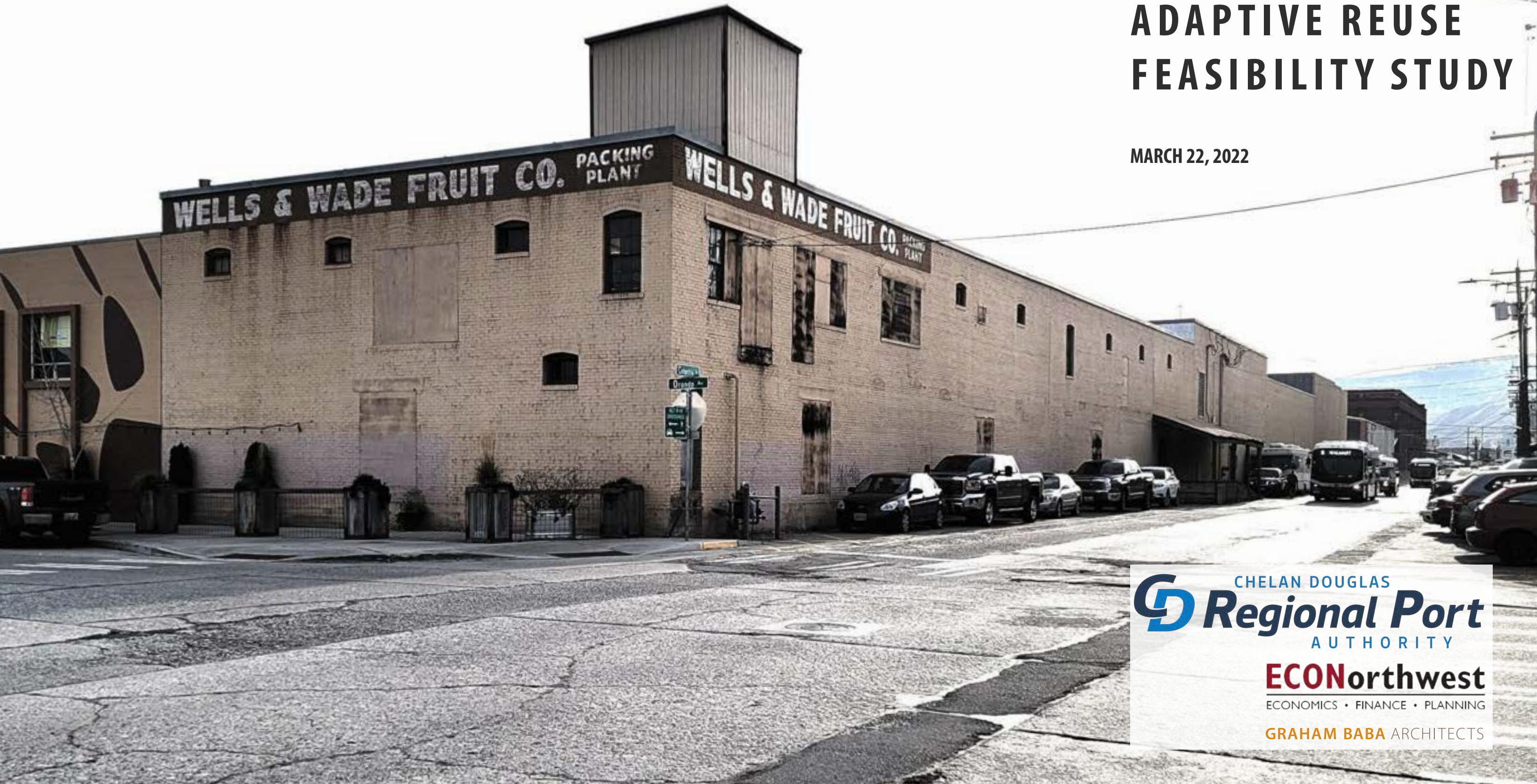



# COLUMBIA STREET ADAPTIVE REUSE FEASIBILITY STUDY

MARCH 22, 2022



CHELAN DOUGLAS  
 **Regional Port**  
AUTHORITY

**ECONorthwest**  
ECONOMICS • FINANCE • PLANNING

GRAHAM BABA ARCHITECTS

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# EXECUTIVE SUMMARY



## EXECUTIVE SUMMARY

In 2019, the Port of Chelan invested \$4.5 million to purchase nine buildings totaling 100,000 square feet that bridge the downtown Wenatchee core to the waterfront. The buildings were historically used for cold storage and fruit packing activities. The Port has since leased the southern portion of the property and identified a developer for the northern portion of the property, leaving a center section consisting of 6 properties to be considered for future reuse.

The Chelan Douglas Regional Port Authority engaged a team led by Graham Baba Architects to review the design and economic feasibility of the adaptive reuse of the 6 buildings on the central parcel. The team includes Graham Baba Architects (architecture and project lead), ECONorthwest (economic analysis), DCW (construction cost estimating), Swenson Say Faget (structural engineers), Pacific Engineering (civil engineers), and PAE Engineers (mechanical/electrical/plumbing engineers). Northwest Vernacular provided additional historic preservation services through an engagement with the Wenatchee Downtown Association.

The six buildings are known as the Wells and Wade/Lineage Logistics buildings, but are generally referred to as the Columbia Street Properties throughout this report. They include:

- Building A: A ca 1973 structural concrete masonry unit building constructed as an addition to Building B. A brewery with a bar and restaurant is currently operating in the space and for the purposes of this analysis is assumed to remain during construction or return after renovations to the buildings is completed.
- Building B: An historic unreinforced structural brick and heavy timber warehouse structure constructed in approximately 1920. It consists of two floors above grade along with a basement. Most of the east wall of the building was removed and replaced with steel framing during the construction of Building A.
- Building C: An historic unreinforced structural brick and heavy timber warehouse structure constructed in approximately 1921 as an addition to Building B. It consists of two floors above grade along with a basement.
- Building D: A structural concrete masonry unit and steel roof joist warehouse constructed as infill between buildings C and E. The building has limited enclosure on the north and south walls and directly abuts the adjacent buildings. The building is believed to have been constructed sometime in the 1970's.
- Building E: A structural concrete masonry unit and steel roof joist warehouse. The building has limited enclosure on the north and abuts the adjacent building to the north. The building is believed to have been constructed sometime in the 1970's.
- Building F: A tilt-up concrete warehouse with internal wood framed structural walls and steel roof joists. The structure was constructed in 1963.

The six buildings most recently formed a separate complex serving the operations of a single fruit company. As such utilities, site features, and systems were in some cases shared across buildings. At the time of this study, only Building A was occupied as identified above.

A project schedule detailing the milestones for the three phases of work follows this page. The study was divided into three phases:

- 1) Site Analysis:  
The team evaluated existing site conditions for issues that could impact the possible reuse of the site and buildings. Appendix B of this report contains land use regulations review, building code analysis, historic preservation funding and controls review, sustainability opportunities, civil and site features analysis, building structural system analysis, and mechanical/electrical/plumbing systems analysis.
- 2) Scheme Options:  
The team prepared three design options for review by the Port. The schemes, along with an associated economic feasibility analysis of each scheme, are included in Appendix C of this report. The economic analysis was based upon approximate per square foot construction costs; complete construction cost estimates were not provided in this phase.

- 3) Concept Development:

Based on Port feedback and direction, the team selected a single scheme for further design and technical development and a more detailed economic analysis. Sections 2 and 3 of this report include overall information on the final design as well as the economic analysis of the scheme. Appendix A contains more detailed information, including architectural and engineering drawings, a construction cost estimate for the scheme, and more information on related historic preservation incentives and controls.

The report provides an analysis of four separate sub-sites/projects. Each sub-division's design includes associated site development costs. The included economic analysis assumes initially that all projects will be developed and owned by the Port, but the sub-division of the site could allow some or all of these projects to be undertaken by the private sector. Further, multiple opportunities exist to have the Port take on "risk-reducing" development activities such as infrastructure construction and site development before handing off projects to a private sector development partner. It is worth noting that historic preservation incentives for Buildings B and C would be impacted by whether private or public entities undergo certain development activities – Appendix A of the report provides additional information on these programs.

While the report assumes independent development of the four project areas, some coordination amongst the projects will be required to ensure continued access and utility service to each of the four sites.

While outside the scope of the team's initial work, follow-on analysis could explore various alternatives for public-private sector partnerships on the site; and could include the impact of historic preservation incentives for the private development of Buildings B and C. Phased design and construction processes could also be explored.

Located between the historic downtown core and a blossoming riverfront district, the redevelopment of the Port's Columbia Street properties presents a unique opportunity to further strengthen the downtown core, bringing new economic vitality and setting the bar for redevelopment up and down Columbia Street as well as the greater Wenatchee area. The preferred design proposes a mix of complimentary uses and leverages the inherent characteristics of the existing site and buildings to create a people-centered place unique to the city and region.

Buildings A, B and C are grouped together given their common structural system and building envelope. Limited improvements are proposed to Building A to extend the life of the building while allowing retention of the existing brewery client. As contributing buildings to the Downtown Wenatchee Historic District, Buildings B and C will be renovated to restore their historic character while creating new opportunities for reuse. A combination of retail, food and beverage, and maker/light industrial uses are proposed, with a variety of tenant space sizes included in the design.

Buildings D and E are grouped together due to their common construction type. The base design includes two larger maker spaces. A portion of Building D adjacent to Building C is proposed for removal to create a new retail "mews" connecting Columbia Street to the interior of the site. This also allows for exposure of the historic southern façade of Building C.

An alternative design is provided for Buildings D and E to create five new live-work units that combine ground level maker or small office spaces with residential units above.

Improvements are proposed along Columbia Street to create a stronger pedestrian environment and improve access to the buildings. Raised sidewalks, modeled after loading docks that used to populate the street-front, are created to provide equitable and accessible entries to Buildings B and C. Canopies overhead would provide weather protection for pedestrians as well as loading activities.

Building F is proposed to be renovated to create four larger maker/light industrial spaces.

The site interior includes public parking as well as improvements required to provide appropriate access and infrastructure to the newly invigorated buildings such as truck loading areas, trash and utility access, fire lanes and pedestrian walkways.



**KICK-OFF MEETING  
NOV 2, 2021**

Owner, GBA + Consultants KO  
and Site visit

- As-Built Measurements
- On-site analysis
- Project Objectives Meeting



**CHECK-IN #1: ANALYSIS  
NOV 30, 2021, VIRTUAL**

Owner, GBA + Consultants  
Initial Site/Market Findings

- Existing Architectural Conditions
- Zoning/Land-Use, Historic Preservation & Building Code Issues
- Structural Analysis
- Site Analysis
- MEP (Building Systems) Analysis
- Economic Analysis



**CHECK-IN #2: CONCEPT  
DEC 15, 2021, VIRTUAL**

Owner + GBA  
Design Meeting

- 3 Alternate Schemes
- Solicit Owner Feedback



**CHECK-IN #3: CONCEPT  
JAN 5, 2022, VIRTUAL**

Owner + GBA + ECONorthwest  
Design Meeting

- Economic Analysis of the 3 schemes
- Refine with Owner Input



**PRESENTATION TO  
CDRPA BOARD #1  
JAN 11, 2022  
IN-PERSON**

GBA + EcoNorthwest + Board of  
Directors

- Presentation of 3 schemes
- Board to narrow to single scheme for development (Included Alternate Live-Work)



**CHECK-IN #4:  
CONCEPT DEVELOPMENT  
FEB 16, 2022, VIRTUAL**

Owner + GBA + Consultants  
Design Meeting

- Preferred Scheme w/ Alternate
- Site Master Plan Development



**CHECK-IN #5:  
DRAFT REPORT REVIEW  
MARCH 16, 2022**

Owner + GBA + ECONorthwest + DCW  
Design Meeting

- Review Draft Report



**PRESENTATION TO  
CDRPA BOARD #2  
MARCH 22, 2022,  
IN-PERSON**

GBA + EcoNorthwest + Board of  
Directors

- Present Project Report
- Economic & Cost Data
- Final Scheme

# **SCHEME: DESIGN**

## 2. SCHEME - DESIGN

### SITE CONTEXT

City of Wenatchee  
Downtown Wenatchee

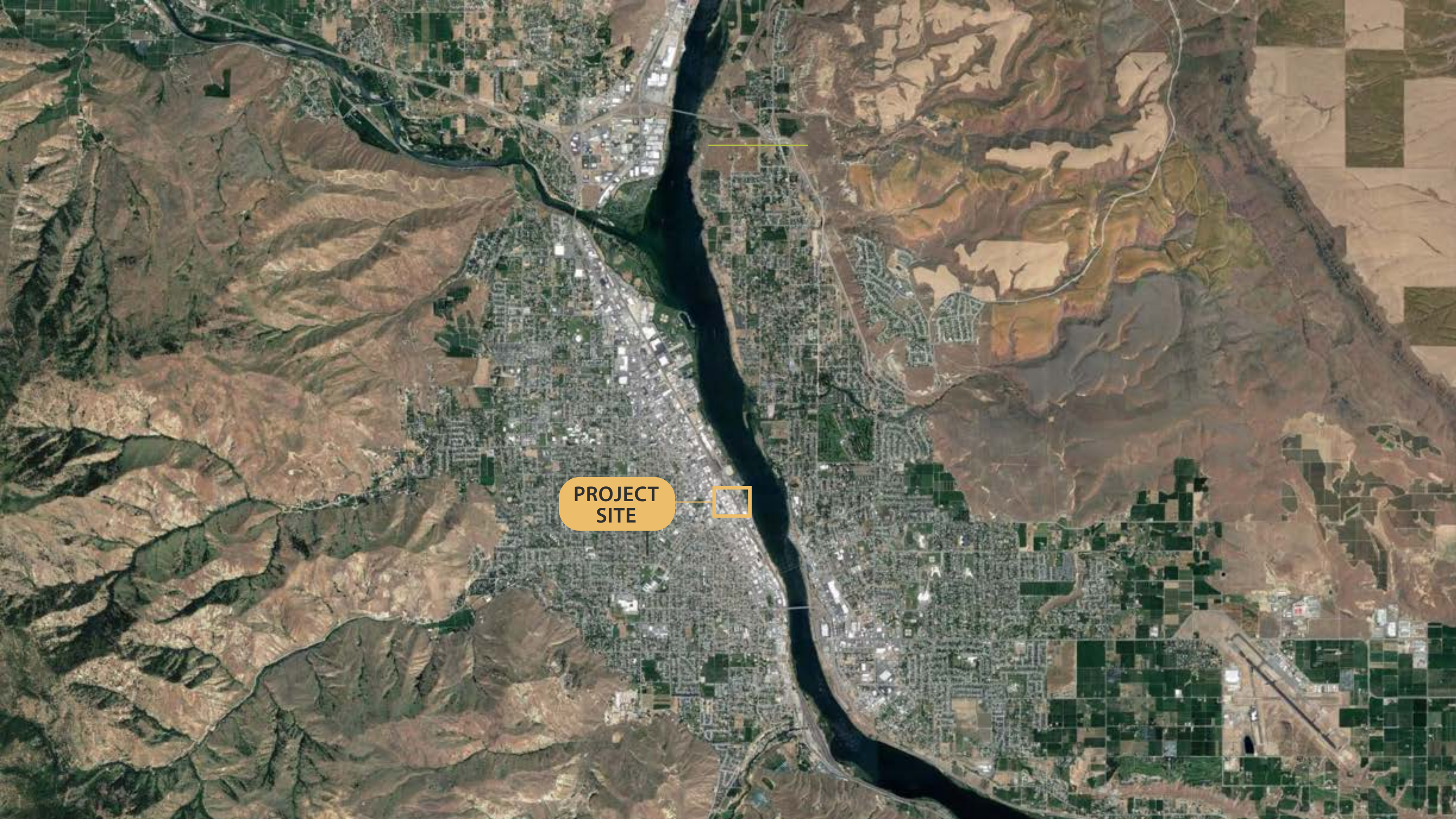
### FLOOR PLANS

Level 1 and Site Plan  
Basement Level Plan  
Level 2 Plan  
Roof Plan  
Program Area Matrix  
Alternate Plans - Buildings D and E  
Alternative Plans Program Area Matrix

### INSPIRATION IMAGES

### RENDERINGS

Alley Facing North  
Columbia Street  
Historic Building Interior



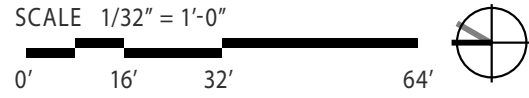
PROJECT  
SITE



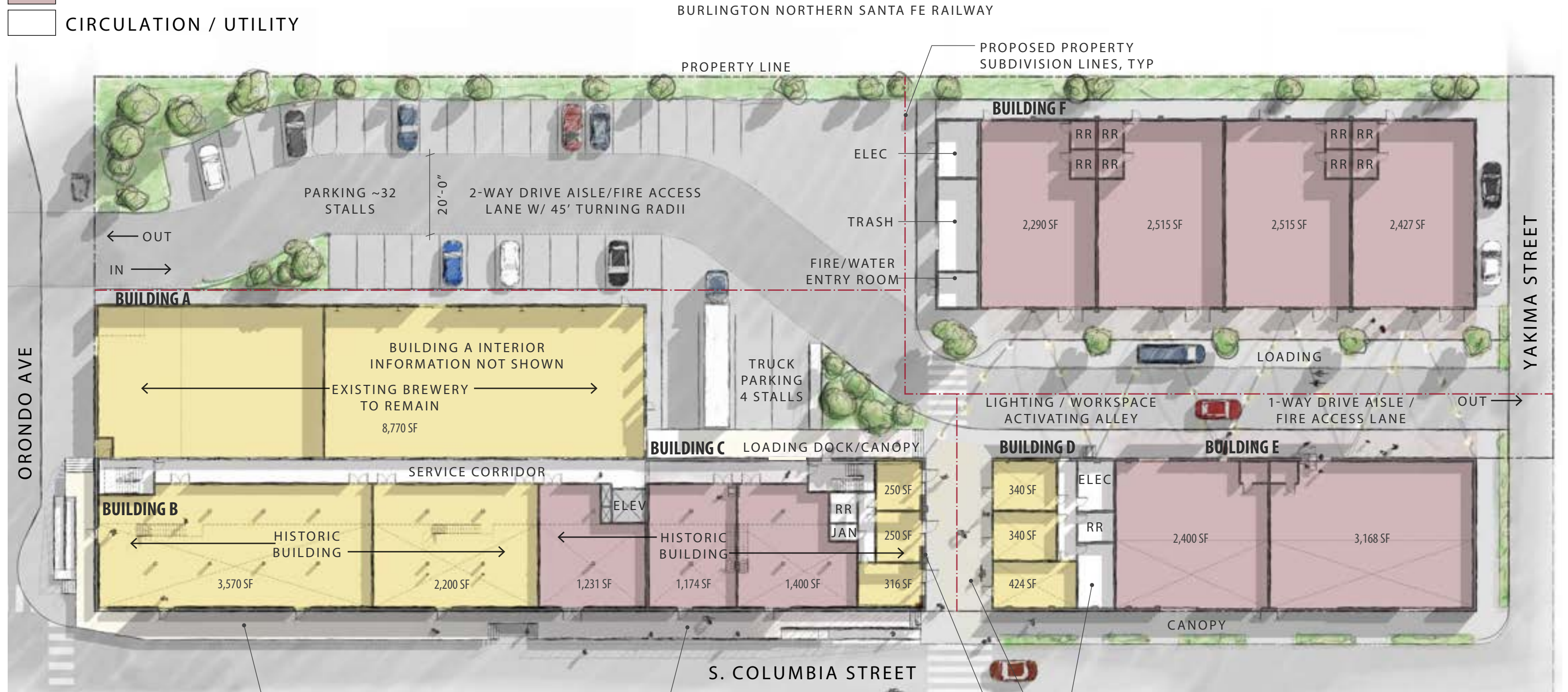


SITE CONTEXT: DOWNTOWN WENATCHEE

# LEVEL 1 & SITE PLAN



- RETAIL SPACE
- MAKER SPACE
- CIRCULATION / UTILITY



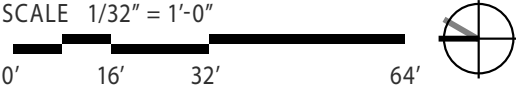
RAISED SIDEWALK, ADA RAMPS, STAIRS,  
CANOPY FOR ABOVE GRADE ACCESS

FIRE/WATER ENTRY ROOM

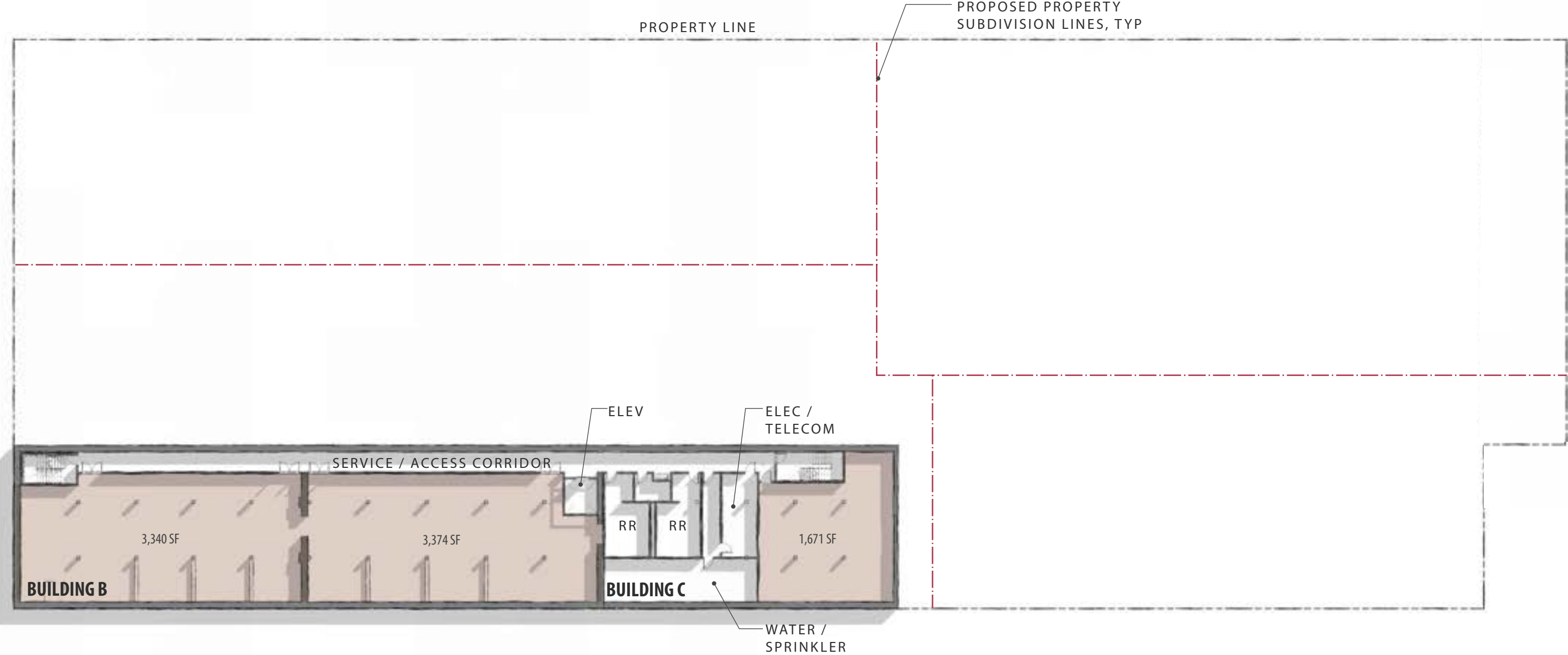
OPEN-AIR "MEWS" WITH SMALL  
RETAIL SPACES BOTH SIDES

EXPOSE HISTORIC BRICK

# BASEMENT LEVEL PLAN



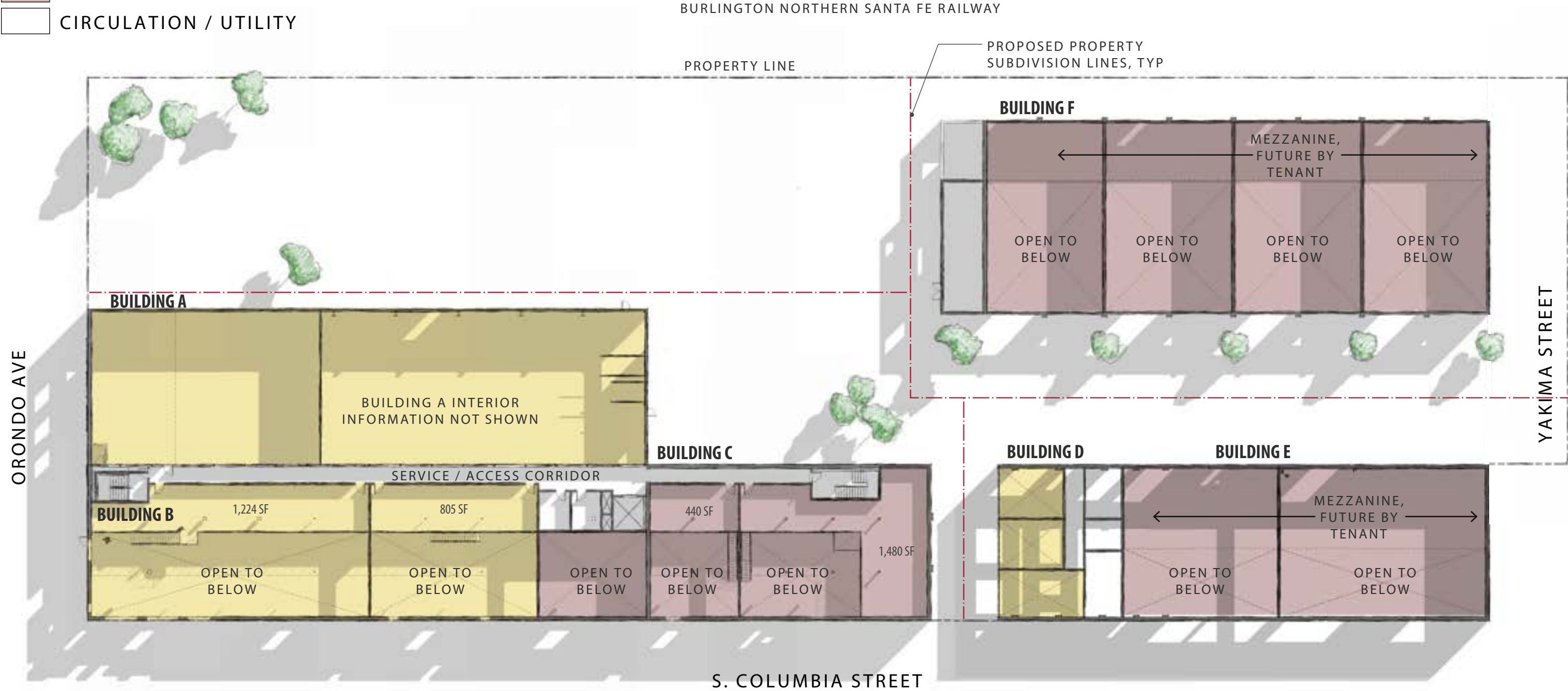
-  STORAGE
-  CIRCULATION / UTILITY



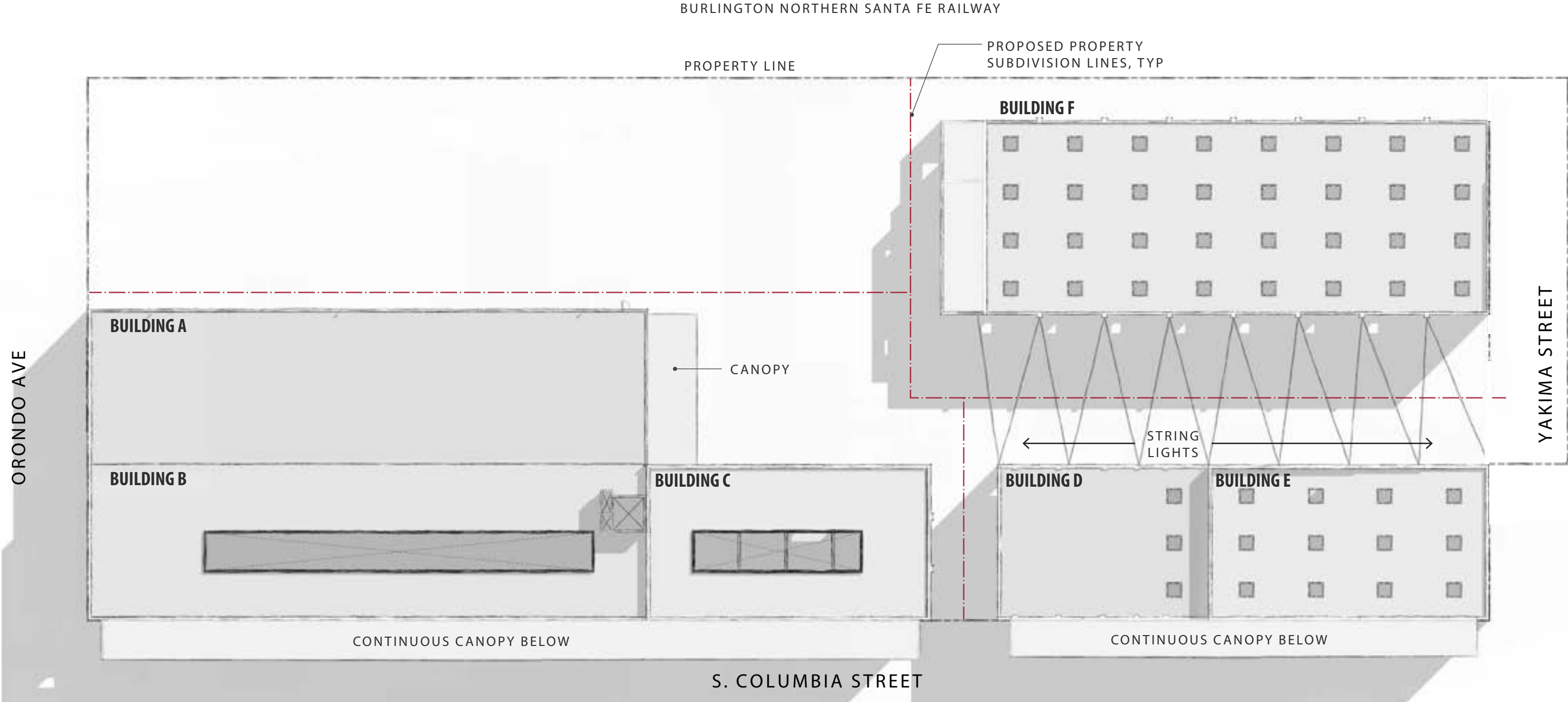
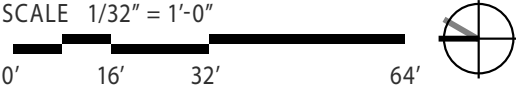
# LEVEL 2 PLAN






- RETAIL SPACE
- MAKER SPACE
- CIRCULATION / UTILITY



# ROOF PLAN



# INSPIRATION PRECEDENT IMAGES

-  RETAIL SPACE
-  MAKER SPACE
-  CIRCULATION / UTILITY



## CDRPA COLUMBIA STREET STUDY - BASE SCHEME PROGRAM AREAS

BUILDING	STORAGE AND WAREHOUSE			MAKER SPACE AND LIGHT INDUSTRIAL			RETAIL AND FOOD + BEVERAGE			RESIDENTIAL			BUILDING TOTALS (GSF)	BUILDING TOTALS (NSF) <sup>1</sup>
	GROSS (GSF) <sup>2</sup>	UNLEASABLE AREA	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	UNLEASABLE AREA	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	UNLEASABLE AREA	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	UNLEASABLE AREA	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>		
A <sup>3</sup>							8,770	0	=	8,770	-	=	8,770	8,770
B <sup>4</sup>	8,033	- 1319	= 6,714	1,635	- 404	= 1,231	6,983	- 1213	= 5,770		-	=	16,651	13,715
C <sup>4</sup>	4,084	- 2413	= 1,671	3,227	- 653	= 2,574	1,034	- 218	= 816		-	=	8,345	5,061
D <sup>5</sup>			0	1,925	- 597	= 1,328	1,303	- 199	= 1,104		-	=	3,228	2,432
E <sup>5</sup>			0	4,240	- 0	= 4,240					-	=	4,240	4,240
F <sup>5</sup>			0	10,596	- 849	= 9,747					-	=	10,596	9,747
TOTAL SITE	<b>12,117</b>		<b>8,385</b>	<b>21,624</b>		<b>19,120</b>	<b>18,090</b>		<b>16,460</b>	<b>0</b>		<b>0</b>	<b>51,830</b>	<b>43,965</b>

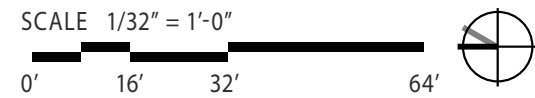
### COMMON SITE ELEMENTS

AUTO PARKING COUNT:	32 SPACES
TRUCK PARKING COUNT:	4 SPACES

#### NOTES:

- 1 Leasable areas are approximate calculations provided for conceptual design purposes only. The areas do not represent leasable areas as calculated per full BOMA rules.
- 2 Gross areas are based upon approximate total construction areas for each program type.
- 3 Building A existing brew-pub use is calculated as food + beverage for the purpose of this analysis. Given limitations of as-built documentation and relatively small size of the floor plate, the analysis does not include the second floor area within Building A.
- 4 Building B & C basements are calculated as storage and warehouse.
- 5 Building D, E, and F do not include mezzanines built as part of tenant improvements, labeled on plans as "Possible Mezzanines, Future by Tenant". If all tenants build mezzanines, leasable areas would increase in D, E, and F by 725sf, 2,275sf, and 3,000sf respectively.

# ALTERNATE PLANS - BUILDINGS D&E



- RETAIL SPACE
- MAKER SPACE
- RESIDENTIAL
- CIRCULATION / UTILITY

**Note:**  
The alternate scheme as presented does not require elevator service to the upper residential levels of the units. These units are considered multistory live-work units and as such, the ground commercial use must include accessible entries and restrooms but the upper levels do not need to meet the requirements of the accessibility codes' Type B unit. Type A units are also not required given the limited quantity of residential units on the site.

The following alternative configurations could also meet the accessibility codes, but were not studied in detail:

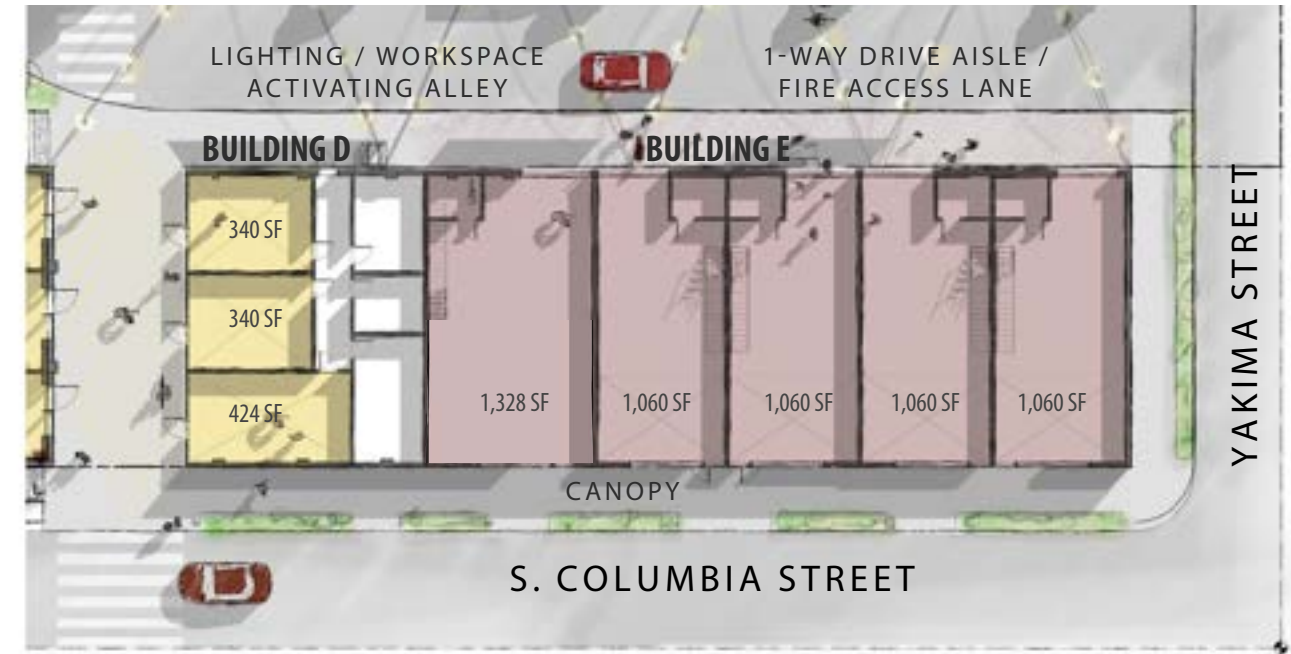
1) (5) Separate Residential Units:

If the residential units on the upper levels are fully separated from the commercial spaces or are configured such that an owner can provide a separate entry from the street to the residential use; then the upstairs units must meet the requirements of Type B units and have an accessible route from the right of way to the entry door of each unit. In effect this would require a residential lobby, elevator and common corridor on the upper level.

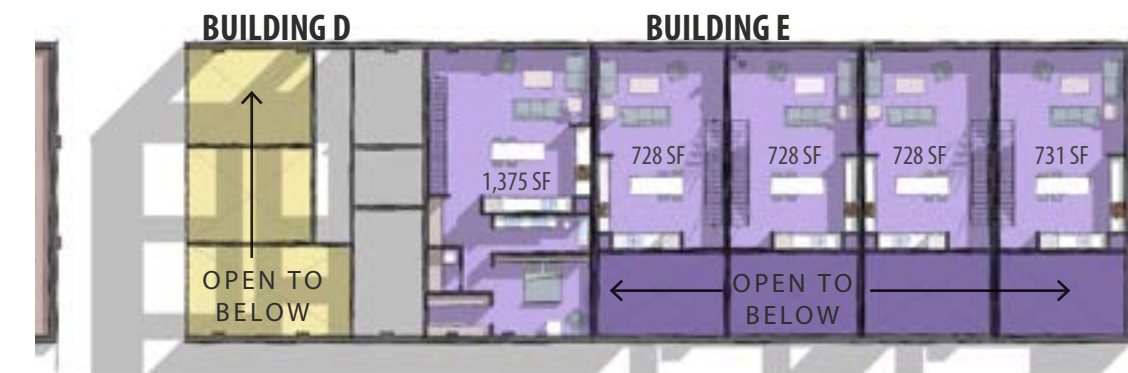
2) (4) Separate Residential Units on the Upper Floor with a single Ground Level Unit:

Providing a single Type B residential unit with an accessible entry on the ground floor would allow for the remaining 4 units on the upper level to not meet Type B requirements and not require accessible pathways to the entries of the upper units. In effect, this would eliminate the elevator and common corridor requirements in alternate option 1. Note that the zoning code does not allow residential uses facing the street, so the ground level unit would need to face the back of the building.

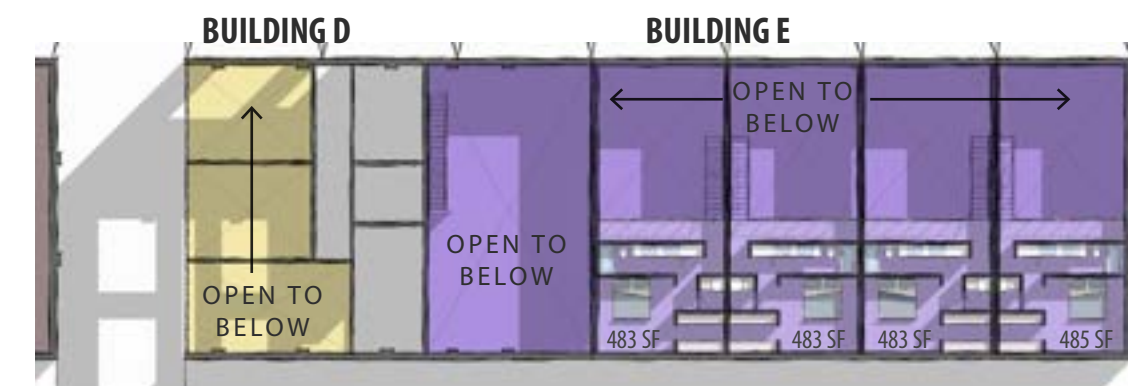
These alternate configurations are conceptual only - Accessibility code requirements can vary based upon final design layouts and should be fully vetted by the design professional developing these plans.



GROUND LEVEL PLAN - MAKER SPACES



LEVEL 2 PLAN - LIVING SPACES



LOFT PLAN - LIVING SPACES



## CDRPA COLUMBIA STREET STUDY - ALTERNATE SCHEME PROGRAM AREAS

BUILDING	STORAGE AND WAREHOUSE			MAKER SPACE AND LIGHT INDUSTRIAL			RETAIL AND FOOD + BEVERAGE			RESIDENTIAL			BUILDING TOTALS (GSF)	BUILDING TOTALS (NSF) <sup>1</sup>	
	GROSS (GSF) <sup>2</sup>	UNLEASABLE AREA	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	UNLEASABLE AREA	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	UNLEASABLE AREA	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	UNLEASABLE AREA	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>			
A <sup>3</sup>							8,770	0	=	8,770			8,770	8,770	
B <sup>4</sup>	8,033	- 1319	= 6,714	1,635	- 404	= 1,231	6,983	- 1213	=	5,770			16,651	13,715	
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E			0	4,240	- 0	= 4,240				4,849	- 0	= 4,849	9,089	9,089	
F <sup>5</sup>			0	10,596	- 849	= 9,747							10,596	9,747	
TOTAL SITE	<b>12,117</b>		<b>8,385</b>	<b>21,624</b>		<b>19,120</b>	<b>18,090</b>			<b>16,460</b>	<b>6,177</b>		<b>58,007</b>	<b>50,142</b>	

### COMMON SITE ELEMENTS

AUTO PARKING COUNT:	32 SPACES
TRUCK PARKING COUNT:	4 SPACES

#### NOTES:

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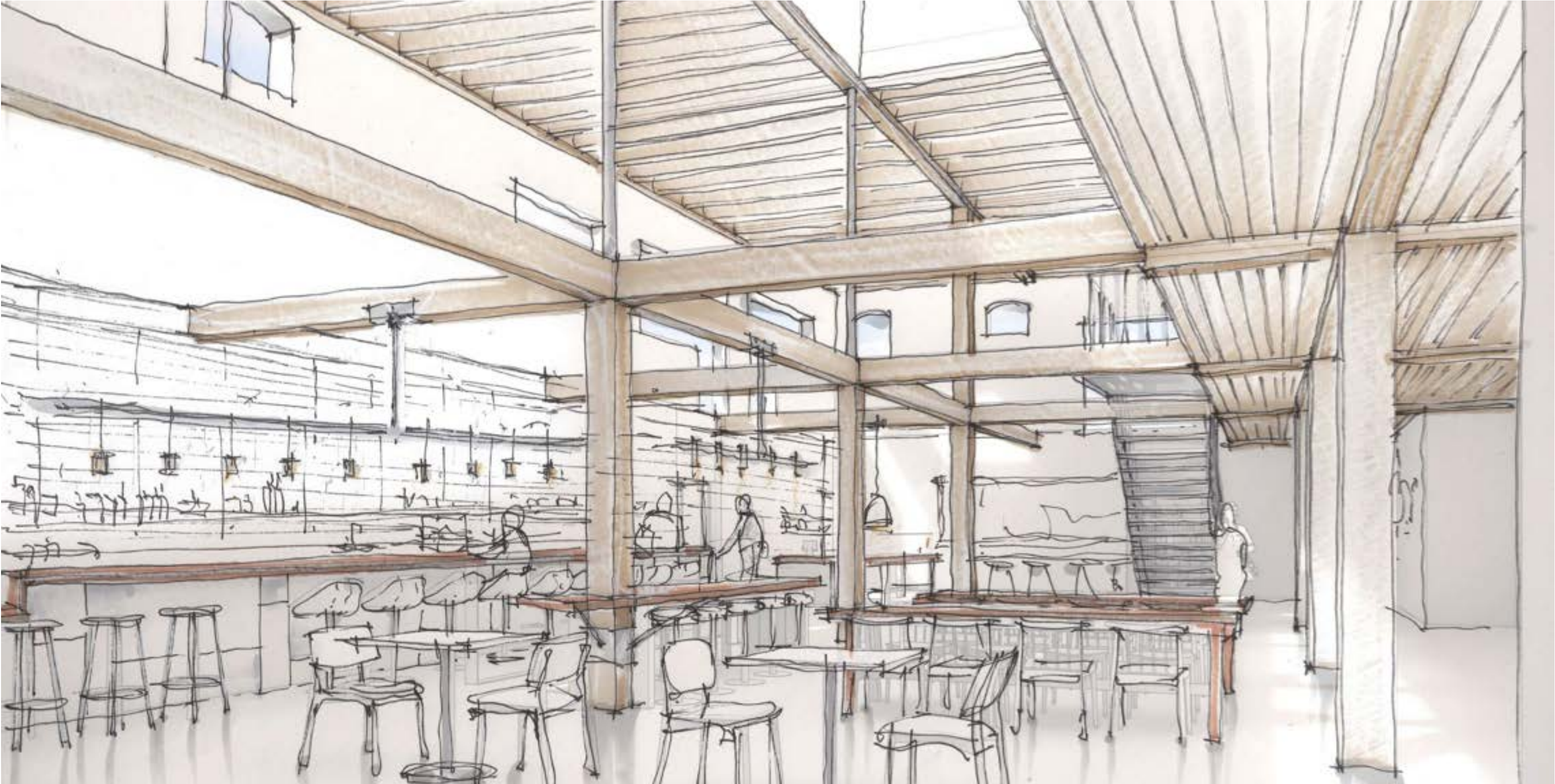
# ALLEY FACING NORTH



# COLUMBIA STREET



# HISTORIC BUILDING INTERIOR



A photograph of a brick building with wooden shutters and a ladder. The building is made of dark red bricks. There are two windows with wooden shutters, one above the other. The shutters have a diagonal cross pattern. A white ladder is leaning against the brick wall to the right of the lower window. The ground is a light-colored concrete or dirt surface.

**SCHEME:  
ECONOMIC  
ANALYSIS**

---

# Columbia Street Properties Adaptive Reuse Market Assessment & Feasibility Study

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March 2022

Prepared for: Chelan Douglas Regional Port Authority

Final Report

**ECON**orthwest  
ECONOMICS • FINANCE • PLANNING

Park Place  
1200 Sixth Avenue  
Suite 615  
Seattle, WA 98101  
206-823-3060

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# 1. Introduction

ECONorthwest is assisting a multi-disciplinary team led by Graham Baba Architects to help the Chelan Douglas Regional Port Authority in understanding the highest and best use for the Columbia Street Properties that will fill a need in the market. This assessment examines demographic, economic, and real estate market trends to identify market support for various land uses that could be potentially feasible in the subject property.

## 1.1 Background and Purpose

The purpose of this analysis is to identify viable land uses for the Columbia Street Properties. This assessment evaluates the market viability of various development types for both new construction and adaptive-reuse renovations that could be supported by the market. This assessment will also inform future discussions about the mix of supported uses in the Columbia Street Properties.

The Columbia Street Properties (shown in Exhibit 1) is a set of six buildings purchased by the Port of Chelan in 2019 totaling 42,000 square feet. These properties were purchased by the port due to its close proximity to Downtown Wenatchee and the Pybus Public Market and given the favorable zoning, which allows for a wide range of uses including manufacturing, light industrial, office, multifamily, bars/restaurants, gyms, and wineries/breweries.

Exhibit 1. The Columbia Street Properties Area



## 1.2 Data and Methods

In this assessment we drew from a variety of data sources to compile an understanding of the Wenatchee commercial and residential real estate market. Source citations can be found on each page where quantitative data is presented. We also relied on stakeholder interviews to fill in the gaps between data, and tell the local, qualitative story. We conducted these interviews in November 2021. The interviewees ranged from developers and real estate brokers, to economic development officials, and Chelan Port representatives. Interview summary key findings are included in the **Error! Reference source not found.** Market Potential in Wenatchee section of this report. Mixing the qualitative input from locals with on-the-street knowledge and perspectives is fundamental to understanding the complete story of Wenatchee’s commercial and residential real estate market and opportunities for the Columbia Street Properties.

## 1.3 Organization of this Report

The remainder of this document is organized into the following chapters:

- **Chapter 2. Economic and Demographic Trends.** Presents information about the characteristics of households and population living in Wenatchee and economic trends that will inform land uses.
- **Chapter 3. Market Area for Analysis.** Describes the market area for analysis used for this project where real estate trends will be summarized.
- **Chapter 4. Wenatchee Market Conditions and Trends.** Presents information about the local, commercial and residential market. It presents real estate market trends that will likely influence development in the Columbia Street Properties.
- **Chapter 5. Market Potential in Wenatchee.** Summarizes Wenatchee’s market trends and identifies demand drivers and market potential for commercial and residential real estate.
- **Chapter 6. Financial Feasibility Analysis.** Presents the financial feasibility results of three initial conceptual design schemes and the final design scheme.
- **Chapter 7. Fiscal and Economic Analysis.** Summarizes the fiscal and economic impact of the final scheme development onto the City of Wenatchee and region.



## 2. Economic and Demographic Trends

This chapter provides an overview of macro level economics and demographic trends in Wenatchee and Chelan County. Evaluating Columbia Street properties' opportunities, it is helpful to understand how the economics and demographics of Wenatchee compare to the larger region.

### 2.1 Demographic Trend Summary

- Wenatchee's population has grown at an average annual rate of 1.17 percent since 2000.
- Residents of Wenatchee tend to be younger than both the Chelan County and Washington state median.
- Wenatchee households tend to be smaller than Chelan County and Washington.
- A larger share of households in Wenatchee are renter-occupied than in Chelan County and Washington.
- Households in Wenatchee earned less than households in Chelan County and the statewide median.
- Wenatchee's unemployment rate has recovered significantly from the effects of the COVID-19 pandemic and was lower in September 2021 than prior to the pandemic.

### 2.2 Wenatchee Demographic Trends

**POPULATION** · · · Wenatchee is growing at a faster rate than the County.

Wenatchee's population grew by 26 percent between 2000 and 2020, adding 7,284 new residents. Over this period, Wenatchee's population grew at an average annual growth rate of 1.17 percent, which is faster than Chelan County and slightly slower than Washington.

Based on Washington State Office of Finance Management's population estimates and past population growth trends, Wenatchee is estimated to reach 40,430 people by 2040 (an increase of 5,290 people between 2020 and 2040).

Exhibit 2.1. Population Change, Wenatchee, Chelan County, and Washington, 2000–2020

Source: Washington State Employment Security Department.

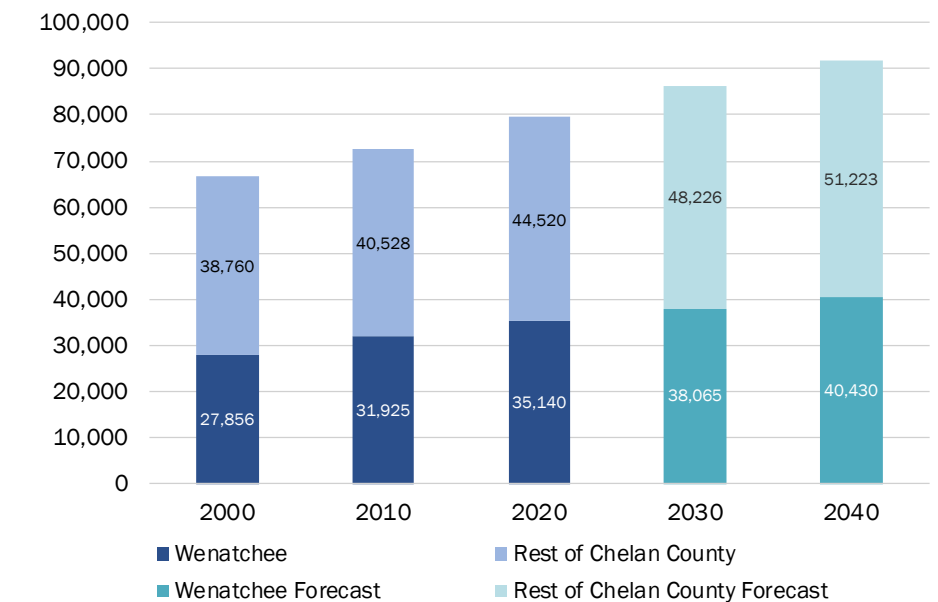
Geography	Year			Change, 2000 - 2020		
	2000	2010	2020	# Change	% Change	AAGR
Wenatchee	27,856	31,925	35,140	7,284	26%	1.17%
Chelan	66,616	72,453	79,660	13,044	20%	0.90%
Washington	5,894,143	6,724,540	7,656,200	1,762,057	30%	1.32%

Chelan County's population is forecasted to grow by 11,993 residents between 2020 and 2040.

Wenatchee accounted for 44.1% of the total Chelan County population in 2010 and 2020. If this share remains the same, Wenatchee is estimated to grow by 5,290 residents between 2020 and 2040.

Exhibit 2.2. Population Forecast, Chelan County, 2000–2040

Source: Washington State Office of Financial Management.



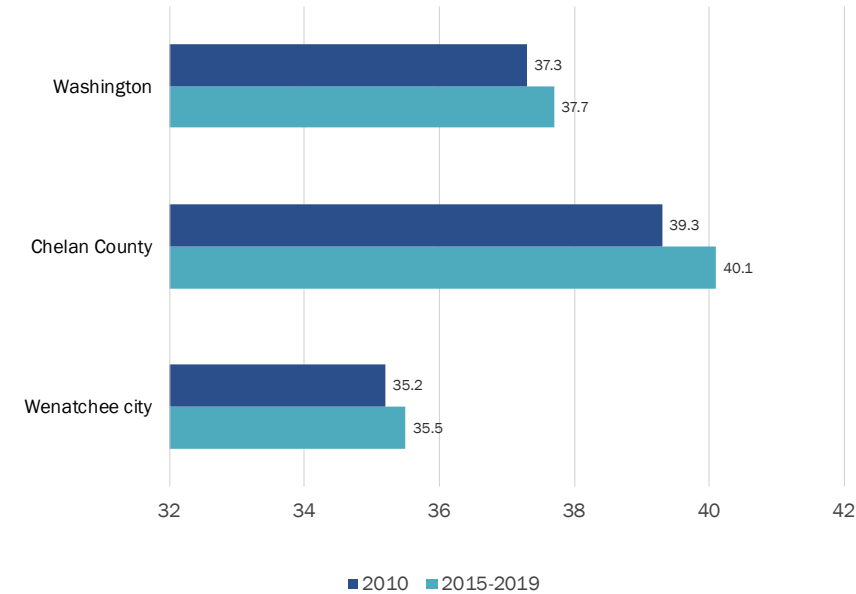
**AGE · · Residents of Wenatchee are generally younger.**

Wenatchee’s population is younger than both Chelan County and Washington.

Wenatchee’s median age is 4.6 years younger than Chelan County as a whole, and 2.2 years younger than the statewide median.

**Exhibit 2.3. Median Age, Wenatchee, Chelan County, and Washington, 2010–2015-2019**

Source: U.S. Census Bureau, 2010 Decennial Census and 2015-2019 ACS 5-Year Estimates.

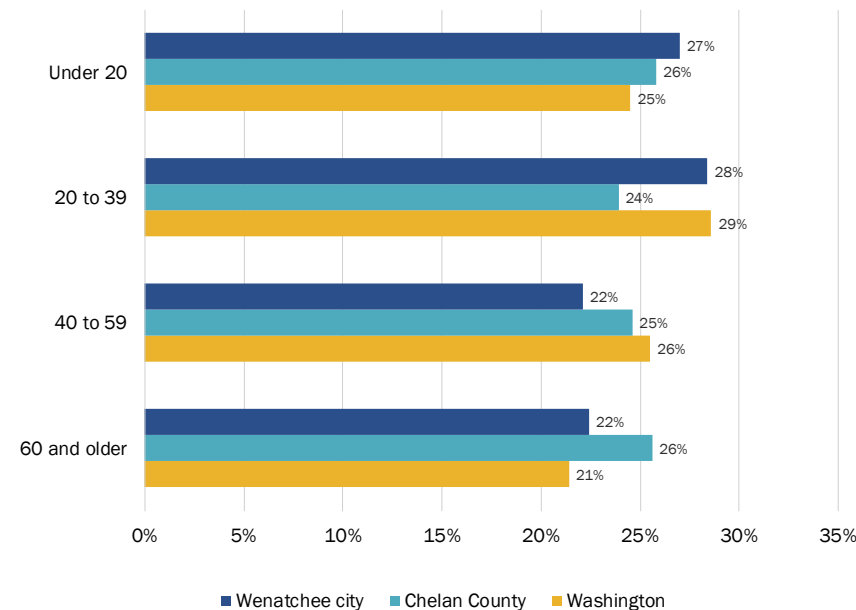


Wenatchee’s prime working age population (20- to 59-year-olds) is slightly larger than Chelan County (51 percent compared to 49 percent) but is smaller than Washington (54 percent).

Just over one-fifth of Wenatchee’s resident population (22 percent) is 60 years and older, a smaller share than Chelan County (26 percent), but higher than Washington (21 percent).

**Exhibit 2.4. Population by Age, Wenatchee, Chelan County, and Washington 2015–2019**

Source: U.S. Census Bureau, 2015-2019 ACS 5-Year Estimates.



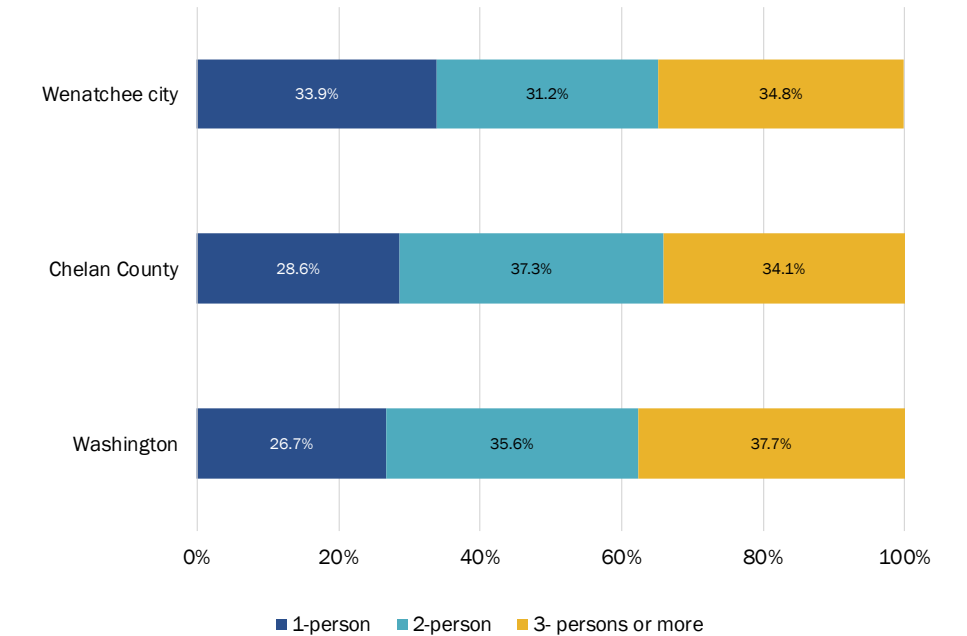
**HOUSEHOLDS · · Most of Wenatchee’s households contain 3-persons or more.**

Wenatchee household size tends to be large (3-persons or more), similarly to that of Chelan and Washington.

In 2019, Wenatchee household size is almost evenly split between 1-person, 2-person, and 3-person or more.

**Exhibit 2.5. Household Size, Wenatchee, Chelan County, and Washington, 2015–2019**

Source: U.S. Census Bureau, 2015-2019 ACS 5-Year Estimates.

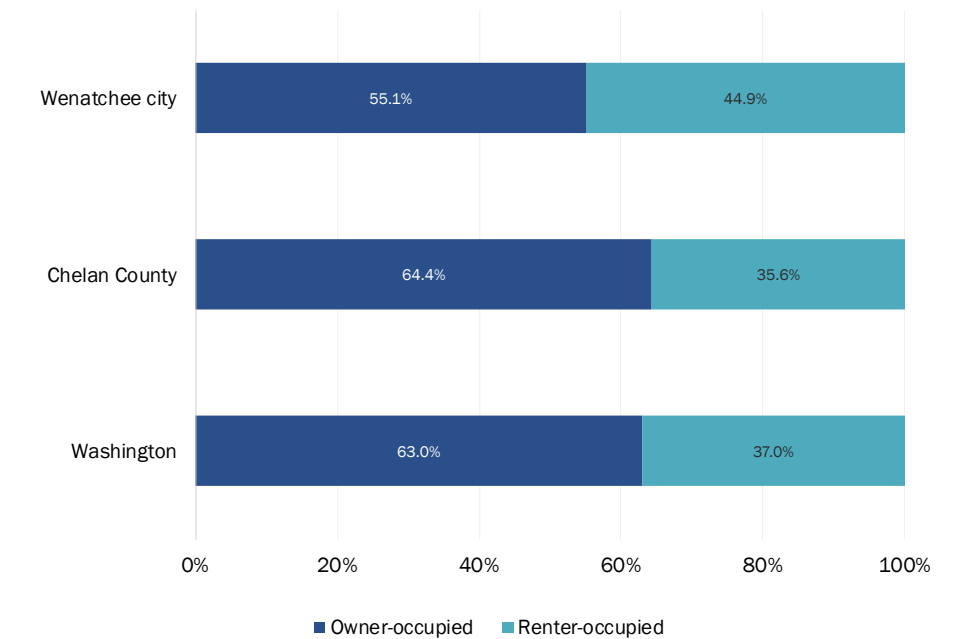


Most of the Wenatchee’s housing is owner-occupied.

However, Wenatchee has a higher share of renter-occupied households relative to Chelan County and Washington.

**Exhibit 2.6. Household Tenure, Wenatchee, Chelan County, and Washington, 2015–2019**

Source: U.S. Census Bureau, 2015-2019 ACS 5-Year Estimates.



**INCOME** · · Households in Wenatchee typically earn less when compared to Chelan and Washington.

The median household income in Wenatchee was below both Chelan County and the statewide average in 2019.

Households in Wenatchee generally earn about \$20,000 less than statewide averages.

Exhibit 2.7. Median Household Income, Wenatchee, Chelan County, and Washington, 2015-2019

Source: U.S. Census Bureau, 2015-2019 ACS 5-Year Estimates.



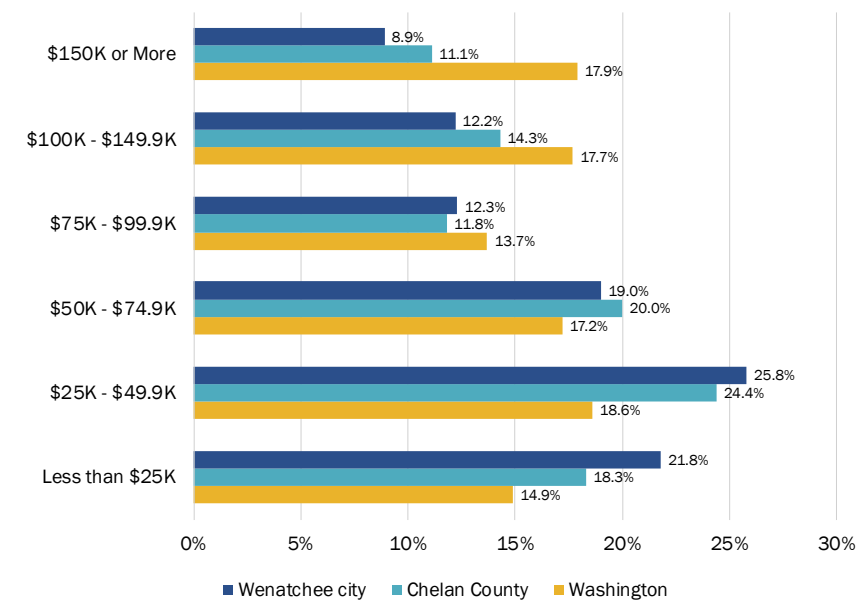
Wenatchee households tend to earn lower income when compared to Chelan County and Washington.

Approximately 48 percent of Wenatchee households earned less than \$50,000 per year during the 2015-2019 period, compared to 42 percent in Chelan County and 34 percent in Washington.

About 21 percent of Wenatchee households earned more than \$100,000 per year, compared to 25 percent in Chelan County and 36 percent in Washington.

Exhibit 2.8. Distribution of Household Income, Wenatchee, Chelan County, and Washington 2015-2019

Source: U.S. Census Bureau, 2015-2019 ACS 5-Year Estimates.



**2.3 Wenatchee Economic Trends**

Recent data shows that the unemployment rate for Wenatchee residents is relatively low, compared to Washington. Wenatchee’s employment level decreased sharply at the beginning of the COVID-19 pandemic, however it has since recovered and grown its employment base 5 percent when compared to employment number for the beginning of 2019.

Wenatchee’s employment base is concentrated in four major sectors which include health care and social assistance (30.5%), agriculture forestry, fishing, and hunting (19.1%), retail trade (12.0%), and accommodations and food services (8.3%).

The sectors that have primarily led to employment growth in Wenatchee, over the last decade, were administrative & support, waste management and remediation (adding 359 jobs), construction (adding 329 jobs), real estate and rental and leasing (adding 118 jobs), and education services (adding 39 jobs). According to Washington Employment Security Department, the health services and social assistance and government sectors are expected to add an additional 2,900 jobs to Chelan County between 2022 and 2027.

The following information presents data about characteristics of Wenatchee’s economy.

Exhibit 2.9. Employment Change by Major Employment Sector in Wenatchee, 2010 - 2019

Source: U.S. Census Bureau OnTheMap CES Data.

NAICS Sector	Employment		% Share of Total Employment		Change, 2010 - 2019	
	2010	2019	2010	2019	Difference	% Change*
Agriculture, Forestry, Fishing and Hunting	3,140	3,582	19.6%	19.1%	442	14.1%
Mining, Quarrying, and Oil and Gas Extraction	1	3	0.0%	0.0%	2	200.0%
Utilities	13	5	0.1%	0.0%	-8	-61.5%
Construction	521	850	3.2%	4.5%	329	63.1%
Manufacturing	786	677	4.9%	3.6%	-109	-13.9%
Wholesale Trade	489	562	3.0%	3.0%	73	14.9%
Retail Trade	2,156	2,238	13.4%	12.0%	82	3.8%
Transportation and Warehousing	222	206	1.4%	1.1%	-16	-7.2%
Information	315	292	2.0%	1.6%	-23	-7.3%
Finance and Insurance	448	522	2.8%	2.8%	74	16.5%
Real Estate and Rental and Leasing	174	292	1.1%	1.6%	118	67.8%
Professional, Scientific, and Technical Services	615	739	3.8%	3.9%	124	20.2%
Management of Companies and Enterprises	31	14	0.2%	0.1%	-17	-54.8%
Administration & Support, Waste Management and Remediation	328	687	2.0%	3.7%	359	109.5%
Educational Services	38	77	0.2%	0.4%	39	102.6%
Health Care and Social Assistance	4,694	5,707	29.2%	30.5%	1,013	21.6%
Arts, Entertainment, and Recreation	161	116	1.0%	0.6%	-45	-28.0%
Accommodation and Food Services	1,352	1,559	8.4%	8.3%	207	15.3%
Other Services (excluding Public Administration)	565	598	3.5%	3.2%	33	5.8%
Public Administration	0	0	0.0%	0.0%	0	0.0%
<b>Total</b>	<b>16,049</b>	<b>18,726</b>	<b>100.0%</b>	<b>100.0%</b>	<b>2,677</b>	<b>16.7%</b>

\* Sectors with employment growth exceeding 50 percent have been highlighted green; sectors with employment contractions have been highlighted yellow.

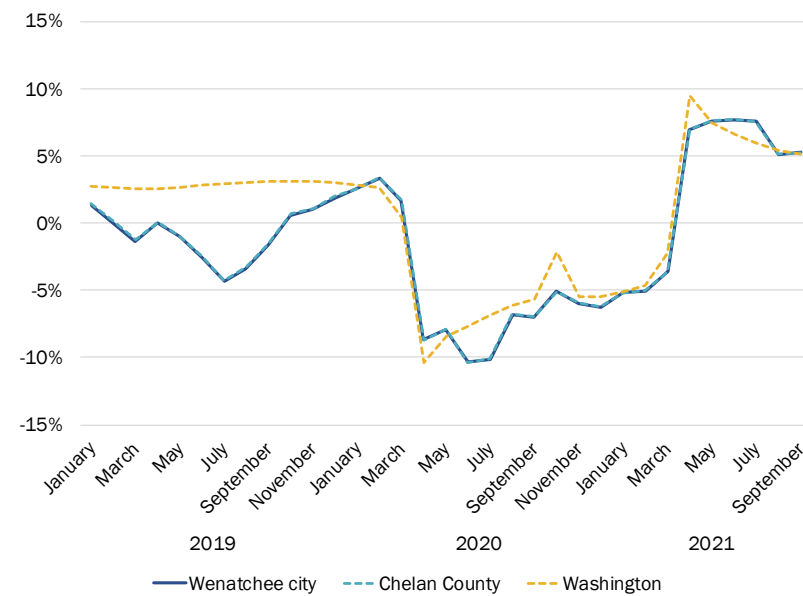
**EMPLOYMENT** · · · Employment has recovered and the number of jobs have increased.

Wenatchee’s employment level decreased sharply at the beginning of the COVID-19 pandemic but has rebounded at a similar pace to Washington.

As of September 2021, Wenatchee has 18,968 employed persons, which is more people than in December 2019, before the COVID-19 pandemic.

Exhibit 2.10. Year over Year change in employment, Wenatchee, Chelan County, and Washington, January 2019–September 2021.

Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics (LAUS).

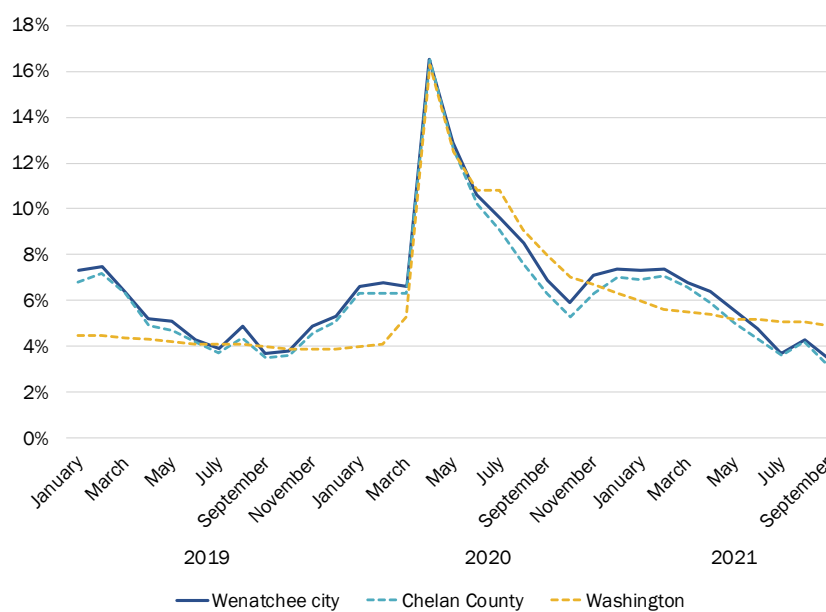


At the outset of the COVID-19 pandemic, the unemployment rate in Wenatchee spiked to 16.5 percent, about 0.2 percentage points higher than the statewide average.

As of September 2021, the unemployment rate in Wenatchee reached 3.5 percent. This rate is lower than before the COVID-19 pandemic, and 1.4 percentage points below the statewide average.

Exhibit 2.11. Monthly Unemployment Rate Before and After COVID Lockdowns, Wenatchee, Chelan County, and Washington, January 2019–September 2021.

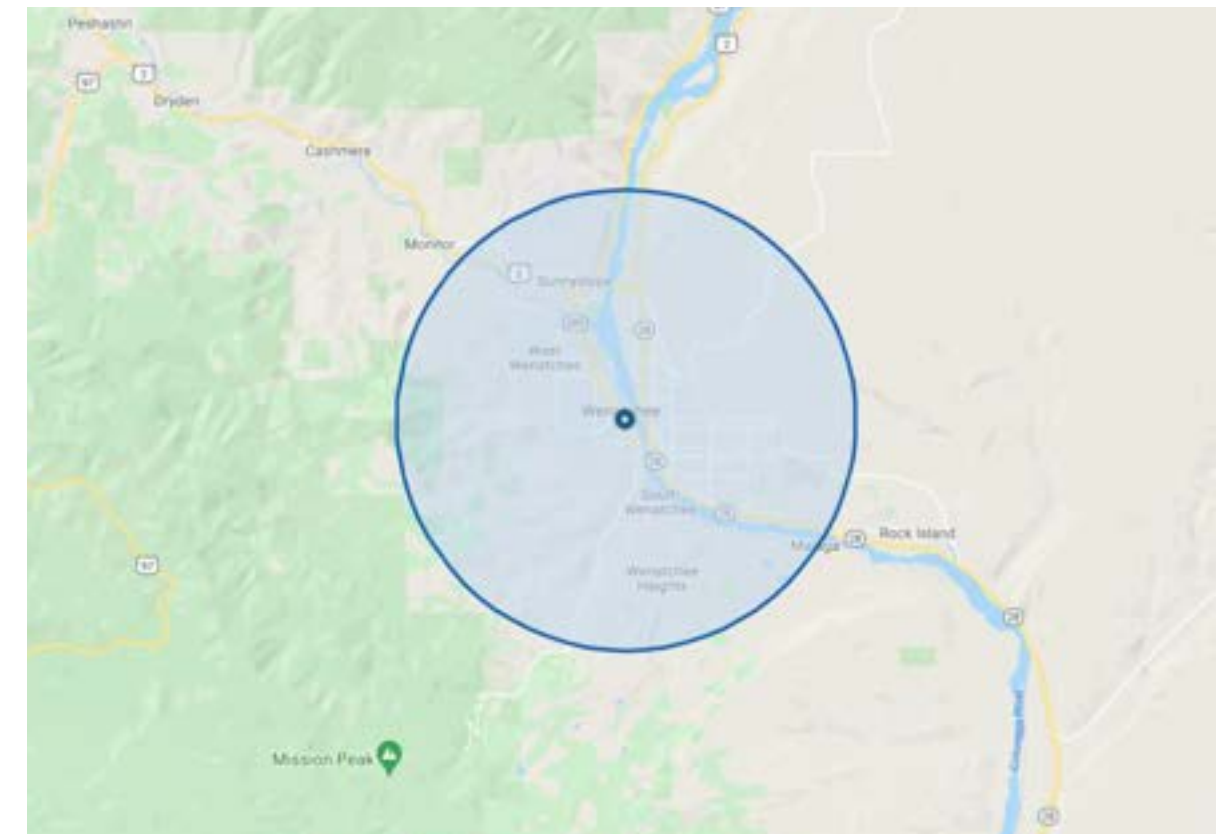
Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics (LAUS).



### 3. Market Area for Analysis

This assessment presents market analysis trends and key findings for the Wenatchee market—which includes areas of East Wenatchee, South Wenatchee, and Sunnyslope. Together these areas form what is locally called the “Wenatchee Valley”.

Exhibit 2. Wenatchee Market Area for Analysis



## 4. Wenatchee Market Conditions and Trends

This section summarizes the current and recent historical real estate conditions for commercial and residential real estate in Wenatchee.

- Commercial real estate is any non-residential property used for commercial profit-making purposes. It includes office, industrial, flex space, retail, and hotel development types.
- Residential real estate includes any product type that is developed for people to live in. It includes rental and ownership housing, including multifamily apartments, condominiums, single-family homes, townhomes, manufactured homes, and student housing. This assessment will only focus on multifamily residential trends in Wenatchee.

### 4.1 Summary of Commercial Real Estate Trends

- Office:** Wenatchee’s existing office inventory is relatively small and makes up approximately 16 percent of the commercial real estate. New office construction generally trends to be small and caters towards the local professional industry. Office rents have increased 28 percent since 2011 to about \$19.84 in 2021 Q3, while vacancy rates have declined to very low levels of 0.4 percent in 2021 Q3. Very low vacancy rates can result in upward pressures in rents when demand is high, and supply is low.
- Retail:** The retail submarket in Wenatchee has gained strength in the past few years as rents have increased 50 percent since 2011, while vacancy rates have remained very low. Since 2011, new construction in retail has totaled approximately 147,000 square feet of space—which has comprised most of the new commercial real estate in Wenatchee. Rising rents and very low vacancy rates in the retail submarket suggest a constrained supply of retail space that has resulted in upward pressures in rents. This trend in the retail submarket indicates possible demand for additional retail space in Wenatchee.
- Industrial:** A strong growth in industrial space has increased demand for industrial space. Since 2011, industrial rents have increased 40 percent to \$8.40 per square foot in 2021 Q3. In the past decade vacancy rates have remained very low which has led to a constrained supply of industrial space in Wenatchee. Small amounts of new industrial space totaling 22,500 square feet has been built between 2011 and 2021 Q3—which was quickly absorbed by the market. Strong growth in rents and very low vacancy rates indicate that there is demand for industrial space in Wenatchee.

### 4.2 Existing Commercial Real Estate Inventory

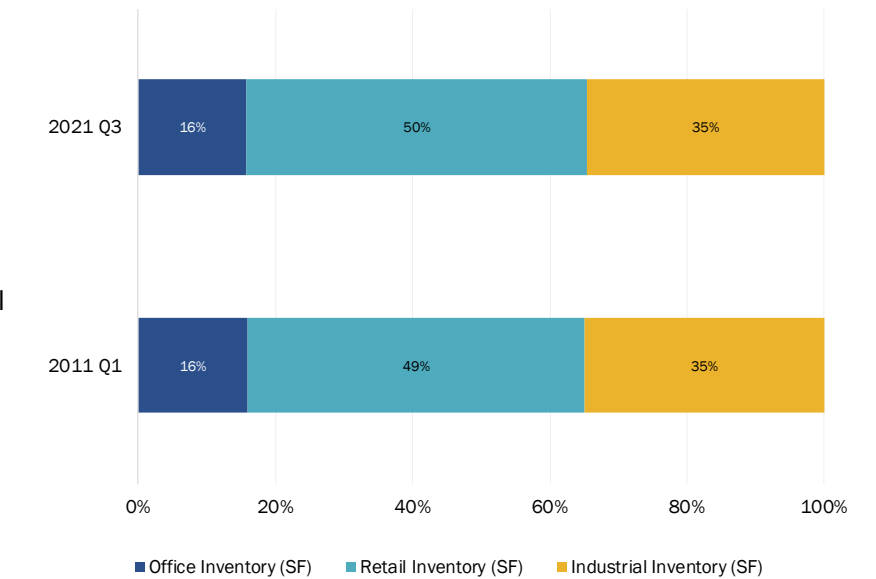
Between 2011 and 2021Q3, 163,345 new square feet of commercial inventory has been added in Wenatchee.

The largest portion of this growth has been in retail inventory—approximately 125,853 new square feet of retail space.

The retail submarket makes up the majority (50%) of Wenatchee’s commercial real estate followed by industrial (35%), and office space (16%).

Exhibit 4.1 Commercial Inventory, Wenatchee Market Area, 2011Q1, 2021Q3

Source: CoStar.



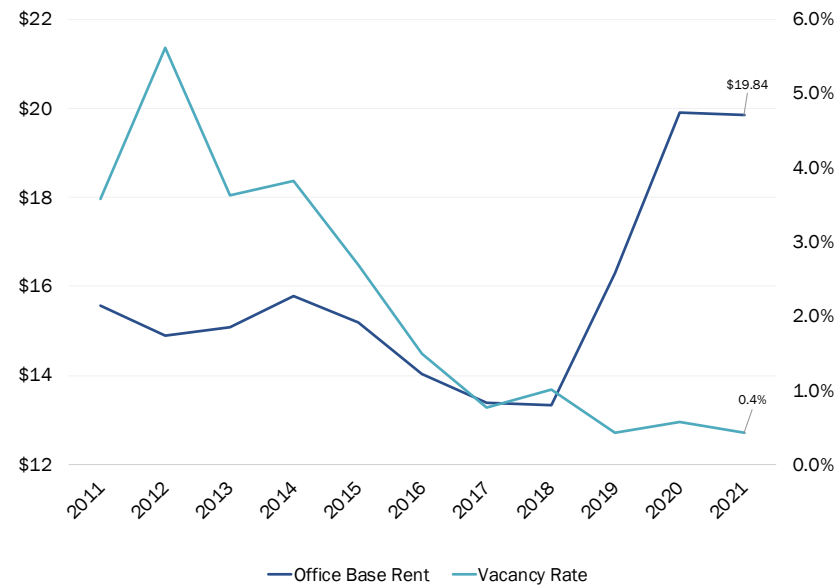
### 4.3 Office

Between 2011 and 2021 Q3, office base rents increased 28 percent (\$4.29), from \$15.55 per square foot in 2011 up to \$19.84 per square foot in 2021 Q3.

Office vacancy rates are very low at about 0.4 percent in 2021 Q3.

Exhibit 4.2. Office Market Rent and Vacancy Rate, Wenatchee Market Area, 2011-2021Q3

Source: CoStar.



Despite a highly negative net absorption in 2011, Wenatchee has had mostly positive net absorption of office space in the past decade.

The most recent office deliveries in Wenatchee was a 15,000 square feet building constructed in 2018 and was quickly absorbed by the market.

At the end of 2021 Q3, there is one office building totaling 7,000 square feet that is proposed to be constructed soon.

Exhibit 4.3. Office Supply and Demand, Wenatchee Market Area, 2011-2021Q3

Source: CoStar.



#### 4.3.1 Characteristics of Recent New Office Development

The Wenatchee office buildings listed below were constructed within the past three years. Wenatchee’s new office space tends to be small, serving the local professional industry and usually mixed with other complimentary uses such as residential or retail.



504 N Wenatchee Ave  
 Year Built: 2022  
 Building Sq. Ft.: 7,159  
 Estimated Rent: N/A

Description: 504 N Wenatchee Ave is a proposed 2-story, mixed-use building offering office and retail space. Leasing space range between 3,000 to 4,100 square feet in size.



1301 Walla Walla Ave  
 Year Built: 2018  
 Building Sq. Ft.: 15,072  
 Estimated Rent: N/A

Description: 1301 Walla Walla Ave is a 3-story, mixed-use office and residential building with office uses in the ground floor and condos occupying the upper floors. Current office tenants include Cornerstone Home Lending Inc and Draggoo Financial Group.

## 4.4 Retail

Between 2011 and 2021 Q3, Wenatchee's Triple-net (NNN) retail rents increased 50 percent (\$5.46), from \$10.97 per square foot in 2011 up to \$16.43 per square foot in 2021 Q3.

Retail vacancy rates in Wenatchee are very low at about 0.8 percent in 2021 Q3.

Typically, a healthy retail market has a vacancy rate between 5 and 7 percent. Vacancy rates lower than 5 percent suggest a constrained supply of retail supply that can result in upward pressures in rents. Vacancies higher than 7 percent indicate a weak market or oversupply of retail space.

Wenatchee has not seen any retail deliveries since 2018, when 25,102 square feet were added.

Between 2011 and 2021 Q3, a total of 147,187 square feet of retail space has been built in Wenatchee.

At the end of 2021 Q3, there is one retail building totaling 8,500 square feet that is proposed to be constructed soon.

Exhibit 4.4. Retail NNN Rent and Vacancy Rate, Wenatchee Market Area, 2011-2021Q3

Source: CoStar.

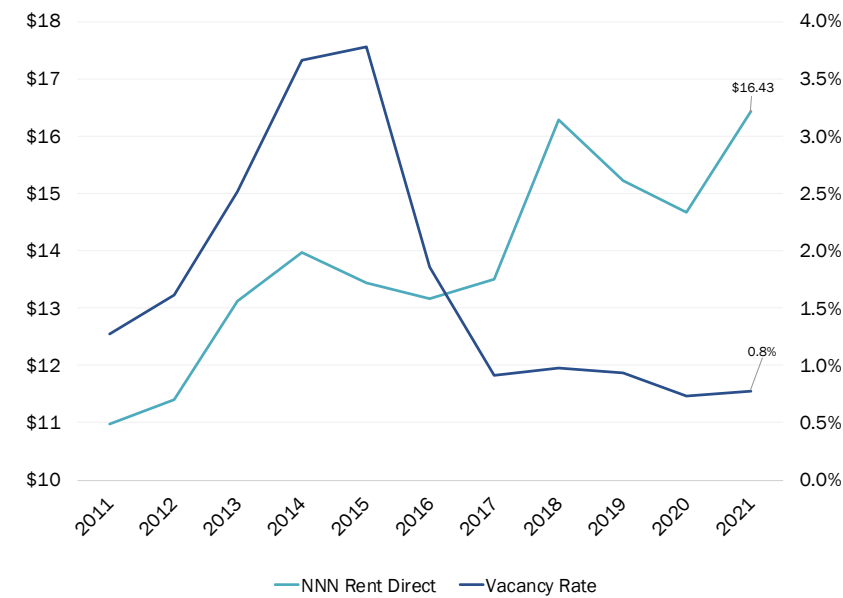


Exhibit 4.5. Retail Supply and Demand, Wenatchee Market Area, 2011-2021Q3

Source: CoStar.



### 4.4.1 Characteristics of Recent New Retail Development

Most of Wenatchee's new retail buildings built in the past six years were stand-alone single tenant retail space. The one exception is the 504 N Wenatchee Ave mixed-use building that is proposed to be built in 2022. Buildings sizes ranged from about 2,000 square feet to 8,000 square feet.



504 N Wenatchee Ave

Year Built: 2022

Building Sq. Ft.: 7,159

Estimated Rent: N/A

Description: 504 N Wenatchee Ave is a proposed 2-story, mixed-use building offering office and retail space. Leasing space range between 3,000 to 4,100 square feet in size.



146 Easy Way

Year Built: 2018

Building Sq. Ft.: 8,000

Estimated Rent: N/A

Description: 146 Easy Way is a 8,000 square foot medical office building and home to Wenatchee Pediatric Dentist.



1920 N Wenatchee Ave

Year Built: 2018

Building Sq. Ft.: 4,216

Estimated Rent: N/A

Description: 1920 N Wenatchee Ave is a stand-alone, drive-through restaurant building. Current tenant is the Panda Express Chinese restaurant.



739 S Mission St  
 Year Built: 2015  
 Building Sq. Ft.: 2,184  
 Estimated Rent: N/A

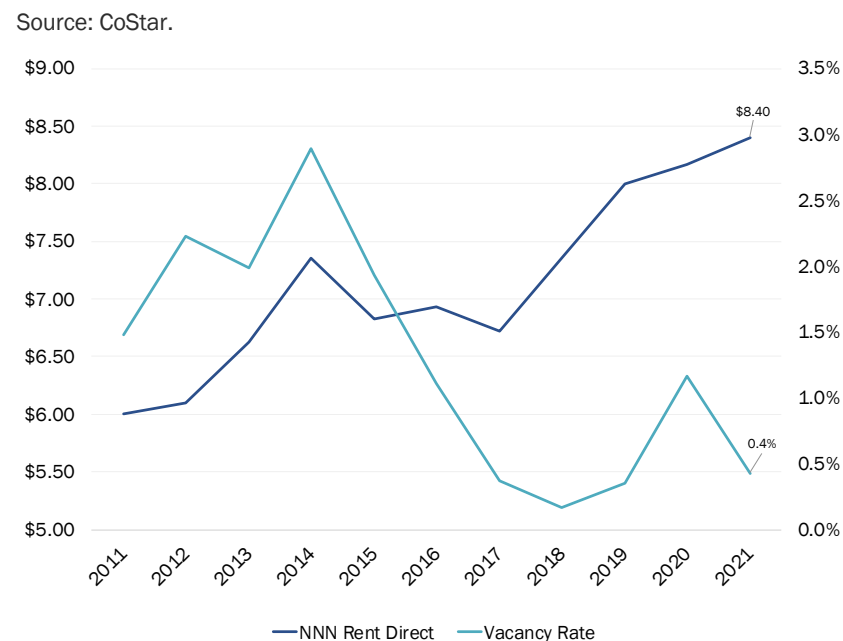
Description: 739 S Mission St is a 2,184 square foot stand-alone building currently occupied by Dutch Bros. The building offers a double-window drive through lane.

## 4.5 Industrial

Between 2011 and 2021 Q3, Triple-net (NNN) industrial rents increased 40 percent (\$2.39), from \$6.01 per square foot in 2011 up to \$8.40 per square foot in 2021 Q3.

In the past decade, Industrial vacancy rates have reached an all-time low of 0.4 percent in 2021 Q3. Very low vacancy rates can result in upward pressures in rents.

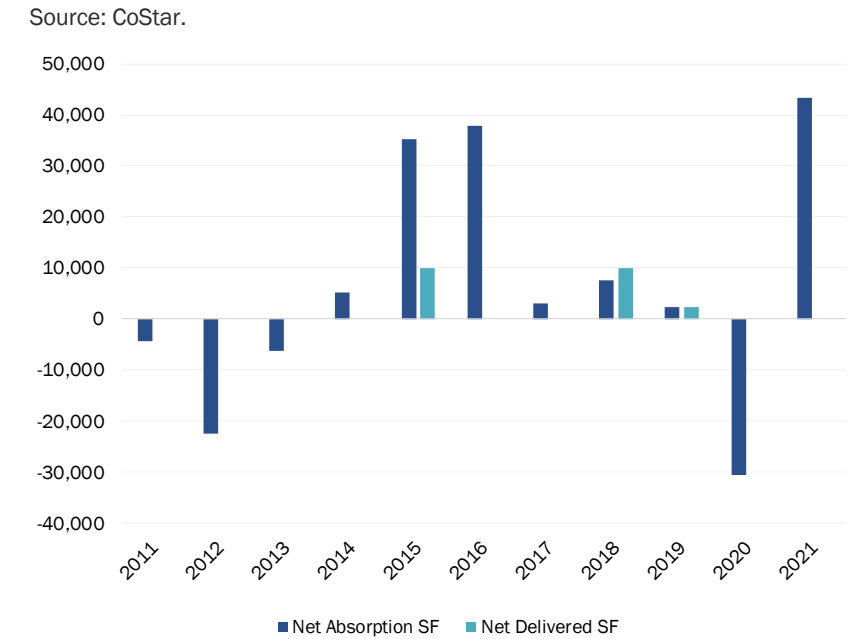
Exhibit 4.6. Industrial NNN Rent and Vacancy Rate, Wenatchee Market Area, 2011-2021Q3



Between 2011 and 2021 Q3, a total of 22,500 square feet of new industrial space has been built in Wenatchee.

At the end of the third quarter of 2021, there was no new industrial space proposed or under construction.

Exhibit 4.7. Industrial Supply and Demand, Wenatchee Market Area, 2011-2021Q3



## 4.6 Residential Real Estate Trends

This section provides an assessment of residential real estate trends for Wenatchee Valley’s single-family and multifamily housing markets. It addresses factors such as housing mix, housing tenure, new housing development (particularly for multifamily uses), residential sales, and rental costs.

## 4.7 Summary of Residential Real Estate Trends

Today, the majority of housing in Wenatchee Valley is single-family detached and owner-occupied. Most of the households are one or two-person households, while the majority of young adults ages 18 to 34 years old live with a partner or parent.

Single family housing vacancy rate in Wenatchee Valley is at about 6 percent, while multifamily vacancy rates recently decreased to 6.9 percent in 2021 Q3. Wenatchee Valley’s existing housing mix may limit housing options for non-family households, and family households without children, which account for 69 percent of Wenatchee Valley’s households.

According to Redfin, the median home sale price for a single-family house is \$425,000 in 2021 Q3, an increase of 51 percent between 2016 and 2021 Q3. Townhomes and condominiums offer a more affordable ownership alternative, with an average sale price of \$336,000 and \$303,300 respectively. However, the limited stock of attached single family housing and ownership multifamily units can still price out people if sales prices increases which tend to happen when



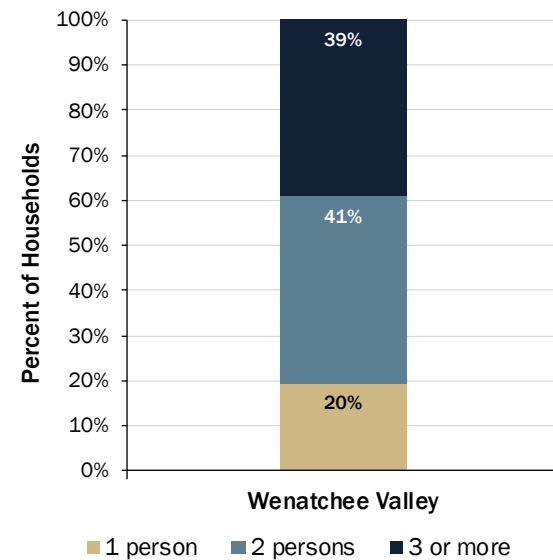
demand is high and supply is low. Home sales prices along with multifamily rents have been climbing steadily in recent years. Just in the past year the median home sale price in Wenatchee Valley has risen by 11 percent year-over-year.

Multifamily rents have been on the rise in Wenatchee Valley. Multifamily rents per square foot increased from \$1.16 in 2011 to \$1.67 in the third quarter of 2021, signaling the desirability of housing in Wenatchee Valley.

More than 60 percent of Wenatchee Valley's households are one- or two-person households. About 39 percent of Wenatchee Valley households are 3 persons or more. This usually indicates a family household with children.

Exhibit 4.8. Household Size, Wenatchee Valley, 2015-2019

Source: 2015-2019 ACS



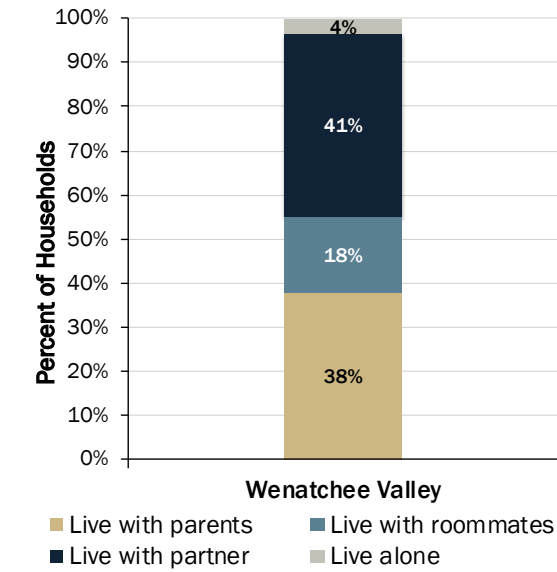
The chart to the right looks at the living arrangement of adults 18 to 34 years old, including their co-residence with parents, partner, or roommates.

Most young adults in Wenatchee Valley live with their partner (41 percent).

However, a substantial share of young adults also lives with their parents (38 percent). This can possibly indicate that the housing market is not providing enough smaller housing types for younger residents.

Exhibit 4.9. Household Living Arrangement, Wenatchee Valley, 2015-2019

Source: 2015-2019 ACS

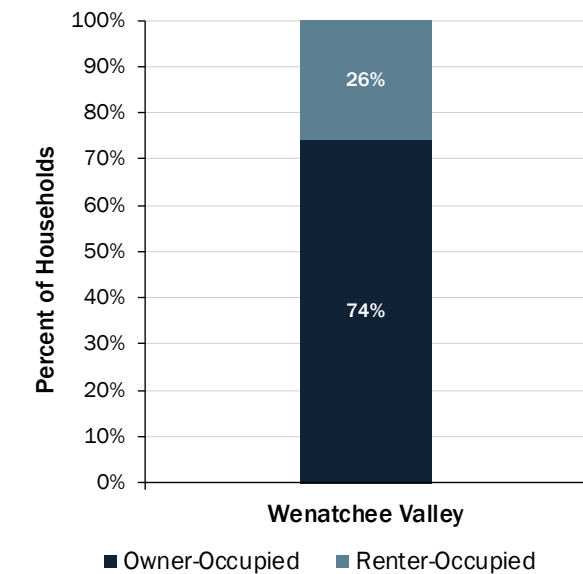


Most of the housing in Wenatchee Valley is owner-occupied (74 percent).

Approximately a quarter of Wenatchee Valley's housing is renter-occupied.

Exhibit 4.10. Household Tenure, Wenatchee Valley, 2015-2019

Source: 2015-2019 ACS

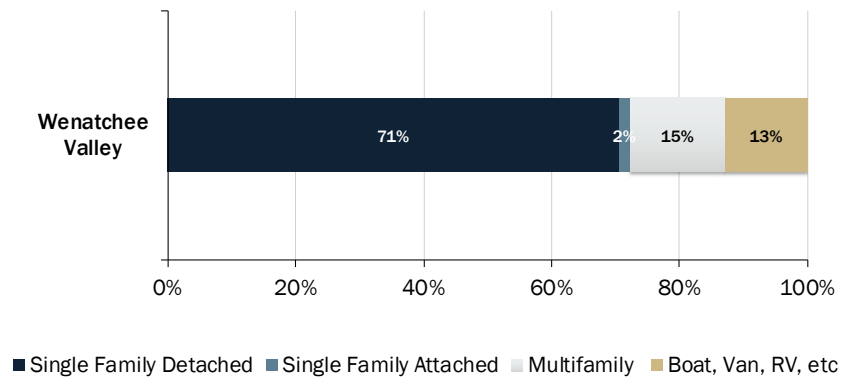


Wenatchee Valley's housing is majority single family detached.

About 2 percent of the housing stock is single family attached, 15 percent is multifamily, and 13 percent boat, van, RV, or other.

Exhibit 4.11. Housing Mix, Wenatchee Valley, 2015-2019

Source: 2015-2019 ACS



## 4.8 Single Family, Townhouses, and Condominiums

According to Redfin, the median sales price for single family homes in Wenatchee Valley over the past year was \$425,000—a 12.5 percent increase year-over-year. Compared to townhouses and condominiums, single family homes in the Wenatchee Valley tend to be larger and older housing stock. Townhouses and condominiums offer a more affordable ownership alternative, with an average sale price of \$336,000 and \$303,300 respectively.

Exhibit 4.12. Median Home Sales Price in Wenatchee Valley, 2020-2021

Source: Redfin

Housing Type	Median Sale Price	Average Square Feet	Average Year Built	Average Number of Beds	Number Sold
Single Family	\$425,000	2,015	1977	3	499
Townhouse	\$336,00	1,568	1999	3	18
Condominium	\$303,300	1,388	1987	2	31

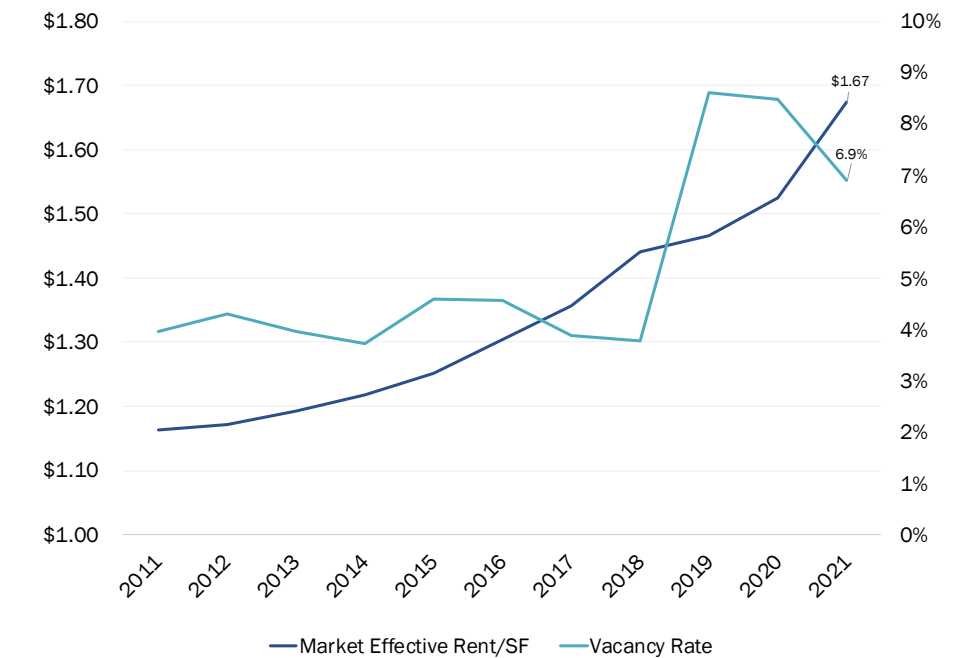
## 4.9 Multifamily

The average multifamily market effective rent reached a high of \$1.74 per square foot in 2021Q3, an increase of 16 percent since 2020Q1. This rent is 51 percent higher than in 2011Q1.

Vacancy rates have fluctuated over the years but increased sharply in 2019 and again in the end of 2020 and beginning of 2021, before decreasing to 4.1 percent in 2021Q3.

Exhibit 4.13. Multifamily Effective Rent per Square Foot and Vacancy Rate, All Bedroom Types, Wenatchee Market Area, 2011-2021Q3

Source: CoStar.

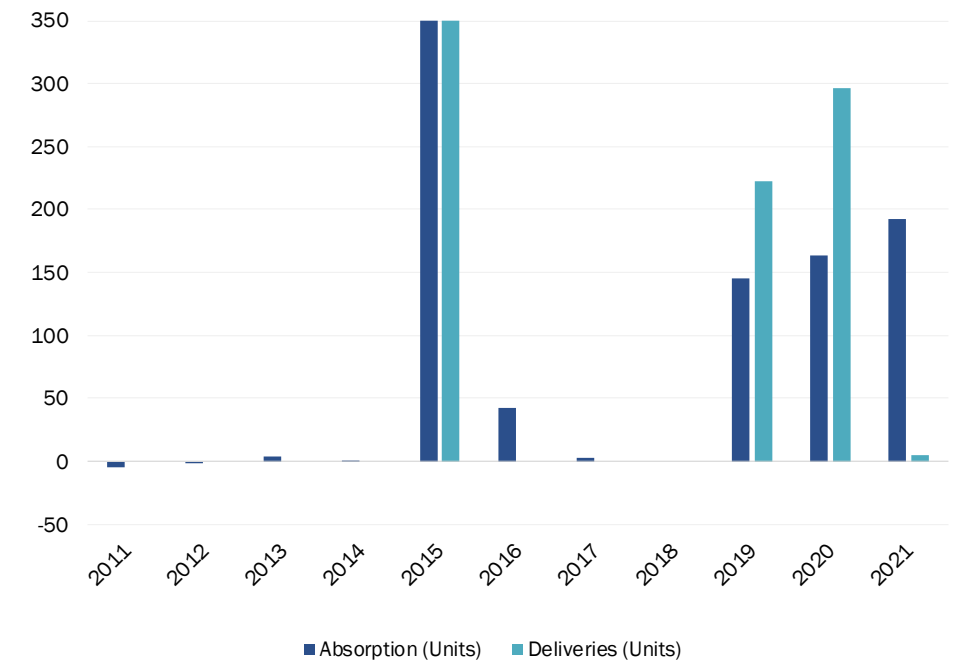


From 2011 to 2021, the market area has mostly experienced positive net absorption, which implies the demand for multifamily units exceeds the supply. Apartment demand is fueled by gains in population and a structurally high share of renters. The high demand for housing means that fewer units are available on the market to rent.

Approximately 941 multifamily units were delivered to the market from 2011-2021Q3.

Exhibit 4.14. Multifamily Supply and Demand, Wenatchee Market Area, 2011-2021Q3

Source: CoStar.



#### 4.9.1 Characteristics of Recent New Multifamily Development

The list below shows the recent construction of multifamily development in Wenatchee. Multifamily buildings generally tended to be 3-stories high and of wood-frame construction. These buildings ranged in size of about 65,000 square feet to 264,000 square feet. Apartment count also ranged from 65 units to 312 units total.



615 N Piere St – 600 Riverside Apartments  
 Year Built: 2019  
 Building Sq. Ft.: 149,000  
 Estimated Rent: \$2.27 avg. per sq. f.t

- Garden-Style, Market-Rate Housing
- 144 units
- Studio (11), 1-bedroom (78), 2-bedroom (55)
- Average SF per unit: 761



895 Riverside Dr – Riverside9 Apartment Homes  
 Year Built: 2015  
 Building Sq. Ft.: 263, 907  
 Estimated Rent: \$1.96 per sq. ft.

- Garden-Style, Market-Rate Housing
- 312 units
- Studio (54), 1-bedroom (102), 2-bedroom (156)
- Average SF per unit: 876



1688 Stella Ave – Courtyard 465 Apartments  
 Year Built: 2019  
 Building Sq. Ft.: 65,000  
 Estimated Rent: \$1.90 per sq. ft.

- Low-Rise, Market-Rate Housing
- 65 units
- 1-bedroom (29), 2-bedroom (36)
- Average SF per unit: 868

## 5. Market Potential in Wenatchee

Below we summarize the market trends and demand for office, retail, industrial/flex, and residential uses that could be supported by the market. Our evaluation for market demand for the different uses were also based on conversations conducted with local brokers, developers, and the Wenatchee Downtown Association.

The Columbia Street Properties provide a great opportunity to accommodate a mix of uses that can benefit from being in a downtown setting, while also serving a need in the market of Wenatchee. There is market demand for office, retail, industrial/flex, and residential space in Wenatchee at varying sizes. Our market assessment indicates that small to medium sized commercial space can be absorbed into the market and that a mix of uses can thrive in the Columbia Street Properties site. The site is likely too large to be occupied by a single use and a use the scale of the Columbia Street Properties will likely take time to be absorbed into the market.

Market Trends	Deliveries	Demand Drivers	Market Potential
<b>Office</b>			
Vacancies have declined steadily since 2012 to a very low vacancy rate. Rents have been on a steady rise since 2018.	There have been fewer deliveries than in other commercial real estate market sectors. Most of Wenatchee’s office space was constructed before the 1990’s. Recent deliveries have been relatively small sized buildings between 7,000 and 15,000 square feet in size.	Office market trends are indicative of Wenatchee’s small local sector employment—which are local businesses that provide services primarily in a local and regional market.	Trends suggest a small demand for office space. Wenatchee’s older office stock will encourage more office space tenant improvements to meet the needs of office users.  New office deliveries will generally be mixed in with retail uses to allow for more flexibility in leasing space if office does not prove to be in demand.  There is demand for smaller modern type office—ranging between 200 to 1,000 square feet in size.
<b>Retail</b>			
Rents have risen to 10-year highs, while vacancies have fallen to very	Since 2011, 147,000 square feet of new retail space has been delivered. Much of this retail space has been in	Population and household growth in Wenatchee has fueled much of the new retail space which has mostly been stand-alone	The Downtown location is prime for experiential retail that serves local, regional, and tourism markets. Experiential retail is

Market Trends	Deliveries	Demand Drivers	Market Potential
low levels in recent years.	northern Wenatchee along highway 285 and near Wenatchee Valley Mall.	fast-food restaurants, pharmacy, and car dealerships.	<p>characterized as being small local businesses generally boutique style retailers.</p> <p>A mix of small scale, eating and drinking establishments, and retailers can be supported in Downtown.</p> <p>There is also demand for a small grocer/market to serve a grab-n-go food need in the Downtown area—that can be supported by residents, employees, and tourists.</p>
<b>Industrial/Flex</b>			
Generally, rents have climbed to an all-time-high and vacancies have declined to very low levels.	Since 2011, there have been few industrial and flex buildings delivered to the Wenatchee market. Recent deliveries have been small of about 10,000 square feet or less.	Both modern and traditional industrial space demand is not aligned with the urban form and active use goals for Downtown Wenatchee. However, there can be some flex/maker type businesses that could serve the market and create a destination place. Some examples include, architectural salvage or antique stores, breweries and distilleries, or other small local manufactures.	<p>Oftentimes flex uses have an office component or adjacent office uses that are supported and compatible for these types of users.</p> <p>Providing flex space can help support the market demand for makers and manufacturers, creative office space, and unique flex space users that can create a placemaking identify for the Columbia Street Properties.</p> <p>Business incubator can be supported by this use.</p>
<b>Multifamily</b>			
Rents have climbed steadily to an all-time-high, while vacancy rates remaining healthy.	Sizable multifamily developments have been constructed recently delivering approximately 950 multifamily units to the market since 2011. These new unit deliveries have by in	Wenatchee has benefited from the natural beauty of its setting, attracting tourists and residents interested in outdoor recreation as well as its good quality of life. Population growth and household formation will continue to increase	Multifamily trends indicate a steady demand for multifamily units of one or two projects per year. However, the proposed Riverfront Village Apartments will likely capture near-term demand. There will still be a demand for multifamily

Market Trends	Deliveries	Demand Drivers	Market Potential
	<p>most part, been absorbed by the market.</p> <p>The Riverfront Village Apartments is expected to bring 454 units to the market. The proposed unit mix includes 33 studios, 290 1-bedroom units, and 131 2-bedroom units.</p>	<p>demand for housing. There will be an increasing demand for studio and 1-bedroom apartments to accommodate Wenatchee’s households who are one and two-person households.</p>	<p>in the mid to long-term years.</p> <p>There could be an opportunity to provide live-work units to support small entrepreneurs, makers, and artists.</p> <p>Some demand for ownership housing options as well.</p>

## 6. Financial Feasibility Analysis

To help the Chelan Douglas Regional Port Authority identify the highest and best use for the Columbia Street Properties, ECONorthwest conducted multiple financial feasibility analyzes to understand the cost of new construction and adaptive reuse for several uses. Understanding the costs and achievable rents of such uses will help illustrate which use might be more financially feasible or cost prohibitive.

At the most basic level, financial feasibility is determined when the rents (income) of a specific use are sufficient to cover the costs of construction or adaptive reuse, plus generate additional revenue to create some profit for the property owner. All uses that produce a positive return are regarded as financially feasible.

### 6.1 Pro Forma Analysis Approach

To understand the highest and best use for the Columbia Street properties, we created an analysis model that employs the same financial considerations a real estate developer would use to determine if a proposed development is financially feasible. These financial calculations are referred to as a “pro forma” model. A pro forma considers the size of the building and the revenue that building can deliver (from rents and sales prices) relative to the costs of constructing and operating the building. The analysis considered several design schemes based on input from the Port and it’s intended vision for properties.

More specifically, the analysis solved for a metric called “debt coverage ratios” (DSCR). DSCR is expressed as a ratio between the revenues of the entire project and its debt service costs. It is generally common for developers to acquire constructions loans to finance a development project. Financial institutions often use DSCR to underwrite a construction loan and evaluate whether the project will be able to pay back the loan, plus some interest and a buffer for risk. Industry standards suggest that a 1.15 to 1.25 is the typical DSCR range for underwriting requirements. In this fashion, the analysis can evaluate if different development options generate sufficient revenue to cover its debt obligations.

To complete this analysis, the analysis used financial inputs such as rent, operating costs, and development costs for each prototype modeled. After defining the available building areas, the analysis used the pro forma to calculate the revenue from the leasable square feet and then removed the operating costs (such as taxes, insurance, maintenance, management, select utilities) to arrive at an annual net operating income (a.k.a. NOI). Total development costs were calculated by applying the cost per square foot values to the gross square feet for each product type (e.g., retail, residential). These values are summed to a total hard cost along with calculated soft cost, contingency, and developer fee to arrive at the total development cost. Additional financial assumptions are applied to estimate a typical debt service payment (e.g. amount of the loan, term of the loan, and interest rates). The debt service coverage ratio is calculated by dividing the NOI by the debt service payment (Exhibit 6.1).

Exhibit 6.1. Debt Coverage Ratio Calculation

Source: ECONorthwest Analysis

$$DCR = NOI \div Debt\ Service$$

$$Debt\ Service = Loan\ payment\ for\ most\ of\ the\ total\ development\ costs$$

$$NOI = Rental\ revenue - operating\ costs - vacancy\ costs$$

**How Do Developers Determine if a Project is Feasible?**

At its simplest level, new development happens when developers have the necessary resources and when project profitability is higher than alternative investments. Several factors drive the equation to determine the financial feasibility of development. These factors are illustrated in Exhibit 1.

Exhibit 1: Illustration of Development Costs and Revenues

Source: ECONorthwest

Development feasibility varies across markets based on the above factors. Infeasibility of development occurs in weak markets due to the inability to achieve high enough rents to justify new construction or higher costs of more intense development. In moderately strong markets, low- to mid-size development is feasible. Bigger developments are feasible in strong markets due to high achievable rents and land costs that support increased building capacity.

## 6.2 Preliminary Range of Magnitude of the Envelope Financial Feasibility

Before the GBA design team developed a range of preliminary concepts, ECONW provided some initial financial testing on the “feasibility” of financial viability. Given the wide range of costs associated with new construction and adaptive reuse for the several uses under consideration, we used a low-end cost and a high-end cost for each use and determined the rents that would be needed to cover the costs of new construction or adaptive reuse. For simplicity terms, for each use analyzed we assumed a 2-story, 20,000 square foot building program and a floor plate of 10,000 square feet.

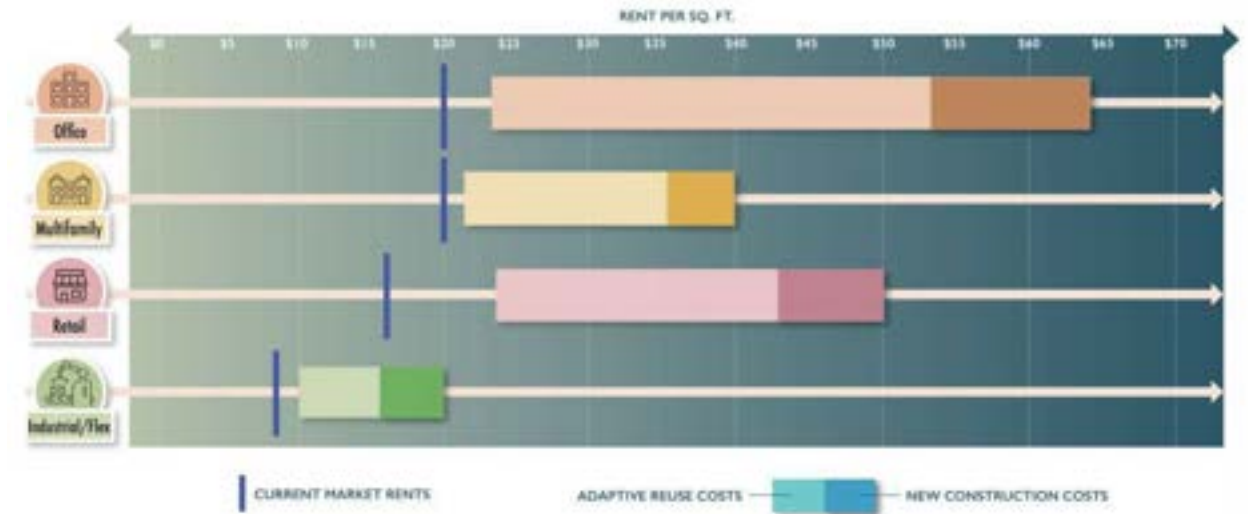
Initial findings include:

- **Office.** The office rents needed to cover the costs of new construction or adaptive reuse ranged between \$24 to \$63 per square foot. Current market rents for office in Wenatchee are not supportive of adaptive reuse or new construction. However, compared to retail costs, office could be more feasible if rents were higher.
- **Retail.** Similarly, to the office use, current retail rents do not support the costs of new construction or adaptive reuse.
- **Industrial/Flex.** Current rents are close enough to support adaptive reuse of industrial/flex spaces. New construction for industrial/flex space is substantially lower than that of office or retail uses. Depending on the prospect tenant of the industrial/flex space, rents could be high enough in the future to support new construction of industrial/flex space.
- **Multifamily.** Current rents for multifamily do not support the development of new construction or adaptive reuse of multifamily uses. Compared to office and retail uses, the rents needed to support new multifamily construction is slightly lower.

The exhibit below illustrates the range of rents needed to support new construction or adaptive reuse for different types of commercial and residential uses.

Exhibit 6.2. Rents Needed to Cover the Cost of New Construction or Adaptive Reuse by Use Type

Source: ECONorthwest Analysis



## 6.3 Conceptual Schemes Financial Feasibility

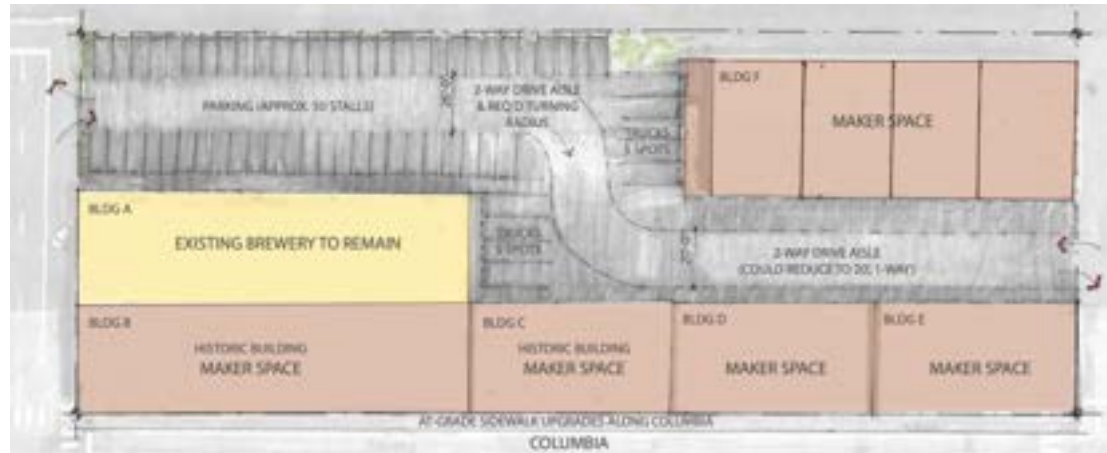
In the second phase of the project, ECONorthwest conducted a financial feasibility analysis on three conceptual schemes developed by Graham Baba Architects. The schemes were designed to convey varying degrees of development potential and programmed in a way that would best support the vision of the Port. Below we provide a summary of each of the schemes evaluated for financial feasibility.

### 6.3.1 Scheme 1 - Risk Reducing

The design of this scheme tries to utilize all buildings to full potential while making minimal investments to the properties to get them leased up and available to the private market. This scheme makes minimal development improvements and is designed to support maker space and light manufacturing uses on the site.

Exhibit 6.3. Scheme – Risk Reducing

Source: Graham Baba Architects



### 6.3.2 Medium Development

This second scheme makes gradual investments to the properties and develops the site to create a placemaking destination for Wenatchee residents. Several mix of uses are combined across the buildings which include a brewery, a local grocery store/ and or retail, maker space/ light manufacturing and creative uses like indoor recreation and black box theater that occupy big spaces.

Exhibit 6.4. Scheme 2 – Medium Development

Source: Graham Baba Architects

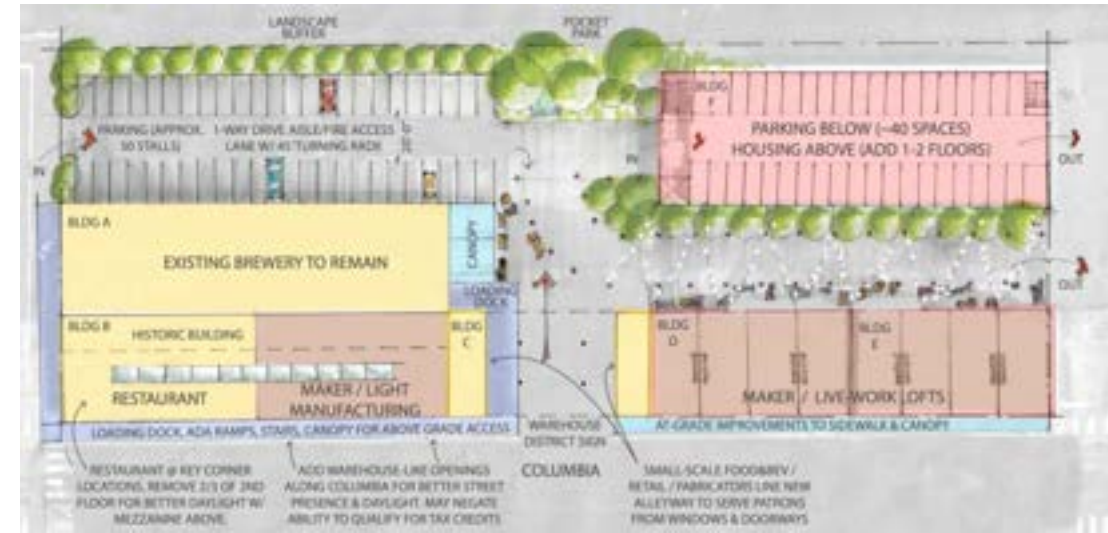


### 6.3.3 Full Scale Development

The third scheme illustrates full scale development of the properties with a mix commercial and residential uses. Part of the site takes would be occupied with a brewery, restaurants and maker space/ light manufacturing, while the rest of the site is dedicated for residential apartments and live-work units.

Exhibit 6.5. Scheme 3 – Full Development

Source: Graham Baba Architects



### 6.3.4 Baseline Feasibility Conditions of Schemes

Within each of the three schemes, the baseline feasibility analysis analyzed the total development costs and the capitalized value of the entire development (a metric used to assess the value of real estate based on a property cash flow/revenues). We then calculated the baseline DSCR that would be achieved with the rent assumptions detailed below.

Exhibit 6.6. Key Assumptions for Financial Feasibility

Source: ECONorthwest

Design Scheme	Assumed Costs	Assumed rents	Infrastructure Improvements	Incentives
Scheme 1	Low-end of range	Current market rents (top end of range)	Limited, no landscaping	Historic preservation
Scheme 2	Low to middle end of range	Higher than market (20-40%)	Greater improvements with landscaping	Historic preservation
scheme 3	Middle portion of range	Higher than market (40-60%)	Greater improvements with landscaping	None

Exhibit 6.7 compares the total development costs, capitalized value, and the baseline DSCR for each scheme. A DSCR less than 1.0 indicates that a development is not financially feasible. A DSCR of 1.0 shows that a development has break-even, while a DSCR greater than 1.0 indicates that a development is feasible and can cover the costs of construction plus interest rates of the loan.

Key findings of our financial feasibility analysis show that:

- All three schemes do not have positive net income
- Each scheme will require some degree of gap funding to be financially feasible
- Some schemes are closer to the target DSCR threshold than others
- A mix of uses is likely needed to achieve overall site feasibility (No single use performs well by itself)

Exhibit 6.7. Development Cost and Baseline DSCR

Source: ECONorthwest

Design Scheme	Total Development Cost per SF of Building	Total Development Cost	Capitalized Value	Baseline DSCR
Scheme 1	\$155	\$10M	\$9.2-10.9M	0.93
Scheme 2	\$225	\$12.4M	\$12.0-\$14.4M	0.90
scheme 3	\$295	\$24M	\$24.3-\$29.7M	0.86

Based on our pro forma analysis, none of the schemes are financially feasible. The next analysis that we conducted was to see how much gap funding is needed to make a project feasible while taking into account financial institution lending requirements. Industry standards suggest that a 1.15 or 1.25 DSCR is needed to qualify for a construction loan for a project. Exhibit 6.8 below shows the range of gap funding needed to reach the target DSCR for each scheme.

This analysis indicates that gap funding is needed to make any desired development scheme financially feasible. Based on our calculations the range of gap funding needed varies by scheme and target DSCR requirement. Generally, the gap funding needed ranges between \$2,000,000 to \$7,500,000 million.

Exhibit 6.8. Gap Funding Needed by DSCR and Scheme

Source: ECONorthwest

Design Scheme	Target of 1.15 DSCR		Target of 1.25 DSCR	
	Gap Funding	% of Hard Costs	Gap Funding	% of Hard Costs
Scheme 1	\$2,000,000	26%	\$2,500,000	32%
Scheme 2	\$2,750,000	28%	\$3,500,000	36%
scheme 3	\$6,000,000	32%	\$7,500,000	41%

## 6.4 Final Scheme Financial Feasibility

After presenting financial feasibility findings to the Port, the design schemes were revised, and a single scheme with an alternative moved forward for final feasibility analysis. The development program for this scheme is detailed below. The programmatic area totals about 52,000 gross square feet across 6 buildings. Maker space/ light industrial makes up the largest share of use (21,624 gsf) followed by retail and food & beverage uses (18,090 gsf). Storage and warehouse in the basement of the buildings make up about 12,000 gross square feet of space. In the alternative scheme a total of five residential units are designed across buildings D and E to create live-work units with maker space/ light industrial in the ground floor.

Exhibit 6.9. Final Scheme Program Area and Uses

Source: Graham Baba Architects

BUILDING	STORAGE AND WAREHOUSE			MAKER SPACE AND LIGHT INDUSTRIAL			RETAIL AND FOOD + BEVERAGE			RESIDENTIAL			BUILDING TOTALS (GSF)	BUILDING TOTALS (NSF) <sup>1</sup>			
	GROSS (GSF) <sup>2</sup>	UNLEASABLE AREA	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	UNLEASABLE AREA	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	UNLEASABLE AREA	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	UNLEASABLE AREA	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>					
A <sup>3</sup>							8,770	-	0				8,770	8,770			
B <sup>4</sup>	8,033	-	1,319	=	6,714	1,635	-	404	=	1,231	6,983	-	1,213	=	5,770	16,651	13,715
C <sup>4</sup>	4,084	-	2,413	=	1,671	3,227	-	653	=	2,574	1,034	-	218	=	816	8,345	5,061
D <sup>5</sup>			0		0	1,925	-	597	=	1,328	1,303	-	199	=	1,104	3,228	2,432
E <sup>5</sup>			0		0	4,240	-	0	=	4,240					4,240	4,240	4,240
F <sup>5</sup>			0		0	10,596	-	849	=	9,747					10,596	9,747	
TOTAL SITE	12,117		8,385		8,385	21,624		19,120		19,120	18,090		16,460		0	51,830	43,965

**COMMON SITE ELEMENTS**

AUTO PARKING COUNT: 35 SPACES

TRUCK PARKING COUNT: 4 SPACES

NOTES:

1 Leasable areas are approximate calculations provided for conceptual design purposes only. The areas do not represent leasable areas as calculated per full BOMA rules.

2 Gross areas are based upon approximate total construction areas for each program type.

3 Building A existing brew-pub use is calculated as food + beverage for the purpose of this analysis. Current analysis does not include second floor in all schemes.

4 Building B & C basements are calculated as storage and warehouse.

5 Building D, E, and F do not include mezzanines built as part of tenant improvements, labeled on plans as "Possible Mezzanines, Future by Tenant". If all tenants build mezzanines, leasable areas would increase in D, E, and F by 225sf, 2,275sf, and 3,000sf respectively.

Exhibit 6.10. Alternative Scheme Program Area and Uses

Source: Graham Baba Architects

BUILDING	STORAGE AND WAREHOUSE			MAKER SPACE AND LIGHT INDUSTRIAL			RETAIL AND FOOD + BEVERAGE			RESIDENTIAL			BUILDING TOTALS (GSF)	BUILDING TOTALS (NSF) <sup>1</sup>			
	GROSS (GSF) <sup>2</sup>	UNLEASABLE AREA	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	UNLEASABLE AREA	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	UNLEASABLE AREA	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	UNLEASABLE AREA	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>					
A <sup>3</sup>							8,770	-	0				8,770	8,770			
B <sup>4</sup>	8,033	-	1,319	=	6,714	1,635	-	404	=	1,231	6,983	-	1,213	=	5,770	16,651	13,715
C <sup>4</sup>	4,084	-	2,413	=	1,671	3,227	-	653	=	2,574	1,034	-	218	=	816	8,345	5,061
D			0		0	1,925	-	597	=	1,328	1,328	-	0	=	1,328	4,556	3,760
E			0		0	4,240	-	0	=	4,240					4,849	9,089	9,089
F <sup>5</sup>			0		0	10,596	-	849	=	9,747					4,849	10,596	9,747
TOTAL SITE	12,117		8,385		8,385	21,624		19,120		19,120	18,090		16,460		6,177	58,007	50,142

**COMMON SITE ELEMENTS**

AUTO PARKING COUNT: 35 SPACES

TRUCK PARKING COUNT: 4 SPACES

NOTES:

1 Leasable areas are approximate calculations provided for conceptual design purposes only. The areas do not represent leasable areas as calculated per full BOMA rules.

2 Gross areas are based upon approximate total construction areas for each program type.

3 Building A existing brew-pub use is calculated as food + beverage for the purpose of this analysis. Current analysis does not include second floor in all schemes.

4 Building B & C basements are calculated as storage and warehouse.

5 Building F does not include mezzanines built as part of tenant improvements, labeled on plans as "Possible Mezzanines, Future by Tenant". If all tenants build mezzanines, total leasable area would increase by 3,000sf.



### 6.4.1 Summary of Final Scheme Financial Feasibility

ECONorthwest analyzed the financial feasibility of the final scheme and alternative with current market rents, detailed in the exhibit below.

#### Current Market Rents do not Support Assumed Debt Obligation

Modeling for current market rent assumptions we find that the revenues generated across each building are not enough to pay its debt obligation required with a 1.25 debt service coverage ratio. Each building’s calculated debt service coverage ratio falls at or below 0.49 DSCR— meaning that revenues generated by the buildings can only cover about 49 percent or less of the debt.

This indicates one of two things: greater rent revenues are needed to support the debt obligation or large outside funding or subsidies are needed to close the financial gap. Assuming current market assumptions the project will not be able meet underwriting debt service coverage targets and would require a construction subsidy of approximately \$16,100,000 million for the final scheme design and \$17,550,000 million for the alternative scheme.

#### Financial Gap Challenges Remain with Rent Increases and Historic Tax Credits

Our next step in this analysis was to find out how much more rent revenue is needed to support the target DSCR threshold. The exhibit below shows that even after modeling for a 150 percent increase in rents there is still a financial gap. Considering that Buildings B and C could be eligible for Federal Historic Tax Credits we next modeled the financial performance of all buildings with this historic tax credit applied.

The value of the historic tax credit improves the financial performance of Buildings A, B, and C by approximately \$2.85 million, thereby reducing the needed construction subsidy. Our analysis indicates that substantial rent increases coupled with eligible historic tax credits are not enough to make the entire development feasible and would still require a construction subsidy of about \$2.88 million for the final scheme and \$2.2 million for the alternative scheme.

Exhibit 6.11. Summary of Rent Assumption and Debt Service Coverage Ratio

Source: ECONorthwest

	Current Market Assumptions		Break Even Market Assumptions (150%+ increase)	
	Final Scheme	Alt. Final Scheme	Final Scheme	Alt. Final Scheme
Rent Assumptions (annual per sf)	\$20.00 - Residential \$16.50 - Retail / Food + Beverage \$12.50 - Maker Space / Light Industrial \$8.50 - Storage and Warehouse		\$50.00 - Residential \$41.25 - Retail / Food + Beverage \$31.25 - Maker Space / Light Industrial \$21.25 - Storage and Warehouse	
Debt Service Coverage Ratio DSCR	0.49 - Buildings A,B,C 0.30 - Buildings D,E 0.36 - Building F	0.49 - Buildings A,B,C 0.43 - Buildings D,E 0.37 - Building F	1.25 - Buildings A,B,C 0.77 - Buildings D,E 0.93 - Building F	1.26 - Buildings A,B,C 1.09 - Buildings D,E 0.93 - Building F
Subsidy needed to reach 1.25 DSCR (w/ historic tax credits applied)	\$6.6 M - Buildings A,B,C \$3.2 M - Buildings D,E \$3.45 M - Building F	\$9.45 M - Buildings A,B,C \$4.65 M - Buildings D,E \$3.45 M - Building F	\$0 - Buildings A,B,C \$1.63 M - Buildings D,E \$1.25 M - Building F	\$0 - Buildings A,B,C \$0.95 M - Buildings D,E \$1.25 M - Building F
Subsidy needed to reach 1.25 DSCR (w/o historic tax credits applied)	\$9.45 M - Buildings A,B,C No change for other buildings		\$2.9 M - Buildings A,B,C No change for other buildings	

### 6.4.2 Financial Feasibility Key Takeaways

- **Total site development as proposed (final and alternative scheme) is not feasible without significant outside funding or subsidies to close the gap.** Increases in construction costs from previous analysis have grown the financial feasibility gap.
- **Development of Buildings A, B, and C is the closest to financial feasibility, but would require:** significant premium in rental rates, historic preservation tax credits acquired and/or other gap funding.
- **Tear down and redevelopment of Buildings DE and F could yield better highest and best uses.** The high cost of rehabilitation may be approaching or exceeding new construction prices. It’s unclear whether retrofitted buildings would fetch additional premium.

## 7. Fiscal and Economic Analysis

A fiscal and economic analysis can further help the Port evaluate the development impact of the proposed final scheme onto the City of Wenatchee and region. From a local taxation perspective, new land development will generate incremental revenues for the city of Wenatchee and the Chelan County, but other taxing jurisdictions may also benefit.

New development within established cities typically offers economies of scale concerning its fiscal position. In other words, new construction can generate more tax revenues than service costs. In this situation, governments have choices on how to "spend" these fiscal surpluses. Some may choose to offer higher levels-of-service or expand the scope of the services they offer. Others may choose to "return" those surpluses to local taxpayers and residents in the form of lower taxes.

While local governments do not balance their budgets in this fashion, it is a useful perspective to help decision-makers weigh the pros and cons of specific land use and the economic development decisions in front of them. The Port has a keen interest in seeing that development proceeds in a fashion that reinforces essential community values and broader fiscal sustainability. This fiscal impact analysis allows policymakers and the Port understand how development of the Columbia Street Properties will generate new tax revenues if development of the final scheme were to be executed.

### 7.1 How will Development Impact Tax Revenues?

Components of development that impact tax revenues include the timing, scale, and quality of construction. These factors drive General Fund tax revenues in two respects. Operating tax revenues are differentiated into two categories:

- **One-time Revenues.** These General Fund revenues are tied to the construction of commercial products. Specifically, they include the retail sales tax on construction (material and labor), which is taxable under Washington state law.
- **Recurring Revenues.** These General Fund revenues are derived from the occupation of commercial structures by residents, businesses, and employees. Specific revenues include the property tax, retail sales tax, and utility taxes.

As the Exhibit below illustrates, incremental tax revenues generated from the development will generate approximately \$5.0 million over the next 20 years if the project were to be constructed. The single most significant revenue streams (e.g., retail sales, property, and utility taxes) mirror the Wenatchee's and Chelan County's current revenue structure. Also, sales taxes from ongoing retail sales account for the lion's share of the overall tax impact.

Exhibit 7.1. Incremental General Fund Revenues from Development (20-year cash flow)

Source: ECONorthwest Calculations

Revenue Source	City	County
Property Taxes (leasehold)	\$400,000	\$360,000
Sales Tax on Construction	\$170,000	\$250,000
Ongoing Sales Tax	\$1,390,000	\$2,050,000
Utility Taxes	\$80,000	N/A
<b>Total Incremental Revenues</b>	<b>\$2,040,000</b>	<b>\$2,970,000</b>

### 7.2 How does the Project Produce other Local Community and Economic Impacts?

Economic impacts are the changes in economic activity that result from an investment of dollars that create new demand for goods and services. They are often measured through changes in spending, jobs, incomes, tax revenues, and the like. Future development will generate new economic activity on the site and in the local economy.

This new economic activity will positively impact the local economy by bringing in new direct investment, more opportunities for local businesses to serve the regional demand and enhancing the productivity of existing retail and service industries in the region. These economic effects would include the potential to support and even catalyze commercial development and contribute to Chelan and Douglas counties economic development objectives for increasing the quality of life, growing tourism, supporting community retail, and producing jobs with salaries that match local housing costs.

The development programs described in this analysis reflect approximately \$19 million of dollars of direct construction investment (Alternative Scheme) as well as the occupation of 60,000 square feet of commercial and residential space. The economic impacts are summarized in the exhibits below.

Exhibit 7.2. Construction Economic Impacts

Source: ECONorthwest Calculations, Washington State Department of Commerce Input/output Impact Model

	Direct Effect	Multiplier Effect
Economic Output	\$19,000,000	\$16,000,000
Jobs	120	100
Wages/Income	\$9,400,000	\$6,900,000

Exhibit 7.3. Operating Economic Impacts

Source: ECONorthwest Calculations, Washington State Department of Commerce Input/output Impact Model

	Direct Employment	Multiplier Effect
Economic Output	\$20,700,000	\$7,500,000
Jobs	70	40
Wages/Income	\$4,400,000	\$3,200,000

Summary of this fiscal/economic analysis indicates that:

- The Alternative scheme reflects over \$25 million in total design and construction investment.
- The Alternative scheme reflects over \$20.7 million in annual economic output of firms at the project. The commercial components for the project will capture future spending from the broader retail and services marketplace. It may also support the “import” of spending from other places as good and services are exported to those communities.
- The construction of the project could provide local employment in the range of 70 jobs based on the types of uses and planned square feet of building area (these are job-years and reflect an equivalent amount of job support given the one-time nature of the construction spending). The additional positions within the project would have a positive economic impact on the local economy. Future employees at the site are going to spend money in the local economy, pay taxes, and many of them, will choose to live in the community and buy or rent homes.
- Construction of the development over the planned build-out period would also create temporary construction jobs within the region. Construction investment could support between 120 jobs in the construction industries.
- The multiplier effect (e.g., the effect of supply chain purchases and employee spending) also contributes to economic growth. The construction of the project will support an additional 100 jobs in the state with many of those jobs in the region. The occupation of the building by firms will support an additional 40 jobs in the state (with most of the jobs in the region).

The development would also attract additional visitors and spending to the region, and this activity would have spillover effects for the local economy. Specifically, these spillovers are likely to increase the business productivity of these existing enterprises.

# APPENDIX A: SCHEME DETAILS



# 4. APPENDIX A: SCHEME DETAILS

PRICING SET

PAE BASIS OF DESIGN NARRATIVE

CONSTRUCTION COST ANALYSIS

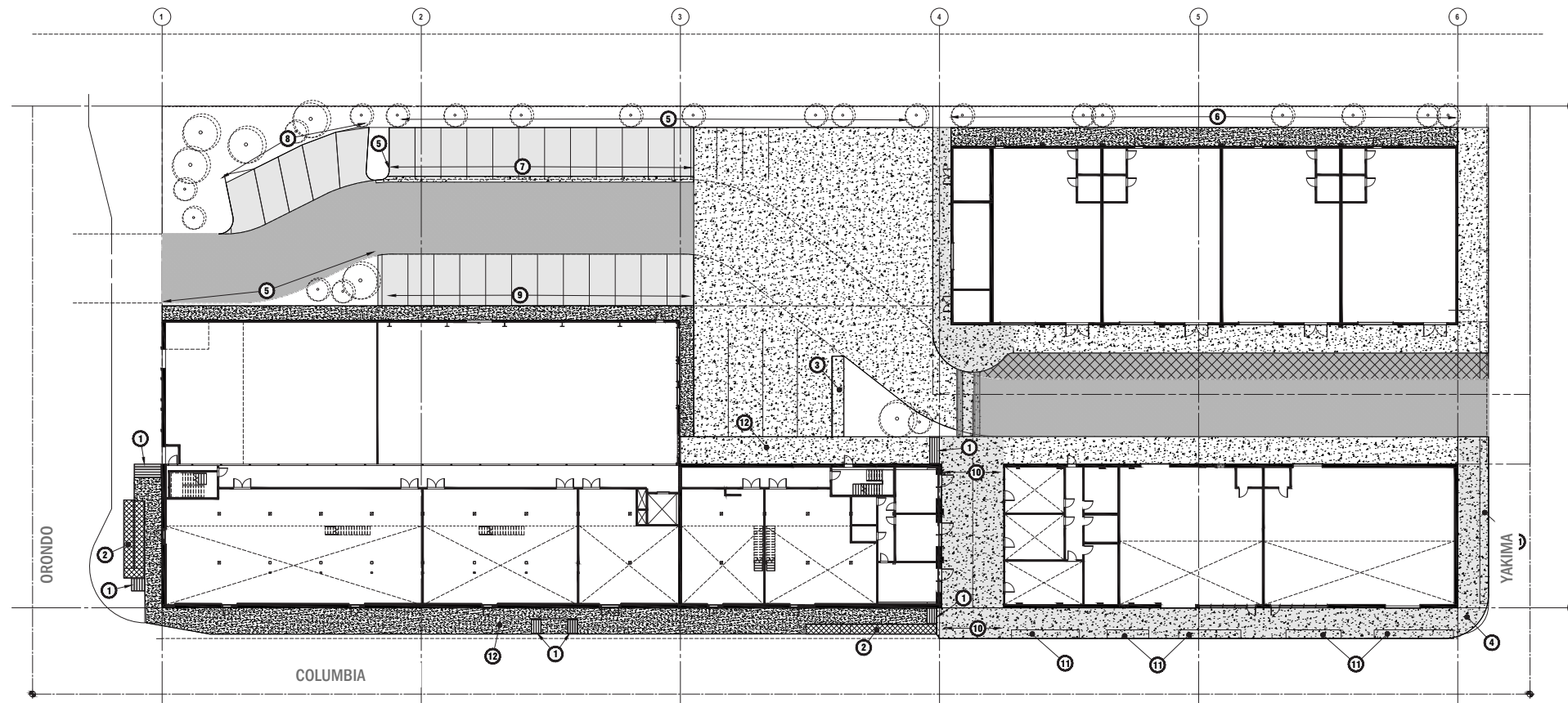
HISTORIC PRESERVATION INCENTIVES AND CONTROLS

**COLUMBIA STREET STUDY**  
**101 Columbia Street**  
**Wenatchee, WA**  
**98801**

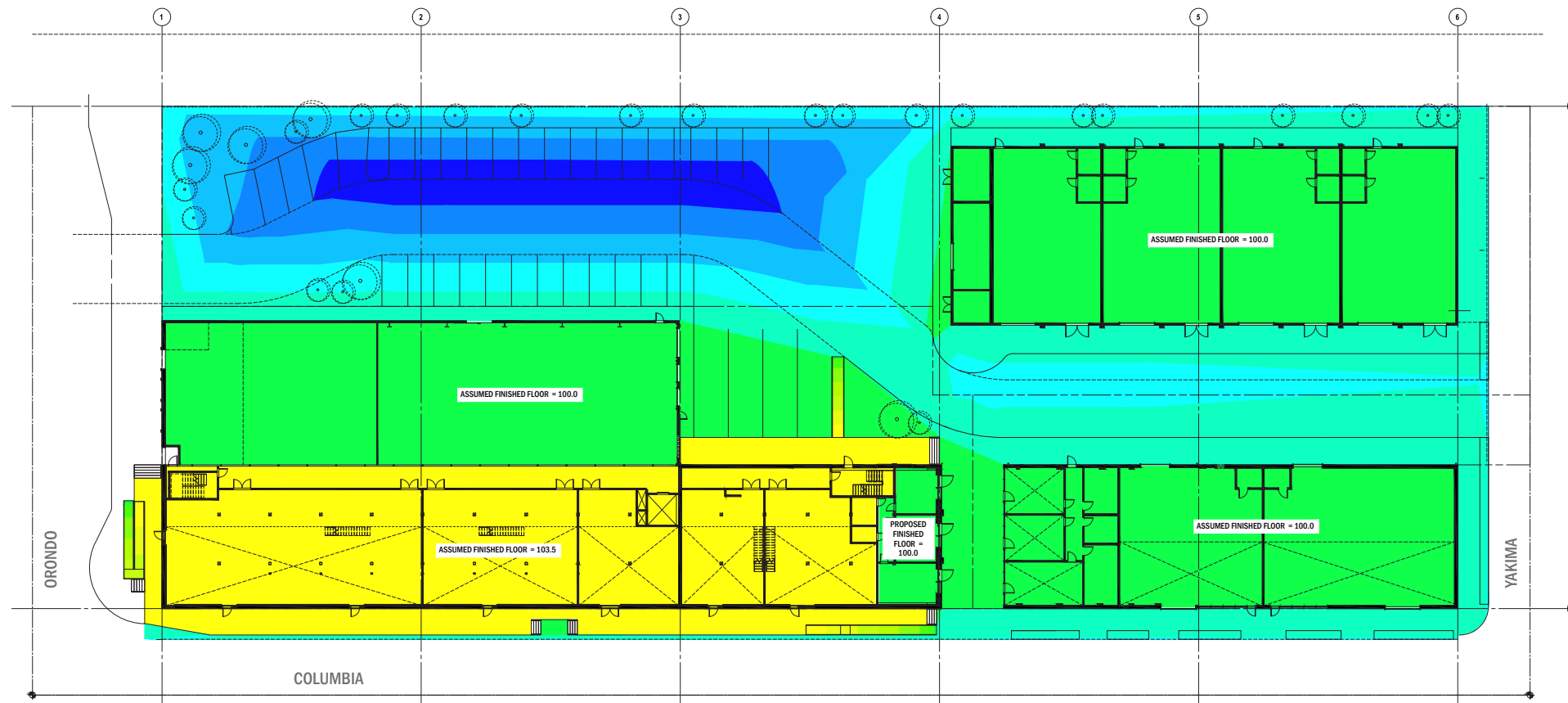
**FEASIBILITY PRICING SET**  
**2/25/2022**

**DRAWING INDEX**

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C2.0	CONCEPTUAL COMPOSITE UTILITY AND STORMWATER PLAN
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S2.34	ROOF FRAMING PLAN BUILDING F
M2.01	BASEMENT LEVEL PLAN
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P2.01	BASEMENT LEVEL PLAN
P2.02	LEVEL 1 FLOOR PLAN
P2.03	LEVEL 2 FLOOR PLAN
P2.04	ROOF PLAN



**CONCEPTUAL PAVING PLAN**  
SCALE: 1" = 20'



**CONCEPTUAL GRADING PLAN**  
SCALE: 1" = 20'

**PAVEMENT LEGEND**

DEPTHS SHOWN ARE CONCEPTUAL AND SHOULD BE CONFIRMED BY A GEOTECH.

	PROPOSED HEAVY ASPHALT PAVEMENT 4" ASPHALT OVER 8" CRUSHED SURFACING
	PROPOSED LIGHT ASPHALT PAVEMENT 3" ASPHALT OVER 6" CRUSHED SURFACING
	PROPOSED CONCRETE WALK (NO VEHICULAR TRAFFIC) 5" CONCRETE OVER 8" CRUSHED SURFACING
	PROPOSED CONCRETE PAVEMENT 6" CONCRETE OVER 6" CRUSHED SURFACING
	DIFFERENTIATED ASPHALT (E. PAINT, STAMP)
	DIFFERENTIATED CONCRETE (E. STAMP/TEXTURE, PIGMENT/PAINT)

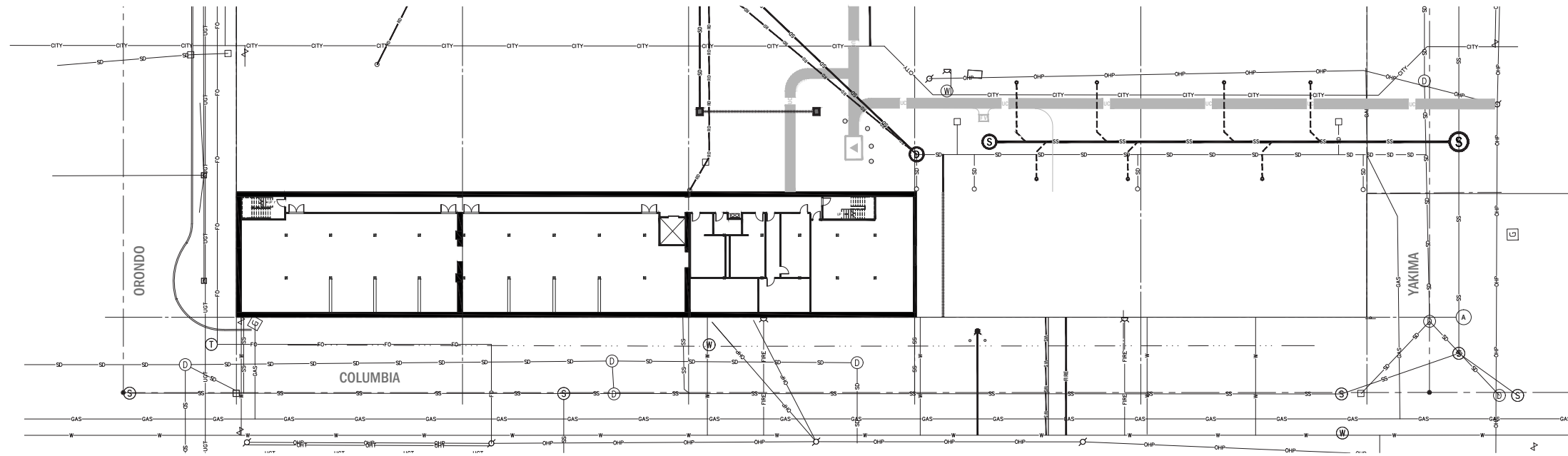
**KEYED NOTES - PROPOSED**

1	STAIRCASE
2	ACCESSIBLE RAMP
3	LOADING RAMP
4	BLENDED TRANSITION/CURB RAMP
5	TRAFFIC CURB
6	PEDESTRIAN CURB
7	VALLEY GUTTER
8	RIBBON/FLAT CURB
9	WHEELSTOPS
10	REMOVABLE BOLLARDS
11	LANDSCAPE BUFFER OR MOVEABLE PLANTERS
12	LOADING DOCK/ELEVATED WALK

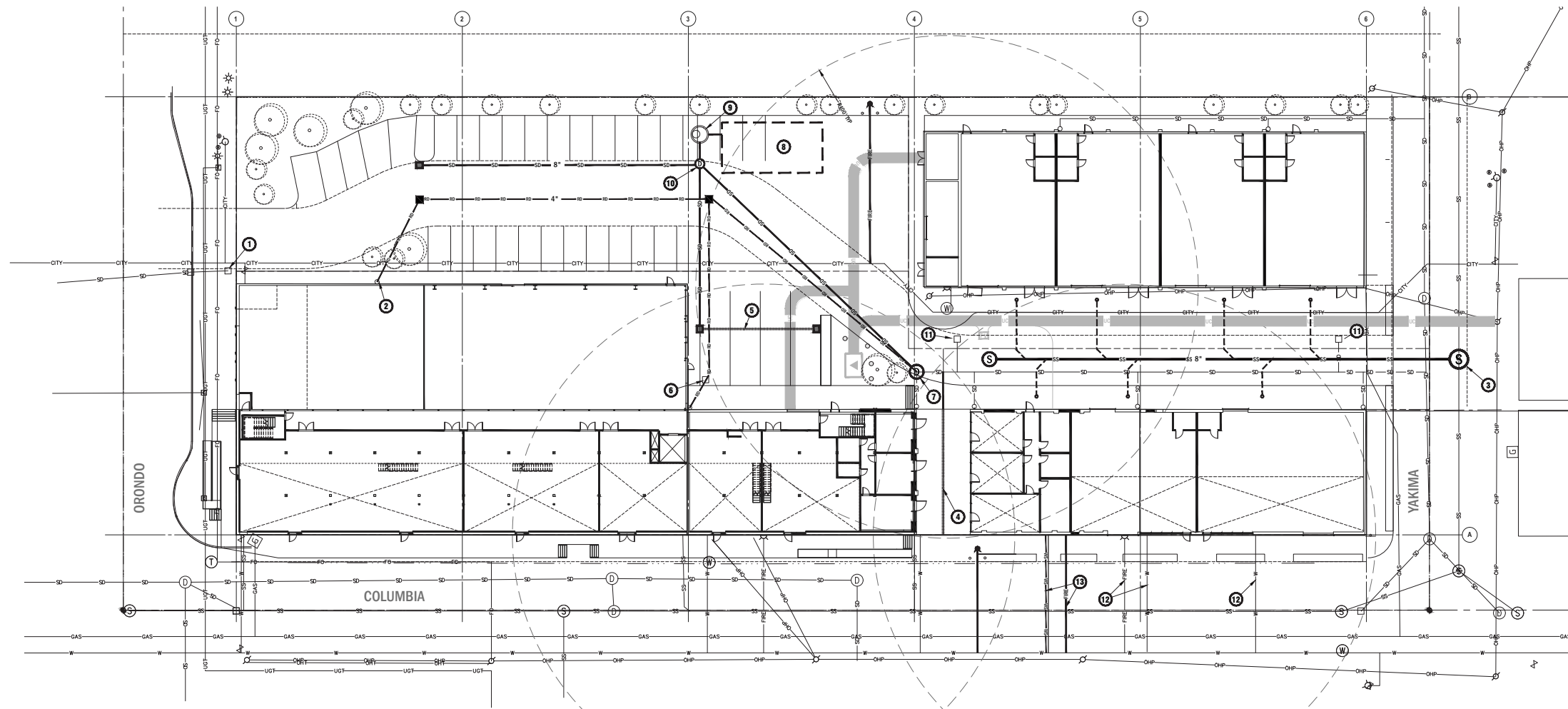
ELEVATIONS SHOWN ARE BASED ON ASSUMED FINISHED FLOOR AT GRADE = 100.0

**Elevations Table**

Number	Minimum Elevation	Maximum Elevation	Area	Color
1	98.5	99.2	2512.7	Blue
2	99.2	99.4	4434.0	Light Blue
3	99.4	99.6	5752.5	Light Green
4	99.6	99.8	8696.2	Light Yellow
5	99.8	100.0	20577.4	Yellow
6	100.0	100.1	29691.1	Light Green
7	100.1	100.5	30.4	Green
8	100.5	101.1	45.7	Light Green
9	101.1	101.7	45.7	Light Green
10	101.7	102.3	72.0	Light Green
11	102.3	102.9	65.7	Light Green
12	102.9	103.5	15561.1	Light Green



**BASEMENT LEVEL CONCEPTUAL COMPOSITE UTILITY AND STORMWATER PLAN**  
SCALE: 1" = 20'



**LEVEL 1 CONCEPTUAL COMPOSITE UTILITY AND STORMWATER PLAN**  
SCALE: 1" = 20'

**BASIS NOTES**

1. ARCHITECTURAL BACKGROUNDS DATED 02/24/2021
2. SURVEY HAS NOT BEEN PREPARED FOR THIS PROJECT. LOCATIONS OF EXISTING SITE FEATURES AND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED FROM RECORDS PROVIDED BY THE CURRENT PROPERTY OWNER AS WELL AS PUBLIC RECORDS AND GIS INFORMATION. AS THE AFOREMENTIONED PRODUCTS WERE NOT PREPARED FOR THE PROJECT OR ARE GENERAL INFORMATION QUALITY, THEY CANNOT BE RELIED UPON. VERIFY THE ACCURACY OF ALL FEATURES AND UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREIN WHICH MAY AFFECT THE IMPLEMENTATION OF THIS PLAN.
3. A GEOTECHNICAL SITE CHARACTERIZATION CONSISTENT WITH WCC 9.20 HAS NOT BEEN PERFORMED. COMPLETION OF THIS INVESTIGATION IS REQUIRED TO DEMONSTRATE SUITABILITY FOR THE SUBSURFACE STORMWATER DISPOSAL SHOWN ON THIS PLAN.

**LEGEND**

SD	EXISTING STORM DRAIN
SS	EXISTING SANITARY SEWER
FM	EXISTING FORCE MAIN
W	EXISTING WATER LINE
OHP	EXISTING OVERHEAD POWER
UGP	EXISTING UNDERGROUND POWER
TEL	EXISTING TELEPHONE
FL	EXISTING FIBER LINE
IR	EXISTING IRRIGATION LINE
GAS	EXISTING GAS LINE
EP	EXISTING POWER POLE
PV	EXISTING POWER VAULT
SW	EXISTING TELEPHONE VAULT OR RISER
SL	EXISTING DRYWELL OR STORM DRAIN MANHOLE
S	EXISTING CATCH BASIN
SB	EXISTING SANITARY SEWER MANHOLE
FD	EXISTING FIRE HYDRANT
WV	EXISTING WATER VALVE
WM	EXISTING WATER METER
WEL	EXISTING WATER WELL
SDP	PROPOSED STORM DRAIN
SSP	PROPOSED STORM DRAIN
SSL	PROPOSED SANITARY SEWER
SSL	PROPOSED SANITARY LATERAL
WDL	PROPOSED DOMESTIC WATER SERVICE
FLP	PROPOSED FIBER LINE
CON	PROPOSED CONDUIT
PV	PROPOSED POWER VAULT
SC	PROPOSED SWITCH CABINET
PT	PROPOSED POWER TRANSFORMER
FP	PROPOSED FIBER PEDESTAL
CB	PROPOSED CATCH BASIN
SDM	PROPOSED STORM DRAIN MANHOLE
SBM	PROPOSED SANITARY SEWER MANHOLE
SCM	PROPOSED SANITARY SEWER CLEANOUT
WIV	PROPOSED WATER OR IRRIGATION VALVE
FRA	PROPOSED FIRE HYDRANT ASSEMBLY

**KEYED NOTES - PROPOSED**

1. ADD RISERS, ADA COMPLIANT FRAME AND LID TO EXISTING CB
2. DOWNSPOUT CONNECTION WITH CLEANOUT, TYP ALL DOWNSPOUTS
3. INSTALL 96" DIAM. SSMH OVER EXISTING 30" R.C. PIPE
4. TRENCH DRAIN WITH ADA COMPLIANT GRATE
5. TRENCH OR SLOT DRAIN
6. REMOVE CATCH BASIN
7. CONNECT TO EXISTING STORM
8. ROCK FILLED INFILTRATION TRENCH
9. TWO BASIC TREATMENT MEDIA CARTRIDGES IN 60" DIAM. CATCH BASIN
10. SPLITTER CATCH BASIN
11. REPLACE EXISTING CATCH BASIN WITH BASIC TREATMENT MEDIA CARTRIDGE CATCH BASIN
12. ABANDON EXISTING WATER/FIRE LINE IN PLACE.
13. WATER SERVICE AND FIRE LINE. SEE MEP FOR SIZE

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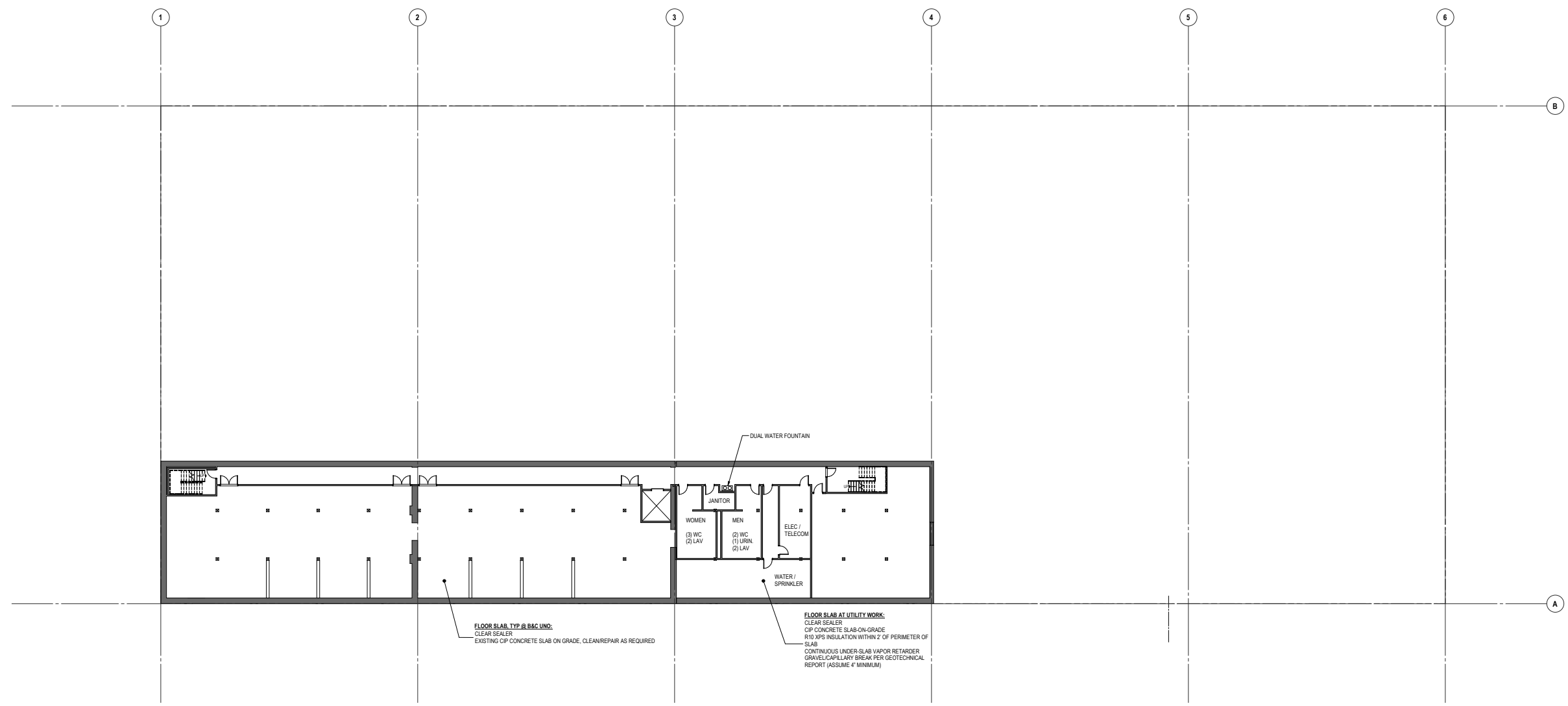
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**CONCEPTUAL COMPOSITE UTILITY AND STORMWATER PLAN**  
Sheet:

**C2.0**





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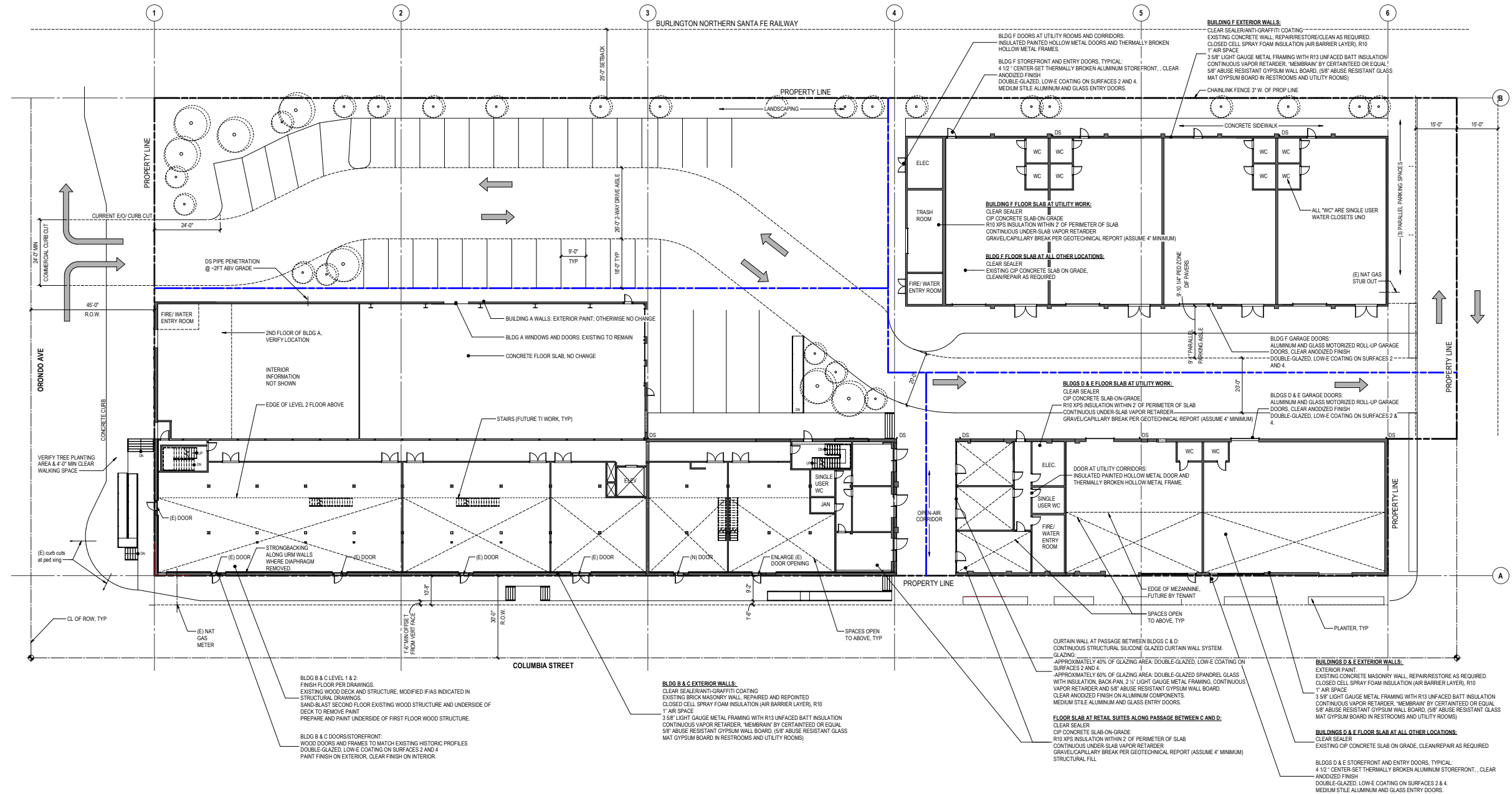
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**BASEMENT LEVEL PLAN**

Sheet:

**A2.01**

**1 BASEMENT LEVEL PLAN**  
SCALE: 1/16" = 1'-0"



1 SITE & LEVEL 1 FLOOR PLAN  
SCALE: 1/16" = 1'-0"

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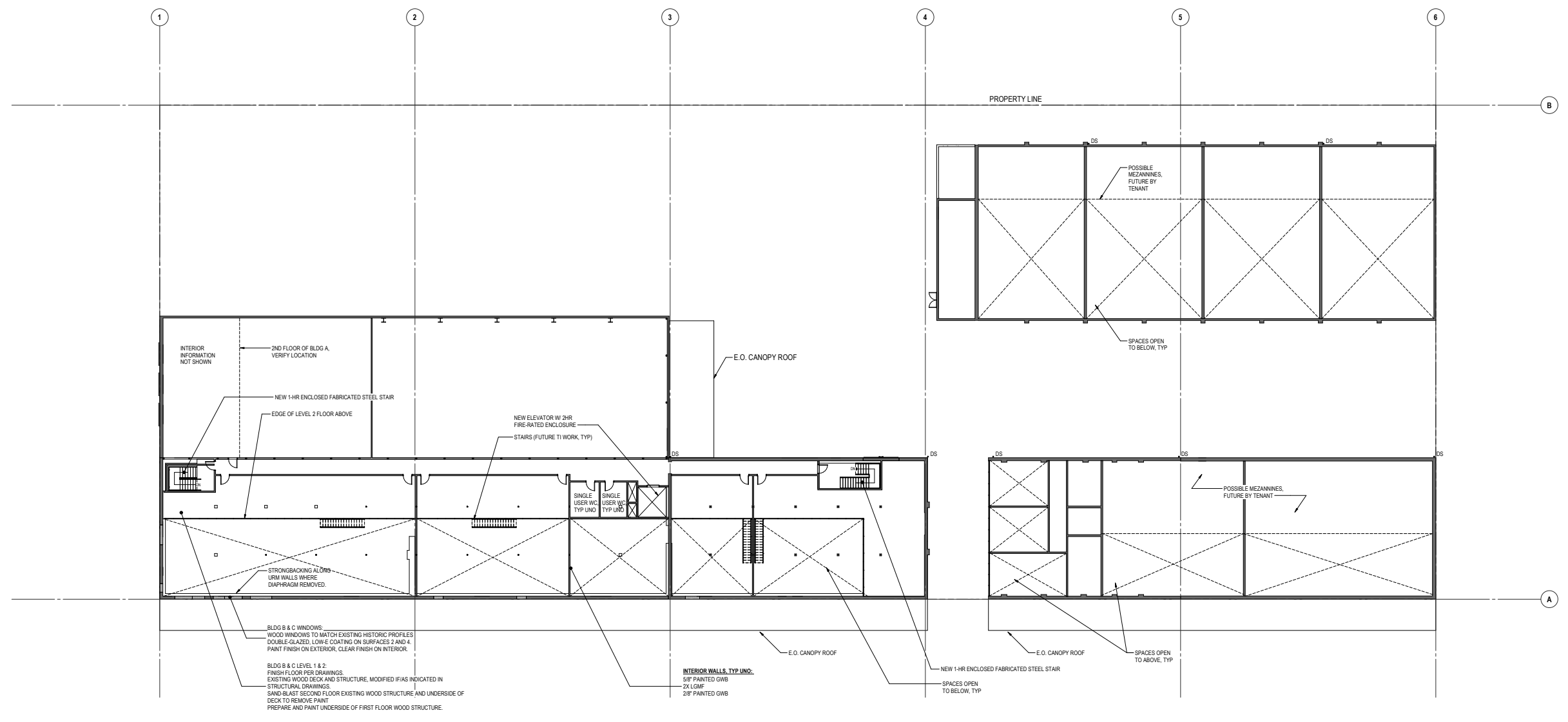
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Sheet contents:  
SITE & LEVEL 1 FLOOR PLAN

Sheet:



**1 LEVEL 2 FLOOR PLAN**  
SCALE: 1/16" = 1'-0"

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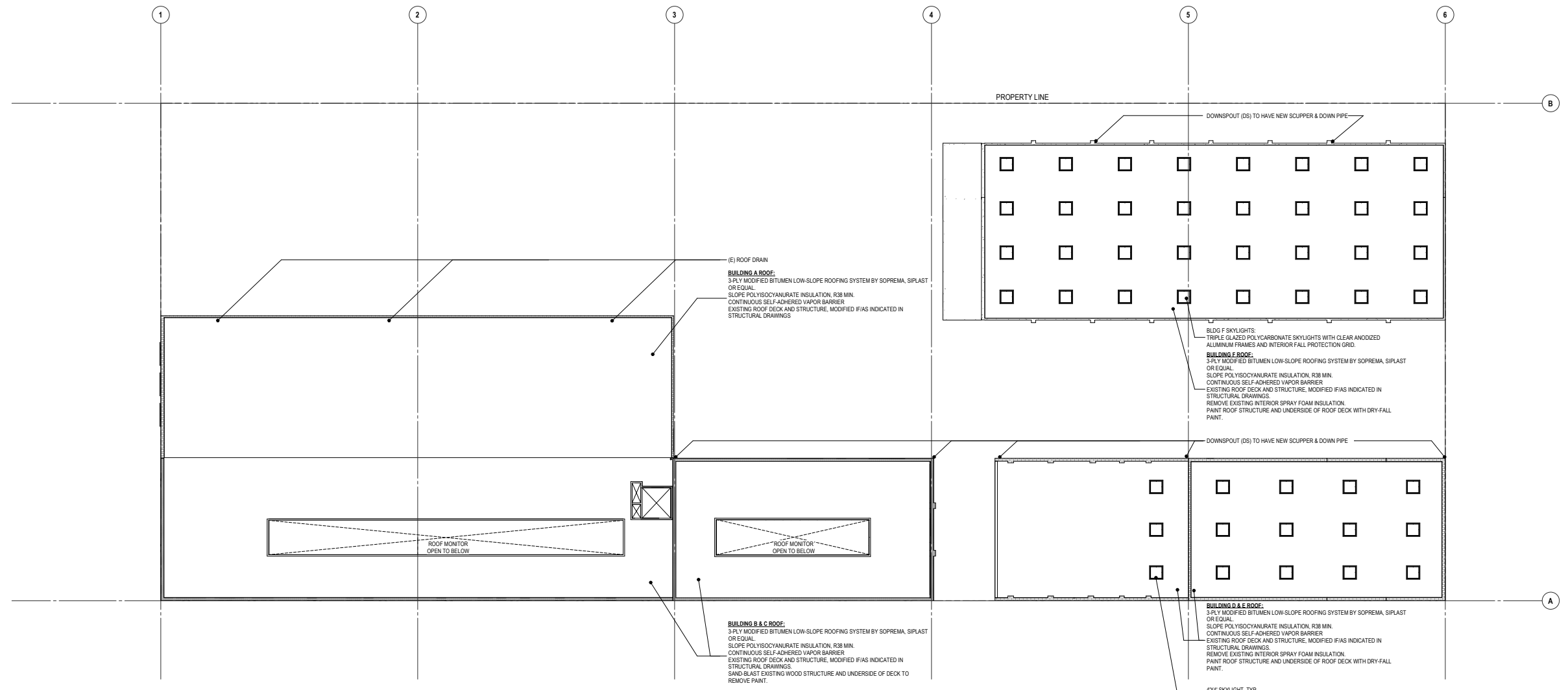
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Sheet contents:  
**LEVEL 2 FLOOR PLAN**

Sheet:

**A2.03**



1 ROOF PLAN  
SCALE: 1/16" = 1'-0"

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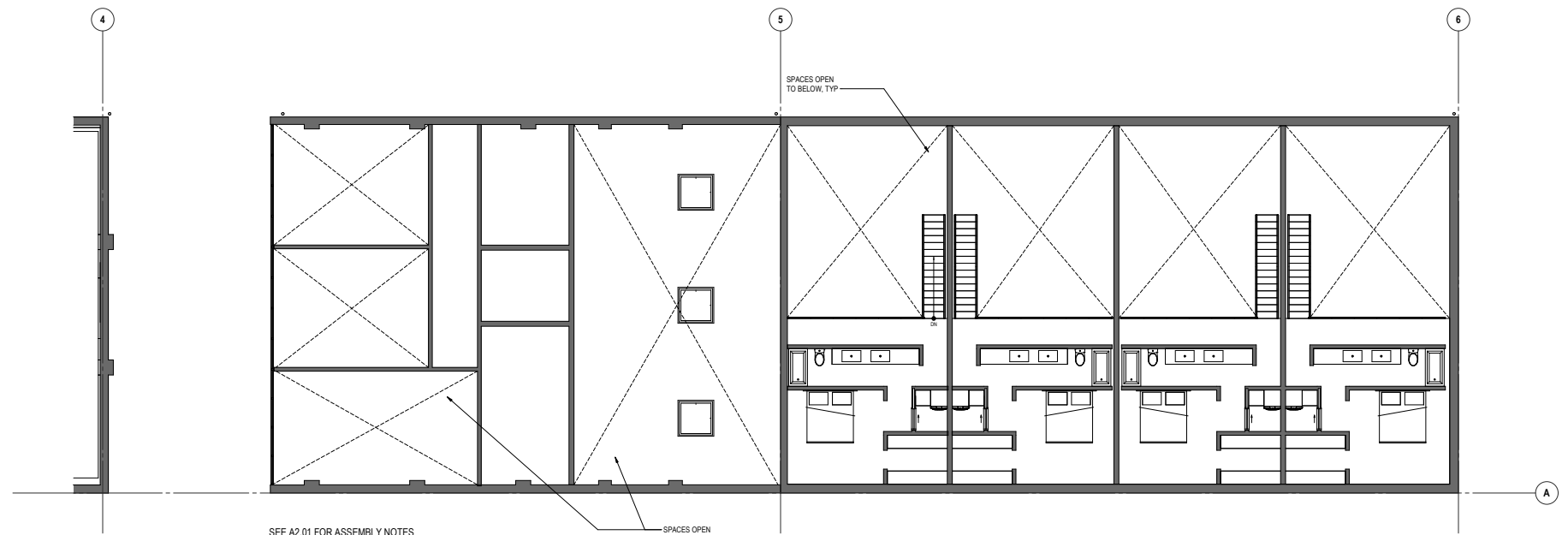
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0' 10' 20' 30'  
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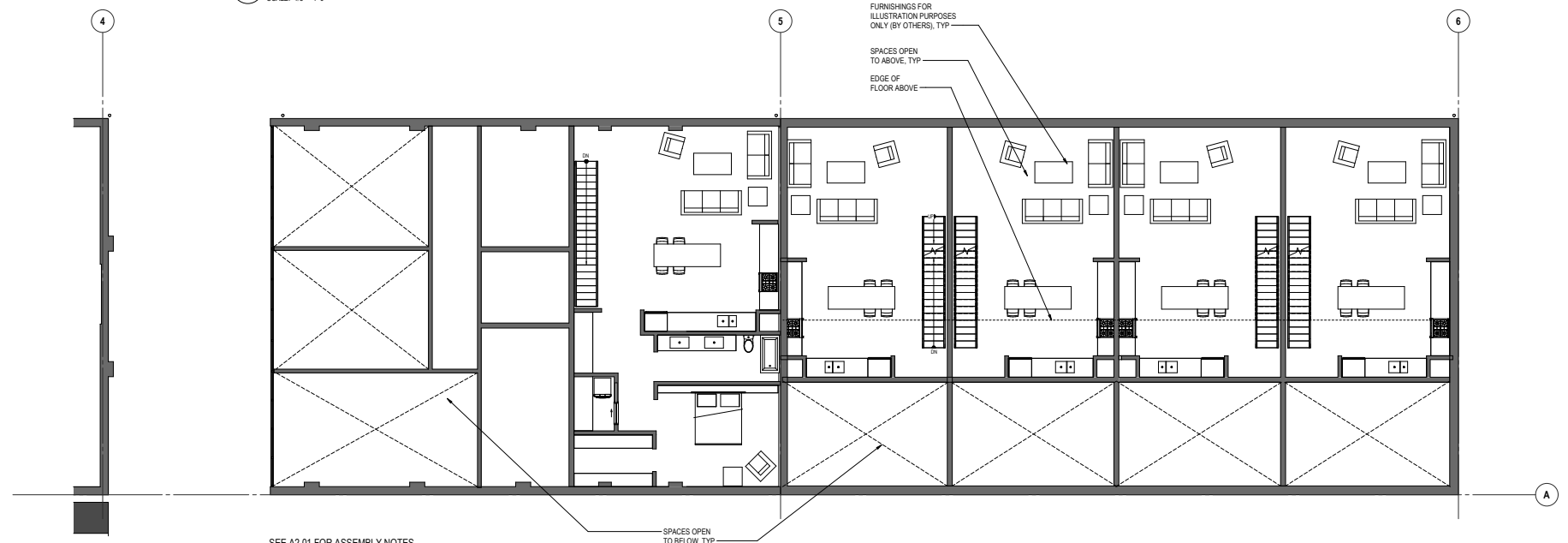
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**ROOF PLAN**

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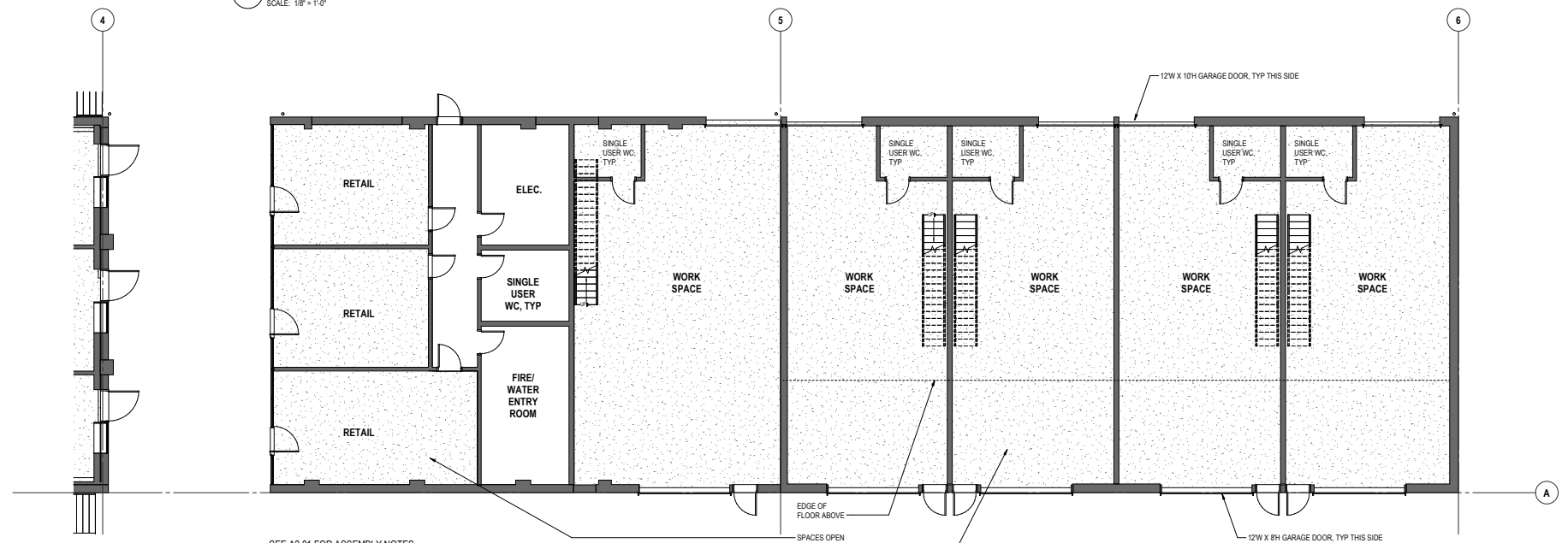
**A2.04**



SEE A2.01 FOR ASSEMBLY NOTES  
**3 MEZZ - ALT BLDG D/E**  
 SCALE: 1/8" = 1'-0"



SEE A2.01 FOR ASSEMBLY NOTES  
**2 LEVEL 2 - ALT BLDG D/E**  
 SCALE: 1/8" = 1'-0"



SEE A2.01 FOR ASSEMBLY NOTES  
**1 GROUND LEVEL - ALT BLDG D/E**  
 SCALE: 1/8" = 1'-0"

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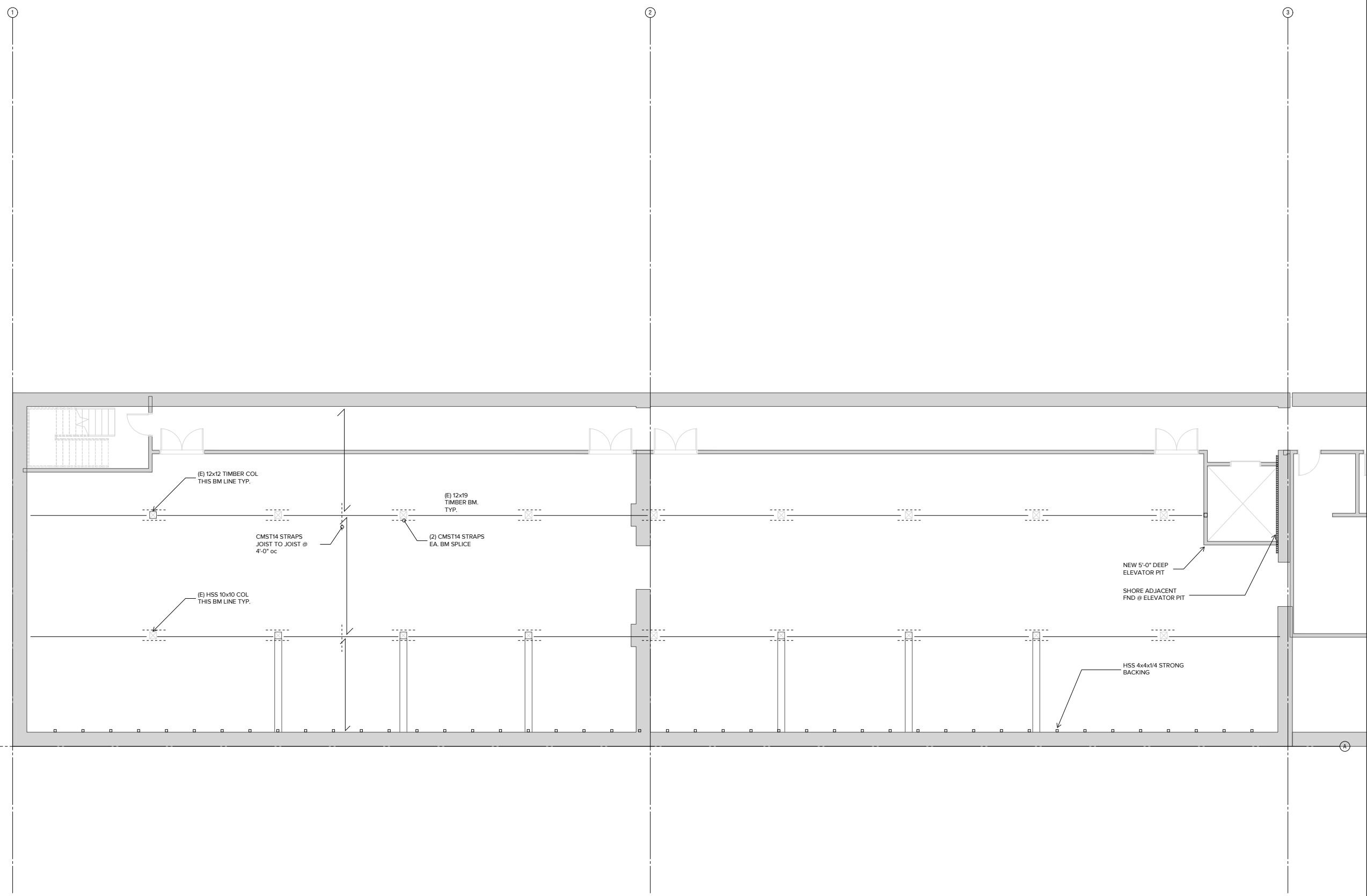
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 Sheet contents:  
**FLOOR PLANS - ALTERNATE**

Sheet:

**A2.20B**



Plan Notes

Legend

Basement Foundation Plan - Buildings A & B  
 Scale: 3/16" = 1'-0"

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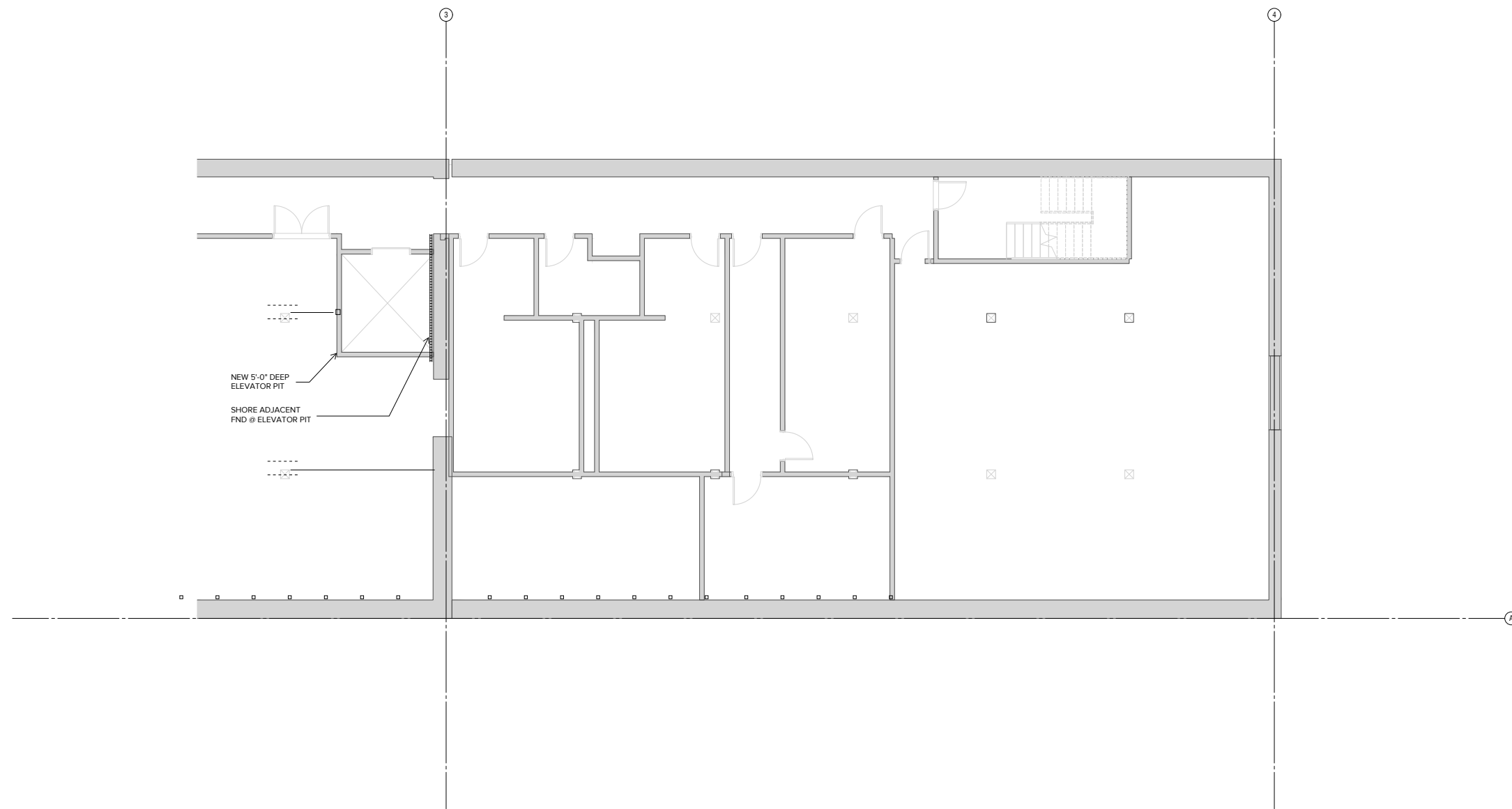
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Sheet contents:  
**Basement Plan Buildings A & B**

Sheet:

**S2.01**

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Plan Notes

Legend

Basment Foundation Plan - Building C  
 Scale: 3/16" = 1'-0"

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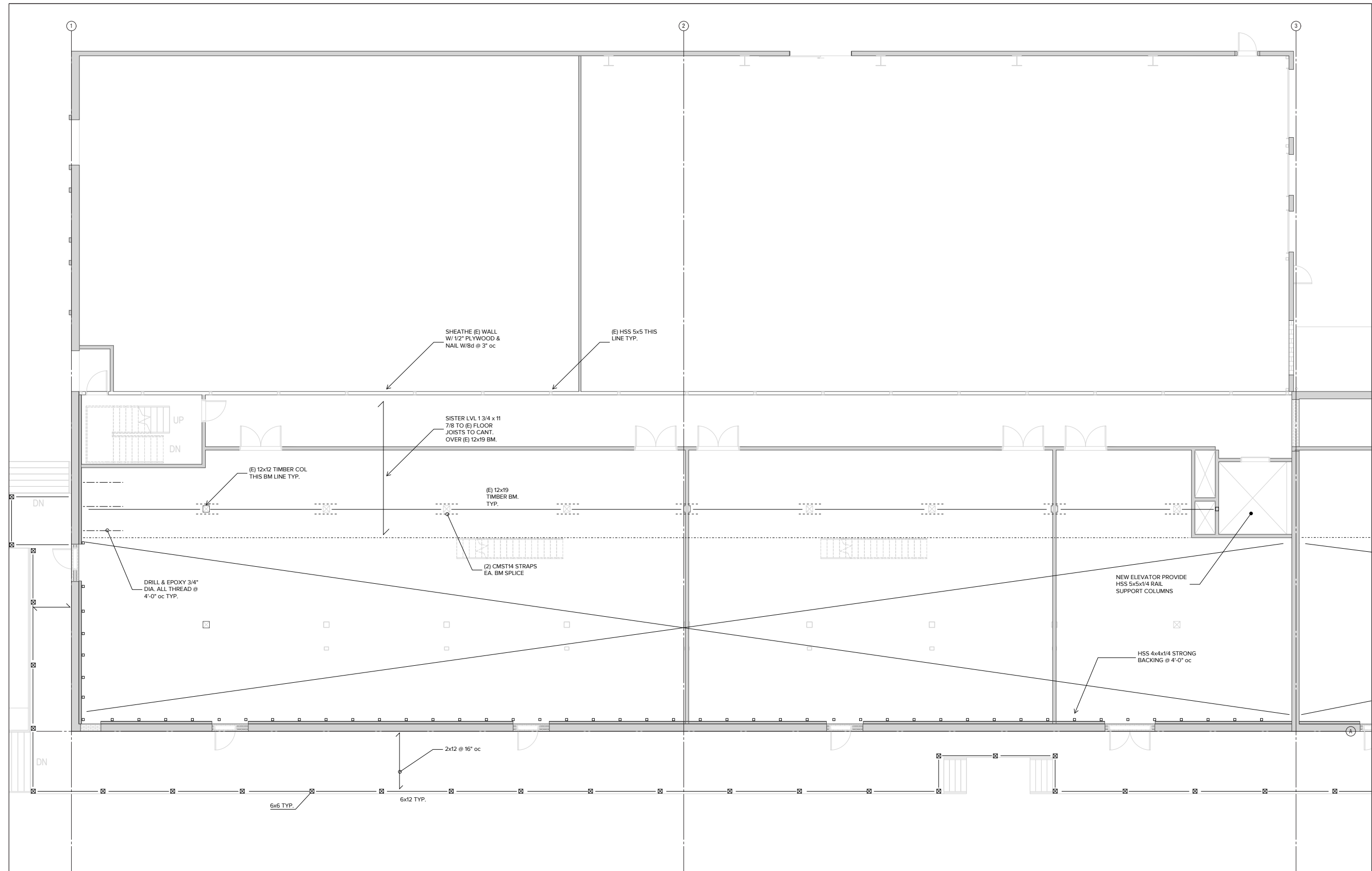
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A	B	C	D	E	F
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Sheet contents:  
**Basement Plan Building C**

Sheet:

**S2.02**



Plan Notes

Legend

Level 1 Framing Plan - Buildings A & B

Scale: 3/16" = 1'-0"

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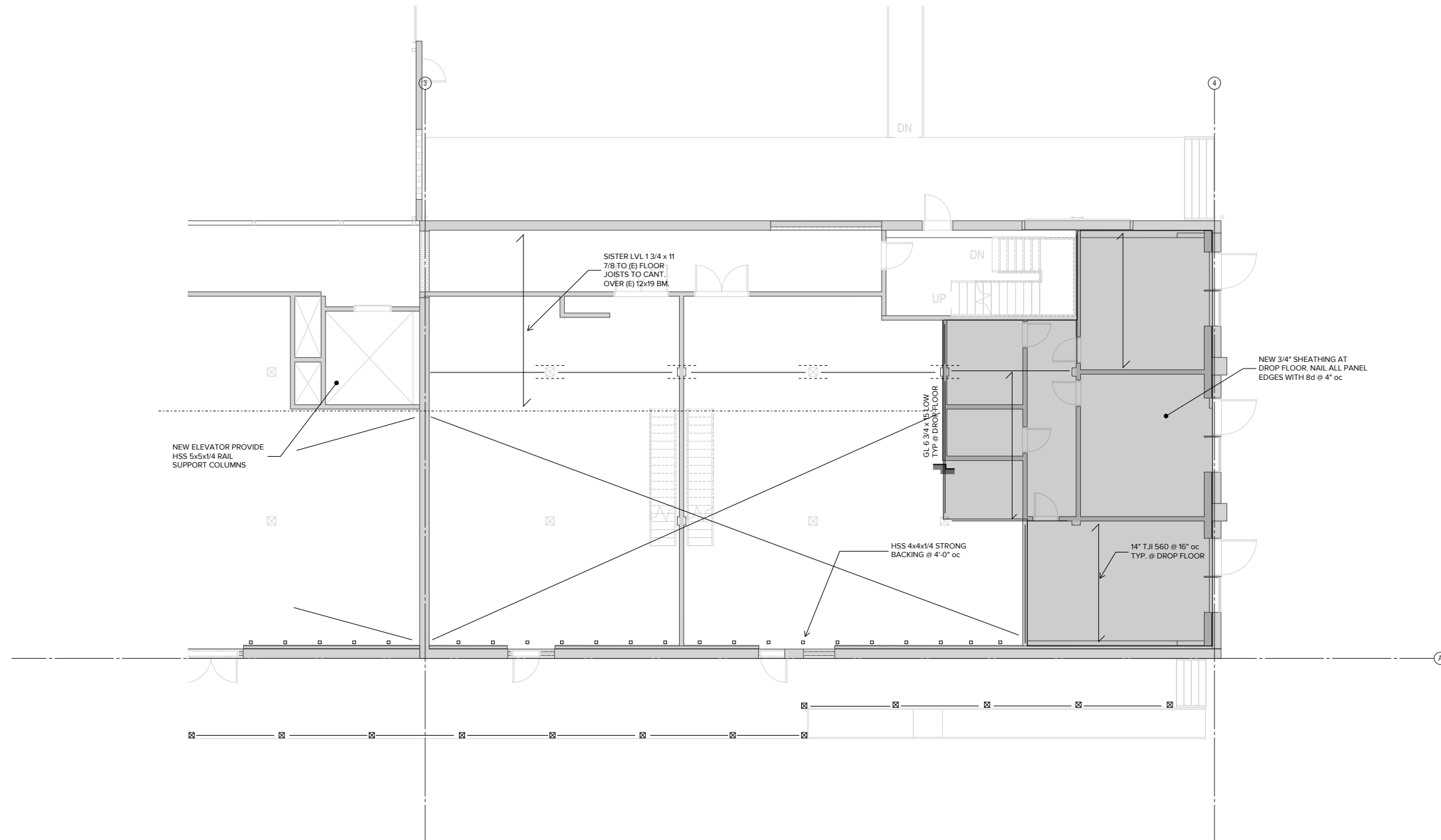
Level 1 Framing  
Plan Buildings A & B

Sheet:

S2.11

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Plan Notes

Legend

Level 1 Framing Plan - Building C

Scale: 3/16" = 1'-0"



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				F
A				
B	C	D	E	

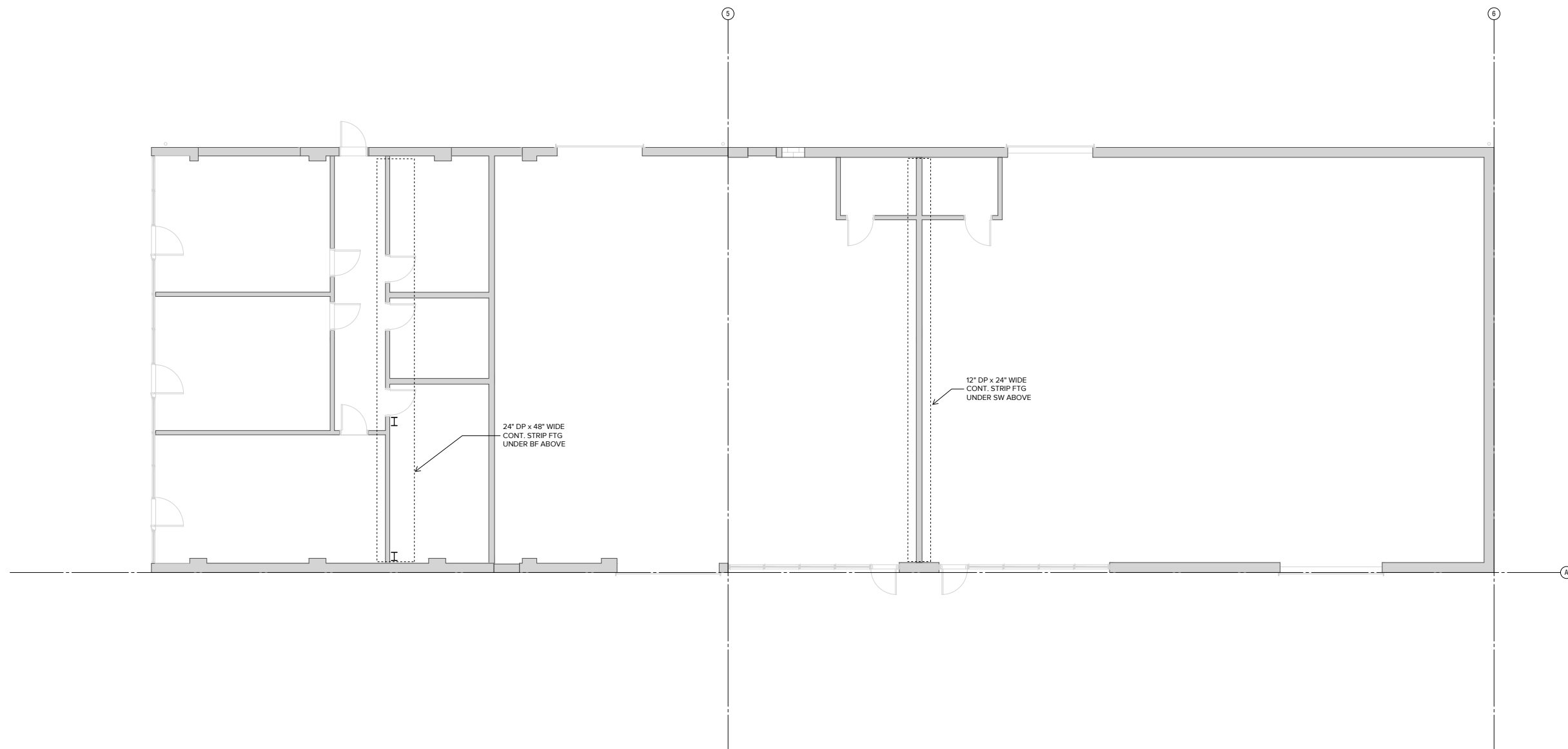
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Level 1 Framing  
Plan Building C

Sheet:

S2.12



Plan Notes

Legend

Level 1 Foundation Plan - Buildings D & E

Scale: 3/16" = 1'-0"



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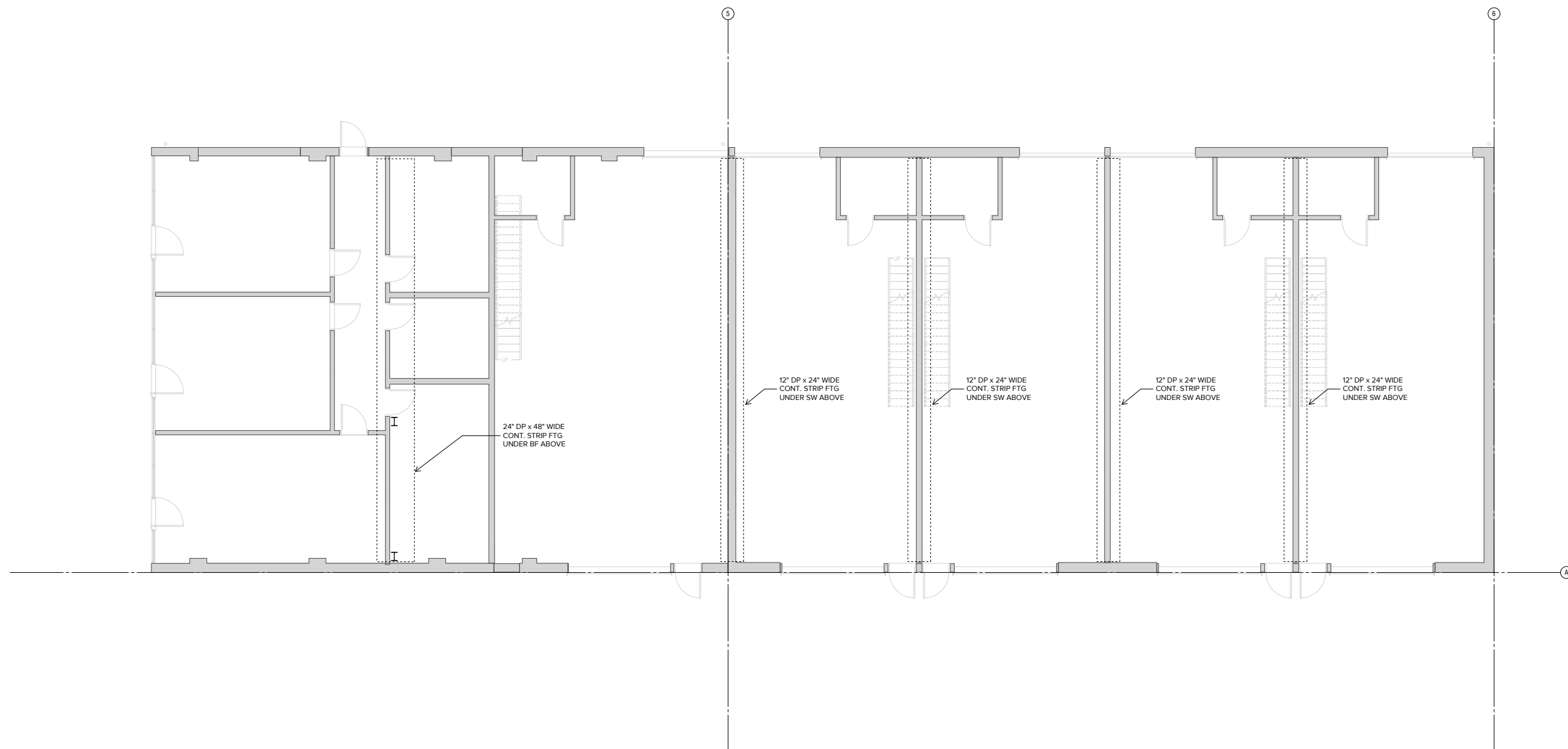
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Sheet contents:  
**Level 1 Foundation Plan Buildings D & E**

Sheet:

**S2.13**



Plan Notes

Legend

Level 1 Foundation Plan - Buildings D & E-Alternate

Scale: 3/16" = 1'-0"



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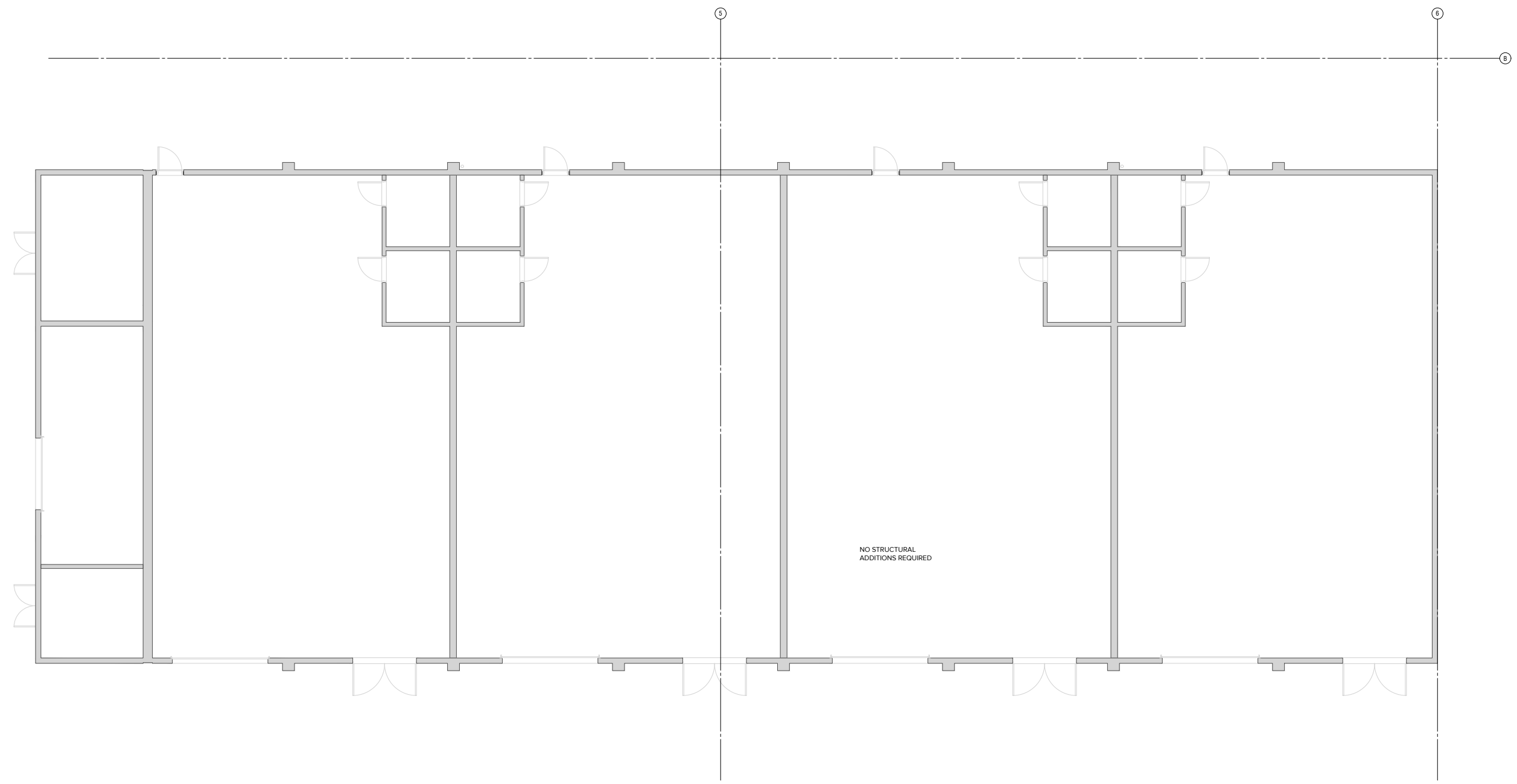
				F
A				
B	C	D	E	

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Sheet contents:  
**Level 1 Foundation Plan Buildings D & E Alternate**

Sheet:

**S2.13a**

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NO STRUCTURAL  
ADDITIONS REQUIRED

Plan Notes

Legend

Level 1 Foundation Plan - Building F  
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F				
A	B	C	D	E

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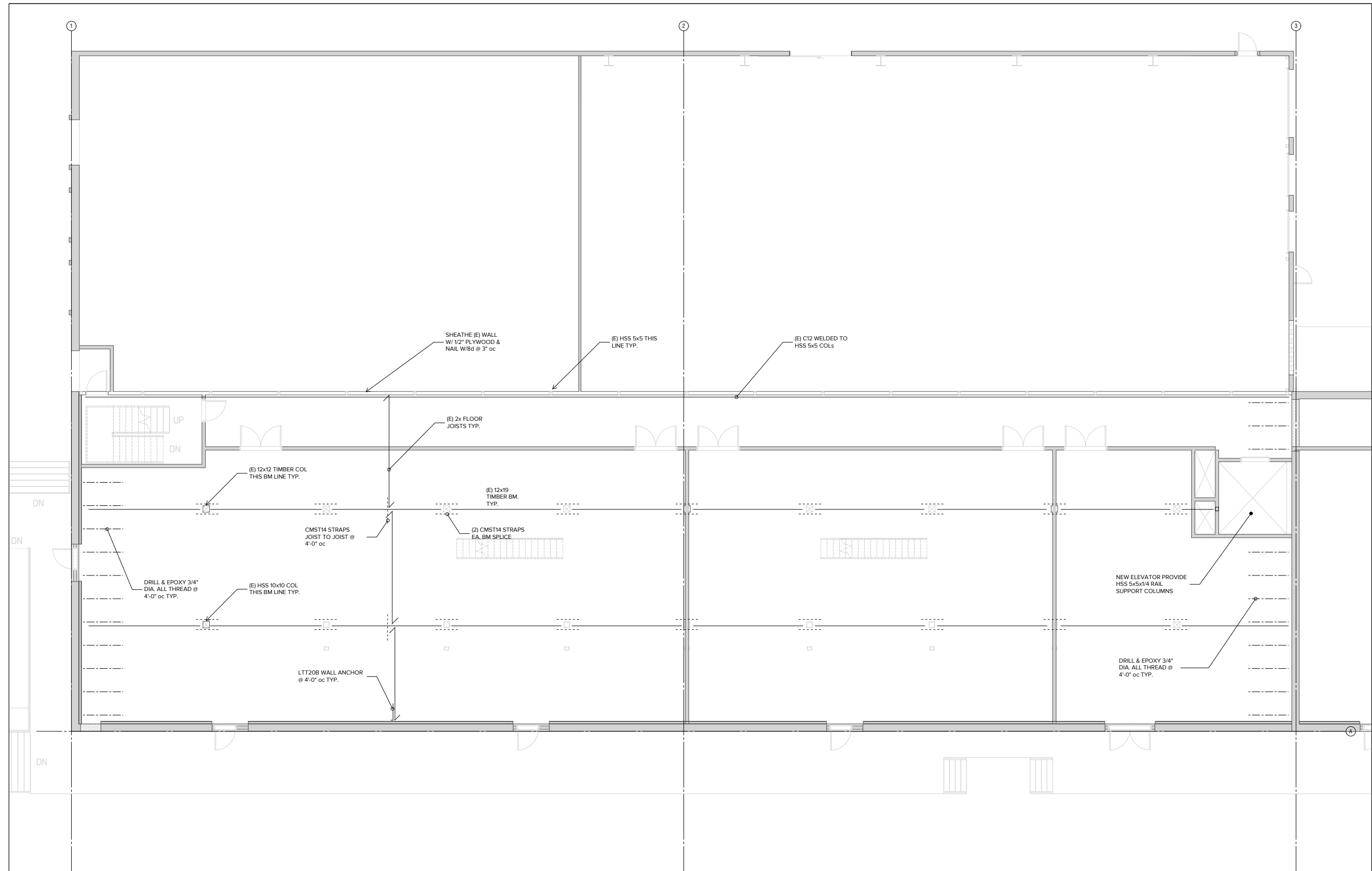
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Level 1 Foundation  
Plan Building F

Sheet:

**S2.14**

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A	B	C	D	E	F
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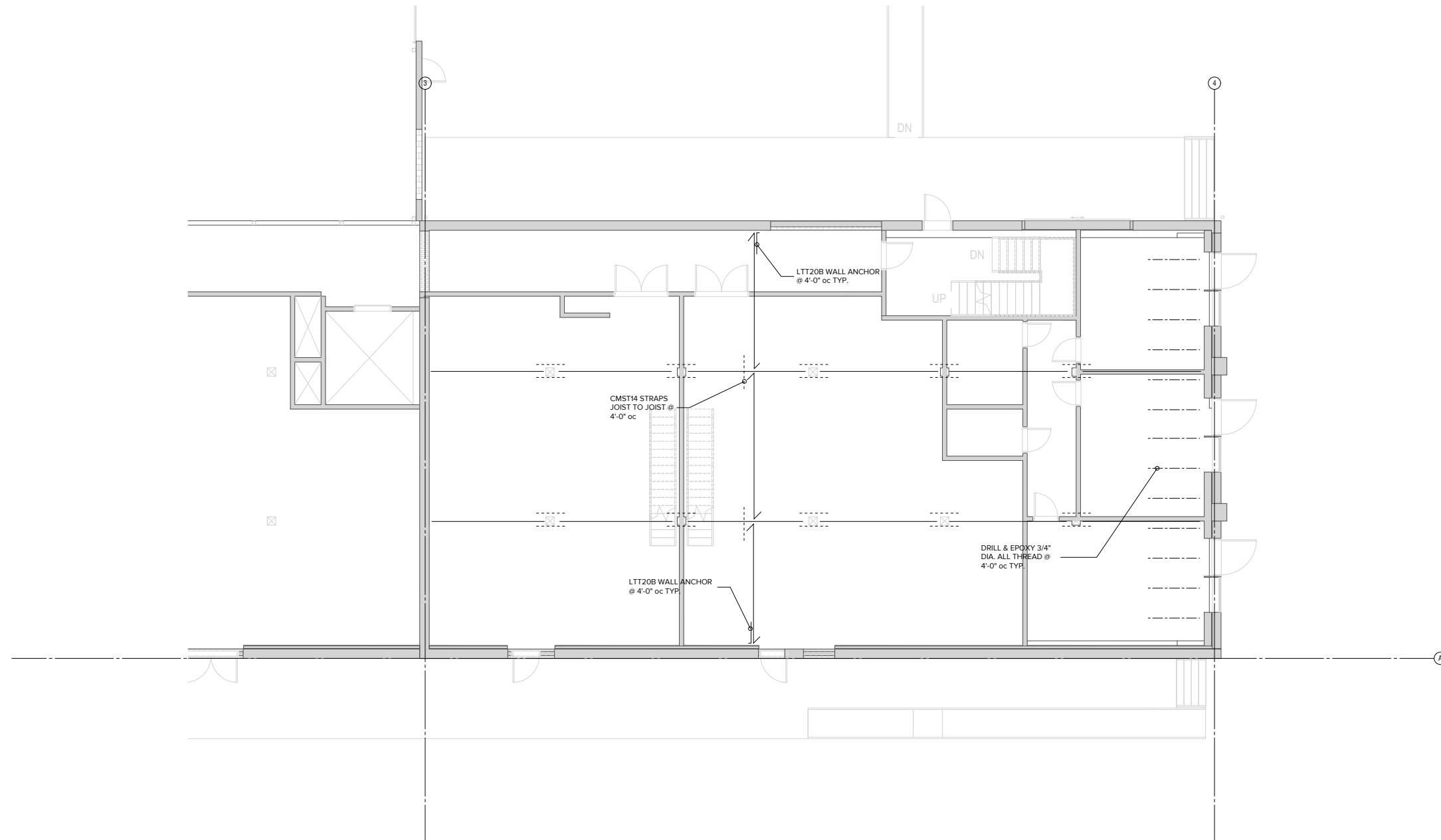
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Level 2 Framing  
Plan Buildings A & B

Sheet:

**S2.21**

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Plan Notes

Legend

Level 2 Framing Plan - Building C  
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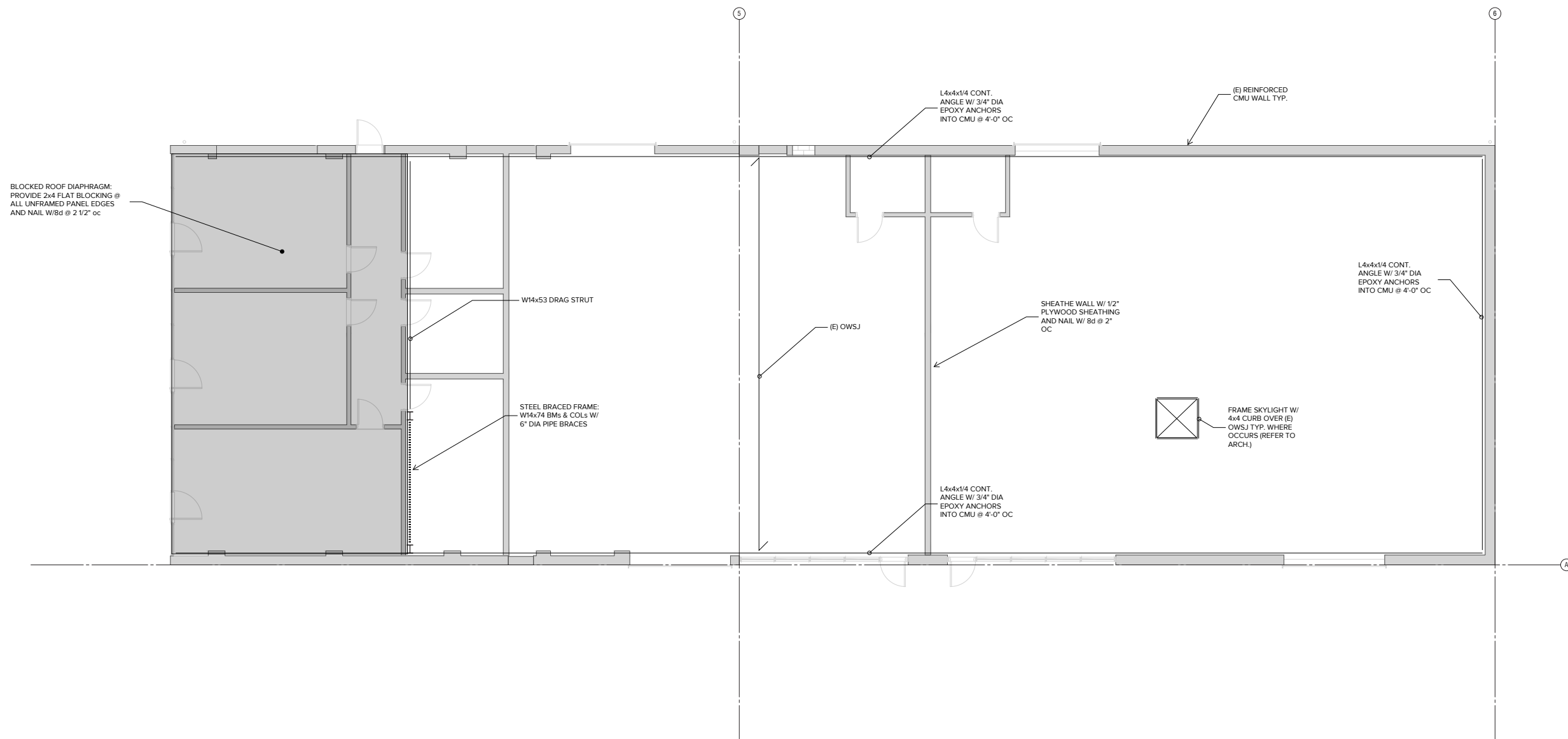
Project No.: 01705-2021-10

				F
A				
B	C	D	E	

Scale:  
Sheet contents:  
**Level 2 Framing  
Plan Building C**

Sheet:

**S2.22**



BLOCKED ROOF DIAPHRAGM:  
PROVIDE 2x4 FLAT BLOCKING @  
ALL UNFRAMED PANEL EDGES  
AND NAIL W/8d @ 2 1/2' oc

W14x53 DRAG STRUT

STEEL BRACED FRAME:  
W14x74 BMS & COLS W/  
6" DIA PIPE BRACES

L4x4x1/4 CONT.  
ANGLE W/ 3/4" DIA  
EPOXY ANCHORS  
INTO CMU @ 4'-0" OC

(E) REINFORCED  
CMU WALL TYP.

L4x4x1/4 CONT.  
ANGLE W/ 3/4" DIA  
EPOXY ANCHORS  
INTO CMU @ 4'-0" OC

SHEATHE WALL W/ 1/2"  
PLYWOOD SHEATHING  
AND NAIL W/ 8d @ 2"  
OC



FRAME SKYLIGHT W/  
4x4 CURB OVER (E)  
OWSJ TYP. WHERE  
OCCURS (REFER TO  
ARCH.)

L4x4x1/4 CONT.  
ANGLE W/ 3/4" DIA  
EPOXY ANCHORS  
INTO CMU @ 4'-0" OC

(E) OWSJ

Plan Notes

Legend

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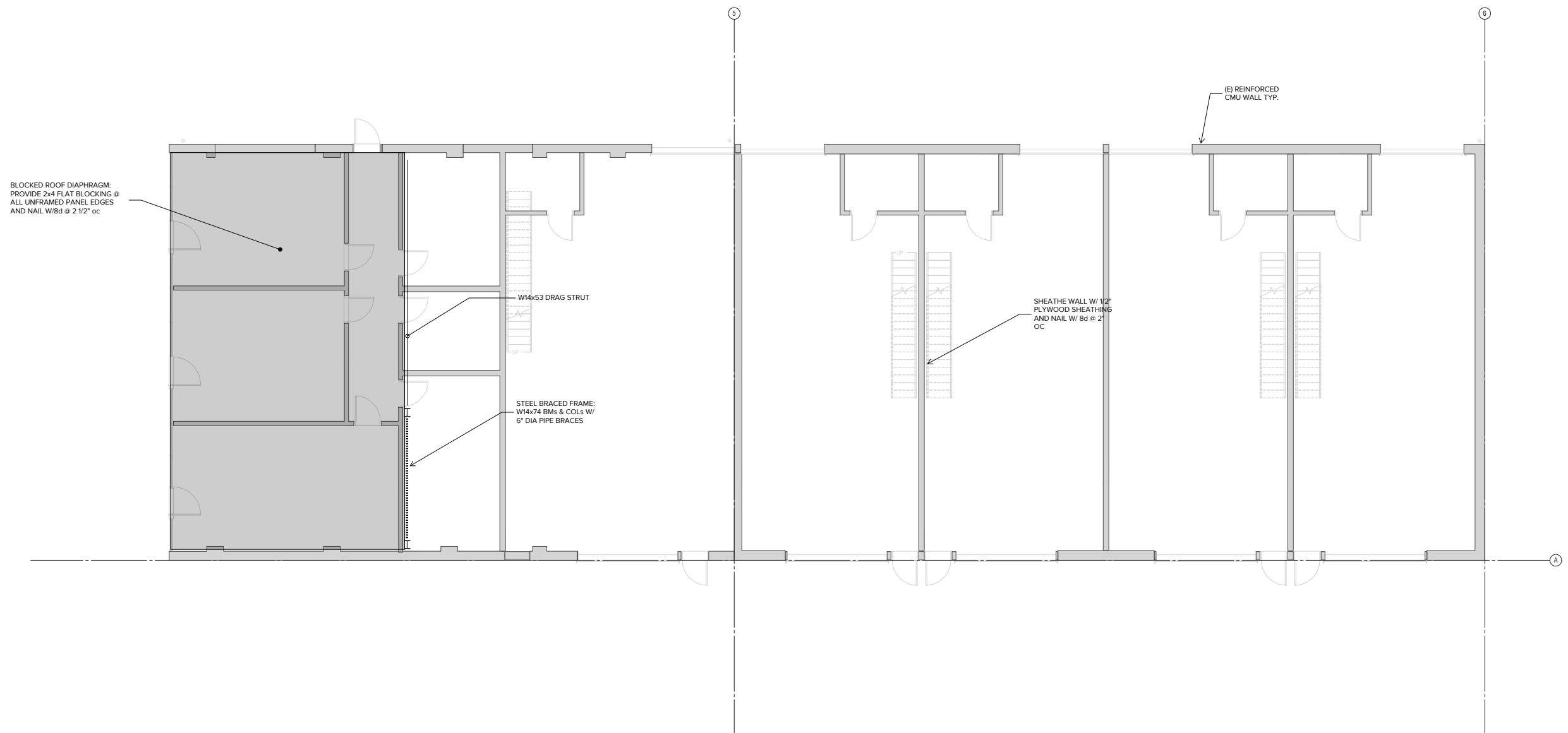
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Scale:  
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Level 2 Framing  
Plan Buildings D & E

Sheet:

S2.23

GRAHAM EAB



BLOCKED ROOF DIAPHRAGM:  
PROVIDE 2x4 FLAT BLOCKING @  
ALL UNFRAMED PANEL EDGES  
AND NAIL W/8d @ 2 1/2' oc

W14x53 DRAG STRUT

STEEL BRACED FRAME:  
W14x74 BMs & COLS W/  
6" DIA PIPE BRACES

SHEATHE WALL W/ 1/2"  
PLYWOOD SHEATHING  
AND NAIL W/ 8d @ 2'  
OC

(E) REINFORCED  
CMU WALL TYP.

Plan Notes

Legend

Level 2 Framing Plan - Buildings D & E-Alternate

Scale: 3/16" = 1'-0"



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98801

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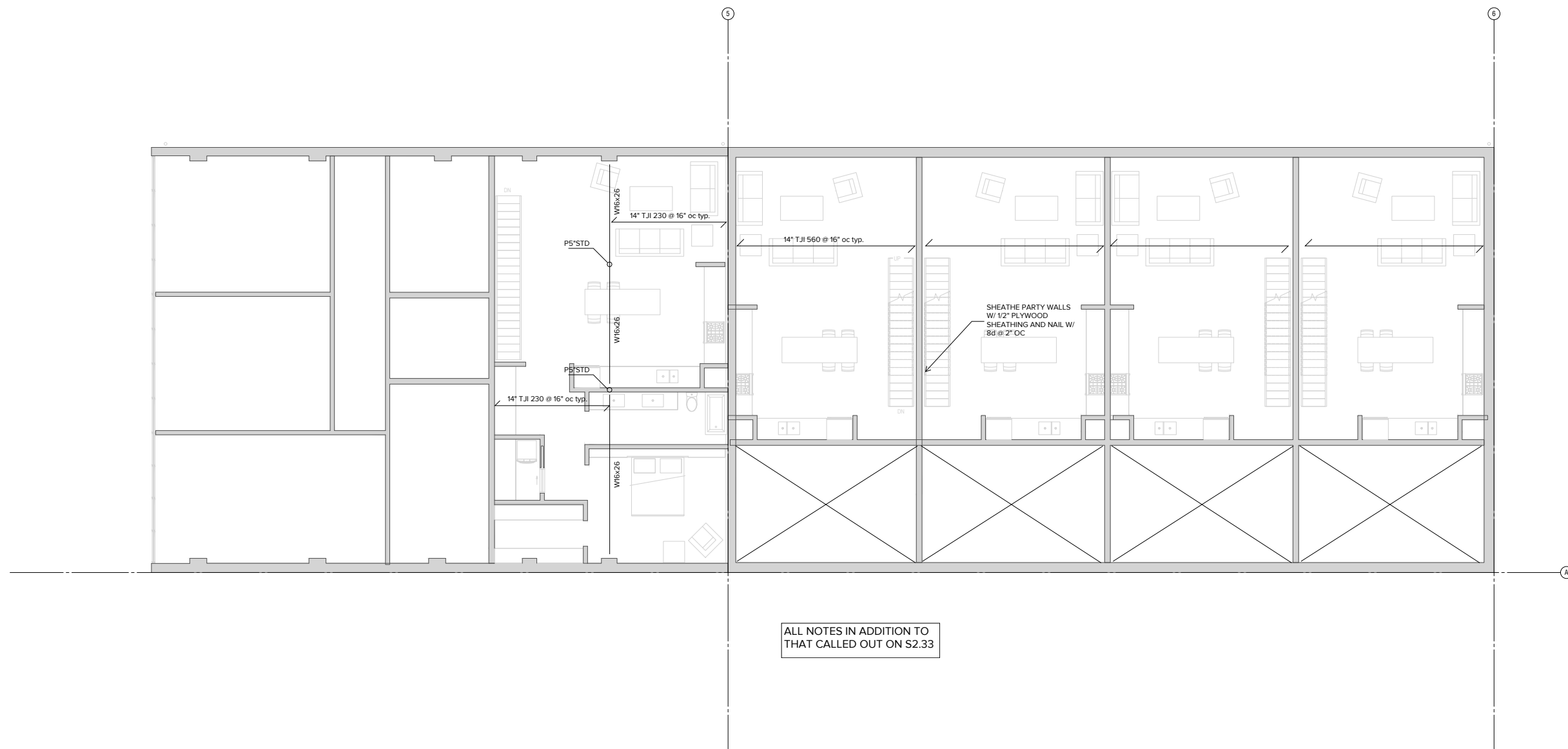
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Plan Buildings D & E  
Alternate**

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**S2.23a**

GRAHAM EAB





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Plan Notes

Legend

Mezzanine Framing Plan - Buildings D & E-Alternate

Scale: 3/16" = 1'-0"



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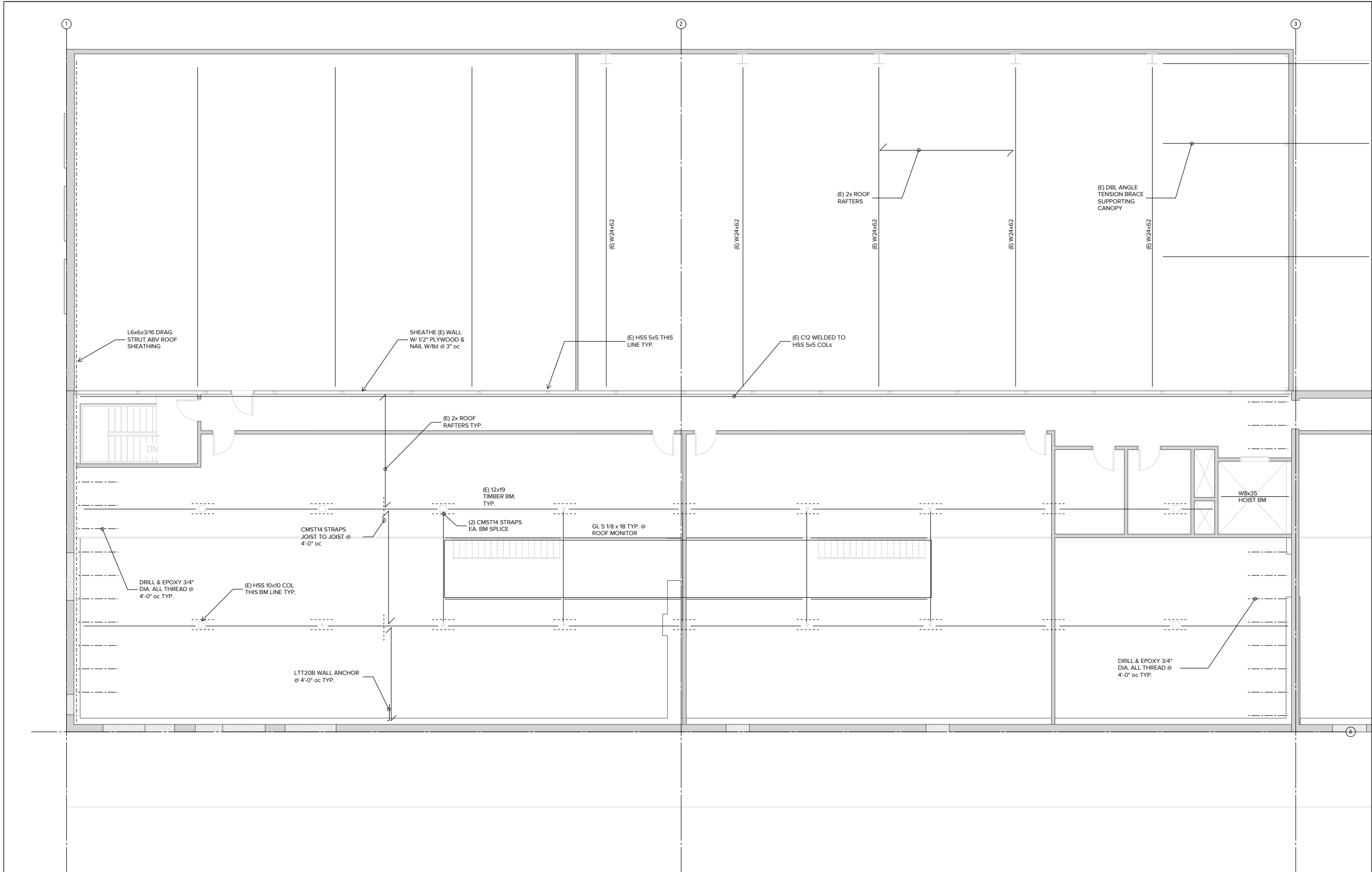
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**S2.24a**

GRAHAM EAB



L6x6x3/16 DRAG STRUT ABV ROOF SHEATHING

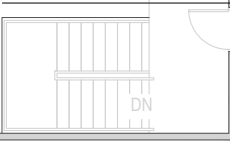
SHEATH (E) WALL W/ 1/2" PLYWOOD & NAIL W/8d @ 3" oc

(E) HSS 5x5 THIS LINE TYP.

(E) C12 WELDED TO HSS 5x5 COLS

(E) 2x ROOF RAFTERS

(E) DBL ANGLE TENSION BRACE SUPPORTING CANOPY



(E) 2x ROOF RAFTERS TYP.

(E) 12x19 TIMBER BM. TYP.

(2) CMST14 STRAPS EA. BM SPLICE

GL 5 1/8 x 18 TYP. @ ROOF MONITOR

W8x35 HOIST BM

CMST14 STRAPS JOIST TO JOIST @ 4'-0" oc

DRILL & EPOXY 3/4" DIA. ALL THREAD @ 4'-0" oc TYP.

(E) HSS 10x10 COL THIS BM LINE TYP.

LTT20B WALL ANCHOR @ 4'-0" oc TYP.

DRILL & EPOXY 3/4" DIA. ALL THREAD @ 4'-0" oc TYP.

Plan Notes

Legend

Roof Framing Plan - Buildings A & B  
Scale: 3/16" = 1'-0"

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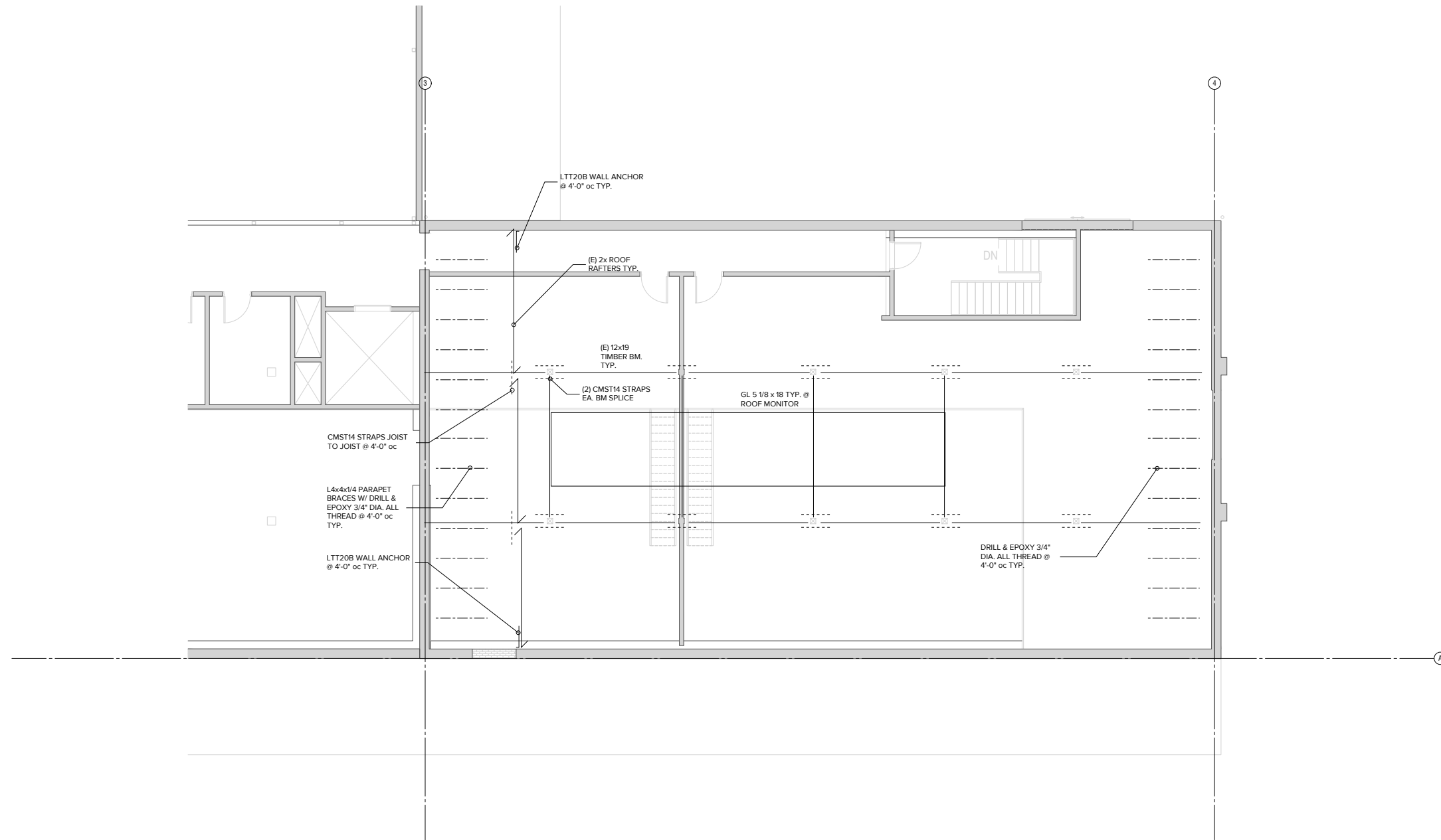
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**S2.31**

GRAHAM EAB



Plan Notes

Legend

Roof Framing Plan - Building C  
Scale: 3/16" = 1'-0"

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B	C	D	E	

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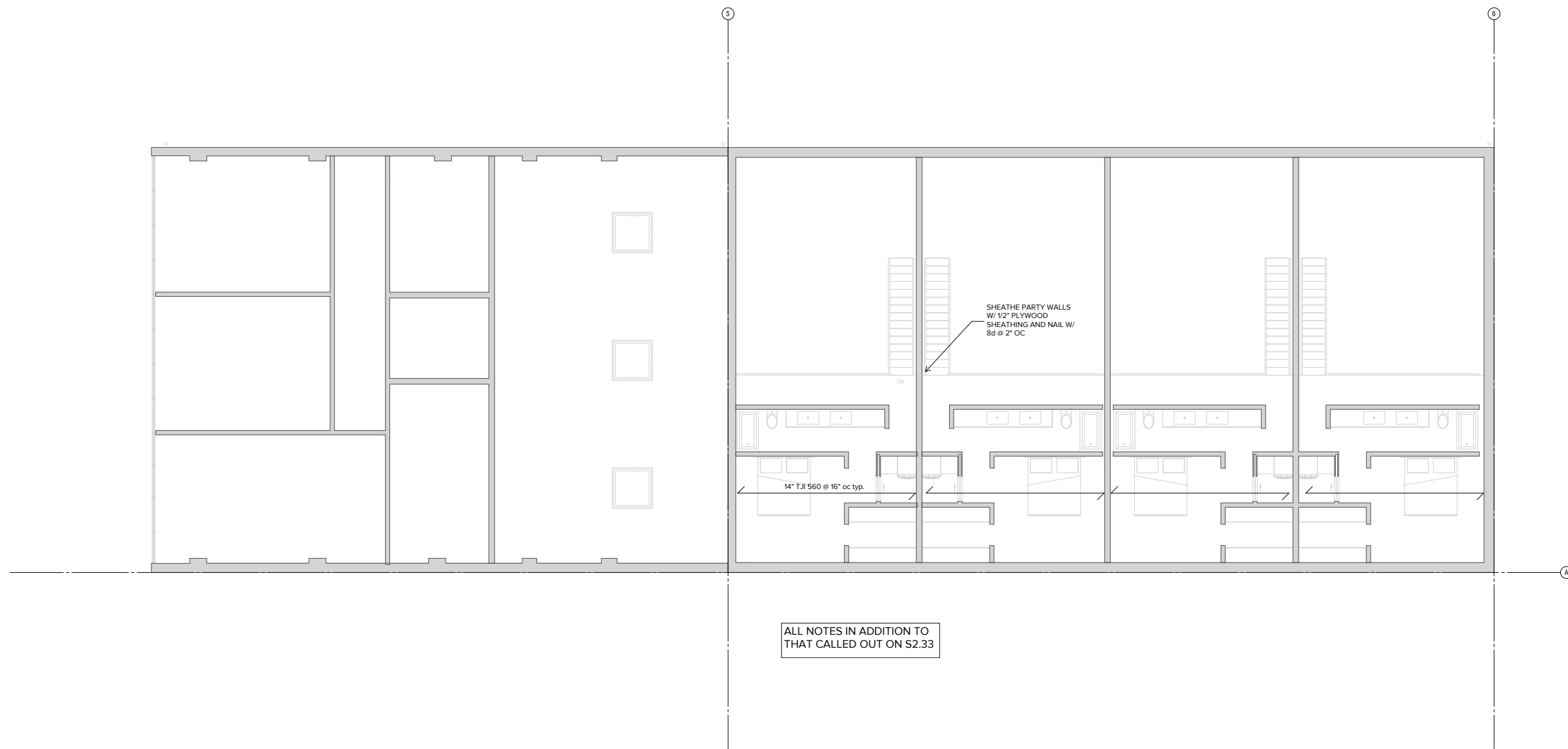
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Roof Framing Plan  
Building C

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S2.32

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ALL NOTES IN ADDITION TO THAT CALLED OUT ON S2.33

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Legend

Roof Framing Plan - Buildings D & E-Alternate  
 Scale: 3/16" = 1'-0"

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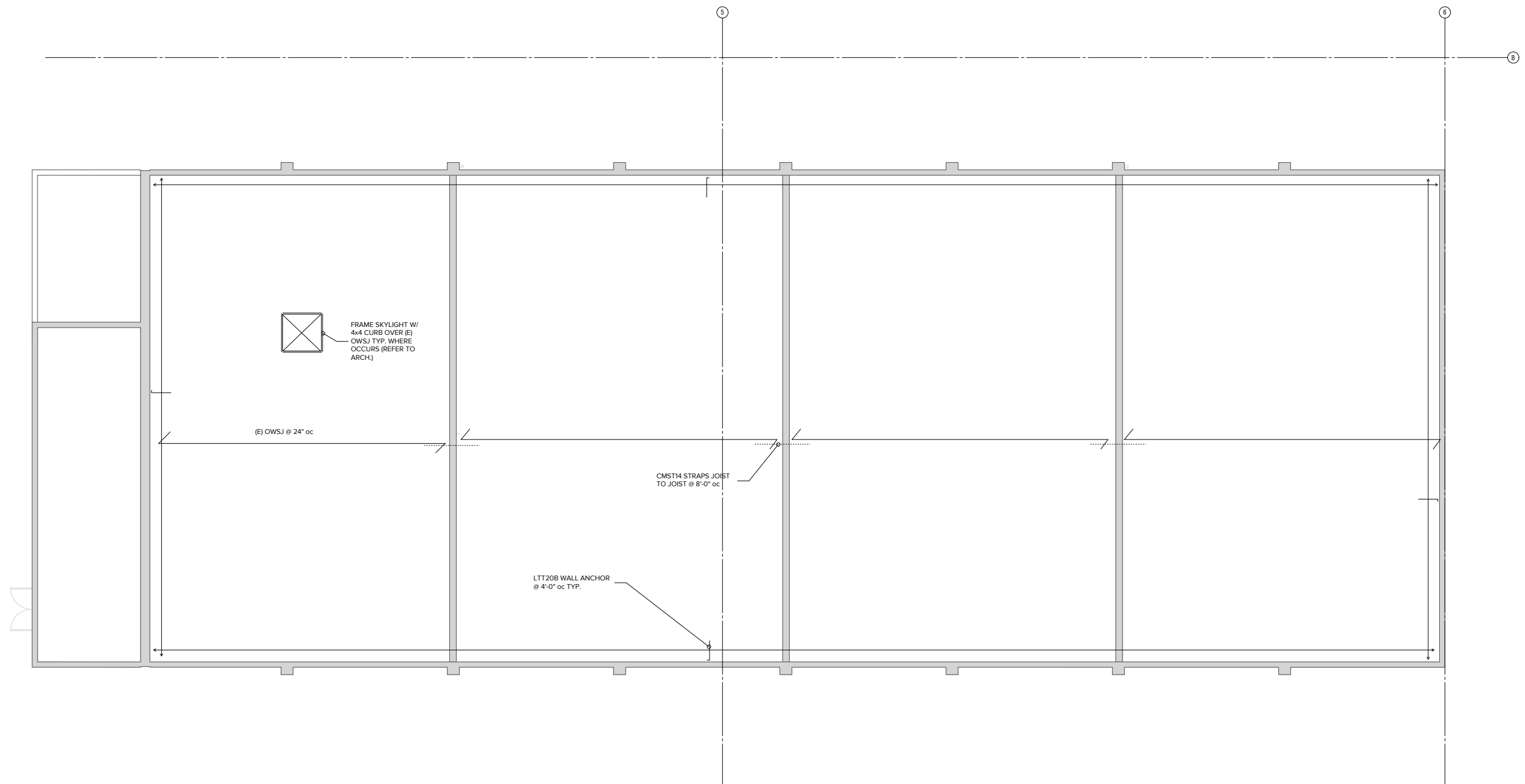
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B	C
D	E

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**Roof Framing Plan  
 Buildings D & E  
 Alternate**

Sheet:

**S2.33a**



Plan Notes

Legend

Roof Framing Plan - Building F  
Scale: 3/16" = 1'-0"

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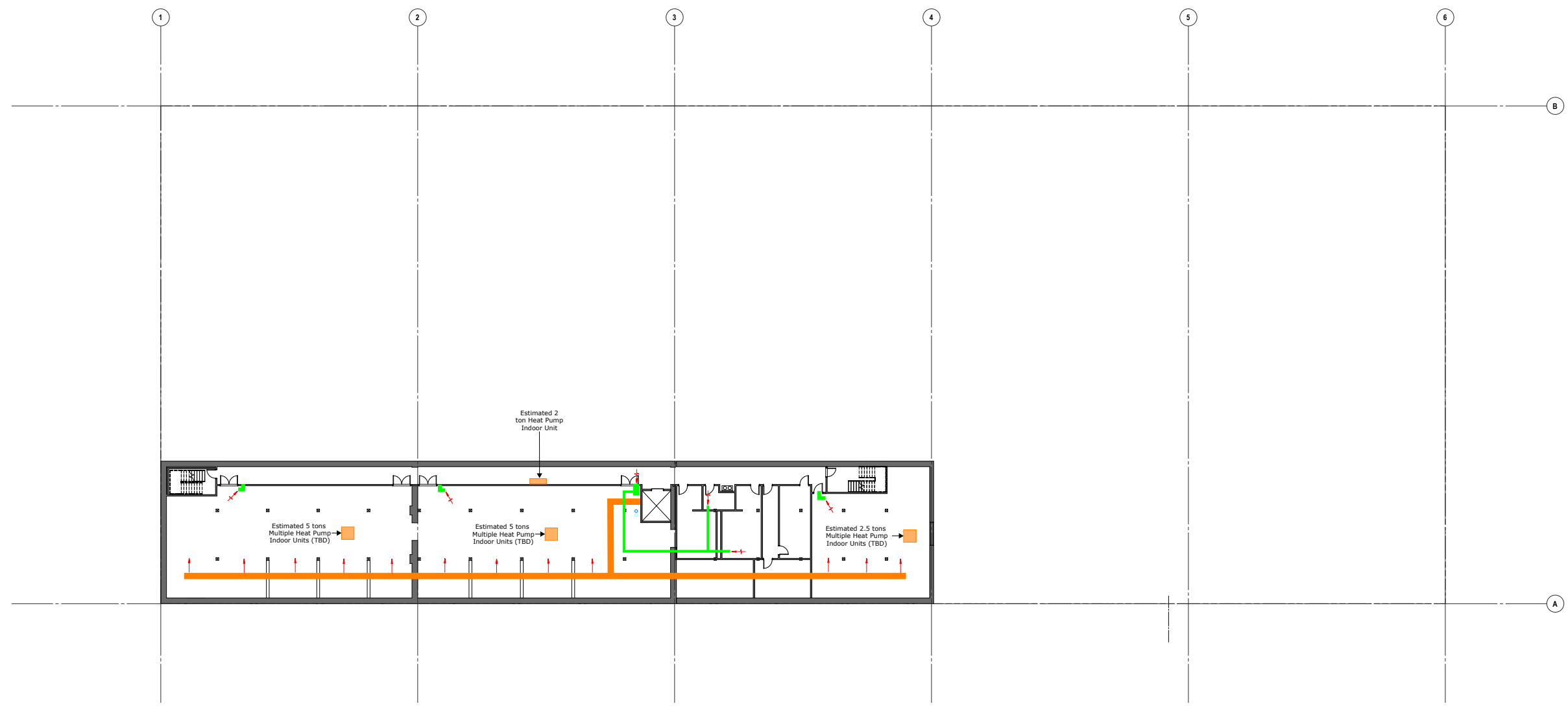
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Building F**

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**S2.34**



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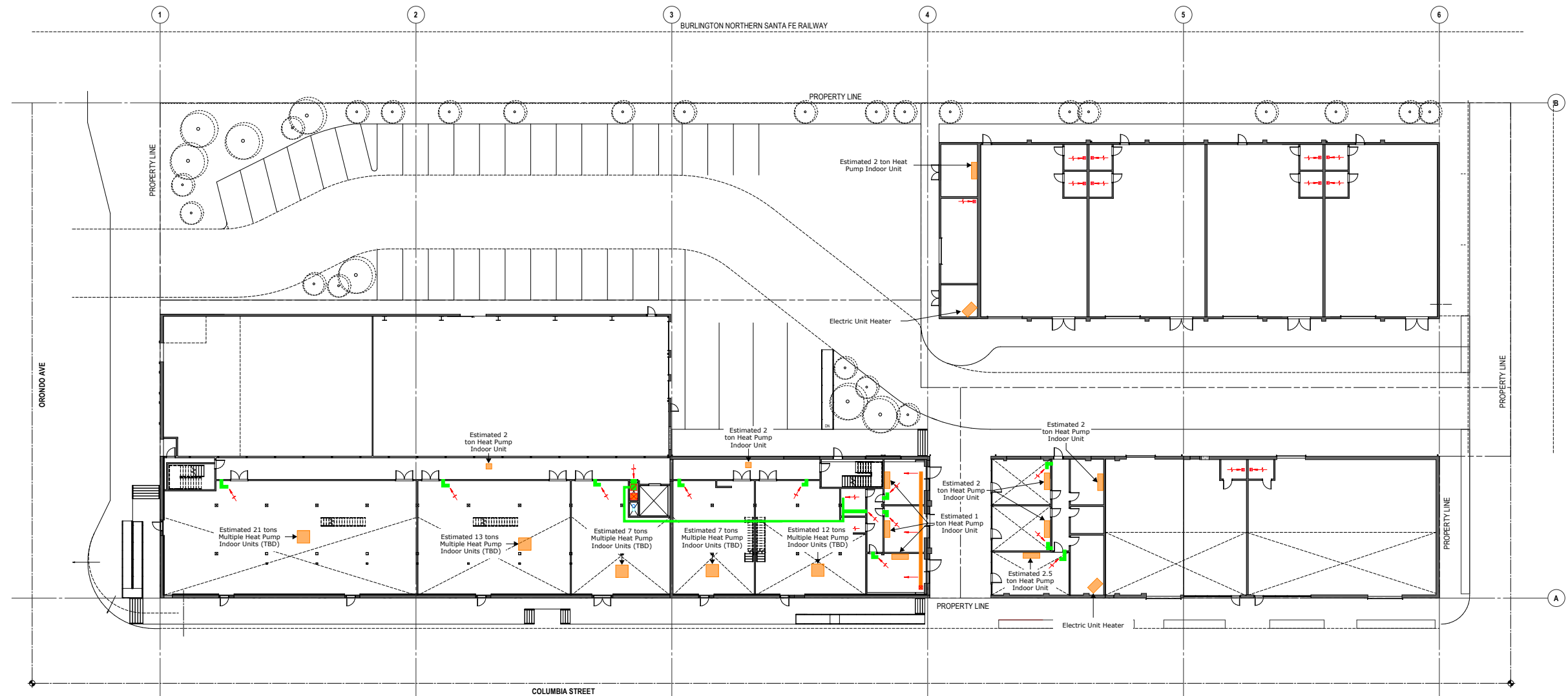
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**BASEMENT LEVEL PLAN**

Sheet:

**M2.01**

**1 BASEMENT LEVEL PLAN**  
SCALE: 1/16" = 1'-0"



1 LEVEL 1 FLOOR PLAN  
SCALE: 1/16" = 1'-0"

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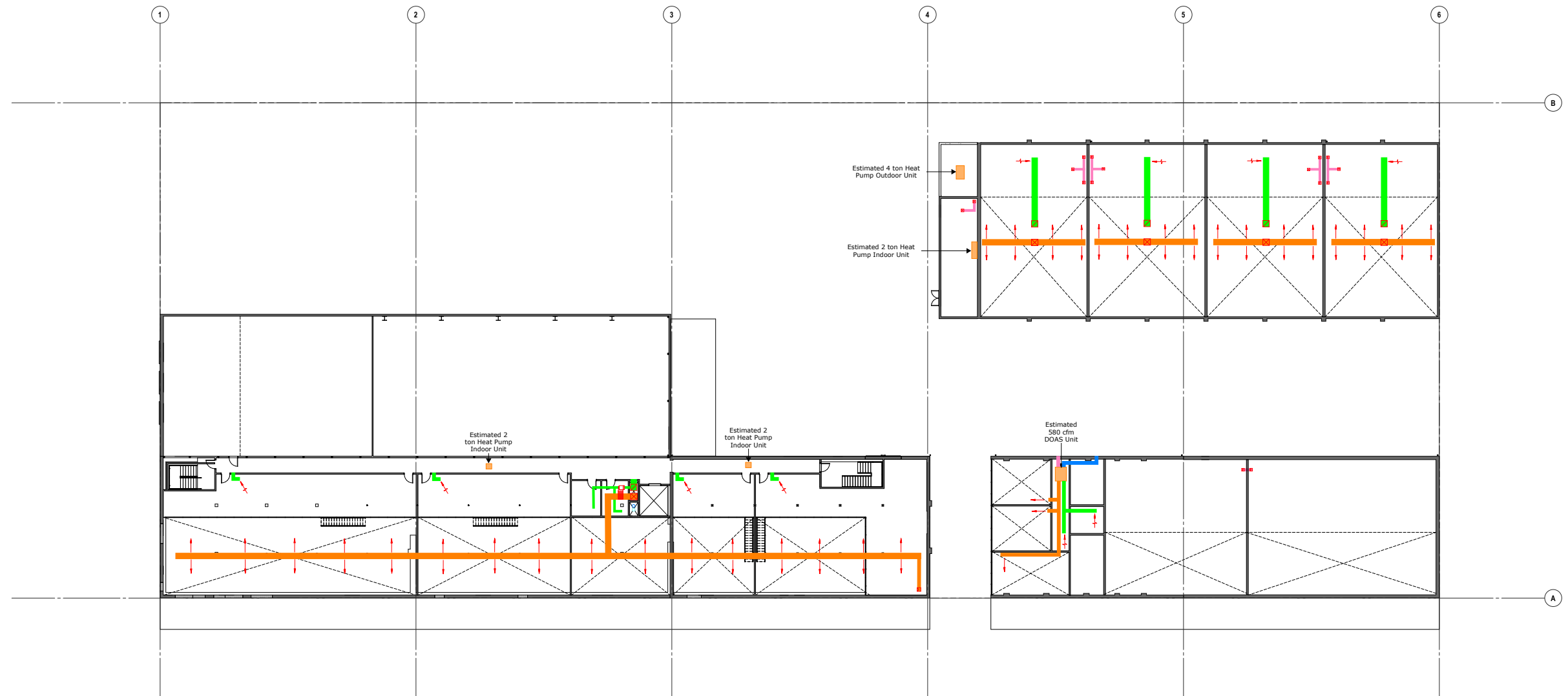
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101 Columbia Street  
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Project No.: 2136

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**LEVEL 1 FLOOR PLAN**

Sheet:

**M2.02**



1 LEVEL 2 FLOOR PLAN  
SCALE: 1/16" = 1'-0"

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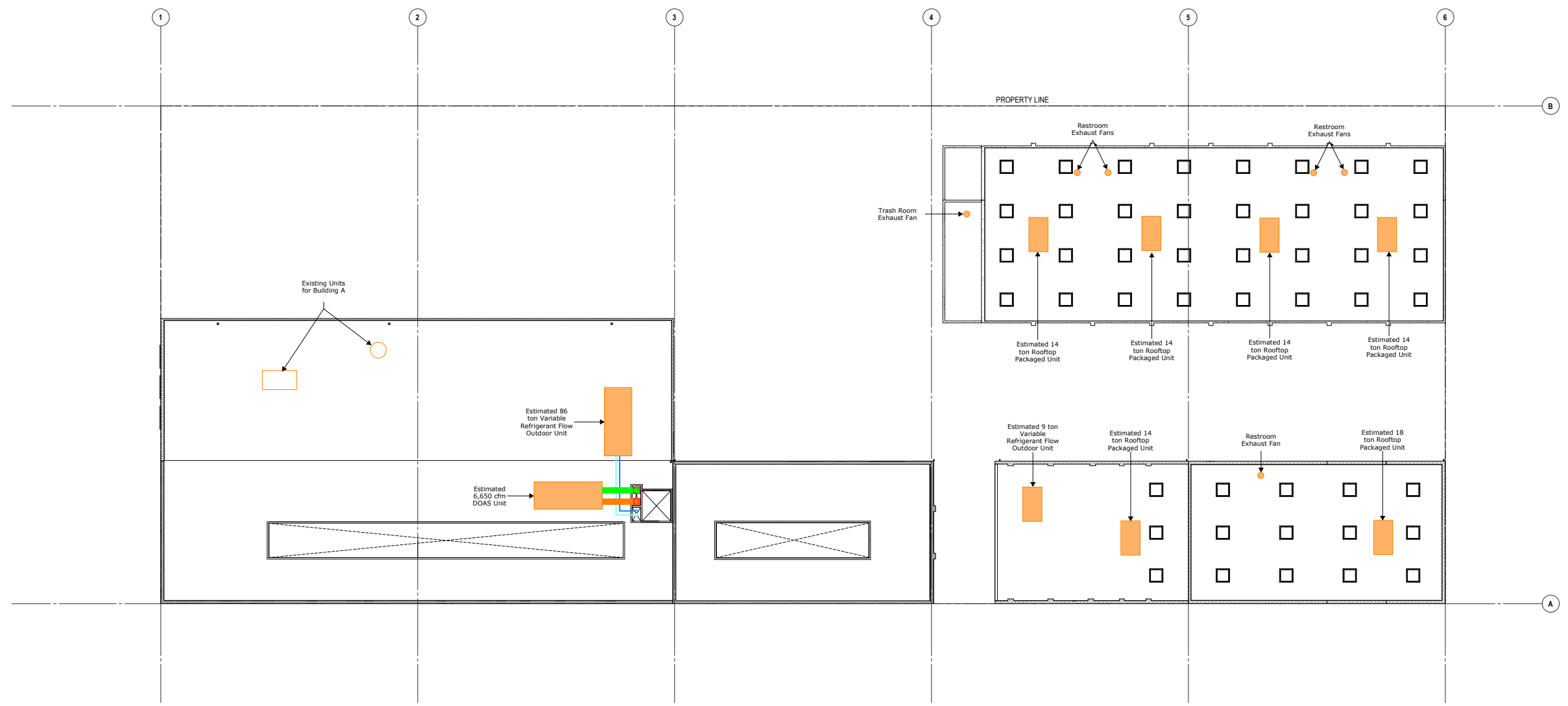
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M2.03





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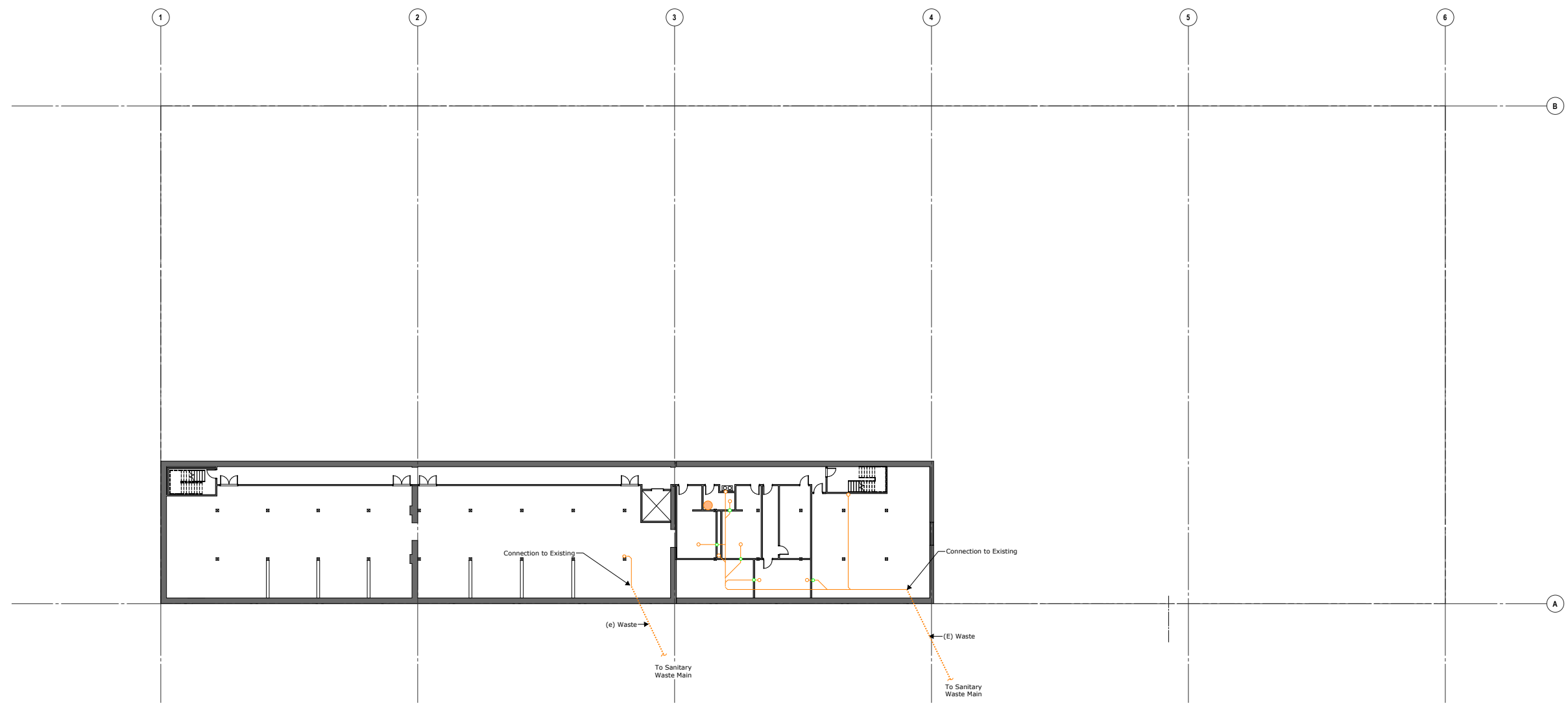
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**ROOF PLAN**

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**M2.04**

**1 ROOF PLAN**  
 SCALE: 1/16" = 1'-0"



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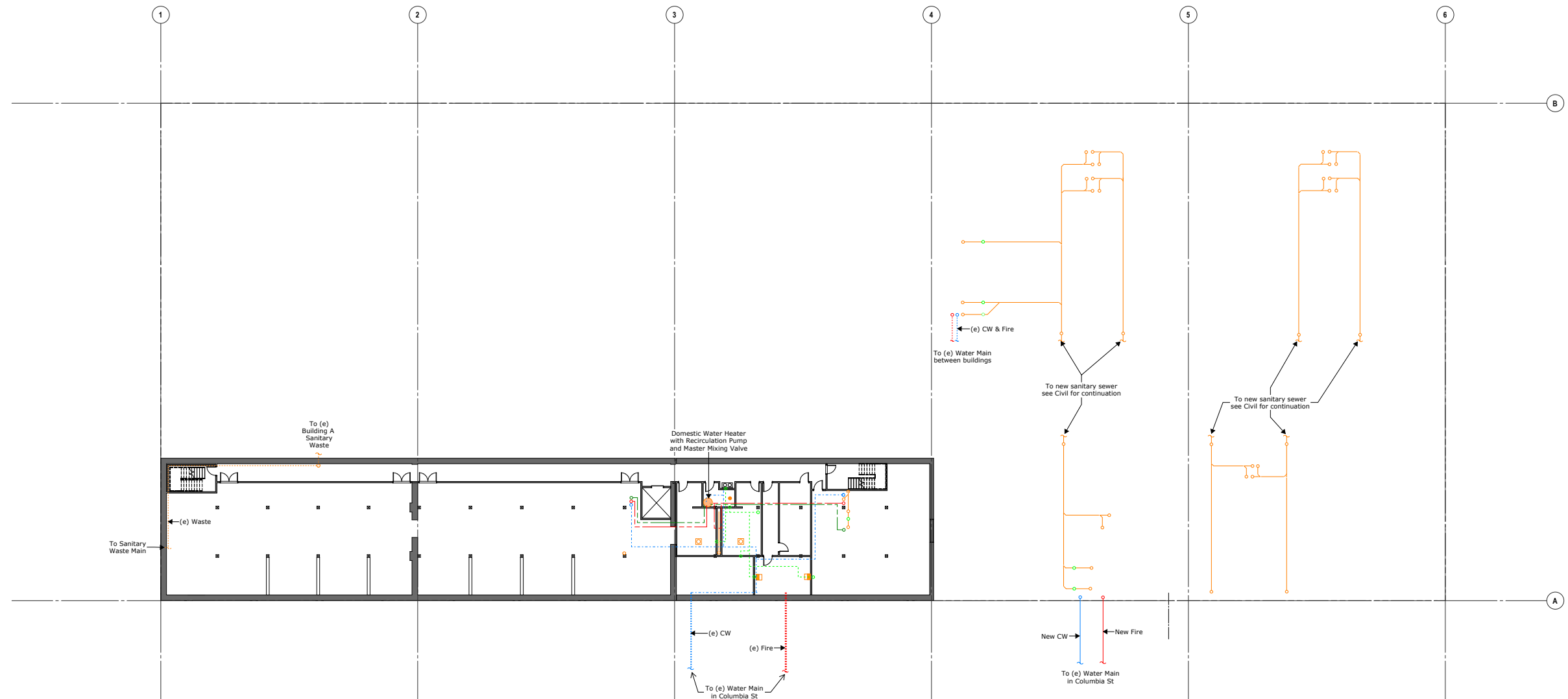
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**UNDER SLAB  
PLAN**

Sheet:

**P2.00**

**1 BASEMENT LEVEL PLAN**  
SCALE: 1/16" = 1'-0"



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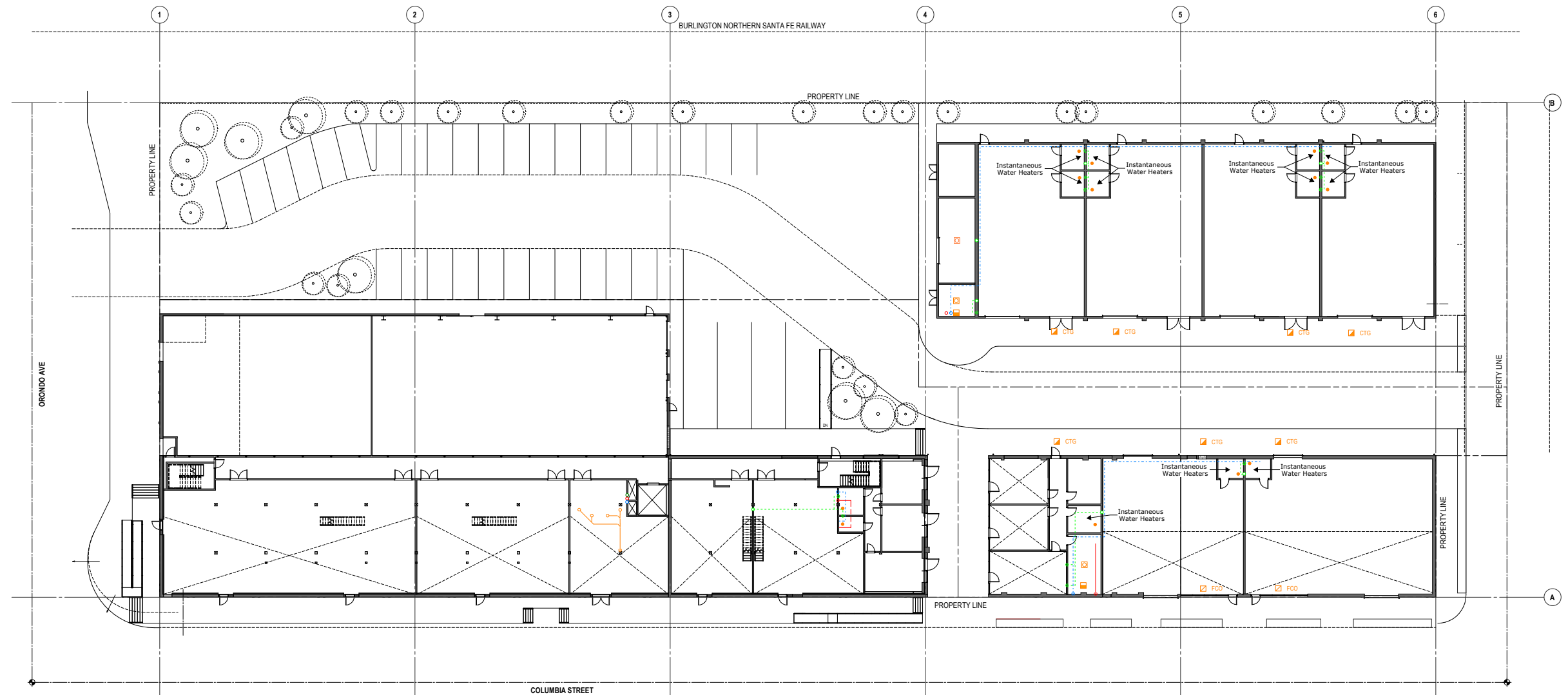
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**BASEMENT LEVEL PLAN**

Sheet:

**P2.01**

**1 BASEMENT LEVEL PLAN**  
 SCALE: 1/16" = 1'-0"



1 LEVEL 1 FLOOR PLAN  
SCALE: 1/16" = 1'-0"

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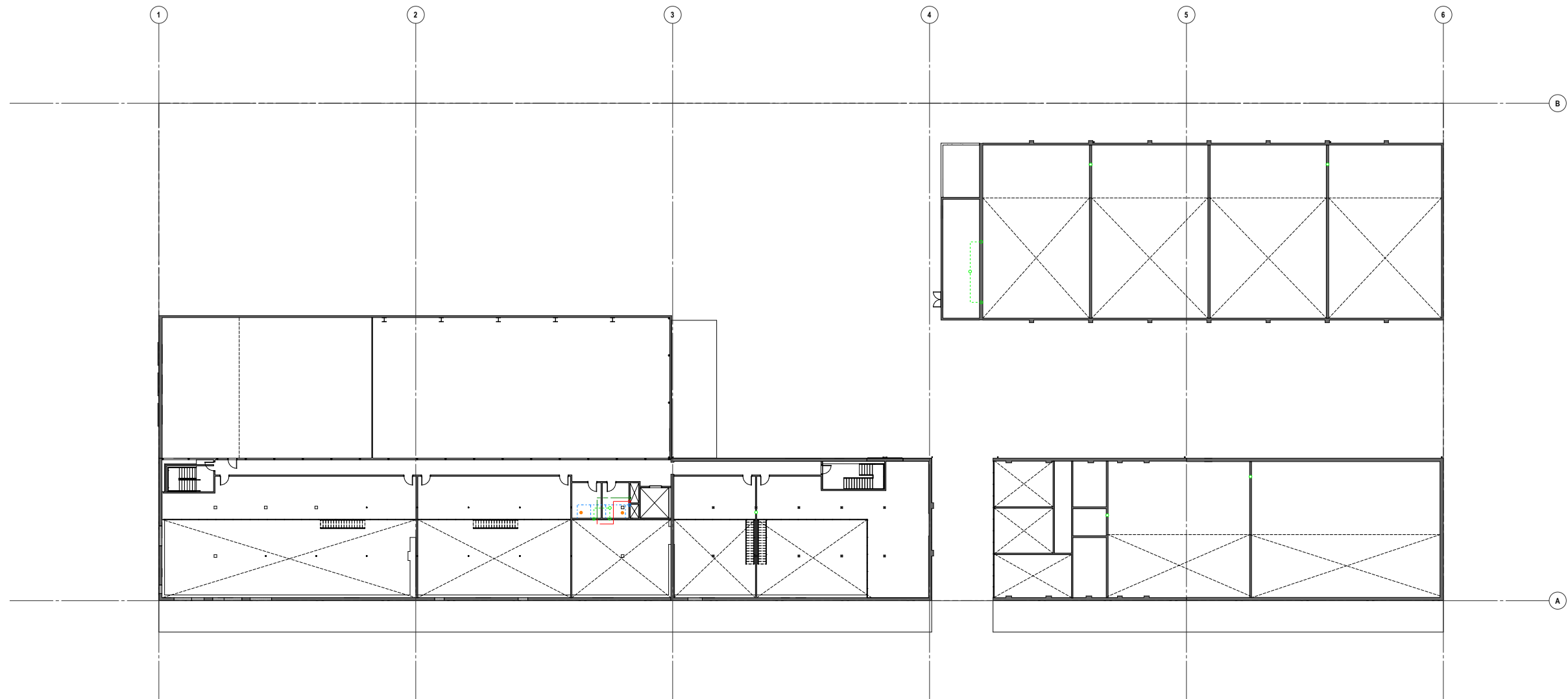
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**LEVEL 1 FLOOR PLAN**

Sheet:

**P2.02**



1 LEVEL 2 FLOOR PLAN  
SCALE: 1/16" = 1'-0"

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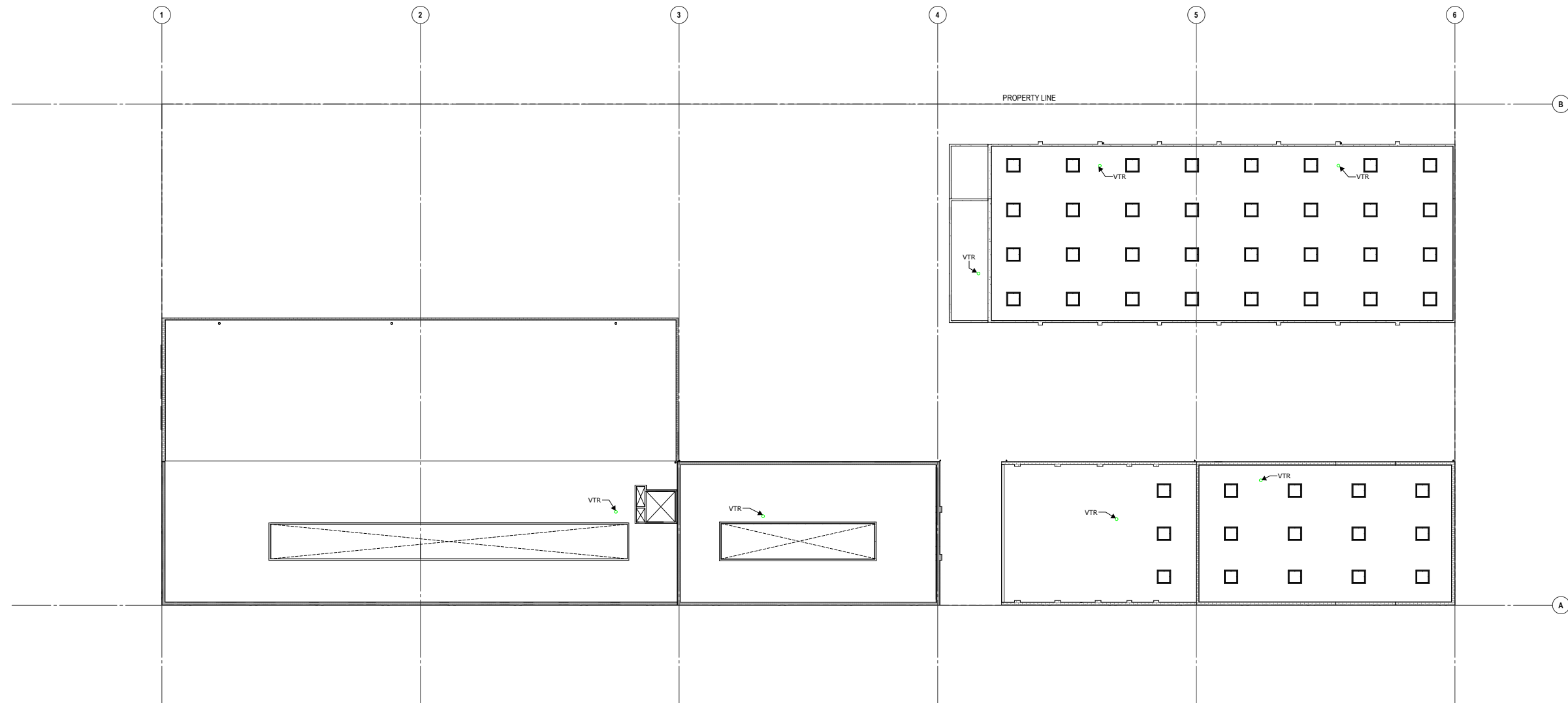
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LEVEL 2 FLOOR  
PLAN

Sheet:

P2.03



1 ROOF PLAN  
SCALE: 1/16" = 1'-0"

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Project No.: 2136

Scale: 1/16" = 1'-0"  
Sheet contents:  
ROOF PLAN

Sheet:

P2.04



# Columbia Street Properties

Basis of Design Narrative - Revised

March 1, 2022

[pae-engineers.com](http://pae-engineers.com)



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## 1.0 Project Description

### 1.1 Building Description

The Columbia Street Properties are a collection of six buildings along Columbia Street, between Orondo and Yakima, in downtown Wenatchee. The following excerpt from the site plan shows each building and its designation. Each section of the analysis refers to the building by the letter designation.

- Building A: Currently leased to Badger Mountain Brewing. Minimal observations of this space.
- Building B: Former fruit pack line facility; two stories with a basement
- Building C: Additional space for the pack line facility; two stories with basement
- Building D: Primarily a single volume storage building; small office; the north portion includes ramps to basement and level 1 of Building C
- Building E: One large volume, former fruit storage
- Building F: Four large volumes of former fruit storage; main chemical process mechanical room and office on the north



Figure 1: Excerpt from Site Civil Plan



**BUILDING ENVELOPE**

**General**

The performance of the building envelope will be critical to the energy efficiency of the building, the comfort level of the occupants, and the design of the mechanical system. The proposed mechanical systems and preliminary equipment sizing are based on the following performance for each envelope component. All glazing percentages must meet the requirements of 2018 WSEC.

**Table 1: Envelope Component Performance**

Build Type	Performance Coefficient	2018 WSEC Type	2018 WSEC
Roof/Ceilings	U-value	Insulation Above Deck	0.027
External Walls	U-value	Steel Framed	0.055
Slab on Grade	F-factor	Slab-On-Grade Floors, Unheated	F-0.540
Exterior Doors	U-value	Exterior doors, swinging	0.37
Fenestration Vertical	U-value	Fixed	0.30
	U-value	Operable	0.40
	U-value	Entrance Doors	0.60
	SHGC	All	0.38
Fenestration Skylights	U-value	Skylights	0.50
	SHGC	Skylights	0.35

**1.2 Codes and Standards**

The following codes, guidelines, regulations, and other references that will be put into practice in the design of the building.

- 2018 International Building Code with Washington Amendments
- 2018 International Fire Code with Washington Amendments
- 2015 International Mechanical Code with Washington Amendments
- 2018 Washington State Energy Code
- 2015 Uniform Plumbing Code with Washington Amendments
- 2020 National Electrical Code with Washington Amendments
- ASHRAE Standard 62.1-2016 – Ventilation for Acceptable Indoor Air Quality
- ASHRAE Standard 55-2017 – Thermal Environmental Conditions for Human Occupancy
- ASHRAE Standard 90.1-2016 – Energy Standard for Buildings Except Low-Rise Residential Buildings
- ADA or Uniform Federal Accessibility Standards
- National Fire Protection Association (NFPA) Standards
- USGBC LEED Green Building Rating System for New Construction (LEED-NC)
- American National Standards Institute (ANSI)
- Institute of Electrical and Electronics Engineers (IEEE)



- National Electrical Manufacturers Association (NEMA)
- Underwriters Laboratories (UL)
- Americans with Disabilities Act (ADA)
- Telecommunications Industry Association (TIA)
- Building Industry Consulting Service International (BICSI)
- ANSI/TIA-568-C.0, Generic Telecommunications Cable for Customer Premises
- ANSI/TIA-569-C, Telecommunications Pathways and Spaces
- ANSI/TIA-607-C, Generic Telecommunications Bonding and Grounding
- ANSI/TIA-606-B, Administration Standard for Telecommunications Infrastructure
- Structured Cabling Systems (Telecom/Data)

**1.3 Washington State Energy Code – C406**

The 2018 Washington Energy Code requires additional efficiency measures to comply. The following table notes the available measures required for the project. A minimum of 6 points are required.

**Table 2: 2018 Washington Energy Code**

C406 #	Option	Efficiency Credits
1	More efficient HVAC	2
2	Reduced lighting power option 1	2
3	Reduced lighting power option 2	4
4	Enhanced lighting controls	1
5	On-site renewables	3
5.1	1/3 renewables of C406.5	1
5.2	2/3 renewables of C406.5	2
6	DOAS	4
7	High performance DOAS	4
8	High efficiency hot water	n/a
9	High performance hot water	n/a
10	Enhanced envelope	3
11	Reduced air infiltration	1
12	Enhanced Commercial Kitchen Equipment	1



## 2.0 Mechanical

### 2.1 Design Criteria

The following tables illustrate the design criteria that will be utilized to design the facility systems.

**Table 3: Design Conditions**

**Location: Wenatchee, Washington**

Operation	Temperature
Outside - Cooling	95°F DB/66°F WB
Outside - Heating	4.3°F
Interior - Cooling	75°F ±2°F, max. 65% RH
Interior - Heating	70°F ±2°F
Interior - Relative Humidity	65% RH maximum

**Table 4: Duct and Pipe Sizing Criteria**

Low-Pressure Ductwork	
Static Pressure Loss	Maximum 0.10 inches water column per 100 feet
Main Velocity	Maximum 1,500 feet per minute
Branch Velocity	Maximum 1,200 feet per minute
Flexible Ducts	Maximum length 8 feet, minimize total 90 degree bends

### 2.2 HVAC Systems

**Air Source Heat Pump Systems.**

Building B and C will be heated and cooled by a variable refrigerant flow system (VRF). The outdoor VRF unit will provide refrigerant to be distributed to multiple indoor units to maintain heating and cooling in the spaces.

Building D, E, and F will have individual dedicated air source heat pump rooftop packaged units with electric backup heat.

Building D (Add Alt) will be heated and cooled by a variable refrigerant flow system (VRF). The outdoor VRF unit will provide refrigerant to be distributed to multiple indoor units to maintain heating and cooling in the spaces.



## 2.3 Variable Refrigerant Flow Systems

**OUTDOOR VRF UNITS**

The variable refrigerant flow (VRF) outdoor units will be a manifolded energy sharing heat recovery system. The VRF will be able to provide simultaneous heating and cooling to the indoor units. The system shall be able to perform 100% heating with low ambient temperatures above 5°F and be able to provide partial heating down to -25°F. The energy recovery will allow the system to remove heating or cooling from one indoor unit and distribute it to another indoor unit that needs heating or cooling.

Estimated Outdoor VRF Units:

- Building B & C – 86 tons
- Building D – 9 tons
- Building F – 4 tons
- Building D – 40 tons (including 9 tons from BOD) (Add Alt)

**INDOOR VRF UNITS**

The VRF indoor units will vary in type and quantity for each space. The indoor units will provide heating and cooling to each space with individual temperature control. Some of the indoor units require condensate pumps if gravity drainage is not practical. The type of indoor units can vary from the following unit types:

- Wall mounted
- Ceiling Cassette
- Ducted

Estimated Indoor VRF Units (multiple units in each space):

- Building B & C
  - Basement
    - Tenant Space 01 – 5 tons
    - Tenant Space 02 – 5 tons
    - Tenant Space 03 – 2.5 tons
    - Other – 2 tons
  - 1<sup>st</sup> Floor
    - Tenant Space 11 – 21 tons
    - Tenant Space 12 – 13 tons
    - Tenant Space 13 – 7 tons
    - Tenant Space 14 – 7 tons
    - Tenant Space 15 – 12 tons
    - Tenant Space 16 – 1 ton
    - Tenant Space 17 – 1 ton
    - Tenant Space 18 – 1 ton
    - Other – 4 tons



- 2<sup>nd</sup> Floor
  - Other – 4 tons
- Building D
  - Tenant Space 11 – 2 tons
  - Tenant Space 12 – 2 tons
  - Tenant Space 13 – 2.5 tons
  - Tenant Space 14 – 4 tons (Add Alt)
  - Tenant Space 15 – 3 tons (Add Alt)
  - Tenant Space 16 – 3 ton (Add Alt)
  - Tenant Space 17 – 3 ton (Add Alt)
  - Tenant Space 18 – 3.5 ton (Add Alt)
  - Other – 2 tons
- 2<sup>nd</sup> Floor
  - Residence 21 – 3 tons (Add Alt)
  - Residence 22 – 2.5 tons (Add Alt)
  - Residence 23 – 2.5 tons (Add Alt)
  - Residence 24 – 2.5 tons (Add Alt)
  - Residence 25 – 3 tons (Add Alt)
- Building F –
  - Other - 4 tons

## 2.4 Air Handling Systems

### VARIABLE PACKAGED ROOFTOP UNITS

Air for cooling and ventilation will be distributed to all occupied spaces by packaged rooftop air handling units.

Units will be equipped with the following components:

- Mixing box with air side economizer
- Final filters (MERV 13) – supply air
- Pre-filters (MERV 8) – Return air
- Heat pump heating and cooling
- Electric backup heating
- Variable speed supply fans
- Variable speed return fans
- Modulating freeze protection
- Supply air acoustic silencers
- Return air acoustic silencers

Zoning of air handling units will be based on environmental requirements and operating schedules.



The heat recovery wheel/plate sized for full airflow rate will transfer energy from the return airstream to the supply air stream when the unit is operating outside the airside economizer mode.

During economizer mode face/bypass dampers will position for free cooling.

The supply and return fans will be sized to meet the design airflow, without redundancy.

Supply and Return fan speeds will vary speed to maintain the minimum airflow required to maintain space temperature setpoints.

Heating will modulate to maintain supply air temperature between 65 and 85 degrees F.

Cooling will modulate to maintain supply air temperature between 55 and 65 degrees F.

Estimated Variable Rooftop Packaged units:

- Building D & E
  - 14 ton, 5,600 cfm
  - 18 ton, 7,200 cfm
- Building F
  - 14 ton, 5,600 cfm (qty 4)

### DEDICATED OUTDOOR AIR SYSTEM (DOAS)

Air for ventilation will be distributed to all occupied spaces by central, custom, factory fabricated, dedicated outdoor air handling units.

Units will be equipped with the following components:

- Outside air damper
- Relief air damper
- Final filters (MERV 13) – supply air
- Pre-filters (MERV 8) – return air
- Heat recovery heat wheel or plate
- Heat pump heating and cooling
- Electric backup heating
- Variable speed supply fans
- Variable speed return fans
- Modulating freeze protection
- Supply air acoustic silencers
- Return air acoustic silencers

Zoning of air handling units will be based on environmental requirements and operating schedules.

The heat recovery wheel/plate sized for full airflow rate will transfer energy from the return airstream to the supply air stream when the unit is operating outside the airside economizer mode.

During economizer mode face/bypass dampers will position for free cooling.

The supply and return fan will be sized to meet the design airflow, without redundancy.



Supply and Return fan speeds will vary speed to maintain the minimum airflow required to maintain ventilation requirements.

Heating and cooling heat pump stage to maintain supply air temperature of 70 degrees F with a 5-degree F dead band. Electric strip heat will be used for back up heat.

Estimated dedicated outdoor air handling units:

- Building B & C: 6,650 CFM

### **ENERGY RECOVERY VENTILATORS (ERV)**

Air for ventilation will be distributed to all occupied spaces by factory fabricated, dedicated energy recovery ventilators.

Units will be equipped with the following components:

- Outside air damper
- Exhaust air damper
- Final filters (MERV 8) – supply air
- Pre-filters (MERV 8) – return air
- Heat recovery plate
- Electric backup heating
- Supply fan
- Return fan

The heat recovery plate sized for full airflow rate will transfer energy from the return airstream to the supply air stream when the unit is operating.

The supply and return fan will be sized to meet the design airflow, without redundancy.

Estimated energy recovery ventilators:

- Building D: 580 CFM
- Building D (Residential): 110 CFM (Add Alt)
- Building D (Retail): 240 CFM (Add Alt)

## 2.5 Exhaust Systems

Rooftop exhaust fans will be provided for janitor closets and restrooms in buildings E and F.

Buildings B, C, & D janitor closets and restrooms will be routed through their associated dedicated outside air systems.

Estimated Exhaust Units:

- Building E restrooms – 300 cfm
- Building F trash room – 500 cfm
- Building F restrooms – 300 cfm (qty 4)



## 2.6 Controls

A direct digital control (DDC) system will be provided to control and monitor all HVAC equipment and systems. Valve and damper actuation will be electric type. The control system will allow full control and monitoring from a secure internet portal. The control system will perform all required control functions, including optimization of equipment and system performance, reliability, equipment life and energy consumption.



## 3.0 Plumbing

### 3.1 Design Criteria

**Table 5: Plumbing Piping Sizing Criteria**

<b>Domestic and Non-Potable Water Piping</b>	
Minimum Pressure	35 PSI at most remote outlet
Maximum Pressure	70 PSI
Friction Loss	Maximum 3 feet per 100 feet
Velocity	Maximum 6 feet per second (Cold & Non-potable Water) Maximum 5 feet per second (Hot Water) Maximum 3 feet per second (Hot Water Return)
Sizing	Per Code (UPC 2018 – Appendix A)
Below Grade Material	3 inch and smaller, Type K, Hard drawn copper tubing, Soldered\brazed fittings 4 inch and larger, Ductile iron, Incoming main, Class 150 Boltite mechanical joint 4 inch and smaller, Type L, Hard drawn copper tubing, Soldered\brazed fittings 6 inch and larger, Type L or Schedule 10 Stainless Steel, Brazed fittings
Domestic Hot Water Supply/Return, Above Grade Insulation	3/4 inch and smaller, 1 inch thick fiberglass, all-purpose jacket or elastomeric 1 inch and larger, 1-1/2 inch thick fiberglass or all-purpose jacket
<b>Waste and Vent Piping</b>	
Piping Slope	Minimum 1/4 inch per foot for piping less than 4 inches, 1/8 inch per foot for 4 inches and larger
Sizing	Per Code (UPC 2018)
Material	Service weight cast iron with no-hub couplings



### PLUMBING FIXTURES

Commercial grade low flow fixtures will be provided where indicated on the architectural drawings. Refer to table below for representative flow rates for each type of fixture.

**Table 6: Plumbing Fixture Types**

<b>FIXTURE</b>				<b>FAUCET / VALVE</b>		
<b>DESCRIPTION</b>	<b>MANUFACTURER / MODEL</b>	<b>TYPE</b>	<b>MOUNTING</b>	<b>DESCRIPTION</b>	<b>MANUFACTURER / MODEL</b>	<b>GPM/ GPF</b>
DRINKING FOUNTAIN	ELKAY EZSTL8WSLK	DUAL LEVEL W/ BOTTLE FILL	WALL	-	-	0.13
-	-	-	-	WALL HYDRANT (CW ONLY)	WOODFORD B65	-
LAVATORY	KOHLER K-2084-L	VITREOUS CHINA	WALL	SENSOR FAUCET	SLOAN EFX-350	0.5
MOP SINK	ACORN TNC-32	NEO-CORNER	FLOOR	VACUUM BREAKER 6" ELBOW BLADE	CHICAGO 814-VBXXCP	2.2
URINAL	SLOAN SU-7009-STG	WASH DOWN	WALL	SENSOR FLUSH VALVE	SLOAN ECOS 8186	0.125
WATER CLOSET (INDIVIDUAL)	SLOAN ST-2029	ELONGATE D	FLOOR	SENSOR FLUSH VALVE	SLOAN G2 8111	1.28
WATER CLOSET (GROUP)	SLOAN ST-2459	ELONGATE D	WALL	SENSOR FLUSH VALVE	SLOAN G2 8111	1.28

**Table 7: Residential Plumbing Fixture Types (Building D Add Alt)**

<b>DESCRIPTION</b>	<b>MOUNTING</b>	<b>DESCRIPTION</b>	<b>GPM GPF</b>
LAVATORY	COUNTER	LEVER HANDLE FAUCET	0.5
LAUNDRY BOX	WALL RECESSED	(2) 1/4" TURN WITH HAMMER ARRESTORS	-
REFRIGERATOR BOX	WALL RECESSED	1/4" TURN WITH HAMMER ARRESTOR	-
SHOWER	FLOOR	TEMPERATURE CONTROL VALVE	1.5
SINK	DROP IN COUNTER	LEVER HANDLE PULL OUT SPRAY	1.5
WATER CLOSET	FLOOR	TANK FLUSH	1.28



### 3.2 Domestic Cold-Water System

It is estimated that 2-inch domestic water service will be required at each building and enter the building at the ground level and be routed to the water entry room. Buildings B, C & F is estimated to reuse the existing water mains. Buildings D & E will require a new 2" water main routed to the new water entry room.

An existing water main located in the street will serve the domestic water system. A water entry room will house backflow device on the incoming domestic water supply. The domestic water system will be provided with positive means to control backflow, with appropriate backflow preventers at sources of possible contamination within the building, such as mechanical equipment and irrigation systems.

Cold water will be distributed to the plumbing fixtures, and other areas requiring water. Refer to Architectural Drawings for plumbing fixtures and room locations. Freeze-proof hose bibs to be distributed around perimeter of building at every 100 feet and be provided for recycling room, and trash room.

#### **IRRIGATION**

A backflow device will be provided for the irrigation system within the water entry room. Irrigation piping will be stubbed out of the building for the landscape use.

#### **BUILDING D (ADD ALT)**

It is estimated that a 1-inch domestic water service will be required at each residence and enter the space at near the water heater. A water meter for each individual residence will be in the space prior to branching off to the cold water distribution to the residence.

Cold water will be distributed to the plumbing fixtures, and other areas requiring water. Refer to Architectural Drawings for plumbing fixtures and room locations.

### 3.3 Domestic Hot Water System

Building B & C domestic hot water will be supplied by an electric storage tank style water heater located in the lower-level janitor's closet.

The water heater will produce 140°F for health and equipment efficiency purposes.

A master thermostatic mixing valve will temper the hot water to 120°F for general use. Domestic hot water will be circulated to maintain temperatures above 120°F throughout the piping in compliance with ASHRAE 12-2020.

Expansion tanks will be provided on hot water systems at water heaters to eliminate pressure buildup when the system is not being used.

Point of use thermostatic mixing valves will temper the hot water to 105°F prior to discharge from any faucet.

Buildings D, E, and F domestic water will be supplied by point of use instantaneous water heaters sized for each application. The instantaneous water heaters will be set to a maximum of 105°F by code to prevent scalding.

Estimated Water heater size:

- Building B&C – 40 gallons at 5 kw



#### **BUILDING D (ADD ALT)**

It is estimated that 3/4-inch domestic hot water line will be required to the water heater in each residence. The water heater will be an electric storage tank style. The water heater will produce 120°F for equipment efficiency purposes. An expansion tank will be provided manage pressure buildup when the system. The water tanks will have a pressure relief valve in case of extreme pressure buildup.

Estimated Water heater size: 30 gallons at 4.5 kw

### 3.4 Sanitary Sewer System

Sanitary waste and vent piping will be provided in toilet rooms and other spaces as required.

Sanitary waste piping leaving the site will connect to a sewer within 5 feet of the building. Sanitary waste piping will run parallel to the storm water and be connected to piping provided by Civil near the curb line. This will allow the sewers to connect to their appropriate separate (sanitary and storm) sewer systems in the future.

Sump pumps will be provided for elevator shafts and connected to the gravity sanitary system within the building.



## 4.0 Fire Protection Systems

### 4.1 Overview

It is estimated that 6-inch fire service will be required at each building and enter the building at the ground level and be routed to the Fire Sprinkler room. Buildings B, C & F is estimated to reuse the existing fire sprinkler mains. Buildings D & E will require a new 6" fire main routed to the new fire / water entry room.

Design-Build Fire Sprinkler contractor shall provide complete sprinkler system. Fire Sprinkler Designer must be certified in accordance with RCW 18-270. The entire building will be totally sprinklered in accordance with NFPA 13.

A detector double check assembly will be provided for the fire service in the Fire Sprinkler room. See drawings for the location of the fire department connection (FDC).

The fire sprinkler system shall comply with NFPA 13, and local Fire Marshal requirements. In general, the fire sprinkler system shall consist of connection to new water service, including electric fire pumps, jockey pump, controllers, automatic transfer switch, main flow alarm station, zone control valves and flow indicators, alarm bell, fire sprinkler piping and heads. All related fire protection accessories as required will be provided. Coordinate location and type of tamper, flow, and pressure switches with the fire alarm system. All fire sprinkler piping to be concealed.

All required system isolation valves shall be provided with tamper switches. Each floor shall be provided with a zone isolation valves with tamper switches, flow switches, fire department test stations and hose valves (as required). The fire department test drain shall terminate outside of the building. Dry pipe sprinkler systems will be provided for areas subject to freezing. Dry pipe systems shall be galvanized inside and out, threaded or with cut grooves. All fire protection system materials to be made in the USA.

Provide a Class II standpipe per the requirements of OSCC Section 905.1.2, local Fire Marshal requirements and NFPA 14. Coordinate location of all hose valves in secure areas.

Fire sprinkler heads to be chrome plated semi-recessed pendant type with polished chrome escutcheons in finished areas and upright rough brass finish type heads in unfinished areas. Horizontal dry sidewall sprinkler heads will be provided for overhangs, loading dock, and other perimeter areas subject to freezing. Quick-Response heads will be provided in all light hazard areas.



## 5.0 Electrical

### 5.1 Design Criteria

The following load allowances will be provided for the project:

**Table 8: Lighting and Power Load Densities**

Area	Lighting Systems (VA/SF)	Power Systems (VA/SF)
Offices	0.6 – 0.7	7 – 10
Circulation/Transition	0.5 – 0.6	1.0
Kitchen / Food Prep	1.09	90
Gymnasia	0.9	1.5
Classrooms	0.71	7 - 10
Meeting Rooms	0.97	7 - 10
Lobby	0.84	1.5
Stairs	0.49	0.5
Restrooms	0.63	1.0
Storage	0.38 – 0.51	0.5
Mechanical/Electrical Areas	0.43	0.5

### 5.2 Service and Distribution

**PRIMARY SITE ELECTRICAL DISTRIBUTION**

The existing buildings are all served independently via aerial feeds from pole-top transformers. Buildings A, B, C, D and E are feed from Columbia Street. Building F is served from a bank of pole-top transformers on a pole at the NW corner of the building. This pole, in turn, is aerial served from a pole in the right of way to the South, along Yakima. All of these services will be removed, including to the pole in the middle of the site that serves Building F.

Provide (2)4"C from the existing utility pole, South at Yakima, to underground, and new concrete encased duct bank from the pole to a new 208V/3Ph utility transformer in the middle of the site.



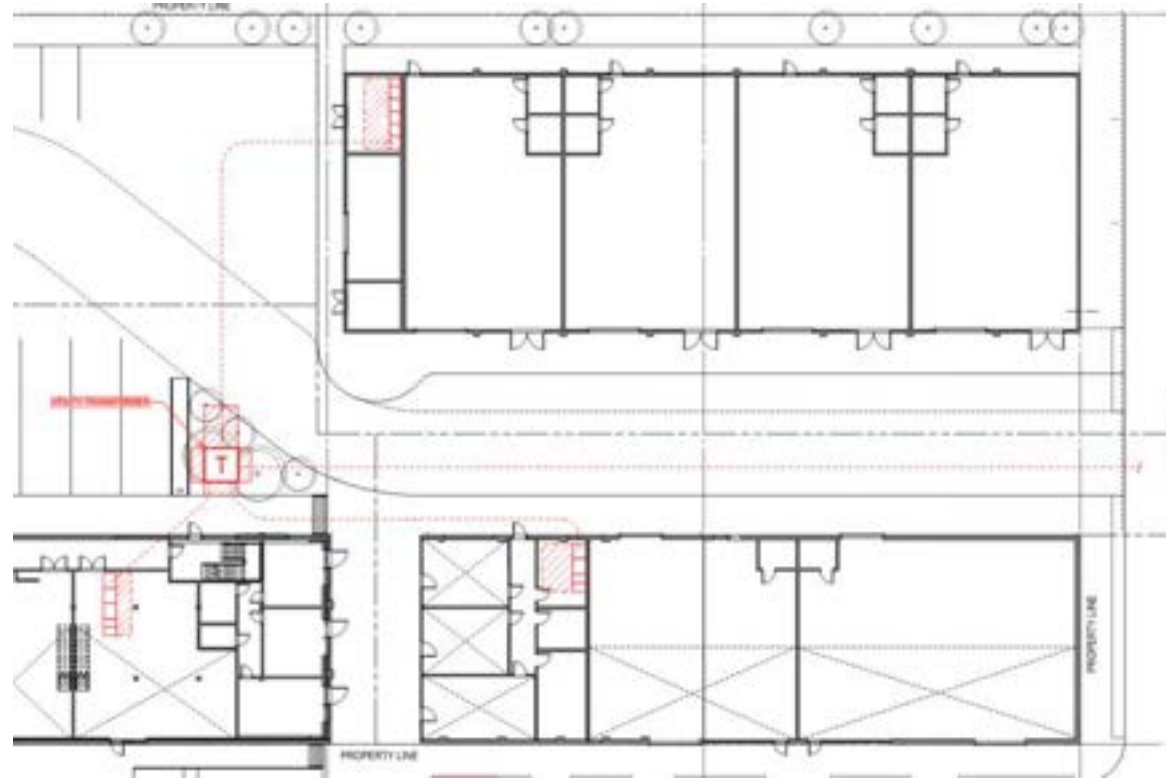


### BUILDING MAIN POWER SERVICE

The existing buildings will be fed via three new electrical services:

- Buildings A-B-C
- Buildings D-E
- Building F

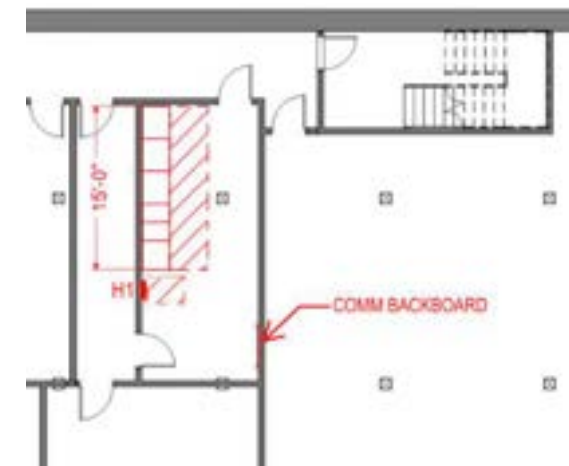
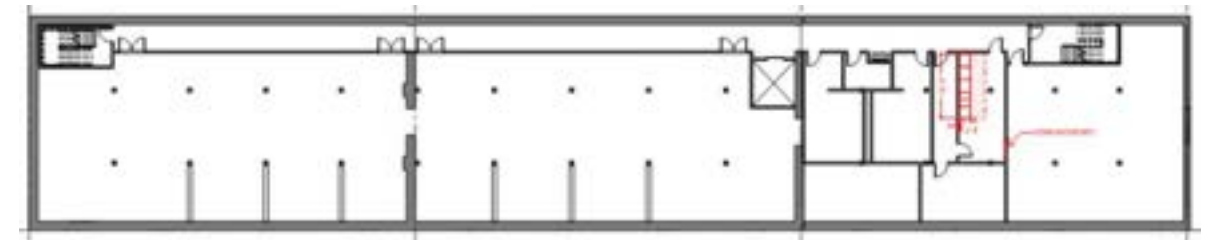
All three new services will be served via the single Utility transformer.



### BUILDING DISTRIBUTION

#### BUILDING A-B-C

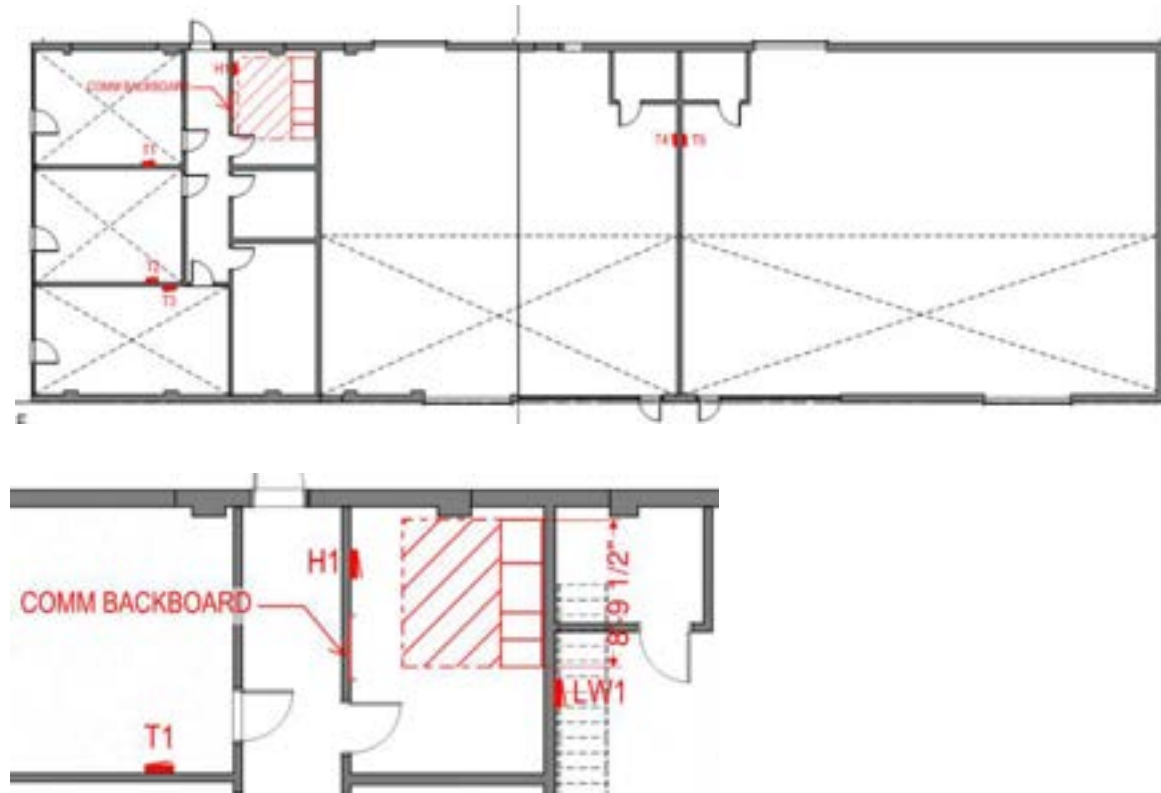
Consolidate the services for Building A, B, and C into a single location and provide a new Commercial Meter Center in the basement Building C. A ballpark size for this new Meter Center is 2500A, 208/120V, 3-phase, 4-wire. As a ROM we recommend an 800A service for the Building A, one 400A service to the largest new tenant space in Building B, two additional 200A services to the other Building B spaces, two 200A service tenant spaces in Building C, three 100A services in building C, and one 200A "house" service for common power in Buildings A, B, and C.





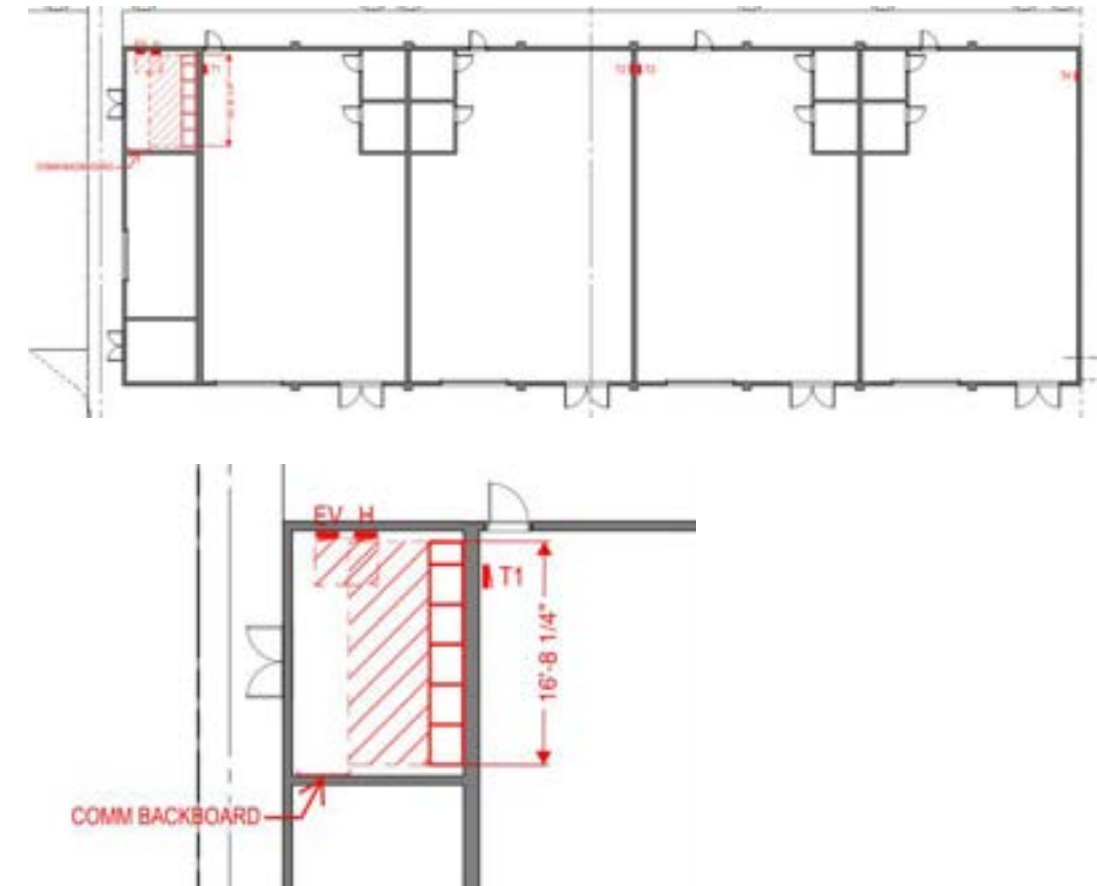
**BUILDING D-E**

Consolidate the services for Building D and E into a single location and provide a new Commercial Meter Center in a new electrical room carved out of the existing space. A ballpark size for this new Meter Center is 1600A, 208/120V, 3-phase, 4-wire. As a ROM we recommend a total of (2)600A meters, and (4)100A meters.



**BUILDING F**

Provide a new Commercial Meter Center in Building F. A ballpark size for this new Meter Center is 2000A, 208/120V, 3-phase, 4-wire. As a ROM we recommend an (4)600A meters and (2)100A meters.



**POWER QUALITY**

Quality of power supply is affected by noise sources within a facility as well as outside (utility transferred). The power distribution system will include measures to help safeguard equipment from utility surges and transient conditions. Surge Protective Devices (SPD) will be provided at each Tenant Service.

**BRANCH CIRCUIT WIRING**

Copper conductors routed in EMT raceway will be used throughout the building for branch distribution. Flexible metal clad (MC) cabling will be used in individual areas for local distribution of branch circuits, the homeruns back to the panel will be EMT/copper conductors. Ground fault circuit interrupter receptacles will be provided in toilet rooms at sinks, roof, outdoor and wet areas.



**EQUIPMENT CONNECTIONS**

Electrical power connections will be made to all mechanical equipment, to include providing all electrically associated devices such as disconnect switches, contactors, magnetic or manual starters, lock-out switches, etc., not furnished under Division 23. VFDs furnished under Division 23 and installed under Division 26.

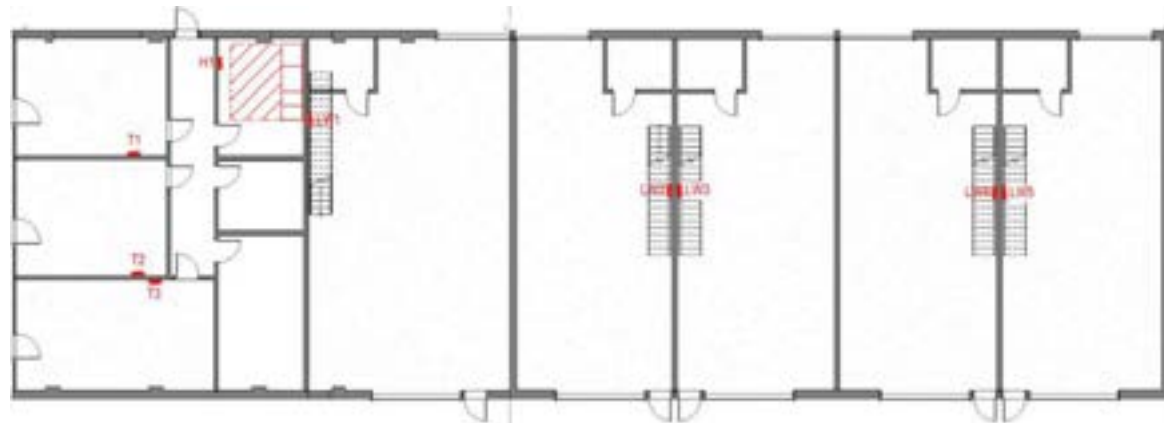
Electrical power connections will be made to support miscellaneous equipment. Connections include disconnect safety switches and wiring to support interlocks to remote devices.

**GROUNDING SYSTEM**

A grounded power system will be provided in compliance with the NEC in each building. This ground system consists of the building service ground consisting of multiple ground rods, UFER ground, and bonding to the water service and structural steel. The grounding system will be extended thru out all electrical systems in the building(s). Grounding busses will be provided in the electrical and telecom network rooms. All metallic systems will be grounded to the building grid. An equipment grounding conductor will be provided in all feeder and branch wiring runs.

**5.3 Building D-E Alternate**

An alternate scheme for Building D-E includes providing 6 live/work tenant spaces in lieu of the two maker spaces. (Refer to architectural for details). For the electrical portion of the alternate, assume that same, new 1600A service will be provided to the building. However, in lieu of (2) 600A, 3-phase meters for the maker spaces, (5)200A, 1-phase meters will be provided for the live/work units. These live/work meter sections will take up approximately the same size as larger meters in the base design, so there should be minimal impact to the electrical room dimensions/layout. Provide a 200A, 1ph, 3wire feeder from each meter to each live/work unit and a 200A panel in each. The smaller, 100A tenant spaces in Building D-E will remain affected by the alternate.



**5.4 Electric Vehicle Charging (EV)**

Per Washington Administrative Code, 5% of new or revised parking on the site must have provision for Type 2 electric vehicle charging. A dedicated service for vehicle charging will be provided from the meter center in Building F. The WAC does not require that charges be installed, but rather, at a minimum, that all infrastructure necessary be provided to each identified future charging location. Two 1”C will be provided to each charging location as identified by the Architect. One conduit will be have (2)#8CU, (1)#10G conductions for power, connected to the EV panel in the main electrical room. The other conduit will be capped at the charger locations and have a pull string back to the communications backboard, for future low connection to charge, which will be coordinated once a specific charger model is identified.

**5.5 Renewable Power System (PV)**

Per Washington State Energy Code pathway will be provided from each main electrical room to the roof of each building for PV readiness, and to provide a pathway for future installation of photovoltaic array(s).

**5.6 Fire Alarm**

**SYSTEM DESCRIPTION**

A new, networked Fire Alarm system will be provided to the campus. Each building group, A-B-C, D-E, and F will have a Fire Alarm Control Panel and each control panel will be interconnected with the others so that an alarm or trouble condition in any of the buildings will also report to the others. The new system(s) will be of supervised, addressable supervised, Class B hard wired, and will include an automatically actuated alarm as described below.

The activation of any sprinkler flow switch, smoke detection device or manual pull station will operate the alarm system and initiate the smoke control sequence where appropriate. The fire alarm annunciator will provide indication of the floor of an alarm and the type of alarm, i.e., manual, sprinkler flow, or smoke. The fire alarm system will be connected to an approved central monitoring service.

The activation of any elevator lobby, hoist way or machine room smoke or heat detector will cause the elevator to initiate a recall sequence.

The activation of any standpipe or sprinkler valve tamper switch activates the fire alarm system supervisory audible signal and illuminates the indicator at the control panel.

The activation of any sprinkler pre-action system pressure or low air switch activates the fire alarm system supervisory audible signal and illuminates the indicator at the control panel.

The activation of any duct detector or area detection device will initiate a HVAC unit shutdown and fire alarm system to close the combination fire/smoke dampers for the zone.

Two-way communication system will be provided within areas of refuge, elevator landing on each accessible floor that is one or more stores above or below the story of exist discharge to comply with NFPA 72.



An emergency responder radio system is provided per King County Requirements for firefighter's and other first responder's radio communications as required by the fire department.

**SYSTEM EQUIPMENT**

Fire alarm equipment will be housed with electrical or telecom equipment rooms or as required by the AHJ. Equipment located within the space will include:

- Fire Alarm System Control Panel
- Annunciator Panel
- NAC Panels
- Firefighter's Control and Indicating Panel (if needed)
- Telephone for Outside Communication

Fire alarm system equipment located remotely will include:

- Remote annunciator panel at the building entry point
- NAC panels
- Voice evac amplifiers

**Table 9: Fire Alarm Device Coverage**

Device	Coverage
Manual pull stations	Located at each exit and each exit leaving an elevated floor.
Smoke Detectors	Corridors, Air handlers (>2,000CFM), Elevators lobbies, Elevator machine rooms, Elevator hoistways.
Fire Sprinkler	Tamper and Flow
Annunciation	Remote Annunciation at entry
Building Annunciation	Horn and Strobe annunciation thru out the facility.
System output	Relay interface for mechanical system shut down and elevator recall.
Monitoring	Central Station Monitoring



## 6.0 Technology

### 6.1 Design Criteria

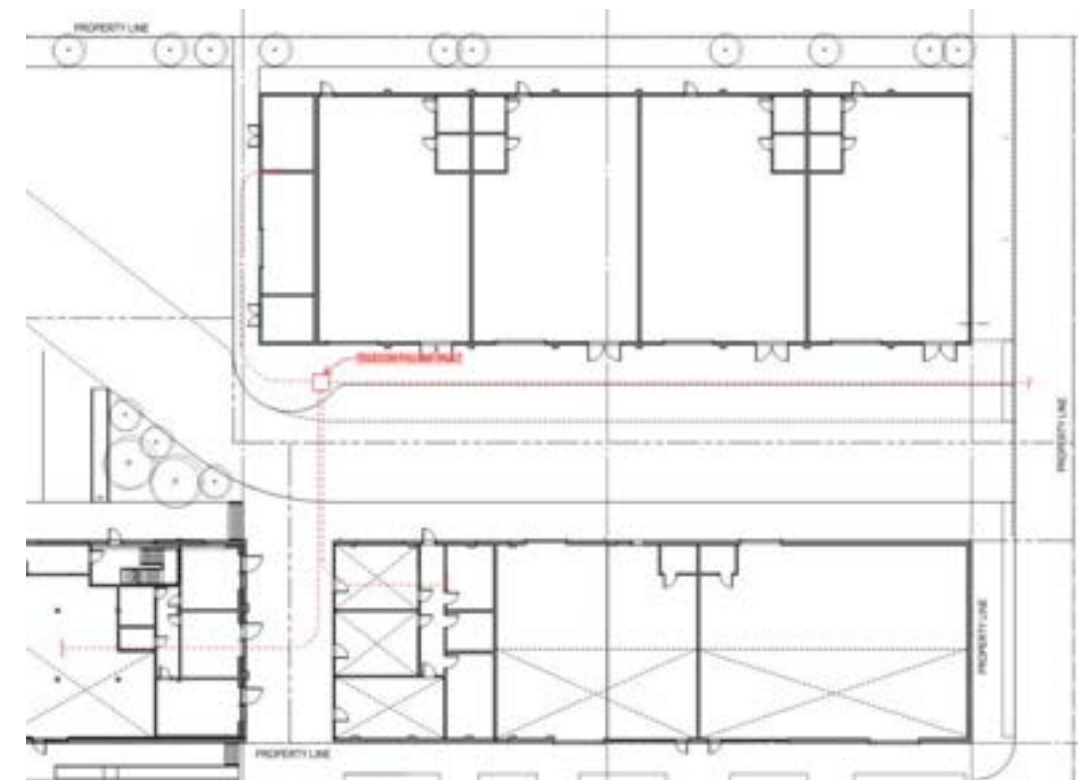
Technology systems provide flexible flow of information, dynamic content exchange, efficient end user communications, and maximizes building managers' oversight and support of building usage.

### 6.2 Existing Infrastructure

Existing Buildings A, B, C, D, and E all currently have telecommunications service via aerial connection from poles along Columbia Street. It does not appear that any communications service exists to Building F. All existing services will be demolished.

### 6.3 New Infrastructure

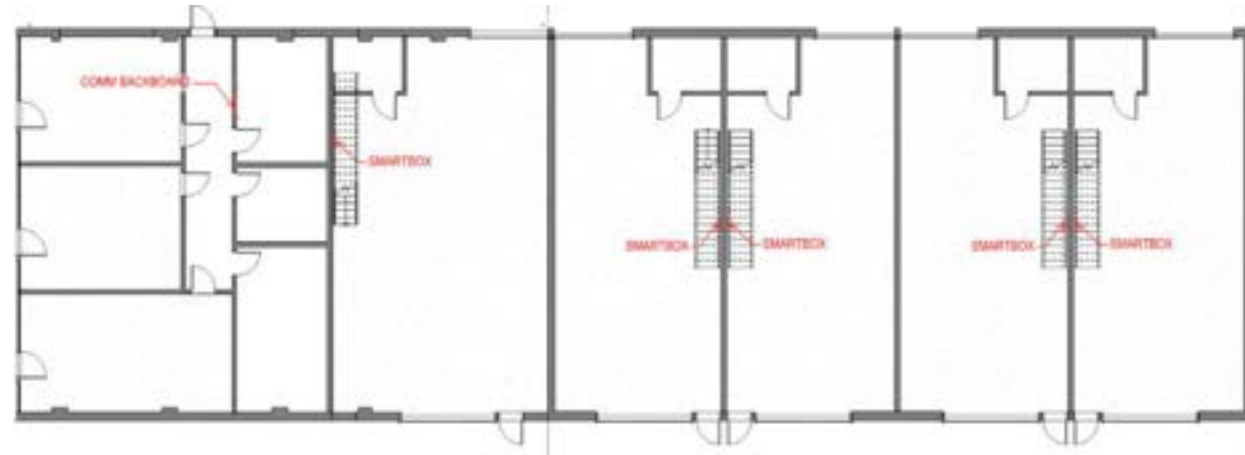
New underground service will be provided to the site from Yakima Street. Two 4" C will be provided down an existing pole and a new telecommunications duct bank will be routed North to a 444-LA pulling vault located adjacent to Building F. Two new 4" C will be provided from the vault to the communications backboard in each building group: A-B-C, D-E, and F. Carrier equipment will be provided at each backboard, and one 2" C will be provided from the backboards to each tenant space. Extension of communication services to each tenant space will be coordinated with prospective tenants as part of their Tenant Improvement build-outs.





## 6.4 Building D-E Alternate

For the alternate, for each of the live/work units provide a (2)1" conduit from the new telecommunications backboard in the building to each unit and terminate in an RF-transparent structured media cabinet (smart box) adjacent to the electrical panel. Provide pull string in each conduit and coordinate with the local utility to pull in coax and copper service lives from the local communications providers. Day-1 communications cabling from all carriers will be pulled in through one conduit, leaving the second as a future spare.



## 6.5 Grounding and Bonding

### TELECOMMUNICATIONS SPACES

A telecom grounding and bonding system will be provided for all telecom rooms and spaces throughout the building.

### Dedicated Telecom Bonding Backbone

This system is separate from the electrical grounding system in that an electrical grounding system is required for safety, but telecom grounding and bonding systems are required to protect active equipment in the system from disruptions due to either outside interference or unbalanced voltage potentials to ground. They are integral in that telecom system must be bonded to the electrical system so that they may function as a single cabling system.

A Primary Bonding Busbar (PBB, formerly TMGB) will be at each communications back-board. The PBB will be connected (bonded) to the electrical meter center ground in each building via the Telecommunications Bonding Conductor (TBC).

# CONSTRUCTION COST ANALYSIS

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Port of Chelan County  
Columbia Street Properties Adaptive Reuse



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Port of Chelan County  
Columbia Street Properties Adaptive Reuse

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Building D and E	15
Building F	22
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Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Overall Summary

	SF	\$/SF	TOTAL
Building A, B and C	43,553	231.74	10,092,901
Building D and E	7,850	398.38	3,127,293
Building F	10,931	329.24	3,598,946
Site - North Property			435,702
<b>RECOMMENDED BUDGET</b>			<b>17,254,842</b>
<b>ALTERNATES</b>			
Alternate 1: Building D and E buildout - live-work (ADD)			2,149,358

## Port of Chelan County Columbia Street Properties Adaptive Reuse

### Scope of Work

#### Project Scope Description

The project comprises cost planning for the Columbia Street Properties located in Wenatchee, WA. The intended design package consists of the conditions assessment of multiple existing buildings and its systems including but not limited to interior and exterior building improvements, new roofing, mechanical and electrical upgrades, and exterior site improvements.

#### Project Design

The costs report is based on the following documents, along with additional supplemental information:

- 220225\_101 Columbia Street - Feasibility Pricing Set, dated 2.25.2022
- Revit As-Builts, received on 3.2.22
- 2022-03-01 Columbia Street Properties - Mechanical Layout Add Alt, dated 2.25.2022
- 2022-03-01 Columbia Street Properties - Plumbing Layout Add Alt, dated 2.25.2022
- Board Meeting 1 plan excerpts\_PEDComments, received on 1.27.2022
- Board Meeting 1 plan excerpts, received on 1.26.2022
- Exhibit A, received on 10.1.2021
- 2022-03-01 Columbia Street Properties Basis of Design Narrative - Revised, dated 3.1.2022
- 220223\_NW Vernacular - Historic Tax Credits Summary, received on 2.25.2022

#### Procurement

Costs are based upon a design bid build delivery method. It is expected that there will be four to five General Contractors to maintain competitive pricing.

## Port of Chelan County Columbia Street Properties Adaptive Reuse

### Basis of Estimate

#### Assumptions and Clarifications

This estimate is based on the following assumptions and clarifications:

- 1 Hazardous material abatement is not required.
- 2 Regular working hours is anticipated with noisy work in off hours.
- 3 Soft costs, including design fee and permits, are not included.
- 4 FF&E is provided and installed by Owner.



Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building A, B and C Areas & Control Quantities

	SF
Areas	
Floor Area	43,553
Subtotal of Enclosed Areas	43,553
<b>TOTAL GROSS FLOOR AREA</b>	<b>43,553</b>

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building A, B and C Summary

	%	\$/SF	TOTAL	
Gross Area:		43,553 SF		
01 Foundations	0%	0.75	32,642	
02 Vertical Structure	2%	4.93	214,736	
03 Floor and Roof Structure	2%	3.48	151,723	
04 External Cladding	6%	13.53	589,206	
05 Roofing and Waterproofing	4%	10.00	435,390	
1 Shell	14%	32.69	1,423,695	
06 Interior Partitions	4%	8.56	372,835	
07 Interior Finishes	2%	5.71	248,586	
2 Interiors	6%	14,268.15	621,421	
08 Equipment and Specialties	0%	0.00	0	
09 Vertical Transportation	2%	5.28	230,000	
3 Equipment & Vertical Transportation	2%	5.28	230,000	
10 Plumbing	2%	4.17	181,710	
11 HVAC	27%	62.12	2,705,510	
12 Electrical	13%	29.91	1,302,523	
13 Fire Protection	3%	5.89	256,457	
4 Mechanical & Electrical	44%	102.09	4,446,200	
14 Selective Demolition	1%	3.12	135,885	
5 Selective Demolition	1%	3.12	135,885	
15 Site Earthwork	2%	5.34	232,446	
5 Building Sitework	2%	5.34	232,446	
<b>BUILDING CONSTRUCTION</b>	<b>70%</b>	<b>162.78</b>	<b>7,089,647</b>	
17 General Requirements	6.00%	4%	9.77	425,379
18 General Conditions	8.00%	6%	13.80	601,202
19 Permits and Fees	2.00%	2%	3.73	162,325
20 Contractor's Overhead & Profit or Fee	5.00%	4%	8.63	375,751
<b>PLANNED CONSTRUCTION COST</b>	<b>86%</b>	<b>198.71</b>	<b>8,654,304</b>	
21 Contingency	10.00%	9%	19.87	865,430
<b>CONSTRUCTION COST BEFORE ESCALATION</b>	<b>94%</b>	<b>218.58</b>	<b>9,519,734</b>	
22 Escalation to Construction Start (Sep 2023)	6.02%	6%	13.16	573,167
<b>RECOMMENDED BUDGET</b>	<b>100%</b>	<b>231.74</b>	<b>10,092,901</b>	

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building A, B and C

Quantity Unit Rate Total

1 Shell

01 Foundations	<b>43,553</b>	<b>SF</b>	<b>0.75</b>	<b>32,642</b>
Clean/repair existing SOG	8,927	SF	1.75	15,622
Slab on grade	835	SF	16.50	13,778
Insulation - R10 XPS	170	SF	3.00	510
Under slab vapor retarder	835	SF	2.10	1,754
Base aggregates 4"	10	CY	95.00	978
02 Vertical Structure	<b>43,553</b>	<b>SF</b>	<b>4.93</b>	<b>214,736</b>
6x6	37	EA	1,305.00	48,285
HSS 4x4x1/4 strong backing	20.06	TN	7,500.00	150,440
Sheathing 1/2" plywood	2,580	SF	5.45	14,061
Shoring	13	LF	150.00	1,950
03 Floor and Roof Structure	<b>43,553</b>	<b>SF</b>	<b>3.48</b>	<b>151,723</b>
2x12	1,929	LF	14.50	27,977
6x12	295	LF	36.25	10,694
14" TJI 560	728	LF	22.50	16,376
CMST14 straps	70	EA	150.00	10,500
Drill and epoxy 3/4"	176	EA	150.00	26,438
GL 5 1/8x18	141	LF	64.00	9,024
GLB 6 3/4x15 LOW	47	LF	72.00	3,384
L6x6x3/16 drag strut	98	LF	28.50	2,793
LTT20B wall anchor	118	EA	70.00	8,225
LVL 1 3/4x11 7/8	588	LF	20.25	11,907
Sheathing 3/4" plywood	1,157	SF	6.15	7,116
HSS 5x5x1/4 rail	0.12	TN	7,500.00	879
W8x35 hoist bm	0.19	TN	7,500.00	1,411
Elevator pit incl. sump pump	1	EA	15,000.00	15,000
04 External Cladding	<b>43,553</b>	<b>SF</b>	<b>13.53</b>	<b>589,206</b>
Clear sealer/anti-graffiti coating	13,920	SF	4.50	62,640
Brick masonry - repair and repoint, allow	13,920	SF	8.00	111,360
Paint - incl. clean and prep	8,070	SF	2.65	21,386
Mtl frame - batt insulation, vapor retarder, 5/8" abuse resistant GYP	13,920	SF	23.50	327,120
Glazing	200	SF	110.00	22,000
Enlarge opening	1	EA	450.00	450
Exterior doors - wood, glazed	13	EA	3,000.00	39,000
Exterior doors - wood, glazed double	1	EA	5,250.00	5,250

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building A, B and C

Quantity Unit Rate Total

05 Roofing and Waterproofing	<b>43,553</b>	<b>SF</b>	<b>10.00</b>	<b>435,390</b>
3-ply modified bitumen low-slope roofing system	19,138	SF	14.50	277,501
Insulation - R38	19,138	SF	6.00	114,828
Vapor barrier	19,138	SF	2.25	43,061
				<b>1,423,695</b>

2 Interiors

06 Interior Partitions	<b>43,553</b>	<b>SF</b>	<b>8.56</b>	<b>372,835</b>
Metal stud framing - 2x LGMF, 2x 5/8" GWB	12,120	SF	17.50	212,100
Strongback	2,047	LF	30.00	61,410
Glazed Walls and relites				NIC
Not required				
Interior doors, frames and hardware				
HM, single	26	EA	2,350.00	61,100
HM, double	11	EA	3,475.00	38,225
07 Interior Finishes	<b>43,553</b>	<b>SF</b>	<b>5.71</b>	<b>248,586</b>
Floors				
Clear sealer - existing conc.	8,927	SF	3.25	29,013
Tile new restroom floors	930	SF	14.50	13,485
Walls				
Painting, new walls	20,223	SF	1.90	38,424
Painting, existing exterior wall	3,240	SF	1.90	6,156
5/8" abuse resistant glass mat GYP board	2,044	SF	14.00	28,616
Ceilings				
Paint - incl. prep, basement	13,515	SF	2.15	29,057
Sandblast - lvl. 1,2	28,448	SF	3.65	103,835

**621,421**

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building A, B and C				
	Quantity	Unit	Rate	Total
<b>3 Equipment &amp; Vertical Transportation</b>				
08 Equipment and Specialties	<b>43,553</b>	<b>SF</b>		
No work anticipated				<i>NIC</i>
09 Vertical Transportation	<b>43,553</b>	<b>SF</b>	<b>5.28</b>	<b>230,000</b>
Enclosed steel stair	4	FLTS	18,500.00	74,000
Hydraulic passenger elevator, 2 stop	3	STPS	52,000.00	156,000
				<b>230,000</b>
<b>4 Mechanical &amp; Electrical</b>				
10 Plumbing	<b>43,553</b>	<b>SF</b>	<b>4.17</b>	<b>181,710</b>
Domestic water service				
Water connections	2	EA	5,000.00	10,000
Fixtures	19	EA		
Toilets	8	EA	1,245.00	9,960
Lavatories	7	EA	800.00	5,600
Urinal	1	EA	1,125.00	1,125
Drinking fountain, dual	1	EA	1,450.00	1,450
Mop sink	2	EA	1,150.00	2,300
New waste and vent pipe for new fixtures	1045	LF	70.00	73,150
New domestic water pipe for new fixtures	1045	LF	55.00	57,475
Water heater	2	EA	8,000.00	16,000
Master thermostatic mixing valve	1	EA	2,150.00	2,150
Expansion tank	1	EA	2,500.00	2,500
11 HVAC	<b>43,553</b>	<b>SF</b>	<b>62.12</b>	<b>2,705,510</b>
Heating and cooling system	43,553	SF	55.00	2,395,415
DDC controls	43,553	SF	6.50	283,095
Commissioning	80	HR	135.00	10,800
Testing and balancing	120	HR	135.00	16,200
12 Electrical	<b>43,553</b>	<b>SF</b>	<b>29.91</b>	<b>1,302,523</b>
Main service and distribution etc.				
Meter center - 2500A	1	LS	65,000.00	65,000
Distribution panel - 800A	1	EA	11,500.00	11,500
Distribution panel - 400A	1	EA	7,500.00	7,500
Distribution panel - 200A	4	EA	6,800.00	27,200
Distribution panel - 100A	3	EA	5,500.00	16,500
House service panel - 200A	1	EA	6,800.00	6,800

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building A, B and C				
	Quantity	Unit	Rate	Total
Branch circuit wiring	43,553	SF	4.50	195,989
Equipment connections	43,553	SF	2.15	93,639
Grounding system	1	LS	20,000.00	20,000
Lighting				
LED lighting and controls	43,553	SF	14.50	631,519
User convenience power				
Modifications ad required	1	LS	15,000.00	15,000
Telephone and communications systems	43,553	SF	1.75	76,218
Alarm and security systems				
Fire alarm devices	43,553	SF	3.00	130,659
Testing				
Testing	40	HR	125.00	5,000
13 Fire Protection	<b>43,553</b>	<b>SF</b>	<b>5.89</b>	<b>256,457</b>
Fire sprinkler systems				
Wet system	43,553	SF	5.80	252,607
Wall hydrants	7	EA	550.00	3,850
				<b>4,446,200</b>
<b>5 Selective Demolition</b>				
14 Selective Demolition	<b>43,553</b>	<b>SF</b>	<b>3.12</b>	<b>135,885</b>
Protection				
Area worker protection and signage	43,553	SF	0.11	4,791
Protect elements to remain	43,553	SF	0.81	35,278
Architectural demolition				
Trade demolition - general	43,553	SF	1.25	54,441
Demolition - electrical equipment				
Trade demolition - general	43,553	SF	0.32	13,937
Demolition - mechanical equipment				
Trade demolition - general	43,553	SF	0.38	16,550

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building A, B and C				
	Quantity	Unit	Rate	Total
Demolition - plumbing equipment				
Trade demolition - general	43,553	SF	0.25	10,888
				<b>135,885</b>

**6 Building Sitework**

<b>15 Site Improvements</b>	<b>43,553</b>	<b>SF</b>	<b>5.34</b>	<b>232,446</b>
Site Prep				
Erosion control	8,875	SF	0.28	2,485
Site protection	1	LS	3,500.00	3,500
Temporary facilities	2	MO	1,500.00	3,000
Site survey and layout	1	LS	5,000.00	5,000
Site Demolition				
Hardscape	8,875	SF	2.25	19,969
Demo - catch basin	1	EA	275	275
Earthwork				
Grading	8,875	SF	0.50	4,438
Excavation - incl. haul and dispose	329	CY	35.00	11,515
Base aggregates	165	CY	36.00	5,940
Parking Lot				
Concrete	3215	SF	16.50	53,048
Concrete - loading dock	840	SF	20.00	16,800
ADA ramp	2	EA	1,550.00	3,100
Pedestrian Paving				
Concrete - sidewalk	4550	SF	9.75	44,363
Concrete - ramp	115	SF	35.00	4,025
Concrete - ramp walls	108	SF	80.00	8,640
Concrete - stairs	155	SF	55.00	8,525
Landscape				
Landscape restoration	1	ALW	1,500.00	1,500
Site Mechanical				
Water Distribution				
Existing water main service - no work				NIC
Sanitary Sewer				
No work anticipated				NIC
Stormwater Management				
Connection	1	EA	3,500.00	3,500
Catch basin	2	EA	3,000.00	6,000
Cleanout	2	EA	850.00	1,700
SW pipe - incl. trenching and backfill	345	LF	50.00	17,250

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building A, B and C				
	Quantity	Unit	Rate	Total
SW - trench drain, incl. grate	45	LF	175.00	7,875
Site Electrical				
Power distribution				
See building				incl.
Site Lighting				
No work anticipated				NIC
				<b>232,446</b>

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building D and E Areas & Control Quantities

	SF
Areas	
Enclosed Areas	
Floor Area	7,850
Subtotal of Enclosed Areas	7,850
<b>TOTAL GROSS FLOOR AREA</b>	<b>7,850</b>

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building D and E Summary

	%	\$/SF	TOTAL
Gross Area:		7,850 SF	
01 Foundations	1%	3.96	31,106
02 Vertical Structure	2%	6.43	50,441
03 Floor and Roof Structure	0%	0.94	7,370
04 External Cladding	18%	71.28	559,575
05 Roofing and Waterproofing	6%	25.74	202,061
1 Shell	27%	108.35	850,553
06 Interior Partitions	2%	9.86	77,390
07 Interior Finishes	2%	6.43	50,465
2 Interiors	4%	16,287.20	127,855
08 Equipment and Specialties	0%	0.00	0
09 Vertical Transportation	0%	0.00	0
3 Equipment & Vertical Transportation	0%	0.00	0
10 Plumbing	2%	7.20	56,525
11 HVAC	16%	64.94	509,775
12 Electrical	12%	46.47	364,815
13 Fire Protection	2%	6.08	47,730
4 Mechanical & Electrical	31%	124.69	978,845
14 Selective Demolition	1%	3.12	24,492
5 Selective Demolition	1%	3.12	24,492
15 Site Earthwork	7%	27.39	214,988
5 Building Sitework	7%	27.39	214,988
<b>BUILDING CONSTRUCTION</b>	<b>70%</b>	<b>279.84</b>	<b>2,196,733</b>
17 General Requirements	6.00%	4%	16.79
18 General Conditions	8.00%	6%	23.73
19 Permits and Fees	2.00%	2%	6.41
20 Contractor's Overhead & Profit or Fee	5.00%	4%	14.83
<b>PLANNED CONSTRUCTION COST</b>	<b>86%</b>	<b>341.60</b>	<b>2,681,543</b>
21 Contingency	10.00%	9%	34.16
<b>CONSTRUCTION COST BEFORE ESCALATION</b>	<b>94%</b>	<b>375.76</b>	<b>2,949,697</b>
22 Escalation to Construction Start (Sep 2023)	6.02%	6%	22.62
<b>RECOMMENDED BUDGET</b>	<b>100%</b>	<b>398.38</b>	<b>3,127,293</b>

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building D and E

Quantity Unit Rate Total

1 Shell

01 Foundations	<b>7,850</b>	<b>SF</b>	<b>3.96</b>	<b>31,106</b>
Clean/repair existing SOG	7,585	SF	1.75	13,274
Slab on grade	265	SF	16.50	4,373
Insulation - R10 XPS	136	SF	3.00	408
Under slab vapor retarder	265	SF	2.10	557
Base aggregates 4"	3	CY	95.00	310
Footing - cont. 24"x48"	13.93	CY	700.00	9,748
Footing - cont. 12"x24"	3.48	CY	700.00	2,437
02 Vertical Structure	<b>7,850</b>	<b>SF</b>	<b>6.43</b>	<b>50,441</b>
L4x4x1/4	1.17	TN	7,500.00	8,811
3/4 dia epoxy anchors	91	EA	65.00	5,931
W14x53 strut	0.80	TN	7,500.00	5,963
W14x74 BM	3.56	TN	7,500.00	26,663
Sheathing 1/2" plywood	564	SF	5.45	3,074
03 Floor and Roof Structure	<b>7,850</b>	<b>SF</b>	<b>0.94</b>	<b>7,370</b>
2x4 blocking	1,340	SF	5.50	7,370
04 External Cladding	<b>7,850</b>	<b>SF</b>	<b>71.28</b>	<b>559,575</b>
Clear sealer/ anti-graffiti coating	10,950	SF	4.50	49,275
CMU - repair	10,950	SF	2.50	27,375
Mtl frame - batt insulation, vapor retarder, 5/8" abuse resistant GYP	10,950	SF	23.50	257,325
Curtain wall	1,440	SF	115.00	165,600
Exterior doors - wood, glazed	6	EA	3,000.00	18,000
Exterior doors - rollup garage	4	EA	10,500.00	42,000
05 Roofing and Waterproofing	<b>7,850</b>	<b>SF</b>	<b>25.74</b>	<b>202,061</b>
3-ply modified bitumen low-slope roofing system	7,062	SF	14.50	102,399
Insulation - R38	7,062	SF	6.00	42,372
Vapor barrier	7,062	SF	2.25	15,890
Skylights w/ 4x4 framing	15	EA	2,760.00	41,400
				<b>850,553</b>

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building D and E

Quantity Unit Rate Total

2 Interiors

06 Interior Partitions	<b>7,850</b>	<b>SF</b>	<b>9.86</b>	<b>77,390</b>
Metal stud framing - 2x LGMF, 5/8" GWB, 2/8" GWB	3,348	SF	17.50	58,590
Glazed Walls and relites				
No work anticipated				NIC
Interior doors, frames and hardware				
HM, single	8	EA	2,350.00	18,800
07 Interior Finishes	<b>7,850</b>	<b>SF</b>	<b>6.43</b>	<b>50,465</b>
Floors				
Clear sealer - existing conc.	7,850	SF	3.25	25,513
Tile new restroom floors	120	SF	14.50	1,740
Walls				
Painting	5,712	SF	3.00	17,136
5/8" abuse resistant glass mat GYP board	434	SF	14.00	6,076
Ceilings				
No work anticipated				NIC
				<b>127,855</b>
3 Equipment & Vertical Transportation				
08 Equipment and Specialties	<b>7,850</b>	<b>SF</b>		
No work anticipated				NIC
09 Vertical Transportation	<b>7,850</b>	<b>SF</b>		
No work anticipated				NIC
				<b>0</b>

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building D and E

Quantity Unit Rate Total

**4 Mechanical & Electrical**

10 Plumbing	<b>7,850</b>	<b>SF</b>	<b>7.20</b>	<b>56,525</b>
Domestic water service				
Water connections	1	EA	5,000.00	5,000
Fixtures	6	EA		
Toilets	3	EA	1,245.00	3,735
Lavatories	3	EA	800.00	2,400
New waste and vent pipe for new fixtures	330	LF	70.00	23,100
New domestic water pipe for new fixtures	330	LF	55.00	18,150
Insta-hot water heater	3	EA	1,380.00	4,140
11 HVAC	<b>7,850</b>	<b>SF</b>	<b>64.94</b>	<b>509,775</b>
Heating and cooling system	7,850	SF	55.00	431,750
DDC controls	7,850	SF	6.50	51,025
Commissioning	80	HR	135.00	10,800
Testing and balancing	120	HR	135.00	16,200
12 Electrical	<b>7,850</b>	<b>SF</b>	<b>46.47</b>	<b>364,815</b>
Main service and distribution etc.				
Meter center - 1600A	1	LS	45,000.00	45,000
Distribution panel - 600A	2	EA	9,500.00	19,000
Distribution panel - 400A	4	EA	7,500.00	30,000
Branch circuit wiring	7,850	SF	4.50	35,325
Equipment connections	7,850	SF	2.15	16,878
Grounding system	1	LS	20,000.00	20,000
Lighting				
LED lighting and controls	7,850	SF	14.50	113,825
User convenience power				
Modifications ad required	1	LS	15,000.00	15,000
Telephone and communications systems	7,850	SF	1.75	13,738
Alarm and security systems				
Fire alarm devices	7,850	SF	3.00	23,550
Other electrical systems				
PV infrastructure	1	LS	27,500.00	27,500

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building D and E

Quantity Unit Rate Total

Testing				
Testing	40	HR	125.00	5,000
				<b>931,115</b>
13 Fire Protection	<b>7,850</b>	<b>SF</b>	<b>6.08</b>	<b>47,730</b>
Fire sprinkler systems				
Wet system	7,850	SF	5.80	45,530
Wall hydrants	4	EA	550.00	2,200
				<b>47,730</b>

**5 Selective Demolition**

14 Selective Demolition	<b>7,850</b>	<b>SF</b>	<b>3.12</b>	<b>24,492</b>
Protection				
Area worker protection and signage	7,850	SF	0.11	864
Protect elements to remain	7,850	SF	0.81	6,359
Architectural demolition				
Trade demolition - general	7,850	SF	1.25	9,813
Demolition - electrical equipment				
Trade demolition - general	7,850	SF	0.32	2,512
Demolition - mechanical equipment				
Trade demolition - general	7,850	SF	0.38	2,983
Demolition - plumbing equipment				
Trade demolition - general	7,850	SF	0.25	1,963
				<b>24,492</b>

**6 Building Sitework**

15 Site Improvements	<b>7,850</b>	<b>SF</b>	<b>27.39</b>	<b>214,988</b>
Site Prep				
Erosion control	7,345	SF	0.28	2,057
Site protection	1	LS	3,500.00	3,500
Temporary facilities	2	MO	1,500.00	3,000
Site survey and layout	1	LS	5,000.00	5,000
Site Demolition				
Hardscape	7,345	SF	2.25	16,526

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building D and E

	Quantity	Unit	Rate	Total
<b>Earthwork</b>				
Grading	7,345	SF	0.50	3,673
Excavation - incl. haul and dispose	273	CY	35.00	9,555
Base aggregates	136.5	CY	36.00	4,914
<b>Parking Lot</b>				
Concrete	1495	SF	16.50	24,668
Asphalt - hd	2685	SF	7.50	20,138
Bollard - removable	4	EA	1,100.00	4,400
<b>Pedestrian Paving</b>				
Concrete - sidewalk	3165	SF	9.75	30,859
<b>Landscape</b>				
Planters - moveable	5	EA	2,500.00	12,500
Landscape restoration	1	ALW	1,500.00	1,500
<b>Site Mechanical</b>				
<b>Water Distribution</b>				
Connection	2	EA	3,500.00	7,000
WS - pipe, incl. trenching and backfill	50	LF	65.00	3,250
FS - pipe, incl. trenching and backfill	50	LF	100.00	5,000
<b>Sanitary Sewer</b>				
Connection	1	EA	3,500.00	3,500
SS - manhole	2	EA	5,500.00	11,000
SS pipe lateral, incl. trenching and backfill	50	LF	65.00	3,250
SS pipe, incl. trenching and backfill	180	LF	90.00	16,200
<b>Stormwater Management</b>				
Connection	1	EA	3,500.00	3,500
Manhole	2	EA	5,250.00	10,500
SW pipe - incl. trenching and backfill	15	LF	50.00	750
SW - trench drain, incl. grate	50	LF	175.00	8,750
<b>Site Electrical</b>				
<b>Power distribution</b>				
See building				<i>incl.</i>
<b>Site Lighting</b>				
No work anticipated				<i>NIC</i>
				<b>214,988</b>

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building F Areas & Control Quantities

	SF
<b>Areas</b>	
<b>Enclosed Areas</b>	
Floor Area	10,931
<b>Subtotal of Enclosed Areas</b>	<b>10,931</b>
<b>TOTAL GROSS FLOOR AREA</b>	<b>10,931</b>



Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building F Summary

	%	\$/SF	TOTAL	
Gross Area:		10,931 SF		
01 Foundations	1%	2.02	22,030	
02 Vertical Structure	1%	1.66	18,122	
03 Floor and Roof Structure	0%	0.04	450	
04 External Cladding	15%	47.92	523,763	
05 Roofing and Waterproofing	6%	20.04	219,110	
<b>1 Shell</b>	<b>22%</b>	<b>71.67</b>	<b>783,475</b>	
06 Interior Partitions	3%	8.85	96,758	
07 Interior Finishes	2%	7.48	81,711	
<b>2 Interiors</b>	<b>5%</b>	<b>16.33</b>	<b>178,469</b>	
08 Equipment and Specialties	0%	0.00	0	
09 Vertical Transportation	0%	0.00	0	
<b>3 Equipment &amp; Vertical Transportation</b>	<b>0%</b>	<b>0.00</b>	<b>0</b>	
10 Plumbing	4%	13.03	142,400	
11 HVAC	19%	63.97	699,257	
12 Electrical	13%	44.33	484,613	
13 Fire Protection	2%	6.00	65,600	
<b>4 Mechanical &amp; Electrical</b>	<b>39%</b>	<b>127.33</b>	<b>1,391,869</b>	
14 Selective Demolition	1%	3.12	34,105	
<b>5 Selective Demolition</b>	<b>1%</b>	<b>3.12</b>	<b>34,105</b>	
15 Site Earthwork	4%	12.82	140,121	
<b>5 Building Sitework</b>	<b>4%</b>	<b>12.82</b>	<b>140,121</b>	
<b>BUILDING CONSTRUCTION</b>	<b>70%</b>	<b>231.27</b>	<b>2,528,040</b>	
17 General Requirements	6.00%	4%	13.88	151,682
18 General Conditions	8.00%	6%	19.61	214,378
19 Permits and Fees	2.00%	2%	5.30	57,882
20 Contractor's Overhead & Profit or Fee	5.00%	4%	12.26	133,986
<b>PLANNED CONSTRUCTION COST</b>	<b>86%</b>	<b>282.31</b>	<b>3,085,968</b>	
21 Contingency	10.00%	9%	28.23	308,597
<b>CONSTRUCTION COST BEFORE ESCALATION</b>	<b>94%</b>	<b>310.54</b>	<b>3,394,564</b>	
22 Escalation to Construction Start (Sep 2023)	6.02%	6%	18.70	204,381
<b>RECOMMENDED BUDGET</b>	<b>100%</b>	<b>329.24</b>	<b>3,598,946</b>	

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building F

	Quantity	Unit	Rate	Total
<b>1 Shell</b>				
01 Foundations	<b>10,931</b>	<b>SF</b>	<b>2.02</b>	<b>22,030</b>
Clean/repair existing SOG	10,786	SF	1.75	18,876
Slab on grade	145	SF	16.50	2,393
Insulation - R10 XPS	96	SF	3.00	288
Under slab vapor retarder	145	SF	2.10	305
Base aggregates 4"	2	CY	95.00	170
02 Vertical Structure	<b>10,931</b>	<b>SF</b>	<b>1.66</b>	<b>18,122</b>
L4x4x1/4	1.46	TN	7,500.00	10,940
3/4 dia epoxy anchors	111	EA	65.00	7,183
03 Floor and Roof Structure	<b>10,931</b>	<b>SF</b>	<b>0.04</b>	<b>450</b>
CMST14 straps	3	EA	150.00	450
04 External Cladding	<b>10,931</b>	<b>SF</b>	<b>47.92</b>	<b>523,763</b>
Clear sealer/ anti-graffiti coating	14,250	SF	4.50	64,125
concrete - repair and prep	14,250	SF	2.25	32,063
Mtl frame - batt insulation, vapor retarder, 5/8" abuse resistant GYP	14,250	SF	23.50	334,875
Exterior doors - HM, double	2	EA	3,600.00	7,200
Exterior doors - wood, glazed	4	EA	3,000.00	12,000
Exterior doors - wood, glazed double	4	EA	5,250.00	21,000
Exterior doors - rollup garage	5	EA	10,500.00	52,500
05 Roofing and Waterproofing	<b>10,931</b>	<b>SF</b>	<b>20.04</b>	<b>219,110</b>
3-ply modified bitumen low-slope roofing system	9,020	SF	14.50	130,790
Skylights w/ 4x4 framing	32	EA	2,760.00	88,320
				<b>783,475</b>
<b>2 Interiors</b>				
06 Interior Partitions	<b>10,931</b>	<b>SF</b>	<b>8.85</b>	<b>96,758</b>
Metal stud framing - 2x LGMF, 2x 5/8" GWB	3,180	SF	17.50	55,650
Existing partition - 2x 5/8" GWB	3,432	SF	6.50	22,308
Glazed Walls and relites				
Not required				NIC

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building F				
	Quantity	Unit	Rate	Total
Interior doors, frames and hardware HM, single	8	EA	2,350.00	18,800
<b>07 Interior Finishes</b>	<b>10,931</b>	<b>SF</b>	<b>7.48</b>	<b>81,711</b>
Floors				
Clear sealer - existing conc.	10,931	SF	3.25	35,526
Tile new restroom floors	576	SF	14.50	8,352
Walls				
Painting, new walls	5,883	SF	1.90	11,178
5/8" abuse resistant glass mat GYP board	1,904	SF	14.00	26,656
Ceilings				
No work anticipated				NIC
				<b>178,469</b>
<b>3 Equipment &amp; Vertical Transportation</b>				
<b>08 Equipment and Specialties</b>	<b>10,931</b>	<b>SF</b>		
No work anticipated				NIC
<b>09 Vertical Transportation</b>	<b>10,931</b>	<b>SF</b>		
No work anticipated				NIC
				<b>0</b>
<b>4 Mechanical &amp; Electrical</b>				
<b>10 Plumbing</b>	<b>10,931</b>	<b>SF</b>	<b>13.03</b>	<b>142,400</b>
Domestic water service				
Water connections	1	EA	5,000.00	5,000
Fixtures	16	EA		
Toilets	8	EA	1,245.00	9,960
Lavatories	8	EA	800.00	6,400
New waste and vent pipe for new fixtures	880	LF	70.00	61,600
New domestic water pipe for new fixtures	880	LF	55.00	48,400
Insta-hot water heater	8	EA	1,380.00	11,040

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building F				
	Quantity	Unit	Rate	Total
<b>11 HVAC</b>	<b>10,931</b>	<b>SF</b>	<b>63.97</b>	<b>699,257</b>
Heating and cooling system	10,931	SF	55.00	601,205
DDC controls	10,931	SF	6.50	71,052
Commissioning	80	HR	135.00	10,800
Testing and balancing	120	HR	135.00	16,200
<b>12 Electrical</b>	<b>10,931</b>	<b>SF</b>	<b>44.33</b>	<b>484,613</b>
Main service and distribution etc.				
Meter center - 2000A	1	LS	65,000.00	65,000
Distribution panel - 600A	4	EA	9,500.00	38,000
Distribution panel - 100A	2	EA	5,500.00	11,000
Branch circuit wiring	10,931	SF	4.50	49,190
Equipment connections	10,931	SF	2.15	23,502
Grounding system	1	LS	20,000.00	20,000
Lighting				
LED lighting and controls	10,931	SF	14.50	158,500
User convenience power				
Modifications ad required	1	LS	15,000.00	15,000
Telephone and communications systems	10,931	SF	1.75	19,129
Alarm and security systems				
Fire alarm devices	10,931	SF	3.00	32,793
Other electrical systems				
EV infrastructure	1	LS	20,000.00	20,000
PV infrastructure	1	LS	27,500.00	27,500
Testing				
Testing	40	HR	125.00	5,000
<b>13 Fire Protection</b>	<b>10,931</b>	<b>SF</b>	<b>6.00</b>	<b>65,600</b>
Fire sprinkler systems				
Wet system	10,931	SF	5.80	63,400
Wall hydrants	4	EA	550.00	2,200
				<b>1,391,869</b>

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building F				
	Quantity	Unit	Rate	Total
<b>5 Selective Demolition</b>				
14 Selective Demolition	<b>10,931</b>	<b>SF</b>	<b>3.12</b>	<b>34,105</b>
Protection				
Area worker protection and signage	10,931	SF	0.11	1,202
Protect elements to remain	10,931	SF	0.81	8,854
Architectural demolition				
Trade demolition - general	10,931	SF	1.25	13,664
Demolition - electrical equipment				
Trade demolition - general	10,931	SF	0.32	3,498
Demolition - mechanical equipment				
Trade demolition - general	10,931	SF	0.38	4,154
Demolition - plumbing equipment				
Trade demolition - general	10,931	SF	0.25	2,733
				<b>34,105</b>

<b>6 Building Sitework</b>				
15 Site Improvements	<b>10,931</b>	<b>SF</b>	<b>12.82</b>	<b>140,121</b>
Site Prep				
Erosion control	6,950	SF	0.28	1,946
Site protection	1	LS	3,500.00	3,500
Temporary facilities	2	MO	1,500.00	3,000
Site survey and layout	1	LS	5,000.00	5,000
Site Demolition				
Hardscape	6,950	SF	2.25	15,638
Demo - catch basin	2	EA	300	600
Earthwork				
Grading	6,950	SF	0.50	3,475
Excavation - incl. haul and dispose	258	CY	35.00	9,030
Base aggregates	129	CY	36.00	4,644
Parking Lot				
Asphalt - hd	915	SF	7.50	6,863
Concrete	2345	SF	16.50	38,693
Asphalt - standard	1575	SF	4.50	7,088
Curb - traffic	185	LF	35.00	6,475
Pedestrian Paving				
Concrete - sidewalk	2115	SF	9.75	20,621
Landscape				
Landscape restoration	1	ALW	1,500.00	1,500

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Building F				
	Quantity	Unit	Rate	Total
Site Mechanical				
Water Distribution				
Existing water main service - no work				<i>NIC</i>
Sanitary Sewer				
Connection	1	EA	3,500.00	3,500
SS - pipe, incl. trenching and backfill	95	LF	90.00	8,550
Stormwater Management				
No work anticipated				<i>NIC</i>
Site Electrical				
Power distribution				
See building				<i>incl.</i>
Site Lighting				
No work anticipated				<i>NIC</i>
				<b>140,121</b>

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Site - North Property Areas & Control Quantities

	SF
Areas	
Enclosed Areas	
Floor Area	11,544
Subtotal of Enclosed Areas	11,544
<b>TOTAL GROSS FLOOR AREA</b>	<b>11,544</b>

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Site - North Property Summary

	%	\$/SF	TOTAL	
Gross Area:		11,544 SF		
01 Foundations	0%	0.00		
02 Vertical Structure	0%	0.00		
03 Floor and Roof Structure	0%	0.00		
04 External Cladding	0%	0.00		
05 Roofing and Waterproofing	0%	0.00		
1 Shell	0%	0.00	0	
06 Interior Partitions	0%	0.00		
07 Interior Finishes	0%	0.00		
2 Interiors	0%	0.00	0	
08 Equipment and Specialties	0%	0.00		
09 Vertical Transportation	0%	0.00		
3 Equipment & Vertical Transportation	0%	0.00	0	
10 Plumbing	0%	0.00		
11 HVAC	0%	0.00		
12 Electrical	0%	0.00		
13 Fire Protection	0%	0.00		
4 Mechanical & Electrical	0%	0.00	0	
14 Selective Demolition	0%	0.00		
5 Selective Demolition	0%	0.00	0	
15 Site Earthwork	70%	26.51	306,054	
5 Building Sitework	70%	26.51	306,054	
<b>BUILDING CONSTRUCTION</b>	<b>70%</b>	<b>26.51</b>	<b>306,054</b>	
17 General Requirements	6.00%	4%	1.59	18,363
18 General Conditions	8.00%	6%	2.25	25,953
19 Permits and Fees	2.00%	2%	0.61	7,007
20 Contractor's Overhead & Profit or Fee	5.00%	4%	1.41	16,221
<b>PLANNED CONSTRUCTION COST</b>	<b>86%</b>	<b>32.36</b>	<b>373,599</b>	
21 Contingency	10.00%	9%	3.24	37,360
<b>CONSTRUCTION COST BEFORE ESCALATION</b>	<b>94%</b>	<b>35.60</b>	<b>410,959</b>	
22 Escalation to Construction Start (Sep 2023)	6.02%	6%	2.14	24,743
<b>RECOMMENDED BUDGET</b>	<b>100%</b>	<b>37.74</b>	<b>435,702</b>	

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Site - North Property

Quantity Unit Rate Total

6 Building Sitework

15 Site Improvements	11,544	SF	26.51	306,054
Site Prep				
Erosion control	14,530	SF	0.28	4,068
Site protection	1	LS	3,500.00	3,500
Temporary facilities	2	MO	1,500.00	3,000
Site survey and layout	1	LS	5,000.00	5,000
Site Demolition				
Hardscape	14,530	SF	2.25	32,693
Earthwork				
Grading	14,530	SF	0.50	7,265
Excavation - incl. haul and dispose	539	CY	35.00	18,865
Base aggregates	270	CY	36.00	9,720
Parking Lot				
Concrete	5110	SF	16.50	84,315
Asphalt - hd	4715	SF	7.50	35,363
Asphalt - standard	4705	SF	4.50	21,173
Curb - traffic	350	LF	35.00	12,250
Curb - flat	55	LF	30.00	1,650
Curb - valley gutter	105	LF	28.50	2,993
Wheel stop	29	EA	225.00	6,525
Pedestrian Paving				
No work anticipated				NIC
Landscape				
Landscape restoration	1	ALW	1,500.00	1,500
Site Mechanical				
Water Distribution				
Existing water main service - no work				NIC
Sanitary Sewer				
No work anticipated				NIC
Stormwater Management				
Connection	1	EA	3,500.00	3,500
Manhole - stormwater treatment	1	EA	15,500.00	15,500
Manhole	1	EA	4,500.00	4,500
Catch basin	3	EA	3,000.00	9,000
Catch basin - riser	1	EA	250.00	250
Infiltration trench	805	SF	14.81	11,926
SW pipe - incl. trenching and backfill	230	LF	50.00	11,500

306,054

Port of Chelan County  
Columbia Street Properties Adaptive Reuse

Alternates

Item Description Quantity Unit Rate Total

Alternate 1: Building D and E buildout - live-work (ADD)

DEDUCT

Interior Partitions	(1)	LS	77,390.00	(77,390)
Interior Finishes	(1)	LS	50,464.50	(50,465)
Plumbing	(1)	LS	56,525.00	(56,525)
HVAC	(1)	LS	509,775.00	(509,775)
Electrical	(1)	LS	364,815.00	(364,815)

ADD

Residential/Commercial fit out	13,920	SF		
Foundations				
24" x 48" footing	15	CY	950.00	14,074
12" x 24" footing	133	CY	950.00	126,667
Vertical structure				
W14x53	0.82	LF	7,500.00	6,161
Steel brace frame - W14x74, incl. 6" dia. Pipe braces	6.42	TN	7,500.00	48,150
Sheathing - 1/2" plywood	3,564	SF	5.45	19,424
Roof and Floor construction				
14" TJI 560, 16" O.C.	3,300	LF	22.50	74,250
14" TJI 230, 16" O.C.	933	LF	23.50	21,933
2x4 blocking	1,330	SF	5.50	7,315
W16x26	0.65	TN	7,500.00	4,875
Decking	6,365	SF	10.50	66,833
Plates and connections	6,365	SF	5.00	31,825
Interior construction - fit out	13,920	SF	30.00	417,600
Interior finishes	7,850	SF	35.00	274,750
Vertical transportation				
Stairs	14	FLT	18,500.00	259,000
Plumbing	7,850	SF	16.50	129,525
Mechanical	7,850	SF	65.00	510,250
Electrical	7,850	SF	55.00	431,750
Equipment and furnishings	7,850	SF	15.00	117,750

Alternate Cost Before Markups

General Requirements	6.00%	90,190
General Conditions	8.00%	127,468
Permits and Fees	2.00%	34,416
Contractor's Overhead & Profit or Fee	5.00%	87,762
Contingency	10.00%	184,300
Escalation to Construction Start (Sep 2023)	6.02%	122,060

2,149,358

# HISTORIC PRESERVATION INCENTIVES & CONTROLS



March 9, 2022

Graham Baba Architects  
Attn: Susan Tillack, Associate Principal  
1507 Belmont Avenue, Suite 200  
Seattle, WA 98122

## Re: Columbia Street Project | Financial Incentives

Dear Ms. Tillack:

Below please find our analysis of potential financial incentive use for the rehabilitation of historic buildings within the Columbia Street project.

Please let me know if you have any questions or concerns.

Best regards,

  
Spencer Howard  
Co-founder/Architectural Historian

## Abbreviations

DAHP – Washington State Department of Archaeology and Historic Preservation  
HTCs – Federal Historic Tax Credits (also referred to as tax credits)  
NRHP – National Register of Historic Places  
Port – Chelan Douglas Regional Port Authority (Port of Chelan County and Port of Douglas County, consolidated as of January 1, 2020)  
SPV – State Special Valuation Program  
TIs – Tenant Improvements  
WRHP – Wenatchee Register of Historic Places

## Abstract

The purpose of this report is to identify potential pathways for financial incentive usage to support the rehabilitation and adaptive reuse of Chelan Douglas Regional Port Authority (Port) historic buildings within the Columbia Street project area. Incentives relative to historic buildings considered include the Federal Historic Tax Credits (HTCs) and State Special Valuation Program (SPV).

Since the Port does not have a Chelan County property tax liability, the only incentive is HTCs. Key to this process is first figuring out a viable pathway to utilize the HTCs, and then determining if the amount of tax credits generated offset the cost of obtaining them.

With the Port as developer there is no benefit relative to HTCs. A private developer shifts funds to the private sector making HTCs possible but requires a long-term lease. Grants provide a potential pathway for Port financial investment while a private developer utilizes the tax credits.

HTCs extend only to work completed within the footprint of National Register of Historic Places (NRHP) listed (individually or contributing to a district) buildings. Buildings within the Columbia Street project that are not already identified as contributing are unlikely to change in status to become contributing.

All analysis based on available project data received from and data from Graham Baba Architects, the IRS and NPS, and is intended for planning purposes only and should be confirmed by attorneys specializing in historic tax credit consulting and syndication prior to utilizing.

## Development

The three development pathways: the Port as developer; a private developer; or a combination of the Port and a private developer. The following addresses potential incentives and restrictions associated with each.

## Assumptions

The following assumptions informed evaluation of the development pathways.

- The Port does not pay Chelan County property taxes.
- A long-term lessee will not pay Chelan County property taxes, only leasehold excise tax.
- The Port does not have a federal tax liability.
- The Port can enter into public/private agreements to support economic development.
- The Port is not considered a cooperative as defined in Internal Revenue Code Section 521.
- That leases of the redeveloped building to for profit uses will exceed 35% of the building's net rentable floor space, excluding common areas (Internal Revenue Code Section 168(h)(1)(B)(iii)). Since the Port is a tax-exempt entity, the concern is that a greater than 35% use of the building by the Port could be regarded as tax-exempt use of the property.

## Pathways

Common to all pathways:

- Relative to Federal Historic Tax credit usage is that the property must be Section 38 property (depreciation allowable to the taxpayer) at the start of the project.
- The Special Valuation Program will not apply due to the underlying Port land ownership and absence of a Chelan County property tax liability. Leasehold excise tax paid by a private lessee for the use of public property in lieu of property tax is based generally on rent and not subject to the Special Valuation Program.

### Port as Developer

The Port, as a tax-exempt entity, cannot incur the costs and pass the tax credit to a lessee (Treasury Regulation Section 1.48-4(a)(1)). This eliminates the pathway of Port investment and sale of the tax credits.

### Private Developer

This pathway requires an entity with a federal tax liability to have a long-term lease. The lease must be in place at the start of the project for the property to be Section 38 so the lessee can incur qualified rehabilitation expenditures (Treasury Regulation Section 1.48-4(a)(1)). This assumes largely private sector investment in the building rehabilitation. Refer to Port/Private Developer below relative to the role of grants.

- The lease term must not be short term or else the tax credit will be reduced. To be long-term the lease must be at least 31.2 years for commercial and 22 years for residential rental properties, meeting the greater than 80% class life of the property.
- A net lease providing the Port with a guaranteed specific return is not considered short term; however, it is not clear how this provision applies where the lessor is a tax-exempt entity (Internal Revenue Code Sections 48(d)(4)(D) and 57(c)(1)(B)).
- This assumes the lessee would have sufficient federal tax liability to be able to utilize the federal tax credits rather than sell them to another entity. If another entity will purchase the tax credits, then the viability of a legal structure enabling this must be vetted. The purchase price of the tax credits and legal costs will be significant factors.
- A single lessee is the most straight forward, as the substantial rehabilitation test is different when multiple lessees are involved (Treasury Regulation Section 1.48-12(b)(2)(ii) and (iv)). The aggregate of qualified rehabilitation expenditures incurred by both the Port and any lessees must exceed the aggregate adjusted basis of all parties with an interest in the building. This encompasses the adjusted basis of the building for the Port, as well as the adjusted basis of the lessees in the leasehold and any leasehold structural improvements. The amount of tax credit that each party can claim is based on the amount they spent and not the aggregate amount.

### Port/Private Developer

This pathway requires the same structure as the Private Developer pathway above with the following two differences in how funds are invested in the project.

The Port can complete design and construction of the shell and core work. However, as a tax-exempt entity these expenditures by the Port do not count towards the tax credit calculation, do not count towards the substantial rehabilitation test, and will count as improvements relative to calculating the adjusted basis of the building for subsequent tenant improvement work by the developer. It is unlikely the subsequent tenant improvement work will meet the substantial rehabilitation test based on the value of the shell and core work relative to tenant improvements. The substantial rehabilitation test is met when qualified rehabilitation expenditures exceed the adjusted basis within a 24 or 60-month period selected by the entity with the tax liability (Internal Revenue Code Section 47(c)(1)(C) and Treasury Regulation Section 1.48-12(b)(2)(i)).

The Port can provide monetary incentives to help defray the cost of rehabilitation. To protect and stabilize their investment, these would likely consist of grants supporting shell and core work that would

result in a quantifiable benefit in exchange for the grant. An example of this is an urban revitalization grant used to fund improvements. Key considerations relative to historic tax credit impact follow below.

- Is the recipient corporate or a non-corporate taxpayer?
- Will the recipient have dominion and control over the grant funds?

A developer that is a non-corporate taxpayer (individual or partnership) with control of the funds can count the grant funds as gross income. They will pay taxes on the funds, but can count them towards the substantial rehabilitation test, and as part of the tax credit calculation. If the developer does not have control of the funds, such as if the Port chooses and pays the contractor directly, then the funds can count towards the substantial rehabilitation test but not the tax credit calculation.

A developer that is a corporate taxpayer will not be able to count the grant as gross income. Instead, the grant will be considered a capital contribution made by a non-shareholder. The IRS *Rehabilitation Tax Credit Audit Technique Guide* is not clear on whether the grant could still count towards the substantial rehabilitation test.

### Resources

IRS. *Rehabilitation Tax Credit Audit Technique Guide*. This is an excellent resource for specific questions and case law on how regulations and absence of specific regulations have been interpreted.

<https://www.irs.gov/pub/irs-mssp/rehab.pdf>

IRS site: <https://www.irs.gov/businesses/small-businesses-self-employed/rehabilitation-tax-credit-real-estate-tax-tips>

IRS. "Use of Rehabilitation Tax Credit by Lessees." This provides an excellent overview of the aspects involved in lessees utilizing the tax credits, lease durations and net lease use.

[https://www.irs.gov/pub/irs-utl/use\\_of\\_credit\\_by\\_lessees.pdf#:~:text=A%20tax-exempt%20entity%20cannot%20pass%20the%20rehabilitation%20tax,to%20which%20depreciation%20is%20allowable%20to%20the%20lessor.](https://www.irs.gov/pub/irs-utl/use_of_credit_by_lessees.pdf#:~:text=A%20tax-exempt%20entity%20cannot%20pass%20the%20rehabilitation%20tax,to%20which%20depreciation%20is%20allowable%20to%20the%20lessor.)

NPS site: <https://www.nps.gov/tps/tax-incentives.htm>

Wishneff.com. This firm worked on the legal structure for tax credit use for at least one project at Fort Worden for the PDA.

[Historic, New Markets Tax Credit Consulting and Syndication | BW&A \(wishneff.com\)](https://www.wishneff.com/historic-new-markets-tax-credit-consulting-and-syndication)

## Financial Incentives

### Federal Historic Tax Credits

#### Program

The Federal Rehabilitation Tax Credit (Historic Preservation) is a 20% tax credit and is a useful tool to support private investment in the repair and rehabilitation of historic income producing buildings. State-wide, over 300 projects, on average 15 per year, have utilized the program for a combined project total exceeding \$1.3 billion. Project sizes range from \$14,000 to over \$73 million. Nationwide, over \$30.8 billion in tax credits have been approved, which exceeds the net gain of over \$35.9 billion in Federal tax receipts generated by the rehabilitation work.<sup>1</sup> The main limitation to its use in communities is the substantial rehabilitation expenditure threshold of spending more than 100% of the adjusted basis of just the building, excluding the land.

There have been three projects within the city that sought to utilize incentive, and one of which have

<sup>1</sup> Washington State Department of Archaeology and Historic Preservation. Federal Historic Tax Credit, "What is It?" URL: <https://dahp.wa.gov/grants-and-funding/federal-historic-tax-credit>, accessed 2/22/2022.

successfully completed the process and another in progress.

#### Requirements

- Federal tax liability
  - Sale of credits is possible, but will not be dollar for dollar and will include legal costs to set up the sale mechanism.
  - Direct use, enabled through long-term lease to private developer is the most cost effective.
  - Examples include the City of Tacoma working with developer SurgeTacoma to rehabilitate Old City Hall and the Fort Worden PDA with a long-term lease from the State and working with for-profit tenants to utilize tax credits for building rehabilitation.
  - The property must be income producing and remain such for at least five years.
- NRHP listed
  - The building must be individually listed in the National Register or certified as contributing to the significance of a registered historic district.
  - The status is unlikely to change for any buildings currently not contributing to the Downtown Wenatchee NRHP district. The period of significance for the historic district ends in 1955. Buildings and additions built after 1955 are not contributing unless the district is amended. Based on extant post 1955 resources NPS is unlikely to support an amendment extending the period of significance.
- Substantial expenditure test
  - Project expenditures must exceed 100% of adjusted basis or purchase price of building.
  - There is a 24- or 60-month window for demonstrating that expenditures meet the substantial expenditure test.
- NPS design review
  - This review extends to both exterior and interior alterations.
  - Work is evaluated using the *Secretary of the Interior's Standards for Rehabilitation*.

Process requirements for the program:

- DAHP consultation at the conceptual stage to talk through the potential project and identify any potential issues or concerns. All subsequent application materials are submitted to DAHP for initial review and comment. Once complete, DAHP submits the applications to NPS for review and final decision. Each stage of agency review takes 30 days. Construction should not start until the project has written Part 2 approval from NPS.
- Part 1 – Evaluation of Significance submittal if the building is contributing within a NRHP listed historic district or is not individually NRHP listed.
- Part 2 – Description of Rehabilitation submittal describing existing conditions, proposed work, and providing photographs and project drawings. This includes identification of whether this will be a single or phased project.
- Amendment(s) submittal if there is a design change identified during construction that differs from what was approved by NPS.
- Advisory Determination(s) submittal if the project is phased to document completion of a phase.
- Part 3 – Request for Certification of Completed Work to document the completed work was built as described in the Part 2 and any subsequent amendment.
- IRS Form 3468 – Investment Credit submitted by the taxpayer to claim the rehabilitation credit.

#### State Special Valuation Program

This program requires a Chelan County property tax liability, which the Port does not have.

#### Program

Established as a state-wide property tax reduction incentive, the Washington State Legislature during its 1985 session, stated in RCW 84.26.010 that “it is in the public interest of the people of the state of Washington to encourage maintenance, improvement, and preservation of privately owned historic landmarks as the state approaches its Centennial year of 1989. To achieve this purpose, this chapter provides special valuation for improvements to historic property.”

Nearly 40 years later, this program continues to provide an important incentive supporting the rehabilitation and maintenance of commercial and non-commercial resources.

The program is administered at the local level through the Chelan County Assessor and the City of Wenatchee Historic Preservation Commission (HPC). Properties eligible to utilize this incentive are those listed to the Wenatchee Register of Historic Places, either individually or as a contributing resource to a Wenatchee Register listed district.

Utilizing a property tax reduction program takes a long-term view towards the stability and increase of property values and tax revenue. The program enables money spent on the rehabilitation or repair of a designated historic property to be deducted from its assessed value (combined land and building values), and then property taxes are calculated on the remainder. This tax reduction runs for a period of 10 years.

To qualify for the program, the improvements must be substantial (at least 25% of the assessed value of just the building, excluding the land within a 24-month period), and meet the *Secretary of the Interior's Standards for Rehabilitation*.

This program helps to offset increases in property value due to improvements and encourages the ongoing repair and maintenance of historic properties. This program can be combined with the Federal Rehabilitation Tax Credits to provide an added incentive for commercial building owners. For more information: <https://dahp.wa.gov/grants-and-funding/special-tax-valuation>

#### EcoNW Data

The Federal Historic Tax Credit (HTC) is 20% of the total qualified rehabilitation expenditures and is claimed as part of the Federal income tax filing on IRS Form 3468 – Investment Credit generally once the project is complete and the building placed in service.

The Port does not have a county tax liability, so the Special Valuation Program is not addressed.

Key questions are:

- Will the project spend enough to meet the substantial rehabilitation expenditure threshold?
- If so, will the project spend enough such that the tax credit offsets the soft costs incurred to obtain the credit?



## Resources

Building ID	Parcel	Year Built	HTC Eligible	Improvement Value (2020)
A	17970, 17971	1973	No	\$693,807
B	17970, 17971	1920	Yes	\$125,626
C	17972	1921	Yes	\$84,038
D	17973	1970s est.	No	\$105,083
E	17974	1970s est.	No	\$96,998
F	17973			No data
G	18804	1963	No	\$595,430

## Soft Costs

The following are planning level cost ranges for work needed to obtain the tax credit.

- Part 1, 2 and 3 applications, including potential amendments to achieve NPS project certification. \$8,000 to \$15,000 depending on project complexity and number of amendments.
- Attorney fees to set up the legal structure for a passthrough entity or lessee of the building to utilize the credit absent the private entity owning an interest in the building directly. There are multiple variables, and I am not certain exactly where these numbers would land but providing a very rough range of \$20,000 to \$65,000.
- Accounting fees for cost certification of the project. Based on the potential complexity of the project, this would be important to have in the event of an IRS audit. I do not know what the cost range would be, but would imagine similar to the attorney fees depending on complexity.

## Expenditure Thresholds

The project must meet the substantial rehabilitation test in which the cost exceeds the greater of \$5,000 or the building's adjusted basis. Absent data on the purchase price, the improvement value established by the County is often used as a place holder for planning purposes. The National Park Service provides the following formula:

- $A - B - C + D =$  adjusted basis
- A = purchase price of the property (building and land)
- B = the cost of the land at the time of purchase
- C = depreciation taken for an income-producing property
- D = cost of any capital improvements made since purchase

The property must be income producing and remain such for at least five years.

## Eligible Expenditures

Eligible expenditures for the program per IRS 26 CFR 1.48-12 defined as: "In general, except as otherwise provided in paragraph (c)(7) of this section, the term "qualified rehabilitation expenditure" means any amount that is –

- Properly chargeable to capital account (as described in paragraph (c)(2) of this section),
- Incurred by the taxpayer after December 31, 1981 (as described in paragraph (c)(3) of this section),
- For property for which depreciation is allowable under section 168 and which is real property described in paragraph (c)(4) of this section, and

- Made in connection with the rehabilitation of a qualified rehabilitated building (as described in paragraph (c)(5) of this section)."

The following items are generally eligible.

- Direct construction costs
- Soft costs including:
  - Architect, engineer, historic preservation, and other specialty professions/trades fees.
  - Construction permit fees.
  - Development management fees, if these are documented to clearly show the cost to the company through payment of services for the work.
  - Construction loan interest ad fee.
  - Utilities, taxes, and insurance for the construction period.
  - State sales tax.
- Site work that is necessary for rehabilitation, such as utilities, foundation work, clearing and disposal costs.
- Plumbing and electrical, all systems, including required exterior work (such as sewer lines), fire suppression systems, lighting fixtures, faucets, and sinks, supplies and materials.
- Furnishings that are built in. Tables or islands can be included if they are permanently attached to the floor.
- Appliances that are part of the building systems and permanent, such as water heaters, HVAC and A/C units. The ducting and fire suppression tied to kitchen hoods, but not the hood itself.
- Carpeting if glued in place.
- Solar panels.

The following items are generally not eligible.

- Expenditures within the footprint of any building portions identified in the table above that are not HTC eligible. These can be segregated on a square footage basis from the total project costs or tracked separately, but the process must be documented.
- Any expenditure with respect to which the taxpayer does not use the straight-line method of depreciation over a recovery period determined under section I.R.C. § 168(c) or (g). That requirement does not apply to any expenditure to the extent the alternative depreciation system of I.R.C. § 168(g) applies to such expenditure by reason of I.R.C. § 168(g)(1)(B) or (C),
- Acquisition costs and legal fees, this would include fees for combining the parcels.
- Building enlargement costs, except to make the building fully usable. For example, roof top mechanical and external seismic retrofit elements are eligible as they make the building fully usable; but penthouse additions are not.

- Costs related to valuation and permanent financing, as well as leasing and marketing, and overhead costs.
- Work related to but outside of the building, including sidewalks, paving for parking lots, and landscaping.
- Site work related to landscaping, new walls, paving for parking, sidewalks, accent lighting that is not mounted to the building, sprinkler systems.
- Security and alarm systems, including cameras, and table or floor lamps.
- Furnishings that are moveable.
- Appliances that are portable, such as commercial kitchen appliances, washers and dryers, ranges/ovens even if wall mounted, dishwashers, range hood.
- Rugs and carpeting, if tacked in place or tiles.
- Signage.
- Window treatments (blinds, curtains).

## SOI Standards

The *Secretary of the Interior's Standards for Rehabilitation*, codified as 36 CFR 67.

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

# APPENDIX B: SITE ANALYSIS



# 5. APPENDIX B - SITE ANALYSIS

LAND USE, BUILDING CODE, HISTORIC PRESERVATION AND SUSTAINABILITY ANALYSIS

CIVIL / SITE ANALYSIS

STRUCTURAL ANALYSIS

MECHANICAL / ELECTRICAL / PLUMBING ANALYSIS

# LAND USE, BUILDING CODE, HISTORIC PRESERVATION AND SUSTAINABILITY ANALYSIS

## LAND-USE AND BUILDING CODE ANALYSIS - GENERAL:

### MAJOR APPLICABLE CODES:

- 1) Chapter 10 of the Wenatchee City Code (Wenatchee Zoning Code), including Section 10.40.020 (Columbia Street Overlay)
- 2) City of Wenatchee Central Business District Subarea Plan (April 2007)
- 3) SEPA (State Environmental Protection Act)
- 4) 2018 Washington Building Code\*
- 5) 2018 Washington Existing Building Code\*
- 6) 2018 Washington Fire Code\*
- 7) 2018 Washington Energy Code\*
- 8) 2018 Washington Mechanical Code\*
- 9) 2018 Uniform Plumbing Code (as modified by Washington State)\*

\* As modified by chapter 2.04 of the Wenatchee City Code

### PORT BUILDING IDENTIFICATION LETTERS, PARCEL NUMBERS, AREAS, AND BASIC CONSTRUCTION TYPES:

- 1) A ;222003925075 – 9,000 SF; CMU/wood
- 2) B: 222003925080 – 9,000 SF; Brick/wood
- 3) C: 222003925085 – 4,500 SF; Brick
- 4) D: 222003925090 – 5,000 SF; CMU
- 5) E: 222003925095 – 4,000 SF; CMU
- 6) F: 222003440100 – 10,850 SF; Tilt up concrete

### ADDRESS:

- 1) Main Address: 1 Orondo Av, Wenatchee, WA 98801
- 2) Additional Addresses: Building B: 101 Columbia Street, Wenatchee, WA 98801

## LAND USE CODES AND PROCESSES:

### ZONE:

- 1) CBD - Central Business District
- 2) Overlay: CSO - Columbia Street Overlay

### HEIGHT, BULK, AND SET-BACK REQUIREMENTS (10.46.030/10.46.040):

- 1) Height Limit: 90 feet.
- 2) FAR Limit: NO FAR limits in City of Wenatchee.
- 3) Setbacks: None required. (0 lot line buildings allowed.)
- 4) Lot coverage: Building may cover 100% of lot.

### SEPA PROCESS AND EXEMPTIONS (12.04.030):

- 1) Exempt projects:
  - a. Residential buildings with fewer than 20 dwelling units

- b. Agricultural structures up to 30,000 SF
  - c. Office, school, commercial, recreational, service or storage buildings up to 12,000 sf
  - d. Demolition of buildings “with recognized historical significance such as listing in a historic register” is not exempt.
  - e. If modifications/additions are made to the building(s) that push the building above 12,000 sf, a SEPA checklist must be submitted.
- 2) Lead review agency: Will need to confirm if Port is lead agency or if City of Wenatchee will be. This may depend upon whether Port has ownership of the property and/or is Owner of a project.

### ALLOWED LAND USES (10.10.020):

- 1) Allowed:

Includes but not limited to building materials, garden and farm supplies; exercise facilities, farmer’s market, furniture, home furnishings and appliances, and retail stores; neighborhood groceries, drinking establishments, micro breweries & distilleries; hotels and restaurants; artisan/industrial manufacturing; light industry, warehousing, welding & fabrication; wholesale products & sales; offices; indoor recreation center; live/work dwellings; and mixed use.
- 2) Cryptocurrency & data centers are permitted but not at grade level street frontage
- 3) Multifamily housing is permitted but use is not allowed on the ground level of designated pedestrian-oriented streets. (Orondo, Yakima and Columbia are designated streets.)
- 4) Outdoor mobile vendor are possible accessory use.
- 5) Prohibited uses:

Marijuana retail prohibited.
- 6) Conditional uses:

Includes auditoriums, libraries, museums, theaters and nightclubs

### DEVELOPMENT STANDARDS - CBD ZONE INCLUSIVE OF CSO OVERLAY (10.24.050):

- 1) Parking:
  - a. All buildings in existence before January 15, 2018 are exempt from having to provide off-street parking with the following exceptions:
    - New construction requires one off-street parking space for each residential unit. All other uses exempt.
    - Demonstration of off-street loading space for trucks and delivery vehicles shall be provided.
  - b. Surface parking areas shall not be located between the primary building and the public right-of-way (excluding alleys).
  - c. Surface parking lots that face street intersection corners are prohibited unless allowed by the director.

### COLUMBIA STREET OVERLAY (CSO) (10.40.020):

- 1) Development standards for projects within the Columbia Street overlay are required to meet the CBD zone requirements noted above.
- 2) The development character is focused on maintaining the utilitarian/warehousing history of the district. The following are encouraged:
  - a. Historic painted wall signs
  - b. Awnings and Canopies
  - c. Loading Docks; Accessible Ramps. Where the ground level of the warehouse is above street level, accessible ramps are encouraged that mimic the loading docks in the district.

- d. Distinctive covered and lighted entrances
- e. Pedestrian areas should be defined through the use of bollards spaced at least every 10 feet.

## HISTORIC PRESERVATION:

### GENERAL:

- 1) Buildings B and C are “Contributing” buildings in the Downtown Wenatchee Historic District, listed on the National Register (but not on the City’s local historic register).
- 2) Buildings A, D and E are within the historic district, but appear to be non-contributing buildings.
- 3) Federal and Local Incentives are available for rehabilitation projects of historic buildings meeting certain standards. There is no state tax benefit program.

### FEDERAL REHABILITATION TAX CREDIT PROGRAM:

The National Register listing may make the Buildings B and C eligible for Federal grants-in-aid for historic preservation:

- 1) The Federal Rehab tax credit program offers a tax credit that is equal to 20% of the qualified rehabilitation expenses (see below). The project must meet the adjusted basis of the building and it must meet the Standards for Rehabilitation.
- 2) The tax credit is only available to properties that will be used for a business or other income-producing purpose, and a "substantial" amount must be spent rehabilitating the historic building.
- 3) Costs associated with these items are generally eligible
  - a. Walls, Partitions, Floors, Ceilings, Permanent coverings, such as paneling or tiles; Windows and doors; Components of central air conditioning or heating systems; Plumbing and plumbing fixtures; Electrical wiring and lighting fixtures; Chimneys; Stairs; Escalators, elevators, sprinkler systems, fire escapes; Other components related to the operation or maintenance of the building
  - b. Any expenditure for a structural component of a building
  - c. In addition to the above named "hard costs", there are "soft costs" which also qualify. These include construction period interest and taxes, architect fees, engineering fees, construction management costs, reasonable developer fees, and any other fees paid that would normally be charged to a capital account.
- 4) Expenses that do not qualify for the rehabilitation tax credit:
  - a. Acquisition costs; Appliances; Cabinets; Decks (not part of original building); Demolition costs (removal of a building on property site); Fencing; Feasibility studies; Financing fees; Furniture; Landscaping; Leasing Expenses; Moving (building) costs (if part of acquisitions); New construction costs or enlargement costs (increase in total volume); Outdoor lighting remote from building; Parking lot; Paving; Planters; Porches and Porticos (not part of original building); Retaining walls; Sidewalks; Signage; Storm sewer construction costs;

### LOCAL SPECIAL VALUATION PROGRAM:

- 1) At the local level, Special Valuation is a reduction in property tax based on the amount spent on the rehab. The building must be listed on the local register and the project must meet the Standards. This program is administered at the local level.
- 2) Assuming B and C are the only portions of the site that are historic, they would be the only part that would qualify for the tax credits. These buildings are not currently listed on the local register but DAHP has indicated they are likely eligible.

### HISTORIC CONTROLS:

- 1) Projects seeking to employ federal rehabilitation tax credit program or the local special valuation program are subject to the design requirements of those programs. The programs, however, are voluntary.
- 2) There is no DAHP review for projects that affect National Register properties unless there is a regulatory trigger, such as state or federal funding. If this is all private, then there is no DAHP review (or tax benefits).
- 3) As noted above, the properties are not currently listed on the local register, but Buildings B and C are likely eligible for listing. Listing would be required to take advantage of the special valuation program. If listed, the buildings would be subject to additional controls for initial and future projects, including requirements for review and approval by the Historic Preservation Board for changes to the building(s).
  - a. Examples of the types of changes requiring board approval include changes to the exterior, demolition, additions, revising exterior paint colors, and changes to signage.
  - b. Most significant for the development potential of this site could be restrictions on the scale and height of additions to the existing structures and prohibition on outright demolition of existing structures.

## SUSTAINABILITY OPPORTUNITIES:

### GENERAL:

Early consideration of sustainability would allow the design and development team to best leverage the site opportunities, local government incentives and design and construction budgets to produce a differentiated development product while improving environmental outcomes. Direct and indirect benefits of green building for the development team and/or tenants could include:

- 1) Staying ahead of regulations
- 2) Risk and liability reduction
- 3) Operational cost reduction including reduced utility costs
- 4) Enhanced employee productivity and retention
- 5) Enhanced building health
- 6) Brand quality and loyalty
- 7) Environmental stewardship
- 8) National and regional recognition and acceptance
- 9) Marketing potential

### 3RD PARTY CERTIFICATION OPTIONS:

Use of a 3<sup>rd</sup> party certification program can provide the design team with guidance in setting strategies, establish set criteria for compliance for the design and construction teams, and lend the completed project marketable attributes with national recognition and acceptance. These include:

- 1) LEED – One of the most popular and recognized certification programs, LEED is administered by the United States Green Building Council and provides a comprehensive set of guidelines and standards for green building. Understanding and acceptance of the program is common in the design and construction industry.
- 2) Living Building Challenge – Newer than LEED, the Living Building Challenge seeks to move beyond “doing less harm” to being restorative to the environment and community. It consists of seven “petals” (or areas of approach) and twenty “imperatives” (or standards). Included amongst the imperatives are requirements for net positive energy (the building produces more energy on-site than it uses), net positive water (the project captures more water on site than it uses) and strict limits on certain harmful chemicals and building materials. Full certification in all petals and imperatives is one option, as is a “petal certification” approach which allows for compliance with three petals only, of which one must be related to energy, water or materials. The Living Building Challenge is less common than LEED, but was launched in the Pacific Northwest and is gaining ground as the standard for advanced sustainability.
- 3) Well – National certification program focused on health and well-being in buildings.

Several certification programs focus on individual building attributes:

- 1) EnergyStar, Living Building Challenge Net Zero Energy Certification, Passive House, and the 2030 Challenge focus on energy use reduction. The 2030 Challenge focuses in particular on climate change by requiring significant reductions in on-site energy use over baseline code buildings. Net Zero Energy Certification requires the building to use no more energy than can be produced on site. Passive House certification requires reduced energy consumption, higher performance building envelopes and improved indoor air quality
- 2) Watersense is a water use reduction program
- 3) Green Seal and Green Guard focus on use of building material which are healthier choices for building inhabitants

## BUILDING CODE ANALYSIS:

### GENERAL:

This analysis provides an overview of major building code issues which could drive initial development decisions. Since many building code issues are highly specific to a building layout and use mix, a more extensive and detailed code analysis would need to be conducted during later design phases.

The Washington State Existing Building Code is the base code for compliance within existing buildings and for additions to existing buildings. This code makes reference to and incorporates the Washington State Building Code, and full compliance with that code is often required when making major alterations to buildings or the uses within buildings.

For the purposes of code compliance, it should be understood that five of the six subject buildings (Buildings A through E) will likely be considered a single continuous building for the purpose of compliance with the building codes, although a separation between buildings C and D may be possible, which would divide the block into two buildings, one A-C and the other E-E. (See details below.) Building F may be considered as a separate stand-alone building with some minor restrictions on openings and exterior wall ratings for Buildings D, E and F. (See details below.)

### CITY OF WENATCHEE DESIGN SPECIFICATIONS:

- 1) Roof Snow Load: 40 lbs per square foot
- 2) Climate Zone: 5B
- 3) Design Wind Speed: 85 mph
- 4) Wind Exposure: C
- 5) Seismic Zone: C (Residential) / D (Commercial)
- 6) Soil Pressure: 1,500 lbs per square foot assumed
- 7) Freeze Depth: 18" for footings and foundations
- 8) Depth of Waterline: At least 3 feet, and 5 feet if under a driveway

### EXISTING BUILDING CODE – CLASSIFICATION OF WORK (Chapter 2 and Chapter 6)

- 1) Chapter 2 defines several key concepts related to the intensity of work on existing buildings:
  - a. Repair: Work done for the purpose of maintenance or to correct damage
  - b. Addition: Extension or increase in floor area, number of stories, or height.
  - c. Alteration: Any construction or renovation to an existing structure other than a repair or addition.
  - d. Change in occupancy: Change in the use of a building or portion of a building.
- 2) Chapter 6 provides further guidance on how to classify alteration work, and thus which sections of the Existing Building Code and Building Code will apply
  - a. Level 1 – Work which removes elements and replaces them with new elements serving the same purpose.
  - b. Level 2 – Work which includes reconfiguration of the space, the additional or elimination of any window or door, the reconfiguration of any system, or the installation of additional equipment.

- c. Level 3 – Work where the work area exceeds 50% of the building area.
- 3) Based upon preliminary discussions with the Port on their goals for the project, we expect work to be considered an Addition, Level 3 Alteration, and/or Change of Use.

### EXISTING BUILDING CODE – COMPLIANCE METHOD (Section 301)

- 1) Work on existing buildings may comply with the code through one of three methods. These methods may not be mixed. The entire project must meet the requirements of one of the methods:
  - a. Prescriptive: Comply with all requirements in Chapter 5 of the Existing Building Code
  - b. Performance: Score the project in accordance with the formulas and guidelines in Chapter 13 of the Existing Building Code and meet the minimum scores dictated for each occupancy/use type.
  - c. Work Area Compliance Method: This is the most common method of compliance and is evaluated further in this code analysis. Compliance is via the requirements in Chapters 6 through 12 of the Existing Building code, which dictate different requirements based upon the type/level of work at the building.

### EXISTING BUILDING CODE – ALTERATIONS (Chapters 7-9)

- 1) Level 1 alterations are governed by Chapter 7 and dictate that new replacement materials and systems meet current building code and that alterations do not make the building less safe overall than before the work. It does not require replacement or modification of adjacent existing materials and systems.
- 2) Level 2 alterations are governed by Chapter 8. These generally require that egress, configurations, materials, and systems all be brought up to current code within the work area. Chapter 8 provides some relief to specific current code requirements depending upon the nature of the alteration. Increases in structural loads (gravity or seismic) to areas of the structure require upgrades to the structural system in that area to bring it in compliance with current codes.
- 3) Level 3 alterations are governed by Chapter 9. In addition to the requirements for Level 1 and Level 2 alterations, Level 3 alterations trigger additional means of egress, structural and fire sprinkler system in areas of the building outside of the actual areas of work.

### EXISTING BUILDING CODE – CHANGE OF USE (Chapter 10)

- 1) Change in uses shall be based upon occupancy types listed in Chapter 3 of the Washington Building Code.
- 2) Changes to certain uses within the building will require full compliance with the current building code for the entire building. These uses include:
  - a. Covered and open mall buildings.
  - b. Atriums.
  - c. Motor vehicle-related occupancies.
  - d. Aircraft-related occupancies.
  - e. Motion picture projection rooms.
  - f. Stages and platforms.
  - g. Special amusement buildings.
  - h. Incidental use areas.
  - i. Hazardous materials.
  - j. Ambulatory care facilities.
  - k. Group I-2 occupancies.
  - l. Group I-1, Condition 2, for licensure as an assisted living facility under Chapter 388-78A WAC or residential treatment facility under Chapter 246-337 WAC.

- 3) Other changes of use will require either compliance with current building code within the area of the newly established use or in the entire building. To limit changes to the use area only, fire separations meeting the requirements of separate occupancies in the current building code must be provided. Otherwise, the upgrades must be provided throughout the building. Some minor exceptions to current code requirements are indicated in this chapter.
- 4) Some systems only require upgrades based upon a higher level of "relative hazard" as defined by charts in this chapter. If a use is at the same or lesser hazard class, upgrades may not be required.
  - a. Hazards are defined at different level for each system type, but generally, the current prominent current use on the site (apple storage – likely S-2 occupancy) is at the lowest hazard category on each chart.
  - b. Systems subject to upgrade based upon a higher occupancy relative hazard instead of a simple change in occupancy include:
    - i. Means of egress
    - ii. Overall allowed building height and area
    - iii. Exterior wall fire resistance requirements

#### EXISTING BUILDING CODE – ADDITIONS (Chapter 11)

- 1) Additions must comply with current building code.
- 2) Additions may not increase the overall building, area, height, or number of stories beyond what is allowed by current building code or increase non-conformity relative to current building code.
- 3) Additions which impact the existing building structural systems require upgrading the existing building structural systems to current code, with some exceptions.

#### WASHINGTON BUILDING CODE, GENERAL

- 1) Given the level of building alteration and occupancy type changes anticipated by the project, many aspects of the Building Code will apply.
- 2) We have summarized relevant aspects of the building code below. These have been summarized relative to how they might apply if the Existing Building Code requires compliance with the current code. Where relevant, we have included additional notes indicating where some relief from these code requirements may apply.

#### USE AND OCCUPANCY CLASSIFICATION (WBC Chapter 3)

- 1) The building code divides occupancies into various use groups based upon the level and type of life safety risks associated with each use. These should not be confused with zoning occupancy types, which divide occupancies based upon land-use impacts.
- 2) Based upon the likely development scenarios for the site, the following building code occupancy groups are possible:
  - a. **A-1**  
Assembly spaces, usually with fixed seating, intended for the production and viewing of performing arts or motion pictures, including motion picture theaters, symphony and concert halls, television and radio studios admitting an audience and theaters.
    - i. Smaller spaces (with less than 50 occupants calculated according to Chapter 10 of the WBC) are considered instead to be "B" occupancies.
  - b. **A-2**  
Assembly spaces intended for food and drink consumption including restaurants, banquet halls, nightclubs and bars.
    - i. Smaller spaces (with less than 50 occupants calculated according to Chapter 10 of the WBC) are considered instead to be "B" occupancies.
    - ii. A portion of the current brewpub occupancy (public/dining/bar space) conforms to the description of an A-2 occupancy.
  - c. **A-3**  
Includes uses such as amusement arcades, art galleries larger than 3000 gsf, bowling alleys,

- community halls, dance halls (without food and drink consumption), exhibition halls, lecture halls.
- i. Smaller spaces (with less than 50 occupants calculated according to Chapter 10 of the WBC) are considered instead to be "B" occupancies.
- d. **B**  
Includes office, professional services, educational occupancies for students above the 12<sup>th</sup> grade, laboratories, and food processing establishments of 2,500 sf or less.
    - i. Food processing/manufacturing spaces over 2,500 sf and the manufacturer of alcoholic beverages would likely be considered an F-2 of F-1 occupancy.
  - e. **E**  
Includes educational uses through the 12<sup>th</sup> grade when used by 6 or more students per day.
  - f. **F-2**  
Occupancies in this group are considered low hazard and include the manufacture of beverages (with less than 16% alcohol content), brick/masonry, ceramic products, glass products, gypsum, ice and metal fabrication/assembly.
    - i. A portion of the current brewpub occupancy (brewery production) conforms to the description of a F-2 occupancy.
  - g. **F-1**  
Occupancies of moderate hazard are included in this group. The majority of the possible light industrial and small fabrication tenants for the site would likely fall into this group. Code compliance with the requirements of this group would also result in compliance for the F-2 group, giving a project additional flexibility in tenant selection over building a project to suite F-1 only.
  - h. **H-1 through H-5**  
Occupancies in these groups involve the manufacture or use in manufacturing of hazardous substances and often require special construction and egress design. It is assumed for the purposes of this analysis that the development will NOT involve tenants within these groups.
  - i. **I-4**  
This occupancy group includes day care facilities serving over 5 students
    - i. Day care facilities serving 5 or less students are considered a B occupancy.
    - ii. Day care facilities for children 2 ½ years or younger with 6 to 100 students, and which have ground-floor classrooms with individual direct exterior exits, are considered an E occupancy.
  - j. **M**  
Mercantile occupancies such as art galleries of less than 3000 gsf, department stores, drug stores, markets, retail or wholesale stores and sales rooms.
  - k. **R-1**  
Residential uses in which occupants are primarily of a transient nature, including hotels.
  - l. **R-2**  
Residential uses in which occupants are primarily of a permanent nature, including apartment houses.
  - m. **S-2**  
Storage of moderate hazard (S-1) and low hazard (S-2) materials. The code has a specific and long list of materials under each hazard group.
    - i. The last documented use of much of the existing structure, apple storage, would conform to an S-2 occupancy.

#### GROUP R-3 SPECIAL REQUIREMENTS (WBC Chapter 4, Section 420)

- 1) Residential units must be separated from each other and from other occupancies vertically with a 1-hour fire partition
  - a. Fire partition can be reduced to ½ hour in sprinklered Type IIB, IIIB and VB buildings.



- b. Supporting construction for the partition must be protected to 1 hour, except for in Type IIB, IIIB and VB buildings, where supporting construction is not required to be rated unless required elsewhere by the code.
- 2) Residential units must be separated from each other and from other occupancies horizontally with a 1-hour horizontal assembly.
- a. Horizontal assembly can be reduced to ½ hour in sprinklered Type IIB, IIIB and VB buildings.
  - b. Supporting construction for the assembly must be protected to 1 hour, except for in Type IIB, IIIB and VB buildings, where supporting construction is not required to be rated unless required elsewhere by the code.

**GENERAL BUILDING HEIGHTS AND AREAS AND TYPES OF CONSTRUCTION (WBC Chapters 5 and 6 plus Chapter 7, Sections 705.8 and 706)**

- 1) Chapter 5 stipulates the maximum size, height and number of stories for a building with a given use (or mix of uses) and construction type. Preliminary analysis of this chapter typically determines the construction type for a project given a selected mix of uses; with the construction type having a fairly large impact on the design of a project and the cost of construction. In an existing building, the analysis is done in reverse, with the existing building's construction type, size, height, and area reviewed relative to what occupancy types can be accommodate.
- 2) The existing buildings as currently constructed conform to Type VB construction.
- a. With removal of some combustible non-structural wood furring and plywood finish from the interior face of exterior walls, however, the structures will likely comply with Type IIIB construction requirements in Buildings A, B, C and F; and Type IIB in Buildings D and E. (Use of new internal wood framing in D and E would create a Type IIIB building.)
  - b. Given that Buildings A-E are a currently a single building for the purposes of the building codes, however, the lowest construction classification would apply to all five buildings, meaning all five would be classified as Type IIIB after removal of combustible furring and finish at the exterior walls. Building F would remain a Type IIB.
  - c. Upgrading Type IIB construction to IIA and Type IIIA to IIIB is theoretically possible, but would require relatively difficult and expensive upgrades to achieve the required additional fire resistive ratings on primary structure and floor and roof construction. As such, analysis of these building types is excluded from this initial analysis.
    - Required upgrades would be to install 1 hour rated protection for all primary structural elements, floor and roof construction.
- 3) The construction types referenced above include:
- a. Type IIB
    - All construction must be of non-combustible materials. Exceptions allow use of some combustible finish materials, windows, etc. Fire-resistive treated lumber is also allowed in some non-bearing partitions.
    - This building type carries no fire rating requirements other than those required elsewhere in the code.
  - b. Type IIIB
    - Exterior walls must be of non-combustible or fire-resistant treated lumber; interior wall, floor and roof construction can be of combustible construction.
    - Exterior bearing walls must be 2-hour rated. Columns and beam buried within the exterior wall assembly must also carry individual 2-hour ratings. All other structural elements may be unrated.
  - c. Type VB
    - Construction may be of combustible or non-combustible materials.
    - This building type carries no fire rating requirements other than those required elsewhere in the code
  - d. Exterior walls for all construction types:  
The code imposes additional exterior wall rating and opening (window/door) limitation requirements based upon the distance to an interior lot line or to the property line across the

street on a street lot line. (The width of Orondo Ave and Columbia Street are great enough to avoid any restrictions for street-facing lot lines. The centerline of the abandoned Yakima Street right of way is considered an interior lot line for the purpose of this code analysis.) The requirements also vary based upon building occupancy and construction type. For the purposes of this analysis, the following outcomes seem possible:

- Exterior wall at or within 3 feet of interior lot line:
  1. 2 hour exterior wall
  2. no openings allowed
  3. These restrictions would apply if new buildings are constructed on site adjacent to existing ones.
- Exterior wall between 3 and 5 feet of interior lot line:
  1. 2 hour exterior wall
  2. 15% of wall may containing openings
- Exterior wall between 5 and 10 feet of interior lot line:
  1. 1 hour exterior wall (2 hour walls for exterior bearing walls of Type IIIB construction)
  2. 25% of wall may containing openings
- Exterior wall between 10 and 15 feet of interior lot line:
  1. 1 hour exterior wall for construction type IIIB (2 hour walls for exterior bearing walls of Type IIIB), no wall rating for construction types IIB and VB
  2. 45% of wall may containing openings
  3. These restrictions would likely apply to the Building F façade facing the railroad tracks.
- Exterior wall between 15 and 20 feet of interior lot line:
  1. 1 hour exterior wall for construction type IIIB (2 hour walls for exterior bearing walls of Type IIIB), no wall rating for construction types IIB and VB
  2. 75% of wall may containing openings
- Exterior wall between 20 and 30 feet of interior lot line:
  1. 1 hour exterior wall for construction type IIIB (2 hour walls for exterior bearing walls of Type IIIB), no wall rating for construction types IIB and VB
  2. No limits on wall openings
  3. These restrictions would likely apply to the Yakima St facing facades of Buildings E and F. These restrictions would also likely apply to the Building F and Buildings D/E facades which face each other. (The code stipulates that you consider an imaginary lot line half way between buildings on the same lot.)
- Greater than 30 feet from interior lot line:
  1. No wall rating except for 2 hour bearing walls in Type IIIB construction.
  2. No limits on wall openings.

Based upon our initial analysis of the existing building configurations and the code, there do not appear to be any undue restrictions on façade redevelopment for the existing buildings; although some consideration will need to be paid to this code section, especially if new construction is provided on the site to supplement the existing.

- 4) WBC 508 makes a distinction between **separated versus non-separated occupancies**.
- a. Separated occupancies required rated horizontal and vertical construction separating the various occupancies from each other. For the use types included in this analysis, the maximum rating requirement is 1 hour. In the case of separated occupancies, the maximum area is calculated in proportion to each amount of occupancy. The maximum height and number of stories is checked for each occupancy individually.
  - b. Partially separated occupancies are allowed. This is useful in cases where an individual occupancy is located on a lower level, but would not be allowed by code on an upper level given the height and number of stories in the building. In this case, separating the lower level occupancy from the occupancies above would bring the building into compliance.

- c. A project can choose to NOT separate occupancies. In this case, the most restrictive requirements of any occupancy included in the building would apply to the entire building. If the desired occupancies and building configuration allow for it, this is the least costly path for compliance with the code.
- 5) WBC 504 stipulates **maximum building height and number of stories** based upon occupancy classification and building types. Note that the building code limits may be more or less than the limits placed upon the project by zoning FAR and height requirements. (The strictest code condition governs.) Assuming a sprinklered building (to NFPA-13 commercial building standards), and for the uses and building types analyzed for this project, building code height and story limits are as follows:
- A-1/A-2/A-3/E/F-1/ I-4/M/S-1**
    - Type IIB or IIIB: 75 feet, 3 stories
    - Type VB: 60 feet, 2 stories
  - B**
    - Type IIB or IIIB: 75 feet, 4 stories
    - Type VB: 60 feet, 3 stories
  - F-2/S-2**
    - Type IIB or IIIB: 75 feet, 4 stories
    - Type VB: 60 feet, 3 stories
  - R-1/R-2**
    - Type IIB or IIIB: 75 feet, 5 stories
    - Type VB: 60 feet, 3 stories
    - This analysis assumes installation of a commercial NFPA-13 standard sprinkler system. Installation of a residential NFPA-13R sprinkler system would reduce the height/stories to 60 feet/4 stories for construction types IIB and IIIB.
- 6) Stories and heights are measured “above grade plane”
- A story is considered above the grade plan if the entire store is above the grade plan OR the next story above that story is more than 6 feet above grade plan OR the next story above that story is more than 12 feet above the ground at any point.
  - Grade plan is defined as the average grade along the exterior walls. Where grade slopes away from the building at a given facade, the average along that façade is measured at the property line or six feet away from the building if the property line is more than six feet from the building.
  - For the purposes of this section of the code, the basement level of Buildings A, B, and C do NOT count as stories in the maximum story calculations.
- 7) Per WBC 505, **mezzanines** do not count as stories when determining compliance with WBC 504. They are also considered to be part of the story below, but their area is not included when calculating compliance with WBC 506 (see below). Requirements to count a floor as a mezzanine instead of a full story include:
- Per WBC 505.2.3, mezzanines must be open to the floor below.
    - Some closed mezzanines or portions of mezzanines are allowed, including mezzanines with less than 10 occupants and mezzanines with a minimum of two means of egress.
  - Per WBC 505.2.1, the aggregate area of mezzanines for a given story must be 1/3 or less of the area of the rooms to which they are open to below. (Any separate enclosed portions of the story below are not considered in the % calculations.)
    - Residential mezzanines, is fully open to the floor below, can be up to ½ of the area of the room below.
- 8) WBC 506 stipulates **maximum building area** based upon occupancy classification and building types. Note that the building code limits may be more or less than the limits placed upon the project by zoning FAR. (The strictest code condition governs.) The maximum limits on the code describe the maximum floor area per floor of the building; not the overall maximum building area for the entire structure, although there are additional area limitations imposed upon buildings over 3 stories. (See below.) Assuming a sprinklered building (to NFPA-13 commercial building standards), and for the uses and building types analyzed for this project, building maximum areas from Table 504.4 are as follows.

Note that these numbers do NOT include the frontage increase allowed by WBC 506.3, which is covered below and would increase these baseline numbers:

- A-1**
    - Type IIB or IIIB: 25,500 sf multistory and 34,000 single story
    - Type VB: 15,500 sf multistory and 22,000 single story
  - A-2/A-3**
    - Type IIB or IIIB: 28,500 sf multistory and 38,000 single story
    - Type VB: 18,000 sf multistory and 24,000 single story
  - B**
    - Type IIB: 69,000 sf multistory and 92,000 single story
    - Type IIIB: 36,000 sf multistory and 48,000 single story
    - Type VB: 25,500 sf multistory and 34,000 single story
  - E**
    - Type IIB or IIIB: 43,500 sf multistory and 58,000 single story
    - Type VB: 28,500 sf multistory and 38,000 single story
  - F-1**
    - Type IIB: 46,500 sf multistory and 62,000 single story
    - Type IIIB: 57,000 sf multistory and 76,000 single story
    - Type VB: 27,000 sf multistory and 36,000 single story
  - F-2**
    - Type IIB: 69,000 sf multistory and 92,000 single story
    - Type IIIB: 54,000 sf multistory and 72,000 single story
    - Type VB: 39,000 sf multistory and 52,000 single story
  - E**
    - Type IIB or IIIB: 39,000 sf multistory and 52,000 single story
    - Type VB: 28,500 sf multistory and 38,000 single story
  - I-4**
    - Type IIB or IIIB: 43,500 sf multistory and 58,000 single story
    - Type VB: 27,000 sf multistory and 36,000 single story
  - M**
    - Type IIB or IIIB: 37,500 sf multistory and 50,000 single story
    - Type VB: 27,000 sf multistory and 36,000 single story
  - R-1/R-2**
    - Type IIB or IIIB: 48,000 sf multistory and 64,000 single story
    - Type VB: 21,000 sf multistory and 28,000 single story
  - S-1**
    - Type IIB or IIIB: 52,500 sf multistory and 70,000 single story
    - Type VB: 27,000 sf multistory and 36,000 single story
  - S-2**
    - Type IIB or IIIB: 78,000 sf multistory and 104,000 single story
    - Type VB: 40,500 sf multistory and 54,000 single story
- 9) WBC 506.3 allows for an increase in allowable area due to increased fire department access to the building. Access can be from a public right of way, or fire lanes interior to the lot.
- For the purposes of this analysis, we have looked at only Buildings A-E, since Building F is sufficiently small to not require an increase in allowable are to accommodate anticipate program needs.
  - For buildings A-E, we have taken a somewhat conservative approach with fire lanes limited to dead-end corridors (maximum 150 feet long per Fire Code) along the south of Building E and the east of Building A. Orondo and Columbia, as public streets also provide access which can be considered by this code provision.
  - To calculate the increase area, we must first calculate “W” per WBC 506.3.2, which is the weighted average width of the fire department access where it occurs the building:

- In our case,  $W = (449 \times 30) + (99 \times 30) + (49 \times 20) + (150 \times 20) / 747$
  - So,  $W = 27.3$
- d. We then calculate the amount of the increase (I) by the formula in WBC 506.3.3:
- $I = (747/1097 - 0.25) \times 27.3/30$
  - So,  $I = .39$
- e. We then must calculate the new allowable areas individually for each occupancy type using the formula for multi-story mixed use buildings per WBC 506.2.4. We have completed calculations on the most restrictive A occupancy types for this analysis (assuming a multistory Type IIIB construction sprinklered project), but can complete calculations for others if necessary at a later date:
- $A = (\text{Tabular Area} + (\text{non-sprinklered tabular area} \times I))$
  - For Type A-1:  $A = (25,500 + (8,500 \times .39)) = 28,815 \text{ max sf}$
  - For Type A-2/A-3:  $A = (28,500 + 9,500 \times .39) = 32,205 \text{ max sf}$
- 10) Overall building area in buildings over three stories tall above grade plan has additional restrictions per WBC 506.2.3 and WBC 506.2.4.
- WBC 506.2.3 pertains to buildings with a single use type. In addition to the per floor area limitations described above, this section effectively limits the overall area of the building to three times the allowable area per floor. If sprinklered, the overall limit is four times the allowable area per floor.
  - WBC 506.2.4 governs mixed use occupancies which are more likely under redevelopment scenarios. In addition to the per floor area limitations described above, this section effectively limits the overall area of the building to three times the allowable area per floor. If sprinklered AND all occupancies are separate per WBC 508.4, the overall limit is four times the allowable area per floor.
- 11) A single building can be divided by the use of a Fire Wall to create multiple individual buildings, each with its own maximum area, height and story calculations. Each building can also have different construction types. The wall between buildings is subject to the requirements of WBC Section 706. Key considerations include:
- The wall must be constructed to allow collapse of the structure on either side without collapse of the wall under fire condition. (Generally, this means construction of a double wall, each meeting the rating requirement, and each attached to the building structure on that side of the overall fire wall.
  - Fire walls must be constructed of non-combustible construction, unless constructed with Type V buildings on both sides.
  - Fire walls must meet the rating requirements in WBC Table 706.4. For the purposes of this analysis, we have assumed a 3 hour wall will be required given the likely occupancy types and construction types involved.
  - Fire walls must be continuous from exterior wall to exterior wall. Per WBC 706.5 it is likely that the walls can terminate at the interior face of exterior sheathing.
    - Exterior walls 4 feet to either side of the fire wall require a 1 hour rating. Openings within the 4 foot zone have additional restrictions/rating requirements.
  - Fire walls must run from the foundation to a point 4 feet above the higher of the two roofs located on either side of the wall.
    - Some exceptions exist that allow termination of the wall at the underside of roof sheathing. This will require:
      - Class B roof covering
      - No roof openings within 4' of the fire wall
      - For roofs in Type IIIB or VB buildings, replacement of roof sheathing with fire-retardant treated lumber or the addition of gwb protection meeting the requirements of WBC 706.6 exception 4.3
  - Openings in fire walls are limited must:
    - Be limited to an aggregate total of 25% of the length of wall.
    - Be limited to a maximum area of 156 sf per opening

- Be protected with a 3 hour rated door, fire shutter or rated glazing assembly in a 3 hour rated wall.

#### Existing Building Occupancy/Area/Height Recommendations and Initial Observations (WBC Chapters 5 and 6):

- Building F:
  - This building is small enough to accommodate all likely occupancy groups, whether left as Type VB construction or improved to Type IIIB construction through removal of the existing combustible framing at the interior of exterior walls. Removal of the combustible construction in exterior walls and converting the building to Type IIIB now, however, may be of benefit in terms of increasing future flexibility relative to building expansion.
  - Insertion of a second floor would be possible from a maximum height/stories perspective for all likely occupancy groups.
- Buildings A-E
  - The overall area of the structure is approximately 31,300 gsf on the ground floor.
  - Conversion from current Type VB to Type IIB/Type IIIB construction through removal of the existing combustible furring at the interior of exterior walls is likely required for most reuse scenarios.
  - As a single Type IIIB building, all probable occupancy types EXCEPT A-1 can be accommodated
    - The existing building area is very close to the allowable footprint for A-2/A-3 use, limiting opportunities for expansion/additions. (Note that the existing brew-pub includes an area of A-2 occupancy.)
    - Theater use (occupancy type A-1) might be possible with provision of wider and/or longer fire lanes through the interior of the site than was assumed in the analysis above.
    - Insertion of a second floor in the Building E/F combination would be possible.
    - Building a full third story addition would be possible.
    - Selective small additions at levels 4 and 5 might be possible, but will be significantly constrained by the code requirements related to maximum building area, so likely limited to small penthouses or similar. Taller additions would depend upon the specific occupancy types proposed and the ability to add rated horizontal occupancy separations between the existing buildings and the additions.
  - Creating a fire wall between Buildings C and D seems possible, and would break the overall building into two buildings, with A-C now a Type IIIB building of smaller size and D and E a Type IIB or IIIB building of smaller size.
    - The resulting smaller buildings would both support code compliance for all probable occupancy types without wider or longer fire lanes.
    - Additions increasing the footprint of the existing buildings would also be possible.
    - The split buildings would fully accommodate a third story addition and likely be less constrained relative to four and five story additions. Taller additions would still depend upon the specific occupancy types proposed and the ability to add rated horizontal occupancy separations between the existing buildings and the additions.
  - Removal of all or part of Building D would have a similar effect to providing a fire wall in that it would break the overall building into two smaller buildings.
    - The new exterior facades (south wall of A-C and north wall of E (or D-E if retaining a portion of D) would need to meet fire rating and opening restriction requirements as described in the exterior wall analysis above. A separation of 10 feet between buildings would result in reasonable restrictions on the facades, with 20 feet lifting most restrictions.

#### Number of Exits (WBC Chapter 10, Section 1006)

- The building code generally requires two means of egress from most spaces in buildings to the public right-of-way. Some spaces require more than two exits and some may only need one.

- a. Occupant loads (determined by a code-mandated calculation of amount of square footage allotted to each occupant based upon use) are the primary determinant of the number of exits required from a given space and/or story of the building.
  - i. For most commercial uses, an occupant load of 50-500 requires two exits. For residential and I-2 uses, 11-500 requires two exits. For S-1/S-2 uses, 21-500 requires two exits.
  - ii. For all uses, 501-1000 requires three exits. Over 1000 requires four exits.
  - iii. Given the size of the buildings on the site and the likely occupancies, we do not anticipate many allowable 1-exit spaces.
- b. Spaces or stories that meet the occupant load requirement to have only a single exit can still be required to have two exits based upon the Maximum Common Path of Egress Travel Distance.
  - i. This is defined as the distance (measured along the path of travel) between the farthest corner of the space to the point in the egress path in which the occupant would have two choices to exit.
  - ii. Spaces or stories where the distance is over the following limits must be provided with two exits, regardless of how low the occupant load is:
    1. A, E, I-4, and M uses: 75 feet
    2. B uses: 100 feet
    3. F and S uses: 100 feet
    4. R-1 uses: 75 feet
    5. R-2 uses: 125 feet
- c. R-2 uses are further restricted such that only a maximum of 4 dwelling units per floor can be served by a single exit and such that floors four and higher above grade require at least two exits.

#### Foam Plastic Insulation (WBC Section 2603)

- 1) WBC 2603 regulates the use of foam plastic insulation in buildings and has stipulations for flammability and smoke emission testing.
- 2) WBC 2603.4 requires a thermal barrier between foam insulation and interior spaces. The thermal barrier requirement is generally met with ½" minimum gypsum wall board, although other coverings (including possibly the cementitious covering currently installed in Building D) may meet the requirements of the code.
  - a. Some select exceptions allow aluminum or steel sheet metal covering in lieu of gypsum wall board, notably for foam in walk-in coolers, door assemblies, and in single story, sprinklered buildings.
  - b. Existing construction in many locations does not appear to have code required thermal barrier. If the spray foam is not removed during the renovations of the buildings, additional thermal barrier assemblies will be required.

## ENERGY CODE ANALYSIS:

#### GENERAL:

Construction projects in Washington state must meet the Washington State Energy Code, which stipulates requirements for exterior building envelopes, lighting and electrical systems, and mechanical systems. The code does allow for exceptions based upon the rehabilitation of existing construction (versus building new), but in the case of major rehabilitation projects, the majority of the code often applies. We have summarized the major code requirements here, but more detailed analysis of the code will be required during later phases of the project once specific layouts, designs, and programmatic uses are set.

The project is located in Climate Zone 5B.

#### EXISTING BUILDINGS (C501 – C505):

- 1) These chapters provide additional guidance on application of the energy code to commercial uses in existing structures.
- 2) Generally speaking, the following areas must comply with the current code as if new construction:
  - a. Additions
  - b. Spaces where the space conditioning type (conditioned, unconditioned, semi-conditioned) changes from one type to another.
    - i. The majority of the space in the buildings is considered unconditioned or semi-conditioned and will be converted to the conditioned space.
  - c. Areas of new or substantially altered building envelope, including new windows and doors.
  - d. New mechanical systems or portions of mechanical systems.
  - e. New electrical/lighting systems or portions of electrical/lighting systems.
  - f. Any space that is converted from an F, S or U occupancy to an occupancy other than F, S or U.
    - i. The majority of the current building spaces conforms to a Type S occupancy, although some of the imagined uses do conform to S and F occupancy descriptions.
  - g. Any space that is converted to a Group R dwelling unit or portion thereof, from another use or occupancy.
- 3) These chapters do provide some limited relief to requirements of the code, so are worth revisiting during later phases of more detailed design.

#### COMMERCIAL ENERGY EFFICIENCY (C401 – C411)

- 1) Building envelopes must comply with the code via a prescriptive, component, or total building performance method.
  - a. Prescriptive compliance requires meeting minimum requirements for all components. This is the most common method for simple projects and many new construction projects.
  - b. The component method allow for building envelope compliance via a calculation of overall building envelope performance, allowing trade-offs between elements exceeding code requirements and those not quite meeting code requirements. This is common for more complex projects and in adaptive reuse projects where some existing building components may not be able to meet current code without extensive modification.
  - c. The total building performance method considers the building envelope in the context of overall building energy performance such that trade-offs can occur between building envelope components and MEP system performance. This generally requires a whole building energy model so is usually reserved for more complex projects that cannot otherwise comply via prescriptive or component methods. It should be note noted that projects seeking some sustainability certifications require these energy models anyway, so in those cases, the models can be made to serve dual purposes.
- 2) General prescriptive envelope requirements are as follows. These requirements are similar to the baseline building conditions used for component and total building performance methods:
  - a. Roof (Insulation entirely above deck): R38 continuous insulation (CI)
  - b. Mass (masonry or concrete) walls: R13.3 CI for residential uses, R9.5 CI for all others
  - c. Mass transfer deck slab edge: R5
  - d. Below Grade Walls (Residential Only): R10 CI (exterior) OR R15 CI (interior) OR R21 cavity insulation + R5 CI between slab and exterior wall.
  - e. Steel framed walls: R19 in cavity + R8.5CI for residential uses, R13 in cavity + R10CI for all other uses
  - f. Wood framed walls: R25 in cavity OR R20 in cavity + R3.8 CI for residential OR R13 in cavity + R7.5 CI; R21 in cavity OR R15 in cavity + R5 CI for all other uses.
  - g. Floors over exterior/unheated space: R30 CI for mass assemblies, R30 for wood framed assemblies, R38 + R10 CI for steel framed assemblies.
  - h. Slabs on Grade: R10 for 24" below
  - i. Opaque Doors: R4.75
  - j. Window Units: U-0.30
  - k. Curtain Wall: U-.30 for residential uses, U-0.38 fixed and U-0.40 operable for all other uses.

- l. Glazed Entrance Doors: U-9.60
  - m. Skylights: U-0.50 and SHGC .35
  - n. Glazing SHGC: varies depending upon overhang condition and orientation. (Reference Table C402.4)
  - o. Glazing Maximum Area:
    - i. Vertical: 30% of above-grade wall area
    - ii. Skylights: 5% of total roof area.
- 3) Additional Relevant General Requirements:
- a. C402.4.2 stipulates a minimum skylight area installation for spaces greater than 2500 square feet with ceilings 15 feet or higher over 75% of the space.
  - b. C402.5 stipulates installation of a continue air barrier at the building envelope and testing of air leakage after construction. Finished construction must not exceed stipulated maximum air leakage rates.
  - c. C402.5.7 requires vestibules with 7 feet between interior and exterior doors. The following exterior doors are exempt from this requirement:
    - i. Doors not intended as building entries. (Eg: exit only doors, utility room doors, etc.)
    - ii. Spaces of less than 3000 sf where the space is fully enclosed and is not part of a pathway into the main circulation path for the building.
    - iii. Tenant spaces of greater than 3000 sf if the drawings note that a future tenant improvement will be required to provide the necessary vestibule.
    - iv. Doors outfitted with air curtain devices in spaces not connected to the main building elevator lobby or which are in buildings less than 3 stories above grade.
    - v. Doors in buildings less than four stories above grade and less than 10,000 sf total in area.
    - vi. Doors to semi-heated spaces.
  - d. C403, C404, C405 and C405 stipulate minimum energy efficiency standards for mechanical, electrical, and lighting systems.
  - e. C411 requires stipulation of a “solar ready” area with sufficient structural capacity and conduit pathways for future installation of solar panels. Solar ready areas can be on the site or on the roof. The section indicates the minimum area required as based upon either 40% of the roof area or 20% of the projected electrical service size.

- Fair Housing Act (FHA):  
The FHA is a federal standard that applies to all residential projects and is enforceable through civil action.

While many of the requirements of these codes are similar, there are sometime differences between the requirements in the codes. In the case of a discrepancy, a project will likely follow the most stringent requirement amongst the codes.

### ANALYSIS

Since the specific uses, design and configuration of a project significantly impacts the application of the accessibility codes, a detailed analysis of the codes falls outside the scope of this feasibility study. We can confirm, however, the following basic issues related to accessibility at the project site:

- 1) Additions and altered areas of the existing buildings will need to comply with the current accessibility codes.
- 2) An accessible pathway must generally be provided to altered areas if they contain the “primary function” in the building, even if that pathway has to traverse areas not otherwise altered. The codes establish limits to the cost of pathway upgrades (relative to the cost of the alterations requiring them) before they are considered infeasible and aren’t required.
- 3) Accessibility between floors (through ramps, wheelchair lifts, or elevators) will likely be required throughout. This area of the code does show differences between the building code and the ADA such that the strictest interpretation between them yields few exceptions. The combined reading of the exceptions may yield small areas of the building which do not require access; but generally speaking it should be assumed that elevator service or ramps will be required to connect most floors to the accessible pathway system.
- 4) Residential occupancies offer the most exceptions to required elevator service. Generally, so long as all public functions and the required percentage of fully accessible/Type A units can be provided on an accessible floor, the other units (Type B units) can be on floor accessed only by a stairway.
- 5) Buildings A and F and the east faces of Buildings D and E are at grade and will require fewer modifications to provide accessibly entries.
- 6) Buildings B and C do not have floors which align with grade at any elevation so will likely require more modifications to provide the appropriate level of accessibility in a renovation scenario.

## ACCESSIBILITY CODES ANALYSIS:

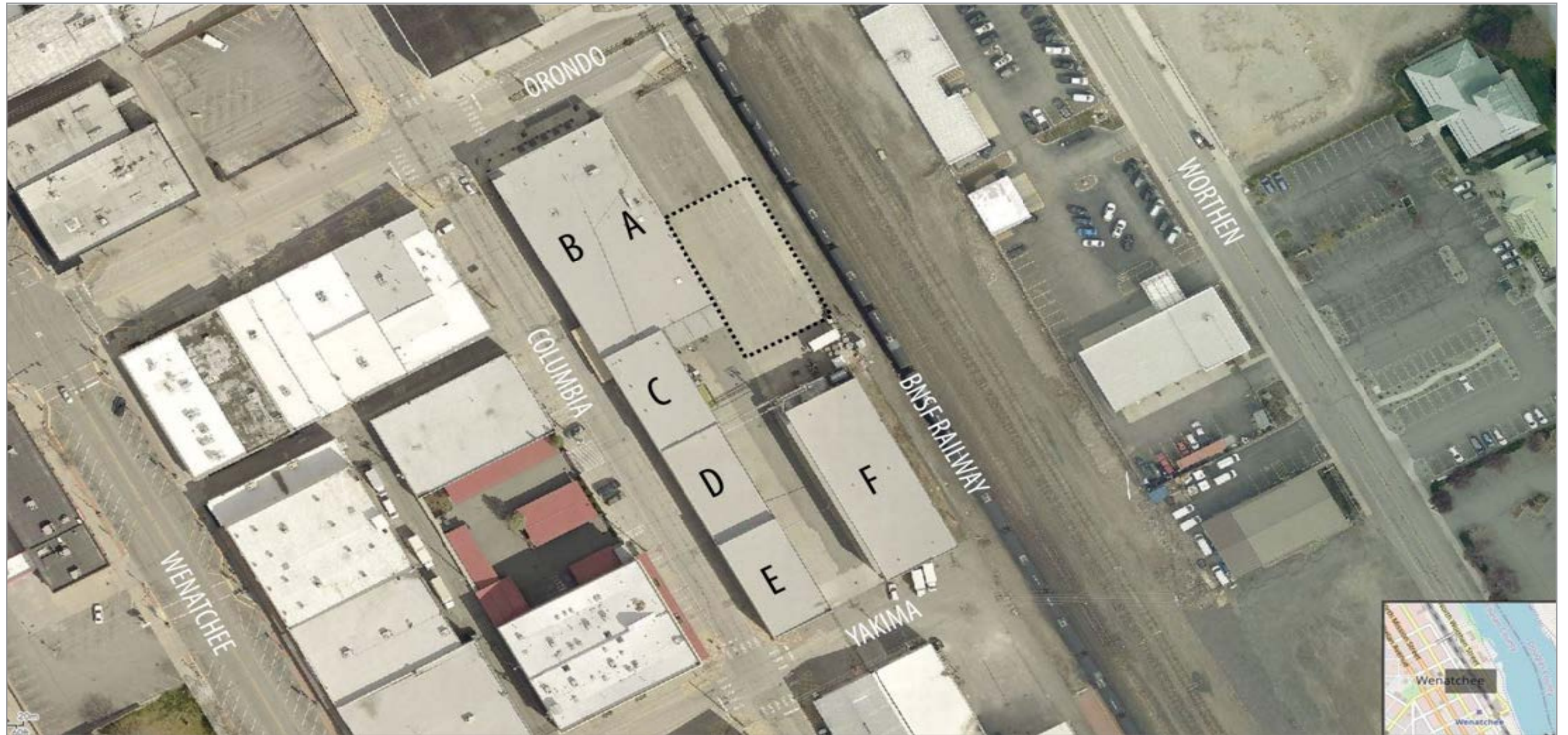
### GENERAL:

Construction projects in Washington State must follow several local, state and federal laws regarding the accessibility of design and construction. These include:

- Washington Building Code and ANSI A117.1:  
Chapter 11 of the WBC determines where and when accessibility standards must be observed in projects (“scoping” of the code) and then refers to the national accessibility standard of ANSI A117.1 for the specific rules and requirements for making spaces and elements accessible. The Existing Building Code contains some exceptions relative to the scoping of compliance in existing buildings. The building code is typically enforced through the building permit review process and by the permit inspectors during the construction process.
- American with Disabilities Act (ADA):  
Chapters 2 and 3 of the ADA set scoping standards for the code with Chapter 2 relevant to government buildings and Chapter 3 relevant to non-government building. (Scoping for the project may depend upon whether or not the buildings are government owned at the time of development.) Chapter 4 (2004 ADAAG) then sets the specific rules and requirements for making spaces and elements accessible. Section 202 of the ADAAG includes compliance exceptions for existing building. This code is typically enforced through civil action, either by individuals or in some cases by government agencies.

# CIVIL SITE ANALYSIS

## AERIAL VIEW



COLUMBIA STREET CHECK-IN #1 - ANALYSIS

# CIVIL SITE ANALYSIS

## COLUMBIA STREET



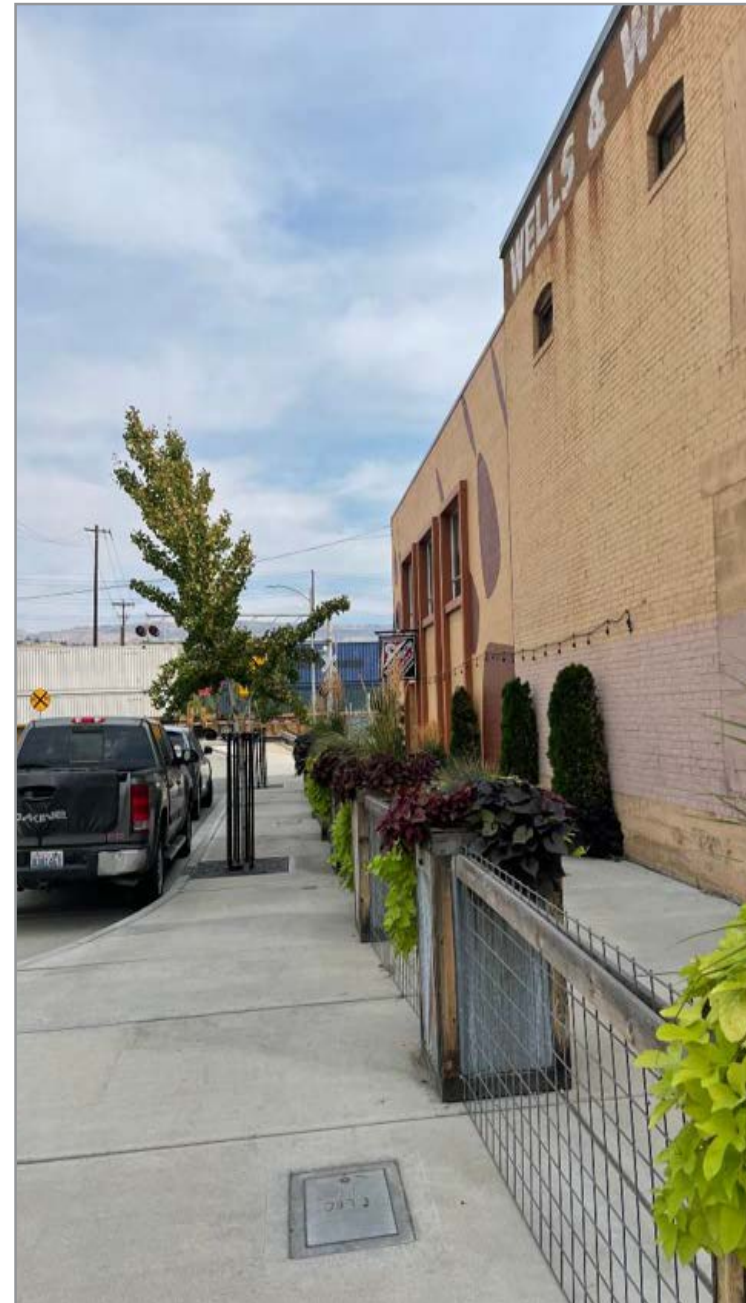
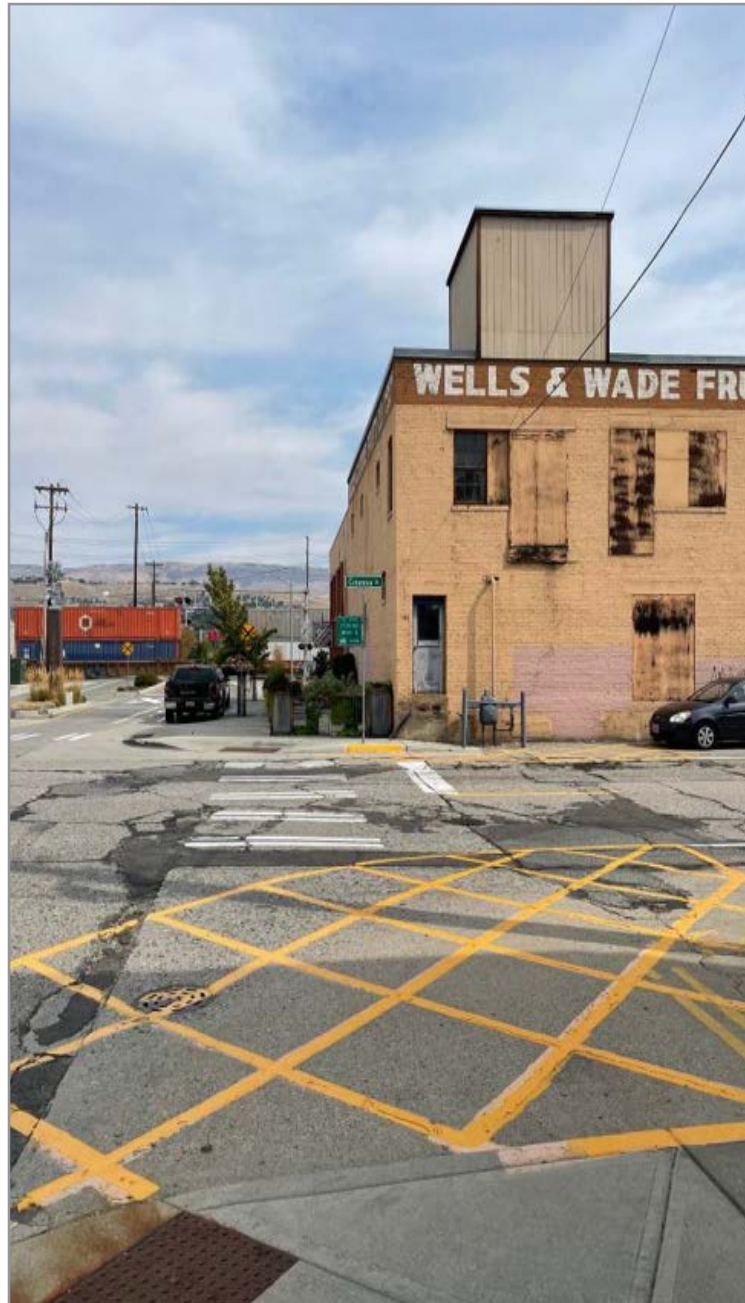
COMPLETE STREETS

COLUMBIA STREET CHECK-IN #1 - ANALYSIS



# CIVIL SITE ANALYSIS

## POINTS OF ACCESS



UNRESTRICTED TURN MOVEMENT AT ORONDO DRIVEWAY

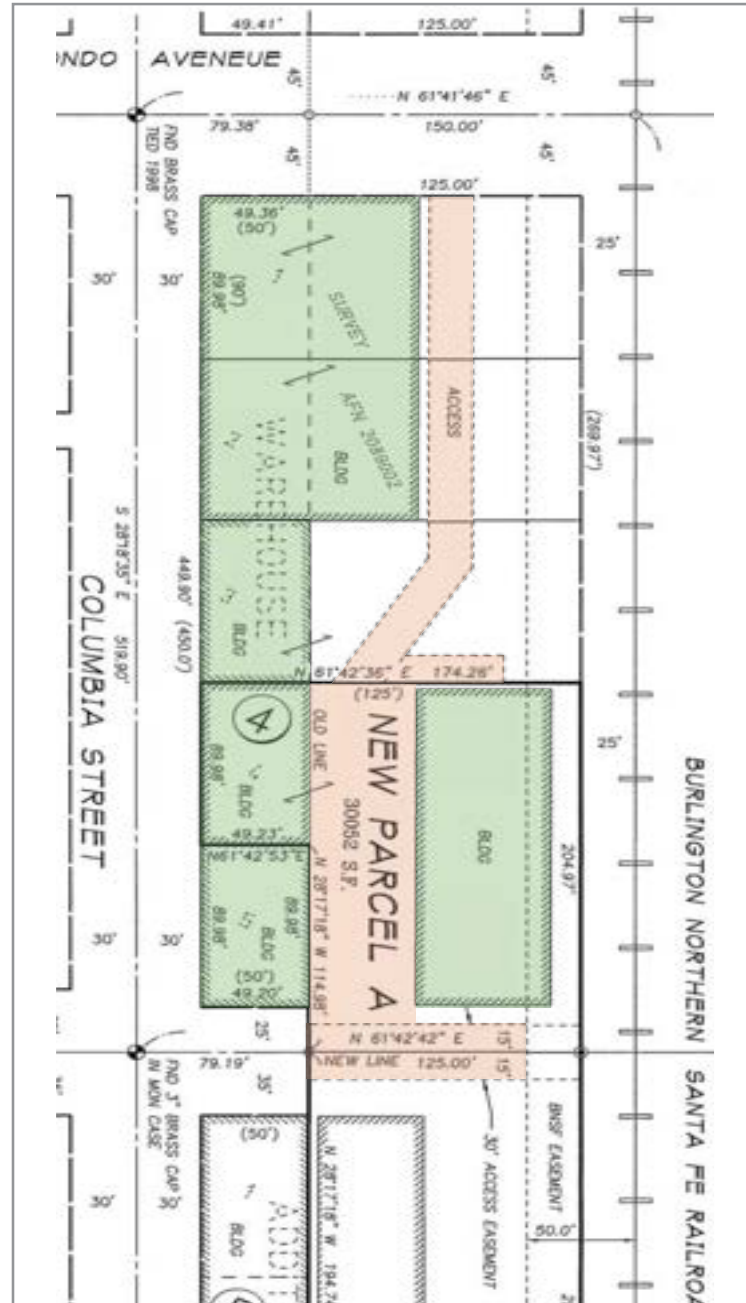


PRIVATE USE OF PUBLIC RIGHT OF WAY YAKIMA INTERSECTION



# CIVIL SITE ANALYSIS

## INTERNAL SITE ACCESS



LOADING DOORS, BUILDING F



DOORS, BUILDING A

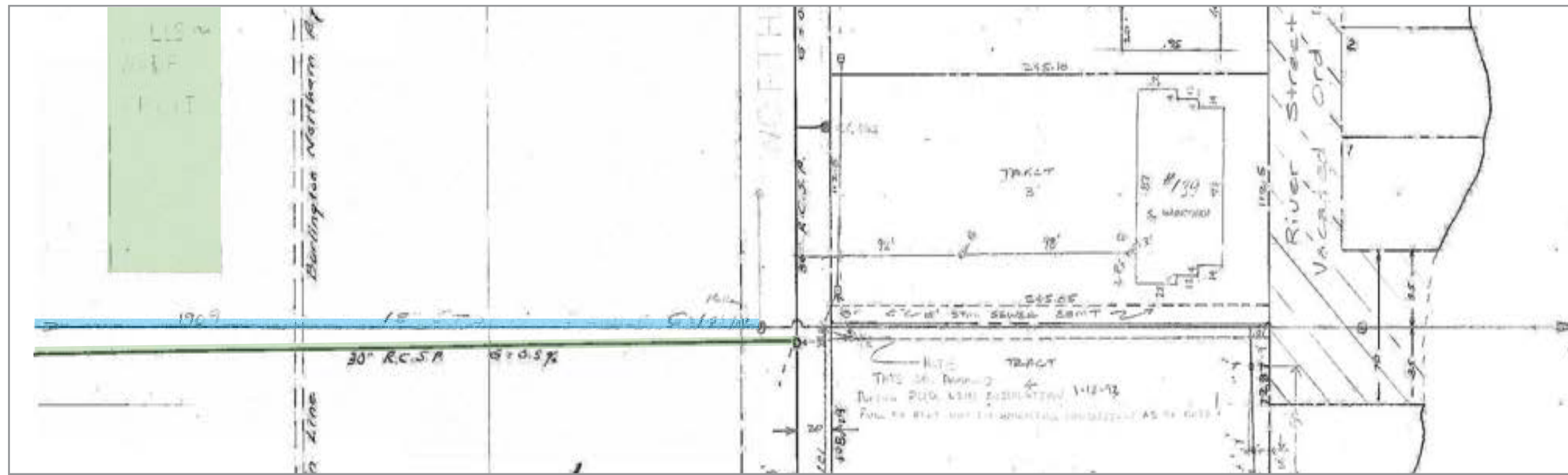


LOADING DOORS, BUILDING C

ROS AFN2528708  
CHANGES TO ACCESS IMPACT BUILDING POTENTIAL, IFC  
APPENDIX D, ANTICIPATE 20' MINIMUM WIDTH  
COLUMBIA STREET CHECK-IN #1 - ANALYSIS

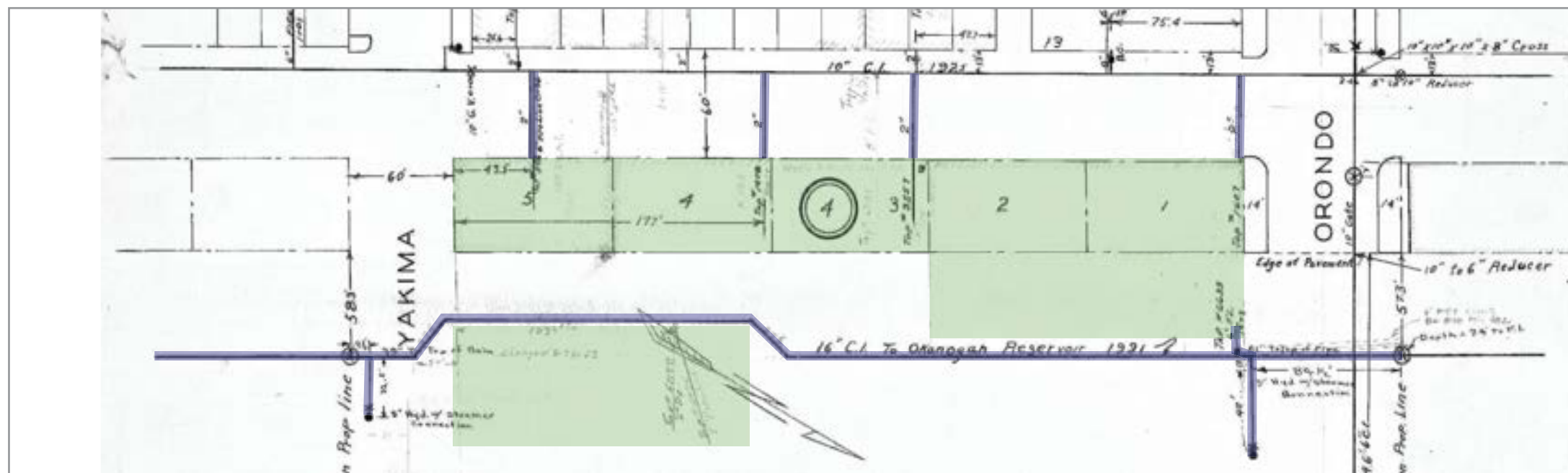
# CIVIL SITE ANALYSIS

## UTILITIES



### SEWER

- 30-INCH DIAMETER SEWER PIPE POTENTIALLY ALONG SOUTH PROPERTY LINE
- 18-INCH DIAMETER STORM PIPE NORTH OF PROPERTY LINE



### WATER

- ADDITIONAL HYDRANTS MAY BE NECESSARY
- 16-INCH DIAMETER WATER MAIN RUNS THROUGH SITE NEAR BUILDINGS A AND F
- UTILITY EASEMENTS GRANTED TO THE CITY MAY BE NECESSARY
- 8-INCH DIAMETER FIRE LINE TO BUILDING F
- 6-INCH DIAMETER FIRE LINE TO BUILDING A
- 10-INCH DIAMETER WATER MAIN IN COLUMBIA
- 6-INCH DIAMETER AND 8-INCH DIAMETER FIRE LINES TO BUILDING D
- 8-INCH DIAMETER FIRE LINE TO BUILDING C

# STRUCTURAL ANALYSIS

DRAWN: - RJ  
 DESIGN: - AGL/KAB/TA  
 CHECKED: - ZFK  
 APPROVED: - ZFK

REVISIONS:


JURISDICTIONAL APPROVAL STAMP:

PROJECT TITLE:

Project Line One  
 Project Line Two  
 Project Line Three  
 Project Line Four

Columbia Street  
 Properties

ARCHITECT:

Graham Baba Architects  
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 Seattle, WA 98122  
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ISSUE:

Preliminary

SHEET TITLE:

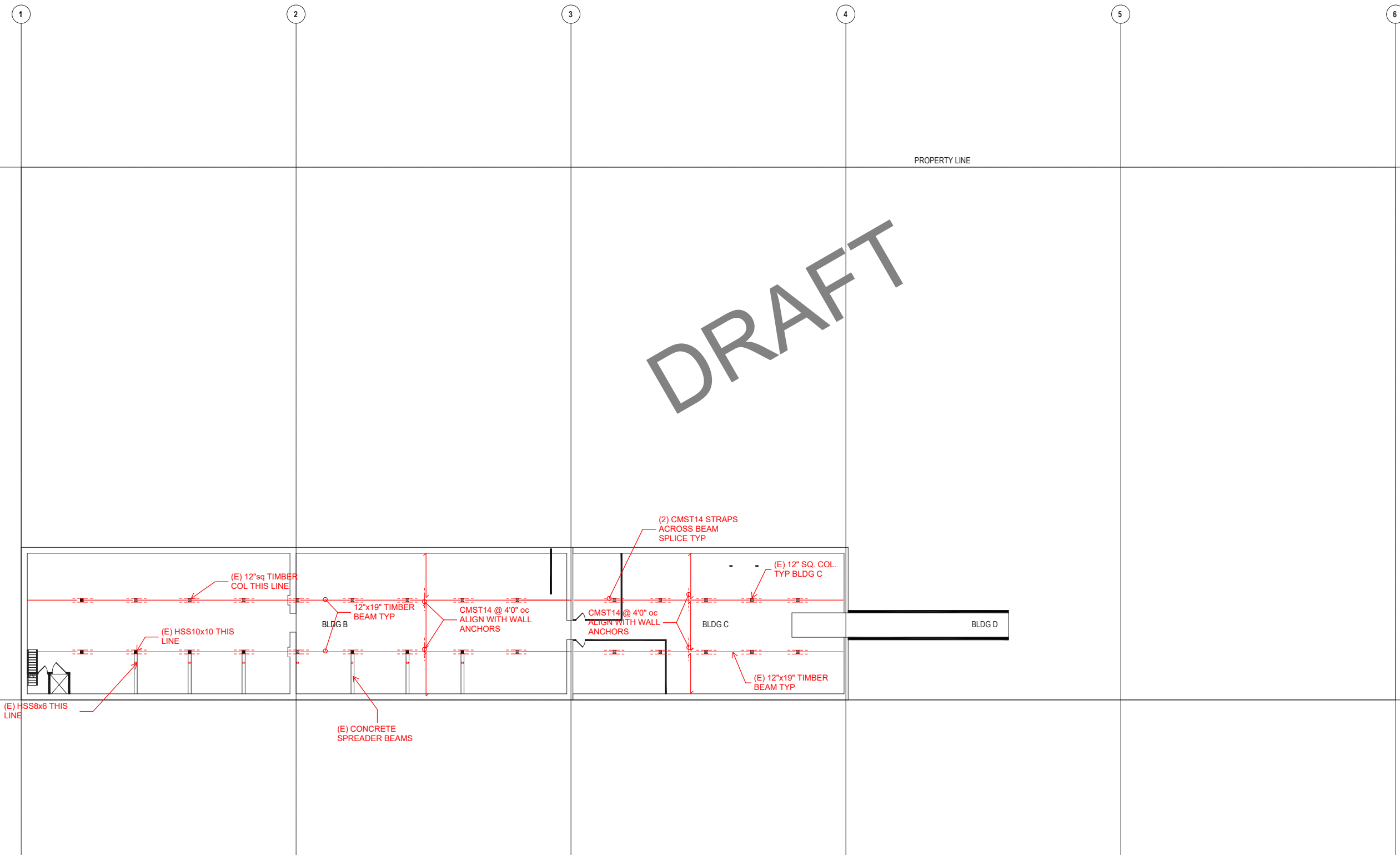
Basement Plan

SCALE: 1/16" = 1'-0" U.N.O.  
 DATE: 11/26/2021  
 PROJECT NO: 01705-2021-10

SHEET NO:

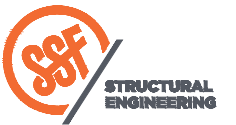
S 2.0

DRAFT



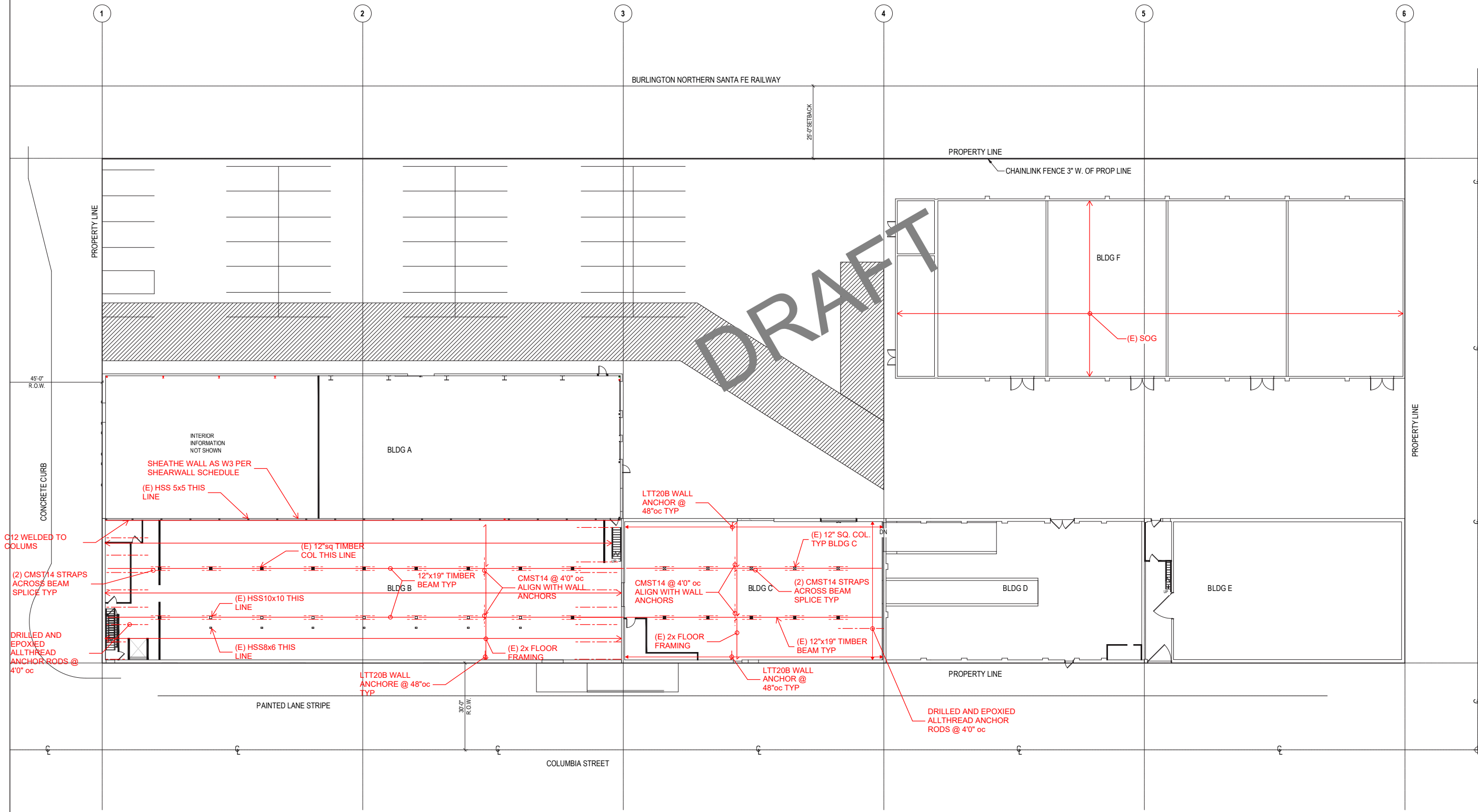
BASEMENT LEVEL PLAN

# STRUCTURAL ANALYSIS



2124 Third Avenue - Suite 100 - Seattle, WA 98121  
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REVISIONS:	

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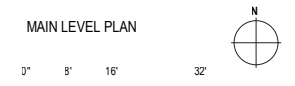
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 Project Line One  
 Project Line Two  
 Project Line Three  
 Project Line Four

ARCHITECT:  
 Client Name  
 Address Line 1  
 Address Line 1  
 PH .....  
 FX .....

ISSUE:  
**Preliminary**

SHEET TITLE:  
 Main Level Plan  
X

SCALE: 1/16" = 1'-0" U.N.O.  
 DATE: .....  
 PROJECT NO: .....  
 SHEET NO:



**S2.1**

# STRUCTURAL ANALYSIS

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DESIGN:	-
CHECKED:	-
APPROVED:	-

REVISIONS:	

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PROJECT TITLE:  
 Project Line One  
 Project Line Two  
 Project Line Three  
 Project Line Four

ARCHITECT:  
 Client Name  
 Address Line 1  
 Address Line 1  
 PH .....  
 FX .....

ISSUE:  
**Preliminary**

SHEET TITLE:  
 Upper Level Plan  
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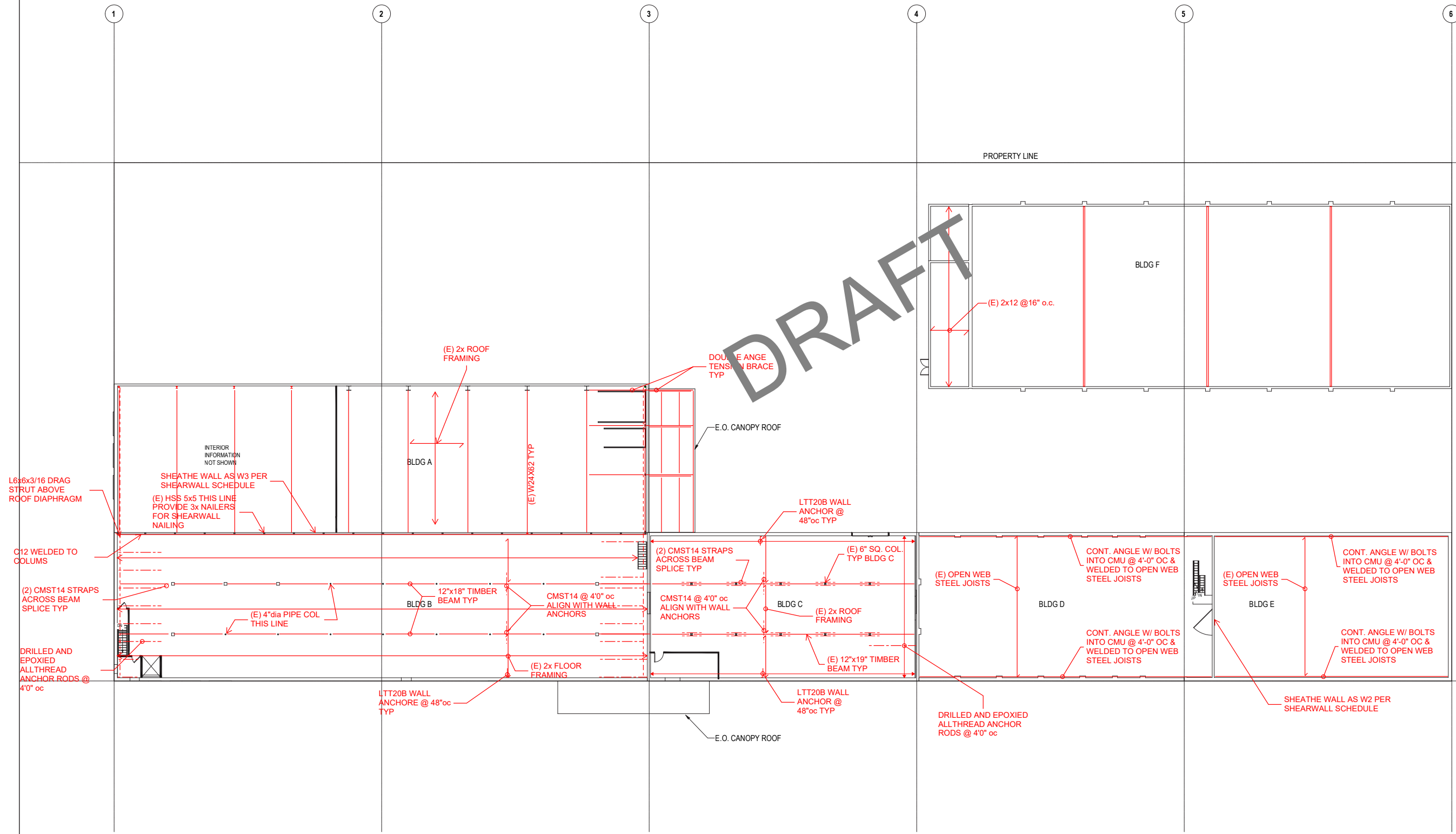
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PROJECT NO: .....

SHEET NO: .....

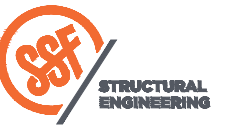
**S 2.2**



DRAFT



# STRUCTURAL ANALYSIS



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DRAWN:	-
DESIGN:	-
CHECKED:	-
APPROVED:	-

REVISIONS:	

JURISDICTIONAL APPROVAL STAMP:

PROJECT TITLE:  
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 Project Line Three  
 Project Line Four

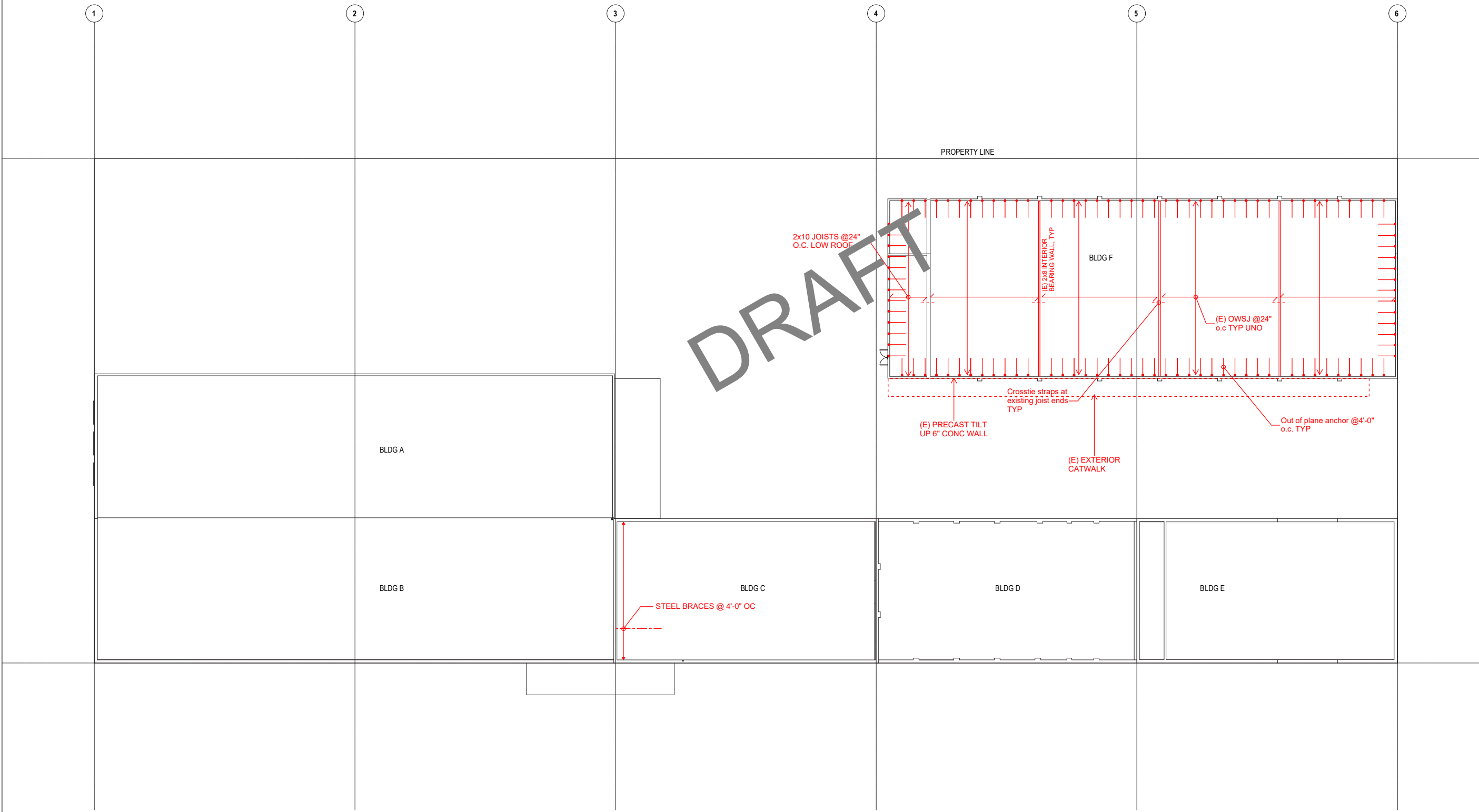
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 FX .....

ISSUE:  
**Preliminary**

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 PROJECT NO: .....  
 SHEET NO:

**S 2.3**



# MECHANICAL / ELECTRICAL / PLUMBING ANALYSIS



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## Columbia Street Properties

Existing Conditions and Feasibility Report

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# 1.0 Project Description

## 1.1 General Building Description

The Columbia Street Properties are a collection of six buildings along Columbia Street, between Orondo and Yakima, in downtown Wenatchee. The following excerpt from the site plan shows each building and its designation. Each section of the analysis refers back to the building by the letter designation.

Building A: Currently leased to Badger Mountain Brewing. Minimal observations of this space.

Building B: Former fruit pack line facility; two stories with a basement

Building C: Additional space for the pack line facility; two stories with basement

Building D: Primarily a single volume storage building; small office; the north portion includes ramps to basement and level 1 of Building C

Building E: One large volume, former fruit storage

Building F: Four large volumes of former fruit storage; main chemical process mechanical room and office on the north



Figure 1: Excerpt from Site Civil Plan



# 2.0 Mechanical Systems

The following write up does not pertain to building A which has an existing fully functional mechanical system.

## 2.1 Control System

### DESCRIPTION

Any controls systems are standalone line voltage controls.



Figure 2: Thermostat

### GENERAL CONDITIONS

The existing controls system are decommissioned, broken, or do not function.

### CODE ISSUES

The existing system does not meet code and could not be modified to meet code.

### RECOMMENDATIONS

A new control system will have to be installed for buildings B through F.



## 2.2 Heating Systems

### DESCRIPTION

The only heating system in the buildings are for minimal freeze protection only. Heating exists in the building F machinery room, the building D office space, and two gas furnaces in building B. These heating systems are only good for minimal freeze protection.



Figure 3: Building B Furnaces, Building D Wall Heater, Building F Unit Heater

### GENERAL CONDITIONS

The existing unit heaters in buildings D and F are in bad condition and should be replaced or removed with the new design. The two gas furnaces in building B look to be in good condition but would not be considered for reuse or salvage.

### CODE ISSUES

The buildings would currently be considered unconditioned or partially conditioned spaces and would have to brought up to code for any new building designs or modifications.

### RECOMMENDATIONS

New heating systems will have to be provided to meet the new design and occupancy requirements.



## 2.3 Cooling Systems

### DESCRIPTION

The only cooling system for the buildings was an ammonia based refrigeration system for fruit storage. the entire system still exists but has been drained and decommissioned.



Figure 4: Ammonia Distribution System



Figure 5: Ammonia Refrigerator Units

### GENERAL CONDITIONS

There is no active cooling in buildings B through F.

### CODE ISSUES

The buildings would currently be considered unconditioned spaces and would have to brought up to code for any new building designs or modifications.

### RECOMMENDATIONS

New cooling systems will have to be provided to meet the new design and occupancy requirements.



## 2.4 Ventilation Systems

### DESCRIPTION

There are no existing ventilation systems in buildings B through F.

### CODE ISSUES

Ventilation systems will have to be provided in buildings B through F depending on the final occupancy and design of the buildings.

### RECOMMENDATIONS

Install new ventilation systems in buildings B through F depending on the final occupancy and design of the buildings.

## 2.5 Exhaust Systems

### DESCRIPTION

There are no existing exhaust systems in buildings B through F.

### CODE ISSUES

New exhaust systems will have to be provided in buildings B through F depending on the final occupancy and design of the buildings.

### RECOMMENDATIONS

Install new exhaust systems in buildings B through F depending on the final occupancy and design of the buildings.



## 3.0 Plumbing Systems

### 3.1 Domestic Water System

#### DESCRIPTION

Very little domestic water system exists in the buildings. Building A has a dedicated water entry system that supplies the brewery and restaurant. The water entry system in building C feeds buildings B and C. Building D and E are feed from a water entry system in building D (picture unavailable). Building F has a dedicated water entry system.



**Figure 6: Building Water Entry Systems (Buildings C & F)**

#### GENERAL CONDITIONS

The existing systems look to be in good condition and could be reused if the new design does not require more water usage and larger pipes.

#### CODE ISSUES

The system may have to be replaced to meet the current low led piping requirement for domestic water systems.

#### RECOMMENDATIONS

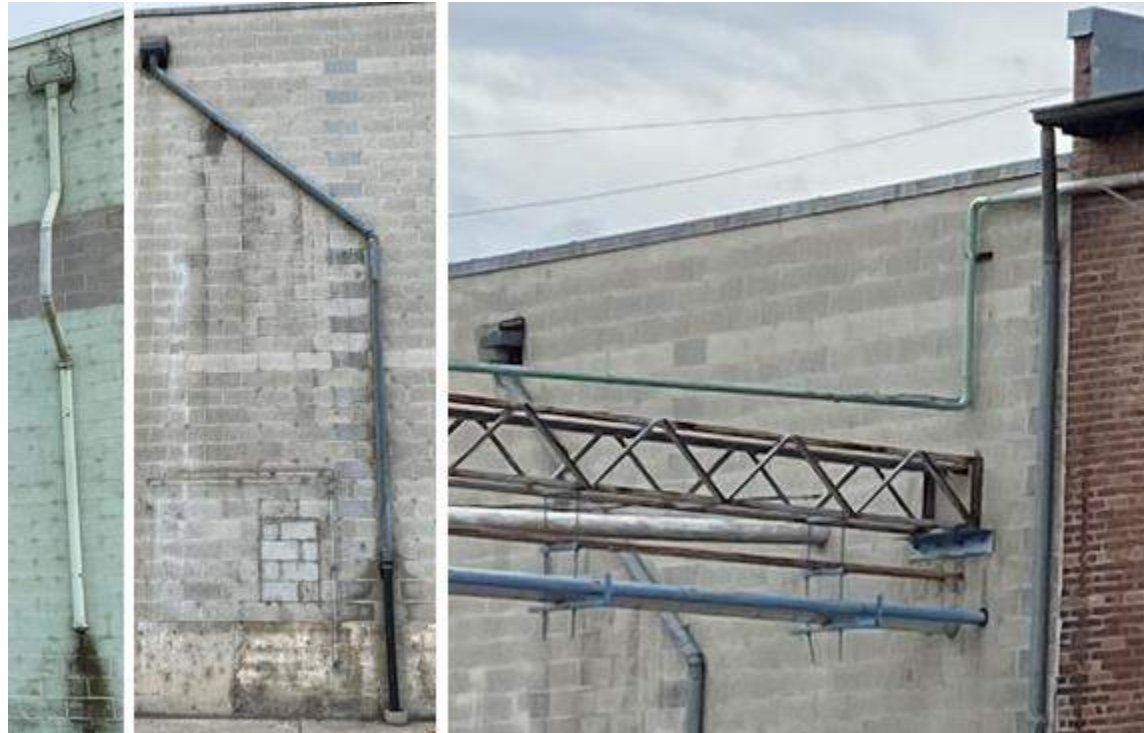
All plumbing will have to be new and installed to meet code and the new architectural design requirements.



### 3.2 Storm Drain System

**DESCRIPTION**

The buildings storm drains systems are served by a combination of gutters and scuppers that route down the exterior of the building. The piping types and routing vary between the buildings.



**Figure 7: Various Storm Drainage Exterior Piping**

**GENERAL CONDITIONS**

The existing system is failing in places and has been crushed by trucks in various locations.

**RECOMMENDATIONS**

It is recommended that the exterior piping be replaced with a new piping system that is consistent between all the buildings and selected to complement the new architectural design.



### 3.3 Sanitary Sewer System

**DESCRIPTION**

All the buildings have a minimal amount of sanitary drainage. Building A routes sanitary drains through the lower level of building B.



**Figure 8: Building B Lower Level Sanitary Piping**

**GENERAL CONDITIONS**

The new building A sanitary drainage is in good condition, but routes through the lower level of building B. The drainage in the other buildings are considered in questionable condition and undersized for any additions or modifications.

**CODE ISSUES**

The sanitary system in buildings B, C, D, E, and F would have to be brought up to code requirements. Codes in question would be cleanouts, venting, backwater, and potentially others.

**RECOMMENDATIONS**

Most if not all Sanitary systems would need to be replaced to meet new occupancy and building configurations.



### 3.4 Natural Gas System

**DESCRIPTION**

The buildings have two natural gas meter locations. The first gas meter feeds building A through building B and is location at the corner of Columbia St and Orondo Ave. The second gas meter location serves building F and is on Yakima St off of Columbia St. The gas meter has been removed because the building has been decommissioned.



**Figure 9: Building B Gas Meter and F Meter Location**

**GENERAL CONDITIONS**

The existing gas meter and distribution system that serves building A through building B looks to be in good condition. The building F location would need a new meter and the distribution looks to be in questionable condition.

**CODE ISSUES**

If the buildings are separated in use and function, the locale utility may require additional meters and distribution system installed.

**RECOMMENDATIONS**

Depending on the new usage of the building the gas meters may need to be replace, see code issues, and new distribution systems would have to be installed.



### 3.5 Plumbing Fixtures

**DESCRIPTION**

Buildings B, C, D, E, and F have very little plumbing fixtures. Building F has consists of industrial safety eye/shower wash station fixtures. Building C has a small office with a stainless steel sink. Building B has a small restroom room. Building A has a restrooms, bar fixtures, full food kitchen, and brewery.



**Figure 10: Various Plumbing Fixtures**

**GENERAL CONDITIONS**

All of the plumbing fixtures in buildings B through F are in poor condition. The Restroom in Building B could be reused if it upgraded to meet ADA codes and fits the new design. Building A fixtures are in good condition are currently in use and maintained by the brewery.

**CODE ISSUES**

All of the building (excluding building A) would have to be brought up to current plumbing codes.

**RECOMMENDATIONS**

Replace all plumbing fixture to match new building usage and design.



### 3.6 Fire Protection Systems

#### DESCRIPTION

The building complex has 4 existing fire department connection locations with associated backflow prevention valves and fire risers. Building A is assumed to be a wet pipe system because it is an occupied building and has a commercial kitchen. We were unable to see the fire riser in the restaurant while it was in operation. The remaining buildings (B,C,D,E,F) are all food storage and warehouse building and are protected by dry pipe fire systems.



Figure 11: Building A Fire Department Connection, Backflow Preventer, and Riser



Figure 12: Building C Fire Department Connection, Backflow Preventer, and Riser



Figure 13: Building D Fire Department Connection, Backflow Preventer, and Riser



Figure 14: Building F Fire Department Connection, Backflow Preventer, and Riser



**GENERAL CONDITIONS**

The existing systems look to be in good condition and could be reused if the design can use the existing type of fire control system. If the system required a different style of fire protections system, then the system will have to be replaced.

**CODE ISSUES**

Depending on the occupancy and use of the building, the systems may have to be replaced with the appropriate fire protection systems.

**RECOMMENDATIONS**

Reuse if systems if possible. Reuse locations of fire piping from the street.



# 4.0 Electrical

## 4.1 Service and Distribution

**BUILDING A**

**Description**

Building A is currently leased to one primary tenant – Badger Mountain Brewing. Minimal observations were made in this building. The second floor at the northern portion of the building, occupied by a different tenant, was not observed.

From observations at Building C, at least some of Building A (if not all) is fed from the distribution at Building C.



**Figure 15: North Elevation of Buildings A and B**



### General Conditions

Anything that was added by the tenant is likely installed to the latest Codes and in good working order. Distribution equipment upstream of the new is likely existing in one of the other buildings, discussed below.

### Code Issues

Serving one building from another, if they're indeed separate buildings, is generally not allowed. It's not clear if Building A has its own dedicated panel that's metered separately. If Building A and B are indeed fully separate buildings, having electrical and other systems serving across the building separation may be an issue.

### Recommendations

A new metered service or panel dedicated to Building A is recommended. This could be an independent service drop from Chelan PUD or a separate metered service from a central meter stack located in one of the other buildings (likely Building C).

Most commercial uses would not exceed 20VA/sf for a service size. Based on this and the current footprint, an 800A, 208V, 3-phase, 4-wire service is a reasonable estimate for a new service for Building A only. This is an estimate based on the building remaining as one story, with a second story at the northern half of the building.

## BUILDING B

### Description

This building is similar to Building C, in that it is two stories with a basement. The electrical service for this building appears to be from the Building C distribution.

The lighting throughout is a mix of fluorescent strip lights and incandescent lamp holders.



Figure 16: Building B Level 2

### General Conditions

All equipment – including lighting and wiring devices – is beyond its normal service life for electrical equipment. The delta configuration of the main panel in Building C that serves this building is no longer a common electrical service voltage and phase arrangement – a 208/120V Y configuration is more widely used.

### Code Issues

Lighting does not meet current Energy Code.

### Recommendations

A new metered service or panel is recommended. This could be an independent service drop from Chelan PUD or a separate metered service from a central meter stack located in one of the other buildings (likely Building C).





Most commercial uses would not exceed 20VA/sf for a service size. Based on this and the current footprint, a 1,600A, 208V, 3-phase, 4-wire service is a reasonable estimate for a new service for Building B only. This is an estimate based on the building remaining as three stories.

All lighting should be replaced with new. Convenience power and connections to mechanical and plumbing systems will all be new.

## BUILDING C

### Description

The building is two stories with a basement. There appear to be two electrical services in this building – one in the basement and one at level 1. These are served from overhead drops across Columbia Street. The drops are surface mounted to the exterior and enter the building in the general vicinity of the meters and switchboards at the basement and level 1.

The basement service appears to be 800A, 240/120V, 3-phase Delta distribution. There are two circuit breakers, each 400A, that are labeled "Service Disconnect." The main switchboard is made Cutler Hammer (which is now EATON). The distribution board also includes three circuits more recently labeled for Badger Mountain Brewing (Building A) rooftop mechanical equipment.



**Figure 17: Building C Basement Main Distribution Panel**



The level 1 service size is unclear. The meter installation sign-off date is in 1981. The equipment at level 1 includes a distribution panel with service disconnects to panels at various levels and locations in Building B and C.



**Figure 18: Building C Level 1 Distribution Panel**

There is also a large motor control center at Level 1. This appears to have been for the fruit packing line equipment (conveyors, etc.) and is no longer in use.

The lighting throughout is a mix of fluorescent strip lights and incandescent lamp holders.

### General Conditions

All equipment is beyond its normal service life for electrical equipment. The delta configuration of the main panel in the basement is no longer a common electrical service voltage and phase arrangement – a 208/120V Y configuration is more widely used.

The wiring devices – receptacles and light switches – also appear to be beyond the time of useful life for electrical equipment. Some are also in disrepair.



### Code Issues

Lighting does not meet current Energy Code.

The basement distribution board has foreign systems located in the working clearance space.

Although not necessarily a Code issue, most utility companies allow only one service per building or site. This building has multiple services.

### Recommendations

Consolidating to a single new service is recommended. The new service equipment should be in its own space that has adequate working and equipment clearances.

Most commercial uses would not exceed 20VA/sf for a service size. Based on this and the current footprint, an 800A, 208V, 3-phase, 4-wire service is a reasonable estimate for a new service for Building C only. This is an estimate based on the building remaining as three stories.

Should Building C service be expanded to accommodate a meter center/meter stack for the other buildings currently connected to Building C, an overall service size estimate for A through E is 4,000A at 208/120V, 3-phase, 4-wire or 1,600A at 480/277V, 3-phase, 4-wire.

All lighting should be replaced with new. Convenience power and connections to mechanical and plumbing systems will all be new.

## BUILDING D

### Description

The electrical service appears to be a single branch panel fed from Building D. It is unclear if everything in Building D (and E) is fed from this panel, or if other branch circuits are extended from the service in Building C.

High bay light fixtures are an HID source. Additional incandescent spotlights are installed at the trusses.



**Figure 19: Existing Branch Panel in Building D**

### General Conditions

The branch panel appears to be beyond the time of useful life for electrical equipment. It may also be from the same, now obsolete, manufacturer of the other electrical equipment observed in the buildings.

The wiring devices – receptacles and light switches – also appear to be beyond the time of useful life for electrical equipment. Some are also in disrepair.

It is not clear if all the lights in the space are functional.

### Code Issues

Lighting likely does not meet current Energy Code.

Some of the wiring devices are damaged or uncovered, and this poses an Electrical Code violation.

### Recommendations

Should this building remain as part of one of the schemes, a new metered service or panel is recommended. This could be an independent service drop from Chelan PUD or a separate metered service from a central meter stack located in one of the other buildings (likely Building C).

Most commercial uses would not exceed 20VA/sf for a service size. Based on this and the current footprint, a 250A, 208V, 3-phase, 4-wire service is a reasonable estimate for a new service or panel. This is an estimate based on the building remaining as a single story.



All lighting should be replaced with new. Convenience power, along with power to mechanical and plumbing systems will all be new. This ensures the electrical systems meet the new use of the space and that all items are constructed to current Codes.

## BUILDING E

### Description

The only electrical service appears to be branch circuits for lighting and equipment fed from a panel in Building D.

Lights were not functional and minimal observations made in this building.

### General Conditions

Electrical system condition was difficult to observe, and what was observed was in disrepair (i.e. lighting).

### Code Issues

This building is very similar to a food storage bay of Building F, only a larger volume. Any change in use requires new electrical systems.

### Recommendations

Should this building be separate from Building D in any of the proposed re-use schemes, a new metered service is recommended. This could be an independent service drop from Chelan PUD, or a separate metered service from a central meter stack located in one of the other buildings (likely B or C). If it is kept intact with the other buildings in this block, a separately metered panel dedicated to the building is recommended.

Most commercial uses would not exceed 20VA/sf for a service size. Based on this and the current footprint, a 250A, 208V, 3-phase, 4-wire service is a reasonable estimate for a new service or panel. This is an estimate based on the building remaining as a single story.

All lighting should be replaced with new. Convenience power, along with power to mechanical and plumbing systems will all be new. This ensures the electrical systems meet the new use of the space and that all items are constructed to current Codes.

## BUILDING F

### Description

The building is served by a 1200A, 208/120V, 3-phase, 4-wire service. The main switchboard and meter are in the mechanical space on the ground floor at the north side of the building. There are 240V, 3-phase load centers at each storage room bay located on the mechanical support walkway attached to the east side of the building. The main switchboard also feeds branch panels located in Building D.

The lighting fixtures throughout are a mixture of fluorescent and incandescent.



Figure 20: Building F Main Switchboard and Meter

### General Conditions

Although it appears to be well maintained, the equipment is beyond the normal service life for electrical equipment. It is also from a manufacturer that no longer exists.

Many of the light fixtures are no longer functioning.

### Code Issues

The electrical service drop appears that it is too close to the access space for mechanical equipment at the roof. *[add in NEC and/or utility standards here]*

Lighting likely does not meet current Energy Code.



**Figure 21: Building F Utility Service Drop**

### Recommendations

A new service, including main meter and distribution panelboard is recommended. It is also recommended that the new service is for Building F only, and that the connection to Building D is removed.

Most commercial uses would not exceed 20VA/sf for a service size. Based on this and the current footprint, a 600A, 208V, 3-phase, 4-wire service is a reasonable estimate for a new service. This assumes the building would remain a single story.

All lighting and convenience power, along with power to mechanical and plumbing systems should be replaced with new. This would ensure the electrical systems meet the new use of the space and that all items are constructed to current Codes.



## 4.2 Emergency Power

### DESCRIPTION

In general, there are very limited sources of backup power throughout all six buildings. Some of the alarm systems appear to have battery backup. It was not apparent that any of the light fixtures had any battery backup.

### GENERAL CONDITIONS

Alarm systems and light fixtures appeared to be somewhat functional for the building current use. However, many light fixtures are no longer functional. The alarm systems appeared to be mostly associated with the fruit packing and processing equipment, which is no longer in use.

### CODE ISSUES

Egress lighting and fire alarm systems are either non-existent or do not have any means of backup power.

### RECOMMENDATIONS

Changes in use to the buildings will likely require, at a minimum, that egress lighting is provided with backup power. It may be achieved with either distributed batteries in light fixtures or with a centralized lighting inverter.

Changes in use will likely require addressable fire alarm systems.

It is recommended that all the existing alarm systems, whether fire alarm or alarm systems associated with the fruit processing, be removed and replaced with new.

# APPENDIX C: INITIAL SCHEME OPTIONS





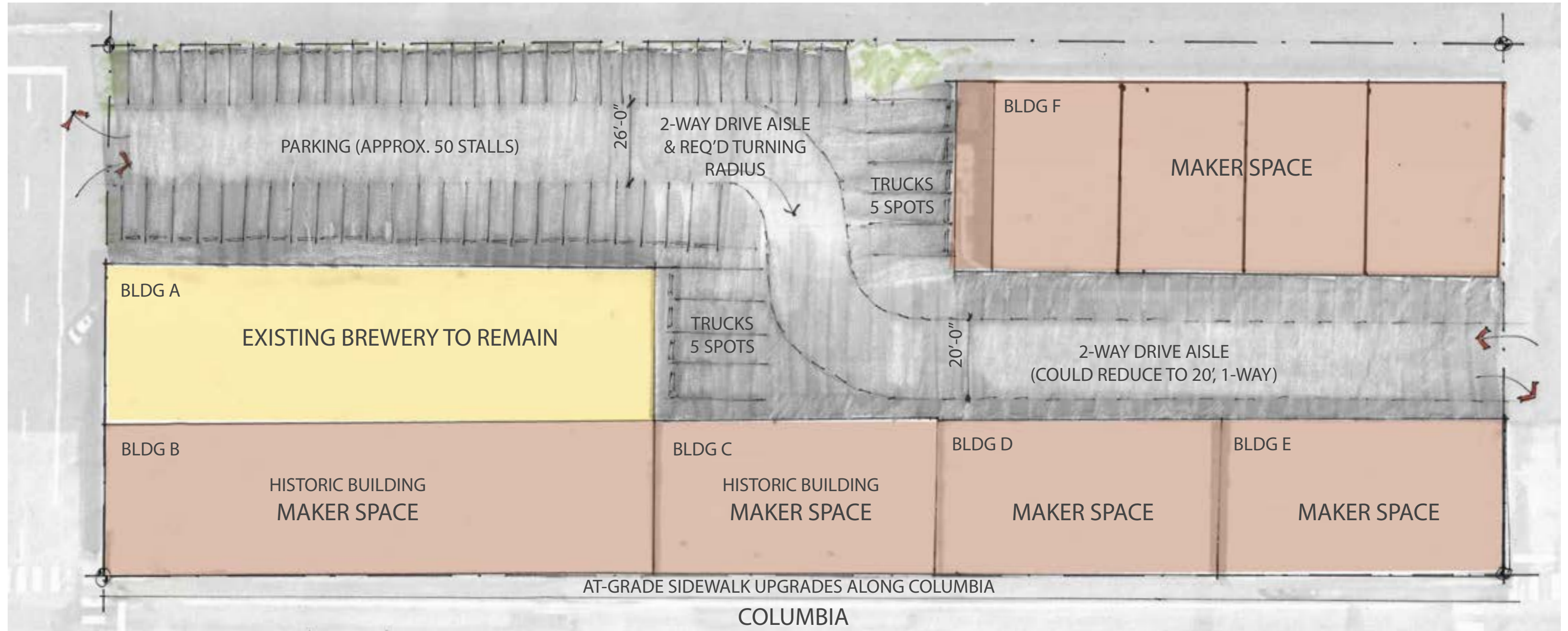
COLUMBIA STREET STUDY  
**BOARD PRESENTATION:  
3 CONCEPTS**

JAN 11, 2022

**GRAHAM BABA** ARCHITECTS  
**ECON**orthwest

# SCHEME 1 - RISK REDUCING SCHEME

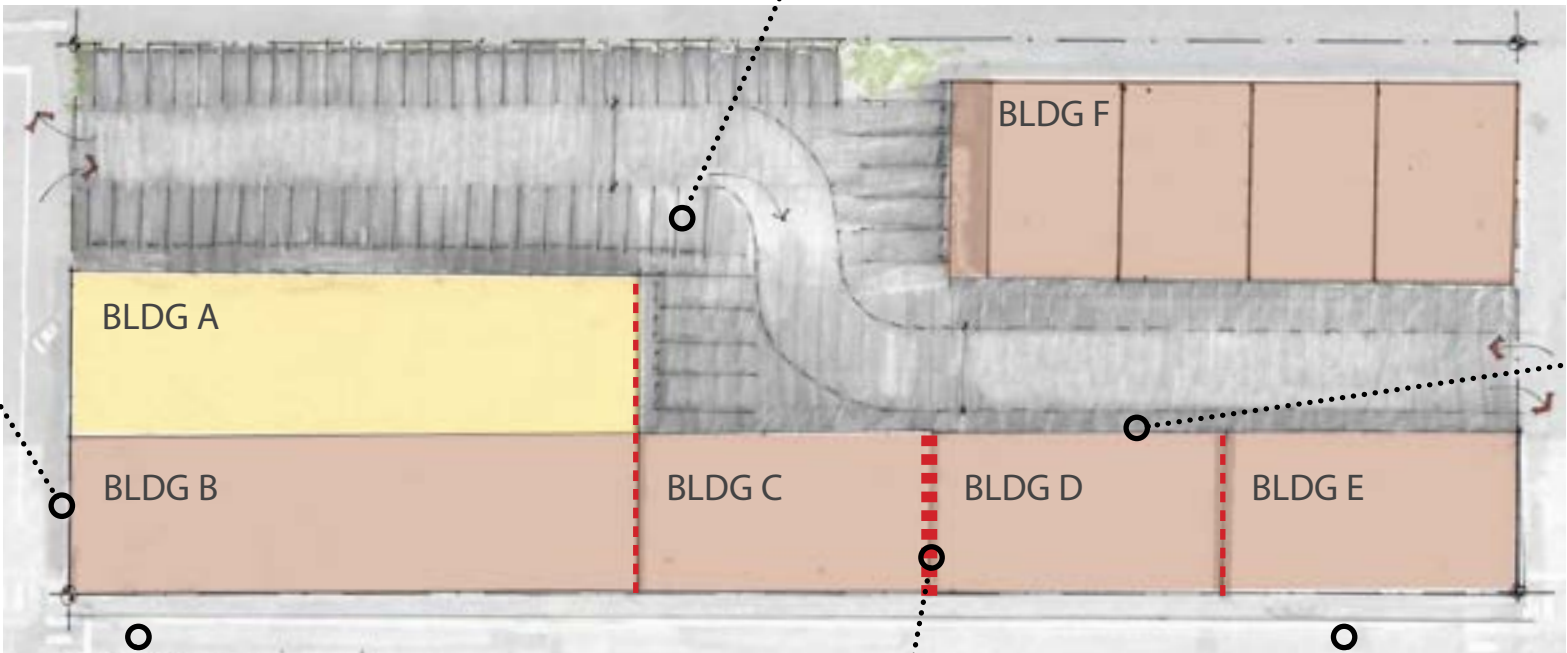
SCALE 1/32" = 1'-0"  
 0' 16' 32' 64'



- ASSUMES MAKER SPACES INCLUDE PRODUCTION, DISTRIBUTION, ACCESSORY OFFICE SPACES, SHOWROOMS ETC.
- WILL ENTAIL CHANGE OF USE
- MEP, SPRINKLER, ENERGY/ENVELOPE AND SEISMIC UPGRADES TO CURRENT CODE
- REPAIRS AS REQUIRED (NEW ROOFS, REPLACE DOORS AND WINDOWS, ETC.)
- NO ADDITIONAL SF = NO NEED FOR NEW FIREWALL IF INTERIOR WOOD FURRING IS REMOVED
- ADA UPGRADES TO CURRENT CODE (ELEVATOR AND STAIRS TO GRADE, SIDEWALK UPGRADES AT GRADE ALONG COLUMBIA)
- RE-PAVE PARKING LOT
- BLDGS B + C: POSSIBILITY OF REHAB TAX CREDITS IF UPGRADES DONE TO SECRETARY OF INTERIOR STANDARDS

# SCHEME 1 - RISK REDUCING SCHEME

(PRECEDENTS AND POSSIBLE SUB-DIVISION LOCATIONS)



POSSIBLE SUB-DIVISION OF PROPERTY DEVELOPMENT SHOWN WITH DASHED LINES, TYPICAL. (MAY REQUIRE ADDITIONAL FIRE WALLS, UTILITY CONNECTIONS, STAIRS AND ELEVATORS, AND/OR ACCESS POINTS.)





# SCHEME 1 - RISK REDUCING SCHEME

SCHEME 1 - PROGRAM SPACES															BUILDING TOTALS (GSF)	BUILDING TOTALS (NSF) <sup>1</sup>	
BUILDING	STORAGE AND WAREHOUSE			MAKER SPACE AND LIGHT INDUSTRIAL			RETAIL AND FOOD + BEVERAGE			ENTERTAINMENT			RESIDENTIAL				
	GROSS (GSF) <sup>2</sup>	EFFICIENCY FACTOR	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	EFFICIENCY FACTOR	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	EFFICIENCY FACTOR	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	EFFICIENCY FACTOR	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	EFFICIENCY FACTOR	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>		
A <sup>3</sup>	0 x 90% =		0	0 x 90% =		0	8,770 x 95% =		8,332	0 x 90% =		0	0 x 80% =		0	<b>8,770</b>	<b>8,332</b>
B <sup>4</sup>	4,017 x 90% =		3,615	21,253 x 90% =		19,127	0 x 90% =		0	0 x 90% =		0	0 x 80% =		0	<b>25,269</b>	<b>22,742</b>
C <sup>4</sup>	2,042 x 90% =		1,838	10,564 x 90% =		9,508	0 x 90% =		0	0 x 90% =		0	0 x 80% =		0	<b>12,606</b>	<b>11,345</b>
D	0 x 90% =		0	4,269 x 90% =		3,842	0 x 90% =		0	0 x 90% =		0	0 x 80% =		0	<b>4,269</b>	<b>3,842</b>
E	0 x 90% =		0	4,240 x 90% =		3,816	0 x 90% =		0	0 x 90% =		0	0 x 80% =		0	<b>4,240</b>	<b>3,816</b>
F	0 x 90% =		0	10,596 x 90% =		9,536	0 x 90% =		0	0 x 90% =		0	0 x 80% =		0	<b>10,596</b>	<b>9,536</b>
<b>TOTAL SITE</b>	<b>6,059</b>		<b>5,453</b>	<b>50,922</b>		<b>45,829</b>	<b>8,770</b>		<b>8,332</b>	<b>0</b>		<b>0</b>	<b>0</b>		<b>0</b>	<b>65,750</b>	<b>59,614</b>

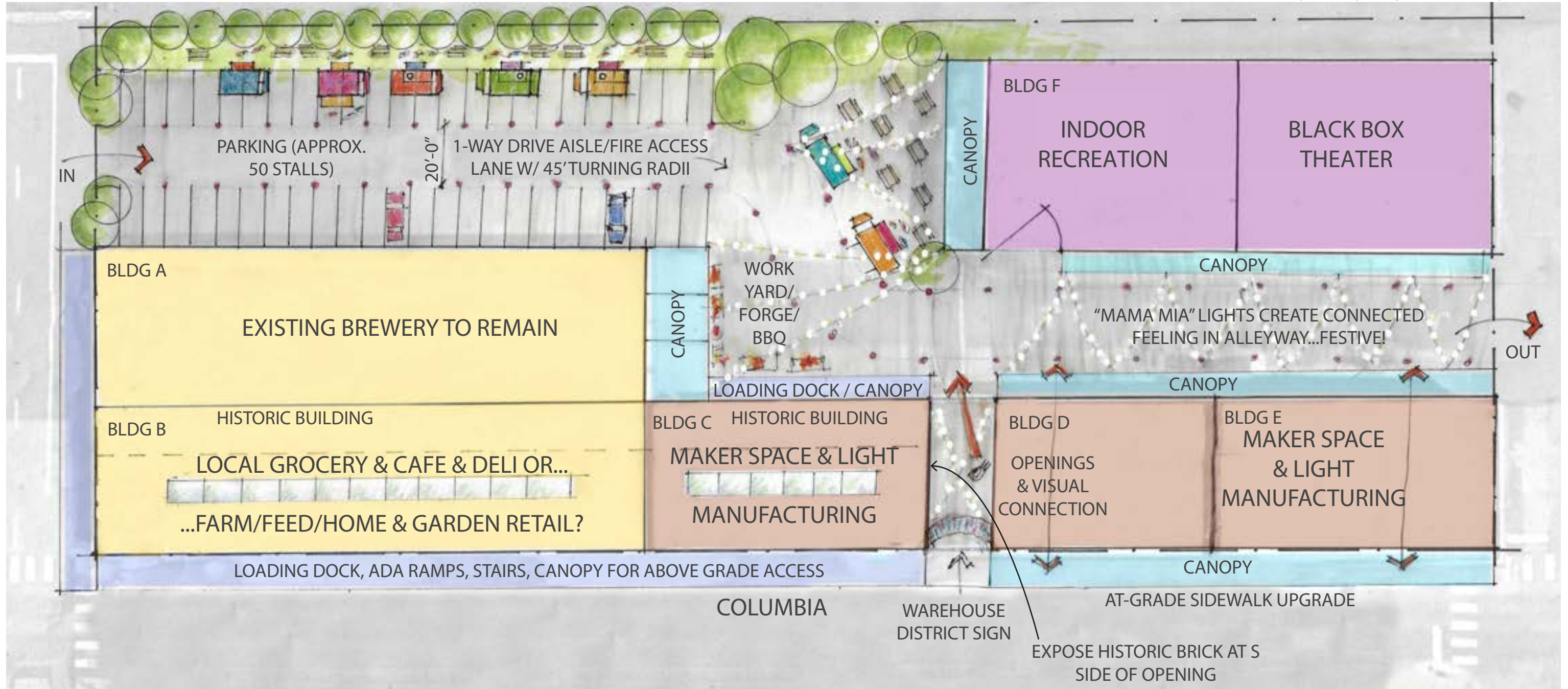
COMMON SITE ELEMENTS	
AUTO PARKING COUNT:	50 SPACES
TRUCK PARKING COUNT:	9 SPACES

**NOTES:**

- 1 Leasable areas are approximate calculations provided for conceptual design purposes only. The areas are based upon typical previous program to area relationships ("efficiency factors") and will change as specific designs are developed.
- 2 Gross areas are based upon approximate total construction areas for each program type. For this analysis, area shared between program types (eg: common utility rooms and vertical circulation) is split equally between all program types in a given building.
- 3 Building A existing brew-pub use is calculated as food + beverage for the purpose of this analysis. Current analysis does not include second floor in all schemes.
- 4 Building B and C areas include second levels calculated as maker space and light industrial use, and basements are split 1/2 maker space and 1/2 storage.

# SCHEME 2 - MEDIUM LEVEL DEVELOPMENT

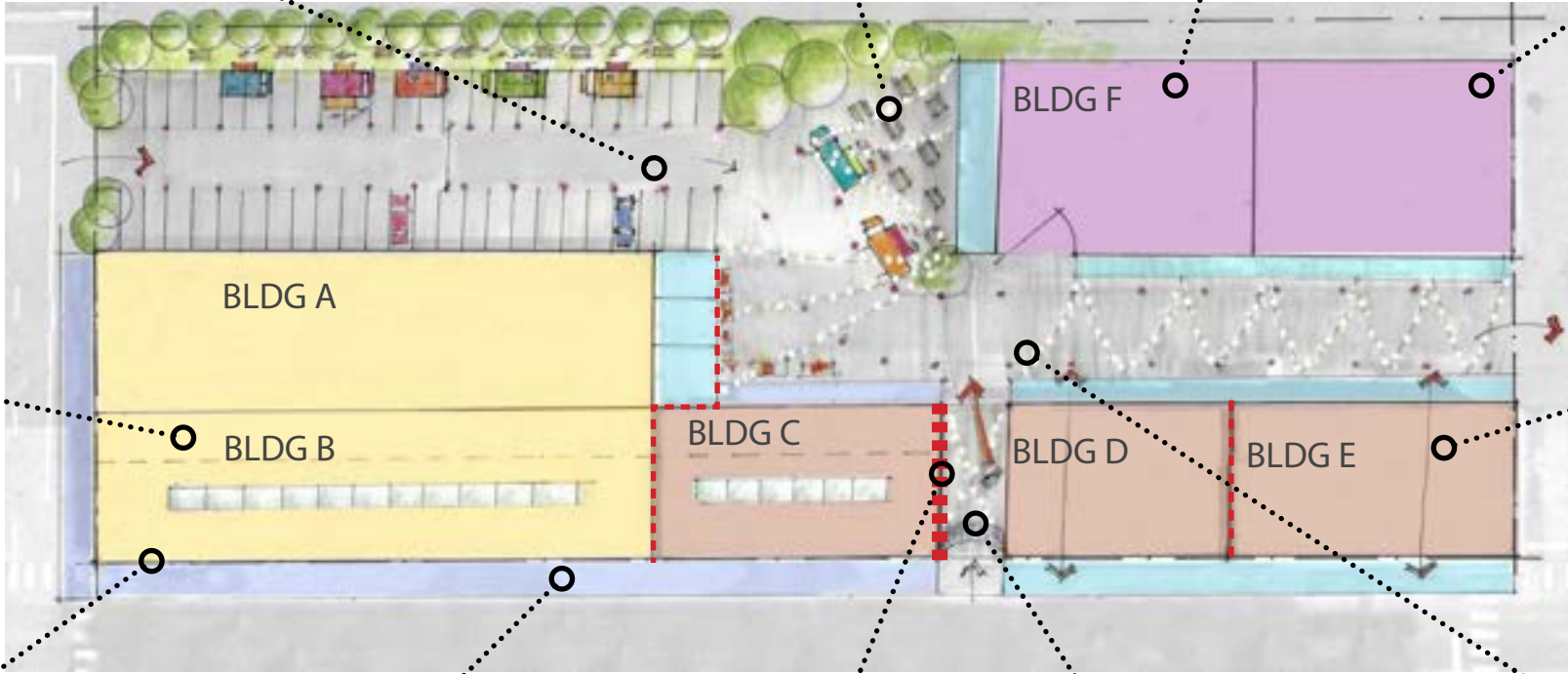
SCALE 1/32" = 1'-0"  
 0' 16' 32' 64'



- FULL SEISMIC, MEP, SPRINKLER & ENERGY UPGRADES TO CURRENT CODE
- REPAIRS AS REQUIRED (NEW ROOFS, REPLACE DOORS AND WINDOWS)
- CHANGE OF USE IN ALL BUILDINGS
- PORTION OF BUILDING D REMOVED FOR GREATER CONNECTION BETWEEN COLUMBIA AND INNER COURT; ALLOWS ADDITIONAL SQUARE FOOTAGE LATER AS NO FIRE SEPARATION REQUIRED
- ADA UPGRADES (ELEVATOR AND STAIRS TO GRADE, SIDEWALK UPGRADES AT GRADE ALONG C & D @ COLUMBIA, NEW LOADING DOCK/RAMPS/STAIRS ALONG A/B/C)
- BLDGS B + C: RESTORE PER SECRETARY OF INTERIOR STANDARDS FOR TAX CREDITS, APPLY FOR LOCAL REGISTER LISTING FOR TAX ABATEMENT; REMOVE 2/3 OF 2ND STORY AND INSTALL SKYLIGHTS IN ROOFS FOR GREATER DAYLIGHT INTO GROUND FLOOR (RESTRICTED ON EXTERIOR OPENINGS, BUT INTERIOR MODIFICATIONS NOT RESTRICTED.)
- LANDSCAPE EDGE, RETRACTABLE BOLLARDS FOR FLEXIBILITY OF USE IN PARKING AREA

# SCHEME 2 - MEDIUM LEVEL DEVELOPMENT

(PRECEDENTS AND POSSIBLE SUB-DIVISION LOCATIONS)



POSSIBLE SUB-DIVISION OF PROPERTY DEVELOPMENT SHOWN WITH DASHED LINES, TYPICAL. (MAY REQUIRE ADDITIONAL FIRE WALLS, UTILITY CONNECTIONS, STAIRS AND ELEVATORS, AND/OR ACCESS POINTS.)



# SCHEME 2 - MEDIUM LEVEL DEVELOPMENT

SCHEME 2 - PROGRAM SPACES																	
BUILDING	STORAGE AND WAREHOUSE			MAKER SPACE AND LIGHT INDUSTRIAL			RETAIL AND FOOD + BEVERAGE			ENTERTAINMENT			RESIDENTIAL			BUILDING TOTALS (GSF)	BUILDING TOTALS (NSF) <sup>1</sup>
	GROSS (GSF) <sup>2</sup>	EFFICIENCY FACTOR	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	EFFICIENCY FACTOR	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	EFFICIENCY FACTOR	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	EFFICIENCY FACTOR	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	EFFICIENCY FACTOR	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>		
A <sup>3</sup>	0	x 90% =	0	0	x 90% =	0	8,770	x 95% =	8,332	0	x 90% =	0	0	x 80% =	0	8,770	8,332
B <sup>4</sup>	4,017	x 90% =	3,615	0	x 90% =	0	15,507	x 90% =	13,956	0	x 90% =	0	0	x 80% =	0	19,524	17,571
C <sup>5</sup>	2,042	x 90% =	1,838	7,723	x 90% =	6,951	0	x 90% =	0	0	x 90% =	0	0	x 80% =	0	9,765	8,789
D	0	x 90% =	0	3,415	x 90% =	3,074	0	x 90% =	0	0	x 90% =	0	0	x 80% =	0	3,415	3,074
E	0	x 90% =	0	4,240	x 90% =	3,816	0	x 90% =	0	0	x 90% =	0	0	x 80% =	0	4,240	3,816
F	0	x 90% =	0	0	x 90% =	0	0	x 90% =	0	10,596	x 90% =	9,536	0	x 80% =	0	10,596	9,536
TOTAL SITE	6,059		5,453	15,379		13,841	24,277		22,288	10,596		9,536	0		0	56,310	51,118

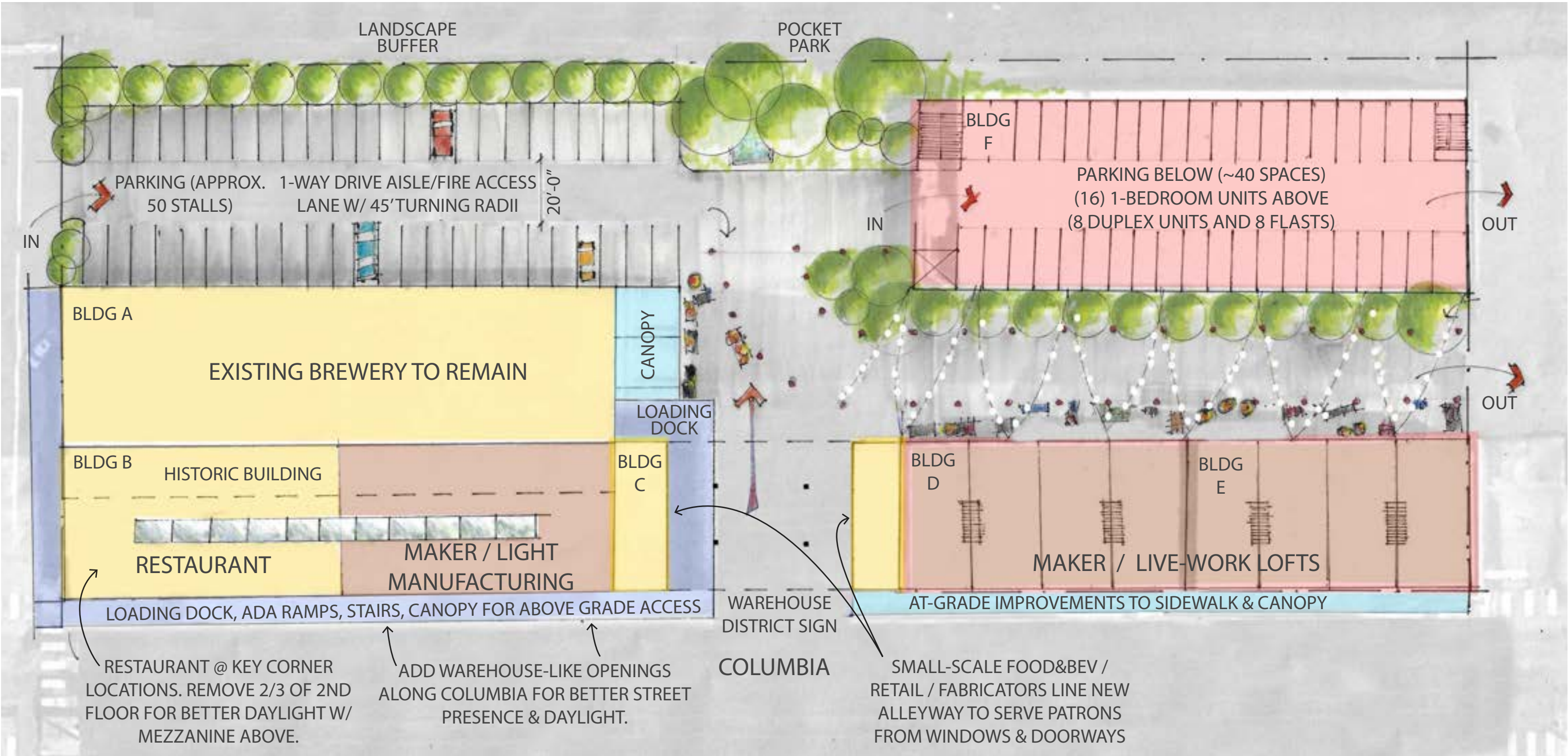
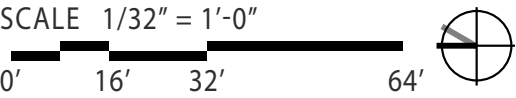
COMMON SITE ELEMENTS	
AUTO PARKING COUNT:	50 SPACES
TRUCK PARKING COUNT:	0 SPACES

NOTES:

- 1 Leasable areas are approximate calculations provided for conceptual design purposes only. The areas are based upon typical previous program to area relationships ("efficiency factors") and will change as specific designs are developed.
- 2 Gross areas are based upon approximate total construction areas for each program type. For this analysis, area shared between program types (eg: common utility rooms and vertical circulation) is split equally between all program types in a given building.
- 3 Building A existing brew-pub use is calculated as food + beverage for the purpose of this analysis. Current analysis does not include second floor in all schemes.
- 4 Building B basement calculated as half retail and half storage.
- 5 Building C basement calculated as half maker space and half storage.

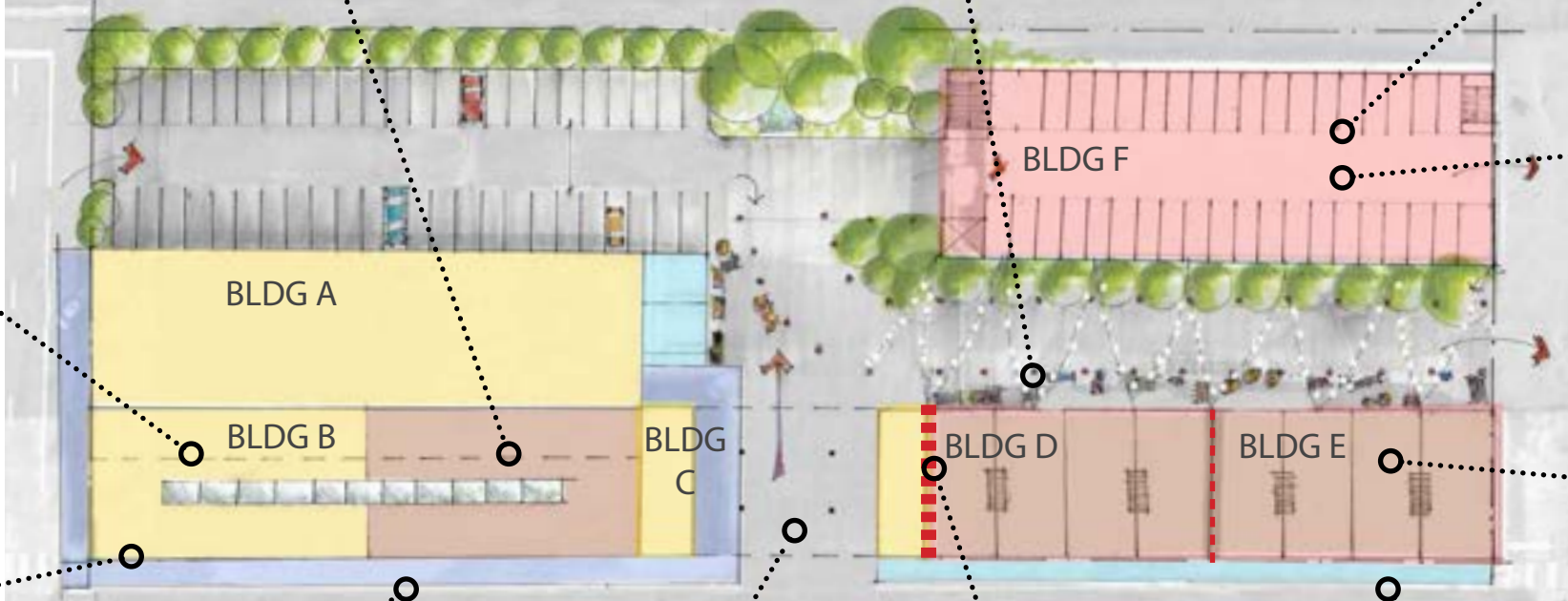
# SCHEME 3 - FULL SCALE DEVELOPMENT



- SAME AS SCHEME 2 PLUS:
- REMOVAL OF PORTION OF BUILDING C CREATES VISUAL ACCESS INTO WORKYARDS AND COURTYARD POCKET PARK - THIS WILL LIKELY NEGATE THE ABILITY TO APPLY FOR TAX CREDITS AND ABATEMENTS.
- BLDG C "ALLEY" LINED WITH SMALL FOOD/BEV/FABRICATORS
- ADD FLOOR (+ PENTHOUSE) TO BLDGS D, E & F FOR HOUSING ABOVE; SEE MORE DETAILED UPPER FLOOR PLAN; PARKING AT GRADE IN BLDG F
- BLDGS B + C: ADD MULTIPLE LARGE WAREHOUSE-SCALE OPENINGS TO INCREASE VISUAL CONNECTION TO STREET AND ACCESS TO DAYLIGHT - THIS MAY NEGATE THE ABILITY TO APPLY FOR TAX CREDITS AND ABATEMENTS.

# SCHEME 3 - FULL SCALE DEVELOPMENT

(PRECEDENTS AND POSSIBLE SUB-DIVISION LOCATIONS)



POSSIBLE SUB-DIVISION OF PROPERTY DEVELOPMENT SHOWN WITH DASHED LINES, TYPICAL. (MAY REQUIRE ADDITIONAL FIRE WALLS, UTILITY CONNECTIONS, STAIRS AND ELEVATORS, AND/OR ACCESS POINTS.)



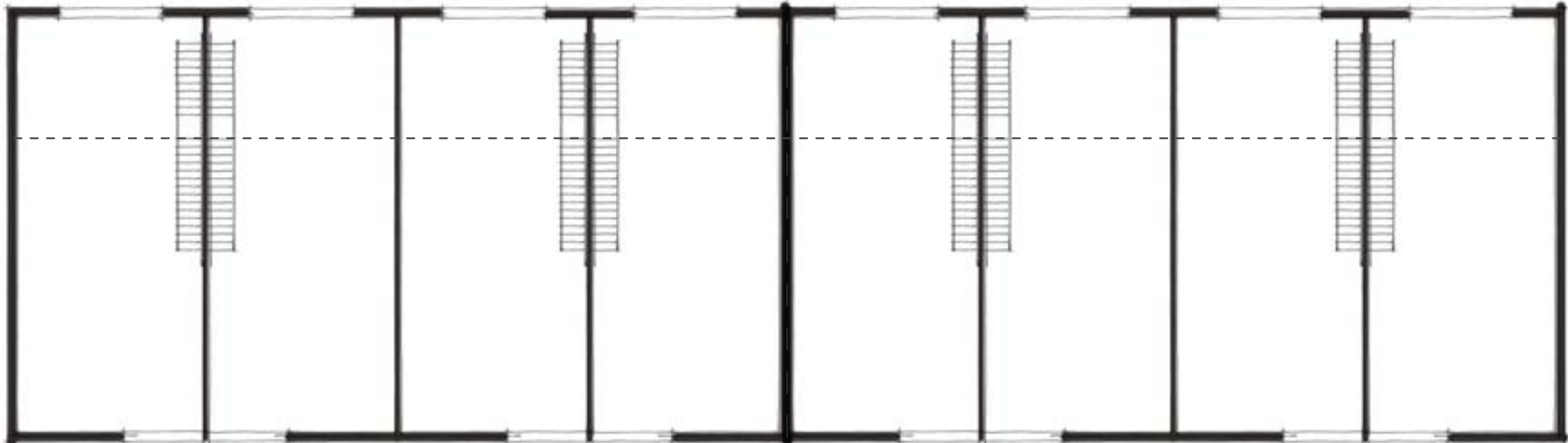
# SCHEME 3 - FULL SCALE DEVELOPMENT

LIVE-WORK SPACES  
BUILDINGS D&E



LOFT PLAN - L2 BLDG D

LOFT PLAN - L2 BLDG E



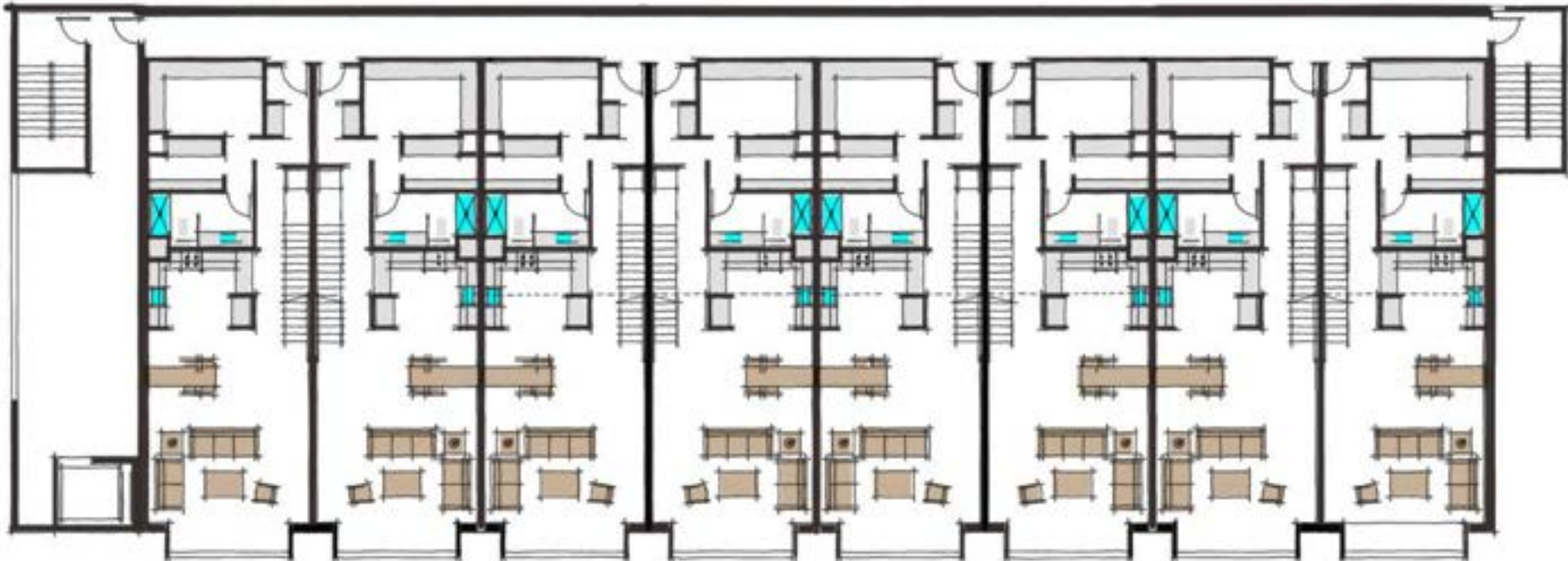
MAKER SPACE PLAN - L1 BLDG D

MAKER SPACE PLAN - L1 BLDG E

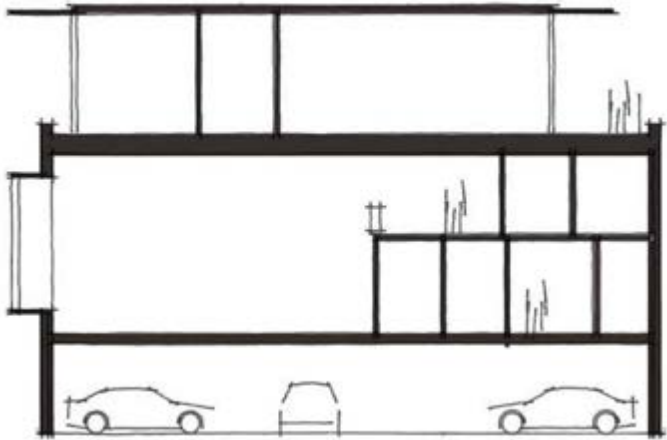
# SCHEME 3 - FULL SCALE DEVELOPMENT

APARTMENTS &  
PENTHOUSES

BUILDING F

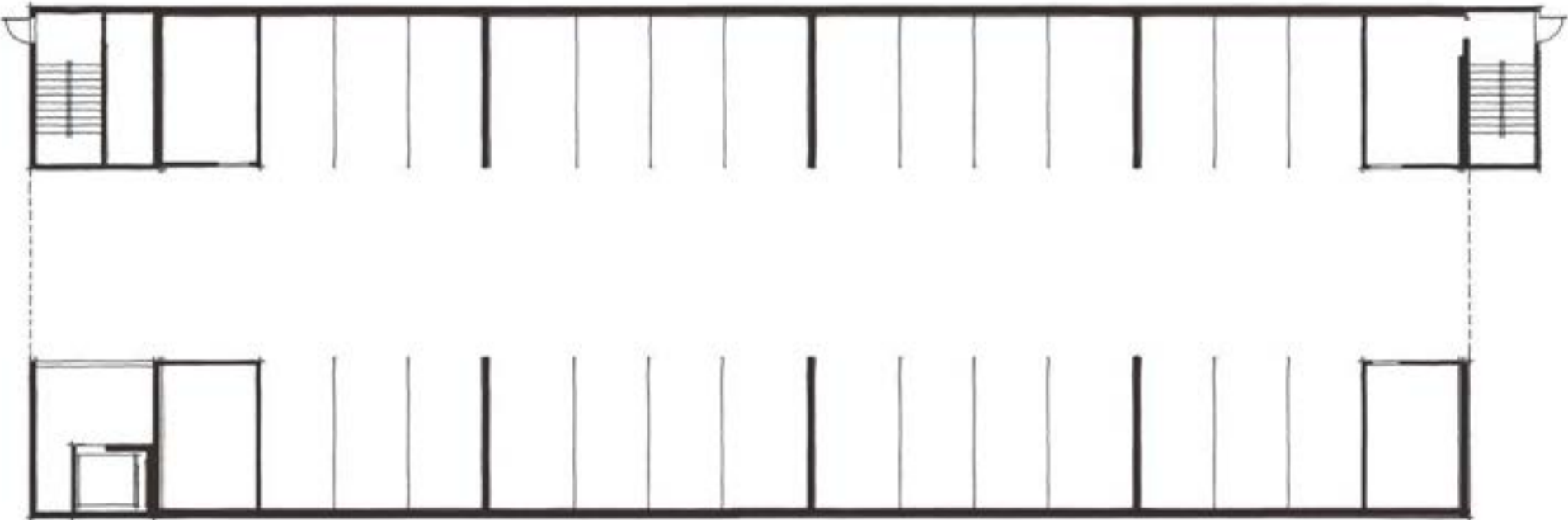


APARTMENT PLAN - L2 BLDG F



PENTHOUSE  
MEZZANINE  
APARTMENT  
PARKING

SECTION - BLDG F



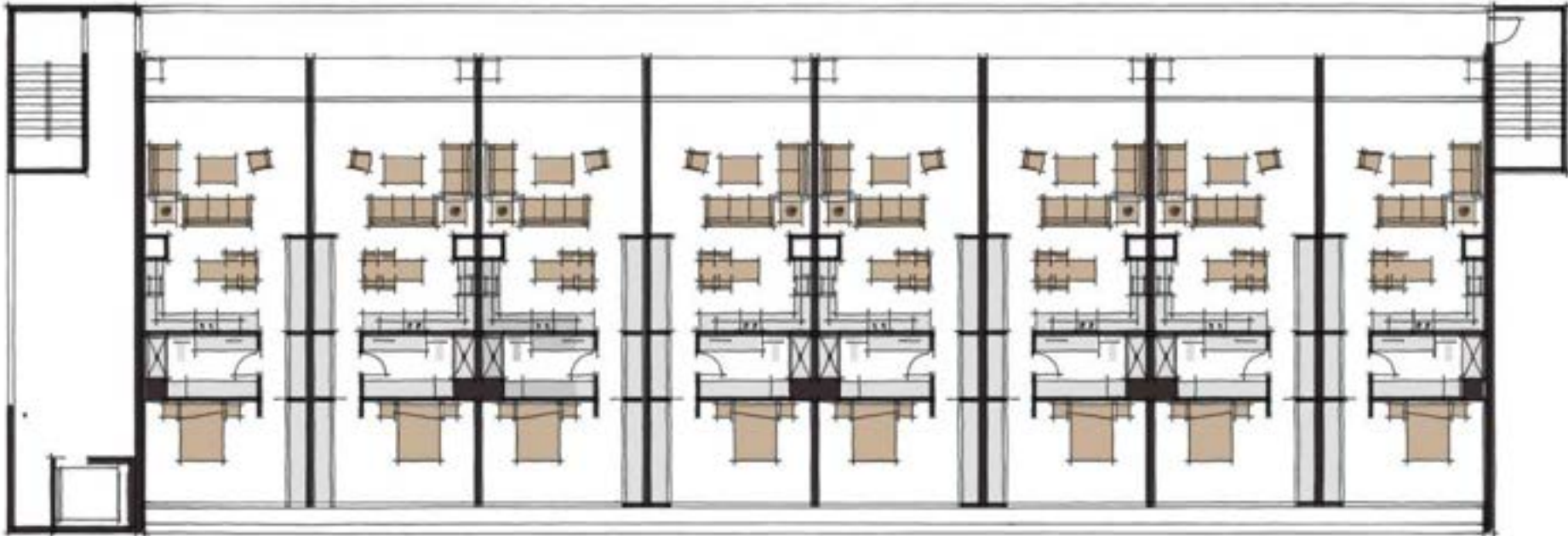
PARKING PLAN - L1 BLDG F



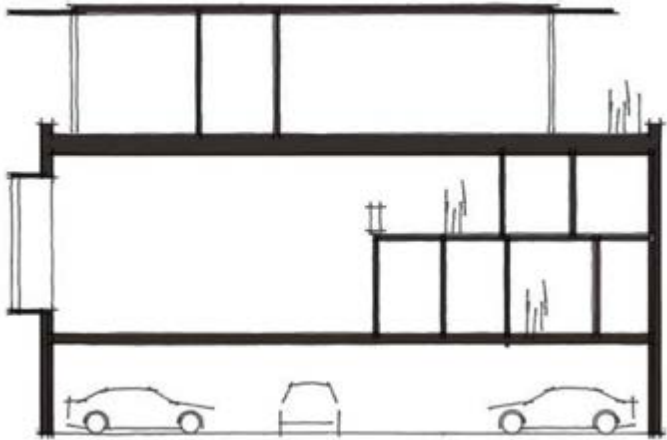
# SCHEME 3 - FULL SCALE DEVELOPMENT

APARTMENTS &  
PENTHOUSES

BUILDING F



PENTHOUSE PLAN - L4 BLDG F



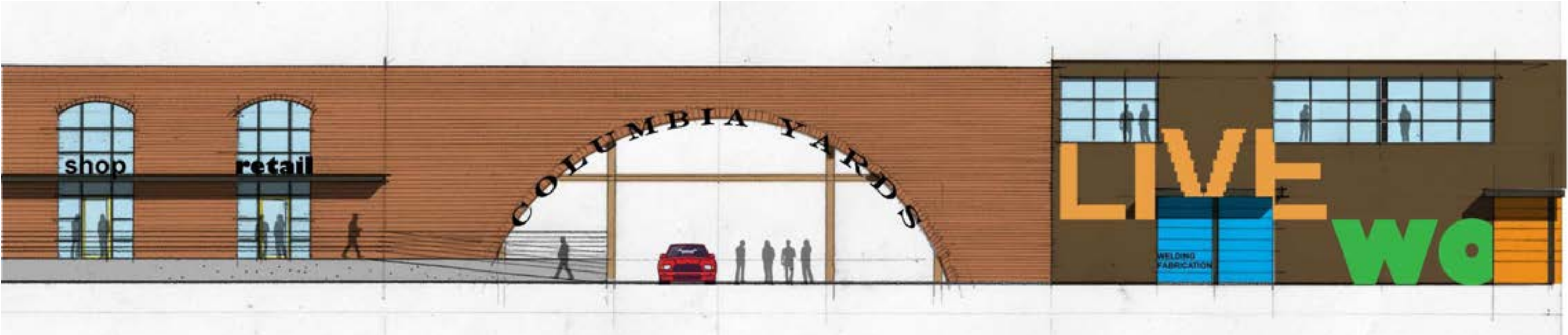
PENTHOUSE  
MEZZANINE  
APARTMENT  
PARKING

SECTION - BLDG F



MEZZANINE PLAN - L3 BLDG F

SCHEME 3



COLUMBIA ST ELEVATION - BLDG B, C, & D



SECTION - BLDG B, C, & D

SCHEME 3 - PERSPECTIVE SKETCH



# SCHEME 3 - FULL SCALE DEVELOPMENT

SCHEME 3 - PROGRAM SPACES																	
BUILDING	STORAGE AND WAREHOUSE			MAKER SPACE AND LIGHT INDUSTRIAL			RETAIL AND FOOD + BEVERAGE			ENTERTAINMENT			RESIDENTIAL			BUILDING TOTALS (GSF)	BUILDING TOTALS (NSF) <sup>1</sup>
	GROSS (GSF) <sup>2</sup>	EFFICIENCY FACTOR	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	EFFICIENCY FACTOR	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	EFFICIENCY FACTOR	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	EFFICIENCY FACTOR	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>	GROSS (GSF) <sup>2</sup>	EFFICIENCY FACTOR	APPROXIMATE LEASABLE AREA (NSF) <sup>1</sup>		
A <sup>3</sup>	0 x 90% =		0	0 x 90% =		0	8,770 x 95% =		8,332	0 x 90% =		0	0 x 80% =		0	8,770	8,332
B <sup>4</sup>	4,017 x 90% =		3,615	7,784 x 90% =		7,005	7,723 x 90% =		6,951	0 x 90% =		0	0 x 80% =		0	19,524	17,571
C <sup>5</sup>	1,360 x 90% =		1,224	0 x 90% =		0	1,419 x 90% =		1,277	0 x 90% =		0	0 x 80% =		0	2,779	2,501
D <sup>7</sup>	0 x 90% =		0	4,269 x 95% =		4,056	0 x 90% =		0	0 x 90% =		0	5,550 x 95% =		5,272	9,819	9,328
E <sup>7</sup>	0 x 90% =		0	4,240 x 95% =		4,028	0 x 90% =		0	0 x 90% =		0	5,512 x 95% =		5,236	9,752	9,264
F	0 x 90% =		0	0 x 90% =		0	0 x 90% =		0	0 x 90% =		0	27,550 x 80% =		22,040	27,550	22,040
TOTAL SITE	<b>5,376</b>		<b>4,839</b>	<b>16,293</b>		<b>15,089</b>	<b>17,912</b>		<b>16,560</b>	<b>0</b>		<b>0</b>	<b>38,611</b>		<b>32,548</b>	<b>78,193</b>	<b>69,036</b>

## COMMON SITE ELEMENTS

AUTO PARKING COUNT:	50 SPACES	
TRUCK PARKING COUNT:	0 SPACES	
STRUCTURED PARKING:	28 SPACES	8477 GSF <sup>6</sup>

### NOTES:

- 1 Leasable areas are approximate calculations provided for conceptual design purposes only. The areas are based upon typical previous program to area relationships ("efficiency factors") and will change as specific designs are developed.
- 2 Gross areas are based upon approximate total construction areas for each program type. For this analysis, area shared between program types (eg: common utility rooms and vertical circulation) is split equally between all program types in a given building.
- 3 Building A existing brew-pub use is calculated as food + beverage for the purpose of this analysis. Current analysis does not include second floor in all schemes.
- 4 Building B basement calculated as 25% retail, 25% maker space, and 50% storage.
- 5 Building C consists of retail area on main level and storage on basement level. Construction includes infill of 2/3 of basement level, removal of entire second level, and outdoor space within existing shell consisting of 2,838 SF in addition to program areas indicated above.
- 6 Structured parking area indicated here is excluded from overall site and building area totals above.
- 7 Building D & E "maker space" represents the ground level of "Live-Work" units, and could be maker spaces, professional offices, retail, etc.

# Columbia Street Properties Adaptive Reuse Study

**ECON**Northwest

ECONOMICS • FINANCE • PLANNING

# Purpose of Preliminary Financial Testing

- Test financial performance of schemes to better understand the real estate (not to make Go-No Go decisions)
  - Understand nature of cost
  - Tenant and revenue potential
  - Net income
- Who's financial performance?
  - Local Developer (assuming modest returns)
  - This is done to understand the “private market” performance of the scheme under current conditions (not the Port as Master Developer)
- Contemplate future planning implications in Phase 3
  - Programming and specific costs
  - Own vs sale options
  - Master developer or partnership arrangements
  - Timing and phasing implications

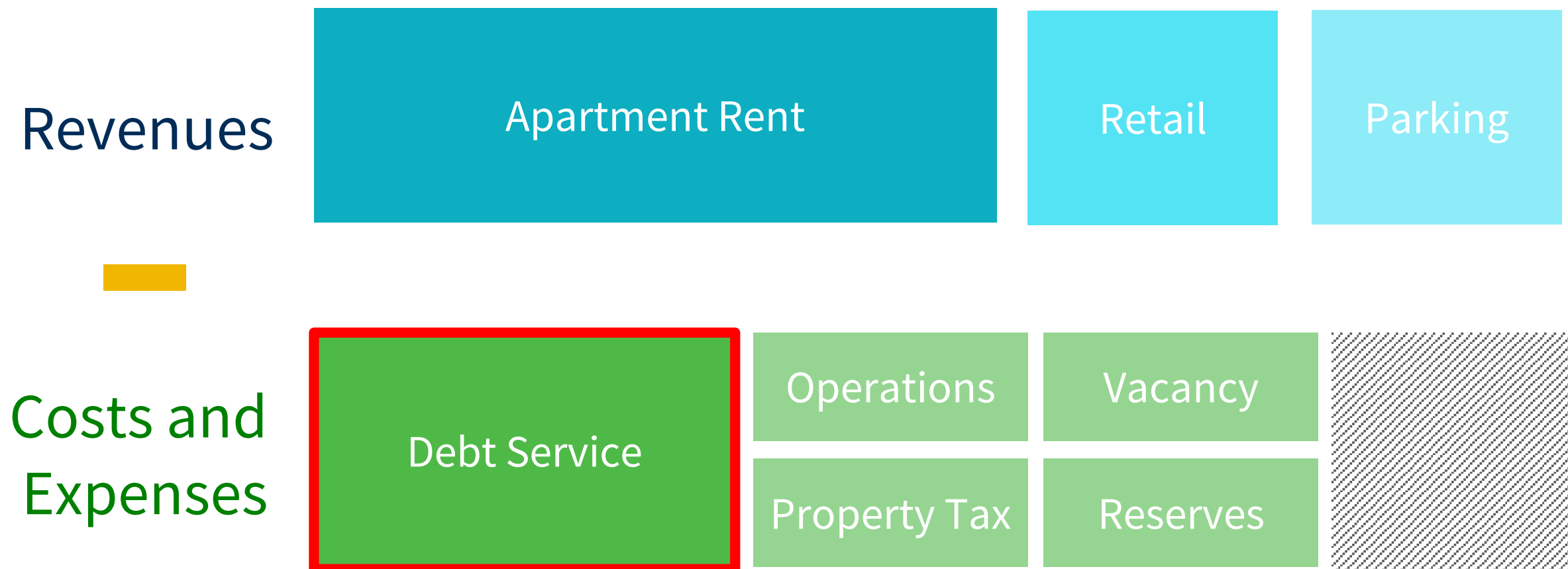
# Feasibility Metric - Debt Service Coverage Ratio (DSCR)

Debt Service Coverage Ratio (DSCR):

- Expressed as a ratio between revenues and debt service costs
- Used in financial loan underwriting

Examples:

- <1 – Project can't pay loan
- 1 - Break even
- 1.15 to 1.25 – typical underwriting requirements



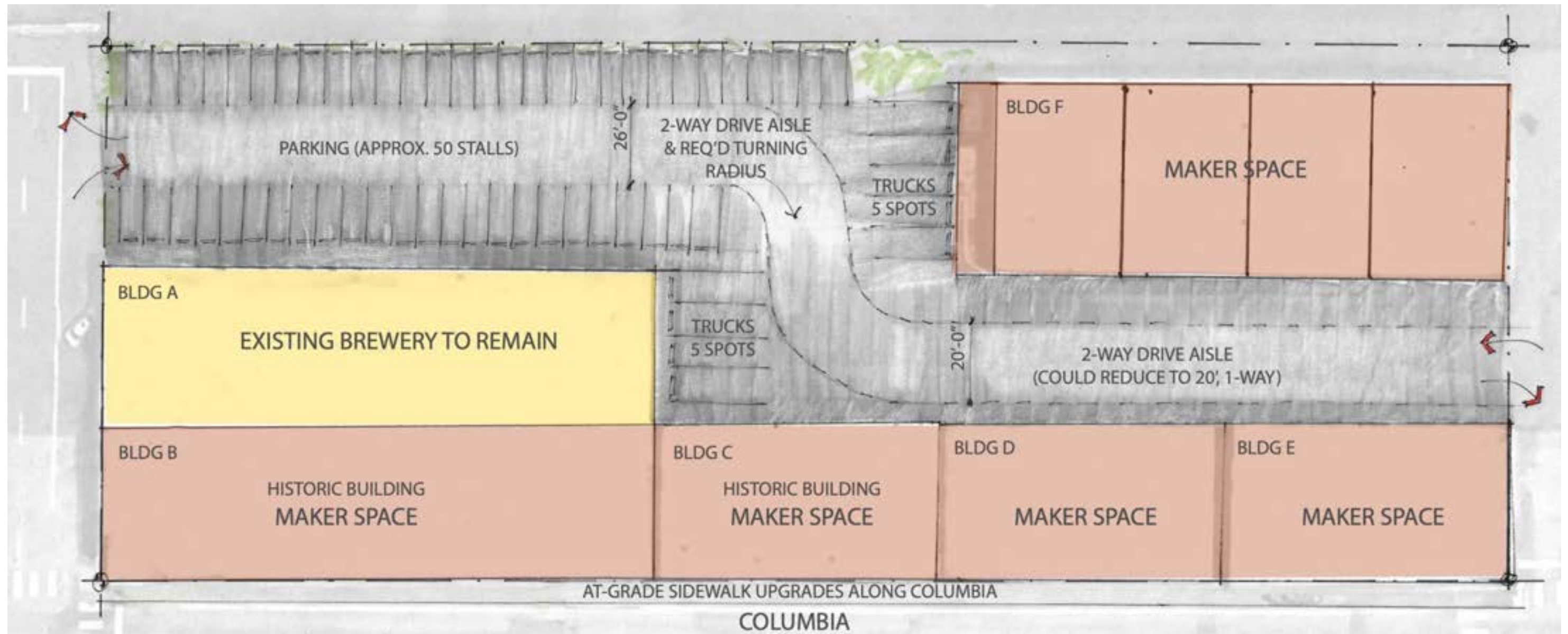
# Financial Analysis Approach

- Evaluate schemes on a per building per use basis
- Specific development costs and revenues are applied to both building and uses
- Differentiate costs (and revenues where appropriate) by type:
  - Architecture/Engineering
  - Infrastructure/Site prep
  - Parking/Landscaping
  - Unfinished spaces
  - Finished spaces
- Revenues and costs evaluated for financial performance measures

SCHEME 3						
Site Information						
Soft Cost		20%				
Contingency		5%				
Developer Fee		5%				
Tax abatement term (years)		10				
Present value of abatement		70%				
Loan interest		5%				
Loan term		30				
Number of payments per year		12				
LTC		100%				
Total Hard Cost						
	Storage and Warehouse	Maker Space and Light Insutrial	Retail and Food + Beverage	Entertainment	Residential	Parking
Land Cost	\$0	\$0	\$0	\$0	\$0	\$0
Hard Cost	\$645,177	\$3,071,078	\$4,244,937	\$0	\$8,628,489	\$1,370,000
HP Hard Cost Reduction	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Hard Cost</b>	<b>\$645,177</b>	<b>\$3,071,078</b>	<b>\$4,244,937</b>	<b>\$0</b>	<b>\$8,628,489</b>	<b>\$1,370,000</b>
Soft Cost	\$129,035	\$614,216	\$848,987	\$0	\$1,725,698	\$274,000
HP Soft Cost Reduction	-\$25,807	-\$58,688	-\$86,663	\$0	\$0	\$0
<b>Total Soft Cost</b>	<b>\$103,228</b>	<b>\$555,528</b>	<b>\$762,324</b>	<b>\$0</b>	<b>\$1,725,698</b>	<b>\$274,000</b>
Contingency	\$37,420	\$181,330	\$250,363	\$0	\$517,709	\$82,200
Developer Fee	\$39,291	\$190,397	\$262,881	\$0	\$543,595	\$86,310
HP Tax abatement	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Development Cost</b>	<b>\$825,116</b>	<b>\$3,998,333</b>	<b>\$5,520,505</b>	<b>\$0</b>	<b>\$11,415,492</b>	<b>\$1,812,510</b>
Infrastructure cost	\$510,000					
Total Revenue						
	Storage and Warehouse	Maker Space and Light Insutrial	Retail and Food + Beverage	Entertainment	Residential	Parking
Rent per year	\$65,324	\$279,147	\$438,827	\$0	\$911,352	\$0
Property taxes per year	\$7,349	\$39,081	\$65,824	\$0	\$118,476	\$0
Op Ex per year	\$2,450	\$16,749	\$43,883	\$0	\$63,795	\$0
Annual NOI	\$55,526	\$223,317	\$329,120	\$0	\$729,082	\$0
Annual abated property taxes	\$0	\$0	\$0	\$0	\$0	\$0
Annual payment	\$53,153	\$257,567	\$355,623	\$0	\$735,370	\$116,759
DSCR	1.045	0.867	0.925	#DIV/0!	0.991	0.000
Financial Return assumptions						
Subtotal Dev Cost for Scheme	\$24,081,956					
Subsidy	\$7,500,000					
Total Dev Cost for Scheme	\$16,581,956					
Total Debt	\$16,581,956					
Annual Payment	\$1,068,186					
Total Annual NOI for Scheme	\$1,337,045					
<b>Debt Service Coverage Ratio</b>	<b>1.252</b>					



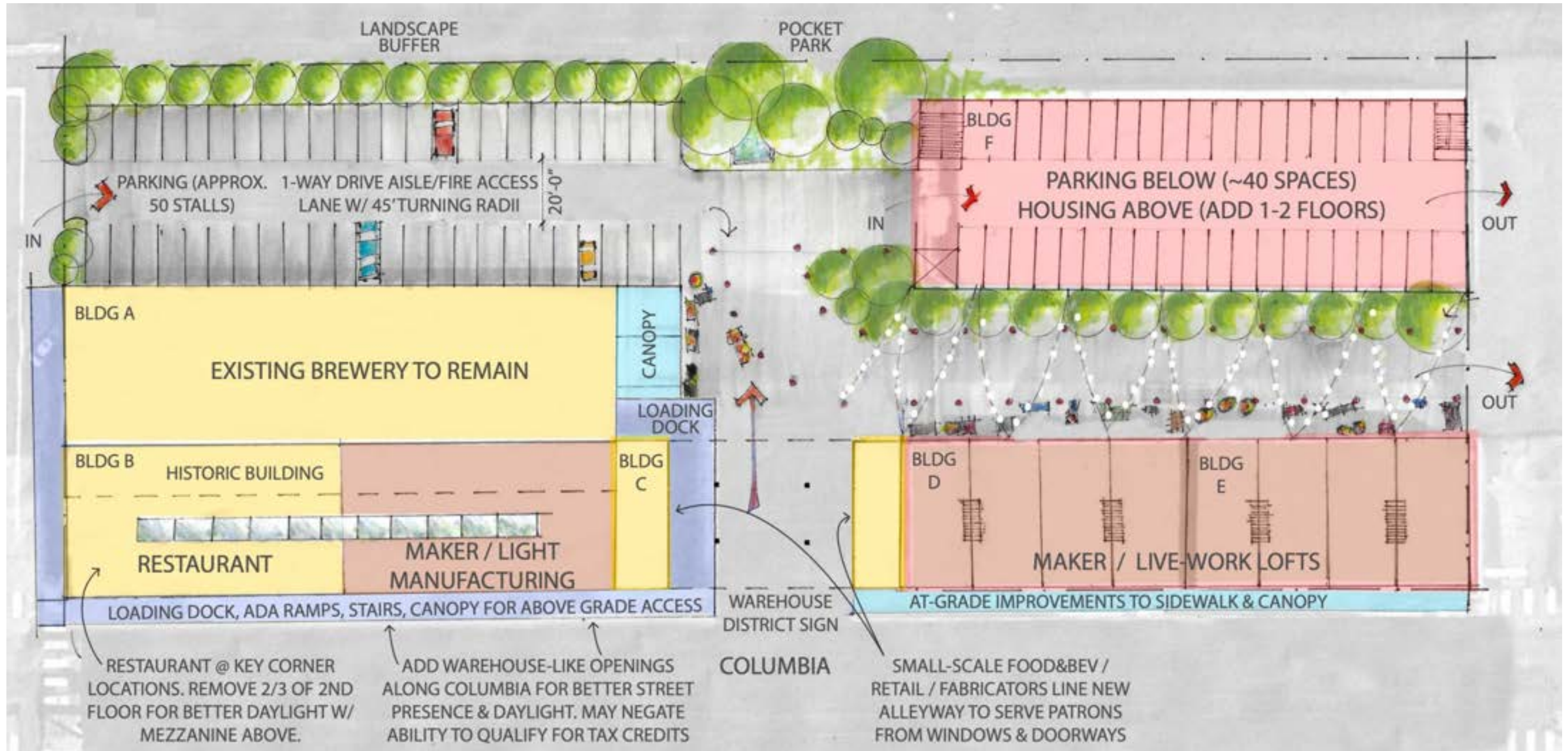
# Scheme 1 - Risk Reducing



# Scheme 2 - Medium Level Development



# Scheme 3 - Full Scale Development



# Assumptions

	<b>Assumed Costs</b>	<b>Assumed Rents</b>	<b>Infrastructure Improvements</b>	<b>Incentives</b>
Scheme 1	Low-end of range	Current market rents (top end of range)	Limited, no landscaping	Historic preservation
Scheme 2	Low to middle end of range	Higher than market (20-40%)	Greater improvements with landscaping	Historic preservation
Scheme 3	Middle portion of range	Higher than market (40-60%)	Greater improvements with landscaping	None

- Current development costs include planning level estimates informed by the cost estimator
- Phase 3 will provide more detail to allow a cost estimator to fully price the project

# Results for all Schemes

	Total Dev. Costs per sf of Building	Total Dev. Cost	Capitalized Value	Baseline DSCR
Scheme 1	\$155	\$10M	\$9.2-\$10.9M	0.93
Scheme 2	\$225	\$12.4M	\$12.0 -\$14.4M	0.90
Scheme 3	\$295	\$24M	\$24.3M-\$29.7M	0.86

- Current schemes do not have positive net income
- Some schemes are closer to target thresholds than others
  - Scheme 1 – low construction costs
  - Scheme 2– higher rents
  - Scheme 3 – higher rents and higher construction costs
- Mix of uses is likely needed to achieve overall site feasibility.
  - No single use performs well by itself (balanced variance by uses).

# Level of Investment Needed for Loan

	Target of 1.15 DSCR		Target of 1.25 DSCR	
	Gap Funding	% of Hard Costs	Gap Funding	% of Hard Costs
Scheme 1	\$2,000,000	26%	\$2,500,000	32%
Scheme 2	\$2,750,000	28%	\$3,500,000	36%
Scheme 3	\$6,000,000	32%	\$7,500,000	41%

## How to close the "gap"

- Revise scheme program/timing maximize financial performance
- Financial investment. Example investments may include: infrastructure, site prep, shared parking, low-cost financing, philanthropic contributions, etc.

- No scheme is feasible in by the private market
- Each scheme will require different levels of gap funding
- The higher the investment will likely yield the greatest community benefit in the long run

# Planning Implications

	Near-Term (5-years)			Long-Term (10-15 years)		
	Investment Needed	Opportunities	Benefits	Investment Needed	Opportunities	Benefits
Scheme 1	Low	Historic preservation	Mix of jobs	N/A	N/A	N/A
Scheme 2	Medium	Historic preservation, lease up spaces and sell property	Mix of jobs and a downtown destination	Medium	Historic preservation, potential for phased development or partial sell off/partnership	Mix of jobs and a downtown destination
Scheme 3	High	Lease up spaces and sell property	Job creation, market-making identity and a downtown destination	High	Potential for phased development or partial sell off/partnership	Job creation, market-making identity and a downtown destination



# Planning Implications


	Port as Land Owner/Developer			Phase 3 Planning Implication
	Description	Pros	Cons	
<b>Surplus</b>	<ul style="list-style-type: none"> <li>Dispose/surplus the property as is (either whole or in pieces)</li> </ul>	<ul style="list-style-type: none"> <li>Recoup capital investments for other opportunities</li> </ul>	<ul style="list-style-type: none"> <li>Low opportunity cost (not crowding out private investment)</li> <li>Property has rehabilitation issue</li> <li>Uncertain community and economic development benefits</li> </ul>	<ul style="list-style-type: none"> <li>Determine which assets to hold.</li> </ul>
<b>Hold and Maintain</b>	<ul style="list-style-type: none"> <li>Hold the property</li> <li>Make small incremental improvements to meet revenue opportunities (not sacrificing long-term option value)</li> </ul>	<ul style="list-style-type: none"> <li>Maintain Port control of the assemblage</li> <li>Moderate appreciation potential</li> <li>Control of future community and economic development benefits.</li> </ul>	<ul style="list-style-type: none"> <li>Opportunity cost of holding the property.</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate buildings for immediate lease</li> <li>Evaluate for community and economic development benefits</li> </ul>
<b>Develop (Phase 3 work)</b>	<ul style="list-style-type: none"> <li>Balance between holding portions of the site and developing the site</li> <li>Seek anchor tenants where appropriate/needed</li> </ul>	<ul style="list-style-type: none"> <li>Maintain Port control of the assemblage</li> <li>Seek development partners</li> <li>Stronger appreciation potential</li> <li>Stronger control of community and economic development benefits</li> </ul>	<ul style="list-style-type: none"> <li>Opportunity cost of holding the property</li> <li>Opportunity cost of development capital</li> </ul>	<ul style="list-style-type: none"> <li>Revise scheme to maximize financial and economic development potential</li> <li>Evaluate scheme for phasing and partnership implications</li> </ul>



Interplay between options



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