West Linn

Planning & Development • 22500 Salamo Rd #1000 • West Linn, Oregon 97068 Telephone 503.656-3535 • westlinnoregon.gov

DEVELOPMENT REVIEW APPLICATION

RESERVED DAM	TO VERY NEW YORK		For Office Use Only		Des Mens 7	MANUACE DESCRIPTION		
STAFF CONTACT Chris Myers			PROJECT NO(S) CUP-25-03/DR-25-03/VAR-25-02			PA-25-06		
Non-Refundable Fee(s) \$3,450+ \$500 + \$500			REFUNDABLE DEPOSIT(5) \$4,500 +\$4,500	Т	TOTAL \$13,450			
Type of Review (Please check all that apply): Annexation (ANX) Final Appeal (AP) Floor CDC Amendment (CDC) Histor Code Interpretation (MISC) Lot L Conditional Use (CUP) Minor Design Review (DR Mod Tree Easement Vacation (MISC)			I Plat (FP)Related File #	Ten Tim Rigi Var Wat	Subdivision (SUB) Temporary Uses (MISC) Time Extension (EXT) Right of Way Vacation (VAC) Variance (VAR) Water Resource Area Protection/Single Lot (VAR) Water Resource Area Protection/Wetland (VAR) Willamette & Tualatin River Greenway (WAR)			
Extension o	f Approval (EXT) n, Home Occupation, Side	Stre	et Vacation , Addressing, and Sign applications	Zor	ne Change (ZC)			
Site Location/Address: 18850 Willamette Drive West Linn, OR			Assessor's Map No.: 21E14DD					
			Tax Lot(s): 21E14DD06900					
				Total Land Area: 1.294 Acres, 56,378 sf				
This building is rep The building is Typ	ory, 17'-8" high new automate lacing an existing McDonald's	itects , Suite	with vacuum stations with associated pa The hours of operation are from 8:00 AN p B. Car maintenance facilities are allowe	1 to 8:00 PM.	ne: 503.924.	6321 osch@froelich-engin		
Owner Name (required): Address: City State Zip: City State Zip: Chuck Kaady 2545 SW Spring Garden Street, Suite 200 Portland, OR, 97219			Phon Email	1: 503.924.	sch@froelich-engin			
Consultant Name: Evan Eykelbosch, Froelich Engineers Address: 17700 SW Upper Boones Ferry Road, suite 11 Portland, OR 97224			ch Engineers s Ferry Road, suite 115	Phone: 503.924.6321 eeykelbosch@froelich-engi eers.com				

- 1. Application fees are non-refundable (excluding deposit). Applications with deposits will be billed monthly for time and materials above the initial deposit. *The applicant is financially responsible for all application costs.
- 2. All information provided with the application is considered a public record and subject to disclosure.
- The owner/applicant or their representative should attend all public hearings related to the application.
- 4. A decision may be reversed on appeal. The decision will become effective once the appeal period has expired.
- 5. Submit this form, application narrative, and all supporting documents as a single PDF through the web page: https://westlinnoregon.gov/planning/submit-land-use-application.

The undersigned property owner authorizes the application and grants city staff the right of entry onto the property to review the application. The applicant and owner affirm that the information provided in this application is true and correct. Applications with deposits will be billed monthly for time and materials incurred above the initial deposit. The applicant agrees to pay additional billable charges.

07/23/2025

Owner's signature (required)

Date



Planning & Development • 22500 Salamo Rd #1000 • West Linn, Oregon 97068

Telephone 503.656-3535 • westlinnoregon.gov

DEVELOPMENT REVIEW APPLICATION

ALCOHOLD BUILDING		For Office Use Only				
STAFF CONTACT		PROJECT NO(s).		PRE-APPLICATION NO.		
NON-REFUNDABLE FEE(S)		REFUNDABLE DEPOSIT(S)	TOTAL			
Type of Review (Ple	ase check all that ap	ply):				
Appeal (AP) CDC Amendment (CDC) Code Interpretation (MISC) Conditional Use (CUP) Design Review (DR Tree Easement Vacation (MISC) Expediated Land Division (ELD)		Final Plat (FP) Related File# Flood Management Area (FMA) Historic Review (HDR) Lot Line Adjustment (LLA) Minor Partition (MIP) Modification of Approval (MOD) Non-Conforming Lots, Uses & Structures Planned Unit Development (PUD) Street Vacation	Temporary Time Extens Right of Wa Variance (Variance Resou	ubdivision (SUB) emporary Uses (MISC) ime Extension (EXT) ight of Way Vacation (VAC) ariance (VAR) /ater Resource Area Protection/Single Lot (WAP) /ater Resource Area Protection/Wetland (WAP) /illamette & Tualatin River Greenway (WRG) one Change (ZC)		
Pre-Application, Home C	_	Use, Addressing, and Sign applications	require different form	ns, available on the website.		
Site Location/Address:			Assessor's Map	No.: 21E14DD		
18850 Willamette Drive, West Linn, OR, 97068			Tax Lot(s): 21E14DD06900 Lots 40 & 41			
			Total Land Area	1.294 Acres		
(PA-25-06) currently	n for a Class II Var in for review with	iance, resulting from the findings of i the City of West Linn. The applicant imary street face and 30% glazing or	s requesting a Varia	nce for section 55.100 6 e		
Applicant Name*: Eric Li, Senior Associate Address: TVA Architects City State Zip: 1750 SW Yamhill Street, Suite 150 Portland, OR 97205			Phone: 97	1.678.7578 icl@tvaarchitects.com		
Owner Name (required) Address: City State Zip:	Kaady Car Wash	Garden Street, Suite 200		3.246.7735 Kaady@Kaady.com		
Consultant Name: Address: City State Zip:	Evan Eykelboso Froelich Engine 17700 SW Uppe Portland, OR 97	ering er Boones Ferry Rd. Suite 115		03.924.6321 eykelbosch@froelich-engineers.com		

- 1. Application fees are non-refundable (excluding deposit). Applications with deposits will be billed monthly for time and materials above the initial deposit. *The applicant is financially responsible for all application costs.
- All information provided with the application is considered a public record and subject to disclosure.
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- 4. A decision may be reversed on appeal. The decision will become effective once the appeal period has expired.
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The undersigned property owner authorizes the application and grants city staff the right of entry onto the property to review the application. The applicant and owner affirm that the information provided in this application is true and correct. Applications with deposits will be billed monthly for time and materials incurred above the initial deposit. The applicant agrees to pay additional billable charges.

Date

Owner's signature (required)

9.13-2025

DEVELOPMENT REVIEW CHECKLIST

The application form and supporting materials should be submitted electronically through https://westlinnoregon.gov/planning/submit-land-use-application as one (1) .pdf file. To create a single PDF file, go to Adobe Acrobat Free Merge PDF online tool. Other free Acrobat PDF tools like converting a file to PDF or reducing the file size are available on the Adobe website.

Supporting reports may be uploaded separately through this web form *if* the file size is too large. The separate submissions should be numbered (i.e., Submittal 1 of 2) and noted under transmittal contents. All plan set files MUST be flattened and reduced.

Submission requirement to upload through the web form:

- .pdf format.
- Individual file size no larger than 128 MB.
- Do not attach 'zip' files. Our server will reject all 'zip' files.
- Reduce and flatten all plan sets BEFORE uploading plan sets. The raster/vector settings should be optimized for printing.

A complete application must include the following:

- Development Review Application. Original signatures from all owners must be on the application form. Do
 NOT use DocuSign.
- A **project narrative** outlining the project's scope in detail, including the changes to the site, structure, landscaping, parking, land use, and lot consolidations.
- Complete written responses to identified approval criteria in the Community Development Code (CDC).
- A Service Provider Letter from Tualatin Valley Fire and Rescue https://www.tvfr.com/399/Service-Provider-Permit Please contact Jason Arn at jason.arn@tvfr.com with any questions about TVF&R requirements.
- Vicinity Map showing the site within the City.
- Site Plan drawn to scale showing the:
 - Taxlot and address of the project,
 - Area of the site (acres or square feet),
 - > Zoning and Neighborhood Association,
 - Location and dimensions of existing and proposed buildings, structures,
 - Location of existing and proposed on-site driveways and off-street parking,
 - Configuration and dimensions of all existing and proposed lots and tracts, including a proposed park, open space, and or drainage tracts or easements,
 - > Location and width of existing and proposed easement for access, drainage, etc., and
 - Location of existing and proposed trees and other proposed landscaping.
 - Location of existing public and private utilities, easements, and 100-year floodplain,
 - Sensitive areas, including the location of on-site wetlands and riparian areas,
 - Location of existing off-site driveways across the street,
 - If applicable, internal circulation system, name, and location of existing and proposed roadways and roadway easements (private and public), and
 - Location and width of existing and proposed on-site pedestrian and bicycle facilities on-site.
- If applicable, a Utility Plan and Landscape plan, drawn to scale.
- If applicable, Building elevation drawings with exterior elevations for every side of each structure, height including building materials and floor levels, drawn to scale.
- If required, documentation of any required meeting with the respective City-recognized neighborhood association per CDC 99.038.
- Any other materials identified by city staff at the pre-application meeting.

For applications that the Planning Commission decides, the applicant or applicant's representative should present their proposal to the PC at the public hearing.



September 3, 2025

Chuck Kaady 2545 SW Spring Garden Street, Suite 200 Portland, OR 97205

SUBJECT: Conditional Use Permit and Class II Design Review Application for 18850 Willamette Drive (CUP-25-03/DR-25-03)

Chuck Kaady,

Your application submitted on August 4, 2025 has been deemed **incomplete**. The following items must be addressed:

- 1) CDC Chapter 55 Design Review (55.100(6)(E) Commercial buildings must provide 60% windows or transparency at the pedestrian level. If 60% cannot be met a Class II Variance will be required.
- 2) CDC Chapter 75 Variances and Special Waivers Address all applicable code sections in Chapter 75 regarding a request to reduce the required windows and transparency on commercial buildings. The fee for a Class II Variance is \$3450 and must be paid at time of resubmittal.
- 3) CDC Chapter 99 Procedures for Decision Making: Quasi-Judicial (99.038)(A-E) Address all applicable code criteria for 99.038(A-E).

Pursuant to CDC 99.035, the Planning Director may require information in addition to that required by a specific chapter in the Community Development Code or may waive a specific requirement for information or a requirement to address certain approval standards.

Pursuant to ORS 227.178: If an application for a permit, limited land use decision or zone change is incomplete, the governing body or its designee shall notify the applicant in writing of exactly what information is missing within 30 days of receipt of the application and allow the applicant to submit the missing information. The application shall be deemed complete for the purpose of subsection (1) of this section upon receipt by the governing body or its designee of:

- (a) All of the missing information;
- (b) Some of the missing information and written notice from the applicant that no other information will be provided; or
- (c) Written notice from the applicant that none of the missing information will be provided. You have through <u>February 24, 2026</u>, to make the application complete by providing the information outlined above. On the 181st day after first being submitted, the application will be considered void if

the applicant has been notified of the missing information and has not submitted the information as requested above or a written notice responding to the above options.

Please contact me at 503-742-6062, or by email at cmyers@westlinnoregon.gov if you have any questions or comments.

Respectfully,

Chris Myers

Chris Myers Associate Planner



Date: September 12, 2025

Project Name: Kaady Car Wash CUP-25-03/DR-25-03

Project No: 24041

Re: Completeness Response Letter

Memo

To: Chris Myers Chuck Kaady

Bob Thompson

From: Eric Li

This is a response letter to the incompleteness letter received that was dated September 3, 2025, from the City of West Linn.

The following actions have been taken in response to the comments received.

- A Class II Variance has been applied for in response to the clause in Chapter 55.100(6)(E) that requires 60% glazing on the primary (Willamette Drive) face, and 30% on the secondary (Walling Way) Face.
- 2. The written narrative now includes, on page 9, the following justification for the variance:

Class II VARIANCE 75.020

The proposed Car Wash does not comply with the window glazing requirements stipulated in 55.100 6 e, which requires 60 % transparency along the main elevation facing Willamette Drive, or the 30% transparency required along the secondary elevation facing Walling Way. The Applicant is submitting for a Class II Variance for the requirements of the glazing percentage required by 55.100 6 4.

During business hours, the exit elevation facing Willamette Drive will be open, providing a 12'-0" x 12'-0" opening that is fully "transparent". Along the Walling Way Driver's Side, there is 12% glazing provided to the employee workspaces (19'-8" glazing over 115'-0"). The Ticket Stations, which interact with the public, are 75% glazed (3 sides of each booth).

 The lack of the requisite glazing does not provide a life-safety or accessibility concern. The percentage of glazing is not a condition that conflicts with any requirements in the OSSC Code.

tva architects, inc.

MEMO – Eric Li September 12, 2025 Kaady Car Wash – City of West Linn Completeness Response. Page 2

- The use of a masonry wall performs better as an acoustic buffer than a glazed opening, and acoustics was a primary concern of the Neighborhood Association.
 Windows adjacent to areas near fan dryers would increase the sound vibration from air blowers rather than dampen the noise, as the masonry walls will.
- Glazing into the wash bay on the passenger side is possible, but it does not achieve the required amount of glazing facing the public. Adding additional glazing would not enhance or provide any visual enhancement relative to the functions inside of the building. There are no people working inside the wash bay during operational hours, nobody needs to see out of the wash bay as the space is unoccupied.
- Glazing into the storage room on the South (Walling Way) side would interfere with the mounting of the filtration treatment equipment in the storage room, which requires and would not provide a notable benefit to be publicly seen.
- The requested variance does not affect the size, location, or topography of the building on the site. The code provision in 55.100 6 e is an aesthetic provision.
- The request for this variance does not create any conflicts with any other Community Development code standards.
- Nearby Precedents for non-compliance with this Code section (Whether or not they applied for a variance) include:
 - United Car Wash on 19303 Willamette Drive (Very Similar)
 - o Walmart on 19133 Willamette Drive
 - o Wells Fargo Bank on 19181 Willamette Drive
 - o Soku Sushi and Noodle on 19171 Willamette Drive
 - o Monte Gozales Family Dentistry on 18612 Willamette Drive
 - o Burgerville on 18530 Willamette Drive
- 3. Included in this Application, per the Procedures for Decision Making: Quasi-Jurisdictional of 99.038, Neighborhood Contact Required for Certain Applications:
- A. Purpose: The purpose of the neighborhood contact is to identify potential issues or conflicts regarding a proposed application so that they may be addressed before filing.
 - a. Acknowledged. This meeting was scheduled, held, and recorded in accordance with the requirements of 99.038.
- B. The applicant shall contact by letter all recognized neighborhood associations whose boundaries contain all or part of the site of the proposed development and all property owners within 500 feet of the site.
 - a. A letter of notification was drafted to inform these neighbors of the scheduled meeting. These letters were mailed more than 20 days before the June 8 meeting. This letter has been included as part of this Conditional Use application, see attached.
 - b. See the attached mailing list of neighbors, as determined by Chicago Title.
- C. The letter shall be sent to the president of the neighborhood association and to one designee as submitted to the City by the Neighborhood Association. It shall be sent by regular mail to the other officers of the association and the property owners within 500 feet of the project.

MEMO - Eric Li September 12, 2025 Kaady Car Wash - City of West Linn Completeness Response. Page 3

- a. The letter was sent by certified mail to NA President Michelle Goldberg, NA Vice President Tony Bracco, and to the Robinwood Station courtesy of Michelle Goldberg. See the attached receipts for the certified mail.
- b. Please note that the email addresses listed for the Robinwood Neighborhood Association on the City of West Linn Website are not viable website addresses, which made contacting the officials very difficult. TVA had to attend the May Robinwood Neighborhood Association meeting to get on the next month's schedule, as repeated email requests to the City's identified email addresses were not returned, creating delays in the design team's ability to get on the Neighborhood Association meeting schedule. The NA Treasurer, Kevin Bryck, confirmed this issue. This information should be corrected for future applicants.
- D. Two signs were posted on the building site, announcing the time, date, and location of the Neighborhood Association Meeting. One sign was placed along Willamette Drive, and one sign was placed next to the driveway entry on Walling Way. The signs were 30" x 42" and mounted on polycarbonate boards and were staked in place.
 - a. A .pdf of the sign has been provided as part of this CUP permit application.

 Contact information for Chuck Kaady and Eric Li is included on both the sign and the notification letter.
 - b. Photographs of the signage in place have been provided as part of this CUP application. **See sheets G1 and G1.1.**
- E. The following documents have been attached to this application.
 - a. A copy of the certified letter with receipts from the USPS, dated 5/9/2025.
 - b. An affidavit of the mailing for the letters of notification, dated 5/9/2025, which a notary public has stamped.
 - c. A .pdf copy of the notification signage, announcing the date, time, and location of the Neighborhood Association Meeting.
 - d. A copy of the meeting agenda and the meeting minutes provided by the Robinwood Neighborhood Association.
 - e. As of 9/5/25, the Design Team has received (1) written comment in opposition to the proposed use, from Morgan McCarley, dated 5/20/2025. The email has been included in the application.
 - f. An MP3 audio recording of the Neighborhood Association was provided to Chris Myers in the original application.

The major points of concern from the audience were traffic, noise, and wetland issues.

The Applicant acknowledges the concerns of the neighborhood community and addresses these elements in this application narrative:

- Water Resource Area Protection Chapter 32
- Privacy and Noise 55.100D,
- Traffic 55.125

END COMPLETENESS RESPONSE



Date: Revised on September 12, 2025 Project Name: Kaady Car Wash West Linn

Project No: 24041

Re: Type II Design Review Application

CONDITIONAL USE AND TYPE II DESIGN REVIEW APPLICATION AND WRITTEN RESPONSES FOR 18550 Willamette Drive, Tax Lot 21E14DD06900 Per Chapters 55 and 60 of the City of West Linn Community Development Code

APPLICATION NARRATIVE

The Kaady Car Wash is a one-story, 3,190-sf building that is 17'-8" high and has 280 sf of auxiliary buildings (Ticket Booth and Vacuum Shed), for a total of 3,470 sf of leasable space. It is replacing a 3,948-sf McDonald's restaurant with drive-through service. The building type is considered an automobile cleansing facility per 2.a. in 19.060 Conditional Uses, which allows the use in this zone subject to the provisions of Chapter 60 of the CDC, Conditional Uses.

Kaady Car Wash is a locally owned franchise of automotive cleaning facilities that have used state-of-the-art car wash technology for the residents of the Portland Metropolitan area since 1977. Kaady Car Washes are better for the cars, the environment, and for all that cars go through. Business operations run daily from 8 AM to 8 PM. Similar facilities have recently been developed on West Burnside in Portland and along TV Highway in Hillsboro.

There are no public restroom facilities within the scope of this work. An accessible staff restroom is available for the use of car wash employees.

Building Construction Type and Occupancy:

The construction type is VB, and the occupancy group is B. The building is non-separated. The Car Wash has an occupancy of 12, and each of the two ticket stations has an occupancy of 1. The allowable area is 9,000 sf without sprinklers, per Table 504.3. COMPLIANT The allowable building height is 40'-0" without sprinklers per Table 504.3. COMPLIANT

For Type VB Construction, Class B Occupancy, No Sprinklers:

OSSC Table 504.3 allowable building height is 40'-0" COMPLIANT OSSC Table 504.4 allows for two allowable stories. COMPLIANT OSSC Table 506.2 allowable area is 9,000 s.f. COMPLIANT

A precedent for a car wash conditional use exists with the operation of United Car Wash, located at 19303 Willamette Drive, West Linn.

tva architects, inc.

1750 sw yamhill street \mid suite 150 \mid portland, oregon 97205 phone: 503 220 0668 \mid www.tvaarchitects.com

Existing Easement:

There is an existing Reciprocal Ingress and Egress Easement on the site, Document No 96-058137 amended by Document 98-051836, that provides access to the shopping mall on the lot adjacent to the north. This easement remains. The existing lot entries remain unchanged.

Existing landscaping and Planting:

None of the street trees on the site are documented or included in the City of West Linn Street Tree Inventory Map. One street tree located off Walling Way may need to be modified to accommodate the upgrade of the water service line, but the rest of the street trees are to remain. There is a masonry existing site retaining wall that is approximately 8'-0" on the east side of the lot that provides a visual and acoustic buffer to the adjacent residential zone. On the east side of the wall is a vegetated water treatment swale that we will keep, upgrade, and maintain. Interior lot landscaping will be demolished and replaced as shown on the site plan with City-compliant small trees.

Pre-Application Conference

TVA and Chuck Kaady met with Chris Myers with the City of West Linn Planning Department for a Pre-Application conference on March 8, 2025. See attached Summary Notes.

The key issues from the meeting were that:

- 1. The design team needed to meet with the Robinwood Neighborhood Association and to provide an audio recording of the meeting.
- 2. The applicant must have a TVF&R Provider Permit as part of the application
- 3. There is an existing ingress/egress easement on the property, which must be maintained unless legally changed with all property owners agreeing.

TVFR Provider Permit

A Tualatin Valley Fire and Rescue Provider Permit has been submitted and approved by TVFR, and is included as part of this application.

Historical Preservation:

This is not a historical condition subject to review from the Historic Review Board.

99.038 Neighborhood Contact Required for Certain Applications

TVA and Kaady Car Wash hosted a Robinwood Neighborhood Association meeting at the Robinwood Station Community Center on June 8, 2025, at 7:00 PM. Also in attendance were the Vice President, Tony Bracco, and the Secretary/Treasurer, Kevin Bryck. The Association President, Michelle Greenberg, was invited, but did not attend. Our presentation lasted about an hour, where we fielded questions and concerns from the community. A complete audio documentation of the event was taken and is submitted with this application.

Questions and concerns from this meeting included:

- Noise and acoustic performance of the building.
- The effects of on-site water drainage on the local water system.
- Traffic along Willamette Drive.
- Whether the addition of another car wash in the neighborhood is warranted.

The Design Team will address each of these items in this application.

Included in this Application, per the requirements of 99.038, Neighborhood Contact Required for Certain Applications:

- A. Purpose: The purpose of the neighborhood contact is to identify potential issues or conflicts regarding a proposed application so that they may be addressed before filing.
 - a. Acknowledged. This meeting was scheduled, held, and recorded in accordance with the requirements of 99.038.
- B. The applicant shall contact by letter all recognized neighborhood associations whose boundaries contain all or part of the site of the proposed development and all property owners within 500 feet of the site.
 - A letter of notification was drafted to inform these neighbors of the scheduled meeting. These letters were mailed more than 20 days before the June 8 meeting. This letter has been included as part of this Conditional Use application, see attached.
 - b. See the attached mailing list of neighbors, as determined by Chicago Title.
- C. The letter shall be sent to the president of the neighborhood association and to one designee as submitted to the City by the Neighborhood Association. It shall be sent by regular mail to the other officers of the association and the property owners within 500 feet.
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- a. A .pdf of the sign has been provided as part of this CUP permit application. Contact information for Chuck Kaady and Eric Li is included on both the sign and the notification letter.
- b. Photographs of the signage in place have been provided as part of this CUP application. See sheets G1 and G1.1.
- E. The following documents have been attached to this application.
 - a. A copy of the certified letter with receipts from the USPS, dated 5/9/2025.
 - b. An affidavit of the mailing for the letters of notification, dated 5/9/2025, which has been stamped by a notary public.
 - c. A .pdf copy of the notification signage, announcing the date, time, and location of the Neighborhood Association Meeting.
 - d. A copy of the meeting agenda and the meeting minutes provided by the Robinwood Neighborhood Association.
 - e. As of 9/5/25, the Design Team has received (1) written comment in opposition to the proposed use, from Morgan McCarley, dated 5/20/2025. The email has been included in the application.
 - f. An mp3 audio recording of the Neighborhood Association was provided to Chris Myers.

The major points of concern from the audience were traffic, noise, and wetland issues.

The Applicant acknowledges the concerns of the neighborhood community and addresses these elements in this application narrative:

- Water Resource Area Protection Chapter 32,
- Privacy and Noise 55.100D,
- Traffic 55.125

Design Documents:

The attached documents have been provided as part of this Conditional Use Application: The required drawings have been provided in PDF format, in both full-size (30x42) and 11x17 formats. 55.070 Submittal Requirements require these Documents

- A site plan A0.01
- Building Elevations A4.01 and A4.02
- Grading Plan
- Site Utility Plan
- Photographs of the Existing McDonald's Site (with Neighborhood Notification Sign)
- Photographs of the Portland, West Burnside Kaady Car Wash, completed in 2024, which
 is the basis of the design for this project.
- Photographic proof of the acoustic testing of the Burnside Site.
- A Light Coverage Plan

CHAPTER 19 GENERAL COMMERCIAL (GC) ZONE REQUIREMENTS

19.020 PROCEDURES AND APPROVAL PROCESSES

 The approval of a conditional use is discretionary with the Planning Commission, the process and criteria for approval set forth in Chapter 60 of the City of West Linn Community Development Code.

19.060 CONDITIONAL USES

Automotive and equipment cleaning uses are allowed as a conditional use. A
 Conditional Use Permit will be applied for under the requirements listed in Chapter 60
 of the West Linn Community Development Plan. (See below for more information.)

19.070 DIMENSIONAL REQUIREMENTS

- Minimum front lot line length shall be 35 feet. COMPLIANT
- Minimum lot width shall be 50 feet. COMPLIANT
- Minimum lot depth shall not be less than 90 feet. COMPLIANT
- The maximum lot coverage shall be 50 percent. COMPLIANT
- Maximum building height shall be two and one-half stories or 35 feet for any structure located 50 feet or more from a low or medium-density residential zone. COMPLIANT
- For lot lines that abut an arterial, there shall be no minimum yard dimensions or minimum building setback area, and the maximum building line shall consist of landscaping or a combination of non-vehicular hardscape areas and landscaped areas. COMPLIANT

CHAPTER 32 WATER RESOURCE AREA PROTECTION

- Per the West Linn Water Resource Area Map, Fern Creek runs as an underground pipe segment below the property and is piped out at the west property line. Fern Creek, upon emerging on the other side of the property line becomes a significant riparian corridor.
- The projected water resource area of the riparian corridor on this property is where the stormwater treatment pond is. The water resource itself (Fern Creek) is outside of the property lines of this project.
- There is no construction in this area of the site. Per Table 32-1, stormwater treatment facilities are allowed in a Water Resource Area.
- There are no wetland conditions on this property identified in the Water Resource Inventory.

CHAPTER 42 CLEAR VISION AREA

• The Owner will trim and maintain the street tree canopy 8'-0" and below at the corner of Willamette Drive and Walling Way to provide the clear vision area 30'-0" from the intersection as required per 42.020. There are to be no visual obstructions (walls, fences, or planting) provided at this intersection as part of this scope of work.

CHAPTER 44 FENCES

- No new fences are being provided in this cope of work.
- There is an existing CMU retaining wall on the east side of the east drive exit that will remain. This retaining wall is 6'-8" max. and does not abut a street. Most of this wall is 40" max above grade. This wall is not within a front yard setback area.

CHAPTER 46 OFF-STREET PARKING, LOADING, AND RESERVOIR AREAS

- The traffic flow reverses through the car wash, and vehicles can either exit back onto Willamette Drive or use the self-servicing vacuum spaces in a lot to the north of the car wash. The vacuum stalls are generously sized at 10'-0" wide x 18'-0" deep, and the total number of parking spaces is 17.
- Note that the vacuum stations are for active cleaning use and are not intended as medium or long-term parking spaces.
- Per the Off-Street Parking Requirements table 46.090, the maximum number of parking spaces is 5 per 1000 sf of leasable building, using "other commercial uses" as the Land Use criteria.
- 3.47 x 5 = 17.35 parking spaces maximum allowed. COMPLIANT
- The Reservoir Requirement for drive-in uses for mechanical car washes requires 3 spaces/washing unit, and 5 spaces for attendant ticket dispensing. This facility has a reservoir area of 6 cars from the car wash to the ticket station and 18 cars from the ticket station to the driveway entrance. ODOT has reviewed the site plan submitted for the Pre-Application Conference.
- The building does not exceed the threshold for Commercial Buildings at which a loading space berth is required. (10,000 sf). Per 46.130.
- All exterior lighting for this facility will be concealed or shielded for compliance with 46.150 Design Standard 13.
- This facility is compliant with the maximum allowable 12 parking spaces in a row as required by 46.150 Standard 19.
- One accessible parking space is required. One is provided.
- This facility is compliant with all of the conditions listed in 46.150 Design and Improvement Standards for non-residential parking.
- Two bicycle spaces are required or .33 spaces per 1000 gross sf (.33 x 4=1.32), whichever is greater, for auto-oriented services. Two are provided.
- This facility provides less than one-half acre of parking (7,548 sq. ft.), so it is not required to provide shade trees at the parking area.

CHAPTER 48 ACCESS, EGRESS, AND CIRCULATION

- This project is compliant with the conditions required in Chapter 48.
- A traffic impact analysis has not been requested by the City as a condition of the Pre-Application meeting. The State Department of Transportation is reviewing the Pre-Application documents.

- The two existing site access driveways remain, and no new driveways are being added. The driveway off of Willamette Drive (40'-0 wide) is both ingress and egress. The Owner is considering whether the driveway on Walling Way (37'-0" wide) will be used for Egress only or both ingress and egress. It was explained to the design team that it could be either condition.
- There is an existing reciprocal ingress and egress easement that is to remain along the west boundary of the site. See the Site Plan for additional easement information.

 Documents 96-058137 and 98-051836 are on record with the City of West Linn.
- A portion of the site utilizes one-way traffic to direct customers through the drivethrough mechanical car wash. The vacuum station stalls are served by a two-way drive aisle. The Owner is considering utilizing the SW exit off of Walling way as an exit only driveway to control the traffic gueue for the car wash.

CHAPTER 52 SIGNS

- Permanent monument signs and building-mounted signage are permitted on this property and will be submitted under a separate permit, conforming to 52.101 Signage Procedures and Approval Process to ensure compliance with Chapter 52 in full.
- Anticipated signage includes a building mounted sign and a pole mounted sign.

CHAPTER 54 LANDSCAPING

- All existing street trees along Willamette Drive and Walling Way are to be retained. The
 new drive access aisle follows the same profile as the existing curb line of the
 McDonald's site, protecting the existing root systems. The existing cedar trees along
 the east property line behind the masonry retaining wall remain. There are small
 existing deciduous trees (with a diameter of less than 12 inches at chest height) within
 parking islands and peninsulas that are being removed as part of this scope.
- One exception: There may be a need to remove or provide protection for a tree that has grown its root system around the existing water meter, which is being upsized for the car wash use.
- The existing street trees will be trimmed to conform to the Clear Vision Area requirements stated in Chapter 42.
- Per chapter 54.020, Parking lots with 10 to 20 parking spaces shall have a minimum of five percent of the interior devoted to landscaping. The perimeter landscaping is not to be included in this five percent. There shall be one shade tree planted for every eight parking spaces. For seventeen parking spaces, three trees are required, and four are proposed in this scope of work.
- Per the Pre-Application meeting review from the City of West Linn, the quantity of landscaping provided by the street trees as proposed in this site plan satisfies the criteria of Chapter 54
- The existing stormwater treatment containment pool and surrounding landscaping will be maintained, cleared of blackberries, and improved as necessary for water treatment and retention.

CHAPTER 55 DESIGN REVIEW

This project does not fall under any of the project types listed for CLASS I Design Review. Therefore, a new major commercial construction project is subject to a Class II Design Review. The project has executed the Pre-Application conference required by 55.030.

55.100 APPROVAL STANDARDS - CLASS II DESIGN REVIEW GENERAL/DISCRETIONARY

RELATIONSHIP TO THE NATURAL ENVIRONMENT

- No heritage trees are dedicated in the City of West Linn Street Tree Inventory Map on this site.
- The topography and natural drainage shall be preserved to the greatest degree possible. This project will utilize the existing stormwater treatment facility in the SW corner of the site, where the natural drainage of the site currently flows.
- There are no steep slopes on this site that are subject to slumping and sliding.

ARCHITECTURE

- The architectural character of this building is in character and scale with the other buildings in this neighborhood. A precedent for car washes exists nearby, with United Car Wash located at 19303 Willamette Dr. (approximately five blocks away). Drivethrough businesses are common along Willamette Drive. Chevron, Starbucks, Burgerville, Castrol, and Wells Fargo all have drive-through operations along Willamette Dr. within five blocks of this site.
- The building that Kaady Car Wash will be replacing is a McDonald's drive-through restaurant, so the vehicular-oriented character has a precedent for this site.
- The size and shape of this building is consistent with the commercial buildings along Willamette Drive.
- Willamette Drive is an arterial highway (HWY 43) and does not support a pedestrian commercial environment. Walling Way is a local roadway that, due to previous right-of-way improvements, does not require additional frontage Improvements at the property location, according to the West Linn Department of Transportation.
- There are no public entrances to this facility. The public does not enter the building, except to run their cars through the wash. The main street and transit entrance proximity requirements do not apply.
- The car wash has been set back from the property lines, with the existing street trees
 and site retaining wall acting as an acoustic buffer to neighboring properties. These
 dimensions are to the property lines. Existing neighboring buildings are located at a
 minimum of 100 feet away.
 - South Buffer 71'-1"West Buffer 54'-5'
 - West Buffer 54'-5"North Buffer 53'-3"
 - o North Bullet 33 3
 - o East Buffer 113'-8"
- The mechanical equipment on top of the car wash has a 3'-8" high ribbed metal panel roof screen, masking HVAC equipment from view. See attached exterior elevations

A4.01 and A4.02. We will be seeking an exception for the 60 percent glazing of the building due to its use as a car wash. There are windows provided for the Car Wash staff, but most of the building enclosure is for the car wash, for which windows are not needed.

Class II VARIANCE 75.020

The proposed Car Wash does not comply with the window glazing requirements stipulated in 55.100 6 e, which requires 60 % transparency along the main elevation facing Willamette Drive, or the 30% transparency required along the secondary elevation facing Walling Way. The Applicant is submitting for a Class II Variance for the requirements of the glazing percentage required by 55.100 6 4.

During business hours, the exit elevation facing Willamette Drive will be open, providing a 12'-0" x 12'-0" opening that is fully "transparent". Along the Walling Way Driver's Side, there is 12% glazing provided to the employee workspaces (19'-8" glazing over 115'-0"). The Ticket Stations, which interact with the public, are 75% glazed (3 sides of each booth).

- The lack of the requisite glazing does not provide a life-safety or accessibility concern. The percentage of glazing is not a condition that conflicts with any requirements in the OSSC Code.
- The use of a masonry wall performs better as an acoustic buffer than a glazed opening, and acoustics was a primary concern of the Neighborhood Association. Windows adjacent to areas near fan dryers would increase the sound vibration from air blowers rather than dampen the noise, as the masonry walls will.
- Glazing into the wash bay on the passenger side is possible, but it does not achieve
 the required amount of glazing facing the public. Adding additional glazing would
 not enhance or provide any visual enhancement relative to the functions inside of
 the building. There are no people working inside the wash bay during operational
 hours, nobody needs to see out of the wash bay as the space is unoccupied.
- Glazing into the storage room on the South (Walling Way) side would interfere with the mounting of the filtration treatment equipment in the storage room, which requires and would not provide a notable benefit to be publicly seen.
- The requested variance does not affect the size, location, or topography of the building on the site. The code provision in 55.100 6 e is an aesthetic provision.
- The request for this variance does not create any conflicts with any other Community Development code standards.
- Nearby Precedents for non-compliance with this Code section (Whether or not they applied for a variance) include:
 - United Car Wash on 19303 Willamette Drive (Very Similar)
 - o Walmart on 19133 Willamette Drive
 - o Wells Fargo Bank on 19181 Willamette Drive
 - o Soku Sushi and Noodle on 19171 Willamette Drive
 - o Monte Gozales Family Dentistry on 18612 Willamette Drive
 - o Burgerville on 18530 Willamette Drive

PRIVACY AND NOISE (55.100.D)

Applicable Sections:

- 3. Structures or on-site activity areas that generate noise, lights, or glare shall be buffered from adjoining residential uses in accordance with the standards in subsection C of this section, where applicable.
- 4. Businesses or activities that can reasonably be expected to generate noise in excess of the noise standards contained in West Linn Municipal Code Section <u>5.487</u> shall undertake and submit appropriate noise studies and mitigate as necessary to comply with the code. (See CDC <u>55.110</u>(B)(11) and <u>55.120</u>(M).) If the decision-making authority reasonably believes a proposed use may generate noise exceeding the standards specified in the municipal code, then the authority may require the applicant to supply professional noise studies from time to time during the user's first year of operation to monitor compliance with City standards and permit requirements."

Design response:

- West Linn Municipal Code 5.487 Sound Levels and Noise prohibits noise between 9:00
 PM and 7:00 AM. Kaady Car Wash's daily operations begin at 8:00 AM and ends at 8:00
 PM, making the facility compliant.
- Chuck Kaady took decibel reading from the Burnside site, with cars going through the wash. These readings were taken at 8:00 AM on June 16.
 - o 42 feet from car wash entry: 72 dB.
 - \circ 50 feet from exit on the sidewalk on Burnside Street: 70db 80 db
- This noise level is considered moderate, below the threshold for causing hearing damage. This noise is also intermittent, and is a "whooshing" noise rather than a banging noise.
- The Willamette Drive site is 123 feet from the east property line (opposite the wash entry), and 67'-0" from the entry is an 8'-0" high CMU retaining wall buffer. The slope drops away from the site, and on the other side of the retaining wall is a thicket of mixed blackberry and wetland plantings.
- From the exit to the sidewalk along Willamette Drive, the exit is 61'-8" minimum. The sidewalk is 8'-4" wide, and Willamette Drive is 80'-0" before you hit the opposite sidewalk. The property on the opposite side of Willamette Drive is a commercial property. The nearest residential property to the west is at least 350' away from the exit of the car wash, and the commercial buildings in Lot 18825 provide an acoustic buffer. Moreover, Willamette Drive will provide a more constant, and equivalent noise source (Louder for big trucks and motorcycles) than the car wash to the neighbors to the west.
- The distance offset from the car wash is considerably more than the acoustic readings
 that were taken from the new Burndside Kaady Car Wash, which is a new development,
 and is also using patented state-of-the art equipment that has been designed to be
 quieter.

TRAFFIC (55.125)

Section 55.125 states "Certain development proposals required that a **traffic impact analysis** (TIA) be provided which may result in modifications to the site plan or conditions of approval to address or minimize any adverse **impacts** created by the proposal. The purpose, applicability and standards of this **analysis** are found in CDC <u>85.170(B)(2)</u>. (Ord. <u>1584</u>, 2008; Ord. <u>1745</u> § 1 (Exh. A), 2023)"

CDC 85.170 (B)(2) requires a TIA (no dwellings) under the following considerations:

The development application involves one or more of the following actions:

- (A) A change in zoning or a plan amendment designation; or (NO)
- (B) Any proposed development or land use action that ODOT states may have operational or safety concerns along a State highway; and (NO)
- (C) The development shall cause one or more of the following effects, which can be determined by field counts, site observation, traffic impact analysis or study, field measurements, crash history, Institute of Transportation Engineers Trip Generation manual, and information and studies provided by the local reviewing jurisdiction and/or ODOT: (NO)
 - (1) An increase in site traffic volume generation by 250 average daily trips (ADT) or more (or as required by the City Engineer); or (Not requested by the city)
 - (2) An increase in use of adjacent streets by vehicles exceeding the 20,000 pound gross vehicle weights by 10 vehicles or more per day; or (NO)
 - (3) The location of the access driveway does not meet minimum intersection sight distance requirements, or is located where vehicles entering or leaving the property are restricted, or such vehicles queue or hesitate on the State highway, creating a safety hazard; or (NO)
 - (4) The location of the access driveway does not meet the access spacing standard of the roadway on which the driveway is located; or (NO)
 - (5) A change in internal traffic patterns that may cause safety problems, such as backup onto the highway or traffic crashes in the approach area. (Not with the modified queue reservoir configuration... ODOT)

As per our Pre-Application Meeting with Chris and the City Engineer, <u>none of these criteria</u> <u>would trigger a TIA</u>. The car wash will not generate an increase of 250 average daily trips more than a McDonald's drive-through restaurant. Additionally, we do not have any available traffic impact data from McDonald's.

CHAPTER 60: CONDITIONAL USE

Per Section 19.060, Automotive and Equipment Cleaning facilities are considered a conditional use. A Conditional Use Permit application has been submitted, and the associated Neighborhood Association Meeting was held on Tuesday, June 10, at the Robinwood Neighborhood Association Community Center. A recording of this meeting has been provided for the Conditional Use requirements.

The conditional use application includes a written narrative and a site plan describing the conditions stipulated in 60.070 Approval Standards and Conditions. This submittal includes information described in this application pursuant to Chapters 52 through 55 and section 92.010 of the Community Development Code.

The site is nominally level and mostly flat, with sufficient area and dimensions adequate to the proposed use. This is a commercial property within a General Commercial zone. (GC) This site does not involve the removal or alteration of a historic resource.

SUITABILITY OF PUBLIC FACILITIES PER 60.070 APPROVAL STANDARDS

This proposed project meets the requirements of the Public Facilities standards, per review with the City Engineers through the Pre-Application conference from March 6, 2025.

SANITARY SEWER

- The Existing 8" sanitary main currently running along the partial frontages of the property of Walling Way, and the 8" main in the vicinity are large enough to handle the capacity from our development.
- As-built data shows that the McDonald's property utilizes a 4" sanitary lateral on Walling Way.
- A new 6" sanitary lateral is shown and will be provided if warranted

DOMESTIC WATER

- The existing 6" domestic water main that runs across the frontages of the property on Walling Way currently serves a 1.5" meter.
- Our project proposes an upgrade to a 2" water meter for Car Wash needs. The city's water main can serve this new meter. This will require Systems Development Charges, which will be paid prior to the issuance of a Site Development Permit.
- A 2" RPBA will be provided to protect the water system.

TRANSPORTATION

- Willamette Drive is classified as a major arterial.
 - o ODOT controls this right-of-way.
 - Neighborhood Association members expressed concerns about the volume and speed of traffic along Willamette Drive. This project will not impact or modify the existing speed or volume of traffic along this major arterial.
- Walling Way is classified as a local roadway, with 50 feet of right-of-way along the frontage of our proposed development lot.
 - The City is not requesting any additional ROW to be dedicated across the property frontage.
 - o Due to previous ROW improvements along Walling Way, the City will not require any additional frontage improvements at this location.

STORMWATER

- An existing water quality vault and retention pond currently serve this site and the
 adjacent strip mall. Due to the age of this system, it is likely does not meet current
 stormwater management requirements. Therefore, the project will be providing a new
 water quality treatment manhole and a below-grade detention system. Discharge from
 the flow control structure will tie into the exiting site stormwater system, including the
 stormwater retention pond.
 - o The design team acknowledges that the City of West Linn is currently in the process of adopting a new stormwater management manual.

END OF LAND USE / CONDITIONAL USE NARRATIVE

Eric Li, Senior Associate, TVA Architects

CITY OF WEST LINN PRE-APPLICATION CONFERENCE MEETING SUMMARY NOTES March 6, 2025

SUBJECT: Proposed Car Wash.

FILE: PA-25-06

APPLICANTS PRESENT: Chuck Kaady, Eric Li

STAFF PRESENT: Chris Myers, Associate Planner

PUBLIC PRESENT:

These pre-application summary notes have been prepared for the applicant to identify applicable code sections and critical issues for the proposed application and summarize the application process and fees*. Pre-Application summary notes are based on preliminary information and may not include all considerations. Contact the assigned planner for additional information regarding the process, approval criteria, submittal requirements, questions, and clarifications. Pre-Application Conference summary notes are valid for eighteen months from the meeting date. Once a complete application is submitted, the final decision can take 6-10 months.

SITE INFORMATION:

Site Address: 18850 Willamette Drive

Tax Lot No.:21E14DD06900Site Area:1.294 AcresNeighborhood:Robinwood NAComp. Plan:Commercial

Zoning: General Commercial

Zoning Overlays: Riparian Corridor, Habitat Conservation Area

PROJECT DESCRIPTION:

The applicant proposes a Conditional Use Permit and a Class II Design Review for the construction of a car wash.

APPLICABLE COMMUNITY DEVELOPMENT CODE SECTIONS:

Approval standards and criteria in effect when an application is *received* will be applied to the proposed development. The following Community Development Code (CDC) Chapters apply to this proposal:

- Chapter 2: Definitions
- Chapter 19: General Commercial
 - o 19.020 Procedures and Approval Process
 - o 19.030 Permitted Uses
 - 19.060 Conditional Uses
 - o 19.080 Dimensional Requirements, Conditional U
- Chapter 32: Water Resource Area Protection
 - o 32.010 Purpose
 - o 32.020 Applicability
- Chapter 42: Clear Vision Areas
 - 42.020 Clear Vision Areas Required
 - 42.040 Computation; Street and Accessway 24 Feet or More in Width
- Chapter 46: Off-Street Parking, Loading, and Reservoir Areas
 - o 46.020 Applicability and General Provisions
 - o 46.030 Submittal Requirements
 - 46.070 Maximum Distance Allowed Between Parking Area and Use

- 46.090 Computation of Required Parking Spaces (Maximum)
- o 46.110 Reservoir Areas Required for Drive-in Uses (car wash is listed)
- 46.150 Design and Improvement Standards
- Chapter 48: Access, Egress, and Circulation
 - o 48.020 Applicability and General Provisions
 - 48.025 Access Control
 - o 48.040 Minimum Vehicle Requirements for Non-Residential Uses
 - o 48.050 One-Way Vehicular Access Points
 - o 48.080 Bicycle and Pedestrian Circulation
- Chapter 52: Signs
 - 52.300 Permanent Sign Design Standards
- Chapter 54 Landscaping
 - o 54.050 Protection of Street Trees
- Chapter 55: Design Review
 - o 55.020 Classes of Design Review (Class II)
 - o 55.070 Submittal Requirements
 - o 55.100 Approval Standards Class II Design Review General Discretionary
 - o 55.110 Site Analysis
 - o 55.120 Site Plan
 - 55.125 Transportation Analysis
 - 55.140 Architectural Drawings
 - o 55.150 Landscape Plan
- Chapter 60: Conditional Uses
 - o 60.030 Administration and Approval Process
 - 60.070 Approval Standards and Conditions
 - o 60.080 Site Plan and Map
- Chapter 99: Procedures for Decision Making: Quasi-Judicial
 - o 99.030 Application Process
 - 99.038 Neighborhood Contact Required (Yes, CUP requires NA meeting)
 - o 99.060 Approval Authority (Planning Commission)

KEY ISSUES & CONSIDERATIONS

Staff has identified the following development issues, design considerations, or procedural issues that you should be aware of as you prepare your formal application for submittal. The identification of these issues or considerations here does not preclude the future identification of additional issues or considerations:

- 1. Applicant must attend NA meeting AND provide an audio recording as part of the application.
- 2. Applicant must have a TVF&R Provider Permit as part of the application.
- 3. There is an existing ingress/egress easement on the property which must be maintained unless legally changed with all property owners agreeing (1998).

RESPONSE TO APPLICANT QUESTIONS:

Links to previous Design Review projects:

https://westlinnoregon.gov/projects/completed?term_node_tid_depth=All&field_project_type_tid=40&keys=

Master Fee Schedule:

https://westlinnoregon.gov/sites/default/files/fileattachments/finance/page/7989/mfc - fy 2025 effective july 1 2024 clean adopted 08.08.24 - minor wlrr updates.pdf

A storm water report will be needed at the time of Development Review.

ENGINEERING:

The Engineering department comments are attached. For further details, contact Clark Ide at 503-722-3437 or Cide@westlinnoregon.gov.

BUILDING:

For building code and ADA questions, contact Adam Bernert at <u>abernert@westlinnoregon.gov</u> or 503-742-6054 or Alisha Bloomfield@westlinnoregon.gov or 503-742-6053.

TUALATIN VALLEY FIRE & RESCUE:

A Service Provider Permit must be provided with this application - https://www.tvfr.com/399/Service-Provider-Permit. Contact Jason Arn at jason.arn@tvfr.com or 503-259-1510 with any questions.

TREES:

For information on the tree requirements for this proposal, contact the Mike Perkins, City Arborist at mperkins@westlinnoregon.gov or 503-722-4728.

PROCESS:

A Conditional Use Permit and a Class II Design Review are a Planning Commission Decision. A public hearing is required. Once the application is declared complete, staff will review the application, send a 20-day public comment notice, and post a notice sign on the property. When the public comment period closes. A final decision can take 6-10 months.

There is a 14-day appeal period after the decision. If the decision is not appealed, the applicant may proceed with the development.

NEIGHBORHOOD MEETING:

A neighborhood meeting is required for a Conditional Use Permit and a Class II Design Review

HOW TO SUBMIT AN APPLICATION:

Submit a complete application in a single PDF document through the <u>Submit a Land Use Application</u> web portal. A complete application should include:

- 1. A development application;
- 2. Application materials identified in the Development Review Checklist.

COMPLIANCE NARRATIVE:

Written responses supported by substantial evidence must address all applicable approval standards and criteria. Written materials must explain how and why the proposed application will meet each applicable approval criteria. "Not Applicable" is not an acceptable response to the approval criteria.

Submittal requirements may be waived, but the applicant must first identify the specific submittal requirement and request, in writing, that the Planning Manager waive the requirement. The applicant must identify the specific grounds for the waiver. The Planning Manager will respond with a written determination about the waiver request before applying.

APPLICATION FEES & DEPOSITS:

The Planning Division Fee Schedule can be found on our website: https://westlinnoregon.gov/finance/current-fee-schedule

- Deposit for a CUP = \$4500
 - = \$500 Inspection fee
- <u>Deposit</u> Class II Design Review = \$4500

= \$500

Applications with deposits will be billed monthly for time and materials. Please provide the name and address of the party responsible for the final invoice in your application.

Timelines:

Once the application and payment are received, the City has 30 days to determine if the application is complete. If the application is incomplete, the applicant has 180 days to complete it or provide written notice to staff that no other information will be provided. Once complete, the City has 120 days from the completeness determination to make a final decision on the application. Typical land use applications can take 6 months from beginning to end.

* **DISCLAIMER:** These pre-application notes have been prepared per <u>CDC Section 99.030.B.7.</u> The information provided is an overview of the proposal considerations and requirements. Staff responses are based on limited material presented at the pre-application conference. New issues and requirements can emerge as the application is developed. Failure to provide information does not constitute a waiver of the applicable standards or requirements. The applicant has the burden of proof to demonstrate that all approval criteria have been satisfied. These notes do not constitute an endorsement of the proposed application or assure project approval.



Pre-app Comments

Project Number: PA-25-06 Class 2 Commercial Design Review: 18850 Willamette Drive

Engineering Contact:

Jameson Lumpkin jlumpkin@westlinnoregon.gov Telephone: (503) 722-4739

Project Description: Proposed Car Wash

Pre-application meeting date: March 6, 2025

The comments provided below are based upon material provided as part of the pre-application packet and are intended to identify potential design challenges associated with the development. Comments are not intended to be exhaustive and do not preclude the engineering department from making additional comments as part of the formal land use application process.

TRANSPORTATION

Minimum Requirements:

- Willamette Drive
 - Willamette Drive is classified as a major arterial.
 - o Oregon Department of Transportation (ODOT) controls this Right of Way.
- Walling Way
 - Walling Way is classified as a local roadway.
 - Walling Way has approx. 50 feet of ROW along the frontage of the proposed development lot. The City would not request any additional ROW be dedicated across the property frontage.
 - Due to previous ROW improvements to Walling Way, the City will require no additional frontage Improvements at the property location.

SANITARY SEWER

Minimum Required Improvement:

- Existing 8" mains currently run along the patrial frontages of the property on Walling Way. The 8" mains in the vicinity are large enough to handle the capacity from the proposed development.
- As-built data shows current commercial property utilizes 4" sanitary lateral on Walling Way.

DOMESTIC WATER

Minimum Required Improvement:

- Existing 6" DI water mains currently run along the frontages of the property on Walling Way
 - o Existing property utilizes meter from this main.
- Building code will dictate the required meter size for this proposed development. Current meter size is 1.5"
- Developer inquired about upgrade to a 2" meter. City main has the capacity to serve this 2" meter upgrade.



Pre-app Comments

Project Number: PA-25-06 Class 2 Commercial Design Review: 18850 Willamette Drive

Engineering Contact:

Jameson Lumpkin jlumpkin@westlinnoregon.gov Telephone: (503) 722-4739

SURFACE WATER (STORM SEWER)

Minimum Required Improvement:

- Onsite run-off generated from new impervious areas of greater than 1000 square feet must be captured, treated, detained and conveyed to the nearest public stormwater system in accordance with the *Portland Stormwater Management Manual*, the Uniform Plumbing Code, and *City of West Linn Public Works Standards*.
- Preferred stormwater management would be to capture, treat, and infiltrate on site. If infiltration is not feasible, conveyance to the City system would be required.
- All Stormwater facilities must be designed and accepted by a licensed engineer.
- Current property shows a stormwater facility on site. This facility may be used for this proposed development but a licensed engineer must prove the facility meets current stormwater requirements.

OTHER

- City is currently in the process of adopting a new stormwater management manual. If site development plans are submitted after this adoption, the new requirements will be enforced.
- Any required improvements shall be constructed to meet current City of West Linn Design Standards.
- Any required work in the ROW shall be constructed, inspected and accepted by the City.
- Development shall pay all applicable System Development Charges (SDC) fees prior to issuance of Site Development permit.
- The proposed development will disturb less than 5 acre, therefore a West Linn Erosion Control Permit Application, as outlined in Section 2.0065 of the *City of West Linn Public Works Standards*, will be required prior to the commencement of construction.

ROBINWOOD NEIGHBORHOOD ASSOCIATION

June Meeting Agenda

7:00 pm, June 8th, 2025. Robinwood Station Zoom meeting:

https://us05web.zoom.us/j/83286322408? pwd=GCoY3SrlCqejtO8FUXBO5810tzMYk1.1 Meeting ID: 832 8632 2408 Passcode: jb4ywY

- 1. Call to Order. Introduction of new attendees.
- 2. Agenda Approval. May Minutes Approval
- 3. Treasurer's Report
- 4. Presentation from Eric Li from TVA Architects: New Kaady carwash to be constructed at former McDonalds location on Walling and 43 requires a zoning variance.
- 6. Presentation about Restoration Project at 3955 Cedaroak Dr.
- 7. Announcements, City and Community Events
- 8. Old Business
 - Budget Committee update.
 - Ole Olsen regarding Kenthorpe infill project.
 - Formation of the "Robinwood Good Neighbor Committee"
- 9. New Business
 - Picnic Committee volunteers sought for planning August 23rd event.
 - Replacement of RNA President pending
- 10. Adjournment

ROBINWOOD NEIGHBORHOOD ASSOCIATION MINUTES June 10th 2025 Meeting

Meeting Called to Order by Tony Bracco at 7:07 pm.

Guests and new attendees: Eric Li with TVA Architects

Agenda Review: Agenda approved.

May Minutes Approval: Approved by acclamation.

Treasurer's Report: No expenditures, current balance is \$3594.80

TVA Architects, Eric Li: Working on the new carwash at former McDonalds location on Walling and 43. Landscaping remain same except one tree removal. Building lower than existing play area. 17 foot building height plus 4 feet of mechanical on top. Conditional use permit and design review required due to automotive related business not allowed in General Comm; zone. Conditional uses are discretionary based upon conditions required by Planning Staff.

Questions regarding creeks and sensitive riparian areas. Creek runs in pipe under site. Not changing hardscape so no increased surface water runoff created. 2 to 3 minutes cycle with no public use inside, only at vac stations outside. Water is 41 and there is a catchment from McD on the southwest corner which is over grown with berries. Water reused and recycled and settled in containment tanks. 30 gallons used per car. Effluent collected in tanks in the building and periodically disposed.

Attendants on site. Two vacuum pumps enclosed inside building masonry walls central system. Operating hours 8am to 8pm 7 days. Cars enter from east with dryer blowers facing OR43. New blowers are much quieter. Blowers 70dB at 50 feet so less than traffic noise. Check 19th & Burnside location for same installation. Currently in phase 2 of 5 step permitting process.

Questions about traffic counts and potential for sound baffling structures. 18 total back in parking spaces, 15 for vacuums with 3 for employees.

Motion for Ad Hoc committee to bring forth a motion for the July meeting.

Update on Trillium Restoration by Dillon Wells: Ongoing, no new info.

Announcements, City & Community Events:

Community Garden Plant Sale - Free tomatoes still available in the Garden. Blood Drive at Station, Saturday July 8th. No Open Mic Night in June. Family Fun Day this Saturday with Bounce House, Crafts, Movies, Pizza, Slushies.

Old Business:

No Budget Committee update.

Good Neighbor Code Enforcement Committee needs more volunteers and a plan.
Ole Olsen on Kenthorpe infill project. 4399 Kenthorpe Way 4-lot expedited land division.
Since original 1936 survey was not recorded, property cannot be legally re-platted.
Trillium Creek property naming? Proposed names include 'Trillium Crossing' and 'Trillium Preserve.'

New Business: Yard /Garage Sale Weekend second Saturday in August.

Adjourn 8:42 **Attendance:** 45 with 0 virtual

Michelle Goldberg, President Tony Bracco, Vice President Kevin Bryck, Secretary/Treasurer Dawn Meaney, Ambassador Joe Fustolo, Member at Large



AFFIDAVIT OF MAILING

STATE OF OREGON COUNTY OF MULTNOMAH

I, Eric Li, being duty sworn, depose and say that on 05/09/2025, I caused to have mailed to Michelle Goldberg, the President of the Robinwood Neighborhood Association, and to a designated recipient of the Neighborhood Associations' request, a notice of a mailing to discuss a proposed development at 18850 Willamette Drive, West Linn, Oregon, 97068. A copy of which has been attached hereto and made a part hereof.

Chicago Title has provided a list of all neighbors within 500 feet of the proposed work, and each of these property owners is receiving a notification of a pending meeting by United States Post. See attached list of neighborhood recipients.

I further state that said notices were enclosed in envelopes plainly addressed to said persons and were deposited on the date indicated above in the United States Post Office with postage prepaid, therein.

This MAY 9.2025

Signed

Subscribed and sworn in, or affirmed before me this \underline{g} day of $\underline{\mathcal{M}}$

Public for the State of Oregon

My Commission Expires Aug

OFFICIAL STAMP CORY JOE TOWNSEND NOTARY PUBLIC - OREGON COMMISSION NO. 1039934 MY COMMISSION EXPIRES AUGUST 16, 2027

tva architects, inc.

1750 sw yamhill street " suite 150 " portland, oregon 97205 phone: 503-220-0668 www.tvaarchitects.com

Eric Li

From: Morgan McCarley <morgan_mccarley@yahoo.com>

Sent: Tuesday, May 20, 2025 2:23 PM ckaady@kaady.com; Eric Li

Subject: Proposed Kaady Carwash in West Linn

Chuck,

I'm a West linn resident concerned with a proposed plan to build a carwash within a 3 mile radius of 2 existing carwashes. I currently use the Kaady carwash in Lake Oswego, because I don't like the carwash across Hidden Springs from Walmart (leaves a film on my cars). I intend on continuing to use the Lake O Kaady car wash even if one is built closer to my home in West Linn. Frankly, I don't want it there, so I will not support the new location, if built and I will encourage others to do the same. Are there any alternatives to this plan or is this, for sure, happening?

Thanks,

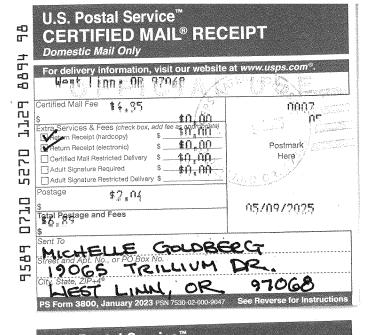
Morgan McCarley 916-715-1369

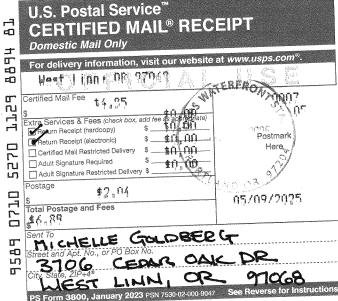
NOTIFICATION OF PROPOSED DEVELOPMENT FOR CONDITIONAL USE PERMIT

18850 WILLAMETTE DRIVE WEST LINN, OREGON 97068

The proposal is for the removal of the existing McDonald's drive-through restaurant, to be replaced with a new Kaady Car Wash. A neighborhood meeting has been scheduled to take place at the Robinwood Station Community Center, 37068 Cedar Oak Drive, at 7:00 PM on Tuesday, June 10. The public is invited to attend to discuss the proposal with the Applicant and Designer of the proposed project.

For additional information about this development you may contact: Chuck Kaady, Developer: 503.793.1100, ckaady@kaady.com Eric Li, Project Architect, TVA Architects: 971.678.7578, ericl@tvaarchitects.com





±0	U.S. Postal Service [™] CERTIFIED MAIL® RECI	EIPT
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Text your tracking number to 28777 (2USPS) to get the latest status. Standard Message and Data rates may apply. You may also visit www.usps.com USPS Tracking or call 1-800-222-1811.

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21E13CC05300 David Sims 3499 Walling Way

West Linn, OR 97068-1544

21E13CC05700 Roxanna Khosravi 19625 Old River Dr

West Linn, OR 97068-1639

21E14DC07601 Eleanor Jones 19477 View Dr

West Linn, OR 97068-1339

21E14DC08100 Overlook Dc LLC 18676 Willamette Dr West Linn, OR 97068-1718

West Linn, OR 97000-17

21E14DD01909 Andrew Chitty & Aniko Becsei

3275 Fairview Way

West Linn, OR 97068-1549

21E14DD02300 Alice Seeger 18530 Vista Ct

West Linn, OR 97068-1130

21E14DD02600 Barbara Weber 18525 Vista Ct

West Linn, OR 97068-1132

21E14DD03300 Chung Park 6457 McDuff Ct

Lake Oswego, OR 97035-8048

21E14DD05100 Mirko Munetic 2128 Club House Dr West Linn, OR 97068

21E14DD05300 & 06300 Will Earhart II

18745 Willamette Dr West Linn, OR 97068-1701 21E13CC05500

Brent & Sarah Hunsberger 3536 Walling Way

West Linn, OR 97068-1546

21E14DC07501 Scott Hillson 19461 View Dr

West Linn, OR 97068-1339

21E14DC07700

Rickey Hug & Billie Janette

1152 Troon Rd

Lake Oswego, OR 97034

21E14DD01500 Zack & Monica Lorts 2245 Snead Dr

Lake Havasu City, AZ 86406-7667

21E14DD01912 Robert Nevarez 18534 Rose Ct

West Linn, OR 97068-1129

21E14DD02400 Brian Kavanagh 5360 S Boston St

Greenwood Village, CO 80111-3409

21E14DD03000 Morgan McCarley 18485 Vista Ct

West Linn, OR 97068-1143

21E14DD03600 Liu Gong LLC

9520 SW Beaverton Hillsdale Hwy

Beaverton, OR 97005-3309

21E14DD05200

Raymond & Rufina Louthan

412 N Division St

Pinehurst, ID 83850-8726

21E14DD05400

Judith Espino & Manuel Ortiz

19586 View Dr

West Linn, OR 97068-1338

21E13CC05600 Nancy Rowinski 3424 Walling Way

West Linn, OR 97068-1535

21E14DC07600

Edward & Janet Gerbasi

19489 View Dr

West Linn, OR 97068-1339

21E14DC08000 & 08001 David & Karen Clary 19535 View Dr

West Linn, OR 97068-1341

21E14DD01908 Forrest Faubion 18527 Rose Ct

West Linn, OR 97068-1131

21E14DD02200

David & Judy Robison 18490 Vista Ct

West Linn, OR 97068-1141

21E14DD02500 Nicholas Sumerfelt 3171 Fairview Way

West Linn, OR 97068-1517

21E14DD03100

Dc Willamette Drive LLC 2327 Stickney Point Rd Sarasota, FL 34231-4016

21E14DD05000

18675 Willamette Drive LLC

Pmb 305 2050 Beavercreek Rd Ste 101

Oregon City, OR 97045

21E14DD05201 Angelica Villarreal 19590 View Dr

West Linn, OR 97068-1338

21E14DD05500

Brian & Stephanie Schutzler 21640 S Sweetbriar Cir West Linn, OR 97068-9228 21E14DD05600 Ann Bias 19512 View Dr

West Linn, OR 97068-1338

21E14DD05800 Elizabeth Zlatnick 19464 View Dr

West Linn, OR 97068-1336

21E14DD06100 & 06200 M5 Willamette LLC 5441 S MacAdam Ave Ste 208

Portland, OR 97239-3822

21E14DD06600-06700 Berrey Investment LLC 25999 SW Canyon Creek Rd Ste E

Wilsonville, OR 97070

21E14DD07100 Joseph Sewell 18747 Rose Way

West Linn, OR 97068-1532

21E14DD07400

Terry & Sandra Bottemiller 3204 Fairview Way

West Linn, OR 97068-1519

21E14DD07601 Diane Finnigan 18625 Rose Way

West Linn, OR 97068-1545

21E14DD08000 Randy Karnes 18652 Rose Way

West Linn, OR 97068-1543

21E14DD08401 Wade & C Gefre PO Box 243

West Linn, OR 97068

21E23AA00601 Cedar Linn LLC 1539 NW 19th Ave Portland, OR 97209-1702 21E14DD05601 John & Mary Bartlett 19482 View Dr

West Linn, OR 97068-1336

21E14DD05900 William Adams 19426 View Dr

West Linn, OR 97068-1336

21E14DD06400 Thomas Irey 2151 Marylhurst Dr

West Linn, OR 97068-1417

21E14DD06800

Berrey Investment LLC 110 N Carpenter St Dept 027

Chicago, IL 60607

21E14DD07200

Carolyn & Larry Ullman 18705 Rose Way

West Linn, OR 97068-1532

21E14DD07500

Dennis & Jeanne Eisele 3220 Fairview Way

West Linn, OR 97068-1519

21E14DD07700

Jason Johnsen & Kari Dee

3477 Walling Way

West Linn, OR 97068-1544

21E14DD08300 R & Cs LLC

4283 Terra Vista Ct

West Linn, OR 97068-1655

21E23AA00100

Noel Lee

19679 Old River Rd West Linn, OR 97068-1639

21E23AA00700 & 01700

Douglas Seely 1780 SW Advance

West Linn, OR 97068-9677

21E14DD05602

Kathy Fisher 19500 View Dr

West Linn, OR 97068-1338

21E14DD06000

Daniel Mercer 19422 View Dr

West Linn, OR 97068-1336

21E14DD06500

Donald Bailey 6330 Haverhill Ct

West Linn, OR 97068-4900

21E14DD07000

Jody & Chrstina Forlenza

3315 Walling Way

West Linn, OR 97068-1539

21E14DD07300

Richard & Victoria Hunt 18655 Rose Way

West Linn, OR 97068-1545

21E14DD07600

Melissa Dugan 3262 Fairview Way

West Linn, OR 97068-1519

21E14DD07800

Shane & Michelle Winder

18718 Rose Way

West Linn, OR 97068-1534

21E14DD08400

Holly Shannon

3344 Fairview Way

West Linn, OR 97068-1551

21E23AA00200

Lisa Stanton

39710 Wendling Rd

Marcola, OR 97454-9105

21E23AA01100

Marilyn Frankel & Carol Pulvermacher

3364 Walling Way

West Linn, OR 97068-1555

21E23AA01200 Durward & Yvonne Bennett 3320 Walling Way West Linn, OR 97068-1555

21E23AA01700 Douglas Seely 1780 SW Advance West Linn, OR 97068-9677

21E23AA02000 Yandy Roman 18976 Walling Cir West Linn, OR 97068-1714

21E23AA02300 Jason & Hannah Harper 1309 N Maple St Canby, OR 97013-2324

21E23AB00100 Wei An 19412 View Dr West Linn, OR 97068-1336 21E23AA01300 William Schroeter PO Box 256 Marylhurst, OR 97036

21E23AA01800 Gerardo & Gail Bezmertney 19042 Walling Cir West Linn, OR 97068-1716

21E23AA02100 Daniela Lucescu & Ryan Pacurar 18950 Walling Cir West Linn, OR 97068-1714

21E23AA02400 Douglas Pullin 18891 Walling Cir West Linn, OR 97068-1717 21E23AA01400 West Linn Investors LLC 6830 SW Windemere Loop Portland, OR 97225-6161

21E23AA01801 Wen Zhao & Sui Yin 85 Laurel St Lake Oswego, OR 97034-4938

21E23AA02200 Tzer Cheng & Chien Ju 18902 Walling Cir West Linn, OR 97068-1714

21E23AA02500 Mark & Tracie Krellwitz 18909 Walling Cir West Linn, OR 97068-1706

























Decibel readings taken at 50'-0" from the car wash exit: 72 db to 80 db (Including background noise from Burnside) SHOWN Decibel readings taken at 42 feet from the car wash entry on the north side: 72 db

These readings put the noise levels within the "medium" noise range, the equivalent of busy street traffic, which is a background noise source in both the Burnside location and the Willamette Drive location. Note that the distance from the entrance at the Willamette Drive conditions is an additional 50'-0" minimally, with an 8'-0" min. high CMU buffering wall on the east side, and Willamette Drive, and a commercial propoerty on the west side.

The business operations fall between 8:00 AM and 8:00 PM, which is within noise tolerance levels of the West Linn Noise Code.



tva architects inc. 1750 sw yamhill st. suite 150 portland, oregon 97205 phone: 503 220 0668 www.tvaarchitects.com



18850 Willamette Drive

- Property ID: 21E14DD-6900
- City: West[®]Linn
- County: Clackamas
- Neighborhood: Robinwood
- Area of the site 1.29 Acres (56,378 sf)
- Area of proposed building: 3,190 sf Area of accessory buildings: 280 sf
- Total leased area = 3470 sf
- Maximum Allowable Parking Spaces = 17
- Proposed Parking Spaces = 17
- Proposed Use: A drive-through car wash with supplemental vacuum cleaning stations. Auxiliary ticket booth and pumphouse enclosures provided.
- Occupancy Group B
- Construction Type VB
- Building Height: 17'-8"
- No sprinklers
- There are no wetlands, riparian, or environmentally sensitive areas on site. There are no steep slopes on site.
- Street Trees are shown but not identified on the City of West Linn Tree Inventory Map. Species not indicated.
- Water suply, storm drain, and sanitary sewer information is per the West Linn City Maps site, exact locations to be provided by
- Overhead Power is on the other side of Willamette Drive

EXISTING BUILDING

- McDonald's : Archland Property LLC c/o McDonald's Corp.
- 3948 sf
- 14.12' height
- Surface Elevation 180.3637'
- Maximum parking per 1000 sf for Other Commercial Uses: 5
- 3470 sf/5 sf per stall = 17.35 spaces, 17 provided

A0.01

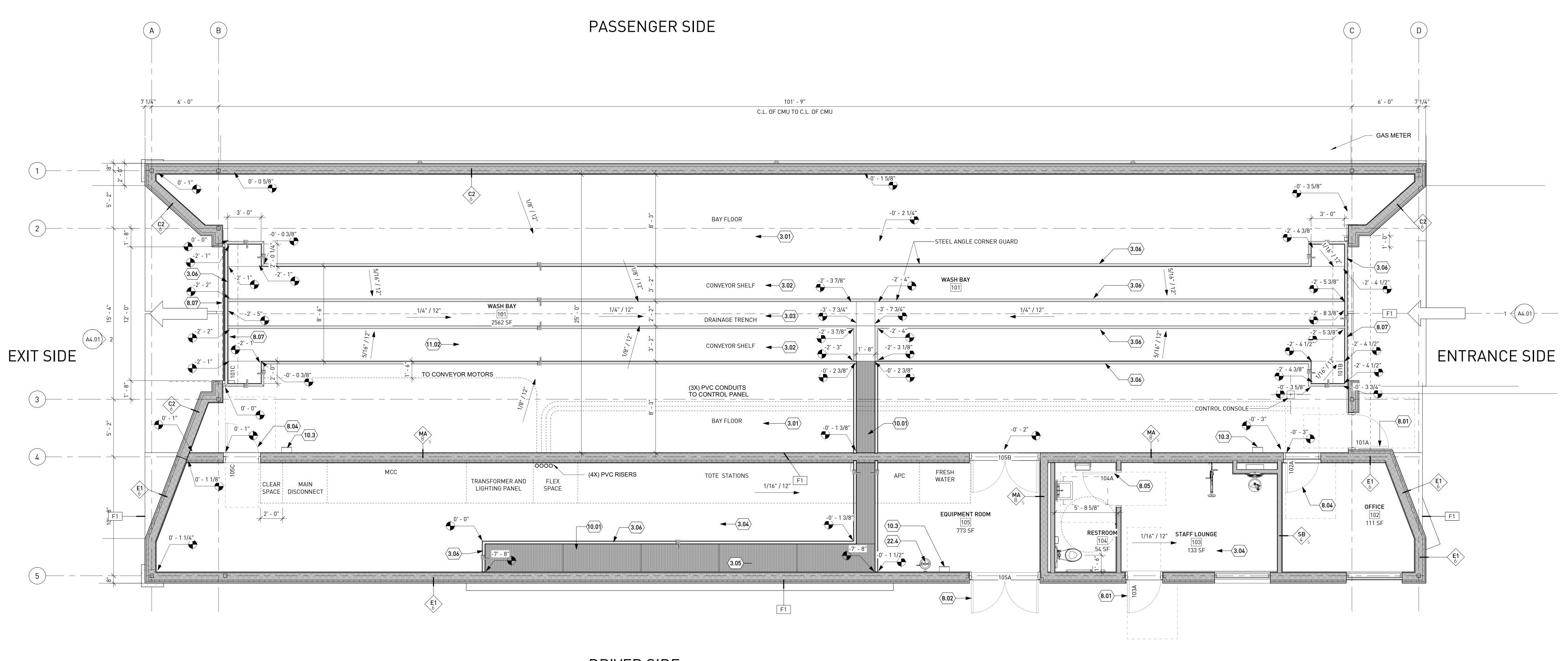
CONDITIONAL

USE PERMIT

OVERALL SITE

PLAN

△ Revisions



DRIVER SIDE

1 FLOOR PLAN

GENERAL NOTES

1. SITE INFORMATION SHOWN FOR REFERENCE ONLY. SEE SITE PLANS.

2. SEE **G** SERIES SHEETS FOR CODE COMPLIANCE

INFORMATION. 3. ALL DIMENSIONS ARE TO FACE OF FINISH, CENTERLINE OF

COLUMN, OR GRID LINE, UNO, EXTERIOR DIMENSIONS ARE TO FACE OF FINISH; DIMENSIONS INDICATED AS "CLR MIN" ARE TO FACE OF FINISH 4. ALL DOOR OPENINGS PERPENDICULAR TO A WALL ARE 5"

THE WALL UNO. 5. SEE G1.XX FOR TYPICAL WALL TYPES, OTHER ASSEMBLY TYPES, STEEL COLUMN FIRE PROTECTION, UNO. 6. SEE EXTERIOR ELEVATIONS FOR WINDOW TYPES NOT

SHOWN HERE. 7. DOOR CLEARANCES ARE SHOWN DASHED AND ARE FOR

REFERENCE ONLY. 8. PROVIDE SOLID FRT BLOCKING AT ALL GRAB BARS AND

WHERE INDICATED ON INTERIOR ELEVATIONS. 9. THE WASH BAY SLAB AND CONVEYOR SHELF SLAB RUN PARALLEL TO EACH OTHER, 25" APART VERTICALLY. SEE STRUCTURAL FOR POUR SEQUENCE.

10. THE WASH BAY SLAB AND OFFICE SLAB RUN PARALLEL TO AND FLUSH WITH EACH OTHER. THE WASH BAY SLAB IS 8" THICK, AND THE OFFICE BAY SLAB IS 4" THICK. SEE STRUCTURAL. THE WASH BAY SLAB ALSO HAS A CROSS SLOPE THAT DRAINS TO THE CONVEYOR/DRAINAGE TRENCH, WHILE THE OFFICE SLAB DOES NOT HAVE A CROSS SLOPE. 11. ELECTRICAL AND PLUMBING CONDUITS ARE SHOWN FOR REFERENCE ONLY. SEE ELECTRICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS AND ADDITIONAL INFORMATION.

12. SINCE SITE CONDITIONS WILL VARY, THE DIRECTIONAL INFORMATION IS DESCRIBED BY FUNCTION: ENTRANCE, EXIT, DRIVER'S SIDE, AND PASSENGER'S SIDE. CARDINAL DIRECTIONS WILL BE REFERENCED ON SITE PLANS AND CIVIL DOCUMENTS.

13. CAR WASH EQUIPMENT IS SHOWN FOR REFERENCE ONLY EXACT COMPONENTS TO BE OWNER FURNISHED AND

KEYNOTES

NOTE: ONLY KEYNOTES APPROPRIATE TO THIS SHEET ARE SHOWN IN THIS KEYNOTE LEGEND. GC TO VERIFY ANY DISCREPANCY IN KEYNOTING.

8" POURED-IN-PLACE CONCRETE WASH BAY SLAB. SEE STRUCTURAL FOR REINFORCING. HARD TROWEL FINISH. SLOPE 1" OVER 30'-0" FROM ENTRANCE TO EXIT. (100'-0"). COUNTER-SLOPE TO DRAIN TO CONVEYOR SHELF. PROVIDE MASTERPOLYHEED 980 MID-RANGE WATER-REDUCING CONCRETE ADMIXTURE AND FINISH WITH W.R. MEADOWS SEAL CURE-25 CONCRETE CURING AND SEALING COMPOUND.

3.02 8" POURED-IN-PLACE CONCRETE CONVEYOR SHELF SLAB. SEE STRUCTURAL FOR REINFORCING. HARD TROWEL FINISH. SLOPE IS PARALLEL TO WASH BAY SLAB. COUNTER SLOPE TO DRAINAGE TRENCH. PROVIDE MASTERPOLYHEED 980 MID-RANGE WATER-REDUCING CONCRETE ADMIXTURE. FINISH WITH W.R. MEADOWS SEAL CURE-25 CONCRETE CURING AND SEALING COMPOUND. COORDINATE INSTALLATION OF CONVEYOR SYSTEM WITH OWNER. PROVIDE STEEL ANGLES FOR OWNER PROVIDED FIBERGLASS TRENCH GRATING.

6" POURED-IN-PLACE CONCRETE DRAINAGE TRENCH SLAB. SEE STRUCTURAL FOR REINFORCING. HARD TROWEL FINISH SMOOTH. PROVIDE MASTERPOLYHEED 980 WATER-REDUCING ADMIXTURE. FINISH WITH W.R. MEADOWS SEAL CURE-25 CONCRETE CURING AND SEALING COMPOUND. SLOPE TOWARDS CROSS-TRENCH, SEE PLAN FOR SLOPE. COORDINATE APPLICATION OF OWNER PROVIDED TRENCH COVER PLATING.

3.04 4" POURED-IN-PLACE CONCRETE OFFICE SLAB. SEE STRUCTURAL FOR REINFORCING. SLOPE PARALLEL TO MATCH BAY FLOOR SLAB. NO CROSS SLOPE. HARD TROWEL SMOOTH FINISH. PROVIDE MASTERPOLYHEED 980 MID-RANGE WATER-REDUCING CONCRETE ADMIXTURE. FINISH WITH W.R. MEADOWS SEAL CURE-25 CONCRETE CURING AND SEALING COMPOUND.

3.05 FILTRATION PIT: 6" POURED-IN-PLACE CONCRETE SLAB ON GRADE, WITH 6" THICK CONCRETE BAFFLE PARTITIONS STAGGERED AS INDICATED ON DRAWINGS. HARD TROWEL FINISH. PROVIDE MASTERPOLYHEED 980 MID-RANGE WATER-REDUCING CONCRETE ADMIXTURE. FINISH WITH W.R. MEADOWS SEAL CURE-25 CONCRETE CURING AND SEALING COMPOUND.

3.06 L3X3X1/4" EMBEDDED ANGLE WITH 3/8" DIA. X 3" SHEAR ANCHORS @ 16" O.C.

8.01 GLAZED ALUMINUM STOREFRONT ENTRY 3'-0" X 8'-0": KAWNEER 350T STANDARD MEDIUM THERMAL SWING DOOR ENTRANCE. 3 1/2" ALUMINUM STILES AND TOP RAIL, 6 1/2" BOTTOM RAIL. GUARDIAN SNX 62/27 LOW-E TEMPERED GLASS LITES, U .28 MAX, SHGC .26 MAX. DOOR HARDWARE: BUTT HINGES (4EA): IVES 5BB1HW 4.5 X 4.5 NRP 630 BRUSHED STAINLESS FINISH, EXIT DEVICE: FALCON F-25-R-L-NL-LAT RIM DEVICE, CLOSER: LCN 4020 CUSH SURFACE MOUNTED CLOSER. THRESHOLD: PEMKO 171 SERIES COMMERCIAL FLAT THRESHOLD 5" WIDE. GASKET: ZERO 488SBK PSA. DOOR SWEEP ZERO 8198AA RAIN DRIP WITH NYLON BRUSH.

8.02 GLAZED ALUMINUM PAIRED STOREFRONT ENTRY 6'-0" X 8'-0": KAWNEER 350T STANDARD MEDIUM THERMAL SWING DOOR ENTRANCE. 3 1/2" ALUMINUM STILES AND TOP RAIL, 6 1/2" BOTTOM RAIL. GUARDIAN SNX 62/27 LOW-E TEMPERED GLASS LITES, U .28 MAX, SHGC .26 MAX. DOOR HARDWARE: BUTT HINGES (8EA): IVES 5BB1HW 4.5 X 4.5 NRP 630 BRUSHED STAINLESS FINISH, EXIT DEVICE (2EA): FALCON F-25-C-L-NL-LAT CONCEALED VERTICAL ROD DEVICE. CLOSER (2EA): LCN 4020 CUSH SURFACE MOUNTED CLOSER. THRESHOLD: PEMKO 171 SERIES COMMERCIAL FLAT THRESHOLD 5" WIDE. GASKET: ZERO 488SBK PSA. DOOR SWEEP ZERO

8198AA RAIN DRIP WITH NYLON BRUSH.

8.04 HOLLOW METAL OFFICE DOOR WITH HOLLOW METAL FRAME 3'-0" X 8'-0", PAINT WHITE. HARDWARE: BUTT HINGES (4EA): IVES 5BB1HW 4.5 X 4.5 NRP 630 BRUSHED STAINLESS FINISH, OFFICE LOCKSET: FALCON T-521-CP6-LAT. CLOSER: LCN 4110 SURFACE MOUNT. GASKET: ZERO 488SBK PSA.

8.05 HOLLOW METAL RESTROOM DOOR IN HOLLOW METAL FRAME 3'-0" X 8'-0", PAINT WHITE. HARDWARE: BUTT HINGES (4EA): IVES 5BB1HW 4.5 X 4.5 NRP 630 BRUSHED STAINLESS FINISH, BATHROOM PRIVACY LOCKSET WITH OCCUPANCY INDICATOR: FALCON H2171-610-LAT. CLOSER: LCN 4020 SURFACE MOUNT (PUSH SIDE)

8.07 OVERHEAD COILING DOOR: COOKSON MODEL ESD10 MOTORIZED ROLLING SERVICE DOOR. 20 GAUGE PAINTED GALVANIZED STEEL, PAINT WHITE. 12'-0" WIDE X 9'-0"

10.01 OWNER FURNISHED 1 1/2" THICK FIBERGLASS TRENCH GRATE. SET ON L2X2X1/8" CONTINUOUS STEEL ANGLES. 10.3 FIRE EXTINGUISHER AND FEC: FIRE EXTINGUISHER: POTTER ROEMER 3010 (OR FIRE MARSHAL APPROVED ALTERNATE) MULTIPURPOSE DRY-CHEMICAL TIYPE IN STEEL CONTAINER: UL RATED 4A:60BC, 10 LB NOMINCAL CPACITY WITH MONAMMONIUM PHOSPHATE BASED DRY CHEMICAL IN ENAMELED STEEL CONTAINER. CABINET:

11.02 CAR WASH EQUIPMENT PROVIDED BY OWNER, SHOWN FOR REFERENCE ONLY. FINAL LOCATION OF EQUIPMENT TO BE DETERMINED BY OWNER.

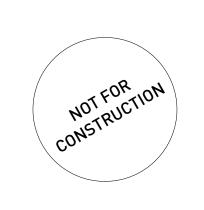
POTTER ROEMER MODEL 7024 SURFACE MOUNTED GALVANNEALED STEEL WITH RECOATABLE WHITE

POLYESTER FINISH. ROLLED RADIUS WITH GLASS PANEL

22.4 EYE WASH STATION: BRADLEY MODEL S19224BPT HALO EYEWASH WITH STAINLESSS STEEL BOWL, TAILPIECE & P-TRAP. COMPLIES WITH ANSI/ISEA STANDARD Z358.1. BARRIER FREE DESIGN. MINIMUM FLOW .4 GPM AT 30

PSI.

tva architects inc. 1750 sw yamhill st. suite 150 portland, oregon 97205 phone: 503 220 0668 www.tvaarchitects.com



18850

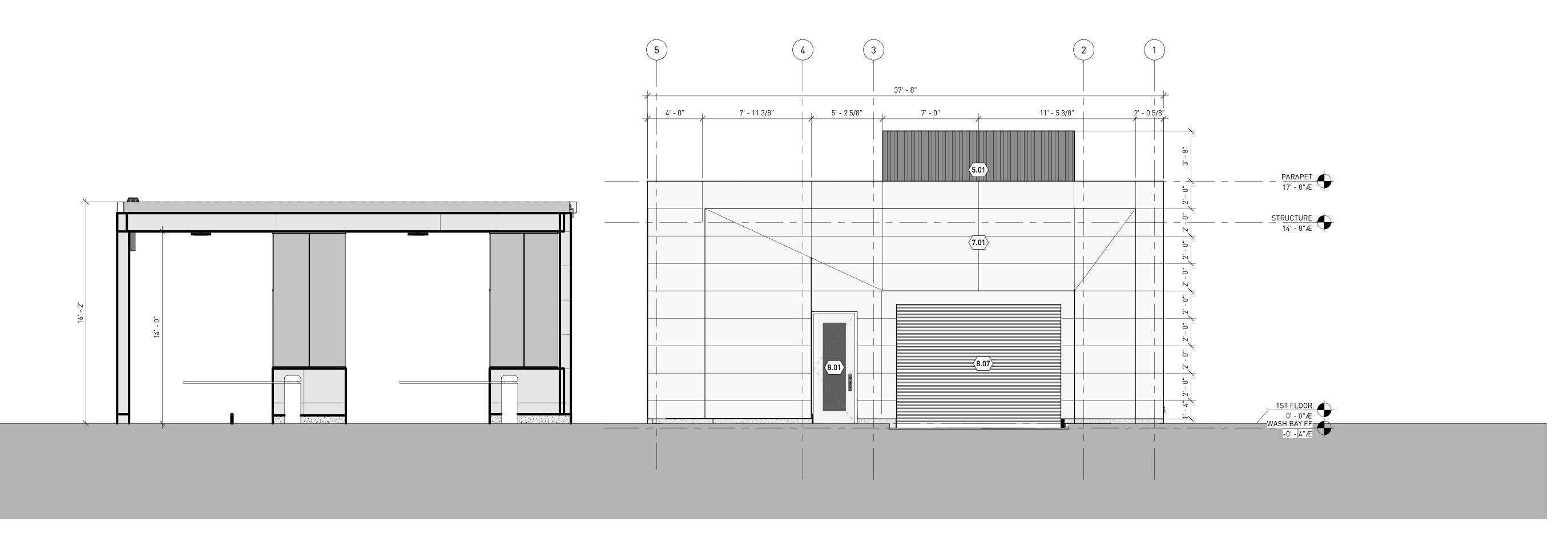
▲ Revisions

CONDITIONAL **USE PERMIT**

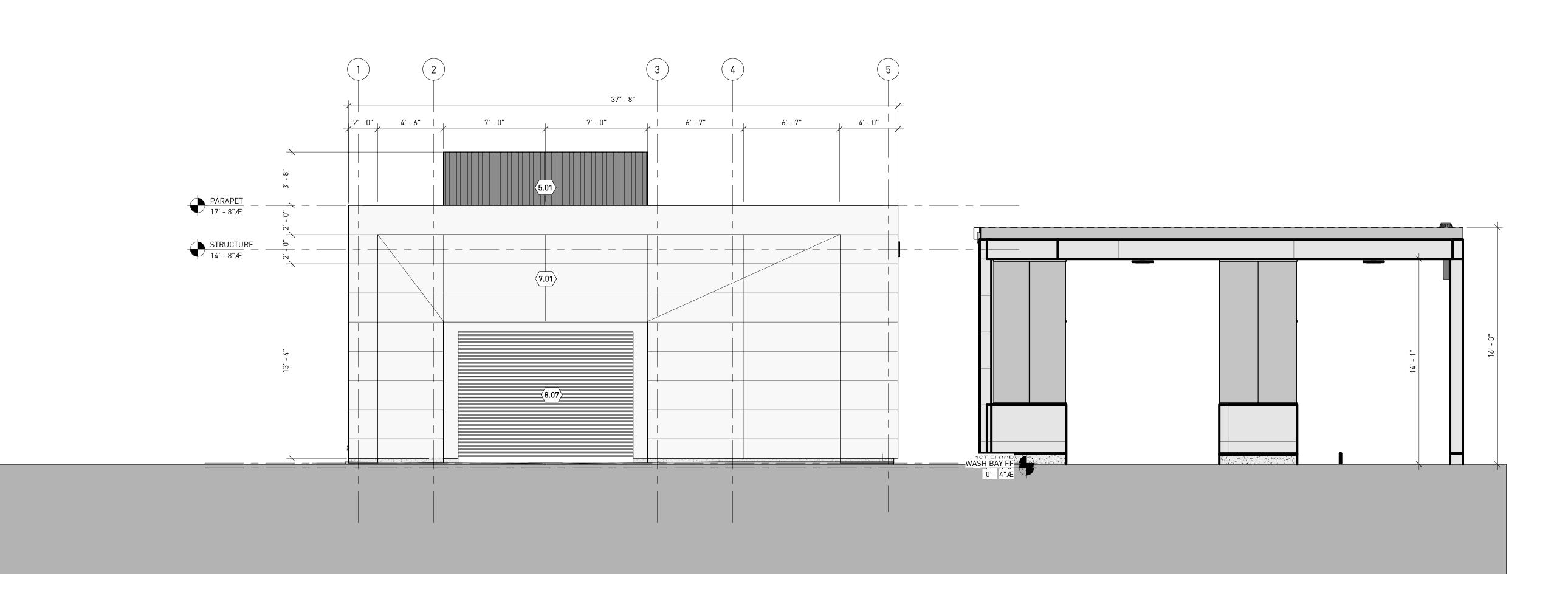
FLOOR PLAN

LEVEL 01

A1.00



1 ENTRANCE ELEVATION



2 EXIT ELEVATION

1/4" = 1'-0"

GENERAL NOTES

- PAINT ALL NON-NOTED MISCELLANEOUS ITEMS TO MATCH
 ADJACENT REFERENCE FINISH COLOR UNO.

 LOUVER COLOR TO BE COORDINATED (SELECTED WITH
- LOUVER COLOR TO BE COORDINATED / SELECTED WITH SUBMITTALS.
- SUBMITTALS.

 3. SEE FLOOR PLAN FOR DOOR AND WINDOW TAGS, TYP.
- 4. WINDOW TYPES NOT SHOWN ON FLOOR PLANS ARE SHOWN ON THESE ELEVATIONS.5. SEE WALL SECTIONS FOR ADDITIONAL ELEVATED AREAS.
 - EYNOTES SHOWN THUS

SHOWN IN THIS KEYNOTE LEGEND. GC TO VERIFY ANY

KEYNOTESSHOWN THUS

NOTE: ONLY KEYNOTES APPROPRIATE TO THIS SHEET ARE

5.01 HSS 4X4 ROOF SCREEN FRAME, SEE STRUCTURAL.
RIBBED METAL PANEL CLADDING, METAL SALES T10-A.

7.01 SMOOTH METAL PANEL SMP-1, COMPOSITE METAL
PANEL, ALPOLIC, ALUCOBOND, REYNOBOND OR
APPROVED. .020 INCH THICK ALUMINUM SHEET WITH
ORGANIC COATING FINISH WITH A LOW-DENSITY

VERTICAL AND HORIZONTAL JOINTS.

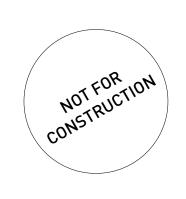
8.01 GLAZED ALUMINUM STOREFRONT ENTRY 3'-0" X 8'-0":
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RAIL, 6 1/2" BOTTOM RAIL. GUARDIAN SNX 62/27 LOW-E
TEMPERED GLASS LITES, U .28 MAX, SHGC .26 MAX.
DOOR HARDWARE: BUTT HINGES (4EA): IVES 5BB1HW 4.5
X 4.5 NRP 630 BRUSHED STAINLESS FINISH, EXIT DEVICE:
FALCON F-25-R-L-NL-LAT RIM DEVICE, CLOSER: LCN
4020 CUSH SURFACE MOUNTED CLOSER. THRESHOLD:
PEMKO 171 SERIES COMMERCIAL FLAT THRESHOLD 5"
WIDE. GASKET: ZERO 488SBK PSA. DOOR SWEEP ZERO
8198AA RAIN DRIP WITH NYLON BRUSH.

POLYEHTYLENE CORE. COLOR: WHITE. ROUT AND RETURN FABRICATION FOR 1" NOMINAL PANEL DEPTH. PROVIDE BACKER ROD AND SILICONE SEALANT FOR 1/2"

8.07 OVERHEAD COILING DOOR: COOKSON MODEL ESD10 MOTORIZED ROLLING SERVICE DOOR. 20 GAUGE PAINTED GALVANIZED STEEL, PAINT WHITE. 12'-0" WIDE X 9'-0" HIGH.

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MOLY CON 97068

CONDITIONAL USE PERMIT

EXTERIOR ELEVATIONS

Project #

A4.01

: 7.2

GENERAL NOTES

- 1. PAINT ALL NON-NOTED MISCELLANEOUS ITEMS TO MATCH ADJACENT REFERENCE FINISH COLOR UNO.
 2. LOUVER COLOR TO BE COORDINATED / SELECTED WITH
- SUBMITTALS. 3. SEE FLOOR PLAN FOR DOOR AND WINDOW TAGS, TYP.

4. WINDOW TYPES NOT SHOWN ON FLOOR PLANS ARE SHOWN

- ON THESE ELEVATIONS. 5. SEE EXTERIOR COMPOSITE SHEETS FOR EXTERIOR FINISHES
- AND GLAZING. 6. SEE WALL SECTIONS FOR ADDITIONAL ELEVATED AREAS.
- 7. ALIGN CENTERLINE OF PANEL JOINTS ON SOFFITS AND PROJECTING FRAME ELEMENTS WITH CENTERLINE OF

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NOTE: ONLY KEYNOTES APPROPRIATE TO THIS SHEET ARE SHOWN IN THIS KEYNOTE LEGEND. GC TO VERIFY ANY

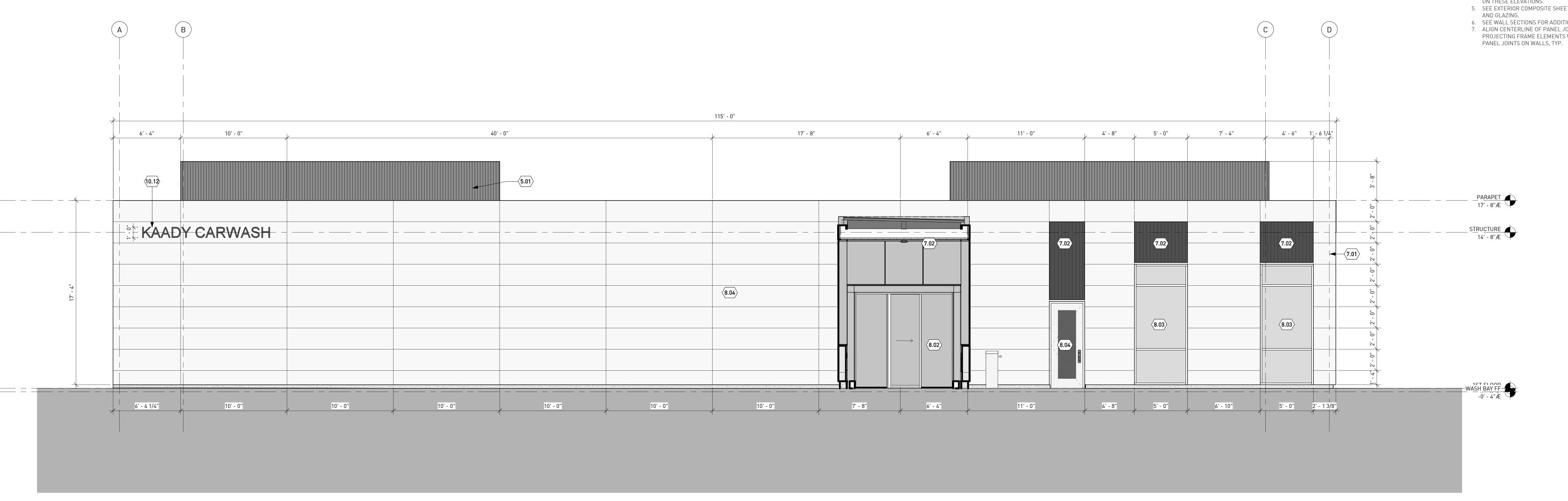
8'-0": KAWNEER 350T STANDARD MEDIUM THERMAL SWING DOOR ENTRANCE. 3 1/2" ALUMINUM STILES AND TOP RAIL, 6 1/2" BOTTOM RAIL. GUARDIAN SNX 62/27 LOW-E TEMPERED GLASS LITES, U .28 MAX, SHGC .26 MAX. DOOR HARDWARE: BUTT HINGES (8EA): IVES 5BB1HW 4.5 X 4.5 NRP 630 BRUSHED STAINLESS FINISH, EXIT DEVICE (2EA): FALCON F-25-C-L-NL-LAT CONCEALED VERTICAL ROD DEVICE. CLOSER (2EA): LCN 4020 CUSH SURFACE MOUNTED CLOSER. THRESHOLD: PEMKO 171 SERIES COMMERCIAL FLAT THRESHOLD 5" WIDE. GASKET: ZERO 488SBK PSA. DOOR SWEEP ZERO 8198AA RAIN DRIP WITH NYLON BRUSH.

KEYNOTES

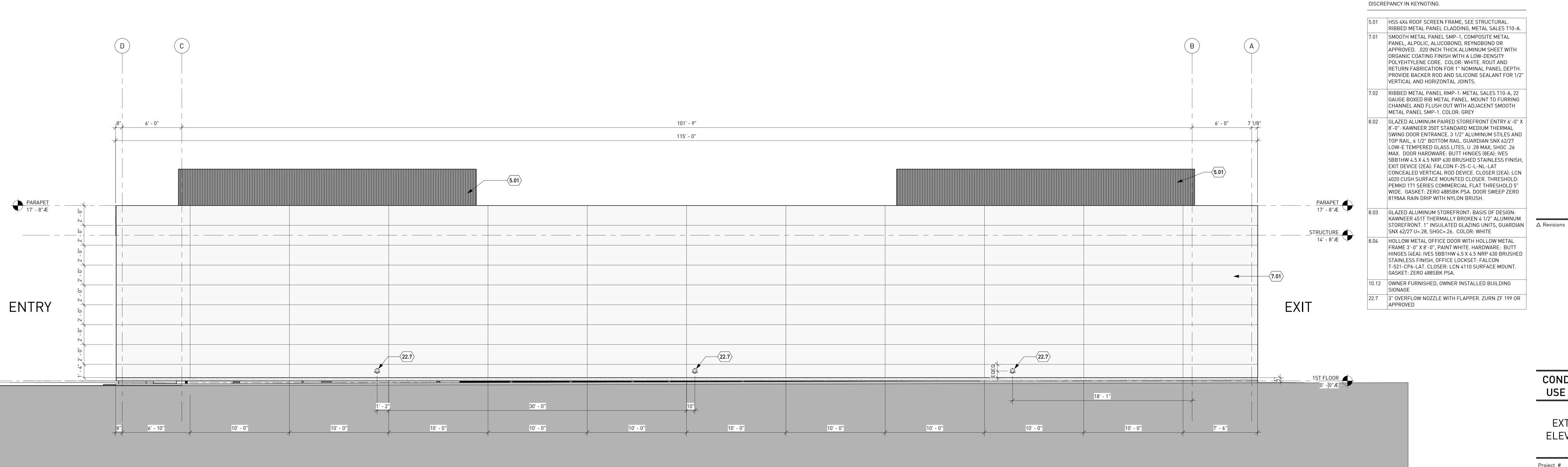
CONDITIONAL **USE PERMIT**

> EXTERIOR ELEVATIONS

A4.02



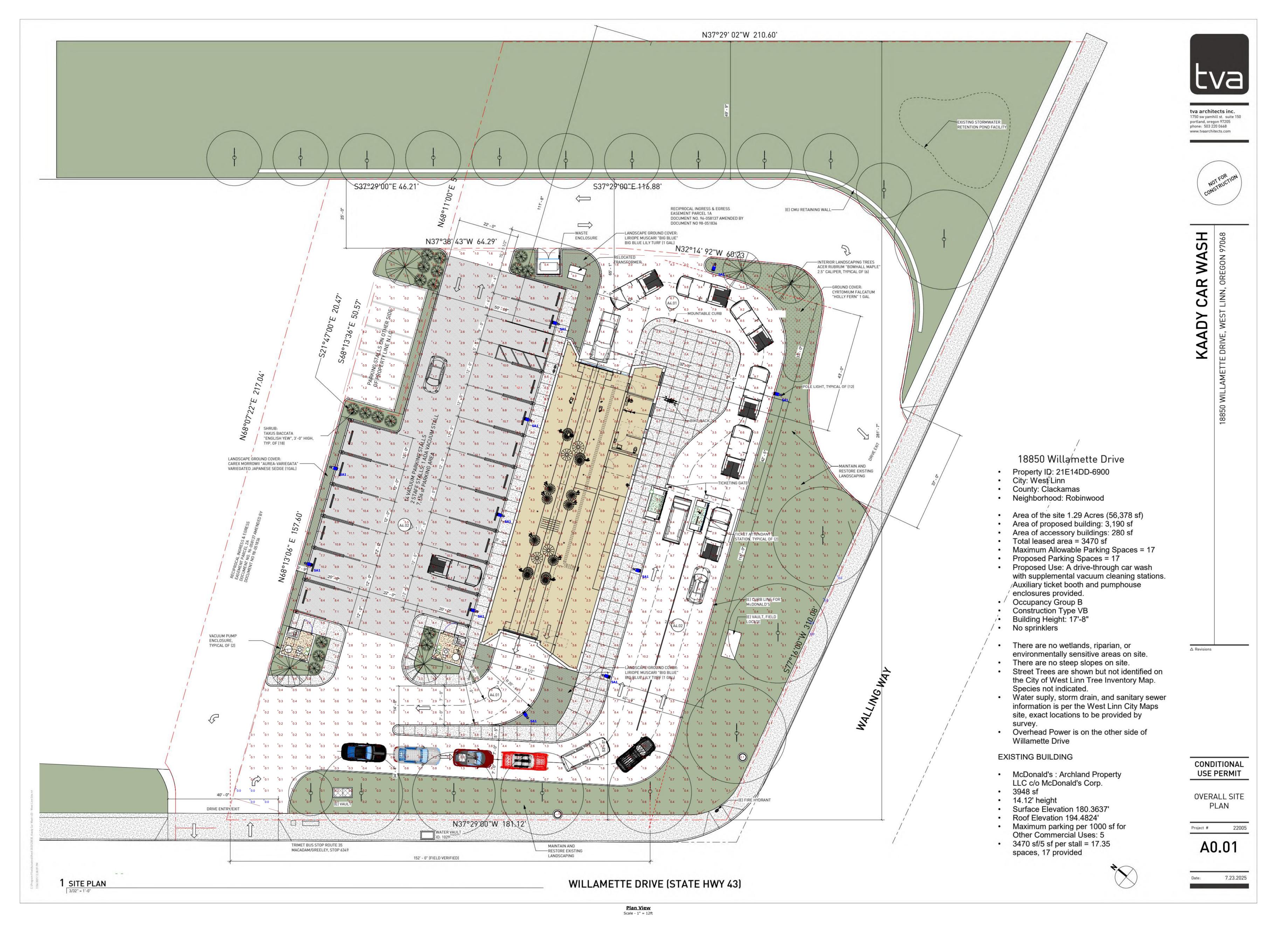
1 DRIVER'S SIDE ELEVATION (SOUTH)

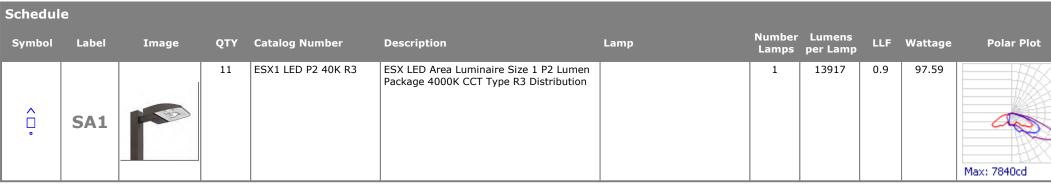


2 PASSENGER'S SIDE ELEVATION (NORTH)

1/4" = 1'-0"





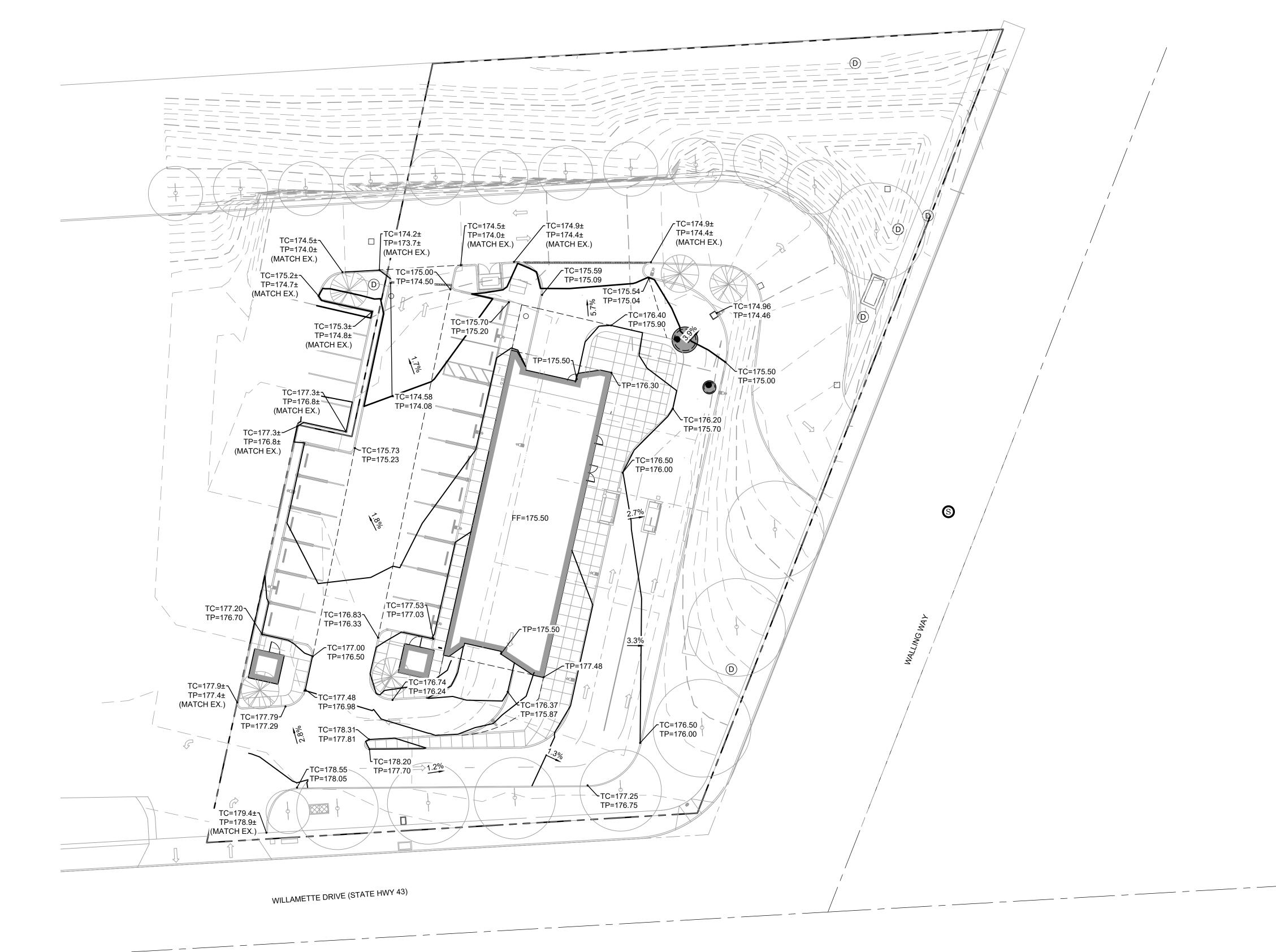


Designer

Date
07/25/2025
Scale
Not to Scale
Drawing No.

Summary

1 of 1



SHEET NOTES

 SLOPES PROVIDED ON SLOPE ARROW ARE FOR REFERENCE ONLY.

- 2. LANDINGS ON ACCESSIBLE ROUTES SHALL NOT EXCEED 1.5% IN ANY DIRECTION.
- 3. ALL ACCESSIBLE ROUTES SHALL COMPLY WITH CURRENT ADA ACCESSIBILITY GUIDELINES FOR BUILDING AND FACILITIES (ADAAG).
- 4. ALL WALKWAYS FROM ACCESSIBLE UNITS ARE DESIGNED TO NOT REQUIRE HANDRAILS. THEREFORE, RAMPS WITH SLOPES STEEPER THAN 5.0% AND LESS THAN 8.33% SHALL NOT EXCEED 0.5' RISE OR 6.0' LENGTH.
- 5. TOP OF CONCRETE OUTSIDE DOOR = FF ELEV. MINUS 0.02' SLOPE LANDING 1.5% AWAY FROM BLDG.

KEY NOTES

1 XXXXXXXXXX

GRADING LABEL LEGEND

<u>CALLOUT</u> <u>DESCRIPTION</u>

GRADING SLOPE AND DIRECTION (DOWNHILL)

SPOT ELEVATION

DESCRIPTION LISTED BELOW.

NO DESCRIPTION MEANS TP

OR TG

NO DESCRIPTION MEANS TO OR TG

XX.XX XX

BOS BOTTOM OF SWALE
BOW BACK OF WALK
BS BOTTOM OF STEP
BW BOTTOM OF WALL
EG EXISTING GRADE
FF FINISHED FLOOR
FL FLOW LINE
G GUTTER
HP HIGH POINT
LP LOW POINT
RIM RIM OF STRUCTURE
TC TOP OF CURB
TG TOP OF GROUND
TP TOP OF PAVEMENT
TS TOP OF STEP
TW TOP WALL

SHEET LEGEND





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1735 Gwsyamhidhshilsuite 150suite 150 pointaind, diregone g7205 phraine 5503 520306220 ann armitieiteademan



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RED PROFACE

OREGON

RENEWS: 12/31/

MEST LINN, OREGON

Revisions

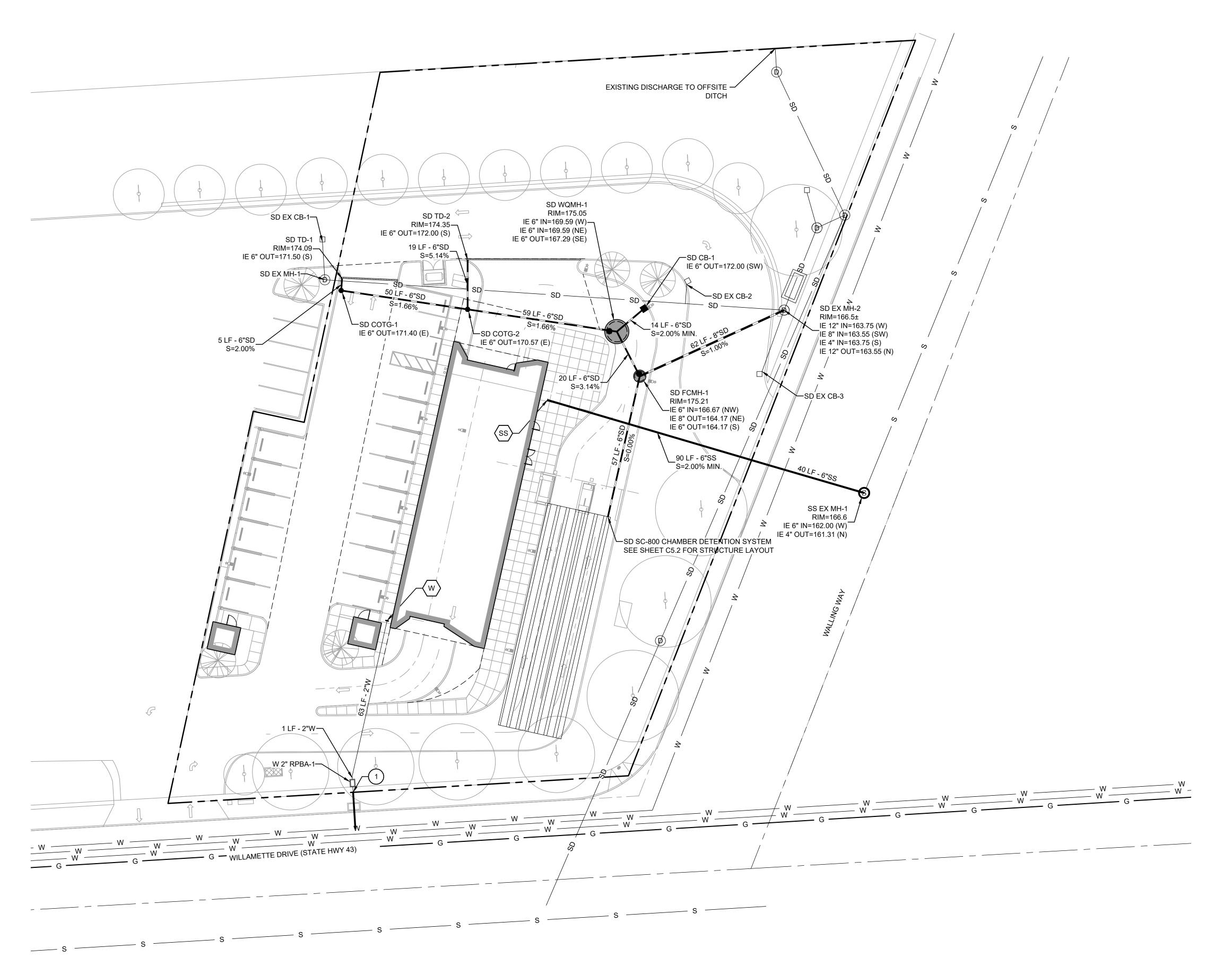
LAND-USE SET

GRADING PLAN

Project # **22005**

C3.0

Date: 7.9.2025



SHEET NOTES

 PIPE BEDDING AND BACKFILL FOR ALL UTILITIES SHALL BE DONE PER DETAIL X/C5.X.

- STRUCTURES LOCATIONS ARE BASED ON CENTER OF STRUCTURE.
- 3. INSTALL TRUST BLOCK ON FIRE AND WATER LINES PER DETAIL X & X/CX.X.

KEY NOTES

- 1 COORDINATE WATER SERVICE POINT OF CONNECTION TO EXISTING X" LATERAL WITH CITY OF WEST LINN.
- 2 FIELD VERIFY LOCATION AND IE OF EXISTING XX" XXXXX LATERAL PRIOR TO CONSTRUCTION.
- 3 IRRIGATION BACKFLOW ASSEMBLY VAULT, SEE LANDSCAPE PLANS.

UTILITY LABEL LEGEND

STRUCTURE LABEL

```
UTILITY TYPE (SD=STORM DRAINAGE, S=SANITARY SEWER, W=WATER, FP=FIRE PROTECTION)

STRUCTURE TYPE CALLOUT

ID NUMBER (WHERE APPLICABLE)

XX XX-XX

X+XX.X RT X.X'

RIM=

IE IN = XX.X

STRUCTURE INFO (WHERE APPLICABLE)
```

PIPE LABEL

IE OUT = XX.X

```
UTILITY LENGTH

UTILITY SIZE

UTILITY TYPE

XXLF - XX" XX

S=X.XX%

SLOPE (WHERE APPLICABLE)
```

STRUCTURE TYPE

SINUC	TURE TIPE	
CALLOUT	DESCRIPTION	DETAIL REF.
BEND	BEND, USE FITTING IF APPLICABLE	
BWV	BACKWATER VALVE	(xxxx
СВ	TRAPPED CATCH BASIN	\bigcirc
CO	CLEANOUT TO GRADE	
CONN	CONNECTION	
DW	DRYWELL	
FCMH	FLOW CONTROL MANHOLE	
FD	FOUNDATION DRAINAGE POINT OF	CONN.
FH	FIRE HYDRANT	
GV	GATE VALVE	
OF	OUTFALL	
OV	OVERFLOW INLET	
SDMH	48" DIA. STORM DRAIN MH	
TD	TRENCH DRAIN	
TEE	TEE CONNECTION	
WYE	WYE CONNECTION	

WATER QUALITY MANHOLE

SHEET LEGEND

- CONNECT TO WASTE LINE. SEE PLUMBING PLANS FOR CONTINUATION. SIZE AS NOTED.
- CONNECT TO STORM DRAIN/ROOF DRAIN. SEE PLUMBING PLANS FOR CONTINUATION. SIZE AND IE AS NOTED.
- CONNECT TO COLD WATER SYSTEM. SEE PLUMBING PLANS FOR CONTINUATION. SIZE AS NOTED.
- UTILITY CROSSING. PROVIDE 12" MIN. CLEARANCE, U.N.O.





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RED PROFACS

OREGON

RENEWS: 12/31/

WEST LINN, OREGON

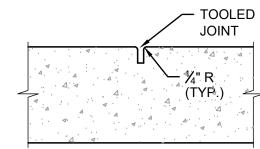
▲ Revisions

LAND-USE SET

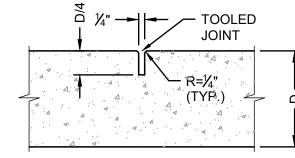
UTILITY PLAN

Project # **22005**

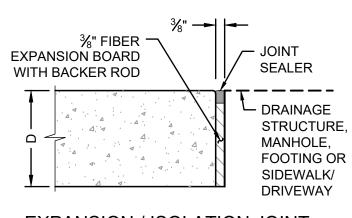
C4.0Date: 7.9.2025



SCORE JOINT



CONTRACTION JOINT



EXPANSION / ISOLATION JOINT	-

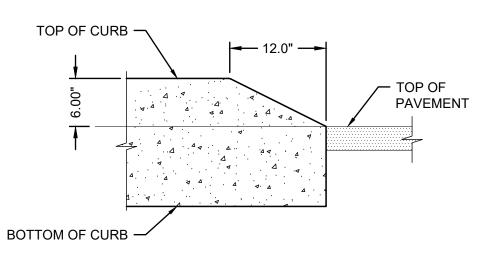
JOINT INTERVALS TABLE						
E,	TYPE	SPACING	OR AT			
	SCORE	5' TYP	LOCATIONS SHOWN ON PLANS			
	CONTRACTION	15' MAX	END OF RAMPS AND DRIVEWAYS			
	EXPANSION/ ISOLATION	200' *	POINTS OF TANGENCY AND AT ENDS OF EACH DRIVEWAY OR OTHER FIXED OBJECTS			

* MONOLITHIC CURB AND SIDEWALK SHALL BE 45' MAX

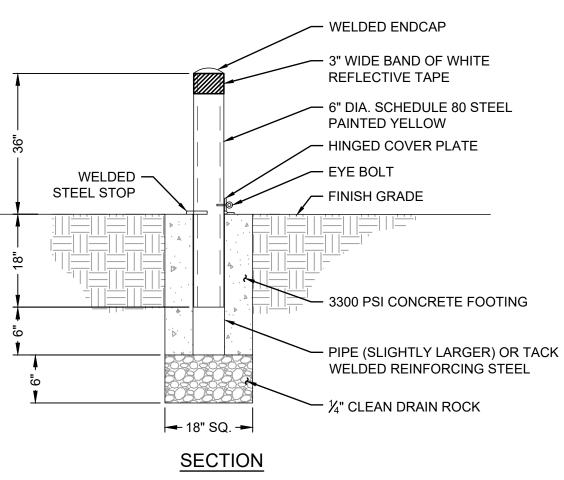
- CONTRACTION JOINTS MAY BE USED IN PLACE OF SCORE JOINTS.
- CONSTRUCTION COLD JOINTS MAY BE USED IN PLACE OF CONTRACTION JOINTS.
- PROVIDE MEDIUM BROOM FINISH WITH NO TOOL MARKS.

SIDEWALK JOINTS

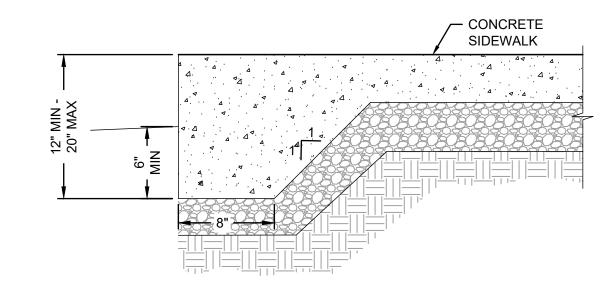
SCALE: NTS



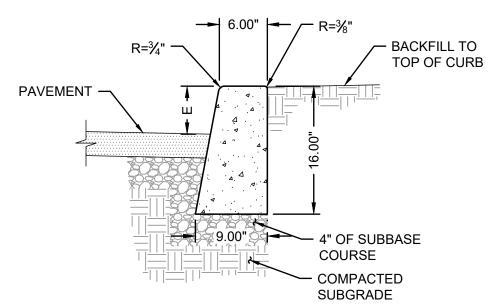




REMOVABLE PIPE BOLLARD SCALE: NTS



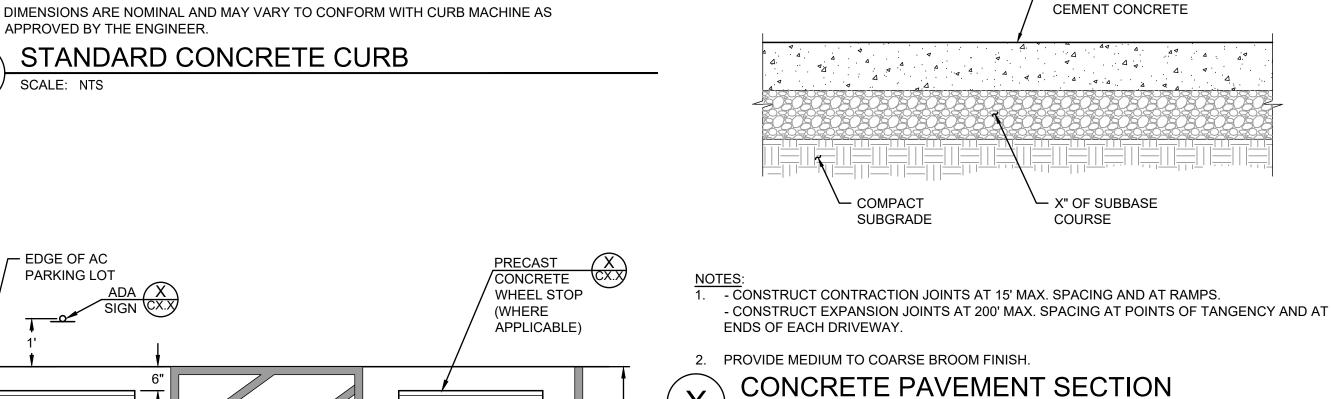


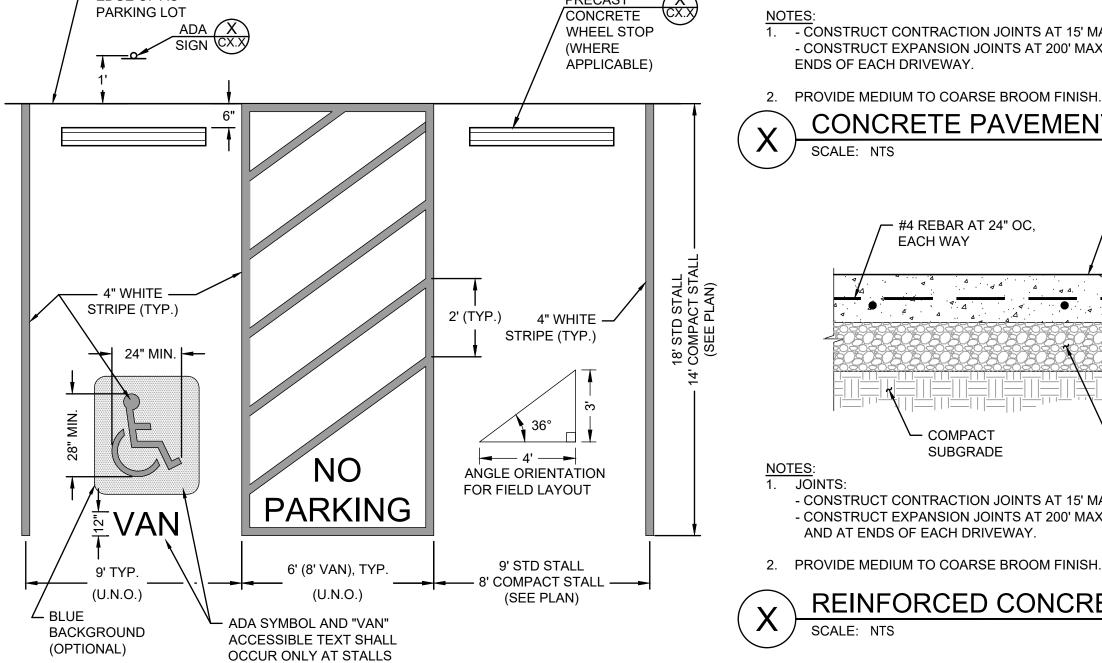


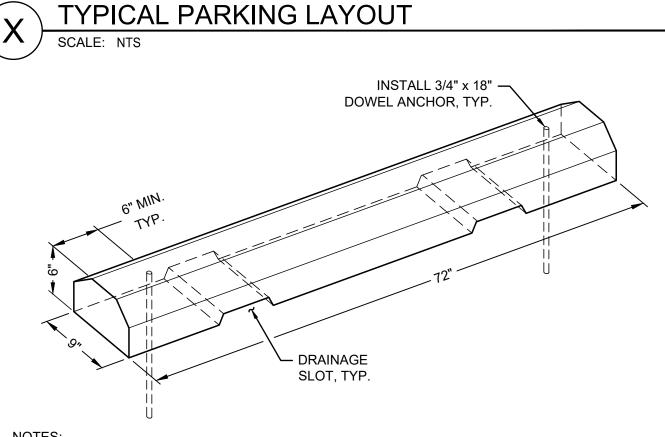
1. CURB EXPOSURE 'E' = 6", TYP. VARY AS SHOWN ON PLANS OR AS DIRECTED.

- 2. CONSTRUCT CONTRACTION JOINTS AT 15' MAX. SPACING AND AT RAMPS. CONSTRUCT EXPANSION JOINTS AT 200' MAX SPACING AT POINTS OF TANGENCY AND AT ENDS OF EACH DRIVEWAY.
- 3. TOPS OF ALL CURBS SHALL SLOPE TOWARD THE ROADWAY AT 2% UNLESS OTHERWISE SHOWN OR AS DIRECTED.
- 4. DIMENSIONS ARE NOMINAL AND MAY VARY TO CONFORM WITH CURB MACHINE AS







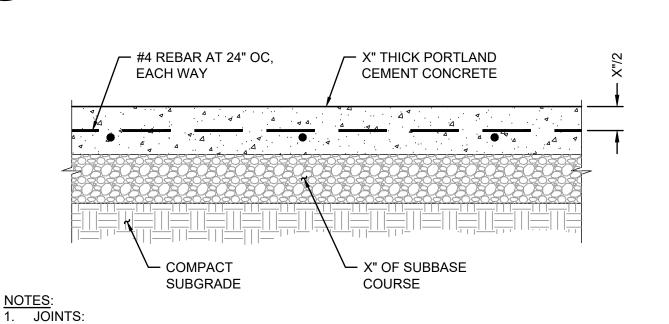


SHOWN ON PLANS

NOTES:

1. DIMENSIONS ARE NOMINAL AND MAY VARY TO CONFORM TO MANUFACTURER'S PRODUCTS APPROVED BY ENGINEER.





- CONSTRUCT EXPANSION JOINTS AT 200' MAX. SPACING AT POINTS OF TANGENCY AND AT ENDS OF EACH DRIVEWAY.

- AC SURFACE COURSE:

LEVEL X HMAC

COMPACTED

SUBGRADE

SCALE: NTS

SCALE: NTS

X" OF X" DENSE GRADED,

ASPHALT PAVEMENT SECTION

─ X" OF BASE

COURSE

- AC BASE COURSE:

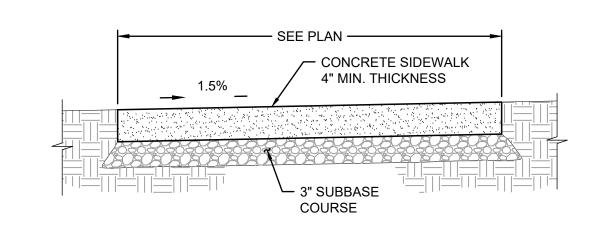
LEVEL X HMAC

— X" THICK PORTLAND

X" OF X" DENSE GRADED,

REINFORCED CONCRETE PAVEMENT SECTION SCALE: NTS

- CONSTRUCT CONTRACTION JOINTS AT 15' MAX. SPACING AND AT RAMPS.



CONSTRUCT CONTRACTION JOINTS AT 15' MAX. SPACING AND AT RAMPS. CONSTRUCT EXPANSION JOINTS AT 200' MAX SPACING, AT POINTS OF TANGENCY AND AT ENDS OF EACH DRIVEWAY, UNLESS NOTED OTHERWISE.





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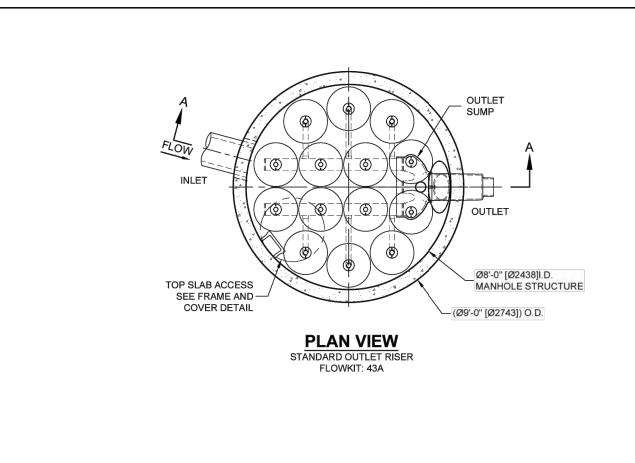
▲ Revisions

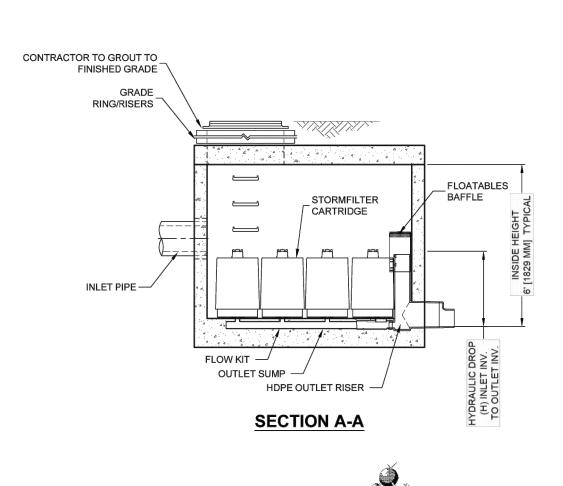
LAND-USE SET

DETAILS

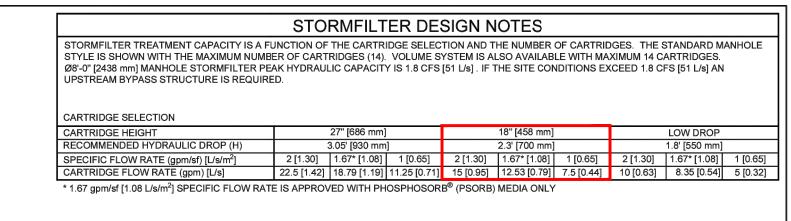
Project # 22005

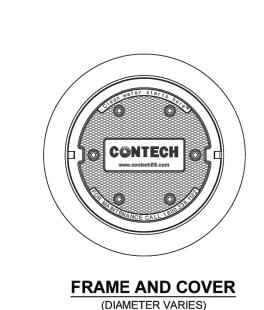
Date: **7.9.2025**





StormFilter®





SITE SPECIFIC DATA REQUIREMENTS							
STRUCTURE ID					*		
WATER QUALITY	FLOW RAT	E (cfs) [L/	s]		*		
PEAK FLOW RATI	E (cfs) [L/s]				*		
RETURN PERIOD	OF PEAK F	LOW (yrs	;)		*		
CARTRIDGE HEIC	SHT (SEE T.	ABLE AB	OVE)		*		
NUMBER OF CAR	TRIDGES F	REQUIRE)		*		
CARTRIDGE FLOY	W RATE				*		
MEDIA TYPE (PER	RLITE, ZPG	PSORB)			*		
PIPE DATA:	I.E.	MATE	RIAL	D	AMETER		
INLET PIPE #1	*	*			*		
INLET PIPE #2	*	*			*		
OUTLET PIPE	*	*			*		
RIM ELEVATION					*		
ANTI-FLOTATION	BALLAST	V	IDTH	Τ	HEIGHT		
			*		*		
NOTES/SPECIAL REQUIREMENTS:							
* PER ENGINEER	OF RECOR	PD.					

GENERAL NOTES

1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.

2. DIMENSIONS MARKED WITH () ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.

3. FOR SITE SPECIFIC DRAWINGS WITH DETAILED VAULT DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com 4. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS

5. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5' [1524 mm] AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO. 6. FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES [178 mm]. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS. 7. SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) [L/s] DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft)[m²].

8. STORMFILTER STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

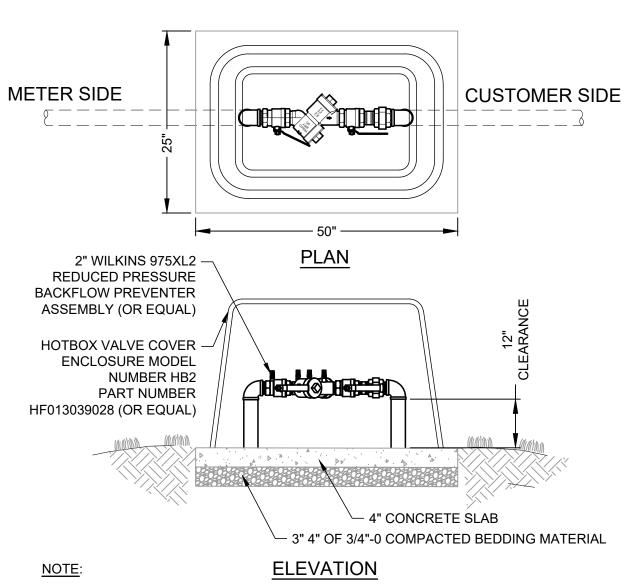
INSTALLATION NOTES

A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD. B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE. C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.

. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET PIPE(S). E. CONTRACTOR TO PROVIDE AND INSTALL CONNECTOR TO THE OUTLET RISER STUB. STORMFILTER EQUIPPED WITH A DUAL DIAMETER HDPE OUTLET STUB AND SAND COLLAR. IF OUTLET PIPE IS LARGER THAN 8 INCHES [200 mm], CONTRACTOR TO REMOVE THE 8 INCH [200 mm] OUTLET STUB AT MOLDED-IN CUT LINE. COUPLING BY FERNCO OR EQUAL AND PROVIDED BY CONTRACTOR. F. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

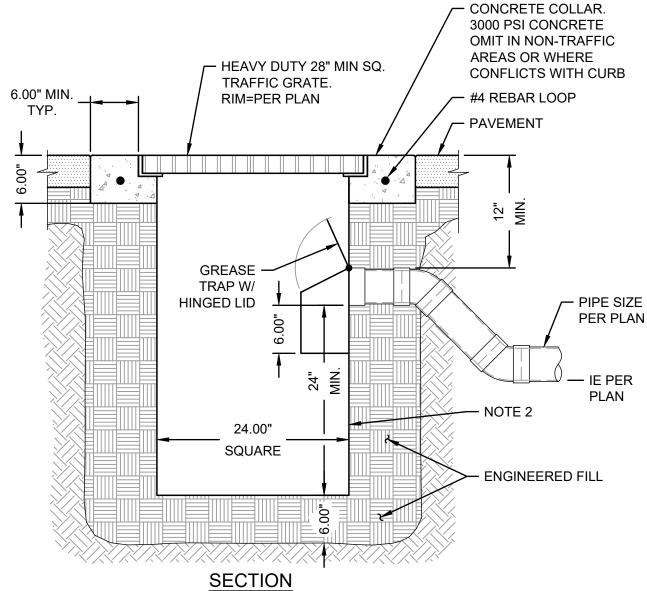
CNTECH www.contechES.com 025 Centre Pointe Dr., Suite 400, West Chester, OH 4506

SFMH96 STORMFILTER STANDARD DETAIL



- 1. HOTBOX ENCLOSURE SHALL BE INSULATED AND HEATED. COORDINATE WITH ELECTRICAL PLANS FOR CONNECTION.
- 2. RPBA SHALL BE ACCESSIBLE BY VERTICALLY LIFTING OFF ENCLOSURE. CONTRACTOR TO VERIFY ACCESSIBILITY PRIOR TO CONSTRUCTION.

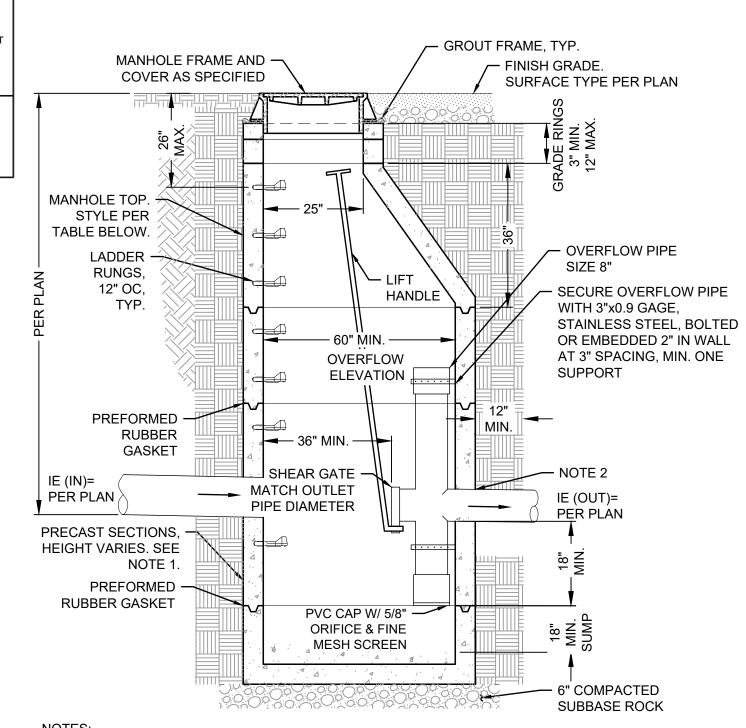
REDUCED PRESSURE BACKFLOW ASSEMBLY SCALE: NTS



CONTRACTOR TO WIDEN EXCAVATION AS REQUIRED TO OBTAIN COMPACTION WITH CONTRACTORS COMPACTION EQUIPMENT.

1/4" STEEL PLATE, BITUMINOUS COATED. AS MANUFACTURED BY GIBSON STEEL BASINS OR APPROVED EQUAL.

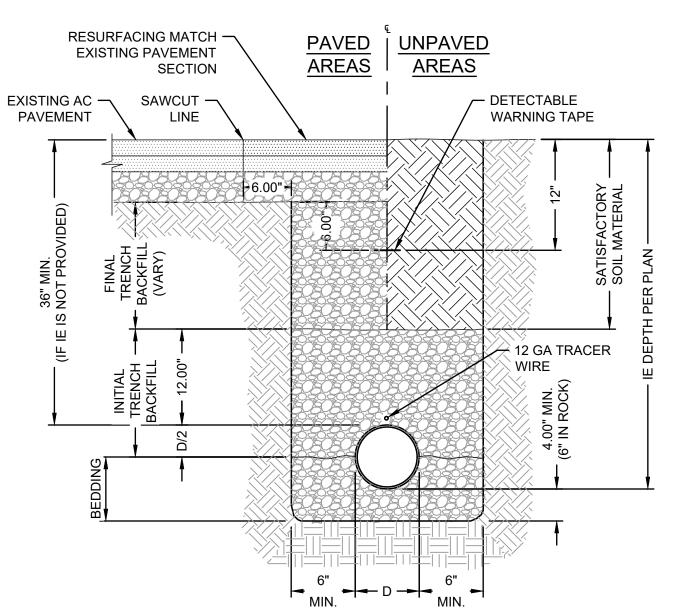
TRAPPED CATCH BASIN



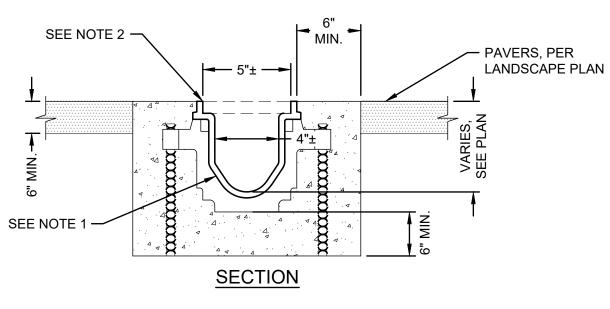
ALL PRECAST SECTIONS SHALL CONFORM TO REQUIREMENTS OF ASTM C-478.

- ALL CONNECTING PIPES SHALL HAVE FLEXIBLE, GASKETED AND UNRESTRAINED JOINT WITHIN 18" OF MANHOLE VAULT. PIPE SIZES NOTED ON PLANS. PIPE CONNECTION TO MANHOLES SHALL HAVE KOR-N-SEAL BOOT OR APPROVED EQUAL.
- ORIFICE AND OVERFLOW ELEVATIONS ARE RELATIVE TO IE (OUT)

FLOW CONTROL MANHOLE SCALE: NTS



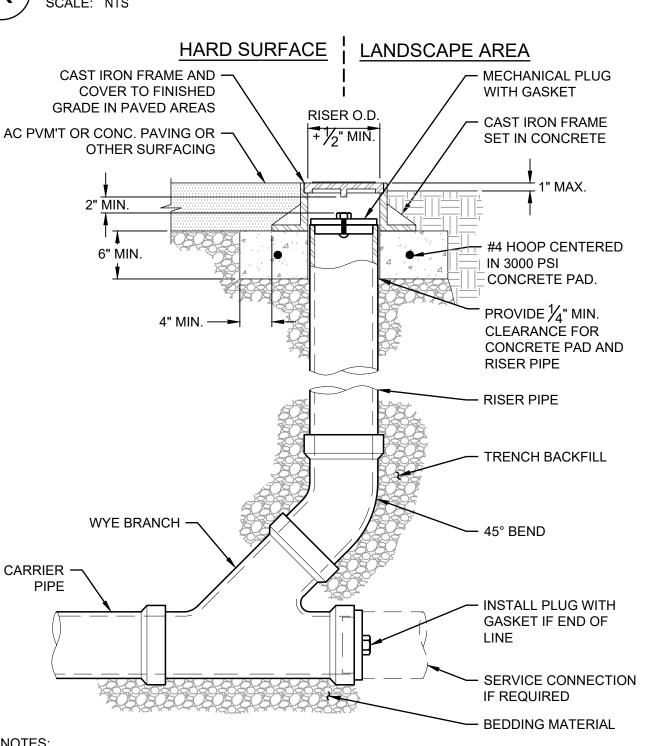
TYPICAL PIPE BEDDING AND BACKFILL



1. TRENCH DRAIN SHALL BE PRE-SLOPED 4" WIDE ZURN OR ACO TRENCH DRAIN OR APPROVED EQUAL.

- 2. TRENCH DRAINS GRATE SHALL BE LOCKABLE HEAVY DUTY TRENCH GRATE CLASS C.
- 3. TRENCH SYSTEM SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.





NOTES:
1. CAST IRON FRAME AND COVER SHALL MEET H-20 LOAD REQUIREMENT.

- 2. FOR CARRIER PIPE SIZE 6" \varnothing AND LESS, PROVIDE RISER PIPE SIZE TO MATCH CARRIER PIPE.
- 3. FOR CARRIER PIPE SIZE 8" \emptyset AND LARGER, RISER PIPE SHALL BE 6" \emptyset .
- 4. RISER PIPE MATERIAL TO MATCH CARRIER PIPE MATERIAL.





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12/31/

△ Revisions

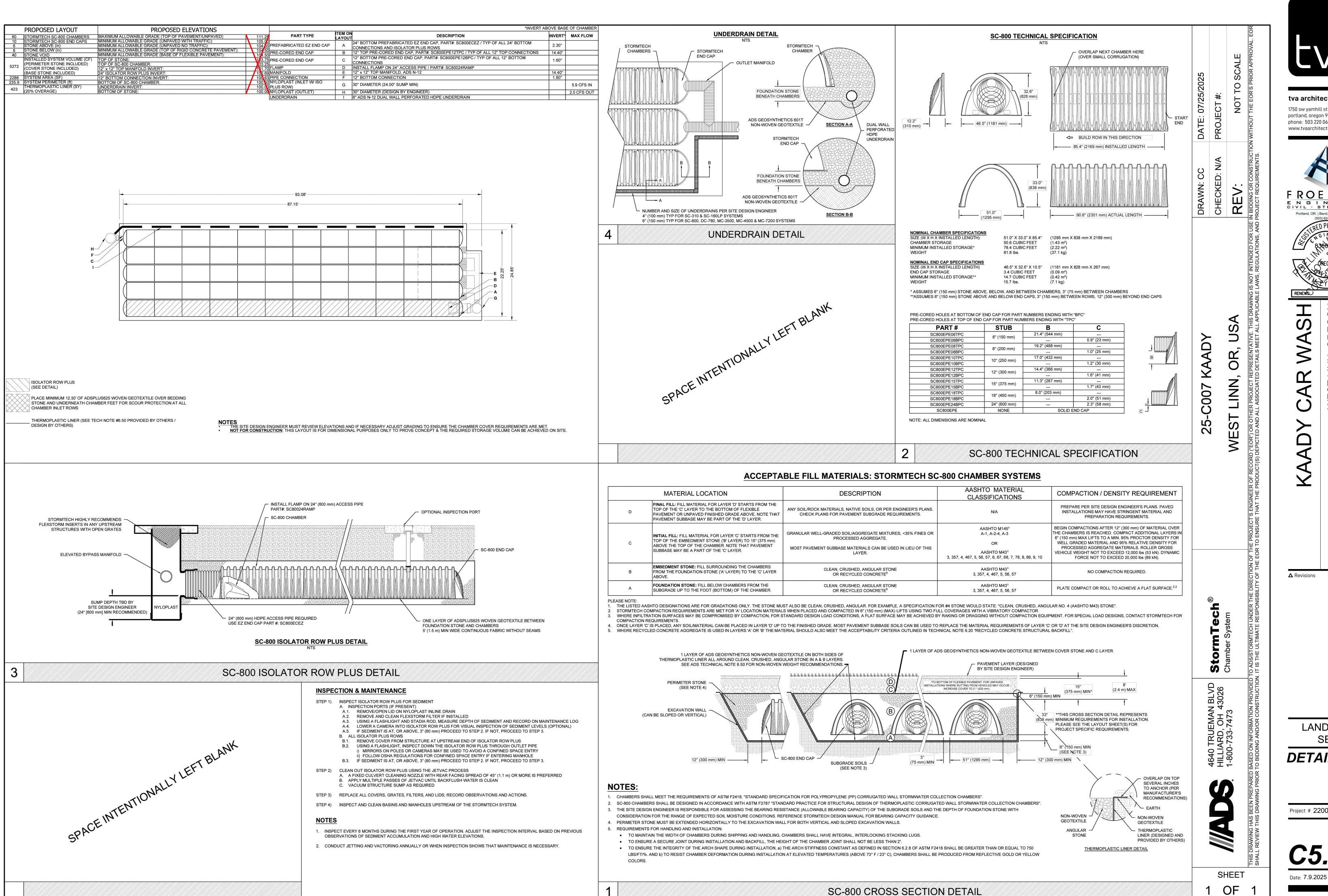
LAND-USE SET

DETAILS

Project # 22005

C5.1

Date: 7.9.2025



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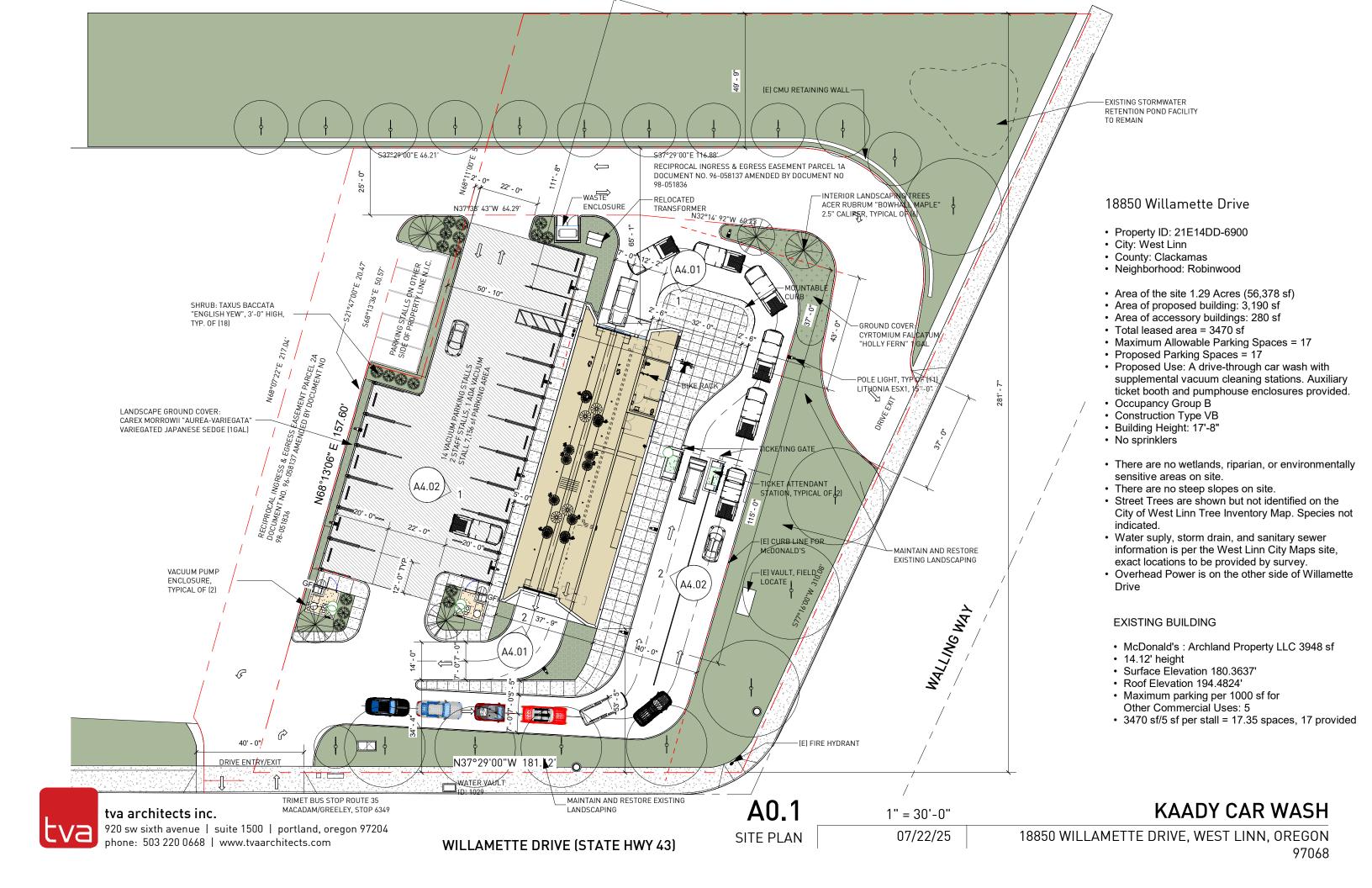
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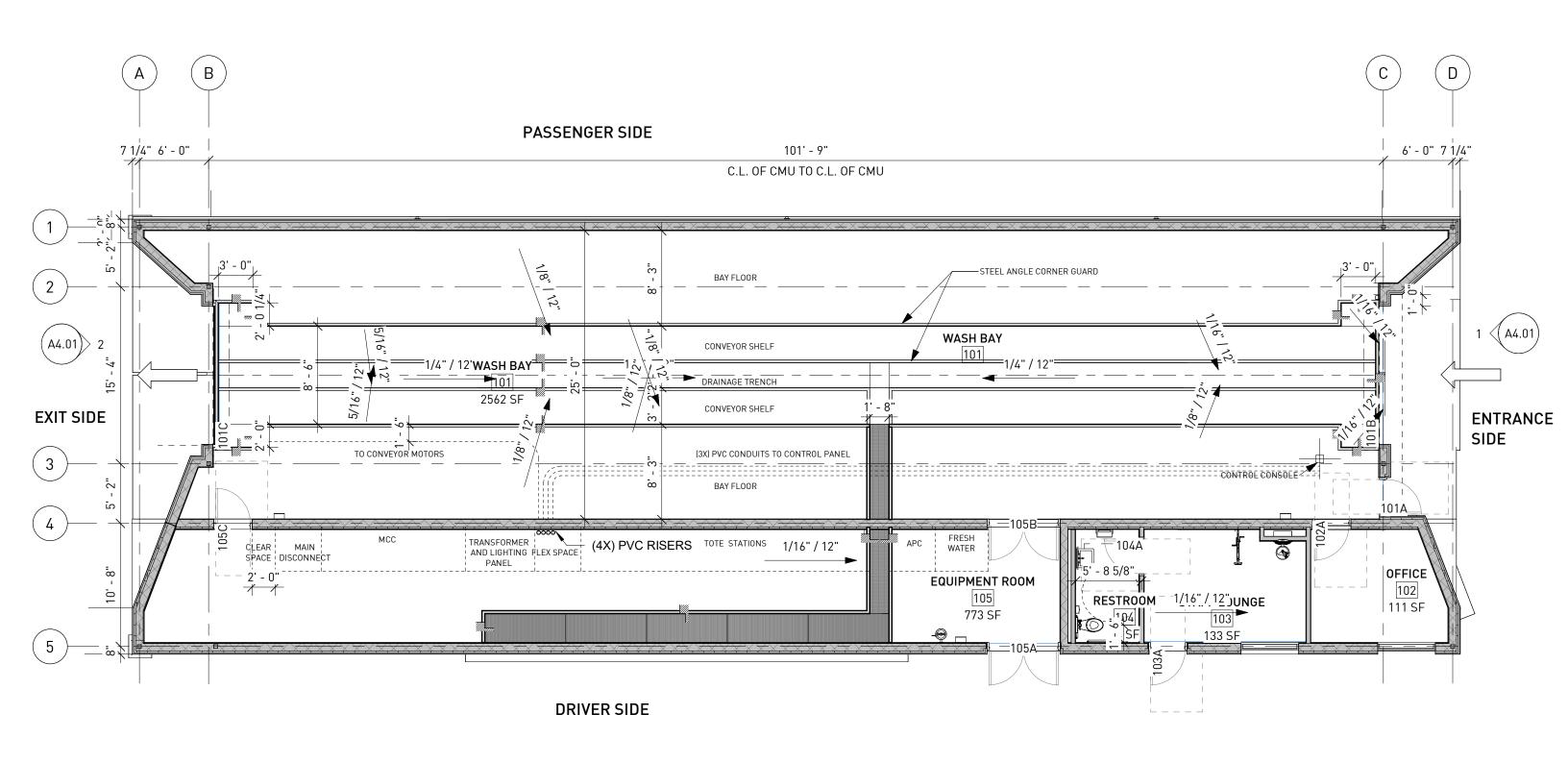


RENEWS 12/31/

LAND-USE

Project # **22005**

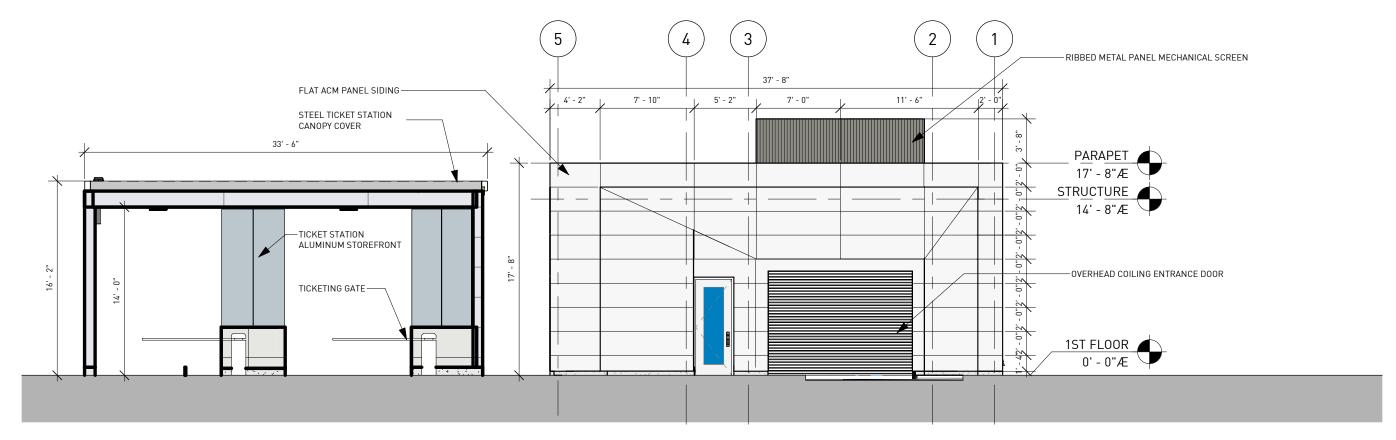




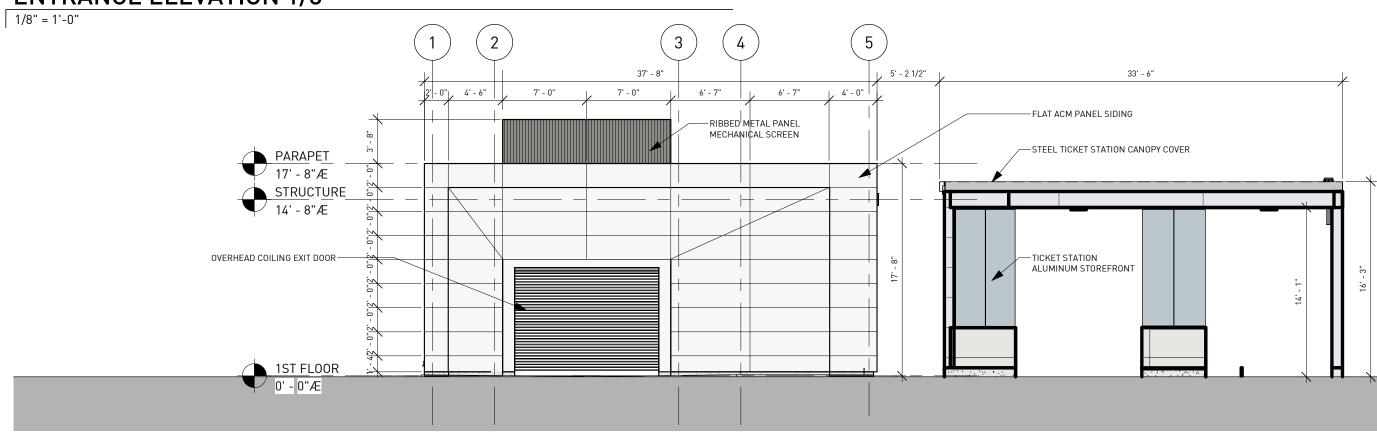


A1 FLOOR PLAN

1/8" = 1'-0"



1 ENTRANCE ELEVATION 1/8"



2 EXIT ELEVATION 1/8"

1/8" = 1'-0"

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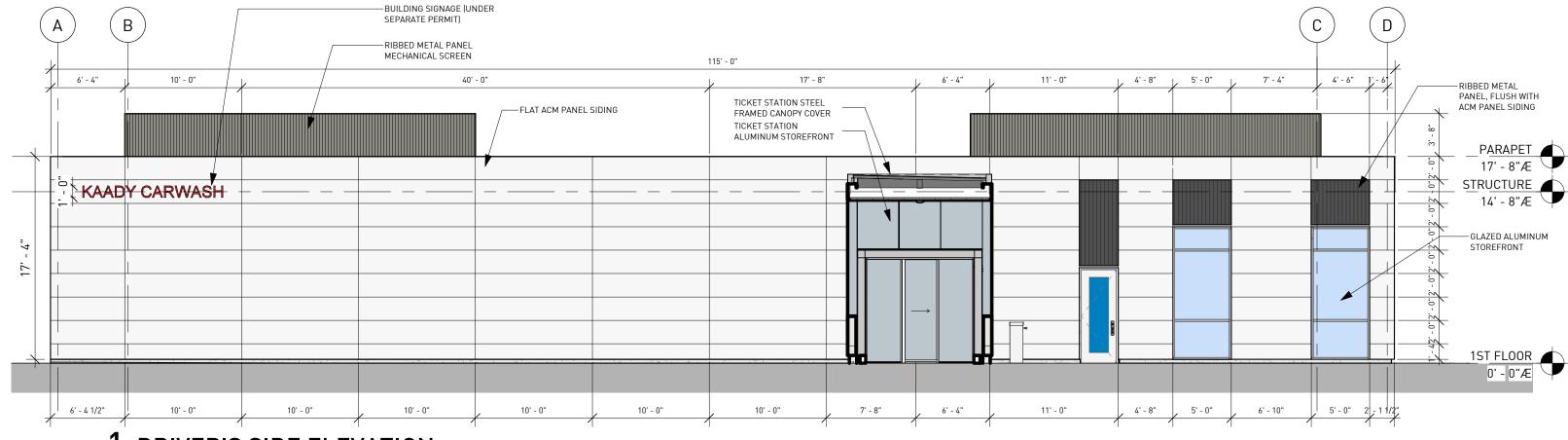
A4.1 EXTERIOR ELEVATIONS

1/8" = 1'-0"

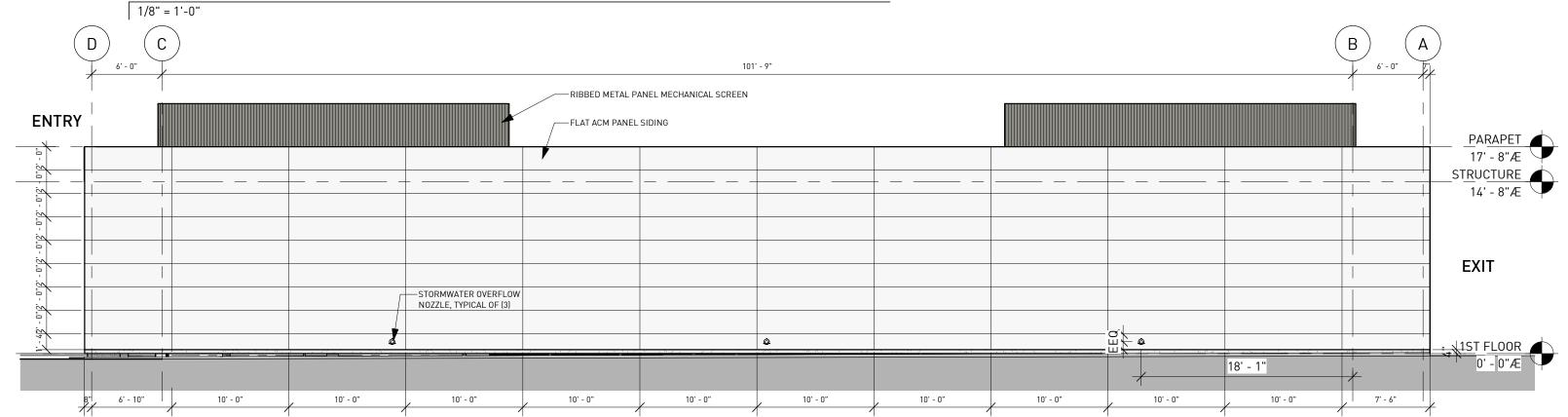
KAADY CAR WASH

07/23/25

18850 WILLAMETTE DRIVE, WEST LINN, OREGON



DRIVER'S SIDE ELEVATION



2 PASSENGER'S SIDE ELEVATION

1/8" = 1'-0"

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A4.2 EXTERIOR ELEVATIONS

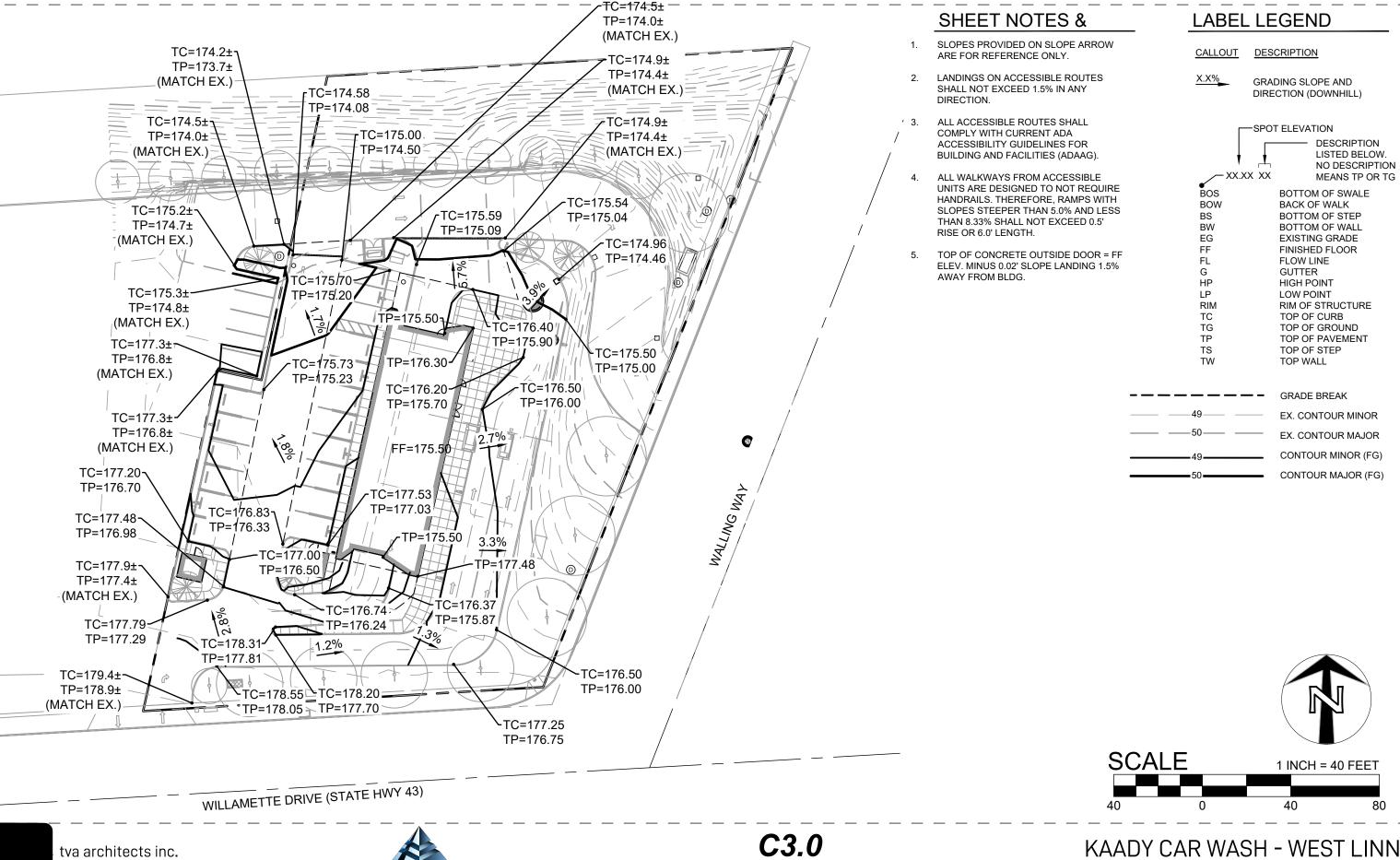
1/8" = 1'-0"

KAADY CAR WASH

07/23/25

18850 WILLAMETTE DRIVE, WEST LINN, OREGON

97068



Plotted: 7/31/25 at 4:15pm By: atomlinson

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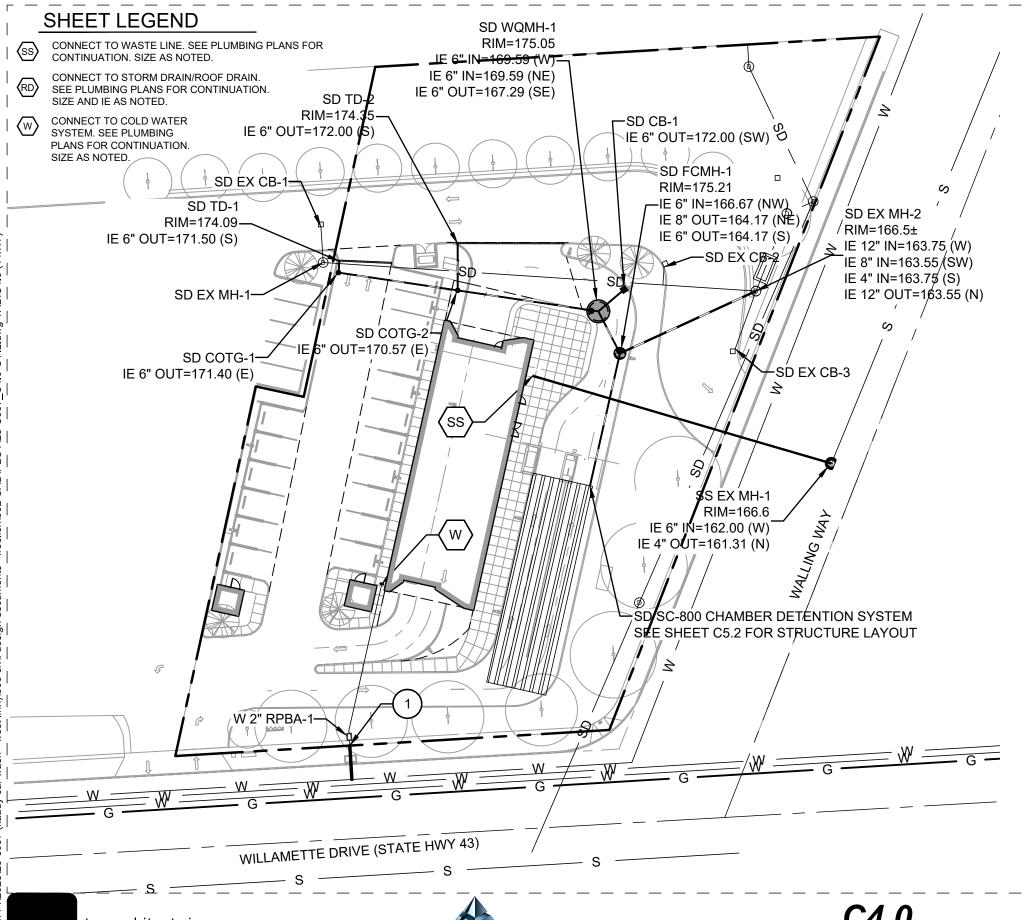
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- froelich\302 CAD\PLOT\25-C007_C3.0-GRAD.dwg TAB:C3.0 (11x17)



GRADING PLAN

18850 WILLAMETTE DRIVE WEST LINN, OR



SHEET NOTES

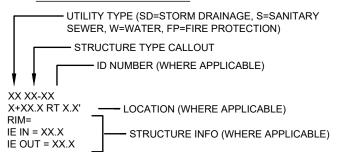
- PIPE BEDDING AND BACKFILL FOR ALL UTILITIES SHALL BE DONE PER DETAIL X/C5.X.
- 2. STRUCTURES LOCATIONS ARE BASED ON CENTER OF STRUCTURE.
- 3. INSTALL TRUST BLOCK ON FIRE AND WATER LINES PER DETAIL X & X/CX.X.

KEY NOTES

- I COORDINATE WATER SERVICE POINT OF CONNECTION TO EXISTING X" LATERAL WITH CITY OF WEST LINN.
- 2 FIELD VERIFY LOCATION AND IE OF EXISTING XX" XXXXX LATERAL PRIOR TO CONSTRUCTION.
- 3 IRRIGATION BACKFLOW ASSEMBLY VAULT, SEE LANDSCAPE PLANS.

UTILITY LABEL LEGEND

STRUCTURE LABEL



STRUCTURE TYPE

CALLOUT	DESCRIPTION	DETAIL REF.
BEND BWV CB CO CONN DW FCMH FD FH GV OF OV SDMH	BEND, USE FITTING IF APE BACKWATER VALVE TRAPPED CATCH BASIN CLEANOUT TO GRADE CONNECTION DRYWELL FLOW CONTROL MANHOLI FOUNDATION DRAINAGE F FIRE HYDRANT GATE VALVE OUTFALL OVERFLOW INLET 48" DIA. STORM DRAIN MH	E POINT OF CONN.
TD TEE WYE WQMH	TRENCH DRAIN TEE CONNECTION WYE CONNECTION WATER QUALITY MANHOL	
	SCALE 40 0	1 INCH = 40 FEET 40 80

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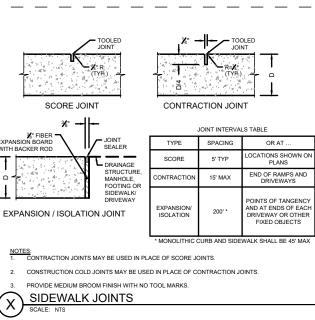
920 sw sixth avenue | suite 1500 | portland, oregon 97204 phone: 503 220 0668 | www.tvaarchitects.com

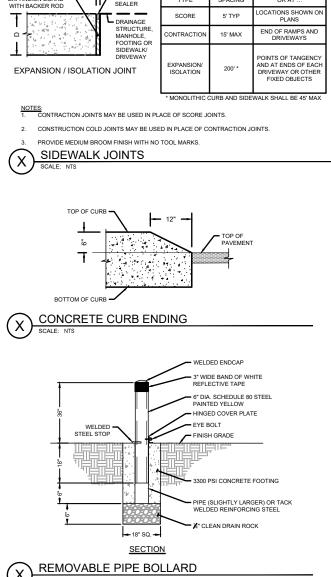


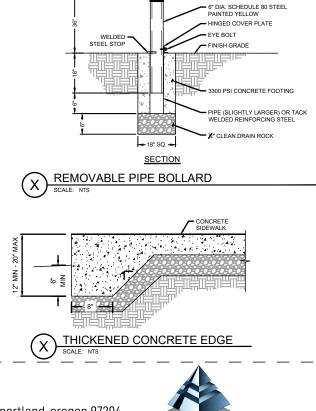
C4.0 UTILITY PLAN

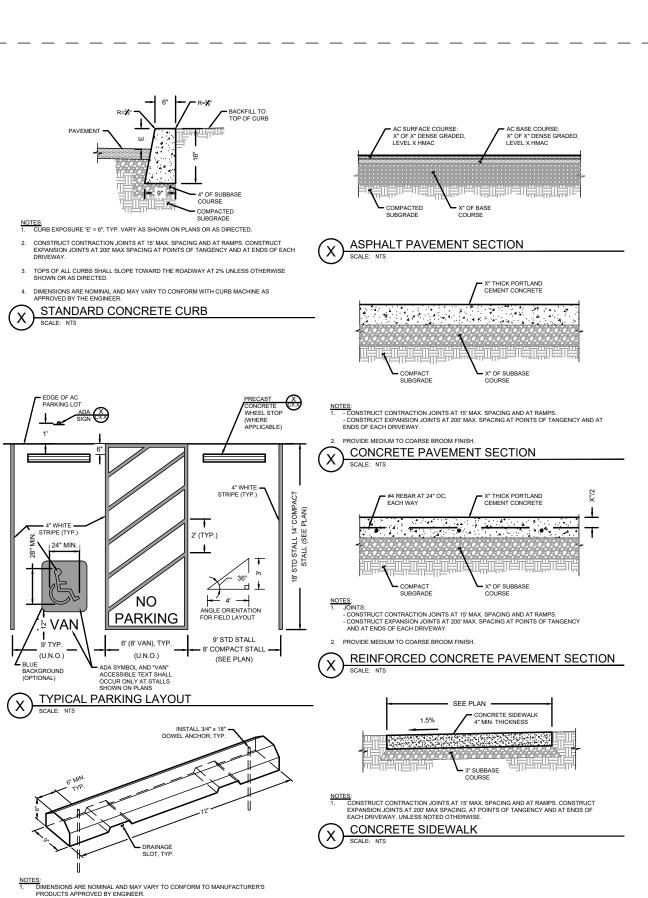
KAADY CAR WASH - WEST LINN

18850 WILLAMETTE DRIVE WEST LINN, OR









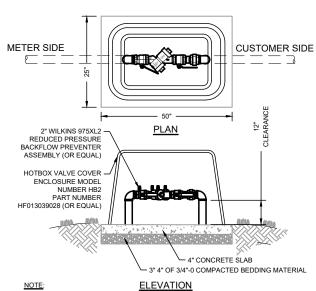
C5.0 **DETAILS**

PRECAST CONCRETE WHEEL STOP

KAADY CAR WASH - WEST LINN

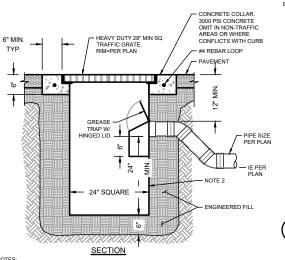
18850 WILLAMETTE DRIVE WEST LINN, OR

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- HOTBOX ENCLOSURE SHALL BE INSULATED AND HEATED. COORDINATE WITH ELECTRICAL PLANS FOR CONNECTION.
- RPBA SHALL BE ACCESSIBLE BY VERTICALLY LIFTING OFF ENCLOSURE CONTRACTOR TO VERIFY ACCESSIBILITY PRIOR TO CONSTRUCTION.

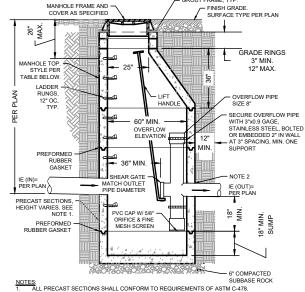
REDUCED PRESSURE BACKFLOW ASSEMBLY



CONTRACTOR TO WIDEN EXCAVATION AS REQUIRED TO OBTAIN COMPACTION WITH

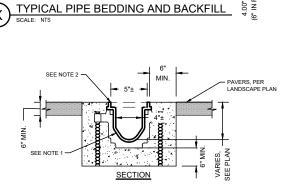
1/4" STEEL PLATE, BITUMINOUS COATED. AS MANUFACTURED BY GIBSON STEEL BASINS OR APPROVED EQUAL.

TRAPPED CATCH BASIN



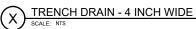
- ALL CONNECTING PIPES SHALL HAVE FLEXIBLE, GASKETED AND UNRESTRAINED JOIN WITHIN 18" OF MANHOLE VAULT. PIPE SIZES NOTED ON PLANS. PIPE CONNECTION TO MANHOLES SHALL HAVE KOR-N-SEAL BOOT OR APPROVED EQUAL.
- ORIFICE AND OVERFLOW ELEVATIONS ARE RELATIVE TO IE (OUT)

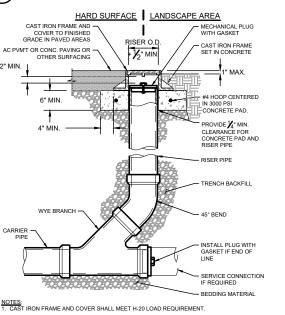
FLOW CONTROL MANHOLE



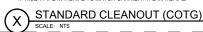
PAVED UNPAVED AREAS

- TRENCH DRAINS GRATE SHALL BE LOCKABLE HEAVY DUTY TRENCH GRATE CLASS C.
- TRENCH SYSTEM SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS





- 2 FOR CARRIER PIPE SIZE 6" AND LESS PROVIDE RISER PIPE SIZE TO MATCH CARRIER PIPE
- 4. RISER PIPE MATERIAL TO MATCH CARRIER PIPE MATERIAL

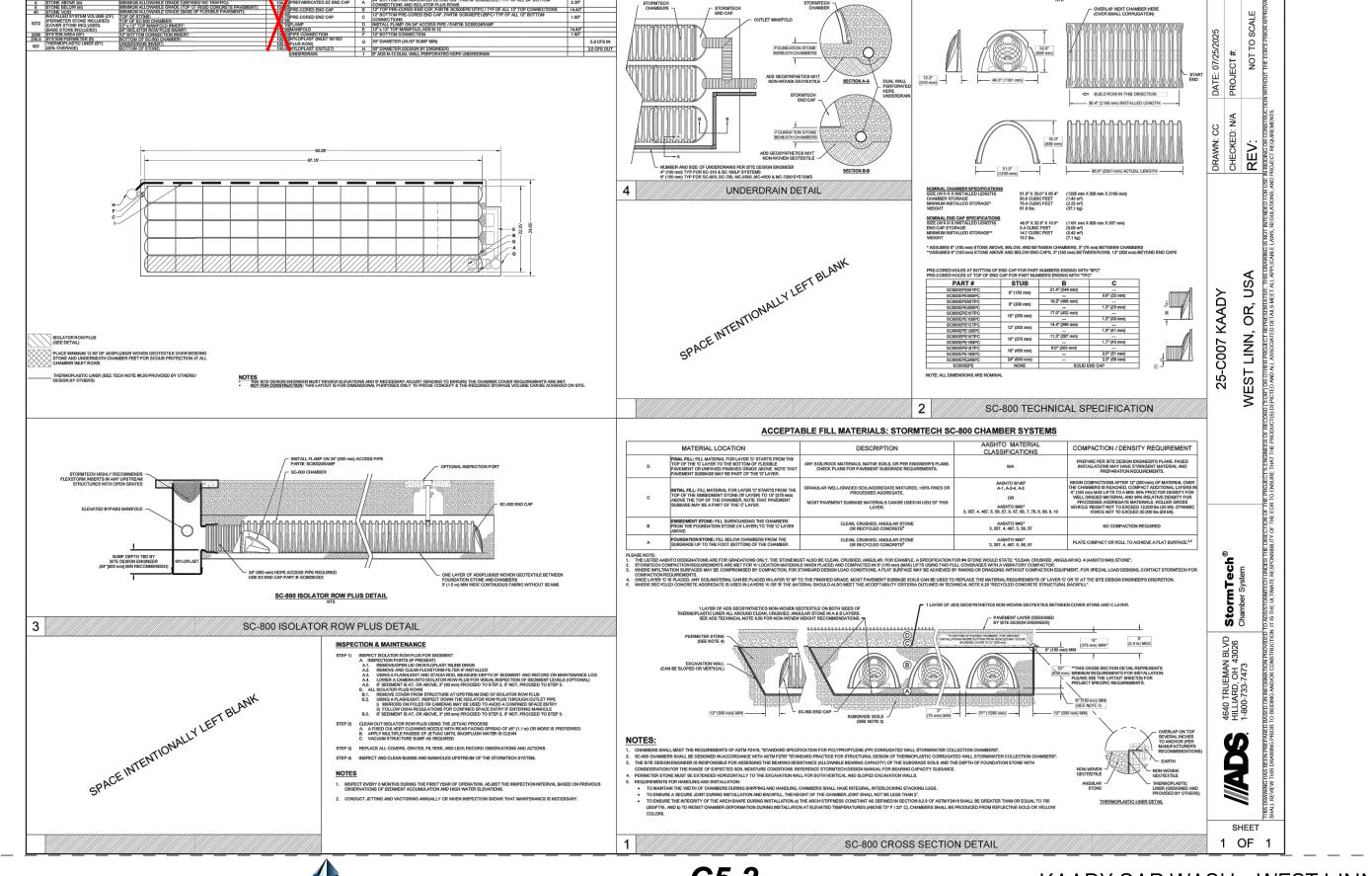


C5.1 **DETAILS**

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- froelich\302 CAD\PLOT\25-C007_C5.0-DETL.dwg TAB:C5.1 (11x17)

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UNDERDRAIN DETAIL

SC-800 TECHNICAL SPECIFICATION

tva

- froelich\302 CAD\PLOT\25-C007_C5.0-DETL.dwg TAB:C5.2 (11x17)

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Plotted: 7/31/25 at 4:16pm By: atomlinson



Tualatin Valley Fire & Rescue

FIRE CODE / LAND USE / BUILDING REVIEW **APPLICATION**

North Operating Center 11945 SW 70th Avenue Tigard, OR 97223 Phone: 503-649-8577

South Operating Center 8445 SW Elligsen Rd Wilsonville, OR 97070 Phone: 503-649-8577

REV 6-30-20

Project Information	Permit/Review Type (check one):
	3 Land Use / Building Review - Service Provider Permit
Applicant Name: Eric Li, TVA Architects	□Emergency Radio Responder Coverage Install/Test
Address:1750 SW Yamhill Street, Suite 150, Portland, Oregon	□LPG Tank (Greater than 2,000 gallons)
97205 Phone:971-678-7578	□Flammable or Combustible Liquid Tank Installation (Greater than 1,000 gallons)
Email: ericl@tvaarchitects.com	* Exception: Underground Storage Tanks (UST)
Site Address: 18850 Willamette Drive	are deferred to DEQ for regulation.
City: West Linn	□Explosives Blasting (Blasting plan is required)
Map & Tax Lot #: 21E14DD-6900	□Exterior Toxic, Pyrophoric or Corrosive Gas Installation (in excess of 810 cu.ft.)
Business Name: Kaady Car Wash	☐ Tents or Temporary Membrane Structures (in excess
Land Use/Building Jurisdiction: General Commercial	of 10,000 square feet)
Land Use/ Building Permit #PA-25-06 (This is a Pre-App#.	□Temporary Haunted House or similar
Pending CU Submission for permit number.)	□OLCC Cannabis Extraction License Review
Choose from: Beaverton, Tigard, Newberg, Tualatin, North Plains, West Linn, Wilsonville, Sherwood, Rivergrove,	□Ceremonial Fire or Bonfire (For gathering, ceremony or other assembly)
Durham, King City, Washington County, Clackamas County, Multnomah County, Yamhill County	For Fire Marshal's Office Use Only
	TVFR Permit #_ 2025 - 0113
Project Description Demolition of an existing McDonald's restaurant. Providing a	Permit Type: 5PP - West Linn
new drive-through mechanized car wash and associated vacuum	Submittal Date: 7-5-25
parking stalls.	Assigned To: DFM Arm
The building is Type VB construction, one story, 3,1900 sf, 17'-8" high. Drive access is available on all four sides of the building.	Due Date: WA
The building is not sprinklered, but its interior is constantly wet	Fees Due:
due to the nature of the building.	Fees Paid:
Approval/inspect	tion Conditions
(For Fire Marshal's	
This section is for application approval only	This section used when site inspection is required
Fire Marshal or Designee Date	Inspection Comments:
Conditions: See approved five service	
plans.	
See Attached Conditions: ☐ Yes Ø No	
Site Inspection Required: ☐ Yes ☐ No	
One hisperiori requires. Li 100 ja 110	Final TVFR Approval Signature & Emp ID Date



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EST LINN, OREGON 97068

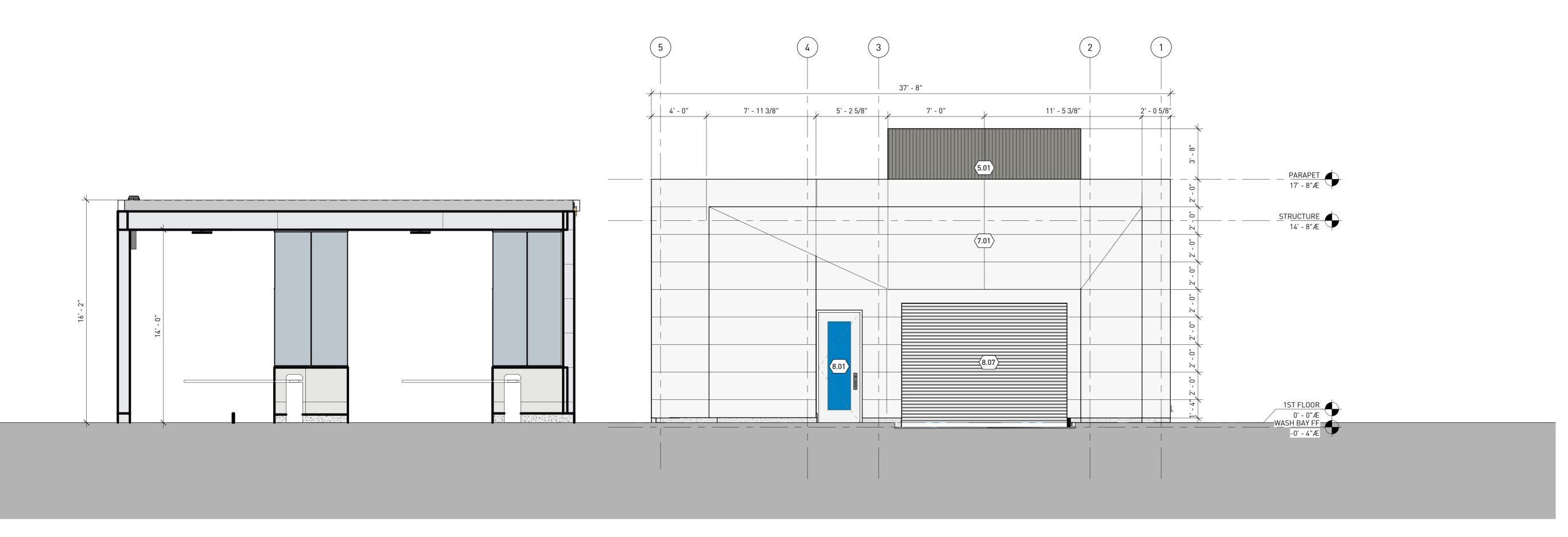
△ Revisions

FIRE SERVICE PERMIT

OVERALL SITE PLAN

FS-1

Date: 2.7.2024



1 ENTRANCE ELEVATION

6' - 7" STRUCTURE 14' - 8"Æ

2 EXIT ELEVATION

1/4" = 1'-0"

GENERAL NOTES

- 1. PAINT ALL NON-NOTED MISCELLANEOUS ITEMS TO MATCH ADJACENT REFERENCE FINISH COLOR UNO.
- 2. LOUVER COLOR TO BE COORDINATED / SELECTED WITH SUBMITTALS.
- 3. SEE FLOOR PLAN FOR DOOR AND WINDOW TAGS, TYP. 4. WINDOW TYPES NOT SHOWN ON FLOOR PLANS ARE SHOWN
- ON THESE ELEVATIONS. 5. SEE WALL SECTIONS FOR ADDITIONAL ELEVATED AREAS.

KEYNOTES

SHOWN THUS NOTE: ONLY KEYNOTES APPROPRIATE TO THIS SHEET ARE SHOWN IN THIS KEYNOTE LEGEND. GC TO VERIFY ANY DISCREPANCY IN KEYNOTING.

5.01 HSS 4X4 ROOF SCREEN FRAME, SEE STRUCTURAL. RIBBED METAL PANEL CLADDING, METAL SALES T10-A. 7.01 SMOOTH METAL PANEL SMP-1, COMPOSITE METAL PANEL, ALPOLIC, ALUCOBOND, REYNOBOND OR APPROVED. .020 INCH THICK ALUMINUM SHEET WITH ORGANIC COATING FINISH WITH A LOW-DENSITY POLYEHTYLENE CORE. COLOR: WHITE. ROUT AND RETURN FABRICATION FOR 1" NOMINAL PANEL DEPTH. PROVIDE BACKER ROD AND SILICONE SEALANT FOR 1/2" VERTICAL AND HORIZONTAL JOINTS.

8.01 GLAZED ALUMINUM STOREFRONT ENTRY 3'-0" X 8'-0": KAWNEER 350T STANDARD MEDIUM THERMAL SWING DOOR ENTRANCE. 3 1/2" ALUMINUM STILES AND TOP RAIL, 6 1/2" BOTTOM RAIL. GUARDIAN SNX 62/27 LOW-E TEMPERED GLASS LITES, U .28 MAX, SHGC .26 MAX. DOOR HARDWARE: BUTT HINGES (4EA): IVES 5BB1HW 4.5 X 4.5 NRP 630 BRUSHED STAINLESS FINISH, EXIT DEVICE: FALCON F-25-R-L-NL-LAT RIM DEVICE, CLOSER: LCN 4020 CUSH SURFACE MOUNTED CLOSER. THRESHOLD: PEMKO 171 SERIES COMMERCIAL FLAT THRESHOLD 5" WIDE. GASKET: ZERO 488SBK PSA. DOOR SWEEP ZERO 8198AA RAIN DRIP WITH NYLON BRUSH.

8.07 OVERHEAD COILING DOOR: COOKSON MODEL ESD10 MOTORIZED ROLLING SERVICE DOOR. 20 GAUGE PAINTED GALVANIZED STEEL, PAINT WHITE. 12'-0" WIDE X 9'-0"

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FIRE SERVICE PERMIT

EXTERIOR ELEVATIONS

FS-2

GENERAL NOTES 1. PAINT ALL NON-NOTED MISCELLANEOUS ITEMS TO MATCH ADJACENT REFERENCE FINISH COLOR UNO. 2. LOUVER COLOR TO BE COORDINATED / SELECTED WITH SUBMITTALS. SEE FLOOR PLAN FOR DOOR AND WINDOW TAGS, TYP. WINDOW TYPES NOT SHOWN ON FLOOR PLANS ARE SHOWN ON THESE ELEVATIONS. 5. SEE EXTERIOR COMPOSITE SHEETS FOR EXTERIOR FINISHES AND GLAZING. 6. SEE WALL SECTIONS FOR ADDITIONAL ELEVATED AREAS.

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SHOWN THUS

KEYNOTES

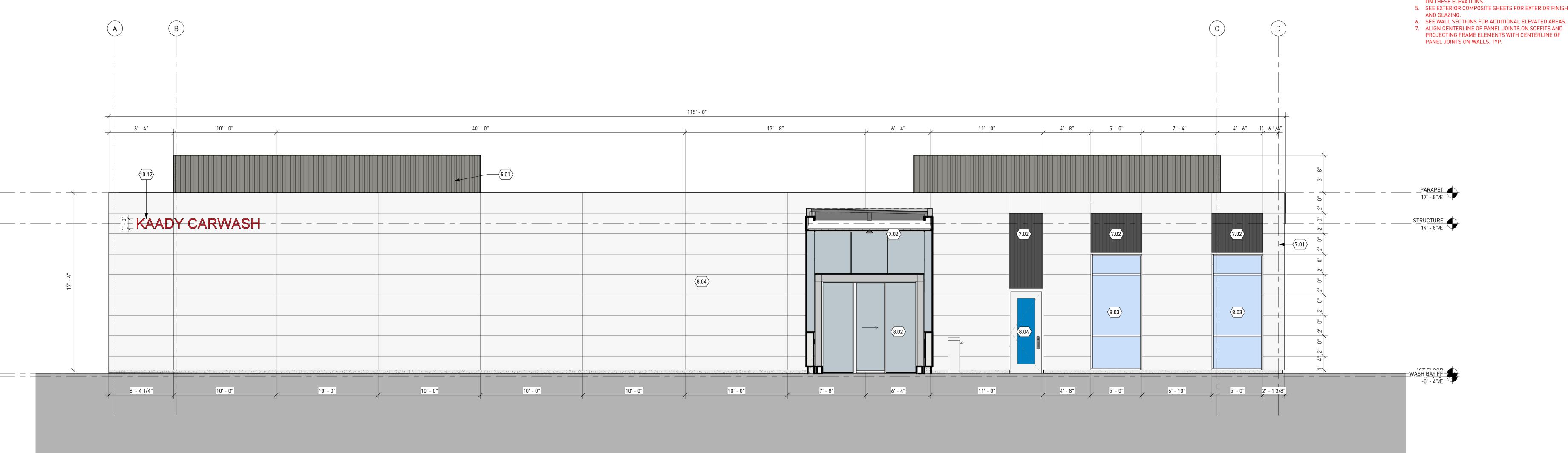
NOTE: ONLY KEYNOTES APPROPRIATE TO THIS SHEET ARE SHOWN IN THIS KEYNOTE LEGEND. GC TO VERIFY ANY

> FIRE SERVICE PERMIT

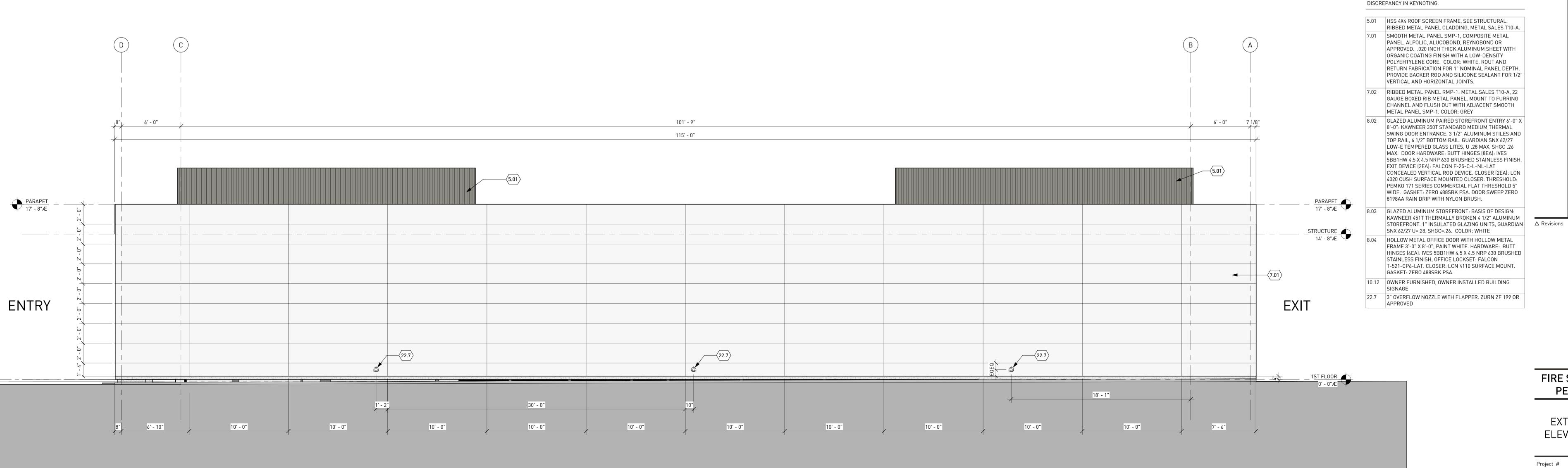
EXTERIOR **ELEVATIONS**

FS-3

Date: 2.7.2024



1 DRIVER'S SIDE ELEVATION (SOUTH)



2 PASSENGER'S SIDE ELEVATION (NORTH)



(Land Use) Stormwater Management Report

Kaady Car Wash – West Linn 18850 Willamette Dr West Linn, OR 97068

Prepared by: Evan Eykelbosch, PE, and Ben Ullmann, PE Froelich Engineers 17700 SW Upper Boones Ferry Rd, Suite 115 Portland, OR 97224 Froelich Project Number: 25-C007 Date: 8/1/2025

(Land Use) Stormwater Management Report

Cont	tents	
I.	Project Overview and Description	3
II.	Methodology	3
III.	Analysis	
IV.	Engineering Conclusion	6
V.	Appendices	7
	Appendix A: Vicinity Map	8
	Appendix B: Basin Maps and Areas	9
	Appendix C: Assumptions	10
	Appendix D: Soil Resource Report	11
	Appendix E: Geotechnical Report	12
	Appendix F: Water Quality Calculations	13
	Appendix G: Water Quantity Calculations	14
	Appendix H: Stormwater Conveyance Calculations	15
	Appendix I: Utility Plan / Details	16
	Appendix J: Operations and Maintenance Plan	17

I. Project Overview and Description

This stormwater report has been prepared in accordance with the City of West Linn's Stormwater Management Manual (WLSWMM) to support the Building Permit application for the proposed project improvements.

Kaady Car Wash – West Linn is a site redevelopment project to convert an existing fast food site. The site is located on tax lot 6900 in the Clackamas County tax map 21E14DD. The existing development will be removed and a new automatic drive thru car wash, with a queuing line and vacuum equipped parking stalls will be constructed. There are no expected frontage improvements to be required with this on-site work.

Existing Conditions

Onsite

This site is located at 18850 Willamette Dr. West Linn, Oregon (See Appendix A: Vicinity Map) and is zoned for General Commercial use (GC). The existing site is approximately 1.30 acres and currently consists of a non-operational McDonalds drive-thru and parking lot. The topography of the majority of the site is a north to south sloping topography with a perpendicular running retaining wall along the north side of the drive aisle. The slope increases significantly beyond the retaining wall. The site is accessible by driveway on Willamette Drive and a driveway along Walling Way. The existing soil is classified as Cascade silt loam with 8 to 15 percent slopes based on a Soil Resource Report for the NRCS with a **Group C** type soil (See Appendix D: Soil Resource Report). Stormwater from the existing site is collected in a series of catch basins and is conveyed into an on-site water quality vault and detention pond. Runoff is managed through a flow control structure and then discharged into the stormwater main in Walling Way. The stormwater is then conveyed into Fern Creek which then outfalls to the Willamette River. The site is within the Willamette River watershed.

'Table 1A: Predeveloped Catchment Basins' provides the predeveloped basin characteristics for the various catchment areas under the predeveloped conditions.

Proposed Conditions

Onsite

The proposed development will construct water quality, water quantity, and storm water detention facilities to meet the requirements in WLSWMM. The onsite development will collect and manage stormwater through trench drains, roof drains, and a catch basin. The captured runoff is then conveyed through a water quality manhole and then piped into a buried detention structure. The proposed stormwater system will tie into the existing stormwater manhole and discharge to the same location.

'Table 1B: Proposed Catchment Basins' provides the proposed basin characteristics for the various catchment areas under the proposed conditions.

A proposed condition Basin Map is provided in Appendix B: Basin Maps and Areas.

II. Methodology

The WLSWMM requires that all new construction resulting in at least 10,000 square feet of impervious area created or replaced to comply with stormwater requirements. Infiltration on site is not feasible due to existing soil conditions and steep slope conditions.

The water quality requirements consist of providing stormwater treatment for the water quality event of 1 inch per 24-hour period for a time of concentration of 10 minutes for the impervious area. This is roughly 80% of the average annual rainfall for the City of West Linn.

The flow control requirements consist of limiting the 2-year, 10-year, and 25-year post development peak flows to their respective pre-development peak. Predeveloped flows are based on a grassland/forested topography with a time of concentration of 5 minutes.

A summary of the stormwater treatment requirements facilities is provided in 'Table 2: Catchment and Facility Table' and a summary of the flow rate results is provided in 'Table 3: Pre- vs Post-Construction Stormwater Flow Rate Table.'

The conveyance calculations were designed for the 25-year storm event (3.9 in/24-hr). See Appendix H: Conveyance Calculations for conveyance sizing calculations.

III. Analysis

The analysis for the onsite stormwater system design is based on Santa Barbara Urban Hydrograph (SBUH) Method using a NRCS Type 1A rainfall distribution for a 24-hour storm. The system was designed using HydroCAD software.

The proprietary water quality manhole design is based on water quality flow of 1 inch per 24-hour storm event, using HydroCAD software (See Appendix F: Water Quality Calculations).

The detention facility design is based on the 2-year, 10-year, and 25-year storm events, using HydroCAD. The WLSSMM requires that detention systems be designed with concrete detention pipes unless the use of such pipe is not practical. Due to the footprint size of using concrete pipes, the project was required to explore the use of an alternative product. The proposed system is currently shown using the ADS SC-800 Chamber Detention system. An analysis of a concrete pipe detention system with a similar depth was considered, and an exhibit for the use of the concrete pipe is provided. (See Appendix G: Water Quantity Calculations.)

Conveyance calculations are based on the Manning Formula for uniform pipe flow (See Appendix I: Stormwater Conveyance Calculations). The peak runoff event can be conveyed by an 6-inch pipe with a minimum slope of 1.50% and an 8-inch pipe with a minimum slope of 1.00%.

Table 1A: Predeveloped Catchment Basins

Predeveloped

·			Area		Tota	.I
Basin	Pervi	ous	Impervious		Total	
	sf	ac	sf	ac	sf	ac
Basin A	31,100	0.714	0	0.000	31,100	0.714

Table 1B: Proposed Catchment Basins

Proposed

			Area		Total Flo		
Basin	Pervi	ous	Imperv	rious	Total		(25-YR)
	sf	ac	sf	ac	sf	ac	cfs
Basin A	314	0.007	30,786	0.707	31,100	0.714	0.65

Table 2: Catchment and Facility table

Catchment/ Facility ID	Drainage Source	Area Managed (sf)	Ownership (private/ public)	Facility Type	Facility Size
WQMH72"-1	Basin A	30,786	Private	Water Quality Manhole	96" Dia Manhole with (9) 18" StormFilters
ADS SC-800 Detention System	Basin A	31,100	Private	Underground Detention Chambers	25.3'x89.3'x3.8' (60) ADS SC-800 Chambers

Table 3: Pre- vs Post-Construction Stormwater Flow Rate Table

Catabmanti	Peak Flow Rate (cfs) for a 24-hour storm						
Catchment/	2-у	ear	10-year		25-year		
Facility ID	Pre	Post	Pre	Post	Pre	Post	
Basin A	0.02	0.02	0.11	0.09	0.15	0.12	

IV. Engineering Conclusion

Based on the requirements of the City of West Linn, all facilities and conveyance components have enough capacity to manage the runoff from the required storm event and should be approved as designed.

V. Appendices

Appendix A: Vicinity Map



Appendix B: Basin Maps and Areas



Appendix C: Assumptions



Santa Barbara Unit Hydrogragh (SBUH) Assumptions:

(used for Water Quality, Flow Control, Conveyance)

Storm Events:

Water Quality (WQ) Storm Event* = 1.00* in/24-hours per West Linn Design Standards 5/25
2-year Storm Event = 2.50 in/24-hours per West Linn Design Standards 5/25
in/24-hours per West Linn Design Standards 5/25
in/24-hours per West Linn Design Standards 5/25
25-year Storm Event = 3.90 in/24-hours per West Linn Design Standards 5/25

*80% of Average Annual Runoff for West Linn

Time of Concentration 10.0 minutes

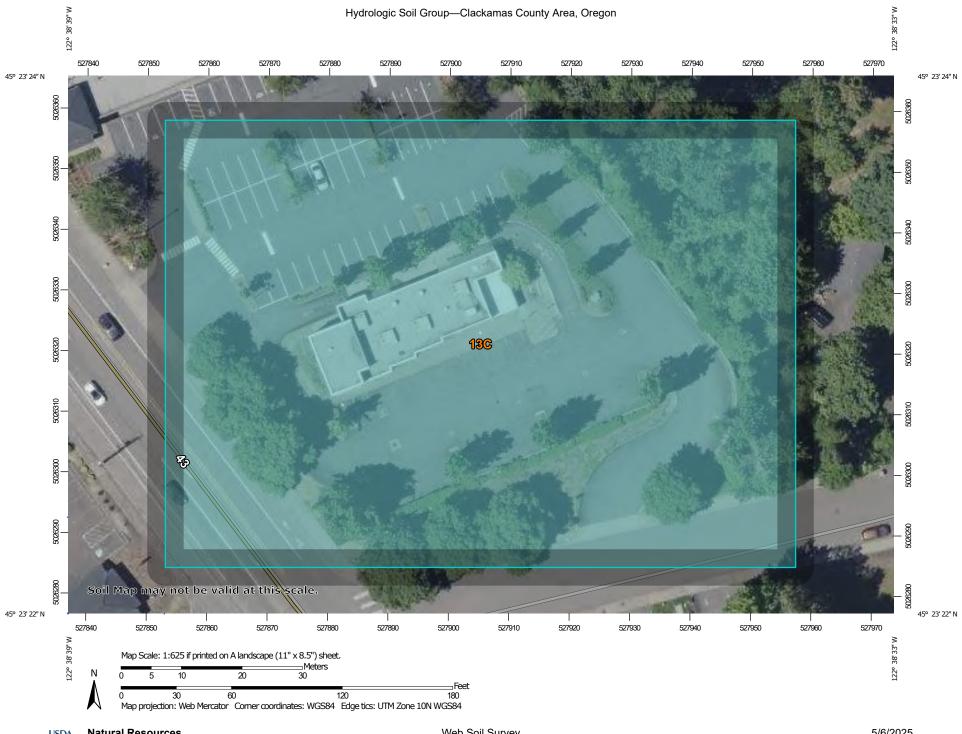
Roughness Coefficient 0.013

Curve Number Assumptions:

NRSC Soil Group = C

Impervious Area = 98 per West Linn Design Standards 5/25
Existing Pervious Area = 86 per West Linn Design Standards 5/25
Proposed Pervious Area = 74 per West Linn Design Standards 5/25
Pre-development Area = 70 per West Linn Design Standards 5/25

Appendix D: Soil Resource Report



MAP LEGEND MAP INFORMATION The soil surveys that comprise your AOI were mapped at Area of Interest (AOI) С 1:20.000. Area of Interest (AOI) C/D Soils Warning: Soil Map may not be valid at this scale. D Soil Rating Polygons Enlargement of maps beyond the scale of mapping can cause Not rated or not available Α misunderstanding of the detail of mapping and accuracy of soil **Water Features** line placement. The maps do not show the small areas of A/D contrasting soils that could have been shown at a more detailed Streams and Canals Transportation B/D Rails ---Please rely on the bar scale on each map sheet for map measurements. Interstate Highways C/D Source of Map: Natural Resources Conservation Service **US Routes** Web Soil Survey URL: D Major Roads Coordinate System: Web Mercator (EPSG:3857) Not rated or not available -Local Roads Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts Soil Rating Lines Background distance and area. A projection that preserves area, such as the Aerial Photography Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required. This product is generated from the USDA-NRCS certified data as of the version date(s) listed below. Soil Survey Area: Clackamas County Area, Oregon Survey Area Data: Version 21, Aug 30, 2024 Soil map units are labeled (as space allows) for map scales 1:50.000 or larger. Not rated or not available Date(s) aerial images were photographed: Mar 1, 2024—Jul 1, 2024 **Soil Rating Points** The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background A/D imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident. B/D

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
13C	Cascade silt loam, 8 to 15 percent slopes	С	1.9	100.0%
Totals for Area of Inter	est	1.9	100.0%	

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

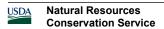
Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition
Component Percent Cutoff: None Specified



Froelich Engineers Job #25-C007

Appendix E: Geotechnical Report

To be provided in final stormwater report

Appendix F: Water Quality Calculations



Total Site (PreDev)



Total Site (PostDev)









25-C007 Kaady Car Wash

Type IA 24-hr Water Quality Rainfall=1.00" Printed 7/23/2025

Prepared by Froelich Engineers
HydroCAD® 10.20-6a s/n 10688 © 2024 HydroCAD Software Solutions LLC

Page 2

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Total Site (PreDev) Runoff

Runoff Area=31,100 sf 0.00% Impervious Runoff Depth=0.00"

Tc=10.0 min CN=70/0 Runoff=0.00 cfs 0.000 af

Subcatchment2S: Total Site (PostDev)

Runoff Area=31,100 sf 98.99% Impervious Runoff Depth=0.78"

Tc=5.0 min CN=74/98 Runoff=0.14 cfs 0.047 af

water quality flow

HydroCAD® 10.20-6a s/n 10688 © 2024 HydroCAD Software Solutions LLC

Page 3

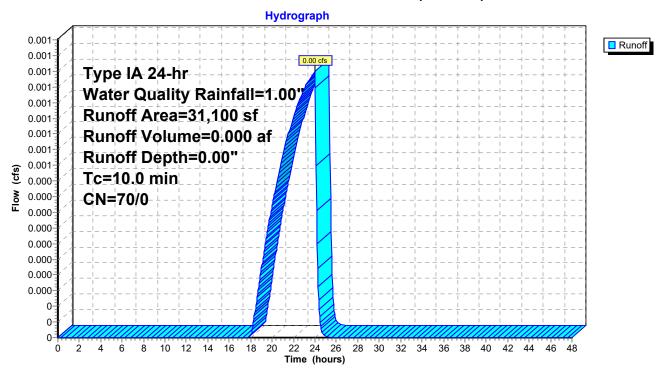
Summary for Subcatchment 1S: Total Site (PreDev)

Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-48.00 hrs, dt= 0.05 hrs Type IA 24-hr Water Quality Rainfall=1.00"

_	Α	rea (sf)	CN [Description		
*		31,100	70			
		31,100	70	100.00% Pe	ervious Are	ea
	Tc	Length	Slope	Velocity	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	·
	10.0					Direct Entry,

Subcatchment 1S: Total Site (PreDev)



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Page 4

Summary for Subcatchment 2S: Total Site (PostDev)

[49] Hint: Tc<2dt may require smaller dt

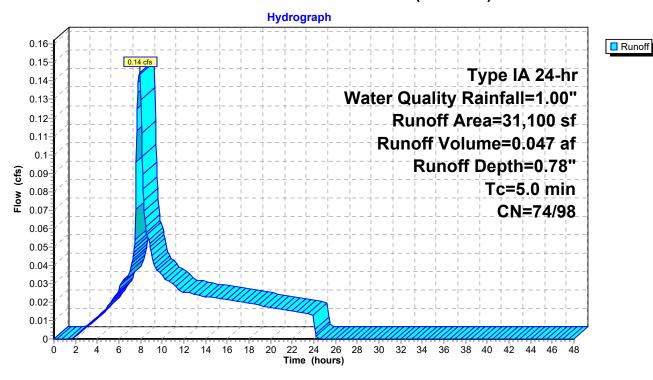
Runoff = 0.14 cfs @ 7.92 hrs, Volume= 0.047 af, Depth= 0.78"

Routed to Pond 3P: Det SC-800

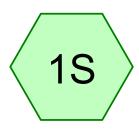
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-48.00 hrs, dt= 0.05 hrs Type IA 24-hr Water Quality Rainfall=1.00"

_	Area (sf)	CN	Description				
*	30,786	98					
*	314	74					
	31,100	98	Weighted Av	erage			
	314	74	1.01% Pervious Area				
	30,786	98	98.99% Impe	ervious Ar	rea		
	Tc Length (min) (feet)		,	Capacity (cfs)	Description		
_	5.0	,	, , ,	, ,	Direct Entry.		

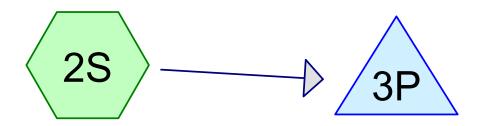
Subcatchment 2S: Total Site (PostDev)



Appendix G: Water Quantity Calculations



Total Site (PreDev)



Total Site (PostDev)

Det SC-800









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Rainfall Events Listing (selected events)

Ever	nt#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
	1	2-Year	Type IA 24-hr		Default	24.00	1	2.50	2
	2	10-Year	Type IA 24-hr		Default	24.00	1	3.45	2
	3	25-Year	Type IA 24-hr		Default	24.00	1	3.90	2

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Type IA 24-hr 2-Year Rainfall=2.50"

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Page 3

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Total Site (PreDev) Runoff Area=31,100 sf 0.00% Impervious Runoff Depth=0.46"

Tc=10.0 min CN=70/0 Runoff=0.02 cfs 0.027 af

Subcatchment2S: Total Site (PostDev) Runoff Area=31,100 sf 98.99% Impervious Runoff Depth=2.25"

Tc=5.0 min CN=74/98 Runoff=0.41 cfs 0.134 af

Pond 3P: Det SC-800 Peak Elev=103.24' Storage=0.109 af Inflow=0.41 cfs 0.134 af

Outflow=0.02 cfs 0.057 af

Total Runoff Area = 1.428 ac Runoff Volume = 0.161 af Average Runoff Depth = 1.35" 50.50% Pervious = 0.721 ac 49.50% Impervious = 0.707 ac HydroCAD® 10.20-6a s/n 10688 © 2024 HydroCAD Software Solutions LLC

Page 4

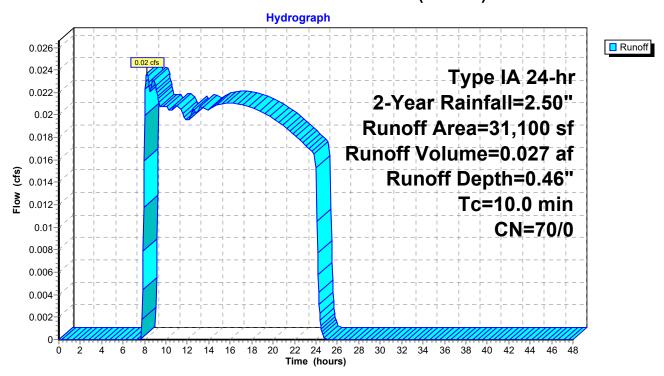
Summary for Subcatchment 1S: Total Site (PreDev)

Runoff = 0.02 cfs @ 8.23 hrs, Volume= 0.027 af, Depth= 0.46"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-48.00 hrs, dt= 0.05 hrs Type IA 24-hr 2-Year Rainfall=2.50"

_	Α	rea (sf)	CN I	Description				
*		31,100	70					
_		31,100	70	70 100.00% Pervious Area				
	Тс	Length	Slope	Velocity	Capacity	Description		
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)			
_	10.0					Direct Entry,		

Subcatchment 1S: Total Site (PreDev)



Summary for Subcatchment 2S: Total Site (PostDev)

[49] Hint: Tc<2dt may require smaller dt

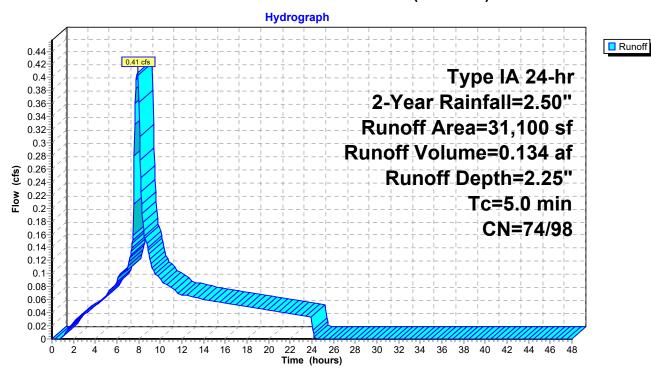
Runoff = 0.41 cfs @ 7.90 hrs, Volume= 0.134 af, Depth= 2.25"

Routed to Pond 3P: Det SC-800

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-48.00 hrs, dt= 0.05 hrs Type IA 24-hr 2-Year Rainfall=2.50"

	Area (sf)	CN	Description					
*	30,786	98						
*	314	74						
	31,100	98	Weighted A	verage				
	314	74		1.01% Pervious Area				
	30,786	98	98.99% Imp	ervious Ar	rea			
	Tc Length			Capacity	Description			
_	(min) (feet)	(ft/	ft) (ft/sec)	(cfs)				
	5.0				Direct Entry.			

Subcatchment 2S: Total Site (PostDev)



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Summary for Pond 3P: Det SC-800

Inflow Area = 0.714 ac, 98.99% Impervious, Inflow Depth = 2.25" for 2-Year event

Inflow = 0.41 cfs @ 7.90 hrs, Volume= 0.134 af

Outflow = 0.02 cfs @ 24.08 hrs, Volume= 0.057 af, Atten= 95%, Lag= 971.0 min

Primary = 0.02 cfs @ 24.08 hrs, Volume= 0.057 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs Peak Elev= 103.24' @ 24.08 hrs Surf.Area= 0.052 ac Storage= 0.109 af

Plug-Flow detention time= 1,215.7 min calculated for 0.057 af (43% of inflow)

Center-of-Mass det. time= 930.2 min (1,604.6 - 674.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	100.00'	0.049 af	25.25'W x 89.17'L x 3.75'H Field A
			0.194 af Overall - 0.070 af Embedded = 0.123 af x 40.0% Voids
#2A	100.50'	0.070 af	ADS_StormTech SC-800 +Capx 60 Inside #1
			Effective Size= 45.0"W x 33.0"H => 7.11 sf x 7.12'L = 50.6 cf
			Overall Size= 51.0"W x 33.0"H x 7.55'L with 0.43' Overlap
			60 Chambers in 5 Rows
			Cap Storage= 3.4 cf x 2 x 5 rows = 34.2 cf
		2 122 5	

0.120 af Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	0.625" Vert. Orifice/Grate C= 0.600
			Limited to weir flow at low heads
#2	Primary	103.65'	8.000" Horiz. Orifice/Grate C= 0.600
	•		Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 24.08 hrs HW=103.24' (Free Discharge)

1=Orifice/Grate (Orifice Controls 0.02 cfs @ 8.63 fps)

—2=Orifice/Grate (Controls 0.00 cfs)

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Page 7

Pond 3P: Det SC-800 - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-800 +Cap (ADS StormTech®SC-800 with cap volume)

Effective Size= 45.0"W x 33.0"H => 7.11 sf x 7.12'L = 50.6 cf Overall Size= 51.0"W x 33.0"H x 7.55'L with 0.43' Overlap Cap Storage= 3.4 cf x 2 x 5 rows = 34.2 cf

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

12 Chambers/Row x 7.12' Long +0.88' Cap Length x 2 = 87.17' Row Length +12.0" End Stone x 2 = 89.17' Base Length

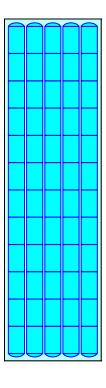
5 Rows x 51.0" Wide + 6.0" Spacing x 4 + 12.0" Side Stone x 2 = 25.25' Base Width 6.0" Stone Base + 33.0" Chamber Height + 6.0" Stone Cover = 3.75' Field Height

60 Chambers x 50.6 cf + 3.4 cf Cap Volume x 2 x 5 Rows = 3,069.7 cf Chamber Storage

8,443.0 cf Field - 3,069.7 cf Chambers = 5,373.2 cf Stone x 40.0% Voids = 2,149.3 cf Stone Storage

Chamber Storage + Stone Storage = 5,219.0 cf = 0.120 af Overall Storage Efficiency = 61.8% Overall System Size = 89.17' x 25.25' x 3.75'

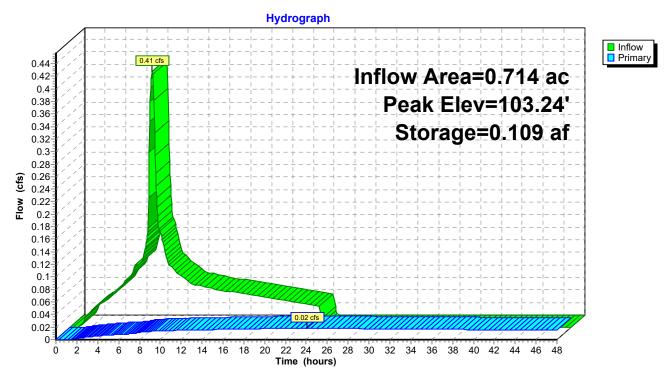
60 Chambers 312.7 cy Field 199.0 cy Stone





Page 8

Pond 3P: Det SC-800



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Type IA 24-hr 10-Year Rainfall=3.45"

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predev flowrate

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Total Site (PreDev) Runoff Area=31,100 sf 0.00% Impervious Runoff Depth=0.98"

Tc=10.0 min CN=70/0 Runoff=0.11 cfs 0.058 af

Subcatchment2S: Total Site (PostDev) Runoff Area=31,100 sf 98.99% Impervious Runoff Depth=3.20"

Tc=5.0 min CN=74/98 Runoff=0.57 cfs 0.190 af

Pond 3P: Det SC-800 Peak Elev=103.69' Storage=0.119 af Inflow=0.57 cfs 0.190 af

Outflow=0.09 cfs 0.106 af

Total Runoff Area = 1.428 ac Runoff Volume = 0.248 af Average Runoff Depth = 2.09" 50.50% Pervious = 0.721 ac 49.50% Impervious = 0.707 ac

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Page 10

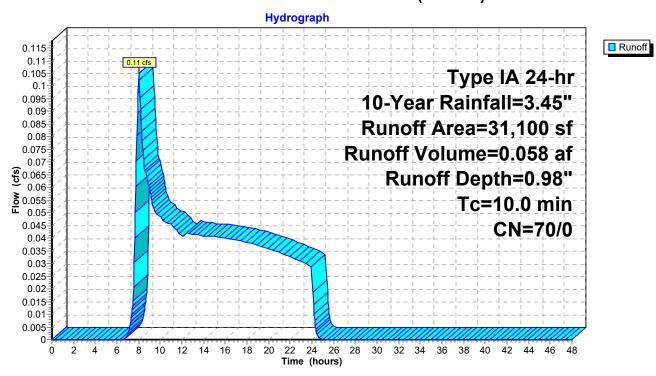
Summary for Subcatchment 1S: Total Site (PreDev)

8.03 hrs, Volume= 0.058 af, Depth= 0.98" Runoff 0.11 cfs @

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-48.00 hrs, dt= 0.05 hrs Type IA 24-hr 10-Year Rainfall=3.45"

	Α	rea (sf)	CN [Description		
*		31,100	70			
		31,100	70 100.00% Pervious Are			ea
	Тс	Length	Slope	Velocity	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	10.0					Direct Entry,

Subcatchment 1S: Total Site (PreDev)



Page 11

Summary for Subcatchment 2S: Total Site (PostDev)

[49] Hint: Tc<2dt may require smaller dt

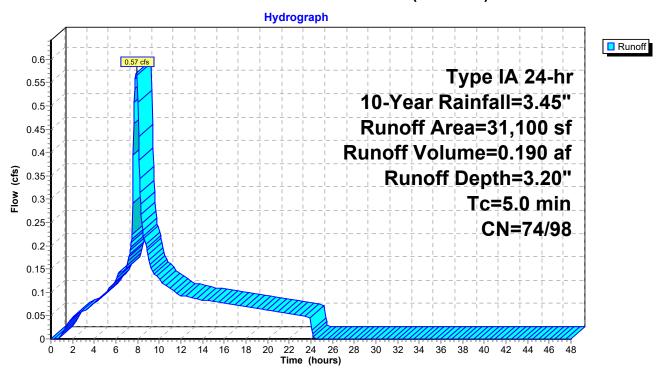
Runoff = 0.57 cfs @ 7.90 hrs, Volume= 0.190 af, Depth= 3.20"

Routed to Pond 3P: Det SC-800

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-48.00 hrs, dt= 0.05 hrs Type IA 24-hr 10-Year Rainfall=3.45"

_	Area (sf)	CN	Description				
*	30,786	98					
*	314	74					
	31,100	98	Weighted Av	erage			
	314	74	1.01% Pervious Area				
	30,786	98	98.99% Impe	ervious Ar	rea		
	Tc Length (min) (feet)		,	Capacity (cfs)	Description		
_	5.0	,	, , ,	, ,	Direct Entry.		

Subcatchment 2S: Total Site (PostDev)



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Type IA 24-hr 10-Year Rainfall=3.45"

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<u>Page 12</u>

Summary for Pond 3P: Det SC-800

Inflow Area = 0.714 ac, 98.99% Impervious, Inflow Depth = 3.20" for 10-Year event

Inflow = 0.57 cfs @ 7.90 hrs, Volume= 0.190 af

Outflow = 0.09 cfs @ 13.62 hrs, Volume= 0.106 af, Atten= 85%, Lag= 343.6 min

Primary = 0.09 cfs @ 13.62 hrs, Volume= 0.106 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs Peak Elev= 103.69' @ 13.62 hrs Surf.Area= 0.052 ac Storage= 0.119 af

Plug-Flow detention time= 945.2 min calculated for 0.106 af (56% of inflow)

Center-of-Mass det. time= 700.6 min (1,365.7 - 665.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	100.00'	0.049 af	25.25'W x 89.17'L x 3.75'H Field A
			0.194 af Overall - 0.070 af Embedded = 0.123 af x 40.0% Voids
#2A	100.50'	0.070 af	ADS_StormTech SC-800 +Cap x 60 Inside #1
			Effective Size= 45.0"W x 33.0"H => 7.11 sf x 7.12'L = 50.6 cf
			Overall Size= 51.0"W x 33.0"H x 7.55'L with 0.43' Overlap
			60 Chambers in 5 Rows
			Cap Storage= 3.4 cf x 2 x 5 rows = 34.2 cf
		0.400 of	Total Available Ctarana

0.120 af Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	0.625" Vert. Orifice/Grate C= 0.600
			Limited to weir flow at low heads
#2	Primary	103.65'	8.000" Horiz. Orifice/Grate C= 0.600
	-		Limited to weir flow at low heads

Primary OutFlow Max=0.08 cfs @ 13.62 hrs HW=103.69' (Free Discharge)

1=Orifice/Grate (Orifice Controls 0.02 cfs @ 9.22 fps)

-2=Orifice/Grate (Weir Controls 0.06 cfs @ 0.68 fps)

Page 13

Pond 3P: Det SC-800 - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-800 +Cap (ADS StormTech®SC-800 with cap volume)

Effective Size= 45.0"W x 33.0"H => 7.11 sf x 7.12'L = 50.6 cf Overall Size= 51.0"W x 33.0"H x 7.55'L with 0.43' Overlap Cap Storage= 3.4 cf x 2 x 5 rows = 34.2 cf

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

12 Chambers/Row x 7.12' Long +0.88' Cap Length x 2 = 87.17' Row Length +12.0" End Stone x 2 = 89.17' Base Length

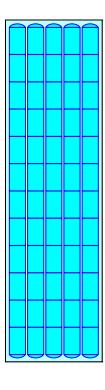
5 Rows x 51.0" Wide + 6.0" Spacing x 4 + 12.0" Side Stone x 2 = 25.25' Base Width 6.0" Stone Base + 33.0" Chamber Height + 6.0" Stone Cover = 3.75' Field Height

60 Chambers x 50.6 cf + 3.4 cf Cap Volume x 2 x 5 Rows = 3,069.7 cf Chamber Storage

8,443.0 cf Field - 3,069.7 cf Chambers = 5,373.2 cf Stone x 40.0% Voids = 2,149.3 cf Stone Storage

Chamber Storage + Stone Storage = 5,219.0 cf = 0.120 af Overall Storage Efficiency = 61.8% Overall System Size = 89.17' x 25.25' x 3.75'

60 Chambers 312.7 cy Field 199.0 cy Stone

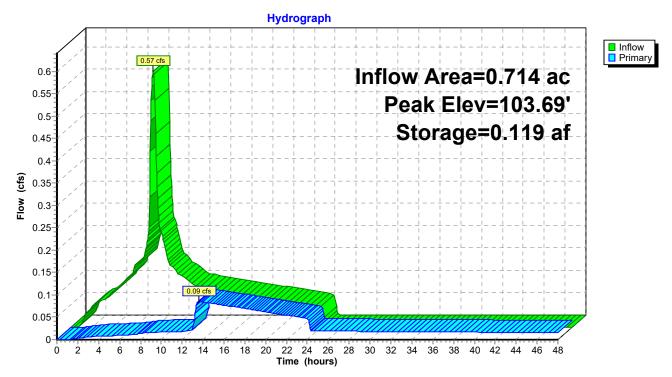




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Page 14

Pond 3P: Det SC-800



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Type IA 24-hr 25-Year Rainfall=3.90"

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Page 15

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Total Site (PreDev) Runoff Area=31,100 sf 0.00% Impervious Runoff Depth=1.26"

Tc=10.0 min CN=70/0 Runoff=0.15 cfs 0.075 af

Subcatchment2S: Total Site (PostDev) Runoff Area=31,100 sf 98.99% Impervious Runoff Depth=3.64"

Tc=5.0 min CN=74/98 Runoff=0.65 cfs 0.217 af

Pond 3P: Det SC-800 Peak Elev=103.71' Storage=0.119 af Inflow=0.65 cfs 0.217 af

Outflow=0.12 cfs 0.133 af

Total Runoff Area = 1.428 ac Runoff Volume = 0.292 af Average Runoff Depth = 2.45" 50.50% Pervious = 0.721 ac 49.50% Impervious = 0.707 ac

Peak flowrate for conveyance

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Page 16

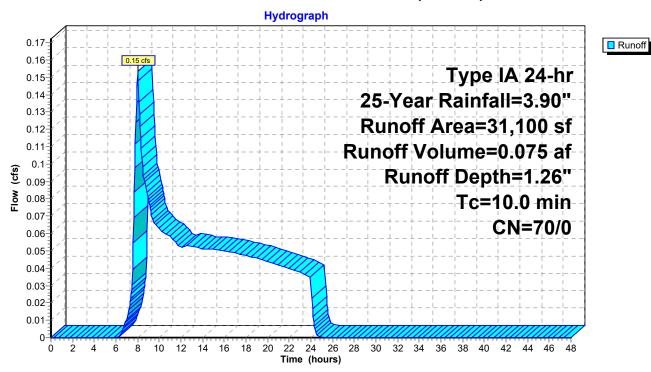
Summary for Subcatchment 1S: Total Site (PreDev)

Runoff = 0.15 cfs @ 8.02 hrs, Volume= 0.075 af, Depth= 1.26"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-48.00 hrs, dt= 0.05 hrs Type IA 24-hr 25-Year Rainfall=3.90"

_	Α	rea (sf)	CN I	Description		
*		31,100	70			
		31,100	1,100 70 100.00% Pervious Area			
	Tc	Length	Slope	Velocity	Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
_	10.0					Direct Entry,

Subcatchment 1S: Total Site (PreDev)



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Page 17

Summary for Subcatchment 2S: Total Site (PostDev)

[49] Hint: Tc<2dt may require smaller dt

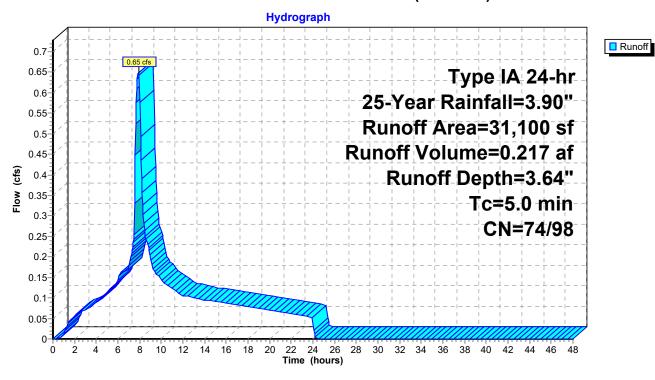
Runoff = 0.65 cfs @ 7.90 hrs, Volume= 0.217 af, Depth= 3.64"

Routed to Pond 3P: Det SC-800

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-48.00 hrs, dt= 0.05 hrs Type IA 24-hr 25-Year Rainfall=3.90"

_	Area (sf)	CN	Description		
*	30,786	98			
*	314	74			
	31,100	98	Weighted Aver	age	
	314 74 1.01% Pervious Area				
	30,786	0,786 98 98.99% Impervious Are			rea
	Tc Length (min) (feet)	Slo (ft/	•	apacity (cfs)	•
_	5.0	,	, , ,	• /	Direct Entry.

Subcatchment 2S: Total Site (PostDev)



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Page 18

Summary for Pond 3P: Det SC-800

Inflow Area = 0.714 ac, 98.99% Impervious, Inflow Depth = 3.64" for 25-Year event

Inflow = 0.65 cfs @ 7.90 hrs, Volume= 0.217 af

Outflow = 0.12 cfs @ 11.21 hrs, Volume= 0.133 af, Atten= 82%, Lag= 198.8 min

Primary = 0.12 cfs @ 11.21 hrs, Volume= 0.133 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs Peak Elev= 103.71' @ 11.21 hrs Surf.Area= 0.052 ac Storage= 0.119 af

Plug-Flow detention time= 819.7 min calculated for 0.133 af (61% of inflow)

Center-of-Mass det. time= 595.3 min (1,257.4 - 662.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	100.00'	0.049 af	25.25'W x 89.17'L x 3.75'H Field A
			0.194 af Overall - 0.070 af Embedded = 0.123 af x 40.0% Voids
#2A	100.50'	0.070 af	ADS_StormTech SC-800 +Capx 60 Inside #1
			Effective Size= 45.0"W x 33.0"H => 7.11 sf x 7.12'L = 50.6 cf
			Overall Size= 51.0"W x 33.0"H x 7.55'L with 0.43' Overlap
			60 Chambers in 5 Rows
			Cap Storage= 3.4 cf x 2 x 5 rows = 34.2 cf
		2 122 5	

0.120 af Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	0.625" Vert. Orifice/Grate C= 0.600
	-		Limited to weir flow at low heads
#2	Primary	103.65'	8.000" Horiz. Orifice/Grate C= 0.600
	•		Limited to weir flow at low heads

Primary OutFlow Max=0.12 cfs @ 11.21 hrs HW=103.71' (Free Discharge)

1=Orifice/Grate (Orifice Controls 0.02 cfs @ 9.24 fps)

-2=Orifice/Grate (Weir Controls 0.10 cfs @ 0.80 fps)

Page 19

Pond 3P: Det SC-800 - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-800 +Cap (ADS StormTech®SC-800 with cap volume)

Effective Size= 45.0"W x 33.0"H => 7.11 sf x 7.12'L = 50.6 cf Overall Size= 51.0"W x 33.0"H x 7.55'L with 0.43' Overlap Cap Storage= 3.4 cf x 2 x 5 rows = 34.2 cf

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

12 Chambers/Row x 7.12' Long +0.88' Cap Length x 2 = 87.17' Row Length +12.0" End Stone x 2 = 89.17' Base Length

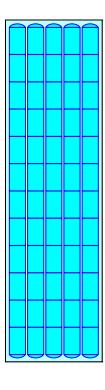
5 Rows x 51.0" Wide + 6.0" Spacing x 4 + 12.0" Side Stone x 2 = 25.25' Base Width 6.0" Stone Base + 33.0" Chamber Height + 6.0" Stone Cover = 3.75' Field Height

60 Chambers x 50.6 cf + 3.4 cf Cap Volume x 2 x 5 Rows = 3,069.7 cf Chamber Storage

8,443.0 cf Field - 3,069.7 cf Chambers = 5,373.2 cf Stone x 40.0% Voids = 2,149.3 cf Stone Storage

Chamber Storage + Stone Storage = 5,219.0 cf = 0.120 af Overall Storage Efficiency = 61.8% Overall System Size = 89.17' x 25.25' x 3.75'

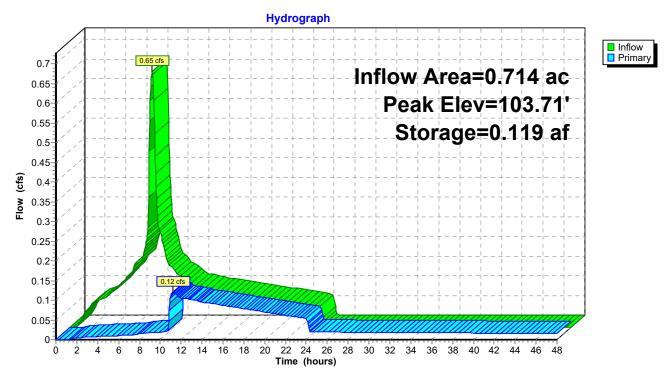
60 Chambers 312.7 cy Field 199.0 cy Stone

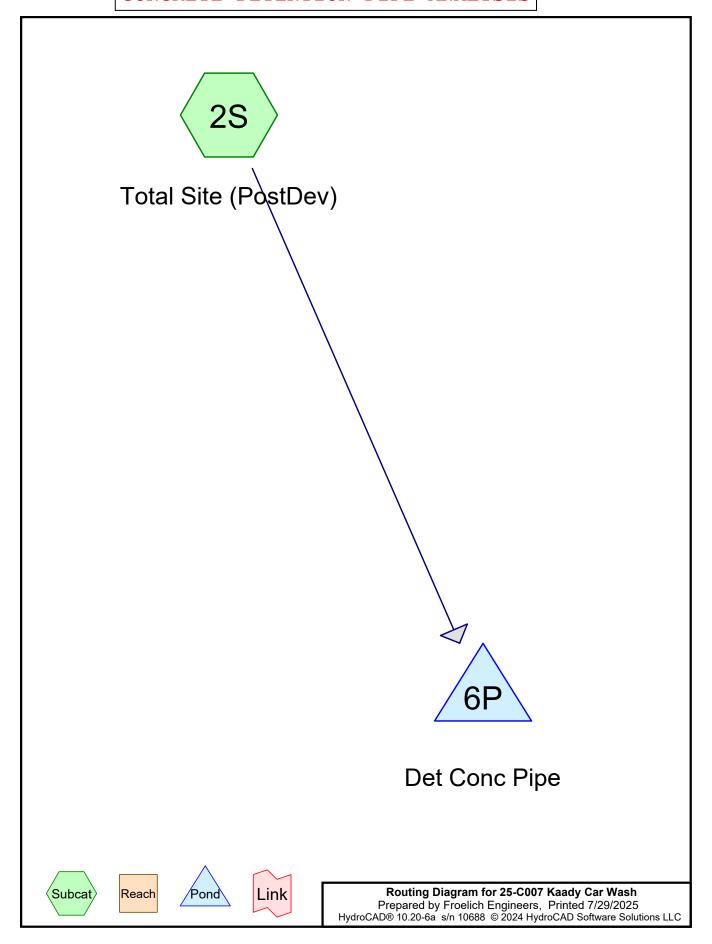




Page 20

Pond 3P: Det SC-800





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Page 2

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Year	Type IA 24-hr		Default	24.00	1	2.50	2
2	10-Year	Type IA 24-hr		Default	24.00	1	3.45	2
3	25-Year	Type IA 24-hr		Default	24.00	1	3.90	2

Type IA 24-hr 2-Year Rainfall=2.50" Printed 7/29/2025

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Page 3

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment2S: Total Site (PostDev) Runoff Area=31,100 sf 98.99% Impervious Runoff Depth=2.25"

Tc=5.0 min CN=74/98 Runoff=0.41 cfs 0.134 af

Pond 6P: Det Conc Pipe Peak Elev=102.63' Storage=0.105 af Inflow=0.41 cfs 0.134 af

Outflow=0.02 cfs 0.066 af

Total Runoff Area = 0.714 ac Runoff Volume = 0.134 af Average Runoff Depth = 2.25" 1.01% Pervious = 0.007 ac 98.99% Impervious = 0.707 ac HydroCAD® 10.20-6a s/n 10688 © 2024 HydroCAD Software Solutions LLC

Page 4

Summary for Subcatchment 2S: Total Site (PostDev)

[49] Hint: Tc<2dt may require smaller dt

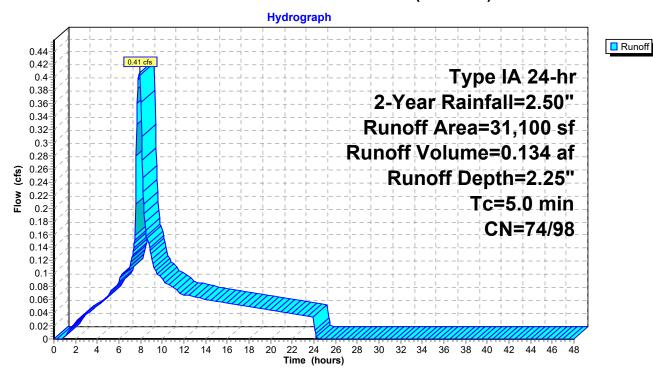
Runoff = 0.41 cfs @ 7.90 hrs, Volume= 0.134 af, Depth= 2.25"

Routed to Pond 6P: Det Conc Pipe

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-48.00 hrs, dt= 0.05 hrs Type IA 24-hr 2-Year Rainfall=2.50"

	Area (s	sf) CN	Description		
*	30,78	36 98			
*	3	14 74			
	31,10	00 98	Weighted A	verage	
	3	14 74	1.01% Perv	ious Area	
	30,78	36 98	98.99% lm	pervious Ar	rea
	Tc Len	•		Capacity	•
_	(min) (fe	et) (ft	/ft) (ft/sec)	(cfs)	
	5.0				Direct Entry,

Subcatchment 2S: Total Site (PostDev)



Type IA 24-hr 2-Year Rainfall=2.50"

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Page 5

Summary for Pond 6P: Det Conc Pipe

Inflow Area = 0.714 ac, 98.99% Impervious, Inflow Depth = 2.25" for 2-Year event

Inflow = 0.41 cfs @ 7.90 hrs, Volume= 0.134 af

Outflow = 0.02 cfs @ 24.07 hrs, Volume= 0.066 af, Atten= 95%, Lag= 970.2 min

Primary = 0.02 cfs @ 24.07 hrs, Volume= 0.066 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs Peak Elev= 102.63' @ 24.07 hrs Surf.Area= 0.065 ac Storage= 0.105 af

Plug-Flow detention time= 1,181.4 min calculated for 0.066 af (49% of inflow) Center-of-Mass det. time= 915.5 min (1,590.0 - 674.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	100.00'	0.028 af	22.00'W x 129.00'L x 3.08'H Field A
			0.201 af Overall - 0.132 af Embedded = 0.069 af x 40.0% Voids
#2A	100.00'	0.087 af	RCP Round 30 x 96 Inside #1
			Inside= 30.0"W x 30.0"H => 4.91 sf x 8.00'L = 39.3 cf
			Outside= 37.0"W x 37.0"H => 7.46 sf x 8.00'L = 59.7 cf
			96 Chambers in 6 Rows

0.114 af Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	0.700" Vert. Orifice/Grate C= 0.600
			Limited to weir flow at low heads
#2	Primary	102.90'	8.000" Horiz. Orifice/Grate C= 0.600
	•		Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 24.07 hrs HW=102.63' (Free Discharge)

-1=Orifice/Grate (Orifice Controls 0.02 cfs @ 7.76 fps)

—2=Orifice/Grate (Controls 0.00 cfs)

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Page 6

Pond 6P: Det Conc Pipe - Chamber Wizard Field A

Chamber Model = RCP Round 30 (Round Reinforced Concrete Pipe)

Inside= 30.0"W x 30.0"H => 4.91 sf x 8.00'L = 39.3 cf Outside= 37.0"W x 37.0"H => 7.46 sf x 8.00'L = 59.7 cf

37.0" Wide + 6.0" Spacing = 43.0" C-C Row Spacing

16 Chambers/Row \times 8.00' Long = 128.00' Row Length +6.0" End Stone \times 2 = 129.00' Base Length 6 Rows \times 37.0" Wide + 6.0" Spacing \times 5 + 6.0" Side Stone \times 2 = 22.00' Base Width 37.0" Chamber Height = 3.08' Field Height

96 Chambers x 39.3 cf = 3,769.9 cf Chamber Storage 96 Chambers x 59.7 cf = 5,732.0 cf Displacement

8,750.5 cf Field - 5,732.0 cf Chambers = 3,018.5 cf Stone x 40.0% Voids = 1,207.4 cf Stone Storage

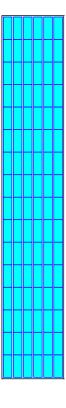
Chamber Storage + Stone Storage = 4,977.3 cf = 0.114 af

Overall Storage Efficiency > 56,9%

Overall System Size = 129.00' x 22.00' x 3.08'

OVERALL SIZE

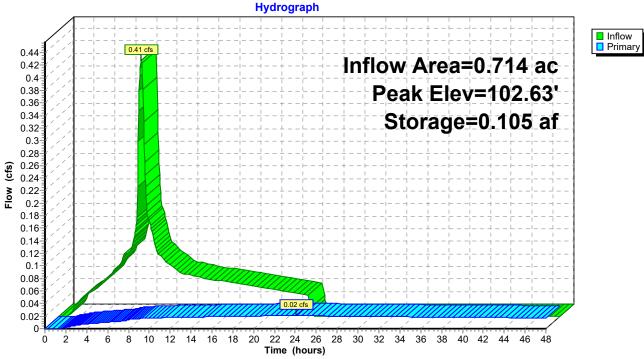
96 Chambers 324.1 cy Field 111.8 cy Stone



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Page 7

Pond 6P: Det Conc Pipe





Type IA 24-hr 10-Year Rainfall=3.45"

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Page 8

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment2S: Total Site (PostDev) Runoff Area=31,100 sf 98.99% Impervious Runoff Depth=3.20"

Tc=5.0 min CN=74/98 Runoff=0.57 cfs 0.190 af

Pond 6P: Det Conc Pipe Peak Elev=102.95' Storage=0.111 af Inflow=0.57 cfs 0.190 af

Outflow=0.09 cfs 0.117 af

Total Runoff Area = 0.714 ac Runoff Volume = 0.190 af Average Runoff Depth = 3.20" 1.01% Pervious = 0.007 ac 98.99% Impervious = 0.707 ac HydroCAD® 10.20-6a s/n 10688 © 2024 HydroCAD Software Solutions LLC

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Summary for Subcatchment 2S: Total Site (PostDev)

[49] Hint: Tc<2dt may require smaller dt

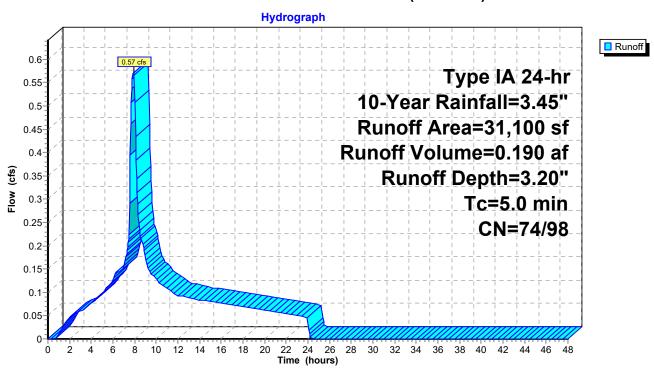
Runoff = 0.57 cfs @ 7.90 hrs, Volume= 0.190 af, Depth= 3.20"

Routed to Pond 6P: Det Conc Pipe

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-48.00 hrs, dt= 0.05 hrs Type IA 24-hr 10-Year Rainfall=3.45"

_	Area	a (sf)	CN I	Description		
*	30	,786	98			
*		314	74			
	31	,100	98 \	Weighted A	verage	
		314		1.01% Perv		
	30	,786	98	98.99% Imp	pervious Ar	rea
		ength	Slope	•	Capacity	·
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Subcatchment 2S: Total Site (PostDev)



Type IA 24-hr 10-Year Rainfall=3.45"

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<u>Page 10</u>

Summary for Pond 6P: Det Conc Pipe

Inflow Area = 0.714 ac, 98.99% Impervious, Inflow Depth = 3.20" for 10-Year event

Inflow = 0.57 cfs @ 7.90 hrs, Volume= 0.190 af

Outflow = 0.09 cfs @ 12.65 hrs, Volume= 0.117 af, Atten= 84%, Lag= 285.2 min

Primary = 0.09 cfs @ 12.65 hrs, Volume= 0.117 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs Peak Elev= 102.95' @ 12.65 hrs Surf.Area= 0.065 ac Storage= 0.111 af

Plug-Flow detention time= 908.7 min calculated for 0.117 af (62% of inflow)

Center-of-Mass det. time= 684.7 min (1,349.8 - 665.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	100.00'	0.028 af	22.00'W x 129.00'L x 3.08'H Field A
			0.201 af Overall - 0.132 af Embedded = 0.069 af x 40.0% Voids
#2A	100.00'	0.087 af	RCP Round 30 x 96 Inside #1
			Inside= 30.0"W x 30.0"H => 4.91 sf x 8.00'L = 39.3 cf
			Outside= 37.0"W x 37.0"H => 7.46 sf x 8.00'L = 59.7 cf
			96 Chambers in 6 Rows
		0.444 [T + 1 A 11 11 Ot

0.114 af Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	0.700" Vert. Orifice/Grate C= 0.600
			Limited to weir flow at low heads
#2	Primary	102.90'	8.000" Horiz. Orifice/Grate C= 0.600
	•		Limited to weir flow at low heads

Primary OutFlow Max=0.09 cfs @ 12.65 hrs HW=102.95' (Free Discharge)

-1=Orifice/Grate (Orifice Controls 0.02 cfs @ 8.22 fps)

—2=Orifice/Grate (Weir Controls 0.07 cfs @ 0.70 fps)

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Page 11

Pond 6P: Det Conc Pipe - Chamber Wizard Field A

Chamber Model = RCP Round 30 (Round Reinforced Concrete Pipe)

Inside= 30.0"W x 30.0"H => 4.91 sf x 8.00'L = 39.3 cf Outside= 37.0"W x 37.0"H => 7.46 sf x 8.00'L = 59.7 cf

37.0" Wide + 6.0" Spacing = 43.0" C-C Row Spacing

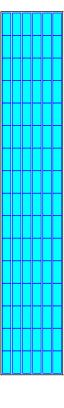
16 Chambers/Row x 8.00' Long = 128.00' Row Length +6.0" End Stone x 2 = 129.00' Base Length 6 Rows x 37.0" Wide + 6.0" Spacing x 5 + 6.0" Side Stone x 2 = 22.00' Base Width 37.0" Chamber Height = 3.08' Field Height

96 Chambers x 39.3 cf = 3,769.9 cf Chamber Storage 96 Chambers x 59.7 cf = 5,732.0 cf Displacement

8,750.5 cf Field - 5,732.0 cf Chambers = 3,018.5 cf Stone x 40.0% Voids = 1,207.4 cf Stone Storage

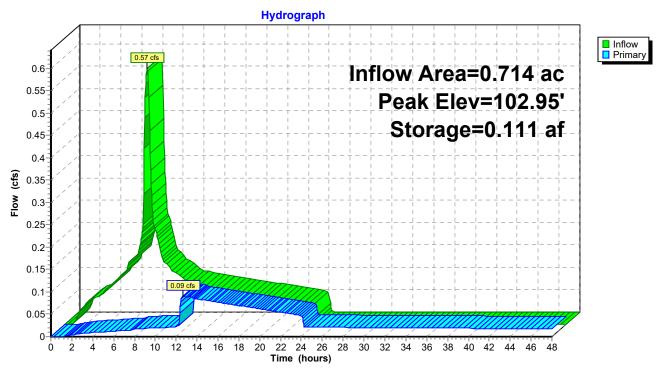
Chamber Storage + Stone Storage = 4,977.3 cf = 0.114 af Overall Storage Efficiency = 56.9% Overall System Size = 129.00' x 22.00' x 3.08'

96 Chambers 324.1 cy Field 111.8 cy Stone



Page 12

Pond 6P: Det Conc Pipe



Type IA 24-hr 25-Year Rainfall=3.90"

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Page 13

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment2S: Total Site (PostDev) Runoff Area=31,100 sf 98.99% Impervious Runoff Depth=3.64"

Tc=5.0 min CN=74/98 Runoff=0.65 cfs 0.217 af

Pond 6P: Det Conc Pipe

Peak Elev=102.96' Storage=0.112 af Inflow=0.65 cfs 0.217 af

Outflow=0.13 cfs 0.144 af

Total Runoff Area = 0.714 ac Runoff Volume = 0.217 af Average Runoff Depth = 3.64" 1.01% Pervious = 0.007 ac 98.99% Impervious = 0.707 ac HydroCAD® 10.20-6a s/n 10688 © 2024 HydroCAD Software Solutions LLC

Page 14

Summary for Subcatchment 2S: Total Site (PostDev)

[49] Hint: Tc<2dt may require smaller dt

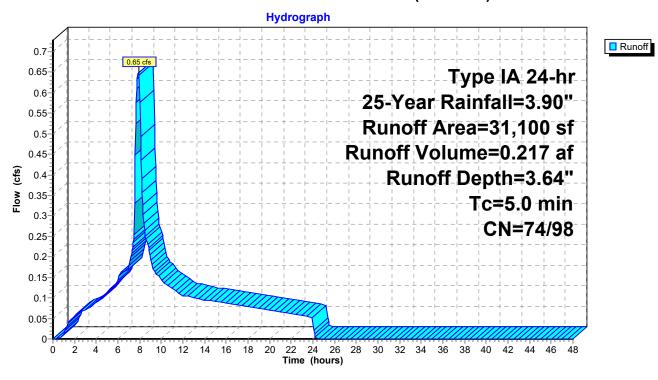
Runoff = 0.65 cfs @ 7.90 hrs, Volume= 0.217 af, Depth= 3.64"

Routed to Pond 6P: Det Conc Pipe

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-48.00 hrs, dt= 0.05 hrs Type IA 24-hr 25-Year Rainfall=3.90"

	Area (s	sf) CN	Description		
*	30,78	36 98			
*	3	14 74			
	31,10	00 98	Weighted A	verage	
	3	14 74	1.01% Perv	ious Area	
	30,78	36 98	98.99% lm	pervious Ar	rea
	Tc Len	•		Capacity	•
_	(min) (fe	et) (ft	/ft) (ft/sec)	(cfs)	
	5.0				Direct Entry,

Subcatchment 2S: Total Site (PostDev)



Type IA 24-hr 25-Year Rainfall=3.90"

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Page 15

Summary for Pond 6P: Det Conc Pipe

Inflow Area = 0.714 ac, 98.99% Impervious, Inflow Depth = 3.64" for 25-Year event

Inflow = 0.65 cfs @ 7.90 hrs, Volume= 0.217 af

Outflow = 0.13 cfs @ 10.69 hrs, Volume= 0.144 af, Atten= 80%, Lag= 167.5 min

Primary = 0.13 cfs @ 10.69 hrs, Volume= 0.144 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs Peak Elev= 102.96' @ 10.69 hrs Surf.Area= 0.065 ac Storage= 0.112 af

Plug-Flow detention time= 789.5 min calculated for 0.144 af (66% of inflow)

Center-of-Mass det. time= 585.3 min (1,247.4 - 662.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	100.00'	0.028 af	22.00'W x 129.00'L x 3.08'H Field A
			0.201 af Overall - 0.132 af Embedded = 0.069 af x 40.0% Voids
#2A	100.00'	0.087 af	RCP Round 30 x 96 Inside #1
			Inside= 30.0"W x 30.0"H => 4.91 sf x 8.00'L = 39.3 cf
			Outside= 37.0"W x 37.0"H => 7.46 sf x 8.00'L = 59.7 cf
			96 Chambers in 6 Rows
		0.444.5	T () A ()) O(

0.114 af Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	0.700" Vert. Orifice/Grate C= 0.600
	•		Limited to weir flow at low heads
#2	Primary	102.90'	8.000" Horiz. Orifice/Grate C= 0.600
	•		Limited to weir flow at low heads

Primary OutFlow Max=0.13 cfs @ 10.69 hrs HW=102.96' (Free Discharge)

-1=Orifice/Grate (Orifice Controls 0.02 cfs @ 8.25 fps)

-2=Orifice/Grate (Weir Controls 0.11 cfs @ 0.82 fps)

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Page 16

Pond 6P: Det Conc Pipe - Chamber Wizard Field A

Chamber Model = RCP Round 30 (Round Reinforced Concrete Pipe)

Inside= 30.0"W x 30.0"H => 4.91 sf x 8.00'L = 39.3 cf Outside= 37.0"W x 37.0"H => 7.46 sf x 8.00'L = 59.7 cf

37.0" Wide + 6.0" Spacing = 43.0" C-C Row Spacing

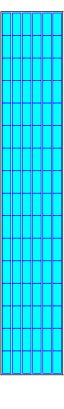
16 Chambers/Row x 8.00' Long = 128.00' Row Length +6.0" End Stone x 2 = 129.00' Base Length 6 Rows x 37.0" Wide + 6.0" Spacing x 5 + 6.0" Side Stone x 2 = 22.00' Base Width 37.0" Chamber Height = 3.08' Field Height

96 Chambers x 39.3 cf = 3,769.9 cf Chamber Storage 96 Chambers x 59.7 cf = 5,732.0 cf Displacement

8,750.5 cf Field - 5,732.0 cf Chambers = 3,018.5 cf Stone x 40.0% Voids = 1,207.4 cf Stone Storage

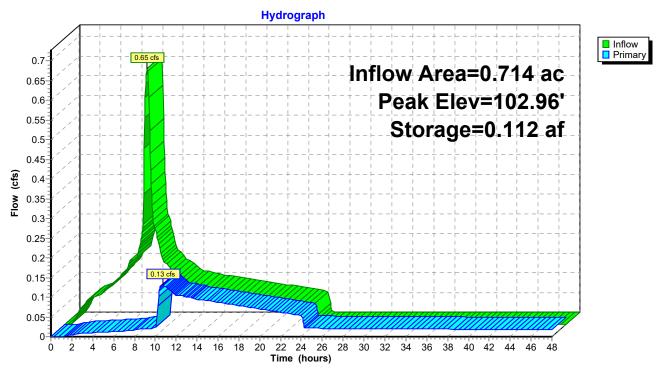
Chamber Storage + Stone Storage = 4,977.3 cf = 0.114 af Overall Storage Efficiency = 56.9% Overall System Size = 129.00' x 22.00' x 3.08'

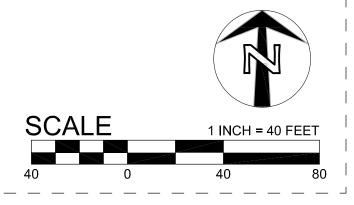
96 Chambers 324.1 cy Field 111.8 cy Stone



Page 17

Pond 6P: Det Conc Pipe





tva architects inc.

920 sw sixth avenue | suite 1500 | portland, oregon 97204 phone: 503 220 0668 | www.tvaarchitects.com

Plotted: 7/31/25 at 4:08pm By: atomlinson



APPENDIX G EXHIBIT UTILITY PLAN

KAADY CAR WASH - WEST LINN

18850 WILLAMETTE DRIVE WEST LINN, OR

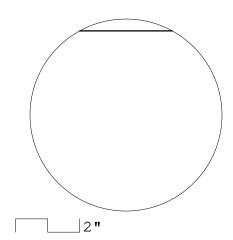
Appendix H: Stormwater Conveyance Calculations

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Project 25-C007
 Kaady Car Wash

GRAVITY PIPE FLOW (Chezy-Manning)

6-inch Pipe @ 1.5%



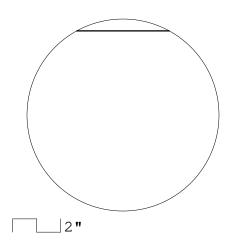
diameter = 6.0"
slope = 1.50%
material: ABS, PVC
Manning's n = 0.013
depth of flow = 93.82% of diameter (max)
wetted perimeter = 1.32'
area = 0.19 s.f.
hydraulic radius = 0.14'
velocity = 3.87 fps
flow = 0.74 cfs

Froelich Engineers

Project 25-C007
 Kaady Car Wash

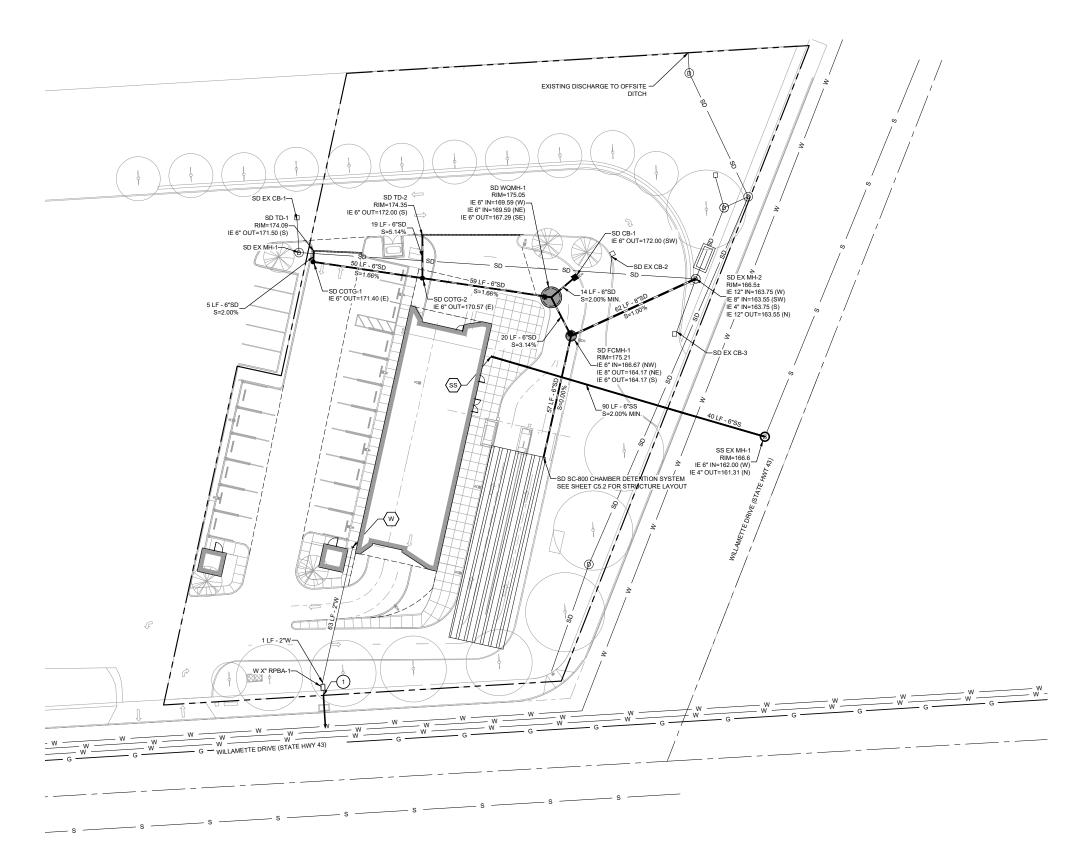
GRAVITY PIPE FLOW (Chezy-Manning)

8-inch Pipe @ 1.0%



diameter = 8.0"
slope = 1.00%
material: ABS, PVC
Manning's n = 0.013
depth of flow = 93.82% of diameter (max)
wetted perimeter = 1.76'
area = 0.34 s.f.
hydraulic radius = 0.19'
velocity = 3.83 fps
flow = 1.30 cfs

Appendix I: Utility Plan / Details



SHEET NOTES

- PIPE BEDDING AND BACKFILL FOR ALL UTILITIES SHALL BE DONE PER DETAIL X/C5.X.
- 2. STRUCTURES LOCATIONS ARE BASED ON CENTER OF STRUCTURE.
- 3. INSTALL TRUST BLOCK ON FIRE AND WATER LINES PER DETAIL X $\&\ X/CX.X.$

KEY NOTES

- COORDINATE WATER SERVICE POINT OF CONNECTION TO EXISTING X" LATERAL WITH CITY OF WEST LINN.
- 2 FIELD VERIFY LOCATION AND IE OF EXISTING XX" XXXXX LATERAL PRIOR TO CONSTRUCTION.
- 3 IRRIGATION BACKFLOW ASSEMBLY VAULT, SEE LANDSCAPE PLANS.

UTILITY LABEL LEGEND

STRUCTURE LABEL

```
UTILITY TYPE (SD=STORM DRAINAGE, S=SANITARY SEWER, W=WATER, FP=FIRE PROTECTION)

STRUCTURE TYPE CALLOUT

ID NUMBER (WHERE APPLICABLE)

XX XX-XX

X+XX XT X.X

LOCATION (WHERE APPLICABLE)

RIM=
IE IN = XXX

STRUCTURE INFO (WHERE APPLICABLE)

IE OUT = XXX
```

PIPE LABEL

```
UTILITY LENGTH

UTILITY SIZE

UTILITY TYPE

XXLF - XX" XX

S=X.XX%

SLOPE (WHERE APPLICABLE)
```

STRUCTURE TYPE

CALLOUT	DESCRIPTION	DETAIL REF.
BEND	BEND, USE FITTING IF API	PLICABLE 🕥
BWV	BACKWATER VALVE	$\frac{-(x\hat{x}x)}{(x\hat{x}\hat{x}\hat{x}\hat{x}\hat{x}\hat{x}\hat{x}\hat{x}\hat{x}x$
CB	TRAPPED CATCH BASIN	${\left(\times \right) }$
CO	CLEANOUT TO GRADE	\circ
CONN	CONNECTION	
DW	DRYWELL	
FCMH	FLOW CONTROL MANHOL	E
FD	FOUNDATION DRAINAGE I	POINT OF CONN.
FH	FIRE HYDRANT	
GV	GATE VALVE	
OF	OUTFALL	
OV	OVERFLOW INLET	
SDMH	48" DIA, STORM DRAIN ME	1
TD	TRENCH DRAIN	
TEE	TEE CONNECTION	
WYE	WYE CONNECTION	

WATER QUALITY MANHOLE

SHEET LEGEND

WQMH

- SS CONNECT TO WASTE LINE. SEE PLUMBING PLANS FOR CONTINUATION. SIZE AS NOTED.
- RD CONNECT TO STORM DRAIN/ROOF DRAIN. SEE PLUMBING PLANS FOR CONTINUATION. SIZE AND IE AS NOTED.
- $\begin{tabular}{lll} \hline W & CONNECT TO COLD WATER SYSTEM. SEE PLUMBING PLANS FOR CONTINUATION. SIZE AS NOTED. \end{tabular}$
- FOR CONTINUATION: SIZE AS NOTED.
- UTILITY CROSSING. PROVIDE 12" MIN. CLEARANCE, U.N.O.





tva architects inc.

1750 sw yamhill st | suite 150 portland, oregon 97205 phone: 503 220 0668 www.tvaarchitects.com



CAR WASH MASH MASH MANN WEST LINN, OREGON

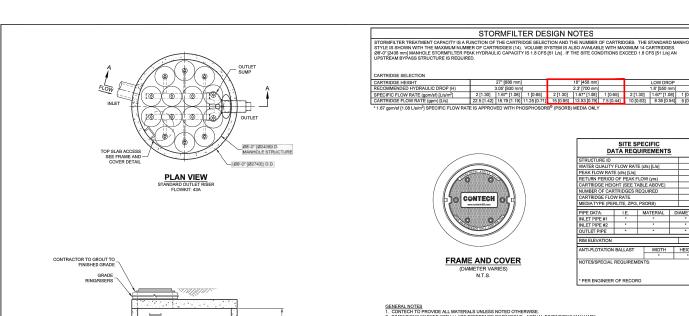
KAADY

CONSTRUCTION SET

UTILITY PLAN

Project # 22005

<u>C4.0</u>



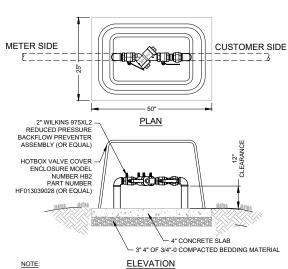
SECTION A-A

StormFilter*

ON ACTUATED. RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SH

CSNTECH

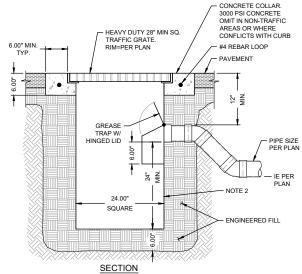
SFMH96 STORMFILTER STANDARD DETAIL



HOTBOX ENCLOSURE SHALL BE INSULATED AND HEATED. COORDINATE WITH ELECTRICAL PLANS FOR CONNECTION.

RPBA SHALL BE ACCESSIBLE BY VERTICALLY LIFTING OFF ENCLOSURE CONTRACTOR TO VERIFY ACCESSIBILITY PRIOR TO CONSTRUCTION.

REDUCED PRESSURE BACKFLOW ASSEMBLY (10)



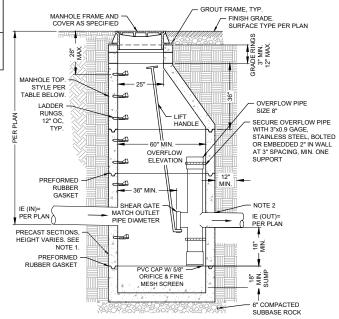
NOTES:

1. CONTRACTOR TO WIDEN EXCAVATION AS REQUIRED TO OBTAIN COMPACTION WITH CONTRACTORS COMPACTION EQUIPMENT

1/4" STEEL PLATE, BITUMINOUS COATED. AS MANUFACTURED BY GIBSON STEEL BASINS OR APPROVED EQUAL.

TRAPPED CATCH BASIN

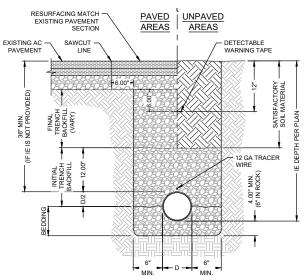
SCALE: NTS



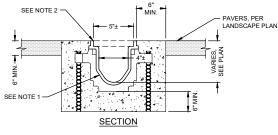
NOTES:
1. ALL PRECAST SECTIONS SHALL CONFORM TO REQUIREMENTS OF ASTM C-478.

- ALL CONNECTING PIPES SHALL HAVE FLEXIBLE, GASKETED AND UNRESTRAINED JOINT WITHIN 18" OF MANHOLE VAULT. PIPE SIZES NOTED ON FLANS. PIPE CONNECTION TO MANHOLES SHALL HAVE KOR-N-SEAL BOOT OR APPROVED EQUAL.
- ORIFICE AND OVERFLOW ELEVATIONS ARE RELATIVE TO IE (OUT)

FLOW CONTROL MANHOLE 6 SCALE: NTS



TYPICAL PIPE BEDDING AND BACKFILL

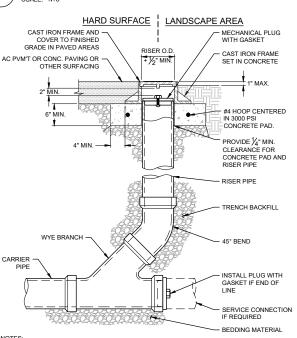


<u>NOTES:</u> 1. TRENCH DRAIN SHALL BE PRE-SLOPED 4" WIDE ZURN OR ACO TRENCH DRAIN OR

2. TRENCH DRAINS GRATE SHALL BE LOCKABLE HEAVY DUTY TRENCH GRATE - CLASS C.

3. TRENCH SYSTEM SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.





NOTES:

1. CAST IRON FRAME AND COVER SHALL MEET H-20 LOAD REQUIREMENT.

- 2. FOR CARRIER PIPE SIZE 6" AND LESS, PROVIDE RISER PIPE SIZE TO MATCH CARRIER PIPE.
- 3. FOR CARRIER PIPE SIZE 8"Ø AND LARGER, RISER PIPE SHALL BE 6"Ø.
- 4. RISER PIPE MATERIAL TO MATCH CARRIER PIPE MATERIAL





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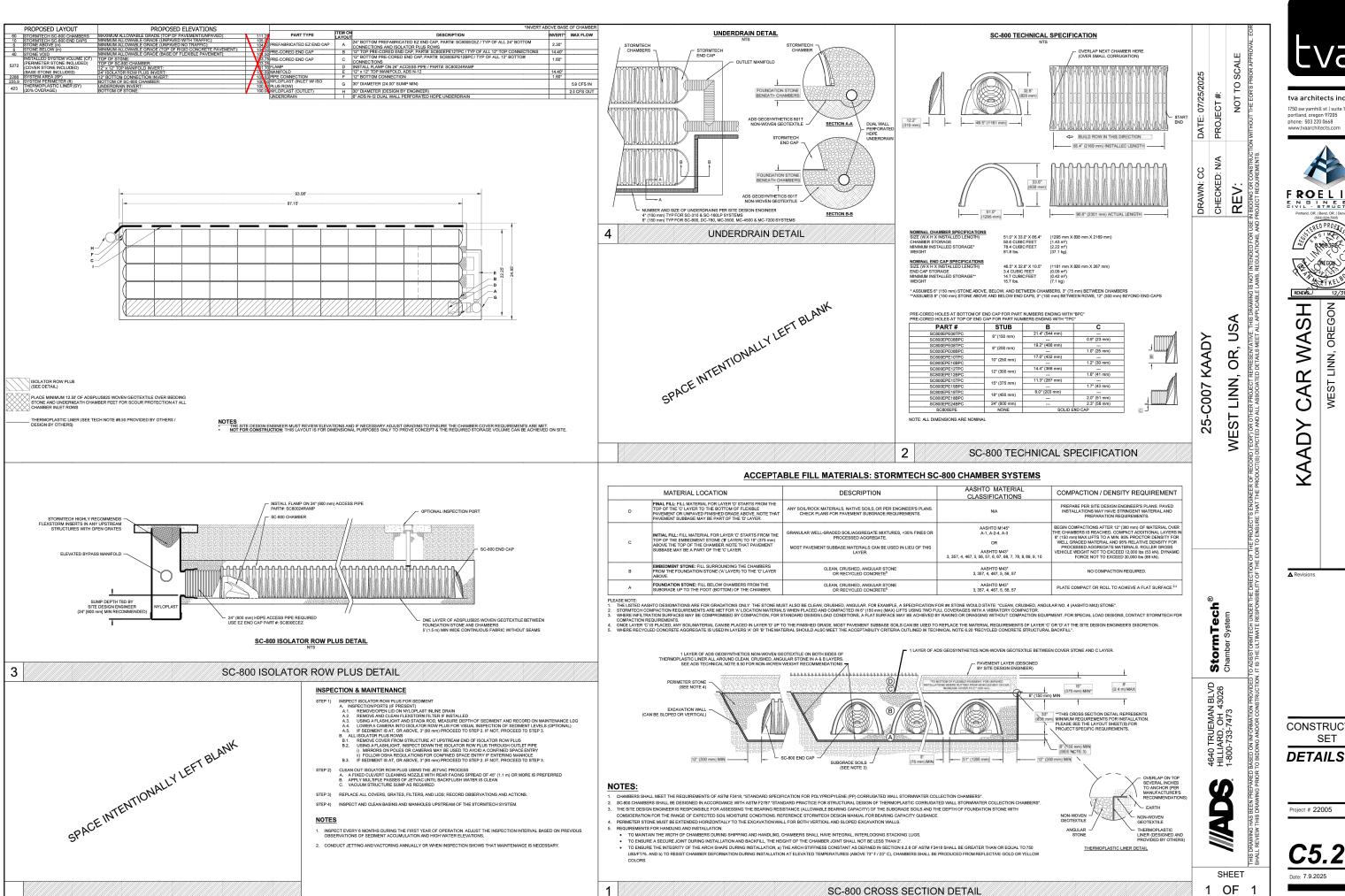
RENEWS **CAR WASH** WEST LINN, OREGON

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Project # 22005

DETAILS



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Appendix J: Operations and Maintenance Plan

to be provided in final stormwater report