



PLANNING COMMISSION

TO: Chair Ledell and Planning Commission

FROM: Chad Eiken, Director, Community Development; Bryan Snodgrass, Principal Planner, Community Development

SUBJECT: **Proposed Use and Development Standards for Warehouse and Freight Movement Uses**

Report Date: 10/13/2023
Hearing Date: 10/24/2023
Proposal: Updates to VMC Title 20, Land Use and Development Code, Regarding the regulation of Warehouse and Freight Movement Uses
Location: Heavy Industrial and Light Industrial Districts
Proponent: Community Development Department
City Staff: Chad Eiken, CDD Director; Bryan Snodgrass, Principal Planner
Recommendation: Forward to City Council a recommendation for adoption of the proposed code changes to VMC Title 20, with amendments as discussed in the report

I. PRIOR COMMISSION REVIEW:

The Planning Commission has held two public workshops on the proposed code changes: July 25, 2023 and September 12, 2023. At the September 12 workshop, the Commission indicated that the draft code amendments should be scheduled for a public hearing.

II. BACKGROUND AND REVIEW PROCESS:

Moratorium

Late in 2022, city planning staff noticed a trend of very large (as large as 600,000 square feet) warehouses being submitted for development approvals. At the time, there were as many as eight warehouses larger than 100,000 square feet being proposed or under construction, with a cumulative building area of 3.34 million square feet, the equivalent of 58 football fields. Other cities were (and are) experiencing a similar surge in large warehouse projects, and staff was hearing reports of mega-warehouses elsewhere, such as a 2.5 million square foot warehouse in Tacoma.

These extremely large facilities appear to be a growing trend nationally in response to the increasing demand for online retail shopping and parcel delivery as well as supply chain logistics issues, and consume significant swaths of limited industrial land with typically lower jobs per acre ratio than many other industrial uses.

Staff became concerned that if the trend continued, limited industrial lands would be consumed by low-wage, low jobs per acre uses that could otherwise be developed for higher wage skilled manufacturing or research and development jobs. Additional concerns with large warehouses that were identified by staff included an increase in truck traffic and pollution, energy consumption/climate impacts from such large building footprints, visual impacts, and limited potential for adaptive re-use of such structures if in the future they are no longer needed for storage of goods.

In December of 2022, planning and economic development staff took their concerns to City Council and recommended that an emergency six-month moratorium be adopted to prevent the submission of any new pre-applications or land use applications for warehouses larger than 100,000 square feet to allow staff time to study these new types of warehouses and understand the physical, operational, and economic differences from traditional wholesale warehouses - as well as key differences in impacts - to inform possible new use and development standards. Because state law only allows land use moratoriums for six months at a time, staff indicated that one six-month extension would be needed to ensure sufficient time to complete needed analysis, public engagement, and development of code amendments.

On December 12 following an executive session, City Council at their regular meeting adopted an emergency ordinance on new large warehouse applications, and the emergency ordinance was affirmed by City Council following a public hearing as required by state law, on January 23, 2023. Three amendments to the initial moratorium ordinance were requested by City Council, which were adopted by ordinance on February 6, 2023, including: 1) an exemption from the moratorium for the Port of Vancouver; 2) increase in the size of warehouses subject to the moratorium from 100,000 square feet to 250,000 square feet and larger; and 3) an exemption from the moratorium for any storage for a publicly-traded product, if formalized through a development agreement.

On June 5, 2023, following a public hearing, City Council approved a six-month extension of the moratorium but also encouraged staff to propose any code amendments as soon as possible so the moratorium may be terminated sooner. The moratorium will end on December 6, 2023 unless code amendments are adopted sooner. Staff's work plan anticipates taking a set of code amendments to City Council for their approval in early October.

Local and National Context: Increase in Need for Warehouse and Distribution Facilities

Warehousing, broadly described as the storage of bulk inventory in large facilities, has undergone substantial evolution, from the introduction of forklifts and pallets in the 1920's to automation and cloud computing today. As a result of advances in technology and proliferation of trucking, warehouses are a critical intermediate step between the supplier and consumer. Additionally, trends like e-commerce and online shopping, near-shoring and reshoring of manufacturing have increased global demand for industrial warehousing, resulting in unprecedented warehouse development in recent years.¹ Changes in shopping behavior during the global pandemic have created further demand for warehouse space.

Nationally, warehouse capacity is reportedly at a premium, with almost 96 percent of existing warehouse space in use. E-commerce, with its direct shipments to consumers, represents a fundamental shift in warehouse logistics. CBRE estimates that the U.S. alone needs 330 million

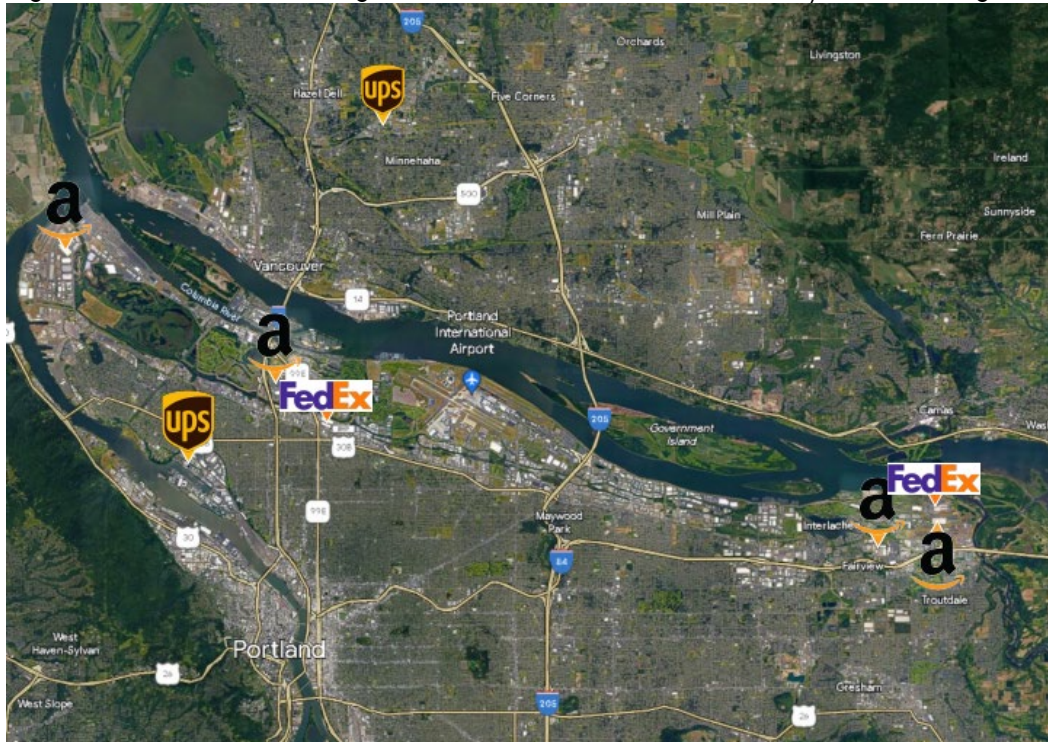
¹Fehr & Peers, 'Traditional Warehouse Developments vs. Modern E-commerce Facilities,' 2023

²"The Warehouse Space Race," www.Prospect.org

square feet of additional warehouse space to meet e-commerce demand into 2025; to meet total demand, another firm, JLL, put that number at one billion square feet.² CBRE further indicates that every \$1 billion in new e-commerce sales requires one million square feet of new warehouse space.

In addition to these national trends, one reason for the surge locally in large warehouses is, aside from a single UPS facility, there is no warehouse/distribution facility in Clark County that specifically stores and repackages individual goods intended for direct delivery to residential or business customers. Home deliveries of goods from Amazon and FedEx to Clark County, for example, originate from the Portland side of the river. (See Figure 1)

Figure 1: Location of Existing Distribution Facilities in Vancouver/Portland Region

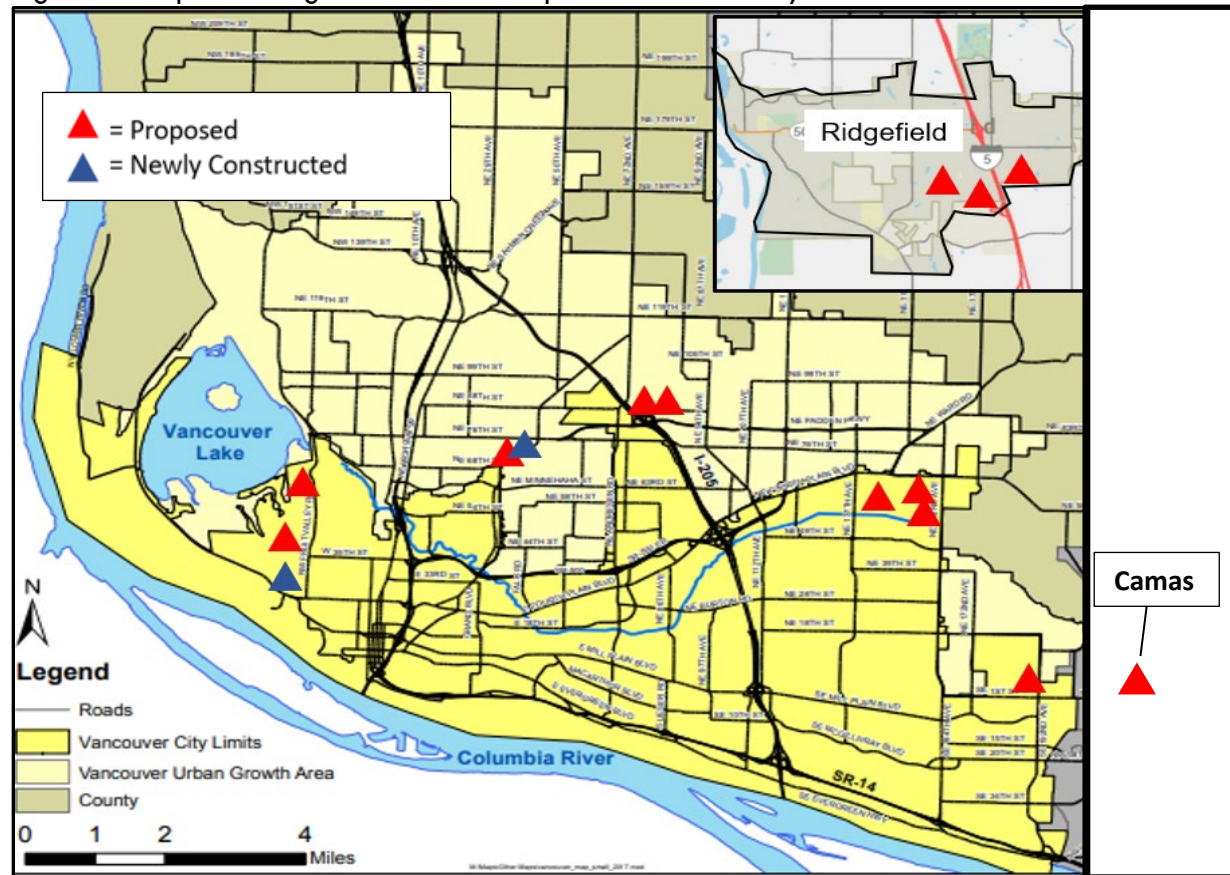


As documented in a [Columbian article](#) last year, there has been a surge of significant recent development of large scale warehouses and distribution centers in Vancouver and elsewhere in Clark County. Planning staff gathered data from Clark County, Ridgefield, Camas, and Vancouver, all of which have one or more large (>250,000 sf) warehouses in their development review process or under construction. While initially staff identified eight warehouse pre-applications or applications of concern in Vancouver alone, this was subsequently reduced to five active projects as one that was under construction was completed, one was only 80,000 square feet, and a third required a comprehensive plan amendment and zone change and was therefore not vested to existing use and development standards. The five warehouses, which are vested to current use and development standards, total 2.8 million square feet and will utilize 156 acres of industrial land. (See Figures 2 and 3)

Figure 2: Current Large Warehouse Applications in Vancouver

Project Name	Location	Owner/Applicant	Building SF	Acres
Prologis Park	Tax lot 152382000 (Fruit Valley)	Wellons Group	560,000	30.22
Harmon Logistics Center	NW corner of SE 1 st /192 nd Ave	DIRG LLC	450,000	24.2
Bridge Development	5500 NE 162 nd Avenue	Bridge Dvpmnt Partners LLC	640,000	36.45
Burnt Bridge Creek Logistics	5920 NE 162 nd Avenue	Defenbaugh LLC	681,000	38.48
Fruit Valley Logistics	6112 NW Fruit Valley Road	Wilson Oil	365,000	26.74
TOTAL / AVG			2,776,000	156

Figure 3: Proposed Large Warehouse Projects in Clark County



Analysis of Warehouse Characteristics

E-commerce is, relatively speaking, a newer sector of the global economy, and detailed studies of how warehouses and associated operations may impact communities (either positively or negatively) are fairly limited. City consultants Fehr and Peers and GLD Partners prepared an analysis of the above characteristics from available data and specific projects to help decision-makers understand the differences between traditional business-to-business warehouses and larger warehouses intended for e-commerce shipping.

Key differences between the two types of warehouses are outlined in the consultant's report (See also Exhibit E), as follows:

Various types of warehouse support retail, commercial, and industrial supply chains. Virtually all industries rely directly or indirectly on warehousing services. Directly related to e-commerce, distribution and fulfillment centers typically provide value-added logistics services, allowing operators to efficiently meet varying customer demands and streamlining supply chains. These facilities differ from traditional warehouses from a physical, operational, and economic standpoint.

1. Key Physical Differences

Physical characteristics of warehouses include warehousing design (building size, lot coverage, loading bays, and parking spaces) and siting. Key physical differences that distinguish e-commerce facilities from traditional warehouses include:

- *More varied building sizes/footprints.* While traditional warehouses are typically less than 100,000 square feet, e-commerce facilities range from about 100,000 square feet to over 1 million square feet.
- *E-commerce warehouses tend to be taller.* Building clear height, defined as the height of a building from the floor to the bottom of the lowest hanging item on the ceiling, is typically less than 32 feet for traditional warehouses, but often greater than 36 feet for e-commerce facilities.
- *More loading dock doors.* Operations at e-commerce facilities require more loading docks.
- *Different siting locations.* Traditional warehouses are typically situated close to other industrial uses, whereas e-commerce facilities tend to be proposed near population centers and ports.

2. Key Operational Differences

Recent technological improvements have resulted in increasingly efficient use of warehouse space and consolidation of facilities. Modern warehouses operate differently than traditional warehouses, particularly regarding hours of operation and the flow of goods:

- *24-7 operations.* Typical hours of operation for e-commerce facilities span 24 hours a day, seven days per week. The non-stop activity in modern warehouses is made possible by shift workers and automation. In contrast, traditional warehouses with slower inventory turnover are typically limited to normal business hours, i.e., 8-hour shifts, five days per week.
- *More constant flow of goods.* E-commerce facilities typically focus less on long-term storage and more on the flow of goods and services. Modern industrial

warehouse facilities are often driven by demand, compared to traditional warehouses, where operations are related to storing the largest amount of goods possible.

3. *Traffic Impacts*

Warehouses generate some level of traffic (passenger cars and trucks), but this varies significantly based on the operations of the facilities. In addition, the type of trucks (medium- vs. heavy-duty trucks⁴) also varies. Traffic impacts differ between e-commerce and traditional warehouses in the following ways:

- *Much higher vehicle activity.* Based on data from the Institute of Transportation Engineers (ITE) Trip Generation Manual, e-commerce facilities generate up to four times more daily vehicle trips than traditional warehouses, particularly for fulfillment centers that require extensive sorting.
- *Traffic occurs at all hours of the day.* The fact that most e-commerce facilities involve round-the-clock operations (versus more 8-hour day operations for traditional warehouses), means that traffic often occurs during off-peak times of the day and night.
- *Smaller delivery vehicles are more common.* Whereas traditional warehouses generate mostly medium-duty and heavy-duty truck trips, light-duty trucks and vans play a substantial role in the transport of goods from today's e-commerce facilities.

4. *Key Economic Differences*

Industrial warehouses generate jobs and tax revenue (property, sales and use, and utility taxes). Warehousing jobs provide two important community benefits: 1) pay rates that start above minimum wage, and 2) on-the-job-training for career advancement. Warehouses also generate indirect jobs⁵ that benefit local and regional economies. Regionally, the U.S. Bureau of Economic Analysis (BEA) estimates that 10 new warehouse jobs create about 14 jobs in other industries.⁶ For every \$1.00 of earnings paid to the new warehouse workers, an additional \$1.50 in earnings is generated throughout the economy. Key distinctions in the economic impact of e-commerce versus traditional warehouses include:

- *Higher-skilled labor.* While traditional warehouses rely on unskilled labor and managerial jobs, highly automated e-commerce facilities offer high-paying jobs such as automation engineers with average salaries over \$100,000 annually. With companies such as Amazon investing more in warehouse automation and on-the-job training for skilled labor, observers of these trends indicate that the presence of these high-paying jobs is likely to grow.
- *More ripple effects on the local economy.* Based on building size/footprint and warehouse jobs created, e-commerce facilities typically entail more local and

regional economic impacts (tax revenue, indirect jobs, and new dollars circulating in the economy) than traditional warehouses.

Key Takeaways

From a physical, operational, and economic standpoint, there are pronounced differences between traditional warehouses and e-commerce facilities. With the evolving warehousing industry and a market need for e-commerce facilities in Vancouver, the City may benefit from new warehouse developments targeted to store and repackage e-commerce goods intended for various purposes, including retail home delivery. The development of e-commerce facilities will support the growth of the local economy in Vancouver through job creation and tax revenue. Regulatory amendments are needed to ensure that any new development supports the City's economic growth, has adequate transportation infrastructure, and aligns with climate and equity goals and priorities.

For the full analysis, see Fehr and Peer's report, entitled "*Traditional Warehouse Developments vs. Modern E-commerce Facilities*," dated revised July 2023, which is attached as Exhibit E.

Proposed Amendments to VMC Title 20

Over the past ten months, staff has consulted with warehouse industry experts and engaged in a series of meetings with environmental advocates and business stakeholders including the Port of Vancouver and representatives from existing warehouse facilities, as well as the Planning Commission. Planning staff have tried where possible to incorporate input on specific code language to make the ordinance clearer and to balance the stated objectives of City Council with industry, neighborhood and environmental perspectives.

The draft code changes presented to Planning Commission for consideration will accomplish several key objectives which are in alignment with the intent of the moratorium and prior Council direction:

- Warehouses larger than 250,000 square feet in a single building would be prohibited in the IL, Light Industrial District which tend to be closer to residential districts. Such warehouses would however be allowed as a limited use in the IH, Heavy Industrial District (effectively only in the Port of Vancouver or Columbia Business Center due to parcel size constraints elsewhere) where they are more compatible with surrounding uses and further away from residential districts, and would need to meet certain proposed additional development requirements.
- The maximum lot coverage standard (e.g., the percent of land that may be occupied by a building) would be reduced from 100% to 75% for all warehouse/freight movement uses in recognition that because a portion of the site is needed for parking, truck loading and maneuvering, storm water detention, tree plantings, etc., it is not possible for buildings to occupy 100% of a given site;
- Warehouses larger than 250,000 square feet in the IH District would be subject to special development standards that: prohibit truck traffic along Fruit Valley Road, reduce the minimum parking requirement, reduce the maximum lot coverage, and require certain climate action measures such as: solar-ready roofs (weight load capacity and electrical), EV charging stations at 20% of parking spaces, truck dock charging conduit and wiring, white-colored roofs to reduce heat storage, skylights or clerestory windows to allow natural light, prohibit truck idling, architectural features (such as windows, darker colors, articulation of

façade, etc.), a 10% increase in tree plantings over other industrial uses (33 tree units per acre) and 25-foot wide treed buffer if adjacent to public streets to reduce visual impacts;

- The minimum required number of parking spaces for all warehouse and distribution facilities would be reduced from 1 space for every 2,000 square feet of building area to 1 space for every 5,000 square feet of building area, in recognition that warehouses are increasingly becoming more automated and may need less parking for employees. Reducing the amount of paved surfaces improves storm water and climate outcomes (less heat retention) and creates more space for tree plantings; and
- The proposed code changes have been drafted to be as simple and easy to follow as possible.

III. SUMMARY OF APPLICANT PROPOSAL:

(Note: Full text can be found in Exhibit B)

- A. Amend VMC 20.440.030-1 Industrial District Use Table to make Warehouse and Distribution Facilities larger than 250,000 square feet a prohibited use in the IL, Light Industrial District, but allow smaller warehouses as a limited use as per the current code; and
- B. Amend VMC 20.440.030-1 Industrial District Use Table to make Warehouse and Distribution Facilities larger than 250,000 square feet a limited use in the IH, Heavy Industrial District, with a footnote directing to additional development standards in a new section VMC 20.895.120; and
- C. Amend VMC 20.440.040-1 Industrial District Development Standards Table to lower the maximum lot coverage for warehouses larger than 250,000 square feet in the IH, Heavy Industrial District from 100% to 75%; and
- D. Amend VMC 20.895 Miscellaneous Special Use Standards to add a new section regarding special standards that apply to warehouses larger than 250,00 square feet. That: 1) prohibit large truck traffic from such uses along Fruit Valley Road, 2) require certain climate action measures such as: solar-ready roofs (weight load capacity and electrical), electrical vehicle and truck dock charging outlets, white-colored roofs to reduce heat retention, skylights or clerestory windows to allow natural light, and prohibit truck idling; and 3) require architectural features (such as windows, darker colors, articulation of façade, etc.) and a 25-foot deep treed buffer if adjacent to public streets to reduce visual impacts; and
- E. Amend VMC 20.945.070-2 Minimum Off-Street Vehicle Parking Requirements, Warehouse/Freight Movement Use, by deleting 1.0/2000 and replacing it with 1.0/5000.

IV. REVIEW CRITERIA AND FINDINGS:

A. VMC 20.285.090 Zoning Code Text Amendments

Approval criteria for Zoning Code text amendments

Proposed zoning or development regulation text changes shall be considered based on the following:

1. *The proposed change is consistent with the comprehensive plan; and*
2. *The proposed change is necessary to further the public interest based on present needs and conditions.*

B. Applicable Vancouver Comprehensive Plan Policies

EN-1 Environmental protection

Protect, sustain, and provide for healthy and diverse ecosystems

EN-2 Stewardship

Demonstrate and promote environmental stewardship and education

EN-3 Energy Conservation

Promote and facilitate energy conservation and alternative energy sources and generation

EN-5 Environmental coordination

Coordinate environmental policies and programs. Continue to consolidate environmental regulations

EN-8 Water quality and quantity

Enhance and protect surface water, stormwater, and groundwater quality from septic discharge, impervious surface runoff, improper waste disposal, and other potential contaminant sources.

EN-10 Air quality

Protect and enhance air quality, in coordination with local and regional agencies and organizations

EN-11 Hazard areas

Manage development in geologically hazardous areas and floodplains to protect public health and safety

C. SEPA Determination

Pursuant to the State Environmental Policy Act (SEPA) and WAC 197-11, the City of Vancouver as lead agency has determined that the proposed Warehouse and Freight Distribution Amendments will not have a probable significant adverse impact on the environment. A Determination of Nonsignificance (DNS) was published on September 22, 2023 in the Columbian with a 14-day comment period, which expires at 5 p.m. on October 6, 2023. Copies were emailed to state and local agencies, media representatives, concerned citizens whose names were on the master SEPA list, stakeholders and neighborhood associations. (See Exhibits C and D)

Procedural appeals to the SEPA determination shall be filed in writing within 14 calendar days following the last day of the comment period (October 20, 2023). Substantive SEPA appeals shall be filed in writing within 14 calendar days of the issuance of Council's decision. As of the writing of this report, no SEPA comments had been filed.

D. Staff Analysis and Findings

Equity Analysis

Currently, warehouses are permitted as limited uses in the IL, Light Industrial District with minimal development requirements, and are permitted outright in the IH, Heavy Industrial District. The draft code would prohibit new warehouses larger than 250,000 square feet in the IL, Light

Industrial District and would allow them as limited uses in the IH, Heavy Industrial District, with new development standards to mitigate identified impacts.

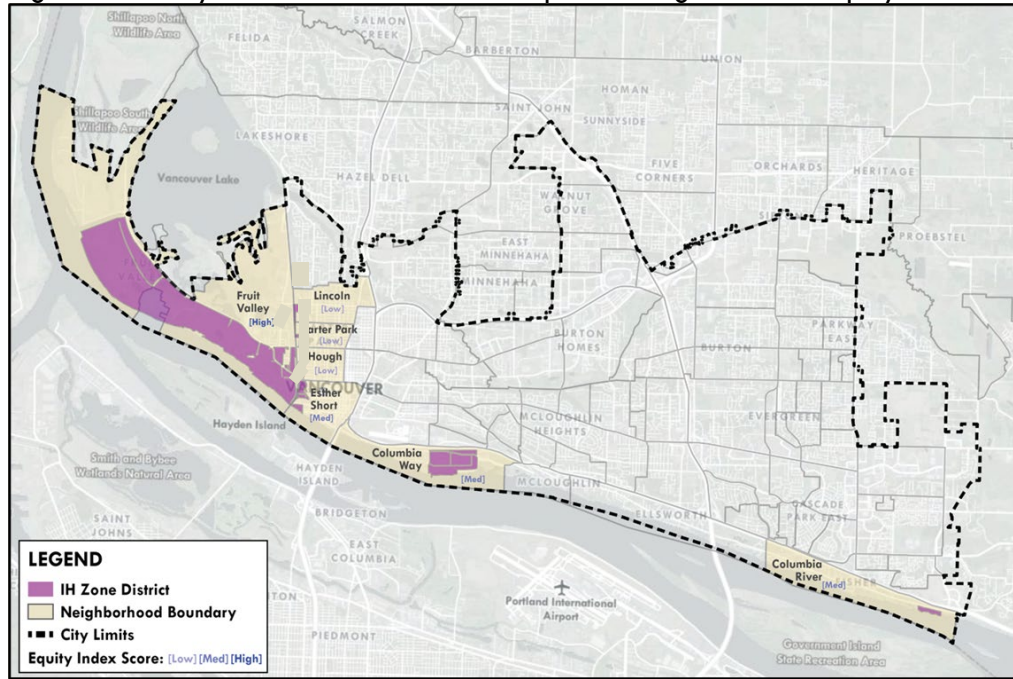
As shown in Figure 4 below, most of the City's Heavy Industrial District is within the Fruit Valley Neighborhood, which includes the Port of Vancouver and industrial properties along Fruit Valley Road. Smaller areas of Heavy Industrial zoning exist further to the east in the Columbia Business Center south of Columbia Way, and a small property near the Columbia River due south of SE 192nd Avenue. Due to property size constraints, a large warehouse could not feasibly locate in the small IH District south of 192nd Avenue.

The Fruit Valley Neighborhood has a high Equity Index Score due to lower median incomes (\$46,667 FV vs. \$63,617 citywide), higher percentage of persons below the poverty line (14.9% vs. 12.7%), higher percentage of Hispanic and non-white residents (26% vs. 13.9%), and lower education attainment (84.4% high school or higher vs. 91.2%). Areas with high equity scores are typically in need of extra resources to support a thriving community, and additionally tend to have historically suffered from a lack of investment (or conversely, outright disinvestment) of services and/or infrastructure.

Columbia Business Center, located south of SR-14 adjacent to Columbia Way, is located in an area that has a low-to-medium equity score, meaning there is a lower chance of disparate impacts from allowing large warehouses in this area.

The recommended code amendments will address the potential for disparate impacts to high priority equity areas as follows: 1) warehouses larger than 250,000 square feet will only be allowed in the IH, Heavy Industrial District, further away from residential areas, and 2) new special development standards that apply to large warehouses such as prohibiting tractor trailer trucks traveling to or from such large warehouses from using Fruit Valley Road, and 3) measures to increase tree canopy, reduce parking and lot coverage, prohibit truck idling, improve visual impacts next to public streets, and promote climate-friendly measures such as electric vehicle charging stations.

Figure 4: Heavy Industrial Districts and Adjacent Neighborhood Equity Scores



Compliance with Applicable Review Criteria

The approval criteria in VMC 20.285.090 include: a) *the proposed change is consistent with applicable Comprehensive Plan policies*, and b) *that the proposed text amendment is necessary to further the public interest based on present needs and conditions*. As described above the applicable policies in the Comprehensive Plan are all in regard to environmental protection, conservation, and stewardship. The proposed code changes are consistent with these policies in that warehouse larger than 250,000 square feet - which typically produce more truck traffic and other environmental impacts than smaller warehouses - will become prohibited in the IL, Light Industrial District which are typically closer to residential areas than Heavy Industrial Districts. Measures to reduce identified impacts and improve environmental outcomes will be required for new warehouses larger than 250,000 square feet, which will only be allowed to locate in the IH, Heavy Industrial District, further away from residential areas. In summary, the proposed code changes further the public interest based on present needs and conditions and meet the approval criteria of VMC 20.285.090.

V. CITY COUNCIL INPUT FROM 10/2/23 WORKSHOP:

City Council reviewed the draft code changes at their October 2 workshop and provided the following feedback (staff response follows each comment):

- Additional outreach should be provided to the Fruit Valley Neighborhood Association since the attendance was low at the neighborhood meeting where the proposal was discussed.

Staff response: In order to ensure that every resident in the FVNA was made aware of the proposal and provided with ways to comment and learn more information, individual postcards were mailed to every address in the association boundary.

- Council expressed concerns about having ‘multiple layers’ of tree planting requirements which could be confusing to applicants.

Staff response: The draft code amendments have been revised in regard to the “extra” tree density requirement for large warehouses by deleting the requirement that “an area of the project site equivalent to 20% of the building footprint area shall be planted at a density of at least thirty trees per acre...” and replacing it with a requirement that “The minimum tree density required by VMC 20.770.080 shall be thirty-three tree units per acre for new development.” This is in effect a 10% increase in tree plantings beyond what is already required for industrial development in the city.

- Council suggested that the required tree plantings, if allowed to be planted off-site, should not be planted too far away (e.g. the other side of the city) from where the building is constructed, to ensure that mitigation is not too far removed from the source of the impact.

Staff response: The language of the tree planting requirement has been revised as follows: “Such trees may be planted in a tree tract on-site or at an off-site location owned by the applicant and within ~~city~~ the limits of the designated neighborhood association within which the development is located, and as approved by the City Forester.” In the case of projects in the Port of Vancouver, such plantings would need to be planted within the Fruit Valley Neighborhood Association boundaries if not planted on-site.

- Council asked whether the requirement for skylights would conflict with the goal of maximizing roof area for solar panels in the future, or whether the solar panels might cover up the skylights.

Staff Response: Staff does not see an inherent conflict in requiring roof skylights to promote natural light into the interior of the warehouse and the placement of solar panels and believe that there will be room to accommodate both features. The solar panels would not be installed to cover up the skylights on the roof.

- Council discussed the proposed requirement for electric charging outlets at each of loading docks, and expressed concerns about the cost of requiring these right away when technology is still evolving and it is unknown what electric fleets will require in the future. Instead of requiring outlets now, Council suggested that the City should only be requiring conduit and electric wiring to the docks to make it easier to convert to charging ports in the future.

Staff Response: The draft code language has been amended as follows: “All loading docks shall be outfitted with ~~outlets~~ electric wiring and conduit extending to electric panels to enable future installation of outlets for charging of electric-powered trucks.”

VI. RECOMMENDED ACTION: Forward to City Council a recommendation for adoption of the proposed code amendments to VMC Title 20 in Exhibit B.

City of Vancouver Staff
Chad Eiken, CDD Director, (360) 487-7882
Bryan Snodgrass, Principal Planner (360) 487-7946

Attachments:

- Exhibit A – Initial Moratorium Ordinance
- Exhibit B – Proposed Code Changes to VMC Title 20
- Exhibit C – SEPA Determination of Nonsignificance (DNS)
- Exhibit D – SEPA Checklist
- Exhibit E – Warehouse Study by Fehr & Peers, July 2023