

# PROGRAMMING REPORT

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## **Cherry Hills Village Public Works Facility** Cherry Hills Village, Colorado

December 2, 2015

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# Section One

## Project Overview



Cherry Hills Village,  
Colorado

## Introduction

The City of Cherry Hills Village is establishing a new Public Works facility which will be located on a site owned by the City of Englewood. Cherry Hills Village will lease a portion of this site for a new facility that will house staff from two departments while utilizing fueling, washing, and various other operations already established on site by the City of Englewood. The Streets Division (part of the Public Works Department) and the Parks, Trails, and Recreation Department will utilize the facility for storing vehicles and materials necessary to perform their duties. In addition, a smaller site on East Jefferson Avenue and South Lafayette Street will be used as a transfer station and storage site for snow removal and bulk materials.

This report will document the space needs for the groups that will be using the new facilities and identify key planning issues.

The user groups that will be included are:

- Streets Division
- Parks, Trails, and Recreation Department (herein referred to as “Parks”)

## Existing Facilities

Currently, the Parks Department operates out of a former firehouse located on Meade Lane, next to the Cherry Hills Village City Hall. This space has a meeting room, limited office space, a locker room, a restroom with a shower, a kitchen, and a garage. There are additional storage areas both inside the garage and behind the building. Near the firehouse, space is also available for Parks and Streets to store vehicles and materials. The lot has two fuel tanks - one above ground and one below ground. A tank for magnesium chloride is situated on the lot. Adjacent to the lot is a garage that houses vehicles, tools, signs, and some shop equipment for the Streets Division. Additional office space is located inside the City Hall building.

This site has several issues, such as the current building being located in a flood plain and the area being needed for redevelopment projects. There is limited heated storage for vehicles at this site.

## Site Descriptions

Two sites are examined in this report. The main site is located at the City of Englewood Fleet Maintenance site along Platte River Drive. The City of Cherry Hills Village will be sharing a 1.25 acre area with the City of Englewood. The City of Cherry Hills Village will be utilizing the northeast corner of this site.

The site area is fenced on the north and east sides. The east fence is in acceptable condition but the north fence is in poor condition. A square space along the north fence is indented (located towards the northeast corner of the site) which is open to the road. This indented space is currently used to store mulch. A strip of gravel runs between the north fence and the road. Most of the area is paved with asphalt, but that asphalt currently shows signs of wear. The area along the inside of the east fence is unpaved. There are existing structures in the area and storm water drainage systems currently in place on the site.

The other site in this report is a small, 0.5 acre triangular property in Cherry Hills Village. This site is bounded on the northwest by East Jefferson Avenue, along the east by South Lafayette Street, and on the south by an offshoot of Jefferson Street. The roads on the east and south sides are unpaved. Jefferson Street, on the northwest side of the site, is a busy thoroughfare. The westernmost portion of the site has a large roadside sign and two power posts. Trees and bushes are located on the property, especially along the southern edge. The entire property is unpaved. It is referred to as the Hampden Pie site.

## Purpose of Report

The purpose of this document is to define functional requirements and space needs, which will serve as a general basis for design of the new facility. This document is generally intended for coordination and budget development efforts, but it is also a very helpful tool that encourages the user's involvement in the review and verification of data and assumptions.

## The Planning Team

The City of Cherry Hills Village Public Works Department selected and contracted with the Planning Team, consisting of Maintenance Design Group, LLC (MDG) and Otak Group, Inc. to provide preliminary design services for the new Public Works Facility.

As part of the planning process, this Programming Report was developed to document assumptions, the design planning theory, planning ratios space needs, and other technical data pertaining to the required functions and equipment at the Public Works Facility.

## Methodology

The most successful facility projects begin with gaining an understanding of the functions or operations to be performed within the facility. Therefore, the Planning Team began this project with data collection, observation, and interviews with Streets Division and Parks staff.

## Report Overview

This Programming Report prepared by the Planning Team consists of three sections and one appendix. The following is a brief description of the contents of each section:

### Section One - Project Overview

Describes the background of the project and gives an overview of the complete report.

### Section Two - Basis for Design

Provides a summary of the more qualitative design issues that were noted during interviews with Public Works (specifically Streets Division) and Parks staff.

### Section Three - Space Needs Program

Presents a summary and methodology of the Space Needs Program.

## Appendices

- *Appendix 1: Space Needs Program* presents a detailed listing of space requirements for the Streets Division and Parks. The intent of the program is to identify program spaces to fulfill future facility needs. Programmed spaces are further defined by their quantity, area, and any remarks significant to design.
- *Appendix 2: Exhibit Lease Area* details the boundaries of the portion of the Englewood site that is being leased to Cherry Hills Village.



Park view in Cherry  
Hills Village

- *Appendix 3: Utility Survey* provides a utility survey of the Hampden Pie conducted by Precision Survey and Mapping, Inc. It shows the location of utility equipment at the site.

### **Acknowledgements**

The Planning Team would like to acknowledge the efforts and contribution of City of Cherry Hills Village and City of Englewood staff during the facility programming effort. It is this continued enthusiastic participation that will ensure the realization of the best facility design possible.

# Section Two

## Basis for Design

## Introduction

This section presents the functional and operational characteristics of the existing City of Cherry Hills Village Public Works facilities. The information gathered and indicated in this report will provide the basis for the design and layout of the new Public Works facility to accommodate the program needs. This Basis for Design is an important element in developing the requirements and space needs for the Parks, Trails, and Recreation Department (Parks) and the Streets Division (part of the Public Works Department). The understanding gained by the Planning team greatly influences planning decisions concerning the design and layout of the new facility. A summary of operational characteristics is included for all departments and/or divisions.

The Planning Team identified the function, staffing (including hours of operation and positions), support vehicles, vehicles maintained, and key planning issues for each space projected for use by Parks and Streets. The Planning Team will use this information in future planning and design efforts.

This section will present a summary of the Space Needs Program by site, starting with the Englewood site and then the Hampden Pie site, and also by department and/or division.

The Space Needs Program does not include growth projections, since Cherry Hills Village is mostly built out for development and no expansion of services is required at this time.

## Functional and Operations Design Data (Englewood Site)

### Streets Division

#### Function

The Streets Division is part of the Public Works Department and maintains Cherry Hills Village's streets. Streets staff also perform sign repair, snow removal, street sweeping, and are responsible for Right-of-Way (ROW) drainage and storm water systems.

### Staffing

The current hours of operation for Streets staff at the central facility are from 8:00 AM to 4:30 PM, Monday through Friday. Table 2.A summarizes Streets staffing.

**Table 2.A - Streets Staffing**

Staffing	
Position	Program 2025
Public Works Project and ROW Manager*	1
Streets Operations Supervisor	1
Laborer	4
<b>Total</b>	<b>6</b>

\*Not located at Englewood site

### Vehicle Parking

Table 2.B presents the quantities of all vehicles that are utilized by the Streets Division.

**Table 2.B - Streets Parking Requirements**

Parking Requirements		
Vehicle Type	Size (Fleet)	Parking Requirements
Small	1	8' x 10'
Medium	12	10' x 20'
Large	8	12' x 30'
Extra Large	1	12' x 40'
<b>Total</b>	<b>22</b>	

### Key Planning Issues

The following key planning issues should be considered in planning and design efforts for the Streets Division.

#### Office Areas

- Provide a private office space for the Operations Supervisor, which includes space for a desk with a chair, lateral file cabinet, bookshelf, and two guest chairs.
- Provide an open office space for Laborers that includes a workstation for each Laborer. Each workstation shall include

space for computer, chair, small workspace, and lateral file storage. Locate the open office space adjacent to the Operations Supervisor's office.

#### **Office Support Areas**

- Streets staff will hold meetings in the main meeting room.
- Provide access to shared areas including Restrooms, the Break Room, Meeting Room, and the Copy Room.

#### **Shared Specialty Bays**

- Provide two large and three extra-large spaces in the heated enclosed vehicle storage.
- Provide one small, five medium, three large, and two extra-large spaces in the unenclosed covered vehicle storage.
- If possible, layout vehicle storage so Streets vehicles may park together.
- Vehicle storage shall NOT have North facing doors to minimize movement on the shady side of the building where ice can build up.

#### **Shop Areas**

- Provide a shop area with room for workbenches and space to set up the Street Division's large shop equipment. Ensure enough access to move items to be worked on in and out easily.
- Provide an enclosed but not heated tool storage room with ample shelving for tools of varying sizes. Provide electrical connections and a nearby surface where battery chargers can be placed as well.
- Provide a storage room with storage units for pesticide and herbicide. Also provide access to an area where pesticides and herbicides can be mixed safely.
- Provide an enclosed but not heated sign storage room with racking for sign storage and sign layout space.
- Space shall be capable of welding. Provide proper ventilation and power for welding equipment.
- If possible, locate storage rooms adjacent to the area where their contents are to be employed or prepared for transport.

## Parks, Trails, and Recreation Department

### Function

Parks maintains Cherry Hills Village’s park land, trails, and Right-of-Way improvements.

### Staffing

The current hours of operation for Parks staff at the central facility are from 8:00 AM to 4:30 PM, Monday through Friday. Table 2.C summarizes Parks staffing.

**Table 2.C - Parks Staffing**

Staffing	
Position	Program 2025
Parks, Trails, and Recreation Administrator	1
Parks Crew Chief	1
City Arborist	1
Maintenance Technicians	3
Seasonal Workers	6
<b>Total</b>	<b>12</b>

### Vehicle Parking

Table 2.D presents the quantities of all vehicles that are utilized by Parks.

**Table 2.D - Parks Parking Requirements**

Parking Requirements		
Vehicle Type	Size (Fleet)	Parking Requirements
Medium	14	10' x 20'
Large	3	12' x 30'
Extra Large	0	12' x 40'
<b>Total</b>	<b>17</b>	

### Key Planning Issues

The following key planning issues should be considered in planning and design efforts for Parks.

#### Office Areas

- Provide a private office space for the Parks, Trails, and Recreation Administrator, which includes space for a desk with a chair, lateral file cabinet, bookshelf, and two guest chairs. Between the Administrator's Office and the exterior of the building there shall be a vestibule/mud room that shall include a coat rack, a small table, and some chairs. A boot clear shall be located outside the exterior door for removing debris from shoes and boots.
- Provide a private office space for the Parks Crew Chief, which includes space for a desk with a chair, lateral file cabinet, bookshelf, and two guest chairs.
- Provide a private office space for the City Arborist, which includes space for a desk with a chair, lateral file cabinet, bookshelf, and two guest chairs.
- Provide an open office space for the Parks Maintenance Technicians that includes a workstation for each Technician. Each workstation shall include space for computer, chair, small workspace, and lateral file storage. Locate the open office space adjacent to the Parks, Trails, and Recreation Administrator's Office, the Parks Crew Chief's Office and the City Arborist's Office.

#### Office Support Areas

- Parks staff will hold meetings in the main meeting room.
- Provide access to shared areas including restrooms, the break room, meeting room, and the copy room.

#### Shared Specialty Bays

- Provide three medium spaces in the heated enclosed vehicle storage.
- Provide 12 medium and three large spaces in the unenclosed covered vehicle storage. Provide an easily accessible storage area for vehicle attachments as well.
- If possible, layout the vehicle storage so all Parks vehicles may park together.

- Vehicle storage shall not have north facing doors so as to minimize movement on the shady side of the building where ice tends to build up.

### Shop Areas

- Provide a Shop Area with room for workbenches and space for Parks' large shop equipment. Ensure enough access to move items easily in and out of the area.
- Provide a Parts Storage Room with ample shelving for parts of varying sizes.
- Provide a Tool Storage Room with ample shelving for tools of varying sizes. Provide electrical connections and a nearby surface where battery chargers can be placed.
- Provide a Storage Room for special events which shall have an open space where large items can be safely stored upright and shelving for smaller items. Ensure enough access to move large items in and out of the area easily.
- Provide a Storage Room for equipment with small engines that has ample shelving and racks. Provide adequate open floor space for storing equipment that should not be kept on shelves or racks. Ensure enough access to move items in and out of the area easily.
- Provide a Storage Room with storage units for pesticide, herbicide, fertilizer, and seed. Provide access to an area where pesticides and herbicides can be mixed safely.
- Provide an irrigation room with a workstation and electrical and data connections for all equipment necessary for running the irrigation system.
- If possible, locate storage rooms adjacent to the area where their contents are to be employed or prepared for transport.

### Shared Spaces

#### Function

The shared spaces include operational equipment and support devices that are utilized by staff within both the Streets Division and Parks.

#### Key Planning Issues

The following key planning issues should be considered in planning and design efforts for the shared areas.

### **Office Areas**

- Provide a Meeting Room with seating and table space for 18 people. Provide connections for computers and a projector. Ensure that a projector screen is included at the opposite end of the room from the projector. The wall behind the screen should also be able to serve as a screen.

### **Office Support Areas**

- Provide a space for the Janitor's Closet which includes space for a mop sink, shelving, and a mobile garbage receptacle.
- Provide a room for shared printing and copying with space for a copy machine, vertical file cabinets, a plotter, and a large countertop.
- Provide a Break Room large enough for half of the field staff. Include space for a kitchenette which includes an oven, a dishwasher, and a microwave oven.
- Provide a Restroom for men with space for toilets, urinals, sinks, and a shower.
- Provide a Restroom for women with space for two toilets, two sinks, and a shower.
- The Restrooms should open to an entry vestibule. The vestibule should include drinking fountains.
- Provide a Men's Locker Room and a Women's Locker Room with space for lockers for full-time staff who do not have private offices. Provide half sized lockers for seasonal and part-time staff. Locate the Locker Rooms so as to be accessible from the Restroom entry vestibule.

### **Building Systems Areas**

- Provide a room for electrical controls for the building.
- Provide a room for mechanical controls to the building.
- Provide a fire riser room with a fire suppression system and alarm.
- Provide a room for the controls of the data and communication for the building.

### **Shared Specialty Bays**

- Provide enclosed and heated vehicle storage at least large enough for the vehicles listed in the program as stored in an enclosed heated environment.

- Provide unenclosed and covered vehicle storage at least large enough for the vehicles listed in the program as stored in an unenclosed covered environment.
- Ensure there is enough room for vehicles to be easily loaded with tools, equipment, and parts, before exiting the vehicle storage areas.
- Vehicle storage shall NOT have North facing doors to minimize movement on the shady side of the building where ice can build up.

## Exterior Site

### Function

The exterior site includes outdoors areas and parking utilized by staff within both the Streets and Parks Divisions.

### Key Planning Issues

The following key planning issues should be considered in planning and design efforts for the exterior site.

### Exterior Areas

- Provide a covered storage area for 200 tons of solid de-ice material.
- Provide two small bulk material bins and two extra small bulk material bins.
- Provide a space for keeping fencing parts and another for keeping small equipment.
- Provide trash/recycle bins for holding up to 400 tons of waste. Also include a compost bin for grass waste.
- Provide a Yard Storage Area for street cones, panels, construction fencing, barricades, and any miscellaneous items that are to be kept outdoors.
- Provide an area suitable for community brush drop-off/recycling operations.
- Locate all storage and bins nearby the access point for the vehicle storage.
- Provide an outdoor patio for use by staff.
- Provide an emergency generator for the facility.

**Parking**

- Provide 18 staff parking spaces, two spaces for visitors, and one accessible (handicap) space.

**Functional and Operations Design Data  
(Hampden Pie Site)**

**Streets Division**

**Vehicle Parking**

Table 2.E presents the quantities of all vehicles that are utilized by the Streets Division.

**Table 2.E - Streets Parking Requirements (Hampden Pie)**

Parking Requirements		
Vehicle Type	Size (Fleet)	Parking Requirements
Extra Large	1	12' x 40'
<b>Total</b>	<b>1</b>	

**Key Planning Issues**

The following key planning issues should be considered in planning and design efforts for the Streets Division.

**Shared Specialty Bays**

- Provide one extra-large space in the Heated Enclosed Vehicle Storage for a front-end loader.

**Shared Spaces**

**Function**

The shared spaces include operational equipment and support devices.

**Key Planning Issues**

The following key planning issues should be considered in planning and design efforts for the shared space.

**Building Systems Areas**

- Provide a room for electrical controls for the building.

## Exterior Site

### Function

The exterior site includes outdoors areas and parking utilized by staff within both the Streets Division and Parks.

### Key Planning Issues

The following key planning issues should be considered in planning and design efforts for the exterior site areas.

### Exterior Areas

- Provide a storage area for 200 tons of solid de-ice material.
- Provide space for a storage tank with containment basin for liquid de-icer.
- Provide two small bulk material bins and two extra small bulk material bins.
- Provide trash/recycle bins for holding waste.

### Parking

- Provide two parking spaces for staff.

# Section Three

## Space Needs Program

## Introduction

This section presents the Space Needs Program for the new Public Works Facility through the projected needs of the year 2025. The program includes office and support areas, storage areas, shop areas, exterior areas, and exterior parking areas to meet the future operational needs for the City of Cherry Hills Village.

The Planning Team members held interviews with Streets Division (part of the Public Works Department) and Parks, Trails, and Recreation (Parks) staff, which were instrumental in determining space sizing and staff numbers.

## Staff Summary

An understanding of facility staffing levels is crucial to the Planning Team when determining the number of parking spaces, size of support facilities, and developing occupancy levels. Table 3.A is a summary of the staffing levels that the Team determined from interview sessions with City of Cherry Hills Village Streets and Parks staff. Refer to *Section Two - Basis for Design and Appendix 1 - Space Needs Program* for a more detailed breakdown of the staffing positions.

Table 3.A - Staff Summary

Staffing	
Department/Division	Program 2025
Streets Division	6
Parks (with seasonal staff)	12
<b>Total</b>	<b>18</b>

## Vehicle Summary

City of Cherry Hills Village vehicle quantities and sizes are essential data for the Planning Team when determining parking requirements on the site and the size of the support facilities. The vehicle quantities were taken directly from a Vehicle Equipment Inventory provided by the City of Cherry Hills Village. Table 3.B summarizes vehicle quantities by division or department.

**Table 3.B - Vehicle Summary**

<b>Vehicles</b>	
Department/Division	Program 2025
Streets Division	22
Parks	17
<b>Total</b>	<b>39</b>

### Space Standards

Space standards were applied to the Space Needs Program and generally apply to the offices, support areas, shops, bays, and vehicle parking. 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 facility program and overall area requirements. The space standards are based on functional needs and requirements established through the design of other facilities and are also based on specific requirements of each functional group. Tables 3.C through Table 3.E display the general area for common types of spaces used throughout the facility.

**Table 3.C - Office Areas**

<b>Office Areas</b>	
Space Type	Area/Person (Square Feet)
Private Office	120
Work Carrel	48

**Table 3.D - City Vehicle Parking**

<b>Vehicle Parking</b>		
Space Size	Area (Square Feet)	Dimensions (LxW)
Small	80	8' x 10'
Medium	200	10' x 20'
Large	360	12' x 30'
Extra Large	480	12' x 40'

**Table 3.E - Employee Visitor Vehicle Parking**

<b>Parking</b>		
Space Type	Area (Square Feet)	Dimensions (LxW)
Employee/Visitor Parking	162	9' x 18'
Accessible Parking	234	13' x 18'

## Circulation Factors

The space requirements shown for each function are designated by net usable area. By using the urban design approach to this development of the facility, the Planning Team plans to minimize the amount of circulation necessary for an efficient facility. There are three Circulation Factors utilized in the Space Needs Program. These factors account for Interior or Building Circulation, Parking Circulation, and Site Circulation.

### Interior or Building Circulation

This factor is applied to the program as a percentage of the total building area. It accounts for miscellaneous building spaces such as hallways, stairwells, custodial closets, mechanical, plumbing, and electrical rooms, wall thickness, structure, and access requirements. The following is a list of the factors (in general) that have been applied to the program:

Office Areas	35%
Shops	20%

### Parking Circulation

This factor is included to account for the drive aisles, walkways, islands, and other areas created by site and access inefficiencies. This factor can vary from 75 to 100 percent of the actual space occupied by a vehicle. For this project the following factor was applied:

Vehicle Parking areas	100%
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### Site Circulation Factor

This factor is also applied to the program as a percentage of the total program area. It accounts for areas around buildings, site drive aisles, building access, and site access. For new construction, a 100 percent 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 which reduce this factor and in effect reduce the necessary footprint of the area used on the site.

## Space Needs Program and Summary

Summaries of the Space Needs Program for the City of Cherry Hills Village Facility site area in Englewood and the Hampden Pie

are provided in Figures 3.1 and 3.2. This summary table includes projected area needs for building areas, vehicle storage areas, exterior areas, and parking areas. These projected space needs are subtotaled into net area requirements in square feet and converted to the total site area in acres for the new facility and any potential residual land area. Site circulation, landscaping requirements, and total acres required are also shown.

The detailed Space Needs Program Summary begins with the identification of each space by name and a space standard (if applicable). The Program 2025 column represents spaces required to accommodate the vehicles and operations for Streets and Parks.

The detailed Space Needs Program can be found in *Appendix 1- Space Needs Program*.

Figure 3.1 - Space Needs Program Summary (Englewood Site)

Englewood Site Space Needs Program Summary		
<b>Building Areas</b>		(Square Feet)
Total Streets Operations Areas		762
Total Parks Operations Areas		1,122
Total Shared Operations Areas		2,743
Total Streets Enclosed Heated Areas		3,744
Total Parks Enclosed Heated Areas		1,248
<b>Covered Areas</b>		
Streets		4,048
Parks		5,497
		19,164
<b>Total Building Areas</b>		<b>19,164</b>
<b>Exterior Areas</b>		
Total Exterior Areas		10,548
<b>Total All Exterior Areas</b>		<b>10,548</b>
<b>Subtotal All Areas</b>		<b>29,712</b>
Site Circulation Factor (includes setbacks, landscaping, etc.)	75%	22,284
<b>GRAND TOTAL FOR ALL AREAS</b>		<b>51,996</b>
<b>ACRES</b>		<b>1.19</b>

Figure 3.2 - Space Needs Program Summary (Hampden Pie Site)

Hampden Pie Site Space Needs Program Summary		
<b>Building Areas</b>		(Square Feet)
Total Streets Enclosed Heated Areas		736
<b>Covered Areas</b>		
Total Streets Covered Areas		704
		1,440
<b>Total Building Areas</b>		<b>1,440</b>
<b>Exterior Areas</b>		
Shared Exterior Areas		5,674
<b>Total All Exterior Areas</b>		<b>5,674</b>
<b>Subtotal All Areas</b>		<b>7,114</b>
Site Circulation Factor (includes setbacks, landscaping, etc.)	100%	7,114
<b>GRAND TOTAL FOR ALL AREAS</b>		<b>14,228</b>
<b>ACRES</b>		<b>0.33</b>

# Section Four Project Budget

## Introduction

The preliminary construction cost estimate was prepared by Maintenance Design Group (MDG) based on similar recently constructed facilities in the Colorado Front Range. There are separate cost estimates for the Englewood and Hampden Pie sites.

The preparation of these estimates is based on the following:

- Space Needs Program Document prepared by Maintenance Design Group
- The Concept Site Plans for the City of Englewood site and the Hampden Pie site
- Review meetings with the City of Cherry Hills Village Public Works Staff

The estimate includes the following scope of work:

- Shop and Heated Vehicle Storage (Englewood site)
- Covered Vehicle Storage (Englewood Site)
- Site grading and paving (Englewood Site)
- Heated Vehicle Storage (Village Center)
- Heated Vehicle Storage (Hampden Pie site)
- Covered Salt Storage (Hampden Pie Site)
- Site grading and paving (Hampden Pie Site)

## Assumptions and Qualifications

Essential services such as electrical, telephone, water, natural gas, storm drainage, and sanitary sewer systems are already on or near each of the sites and can be readily tapped into with some expansion to the existing main systems.

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
- Cost escalation from the date of the estimate (it is recommended to include a range of five to seven percent per year)

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

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
- Special phasing requirements
- 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

The estimate has been prepared using accepted practices and it represents the Planning 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 a low bid. Since the Planning 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 do not warrant nor guarantee that bids or ultimate construction costs will not vary from the cost estimate.

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.

## Summary

The Concept Design Cost Estimate is presented in three separate iterations to indicate how the City staff has made an attempt to reduce the project budget. The total project budget is estimated at approximately \$6,412,000 for all three sites of new facility construction. As mentioned, this is for construction costs as of December 2015 and if the project is delayed for any length of time, the costs are expected to increase each year.

Table 4.1 is the project budget for the first round of programming prior to review by the City staff of new Public Works Facility at the Englewood Site.

Table 4.2 is the revised project budget after the City staff made some tough decisions to reduce some of the facility areas to make the building as operationally efficient as possible.

Table 4.3 is the reduced project budget which includes not building all of the covered storage facility requirements and relocating two heated vehicle bays to the Village Center.

Table 4.4 is the project budget for the facility requirements at the Hampden Pie site.

Table 4.1 - Preliminary Cost Estimate

Cherry Hills Village Public Works Facility Budget (Englewood)				November 17, 2015
Building Space	Area	Cost	Total	Notes
Shop/Heated Vehicle Storage	14,720 sf	\$250 sf =	\$3,680,000	Steel Framed Structure
Covered Vehicle Storage	6,014 sf	\$100 sf =	\$601,400	
Site Work	54,200 sf	\$10 sf =	\$542,000	Grading, asphalt pavement, drainage, landscaping, fencing
		Subtotal	\$4,823,400	
		Contingency	\$482,340	10% at Concept Design
		Contractor Costs	\$723,510	15% Profit and Overhead
		<b>Hard Cost Total</b>	<b>\$6,029,250</b>	
Total Design Team Fees			\$554,691	10% of Hardcost Subtotal plus Contingency
Design Expenses			\$27,735	5% of Design Fees, Printing, Permitting, CA, etc.
FF&E	4,000	\$10 sf	\$40,000	Workstations, Furniture, Storage, etc.
Permitting and Fees			\$48,234	1% of Construction Estimate City of Fort Collins Fees
Owner Construction Contingency			\$602,925	10% for Unforeseen Conditions, Owner Changes, etc.
		<b>Soft Costs Total</b>	<b>\$1,273,585</b>	
<b>TOTAL COSTS</b>			<b>\$7,302,835</b>	

ls = lump sum; sf = square foot; lf = linear foot

Table 4.2 - Revised Cost Estimate

Cherry Hills Village Public Works Facility Budget (Englewood)				December 1, 2015
Building Space	Area	Cost	Total	Notes
Shop/Heated Vehicle Storage	9,822 sf	\$250 sf =	\$2,455,500	Steel Framed Structure
Covered Vehicle Storage	9,545 sf	\$100 sf =	\$954,500	
Site Work	55,400 sf	\$15 sf =	\$831,000	Grading, asphalt pavement, drainage, landscaping, fencing
		Subtotal	\$4,241,000	
		Contingency	\$424,100	10% at Concept Design
		<b>Hard Cost Total</b>	<b>\$4,665,100</b>	
Total Design Team Fees			\$466,510	10% of Hardcost Subtotal plus Contingency
Design Expenses			\$23,326	5% of Design Fees, Printing, Permitting, CA, etc.
FF&E	3,000	\$10 sf	\$30,000	Workstations, Furniture, Storage, etc.
Permitting and Fees			\$42,410	1% of Construction Estimate City of Fort Collins Fees
Owner Construction Contingency			\$466,510	10% for Unforeseen Conditions, Owner Changes, etc.
		<b>Soft Costs Total</b>	<b>\$1,028,756</b>	
<b>TOTAL COSTS</b>			<b>\$5,693,856</b>	

ls = lump sum; sf = square foot; lf = linear foot

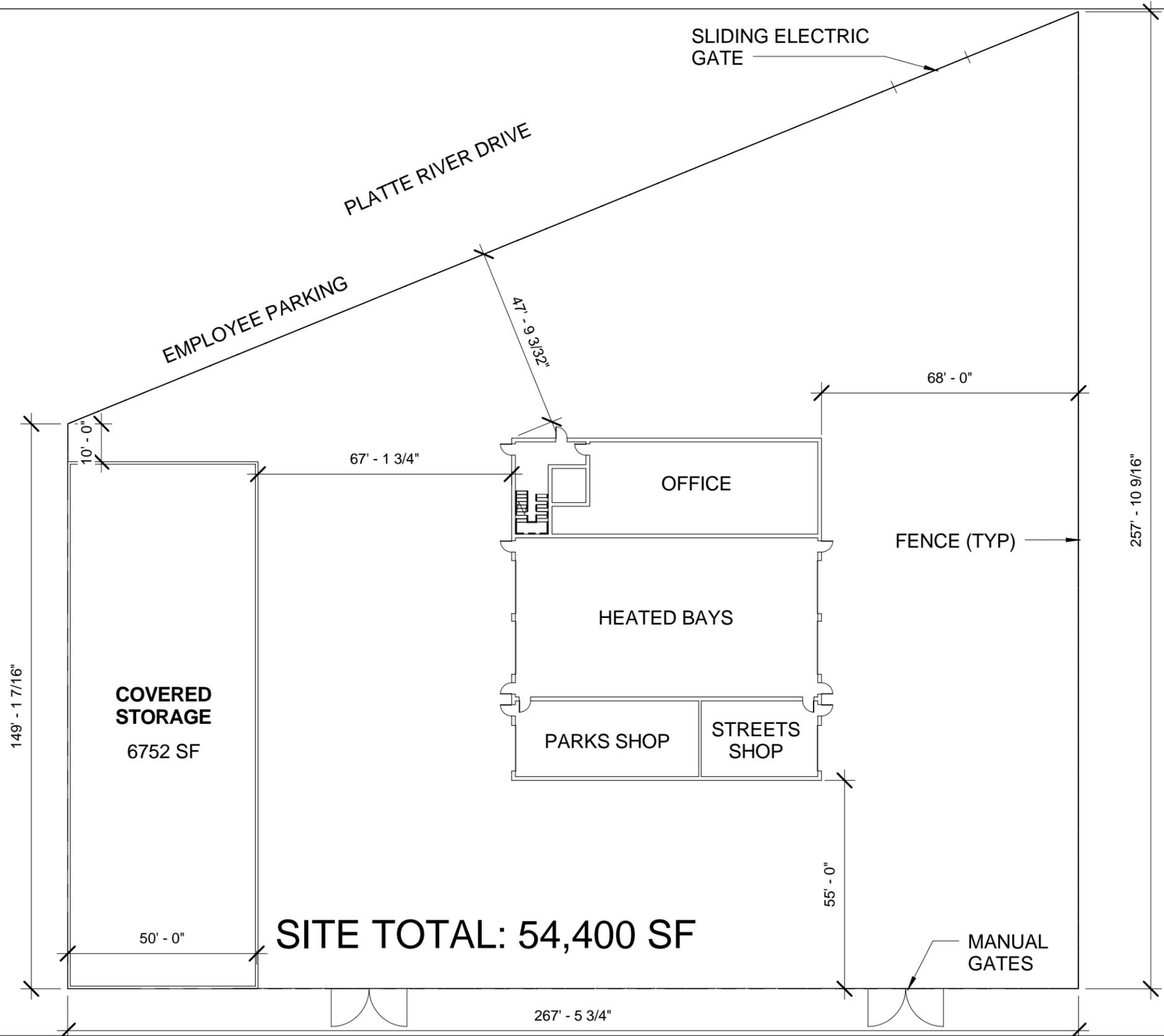
Table 4.3 - Reduced Cost Estimate

Cherry Hills Village Public Works Facility Budget (Englewood & Village Center)				December 2, 2015
Building Space	Area	Cost	Total	Notes
Shop/Heated Vehicle Storage	9,300 sf	\$250 sf =	\$2,325,000	Steel Framed Structure
Covered Vehicle Storage	6,752 sf	\$100 sf =	\$675,200	
Site Work	55,400 sf	\$15 sf =	\$831,000	Grading, asphalt pavement, drainage, landscaping, fencing
Heated Bays (Village Center)	1,500 sf	\$300 sf =	\$450,000	Integrated into Village Center Building
		Subtotal	\$4,281,200	
		Contingency	\$428,120	10% at Concept Design
		<i>Hard Cost Total</i>	<i>\$4,709,320</i>	
Total Design Team Fees			\$470,932	10% of Hardcost Subtotal plus Contingency
Design Expenses			\$23,547	5% of Design Fees, Printing, Permitting, CA, etc.
FF&E	3,000	\$10 sf	\$30,000	Workstations, Furniture, Storage, etc.
Permitting and Fees			\$42,812	1% of Construction Estimate City of Fort Collins Fees
Owner Construction Contingency			\$470,932	10% for Unforeseen Conditions, Owner Changes, etc.
		<i>Soft Costs Total</i>	<i>\$1,038,223</i>	
ls = lump sum; sf = square foot; lf = linear foot			<b>TOTAL COSTS</b>	<b>\$5,747,543</b>

Table 4.4 - Preliminary Cost Estimate

Cherry Hills Village Public Works Facility Budget (Hampden Pie)				December 2, 2015
Building Space	Amount	Cost	Total	Notes
Heated Storage Building	1,280 sf	\$200 sf =	\$256,000	Salt storage and Loader
Material Storage Bins	300 sf	\$275 lf =	\$82,500	8' high walls
Site Work	26,500 sf	\$6 sf =	\$159,000	Grading, pavement (asphalt millings), drainage, landscaping
		Subtotal	\$497,500	
		Contingency	\$49,750	10% at Concept Design
		<i>Hard Cost Total</i>	<i>\$547,250</i>	
Total Design Team Fees			\$54,725	10% of Hardcost Subtotal plus Contingency
Design Expenses			\$2,736	5% of Design Fees, Printing, Permitting, CA, etc.
Permitting and Fees			\$4,975	1% of Construction Estimate City of Fort Collins Fees
Owner Construction Contingency			\$54,725	10% for Unforeseen Conditions, Owner Changes, etc.
		<i>Soft Costs Total</i>	<i>\$117,161</i>	
ls = lump sum; sf = square foot; lf = linear foot			<b>TOTAL COSTS</b>	<b>\$664,411</b>

# Section Five Concept Plans



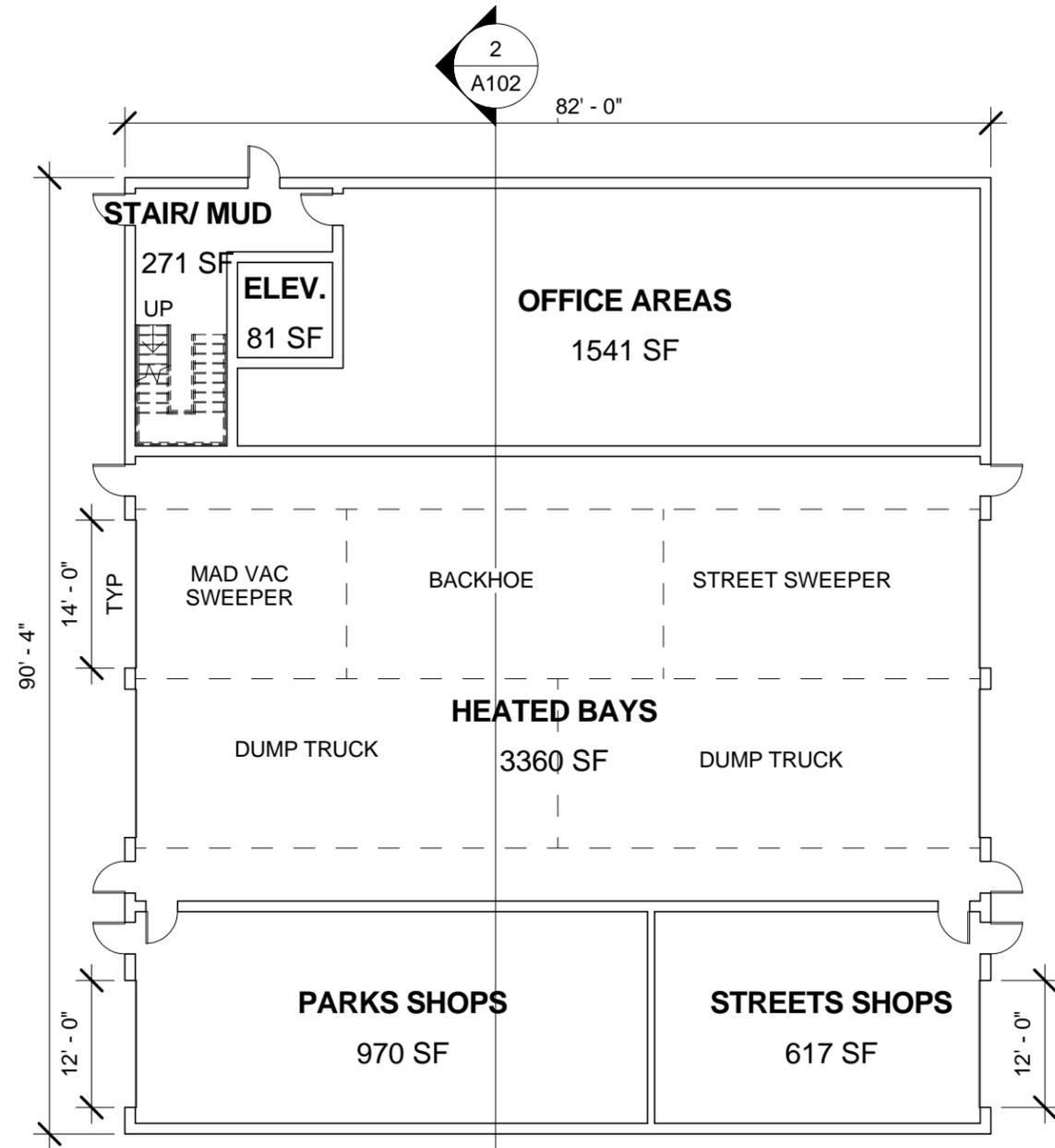
**SITE TOTAL: 54,400 SF**



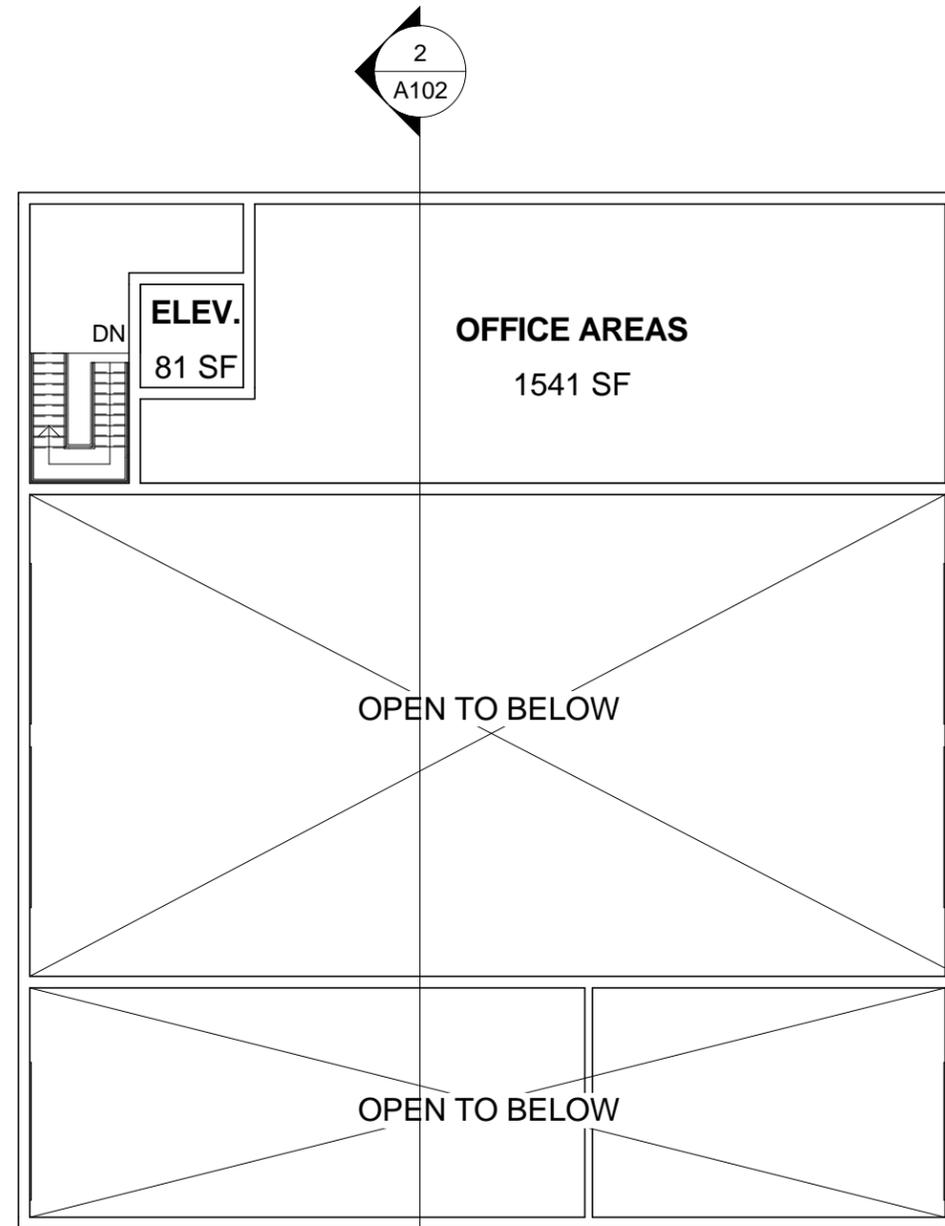
**CHERRY HILLS VILLAGE  
PUBLIC WORKS FACILITY  
ENGLEWOOD SITE**

No.	Description	Date

CONCEPT SITE PLAN		
Project number	Project Number	<b>C101</b>
Date	12/2/2015	
Drawn by	Author	
Checked by	Checker	
Scale		1" = 30'-0"



① Level 1  
1/16" = 1'-0"



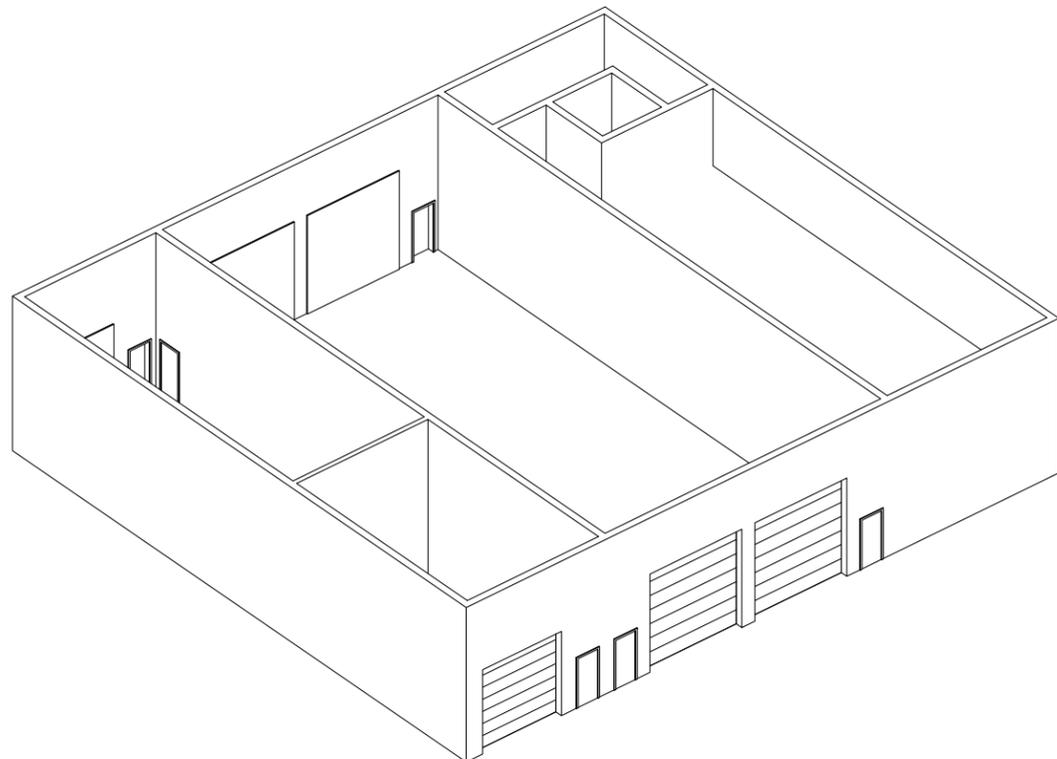
② Level 2  
1/16" = 1'-0"



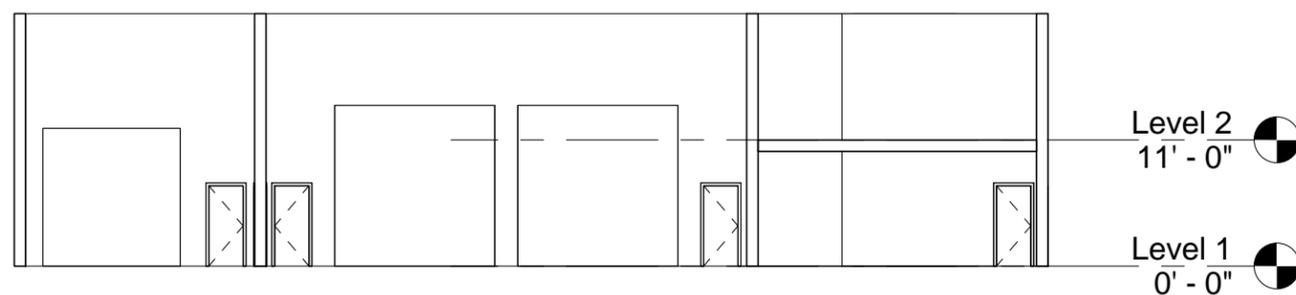
**CHERRY HILLS VILLAGE  
PUBLIC WORKS FACILITY  
ENGLEWOOD SITE**

No.	Description	Date

CONCEPT FLOOR PLAN		
Project number	Project Number	<b>A101</b>
Date	12/2/2015	
Drawn by	Author	
Checked by	Checker	
		Scale 1/16" = 1'-0"



1 3D



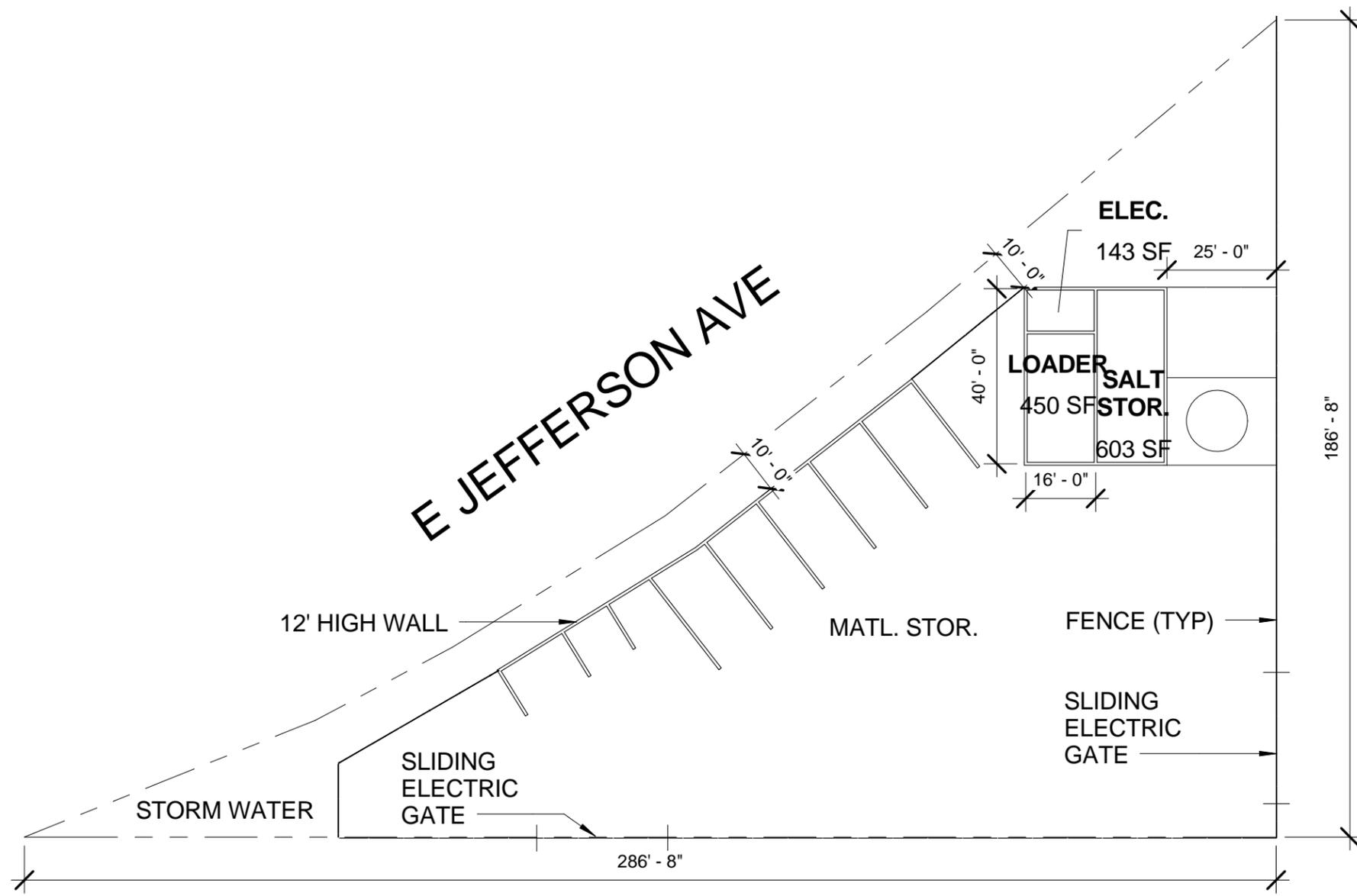
2 Section  
1/16" = 1'-0"



**CHERRY HILLS VILLAGE**  
**PUBLIC WORKS FACILITY**  
**ENGLEWOOD SITE**

No.	Description	Date

SECTION AND 3D VIEW		
Project number	Project Number	<b>A102</b>
Date	12/2/2015	
Drawn by	Author	
Checked by	Checker	
Scale		1/16" = 1'-0"



① Level 1  
1/32" = 1'-0"



**CHERRY HILLS VILLAGE**  
PUBLIC WORKS FACILITY  
HAMPDEN PIE SITE

No.	Description	Date

CONCEPT SITE PLAN		
Project number	Project Number	<b>C102</b>
Date	12/2/2015	
Drawn by	Author	
Checked by	Checker	
Scale		1/32" = 1'-0"

# Appendix 1

# Space Needs Program

**Cherry Hills Village Public Works Facility  
Programming Report**

**Appendix 1  
Space Needs Program**

Streets and Parks Facilities (Englewood and Hampden Pie)

December 2, 2015

**Area Description**

Program 2025				
Space Standard	Quantity		Area (sf)	Remarks
	Staff	Space		

<b>Offices/Administration - Streets (Englewood)</b>	
<b>Office Areas</b>	
Operations Supervisor	
Open Office Space for Laborers	
<b>Subtotal: Offices/Administration - Streets</b>	
Net Gross Factor (Circ/Mech/Elec/Struct)	
<b>Total: Offices/Administration - Streets (Englewood)</b>	

120	1	1	120	Private office
48	5	0	0	Meet in Meeting Room
	6	1	120	
35%			42	
	<b>6</b>	<b>1</b>	<b>162</b>	

<b>Shops - Streets (Englewood)</b>	
<b>Shop Areas</b>	
Streets Shop	
Pesticide/Herbicide Storage	
Tool Storage	
<b>Subtotal: Shops -Streets</b>	
Circulation	
<b>Total: Shops - Streets (Englewood)</b>	

		1	250	
			100	
		1	150	
	0	2	500	
20%			100	
	<b>0</b>	<b>2</b>	<b>600</b>	



**Cherry Hills Village Public Works Facility  
Programming Report**

**Appendix 1  
Space Needs Program**

Streets and Parks Facilities (Englewood and Hampden Pie)

December 2, 2015

**Area Description**

Program 2025				
Space Standard	Quantity		Area (sf)	Remarks
	Staff	Space		

Covered Vehicle Storage (Unenclosed) - Streets (Englewood)
<b>Covered Parking</b>
Vehicle Make and Model
<b>Small</b>
2001 Wacker Double Drum roller
<b>Medium</b>
1998 Chevrolet K20
2000 Hypac Wheel roller
2002 Chevrolet Silverado
2006 Lee Boy Paver
2006 Tack Wagon
<b>Large</b>
2005 Ford F-350
2006 trailer 18 feet
2008 Ford F-250
<b>Extra Large</b>
2000 International dump truck
2009 Volvo Grader
Sign Storage
<b>Subtotal: Covered Vehicle Storage (Unenclosed) - Streets</b>
Net Gross Factor (Circ/Mech/Elec/Struct)
<b>Total: Covered Vehicle Storage (Unenclosed) - Streets (Englewood)</b>

8 x 10		1	80	
10 x 20		5	1000	
12 x 30		3	1080	
12 x 40		2	960	
		1	400	
		0	12	3,520
15%				528
		<b>0</b>	<b>12</b>	<b>4,048</b>

**Cherry Hills Village Public Works Facility  
Programming Report**

**Appendix 1  
Space Needs Program**

Streets and Parks Facilities (Englewood and Hampden Pie)

December 2, 2015

Area Description
------------------

Program 2025				
Space Standard	Quantity		Area (sf)	Remarks
	Staff	Space		

Offices/Administration - Parks (Englewood)
<b>Office Areas</b>
Administrator
Shared Office
Town Arborist and Parks Crew Chief
Open Office Space for Parks Maintenance Technicians
<b>Subtotal: Offices/Administration - Parks &amp; Open Space</b>
Net Gross Factor (Circ/Mech/Elec/Struct)
<b>Total: Offices/Administration - Parks (Englewood)</b>

120	0	0	0	At Village Center
120	2	1	120	Shared Offic; GIS on one computer
	3	0	0	In shared Meeting Room
	5	1	120	
35%			42	
	<b>5</b>	<b>1</b>	<b>162</b>	

Shops - Parks (Englewood)
<b>Shop Areas</b>
Parks & Forestry Shop
Parts Storage
Seed, Fertilizer, Pesticide, and Herbicide Storage
Tool Storage
<b>Subtotal: Shops - Parks</b>
Circulation
<b>Total: Shops - Parks (Englewood)</b>

		1	250	
		1	250	
		1	150	
		1	150	
	0	4	800	
20%			160	
	<b>0</b>	<b>4</b>	<b>960</b>	

**Cherry Hills Village Public Works Facility  
Programming Report**

**Appendix 1  
Space Needs Program**

Streets and Parks Facilities (Englewood and Hampden Pie)

December 2, 2015

Area Description	Program 2025				Remarks
	Space Standard	Quantity		Area (sf)	
		Staff	Space		
<b>Enclosed Vehicle Storage (Heated) - Parks (Englewood)</b>					
<b>Heated Parking</b>					
Vehicle Make and Model					
<b>Medium</b>					
Mad Vac - Sweeper					
2005 Bobcat Toolcat					
2008 Bobcat Skidsteer					
<b>Subtotal: Enclosed Vehicle Storage (Heated) - Parks</b>					
Net Gross Factor (Circ/Mech/Elec/Struct)	30%	0	3	960	
				288	
<b>Total: Enclosed Vehicle Storage (Heated) - Parks (Englewood)</b>		<b>0</b>	<b>3</b>	<b>1,248</b>	

**Cherry Hills Village Public Works Facility  
Programming Report**

**Appendix 1  
Space Needs Program**

Streets and Parks Facilities (Englewood and Hampden Pie)

December 2, 2015

**Area Description**

Program 2025				
Space Standard	Quantity		Area (sf)	Remarks
	Staff	Space		

<b>Covered Vehicle Storage (Unenclosed) - Parks (Englewood)</b>
<b>Covered Parking</b>
<b>Medium</b>
Wood chipper
1990 trailer 12 feet
1999 John Deere 4300 tractor
1998 Sullivan compressor
2006 John Deere 1445 mower
2007 John Deere 1445 mower
2007 John Deere 997 mower
2008 John Deere 997 mower
2008 Ford Ranger
2009 trailer 14 feet
2009 John Deere 1600 mower
2015 Toyota
<b>Large</b>
2006 Ford F-350
2013 Ford F-550
2015 Ford
<b>Attachments Storage</b>
<b>Covered Storage</b>
Irrigation Room
Special Event Storage
Equipment with Small Engines Storage
<b>Subtotal: Covered Vehicle Storage (Unenclosed) - Parks</b>
Net Gross Factor (Circ/Mech/Elec/Struct)
<b>Total: Covered Vehicle Storage (Unenclosed) -Parks (Englewood)</b>

10 x 20		12	2400	
12 x 30		3	1080	
		1	200	Storage for 12 attachments
		1	150	
		1	150	
		1	800	
	0	19	4,780	
15%			717	
	<b>0</b>	<b>19</b>	<b>5,497</b>	

**Cherry Hills Village Public Works Facility  
Programming Report**

**Appendix 1  
Space Needs Program**

Streets and Parks Facilities (Englewood and Hampden Pie)

December 2, 2015

Area Description
------------------

Program 2025				
Space Standard	Quantity		Area (sf)	Remarks
	Staff	Space		

Offices/Administration - Shared (Englewood)
<b>Office Support Areas</b>
Vestibule/Mud Room
Meeting Room/ Break Room
Kitchenette
Shared Printer/Copy Room
Restrooms
Men
Women
Locker Rooms
Men
Women
Seasonal staff
Janitor's Closet
<b>Building Systems Areas</b>
Electrical Room
Mechanical Room
Data/Communication Room
Fire Riser
Compressor Room
<b>Subtotal: Office and Administration (Englewood)</b>
Net Gross Factor (Circ/Mech/Elec/Struct)
<b>Total: Offices/Administration - Shared (Englewood)</b>

		1	100	Boot wash area, coat rack
		1	360	Room for 18 people
		1	100	
		1	100	
				2 toilets, 2 sinks, 2 urinals, 1 shower
		1	300	
		1	150	1 toilet, 1 sink, 1 shower
10		1	102	15 in. x 12 in. x 60 in.
10		1	30	15 in. x 12 in. x 60 in.
5		1	30	Half-sized lockers
		1	50	
		1	120	
		1	300	
		0	120	
		1	50	
		1	120	
		0	2,032	
35%			711	
		<b>0</b>	<b>14</b>	<b>2,743</b>

**Cherry Hills Village Public Works Facility  
Programming Report**

**Appendix 1  
Space Needs Program**

Streets and Parks Facilities (Englewood and Hampden Pie)

December 2, 2015

Area Description
------------------

Program 2025				
Space Standard	Quantity		Area (sf)	Remarks
	Staff	Space		

Exterior Site Areas (Englewood)
Solid De-ice Material
Bulk Material Bins - Small
Extra Small Material Bins
Fence Storage
Emergency Generator
Trash/Recycle/Compost Bins
Small Equipment Storage
Yard Storage
Community Brush Drop-off/Recycling Operation
<b>Subtotal: Exterior Site Areas - Shared</b>
Circulation
<b>Total: Exterior Site Areas (Englewood)</b>

		0	0	Hampden Pie Site
		0	0	Hampden Pie Site
		0	0	Hampden Pie Site
		1	600	
		1	200	
		1	0	Shared with Englewood
		1	1000	
		0	4	1,800
100%				1,800
		<b>0</b>	<b>4</b>	<b>3,600</b>

**Cherry Hills Village Public Works Facility  
Programming Report**

**Appendix 1  
Space Needs Program**

Streets and Parks Facilities (Englewood and Hampden Pie)

December 2, 2015

Area Description
------------------

Program 2025				
Space Standard	Quantity		Area (sf)	Remarks
	Staff	Space		

Exterior Site Requirements (Englewood)
<b>Employee/Visitor Parking</b>
Staff Parking
Visitor/Public Parking
Handicapped Parking
<b>Subtotal: Exterior Site Requirements</b>
Circulation
<b>Total: Exterior Site Requirements (Englewood)</b>

9 x 18		18	2916	
9 x 18		2	324	
13 x 18		1	234	
		0	21	3,474
100%				3,474
		<b>0</b>	<b>21</b>	<b>6,948</b>

**Cherry Hills Village Public Works Facility  
Programming Report**

**Appendix 1  
Space Needs Program**

Streets and Parks Facilities (Englewood and Hampden Pie)

December 2, 2015

Area Description
------------------

Program 2025				
Space Standard	Quantity		Area (sf)	Remarks
	Staff	Space		

Enclosed Vehicle Storage (Heated) - Streets (Hampden Pie)
<b>Heated Parking</b>
Vehicle Make and Model
<b>Extra Large</b>
2003 Caterpillar Front End Loader
Electrical Room
<b>Subtotal: Enclosed Vehicle Storage (Heated) - Shared</b>
Net Gross Factor (Circ/Mech/Elec/Struct)
<b>Total: Enclosed Vehicle Storage (Heated) - Streets (Hampden Pie)</b>

16 x 40		1	640	
		1	100	
	0	1	640	
15%			96	
	<b>0</b>	<b>1</b>	<b>736</b>	

Covered Areas (Hampden Pie)
Solid Deicer
<b>Subtotal: Covered Areas</b>
Circulation
<b>Total: Exterior Site Areas (Hampden Pie)</b>

16 x 40		1	640	
	0	1	640	
10%			64	
	<b>0</b>	<b>1</b>	<b>704</b>	

**Cherry Hills Village Public Works Facility  
Programming Report**

**Appendix 1  
Space Needs Program**

Streets and Parks Facilities (Englewood and Hampden Pie)

**December 2, 2015**

Area Description
------------------

Program 2025				
Space Standard	Quantity		Area (sf)	Remarks
	Staff	Space		

Exterior Site Areas (Hampden Pie)
Liquid Deicer
Bulk Material Bins - Small
Extra Small Material Bins
Trash/Recycle Bins
<b>Subtotal: Exterior Site Areas</b>
Circulation
<b>Total: Exterior Site Areas (Hampden Pie)</b>

		1	150	
15 x 25		5	1875	Road Base, Mulch, Trash, Asphalt Millings, Dirt
12 x 12		2	288	Top Soil, Crusher Fines
		1	200	
	0	9	2,513	
100%			2,513	
	<b>0</b>	<b>9</b>	<b>5,026</b>	

**Cherry Hills Village Public Works Facility  
Programming Report**

**Appendix 1  
Space Needs Program**

Streets and Parks Facilities (Englewood and Hampden Pie)

**December 2, 2015**

Area Description
------------------

Program 2025				
Space Standard	Quantity		Area (sf)	Remarks
	Staff	Space		

Exterior Site Requirements (Hampden Pie)
<b>Employee/Visitor Parking</b>
Staff Parking
<b>Subtotal: Exterior Site Requirements</b>
Circulation
<b>Total: Exterior Site Requirements (Hampden Pie)</b>

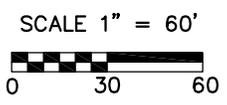
9 x 18		2	324	
100%	0	2	324	
	0	2	648	

# Appendix 2

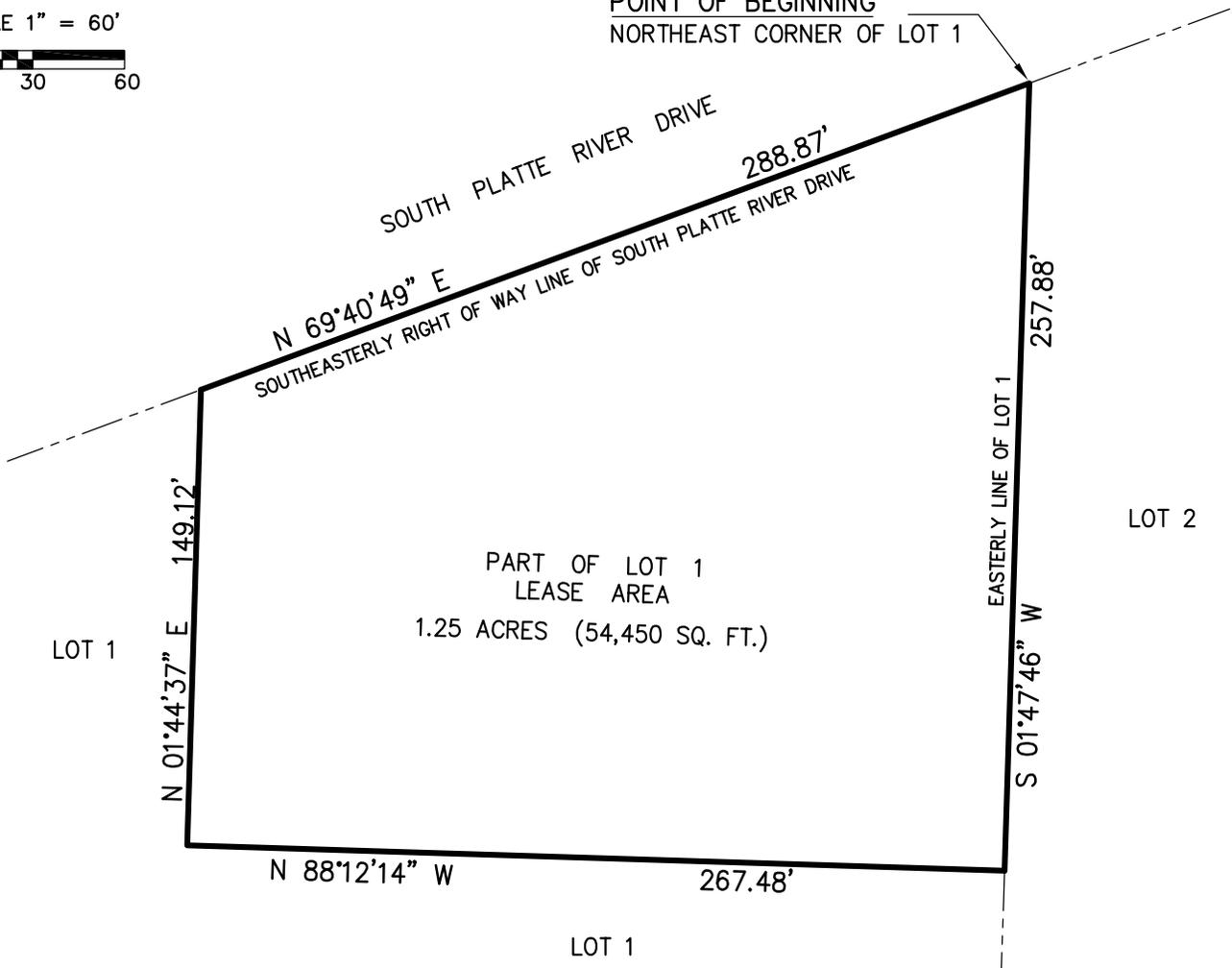
## Exhibit Lease Program

**EXHIBIT  
LEASE AREA**

N



POINT OF BEGINNING  
NORTHEAST CORNER OF LOT 1



PART OF LOT 1  
LEASE AREA  
1.25 ACRES (54,450 SQ. FT.)

DESCRIPTION

A PORTION OF LOT 1, PLATTE RIVER SUBDIVISION,  
CITY OF ENGLEWOOD, COUNTY OF ARAPAHOE, STATE OF COLORADO,  
MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID LOT 1,  
SAID POINT BEING ON THE SOUTHEASTERLY RIGHT OF WAY LINE OF  
SOUTH PLATTE RIVER DRIVE,  
THENCE S 01°47'46" W ALONG THE EASTERLY LINE OF SAID LOT 1,  
A DISTANCE OF 257.88 FEET;  
THENCE N 88°12'14" W, A DISTANCE OF 267.48 FEET;  
THENCE N 01°44'37" E, A DISTANCE OF 149.12 FEET TO A POINT  
ON THE SOUTHEASTERLY RIGHT OF WAY LINE OF SOUTH PLATTE  
RIVER DRIVE, SAID POINT BEING 288.87 FEET FROM THE NORTHEAST  
CORNER OF SAID LOT 1;  
THENCE N 69°40'49" E ALONG THE SOUTHEASTERLY RIGHT OF WAY  
LINE OF SOUTH PLATTED RIVER DRIVE, A DISTANCE OF 288.87 FEET  
TO THE NORTHEAST CORNER OF SAID LOT 1, THE POINT OF BEGINNING.

CONTAINING 54,450 SQUARE FEET OR 1.25 ACRES.

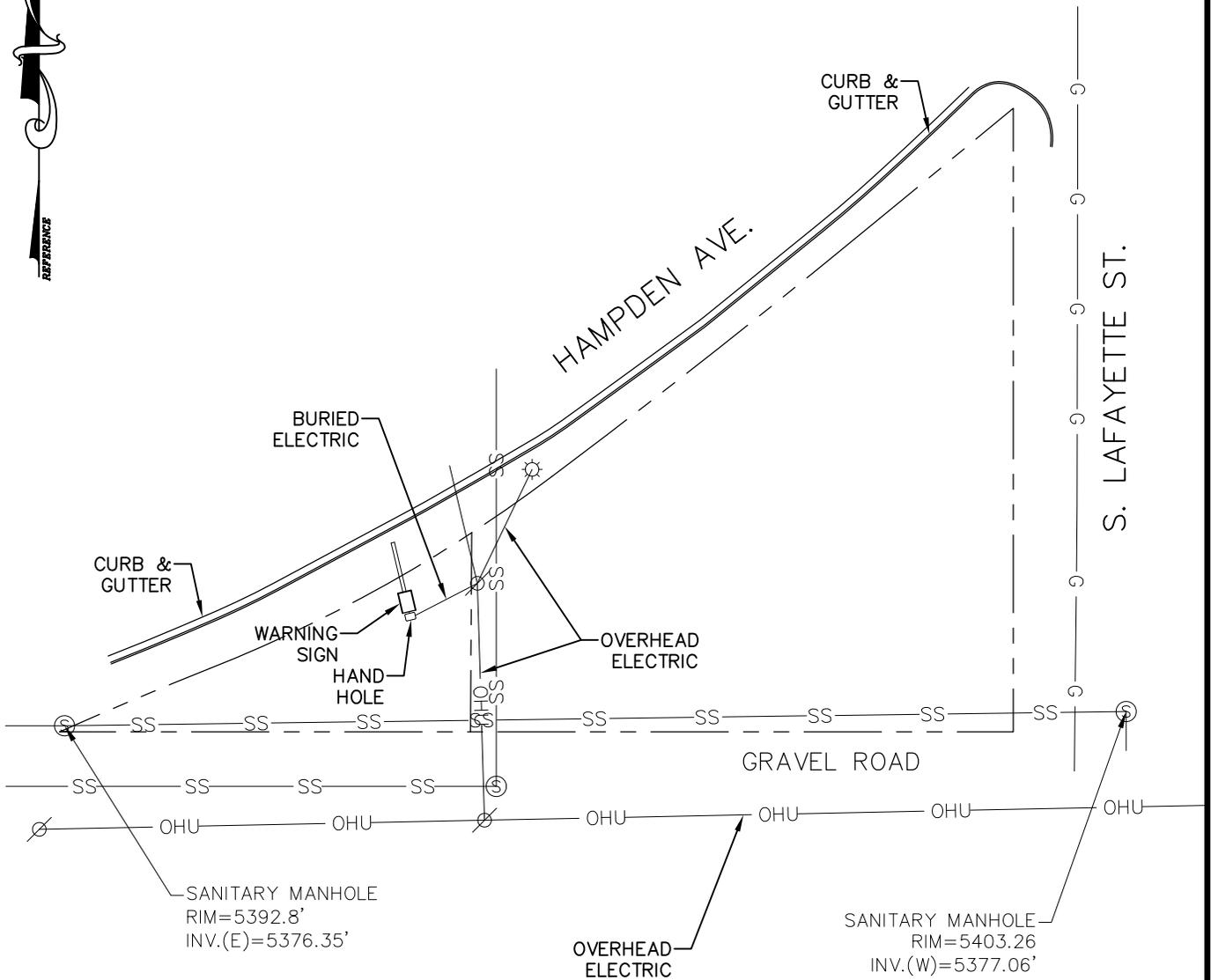
COLORADO ENGINEERING & SURVEYING, INC.

By \_\_\_\_\_  
Date OCTOBER 26, 2015

# Appendix 3

## Utility Survey

# UTILITY SURVEY CHERRY HILLS VILLAGE PROPERTY



## LEGEND

EXISTING OVERHEAD UTILS	_____
EXISTING GAS LINE	_____G_____
EXISTING ELECTRIC LINE	_____E_____E_____
EXISTING UTILITY POLE	⊗
EXISTING STREET LIGHTPOLE	⊙

## NOTE:

1.) THERE APPEARS TO BE FIBER/COMMUNICATIONS AS THERE IS A QWEST FACILITY BOX MOUNTED ON THE WARNING SIGN. WE WERE UNABLE TO OBTAIN A CONDUCTIVE SIGNAL TO TRACE THE CABLE.

2.) PROPERTY LINES SHOWN HEREON ON FOR REPRESENTATIVE PURPOSES ONLY. NO FILED WORK WAS CONDUCTED TO ACERTAIN LOCATIONS OF PROPERTY LINES.



GRAPHIC SCALE: 1" = 50'



**Precision Survey & Mapping, Inc.**

professional land surveying consultants

9145 E. Kenyon Ave., Suite 101, Denver, CO 80237  
Tel:(303) 753-9799 Fax:(303) 753-4044

DRN. BY: C.P.J.

CHKD. BY:

DATE: 9/22/15

SCALE: 1" = 30'

FILE: R11574-CHV

SHEET: 1 OF 1

JOB #: R11574

## UTILITY SURVEY CHERRY HILLS VILLAGE