Space Requirements:** Please list all shared area requirements for your department/group. Please list the title of the space and the relationship/adjacency it may have to other shop spaces. Please briefly describe the special design features or finishes needed for the shop.

Shared Space Name	Number of people	Adjacency	Special Features/Furniture
<i>Meeting room (Lincoln)</i>	<b>8</b>	<i>office</i>	
<b>Meeting room (Washington)</b>	<b>14</b>	<b>office</b>	<b>Flat screen TV</b>
<b>All hands Safety meeting room</b>	<b>40- 100</b>	<b>na</b>	<b>Currently share with all of Public Works</b>
<b>Computer stations</b>	<b>6</b>	<b>crew room</b>	<b>5x24 currently</b>
<b>Meeting room (Lewis &amp; Clark)</b>	<b>6-8</b>	<b>office</b>	

## Office/Workstation Requirements

**Office/Workstation Requirements:** Please list any office requirements for your department/group. Please list the title of the office and if it is an open or closed office/workstation. Please briefly describe the filing/furniture needs, function and the amount of time each day spent in the office.

Office/Workstation Title/Position	Type	Approx. Size	Individual filing needs and furniture for the space	Work function and time spent in the office/workstation
	Open/Closed			
Director(1)	closed	12x24	Desk, files, computer and small meeting table	6 hours per day
Manager(1)	closed	12x20	Desk, files, computer and small meeting area	6 hours per day
Supervisor (3)	closed	12x14	Desk, files, and computer	2 to 4 hours per day
OSI,II,III(2)	open	12x12	Desk, files, and computers	All day
Program Tech II(1)	closed	10x12	Desk, files, computer	6 hours per day
Transportation Engineer(1)	closed	12x16	Desk files, computer and layout area	All day
Executive assistant(1)	closed	12x12	Desk and files, computer	All day



UNIDENT # STAFF

## Office/Workstation Requirements

**Office/Workstation Requirements:** Please list any office requirements for your department/group. Please list the title of the office and if it is an open or closed office/workstation. Please briefly describe the filing/furniture needs, function and the amount of time each day spent in the office.

Office/Workstation Title/Position	Type	Approx. Size	Individual filing needs and furniture for the space	Work function and time spent in the office/workstation
	Open/Closed			
Crew Leads(4)	open	10x10	Desk and files, computers can be shared space	Up to 2 hours per day
Sexton(1)	Closed	10x10	Desk and files, and computer currently on cemetery grounds	Up to 2 hours per day
Engineering Associate(1)	closed	12x14	Desk and files, and computer	Average 6 hours per day

## Shop/Work Area Requirements

**Shop/Work Area Requirements:** Please list all shop or work area requirements for your department/group. Please list the title of the space and the relationship/adjacency it may have to other shop spaces. Please briefly describe the equipment needs and any special design features or finishes needed for the shop.

Shop Name	Adjacency	Approx. Size	Specific Equipment Items	Special Features/Finishes
Sign Shop	na	20x30	Bench for layout	Material storage and office space for records
Welding shop	na	60x40	Electrical, bench space, staging floor space	Materials storage
Paint shop	na	20x50	Walk behind paint equipment	Storage for thermal plastic
Safety equipment storage	Office/ crew room	10x20	Rain gear, safety supplies, water pallets, hard hats, flashlights, etc.	Heated secure storage
<i>FRAGILE, EMERGENCY SIGNAGE.</i> Sign storage	Field crews	20x20	Conex box and Y2K trailer to transport traffic control signs when needed in the field	Secure but accessible
Landscape small equipment storage	Field crews	20x10	Secure storage for equipment and bench and tools to work on chainsaws, hedge trimmers, pole saws, etc.	Secure



## Emergency Event Requirements

**Living Facilities:** Please describe the type of living spaces required to accommodate your department or group for three days after an event. (E.g. Bunk areas, Kitchen, showers)

Need bunk area for crew rest and bath facilities when in emergency operations (6 beds ?) Need kitchen facilities to feed crews of 30 during emergencies and up to 120 for retirements, group meetings, etc.

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**Emergency Facility Systems:** Please describe the type of minimal functions/operations required to accommodate your department or group for three days after an event without outside assistance. (E.g. Water storage, Radio receiver, fuel)

Food prep and storage, currently have a 6x12 closet for feeding storage and another 6x12 for folding table storage. 5x12 for folding chairs. Need water storage, safety equipment storage.

Back up emergency generator and fuel tank for the entire facility.

Need additional fuel storage?

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## Other Data and Information

Please provide the following information to assist the Planning Team in their programming efforts.

- ✓ As-built floor plans of the current facilities.
- ✓ Site plan or survey of the current site. Please include information on other sites/facilities if they are utilized by Denver Water but not located on the site.

**Thank you for your time in completing this questionnaire**

# Programming Questionnaire Fleet Maintenance

City of Bend Public Works  
Bend, OR

Name: Quirt Lancaster \_\_\_\_\_  
Dept.: City of Bend Garage \_\_\_\_\_  
Phone: 541-317-3042 \_\_\_\_\_

*Please provide as much information as possible for each section of this questionnaire. This information will be used in the programming effort for the new Operations Facilities. Your Participation is greatly appreciated.*

## General Information

**Function:** Please describe the primary function and activities of your department or group.

Repair and Maintenance of all the City's Vehicles . Light and Heavy Vehicles and Equipment.

Manage and maintain the City's Fuel System.

Welding, modifications and fabrications.

Perform service calls at remote sites and in the street.

**Operation:** Please provide security concerns/ requirements, maximum number of simultaneous visitors and frequency of visitors to your department or group, and the necessity for after hours access to the facility.

**Security Issues: Storage for parts, oils, and tools.** \_\_\_\_\_

**Simultaneous Visitors/Frequency: Vendors, sales personal and Division Personnel.** \_\_\_\_\_

**After hours access? Why? For the Division personnel to retrieve the repaired vehicles.** \_\_\_\_\_

## Staffing Requirements

# Staffing Requirements

**Staffing:** Please provide an organization chart of your department or group (or sketch one on the back of this sheet). The Planning Team requests to determine existing staffing levels and project for the year 2034. Please list staff in your group or department.

Position	Staffing Projection				Shift Hours	Full-Time	Part-Time	Comments
	2014	2019	2024	2034				
<del>Deputy Director</del>	<del>1</del>	<del>EXAMPLE</del>	<del>EXAMPLE</del>	<del>EXAMPLE</del>		X		<del>Private Office</del>
<del>Administrative Assistant</del>	<del>1</del>	<del>1</del>	<del>1</del>	<del>2</del>		X		<del>Workstation</del>
Supervisor	1	1	1	1		x		Private Office
Administrative Assistant	1.5	<del>2</del>	<del>2</del>	<del>2</del>		x	x	Private offices
Technicians	4	5	5	6		x		Work stations
Possible Fleet Manager		1	1	1		x		Private Office
<b>Total</b>	<b>6.5</b>	<b>10</b>	<b>10</b>	<b>11</b>				



## Vehicles and Parking Requirements

**Vehicles:** Please **provide a detailed vehicle inventory** and summarize below, by vehicle class, the vehicles or pieces of equipment used by your department or group. Be prepared to discuss size (S=8'x10', M=10'x20', L=12'x30', XL=12'x40'), quantity, preferred storage method, and growth through the year 2034.

Vehicle Type	Vehicle Projections				Size				Parking Requirements		
	2014	2019	2024	2034	S	M	L	XL	Uncovered	Covered	Enclosed
<del>Sedan</del>	<del>EXAMPLE</del>	<del>3</del>	<del>4</del>	<del>5</del>	<del>EXAMPLE</del>				X		
<del>Pick-up Truck</del>	<del>1</del>	<del>1</del>	<del>2</del>	<del>3</del>		X				X	
Pick-up Trucks	126	135	140	160		X				X	
Sedans	53	60	65	70	X				X	X	
Suv	84	90	95	100	X				X	X	
Vans	4	4	6	8	X				X	X	
Heavy Trucks	18	24	30	35				X		X	
Heavy Equipment	74	80	85	90				X		X	
Medium Duty Trucks	69	72	75	78				X		X	
Nine Vehicles needed for Enclosed Storage											X
Light Equipment	99	105	105	110	X					X	
Trailers	116	121	126	131			X			X	
<b>Total</b>	<b>643</b>	<b>691</b>	<b>727</b>	<b>782</b>							

*SERVICE - 3 TRUCKS  
READY/DOWN LINE - 10 SPACES  
2014.*

# Vehicles/Equipment Maintained

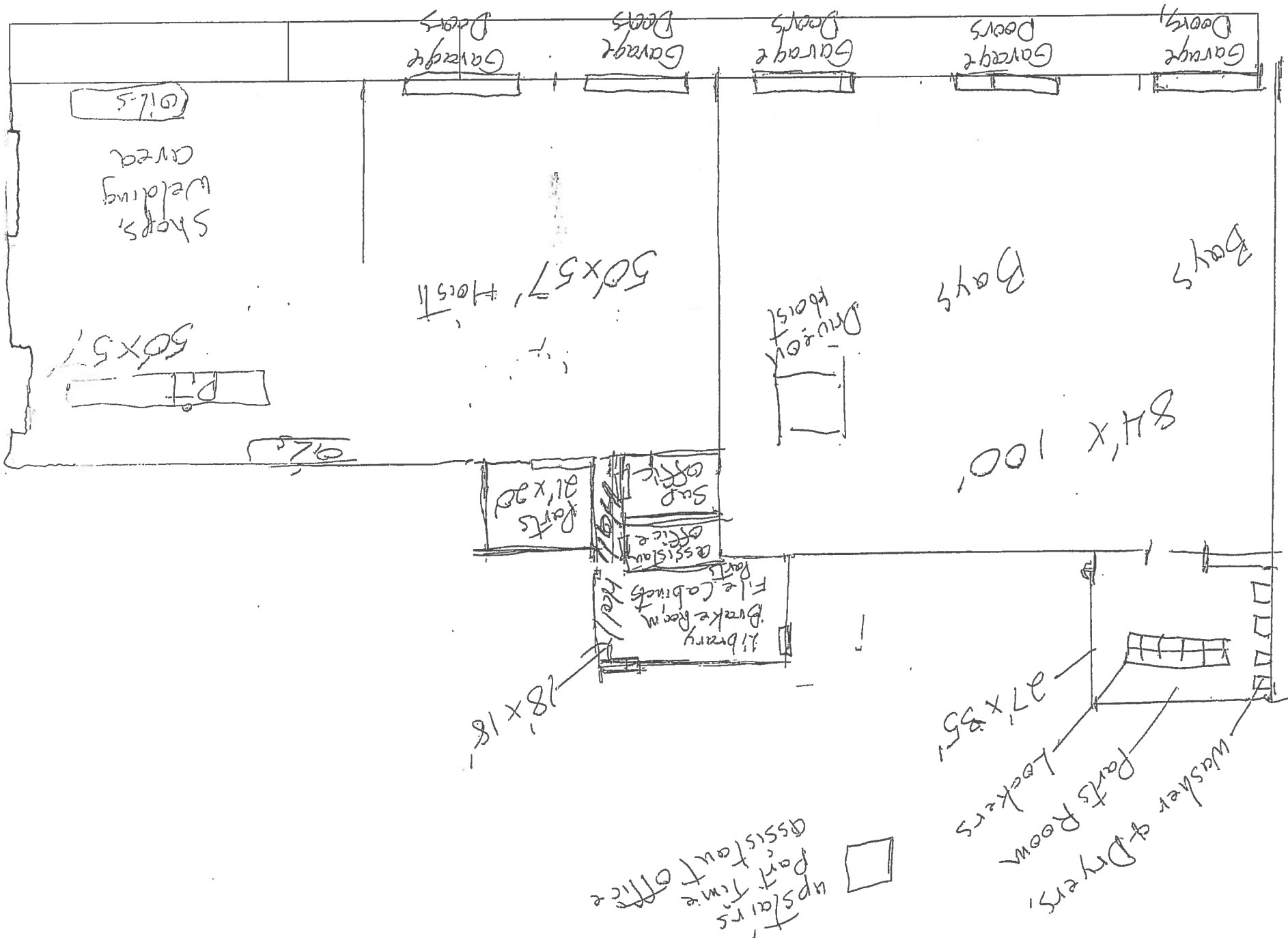
**Vehicles/Equipment Maintained:** Please provide a detailed vehicle inventory and summarize below all vehicles and equipment maintained by the Equipment Services Group. The summary should be divided by vehicle/equipment type, and size. Be prepared to discuss your groups understanding of anticipated fleet growth through the year 2034 and the impact on the Vehicle Maintenance operation.

Vehicle Type	Vehicle Projections				Size				Type		
	2014	2019	2024	2034	S	M	L	XL	Light Vehicle - Equip	Heavy Truck - Equip	Off-Road/Construction
<del>Sedan</del>	<del>EXAMPLE</del>	<del>3</del>	<del>4</del>	<del>6</del>	<del>EXAMPLE</del>				<del>X</del>		
<del>Dump Truck- 10 yard</del>	<del>1</del>	<del>1</del>	<del>2</del>	<del>3</del>			<del>X</del>			<del>X</del>	
Same as above											
<b>Total</b>											

## Existing Space

**Existing Space:** Briefly list all spaces utilized by your department or group and be prepared to discuss your current facilities, where they are located, and any current space inadequacies, etc. **Provide a floor plan or sketch if available.** Describe your existing space and its location (include existing and proposed spaces by function).

Space	Size (L x W)	Function/Inadequacies
Office	10x15	OK
Office	10x15	OK
Office	6x8	Too small
Brake room/library/parts room	18x18	Too much in one room
Laundry room/parts room /locker room shared with Street Dept	27x35 -	Hard to organize
Repair Station	50x57	Repairs- Cannot get some equipment in all the way. The pit is too short for some heavy trucks.
Repair Station	50x57	Repairs OK
Repair Station	84x100	Repairs the
Parts Room	21x20	Parts room will not accommodate all parts.



# Shared Space Requirements

**Shared Space Requirements:** Please list all shared area requirements for your department/group. Please list the title of the space and the relationship/adjacency it may have to other shop spaces. Please briefly describe the special design features or finishes needed for the shop.

Shared Space Name	Number of people	Adjacency	Special Features/Furniture
<del>Crew Room</del>	<del>EXAMPLE 12</del>	<del>Supv. Office</del>	<del>Layout table and chairs for 12 people</del>
Brake room/library/parts room slash file cabinet storage	7	Administrative Assistant	18x18 Two hours a day
Laundry/parts storage/lockers	37	Repair Station	27x35 Two Washers and Two Dryers.
	INCLUDES STAIRS.		

## Office/Workstation Requirements

**Office/Workstation Requirements:** Please list any office requirements for your department/group. Please list the title of the office and if it is an open or closed office/workstation. Please briefly describe the filing/furniture needs, function and the amount of time each day spent in the office.

Office/Workstation Title/Position	Type	Approx. Size	Individual filing needs and furniture for the space	Work function and time spent in the office/workstation
	Open/Closed			
Supervisor	closed	10x15	Two desks. Two computers. Four file cabinets. A book cabinet. Three chairs. Phone.	8 hours a day five days a week.
Assistants Office	closed	10x15	Desk. Printer. Computer. Two file cabinets. Phone. Plenty of desk top for file racks. Three chairs. Book Shelf.	8 hours a day five days a week.
Part time Assistants Office.	Closed	6x8	Computer desk. Computer. File Cabinet. Book Shelf. Phone. Plenty of desk top room for file racks. Book Shelf. Three Chairs.	12 hours a day Two days a week. Will become full time.
Possible Fleet Manager.	Closed	?	?	?
Repair Stations.	Closed	Two 50x57	Wire Feed Welder. Arc Welder. Plasma Cutter. Torch Set. Drill Press. Welding Bench. Five Work Benches. Three Tool Boxes. Parts storage. Band Saw and Bench. Oil storage. Waste oil storage. Grinder. Hand tools. Welding supplies. Two Desk and chairs. Three Flammable Cabinets. Anvil. Steam Cleaner. Two Hot water parts washers. Brake Lathe and accessories. Waste Antifreeze Container. Press. An area for shipping and receiving. Car Hoist.	
Repair station City of Bend Public Works	Closed	84x100	A Drive on Automobile Rack. Four Work Benches. Grinder. Band Saw. Shop Air Compressor. Waste Oil Storage. Sweeper Broom Storage. Fork Lift. Two Welders. Torch Set. Four Tool Boxes. Drill Press. Parts Sand	

**Ladder Storage. Arbor. Battery Storage. Book Cabinet. Wheel Jack Storage. Parts Storage.**

**Would like drive through bays and an over head crane.**



## Shop/Work Area Requirements

**Shop/Work Area Requirements:** Please list all shop or work area requirements for your department/group. Please list the title of the space and the relationship/adjacency it may have to other shop spaces. Please briefly describe the equipment needs and any special design features or finishes needed for the shop.

Shop Name	Adjacency	Approx. Size	Specific Equipment Items	Special Features/Finishes

## Storage Requirements

**Special Storage Requirements:** Please list any special storage requirements for your department/group. Please list types of materials, size of storage requirement, storage type, security requirements, and any special comments that you may have. Include all storage requirements that are currently off-site which you would like to move on-site and any storage on-site that could be stored off-site.

Material/Item	Approximate Size	Storage Type			Security		Comments
		Covered		Enclosed	Secure	Open	
		Yes	No				

## Emergency Event Requirements

**Living Facilities:** Please describe the type of living spaces required to accommodate your department or group for three days after an event. (E.g. Bunk areas, Kitchen, showers)

Sleeping area. Shower. And cooking area.

**Emergency Facility Systems:** Please describe the type of minimal functions/operations required to accommodate your department or group for three days after an event without outside assistance. (E.g. Water storage, Radio receiver, fuel)

Water. Food. Clothing Storage.

## Other Data and Information

Please provide the following information to assist the Planning Team in their programming efforts.

- ✓ As-built floor plans of the current facilities.
- ✓ Site plan or survey of the current site. Please include information on other sites/facilities if they are utilized by Denver Water but not located on the site.

**Thank you for your time in completing this questionnaire**



# Programming Questionnaire Fire Department

City of Bend Public Works  
Bend, Oregon

Name: Tom Fay  
Dept.: Fire Department  
Phone: 541-322-6377

Please provide as much information as possible for each section of this questionnaire. This information will be used in the programming effort for the new Operations Facilities. Your Participation is greatly appreciated.

## General Information

**Function:** Please describe the primary function and activities of your department requires at this facility.

Emergency Response - prevention & planning activities  
UP TO 8 Emergency service providers

UP TO 6 prevention staff:

(at shift change there could be 25 employees on site)

**Operation:** Please provide security concerns/ requirements, maximum number of simultaneous visitors and frequency of visitors to your department or group, and the necessity for after hours access to the facility.

**Security Issues:** security for equipment & prevention supplies  
as well as irrational individuals

**Simultaneous Visitors/Frequency:** 50 people per day

**After hours access? Why?** on 24 hr duty

# Vehicles and Parking Requirements

**Vehicles:** Please provide a detailed vehicle inventory and summarize below, by vehicle class, the vehicles or pieces of equipment used by your department or group. Be prepared to discuss size (S=8'x10', M=10'x20', L=12'x30', XL=12'x40'), quantity, preferred storage method, and growth through the year 2034.

Vehicle Type	Vehicle Projections				Size				Parking Requirements		
	2014	2019	2024	2034	S	M	L	XL	Uncovered	Covered	Enclosed
Sedan	3	3	4	5					X		
Pick-up Truck	1	1	2	3		X				X	
6 Pieces of Apparatus	6	6	6	6				X			X
Staff vehicles	-	3	4	5		X				X	
<b>Total</b>											

## Existing Space

**Existing Space:** Briefly list all spaces utilized by your department or group and be prepared to discuss your current facilities, where they are located, and any current space inadequacies, etc. **Provide a floor plan or sketch if available.** Describe your existing space and its location (include existing and proposed spaces by function).

Space	Size (L x W)	Function/Inadequacies
5 Stations	1 ACRE TO 7 ACRES	4 acre 12,000 sq - adequate 1 is 7,000 inadequate

## Shared Space Requirements

**Shared Space Requirements:** Please list all shared area requirements for your department/group. Please list the title of the space and the relationship/adjacency it may have to other shop spaces. Please briefly describe the special design features or finishes needed for the shop.

Shared Space Name	Number of people	Adjacency	Special Features/Furniture
<i>Training Room</i> <b>EXAMPLE</b>	20	<i>Supv. Office</i>	<i>Training tables and chairs for 20 people</i> <b>EXAMPLE</b>
	?		
	,		



## Storage Requirements

**Special Storage Requirements:** Please list any special storage requirements for your department/group. Please list types of materials, size of storage requirement, storage type, security requirements, and any special comments that you may have. Include all storage requirements that are currently off-site which you would like to move on-site and any storage on-site that could be stored off-site.

Material/Item	Approximate Size	Storage Type			Security		Comments
		Covered		Enclosed	Secure	Open	
		Yes	No				
Prevention Supplies	600 sq ft			X	X		
Receiving AREA	400 sq ft			X	X		

## Emergency Event Requirements

**Living Facilities:** Please describe the type of living spaces required to accommodate your department or group for three days after an event. (E.g. Bunk areas, Kitchen, showers)

8 Bedrooms

Kitchen

Day Room

fitness Room

operations area

Locker Rooms (male & female)

conference Room

**Emergency Facility Systems:** Please describe the type of minimal functions/operations required to accommodate your department or group for three days after an event without outside assistance. (E.g. Water storage, Radio receiver, fuel)

- Generator - w/fuel

- Radio facilities

- Fuel

- water

## Other Data and Information

Please provide the following information to assist the Planning Team in their programming efforts.

- ✓ As-built floor plans of the current facilities.
- ✓ Site plan or survey of the current site. Please include information on other sites/facilities if they are utilized by City of Bend but not located on the site.

**Thank you for your time in completing this questionnaire**

# Appendix B

## Design Charrette Sign-in Sheets



**MEETING ATTENDANCE SIGN IN SHEET**

Date: December 03, 2014

Project Name: Bend Public Works Facility Study

Project City, State: Bend, OR

Contract No.:

MDG Project No: 14P033

**Meeting Information:**

Date:	12/03/2014	Time:	10 AM - 12 PM	Facilitator:	Ken Booth
Location:	Pilot Butte				

**Meeting Subject: Design Charrette**

Initial	Name	Company / Title	Address	Email	Phone Number
KB	Ken Booth	MDG	1600 Stout Street Suite 940 Denver, CO 80202	<a href="mailto:Ken.Booth@mdg-llc.com">Ken.Booth@mdg-llc.com</a>	Bus: 303-302-0266 Cell:
	Teresa Briggs Ristoff	City of Bend, Interim Utility Support Services Manager	62975 NE Boyd Acres Road Bend, OR 97701		Bus: Cell:
	Grant Burke	City of Bend, Facilities			Bus: Cell:
	Cory Darling	City of Bend, Police Department	555 NE 15th Street Bend, OR 97701	<a href="mailto:cdarling@bendoregon.gov">cdarling@bendoregon.gov</a>	Bus: 541-332-2987 Cell:
	Brad Emerson	City of Bend, Project Manager	710 NW Wall Street Bend, OR 97701	<a href="mailto:bemerson@bendoregon.gov">bemerson@bendoregon.gov</a>	Bus: Cell:
	Tom Fay	City of Bend, Fire Department			Bus: Cell:

**MEETING ATTENDANCE SIGN IN SHEET**

Initial	Name	Company / Title	Address	Email	Phone Number
	Mike Gorman	BLRB	404 SW Columbia Suite 200 Bend, OR 97702	<a href="mailto:mgorman@blrb.com">mgorman@blrb.com</a>	Bus: 541-330-6506 Cell:
	Hardy Hanson	City of Bend, Right of Way Ops and Maintenance			Bus: Cell:
	Jim Landin	BLRB	404 SW Columbia Suite 200 Bend, OR 97702	<a href="mailto:jlandin@blrb.com">jlandin@blrb.com</a>	Bus: 541-330-6506 Cell:
	Quirt Lancaster	City of Bend, Fleet Maintenance			Bus: Cell:
	Shannon Ostendorff	City of Bend, Utility Operations Manager	62975 NE Boyd Acres Road Bend, OR 97701		Bus: Cell:
	Steve Prazak	City of Bend, Water Quality Manager	62975 NE Boyd Acres Road Bend, OR 97701		Bus: Cell:
	Paul Rheault	City of Bend, Utility Director			Bus: Cell:
	Ken Vaughan	City of Bend, Utilities	62975 NE Boyd Acres Road Bend, OR 97701	<a href="mailto:kvaughan@bendoregon.gov">kvaughan@bendoregon.gov</a>	Bus: 541-330-4026 Cell:
JW	Jared Weismantel	MDG	87 N Raymond Avenue Suite 700 Pasadena, CA 91103	<a href="mailto:Jared.Weismantel@mdg-llc.com">Jared.Weismantel@mdg-llc.com</a>	Bus: 626-389-2440 Cell:
	Kim Wright	City of Bend, Admin Services Supervisor	62975 NE Boyd Acres Road Bend, OR 97701		Bus: Cell:
					Bus: Cell:

MEETING ATTENDANCE SIGN IN SHEET

Initial	Name	Company / Title	Address	Email	Phone Number
	<i>JM King</i>				Bus: Cell:
	<i>Christopher Blake</i>				Bus: Cell:
	<i>Quint Lancaster</i>				Bus: Cell:
	<i>PAUL Neiswander</i>	<i>COB</i>	<i>575 NE 15th</i>		Bus: Cell:
	<i>DAVID ABBAS</i>	<i>INTERIM DIRECTOR COB</i>	<i>575 NE 15th</i>	<i>dabbas@bendoregon.gov</i>	Bus: <i>541-317-3016</i> Cell: <i>541-610-3743</i>
	<i>BRAD EMERSON</i>	<i>COB</i>	<i>710 NW WAD</i>	<i>bemerson@ bendoregon.gov</i>	Bus: <i>541-317-3054</i> Cell:
	<i>Andy Lane</i>	<i>COB</i>		<i>hhanse@bendoregon.gov</i>	Bus: Cell: <i>541-317-3015</i>
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## MEETING ATTENDANCE SIGN IN SHEET

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**MEETING ATTENDANCE SIGN IN SHEET**

Date: December 02, 2014

Project Name: Bend Public Works Facility Study

Project City, State: Bend, OR

Contract No.:

MDG Project No: 14P033

**Meeting Information:**

Date:	12/02/2014	Time:	10 AM - 12 PM	Facilitator:	Ken Booth
Location:	Pilot Butte				

**Meeting Subject: Design Charrette**

Initial	Name	Company / Title	Address	Email	Phone Number
KB	Ken Booth	MDG	1600 Stout Street Suite 940 Denver, CO 80202	<a href="mailto:Ken.Booth@mdg-llc.com">Ken.Booth@mdg-llc.com</a>	Bus: 303-302-0266 Cell:
	Teresa Briggs Ristoff	City of Bend, Interim Utility Support Services Manager	62975 NE Boyd Acres Road Bend, OR 97701		Bus: Cell:
	Grant Burke	City of Bend, Facilities			Bus: Cell:
	Cory Darling	City of Bend, Police Department	555 NE 15th Street Bend, OR 97701	<a href="mailto:cdarling@bendoregon.gov">cdarling@bendoregon.gov</a>	Bus: 541-332-2987 Cell:
	Brad Emerson	City of Bend, Project Manager	710 NW Wall Street Bend, OR 97701	<a href="mailto:bemerson@bendoregon.gov">bemerson@bendoregon.gov</a>	Bus: Cell:
	Tom Fay	City of Bend, Fire Department			Bus: Cell:

## MEETING ATTENDANCE SIGN IN SHEET

Initial	Name	Company / Title	Address	Email	Phone Number
	Mike Gorman	BLRB	404 SW Columbia Suite 200 Bend, OR 97702	<a href="mailto:mgorman@blrb.com">mgorman@blrb.com</a>	Bus: 541-330-6506 Cell:
	Hardy Hanson	City of Bend, Right of Way Ops and Maintenance			Bus: Cell:
	Jim Landin	BLRB	404 SW Columbia Suite 200 Bend, OR 97702	<a href="mailto:jlandin@blrb.com">jlandin@blrb.com</a>	Bus: 541-330-6506 Cell:
	Quirt Lancaster	City of Bend, Fleet Maintenance			Bus: Cell:
	Shannon Ostendorff	City of Bend, Utility Operations Manager	62975 NE Boyd Acres Road Bend, OR 97701		Bus: Cell:
	Steve Prazak	City of Bend, Water Quality Manager	62975 NE Boyd Acres Road Bend, OR 97701		Bus: Cell:
	Paul Rheault	City of Bend, Utility Director			Bus: Cell:
	Ken Vaughan	City of Bend, Utilities	62975 NE Boyd Acres Road Bend, OR 97701	<a href="mailto:kvaughan@bendoregon.gov">kvaughan@bendoregon.gov</a>	Bus: 541-330-4026 Cell:
JW	Jared Weismantel	MDG	87 N Raymond Avenue Suite 700 Pasadena, CA 91103	<a href="mailto:Jared.Weismantel@mdg-llc.com">Jared.Weismantel@mdg-llc.com</a>	Bus: 626-389-2440 Cell:
	Kim Wright	City of Bend, Admin Services Supervisor	62975 NE Boyd Acres Road Bend, OR 97701		Bus: Cell:
					Bus: Cell:

MEETING ATTENDANCE SIGN IN SHEET

Initial	Name	Company / Title	Address	Email	Phone Number
KR	Kevin M Ramsay	COB	575 NE 15 <sup>TH</sup> ST BEND OR	kramsay@bendoregon.gov	Bus: Cell: 541-815-0305
CB	Chris Blake	COB	" "	cblake@bendoregon.gov	Bus: Cell: 541-317-3033
PN	PAUL NEISWANDER	COB	" "	PNNEISWANDER@BEND.OREGON.GOV	Bus: 541 Cell: 317-3035
DL	Quint Lancaster	Garage Sup.	575-NE 15 <sup>TH</sup> ST	qlancaster@bendoregon.gov	Bus: 541-317-3042 Cell:
BD	Handy Hanson	COB	" "	hhanson@bendoregon.gov	Bus: Cell: 541-317-3015
BE	BRAD EMERSON	COB	710 NW WALL	hemerson@bendoregon.gov	Bus: 541-317-3054 Cell:
LSL	LARRY LANGSTON	FIRE	1212 SW Simpson 97701	llangston@bendoregon.gov	Bus: Cell:
JS	Jay Selman	COB	710 NW WALL	jselman@bendoregon.gov	Bus: 541-693-2175 Cell:
RJ	RJ JOHNSON	BLRB	404 SW COLUMBIA S. 120	rjohnson@blrb.com	Bus: 541.330.6506 Cell:
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					Bus: Cell:

**MEETING ATTENDANCE SIGN IN SHEET**

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## MEETING ATTENDANCE SIGN IN SHEET

Date: December 05, 2014

Project Name: Bend Public Works Facility Study

Project City, State: Bend, OR

Contract No.:

MDG Project No: 14P033

### Meeting Information:

Date:	12/05/2014	Time:	10 AM - 12 PM	Facilitator:	Ken Booth
Location:	Boyd Acres				

### Meeting Subject: Design Charrette

Initial	Name	Company / Title	Address	Email	Phone Number
KB	Ken Booth	MDG	1600 Stout Street Suite 940 Denver, CO 80202	<a href="mailto:Ken.Booth@mdg-llc.com">Ken.Booth@mdg-llc.com</a>	Bus: 303-302-0266 Cell:
CBR	Teresa Briggs Ristoff	City of Bend, Interim Utility Support Services Manager	62975 NE Boyd Acres Road Bend, OR 97701		Bus: Cell:
	Grant Burke	City of Bend, Facilities			Bus: Cell:
	Cory Darling	City of Bend, Police Department	555 NE 15th Street Bend, OR 97701	<a href="mailto:cdarling@bendoregon.gov">cdarling@bendoregon.gov</a>	Bus: 541-332-2987 Cell:
BE	Brad Emerson	City of Bend, Project Manager	710 NW Wall Street Bend, OR 97701	<a href="mailto:bemerson@bendoregon.gov">bemerson@bendoregon.gov</a>	Bus: Cell:
	Tom Fay	City of Bend, Fire Department			Bus: Cell:

**MEETING ATTENDANCE SIGN IN SHEET**

Initial	Name	Company / Title	Address	Email	Phone Number
	Mike Gorman	BLRB	404 SW Columbia Suite 200 Bend, OR 97702	<a href="mailto:mgorman@blrb.com">mgorman@blrb.com</a>	Bus: 541-330-6506 Cell:
	Hardy Hanson	City of Bend, Right of Way Ops and Maintenance			Bus: Cell:
	Jim Landin	BLRB	404 SW Columbia Suite 200 Bend, OR 97702	<a href="mailto:jlandin@blrb.com">jlandin@blrb.com</a>	Bus: 541-330-6506 Cell:
	Quirt Lancaster	City of Bend, Fleet Maintenance			Bus: Cell:
	Shannon Ostendorff	City of Bend, Utility Operations Manager	62975 NE Boyd Acres Road Bend, OR 97701		Bus: Cell:
SP	Steve Prazak	City of Bend, Water Quality Manager	62975 NE Boyd Acres Road Bend, OR 97701	<a href="mailto:sprazak@bendoregon.gov">sprazak@bendoregon.gov</a>	Bus: 541 322 6349 Cell:
	Paul Rheault	City of Bend, Utility Director			Bus: Cell:
KV	Ken Vaughan	City of Bend, Utilities	62975 NE Boyd Acres Road Bend, OR 97701	<a href="mailto:kvaughan@bendoregon.gov">kvaughan@bendoregon.gov</a>	Bus: 541-330-4026 Cell:
JW	Jared Weismantel	MDG	87 N Raymond Avenue Suite 700 Pasadena, CA 91103	<a href="mailto:Jared.Weismantel@mdg-llc.com">Jared.Weismantel@mdg-llc.com</a>	Bus: 626-389-2440 Cell:
KW	Kim Wright	City of Bend, Admin Services Supervisor	62975 NE Boyd Acres Road Bend, OR 97701		Bus: Cell:
MW	MARK WALTER	COB Elect	"	<a href="mailto:mwalter@bendoregon.gov">mwalter@bendoregon.gov</a>	Bus: Cell: 541.410-0871

**MEETING ATTENDANCE SIGN IN SHEET**

Initial	Name	Company / Title	Address	Email	Phone Number
JD	Jeff Buystedt	Lab		jbuystedt@Bendoregon.gov	Bus: Cell: 541-420-8802
DB	Drexell BARNES	Laboratory	Boyd Acres	DBarnes@bendoregon.gov	Bus: 541 322 6368 Cell: 541 815 5542
KG	Relly GRAHAM	IPP	BOYD ACRES	kgraham@BENDOREGON.GOV	Bus: 541-322-6348 Cell: 541-280-7616
DA	DAVE Lee	UTILITIES	Boyd Acres	dlee@Bendoregon.gov	Bus: 541-322-6332 Cell:
					Bus: Cell:
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**MEETING ATTENDANCE SIGN IN SHEET**

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## MEETING ATTENDANCE SIGN IN SHEET

Date: December 04, 2014

Project Name: Bend Public Works Facility Study

Project City, State: Bend, OR

Contract No.:

MDG Project No: 14P033

### Meeting Information:

Date:	12/04/2014	Time:	10 AM - 12 PM	Facilitator:	Ken Booth
Location:	Boyd Acres				

Meeting Subject: Design Charrette

Initial	Name	Company / Title	Address	Email	Phone Number
KB	Ken Booth	MDG	1600 Stout Street Suite 940 Denver, CO 80202	<a href="mailto:Ken.Booth@mdg-llc.com">Ken.Booth@mdg-llc.com</a>	Bus: 303-302-0266 Cell:
TR	Teresa Briggs Ristoff	City of Bend, Interim Utility Support Services Manager	62975 NE Boyd Acres Road Bend, OR 97701		Bus: Cell:
	Grant Burke	City of Bend, Facilities			Bus: Cell:
	Cory Darling	City of Bend, Police Department	555 NE 15th Street Bend, OR 97701	<a href="mailto:cdarling@bendoregon.gov">cdarling@bendoregon.gov</a>	Bus: 541-332-2987 Cell:
BE	Brad Emerson	City of Bend, Project Manager	710 NW Wall Street Bend, OR 97701	<a href="mailto:bemerson@bendoregon.gov">bemerson@bendoregon.gov</a>	Bus: Cell:
	Tom Fay	City of Bend, Fire Department			Bus: Cell:

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Initial	Name	Company / Title	Address	Email	Phone Number
MG	Mike Gorman	BLRB	404 SW Columbia Suite 200 Bend, OR 97702	<a href="mailto:mgorman@blrb.com">mgorman@blrb.com</a>	Bus: 541-330-6506 Cell:
	Hardy Hanson	City of Bend, Right of Way Ops and Maintenance			Bus: Cell:
	Jim Landin	BLRB	404 SW Columbia Suite 200 Bend, OR 97702	<a href="mailto:jlandin@blrb.com">jlandin@blrb.com</a>	Bus: 541-330-6506 Cell:
	Quirt Lancaster	City of Bend, Fleet Maintenance			Bus: Cell:
	Shannon Ostendorff	City of Bend, Utility Operations Manager	62975 NE Boyd Acres Road Bend, OR 97701		Bus: Cell:
	Steve Prazak	City of Bend, Water Quality Manager	62975 NE Boyd Acres Road Bend, OR 97701		Bus: Cell:
	Paul Rheault	City of Bend, Utility Director			Bus: Cell:
	Ken Vaughan	City of Bend, Utilities	62975 NE Boyd Acres Road Bend, OR 97701	<a href="mailto:kvaughan@bendoregon.gov">kvaughan@bendoregon.gov</a>	Bus: 541-330-4026 Cell:
JW	Jared Weismantel	MDG	87 N Raymond Avenue Suite 700 Pasadena, CA 91103	<a href="mailto:Jared.Weismantel@mdg-llc.com">Jared.Weismantel@mdg-llc.com</a>	Bus: 626-389-2440 Cell:
	Kim Wright	City of Bend, Admin Services Supervisor	62975 NE Boyd Acres Road Bend, OR 97701		Bus: Cell:
					Bus: Cell:

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Initial	Name	Company / Title	Address	Email	Phone Number
	Travis Somers	City of Bend Storm Lead	62975 <sup>NE</sup> Boyd Acres Bend, OR 97701	TSOMERS@bendoregon.gov	Bus: Cell: 541 411-1312
RM	Reese Moody	COB	//	Rmoody@bendoregon.gov	Bus: Cell: 541-411-7621
MW	Mark Wolter	COB-Elect.	"	MWOLTER@Bendoregon.gov	Bus: Cell: 541-410-0871
SO	Shannen Ostendorf	COB-Operations	"	Sostendorf@bendoregon.gov	Bus: 541-322-6334 Cell:
RM	Rod Mingsus	COB	"	RMingsus@Bendoregon.gov	Bus: 541- <del>280</del> <sup>633</sup> = 2180 Cell:
KV	Ken Vaughan	COB	"	KVaughan@bendoregon.gov	Bus: Cell: 541-408-4641
WE	Wendy Edde	COB - Stormwater Program Manager	"	wedde@bendoregon.gov	Bus: 541-317-3018 Cell:
SP	Steve Prazak	COB Water Quality Mgr	"	sprazak@bendoregon.gov	Bus: 541-322-6349 Cell:
	Ken Booth	MDG			Bus: Cell:
					Bus: Cell:
					Bus: Cell:

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