AGENDA
DESIGN REVIEW COMMITTEE

August 1, 2019
5:30 p.m.
2nd Floor Council Chambers
1095 Duane Street • Astoria OR 97103

1. CALL TO ORDER

2. ROLL CALL

3. MINUTES
   a) No new minutes to review

4. PUBLIC HEARINGS

   a) Design Review Request (DR19-03) by MMCG GOI Astoria LLC, to construct a 16,000 square foot Grocery Outlet structure at 2190 Marine Dr. in the LS (Local Service) Zone, GOZ (Gateway Overlay Zone), and CGO (Civic Greenway Overlay Zone).

5. REPORT OF OFFICERS

6. STAFF UPDATES / STATUS REPORTS
   a) Save the date
      i. Next DRC meeting: Thursday, September 5, 2019 @ 5:30pm

7. PUBLIC COMMENTS (Non-Agenda Items)

8. ADJOURNMENT

AN INTERPRETER FOR THE HEARING IMPAIRED MAY BE REQUESTED UNDER THE TERMS OF ORS 192.630 BY CONTACTING THE COMMUNITY DEVELOPMENT DEPARTMENT, 503-338-5183.

STAFF REPORT AND FINDINGS OF FACT

July 23, 2019

TO: DESIGN REVIEW COMMISSION

FROM: ROSEMARY JOHNSON, PLANNING CONSULTANT

SUBJECT: DESIGN REVIEW REQUEST (DR19-03) BY MMCG GOI ASTORIA LLC TO CONSTRUCT A COMMERCIAL RETAIL FACILITY AT 2190 MARINE DRIVE

I. BACKGROUND SUMMARY

A. Applicant: MMCG GOI Astoria, LLC
6600 Paige Rd #224
The Colony TX75056

B. Owner: William Heestand
Heestand Family LLC
2401 Pimilco Drive
West Linn OR 97068

Heestand Family LLC (Tax Lot 1402)
1400 Vibar Cove
Round Rock TX 78681

Heestand Family LLC (Tax Lot 1401 & 1700)
c/o T P Freightlines Accounts Payable
PO Box 580
Tillamook OR 97141-0580

C. Location: 2190 Marine Drive (formerly 2275 Commercial Street); Map T8N-R9W Section 8DA Tax Lots 1401, 1402, 1700; Lots 1 to 6, Block 127, Shively; north portion of Lots 1, 2, 3, Block 128, Shively; and vacated portion of Duane and 22nd Streets

D. Zone: LS (Local Services), Gateway Overlay, Civic Greenway Overlay

E. Proposal: To construct a one-story 16,000 square foot commercial building for retail sales

II. BACKGROUND

Site:

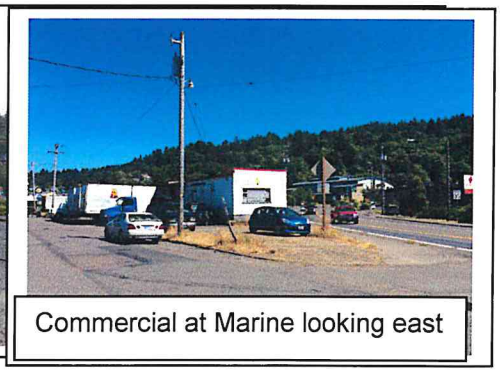
The subject property is located on the north side of Marine Drive, between 23rd street and where Commercial Street merges with Marine Drive near 22nd Street. The project covers three tax lots, a large portion of which is currently utilized as a loading area for industrial/commercial activity. It was formerly the location of TP Freight and the NAPA Auto Parts retail sales establishment. TP Freight is in the process of relocating and Napa Auto Parts is no longer at this location. The site is relatively flat and has access from Marine Drive on the south and Commercial Street on the north.

This site is located in two design overlay zones: Civic Greenway Overlay Zone and Gateway Overlay Zone. Design review standards in both Overlay Zones would apply to the proposed project.

Currently, the site contains two buildings and large open area for former truck maneuvering.


Marine at Exchange looking west


Commercial looking southeast


Commercial at Marine looking east

Area:

The proposed location is bounded on the north by Commercial Street, City Lumber hardware and home improvement store, Walter Nelson janitorial supply store, and a single-family dwelling in Mill Pond; to east by 23rd Street, a single-family dwelling in Mill Pond, Mill Pond Pergola park, and the Astoria Co-op grocery store under construction; to the south by the Mini Mart/Laundromat/Gas station, and across Marine

Drive right-of-way with medical offices, Franz Bakery outlet, and City sewer lift station; and to the west by the intersection of Commercial Street and Marine Drive.

Parks Medical, 2158 Exchange & City sewer lift station

Franz Bakery, 2127 Marine

City Lumber, 2142 Commercial

Mini-mart / gas, 2264 Marine

Single-Family dwelling, 295 23rd

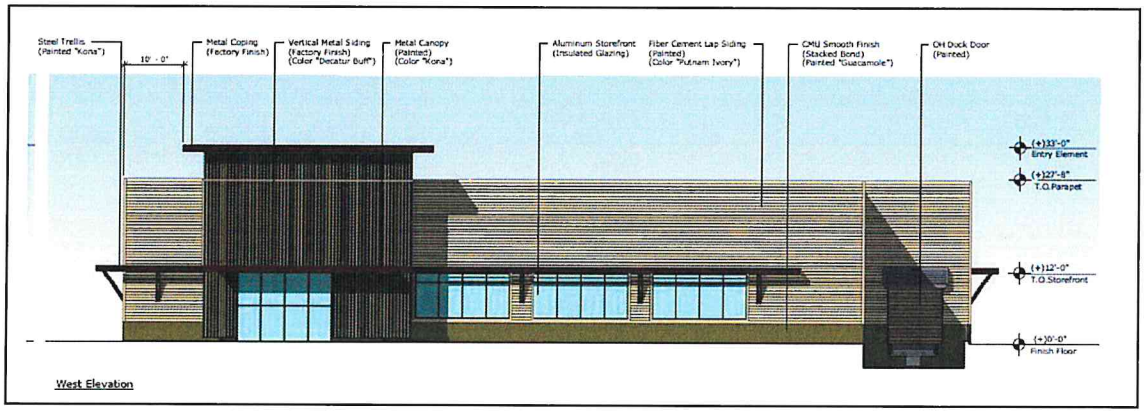
The broader area is dominated by major institutional uses, including the Columbia River Maritime Museum and Barbey Center, City of Astoria Aquatics Center, Columbia Memorial Hospital and Pavilion, Oregon State University Seafood Lab, and residential development at the Mill Pond.

Land use laws state that land use decisions on one project by Commissions do not set precedence for the same decision on other projects. Each application is judged on its own merit and compliance with the code based on its location, proximity to other structures and uses, and the impact of the project on the surrounding neighborhood. The close proximity of this project to the Mill Pond residential development warrants strict compliance with the requirements of the design review areas.

Proposed Construction:

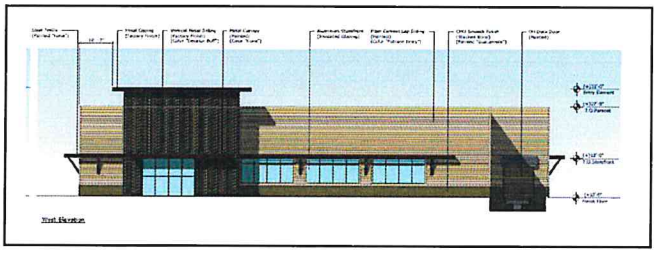
This proposal is to construct a one story, 16,000 square foot Grocery Outlet retail store. Retail Sales Establishments are an outright permitted use in the LS Zone (Local Service). The applicable criteria, including design aesthetics and orientation of the building are reviewed in this staff report. General zoning code requirements will be reviewed administratively by the Planner.

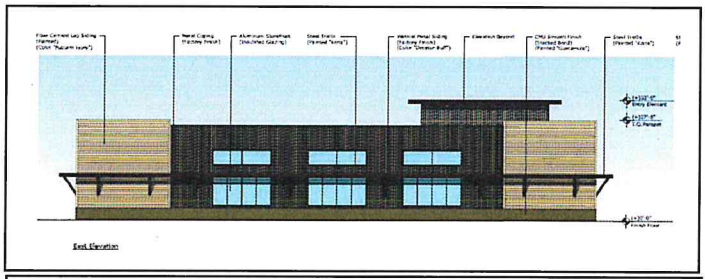
Style: single story rectangular (almost square) building 132' x 124 with a parapet wall; tower element at northwest corner entry;

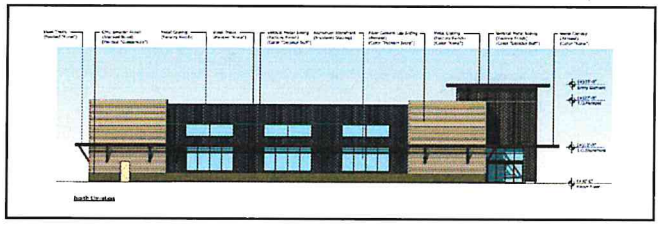


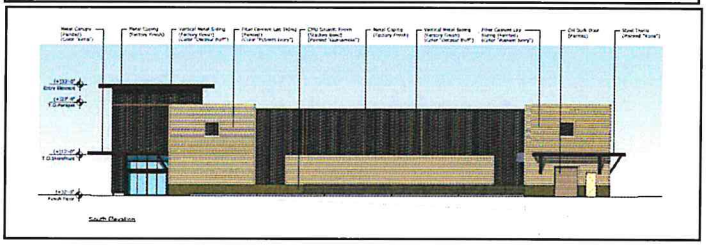
Roof: 27.7' high to top of parapet with 33' high to top of tower element; sloped roof with white TPO membrane over rigid insulation over metal deck; roof hidden behind the parapet

Siding: each elevation has a mixture of horizontal fiber cement lap siding with 6" reveal in "Putnam Ivory" color, and vertical metal corrugated panels in "Decatur Buff" color; 4' tall wainscot panel of smooth, stacked, CMU in "Guacamole" color;

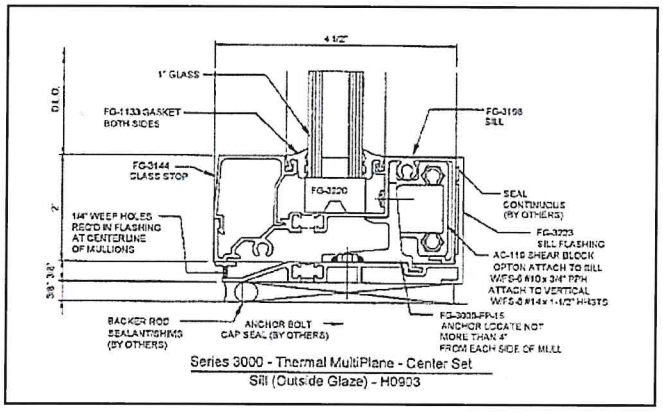


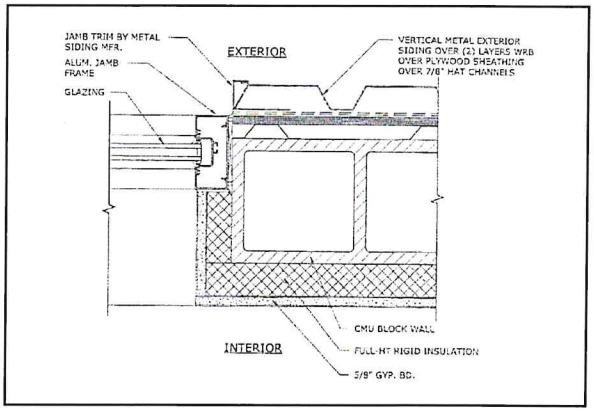




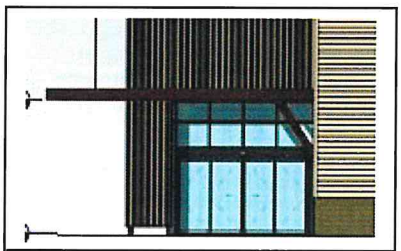


Windows: clear, insulated low "E" glass; 2" x 4.5" aluminum, true divided, storefront window system; fixed; 2" x 4" wood casing

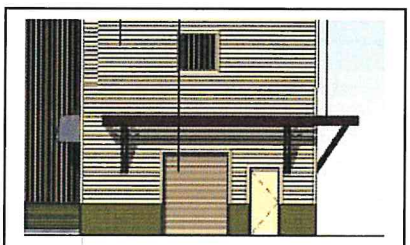




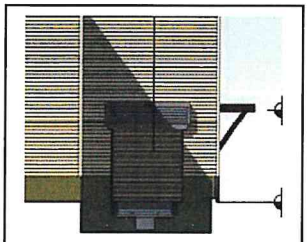
Doors: steel man doors; steel coiled overhead cargo door; single full lite, aluminum sliding entry doors



Main entry doors on north and south elevations



Roll up cargo and man doors on south elevation



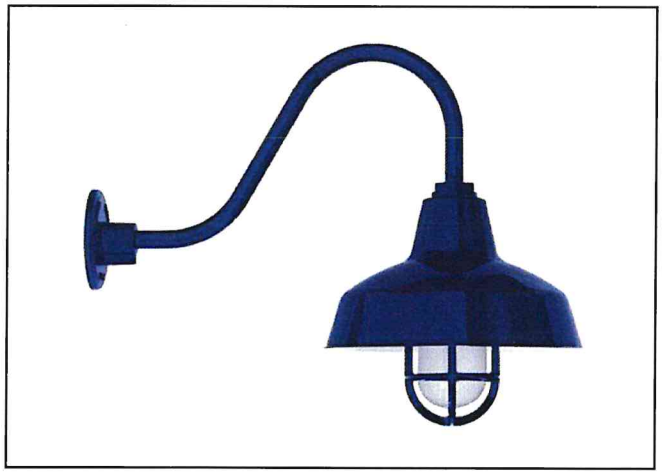
Roll up cargo door on west elevation

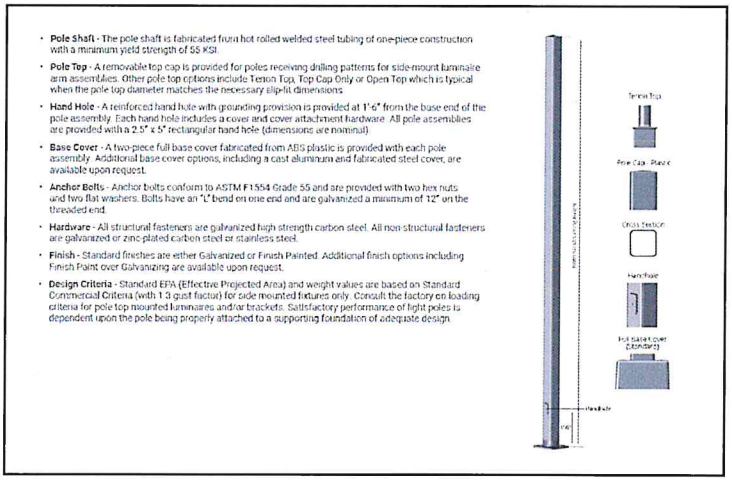
Solid canopy example on north and west elevations

Steel trellis canopy example on south and west elevations

Other Design Elements: metal canopy over entryway; steel trellis canopy on three sides; corner boards on horizontal siding

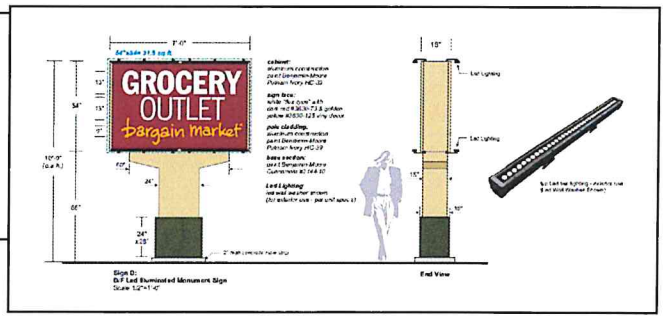
Exterior Lighting: single and double head pole lighting in parking lot; wall mounted fixture at loading dock and general parking area; goose neck design 21.75" wide by 8.25" tall; clear glass with standard metal wire cage globes 7.7" tall by 4.2" wide





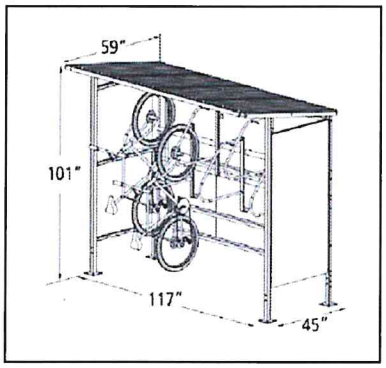
- **Pole Shaft** - The pole shaft is fabricated from hot rolled welded steel tubing of one-piece construction with a minimum yield strength of 55 KSI.
- **Pole Top** - A removable top cap is provided for poles receiving drilling patterns for side-mount luminaire arm assemblies. Other pole top options include Tenon Top, Top Cap Only or Open Top which is typical when the pole top diameter matches the necessary slip-fit dimensions.
- **Hand Hole** - A reinforced hand hole with grounding provision is provided at 1'-6" from the base end of the pole assembly. Each hand hole includes a cover and cover attachment hardware. All pole assemblies are provided with a 2.5" x 5" rectangular hand hole (dimensions are nominal).
- **Base Cover** - A two-piece full base cover fabricated from ABS plastic is provided with each pole assembly. Additional base cover options, including a cast aluminum and fabricated steel cover, are available upon request.
- **Anchor Bolts** - Anchor bolts conform to ASTM F1554 Grade 55 and are provided with two hex nuts and two flat washers. Bolts have an "L" bend on one end and are galvanized a minimum of 12" on the threaded end.
- **Hardware** - All structural fasteners are galvanized high strength carbon steel. All non-structural fasteners are galvanized or zinc-plated carbon steel or stainless steel.
- **Finish** - Standard finishes are either Galvanized or Finish Painted. Additional finish options including Finish Paint over Galvanizing are available upon request.
- **Design Criteria** - Standard EPA (Effective Projected Area) and weight values are based on Standard Commercial Criteria (with 1.3 gust factor) for side mounted fixtures only. Consult the factory on loading criteria for pole top mounted luminaires and/or brackets. Satisfactory performance of light poles is dependent upon the pole being properly attached to a supporting foundation of adequate design.

Sign: neon individual can letter wall signs with clear acrylic face on west and east elevation; external lit monument sign on northwest corner of site



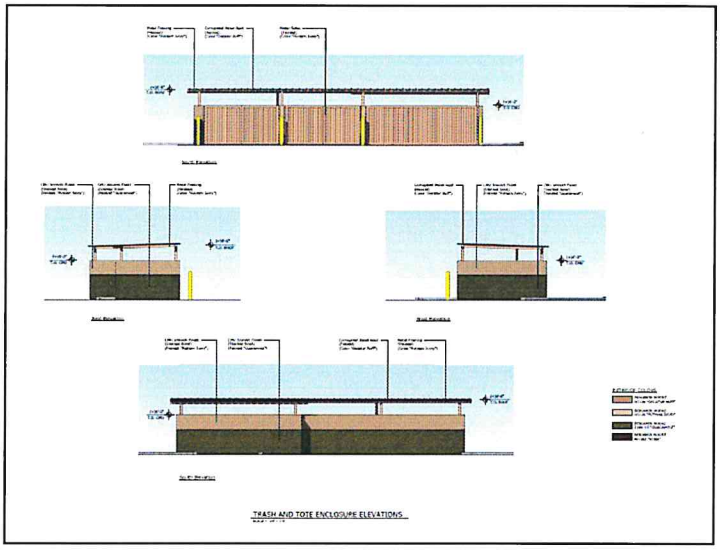
Bike Storage:

Three-sided enclosure for 4 to 6 bicycles; option of polycarbonate wall panels either galvanized or powder coated; option of either polycarbonate or galvanized S deck roof



Trash Enclosure:

Smooth, stacked CMU blocks; corrugated metal panel roof over building; 7' tall to roof, 6.2' to top of walls; metal gates



III. PUBLIC REVIEW AND COMMENT

A public notice was mailed to all property owners within 250 feet pursuant to Section 9.020 on July 8, 2019. A notice of public hearing was published in the *Astorian* on July 20, 2019. On-site notice pursuant to Section 9.020.D was posted July 12, 2019. Any comments received will be made available at the Design Review Commission (DRC) meeting.

IV. APPLICABLE REVIEW CRITERIA AND FINDINGS OF FACT

A. Section 14.015.B, General Provisions, in the Gateway Overlay Zone requires that *"each public or private development proposal within the Gateway Overlay Zone will be reviewed for consistency with the Design Review Guidelines in Sections 14.020 through 14.030."*

Section 14.035, Purpose, in the Civic Greenway Overlay Zone, states "*The purpose of the Civic Greenway Overlay Zone is to implement the land use principles of the Astoria Riverfront Vision Plan, dated December 2009, as they pertain to the Civic Greenway Plan Area. The Civic Greenway Overlay (CGO) Zone is intended to protect views of and access to the Columbia River, provide for an enhance open space and landscaping, support water-dependent uses consistent with Astoria's working waterfront, and encourage modest scale*

housing in areas recommended for residential use. The CGO Zone extends from approximately 16th Street to 41st Street and between Marine Drive and the Columbia River as depicted on the City's Zoning Map."

Section 14.005, Purpose, in the Gateway Overlay Zone, states *"The purpose of the Gateway Overlay Zone is to implement the concepts and guidelines of the Astoria Gateway Master Plan, dated April 1997. The Gateway Overlay Zone is intended to be an intensively developed, mixed-use area which complements Downtown Astoria and the community as a whole."*

Finding: The proposed project is a private development to be constructed within the Gateway and Civic Greenway Overlay Zones and as such will be reviewed for consistency with the Design Review Guidelines. The base zone allows for retail sales as an outright use. The use as a grocery retail establishment project would complement Downtown as it does not conflict with other uses in the Downtown. A new Co-op grocery retail establishment is under construction adjacent to this site to the east. However, while it will be a similar use, it will cater to a different audience, and it is not located within the Downtown area and therefore is not applicable to this criteria. This criteria is met.

B. Section 14.020, Applicability of Design Review Guidelines in the Gateway Overlay Zone states that the *"Design Review Guidelines shall apply to all new construction or major renovation. The guidelines are intended to provide fundamental principles that will assist in the review of the proposed development. The principles identify both "encouraged" and "discouraged" architectural elements. They are broad design objectives and are not to be construed as prescriptive standards."*

Finding: The project is new construction and as such is subject to the Design Review Guidelines. This criteria is met.

C. Section 14.040.B, Applicability and Review Procedures, Non-residential and Mixed-Use Development, in the Civic Greenway Overlay Zone states *"Applications shall be reviewed through the public design review process subject to the Design Review Guidelines in Section 14.025."*

Finding: This project is a commercial use and therefore requires review by the Design Review Commission.

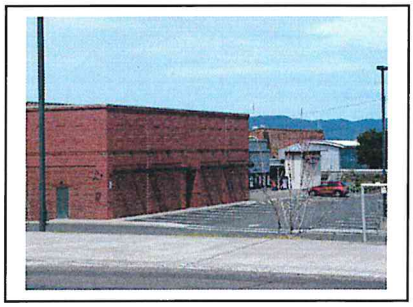
D. Section 14.025.A, Gateway Overlay, Purpose, states *"These guidelines promote architectural elements that unify the Gateway Area by encouraging styles characteristic of Astoria. The historic architecture of Astoria is represented by a variety of styles. Differences in details may be seen from one neighborhood to the next. These guidelines advocate the simplicity of design which is characteristic of Uppertown and the working waterfront. Building styles and details not inspired by Astoria's past will be discouraged. Monotony of*

design should be avoided. Variety of detail, form, and siting should be used to provide visual interest.

The Gateway Plan encourages new construction to reflect historic building types found in the Uppertown area. Three historic building types commonly found in the area include waterfront industrial, commercial, and residential. These building types may be used as models for contemporary building design, but do not restrict or define their function.

The Guidelines make reference to, but do not require the use of, historic materials. Contemporary substitutions (i.e. composite materials), will not be discouraged if their texture, profile, and proportions are similar to those materials with historic precedent."

Finding: Three historic building types commonly found in the area include waterfront industrial, commercial, and residential. The proposed development is a commercial building. The structure is one story tall with a tower element over the main entry. The structure will reflect the characteristics of waterfront buildings with the use of horizontal siding and the corrugated metal siding. The building is a simple rectangular almost square plan with the parking area on the west end of the lot. Building entrances face the rights-of-way on the north and south side of the tower element. Proposed materials are contemporary, smooth, fiber cement siding of horizontal boards, corrugated steel, and commercial aluminum framed window system. These features reflect the historic commercial design of the area in a contemporary way. The building will have corner boards similar to other Uppertown building facades and metal trellis and solid awnings found on both historic and new construction in this area. The Safeway store at 3250 Lief Erikson Drive, Gateway Cinema at 1875 Marine Drive, and CMH Pavilion at 2265 Exchange all have similar awnings.



E. Section 14.025.B in the Gateway Overlay Zone identifies the building forms encouraged.

1. *All Building Types: a) Simple designs without extraneous details; b) Rectangular in plan; c) Square in plan.*

2. *Waterfront Industrial: a) Low in form; b) Cubic in form.*

3. *Commercial: a) Low in form.*

4. *Residential: a) Vertical in form; b) Cubic in form; c) Full front porch or front porch large enough to accommodate several seated persons."*

Section 14.025.C in the Gateway Overlay Zone identifies the building forms discouraged.

"*1. All Building Types: a) Complex building footprints; b) Sprawling structures."*

Finding: The building would be rectangular, low and cubic in form, facing to the west and the parking area. Building details are simple. The building footprint is not complex, nor sprawling. This guideline is met.

F. Section 14.025.D in the Gateway Overlay Zone identifies the windows encouraged.

"*1. All Building Types: a) True-divided, multiple-light windows; b) Single-light windows; c) Applied muntins with profile facing window exterior; d) Rectangular windows with vertical proportions; e) Fixed windows; f) Double or single-hung windows; g) Casement windows; h) Windows should be spaced and sized so that wall area is not exceeded by window area, with the exception of commercial storefronts.*

2. *Waterfront Industrial: a) Square or rectangular windows with multiple lights.*

3. *Commercial: a) Storefronts: 1) Plate glass windows with multiple-light transom windows above; 2) Recessed entries; 3) Window to wall surface proportions may be exceeded; b) Upper Stories: 1) Window area should not exceed wall area.*

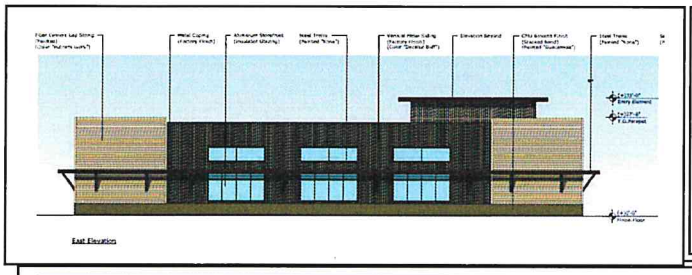
4. *Residential a) Vertical rectangle or square windows; b) Combination of single and multiple-light windows; c) Single windows, paired windows, or windows grouped in threes; d) Bay windows; e) Arched or decorative shaped windows used sparingly; f) Windows should use casings and crown moldings."*

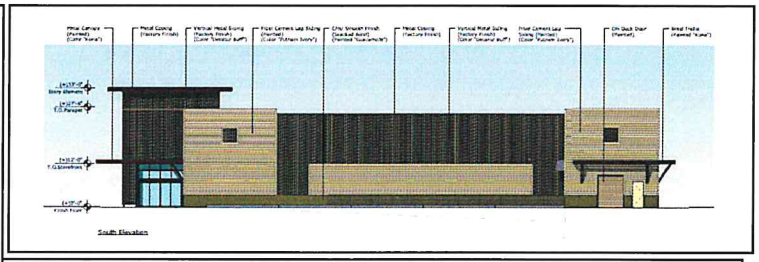
Section 14.025.E in the Gateway Overlay Zone identifies windows discouraged.

"*1. All Building Types: a) Applied muntins which have no profile; b) Smoked glass; c) Mirrored glass; d) Horizontal sliding windows; e) Walls predominated by large expanses of glass, except in commercial storefronts; f) Windowless walls. Large expanses of blank walls should*

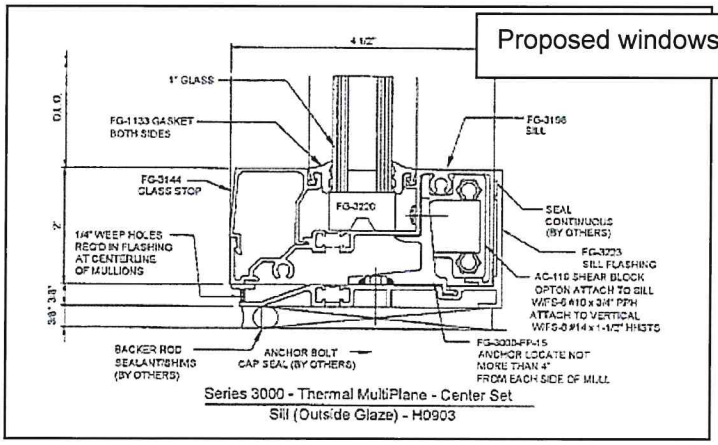
only be located in areas which are not visible to the public; g) Aluminum frame windows, except in commercial storefronts."

Finding: Proposed windows are clear, insulated low "E" glass; 2" x 4.5" aluminum, true divided, storefront window system. Windows are fixed. Windows on the north and east elevations are false windows as these elevations do not contain openings. The false windows shall be installed and maintained to appear as true windows (Condition 1). Windows would have a 2" x 4" wood casing. The north, east, and west elevations have multiple windows. The south elevation is the utilitarian side of the building and will be the cargo delivery loading area. This elevation would also be partially blocked by the adjacent mini-mart building and not as highly visible. The two ends of the elevation will be visible, and the applicant has proposed two vent-like features in that area of vertical corrugated metal siding. The main entry doors are visible in the tower feature.

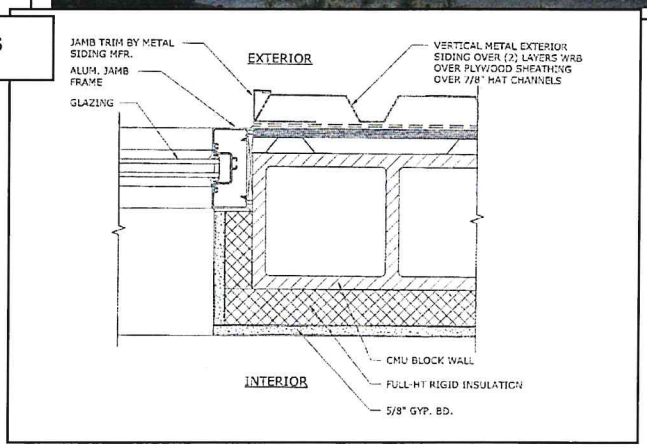


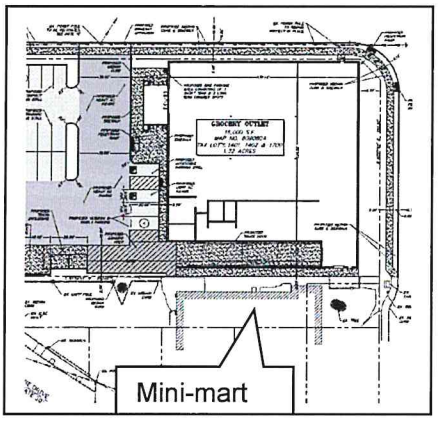


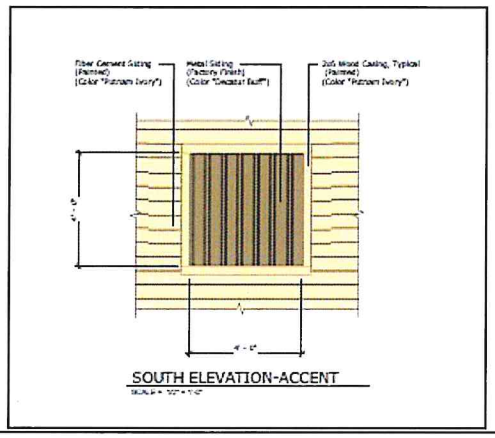
Proposed location

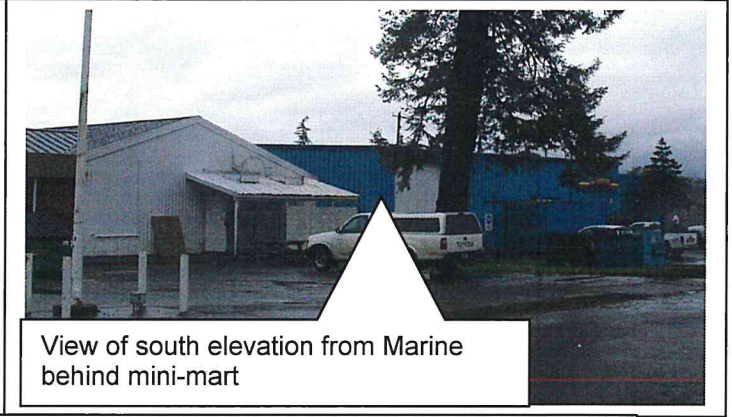


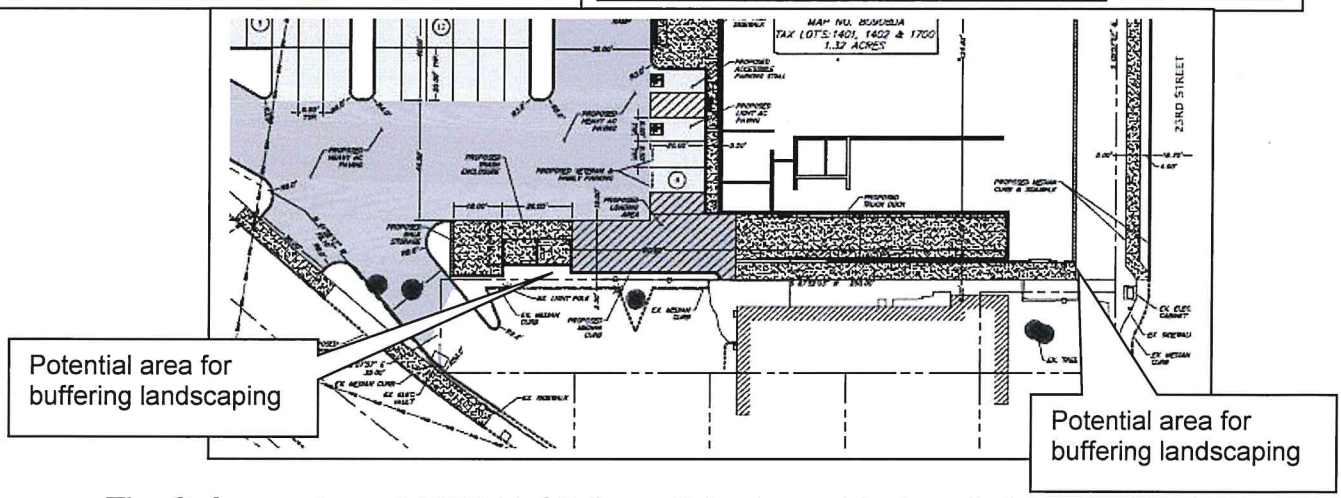
Proposed windows











The Safeway store at 3250 Lief Erikson Drive has a blank wall along the 32nd Street right-of-way. The design included a change in building material application and the installation of landscaping to buffer the view. The impact of the mature landscaping makes a large difference on the appearance of this wall.

Other than the south elevation, there are no large expanses of windowless, blank walls. Since portions of the south elevation will still be visible from the right-of-way, additional landscaping shall be installed to buffer it from view (Condition 2).

G. Section 14.025.F in the Gateway Overlay Zone identifies exterior wall treatments encouraged.

"1. All Building Types: a) Drop siding; b) Weatherboard siding; c) Horizontal siding with six inches or less exposure.

2. Waterfront Industrial: a) Board and batten style; b) Galvanized corrugated metal.

3. Commercial: a) Finished concrete; b) Brick veneer.

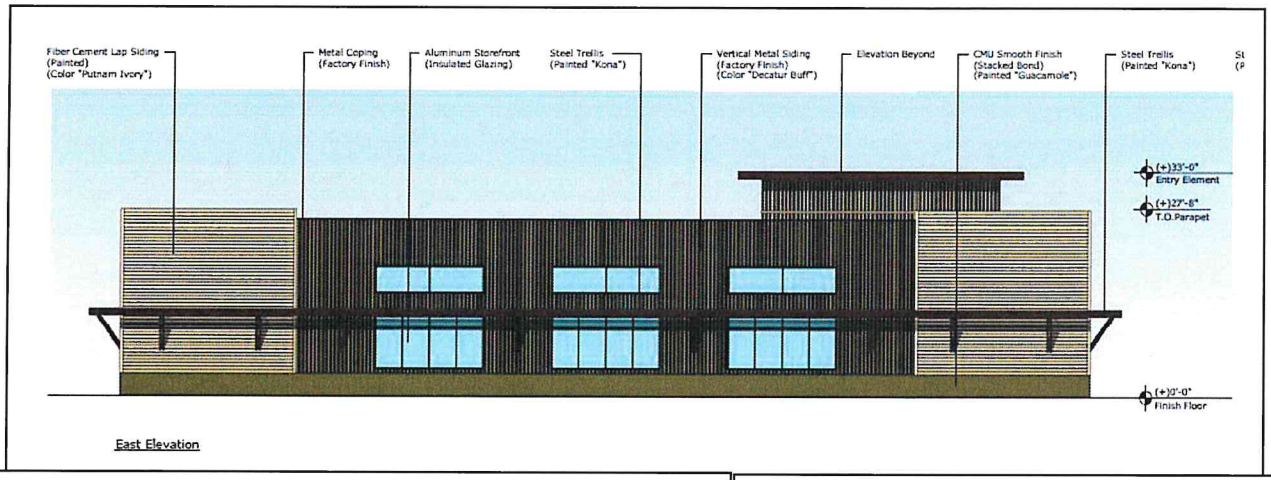
4. Residential: a) Clapboard; b) Wood shingle (rectangular); c) Decorative wood shingle."

Section 14.025.G.1 in Gateway Overlay Zone identifies exterior wall treatments discouraged.

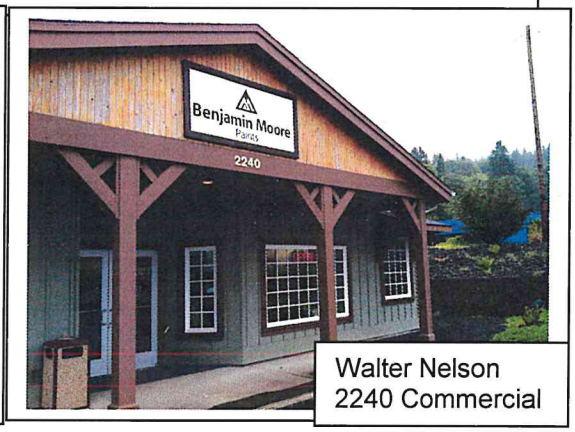
"*1. All Building Types: a) Exposed textured, concrete block; b) Flagstone or other applied stone products; c) Precast concrete or decorative concrete panels; d) Wood shakes; e) Plywood paneling."*

Section 14.030.G.3.a, Other Applicable Use Standards, Exterior Wall Treatments / Siding, states *"Fiber cement siding shall be smooth and not textured."*

Finding: The structure is proposed to be sided with a mixture of smooth fiber cement siding horizontal siding with 6" reveal. No faux texturing is proposed or allowed. Each elevation would have elements of vertical corrugated metal siding. The bottom 4' wainscoting would be stacked, painted CMU blocks.



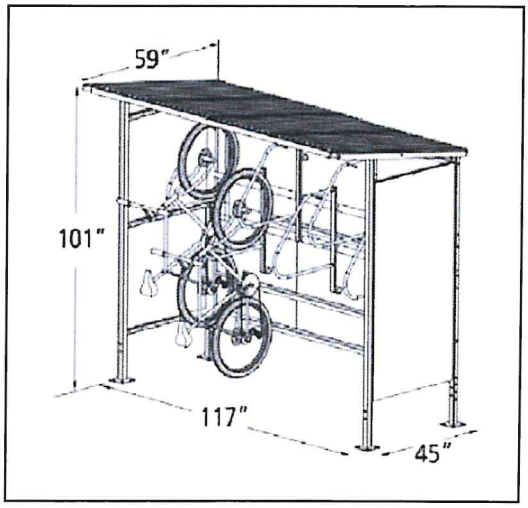
1777 Marine



Walter Nelson
2240 Commercial

Other buildings in the general area such as the former Builder's Supply building at 1777 Marine has vertical corrugated siding which was also typically used on waterfront buildings. The Walter Nelson building at 2240 Commercial is vertical wood and board and batten. These buildings have large facade areas that have a variety of siding to break up these larger building areas. CMU block is proposed only on the lower 4' wainscoting. This is a discouraged material but is used minimally on the lower base of the building. The proposed use of two different materials on the majority of the building is appropriate. This criteria is met for the main building.

The bicycle storage area is proposed to be a three-sided enclosure for 4 to 6 bicycles; option of polycarbonate wall panels either galvanized or powder coated; option of either polycarbonate or galvanized S deck roof. The exact design of the storage area to meet the requirements of Development Code Section 7.105 will be reviewed by the Planner and is not part of the Design Review Commission review. However, the location and materials are part of the DRC review.



Polycarbonate is a thermoplastic polymer and is not one of the "encouraged" wall treatments. The option for a galvanized or powder coated metal would be similar to the vertical corrugated metal siding on the main building. The bicycle storage area shall have siding to match the main structure to be reviewed and approved by the Planner (Condition 14).

H. Section 14.025.H in the Gateway Overlay Zone identifies the roof elements encouraged.

"*1. Waterfront Industrial: a) Single gable with low pitch; b) Repetitive gable with steep pitch; c) Shallow eaves; d) Small shed roof dormers; e) Monitor roof on ridge line; f) Flat panel skylights or roof window.*

2. Commercial: a) Single gable with low pitch; b) Repetitive gable with steep pitch; c) Shallow eaves behind parapet wall; d) Flat or gable roof behind parapet wall; e) Structural skylights.

3. Residential: a) Steep gable with broad eaves; b) Steep hip with broad eaves; c) Dormers with gable, hip, or shed roofs; d) Flat panel skylights or roof window on secondary elevations; e) Turrets or large projecting window bays used sparingly."

Section 14.025.I in the Gateway Overlay Zone identifies the roofing elements discouraged.

"*1. All Building Types: a) False mansard or other applied forms; b) Dome skylights."*

Finding: The roof would be a sloped roof hidden behind the parapet which is 27.7' high to top of parapet with 33' high to top of tower element with a flat roof. This criteria is met.

I. Section 14.025.J in the Gateway Overlay Zone identifies roofing materials encouraged.

"1. All Building Types: a) Cedar shingle; b) Composition roofing; c) Roofing material in gray, brown, black, deep red, or other subdued colors.

2. Waterfront Industrial: a) Galvanized corrugated metal; b) Low profile standing seam, metal roof; c) Roll down.

3. Commercial: a) Built-up."

Section 14.025.K in the Gateway Overlay Zone identifies roofing materials discouraged.

"*1. All Building Types: a) High profile standing seam, metal roof; b) Brightly colored roofing material.*"

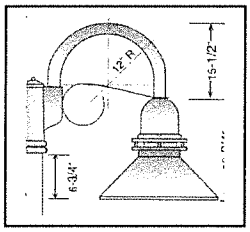
Finding: The roofing material proposed would be white TPO membrane over rigid insulation over metal deck. The bicycle storage area is proposed to have either polycarbonate or galvanized S deck roof. Polycarbonate is a thermoplastic polymer and is not one of the "encouraged" roofing material. The option for a galvanized metal roof would be similar to the vertical corrugated metal siding on the main building. The bicycle storage area shall have roof of metal or other approved material to match the main structure to be reviewed and approved by the Planner (Condition 15).

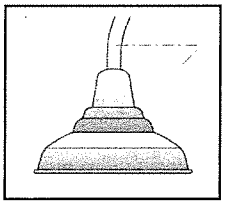
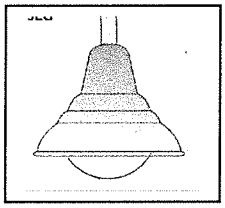
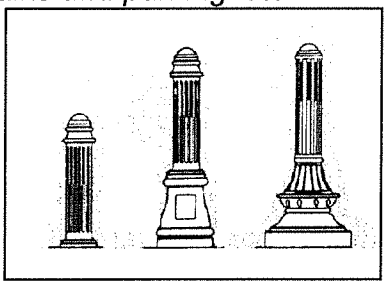
J. Section 14.025.N in the Gateway Overlay Zone identifies exterior lighting encouraged.

"*1. All Building Types: a) Decorative lighting integrated with architecture; b) Metal halide or incandescent; c) Pedestrian and traffic signals combined with street lamps; d) Light fixtures that direct light downward and eliminate glare.*

2. Waterfront Industrial: a) Industrial pan light with goose neck; b) Low bollard lighting.

3. Commercial: a) Historic street lamps along walks and parking lots."



Section 14.025.O in the Gateway Overlay Zone identifies exterior lighting discouraged.

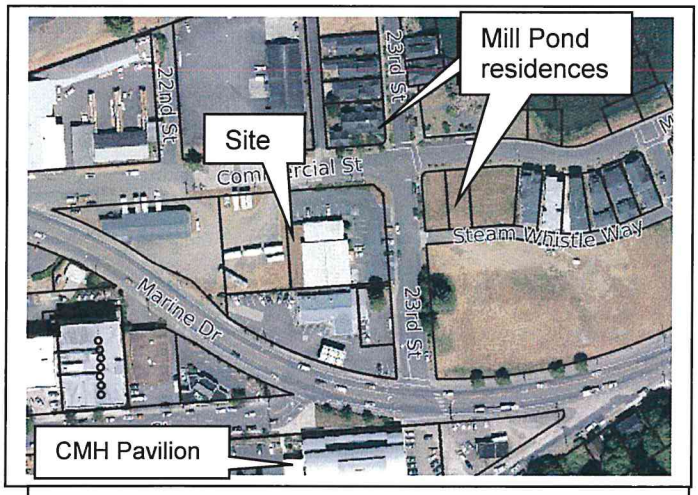
"*1. All Building Types: a) Sodium vapor (amber); b) Fluorescent tube; c) Cobra head street lamps or other contemporary fixtures; d) Fixtures with undiffused, undirected light that do not focus the light to the ground and that will potentially destroy the night sky view."*

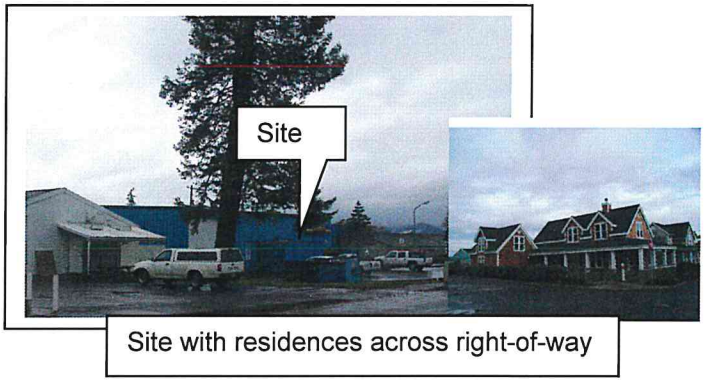
Section 14.070.A.2, Other Development Standards in the Civic Greenway Overlay Zone states *"The following development standards are applicable within the Civic Greenway Overlay Zone.*

2. *Exterior lighting.*

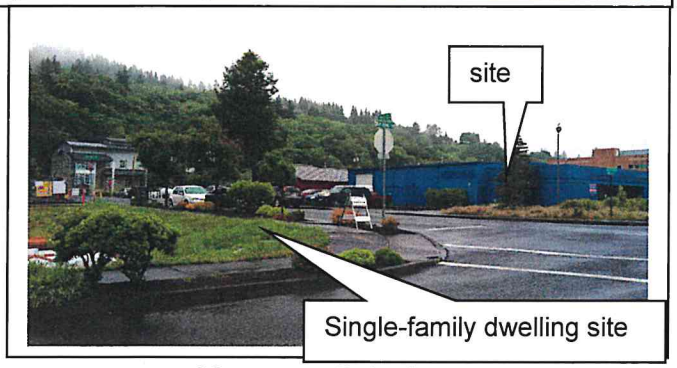
"Outdoor lighting shall be designed and placed so as not to cast glare into adjacent properties or rights-of-way. Light fixtures shall be designed to direct light downward and minimize the amount of light directed upward. The Community Development Director may require the shielding or removal of such lighting where it is determined that existing lighting is adversely affecting adjacent properties or contributing to light directed into the night sky."

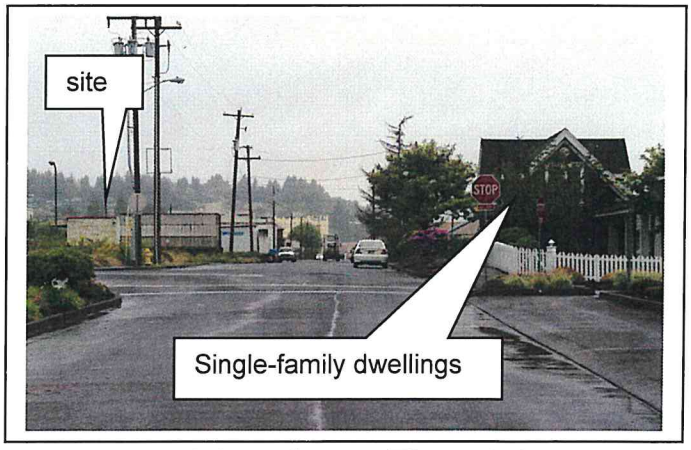
Finding: Historic street lamps along walkways and parking lights are encouraged. However, the applicant has proposed single and two head goose neck black pole lights in the parking lot which are fixtures in the encouraged category of lighting. The support poles will be square. The Code requires that lighting be down cast and not glare into adjacent properties, rights-of-way, and/or night sky. The proposed fixtures would have a clear glass with a wire screen and shall not create a glare (Condition 3). Shoebox style parking lot lights have been approved for some projects such as the CMH Pavilion but were not visible from the Mill Pond residential development. This site is adjacent to Mill Pond and single-family residences and therefore, the lighting will have a greater impact on the residential development.



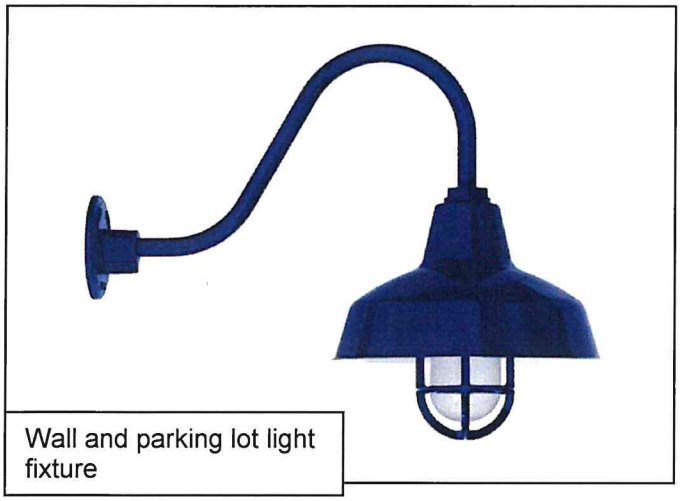


Site with residences across right-of-way

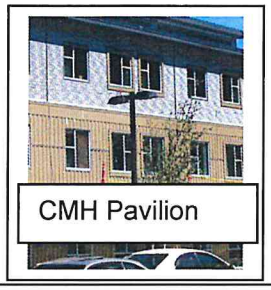




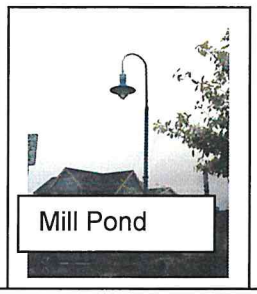
No street light fixtures are proposed along street rights-of-way. The existing utility poles with street lights are not proposed to be removed.



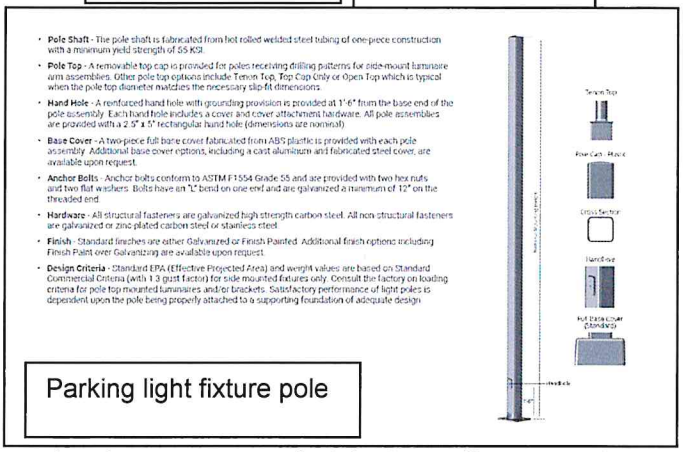
Wall and parking lot light fixture



CMH Pavilion



Mill Pond



Parking light fixture pole

The exterior building lights are proposed to be goose neck, black, wall mounted lights to match the parking lot lights. The fixture will extend 21.75" from the face of the building with a height of 8.25". The Code requires that lighting be down cast and not glare into adjacent properties, rights-of-way, and/or night sky. The proposed fixtures would have a clear glass with a wire screen and shall not create a glare (Condition 3).

Examples of lighting approved in the Gateway Area include OSU Seafood Lab, Safeway, and Gateway Cinema. The proposed lighting meets the criteria.

Location of exterior parking lot and wall lighting has not been identified on the site plan. The applicant shall submit a lighting plan to be reviewed and approved by the Planner prior to issuance of a building permit and installation (Condition 4).

K. Section 14.025(L) identifies signs encouraged.

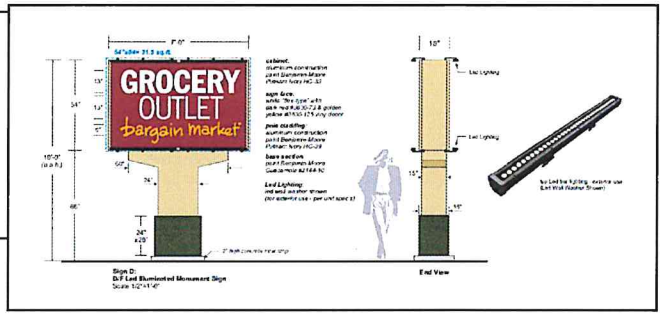
1. *All Building Types: a) Hanging blade signs; b) Signs painted on building facade; c) Signs applied to building facade; d) Front lit; e) Graphics historic in character.*

2. *Commercial: a) Exterior neon.*

Section 14.025(M) identifies signs discouraged.

1. *All Building Types: a) Pole mounted freestanding signs; b) Plastic or internal and back lit plastic.*

Finding: Signage is proposed on the east and west elevations with a monument sign on the northwest corner of the lot. Wall signs are proposed to be neon channel lettering with a clear acrylic cover for protection. The monument sign would have external lighting. This criteria is met.



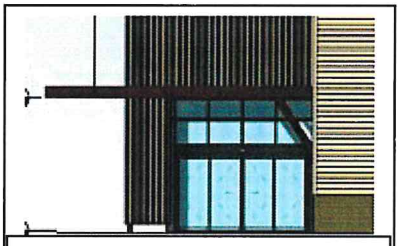
L. Section 14.025(P) identifies other design elements encouraged.

1. *Commercial: a) Canvas awnings or fixed canopies for rain protection.*

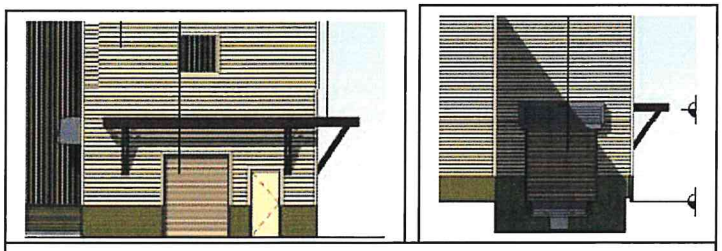
Section 14.025(Q) identifies other design elements discouraged.

2. *Commercial: a) Vinyl awnings; b) Back lit awnings.*

Finding: Metal solid canopy is proposed over the entryway on the northwest corner of the building. Steel trellis canopies are proposed on three sides. Corner boards are proposed on the horizontal siding.

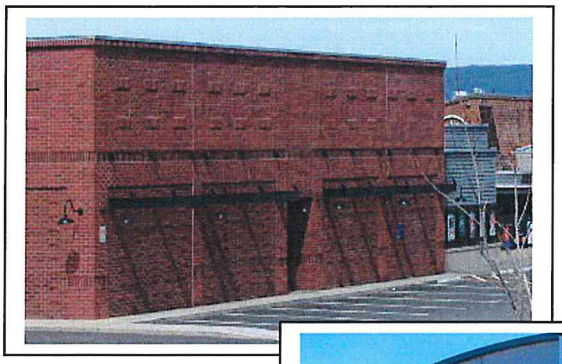


Solid canopy example on north and west elevations



Steel trellis canopy example on south and west elevations

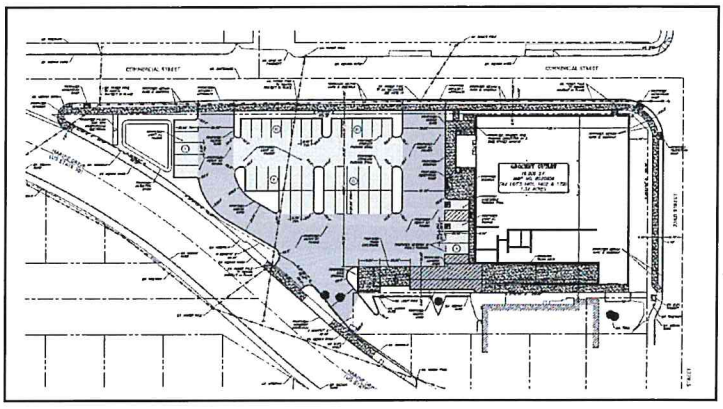
Metal canopies and trellis canopies are found on several buildings in the area, mostly on newer construction at Gateway Cinema, CHM Pavilion, and Safeway.



M. Section 14.030.C.2, Other Applicable Use Standards, Access and Parking Design, in the Gateway Overlay Zone, states "*Building facades and entries should face the adjacent street. Main entrances should face a connecting walkway with a direct pedestrian connection to the street without requiring pedestrians to walk through parking lots or across driveways.*"

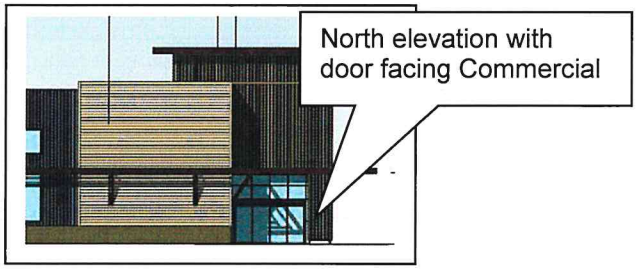
Section 14.001, Definitions for Overlay Zones, defines "*SHOULD: A requirement, unless it can be shown that to comply with the requirement would be unreasonable, impractical, or unfeasible. Economic hardship alone shall not be justification for noncompliance with the requirement, but may be considered in conjunction with other reasons for noncompliance.*"

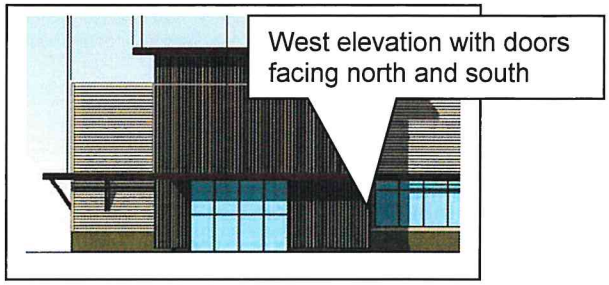
Finding: The proposed project will include approximately 2/3 of the block which is an unusually shaped triangular piece of property. The building entrance is on the west side of the building facing the parking lot. Doors at the entrance will face north with a pedestrian path from Commercial Street and south with a walkway adjacent to the building from the parking lot.



The current design does not promote a pedestrian-oriented street front. Due to the triangle shape of the lot, there is right-of-way on all three sides of the project site. The narrow shape makes it difficult to design parking and buildings that would not have parking between the building and a right-of-way. The building is proposed to be located on the east side of the lot which is the largest area of the lot. Parking would be to the west with a large landscaped area at the far west triangle point of the lot for stormwater.

The design and orientation of the building takes more advantage of the vehicular access from the parking lot but does include pedestrian access from a walkway onto Commercial Street. There are no other pedestrian accesses to the building from a right-of-way.





The neighboring areas are zoned for commercial, residential, and family activities, all of which draw populations other than just retail sales customers to the area. This is not a high pedestrian area along Commercial Street or Marine Drive in this block. The River Trail is located one block to the north and is the primary pedestrian route in this neighborhood. With the construction of the Co-op Grocery store across the 23rd Street right-of-way from this site, there will be increased vehicle and pedestrian traffic to the area.

The building orientation and entrances to the site are all part of the site plan review. In considering these issues, the site configuration poses constraints to development of the site. The use is allowed outright on the site but must meet the design standards of the Overlay Zones. The guidelines/standards concerning building orientation and entrances are identified as criteria that "should" be met, not "shall" be met. Therefore, there is some flexibility on the part of the DRC to determine if these standards can be met or mitigated by other means. If this request was a conditional use permit, there would be more emphasis on the appropriateness of the proposed use/construction at this site. Another type of development could occur on this triangular site that could meet more of the design standards, but since the use is allowed outright, and with the various conditions for mitigating landscaping and other design elements, it would be "unreasonable" to require full compliance with these criteria.

N. Section 14.030.A.1, Other Applicable Use Standards, Building Orientation, in the Gateway Overlay Zone, states that *"development projects should form visually continuous, pedestrian-oriented street fronts with no vehicle use area between building faces and the street. Exceptions to this requirement may be*

allowed to form an outdoor space such as a plaza, courtyard, patio, or garden between a building and a sidewalk. Such a larger front yard area should have landscaping, low walls, fencing, railings, a tree canopy, or other site improvements."

Section 14.030.C, Other Applicable Use Standards, Access and Parking Design, in the Gateway Overlay Zone, states

"1. All uses which are served by an alley, local street, or collector street should have alley or street vehicular access and egress. Curb openings onto Marine Drive or Exchange Streets are discouraged. Parking lots should be on the interiors of blocks or behind buildings, and should be designed to be as unobtrusive as possible. . .

3. Parking areas should be shared among various uses where a development or block is planned as a whole. On-street parking on internal streets may be counted towards the off-street parking requirements with the approval of the Community Development Director."

Section 2.975, Purpose of the LS Zone states, *"The purpose of the Local Service Zone is for those uses that may be of a more vehicular oriented nature, such as gasoline service stations, mini-marts, and other neighborhood commercial uses."*

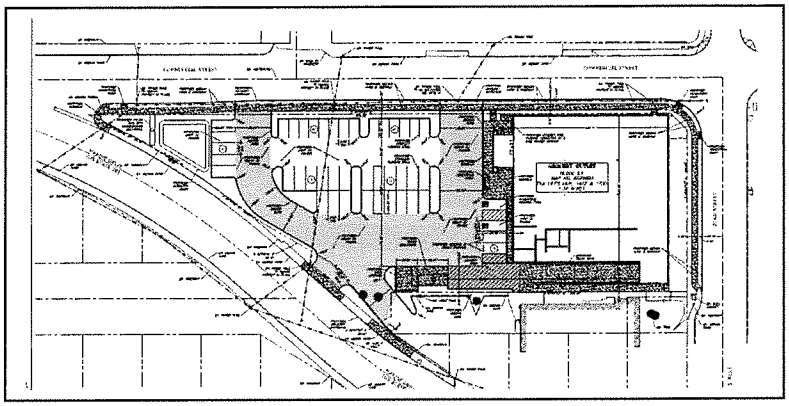
Section 2.981, Other Applicable Use Standards, in the LS Zone, states:

"3. Where feasible, joint access points and parking facilities for more than one use should be established. This standard does not apply to multi-family residential developments.

4. Access drives and parking areas should, where possible, be located on side streets or non-arterial streets in order to minimize congestion on Marine Drive."

Section 14.001, Definitions for Overlay Zones, defines *"<u>SHOULD</u>: A requirement, unless it can be shown that to comply with the requirement would be unreasonable, impractical, or unfeasible. Economic hardship alone shall not be justification for noncompliance with the requirement, but may be considered in conjunction with other reasons for noncompliance."*

<u>Finding</u>: The proposed project will include approximately 2/3 of the block which is an unusually shaped triangular piece of property. The narrow shape makes it difficult to design parking and buildings that would have parking on the interior of the lot behind buildings. The LS Zone allows a more vehicle-oriented development than other zones within the overlay zone areas.



Location of the parking area was also determined by the location of access to the site. There are existing driveways on the Commercial Street and Marine Drive sides of the property. Access from 23rd Street was determined to be problematic due to the existing traffic conditions at the 23rd and Marine Drive intersection as indicated in the Astoria Grocery Outlet Traffic Impact Study dated May 31, 2019. The Development Code states: "*Exceptions to this requirement may be allowed to form an outdoor space such as a plaza, courtyard, patio, or garden between a building and a sidewalk.*" A stormwater detention area which would be landscaped is identified on the site plan for the west corner of the triangle. The applicant still needs to confirm with City Engineering if a stormwater detention area is allowed. If not, the area could still be a landscaped garden area adding buffering of the parking lot.

Landscaping is proposed along the perimeter and will need to be sufficient to buffer the parking area from the pedestrian walkways and view from the right-of-way (Condition 5). Landscaping will be discussed later in the Findings of Fact.

Vehicle access from Marine Drive is discouraged in the Gateway Overlay Zone and the LS Zone. The site has existing access from both Marine Drive and Commercial Street. The Astoria Grocery Outlet Traffic Impact Study (TIS) dated May 31, 2019 (page 9) states that the 23rd Street intersection is operating at a "D" Level of Service (LOS) and Marine Drive is at a "C" LOS. Page 17 of the TIS indicates 23rd Street at a "D" LOS for 2021 without the new retail establishment and at an "E" LOS for 2021 with the new retail establishment. LOS "E" would indicate *"operations with significant intersection approach delays and low average speeds"* as noted in the chart below.

LOS is a *"qualitative measure used to relate the quality of motor vehicle traffic service. LOS is used to analyze roadways and intersections by categorizing traffic flow and assigning quality levels of traffic based on performance measure like vehicle speed, density, congestion, etc."* (Wikipedia)

Table B-5

CMP Level of Service Criteria for Arterials[a] Based on Volume-to-Capacity Ratios

Level of Service	Description	V/C[b]
A	Free-flow conditions with unimpeded maneuverability. Stopped delay at signalized intersection is minimal.	0.00 to 0.60
B	Reasonably unimpeded operations with slightly restricted maneuverability. Stopped delays are not bothersome.	0.61 to 0.70
C	Stable operations with somewhat more restrictions in making mid-block lane changes than LOS B. Motorists will experience appreciable tension while driving.	0.71 to 0.80
D	Approaching unstable operations where small increases in volume produce substantial increases in delay and decreases in speed.	0.81 to 0.90
E	Operations with significant intersection approach delays and low average speeds.	0.91 to 1.00
F	Operations with extremely low speeds caused by intersection congestion, high delay, and adverse signal progression.	Greater Than 1.00

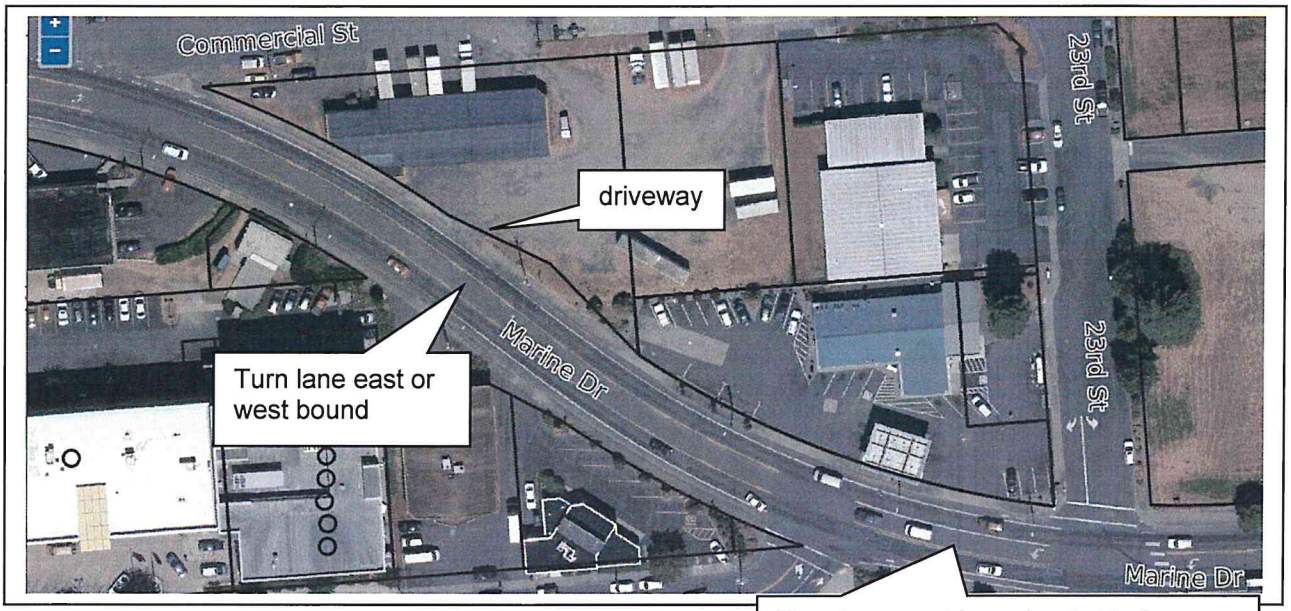
[a] For arterials that are multilane divided or undivided with some parking, a signalized intersection density of four to eight per mile, and moderate roadside development.

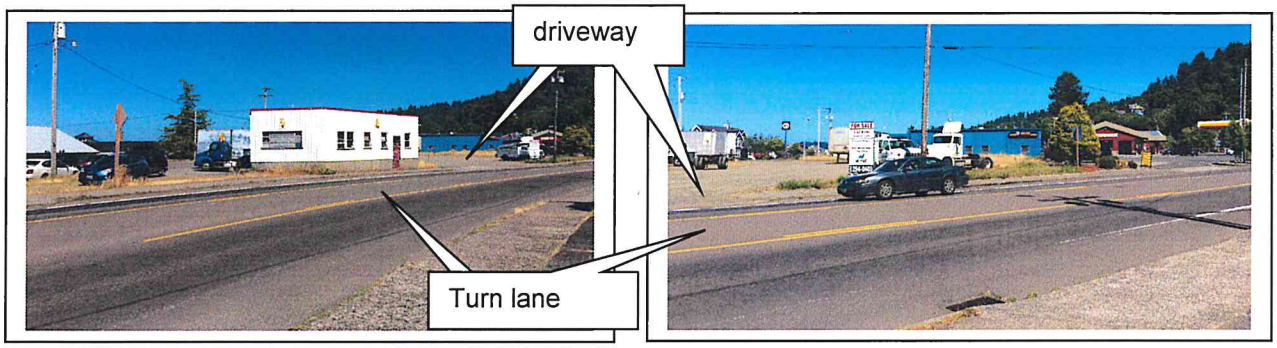
[b] Volume-to-capacity ratio.

≥ greater than or equal to.
< less than.

Source: Transportation Research Board, *Highway Capacity Manual, Special Report 209* (Washington, D.C., 1994).

The Technical Memorandum from ARD Engineering, dated June 27, 2019, addresses the justification for allowing the use of the Marine Drive access in lieu of the Commercial Street access for this project. One of the key elements in this justification is the location of the turn lane on this portion of Marine Drive that would allow easy ingress and egress from the Marine Drive driveway. The 23rd Street intersection does not have a turn lane refuge and has experienced eight motor vehicle accidents in the last five years (page 19 of the TIS).





The Gateway Master Plan, dated April 1997, emphasizes the proposed pedestrian-oriented nature of the area and addresses this with design suggestions to minimize the impact of parking lot locations, building orientation, and site access. It included the concept of a LS Zone that would allow more vehicle-oriented uses. The Plan describes the LS Zone on page 29 and envisioned a landscape buffer along Marine Drive. It suggested "*No curb cuts along Marine Drive*"; however, the proposed access would use an existing curb cut, not a new one. Page 16 of the Gateway Plan states *". . . Marine Drive needs to be designed to minimize congestion. . ."* The recommendations in the Gateway Master Plan were codified into Development Code Section 2.981.4 which states *"Access drives and parking areas should, where possible, be located on side streets or non-arterial streets in order to minimize congestion on Marine Drive."* At the time of the 1997 Gateway Plan, Marine Drive in this area did not contain a turning lane. Some time prior to 2004, Marine Drive was upgraded to include a turning lane that served the TP Freight driveway on Marine Drive, the mini-mart/gas station, and the other uses along this portion of Marine Drive and helped to "minimize congestion".

AREA PLANS

7. Local Service

The local service area is reserved for those uses that may be of a more auto-oriented nature, such as gas stations and other similar neighborhood commercial uses. Siting buildings along roadways and landscaping buffers will conceal parking lots and service areas.

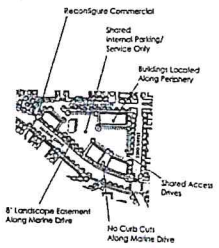
Development Requirements

- 8 foot landscape easement along Marine Drive.
- No curb cuts along Marine Drive.
- Buildings shall be located along the periphery of the area.
- Shared access drives from Commercial and 23rd Streets.
- Shared parking.

Approximate Area:
2.1 Acres

Permitted Uses:
- Gas Stations
- "Neighborhood Commercial"

7. Local Service
(Figure 15)



Circulation

The Astoria Gateway Master Plan area will become special only if the pedestrian environment is prioritized over all other transportation modes (Figure 6). In no instance should this environment be compromised.

Automobile and Truck Components:
- Marine Drive -- As a state highway and primary arterial roadway through the city, Marine Drive needs to be designed to minimize congestion. There will be no curb cuts to parking lots, with the exception of the parcels south of Marine Drive from 23rd Street to 32nd Street. In all other instances, parking will be accessed from side streets only.
- New Roadways -- A local street "loop" is suggested, connecting 23rd Street to 20th Street, and 18th Street will be upgraded to city standards.
- Signals -- Three traffic signals will be located at the intersection of Marine and 17th, Marine and 20th, and Marine and 23rd.

Excerpts from Gateway Master Plan

Therefore, staff believes that one of the intents of the Overlay and LS Zones to minimize the impact of traffic delays on Marine Drive would be best served by allowing use of the existing turn lane refuge into the Marine Drive access to the site. Another intent is to create more aesthetic designs for the gateway entry into the downtown area which could possibly be accomplished with additional landscape buffering of the site (Condition 5).

Marine Drive is a State highway under the jurisdiction of Oregon Department of Transportation (ODOT) as well as the City. An email from Asst. City Engineer Cindy Moore dated 6-24-19 states *"Access to site from Marine Dr. The Public Works Department is willing to approve a driveway off of Marine Dr (as proposed) if ODOT and the Community Development Department concur. The driveway configuration, alignment and section must meet Astoria Engineering Design Standards."* In an email dated 1-30-19, David Smith, ODOT Region 2, Development Review Engineer states *"There is an existing approach at/near the proposed GO 30' approach on Marine Drive and it does not appear as though there are access control restrictions. Thus, at first glance, I don't see issues with the approach on Marine Drive. Of course, you'd need to go through the approach application process. . ."* Both ODOT and the City Engineer have tentatively approved the Marine Drive access pending submittal and approval of final plans and site upgrades. Therefore, the Marine Drive access appears to be feasible if the DRC determines it meets the design standards for the Overlay zones. While not an issue for DRC consideration, the applicant will need to submit an application for review by the City Engineer and ODOT concerning the access driveways, ADA accessibility at crosswalks, and the right-of-way intersection at Commercial and Marine Drive. These issues will be reviewed separately from the design review phase but could impact the final site design and access. If there are major changes as a result of the transportation related reviews, a revised site plan would need to be reviewed and approved by the DRC. Minor revision would be reviewed and approved by the Planner (Condition 12).

The parking and vehicle access to the site are part of the site plan review. In considering these issues as noted above, the site configuration poses constraints to development of the site. The use is allowed outright on the site but must meet the design standards of the Overlay Zones. The guidelines/standards concerning parking and vehicle access to the site are identified as criteria that "should" be met, not "shall" be met. Therefore, there is some flexibility on the part of the DRC to determine if these standards can be met or mitigated by other means. If this request was a conditional use permit, there would be more emphasis on the appropriateness of the proposed use/construction at this site. Another type of development could occur on this triangular site that could meet more of the design standards, but since the use is allowed outright, and with the various conditions for mitigating landscaping and other design elements, it would be "unreasonable" to require full compliance with these criteria.

O. Section 14.030.A.2, Other Applicable Use Standards, Building Orientation, in the Gateway Overlay Zone states that *"new uses should be sited to take advantage of the Columbia River and hillside views."*

Section 1.4001, Definitions, for Overlay Zones, defines *"SHOULD: A requirement, unless it can be shown that to comply with the requirement would be unreasonable, impractical, or unfeasible. Economic hardship alone shall not be justification for noncompliance with the requirement, but may be considered in conjunction with other reasons for noncompliance."*

Finding: The building does not contain functions for views. It is a retail establishment with no on-site extended use. Windows on the north, south, and east side of the building are false windows with no exterior views. Windows on the west elevation face the parking lot. Orientation of the building does not allow views of the Columbia River or hillside. This criteria is not met but is a "should" not a "shall" requirement. The use is allowed outright and therefore, it would be unreasonable to require a retail sales establishment with no on-site extended use to provide views of the River or hillside. Customers to this establishment will be shopping and leaving the site immediately and not staying to enjoy the views. The LS Zone is intended for more vehicular oriented uses.

P. Section 14.030.A.3 Other Applicable Use Standards, Building Orientation, in the Gateway Overlay Zone states that *"if the proposed project is large or situated so as to become an entrance or major focus of the City, the design should recognize the project's prominence and should be both compatible with its surroundings and complementary to the City as a whole."*

Finding: The building will be visible from eastbound traffic on Marine Drive and partially visible from westbound traffic. It is separated from Marine Drive by the existing mini-mart/laundry/gas station at 2264 Marine Drive. The site is not highly visible from the River Trail to the north. With the proposed location of the building on the east end of the lot, the project does not become a major focus at an entrance to Astoria. The proposed design utilizes materials that reflect the surrounding commercial buildings with the use of horizontal fiber cement siding, vertical corrugated metal, and limited use of CMU on the wainscoting. These are materials similar to City Lumber at 2142 Commercial Street, Astoria Co-op at 2350 Marine, and CMH Pavilion at 2265 Exchange Street. The building will be a contemporary commercial design which is compatible with the other commercial buildings in this area.

City Lumber

SW corner proposed Co-op

Mini-mart

Q. Section 14.030.B.1, Other Applicable Use Standards, Building Massing, in the Gateway Overlay Zone states that *"buildings should have a floor area ratio on their lots of at least 1:1 (One square foot of building area for one square foot of lot area), in order to maximize use of the land."*

Section 14.070.A.1, Other Development Standards for the Civic Greenway Overlay Zone states *"The following development standards are applicable within the Civic Greenway Overlay Zone.*

1. Floor area ratios.

Floor area ratio and height standards in Section 14.030(B)(1) and Section 14.030(B)(2) of the Gateway Overlay Zone do not apply to on-land development in the Civic Greenway Overlay Zone. Other use standards in Section 14.030 apply."

Finding: The lot is approximately 57,600 square feet and the buildings would have approximately 16,000 square feet of floor space. The project would have a floor area to lot ratio (FAR) of 0.28:1 (approximately 28%). However, per Section 14.070.A.1, the FAR criteria requirement does not apply to "on-land development in the Civic Greenway Overlay Zone within the Gateway Overlay Zone." This ratio requirement is not required.

R. Section 14.030.B.2, Other Applicable Use Standards, Building Massing, in the Gateway Overlay Zone states that *"buildings should be a minimum of 24 feet in height from grade to highest point of the structure, excluding those features exempt from building height as identified in Development Code Section 3.075."*

Section 2.980, Height of Structures in the LS Zone, states *"No structure will exceed a height of 35 feet above grade, with exception of structures on lots with frontage on Marine Drive between 23rd and 29th Street which are limited to a maximum height of 45 feet above grade."*

Section 14.060.A, Standards for On-Land Development, Height, in the Civic Greenway Overlay Zone, states *"The following development standards apply to on-land development in the Civic Greenway Overlay Zone south of the River Trail / 50' wide railroad line property. The Overwater Development standards shall apply to on-land development north of the River Trail / 50' wide railroad line property. In the event of a conflict between this Section and other Sections of the Astoria Development Code, this Section shall control.*

1. Maximum building height is 28 feet.

2. Building height up to 35 feet is permitted when building stories above 28 feet are stepped back at least 10 feet in accordance with Section 14.060(C)(2).

3. *Exceptions to building height restrictions may be granted through provisions in Section 3.075."*

Section 14.060.C, Standards for On-Land Development, Stepbacks, in the Civic Greenway Overlay Zone, states

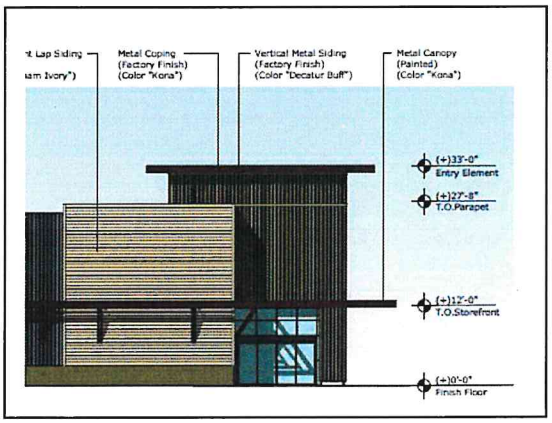
"1. Purpose.

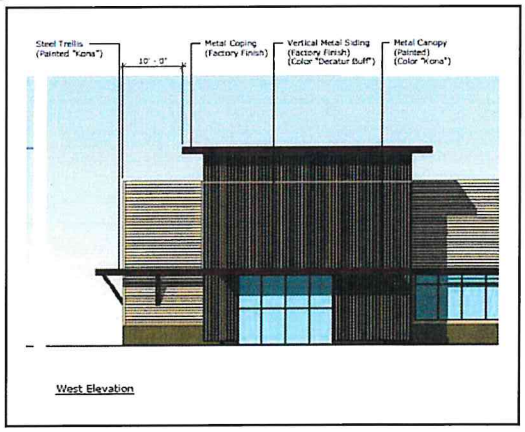
The purpose of a stepback is to allow for less obstructed views from above the building and to create a less imposing building scale as viewed from the street or parallel/adjacent trail. A stepback is also designed to allow more light down to the adjacent or fronting street, sidewalk, or trail.

2. Additional Building Height.

Where the height of a building or building addition is proposed to exceed 28 feet, at least that portion of the building exceeding 28 feet, shall provide a stepback of at least 10 feet from the front plane of the proposed building or building addition that faces the street or the River Trail."

Finding: The proposed building height is 27.7' to the top of the flat roof and 33' to the top of the tower element flat roof. This meets the criteria of 24' minimum. The LS Zone has a maximum height of 35' above grade. The Civic Greenway Overlay Zone allows a height of 35' with a 10' stepback for the portion above 28' fronting on a right-of-way and/or River Trail. The tower element facade along Commercial Street above 28' is stepped back 10' of unobstructed open area. The building meets the allowable height criteria.





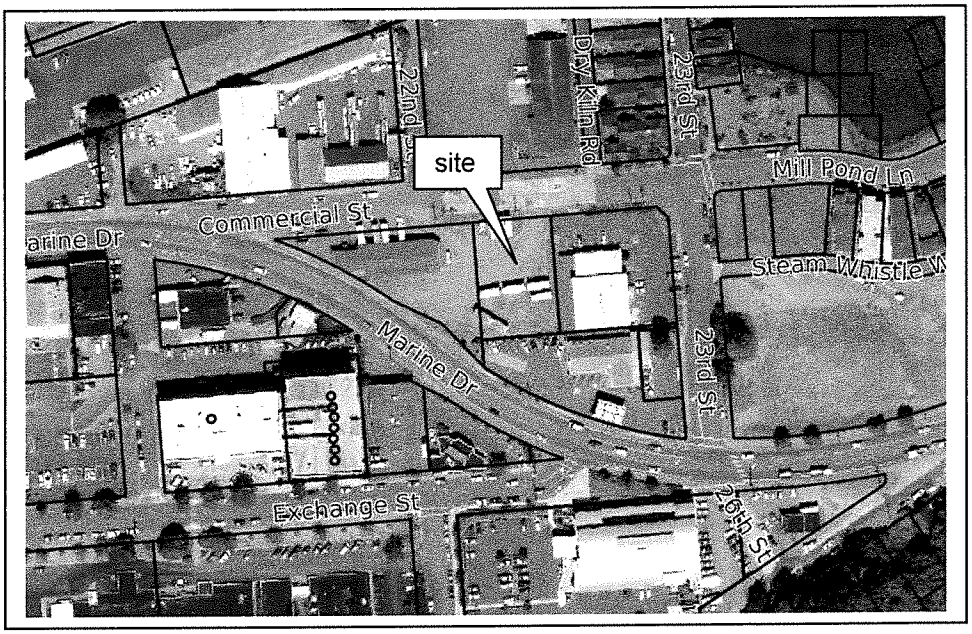
S. Section 14.030.B.3, Other Applicable Use Standards, Building Massing, in the Gateway Overlay Zone states that *"the height, mass, and scale of buildings should be compatible with the site and adjacent buildings. Use of materials*

should promote harmony with surrounding historic structures and the character of the waterfront."

Finding: The proposed building will be 16,000 square feet, one story with a small tower element at the entry. The buildings in the general area are as follows:

City Lumber, 2142 Commercial: store 10,260 sqft; upper sheds 5,800 sqft; lower shed 10,400 sqft; (total 26,460 sqft); one story
Walter Nelson wholesale, 2240 Commercial: 7,900 sqft; one story
Dr. Park Medical Center, 2120 & 2158 Exchange: 25,500 sqft; four story
CMH Pavilion, 2265 Exchange: 18,400 sqft; three story
Mini-mart/Laundry/Shell gas station, 2264 Marine: 6,100 sqft; one story
Astoria Co-op, 2350 Marine: 11,580 sqft; one story
Residence, 285 23rd: 3,200 sqft; two story

The existing buildings on the site include TP Freight at 2140 Commercial (5,000 sqft) and Napa Auto at 2275 Commercial (7,200 sqft) for a total of 12,200 square feet of buildings.



At 16,000 square feet, the proposed building would be comparable with City Lumber facility, Dr. Parks building, and the Pavilion, and would be slightly larger than the Astoria Co-op building. It would be substantially larger than the other buildings in the area. To envision the size of the building, the center lot as noted by "site" above is 15,000 sqft and the lot to the east where the building will be located is 22,300 sqft; therefore, the building would be just slightly larger than the center 15,000 sqft lot.

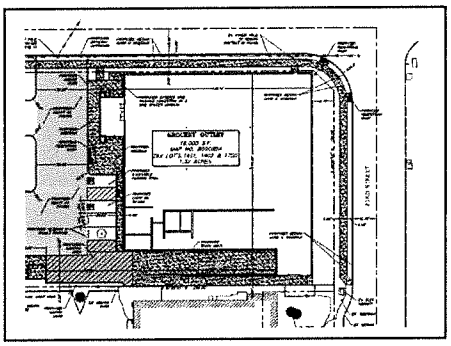
Buildings range from one to four stories tall and the proposed building would be one story at 28' tall. The other one-story buildings in the area are also approximately 20' to 28' tall.

While larger than some of the buildings in this area, with the mixture of building sizes and heights, and its location off Marine Drive on Commercial Street, the proposed building size and height would not be out of scale with the general development of the area.

The building would have horizontal smooth fiber cement siding and vertical corrugated metal siding. Other buildings in the area have wood and/or fiber cement panels, horizontal siding, corrugated metal, brick, and some cedar shingles. The proposed materials are compatible with the character of the waterfront in this area.

T. Section 14.060.B, Standards for On-Land Development, Stepbacks, in the Civic Greenway Overlay Zone, states *"A minimum view corridor width of 70 feet, centered on the right-of-way centerline, shall be provided on north-south rights-of-way between Marine Drive/Lief Erikson Drive and the Columbia River. Buildings shall be set back in order to achieve the 70-foot view corridor."*

Finding: The proposed building would be along 23rd Street and is proposed to be set back 14' from the 23rd Street property line. No structural encroachments shall be allowed within 5' of the property line other than approved landscaping. This criteria is met.



U. Section 14.030.E, Other Applicable Use Standards, Underground Utilities, in the Gateway Overlay Zone states *"This provision shall apply only to utility lines to be installed for new construction. Utility lines, including, but not limited to, electricity, communications, street lighting and cable television, shall be required to be placed underground. Appurtenances and associated equipment such as surface-mounted transformers, pedestal-mounted terminal boxes and meter cabinets may be placed above the ground, and shall be screened by sight obscuring fences and/or dense landscape buffers. The Design Review Committee may waive the requirements of this section if topographical, soil, or other conditions make such underground installations or screening of above ground equipment unreasonable or impractical. The applicant shall make all necessary arrangements with the serving utility or agency for underground installations provided hereunder; all such installations shall be made in accordance with the tariff provisions of the utility, as prescribed by the State Public Utilities Commissioner."*

Finding: All utilities are proposed to be underground. No surface mounted facilities are shown. The final site plan showing any surface facilities shall be reviewed and approved by the Planner prior to issuance of the building permit and shall be screened from view (Condition 6).

V. Section 14.030.D, Other Applicable Use Standards, Landscaping in the Gateway Overlay Zone, states

"1. Street trees should be planted within the right-of-way along both sides of the streets within the Gateway Overlay Zone.

a. Spacing should be 30 feet on center, depending on species and branching habit.

b. Minimum size of deciduous trees should be 2" caliper, with an upright form.

c. Mature branching height should be a minimum of 15'.

d. Durable tree grates and trunk protectors should be installed.

2. Areas between trees should be landscaped with a variety of shrubs and perennials, with an emphasis on flowering species."

Section 14.075.A.3, Landscaping, Street Trees, in the Civic Greenway Overlay Zone states *"Street trees are required to be planted within the right-of-way along both sides of the street in the Civic Greenway Overlay Zone in accordance with the provisions in this Section and those in Section 14.030.D.*

a. Maximum height for street trees along north-south streets between Marine Drive and the Columbia River is 45 feet.

b. Street trees along north-south streets between Marine Drive and the Columbia River shall have narrow profiles and/or be pruned to a maximum width of 15 feet.

c. Street trees along north-south streets between Marine Drive and the Columbia River shall be one of the columnar species listed in Section 3.125, unless otherwise approved by the Community Development Director.

d. Required street trees shall be maintained by the adjacent property owner and/or other identified entity. There shall be a maintenance agreement or other City approved agreement."

Finding: The applicant has been advised that street trees will be required on Commercial and 23rd Streets and Marine Drive. The applicant will need to work with the City Engineer on the location and installation of the trees within the right-of-way. A landscape plan for the required street trees and a draft maintenance agreement shall be reviewed and approved by the Planner prior to

issuance of the building permit. The trees shall be installed prior to occupancy of the building (Condition 7).

The TIS notes that visibility at the Marine Drive driveway is partially blocked by an existing street tree adjacent to the Mini-mart location. The TIS recommends that this tree be trimmed for safety. The applicant shall work with the City Engineer and the adjacent property owner concerning trimming of this tree at the applicant's expense. The tree shall be trimmed prior to occupancy of the building (Condition 8).

W. Section 14.075.A.2, Landscaping, Land side or upland standards, in the Civic Greenway Overlay Zone, states *"Landscaping is required in the Civic Greenway Overlay Zone in accordance with the provisions in this Section and those in Sections 3.120 to 3.125. The provisions in this Section apply to new construction or exterior renovations with a value of at least 20% of the assessed value of the structure, or in the event of installation of new parking areas. . .*

2. Land side or upland standards.

The following standards apply to landscaping along the frontage of parcels abutting the River Trail to the south.

a. Height and spacing.
- *1) Maximum spacing of trees is 20 feet on center.*
- *2) Maximum spacing of shrubs is five (5) feet on center.*
- *3) Ground cover landscaping is required in between shrubs and trees.*
- *4) Trees shall not exceed 35 feet in height at maturity."*

Section 2.979, Landscaped Open Area, in the LS Zone, states *"A minimum of 20% of the total lot area will be maintained as a landscaped open area."*

Section 3.110, Landscaping Required, states *"At the time a building permit is requested for new construction, or for remodeling with a value of at least 33% of the assessed value of the structure, or in the event of a change of use or installation of new parking areas, the property shall come into compliance with the landscape requirements and a landscaping plan shall be submitted to the Community Development Director. Such landscaping plan may also be used as a site or plot plan for the development, provided all information necessary for the site or plot plan is provided. The plan shall be of sufficient scale to show existing and proposed features, proposed materials, contours (where appropriate) and other features."*

Section 3.115, Review of Landscaping Plans, states *"The landscaping plan shall be reviewed by the Community Development Director to determine if it meets the quantitative requirements of the Code. Landscaping in conjunction*

with Uses Permitted Outright may be approved by the Community Development Director. Landscaping in conjunction with Conditional Uses shall be reviewed by the Planning Commission as part of the review under Section 11.010. In such cases, the Planning Commission may review schematic plans and the final plans may be reviewed by the Community Development Director. No Certificate of Occupancy or other final approval shall be issued by the building official or the City until the landscaping is installed as specified by the Planning Commission or Community Development Director. Minor changes in the landscape plan may be allowed by the Community Development Director, so long as they do not alter the overall character of the development."

Section 3.125.A, Native Plants, Use of Native Plants, states *"The following shall apply to landscaping within the Riverfront Vision Plan Overlay Area Zones.*

A. Use of Native Plants.

Landscaping shall consist of native plants from the list of recommended native trees, shrubs, grasses and groundcover listed in Section 3.125(B), or that are otherwise determined to be native plants in documents such as the following: Flora of the Pacific Northwest (1973) by Hitchcock & Conquist; Gardening with Oregon Native Plants, West of the Cascades (2008) by Oregon State University Extension Service; or a comparable document recommended by the City staff will be the reference for determining other native plants.

The Community Development Director, or designee, may approve plants that are not native if it is determined that the plant better addresses environmental constraints, habitat value, transparency, height, resilience, and maintenance needs."

Finding: The applicant has not submitted a landscape plan but does indicate landscaped areas on the site plan at 8,695 sqft on-site and 4,215 sqft within the right-of-way for a total of 12,910 square feet. The site is approximately 57,500 square feet and 20% landscaping would be 11,500 square feet. The applicant shall submit a landscaping plan in compliance with the Development Code requirements prior to issuance of the building permit to be reviewed and approved by the Planner. Landscaping shall be installed prior to occupancy of the building (Condition 9).

X. Section 3.120.A, Landscaping Requirements, states *"Specific requirements governing the placement and maintenance of landscape materials are as follows:. . .*

7. Planting areas shall be designed to separate parking lots from the sidewalk and street and shall contain a mixture of trees and shrubs, except where the presence of chairwalls or public utilities makes the

planting infeasible, as determined by the City Engineer, in which case concrete, stone, or other manufactured containers may be used.

8. *Parking areas with 20 spaces or more shall have a minimum of one landscaping divider per ten (10) parking spaces. Each ten (10) parking spaces shall be bordered by a landscaped area. Such area shall consist of a curbed planter of at least three (3) feet by 16 feet, or at least 48 square feet. Each planter shall contain at least one (1) tree, along with hedge or shrub material.*

9. *For new construction, parking areas shall be separated from the exterior wall of a structure, exclusive of paved pedestrian entranceways or loading areas, by a strip of landscaping material. All planting areas shall be protected by the use of concrete bumper blocks affixed to the paving.*

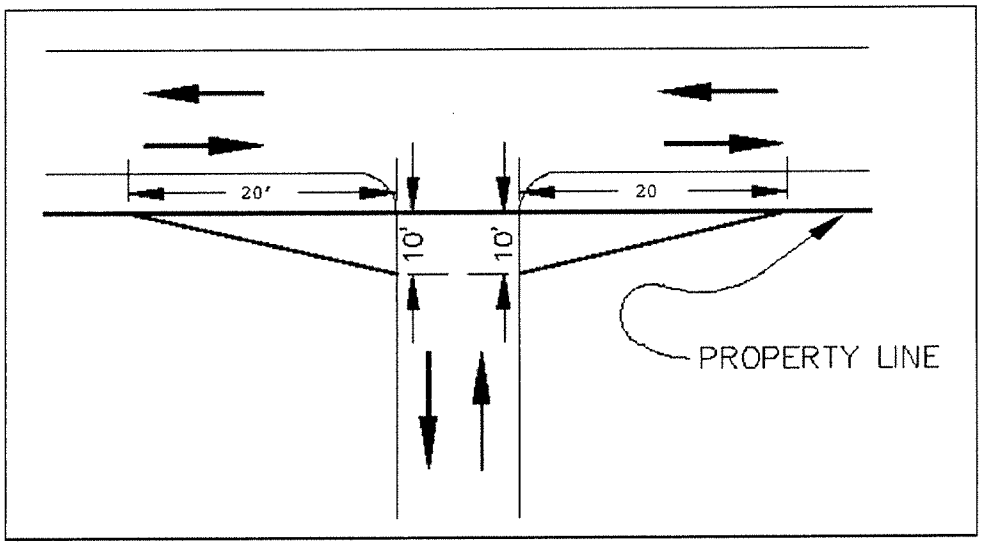
13. *Up to 50% of the landscaping requirement may be satisfied by the use of City rights-of-way for landscaping, as approved by the City Engineer. The property owner shall be responsible for the maintenance of such landscaping. (See City Code 2.350 through 2.353.)"*

Section 7.110.G.1, Parking and Loading Area Development Requirements, Landscaping, states *"Landscaping shall be provided as required in Section 7.170 and Section 3.105 through 3.120."*

Section 7.170, Landscaping of Outdoor Storage or Parking Areas, states *"A minimum of 5% of the gross parking lot area shall be designed and maintained as landscaped area, subject to the standards in Sections 3.105 through 3.120. This requirement shall apply to all parking lots with an area of 600 square feet or greater. Approved sight obscuring fences or vegetative buffers shall be constructed where commercial parking lots abut Residential Zones. The minimum 5% landscaping shall be counted as part of the total landscaping required for the property."*

City Code Section 6.100.5, Vision Clearance Area, Non-residential driveways, states *"A vision clearance area shall consist of a triangular area, two sides of which are 20-foot and 10-foot lengths along the property line and edge of the driveway, respectively, and the third side of which is a line across the corner of the lot connecting the ends of the other two sides (Figure 4)."*

Figure 4: Vision Clearance Area for Non-Residential Driveways



Finding: The applicant has not submitted a landscape plan but does indicate landscaped areas on the site plan at 8,695 sqft on-site and 4,215 sqft within the right-of-way for a total of 12,910 square feet. Up to 50% of the landscaping may be in the right-of-way. The site requires 11,500 square feet of landscaping and a maximum of 5,750 square feet may be located in the right-of-way.

Parking areas are required to be separated from pedestrian areas with landscaping. The site plan indicates landscaping between the parking area and the pedestrian sidewalk in the right-of-way. As noted in Sections 14.030.A.1 and 14.030.C above, the parking area should be located behind the building and not adjacent to pedestrian areas. Due to the lot configuration, the parking lot is proposed to be located at the focal point of the site adjacent to the Commercial Street and Marine Drive pedestrian walkways. However, to mitigate this location, landscaping should be installed to be sufficient to buffer the view of the parking area from the adjacent rights-of-way (Condition 5). However, the landscaping shall also comply with the Vision Clearance Area as required by City Code.

Not all landscaping requirements are being addressed in the Findings of Fact as they are generally reviewed administratively. However, the above issues were specifically addressed as they deal with mitigation of design review issues that are reviewed by the Design Review Commission. The Planner shall review and approve the landscape plan prior to issuance of the building permit and installation to assure compliance with all zoning requirements for landscaping (Condition 9).

Y. Section 3.215, Outdoor Storage Area Enclosures, states

1. *Outdoor Storage Area Enclosure Required.*

   Outdoor storage areas shall be enclosed to provide physical and/or visual buffers. Required enclosures shall be maintained in such condition as to not become so defective, unsightly, or in such condition of deterioration, disrepair, or unsanitary condition that the same causes potential depreciation of the values of surrounding properties or is materially detrimental to nearby properties and/or improvements.

2. *Applicability.*

   The provisions of this Section shall apply to all new construction or major renovation of the existing structures, where "major renovation" is defined as construction valued at 25% or more of the assessed value of the existing structure, unless otherwise specified by the provisions in this Section. The provisions shall also apply to all new storage areas; relocation of an existing storage area; and/or expansion of an existing storage area.

3. *In addition to other Code requirements such as Historic and/or Design Review, enclosures shall be provided as follows:*

   a. *Outdoor storage areas shall be enclosed by appropriate vegetation, fencing, or walls, except for single-family and two-family residential use.*

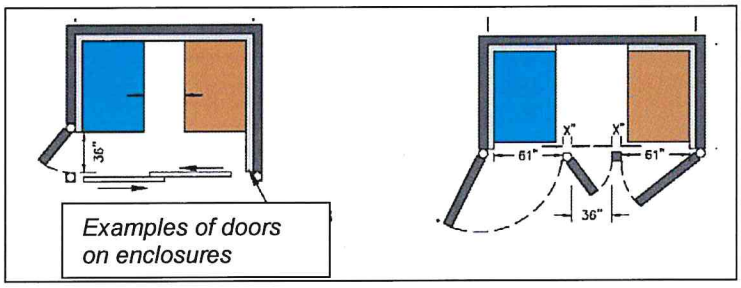
   b. *Section 3.215 does not apply to outdoor retail sales areas.*

   c. *An enclosed storage area visible from other properties and/or rights-of-way shall be required to include a cover to buffer the view from other properties and/or rights-of-way. The minimum clearance inside a covered enclosure shall be 7'6" with a 6'8" high entryway for pedestrian access.*

   d. *Enclosed storage areas greater than 7' tall shall contain a pedestrian access door in addition to the main service doors.*

   e. *The design and location of any enclosed solid waste disposal storage area shall be reviewed and approved by the collection service company.*

   f. *Unless approved by the Planner, access to enclosed storage areas shall not be blocked by parking spaces.*



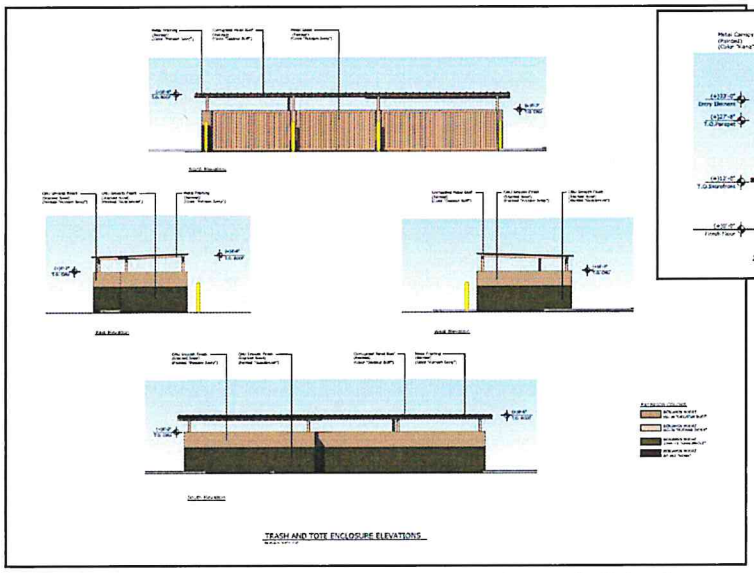
Examples of doors on enclosures

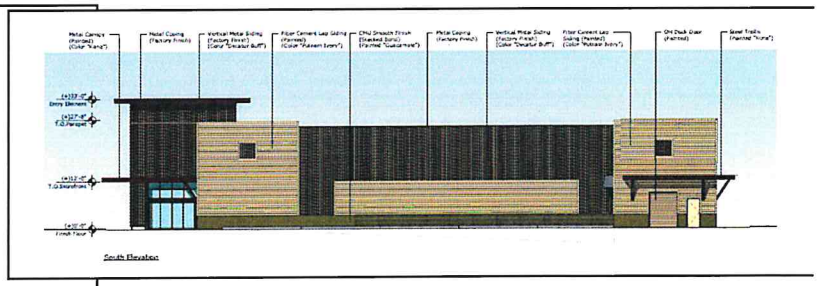
Covered storage area

Open storage area"

Section 14.030.G.3.b, Other Applicable Use Standards, Exterior Wall Treatments / Siding, states "*Solid waste disposal area and mechanical equipment enclosures should be sided to match the main structures.*"

Finding: The proposed solid waste disposal area is approximately 771 square feet (approximate 19' x 44'); 6.2' tall with a corrugated metal roof over the full structure at 7' tall. The structure is proposed to be smooth, stacked CMU blocks, with metal cargo doors. The main structure is proposed to have CMU blocks on the lower 4' of the structure and a mixture of horizontal fiber cement and vertical corrugated metal siding. The applicant proposes to vary the paint colors on the enclosure, but over time, paint colors can change. The enclosure should have siding to match the main structure. CMU block is a "discouraged" material, but minimal use on the lower portion of the structure may be acceptable with approved materials on the upper sections (Condition 10).





The enclosure would be visible from a right-of-way and therefore needs to have a cover. Structures with a cover are required to have at least 7.5' interior clearance and contain a man door. The applicant shall submit a revised design

for the solid waste disposal storage enclosure to comply with the requirements of Section 3.215 and 14.030.G.3.b and shall work with the solid waste disposal company to verify size and location of the facility. The plans shall be reviewed and approved by the Planner prior to issuance of the building permit (Condition 10).

Z. Section 3.158.B, Legal Lot Determination, Combining of Lots, states *"When a project will extend into adjacent lots, parcels, or tracts whether to meet lot size requirements, for the placement of structures or accessory uses, or to provide for requirements such as parking, the Community Development Director or Planner shall require that the properties be combined either through a Property Line Adjustment or by recording a deed or memorandum containing a covenant preventing the separate sale, transfer, or encumbrance of either property except in compliance with building codes, City of Astoria Development Code, and other applicable land use regulations."*

Finding: The applicant has been advised of the need to combine the lots. Prior to any construction, the applicant shall submit a Legal Lot Determination (LLA) permit to the Community Development Department to combine the lots on the deed. Combining of lots does not require public review but will be required to be completed prior to occupancy of the building and final inspection (Condition 11).

V. CONCLUSION AND RECOMMENDATION

The request in balance meets the Design Review Guidelines. Staff recommends approval of the request with the following conditions:

1. The false windows shall be installed and maintained to appear as true windows.

2. Additional landscaping shall be installed to buffer view of the south elevation of the main structure from the right-of-way.

3. The parking lot and wall lighting shall not cast a glare onto adjacent properties or rights-of-way.

4. The applicant shall submit site plans for the building wall lighting and parking lot lighting fixtures to be reviewed and approved by the Planner prior to issuance of the building permit.

5. Landscaping between the parking area and the rights-of-way / pedestrian walkways shall be sufficient to buffer the view of the parking area from the adjacent rights-of-way.

6. The final site plan showing any surface facilities shall be reviewed and approved by the Planner prior to issuance of the building permit and shall be screened from view.

7. A landscape plan for the required street trees and a draft maintenance agreement shall be reviewed and approved by the Planner prior to issuance of the building permit. The street trees shall be installed prior to occupancy of the building.

8. The applicant shall work with the City Engineer and the adjacent property owner concerning trimming of the street tree on Marine Drive adjacent to 2264 Marine Drive at the applicant's expense. The tree shall be trimmed prior to occupancy of the building.

9. The applicant shall submit a landscaping plan in compliance with the Development Code requirements prior to issuance of the building permit to be reviewed and approved by the Planner. Landscaping shall be installed prior to occupancy of the building.

10. The applicant shall submit a revised design for the solid waste disposal storage enclosure to comply with the requirements of Section 3.215 and 14.030.G.3.b and shall work with the solid waste disposal company to verify size and location of the facility. The enclosure shall be sided to match the main structure. The plans shall be reviewed and approved by the Planner prior to issuance of the building permit.

11. The applicant shall submit a Legal Lot Determination (LLA) permit to the Community Development Department prior to issuance of the building permit, to combine the lots on the deed. Combining of lots shall be required to be completed prior to occupancy of the building and final inspection

12. Any change in design, material, site plan, or modifications to the proposed plans as described in this Staff Report shall be submitted to the Community Development Department for review and approval.

13. The applicant shall obtain all necessary City, State, building permits, or other permits as needed.

14. The bicycle storage area shall have siding to match the main structure to be reviewed and approved by the Planner.

15. The bicycle storage area shall have roof of metal or other approved material to match the main structure to be reviewed and approved by the Planner.

DR-19-03

Tiffany Taylor

From: Stewart Bell <stewartb@pacifier.com>
Sent: Saturday, July 20, 2019 10:22 AM
To: Tiffany Taylor
Subject: design review for Grocery Outlet

*****EXTERNAL SENDER*****
Dear Ms. Taylor,

I'm writing to oppose the application for approval from Grocery Outlet to build a store in the Gateway district in Astoria.

In the Gateway Overlay, development is intended to complement downtown Astoria and the surrounding community. But Grocery Outlet's corporate approach is apparently one-size-fits-all. Its building plan for Astoria is no different from its building in Rainier and other towns. Have you driven past its Rainier store? It is the most eye-catchingly ugly store on the entire Hwy 30 trip into Portland, in my opinion. It sticks out like a sore thumb. Furthermore, it can't be justified on the basis of need when a larger, locally and cooperatively owned grocery store is nearing completion right across the street from their proposed location. It is a classic case of out-of-town corporate interests moving in to take advantage of local initiation and legwork, like all the hotels proposed after The Cannery Pier Hotel took all the risks.

Please, just say no to Grocery Outlet.

Thank you,
Stewart Bell
240 Lincoln Street, Astoria

CITY OF ASTORIA
Founded 1811 • Incorporated 1856

MEMORANDUM • COMMUNITY DEVELOPMENT

DATE: **July 19, 2019**

TO: **Interested Parties**

FROM: **Tiffany Taylor**

SUBJECT: **PUBLIC COMMENTS FOR THE DESIGN REVIEW COMMISSION (DRC)**

Please find attached Public Comments our office has received for Design Review Request DR19-03, up for review at the next DRC meeting, scheduled for August 1, 2019.

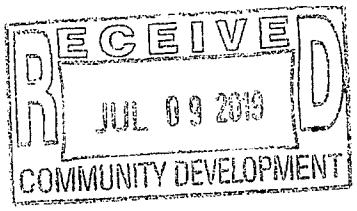
The public hearing remains open, and any additional comments will be made available for your review.

City Hall • 1095 Duane Street • Astoria, OR 97103 • Phone 503-338-5183 • Fax 503-338-6538
ttaylor@astoria.or.us • www.astoria.or.us

[illegible]

Tiffany Taylor

From: Liz Bartell <bartell.liz@gmail.com>
Sent: Tuesday, July 9, 2019 5:30 PM
To: Tiffany Taylor
Subject: Food Outlet



*****EXTERNAL SENDER*****

Please, no Food Outlet. Thank you.

Sent from my iPhone

Tiffany Taylor

From: Laurie Caplan <lcaplan2010@gmail.com>
Sent: Tuesday, July 9, 2019 6:03 PM
To: Tiffany Taylor
Cc: Brett Estes; Rosemary Johnson
Subject: CORRECTED: Grocery Outlet application

*****EXTERNAL SENDER*****

CORRECTED LETTER

Dear Members of the Design Review Committee, At first I thought it was an April Fool's joke that Grocery Outlet wants to open a store a block away from the new Astoria Co-op. But I'm not laughing now.

Astorians take pride in our sense of place. We're an outstanding example of a small town that has many local businesses as the foundation of our local economy. Let's keep it that way! One stellar local business is the Astoria Co-op. Local residents started the Co-op decades ago. Since then, the Co-op has expanded its membership and shopper base many times the original and recently raised $1.5M in six weeks to kick off the building of the new store, at 23rd and Marine Drive. I believe most of that start-up money came from local residents who value local businesses, especially those like the Co-op that give back so generously to its employees and our town.

When a similar outlet was proposed for Highway 30 east of Astoria, it was turned down because it duplicated services already available nearby and was a national chain with no local ties. In fact, the outlet's presenters at the county meeting hardly knew anything about that specific part of highway or the nearby communities of Svensen, Knappa, and Brownsmead. I imagine that's true of Discount Grocers' staff.

I'm all in favor of competition, but this isn't competition. This is one of several national chains willing and eager to undercut, if not eliminate, local businesses.

Please support Astoria's local businesses and reject this application.

Thank you for tackling the many difficult decisions affecting all of us!

Best,
Laurie Caplan
766 Lexington Avenue
Astoria
503-338-6508 landline

Tiffany Taylor

To: Greg Lavin
Subject: RE: Grocery Warehouse proposal

From: Greg Lavin [mailto:greglavin23@gmail.com]
Sent: Friday, July 19, 2019 12:13 PM
To: Tiffany Taylor <ttaylor@astoria.or.us>
Subject: Re: Grocery Warehouse proposal

*****EXTERNAL SENDER*****

We are members of the Astoria Co-op and have admitted biases in favor of the Co-op's beautiful new store at 23rd and Marine, and sternly oppose the Grocery Outlet development proposed for the imediate area. In working toward obvious needs for expansion, the Co-op went to great measures to accommodate the concerns of the community, especially the residents and owners in Mill Pond. Our view is that the new Co-op building and site are going to be wonderful contributions to the local area and community of Astoria, overall, and add a particularly classy addition the the eastern gateway to the city. We find little in the proposed Grocery Outlet plan that attends to the Gateway and Civic Greenway criteria for design, location, or traffic considerations. We regard the proposed "dollar store" grocery model, as submitted, as simply wrong for that site.

Our sense is that in an area of highly limited available space the proposal is being made primarily in the spirit of "wherever we can find to put it," and the situation and design offer nothing to suggest the plan is appropriate to the City's criteria for that design-sensitive location. For many reasons, it seems to us far better to suggest placement of such a business in the developing commercial area of West Marine Drive near where the Napa Auto Parts has relocated, and where no major grocery stores currently exist.

Thank you for considering our views,

Greg Lavin and Robin Rodgers
Astoria

Greg

From: Nelle Moffett
To: Tiffany Taylor
Subject: Opposed to Grocery Outlet store in Gateway - or anywhere in Astoria
Date: Friday, July 19, 2019 10:54:53 AM

*****EXTERNAL SENDER*****

I am writing to express my opposition to the proposed Grocery Outlet store in Gateway. We do not yet know the full impact of the new Co-op store in that area and it is too soon to add more traffic. Let's first allow the Co-op to open and get settled in before adding more complexity to this area, which already becomes easily congested. Astoria has limited resources and opportunities for businesses, therefore we need to move slowly and take our time to grow rationally and in keeping with the historic and health conscious nature of the town.. I am not interested in the chains such as Dollar General and Grocery Outlet coming into Astoria. There are plenty of other places that would welcome this type of business. Astoria has The Market and the Peter Pan Market which need our local support.

Thank you,
Nelle Moffett

From: Jan Mogenson-Jones
To: Tiffany Taylor
Subject: Grocery Outlet
Date: Thursday, July 18, 2019 10:23:50 AM

*****EXTERNAL SENDER*****
Attn: Astoria Planning Dept

As a lifelong resident of Astoria, I want to express my **support** for the addition of the **Grocery Outlet** store to our community. I am, however, concerned about the proposed location. With the addition of the new Astoria Co-Op at the east end of town, the traffic will be increased to an even busier level! I am assuming that crosswalk lights and traffic light or turn lanes are being considered in that area now.

As others have suggested I'm sure, the west end (South slope) of town (possibly the old Astoria Ford location) would be a better fit since there is less business (thus less traffic) and a great need for a grocery store on that end of town.

Again, I want to express my support for the addition of a Grocery Outlet store to the Astoria community! We have one grocery store in a community of 10,000, which forces us to do more shopping in Warrenton because of choices.

Jan Mogenson-Jones

DRM-03

Tiffany Taylor

From: Robert Paulmenn <robertpaulmenn1@gmail.com>
Sent: Wednesday, July 17, 2019 5:17 AM
To: Tiffany Taylor
Subject: grocery outlet

*****EXTERNAL SENDER*****
Design Review Committee-

The placement of this store at that location is a terrible idea. The bottleneck that I believe will occur will be ridiculous. We already see backups from town up to the Crest Motel on weekends and most afternoons now and with customers trying to turn in and out onto the highway as the highway department has mandated, no one will be moving at all. And trying to squeeze a 16,000 sq.ft. building plus parking doesn't seem to make much sense.

Don't allow this! Just because they can doesn't mean they should!

There is plenty of room on West Marine!

Thank you,

Robert Paulmenn and Mary Lou McAuley

robertpaulmenn1@gmail.com

Tiffany Taylor

From: Brenda Penner <bspenner418@gmail.com>
Sent: Thursday, July 18, 2019 10:10 PM
To: Tiffany Taylor
Cc: Matthew Stanley
Subject: Grocery Outlet plan

*****EXTERNAL SENDER*****
Dear Ms. Taylor,
I have grave concerns about another grocery store in the old Napa Auto Parts venue. Traffic patterns will be nothing but problematic.

The hospital employees park in the neighborhood, the Gas station/beer growler store has traffic.Pedestrians will be more at risk. The congestion will be terrible.

This is not a good place for more parking and traffic. As a citizen of Astoria, I suggest the planning commission deny Grocery Outlet's plan.

Brenda Penner
999 Ridge Dr
Astoria, OR
503-791-5490
--
Brenda S. Penner P.O. Box 544, Astoria, OR 97103 503-325-5305 cell 503-791-5490

7-11-19

CITY PLANNING;

DEAR FOLKS, I HAVE WRITTEN BEFORE MANY TIMES, ABOUT CO+OP — NOW IT IS LOOKING REAL GOOD!

I DO HAVE SOME COMMENTS THO- ABOUT GROCERY OUTET'S "COMING TO A SPACE NEAR YOU"

WE HAD A GROCERY OUTLET, IN GRANTS PASS & IT WAS A DK SOURCE FOR cheap WINE AND products CLOSE TO pull DATES — ~~from~~ hopefully THIS HAS CHANGED. - AS TO how TO ACCESS THIS STORE, IT MUST REQUIRE A LITE @ 23RD !!- THEN CO-OP AND OUTLET CUSTOMERS CAN ~~SE~~ ~~SAFELY~~ SAFELY TURN DOWN 23RD -G. OUTLET CAN DO SAME AS Co-op BY HAVING LOT ACCESS W/ HARD

over

AND CARS CAN RUN TO BACK of STORE SAME AS Co-op.

TRAFFIC @ 23rd, on A CURVE, plus TURN LANE TO HOSPITAL, NEEDS A LITE AND STORE CAN PAY FOR IT.
- NO Good TO CROSS COMMERCIAL IN FRONT OF CITY LUMBER, AN TOO MANY CARS WILL CAUSE BIG TROUBLE ON CURVE GOING WEST.

Dick Davis

CITY OF ASTORIA
Founded 1811 • Incorporated 1856

COMMUNITY DEVELOPMENT

RECEIVED
JUN 27 2019
COMMUNITY DEVELOPMENT

☑ Fee Paid Date 7/1/19 By NA TT
Fee: $750.00

DR 19-03

DESIGN REVIEW >25,000 Project Value

Using → 2190 ~~2190~~ Marine Drive, Astoria, OR 97103

Property Address: 2275 Commercial Street, Astoria, OR 97103

Lot N portion Lot 1, 2, 3 Block 128 Subdivision Shively
1-6 Block 127 & vacated portions Duane, 22nd.

Map 8DA Tax Lot 1401, 1402, 1700 Zone LS, Gateway Overlay, Civic Greenway Overlay

Applicant Name: MMCG GOI Astoria, LLC

Mailing Address: 6600 Paige RD, STE 224, The Colony, TX 75056

Phone (214) 308-0008 Email: dd@maincg.com

Property Owner's Name: Heestand Family, LLC

Mailing Address: 1400 Vibar Cv, Round Rock, TX 78681

Phone: (512) 669-9577 Email: billheestand@protonmail.com

Signature of Applicant: [signature] Date: 6-26-2019

Signature of Property Owner See Attached Letter of Auth Date:

Proposed Construction: CMU building with fiber cement board & vertical metal siding, TPO roofing

Site Dimensions & Square Footage: 1.32 acres total or 57,499 square feet

Building Square Footage: 1st Floor: 16,000 SF. 2nd & 3rd Floor: N/A Garage: N/A

Accessory Building Information: N/A

FILING INFORMATION: The Design Review Committee meets on the first Thursday of the month, as needed depending on date of applications. Complete applications must be received by the 1st of the previous month. *A pre-application meeting with the Planner is required prior to the acceptance of the application as complete.* Only complete applications will be scheduled on the agenda. Your attendance at the Design Review Committee meeting is recommended.

For office use only:			
Application Complete:		**Permit Info Into D-Base:**	
Labels Prepared:		**Tentative DRC Meeting Date:**	
120 Days:			

All information concerning construction materials, design, dimensions, etc. is REQUIRED. If submitting large format plans, please also submit a reduced copy at 11" x 17" for reproducing.

Briefly address each of the Design Review Guidelines and state whether the project complies with the guideline, if applicable, and why this request should be approved. **Please provide manufacturer information and/or detailed information for use of any material or design not selected from the "Encouraged" list in the Design Guidelines.** (Use additional sheets if necessary.):

1. **Building Form.**
   Basic Shape: 131'-4" deep X 124'-0" wide X 27'-4" tall

   Porches & Balustrade - Design, Dimension, Features, Materials: N/A

   Balconies & Balustrade - Design, Dimension, Features, Materials: N/A

   Other: Front entry element, 40'-0" w X 17'-0" deep X 33'-0" tall, vertical metal siding painted Decatur buff

2. **Windows.**
   Material: 2"x4.5" Aluminum storefront system with 1' insulated low "E" glazing
   Divided Windows (true divided, external muntins, etc): True divided system

   Operation (casement, single hung, etc.): Fixed storefront system

   Size & Material of Exterior Casings (minimum 5/4" x 4"; provide detail diagram): 2x4 wood casing, Painted
   Other:

3. **Exterior Wall Treatments.**
   Material & Dimensions of Siding (note if material is smooth or textured): Main Body: fiber cement board LAP siding w/ 6" exposure, painted, corner treatment: vertical metal siding.

   Decorative Features: Steel trellis on 3-sides

   Other:

4. **Doors.**
   Material & Design: Steel man doors, steel overhead coiling doors, aluminum sliding entrance system
   Other:

5. **Roof Elements.**
   Style and Pitch of Roof: Single slope,1/4"/FT TPO membrane system over rigid insulation over metal deck
   Material:
   Color: White
   Decorative Features (eave brackets, etc): N/A

   Other:

6. **Garage.**
Garage Door Material & Design: N/A
Window Material & Design: _____
Roof Style & Material: _____
Other: _____

7. **Signs.**
Dimension & Square footage: See attached sign package.
Location: _____
Type, Material & Design: _____
Other: _____

8. **Exterior Lighting.**
Fixture & Lamp Design: Single & 2 head pole mtd fixtures & wall mtd. By mester, LED
Location: Wall mounted by loading dock & general parking area
Other: _____

9. **Other Design Elements.**
(Fences, out buildings, corner boards, belt course, etc. with dimensions): 4'-0" high CMU wainscot, stacked bond pattern on all 4 – sides of building
_____

10. **Building Orientation.**
To fit building to our unique shaped lot the building is parallel and perpendicular to 23rd Street and Commercial Street.
_____

11. **Building Massing.**
Building to Lot Ratio: NA
Other: _____

12. **Access and Parking Design.**
Number of Off-street Spaces: We have 47 total parking stalls on site. Access TIA study has been Provided with our submittal. We have two access points off Commercial Street and one off of Marine Drive.
Other: _____

13. **Landscaping.**
Per code we are required to have 20 percent landscaping or 11,500 sf. We have 8,695 sf onsite and 4,215 sf within the ROW for a total of 12,910 sf.
_____

14. **Underground Utilities.**
We will be undergrounding the power lines adjacent to our building.
_____

PLANS: A site plan indicating location of the proposed structure on the property is required. Diagrams showing the proposed construction indicating style and type of materials proposed to be used are required.

LETTER OF AUTHORIZATION

March 19, 2019

From: Property Owner
Heestand Family, LLC
c/o William Heestand
1400 Vibar Cv
Round Rock, TX 78681
M: (512) 669-9577
E: billheestand@protonmail.com

To: Main & Main Capital Group, LLC
c/o Dan Dover
6600 Paige Road Suite 224
The Colony, TX 75056

RE: Proposed: Astoria, OR Commercial Retail Project
Location: 2275 Commercial Street and 2190 Marine Street, Astoria, OR 97103
APN# 22918, 22919 and 22922

To Whom It May Concern,

The above referenced site is being developed as a commercial project. The entire property located at the above referenced addresses and parcel numbers will be used in relationship to the construction of that use.

Please accept this letter as authorization for the following entities to apply for, on my behalf, and on behalf of the property, any permits and/or approvals necessary for the development of the project:

Main & Main Capital Group, LLC
MMCG GOI Astoria, LLC
Tectonics Design Group
Woodblock Architecture, Inc.

Should you have any questions, please feel free to contact us directly on my mobile phone listed above.

Thank You,

William Heestand — 6-20-19

Heestand Family, LLC — Date

By: William Heestand

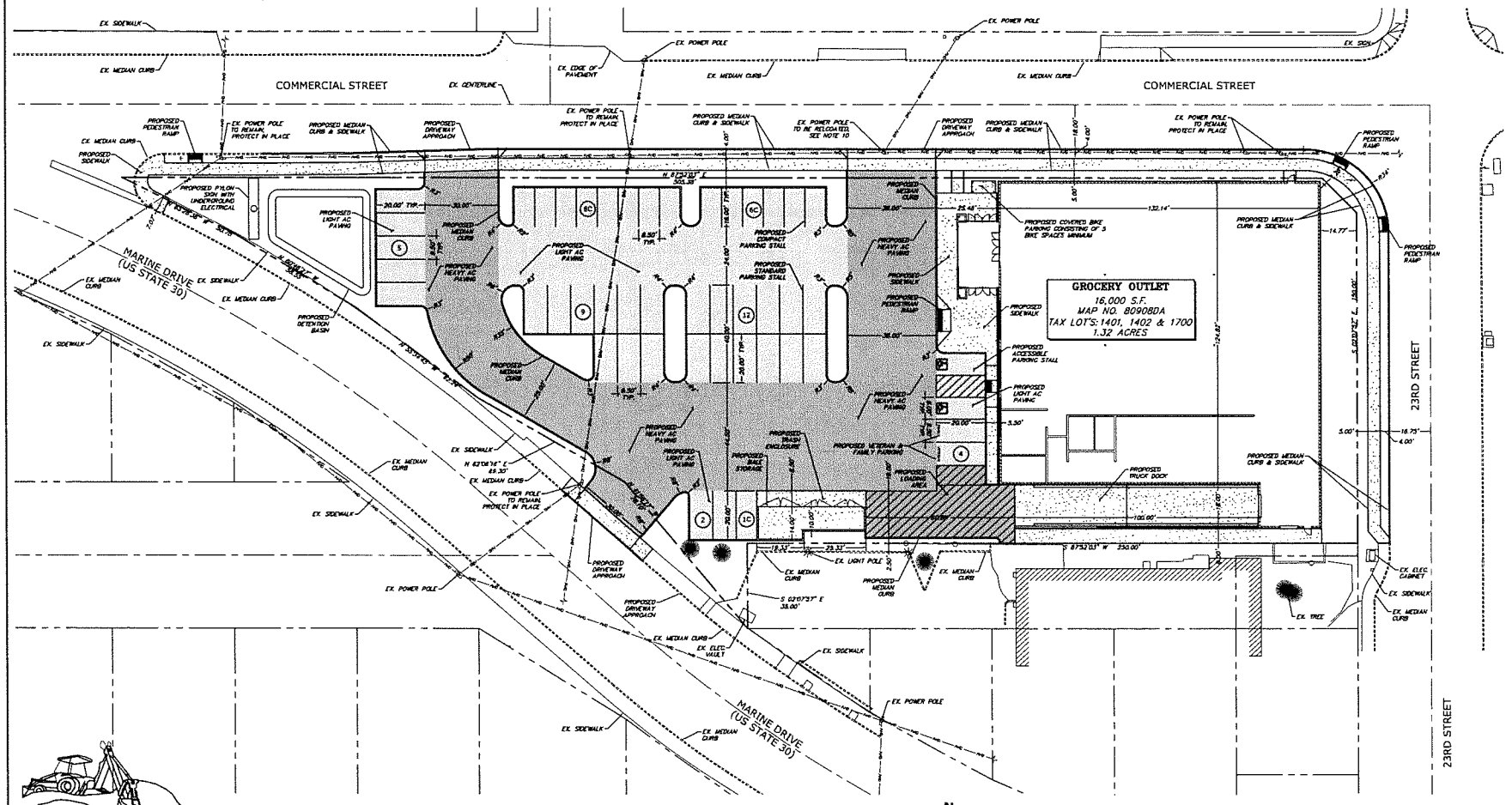
Its: Managing Member

PROJECT LEGEND

PARCEL MAP NUMBER:	80908DA
TAX LOT NUMBER'S:	1401, 1402 & 1700
PARCEL ZONING:	LS (LOCAL SERVICE)
PARCEL AREA:	1.32 ACRES (57,716 S.F.)
LOT COVERAGE:	
BUILDING AREA:	16,000 S.F. (27.7%)
ONSITE LANDSCAPE AREA:	8,488 S.F. (13.07%)
ROW LANDSCAPE AREA:	4,315 S.F. (7.30%)
SITE SETBACKS:	
FRONT YARD:	= 10 FEET
SIDE YARD:	= 10 FEET
BACK YARD:	= 10 FEET
PARKING REQUIREMENTS:	
1 SPACE PER 500 s.f. = 16,000/500 = 32 SPACES	
COMPACT SPACES PROVIDED = 15 SPACES	
STANDARD SPACES PROVIDED= 32 SPACES	
TOTAL SPACES PROVIDED = 47 SPACES	

NOTES:

1. PERMANENT STRIPING, BIKE LANES, AND MARKINGS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
2. PARKING SPACE LINES SHALL BE 4-INCH WIDE, WHITE STRIPES.
3. HANDICAP PARKING SPACES SHALL BE MARKED WITH A PAINTED BLUE FIELD 48-INCHES SQUARE CONTAINING A PAINTED WHITE WHEELCHAIR SYMBOL.
4. HANDICAP PARKING AISLE LINES SHALL HAVE 4-INCH WIDE WHITE STRIPES AT A 45 DEGREE ANGLE AND AT 18-INCHES ON CENTER.
5. PARKING STALL INSTALLATION AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE M.U.T.C.D. AND "ORANGE BOOK."
6. ALL EXTERIOR CONCRETE EXPOSED TO FREEZING AND THAWING CONDITIONS SHOULD BE RATED AT 4,500 PSI MINIMUM.
7. REFERENCE "GENERAL NOTES" ON SHEET C0.1
8. REFERENCE "ABBREVIATIONS" ON SHEET C0.1
9. REFERENCE "LEGEND" ON SHEET C0.1
10. COORDINATE RELOCATION OF EXISTING POWER POLES AND OVERHEAD LINES WITH LOCAL POWER PURVEYOR.



SITE PLAN

SCALE: 1" = 20'-0"

2 DAYS BEFORE YOU DIG CALL UBA TOLL FREE 1-800-227-2600

1"=20'-0" GROCERY OUTLET 1804_C21

DRAWN: N.D.J.
DESIGNED: N.D.J.
CHECKED/STAMPED: MATT K. BASMUSSEN, P.E.

STAMP: PRELIMINARY DESIGN

DESIGNER: TECTONICS DESIGN GROUP
735 Sandhill Rd., #250, Reno, Nevada 89521
www.tectonicsdesigngroup.com
tel 775-824-9988
fax 775-824-9986

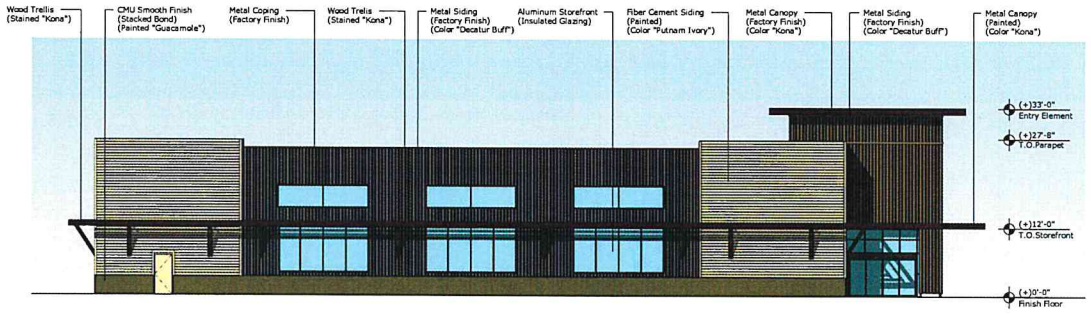
PROJECT/CLIENT: Grocery Outlet
Astoria, Oregon
MAIN & MAIN
6600 Paige Road, Suite 224, The Colony, TX 75056
#1.19041

SUBMITTAL RECORD:

DATE:	SUBMITTAL
6/28/19	DESIGN REVIEW

SHEET TITLE: SITE PLAN

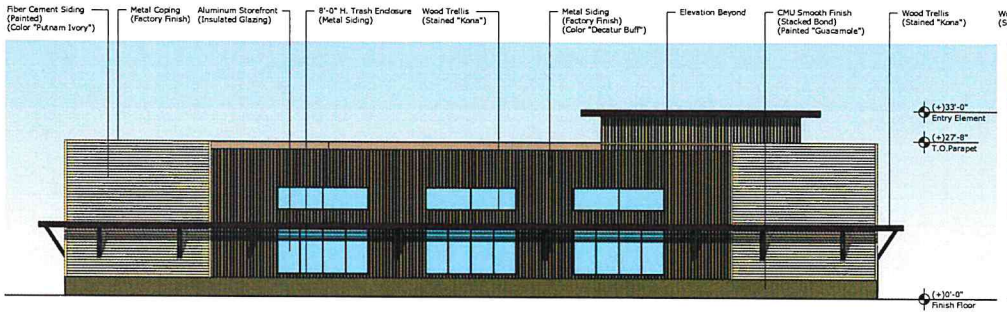
SHEET: C2.1



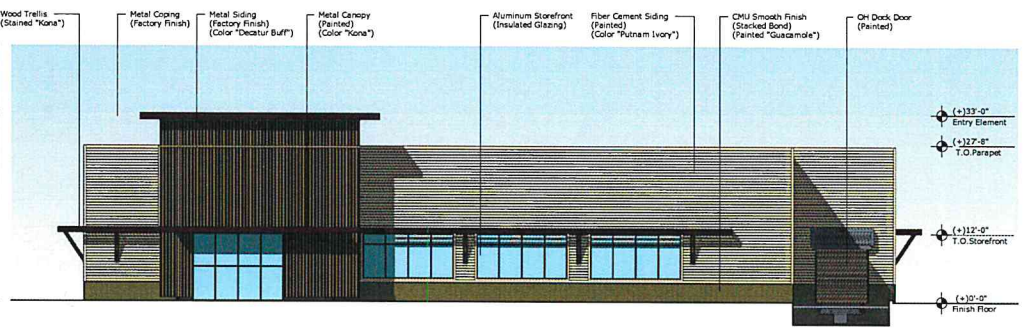
North Elevation

EXTERIOR COLORS

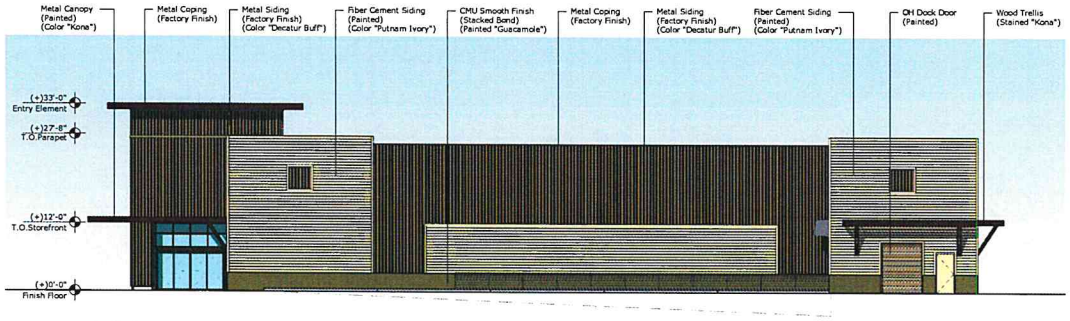
- BENJAMIN MOORE HC-38 "DECATUR BUFF"
- BENJAMIN MOORE HC-39 "PUTMAN IVORY"
- BENJAMIN MOORE 2144-10 "GUACAMOLE"
- BENJAMIN MOORE AF-165 "KONA"



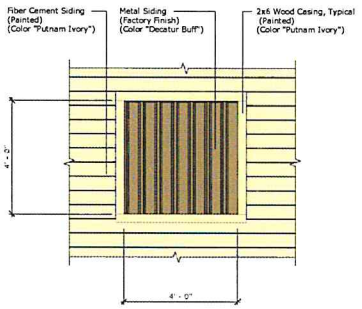
East Elevation



West Elevation



South Elevation



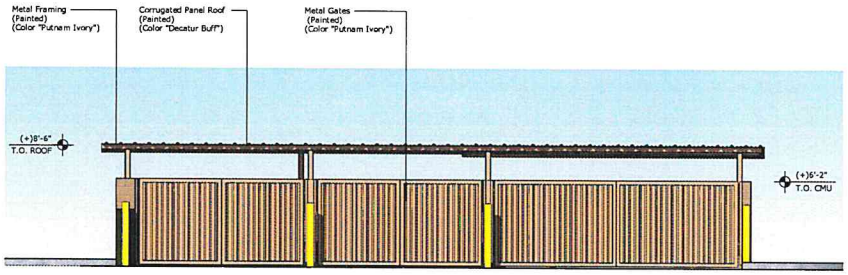
SOUTH ELEVATION-ACCENT

SCALE = 1/2" = 1'-0"

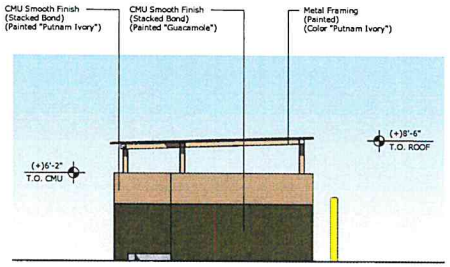
TECTONICS DESIGN GROUP

Conceptual Elevations | Astoria, Oregon | PR.3

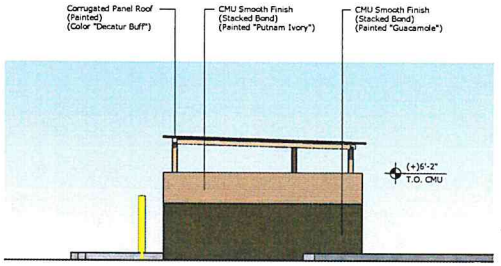
MAIN & MAIN



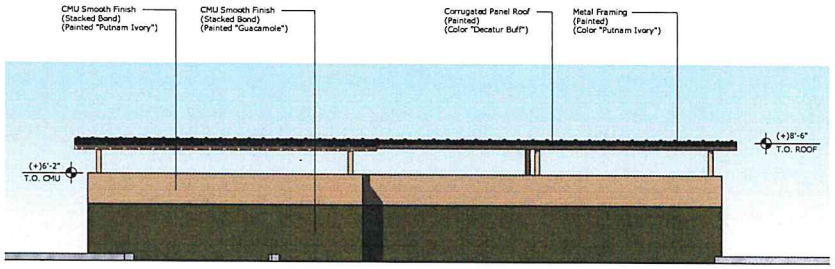
North Elevation



East Elevation



West Elevation



South Elevation

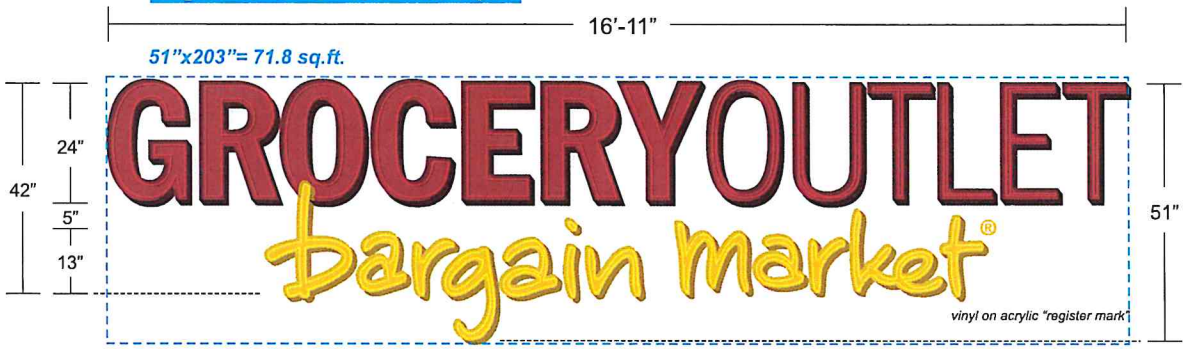
EXTERIOR COLORS

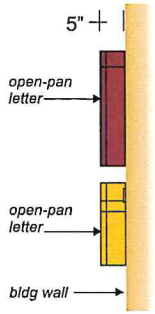
- BENJAMIN MOORE HC-38 "DECATUR BUFF"
- BENJAMIN MOORE HC-39 "PUTMAN IVORY"
- BENJAMIN MOORE 2144-10 "GUACAMOLE"
- BENJAMIN MOORE AF-165 "KONA"

TRASH AND TOTE ENCLOSURE ELEVATIONS

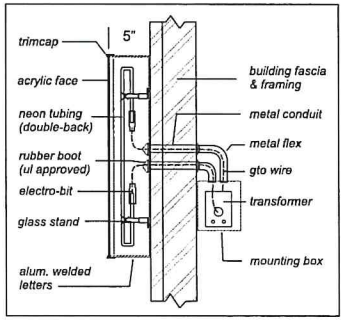
SCALE = 1/4" = 1'-0"

signs "A" & "B" tot.: 118.3 sq.ft.





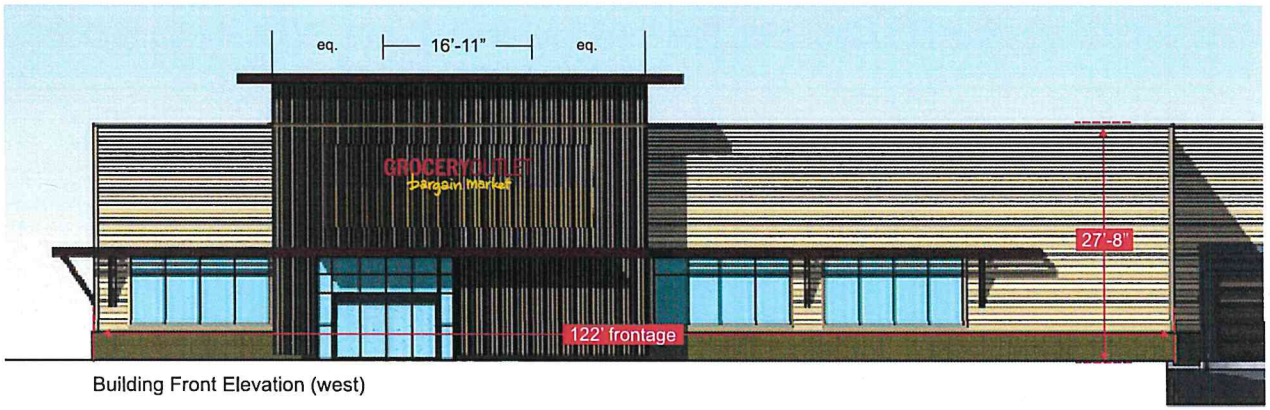
End View



Open P/C Exposed Neon Sign Detail

Sign A:
Open Pan Exposed Neon Illuminated Sign
Scale 1/2"=1'-0"

5" deep aluminum welded fabricated open-pan letters paint dark red #3630-73 & golden yellow #3630-125 (interior & exterior). clear acrylic faces with 3/4" trimcap - match color of letter. 10 mm exposed double-tube ruby red & sunflower yellow neon illumination. flush mount to building fascia.



Building Front Elevation (west)

1) This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.
2) The location of the disconnect switch after installation shall comply with the Srtical 600.6 (A)(1) of the National Electrical Code

USS UNITED SIGN SYSTEMS
C.S.C.L. # 718965
5201 Pentecost Drive
Modesto, Calif. 95356
1-800-481-SIGN
FAX (209) 543-1326
DESIGN MANUFACTURING INSTALLATION MAINTENANCE

JOB INFO

JOB #: 00000
CLIENT: GROCERY OUTLET
CONTACT:
DATE: 7-2-18
PROJECT LOCATION:

ASTORIA, OR

SALESPERSON: SEAN CAMPBELL
DRAWN BY: BAM
PAGE 1 OF 5

CLIENT APPROVAL DATE

LANDLORD APPROVAL DATE

FILE

REVISIONS:
2-11-19 bam
4-9-19 bam
4-26-19 bam
5-13-19 bam
6-8-19 bam

SCALE: NOTED

FILE NAME: GROCERY OUTLET astoria

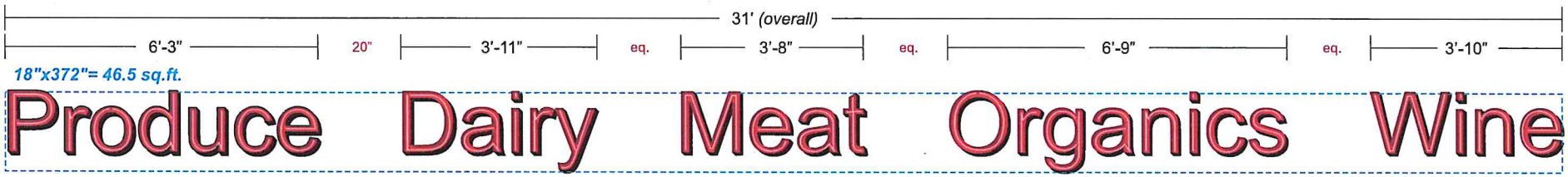
ELECT.

120 Volt ☐
277 Volt ☐
Other ☐

one box above MUST be checked prior to any mfg.

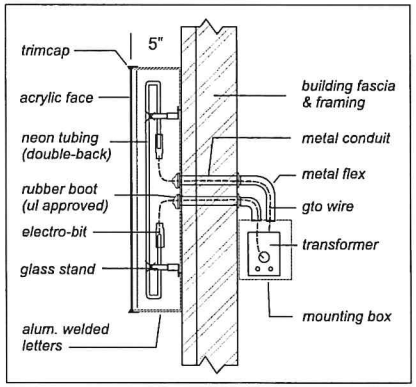
SPECIFICATIONS

See Drawing for Specifications



Sign B:
Open Pan Exposed Neon Illuminated Sign
Scale 1/2"=1'-0"

5" deep aluminum welded fabricated open-pan letters paint dark red #3630-73 (interior & exterior).
clear acrylic faces with 3/4" trimcap - match color of letter. 10 mm exposed double-tube ruby red neon illumination.
flush mount to building fascia.



Open P/C Exposed Neon Sign Detail

Building Front Elevation (west)

1) This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.
2) The location of the disconnect switch after installation shall comply with the Srtical 600.6 (A)(1) of the National Electrical Code

USS UNITED SIGN SYSTEMS
C.S.C.L. # 718965
5201 Pentecost Drive
Modesto, Calif. 95356
1-800-481-SIGN
FAX (209) 543-1326
DESIGN MANUFACTURING INSTALLATION MAINTENANCE

JOB INFO

JOB #: 00000
CLIENT: GROCERY OUTLET
CONTACT:
DATE: 7-2-18
PROJECT LOCATION:
ASTORIA, OR

SALESPERSON: SEAN CAMPBELL
DRAWN BY: BAM
PAGE 2 OF 5

CLIENT APPROVAL DATE

LANDLORD APPROVAL DATE

FILE

REVISIONS: 6-8-19 bam

SCALE: NOTED

FILE NAME: GROCERY OUTLET astoria

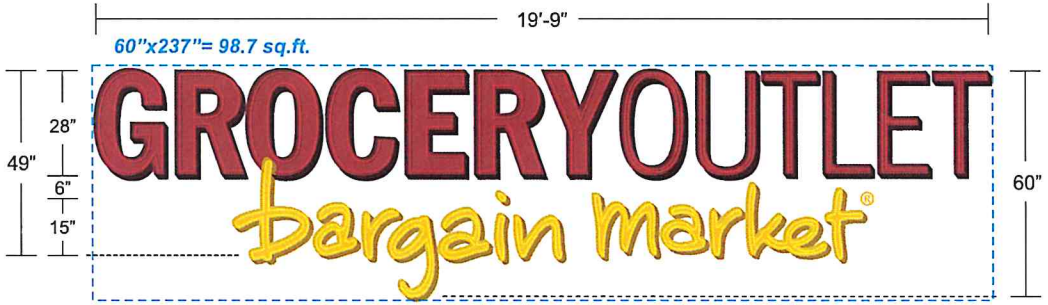
ELECT.

120 Volt ☐
277 Volt ☐
Other ☐

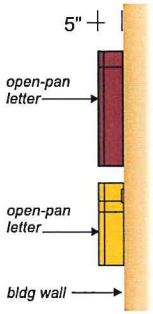
one box above MUST be checked prior to any mfg.

SPECIFICATIONS

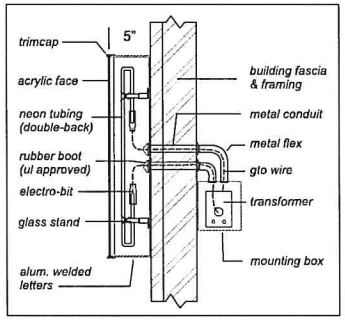
See Drawing for Specifications



Sign C:
Open Pan Exposed Neon Illuminated Sign
Scale 3/8"=1'-0"

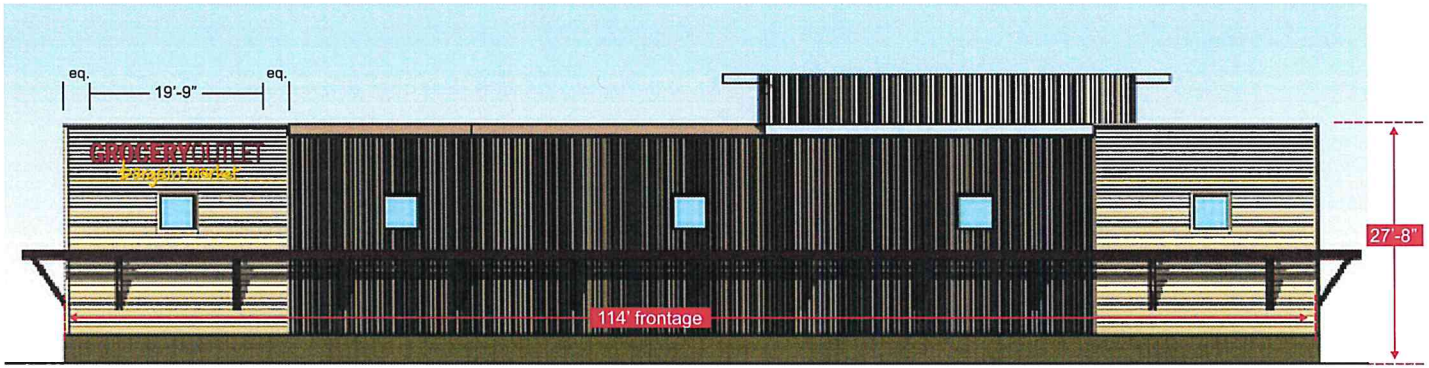


End View



Open P/C Exposed Neon Sign Detail

5" deep aluminum welded fabricated open-pan letters paint dark red #3630-73 & golden yellow #3630-125 (interior & exterior).
clear acrylic faces with 3/4" trimcap - match color of letter. 10 mm exposed double-tube ruby red & sunflower yellow neon illumination.
flush mount to building fascia.



Building Front Elevation (east)

1) This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes.
This includes proper grounding and bonding of the sign.
2) The location of the disconnect switch after installation shall comply with the Srtical 600.6 (A)(1) of the National Electrical Code

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Modesto, Calif. 95356
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FAX (209) 543-1326
DESIGN MANUFACTURING INSTALLATION MAINTENANCE

JOB INFO

JOB #: 00000
CLIENT: GROCERY OUTLET
CONTACT:
DATE: 7-2-18
PROJECT LOCATION:

ASTORIA, OR

SALESPERSON: SEAN CAMPBELL
DRAWN BY: BAM
PAGE 3 OF 5

CLIENT APPROVAL DATE

LANDLORD APPROVAL DATE

FILE

REVISIONS:
2-11-19 bam
4-9-19 bam
4-26-19 bam
5-13-19 bam
6-8-19 bam

SCALE: NOTED

FILE NAME: GROCERY OUTLET astoria

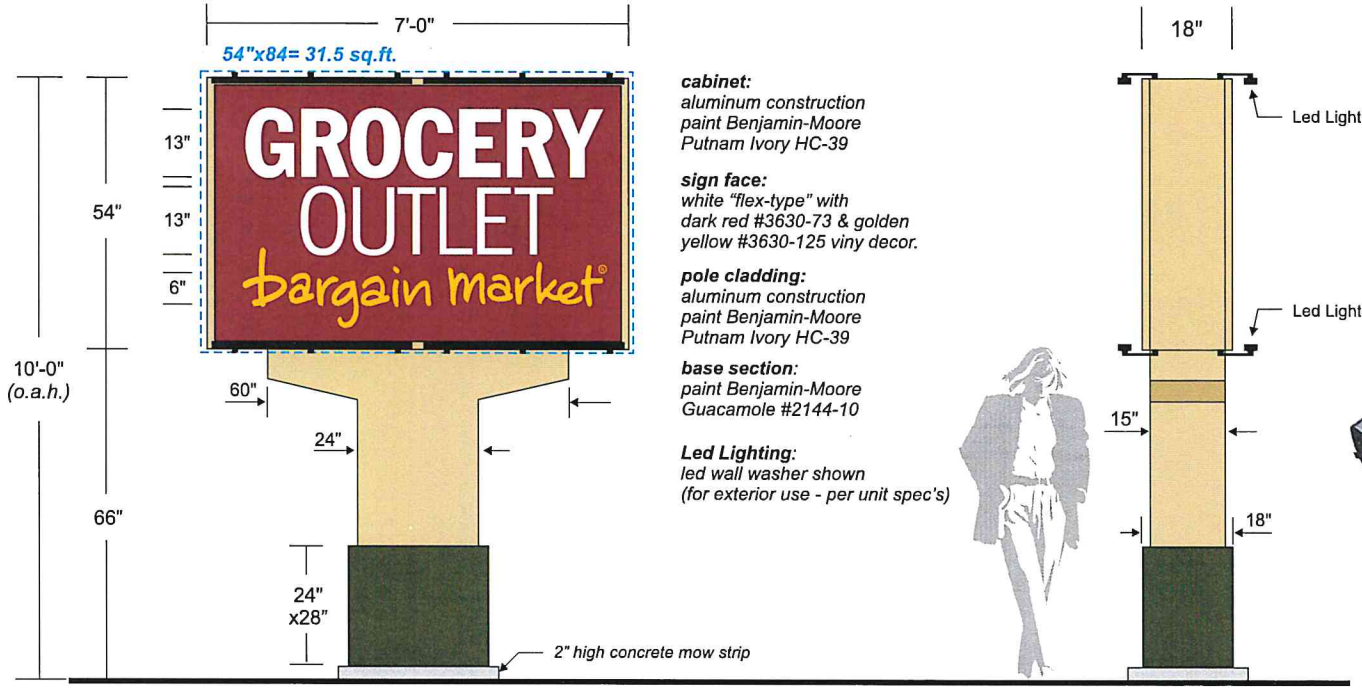
ELECT.

120 Volt ☐
277 Volt ☐
Other ☐

one box above MUST be checked prior to any mfg.

SPECIFICATIONS

See Drawing for Specifications



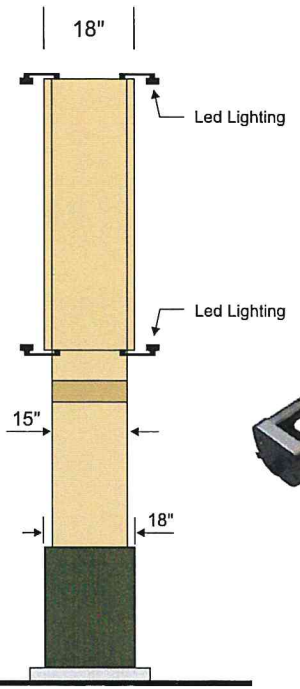
cabinet:
aluminum construction
paint Benjamin-Moore
Putnam Ivory HC-39

sign face:
white "flex-type" with
dark red #3630-73 & golden
yellow #3630-125 viny decor.

pole cladding:
aluminum construction
paint Benjamin-Moore
Putnam Ivory HC-39

base section:
paint Benjamin-Moore
Guacamole #2144-10

Led Lighting:
led wall washer shown
(for exterior use - per unit spec's)



typ Led bar lighting - exterior use
(Led Wall Washer Shown)

Sign D:
D/F Led Illuminated Monument Sign
Scale 1/2"=1'-0"

End View

1) This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes.
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2) The location of the disconnect switch after installation shall comply with the Srtical 600.6 (A)(1) of the National Electrical Code

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JOB INFO

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ASTORIA, OR

SALESPERSON: SEAN CAMPBELL
DRAWN BY: BAM
PAGE 4 OF 5

CLIENT APPROVAL DATE

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FILE NAME: GROCERY OUTLET astoria

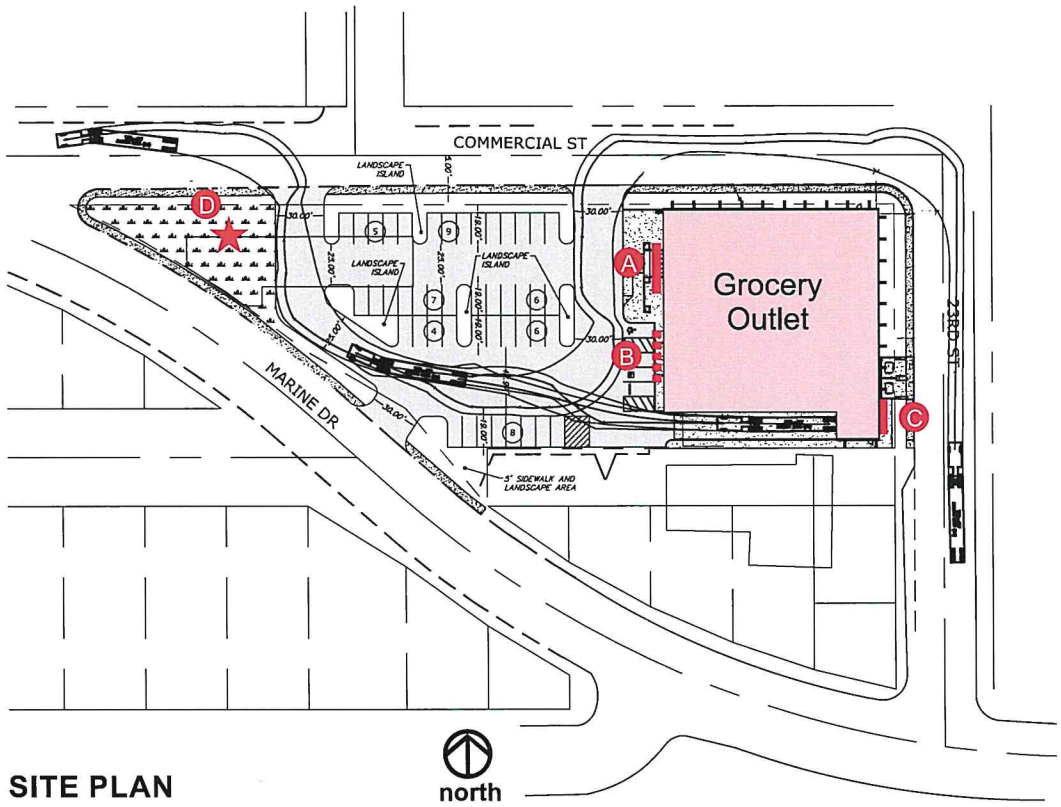
ELECT.

120 Volt ☐
277 Volt ☐
Other ☐

one box above MUST be checked prior to any mfg.

SPECIFICATIONS

See Drawing for Specifications



SITE PLAN

1) This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.
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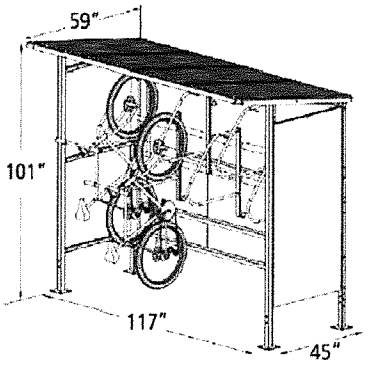
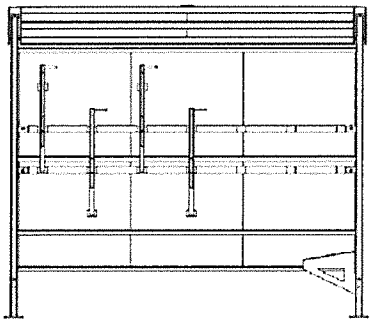
SPECIFICATIONS

See Drawing for Specifications

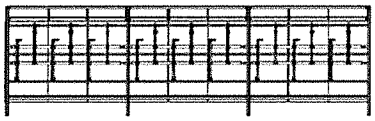
The Design Layout is specific to 120 volt electrical power for approved illuminated signage. Any other voltage at job site that requires additional install trips will be an extra charge

POCKET SHELTER





A bench may be mounted to the inside of the Pocket Shelter and still allow room for four bikes.



Dero Shelters can be used in a modular fashion (shared uprights). However, when used in this manner, please consult a Dero Bike Rack sales associate for layout, as the rack spacing and bike capacity can change!

CAPACITY

With Ultra Space Savers: 6 Bikes
With Bike Files: 10 Bikes

MATERIALS

Uprights: 2" x 3/16" square tube
Feet: 3/8" plate
Horizontal members: 3/16" formed sheet
Roof panels: 26g type S deck or 1/4" polycarbonate
Roof members: 3/16" formed sheet
Side panels: 1/4" polycarbonate (optional)

FINISHES

☐ **Galvanized**
An after fabrication hot dipped galvanized finish is our standard option.

☐ **Powder Coat**
Our powder coat finish assures a high level of adhesion and durability by following these steps:
1. Sandblast
2. Epoxy primer electrostatically applied
3. Final thick TGIC polyester powder coat

MOUNT OPTIONS

☐ **Surface**
Has four 6" square feet which must be anchored to the ground with supplied anchors.

LOAD DATA

Dead load = self weight of structure
Live load = snow load = 45 psf
Wind load = 90 mph exposure B
Seismic load = moderate
Footing: see page 4
Anchor bolt = Simpson strong-bolt 2, 1/2" x 5 1/2", 3 7/8" minimum embed

ROOF OPTION

☐ **Galvanized S Deck**

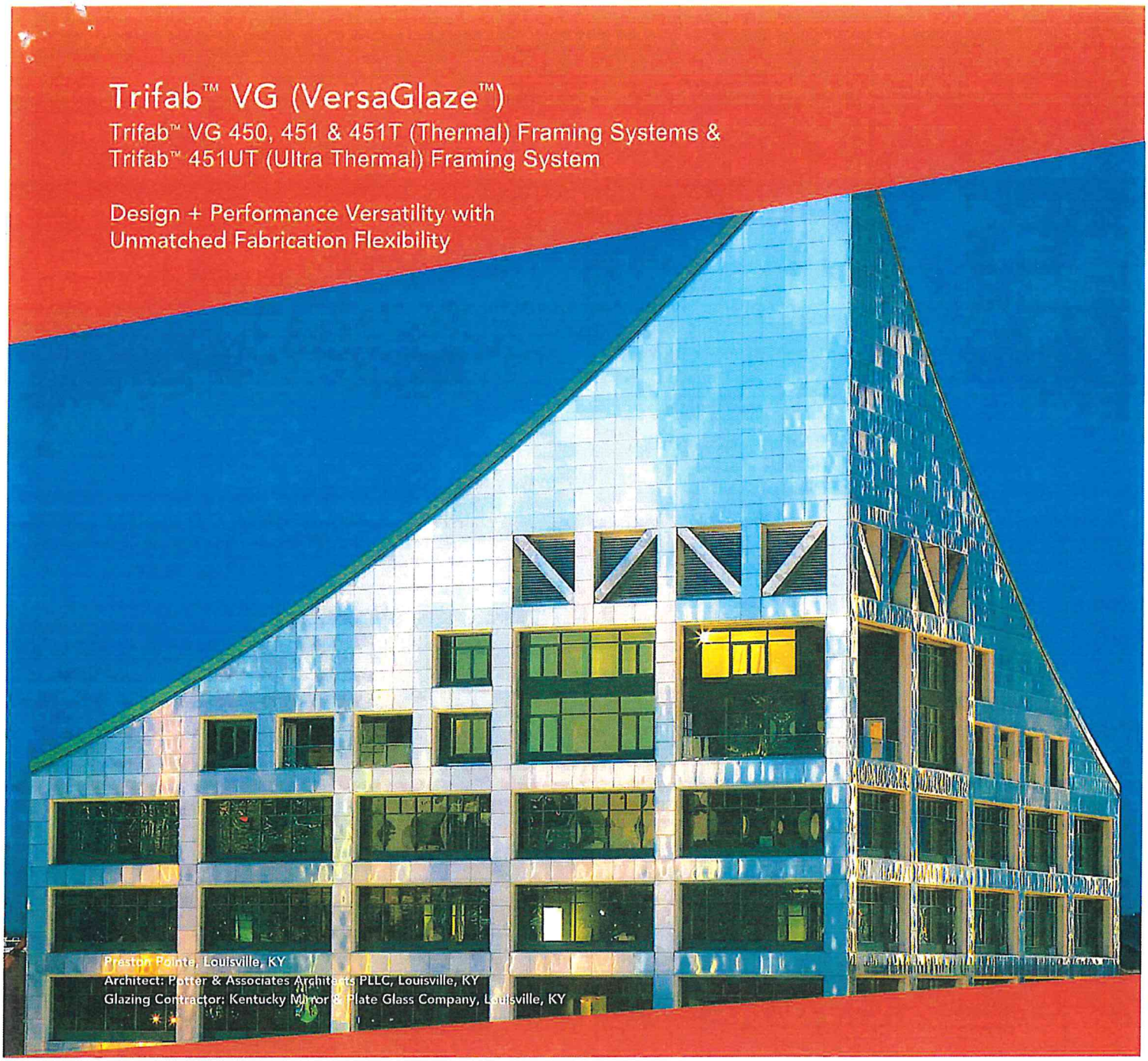
☐ **Polycarbonate Panel**

DERO
A PLAYCORE Company

Trifab™ VG (VersaGlaze™)

Trifab™ VG 450, 451 & 451T (Thermal) Framing Systems & Trifab™ 451UT (Ultra Thermal) Framing System

Design + Performance Versatility with Unmatched Fabrication Flexibility



Preston Pointe, Louisville, KY
Architect: Potter & Associates Architects PLLC, Louisville, KY
Glazing Contractor: Kentucky Mirror & Plate Glass Company, Louisville, KY

Trifab™ VersaGlaze™ is built on the proven and successful Trifab™ platform – with all the versatility its name implies. There are enough framing system choices, fabrication methods, design options and performance levels to please the most discerning building owner, architect and installer. The Trifab™ VersaGlaze™ family's newest addition, Trifab™ 451UT (Ultra Thermal) framing system, is designed for the most demanding thermal performance and employs a "dual" Isolock™ Thermal Break.

Aesthetics

Trifab™ VersaGlaze™ framing systems offer designers a choice of front-, center-, back- or multi-plane glass applications. Structural silicone glazing (SSG) and Weatherseal glazing options further expand the designers' choices, allowing for a greater range of design possibilities for specific project requirements and architectural styles. All systems have a 4-1/2" frame depth – Trifab™ VersaGlaze™ 450 has 1-3/4" sightlines, while Trifab™ VersaGlaze™ 451/451T and Trifab™ 451UT have 2" sightlines.

KAWNEER
AN ARCONIC COMPANY

With seamless incorporation of Kawneer entrances or windows, including GLASSvent™ visually frameless ventilators, Trifab™ VersaGlaze™ can be used on almost any project. These framing systems can also be packaged with Kawneer curtain walls and overhead glazing, thereby providing a full range of proven, and tested, quality products for the owner, architect and installer from a single source supplier.

Economy

Trifab™ VersaGlaze™ 450/451/451T framing systems offer four fabrication choices to suit your project (Trifab™ 451UT available as screw spline fabrication only):

- **Screw Spline** – for economical continuous runs utilizing two piece vertical members that provide the option to pre-assemble units with controlled shop labor costs and smaller field crews for handling and installation.
- **Shear Block** – for punched openings or continuous runs using tubular moldings with shear block clips that provide tight joints for transporting large pre-assembled multi-lite units.
- **Stick** – for fast, easy field fabrication. Field measurements and material cuts can be done when metal is on the job.
- **Type B** – Same fabrication benefits as shear block except head and sill run through.

All systems can be flush glazed from either the inside or outside. The Weatherseal option provides an alternative to SSG vertical mullions for Trifab™ VersaGlaze™ 450/451/451T. This ABS/ASA rigid polymer extrusion allows complete inside glazing and creates a flush glass appearance on the building exterior without the added labor of scaffolding or swing stages. Additionally, High-Performance (HP) Flashing options are engineered to eliminate perimeter sill fasteners and associated blind seals.

Brighton Landing, Cambridge, MA
Architects: ADD Inc., Cambridge, MA
Glazing Contractors: Ipswich Bay Glass Company,Inc., Rowley, MA

For the Finishing Touch

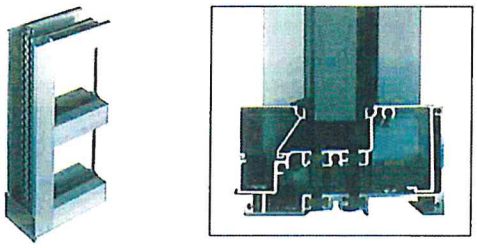
Architectural Class I anodized aluminum finishes are available in clear and Permanodic™ color choices.

Painted finishes, including fluoropolymer, that meet AAMA 2605 are offered in many standard choices and an unlimited number of specially designed colors.

Solvent-free powder coatings add the green element with high performance, durability and scratch resistance that meet the standards of AAMA 2604.

Performance

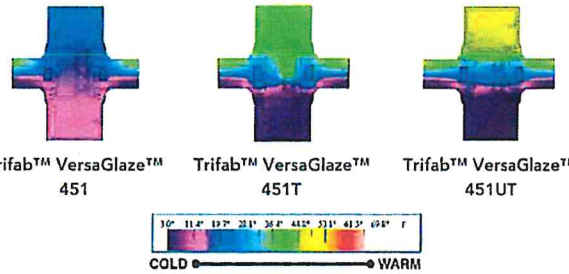
Kawneer's Isolock™ Thermal Break process creates a composite section, prevents dry shrinkage and is available on Trifab™ VersaGlaze™ 451T. For even greater thermal performance, a "dual" Isolock™ Thermal Break is used on Trifab™ 451UT.



Trifab™ 451UT uses a "dual" Isolock™ Thermal Break (right) and features a new HP (High Performance) sill design, which incorporates a screw-applied end dam (left), ensuring positive engagement and tight joints between the sill flashing and end dam.

U-factor, CRF values and STC ratings for Trifab™ VersaGlaze™ vary depending upon the glass plane application. Project specific U-factors can be determined for each individual project. (See the Kawneer Architectural Manual or Kawneer.com for additional information).

Thermal simulations showing temperature variations from exterior/cold side to interior/warm side.

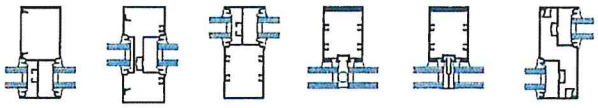


Trifab™ VersaGlaze™ 451 | **Trifab™ VersaGlaze™ 451T** | **Trifab™ VersaGlaze™ 451UT**

PERFORMANCE TEST STANDARDS

Air Infiltration	ASTM E 283
Water	AAMA 501, ASTM E 331
Structural	ASTM E 330
Thermal	AAMA 1503
Thermal Break	AAMA 505, AAMA TIR-A8
Acoustical	AAMA 1801, ASTM E 1425

Trifab™ VersaGlaze™ 450/451/451T glazing options
(note: Trifab™ 451UT available as center set glass plane only).



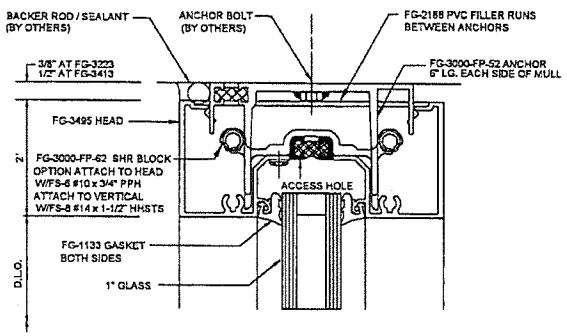
Front | **Center** | **Back** | **SSG** | **Weatherseal** | **Multi-Plane**

Kawneer Company, Inc.
Technology Park / Atlanta
555 Guthridge Court
Norcross, GA 30092

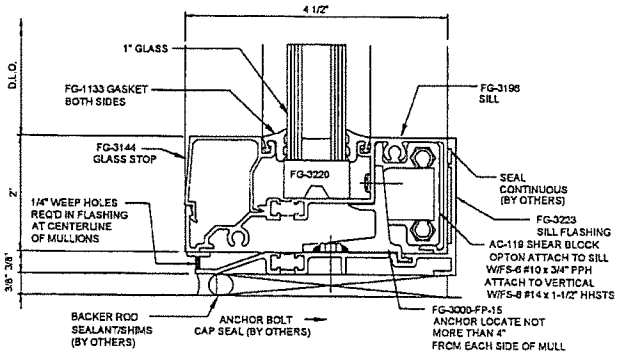
kawneer.com
770 . 449 . 5555

KAWNEER
AN ARCONIC COMPANY

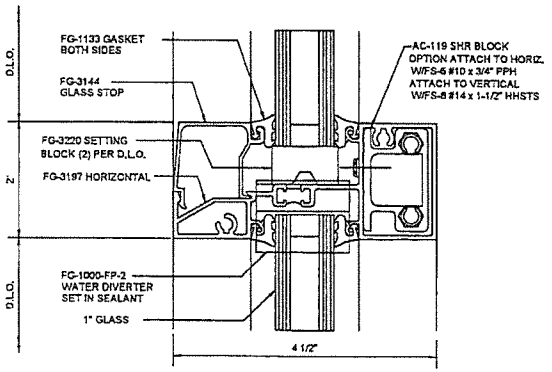
Series 3000 : Storefront : Thermal : Multiplane : Center Set : Outside Glazed : Screw Spline: 3413 Sill: Head Can



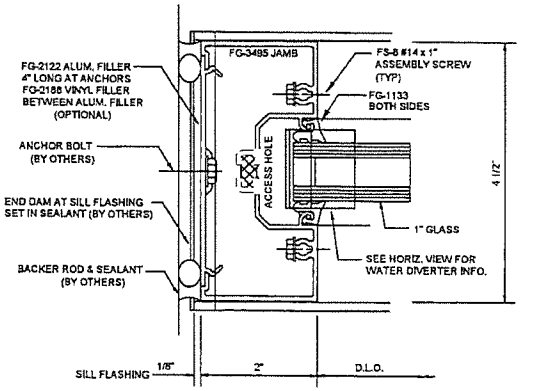
Series 3000-Thermal MultiPlane - Center Set
Head- H0902



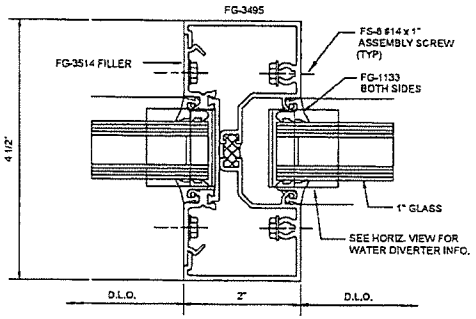
Series 3000 - Thermal MultiPlane - Center Set
Sill (Outside Glaze) - H0903



Series 3000 - Thermal MultiPlane - Center Set
Horizontal- H0901



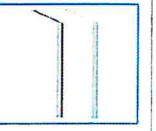
Series 3000-Thermal MultiPlane - Center Set
Jamb - V0902



Series 3000-Thermal MultiPlane - Center Set
Typical Vertical - V0906

Vitro
Architectural Glass

Thickness (inches)	Transmittance UV %	Transmittance Visible %	Transmittance Total Solar %	Exterior Solar Reflectance %	Exterior Visible Reflectance %	Interior Visible Reflectance %	U-Value (Winter Nighttime) (Btu/hr*ft2*°F)	U-Value (Summer Daytime) (Btu/hr*ft2*°F)	Shading Coefficient (SC)	Solar Heat Gain Coefficient (SHGC)	Light To Solar Gain (LSG)	Thermal Stress Risk
Solarban® 60 on Clear 5mm (2) | Air 1/2" (12.7mm) | Clear 5mm												
7/8"	19	71	35	30	11	12	0.29	0.27	0.45	0.39	1.82	Low



Specifications

Insulating Unit Construction

Solarban® 60 on Clear 5mm (2) | Air 1/2" (12.7mm) | Clear 5mm

Outdoor Lite: Clear with a second surface Solarban® 60

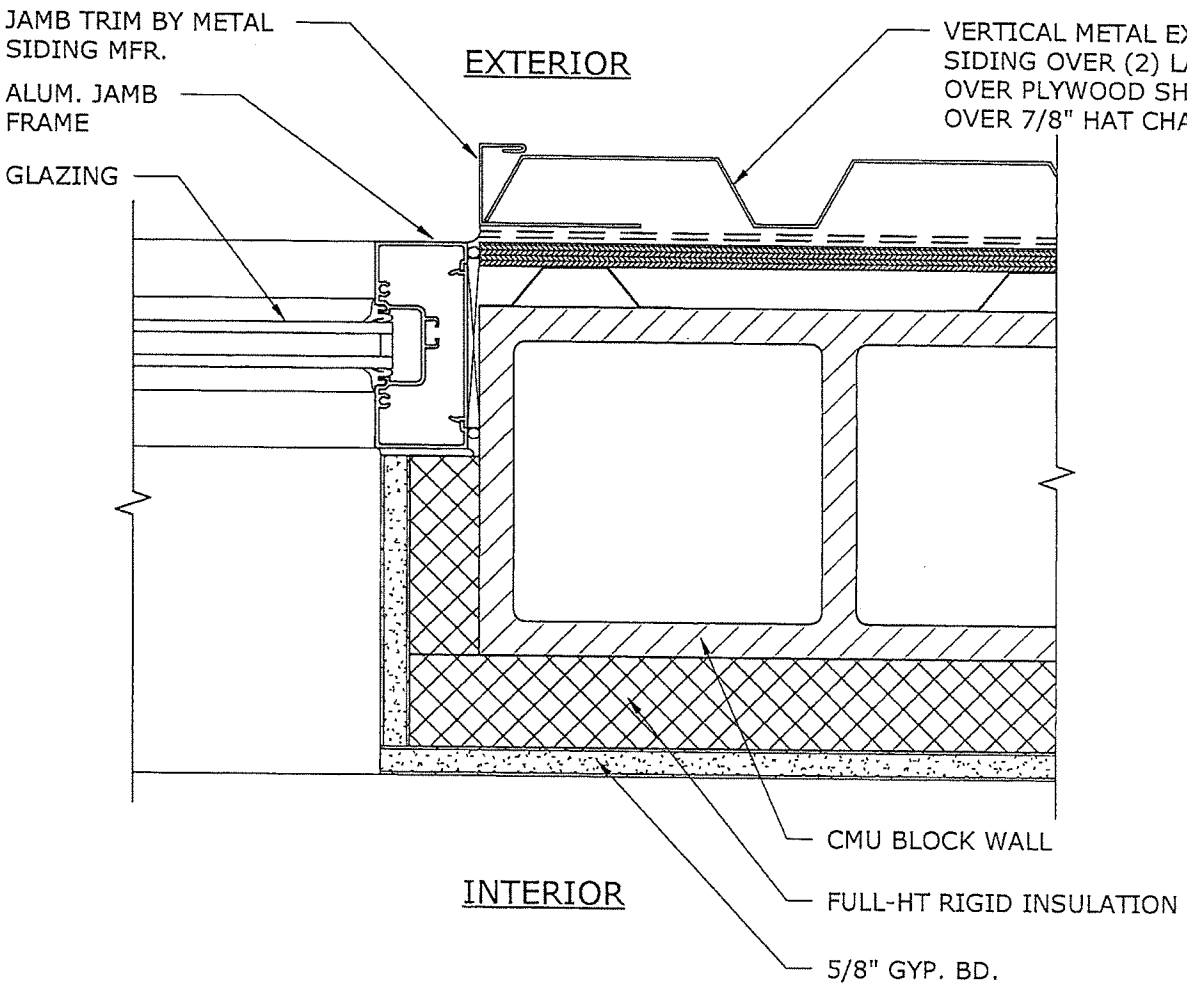
Indoor Lite: Clear 5mm

Vitro Approved Manufacturers/Where to Buy Vitro Products: Vitro Authorized™ Fabricator

Certification: Vitro lite(s) are Cradle to Cradle certified by McDonough Braungart Design Chemistry, LLC (MBDC www.mbdc.com)

Solarban® 60: Solarban® 60 glass is a mid-range MSVD solar control low-e glass. Though the coating is transparent (on clear or Starphire® Ultra-Clear glass), it can also be paired with, or applied directly on most Vitro tinted glasses in an insulating glass unit.

The results represent Center-of-Glass performance data based on NFRC 100 Environmental Design Conditions utilizing the LBNL Window 7.3 software program. Performance data is based on representative samples of factory production. Actual values may vary slightly due to variations in the production process. This data is to be used for comparison purposes and should not be considered a contract. It is the recipient's responsibility to ensure the manufacturability of the above glazing configurations as well as evaluating appropriate design considerations such as wind and snow load analysis, thermal stress analysis, and local building code compliance. Vitro recommends that a full size mock-up be reviewed under the specific job-site conditions and retain the mock-up as a basis of acceptable product.


JAMB TRIM BY METAL SIDING MFR.
ALUM. JAMB FRAME
GLAZING
EXTERIOR
VERTICAL METAL EXTERIOR SIDING OVER (2) LAYERS WRB OVER PLYWOOD SHEATHING OVER 7/8" HAT CHANNELS
CMU BLOCK WALL
FULL-HT RIGID INSULATION
INTERIOR
5/8" GYP. BD.

BARN LIGHT
ELECTRIC COMPANY.

GOODRICH® AVALON NAUTICAL LED GOOSENECK LIGHT

GOODRICH® AVALON NAUTICAL LED GOOSENECK LIGHT

Write a review

$476.00

BLE-G-WHA-CGG-LED

Shade Size:
Select Option

Guard Finish: *
- Select -

Finishes: *
- Select -

Glass Options: *
- Select -

Gooseneck Arms: *
- Select -

Dusk-to-Dawn Photocell: *
- Select -

Gooseneck Arm Finish: *
- Select -

Color Temperature: *
- Select -

Cast Guard Option: *
- Select -

Add To Wish List

QTY: 1 + −

Add To Cart

PRODUCT DETAILS | FINISH, MOUNTING & ACCESSORIES | SPECS | REVIEWS

GOODRICH
LIGHTING EQUIPMENT

The once-lost craftsmanship of industrial lighting lives on in the Goodrich® Avalon Rustic LED Gooseneck Light! Layering each warehouse shade with porcelain enamel helps ensure this wall light's durability. The porcelain withstands installation as exterior lighting, offering years of service as it illuminates these spaces. Echoing the porcelain's strength, a rustic guard is attached to each Avalon shade. Both porcelain and guard protect the fixture, but also elevate its overall style. Modern designers regularly install the Avalon as both interior and exterior lighting because of its rugged aesthetic and solid craftsmanship.

The Avalon's service is greatly enhanced through the integration of LED modules into its shade. Needing less energy to provide illumination, gooseneck LED lights are an economical addition to your space. With reduced power bills and a lessened environmental impact, the Avalon showcases LED's hallmark efficiency. The combination of craftsmanship, style and technical innovation results in the ideal gooseneck wall light for any home or business!

Shade Sizes:

12" Shade: W 12" x H 6 ¾"
14" Shade: W 14" x H 7 ¾"
16" Shade: W 16" x H 8 ½"

Additional Information:

- **Finish:** Multiple (See Finish Options)
- **Mounting:** Multiple (See Gooseneck Options)
- **Guard Option:** Standard Cast Guard, Heavy Duty Cast Guard or Wire Guard
- **Backplate Dimensions:** 4 ¾" Diameter
- **Number of Sockets:** 1
- **Use:** CSA Listed for Wet Locations
- **Lead Time:** 7-14 Business Days (Not Applicable to Commercial Orders)
- **Manufactured in the U.S.A.** This light fixture is made-to-order to suit your custom specifications. Learn more about the process here.
- **Due to the hand spun and hand applied porcelain enamel process, slight blemishes and character are common.**
- **No Returns Accepted on This Fixture**

Please Note: No metal fixture, no matter the finish, is guaranteed against corrosion especially in salt air environments. If your fixtures will be installed in a location near salt water or with extreme weather conditions, we recommend routine and careful maintenance of your lighting including a mild soap-and-water wash and gentle buffing to help maintain the finish.

LED Product Details:

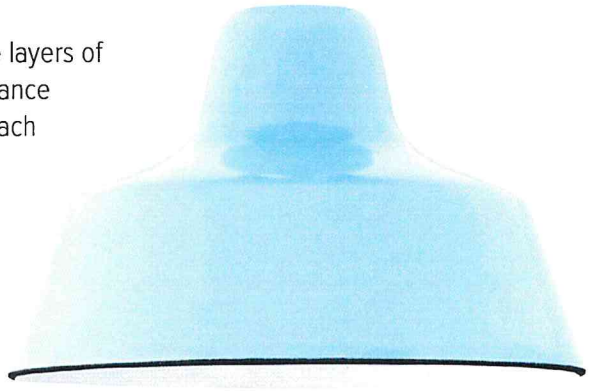
- **LED Driver:** 16.8W / 120V Integrated into fixture assembly
- **LED Dimming Option:** TRIAC Dimmable down to 1%; Requires Compatible Dimming Switch (See Specification Sheet for Compatible Dimmer Switches.)
- **LED Efficiency:** Delivers over 115 Lumens Per Watt
- **LED Lumen(LM) Comparison:** 1600LM Compares to 100W INC. Bulb
- **LED Color Temperature:** Cree's 2-Step EasyWhite® Technology ensures excellent color consistency, with your choice of 2700K, 3000K, 3500K or 4000K. - 80 CRI Minimum

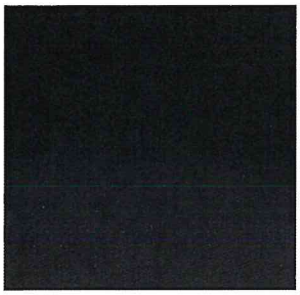
PORCELAIN FINISHES

REV 09.25.18

Applied by hand in our Florida-based manufacturing facility, multiple layers of porcelain enamel glass give our shades a unique high-gloss appearance and the protection they need in outdoor and commercial settings. Each solid steel shade is fired in a high-temperature oven, a process that forms a permanent bond between the porcelain and metal.

To complete their signature look, all porcelain shades feature a white interior and a black ring around the outer rim. A vast assortment of finish colors helps our shades adhere to any space's look.

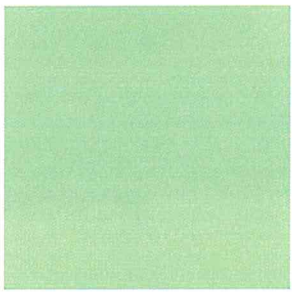




150 BLACK

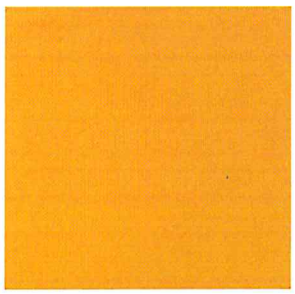
250 WHITE

350 VINTAGE GREEN

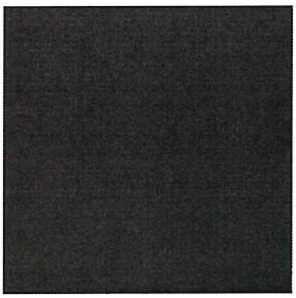


355 JADITE

455 CHERRY RED

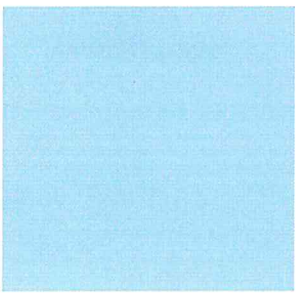


550 YELLOW



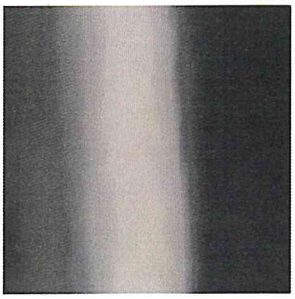
650 BRONZE

750 COBALT BLUE



765 DELPHITE BLUE

850 GRAPHITE



950 METALLIC CHROME

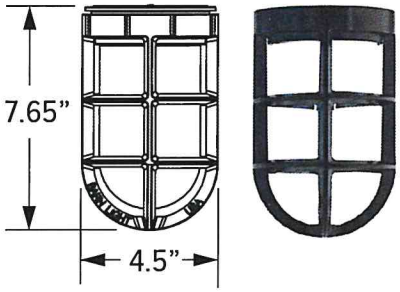
SALES@BARNLIGHT.COM (800) 407-8784 320 KNOX MCRAE DRIVE, TITUSVILLE, FL 32780 BARNLIGHT.COM

ACCESSORIES TO IMPRESS

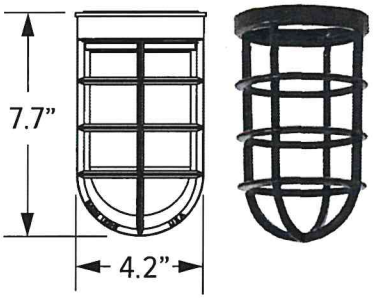
REV 09.25.18

Different accessories completely alter the look and feel of a light. By selecting a durable cast guard and glass or a rugged wire cage, our lights take on a trendy industrial character. Not only are these accessories stylish, but they also protect the bulb in commercial or industrial settings!

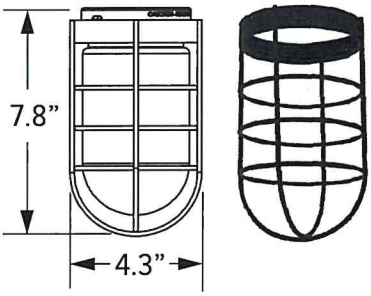
GUARD OPTIONS



TGG Heavy Duty Cast Guard



CGG Standard Cast Guard



WGG Wire Guard

GLASS OPTIONS

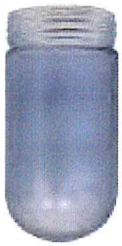
Not Applicable with Halogen Lights

CLR Clear

FST Frosted

RIB Ribbed

CCR Clear Crackle

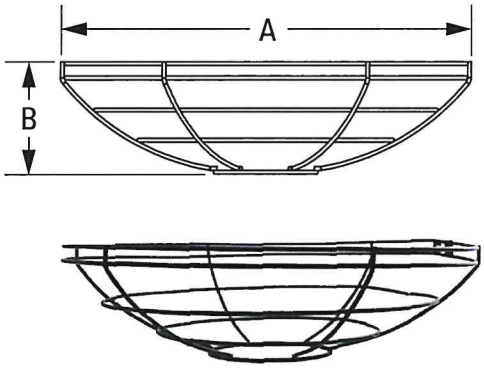


SMK Smoke Crackle

HCR Honey Crackle

WIRE CAGE

Not Applicable with Guard and Glass



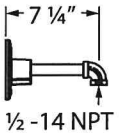
WC Wire Cage

DIAMETER (A)	HEIGHT (B)
8”	2.7”
10”	2.9”
11”	3.2”
12”	3.4”
13”	3.7”
14”	3.9”
15”	4.2”
16”	4.4”
17”	4.7”
18”	4.9”
20”	5”

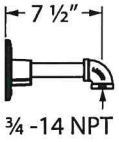
GOOSENECK LIGHTING

REV 09.26.18

Timeless and practical, our vast selection of gooseneck arms provides the perfect angle and style for any setting. The curved arms evoke classic light styles while helping the shade direct light onto sidewalks, signs and more. Each gooseneck arm is crafted in our Florida-based manufacturing facility! Please Note: Select gooseneck arms cannot be used with certain designs and shades. For additional information, please visit the individual product listing. Additionally, gooseneck arms indicated with an asterisk are not available in copper and brass finishes.



G3*



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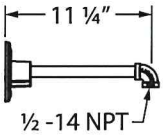

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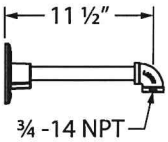

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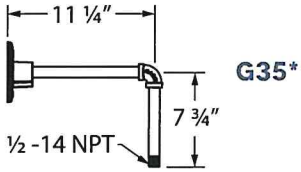

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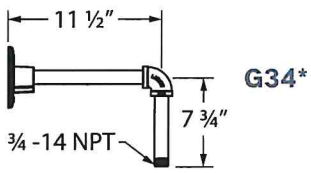

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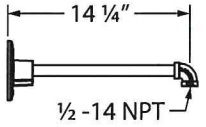

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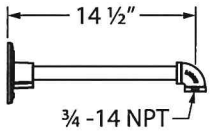

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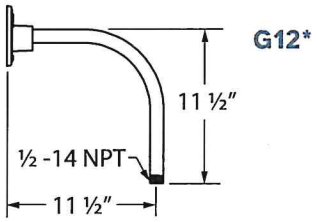

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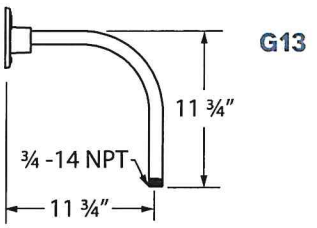

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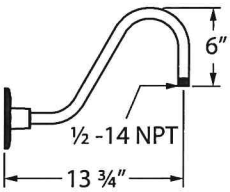

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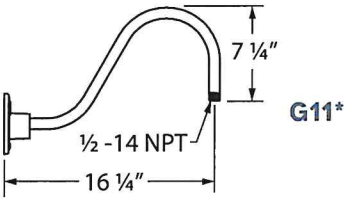

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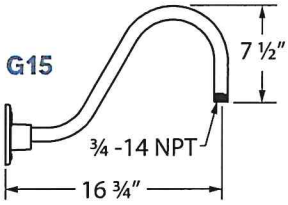

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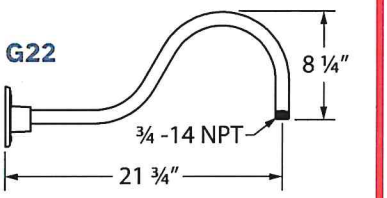

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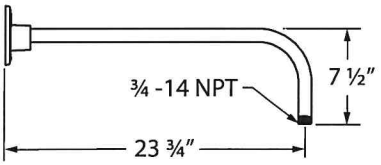

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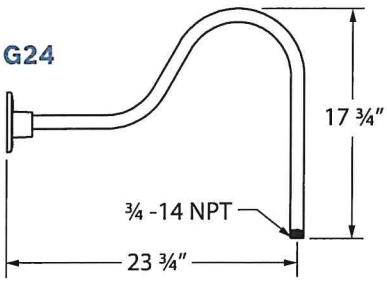

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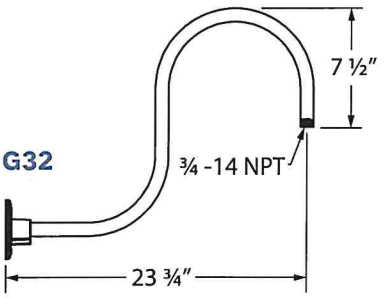


G32

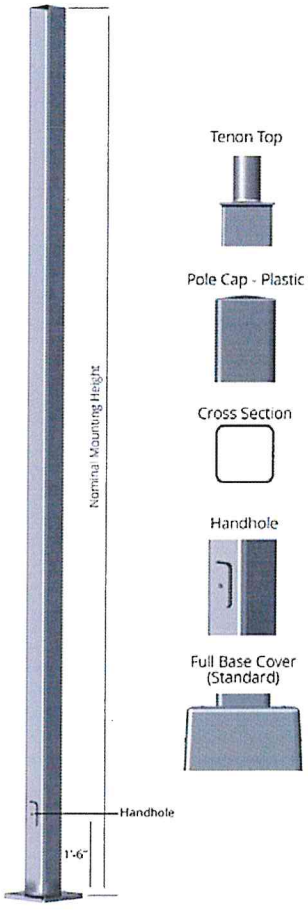
Project Name _____ Pole Type _____

Catalog # _____

Square Straight Steel Light Poles, Anchor Base

Product Overview

- **Pole Shaft** - The pole shaft is fabricated from hot rolled welded steel tubing of one-piece construction with a minimum yield strength of 55 KSI.
- **Pole Top** - A removable top cap is provided for poles receiving drilling patterns for side-mount luminaire arm assemblies. Other pole top options include Tenon Top, Top Cap Only or Open Top which is typical when the pole top diameter matches the necessary slip-fit dimensions.
- **Hand Hole** - A reinforced hand hole with grounding provision is provided at 1'-6" from the base end of the pole assembly. Each hand hole includes a cover and cover attachment hardware. All pole assemblies are provided with a 2.5" x 5" rectangular hand hole (dimensions are nominal).
- **Base Cover** - A two-piece full base cover fabricated from ABS plastic is provided with each pole assembly. Additional base cover options, including a cast aluminum and fabricated steel cover, are available upon request.
- **Anchor Bolts** - Anchor bolts conform to ASTM F1554 Grade 55 and are provided with two hex nuts and two flat washers. Bolts have an "L" bend on one end and are galvanized a minimum of 12" on the threaded end.
- **Hardware** - All structural fasteners are galvanized high strength carbon steel. All non-structural fasteners are galvanized or zinc-plated carbon steel or stainless steel.
- **Finish** - Standard finishes are either Galvanized or Finish Painted. Additional finish options including Finish Paint over Galvanizing are available upon request.
- **Design Criteria** - Standard EPA (Effective Projected Area) and weight values are based on Standard Commercial Criteria (with 1.3 gust factor) for side mounted fixtures only. Consult the factory on loading criteria for pole top mounted luminaires and/or brackets. Satisfactory performance of light poles is dependent upon the pole being properly attached to a supporting foundation of adequate design.



lightpolesPLUS.com

206 W. McWilliams St.
Suite 101
Fond du Lac, WI 54935

888-791-1463
quotes@lightpolesplus.com
LightPolesPlus.com

Rev. V09122018

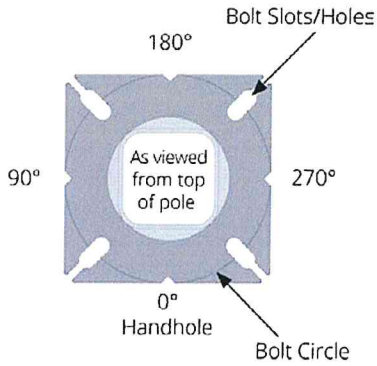
EPA Load Information

BASE MODEL	80 MPH w/1.3 GUST		90 MPH w/1.3 GUST		100 MPH w/1.3 GUST	
	MAX EPA (SQFT)	MAX WEIGHT (LBS)	MAX EPA (SQFT)	MAX WEIGHT (LBS)	MAX EPA (SQFT)	MAX WEIGHT (LBS)
VS-SSSA-10-4040-11-AB-FP	30.6	765	23.8	595	18.9	473
VS-SSSA-12-4040-11-AB-FP	24.4	610	18.8	470	14.8	370
VS-SSSA-14-4040-11-AB-FP	19.9	498	15.1	378	11.7	293
VS-SSSA-15-4040-11-AB-FP	15.9	398	11.8	295	8.9	223
VS-SSSA-16-4040-11-AB-FP	15.9	398	11.8	295	8.9	223
VS-SSSA-18-4040-11-AB-FP	12.6	315	9.2	230	6.7	168
VS-SSSA-20-4040-11-AB-FP	9.6	240	6.7	167	4.5	150
VS-SSSA-20-4040-07-AB-FP	15.8	240	12.7	167	9	150
VS-SSSA-20-5050-11-AB-FP	17.7	443	12.7	343	9.4	235
VS-SSSA-20-5050-07-AB-FP	28.1	703	21.4	535	16.2	405
VS-SSSA-25-4040-11-AB-FP	4.8	150	2.6	100	1	50
VS-SSSA-25-4040-07-AB-FP	10.8	270	7.7	188	5.4	135
VS-SSSA-25-5050-11-AB-FP	9.8	245	6.3	157	3.7	150
VS-SSSA-25-5050-07-AB-FP	18.5	463	13.3	333	9.5	238
VS-SSSA-30-4040-07-AB-FP	6.7	168	4.4	110	2.6	65
VS-SSSA-30-5050-11-AB-FP	4.7	150	2	50	N/A	N/A
VS-SSSA-30-5050-07-AB-FP	10.7	267	6.7	167	3.9	100
VS-SSSA-30-6060-07-AB-FP	19	475	13.2	330	9	225
VS-SSSA-35-5050-07-AB-FP	5.9	150	2.5	100	N/A	N/A
VS-SSSA-35-6060-07-AB-FP	12.4	310	7.6	190	4.2	105
VS-SSSA-40-6060-07-AB-FP	7.2	180	3	75	N/A	N/A

Designation & Dimensional Information

BASE MODEL	POLE DIMENSIONS					BASE PLATE		ANCHOR BOLTS	
	NOMINAL MOUNTING HEIGHT	TOP SQ (IN)	BASE SQ (IN)	WALL THK (GA)	STRUCTURE WEIGHT (LBS)	BOLTCIRCLE DIA (IN)	SQ (IN) x THICK (IN)	DIA x LENGTH x HOOK (IN)	PROJECTION (IN)
VS-SSSA-10-4040-11-AB-FP	10'-0"	4	4	11	75	8.0 - 9.0	8.25 x 0.75	0.75 x 17.00 x 3.00	3.25 - 3.75
VS-SSSA-12-4040-11-AB-FP	12'-0"	4	4	11	90	8.0 - 9.0	8.25 x 0.75	0.75 x 17.00 x 3.00	3.25 - 3.75
VS-SSSA-14-4040-11-AB-FP	14'-0"	4	4	11	100	8.0 - 9.0	8.25 x 0.75	0.75 x 17.00 x 3.00	3.25 - 3.75
VS-SSSA-15-4040-11-AB-FP	15'-0"	4	4	11	110	8.0 - 9.0	8.25 x 0.75	0.75 x 17.00 x 3.00	3.25 - 3.75
VS-SSSA-16-4040-11-AB-FP	16'-0"	4	4	11	115	8.0 - 9.0	8.25 x 0.75	0.75 x 17.00 x 3.00	3.25 - 3.75
VS-SSSA-18-4040-11-AB-FP	18'-0"	4	4	11	125	8.0 - 9.0	8.25 x 0.75	0.75 x 17.00 x 3.00	3.25 - 3.75
VS-SSSA-20-4040-11-AB-FP	20'-0"	4	4	11	140	8.0 - 9.0	8.25 x 0.75	0.75 x 17.00 x 3.00	3.25 - 3.75
VS-SSSA-20-4040-07-AB-FP	20'-0"	4	4	7	200	8.0 - 9.0	8.25 x 0.875	0.75 x 17.00 x 3.00	3.38 - 3.88
VS-SSSA-20-5050-11-AB-FP	20'-0"	5	5	11	185	10.0 - 12.0	11 x 1	0.75 x 17.00 x 3.00	3.5 - 4
VS-SSSA-20-5050-07-AB-FP	20'-0"	5	5	7	265	10.0 - 12.0	11 x 1	0.75 x 17.00 x 3.00	3.5 - 4
VS-SSSA-25-4040-11-AB-FP	25'-0"	4	4	11	170	8.0 - 9.0	8.25 x 0.75	0.75 x 17.00 x 3.00	3.25 - 3.75
VS-SSSA-25-4040-07-AB-FP	25'-0"	4	4	7	245	8.0 - 9.0	8.25 x 0.875	0.75 x 17.00 x 3.00	3.38 - 3.88
VS-SSSA-25-5050-11-AB-FP	25'-0"	5	5	11	225	10.0 - 12.0	11 x 1	0.75 x 17.00 x 3.00	3.5 - 4
VS-SSSA-25-5050-07-AB-FP	25'-0"	5	5	7	360	10.0 - 12.0	11 x 1	0.75 x 17.00 x 3.00	3.5 - 4
VS-SSSA-30-4040-07-AB-FP	30'-0"	4	4	7	291	8.0 - 9.0	8.25 x 0.875	0.75 x 17.00 x 3.00	3.38 - 3.88
VS-SSSA-30-5050-11-AB-FP	30'-0"	5	5	11	265	10.0 - 12.0	11 x 1	0.75 x 17.00 x 3.00	3.5 - 4
VS-SSSA-30-5050-07-AB-FP	30'-0"	5	5	7	380	10.0 - 12.0	11 x 1	0.75 x 17.00 x 3.00	3.5 - 4
VS-SSSA-30-6060-07-AB-FP	30'-0"	6	6	7	520	11.0 - 13.0	12.5 x 1	1.00 x 36.00 x 4.00	4 - 4.5
VS-SSSA-35-5050-07-AB-FP	35'-0"	5	5	7	440	10.0 - 12.0	11 x 1	0.75 x 17.00 x 3.00	3.5 - 4
VS-SSSA-35-6060-07-AB-FP	35'-0"	6	6	7	540	11.0 - 13.0	12.5 x 1	1.00 x 36.00 x 4.00	4 - 4.5
VS-SSSA-40-6060-07-AB-FP	40'-0"	6	6	7	605	11.0 - 13.0	12.5 x 1	1.00 x 36.00 x 4.00	4 - 4.5

Anchor Base Detail



1. The total combined EPA and weight of all fixtures, brackets and attachments mounting to a light pole cannot exceed the EPA and weight rating for a specified pole.
2. Standard EPA (Effective Projected Area) and weight values are based on Standard Commercial Criteria (with 1.3 gust factor) for side mounted fixtures only. Consult the factory on loading criteria for pole top mounted luminaires and/or brackets.
3. Satisfactory performance of light poles is dependent upon the pole being properly attached to a supporting foundation of adequate design.

Note: Additional sizes and configurations are available upon request.

"+" Indicates a vibration dampener is standard

lightpolesPLUS.com

206 W. McWilliams St.
Suite 101
Fond du Lac, WI 54935

888-791-1463
quotes@lightpolesplus.com
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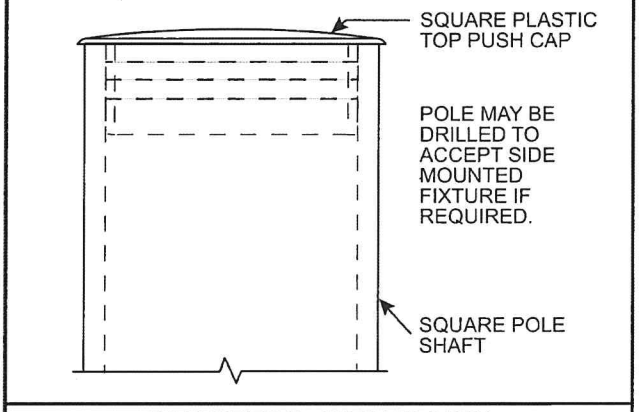
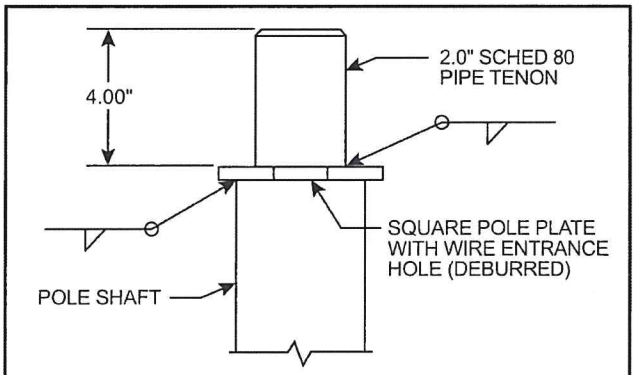
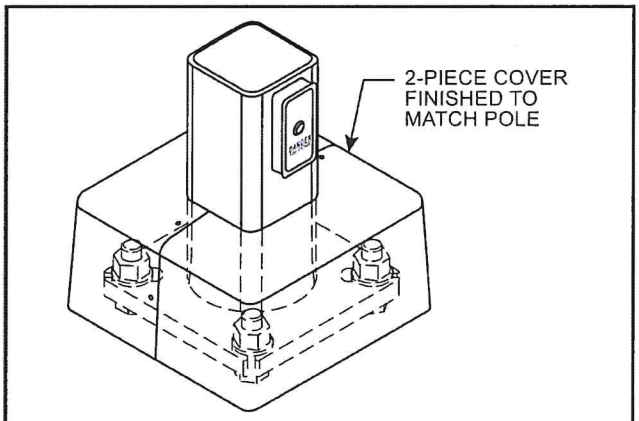
Rev. V09122018



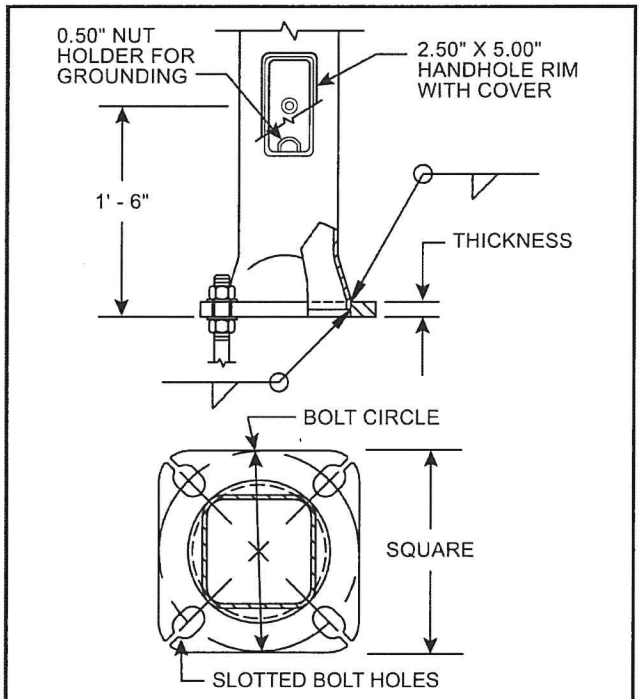
CAP DETAIL (STANDARD)



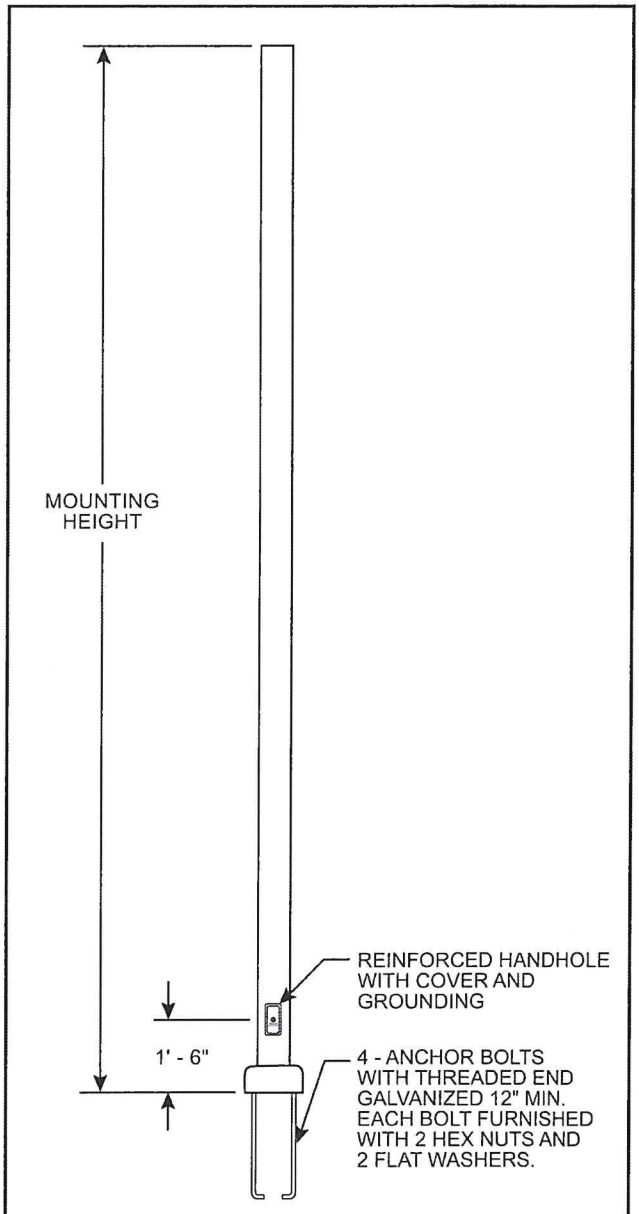
P2 TENON DETAIL (OPTIONAL)



FULL BASE COVER (STANDARD)



POLE BASE AND HANDHOLE DETAIL



POLE DETAIL

lightpolesPLUS.com

206 W. McWilliams St.
Suite 101
Fond du Lac, WI 54935

888-791-1463
quotes@lightpolesplus.com
LightPolesPlus.com

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Ordering Information

Ex. VS-SSSA-10-4040-11-AB-FP-DB-D1-EHH

Designation		Length*
VS-SSSA	= Square Straight Steel Anchor Base	10 to 40

Base OD*	Top OD*
40 = 4"	40 = 4"
50 = 5"	50 = 5"
60 = 6"	60 = 6"

Thickness*
07 = 7ga
11 = 11ga

Anchor Bolts	
AB	= Includes Anchor Bolts
LAB	= Less Anchor Bolts

Finish Type	
GV	= Galvanzied Only (No Paint)
FP	= Finish Painted
FPGV	= Finish Paint over Galvanizing

Painted Color	
DB	= Dark Bronze
MB	= Medium Bronze
LG	= Light Gray
DG	= Dark Green
HG	= Hunter Green
SG	= Slate Gray
BK	= Black
WH	= White
SL	= Silver
SC	= Custom

Fixture Mounting
Drill Mounting (includes cap)
D1 = Single
D2 = 2@180 deg.
D3 = 3@120 deg.
D4 = 4@90 deg.
D5 = 2@90 deg.
D6 = 3@90 deg.
Tenon Mounting
P1 = 4" OD x 5" Long Tenon
P2 = 2.38" OD x 4" Long Tenon
P3 = 3.50" OD x 6" Long Tenon
P4 = 4" OD x 6" Long Tenon
P5 = 2.88" OD x 4" Long Tenon
P6 = 2.88" OD x 5" Long Tenon
P7 = 2.38" OD x 5" Long Tenon
PQ = 2.38" OD x 12" Long Tenon
PD = 3" OD x 3" Long Tenon
P9 = Custom Size Tenon
Other Options
PC = Cap Only, No Side Drilling
PL = Open Top, No Cap or Side Drilling

* See previous pages for base model configurations.
Consult factory or your sales rep for deviations from base models.
Additional sizes and configurations available upon request.

Options & Accessories

Description		
SPL	=	Special Cut Length (Please Specify)
BCSPCL	=	Special Base Plate to Match Existing Bolt Circle (May Add 2 Weeks to Production Lead Time, May Require Special Base Cover)
VDA	=	Internal Vibration Dampener, Factory Installed
VDF	=	Internal Vibration Dampener, Field Installable
FBCS	=	Steel Full Base Cover
FBCP	=	ABS Plastic Full Base Cover

Description		
ULHH	=	UL Compliant Hand Hole
NECHH	=	NEC 410.30 Compliant Hand Hole & Cover
EHH	=	Additional Hand Hole Opening w/ Cover Assembly (Specify Pole Height & Orientation)
FST	=	Festoon Provision, Electrical by Others (Specify Pole Height & Orientation)
CPL	=	NPT Pipe Coupling (Specify Pole Height, Orientation & NPT Size)
PXDX	=	Side Drill + Tenon w/ Additional Hand Hole (Specify Tenon OD & Length)

Description		
STAMP	=	Engineering Services, Signed & Sealed Calcs
STAMPCA	=	Engineering Services, CA Signed & Sealed Calcs
PRE750	=	Pre-Ship Anchor Bolts - 0.75" x 17" x 3"
PRE100	=	Pre-Ship Anchor Bolts - 1.0" x 36" x 4"

Note: Please consult factory or your sales representative to verify options and accessories will work with your light pole part number.

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ARD ENGINEERING
21370 SW Langer Farms Pkwy
Suite 142, Sherwood, OR 97140

Technical Memorandum

EXPIRES: 12/31/19

To: Matt Rasmussen, Tectonics Design Group

From: Michael Ard, PE

Date: June 27, 2019

Re: Astoria Grocery Outlet: Site Access Considerations

A new Grocery Outlet discount supermarket store has been proposed for a site on the northeast side of Marine Drive (Highway 30) between Commercial Street and 23rd Street in Astoria, Oregon. The site is proposed to take access via two driveways on Commercial Street and one driveway on Marine Drive. The Oregon Department of Transportation has indicated that the existing access on Marine Drive could remain open following completion of the proposed development; however, the City of Astoria has a goal to limit the number of access locations along higher-classification roadways such as Marine Drive. Accordingly, some justification is required in order to maintain this access. This memorandum is written to provide information regarding the operational and safety impacts that would be associated with closure of the access.

PROPOSED ACCESS

As detailed in the traffic impact study dated May 21, 2019 the proposed development includes two access driveways on Commercial Street and one driveway on Marine Drive. The analysis conducted for the proposed development was based on utilization of all three points of access.

Most of the site trips (70 percent) are projected to travel to and from the west on Marine Drive. These trips have a relatively direct access available by traveling via Commercial Street to the driveways on the local street.

In this instance, there are two primary routes to access the site (i.e. indirect access via Commercial Street and direct access via the proposed driveway on Marine Drive). Given multiple options for site access, most drivers will seek the most direct access to the site. Since the two proposed travel routes provide relatively equal travel distances and times, it is expected that about half of site visitors traveling from the west will use Commercial Street and half will use the proposed driveway on Marine Drive. This distribution of site trips is reflected in the traffic impact study.

OPERATIONAL AND SAFETY IMPACTS OF POTENTIAL DRIVEWAY CLOSURE

The functional classification of streets ranges from local streets to arterial streets. Local streets are intended to prioritize access over mobility, with the primary function of serving as access to end-point destinations. This prioritization often means that the flow of through traffic is interrupted, resulting in some delays to through traffic and less efficient operation of the street. Arterial streets, on the other hand,

prioritize mobility over access, with the primary purpose of serving the efficient flow of through traffic. This prioritization often means that access to end-point destinations is restricted and constrained. Collector streets are intended to balance the needs of access and mobility, and fall somewhere between the two previously described design goals.

Commercial Street is classified as a local street and accommodates low volumes of low-speed traffic. Since it is a local street, there are no significant concerns associated with having two points of access to this roadway.

Marine Drive is classified as an Arterial, and therefore should prioritize mobility and the flow of through traffic over access to individual land uses. Accordingly, it is appropriate to attempt to reduce the number of driveways accessing this roadway.

In this instance, if the proposed direct access to Marine Drive were closed there would be some resulting re-routing of site trips. Since Commercial Street is on the near side of the proposed discount supermarket, eastbound drivers entering the site would need to turn onto Commercial Street just prior to reaching the proposed development. Many drivers traveling along Marine Drive will not know or will not think to turn prior to reaching their destination and will therefore consider their available travel options only after having passed Commercial Street. It is estimated that at least one third to one half of eastbound drivers traveling to the site will pass Commercial Street prior to trying to turn into the site. With closure of the driveway on Marine Drive these trips would need to travel eastbound to 23rd Street, where they can turn left to make their way to the site.

In evaluating whether it is appropriate to close the direct access on Marine Drive, it is critical to compare the operational and safety impacts of the direct access driveway to the operational and safety impacts of rerouted trips traveling via 23rd Street.

The proposed direct site access on Marine Drive is located within a relatively low speed environment, with a posted speed limit of 30 mph and horizontal curves in each direction which also limit the approach speeds. The highway has a three-lane cross-section which includes a center two-way left-turn lane as well as a single through lane in each direction. The presence of this center lane allows left-turning drivers to pull out of the through travel lane when entering the site eastbound, which avoids having stopped traffic within the eastbound through lane on Marine Drive. It also provides a refuge for drivers exiting the site to make two-stage left-turns, wherein they wait for a gap in the westbound traffic stream prior to entering the center median, then wait for a gap in the eastbound traffic stream prior to merging with through traffic. Thus, the center turn lane allows the access to operate more safely and efficiently, with reduced delays to turning vehicles and without significant interruptions to the flow of through traffic on Marine Drive.

With closure of the direct access to Marine Drive, the re-routed site trips would need to make left turns at the intersection of Marine Drive and 23rd Street. In contrast to the proposed site access location, this

intersection does not have a center left-turn lane available, since the roadway width is allocated to one through lane in the eastbound travel direction and two lanes in the westbound direction. One westbound travel lane is an exclusive left-turn lane serving the high volume of westbound left-turning traffic from Marine Drive onto Exchange Street, while the other is a westbound through/right travel lane.

Without the presence of a center turn lane, eastbound vehicles making left turns onto 23rd Street must stop within the though travel lane. This results in unexpected, random stops for eastbound traffic in the through travel lane. The stops are unexpected since the intersection is unsignalized and typically operates in free flow in the eastbound direction but turning vehicles must wait for an appropriate gap in the westbound flow before turning onto 23rd Street. The unexpected stops on Marine Drive would be expected to increase the frequency of rear-end collisions within this travel lane. Under existing conditions, there were 12 vehicles making the eastbound left turn from Marine Drive onto 23rd Street. Closure of the proposed site access on Marine Drive would be expected to result in approximately 12-15 additional eastbound left turns at this intersection.

Since the closure of the direct access to the proposed store would increase the number of eastbound left-turning vehicles at this intersection and vehicles making left-turns into a driveway directly serving the site on Marine Drive would not result in stopping within the eastbound travel lane, it is anticipated that closure of the access would result in an increase in collisions in the site vicinity.

In addition to the safety impacts of closure of the direct access, some operational concerns would also be anticipated. Stopped vehicles in the eastbound travel lane will clearly increase delays for eastbound traffic on Marine Drive in the site vicinity. But it will also result in some secondary impacts and delays to westbound traffic. Eastbound left-turning vehicles stopped at 23rd Street will often accumulate queues stacking on Marine Drive west of the intersection. Given the short distance between 23rd Street and Exchange Street, any queues of more than 150 feet (approximately 6 vehicles) could obstruct westbound traffic from turning left onto Exchange Street, thereby increasing delays and queue lengths for the westbound left-turn movement.

CONCLUSIONS

Based on the analysis of the proposed direct site access to Marine Drive, it is projected to allowing direct access to this Arterial roadway will result in improved safety and decreased interruptions to the flow of through traffic. Accordingly, allowing the access will better serve the purpose of the Arterial roadway than would restriction of direct access to the proposed Grocery Outlet site.

If you have any questions regarding this analysis, please feel free to contact me at mike@ardengr.com or by phone at 503-537-8511.

ARD ENGINEERING

ASTORIA GROCERY OUTLET
TRAFFIC IMPACT STUDY

ASTORIA, OREGON

21370 SW Langer Farms Parkway, Suite 142, Sherwood, OR 97140 – (503)862-6960

ASTORIA GROCERY OUTLET
TRAFFIC IMPACT STUDY

ASTORIA, OREGON

PREPARED FOR:
Main & Main Capital Group, LLC

PREPARED BY:
Michael Ard, PE
Ard Engineering

DATE:
May 31, 2019

21370 SW Langer Farms Parkway, Suite 142, Sherwood, OR 97140 - (503)862-6960

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EXECUTIVE SUMMARY

1. A Grocery Outlet store with a gross floor area of 16,000 square feet is proposed for a site on the north side of Marine Drive south of Commercial Street and west of 23rd Street in Astoria, Oregon.

2. The proposed development is projected to generate a net increase of 21 site trips during the morning peak hour, 86 site trips during the evening peak hour, and 784 daily site trips.

3. Based on the operational analysis, all study area intersections are projected to operate acceptably per ODOT standards through 2021 either with or without the addition of site trips from the proposed development. No operational mitigations are necessary or recommended.

4. Based on the queuing analysis, there is sufficient space for the projected 95th percentile queues for the major-street left turn movements between 21st Street and Commercial Street. Given the low volume of westbound left-turns from Marine Drive onto 21st Street, warrants are not met for a westbound left-turn lane at this intersection. Accordingly, the existing center two-way left-turn lane could be converted to a dedicated eastbound left-turn lane serving Commercial Street.

5. Due to the location of the site and the locations of site access, no additional traffic impacts are projected on residential neighborhood streets in the site vicinity.

6. Crash data for the most recent five years shows no significant crash trends that may be indicative of design deficiencies at the study intersections. No specific crash mitigations are recommended.

7. With removal or limbing of the lower branches of the existing tree located south of the site access driveway on Marine Drive, adequate sight distance is projected to be available. No other sight distance mitigations are necessary or recommended in conjunction with the proposed development.

PROJECT DESCRIPTION & LOCATION

INTRODUCTION

A new 16,000 square-foot Grocery Outlet store is proposed for a site located on the north side of Marine Drive (Columbia River Highway/US 30) south of Commercial Street and west of 23rd Street in Astoria, Oregon. The site will take access via two driveways on Commercial Street and one on Marine Drive.

This report addresses the impacts of the proposed development on the surrounding street system. Based on correspondence with City of Astoria and ODOT staff, an operational and safety analysis was conducted for the intersections of Marine Drive at 21st Street, Marine Drive at Commercial Street, Marine Drive at 23rd Street, the two site access driveways on Commercial Street and the site access driveway on Marine Drive.

The purpose of this analysis is to determine whether the surrounding transportation system is capable of safely and efficiently supporting the proposed use and to identify any necessary improvements and mitigations.

SITE LOCATION AND STUDY AREA ROADWAY DESCRIPTIONS

The project site comprises three tax lots (80908DA01700, 80908DA01401 and 80908DA01402), which are currently occupied by a 6,900 square-foot auto parts store and a 4,292 square-foot warehouse facility. Under the proposed development plan, these existing businesses will be removed and a new discount supermarket facility with a gross floor area of 16,000 square feet will be constructed. The site will take access via two driveways on Commercial Street and one driveway on Marine Drive.

The subject property is surrounded primarily by existing commercial uses. Some existing residential development is located to the northeast and east of the property, and the Urgent Care Northwest/Park Medical Buildings are located to the south on the opposite side of Marine Drive.

Marine Drive (Columbia River Highway/US 30) is generally a three-lane highway in the site vicinity with a single travel lane in each direction and a center two-way left turn lane. It has a posted speed limit of 30 mph in the site vicinity. It is classified by the City of Astoria as an Arterial street and by the Oregon Department of Transportation as a Statewide Highway and a Freight Route. Striped bike lanes and sidewalks are in place on both sides of the highway. The roadway narrows to a two-lane cross-section east of 23rd Street.

21st Street, Commercial Street and 23rd Street are classified by the City of Astoria as Local streets. Each has a two-lane cross-section with one through lane in each direction and no centerline striping. Partial sidewalks are in place along 21st Street and Commercial Street. Continuous sidewalks are in place along both sides of 23rd Street.

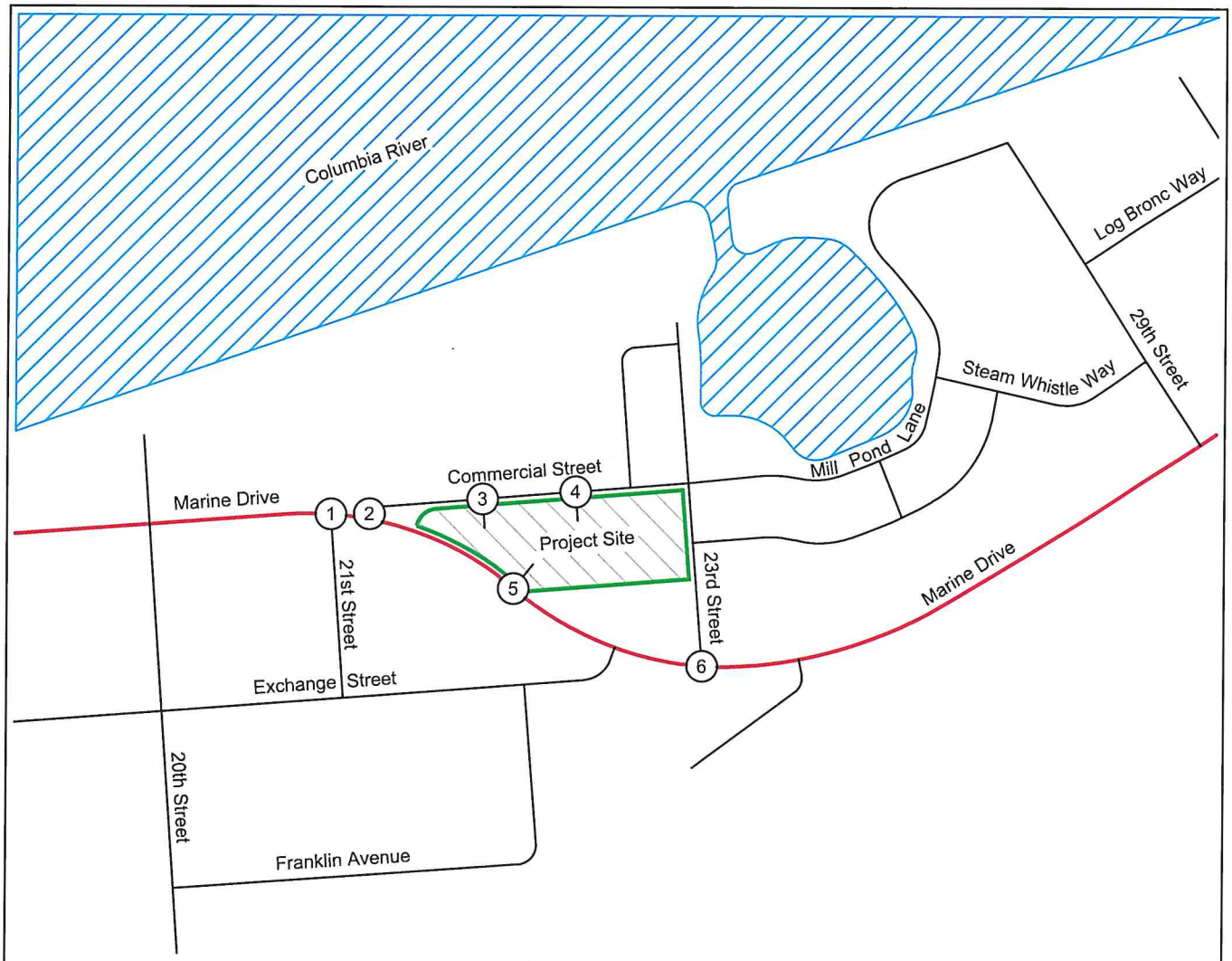
EXISTING CONDITIONS

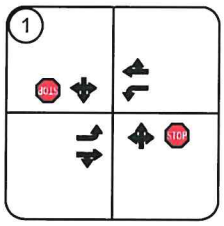
The intersection of Marine Drive at 21st Street is a four-way intersection that operates under stop control for the northbound 21st Street approach as well as the southbound driveway approach. Through traffic traveling along Marine Drive is free flowing. The northbound and southbound approaches each have a single, shared lane for all turning movements. The eastbound and westbound approaches each have a left-turn lane within the center median and a shared through/right lane, with a bike lane to the right of the motor vehicle lanes. All crosswalks are unmarked.

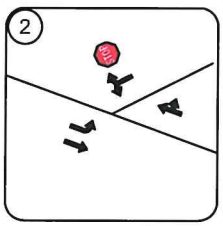
The intersection of Marine Drive at Commercial Street is a T-intersection controlled by a stop sign on the westbound Commercial Street approach. Through traffic traveling along Marine Drive is free flowing. The westbound Commercial Street approach has a single, shared lane for left- and right-turning movements. The eastbound Marine Drive approach has a left-turn lane within the center median and a through lane. The northwest-bound Marine Drive approach has a single, shared through/right lane. Bike lanes are in place along Marine Drive to the right of the motor vehicle travel lanes. Crosswalks are unmarked on all legs of the intersection.

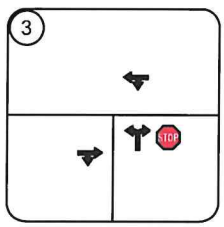
The intersection of Marine Drive at 23rd Street is a T-intersection controlled by a stop sign on the southbound 23rd Street approach. Through traffic traveling along Marine Drive is free flowing. The southbound approach has a left-turn lane and a right-turn lane. The eastbound approach has a shared left/through lane. The westbound approach has a shared through/right lane. Bike lanes are in place along Marine Drive to the right of the motor vehicle travel lanes. Crosswalks are marked crossing the north and east legs of the intersection.

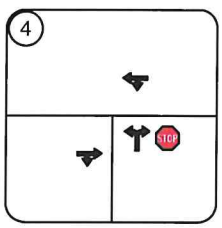
A vicinity map displaying the project site, vicinity streets, and the study intersections with their associated lane configurations is shown in Figure 1 on page 6.

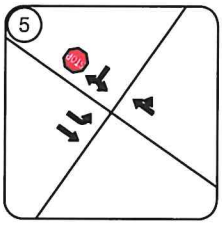


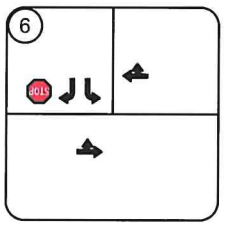












LEGEND

(#) Study Intersection #

STOP Stop Sign

VICINITY MAP
Study Intersection
Lane Configurations and Traffic Control

FIGURE 1

PAGE 6

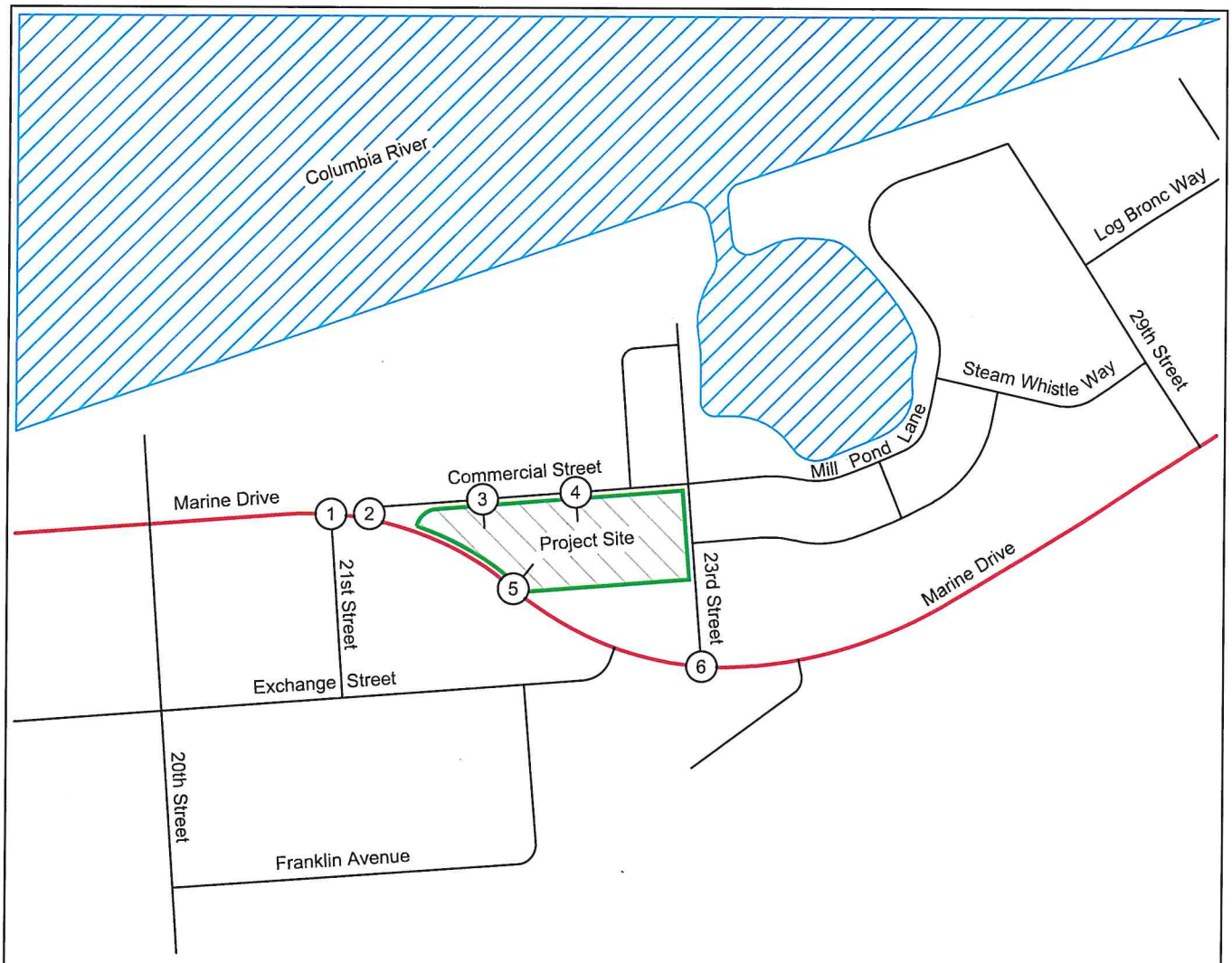
TRAFFIC COUNT DATA

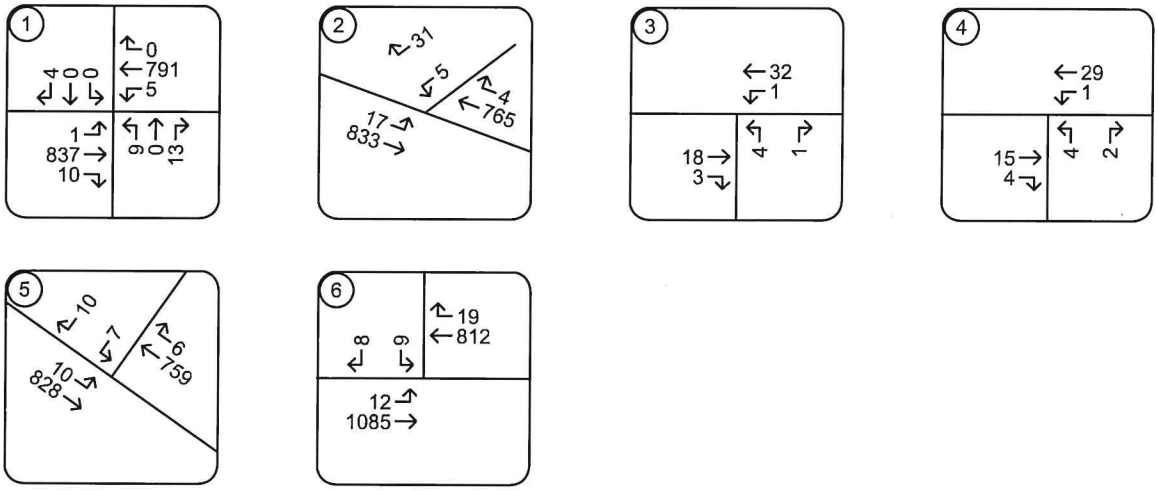
Traffic counts were conducted at the study intersections on Thursday May 2nd, 2019 from 3:00 PM to 6:00 PM. The peak hour occurred from 4:15 to 5:15 at the intersections of Marine Drive at 21st Street and Marine Drive at Commercial Street. The peak hour occurred from 4:30 to 5:30 PM at the intersection of Marine Drive and 23rd Street. Since the intersection at 23rd Street operates independently of the other intersections, the individual peak hours for each intersection were conservatively used in the operational analysis.

Prior to conducting the operational analysis, the measured traffic volumes along Marine Drive were adjusted to account for "30th-highest hour" (peak-season) traffic conditions.

The measured peak-hour turning movement volumes were adjusted to reflect 30th-highest hour traffic conditions using seasonal variation data from the Oregon Department of Transportation's 2017 Seasonal Trend Table in conjunction with data from ODOT's Automatic Traffic Recorder (ATR) Station 05-001, located on Highway 30 east of the City of Clatskanie. Using this data, a seasonal adjustment factor of 1.185 was calculated. Alternatively, using the average of the Coastal Destination, Summer and Commuter seasonal trend data, a similar adjustment factor of 1.18 was calculated for the highway volumes. Since the two values matched very closely, in cooperation with Keith Blair of ODOT we agreed to use the more conservative adjustment factor of 1.185. This seasonal adjustment factor was applied to the through traffic volumes traveling along Marine Drive in the study area.

Figure 2 on page 8 shows the existing year 2019 30th-highest hour traffic volumes during the evening peak hour at the study intersections.





The reported turning-movement volumes include an 18.5% seasonal adjustment factor applied to highway through movements.

TRAFFIC VOLUMES
2019 Existing 30th-Highest Hour Conditions
Evening Peak Hour

FIGURE 2

OPERATIONAL ANALYSIS

An operational analysis was conducted for the study intersections using Synchro 10 software, with outputs calculated based on the *HIGHWAY CAPACITY MANUAL, 6TH EDITION*. The analysis was conducted for the weekday evening peak hour, since this period represents the highest-volume hour of the day.

Level of service (LOS) can range from A to F, with level of service A representing nearly free-flow conditions and level of service F representing high delays and severe congestion. A report of level of service D generally indicates moderately high but tolerable delays, and typically occurs prior to reaching intersection capacity.

The two site access intersections along Commercial Street operate under the jurisdiction of the City of Astoria. The city requires that all movements serving more than 20 vehicles operate at level of service E or better and with a v/c ratio not higher than 0.90.

The study intersections along Marine Drive operate under the jurisdiction of the Oregon Department of Transportation (ODOT). ODOT's Oregon Highway Plan establishes mobility targets for the intersections which require that the unsignalized highway intersections operate with a volume-to-capacity (v/c) ratio of 0.85 or less on the state highway approaches and 0.95 or less on the side-street approaches. The v/c ratio represents the portion of the intersection capacity that is being utilized during the peak hours. A v/c ratio of 1.0 would indicate that the intersection is operating at capacity.

A summary of the existing conditions operational analysis is provided in Table 1 below. Based on the analysis, all study intersections are currently operating acceptably during the evening peak hour. Detailed capacity analysis worksheets are provided in the technical appendix.

Table 1 - Operational Analysis Summary: 2019 Existing Conditions

Intersection	PM Peak Hour		
	Delay	LOS	v/c
Marine Drive at 21st Street	20.7	C	0.51 / 0.09
Marine Drive at Commercial Street	17.0	C	0.50 / 0.11
Commercial Street at West Site Access	8.8	A	0.01 / <0.01
Commercial Street at East Site Access	8.7	A	0.01 / <0.01
Marine Drive at Site Access	17.6	C	0.50 / 0.06
Marine Drive at 23rd Street	27.1	D	0.67 / 0.06

*v/c ratios are listed as (major street v/c) / (minor street v/c).

SITE TRIPS

The proposed Grocery Outlet store will have a gross floor area of 16,000 square feet. It will replace two existing businesses on the subject property, a 6,900-sf auto parts store and a 4,292-sf warehouse facility. Both of these existing buildings will be removed as part of the proposed development. To estimate the net increase in site trips that will be generated by the proposed site redevelopment, trip rates from the *TRIP GENERATION MANUAL, 10th EDITION* were used. Data from land-use codes 150, *Warehousing*, 843, *Automobile Parts Sales*, and 854, *Discount Supermarket* were used to estimate the proposed development's trip generation based on the respective gross floor areas of the existing and proposed uses.

The proposed development is expected to attract pass-by trips. Pass-by trips occur when vehicles traveling past the site turn into the site while on the way to another destination. Since these trips would travel down the adjacent street regardless of whether they patronize the site, they do not add to the major-street traffic volumes. However, they do add turning movements at the site access driveways. Based on data from the *TRIP GENERATION HANDBOOK, 3RD EDITION*, published by the Institute of Transportation Engineers, 21 percent of site trips for discount supermarkets are projected to be pass-by trips. These trips were assumed to be attracted from the through traffic volumes traveling along Marine Drive. Similarly, 43 percent of the prior trips to the existing auto parts store would be expected to be pass-by trips.

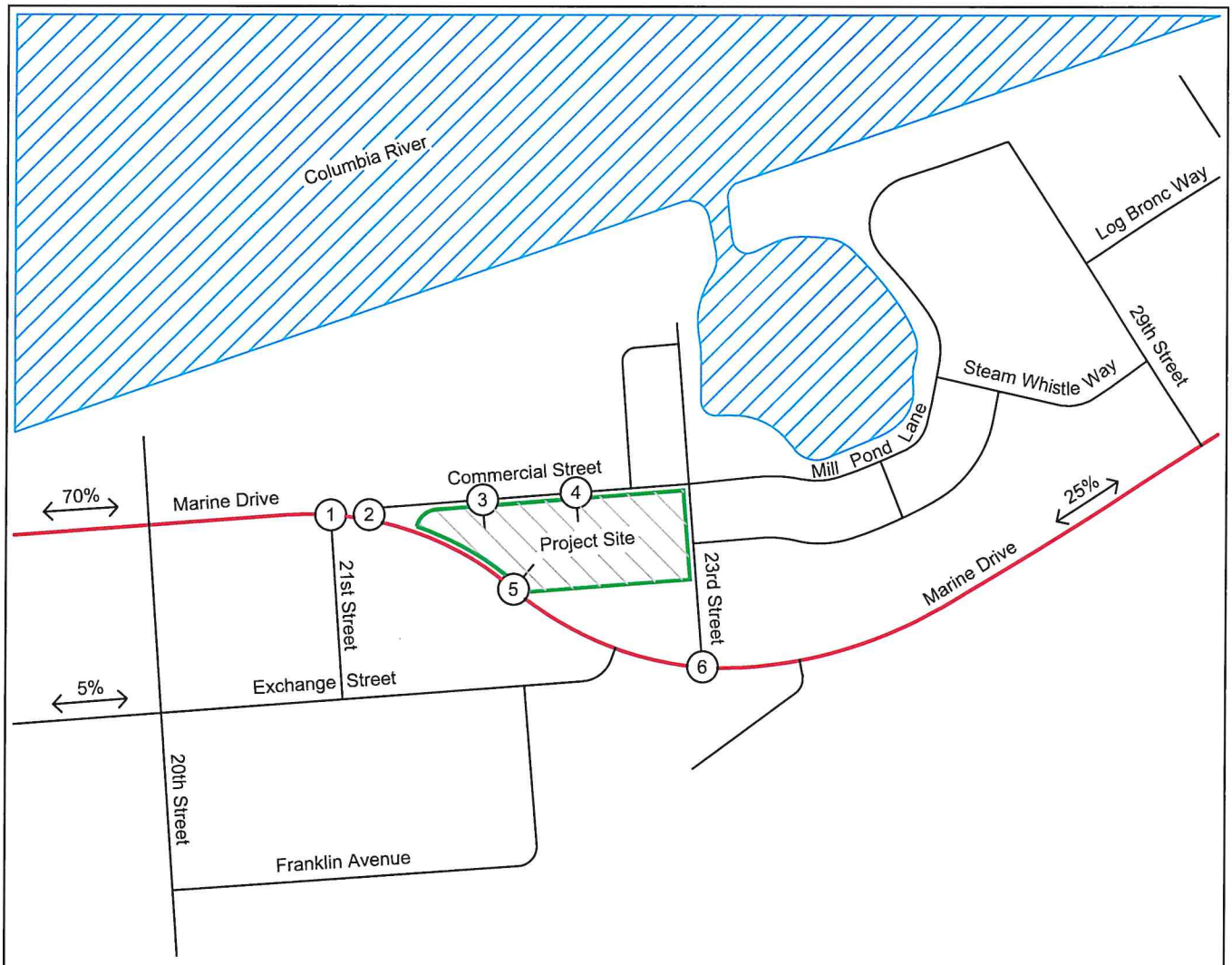
Based on the trip generation analysis, the proposed development is projected to generate 21 net new trips during the morning peak hour and 86 site trips during the evening peak hour. A summary of the trip generation calculations is provided in Table 2 below. It is also projected to result in 18 added pass-by trips during the evening peak hour. Detailed trip generation worksheets are included in the attached technical appendix.

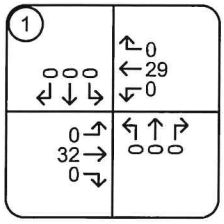
Table 2 - Trip Generation Summary

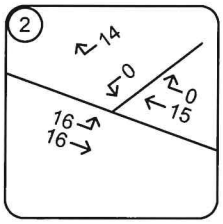
	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	Total
16,000 sf Discount Supermarket	23	17	40	79	78	157	1,454
-21% Pass-By Trips	-4	-4	-8	-16	-16	-32	-306
-6,900 sf Automobile Parts Store	-10	-8	-18	-16	-18	-34	-366
+43% Pass-By Trips	4	4	8	7	7	14	158
-4,292 sf Warehousing	-1	0	-1	0	-1	-1	-8
Net New Site Trips	12	9	21	54	50	104	932
Added Primary Site Trips	**12**	**9**	**21**	**45**	**41**	**86**	**784**
Added Pass-By Trips	**0**	**0**	**0**	**9**	**9**	**18**	**148**

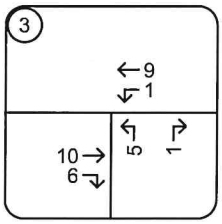
TRIP DISTRIBUTION

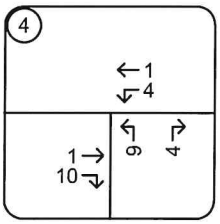
The directional distribution of primary site trips to/from the project site was estimated based the existing travel patterns in the site vicinity as well as the locations of likely travel destinations and the locations of major transportation facilities. Overall, 70 percent of site trips are projected to travel to and from the west on Marine Drive, 25 percent are projected to travel to and from the east along Marine Drive, and the remaining 5 percent of site trips are projected to travel to and from the west along Exchange Street. The trip distribution percentages and trip assignment for primary site trips are shown in Figure 3 on page 12. The anticipated pass-by trips are illustrated in Figure 4 on page 13.

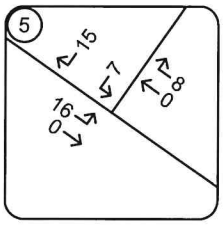


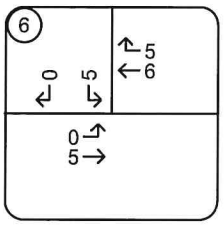








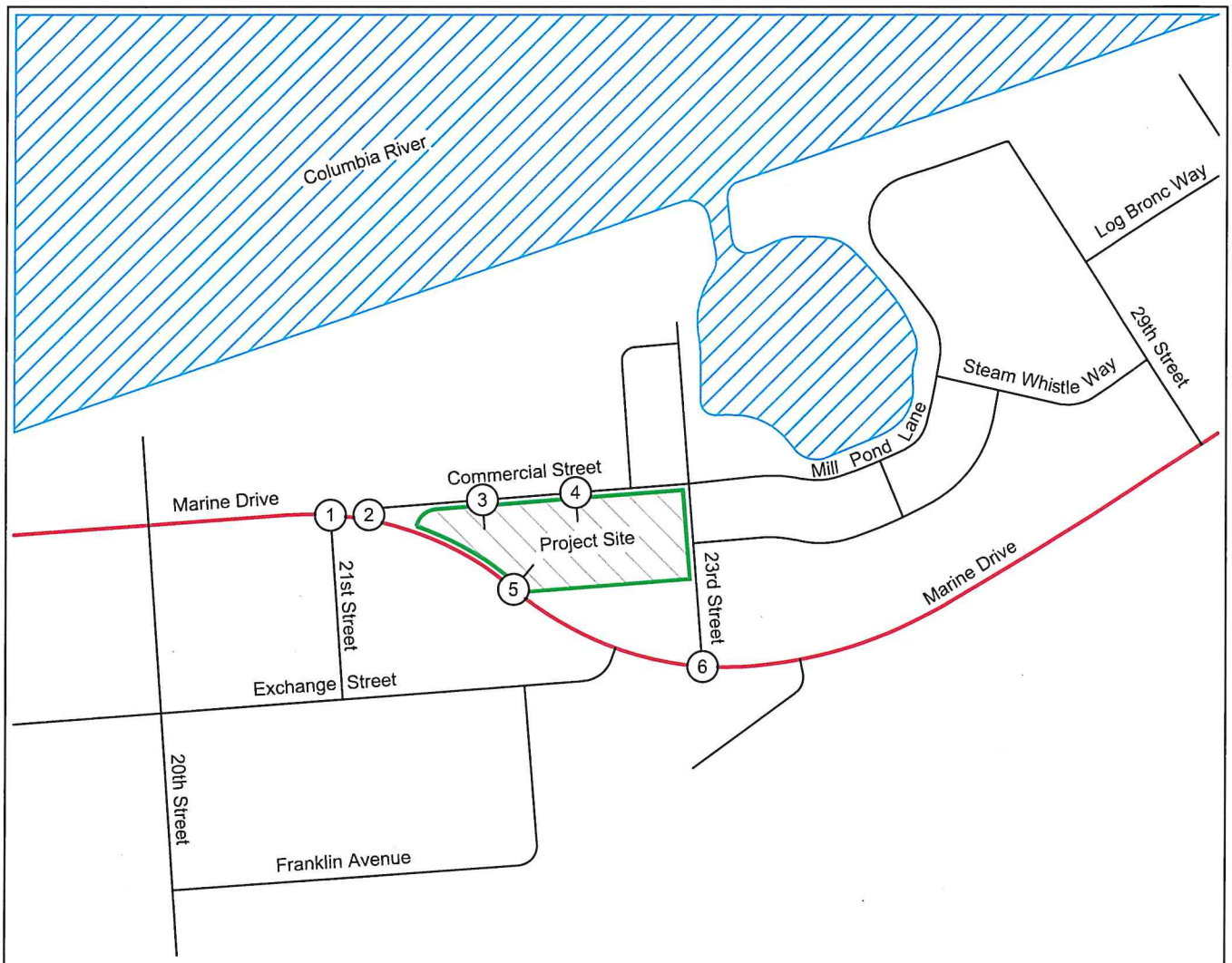


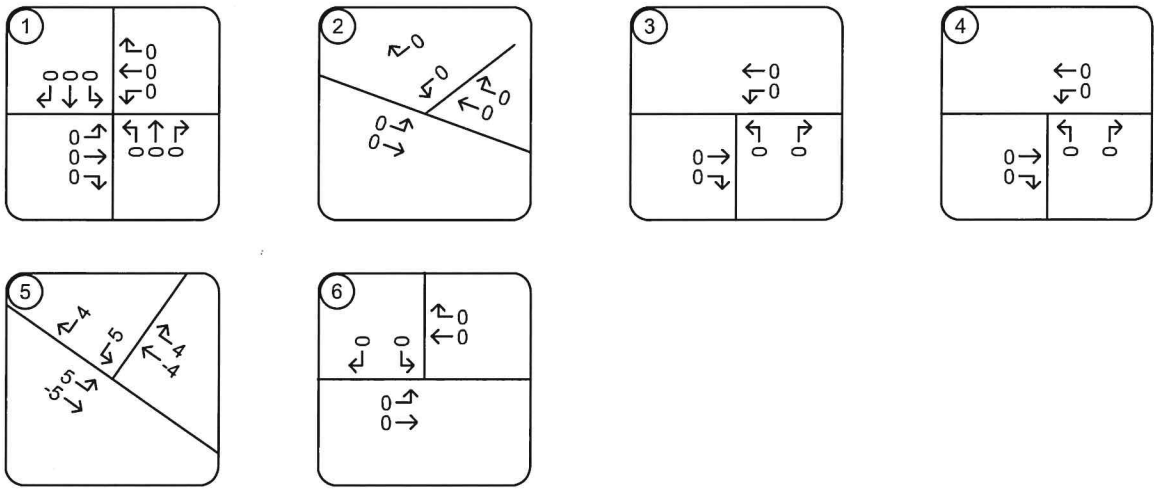


TRAFFIC VOLUMES

Site Trip Distribution and Assignment: Primary Site Trips
Evening Peak Hour

FIGURE 3





TRAFFIC VOLUMES
Site Trip Distribution and Assignment: Pass-By Trips
Evening Peak Hour

FIGURE 4

FUTURE CONDITIONS ANALYSIS

BACKGROUND VOLUMES

In order to determine the expected impact of site trips on the study area intersections, it is necessary to compare traffic conditions both with and without the addition of the projected traffic from the proposed Grocery Outlet facility. Since the proposed use cannot be constructed and occupied immediately, the comparison is made for future traffic conditions at the time of project completion. It is anticipated that the store can be completed and occupied within two years. Accordingly, the analysis was conducted for year 2021 traffic conditions.

Prior to adding the projected site trips to the study intersections, the existing traffic volumes were adjusted to account for background traffic growth over time. Background growth is expected to occur regardless of whether or not the proposed store is constructed, and accounts for other developments within and around the City of Astoria, as well as increases in population and increasing highway traffic volumes. Based on data from ODOT's Future Volume Tables, a linear growth rate of 0.7 percent per year was applied to the through traffic volumes on Marine Drive. All other turning movements had a compounded growth rate of 2 percent per year applied. These growth rates were applied over a period of two years to determine the year 2021 background traffic volumes.

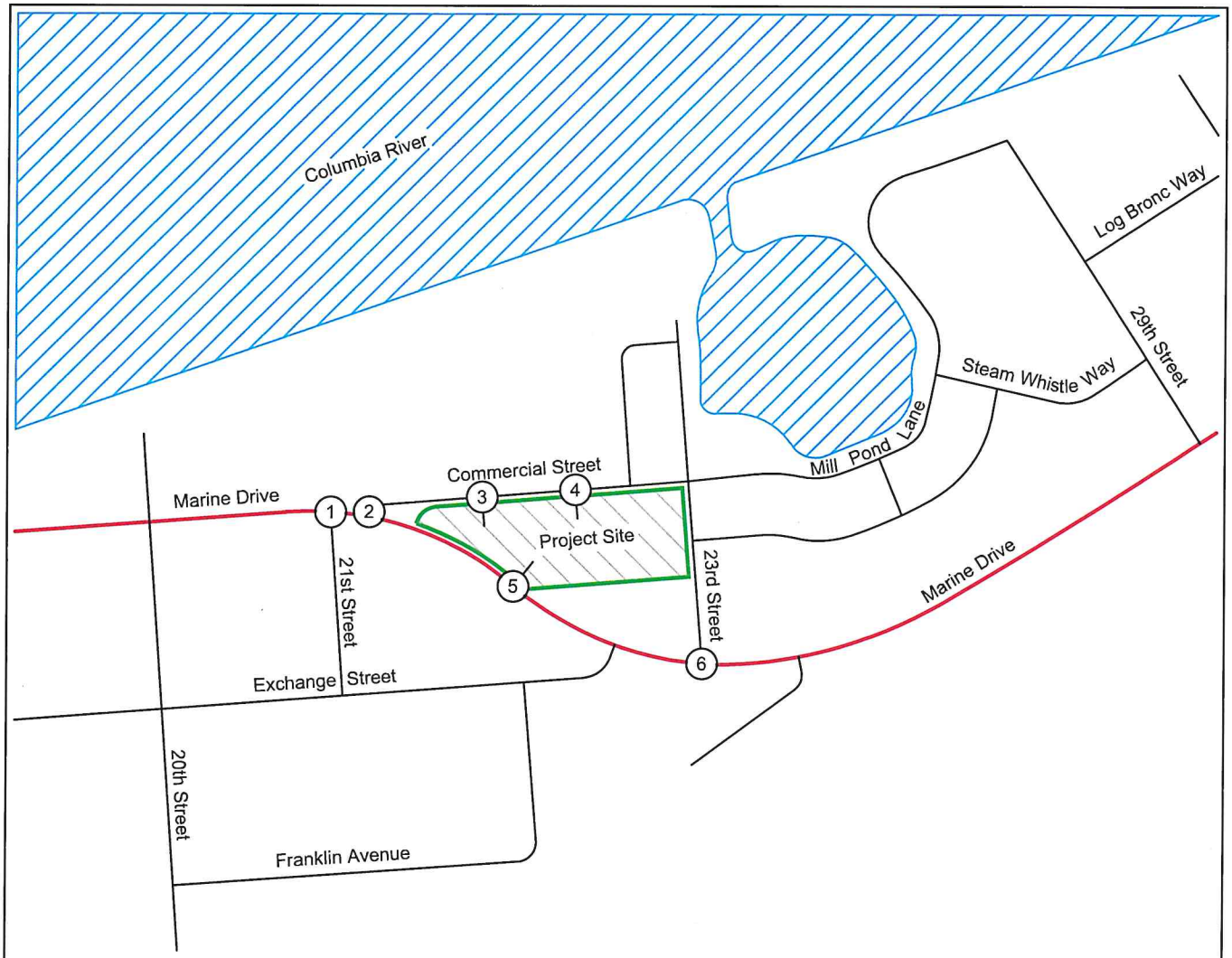
In addition to the background growth, the anticipated site trips associated with full development of the Astoria Co-Op Grocery Store were added to the background traffic volumes at the study area intersections. Site trips associated with the existing auto parts store and warehouse uses on the subject property were also included in the background traffic volumes.

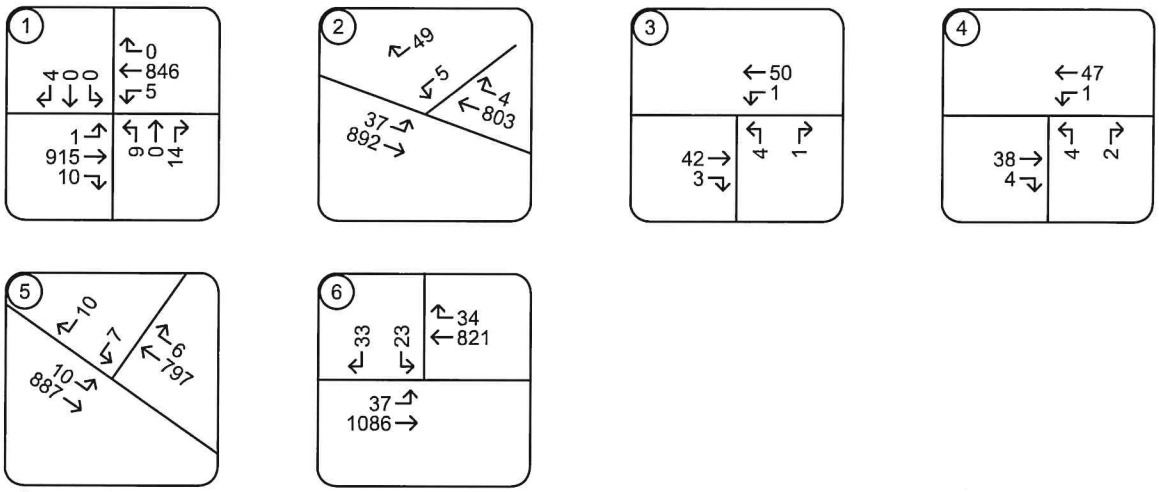
Figure 5 on page 15 shows the projected year 2021 background traffic volumes at the study intersections during the evening peak hour.

BACKGROUND VOLUMES PLUS SITE TRIPS

Peak hour trips calculated to be generated by the proposed development were added to the projected year 2021 background traffic volumes to obtain the year 2021 total traffic volumes following completion of the proposed Grocery Outlet store.

Figure 6 on page 16 shows the projected year 2021 peak hour volumes including both background growth and site trips from the proposed development during the evening peak hour.

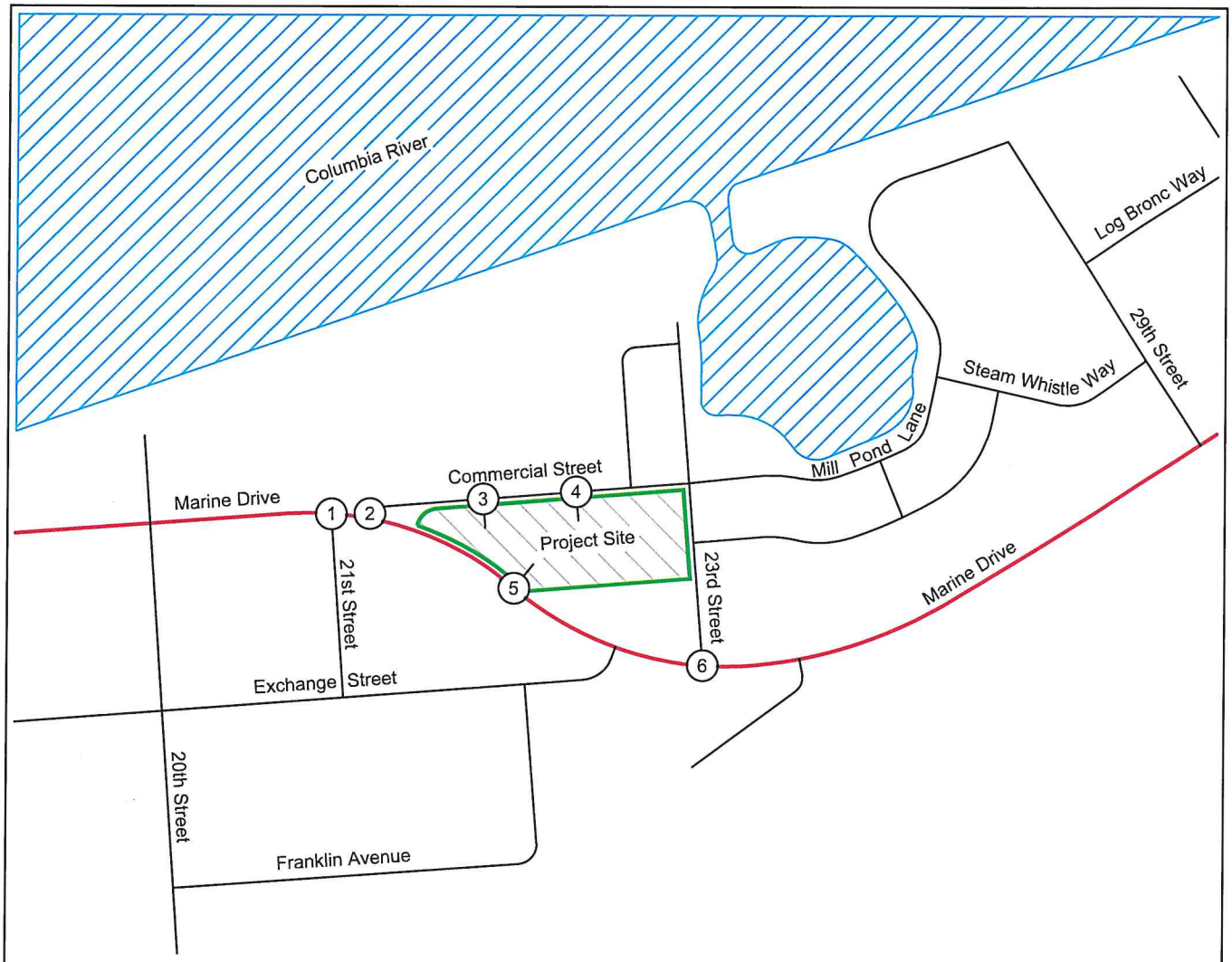


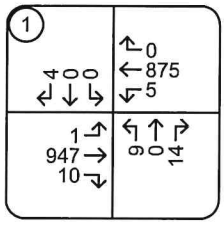


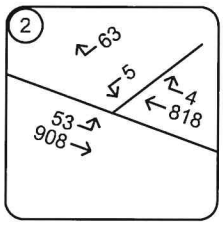
The calculated turning-movement volumes include in-process trips from approved development, background growth of 0.7% per year (linear) for the highway, and 2% per year (compounded) for the minor-street turning movements.

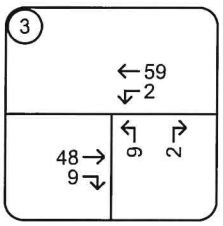
TRAFFIC VOLUMES
2021 Background Conditions
Evening Peak Hour

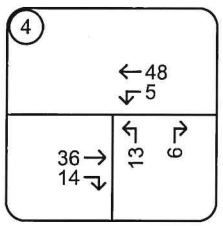
FIGURE 5

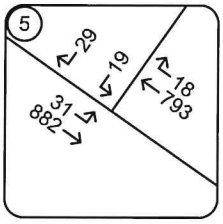


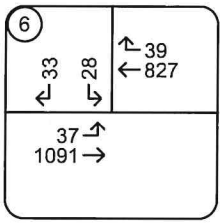












TRAFFIC VOLUMES
2021 Backround Plus Site Trips Conditions
Evening Peak Hour

FIGURE 6

OPERATIONAL ANALYSIS

The future conditions operational analysis was again conducted using Synchro analysis software, with outputs based on the analysis methodologies contained in the *HIGHWAY CAPACITY MANUAL, 6TH EDITION*. The analysis was prepared for each intersection's evening peak hour.

The results of the future conditions operational analysis are summarized in Table 3 below. Detailed analysis worksheets are also included in the technical appendix.

Table 3 - Operational Analysis Summary: Year 2021 Future Conditions

Intersection	PM Peak Hour		
	Delay	LOS	v/c
Marine Drive at 21st Street			
2021 Background Conditions	22.7	C	0.56 / 0.11
2021 Background plus Site	23.6	C	0.58 / 0.11
Marine Drive at Commercial Street			
2021 Background Conditions	18.3	C	0.54 / 0.17
2021 Background plus Site	19.4	C	0.55 / 0.22
Commercial Street at West Site Access			
2021 Background Conditions	9.0	A	0.03 / <0.01
2021 Background plus Site	9.1	A	0.04 / 0.02
Commercial Street at East Site Access			
2021 Background plus Site	8.9	A	0.03 / <0.01
2021 Background plus Site	9.0	A	0.03 / 0.02
Marine Drive at Site Access			
2021 Background Conditions	18.5	C	0.53 / 0.06
2021 Background plus Site	21.1	C	0.53 / 0.18
Marine Drive at 23rd Street			
2021 Background Conditions	34.5	D	0.65 / 0.17
2021 Background plus Site	36.1	E	0.66 / 0.20

*v/c ratios are listed as (major street v/c) / (minor street v/c).

Based on the results of the operational analysis, all intersections are projected to operate acceptably per ODOT and City of Astoria standards through year 2021 either with or without the addition of site trips from the proposed development. No operational mitigations are necessary or recommended in conjunction with the proposed development.

QUEUING ANALYSIS

A queuing analysis was conducted to determine whether queues from the closely-spaced intersections on Marine Drive may interfere with the efficient operation of the transportation network. In particular, the analysis focused on queues within the center two-way left-turn lane on Marine Drive between 21st Street and Commercial Street.

Commercial Street intersects Marine Drive at a skewed angle and along a curved segment of Marine Drive. This results in an alignment wherein vehicles traveling along the state highway turn to follow the curve, while vehicles traveling between Commercial Street and the west leg of Marine Drive maintain a relatively straight travel path.

Vehicles queuing to make eastbound left turns from Marine Drive onto Commercial Street would be expected to queue within the center two-way left-turn lane. Vehicles making westbound left-turns from Marine Drive onto 21st Street will also queue within the center two-way left-turn lane. Based on measurements of the existing roadway alignments, there is approximately 95 feet of linear distance within the center median between the two intersections.

The queuing analysis was conducted using Synchro/SimTraffic software with calibrations per the requirements of ODOT's Analysis Procedures Manual. The analysis was conducted for year 2021 background plus site trips conditions in order to verify that the projected queues can be accommodated within the available queue storage.

Based on the queuing analysis, the 95th percentile queue westbound on Marine Drive approaching 21st Street was projected to be 23 feet (approximately one vehicle). The 95th percentile queue eastbound on Marine Drive approaching Commercial Street was projected to be 61 feet (approximately 2 vehicles). Based on the projected queue lengths, there is sufficient space between the intersections to accommodate the 95th percentile queues.

It should be noted that it is unlikely that the 95th percentile queues in the eastbound and westbound directions would occur at the same time; however there is sufficient space to accommodate the waiting vehicles within the center lane even if these demands occurred simultaneously. It should also be noted that the volume of westbound left-turning traffic is not sufficient to meet ODOT's left-turn lane warrants, and that the existing center two-way left-turn lane could therefore be converted into a dedicated eastbound left-turn lane. No other queuing-related mitigations are recommended in conjunction with the proposed development.

NEIGHBORHOOD IMPACTS

Since the subject property has direct access to Marine Drive as well as access on Commercial Street, no significant traffic additions are projected on the residential streets in the site vicinity. Although there may be a nominal number of trips to and from the site that travel on the local residential streets, these trips would only be expected to occur to the extent that the drivers live within those residential areas. Accordingly, similar trips volumes would be projected on the residential streets regardless of whether the drivers were destined for the proposed Grocery Outlet store or a more distant alternative store. No measurable impacts are projected on the neighborhood streets in the site vicinity, and no mitigations are recommended in conjunction with the proposed development.

SAFETY ANALYSIS

CRASH DATA ANALYSIS

Using data obtained from the Oregon Department of Transportation's Crash Analysis and Reporting Unit, a review of the five most recent years of available crash history (from January 2013 to December 2017) was performed for each of the study intersections. The crash data was evaluated based on the number, type, and severity of collisions, as well as the intersection crash rates. Crash rates allow comparison of relative safety risks at intersections with different lane configurations, volumes, and traffic control devices by accounting for both the number of crashes that occur during the study period and the number of vehicles that traveled through the intersection during that period. Crash rates are calculated using the standard assumption that evening peak hour volumes are approximately 10 percent of the average daily traffic volume at an intersection. The calculated crash rates were compared to the 90th percentile crash rates for similar intersections in the state of Oregon in order to determine whether any of the intersections are among the top 10 percent of higher-risk intersections in Oregon.

The intersection of Marine Drive at 21st Street had one reported crash during the five-year analysis period. It was a backing collision that resulted in property damage only. The crash rate at the intersection was calculated to be 0.04 crashes per million entering vehicles. The 90th percentile crash rate for unsignalized urban four-way intersections is 0.408 crashes per million entering vehicles. Accordingly, the crash rate at this intersection is below the level which would indicate a significant safety concern.

The intersection of Marine Drive at Commercial Street had one reported collision during the five-year analysis period. It was a turning-movement collision between a driver traveling westbound along Marine Drive and a driver that failed to yield while making a westbound right turn from Commercial Street onto Marine Drive. The crash resulted in a report of a "possible injury/complaint of pain". The crash rate at the intersection was calculated to be 0.04 crashes per million entering vehicles. The 90th percentile crash rate for unsignalized urban T-intersections is 0.293 crashes per million entering vehicles. Again, the crash rate at this intersection is below the level which would indicate a significant safety concern.

The intersection of Marine Drive at 23rd Street had eight reported crashes during the five-year analysis period. These included six rear-end collisions, one turning-movement collision and one pedestrian collision. The pedestrian collision occurred when a pedestrian crossing from south to north was struck by a westbound driver, resulting in a non-incapacitating injury to the pedestrian. The intersection crashes resulted in no serious injuries or fatalities; however, there was one reported non-incapacitating injury and four reports of a "possible injury/complaint of pain". The crash rate for the intersection was calculated to be 0.266 crashes per million entering vehicles. The 90th percentile crash rate for unsignalized urban T-intersections is 0.293 crashes per million entering vehicles. Again, the crash rate at this intersection is below the level which would indicate a significant safety concern.

Based on the crash data analysis, no significant safety concerns were identified and none of the study intersections are within the top ten percent of high crash locations for similar intersections in the

state of Oregon. No specific crash mitigations are recommended in conjunction with the proposed development.

SIGHT DISTANCE

Intersection sight distance was examined for the proposed site access driveways on Marine Drive and Commercial Street.

According to *A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS*, published by the American Association of State Highway and Transportation Officials (AASHTO) and based on the posted speed limit of 30 mph on Marine Drive, the minimum required intersection sight distance is 335 feet in each direction.

From the site access driveway on Marine Drive, intersection sight distance was measured to be in excess of 400 feet to the west and 160 feet to the east. Intersection sight distance to the east is limited by an existing tree on the south side of the driveway. If the tree is removed or limbed to provide a clear line of sight below the canopy, it is projected that 335 feet of intersection sight distance can be attained in each direction.

For the proposed driveways along Commercial Street, clear sight lines are projected to be available to the ends of the roadway in each direction. Accordingly, adequate sight distance is available for safe operation of the proposed driveways on Commercial Street.

Based on the analysis, it is recommended that the tree closest to the roadway immediately south of the site access on Marine Drive either be removed or limbed to a height of at least 7 feet above the ground. With this improvement, adequate sight distance is projected to be available at all points of site access.

CONCLUSIONS

Based on the operational analysis, all study area intersections are projected to operate acceptably per ODOT standards through 2021 either with or without the addition of site trips from the proposed development. No operational mitigations are necessary or recommended.

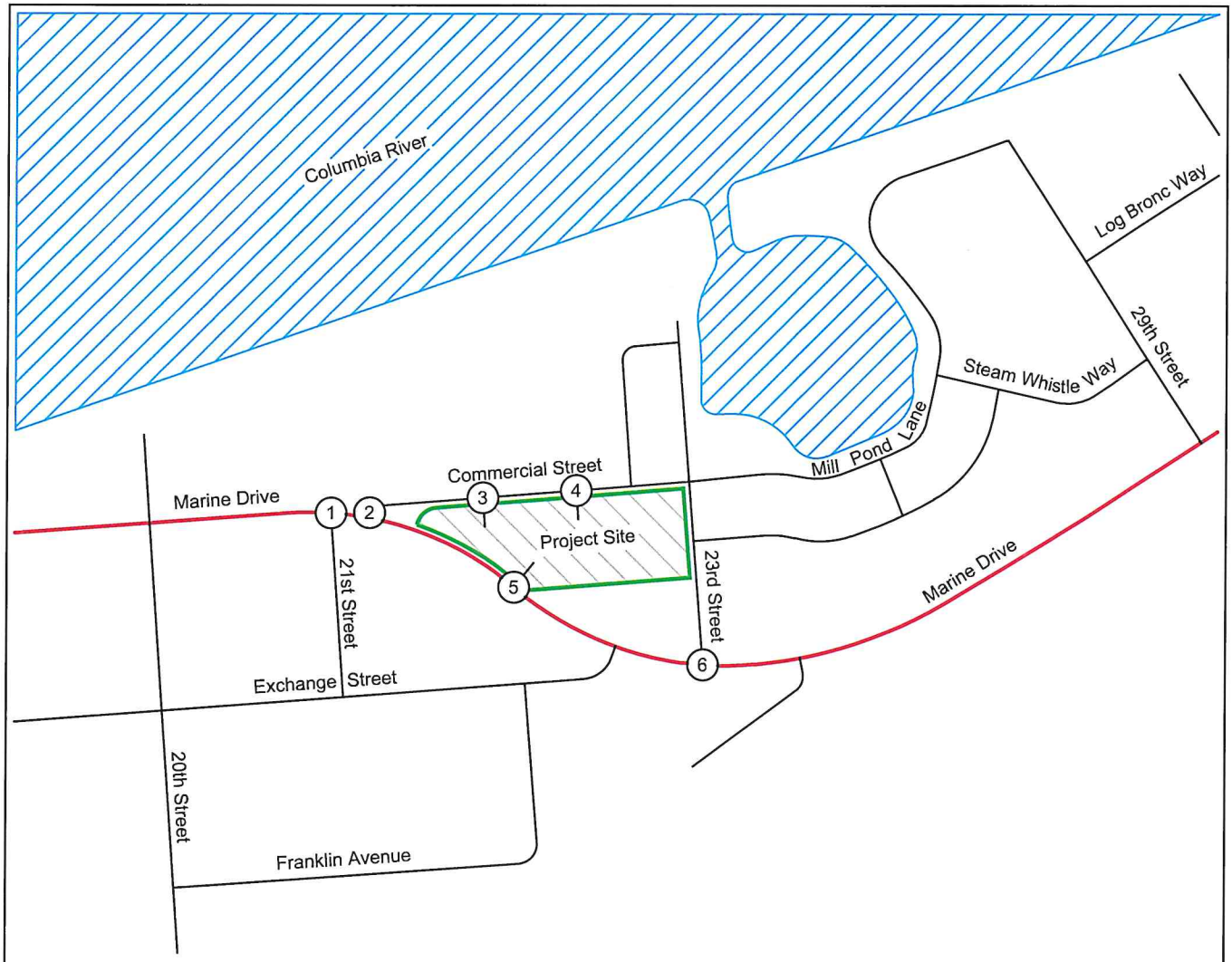
Based on the queuing analysis, there is sufficient space for the projected 95th percentile queues for the major-street left turn movements between 21st Street and Commercial Street. Given the low volume of westbound left-turns from Marine Drive onto 21st Street, warrants are not met for a westbound left-turn lane at this intersection. Accordingly, the existing center two-way left-turn lane could be converted to a dedicated eastbound left-turn lane serving Commercial Street.

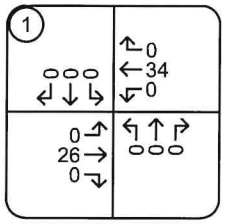
Due to the location of the site and the locations of site access, no additional traffic impacts are projected on residential neighborhood streets in the site vicinity.

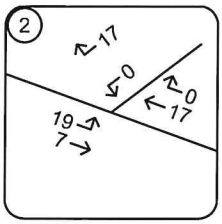
Crash data for the most recent five years shows no significant crash trends that may be indicative of design deficiencies at the study intersections. No specific crash mitigations are recommended.

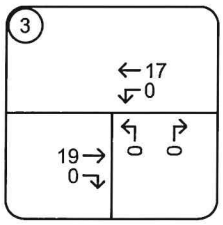
With removal or limbing of the lower branches of the existing tree located south of the site access driveway on Marine Drive, adequate sight distance is projected to be available. No other sight distance mitigations are necessary or recommended in conjunction with the proposed development.

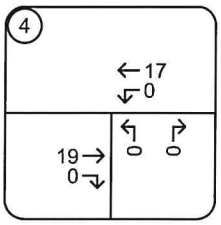
APPENDIX

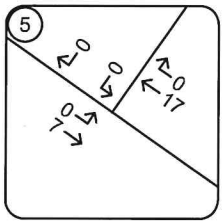


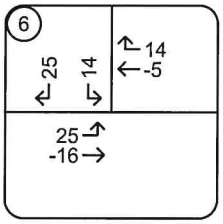












TRAFFIC VOLUMES
In-Process Trips (Astoria Co-op Grocery Store)
Evening Peak Hour

FIGURE 7

PAGE APP1

All Traffic Data Services, Inc.
15105 SE 17th St. Vancouver, WA. 98683
503-833-2740

File Name : 21st St & Marine Dr PM
Site Code :
Start Date : 5/2/2019
Page No : 1

Groups Printed- Unshifted - Bank 1 - Bank 2

	21ST ST Southbound						COMMERCIAL ST Westbound						MARINE DR Northwestbound						21ST ST Northbound						MARINE DR Eastbound						
Start Time	Left	Bear Left	Thru	Right	Peds	App Total	Hard Left	Left	Thru	Right	Peds	App Total	Hard Left	Bear Left	Bear Right	Hard Right	Peds	App Total	Left	Thru	Right	Hard Right	Peds	App Total	Left	Thru	Bear Right	Right	Peds	App Total	Int. Total
15:00	0	0	0	0	0	0	1	0	8	0	2	11	1	137	0	1	0	139	0	0	0	2	5	7	0	8	139	4	1	152	309
15:15	0	0	0	0	0	0	0	0	8	0	0	8	1	157	0	0	0	158	1	0	0	0	0	1	0	12	151	2	0	165	332
15:30	0	1	0	0	0	1	0	0	6	0	0	6	0	153	0	1	0	154	1	0	0	1	1	3	0	7	155	2	0	164	328
15:45	0	0	0	0	1	1	1	0	8	0	1	10	1	153	0	2	1	157	0	0	0	1	0	1	0	7	156	2	0	165	334
Total	0	1	0	0	1	2	2	0	30	0	3	35	3	600	0	4	1	608	2	0	0	4	6	12	0	34	601	10	1	646	1303
16:00	0	0	0	0	1	1	1	0	2	0	3	6	0	144	0	1	2	147	2	0	0	2	0	4	0	5	157	3	0	165	323
16:15	0	0	0	0	1	1	0	0	5	0	2	7	1	183	0	1	0	185	2	0	0	0	0	2	0	8	150	2	0	160	355
16:30	0	0	0	1	0	1	0	0	12	0	0	12	0	160	0	2	0	162	1	0	0	5	2	8	1	2	161	1	0	165	348
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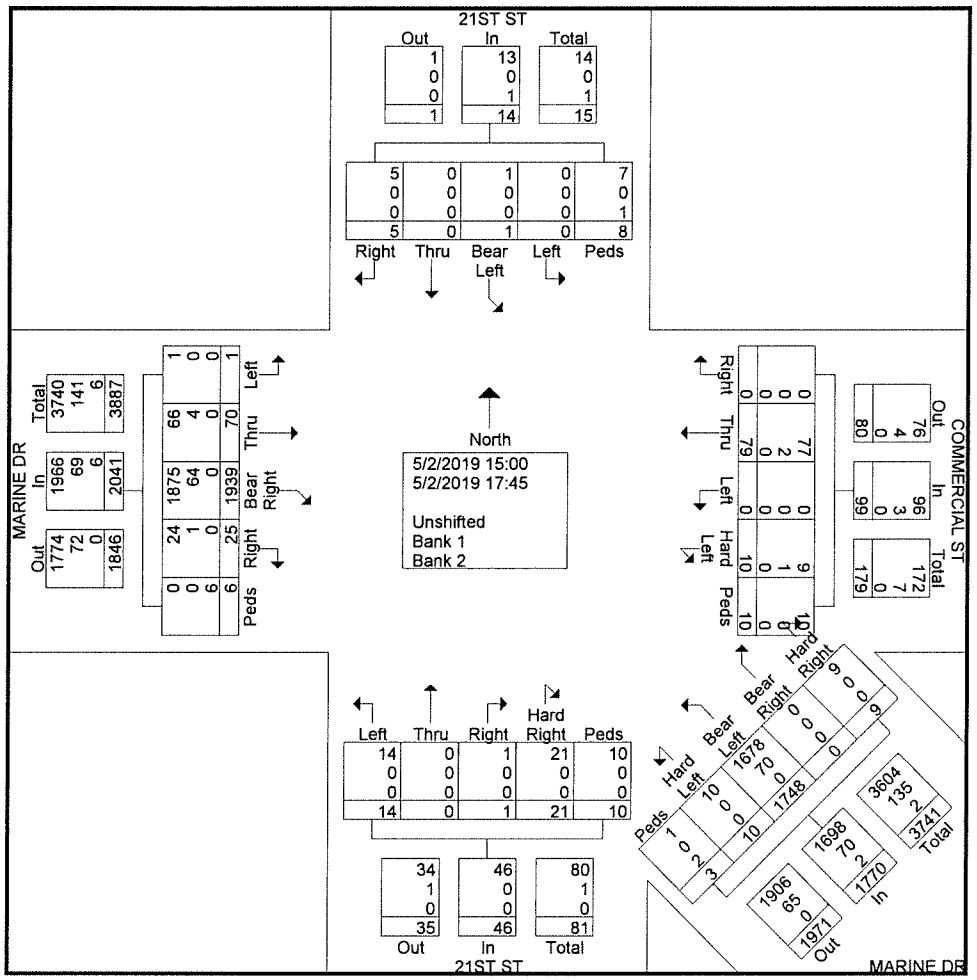
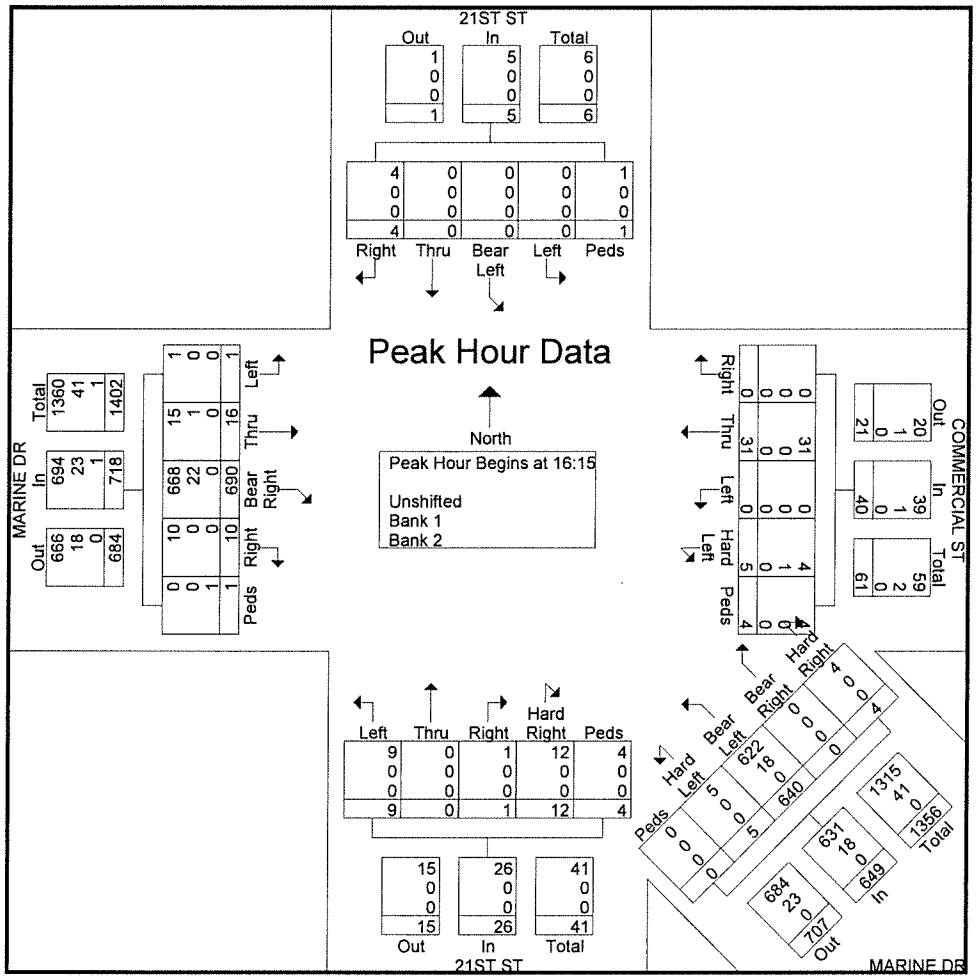
Total	0	0	0	2	5	7	2	0	22	0	0	24	4	524	0	1	0	529	6	0	1	8	1	16	0	17	685	5	5	712	1288
Grand Total	0	1	0	5	8	14	10	0	79	0	10	99	10	1748	0	9	3	1770	14	0	1	21	10	46	1	70	1939	25	6	2041	3970
Apprch %	0	7.1	0	35.7	57.1		10.1	0	79.8	0	10.1		0.6	98.8	0	0.5	0.2		30.4	0	2.2	45.7	21.7		0	3.4	95	1.2	0.3		
Total %	0	0	0	0.1	0.2	0.4	0.3	0	2	0	0.3	2.5	0.3	44	0	0.2	0.1	44.6	0.4	0	0	0.5	0.3	1.2	0	1.8	48.8	0.6	0.2	51.4	
Unshifted														1678				1698									1875			1966	3819
% Unshifted	0	100	0	100	87.5	92.9	90	0	97.5	0	100	97	100	96	0	100	33.3	95.9	100	0	100	100	100	100	100	94.3	96.7	96	0	96.3	96.2
Bank 1	0	0	0	0	0	0	1	0	2	0	0	3	0	70	0	0	0	70	0	0	0	0	0	0	0	4	64	1	0	69	142
% Bank 1									2.5																	5.7	3.3				
Bank 2	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	6	6	9
% Bank 2	0	0	0	0	12.5	7.1	0	0	0	0	0	0	0	0	0	0	66.7	0.1	0	0	0	0	0	0	0	0	0	0	100	0.3	0.2



All Traffic Data Services, Inc.
15105 SE 17th St. Vancouver, WA. 98683
503-833-2740

File Name : 21st St & Marine Dr PM
Site Code :
Start Date : 5/2/2019
Page No : 2

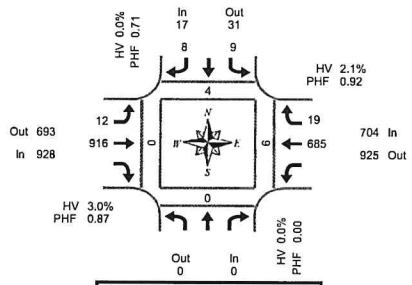
	21ST ST Southbound						COMMERCIAL ST Westbound						MARINE DR Northwestbound						21ST ST Northbound						MARINE DR Eastbound						
Start Time	Left	Bear Left	Thru	Right	Peds	App Total	Hard Left	Left	Thru	Right	Peds	App Total	Hard Left	Bear Left	Bear Right	Hard Right	Peds	App Total	Left	Thru	Right	Hard Right	Peds	App Total	Left	Thru	Bear Right	Right	Peds	App Total	Int Total
Peak Hour Analysis From 3:00:00 PM to 5:45:00 PM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 4:15:00 PM																															
4:15:00 PM	0	0	0	0	**1**	1	0	0	5	0	**2**	7	1	**183**	0	1	0	**185**	2	0	0	0	0	2	0	**8**	150	2	0	160	355
4:30:00 PM	0	0	0	1	0	1	0	0	**12**	0	0	12	0	160	0	**2**	0	162	1	0	0	**5**	**2**	8	**1**	2	161	1	0	165	348
4:45:00 PM	0	0	0	**2**	0	**2**	**5**	0	8	0	2	**15**	**2**	137	0	0	0	139	1	0	0	2	1	4	0	4	185	**4**	0	193	353
5:00:00 PM	0	0	0	1	0	1	0	0	6	0	0	6	2	160	0	1	0	163	**5**	0	**1**	5	1	**12**	0	2	**194**	3	**1**	**200**	**382**
Total Volume	0	0	0	4	1	5	5	0	31	0	4	40	5	640	0	4	0	649	9	0	1	12	4	26	1	16	690	10	1	718	1438
% App. Total	0	0	0	80	20		12.5	0	77.5	0	10		0.8	98.6	0	0.6	0		34.6	0	3.8	46.2	15.4		0.1	2.2	96.1	1.4	0.1		
PHF	.000	.000	.000	.500	.250	.625	.250	.000	.646	.000	.500	.667	.625	.874	.000	.500	.000	.877	.450	.000	.250	.600	.500	.542	.250	.500	.889	.625	.250	.898	.941
Unshifted														622													668				1395
% Unshifted	0	0	0	100	100	100	80.0	0	100	0	100	97.5	100	97.2	0	100	0	97.2	100	0	100	100	100	100	100	93.8	96.8	100	0	96.7	97.0
Bank 1	0	0	0	0	0	0	1	0	0	0	0	1	0	18	0	0	0	18	0	0	0	0	0	0	0	1	22	0	0	23	42
% Bank 1							20.0							2.8												6.3	3.2				
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.1	0.1



Total Vehicle Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740



23rd St & Marine Dr

Thursday, May 02, 2019
3:00 PM to 6:00 PM

Peak Hour Summary
4:30 PM to 5:30 PM

5-Minute Interval Summary
3:00 PM to 6:00 PM

Interval Start Time	Northbound 23rd St				Southbound 23rd St			Eastbound Marine Dr				Westbound Marine Dr				Interval Total	Pedestrians Crosswalk			
				Bikes	L	R	Bikes	L	T		Bikes	T	R	Bikes			North	South	East	West
3:00 PM				0	2	2	0	0	65		1	51	3	0		123	0	0	0	0
3:05 PM				0	0	1	0	3	61		0	55	1	0		121	0	0	0	0
3:10 PM				0	0	1	0	0	50		0	61	1	0		113	0	0	0	0
3:15 PM				0	1	0	0	0	62		0	57	2	0		122	0	0	0	0
3:20 PM				0	2	0	0	0	61		0	55	1	0		119	0	0	0	0
3:25 PM				0	3	0	0	1	63		0	53	1	1		121	0	0	0	0
3:30 PM				0	0	2	0	0	60		0	58	0	0		120	0	0	0	0
3:35 PM				0	0	1	0	1	60		1	56	0	0		118	0	0	0	0
3:40 PM				0	1	1	0	1	57		0	58	0	0		118	0	0	0	0
3:45 PM				0	2	1	0	1	56		0	77	0	0		137	0	0	0	0
3:50 PM				0	1	2	0	1	61		0	54	1	0		120	0	0	0	0
3:55 PM				0	0	1	0	0	71		0	46	1	0		119	0	0	0	0
4:00 PM				0	0	0	0	0	72		0	74	2	0		148	0	0	0	0
4:05 PM				0	0	2	0	0	68		0	42	3	0		115	0	0	0	0
4:10 PM				0	1	0	0	0	72		0	57	0	0		130	0	0	0	0
4:15 PM				0	0	0	0	0	67		0	77	2	0		146	0	0	0	0
4:20 PM				0	0	0	0	0	55		0	80	0	0		135	1	0	0	0
4:25 PM				0	0	0	0	0	60		0	56	0	0		116	0	0	0	0
4:30 PM				0	0	0	0	1	76		0	71	3	0		151	0	0	0	0
4:35 PM				0	1	0	0	1	62		0	46	0	0		110	3	0	1	0
4:40 PM				0	2	0	0	2	65		0	70	1	0		140	0	0	0	0
4:45 PM				0	1	2	0	0	63		0	57	1	0		124	0	0	2	0
4:50 PM				0	0	1	0	1	70		0	51	1	0		124	0	0	1	0
4:55 PM				0	1	1	0	1	81		0	54	4	0		142	0	0	0	0
5:00 PM				0	1	0	0	0	72		0	55	2	1		130	0	0	0	0
5:05 PM				0	1	0	0	0	89		3	71	3	0		164	0	0	0	0
5:10 PM				0	1	1	0	3	76		0	61	0	0		142	0	0	2	0
5:15 PM				0	0	2	0	1	86		0	45	0	0		134	1	0	0	0
5:20 PM				0	1	1	0	1	99		0	51	2	0		155	0	0	0	0
5:25 PM				0	0	0	0	1	77		0	53	2	0		133	0	0	0	0
5:30 PM				0	0	0	0	1	74		1	49	0	0		124	0	0	1	0
5:35 PM				0	0	0	0	1	73		0	48	2	0		124	0	0	1	0
5:40 PM				0	3	0	0	0	54		0	36	4	0		97	0	0	2	2
5:45 PM				0	2	1	0	0	64		0	44	0	0		111	1	0	1	0
5:50 PM				0	1	0	0	1	58		2	52	0	0		112	0	0	0	0
5:55 PM				0	0	2	0	1	55		0	45	0	0		103	0	0	0	0
Total Survey				0	28	25	0	24	2,415		8	2,026	43	2		4,561	6	0	11	2

15-Minute Interval Summary
3:00 PM to 6:00 PM

Interval Start Time	Northbound 23rd St				Southbound 23rd St			Eastbound Marine Dr				Westbound Marine Dr				Interval Total	Pedestrians Crosswalk			
				Bikes	L	R	Bikes	L	T		Bikes	T	R	Bikes			North	South	East	West
3:00 PM				0	2	4	0	3	176		1	167	5	0		357	0	0	0	0
3:15 PM				0	6	0	0	1	186		0	165	4	1		362	0	0	0	0
3:30 PM				0	1	4	0	2	177		1	172	0	0		356	0	0	0	0
3:45 PM				0	3	4	0	2	188		0	177	2	0		376	0	0	0	0
4:00 PM				0	1	2	0	0	212		0	173	5	0		393	0	0	0	0
4:15 PM				0	0	0	0	0	182		0	213	2	0		397	1	0	0	0
4:30 PM				0	3	0	0	4	203		0	187	4	0		401	3	0	1	0
4:45 PM				0	2	4	0	2	214		0	162	6	0		390	0	0	3	0
5:00 PM				0	3	1	0	3	237		3	187	5	1		436	0	0	2	0
5:15 PM				0	1	3	0	3	262		0	149	4	0		422	1	0	0	0
5:30 PM				0	3	0	0	2	201		1	133	6	0		345	0	0	4	2
5:45 PM				0	3	3	0	2	177		2	141	0	0		326	1	0	1	0
Total Survey				0	28	25	0	24	2,415		8	2,026	43	2		4,561	6	0	11	2

Peak Hour Summary
4:30 PM to 5:30 PM

By Approach	Northbound 23rd St				Southbound 23rd St				Eastbound Marine Dr				Westbound Marine Dr				Total
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	
Volume	0	0	0	0	17	31	48	0	928	693	1,621	3	704	925	1,629	1	1,649
%HV	0.0%				0.0%				3.0%				2.1%				2.6%
PHF	0.00				0.71				0.87				0.92				0.94

Pedestrians Crosswalk			
North	South	East	West
4	0	6	0

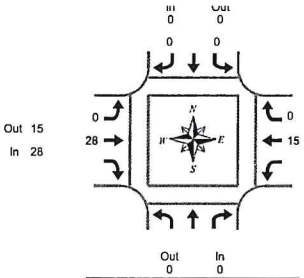
By Movement	Northbound 23rd St				Southbound 23rd St			Eastbound Marine Dr				Westbound Marine Dr			Total
				Total	L	R	Total	L	T		Total	T	R	Total	
Volume				0	9	8	17	12	916		928	685	19	704	1,649
%HV	NA	NA	NA	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	NA	3.0%	2.2%	0.0%	2.1%	2.6%
PHF				0.00	0.56	0.50	0.71	0.60	0.87		0.87	0.92	0.53	0.92	0.94

Rolling Hour Summary
3:00 PM to 6:00 PM

Interval Start Time	Northbound 23rd St				Southbound 23rd St			Eastbound Marine Dr				Westbound Marine Dr				Interval Total	Pedestrians Crosswalk			
				Bikes	L	R	Bikes	L	T		Bikes	T	R	Bikes			North	South	East	West
3:00 PM				0	12	12	0	8	727		2	681	11	1		1,451	0	0	0	0
3:15 PM				0	11	10	0	5	763		1	687	11	1		1,487	0	0	0	0
3:30 PM				0	5	10	0	4	759		1	735	9	0		1,522	1	0	0	0
3:45 PM				0	7	6	0	6	785		0	750	13	0		1,567	4	0	1	0
4:00 PM				0	6	6	0	6	811		0	735	17	0		1,581	4	0	4	0
4:15 PM				0	8	5	0	9	836		3	749	17	1		1,624	4	0	6	0
4:30 PM				0	9	8	0	12	916		3	685	19	1		1,649	4	0	6	0
4:45 PM				0	9	8	0	10	914		4	631	21	1		1,593	1	0	9	2
5:00 PM				0	10	7	0	10	877		6	610	15	1		1,529	2	0	7	2

Heavy Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



23rd St & Marine Dr

Thursday, May 02, 2019
3:00 PM to 6:00 PM

Peak Hour Summary
4:30 PM to 5:30 PM

Heavy Vehicle 5-Minute Interval Summary
3:00 PM to 6:00 PM

Interval Start Time	Northbound 23rd St			Southbound 23rd St			Eastbound Marine Dr			Westbound Marine Dr			Interval Total
			Total	L	R	Total	L	T	Total	T	R	Total	
3:00 PM			0	0	0	0	0	3	3	4	0	4	7
3:05 PM			0	0	0	0	0	1	1	2	0	2	3
3:10 PM			0	0	0	0	0	2	2	6	0	6	8
3:15 PM			0	0	0	0	0	2	2	4	0	4	6
3:20 PM			0	0	0	0	0	5	5	1	0	1	6
3:25 PM			0	0	0	0	0	2	2	0	0	0	2
3:30 PM			0	0	0	0	0	1	1	2	0	2	3
3:35 PM			0	0	0	0	1	1	2	3	0	3	5
3:40 PM			0	0	0	0	0	1	1	2	0	2	3
3:45 PM			0	0	0	0	0	3	3	3	0	3	6
3:50 PM			0	0	0	0	0	0	0	4	0	4	4
3:55 PM			0	0	0	0	0	2	2	4	0	4	6
4:00 PM			0	0	0	0	0	2	2	1	0	1	3
4:05 PM			0	0	0	0	0	1	1	3	0	3	4
4:10 PM			0	0	0	0	0	4	4	5	0	5	9
4:15 PM			0	0	0	0	0	2	2	1	0	1	3
4:20 PM			0	0	0	0	0	1	1	5	0	5	6
4:25 PM			0	0	0	0	0	2	2	2	0	2	4
4:30 PM			0	0	0	0	0	2	2	0	0	0	2
4:35 PM			0	0	0	0	0	4	4	0	0	0	4
4:40 PM			0	0	0	0	0	4	4	2	0	2	6
4:45 PM			0	0	0	0	0	1	1	0	0	0	1
4:50 PM			0	0	0	0	0	1	1	1	0	1	2
4:55 PM			0	0	0	0	0	3	3	2	0	2	5
5:00 PM			0	0	0	0	0	1	1	2	0	2	3
5:05 PM			0	0	0	0	0	1	1	3	0	3	4
5:10 PM			0	0	0	0	0	2	2	0	0	0	2
5:15 PM			0	0	0	0	0	4	4	1	0	1	5
5:20 PM			0	0	0	0	0	4	4	0	0	0	4
5:25 PM			0	0	0	0	0	1	1	4	0	4	5
5:30 PM			0	0	0	0	0	0	0	1	0	1	1
5:35 PM			0	0	0	0	0	1	1	0	0	0	1
5:40 PM			0	0	0	0	0	1	1	0	0	0	1
5:45 PM			0	0	0	0	0	4	4	2	0	2	6
5:50 PM			0	0	0	0	0	0	0	2	0	2	2
5:55 PM			0	0	0	0	0	2	2	2	0	2	4
Total Survey			0	0	0	0	1	71	72	74	0	74	146

Heavy Vehicle 15-Minute Interval Summary
3:00 PM to 6:00 PM

Interval Start Time	Northbound 23rd St			Southbound 23rd St			Eastbound Marine Dr			Westbound Marine Dr			Interval Total
			Total	L	R	Total	L	T	Total	T	R	Total	
3:00 PM			0	0	0	0	0	6	6	12	0	12	18
3:15 PM			0	0	0	0	0	9	9	5	0	5	14
3:30 PM			0	0	0	0	1	3	4	7	0	7	11
3:45 PM			0	0	0	0	0	5	5	11	0	11	16
4:00 PM			0	0	0	0	0	7	7	9	0	9	16
4:15 PM			0	0	0	0	0	5	5	8	0	8	13
4:30 PM			0	0	0	0	0	10	10	2	0	2	12
4:45 PM			0	0	0	0	0	5	5	3	0	3	8
5:00 PM			0	0	0	0	0	4	4	5	0	5	9
5:15 PM			0	0	0	0	0	9	9	5	0	5	14
5:30 PM			0	0	0	0	0	2	2	1	0	1	3
5:45 PM			0	0	0	0	0	6	6	6	0	6	12
Total Survey			0	0	0	0	1	71	72	74	0	74	146

Heavy Vehicle Peak Hour Summary
4:30 PM to 5:30 PM

By Approach	Northbound 23rd St			Southbound 23rd St			Eastbound Marine Dr			Westbound Marine Dr			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	0	0	0	28	15	43	15	28	43	43
PHF	0.00			0.00			0.70			0.54			0.77

By Movement	Northbound 23rd St			Southbound 23rd St			Eastbound Marine Dr			Westbound Marine Dr			Total
			Total	L	R	Total	L	T	Total	T	R	Total	
Volume			0	0	0	0	0	28	28	15	0	15	43
PHF			0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.54	0.00	0.54	0.77

Heavy Vehicle Rolling Hour Summary
3:00 PM to 6:00 PM

Interval Start Time	Northbound 23rd St			Southbound 23rd St			Eastbound Marine Dr			Westbound Marine Dr			Interval Total
			Total	L	R	Total	L	T	Total	T	R	Total	
3:00 PM			0	0	0	0	1	23	24	35	0	35	59
3:15 PM			0	0	0	0	1	24	25	32	0	32	57
3:30 PM			0	0	0	0	1	20	21	35	0	35	56
3:45 PM			0	0	0	0	0	27	27	30	0	30	57
4:00 PM			0	0	0	0	0	27	27	22	0	22	49
4:15 PM			0	0	0	0	0	24	24	18	0	18	42
4:30 PM			0	0	0	0	0	28	28	15	0	15	43
4:45 PM			0	0	0	0	0	20	20	14	0	14	34
5:00 PM			0	0	0	0	0	21	21	17	0	17	38

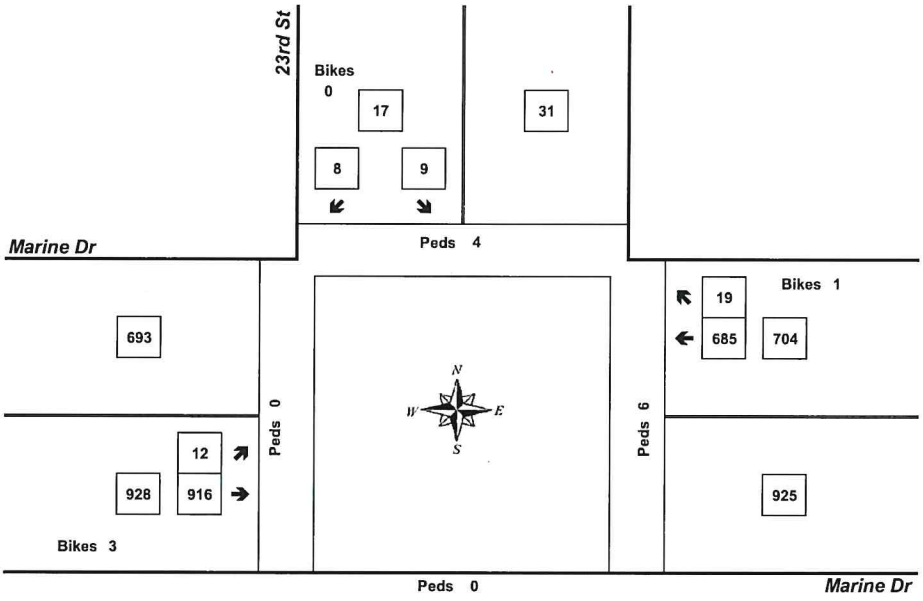
Peak Hour Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740

23rd St & Marine Dr

4:30 PM to 5:30 PM
Thursday, May 02, 2019



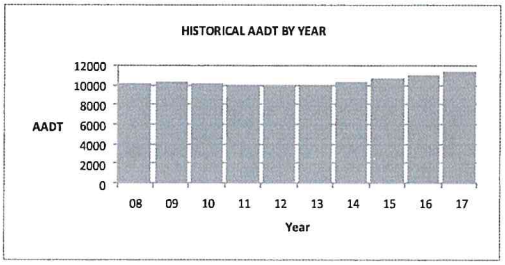
Approach	PHF	HV%	Volume
EB	0.87	3.0%	928
WB	0.92	2.1%	704
NB	0.00	0.0%	0
SB	0.71	0.0%	17
Intersection	0.94	2.6%	1,649

Count Period: 3:00 PM to 6:00 PM

Location:	US30; MP 53.33; LOWER COLUMBIA RIVER HIGHWAY NO. 92; 1.03 miles west of Rainier Road	Site Name:	Rainier (05-006)
		Installed:	September, 1954

HISTORICAL TRAFFIC DATA

		Percent of AADT				
Year	AADT	Max Day	Max Hour	10TH Hour	20TH Hour	*30TH Hour*
2008	10143	148	12.6	12.1	11.7	11.6
2009	10282	156	14.3	12.7	12.4	12.0
2010	10195	149	13.8	12.4	12.2	11.9
2011	9997	150	13.5	12.4	12.1	11.9
2012	9905	157	13.4	12.6	12.1	11.8
2013	10029	149	12.8	12.3	11.9	11.7
2014	10372	152	13.3	12.6	12.3	11.9
2015	10792	161	13.4	12.2	11.6	11.4
2016	11025	147	12.1	11.4	11.2	11.0
2017	11326	147	12.7	12.0	11.9	11.6



2017 TRAFFIC DATA

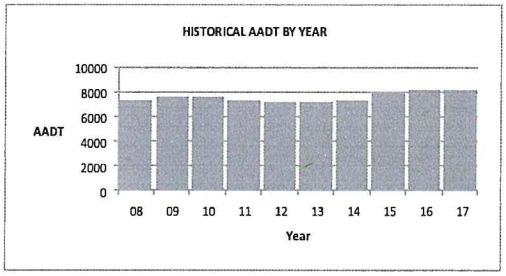
	Average Weekday Traffic	Percent of AADT	Average Daily Traffic	Percent of AADT
January	8521	75	8359	74
February	9515	84	9634	85
March	10035	89	10225	90
April	10939	97	11393	101
May	11496	102	11930	105
June	11986	106	12471	110
July	13241	117	13614	120
August	13781	122	14368	127
September	12333	109	12858	114
October	10948	97	11093	98
November	10150	90	10179	90
December	9834	87	9790	86

For Vehicle Classification data near your project, please go to the following web page: https://www.oregon.gov/ODOT/Data/Documents/TVT_2017.xlsx

Location:	US101; MP 221.67; OREGON COAST HIGHWAY NO. 9; 1.09 miles south of Douglas-Coos County Line	Site Name:	Lakeside (06-001)
		Installed:	January, 1992

HISTORICAL TRAFFIC DATA

		Percent of AADT				
Year	AADT	Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
2008	7322	155	15.4	12.9	12.6	12.3
2009	7601	161	16.0	13.6	13.5	12.9
2010	7586	156	14.2	13.3	12.9	12.7
2011	7319	163	14.0	13.1	12.7	12.5
2012	7181	169	14.7	13.7	13.3	12.9
2013	7181	163	14.5	13.5	13.3	12.7
2014	7367	168	14.7	14.1	13.5	13.1
2015	7963	164	14.4	13.6	12.9	12.8
2016	8192	158	13.8	13.2	12.8	12.5
2017	8273	158	14.8	13.2	12.9	12.6



2017 TRAFFIC DATA

	Average Weekday Traffic	Percent of AADT	Average Daily Traffic	Percent of AADT
January	6015	73	5977	72
February	6585	80	6636	80
March	7229	87	7318	88
April	7294	88	7478	90
May	8286	100	8478	102
June	9298	112	9609	116
July	10702	129	10891	132
August	10815	131	11038	133
September	9420	114	9656	117
October	8001	97	7933	96
November	7119	86	7167	87
December	7176	87	7099	86

For Vehicle Classification data near your project, please go to the following web page: https://www.oregon.gov/ODOT/Data/Documents/TVT_2017.xlsx

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	837	10	5	791	0	9	0	13	0	0	4
Future Vol, veh/h	1	837	10	5	791	0	9	0	13	0	0	4
Conflicting Peds, #/hr	2	0	5	4	0	1	5	0	4	1	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	80	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	1	881	11	5	833	0	9	0	14	0	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	835	0	0	897	0	0	1744	1739	896	1745	1744	840
Stage 1	-	-	-	-	-	-	894	894	-	845	845	-
Stage 2	-	-	-	-	-	-	850	845	-	900	899	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	794	-	-	753	-	-	68	87	339	68	86	365
Stage 1	-	-	-	-	-	-	336	360	-	357	379	-
Stage 2	-	-	-	-	-	-	355	379	-	333	358	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	792	-	-	749	-	-	66	86	336	64	85	363
Mov Cap-2 Maneuver	-	-	-	-	-	-	185	206	-	64	85	-
Stage 1	-	-	-	-	-	-	334	358	-	356	376	-
Stage 2	-	-	-	-	-	-	347	376	-	318	356	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	20.7	15
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	252	792	-	-	749	-	-	363
HCM Lane V/C Ratio	0.092	0.001	-	-	0.007	-	-	0.012
HCM Control Delay (s)	20.7	9.6	-	-	9.8	-	-	15
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	17	833	765	4	5	31
Future Vol, veh/h	17	833	765	4	5	31
Conflicting Peds, #/hr	5	0	0	4	4	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	18	877	805	4	5	33

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	814	0	-	0	1729	817
Stage 1	-	-	-	-	812	-
Stage 2	-	-	-	-	917	-
Critical Hdwy	4.13	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.227	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	809	-	-	-	97	375
Stage 1	-	-	-	-	435	-
Stage 2	-	-	-	-	388	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	805	-	-	-	94	371
Mov Cap-2 Maneuver	-	-	-	-	222	-
Stage 1	-	-	-	-	423	-
Stage 2	-	-	-	-	386	-

Approach	EB	WB	SW
HCM Control Delay, s	0.2	0	17
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1
Capacity (veh/h)	805	-	-	-	339
HCM Lane V/C Ratio	0.022	-	-	-	0.112
HCM Control Delay (s)	9.6	-	-	-	17
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	18	3	1	32	4	1
Future Vol, veh/h	18	3	1	32	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	4	1	38	5	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	25	0	63	23
Stage 1	-	-	-	-	23	-
Stage 2	-	-	-	-	40	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1589	-	943	1054
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	982	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1589	-	942	1054
Mov Cap-2 Maneuver	-	-	-	-	942	-
Stage 1	-	-	-	-	999	-
Stage 2	-	-	-	-	982	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	962	-	-	1589	-
HCM Lane V/C Ratio	0.006	-	-	0.001	-
HCM Control Delay (s)	8.8	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	15	4	1	29	4	2
Future Vol, veh/h	15	4	1	29	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	5	1	34	5	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	23	0	57	21
Stage 1	-	-	-	-	21	-
Stage 2	-	-	-	-	36	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1592	-	950	1056
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	986	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1592	-	949	1056
Mov Cap-2 Maneuver	-	-	-	-	949	-
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	986	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	982	-	-	1592	-
HCM Lane V/C Ratio	0.007	-	-	0.001	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	10	828	759	6	7	10
Future Vol, veh/h	10	828	759	6	7	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	2	2
Mvmt Flow	11	872	799	6	7	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	805	0	-	0	1696	802
Stage 1	-	-	-	-	802	-
Stage 2	-	-	-	-	894	-
Critical Hdwy	4.13	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.227	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	815	-	-	-	102	384
Stage 1	-	-	-	-	441	-
Stage 2	-	-	-	-	399	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	815	-	-	-	101	384
Mov Cap-2 Maneuver	-	-	-	-	233	-
Stage 1	-	-	-	-	435	-
Stage 2	-	-	-	-	399	-

Approach	EB	WB	SW
HCM Control Delay, s	0.1	0	17.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1
Capacity (veh/h)	815	-	-	-	303
HCM Lane V/C Ratio	0.013	-	-	-	0.059
HCM Control Delay (s)	9.5	-	-	-	17.6
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Traffic Vol, veh/h	12	1085	812	19	9	8
Future Vol, veh/h	12	1085	812	19	9	8
Conflicting Peds, #/hr	4	0	0	10	10	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	55	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	2	2	2	2
Mvmt Flow	13	1142	855	20	9	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	885	0	-	0	2053	879
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	1178	-
Critical Hdwy	4.13	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.227	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	761	-	-	-	61	347
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	292	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	754	-	-	-	57	342
Mov Cap-2 Maneuver	-	-	-	-	172	-
Stage 1	-	-	-	-	385	-
Stage 2	-	-	-	-	289	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	21.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	754	-	-	-	172	342
HCM Lane V/C Ratio	0.017	-	-	-	0.055	0.025
HCM Control Delay (s)	9.9	0	-	-	27.1	15.8
HCM Lane LOS	A	A	-	-	D	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2	0.1

Trip Generation Calculation Worksheet

Land Use Description: Discount Supermarket
ITE Land Use Code: 854
Independent Variable: Gross Floor Area
Quantity: 16.0 Thousand Square Feet

Summary of ITE Trip Generation Data

AM Peak Hour of Adjacent Street Traffic
Trip Rate: 2.53 trips per ksf
Directional Distribution: 58% Entering 42% Exiting

PM Peak Hour of Adjacent Street Traffic
Trip Equation: Ln(T) = 0.89 Ln(X) + 2.59
Directional Distribution: 50% Entering 50% Exiting

Total Weekday Traffic
Trip Rate: 90.87 trips per ksf
Directional Distribution: 50% Entering 50% Exiting

Site Trip Generation Calculations

16.0 ksf Discount Supermarket

	Entering	Exiting	Total
AM Peak Hour	23	17	40
PM Peak Hour	79	78	157
Weekday	727	727	1454

Data Source: *Trip Generation Manual, 10th Edition* , Institute of Transportation Engineers, 2017

Trip Generation Calculation Worksheet

Land Use Description: Automobile Parts Store
ITE Land Use Code: 843
Independent Variable: Gross Floor Area
Quantity: 6.9 Thousand Square Feet

Summary of ITE Trip Generation Data

AM Peak Hour of Adjacent Street Traffic
Trip Rate: 2.59 trips per ksf
Directional Distribution: 55% Entering 45% Exiting

PM Peak Hour of Adjacent Street Traffic
Trip Equation: 4.91 trips per ksf
Directional Distribution: 48% Entering 52% Exiting

Total Weekday Traffic
Trip Rate: T = 71.62(X) - 127.66
Directional Distribution: 50% Entering 50% Exiting

Site Trip Generation Calculations

6.9 ksf Automobile Parts Store

	Entering	Exiting	Total
AM Peak Hour	10	8	18
PM Peak Hour	16	18	34
Weekday	183	183	366

Data Source: *Trip Generation Manual, 10th Edition*, Institute of Transportation Engineers, 2017

Trip Generation Calculation Worksheet

Land Use Description: Warehousing
ITE Land Use Code: 150
Independent Variable: Gross Floor Area
Quantity: 4.292 Thousand Square Feet

Summary of ITE Trip Generation Data

AM Peak Hour of Adjacent Street Traffic
Trip Rate: 0.17 trips per ksf
Directional Distribution: 77% Entering 23% Exiting

PM Peak Hour of Adjacent Street Traffic
Trip Rate: 0.19 trips per ksf
Directional Distribution: 27% Entering 73% Exiting

Total Weekday Traffic
Trip Rate: 1.74 trips per ksf
Directional Distribution: 50% Entering 50% Exiting

Site Trip Generation Calculations

4.292 ksf Warehousing

	Entering	Exiting	Total
AM Peak Hour	1	0	1
PM Peak Hour	0	1	1
Weekday	4	4	8

Data Source: *Trip Generation Manual, 10th Edition*, Institute of Transportation Engineers, 2017

HWY	MP	DIR	HS	Location	2014	2015	2016	2036	RSQ
092	1.45	1		West end of ramp structure			81200	94800	MODEL
092	1.87	1		0.10 mile south of N.W. Nicolai Street			38800	46600	MODEL
092	2.38	1		0.05 mile southeast of N.W. 26th Avenue			34200	39400	MODEL
092	2.63	1		0.05 mile southeast of N.W. 29th Avenue			34100	39300	MODEL
092	3.07	1		0.05 mile southeast of N.W. 35th Avenue			32000	37600	MODEL
092	3.76	1		0.05 mile southeast of N.W. 44th Avenue			26300	30900	MODEL
092	3.97	1		0.05 mile northwest of Kittridge Avenue			32400	40700	MODEL
092	6.31	1		0.10 mile southeast of south approach to St. Johns Bridge, Northeast Portland Highway (US30 Bypass)			29000	36900	MODEL
092	7.42	1		0.10 mile northwest of north approach to St. Johns Bridge, Northeast Portland Highway (US30 Bypass)			27900	36500	MODEL
092	10.75	1		0.08 mile south of Sauvie Island Road			21900	27900	MODEL
092	10.95	1		0.12 mile north of Sauvie Island Road			17700	22800	MODEL
092	13.12	1		0.10 mile south of Cornelius Pass Road			17800	22900	MODEL
092	17.34	1		0.05 mile south of Rocky Point Road			26300	30600	MODEL
092	19.35	1		0.30 mile north of Johnsons Landing Road			24200	28100	MODEL
092	20.58	1		0.05 mile north of S.W. E.M. Watts Road			30600	35600	MODEL
092	21.24	1		0.03 mile south of Scappoose-Vernonia Road			32000	36300	0.7498
092	21.32	1		0.05 mile north of Scappoose-Vernonia Road			24200	31200	0.6248
092	23.30	1		0.05 mile south of Fullerton Road			24800	31000	0.5408
092	23.40	1		0.05 mile north of Fullerton Road			24000	30300	0.5997
092	24.86	1		0.05 mile south of Berg Road			23700	29000	0.4766
092	25.53	1		0.05 mile north of Church Road			23500	29800	0.6636
092	27.01	1		0.05 mile north of Millard Road			21100	28600	0.5772
092	27.54	1		0.05 mile south of Firlock Park Boulevard			23800	28500	0.3971
092	27.64	1		0.05 mile south of Gable Road			22800	29800	0.7179
092	27.74	1		0.05 mile north of Gable Road			24000	32800	0.7891
092	28.58	1		0.02 mile north of Columbia Boulevard			20700	24000	0.7527
092	29.47	1		0.05 mile north of Deer Island Road			14300	16500	0.2830
092	30.46	1		0.07 mile south of "L" Street			14400	15300	0.0788
092	30.58	1		0.05 mile north of "L" Street			13600	15100	0.3224
092	30.97	1		0.05 mile south of "E" Street			13600	14300	0.4231
092	32.00	1		0.39 mile north of Pacific Street			10600	10900	0.1262
092	33.77	1		0.20 mile south of Deer Island Frontage Road			10700	11000	0.2602
092	36.58	1		0.05 mile north of Tide Creek Road (Shiloh Basin)			8700	8800	0.1870
092	40.56	1		0.09 mile north of Nicolai Road (Moorage Road)			8300	8400	0.1049
092	43.07	1		0.05 mile south of Graham Road			8700	8800	0.0429
092	45.88	1		0.49 mile north of Spring Lane			7700	7800	0.2576
092	46.89	1		0.02 mile east of 2nd Street			8900	9000	0.1210
092	46.99	1		0.02 mile west of 1st Street			9900	10000	0.2516
092	47.25	1		0.02 mile east of 5th Street W.			11100	11200	0.6714
092	48.11	1		0.02 mile east of Mill Street			12000	12100	0.0543
092	48.42	1		0.04 mile west of Rockcrest Street			17000	18200	0.1789
092	48.97	1		0.30 mile west of Lewis & Clark Bridge Interchange			12600	13500	0.0505
092	51.42	1		0.10 mile west of Heath Road			11200	11700	0.1249
092	53.33	1		Rainier Automatic Traffic Recorder, Sta. 05-006, 1.03 miles west of Rainier Road			11000	11100	0.1616
092	60.62	1		0.20 mile east of Swedetown Road overcrossing			9200	9300	0.1593
092	60.96	1		0.22 mile west of Swedetown Road overcrossing			9000	9100	0.5901
092	61.65	1		0.05 mile south of Mist-Clatskanie Highway (OR47)			8400	8500	0.5578
092	65.94	1		0.05 mile east of Marshland District Road			6400	6500	0.5374
092	66.04	1		0.05 mile west of Marshland District Road			6400	6500	0.7749
092	68.00	1		0.05 mile west of Woodson Road			6000	6100	0.0700
092	69.95	1		Clatsop-Columbia County Line			6700	6800	0.3129
092	70.58	1		0.02 mile east of Westport Ferry Road			6800	7400	0.0736
092	70.62	1		0.02 mile west of Westport Ferry Road			6100	6200	0.5664
092	72.49	1		0.20 mile east of Taylorville Road overcrossing (Wauna)			6100	6200	0.8086
092	72.89	1		0.20 mile west of Taylorville Road overcrossing (Wauna)			5200	6300	0.2265
092	81.38	1		On Fertile Valley Creek Bridge			5300	6200	0.1155
092	82.52	1		On Big Creek Bridge			6700	7900	0.1892
092	92.74	1		0.03 mile west of John Day Road			8100	9500	MODEL
092	95.16	1		0.05 mile west of Nimitz Road			10200	11800	MODEL
092	96.17	1		0.02 mile east of 44th Street			11300	12900	MODEL
092	96.98	1		0.02 mile east of 33rd Street			12500	14200	MODEL
092	97.10	1		0.03 mile west of 32nd Street			16600	18800	MODEL
092	97.39	1		0.02 mile east of 27th Street			17500	20100	MODEL
092	97.94	1		0.02 mile east of 16th Street			17500	19800	MODEL
092	98.11	1		0.02 mile east of 14th Street			8400	9700	MODEL

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	915	10	5	846	0	9	0	14	0	0	4
Future Vol, veh/h	1	915	10	5	846	0	9	0	14	0	0	4
Conflicting Peds, #/hr	2	0	5	4	0	1	5	0	4	1	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	80	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	1	963	11	5	891	0	9	0	15	0	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	893	0	0	979	0	0	1884	1879	978	1885	1884	898
Stage 1	-	-	-	-	-	-	976	976	-	903	903	-
Stage 2	-	-	-	-	-	-	908	903	-	982	981	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	755	-	-	701	-	-	54	71	304	54	71	338
Stage 1	-	-	-	-	-	-	302	329	-	332	356	-
Stage 2	-	-	-	-	-	-	330	356	-	300	328	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	754	-	-	698	-	-	52	70	301	51	70	336
Mov Cap-2 Maneuver	-	-	-	-	-	-	165	187	-	51	70	-
Stage 1	-	-	-	-	-	-	300	327	-	331	353	-
Stage 2	-	-	-	-	-	-	322	353	-	284	326	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	22.7	15.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	228	754	-	-	698	-	-	336
HCM Lane V/C Ratio	0.106	0.001	-	-	0.008	-	-	0.013
HCM Control Delay (s)	22.7	9.8	-	-	10.2	-	-	15.9
HCM Lane LOS	C	A	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	37	892	803	4	5	49
Future Vol, veh/h	37	892	803	4	5	49
Conflicting Peds, #/hr	5	0	0	4	4	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	39	939	845	4	5	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	854	0	-	0	1873	857
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	1021	-
Critical Hdwy	4.13	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.227	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	781	-	-	-	79	356
Stage 1	-	-	-	-	416	-
Stage 2	-	-	-	-	346	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	777	-	-	-	74	353
Mov Cap-2 Maneuver	-	-	-	-	190	-
Stage 1	-	-	-	-	393	-
Stage 2	-	-	-	-	344	-

Approach	EB	WB	SW
HCM Control Delay, s	0.4	0	18.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1
Capacity (veh/h)	777	-	-	-	327
HCM Lane V/C Ratio	0.05	-	-	-	0.174
HCM Control Delay (s)	9.9	-	-	-	18.3
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.6

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	42	3	1	50	4	1
Future Vol, veh/h	42	3	1	50	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	4	1	59	5	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	53	0	112	51
Stage 1	-	-	-	-	51	-
Stage 2	-	-	-	-	61	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1553	-	885	1017
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	962	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1553	-	884	1017
Mov Cap-2 Maneuver	-	-	-	-	884	-
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	962	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	908	-	-	1553	-
HCM Lane V/C Ratio	0.006	-	-	0.001	-
HCM Control Delay (s)	9	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	38	4	1	47	4	2
Future Vol, veh/h	38	4	1	47	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	5	1	55	5	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	50	0	105	48
Stage 1	-	-	-	-	48	-
Stage 2	-	-	-	-	57	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1557	-	893	1021
Stage 1	-	-	-	-	974	-
Stage 2	-	-	-	-	966	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1557	-	892	1021
Mov Cap-2 Maneuver	-	-	-	-	892	-
Stage 1	-	-	-	-	973	-
Stage 2	-	-	-	-	966	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	931	-	-	1557	-
HCM Lane V/C Ratio	0.008	-	-	0.001	-
HCM Control Delay (s)	8.9	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	10	887	797	6	7	10
Future Vol, veh/h	10	887	797	6	7	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	2	2
Mvmt Flow	11	934	839	6	7	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	845	0	-	0	1798	842
Stage 1	-	-	-	-	842	-
Stage 2	-	-	-	-	956	-
Critical Hdwy	4.13	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.227	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	787	-	-	-	88	364
Stage 1	-	-	-	-	423	-
Stage 2	-	-	-	-	373	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	787	-	-	-	87	364
Mov Cap-2 Maneuver	-	-	-	-	216	-
Stage 1	-	-	-	-	417	-
Stage 2	-	-	-	-	373	-

Approach	EB	WB	SW
HCM Control Delay, s	0.1	0	18.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1
Capacity (veh/h)	787	-	-	-	284
HCM Lane V/C Ratio	0.013	-	-	-	0.063
HCM Control Delay (s)	9.6	-	-	-	18.5
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Traffic Vol, veh/h	37	1086	821	34	23	33
Future Vol, veh/h	37	1086	821	34	23	33
Conflicting Peds, #/hr	4	0	0	10	10	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	55	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	2	2	2	2
Mvmt Flow	39	1143	864	36	24	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	910	0	-	0	2123	896
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	1231	-
Critical Hdwy	4.13	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.227	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	744	-	-	-	55	339
Stage 1	-	-	-	-	400	-
Stage 2	-	-	-	-	276	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	737	-	-	-	46	334
Mov Cap-2 Maneuver	-	-	-	-	146	-
Stage 1	-	-	-	-	338	-
Stage 2	-	-	-	-	273	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	24.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	737	-	-	-	146	334
HCM Lane V/C Ratio	0.053	-	-	-	0.166	0.104
HCM Control Delay (s)	10.2	0	-	-	34.5	17
HCM Lane LOS	B	A	-	-	D	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.6	0.3

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	947	10	5	875	0	9	0	14	0	0	4
Future Vol, veh/h	1	947	10	5	875	0	9	0	14	0	0	4
Conflicting Peds, #/hr	2	0	5	4	0	1	5	0	4	1	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	80	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	1	997	11	5	921	0	9	0	15	0	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	923	0	0	1013	0	0	1948	1943	1012	1949	1948	928
Stage 1	-	-	-	-	-	-	1010	1010	-	933	933	-
Stage 2	-	-	-	-	-	-	938	933	-	1016	1015	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	736	-	-	681	-	-	49	65	290	49	65	325
Stage 1	-	-	-	-	-	-	289	317	-	319	345	-
Stage 2	-	-	-	-	-	-	317	345	-	287	316	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	735	-	-	678	-	-	48	64	288	46	64	323
Mov Cap-2 Maneuver	-	-	-	-	-	-	158	179	-	46	64	-
Stage 1	-	-	-	-	-	-	287	315	-	318	342	-
Stage 2	-	-	-	-	-	-	309	342	-	271	314	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	23.6	16.3
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	218	735	-	-	678	-	-	323
HCM Lane V/C Ratio	0.111	0.001	-	-	0.008	-	-	0.013
HCM Control Delay (s)	23.6	9.9	-	-	10.4	-	-	16.3
HCM Lane LOS	C	A	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	53	908	818	4	5	63
Future Vol, veh/h	53	908	818	4	5	63
Conflicting Peds, #/hr	5	0	0	4	4	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	56	956	861	4	5	66

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	870	0	-	0	1940	873
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	1072	-
Critical Hdwy	4.13	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.227	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	770	-	-	-	71	348
Stage 1	-	-	-	-	409	-
Stage 2	-	-	-	-	327	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	766	-	-	-	65	345
Mov Cap-2 Maneuver	-	-	-	-	172	-
Stage 1	-	-	-	-	377	-
Stage 2	-	-	-	-	325	-

Approach	EB	WB	SW
HCM Control Delay, s	0.6	0	19.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1
Capacity (veh/h)	766	-	-	-	321
HCM Lane V/C Ratio	0.073	-	-	-	0.223
HCM Control Delay (s)	10.1	-	-	-	19.4
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.8

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	48	9	2	59	9	2
Future Vol, veh/h	48	9	2	59	9	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	56	11	2	69	11	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	67	0	135	62
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	73	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1535	-	859	1003
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	950	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1535	-	858	1003
Mov Cap-2 Maneuver	-	-	-	-	858	-
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	950	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	881	-	-	1535	-
HCM Lane V/C Ratio	0.015	-	-	0.002	-
HCM Control Delay (s)	9.1	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	36	14	5	48	13	6
Future Vol, veh/h	36	14	5	48	13	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	16	6	56	15	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	58	0	118	50
Stage 1	-	-	-	-	50	-
Stage 2	-	-	-	-	68	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1546	-	878	1018
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	955	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1546	-	874	1018
Mov Cap-2 Maneuver	-	-	-	-	874	-
Stage 1	-	-	-	-	968	-
Stage 2	-	-	-	-	955	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	915	-	-	1546	-
HCM Lane V/C Ratio	0.024	-	-	0.004	-
HCM Control Delay (s)	9	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	31	882	793	18	19	29
Future Vol, veh/h	31	882	793	18	19	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	2	2
Mvmt Flow	33	928	835	19	20	31

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	854	0	-	0	1839	845
Stage 1	-	-	-	-	845	-
Stage 2	-	-	-	-	994	-
Critical Hdwy	4.13	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.227	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	781	-	-	-	83	363
Stage 1	-	-	-	-	421	-
Stage 2	-	-	-	-	358	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	781	-	-	-	80	363
Mov Cap-2 Maneuver	-	-	-	-	200	-
Stage 1	-	-	-	-	403	-
Stage 2	-	-	-	-	358	-

Approach	EB	WB	SW
HCM Control Delay, s	0.3	0	21.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1
Capacity (veh/h)	781	-	-	-	274
HCM Lane V/C Ratio	0.042	-	-	-	0.184
HCM Control Delay (s)	9.8	-	-	-	21.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↰	↱
Traffic Vol, veh/h	37	1091	827	39	28	33
Future Vol, veh/h	37	1091	827	39	28	33
Conflicting Peds, #/hr	4	0	0	10	10	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	55	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	2	2	2	2
Mvmt Flow	39	1148	871	41	29	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	922	0	-	0	2138	906
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	1236	-
Critical Hdwy	4.13	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.227	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	737	-	-	-	54	334
Stage 1	-	-	-	-	396	-
Stage 2	-	-	-	-	274	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	730	-	-	-	45	330
Mov Cap-2 Maneuver	-	-	-	-	145	-
Stage 1	-	-	-	-	334	-
Stage 2	-	-	-	-	271	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	25.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	730	-	-	-	145	330
HCM Lane V/C Ratio	0.053	-	-	-	0.203	0.105
HCM Control Delay (s)	10.2	0	-	-	36.1	17.2
HCM Lane LOS	B	A	-	-	E	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.7	0.4

Intersection: 1: 21st Street & Marine Drive

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	10	222	33	85	85	35
Average Queue (ft)	0	23	5	7	25	4
95th Queue (ft)	6	114	23	41	65	21
Link Distance (ft)		288		154	336	142
Upstream Blk Time (%)		0				
Queuing Penalty (veh)		0				
Storage Bay Dist (ft)	80		50			
Storage Blk Time (%)		1	0	0		
Queuing Penalty (veh)		0	0	0		

Intersection: 2: Marine Drive & Commercial Street

Movement	EB	EB	WB	SW
Directions Served	L	T	TR	LR
Maximum Queue (ft)	66	146	94	88
Average Queue (ft)	28	21	9	41
95th Queue (ft)	61	86	47	80
Link Distance (ft)		154	125	72
Upstream Blk Time (%)		0	0	7
Queuing Penalty (veh)		4	0	5
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	2	2		
Queuing Penalty (veh)	14	1		

Intersection: 3: Site Access & Commercial Street

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	63	38
Average Queue (ft)	7	9
95th Queue (ft)	51	33
Link Distance (ft)	130	49
Upstream Blk Time (%)	2	2
Queuing Penalty (veh)	1	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Site Access & Commercial Street

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	38	40
Average Queue (ft)	2	16
95th Queue (ft)	18	44
Link Distance (ft)	182	93
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Marine Drive & Site Access

Movement	EB	EB	WB	SW
Directions Served	L	T	TR	LR
Maximum Queue (ft)	59	135	20	99
Average Queue (ft)	18	17	1	43
95th Queue (ft)	51	83	13	88
Link Distance (ft)		125	357	78
Upstream Blk Time (%)		1		8
Queuing Penalty (veh)		7		0
Storage Bay Dist (ft)	75			
Storage Blk Time (%)	0	2		
Queuing Penalty (veh)	1	1		

Intersection: 6: Marine Drive & 23rd Street

Movement	EB	WB	SB	SB
Directions Served	LT	TR	L	R
Maximum Queue (ft)	367	118	79	232
Average Queue (ft)	149	20	53	107
95th Queue (ft)	365	76	95	267
Link Distance (ft)	357	446		227
Upstream Blk Time (%)	1			25
Queuing Penalty (veh)	12			0
Storage Bay Dist (ft)			55	
Storage Blk Time (%)			60	2
Queuing Penalty (veh)			19	0

Network Summary

Network wide Queuing Penalty: 66

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF ASTORIA, CLATSOP COUNTY

MARINE DR at 21ST ST, City of Astoria, Clatsop County, 01/01/2013 to 12/31/2017

1 - 1 of 1 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	D M R J S W A U I C O G N H R L K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
00385	N	N N	06/23/2013	19	MARINE DR	INTER	3-LEG	N	N	CLR	ANGL-STP	01	NONE 0	BACK										02
NONE			FR	0	21ST ST	S		STOP SIGN	N	DRY	BACK		PRVTE	E -W									009	00
N			3P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	M	UNK		028	000	02
N			46 11 22.2304199	-123 49 7.553316																UNK				
												02	NONE 0	STOP										
													PRVTE	S -N									012	00
													PSNGR CAR		01	DRVR	NONE	51	M	OR-Y		000	000	00
																				OR<25				

CITY OF ASTORIA, CLATSOP COUNTY

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

MARINE DR at COMMERCIAL ST, City of Astoria, Clatsop County, 01/01/2013 to 12/31/2017

1 - 1 of 1 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	D R A L	M J U G	S I N C	W C S V	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
00584	N	N	N		N	N 10/02/2017	14	COMMERCIAL ST	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	TURN-R										02
CITY			MO			MARINE DR	CN		STOP SIGN	N	DRY	TURN		PRVTE	E -NW										015	00
N			4P				01	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	27	F	OR-Y		028	000	02
N			46 11 22.23		-123 49 7.55	009200100S00																OR<25				
															02	NONE 0	STRGHT									
																PRVTE	SE-NW								000	00
																PSNGR CAR		01	DRVR	NONE	74	F	OTH-Y	000	000	00
																							N-RES			

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

MARINE DR at 23RD ST, City of Astoria, Clatsop County, 01/01/2013 to 12/31/2017

1 - 4 of 8 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	D R E A	M J L G	S U N	W I H	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
00650	N	N	N	N	N	12/23/2015	14	MARINE DR	INTER	CROSS	N	N	RAIN	ANGL-OTH	01	LOG 1	STRGHT										004	02
CITY						WE		23RD ST	E		STOP SIGN	N	WET	TURN		PRVTE	W -E									000		00
N						8A			06	0		N	DAY	INJ		SEMI TOW		01	DRVR	NONE	53	M	OTH-Y		000	000		00
N						46 11 19.26	-123 48 56.79	009200100S00															N-RES					
															02	NONE 0	TURN-R									006	004	00
																PRVTE	S -E									000		02
																PSNGR CAR		01	DRVR	INJC	17	F	OR-Y		028			
																							OR<25					
00492	N	N	N	N	N	09/25/2015	14	MARINE DR	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 0	STRGHT										004	07
CITY						FR		23RD ST	E		STOP SIGN	N	WET	REAR		PRVTE	E -W									000		00
N						8A			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	31	F	OR-Y		043	000		07
N						46 11 19.26	-123 48 56.79	009200100S00															OR<25					
															02	NONE 0	STOP									011	004	00
																PRVTE	E -W									000		00
																PSNGR CAR		01	DRVR	NONE	32	M	OR-Y		000			
																							OR<25					
00056	N	N	N	N	N	01/25/2017	14	MARINE DR	INTER	5-LEG	N	N	CLD	S-1STOP	01	NONE 9	STRGHT										004,128	07
CITY						WE		23RD ST	E		STOP SIGN	N	DRY	REAR		N/A	E -W									000		00
N						11A			06	0		N	DAY	PDO		SEMI TOW		01	DRVR	NONE	00	Unk	UNK		000	000		00
N						46 11 19.26	-123 48 56.79	009200100S00															UNK					
															02	NONE 9	STOP									011		00
																N/A	E -W									000		00
																PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000			
																							UNK					
00073	N	N	N	N	N	02/25/2015	14	MARINE DR	INTER	CROSS	N	N	CLD	PED	01	NONE 0	STRGHT											18,19
CITY						WE		23RD ST	W		STOP SIGN	N	WET	PED		PRVTE	E -W									000		00
N						7P			05	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	81	M	OR-Y		000	000		00
N						46 11 19.26	-123 48 56.79	009200100S00															OR<25					
																	-											
																	STRGHT	01	PED	INJB	33	M		I	INRD	054	034		18,19
																	S N											
00415	N	N	N	N	N	10/08/2016	14	MARINE DR	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										004	07
CITY						SA		23RD ST	W		STOP SIGN	N	DRY	REAR		PRVTE	W -E									000		00
N						11A			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	32	F	OR-Y		043	000		07
N						46 11 19.26	-123 48 56.79	009200100S00															OR<25					
															02	NONE 0	STOP									011	004	00
																PRVTE	W -E									000		00
																PSNGR CAR		01	DRVR	NONE	16	M	OR-Y		000			
																							OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	D R A L	M J U G	S I N C	W C H S	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TO	MOVE / FROM	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
															02	NONE 0	STOP										
																PRVTE	W -E									011	004	00
																PSNGR CAR		02	PSNG	INJC	17	M		000	000		00
00267	N	N	N	N	N	05/19/2017	14	MARINE DR	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										004	27
STATE						FR		23RD ST	W		STOP SIGN	N	DRY	REAR		PRVTE	W -E								000		00
N						2P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	25	M	OTH-Y		016	038		27
N						46 11 19.26	-123 48 56.79	009200100S00															N-RES					
															02	POLCE 0	STOP										
																GOVMT	W -E									011	004	00
																PSNGR CAR		01	DRVR	INJC	49	M	OR-Y		000	000		00
																							OR<25					
00704	N	N	N	N	N	11/14/2017	14	MARINE DR	INTER	3-LEG	N	N	CLD	S-1STOP	01	NONE 9	STRGHT										004	07
CITY						TU		23RD ST	W		STOP SIGN	N	WET	REAR		N/A	W -E								000		00
N						11A			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N						46 11 19.27	-123 48 56.81	009200100S00															UNK					
															02	NONE 9	STOP										
																N/A	W -E								011		00
																PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																							UNK					
00433	N	N	N	N	N	09/03/2014	14	MARINE DR	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	07,27
CITY						WE		23RD ST	CN		STOP SIGN	N	DRY	REAR		PRVTE	W -E								022		00
N						3P			03	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	55	M	OR-Y		043,016	038		07,27
N						46 11 19.26	-123 48 56.79	009200100S00															OR<25					
															01	NONE 0	STRGHT										
																PRVTE	W -E								022		00
																PSNGR CAR		02	PSNG	INJC	57	F		000	000		00
															02	NONE 0	STOP										
																PRVTE	W -E								022	013	00
																PSNGR CAR		01	DRVR	NONE	68	M	OTH-Y		000	000		00
																							N-RES					
															03	NONE 0	STOP										
																PRVTE	W -E								011		00
																PSNGR CAR		01	DRVR	NONE	75	M	OR-Y		000	000		00
																							OR<25					

YOU ARE RECEIVING THIS NOTICE BECAUSE THERE IS A PROPOSED LAND USE APPLICATION NEAR YOUR PROPERTY IN ASTORIA

Mail 7-8-19
Email 7-8-19
Web 7-8-19
Pub 7-25-19

CITY OF ASTORIA
NOTICE OF PUBLIC HEARING

The City of Astoria Design Review Committee will hold a public hearing on Thursday, August 1, 2019 at 5:30 p.m., at Astoria City Hall, Council Chambers, 1095 Duane Street, Astoria. The purpose of the hearing is to consider the following request(s):

1. Design Review Request (DR19-03) by MMCG GOI Astoria LLC, to construct a 16,000 square foot Grocery Outlet structure at 2190 Marine Dr. (Map T8N R9W Section 8DA, Tax Lots 1401, 1402, 1700; Lots 1 to 6, Block 127, and north portions of Lots 1, 2, 3, Block 128, Shively; and vacated portions of Duane and 22nd Streets), in the LS Zone (Local Service), GOZ (Gateway Overlay Zone), and CGO (Civic Greenway Overlay Zone). Development Code Standards 2.975 to 2.981, 14.001, 14.005 to 14.030, 14.035 to 14.040, 14.060, 14.070 to 14.075, Articles 7, 8, 9, and Comprehensive Plan Sections CP.005 to CP.028, CP.057 to CP.058 (Gateway Overlay), CP.067 to CP.068 (Riverfront Vision Overlay), CP.190 to CP.210 (Economic Element), are applicable to the request.

A copy of the application, all documents and evidence relied upon by the applicant, the staff report, and applicable criteria are available for inspection at no cost and will be provided at reasonable cost. A copy of the staff report will be available at least seven days prior to the hearing and are available for inspection at no cost and will be provided at reasonable cost. All such documents and information are available at the Community Development Department at 1095 Duane Street, Astoria. If additional documents or evidence are provided in support of the application, any party shall be entitled to a continuance of the hearing. Contact Community Development, at 503-338-5183 for additional information.

The location of the hearing is accessible to the handicapped. An interpreter for the hearing impaired may be requested under the terms of ORS 192.630 by contacting the Community Development Department at 503-338-5183 48 hours prior to the meeting.

All interested persons are invited to express their opinion for or against the request(s) at the hearing or by letter addressed to the Design Review Committee, 1095 Duane St., Astoria OR 97103. Testimony and evidence must be directed toward the applicable criteria identified above or other criteria of the Comprehensive Plan or land use regulation which you believe apply to the decision. Failure to raise an issue with sufficient specificity to afford the Design Review Committee and the parties an opportunity to respond to the issue precludes an appeal based on that issue.

The Design Review Committee's ruling may be appealed to the City Council by the applicant, a party to the hearing, or by a party who responded in writing, by filing a Notice of Appeal within 15 days after the Design Review Committee's decision is mailed. Appellants should contact the Community Development Department concerning specific procedures for filing an appeal with the City. If an appeal is not filed with the City within the 15 day period, the decision of the Design Review Committee shall be final.

The public hearing, as conducted by the Design Review Committee, will include a review of the application and presentation of the staff report, opportunity for presentations by the applicant and those in favor of the request, those in opposition to the request, and deliberation and decision by the Design Review Committee. The Design Review Committee reserves the right to modify the proposal or to continue the hearing to another date and time. If the hearing is continued, no further public notice will be provided.

THE CITY OF ASTORIA

MAIL: July 8, 2019

Tiffany Taylor
Administrative Assistant