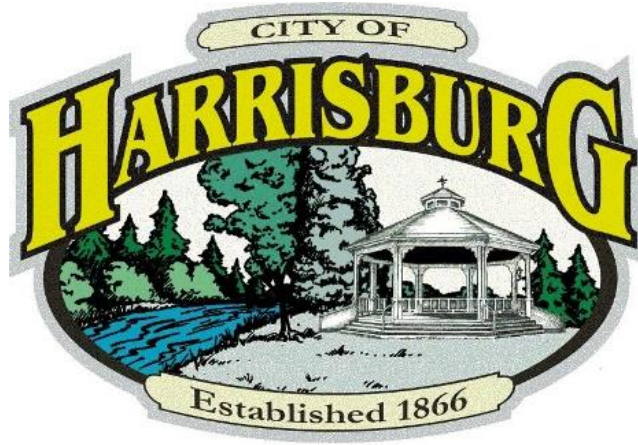




Planning Commission Agenda

July 15, 2025

7:00 PM

Chairperson: Todd Culver
Commissioners: Rhonda Giles, Jeremy Moritz, Kurt Kayner, Kent Wullenwaber, Susan Jackson, Joe Neely and Youth Advisor Taylor Tatum
Meeting Location: Harrisburg Municipal Center Located at 354 Smith St

PUBLIC NOTICES:

1. *This meeting is open to the public and will be tape-recorded.*
2. *Copies of the Staff Reports or other written documents relating to each item on the agenda are on file in the office of the City Recorder and are available for public inspection.*
3. *The City Hall Council Chambers are handicapped accessible. Persons with disabilities wishing accommodations, including assisted listening devices and sign language assistance are requested to contact City Hall at 541-995-6655, at least 48 hours prior to the meeting date. If a meeting is held with less than 48 hours' notice, reasonable effort shall be made to have an interpreter present. The requirement for an interpreter does not apply to an emergency meeting. ORS 192.630(5)*
4. *Persons contacting the City for information requiring accessibility for deaf, hard of hearing, or speech-impaired persons, can use TTY 711; call 1-800-735-1232, or for Spanish voice TTY, call 1-800-735-3896.*
5. *The City of Harrisburg does not discriminate against individuals with disabilities and is an equal opportunity provider.*
6. *For information regarding items of discussion on this agenda, please contact City Administrator Michele Eldridge, at 541-995-2200.*
7. *The City does ask that anyone running a fever, having an active cough or other respiratory issues, not to attend this meeting.*
8. *If you would like to provide testimony, and are unable to attend, please contact the City Recorder. We can accept written testimony up until 5:00 on the day of the meeting and can also call someone during the meeting if verbal testimony is needed.*

CALL TO ORDER AND ROLL CALL

CONCERNED CITIZEN(S) IN THE AUDIENCE. (Please limit presentation to two minutes per issue.)

PUBLIC HEARING

- 1. THE MATTER OF THE PROPOSED SITE PLAN REVIEW AND CONDITIONAL USE PERMIT FOR THE PROPOSED ISOVOLTA HT1 PLANT EXPANSION (LU 464-2025 & 465-2025) LOCATED AT 495 TERRITORIAL STREET.**

STAFF REPORT EXHIBITS:

Exhibit A: Application Form, Written Materials & Design Plan Set

ACTION: I MOTION TO APPROVE WITH CONDITIONS, AMEND, OR DENY THE ISOVOLTA SITE PLAN REVIEW AND CONDITIONAL USE PERMIT, (LU 464-2025 & 465-2025), SUBJECT TO THE CONDITIONS OF APPROVAL CONTAINED IN THE JULY 1, 2025 STAFF REPORT. THIS MOTION IS BASED ON FINDINGS CONTAINED IN THE JULY 1, 2025 STAFF REPORT AND ON APPLICABLE FINDINGS MADE DURING DELIBERATIONS ON THE REQUEST.

APPLICANT: Isovolta (Jim Woodall)

OTHERS

ADJOURN

Staff Report
Harrisburg Planning Commission
Harrisburg, Oregon

THE MATTER OF THE PROPOSED SITE PLAN REVIEW AND CONDITIONAL USE PERMIT FOR THE PROPOSED ISOVOLTA HT1 PLANT EXPANSION (LU 464-2025 & 465-2025) LOCATED AT 495 TERRITORIAL STREET.

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- APPLICANT:** Isovolta (Jim Woodall), PO Box 287, Harrisburg, Oregon, 97446
- LOCATION:** 495 Territorial Street (Map/Tax Lot: 15S04W10-CC-02300)
- HEARING DATE:** July 15, 2025
- ZONING:** Limited Industrial (M-1)
- OWNER:** Isovolta Inc. (Representative: Andrew Healey)
-

INTRODUCTION

The Applicant proposes concurrent Site Plan Review and Conditional Use Permit (CUP) applications for a proposed project located at 495 Territorial Street. Per Harrisburg Municipal Code (HMC) Table 18.45.030, the proposed use in the M-1 zone includes multiple use categories, including “Metal manufacture, welding” and “Special trade contracting facilities.” Both of these uses are listed as CU in Table 18.45.030; therefore, the proposed development is required to be reviewed through the CUP process.

The proposed project includes the following:

- A 32,000-square foot expansion of the existing manufacturing facility to accommodate a new production line.
 - There are no proposed changes to the existing 78,900-square foot facility.
- New drive aisle pavement at a minimum of 24-feet wide – on the west and north sides of the proposed addition that connect to the existing 22 feet wide paved shared access connection on the east side of the existing building to improve circulation around the building.
 - The existing access is shared with the abutting parcel to the east of the subject site (535 Territorial Street; Map/Tax Lot: 15S04W10-CC-02402).
- New stormwater lines to connect the proposed building expansion to a new stormwater facility located at the northwest corner of the site between the proposed pond and building expansion.
- Electrical service to the proposed building expansion.
- New landscaping along the existing open drainage ditch on the western property line and around the proposed stormwater facility.

Per Title 19 of the HMC, both the Site Plan Review and CUP applications are subject to the Type III application procedures, which includes Planning Commission review and final decision.

BACKGROUND & SITE CONTEXT

The Certified Representative Jim Woodall for the property owner, Isovolta Inc. (“Applicant”), submitted concurrent Site Plan Review and Conditional Use Permit applications on March 10, 2025, for a proposed project at the existing Isovolta facility site located at 495 Territorial Street. The existing parcel is identified as Tax Lot 2300 on Linn County Assessor’s Map 15S04W10-CC (the “site”). The site totals 7.46-acres or 324,957 square feet.

The site is in the Limited Industrial (M-1) zone. The site is bordered by existing railroad tracks on both the west and a segment of the east property lines. The east property line also abuts another existing industrial use on a separate parcel. The site shares an access connection with this abutting industrial use and parcel. The site has frontage on Territorial Street to the south. The abutting lots to the north and east across the railroad tracks are also in the M-1 zone. Parcels to the west, which are separated from the site by the railroad tracks, have frontage on N. 3rd St./Highway 99 and are in the C-1 Commercial zone. Parcels to the south across Territorial Street and between the two railroad track corridors are in the same M-1 zone as the site. The parcels east of the abutting industrial use parcel and the railroad tracks are in the R-2 Multi-Family Residential zone.

The site has 2 existing access connections to Territorial Street public rights-of-way, and both connections are proposed to remain. The Applicant has shown that there is a shared access easement over the eastern connection and on-site drive aisles. Territorial Street is classified as an Arterial Street in the draft Harrisburg Transportation System Plan (June 2025).

CRITERIA & FINDINGS OF FACT

This section is organized by the applicable criteria per HMC outlined in ***bold italics*** below and then followed by discussion, findings, and proposed conditions in normal text.

Chapter 19.15 Site Design Review

19.15.050 Approval criteria.

An application for site design review shall be approved if the proposal meets all of the following criteria. The Harrisburg Planning Commission, in approving the application, may impose reasonable conditions of approval, consistent with the applicable criteria contained herein.

1. The application is complete, in accordance with HNC 19.15.040;

Discussion: The information provided by the Applicant (see **Exhibit A**), includes the plan set, a written narrative, stormwater analysis, and building elevations, as necessary to meet the Applicant's burden of proof to address the City approval criteria.

Finding: The City deemed the application complete on June 9, 2025. This criterion is met.

2. The application complies with all of the applicable provisions of Chapters 18.45 and 18.55 HMC, including, but not limited to, building and yard setbacks, lot area and dimensions, density and floor area, lot coverage, building height, building orientation, architecture, and other applicable standards;

Discussion: The proposed project does not include the creation of a new lot, which means the minimum lot area, width, and depth are not applicable. The applicable development standards are building specific, such as setbacks, height, and lot coverage. The plan set includes drawings that demonstrate compliance with the applicable M-1 zone standards.

- The M-1 zone does not have a required height limit. The proposed building addition has two approximate heights – 31'-9" and 68'-0". The existing building has a height of about 25 feet and is proposed to remain without change.
- The required rear and interior side setbacks in the M-1 zone are 15 feet. The proposed building addition is setback more than 40 feet from each adjacent property line.

- The maximum lot coverage is 90 percent in the M-1 zone. The lot coverage calculation is limited to “the total area of a lot covered by buildings” and does not include all impervious surfaces. The proposed building expansion footprint area and the existing building footprint area results in total building area of 110,900 square feet, or approximately 34 percent lot coverage.
- The required minimum landscape area is 10 percent in the M-1 zone. The proposal results in approximately 28 percent (91,503 square feet) of the site in existing and proposed landscape and existing forested areas.

Finding: Based on the discussion above and the Applicant’s provided materials, the proposed project complies with the applicable standards. This criterion is met.

3. *The proposal includes required upgrades, if any, to existing development that does not comply with the applicable land use district standards, pursuant to Chapter 18.25 HMC.*

Discussion: Neither the City staff nor the Applicant identified nonconforming situations on-site or with the existing buildings.

Finding: The standards at Chapter 18.25 are not applicable.

4. *The proposal complies with all of the development and design standards, as applicable, including, but not limited to:*
a. *Chapter 18.70 HMC, Access and Circulation;*

Discussion: As described above, the site has two existing access connections to Territorial Street that are proposed to remain. Territorial Street public sidewalks are improved and proposed to remain. The proposed project includes 52,000 square feet of new asphalt paving to improve on-site circulation around the building. The asphalt paving replaces the existing gravel surface and it is reasonable to determine that this will reduce dust in the area. With the exception of this drive aisle paving around the proposed building expansion, the on-site circulation is existing to remain and is not required to be upgraded at this time. The proposed asphalt paving extends beyond the Applicant’s property and onto the abutting parcel to the east, as shown on the submitted plan set (Sheet BLDG-HT1-005). The abutting landowner is not a party to this application. However, the plan set shows there is an easement in this area.

RECOMMENDED CONDITION: Prior to the Building Permit Submittal, the Applicant shall provide documentation that the abutting property owner accepts the proposed asphalt paving improvement and shared access or remove the proposed off-site paving.

The existing driveway spacing and separation from intersections meets the codified standards for an arterial street. The existing access connections to Territorial Street have a spacing of 230 feet, which exceeds the minimum 150-foot

spacing requirement between driveway approaches. The western most access connection is about 375-feet from the Territorial Street and North 3rd Street intersection, which exceeds the minimum 100-feet separation from intersection standards.

The Applicant did not address the vision clearance area in the written statement or site plan drawings. The existing vegetation includes low shrubs on either side of both driveway approaches. The Applicant asserts that there will be a minimal increase in delivery vehicle traffic attributed to the increased manufacturing capacity and improvements to the western driveway.

RECOMMENDED CONDITION: Before submittal of the Building Permit, the Applicant shall provide a revised Site Plan to clearly show the required vision clearance area, within which there can be no visual obstruction between three feet and eight feet in height above grade.

The applicant's design is thus far somewhat limited. Most buildings of this size and/or occupancy will require a licensed architect and a licensed engineer. More detailed information on the specifics of the building such as occupancy classification, construction type and fire separation distances are required in order determine if there are any known building code issues. This is development concern.

Finding: As conditioned here, the access and circulation standards are met.

b. Chapter 18.75 HMC, Landscaping, Fences and Walls, Outdoor Lighting;

Discussion: As noted above, the proposed addition complies with the minimum landscape standard of the M-1 zone. The existing landscaped areas and preserved forested area are proposed to remain. The proposed project includes an approximate 32,000-square-foot building expansion and about 52,000 square feet of new asphalt paving. These elements are proposed in locations that were previously developed with other buildings and covered with gravel surfaces. There is new proposed landscaping along the western drainage ditch and near the proposed new stormwater facility in the northwest corner of the development area. There are no new proposed parking areas that warrant additional plantings. There are no new fences proposed. The existing fences are setback beyond the required front and side-yard setback.

The Applicant does not address outdoor lighting. The existing facility includes outdoor lighting, and it is reasonable to assume that the proposed building expansion will include security lighting.

RECOMMENDED CONDITION: Any future outdoor lighting installation is subject to and must demonstrate consistency with HMC 18.75.050 at the time of Building

Permit submittal. The Applicant shall provide an outdoor lighting plan signed and sealed by the engineer of record or other licensed professional, as necessary.

Finding: Based on the Applicant's provided materials and as conditioned here, the proposal complies with the applicable standards of HMC Chapter 18.75.

c. Chapter 18.80 HMC, Parking and Loading; and

Discussion: The existing and proposed building addition totals 110,900 square feet. Per HMC 18.80.020, "when computing parking spaces based on floor area, parking structures and nonleasable floor spaces, such as storage closets, mechanical equipment rooms, and similar spaces, are not counted." The Applicant will be providing supplemental materials with new calculations removing these nonleasable areas from the square footage, which will change the parking calculation. The resultant manufacturing square footage will be modified by this figure. Per HMC Table 18.80.030.1, a "manufacturing and production" use is required to provide "one space per 1,000 square feet of floor area; or as required by conditional use permit review." The "manufacturing and production" use is required to provide a total of 76 parking spaces, based upon the current square footage.

Per HMC 18.80.030(2)(e), "the City Administrator through a Type II procedure may reduce the off-street parking standards of Table 18.80.030.1 by one parking space for every two on-street parking spaces located adjacent to the subject site, provided the parking spaces meet the dimensional standards of subsection (4) of this section." The Applicant has submitted such a request to be included within these proceedings. Territorial Street (site frontage) has about 280 linear feet of available on-street parking, or 12 parallel parking spaces (22-feet in length per codified dimensions).

The existing parking area includes 62 parking spaces and on-street parking provides another 6 parking spaces. Without a reduction of the square footage as noted above, there will be 8 parking spaces unaccounted for in the submitted materials. The applicant has been asked to provide the square footage by the day of the meeting. That number will be shared with the Planning Commission at the meeting.

RECOMMENDED CONDITION: Before submittal of the Building Permit, the Applicant shall provide a revised Site Plan to show the location of the additional XX required parking spaces consistent with the City codified dimensional standards at HMC 18.80.030(4).

Finding: As conditioned here, the criterion can be met.

d. Chapter 18.85 HMC, Public Facilities

Discussion: There are no proposed improvements to the adjacent public streets. Territorial Street is improved with paved drive lanes, curb and gutter, sidewalks, and stormwater drainage. The City's adopted plans do not include new streets or street extensions that would preclude the proposed building addition. Therefore, the various transportation standards of HMC 18.85.020 are not applicable.

The existing building and site are served by sanitary sewer, water service, natural gas, and electric power. The lines will be extended to the proposed building expansion per the requirements of the service provider.

The City Public Works Department has reviewed the proposed stormwater facilities and the Applicant's analysis. The application is subject to the following conditions.

RECOMMENDED CONDITION: Prior to issuance of a Certificate of Occupancy, the Applicant shall allow City personnel to access the sand filter during normal business hours and the open the ditch area pre- and post-filter for the required inspections.

RECOMMENDED CONDITION: Prior to building permit submittal, the Applicant shall provide to the City a copy of sand filter Operations and Maintenance plan.¹

RECOMMENDED CONDITION: At the time of building permit submittal, the Applicant shall provide to the City a Sedimentation and erosion control plan.

Finding: Based on the submitted plan set and as conditioned here, the applicable public facilities standards have been met.

5. *For nonresidential uses, all adverse impacts to adjacent properties, such as light, glare, noise, odor, vibration, smoke, dust, or visual impact, shall be avoided; or where impacts cannot be avoided, they are minimized; and*

Discussion: The Applicant's written narrative has addressed the potential off-site impacts and elements often associated with compatibility, as summarized below. All manufacturing processes occur inside the building. This addresses several of the listed potential adverse impacts.

- The proposed project includes a regenerative thermal oxidizer (RTO). The RTO destroys volatile organic compounds that are generated by the new industrial process. According to the Applicant, the "RTO will have a 95% destruction efficiency, and the emissions are virtually odorless after being processed by the RTO."
- Again, per the Applicant's written narrative, "[a]ny noise generated by the new processes will be minimal and largely contained within the facility" and "[t]he new processes and associated facilities will not produce smoke, vibration,..."

¹ The Applicant provided an Operations and Maintenance plan as an attachment to the Stormwater Narrative prepared by Favreau Engineering, dated February 1, 2025.

- The Applicant currently operates under State agency permits that prohibit dust emissions from the manufacturing operations.
- Additionally, the proposed project includes paving the vehicular circulation areas that are currently gravel. The proposed asphalt paving will reduce dust and noise that arises from traffic on the existing gravel surfaces.
- The proposed building expansion is intended to match the existing building's general architectural character, materials, and color so the visual impact will be minimal.
- Also, as described above, the proposed industrial expansion is taking place in the M-1 zone with abutting properties to the east and west that are also industrial uses.

Finding: Based on the submitted plan set and Applicant's written narrative, this criterion is met.

6. *The proposal meets all existing conditions of approval for the site or use, as required by prior land use decision(s), as applicable.*

Discussion: The Applicant and City did not identify conditions of approval from prior land use decisions.

Finding: This criterion is not applicable.

7. *As a condition of approval, the Planning Commission may require public improvements that are necessary to mitigate or prevent development impacts including, but not limited to, traffic, noise, odors, dust, pollution, or others that would affect surrounding existing uses or the City as a whole. [Ord. 987 § 1 (Exh. A), 2022.]*

Discussion: The Applicant's submitted materials demonstrate that all manufacturing processes take place indoors. As summarized above, the proposed project includes an RTO to reduce odors, as required by State and Federal agencies. The adjacent Territorial Street frontage is improved, and public improvements are not necessary.

Finding: There are no recommended public improvements.

Chapter 19.25 Conditional Use Permits

19.25.040 Criteria, standards, and conditions of approval.

The Planning Commission shall approve, approve with conditions, or deny an application for a conditional use, including requests to enlarge or alter a conditional use, based on findings of fact with respect to all of the criteria and standards in subsections (1) and (2) of this section.

Discussion: As described above, the proposed use in the M-1 zone includes components of multiple use categories, including “Metal manufacture, welding”, and “Special trade contracting facilities.” Therefore, the proposed development is required to be reviewed through the CUP process.

Finding: The Applicant has submitted the required materials for a complete CUP application.

1. *Use Criteria.*

- a. *The site size, dimensions, location, topography, and access are adequate for the needs of the proposed use, considering the proposed building mass, parking, traffic, noise, vibration, exhaust/emissions, light, glare, erosion, odor, dust, visibility, safety, and aesthetic considerations;***

Discussion: The Applicant described in the application materials that to accommodate the proposed building expansion, the necessary existing facilities on the site (former Tri State Carports) have been removed. This site preparation provides adequate site size. The site is relatively flat, which can simplify construction and limit the need for excavation.

The City has previously determined that this proposed project does not require a traffic study, as the applicant has shared information showing that it does not trigger those criteria at HMC 18.85.020(1)(d)(1). The existing access connections to Territorial Street are sufficient to serve the use and the proposed on-site circulation creates access around the building. This proposed paved access improves vehicular circulation for clients, employees, delivery vehicles, and also, emergency response personnel. The building mass is similar to the existing building, increasing the height by about 5 feet. The existing building height is approximately 26'-0" and the proposed addition is about 31'-9", per the submitted plans. A portion of the proposed building expansion extends up to about 68'-0". This complies with the development standards, as the M-1 zone has no height limit. Also, this taller element is similar to the other tower elements on adjacent industrial sites to the south. Staff has also verified that there are no specific regulations in relation to taller structures being added adjacent to the existing cell phone tower.

The Applicant has addressed the other potential off-site considerations in the written narrative. All manufacturing processes occur inside the building. This addresses several of the listed potential adverse impacts.

- The proposed project includes a regenerative thermal oxidizer (RTO). The RTO destroys volatile organic compounds that are generated by the new industrial process. According to the Applicant, the “RTO will have a 95% destruction efficiency, and the emissions are virtually odorless after being processed by the RTO.”

- Again, per the Applicant's written narrative, "[a]ny noise generated by the new processes will be minimal and largely contained within the facility" and "[t]he new processes and associated facilities will not produce smoke, vibration,..."
- Additionally, the proposed project includes paving the vehicular circulation areas that are currently gravel. The proposed asphalt paving will reduce dust and noise that arises from traffic on the existing gravel surfaces.
- The proposed building expansion is intended to match the existing building's general architectural character, materials, and color so the visual impact will be minimal.
- As described above, the proposed industrial expansion is taking place in the M-1 zone with abutting properties to the east and west that are also industrial uses.

RECOMMENDED CONDITION: Prior to submittal of the building permit, the Applicant shall provide formal documentation about the regenerative thermal oxidizer that verifies odors are sufficiently removed from emissions as asserted in the written narrative.

Finding: Based on the Applicant's written narrative and plan set and as conditioned, the criterion is met.

b. The negative impacts of the proposed use, if any, on adjacent properties and on the public is mitigated through application of code standards and, as applicable, conditions of approval, or conditions of use, as may be imposed by the Planning Commission;

Discussion: As described under the discussion and findings of HMC 19.15 Site Design Review, the proposed project complies with the applicable code standards (e.g., setbacks, height, etc.) for development in the M-1 zone. Also, per the discussion above under subpart (a), the Applicant has provided information in the written narrative that addresses the potential "negative impacts." That discussion and findings are incorporated herein by reference. Lastly, the industrial site context should be recognized; all abutting parcels are either railroad track corridors or are in the same M-1 zone and expected to have similar industrial uses.

Finding: Based on the Applicant's written narrative and associated discussion, there are no recommended conditions of approval specific to this criterion.

c. All required public facilities, including water, sanitary sewer, and streets, have adequate capacity or are to be improved to adequately serve the use, consistent with City standards; and

Discussion: As described under the discussion and findings of HMC 19.15 Site Design Review, the proposed project complies with the applicable public facilities standards. The existing building is served by all necessary public facilities and

infrastructure. Per the submitted plan set, the proposed building expansion connects to the existing public facilities and utilities.

Public facilities include stormwater management. The Public Works Department referral comments are incorporated into the discussion and findings for the Site Plan Review. As conditioned above, the proposed project is consistent with the public facilities standards per HMC 19.15.050(4)(d).

Finding: The findings at HMC 19.15.050(4)(d) that are provided for the concurrent Site Plan Review application are incorporated herein by reference. Based on the findings here and in the concurrent application, the criterion is met.

d. *A conditional use permit shall not allow a use that is prohibited under Chapters 18.40 and 18.45 HMC; nor shall a conditional use permit grant a variance without a separate variance application being reviewed concurrently with the conditional use application.*

Discussion: Per HMC 18.45.030(2), uses that are listed as “Not Allowed (N)” are prohibited. The proposed building expansion and general manufacturing use in the M-1 zone includes multiple use categories, including “Metal manufacture, welding” and “Special trade contracting facilities,” both of which are listed as CU in HMC Table 18.45.030. The Applicant did not request a Variance to any local land use code standard.

Finding: The conditional use permit is not being used to request a use that is prohibited in the M-1 zone or request a Variance to development standards. This criterion is met.

CONCLUSIONS

The applicant requests approval of concurrent Site Plan Review and Conditional Use Permit, Type III land use applications and a Type II allowance for adjustment to parking requirements. As demonstrated by the above discussion, analysis, and findings, the application, as conditioned, complies with the applicable approval criteria of the Harrisburg Municipal Code.

PLANNING COMMISSION ACTION

The Planning Commission has three options with respect to the subject applications. They can:

1. Approve the request;
2. Approve the request with conditions; or
3. Deny the request.

Based upon the criteria, discussion, and findings of facts above, staff recommends the Planning Commission **Approve with Conditions** the concurrent Site Plan Review and Conditional Use Permit applications.

RECOMMENDED MOTION(S)

NOTE: The motion is located at the top of this staff report and on the Agenda.

RECOMMENDED CONDITIONS OF APPROVAL

CONDITION NO. 1: CONSISTENCY WITH PLANS. Development shall comply with the plans and narrative in the applicant's proposal, except where modified by the Planning Commission through conditions of approval.

CONDITION NO. 2: SHARED ACCESS ACCEPTANCE: Prior to the Building Permit Submittal, the Applicant shall provide documentation that the abutting property owner accepts the proposed asphalt paving improvement and shared access or remove the proposed off-site paving.

CONDITION NO. 3: SHARED ACCESS EASEMENT Before submittal of the Building Permit, the Applicant shall provide a revised Site Plan showing the shared access easement between the site and abutting parcel.

CONDITION NO. 4: VISION CLEARANCE: Before submittal of the Building Permit, the Applicant shall provide a revised Site Plan to clearly show the required vision clearance area, within which there can be no visual obstruction between three feet and eight feet in height above grade.

CONDITION NO. 5: OUTDOOR LIGHTING: Any future outdoor lighting installation is subject to and must demonstrate consistency with HMC 18.75.050 at the time of Building Permit submittal. The Applicant shall provide an outdoor lighting plan signed and sealed by the engineer of record or other licensed professional, as necessary.

CONDITION NO. 6: PARKING: Before submittal of the Building Permit, the Applicant shall provide a revised Site Plan to show the location of the additional XX required parking spaces consistent with the City codified dimensional standards at HMC 18.80.030(4).

CONDITION NO. 7: SAND FILTER INSPECTION: Prior to issuance of a Certificate of Occupancy, the Applicant shall allow City personnel to access the sand filter during normal business hours and the open the ditch area pre- and post-filter for the required inspections.

CONDITION NO. 8: SAND FILTER O&M: Prior to Building Permit submittal, the Applicant shall provide to the City a copy of sand filter Operations and Maintenance plan.

CONDITION NO. 9: SEDIMENTATION AND EROSION CONTROL PLAN: At the time of Building Permit submittal, the Applicant shall provide to the City a Sedimentation and erosion control plan.

CONDITION NO. 10: FORMAL DOCUMENTATION ON RTO EMISSIONS/ODORS: Prior to submittal of the Building Permit, the Applicant shall provide formal documentation about the regenerative thermal oxidizer that verifies odors are sufficiently removed from emissions as asserted in the written narrative.

OTHER DEVELOPMENT CONSIDERATIONS (*Informational Only*)

1. The Applicant shall acquire all required permits, including but not limited to those related to demolition and site preparation, building, electrical, mechanical, and plumbing, before beginning construction of different project components, public improvements as required by HMC Title 15.
2. Additional Design Information is necessary to determine what kinds of building permit changes are required. Most buildings of this size and/or occupancy will require a licensed architect and a licensed engineer. More detailed information on the specifics of the building such as occupancy classification, construction type and fire separation distances are required in order determine if there are any known building code issues. This will also determine if the existing building is already sprinklered, which would then be required of the new addition.
3. Be advised that a 1200-C Permit may be required.
4. Any new fencing will be required to meet the height and landscape standards per HMC 18.75.040(3)(b).



City of Harrisburg
120 Smith Street
Harrisburg, OR 97446
Phone (541) 995-6655
www.ci.harrisburg.or.us/planning

LAND USE APPLICATION

STAFF USE ONLY	
File Number:	Date Received: 7.14.25
Fee Amount: 3,050	

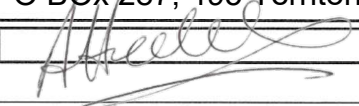
14524

APPLICATION TYPE	
☐ Annexation*	☐ Property Line Adjustment
☐ Comprehensive Plan Amendment*	☐ Partition/Replat* Minor Major
☒ Conditional Use Permit* ≈ 1,750-	☒ Site Plan Review* ≈ 1,200
☐ Historic Permit*	☐ Site Plan Review – Parking Only
☐ Resource Alteration	☐ Subdivision/Replat*
☐ Resource Demolition	☐ Vacation of street, alley or easement
☐ Historic Review – District	☐ Variance*
☐ Legal Lot Determination	☐ Zone Map Change*
☐ Zoning Ordinance Text Amendment*	

*A Pre-Application Conference with City Staff is Required \$ 250-

PLEASE PROVIDE A BRIEF SUMMARY OF THE PROPOSAL	
Project Description	EXPAND our current facility to the north end of the building by 32,000 SF to accommodate new processes and equipment. A portion of the new building will be approximately 68' high while the rest of the new addition will be about 26'. The project includes a new driveway around the entire facility and a new RTD for emissions controls.
Project Name	ISOVOLTA HT1

PRIMARY CONTACT AND OWNER INFORMATION

Applicant's Name	ISOVOLTA INC.		
Phone	541-995-4931	Email	jim.woodall@isovolta-or.us
Mailing Address	P.O. Box 287		
Applicant's Signature			Date
Property Owner Name	Andrew Healey Isovolt Inc.		
Phone	541-9956395	Email	andrew.healey@isovolta-or.us
Mailing Address	PO BOX 287, 495 Territorial St, Harrisburg, OR 97446.		
Owner Signature			Date
			03-10-25

*If more than one property owner is involved, provide a separate attachment listing each owner or legal representative and their signature.

PROPERTY DESCRIPTION

(general vicinity, side of street, distance to intersection, etc.)

Street Address	495 Territorial Rd		
General Location Description	NORTH SIDE OF TERRITORIAL; BETWEEN RAILROAD TRACKS		
Assessor's Map Number(s)	Related Tax Lot(s)		
Map #	15504W10CC	Tax Lot(s) #	323465 02300
The Assessor's Map Number (Township, Section and Range) and the Tax Lot Number (parcel) can be found on your tax statement, at the Linn County Assessor's Office, or online at http://linn-web.co.linn.or.us/propertywebquerypublic/			
Lot Area	7.46 ACRES		

PLEASE TELL US MORE ABOUT THE PROPOSAL AND ITS SITE

1. Are there existing structures on the site? ☒ Yes ☐ No If yes, please explain

70,933 S.F. Steel building for warehouse and mfg.

2. Indicate the uses proposed and describe the intended activities:

Raw material storage. finished goods storage, shipping and receiving dock. mixing room. ~~BE~~ impregnation line. RTO (emissions cont.)

3. How will open space, common areas and recreational facilities be maintained?

4. Are there previous land use approvals on the development site? ☐ Yes ☒ No
If yes, please include a discussion in the project narrative describing how the prior approvals impact your proposal.

5. Have you reviewed the Oregon Fire Code Applications Guide in relation to your land use request? ☒ Yes ☐ No Do you have questions about any element of these requirements? If yes, please explain:

AUTHORIZATION FOR STAFF & DECISION MAKERS TO ENTER LAND

City staff, Planning Commissioners, and City Councilors are encouraged to visit the sites of proposed developments as part of their review of specific land use applications. Decision maker site visits are disclosed through the public hearing process. Please indicate below whether you authorize City staff and decision makers to enter onto the property(-ies) associated with this application as part of their site visits.

☒ I authorize City staff and decision makers to enter onto the property(-ies) associated with this application.

☐ I do not authorize City decision makers to enter onto the property(-ies) associated with this application.

LAND USE AND OVERLAY ZONES

Existing Zone(s) M-1 LIMITED INDUSTRIAL

Existing Comprehensive Plan Designation(s)

Please select any of the following zone overlays or natural areas that apply to the subject site:

- | | | |
|---|--|-------------------------------------|
| ☐ Historic Overlay | ☐ Willamette River Greenway | ☐ Floodplain |
| ☐ Riparian Corridors | ☐ Wetlands | |

*Please include a discussion in the project narrative indicating how these overlays affect your proposal. For more information about any of these overlays, please contact the City Planner at (541) 995-6655.

CHECK THE BOX NEXT TO INCLUDED EXHIBITS

- | | |
|---|--|
| ☒ Narrative* (address all applicable HMC review criteria)
☐ Assessor's Map with Applicable Tax Lots Highlighted
☐ Site Plan
☐ Survey / ALTA
☐ Aerial Photograph / Existing Land Use(s) Map
☐ Zoning Map (if applicable, show proposed change(s))
☐ Comprehensive Plan Map(s) (if applicable, show proposed changes)
☐ Subdivision or Partition Plat | ☐ Architectural Elevations
☐ Architectural Floor Plans
☐ Utilities Plan
☐ Geotechnical Report/Site
☐ Assessment
☐ Electronic Versions of Exhibits
☐ Application Fee
☐ Other |
|---|--|

*A written narrative is required for all application types. Typical drawings sizes are 24"X36", 11"X17", or 8.5"X11". Sizes of required drawings will depend on the type and scope of applications involved. Contact the City Planner to verify requirements. On your plans, include the following: property lines, points of access for vehicles, pedestrians, and bicycles, water courses, any natural features (wetlands, floodplain, etc.), existing and proposed streets and driveways, parking areas, utilities, pedestrian and bike paths, and existing easements. Please note there are additional specific graphic and narrative requirements for each application type. Refer to the Harrisburg Municipal Code for more information.

A Pre-application Conference is Required with City Staff prior to turning in your land use application. Please contact the City Administrator, or City Recorder/Assistant City Administrator to make an appointment. Date of Appointment:

Isovolta HT1 Plant Expansion

Isovolta, Harrisburg wishes to expand its existing facility to accommodate a new pre-preg production line. Pre-preg is a composite material made from pre-impregnated cloth (fiberglass or carbon fiber) and a partially cured polymer matrix (phenolic or epoxy). The finished goods need to be stored at sub-zero temperatures as do some of the raw materials. Some of the pre-preg materials will be used in our existing products to replace materials that we currently buy from various suppliers. The rest of the pre-preg will be sold and shipped to other customers and used as a raw material for their products.

A new facility of approximately 32,000 square feet will be built on the existing site. Old structures that had been in use for “Tri State Carports” up until May of 2024 have already been demolished to make room for the new building. The new building will be steel construction with steel ribbed siding and insulated. The main portion of the new building will have a sloped roof with a maximum height of 32 feet. There will be a tower section of the new building that will accommodate some new equipment. This tower will extend approximately 68 feet above the ground. The new building will be “L” shaped to make room for an existing cell phone tower. The new facility will have sprinklers installed throughout the building. Additional fire protection will be considered for the mixing room.

A concrete pad and structural footings will be installed for the entire square footage of the building. There will be a loading dock ramp for truck shipping and receiving that will be formed concrete.

The current facility has two driveways: one to the east (22 ft wide) of the building and one to the west (24' wide). These two driveways will be joined at the north side of the new building and wrap around the entire facility. The west driveway that is currently gravel will be paved with asphalt. The area around the loading dock will also be paved. Currently the Harrisburg facility receives 4 trucks per day on a busy day. Trucks usually arrive between 8:00am and 5:00pm. The pre-preg production is expected to increase the number of trucks by 2 per day to 6 total per day; this equates to approximated 1 truck every 1.5 hours. There will be ample room on site for the arrival of multiple trucks at the same time. No additional driveway modifications or traffic controls would be needed to accommodate the slight increase in truck traffic to the facility.

The resin required for this process will be delivered via truck and stored in temperature-controlled, refrigerated rooms. These storage areas will feature specially engineered flooring designed to prevent freezing and cracking. All insulation materials used will meet or exceed current Federal and State regulatory standards.

To ensure compliance with Department of Environmental Quality (DEQ) and Fire Marshal regulations, both the refrigerated storage rooms and the newly constructed mixing room will be equipped with integrated spill containment systems, such as troughs or containment tubs. Additionally, an external containment trough will be evaluated for installation along the north end of the building to address the unlikely event of a spill breaching the facility's walls. Curbing around the driveway will also be assessed as a supplementary spill containment measure.

The maximum potential spill volume is inherently limited by the capacity of the largest vessel used in the process, which is 300 gallons.

A regenerative thermal oxidizer (RTO) will be installed to destroy volatile organic compounds that are generated by the new process. The RTO will be in full compliance with the regulations set forth by the Oregon DEQ and the EPA. Waste heat from the RTO will be utilized to heat the pre-preg tower ovens to maximize the plant's efficiency and minimize our use of natural gas and electricity. The RTO will have a 95% destruction efficiency, and the emissions are virtually odorless after being processed by the RTO.

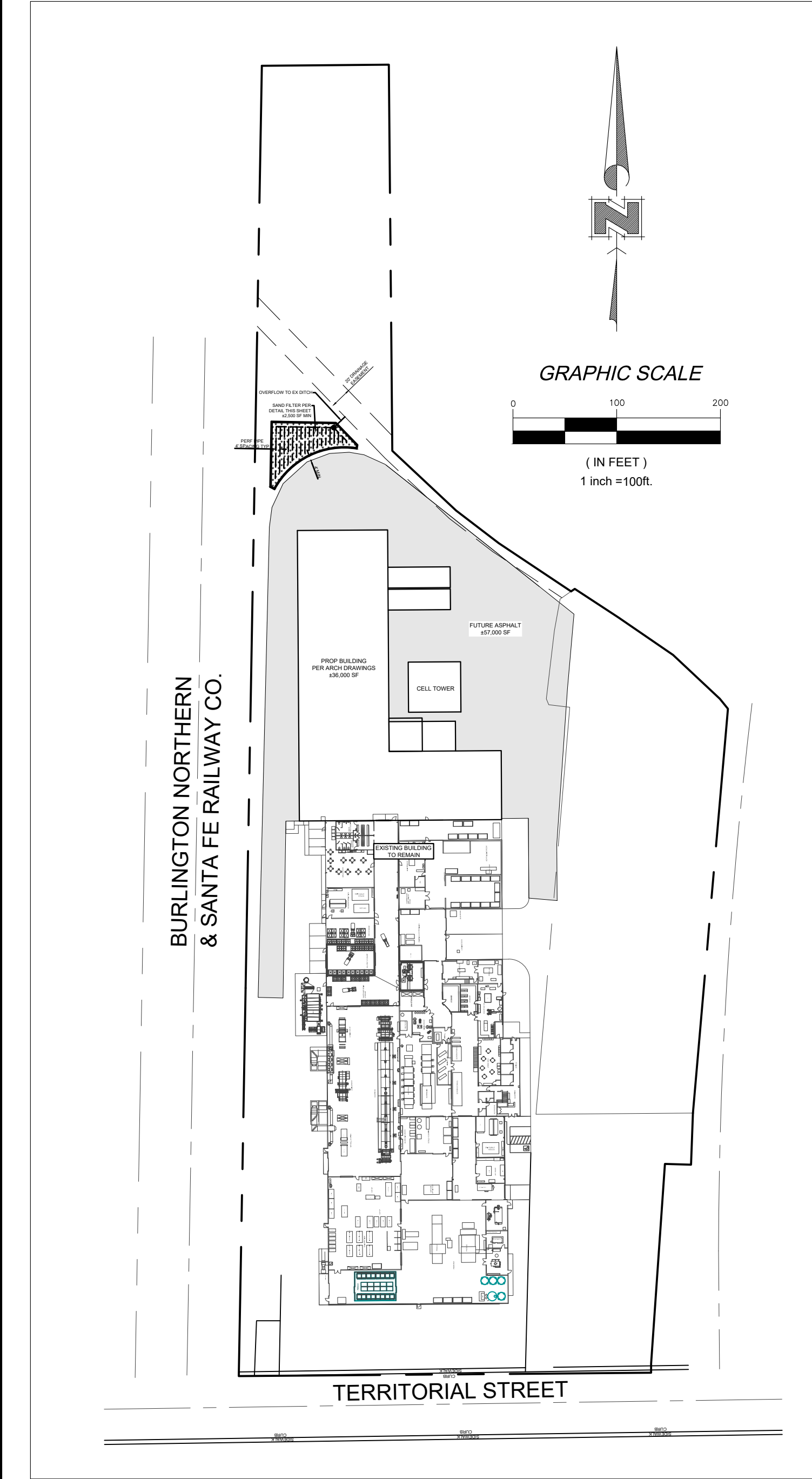
The pre-preg process does not utilize any water, ensuring that there will be no increase in city or well water usage as a result of the new production line. However, the storm water runoff will be slightly modified due to the increased roof area of the new building and the expanded paved areas surrounding the facility.

All new and existing structures will be designed and maintained in full compliance with applicable Federal, State, and local codes, including those governing building, electrical, plumbing, and mechanical systems. The proposed developments will not result in any adverse impacts on adjacent properties.

Any noise generated by the new processes will be minimal and largely contained within the facility. Isovolta will evaluate the potential for dust generation during the resin mixing process and will implement appropriate dust control measures if necessary. The facility currently operates under an Air Contaminant Discharge Permit issued by the Oregon Department of Environmental Quality (DEQ), which prohibits dust emissions. Isovolta is committed to maintaining full compliance with this permit following the installation of any new equipment.

The new processes and associated facilities will not produce smoke, vibration, bright lighting, or glare, ensuring minimal environmental and community impact.

Isovolta will be increasing its staff to operate the new production line, but it is believed that the current water and sewer systems will be adequate to handle the additional personnel.



495 TERRITORIAL ST
HARRISBURG, OR 97446
TL: 15S04W10CC02300

APPLICANT:
ISOVOLTA GROUP
495 TERRITORIAL ST
HARRISBURG, OR 97446
CONTACT: JIM WOODALL
(541) 995-4928
JIM.WOODALL@ISOVOLTA-OR.US

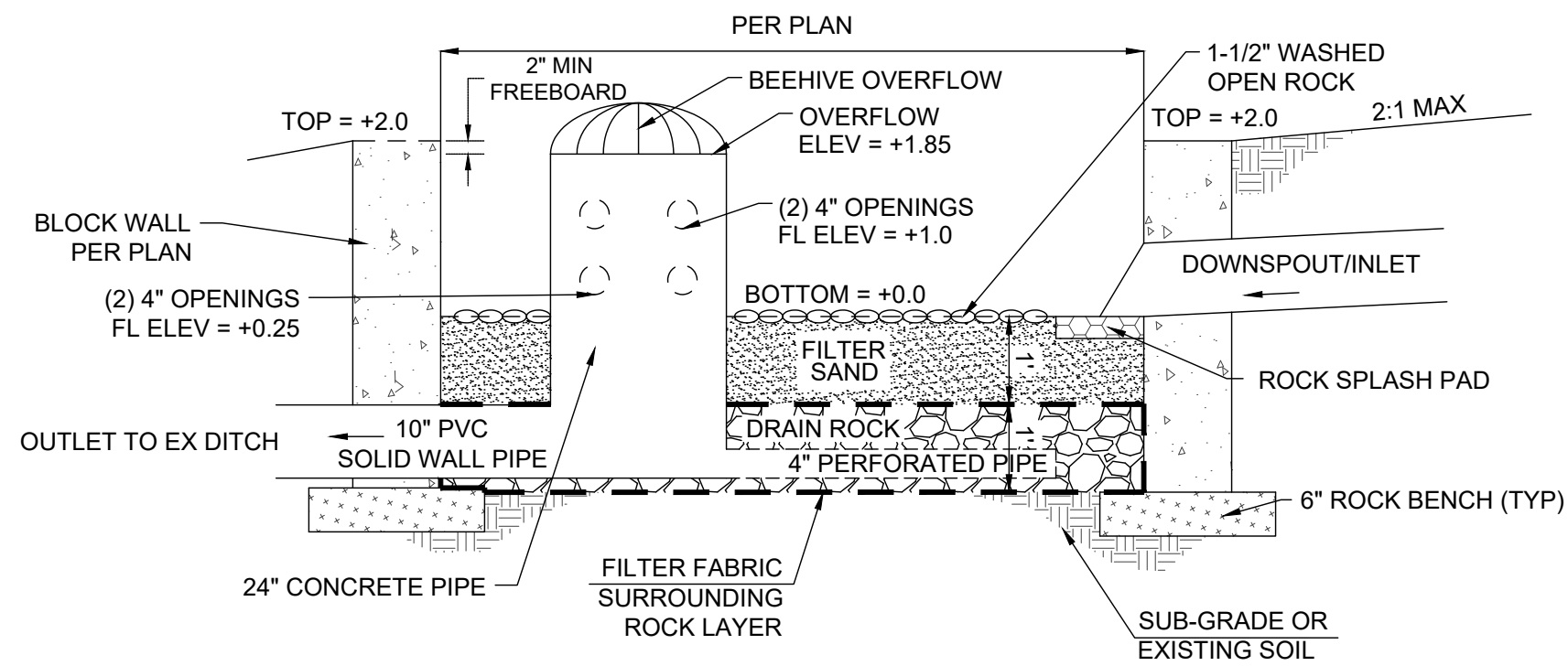
APPLICANT'S REPRESENTATIVE:
FAVREAU ENGINEERING
2206 COUNTRY HAVEN DR
EUGENE, OR 97408
(541) 556-4425

C1 - SAND FILTER PLAN

1. THIS DOES NOT CONSTITUTE A BOUNDARY SURVEY AND IS SUBJECT TO ANY INACCURACIES THAT A SUBSEQUENT BOUNDARY SURVEY MAY DISCLOSE
2. SEE ARCHITECTURAL DRAWINGS FOR BUILDING DETAILS

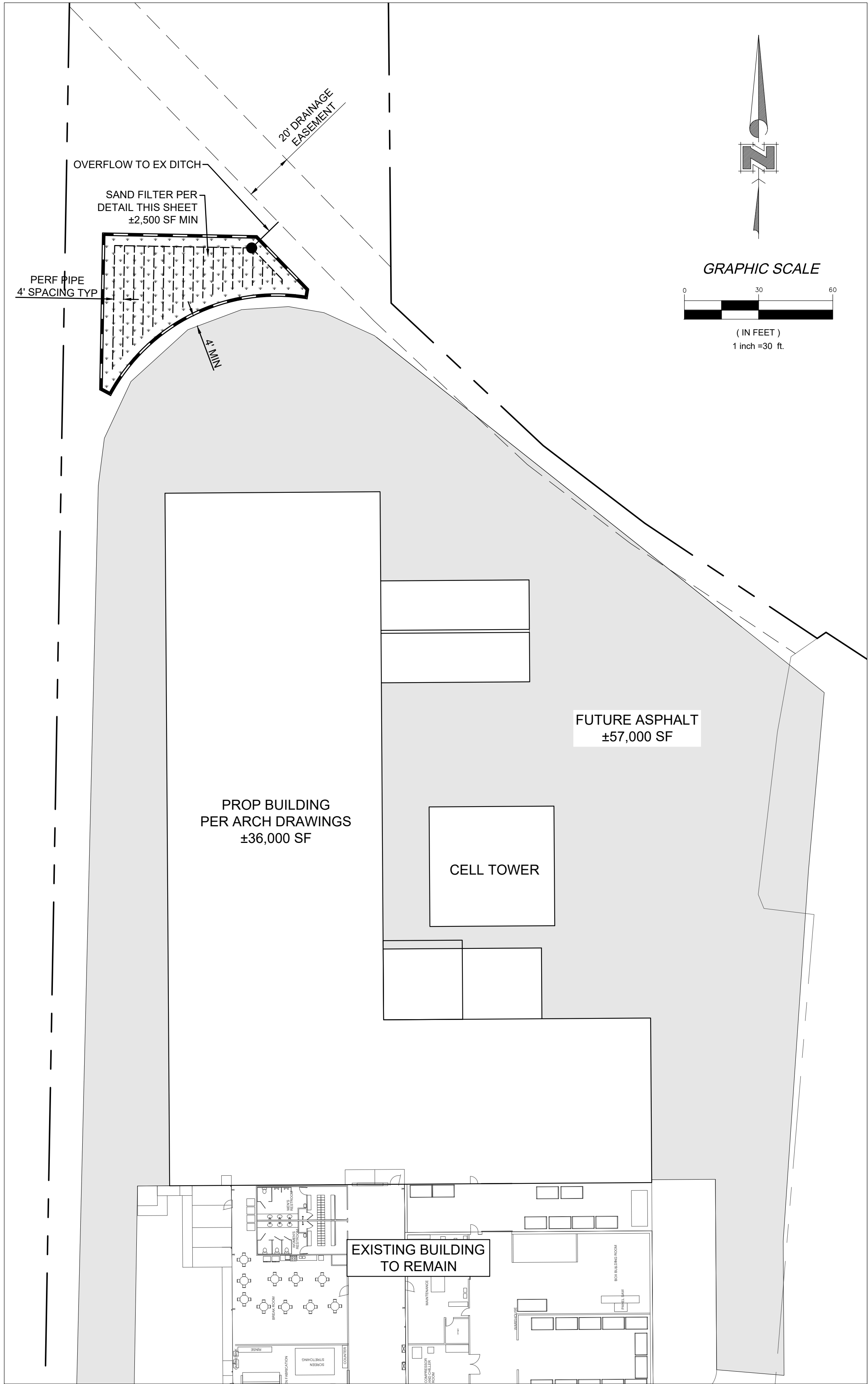
THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS AND CITY OF HARRISBURG. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE DESIGN OF THE PROJECT. THE DESIGN OF THE PROJECT IS THE SOLE RESPONSIBILITY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND INDEMNIFY AND HOLD DESIGN PROFESSIONALS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT THOSE SHOWN ON THIS PLAN. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND ANY OTHER LINES OR STRUCTURES NOT SHOWN ON THESE PLANS, AND IS RESPONSIBLE FOR THE PROTECTION OF, AND ANY DAMAGE TO THESE LINES OR STRUCTURES. ANY ESTIMATED QUANTITIES HEREON ARE ONLY FOR THE PURPOSE OF OBTAINING THE NECESSARY PERMITS, AND FAVREAU ENGINEERING, LLC DOES NOT GUARANTEE THE ACCURACY OF THE ESTIMATED QUANTITIES. THE CONTRACTOR SHALL PERFORM HIS OWN QUANTITY TAKEOFF BEFORE SUBMITTING A BID FOR ANY PORTION OF THE IMPROVEMENTS COVERED BY THESE PLANS. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS INCLUDING POTHOLING AND LOCATING EXISTING UNDERGROUND UTILITIES AND SHALL REPORT DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCEMENT OF WORK.



1. PROVIDE PROTECTION FROM ALL VEHICLE TRAFFIC, EQUIPMENT STAGING, AND FOOT TRAFFIC IN PROVIDED INFILTRATION AREAS PRIOR TO, DURING, AND AFTER CONSTRUCTION.
2. DIMENSIONS:
 - a. WIDTH: 24" MINIMUM
 - b. DEPTH: 6" MINIMUM
 - c. SLOPE: 0.5% OR LESS
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 - a. INFILTRATION SAND FILTERS MUST BE 10' FROM FOUNDATIONS AND 5' FROM PROPERTY LINES. FILTRATION SAND FILTERS DO NOT HAVE SETBACKS WITH AN APPROVED WATERPROOF LINER.
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12. TOTAL ASSUMED DRAINAGE AREA: 2.30 ACRES
13. FACILITY SIZE: 2,500 SF MINIMUM

NO SCALE



STORMWATER PLAN FOR ISOVOLTA PREPREG BUILDING

CITY OF HARRISBURG
PUBLIC WORKS DEPT.

LOT
5S04W10CC02300

APPROVED:

DATE	BY	DESCRIPTION	NO.

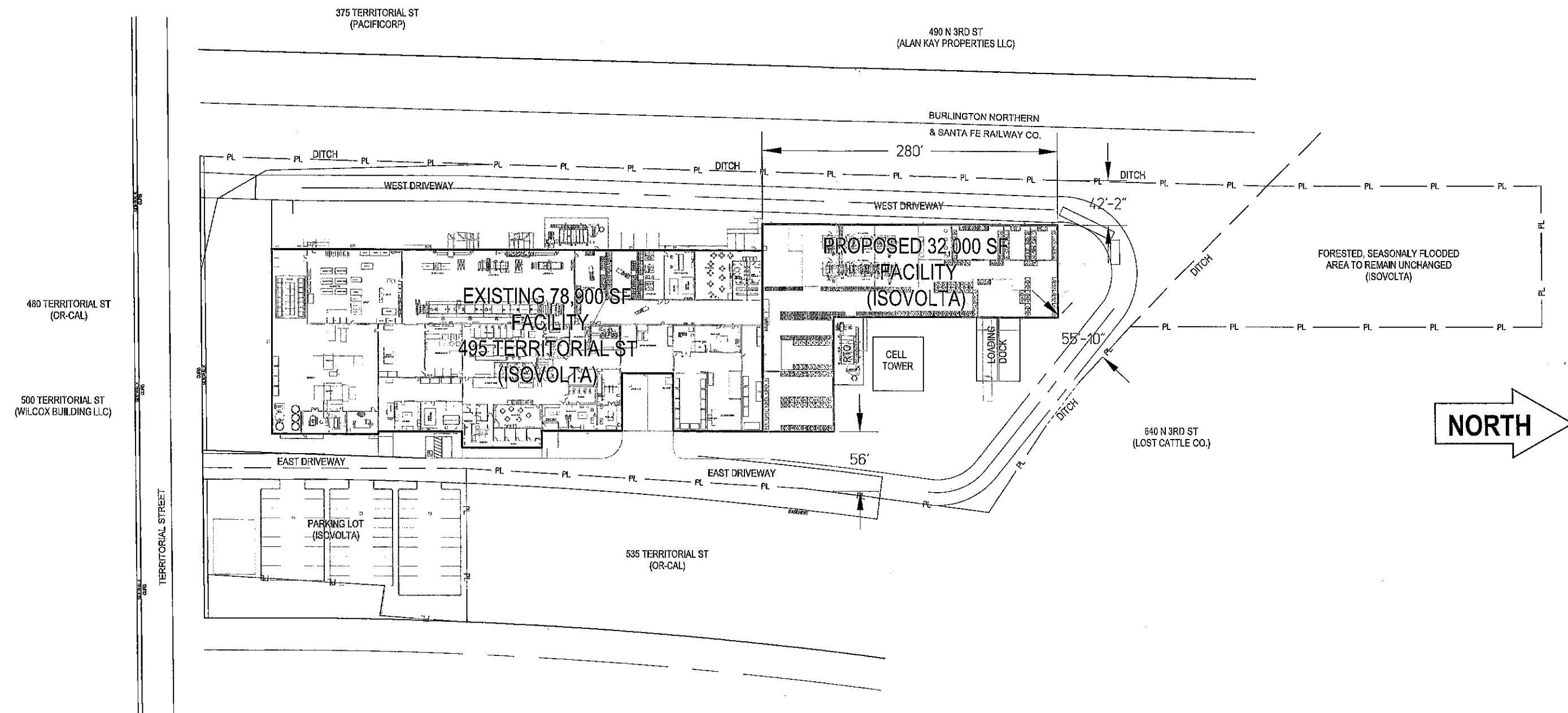
FAVREAU
ENGINEERING

2206 COUNTRY HAVEN DR
EUGENE, OR 97408 (541) 556-4425



DATE: 1/31/25

SHEET C1



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PROJ. #

ISOVOLTA GROUP

DRAWN BY: JRW

DATE: 9/24/2024

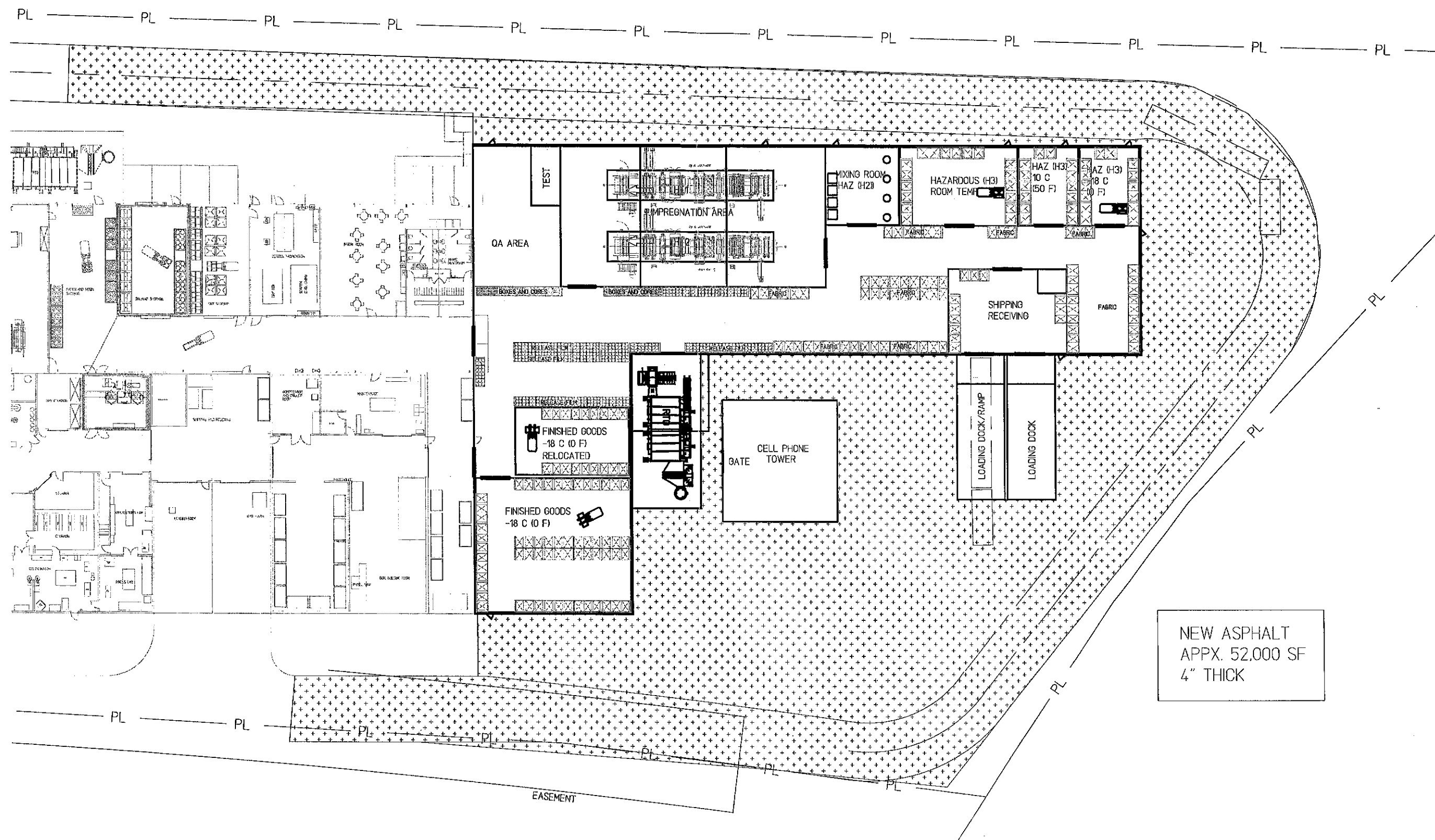
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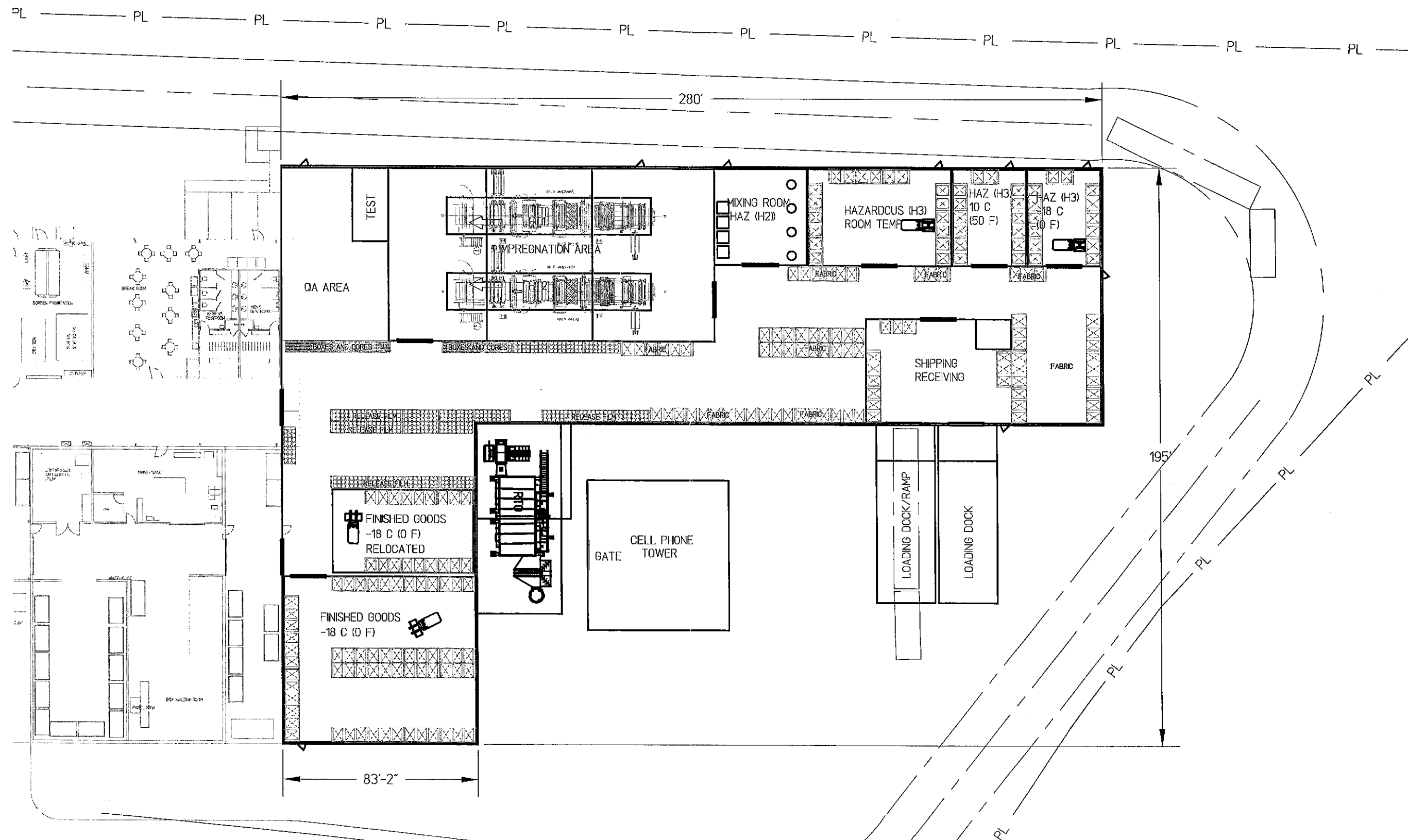
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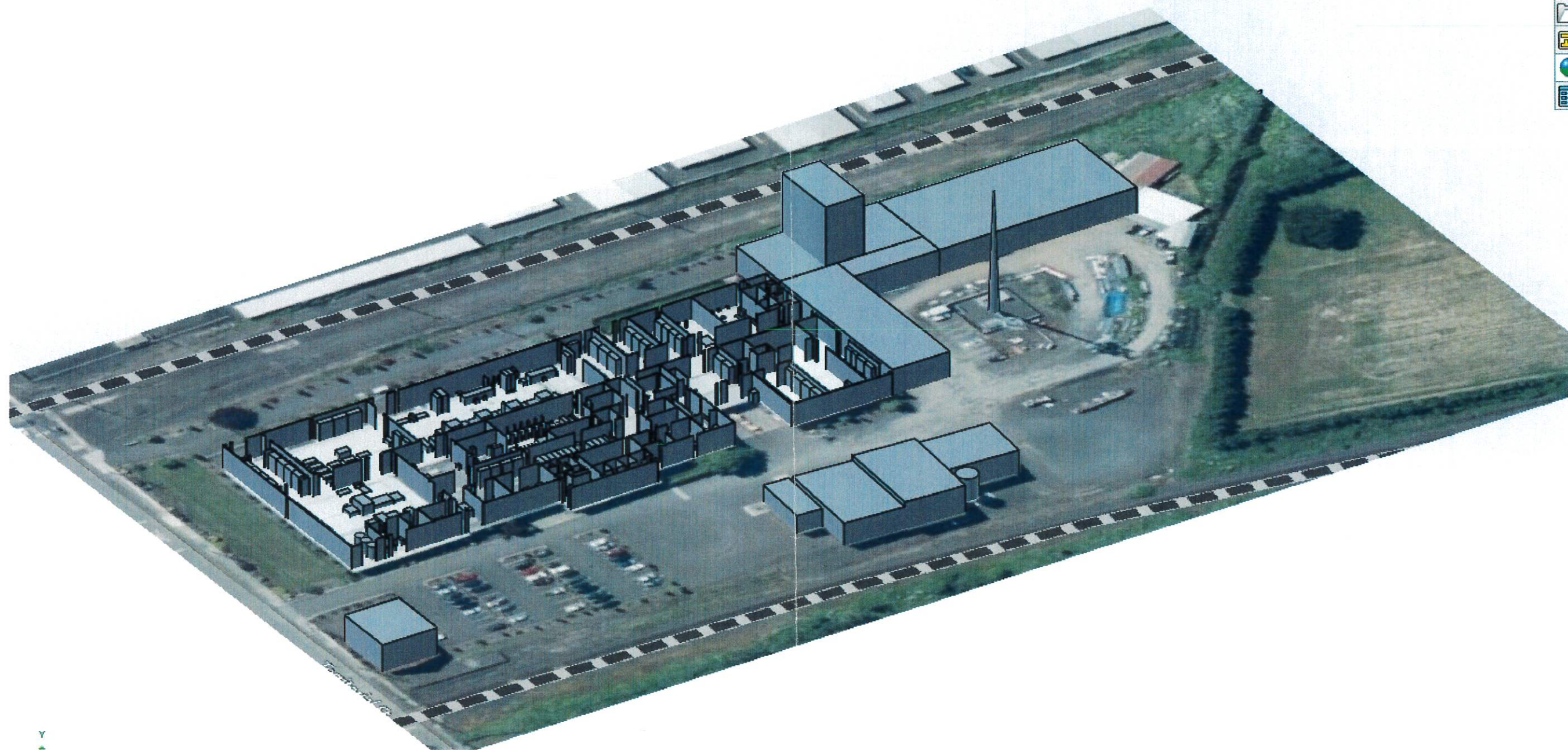
HARRISBURG FACILITY
W/ PREPREG ADDITION

SHEET 1/1

DRW NO. BLDG-HT1-000







VICINITY MAP
NO SCALE

PROPERTY INFO

495 TERRITORIAL ST
HARRISBURG, OR 97446
TL 15S04W10CC02300

APPLICANT:
ISOVOLTA GROUP
495 TERRITORIAL ST
HARRISBURG, OR 97446
CONTACT: JIM WOODALL
(541) 555-4328
JIM.WOODALL@ISOVOLTA-OR.US

APPLICANT'S REPRESENTATIVE:
FAVREAU ENGINEERING
2206 COUNTRY HAVEN DR
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(541) 556-4425

SHEET INDEX

C1 - SAND FILTER PLAN

GENERAL NOTES

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NO SCALE

**ISOVOLTA BUILDING EXPANSION
FILTRATION SAND FILTER DETAIL**

NO SCALE

PER PLAN

2" MIN FREEBOARD

BEEHIVE OVERFLOW

OVERFLOW ELEV = +1.85

1-1/2" WASHED OPEN ROCK 2:1 MAX

DOWNSPOUT/INLET

ROCK SPLASH PAD

6" ROCK BENCH (TYP)

SUB-GRADE OR EXISTING SOIL

4" PERFORATED PIPE

DRAIN ROCK

FILTER SAND

FILTER FABRIC SURROUNDING ROCK LAYER

24" CONCRETE PIPE

10" PVC SOLID WALL PIPE

OUTLET TO EX DITCH

(2) 4" OPENINGS FL ELEV = +0.25

BLOCK WALL PER PLAN

2" MIN

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STORMWATER PLAN
FOR
ISOVOLTA PREPREG BUILDING

CITY OF HARRISBURG
PUBLIC WORKS DEPT.
TAX LOT
15S04W10CC02300

APPROVED

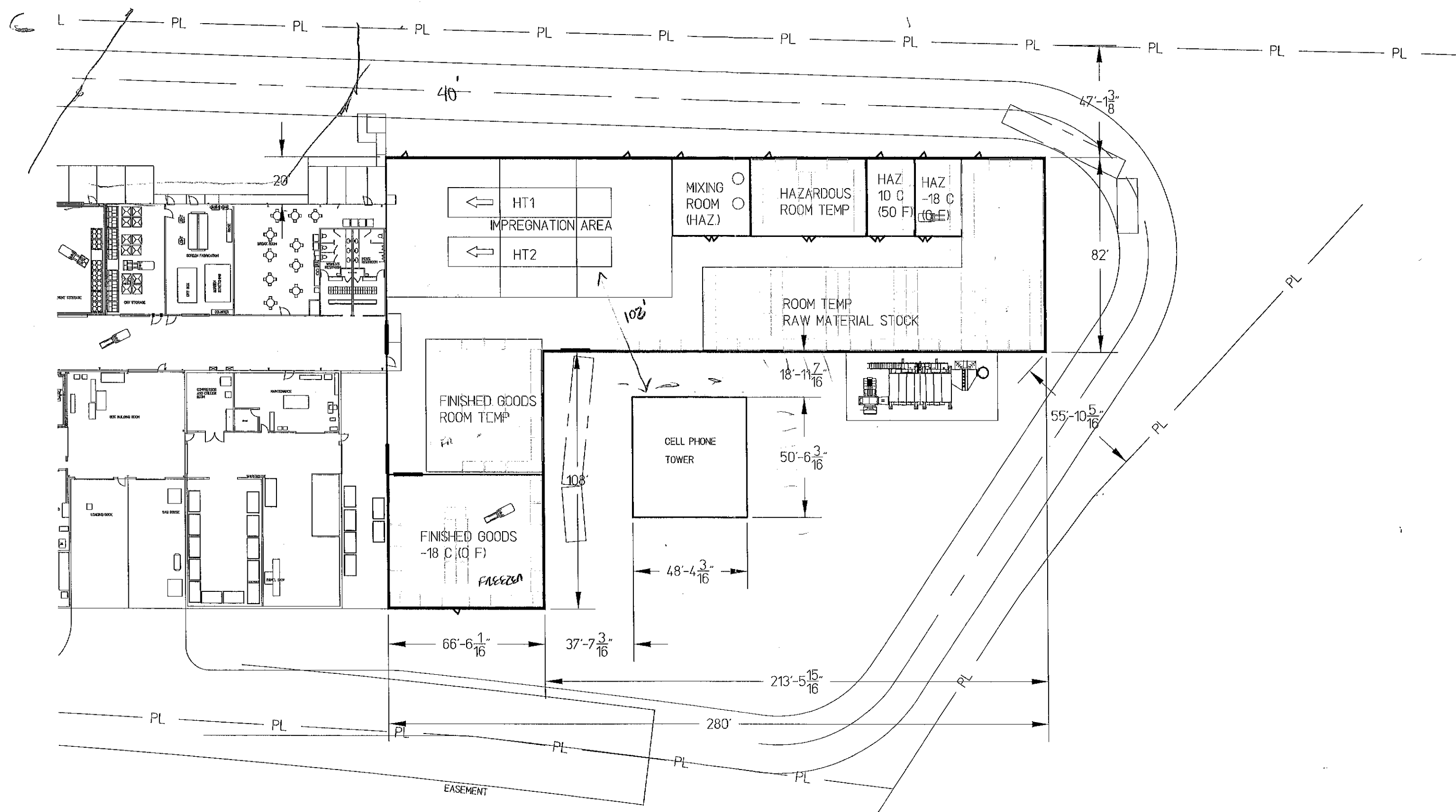
DATE	BY	DESCRIPTION	NO.
		REVISIONS	

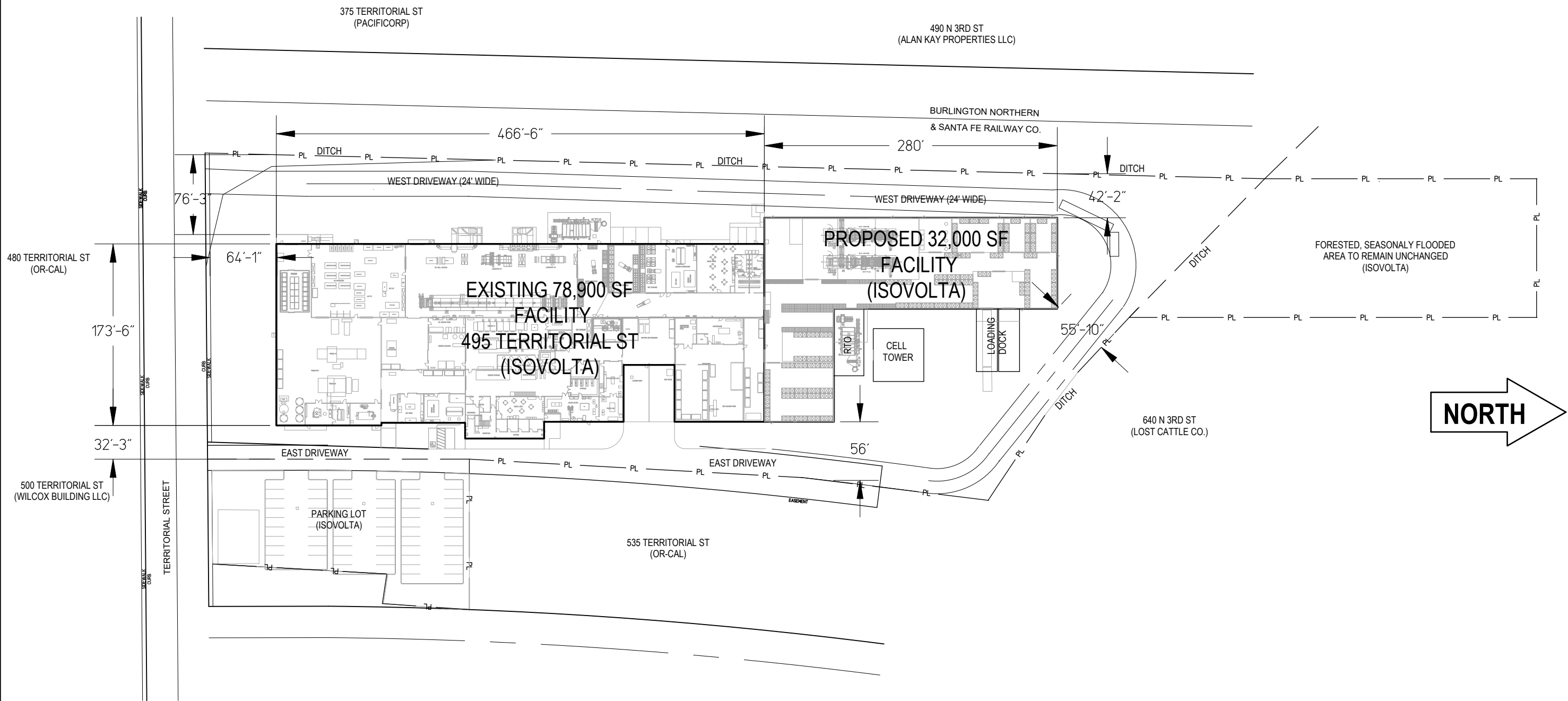
FAVREAU ENGINEERING
2206 COUNTRY HAVEN DR
EUGENE, OR 97408 (541) 556-4425

REGISTERED PROFESSIONAL
ENGINEER
STATE OF OREGON
J. FAVREAU
ETC. J. FAVREAU

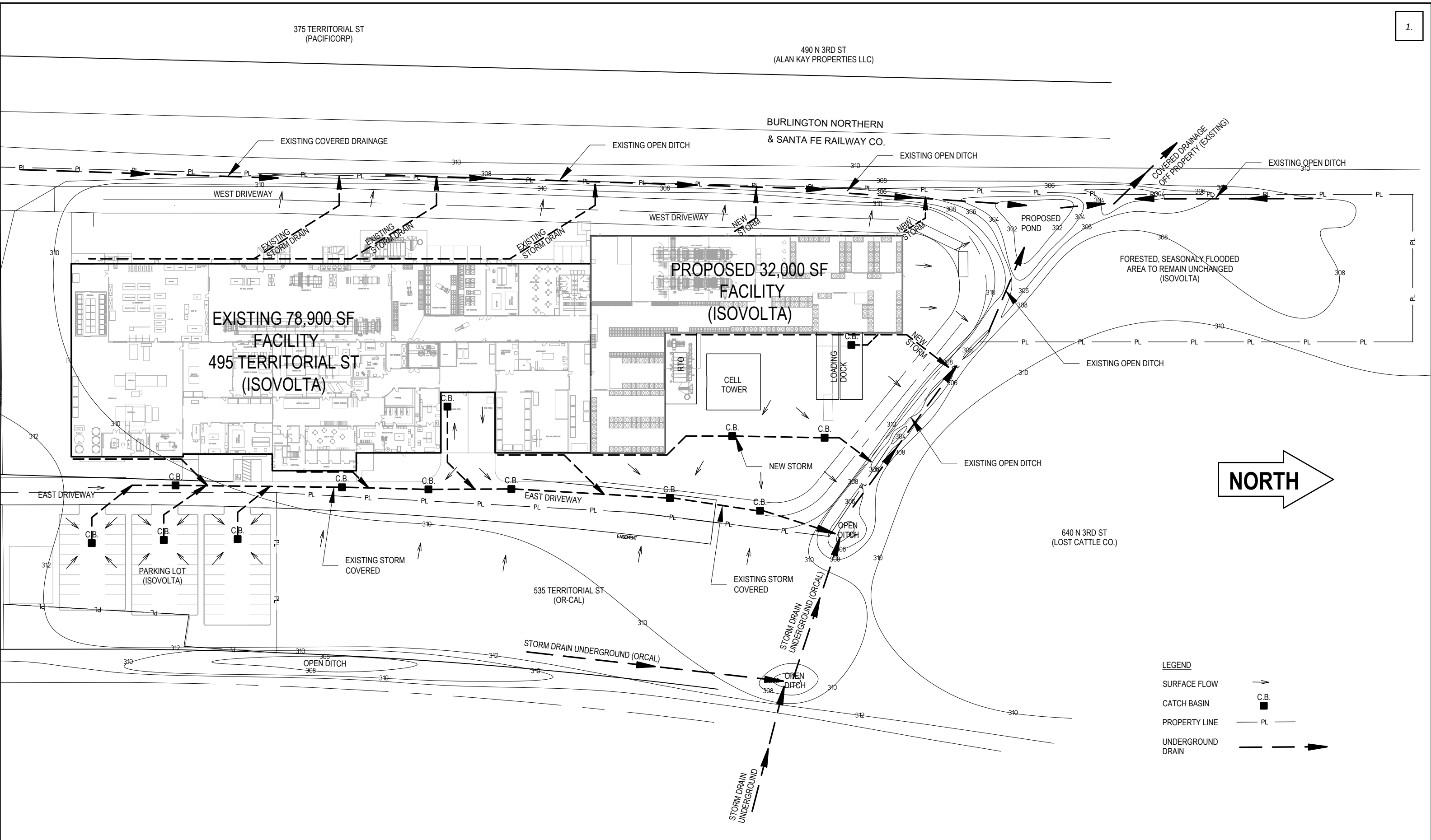
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SHEET C1



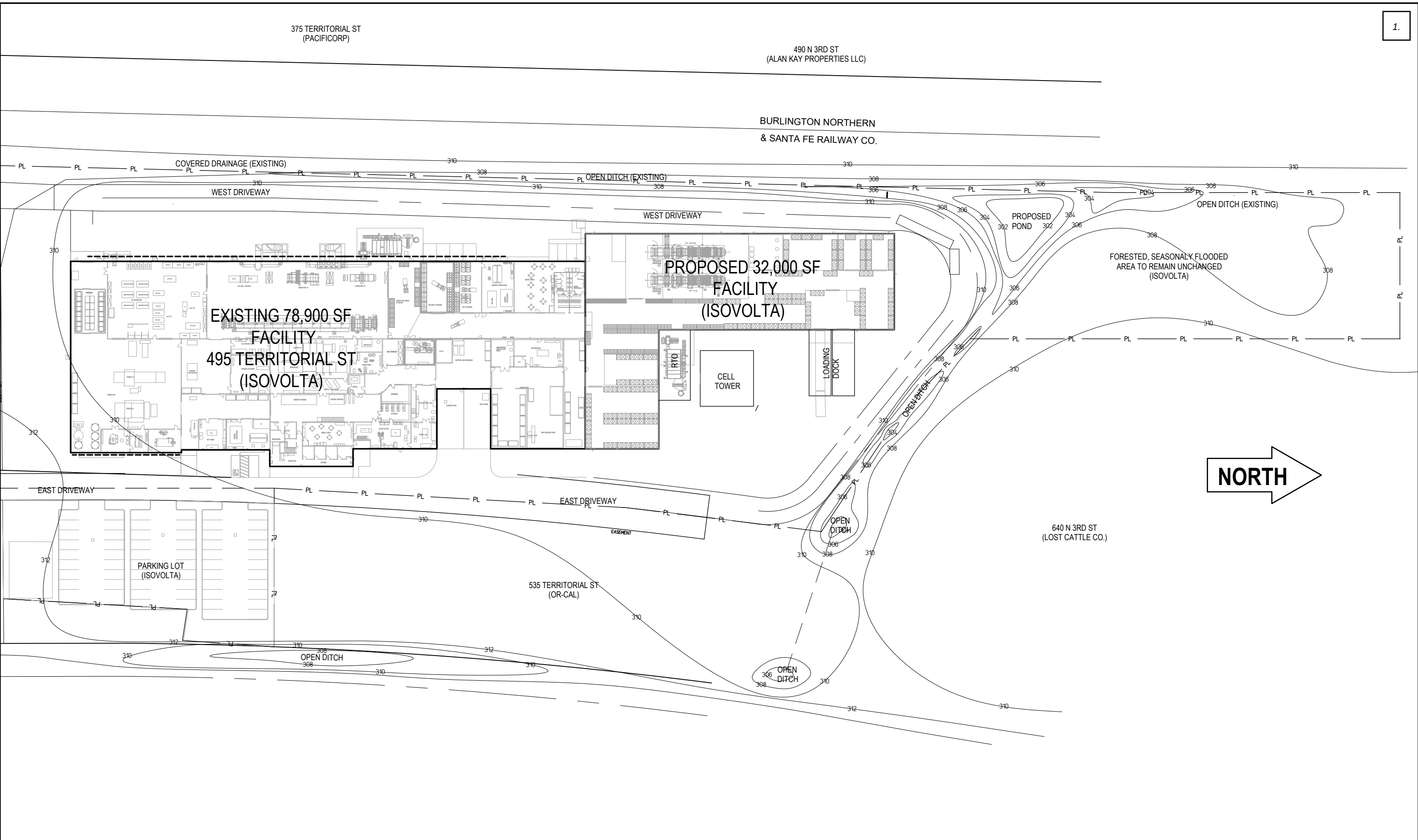


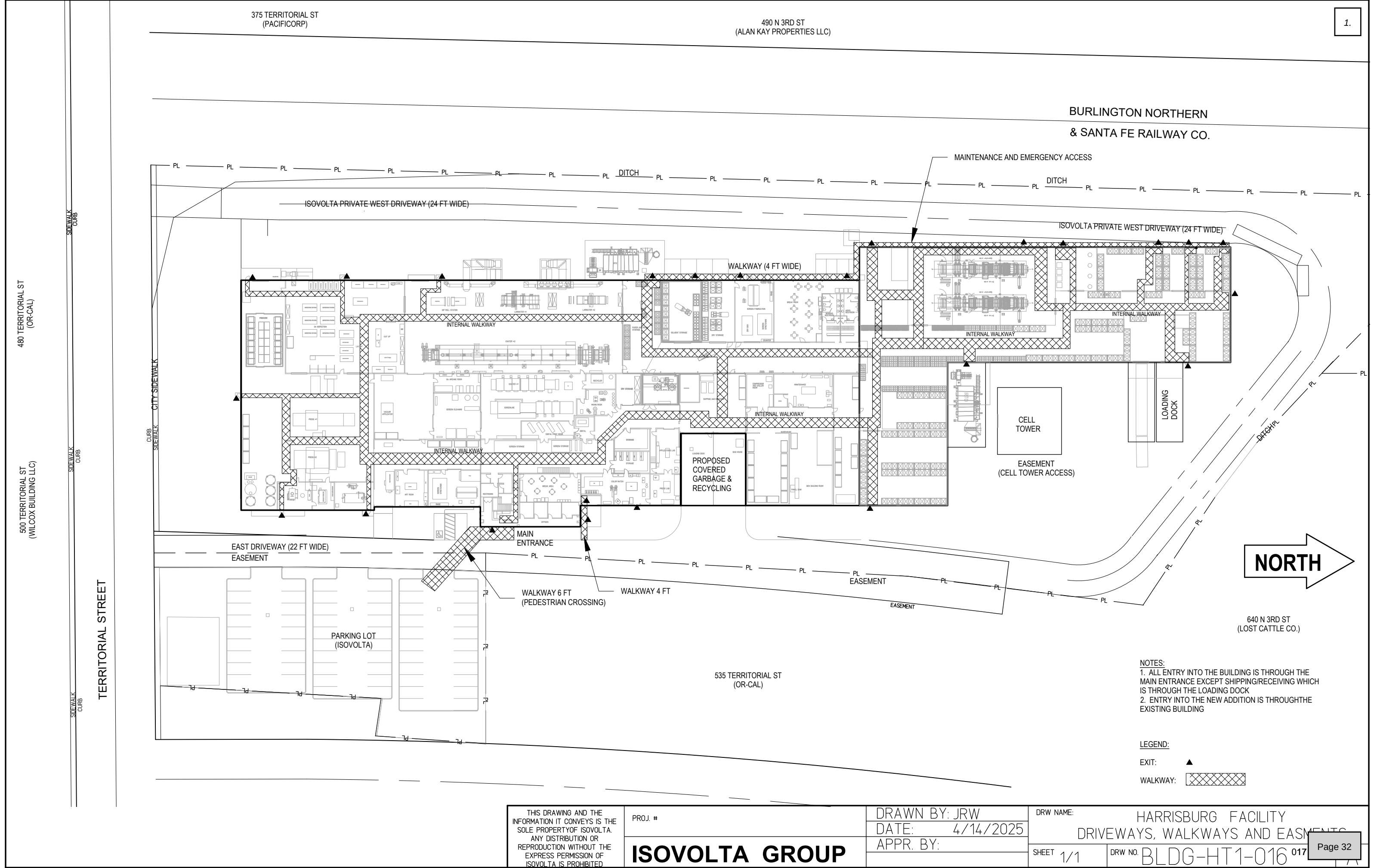
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		DATE: 9/24/2024		W/ PREPREG ADDITION	
	ISOVOLTA GROUP	APPR. BY:		SHEET 1/1	DRW NO. BLDG-HT1-013
				Page 29	

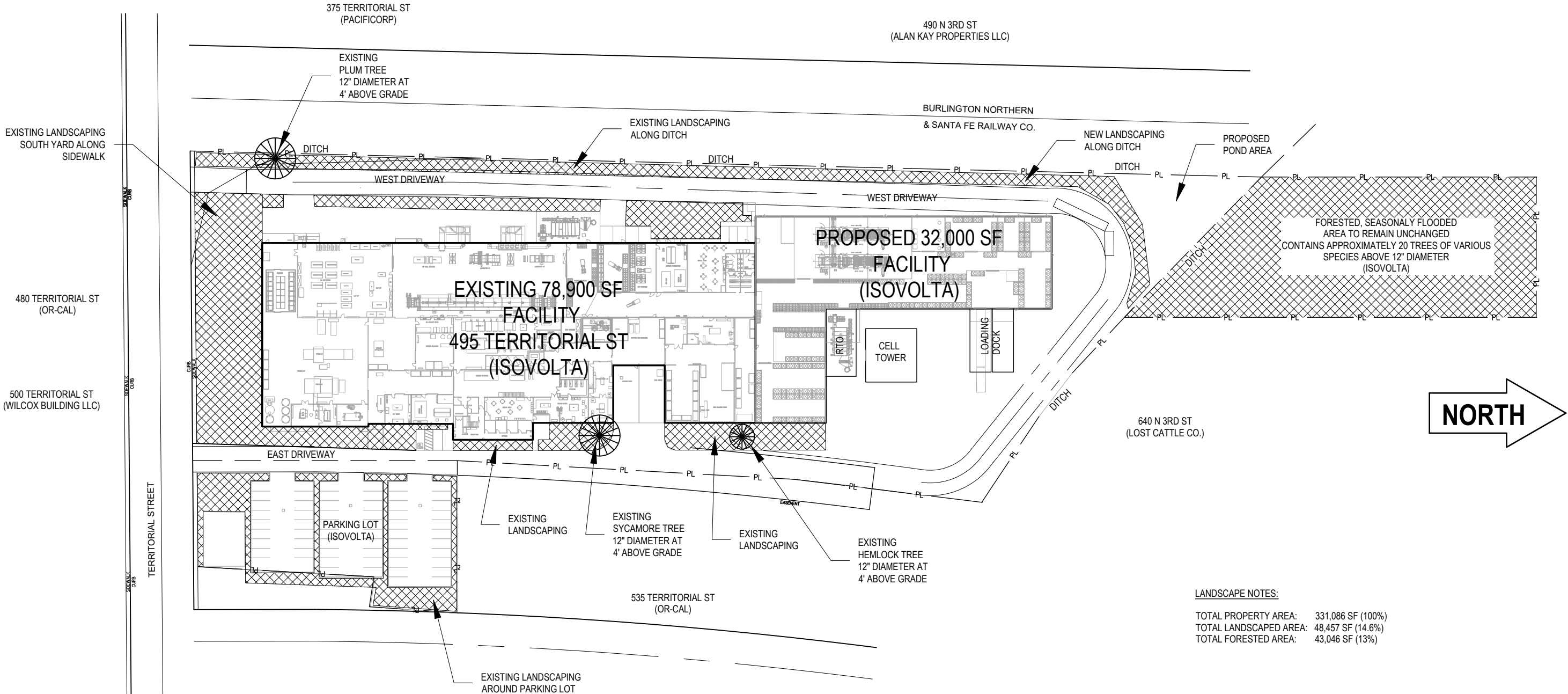


- LEGEND
- SURFACE FLOW →
 - CATCH BASIN C.B. ■
 - PROPERTY LINE — PL —
 - UNDERGROUND DRAIN — — — — — →

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	ISOVOLTA GROUP	DATE: 3/15/2025		SHEET 1/1	DRW NO. BLDG-HT1-014
		APPR. BY:			Page 30

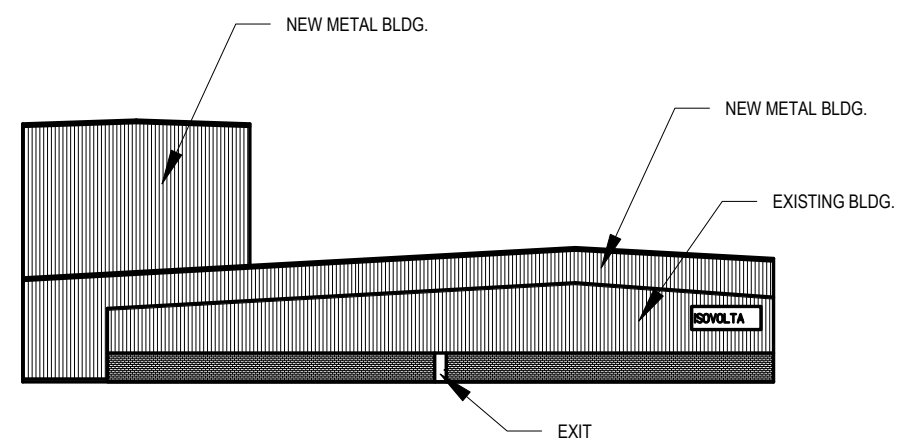




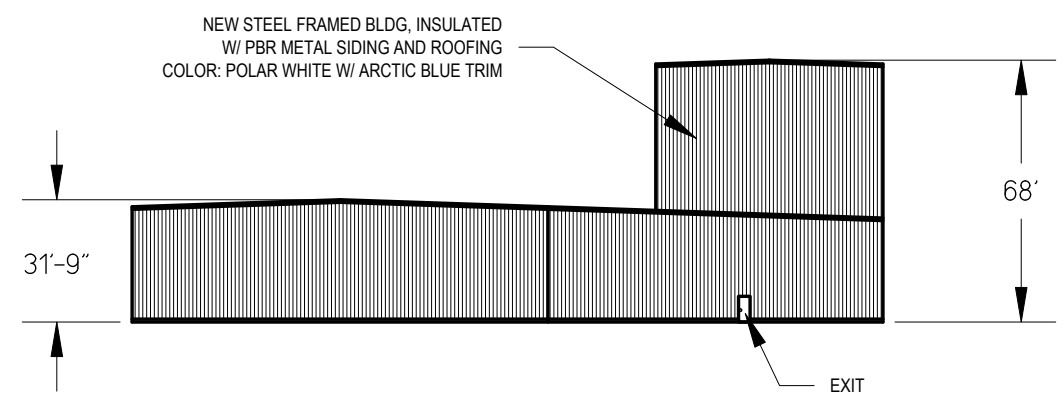


LANDSCAPE NOTES:

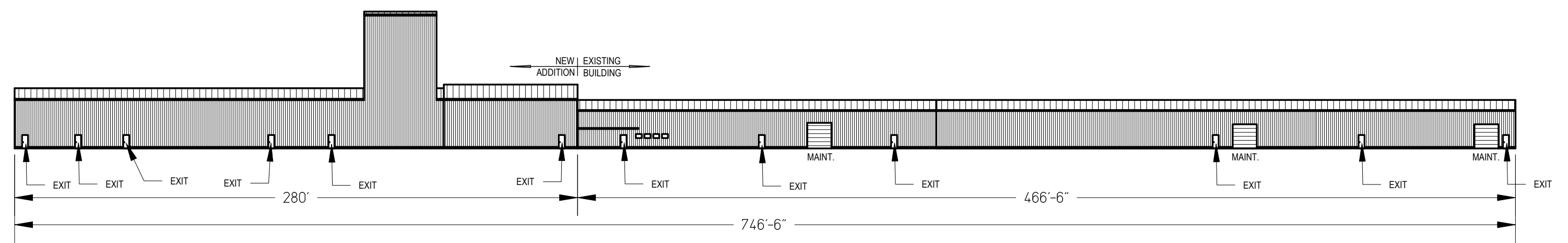
TOTAL PROPERTY AREA:	331,086 SF (100%)
TOTAL LANDSCAPED AREA:	48,457 SF (14.6%)
TOTAL FORESTED AREA:	43,046 SF (13%)



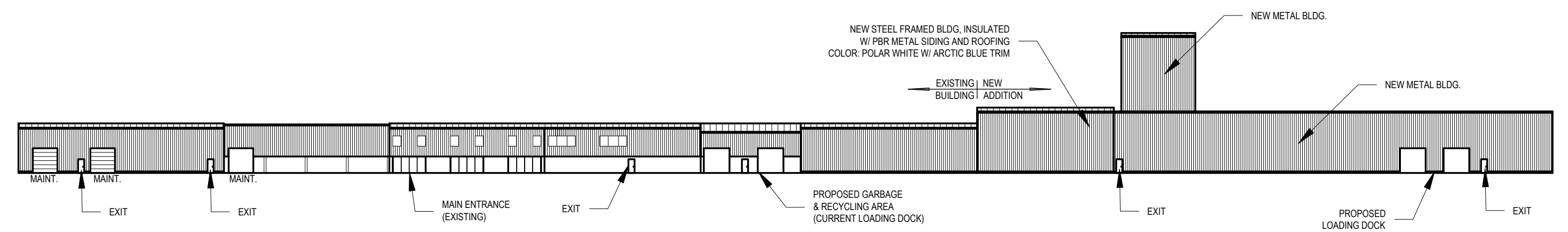
SOUTH ELEVATION



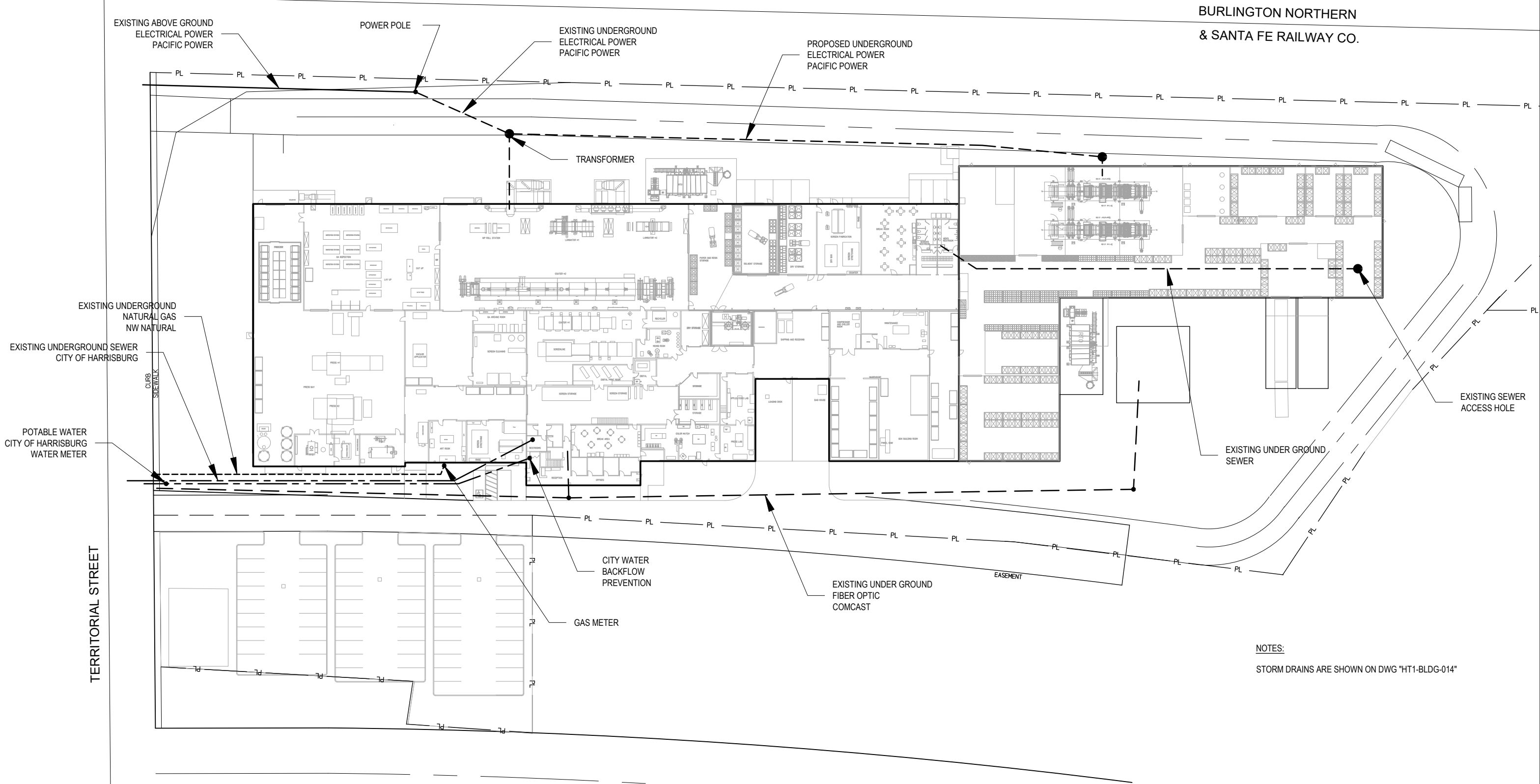
NORTH ELEVATION



WEST ELEVATION



EAST ELEVATION



NOTES:
STORM DRAINS ARE SHOWN ON DWG "HT1-BLDG-014"

ISOVOLTA PREPREG BUILDING STORMWATER NARRATIVE

February 1, 2025

PRE-DEVELOPMENT SITE CHARACTERISTICS

The subject property is comprised of two tax lots, totaling approximately 9.09 acres, north of Territorial St, east of N 4th St; more specifically identified as Tls 15S04W10-CC-02300 and 02402. The site is currently the location of Isovolta, Inc., who is the applicant. NRCS soil classification maps identify this site as having Class D soils and therefore is not suitable for an infiltration facility.

POST-DEVELOPMENT SITE CHARACTERISTICS + FACILITY SIZING

The proposal is for the addition of an approximately 36,000 SF building. Additionally, the applicant plans to eventually pave a portion of the site (approximately 57,000 SF), which has been accounted for in the sizing of the proposed facility. Any future paving will be permitted separately.

Per City of Harrisburg standards, the proposed facility has been sized to detain post-development runoff to less than pre-development rates for the 2, 5, 10, and 25-year storms, utilizing the TR-55 methodology. The attached calculations demonstrate adequate facility sizing to achieve this. For low flows and for larger storms, an overflow structure will be installed that directs runoff eventually into an existing ditch to the northeast of the proposed facility. Low flow orifices have been sized to detain post-development rates to less than pre-development rates. The proposed facility is a sand filter, which provides adequate storage with minimal maintenance. See attached plan for construction details of the proposed facility.

PEAK FLOW RATE (CFS)				
	2-YEAR	5-YEAR	10-YEAR	25-YEAR
PRE-DEVELOPMENT	1.11	1.36	1.82	2.17
POST-DEVELOPMENT	1.69	1.97	2.45	2.82
ROUTED	1.04	1.27	1.56	1.77

As demonstrated in the attached calculations and summarized in the table above, post-development peak runoff rates have been detained to less than peak pre-development rates, consistent with the City of Harrisburg stormwater standards.

ATTACHED DOCUMENTS

1. Hydrograph Report
2. Sand Filter Operations and Maintenance Plan



EXPIRES: 12/31/25

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

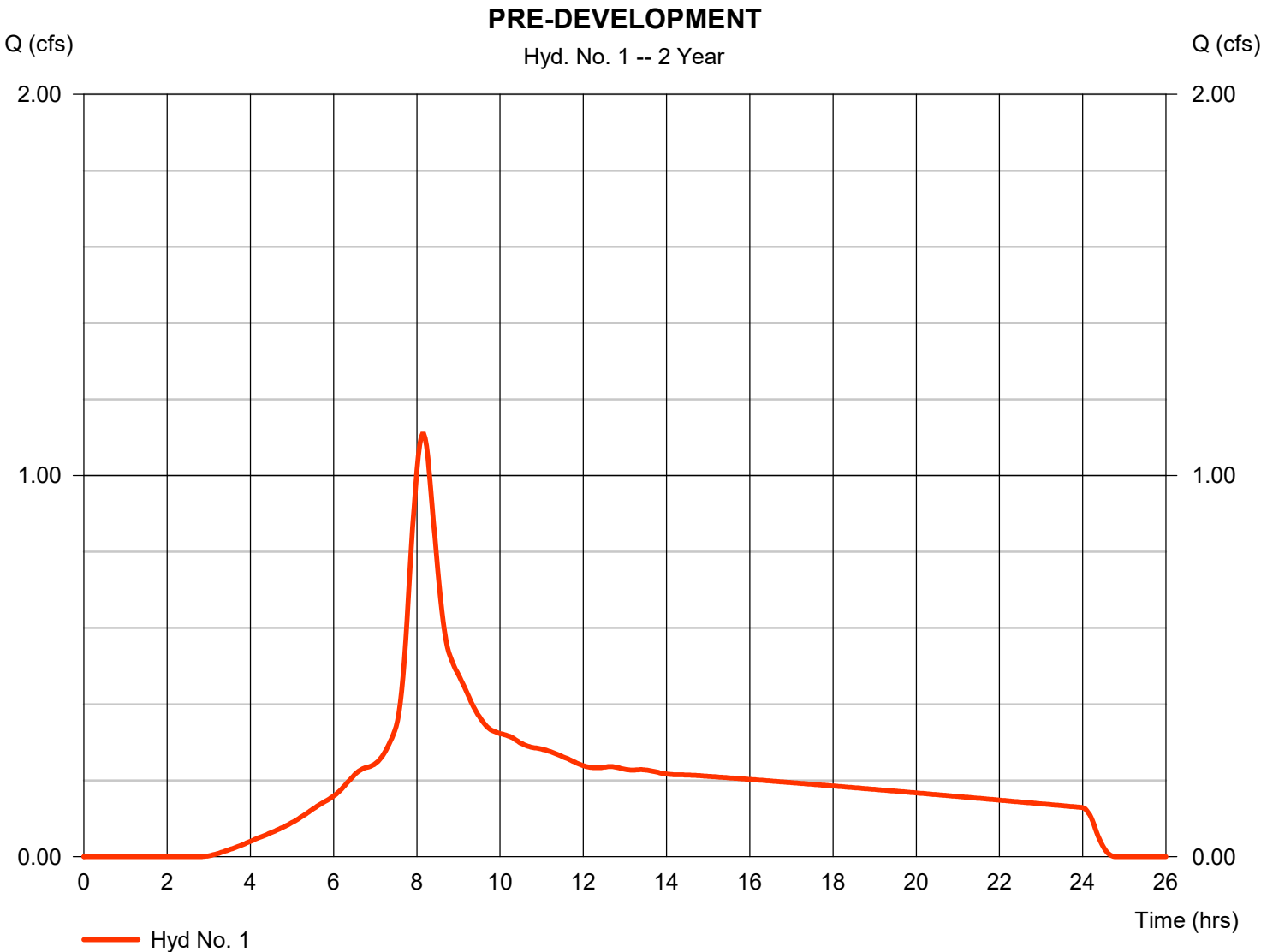
1.

023

Hyd. No. 1

PRE-DEVELOPMENT

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.109 cfs
Storm frequency	=	2 yrs	Time to peak	=	8.13 hrs
Time interval	=	2 min	Hyd. volume	=	17,488 cuft
Drainage area	=	2.300 ac	Curve number	=	90
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	29.20 min
Total precip.	=	3.12 in	Distribution	=	Type IA
Storm duration	=	24 hrs	Shape factor	=	484



TR55 Tc Worksheet

3
1.

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No. 1

PRE-DEVELOPMENT

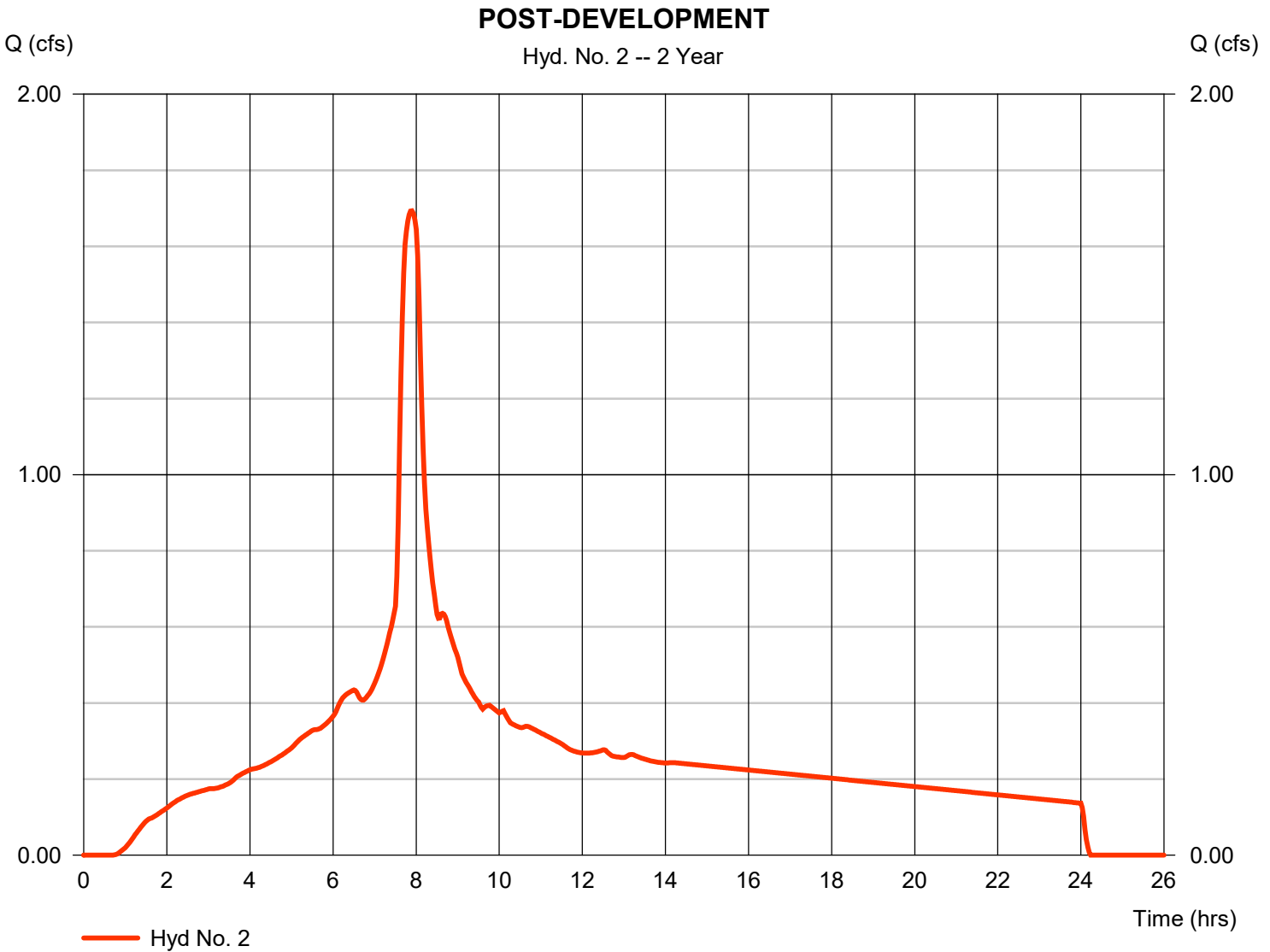
<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.150	0.011	0.011	
Flow length (ft)	= 200.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 3.30	0.00	0.00	
Land slope (%)	= 0.50	0.00	0.00	
Travel Time (min)	= 29.25	+ 0.00	+ 0.00	= 29.25
Shallow Concentrated Flow				
Flow length (ft)	= 0.00	0.00	0.00	
Watercourse slope (%)	= 0.00	0.00	0.00	
Surface description	= Paved	Paved	Paved	
Average velocity (ft/s)	=0.00	0.00	0.00	
Travel Time (min)	= 0.00	+ 0.00	+ 0.00	= 0.00
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	=0.00	0.00	0.00	
Flow length (ft)	(0)0.0	0.0	0.0	
Travel Time (min)	= 0.00	+ 0.00	+ 0.00	= 0.00
Total Travel Time, Tc				29.20 min

Hyd. No. 2

POST-DEVELOPMENT

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.694 cfs
Storm frequency	=	2 yrs	Time to peak	=	7.90 hrs
Time interval	=	2 min	Hyd. volume	=	24,110 cuft
Drainage area	=	2.300 ac	Curve number	=	98*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	7.10 min
Total precip.	=	3.12 in	Distribution	=	Type IA
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.930 x 98) + (2.770 x 80)] / 2.300



TR55 Tc Worksheet

5
1.

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No. 2

POST-DEVELOPMENT

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>			
Sheet Flow							
Manning's n-value	= 0.011	0.011	0.011				
Flow length (ft)	= 200.0	0.0	0.0				
Two-year 24-hr precip. (in)	= 3.30	0.00	0.00				
Land slope (%)	= 0.50	0.00	0.00				
Travel Time (min)	= 3.62	+	0.00	+	0.00	=	3.62
Shallow Concentrated Flow							
Flow length (ft)	= 300.00	0.00	0.00				
Watercourse slope (%)	= 0.50	0.00	0.00				
Surface description	= Paved	Paved	Paved				
Average velocity (ft/s)	=1.44	0.00	0.00				
Travel Time (min)	= 3.48	+	0.00	+	0.00	=	3.48
Channel Flow							
X sectional flow area (sqft)	= 0.00	0.00	0.00				
Wetted perimeter (ft)	= 0.00	0.00	0.00				
Channel slope (%)	= 0.00	0.00	0.00				
Manning's n-value	= 0.015	0.015	0.015				
Velocity (ft/s)	=0.00	0.00	0.00				
Flow length (ft)	(0)0.0	0.0	0.0				
Travel Time (min)	= 0.00	+	0.00	+	0.00	=	0.00
Total Travel Time, Tc				7.10 min			

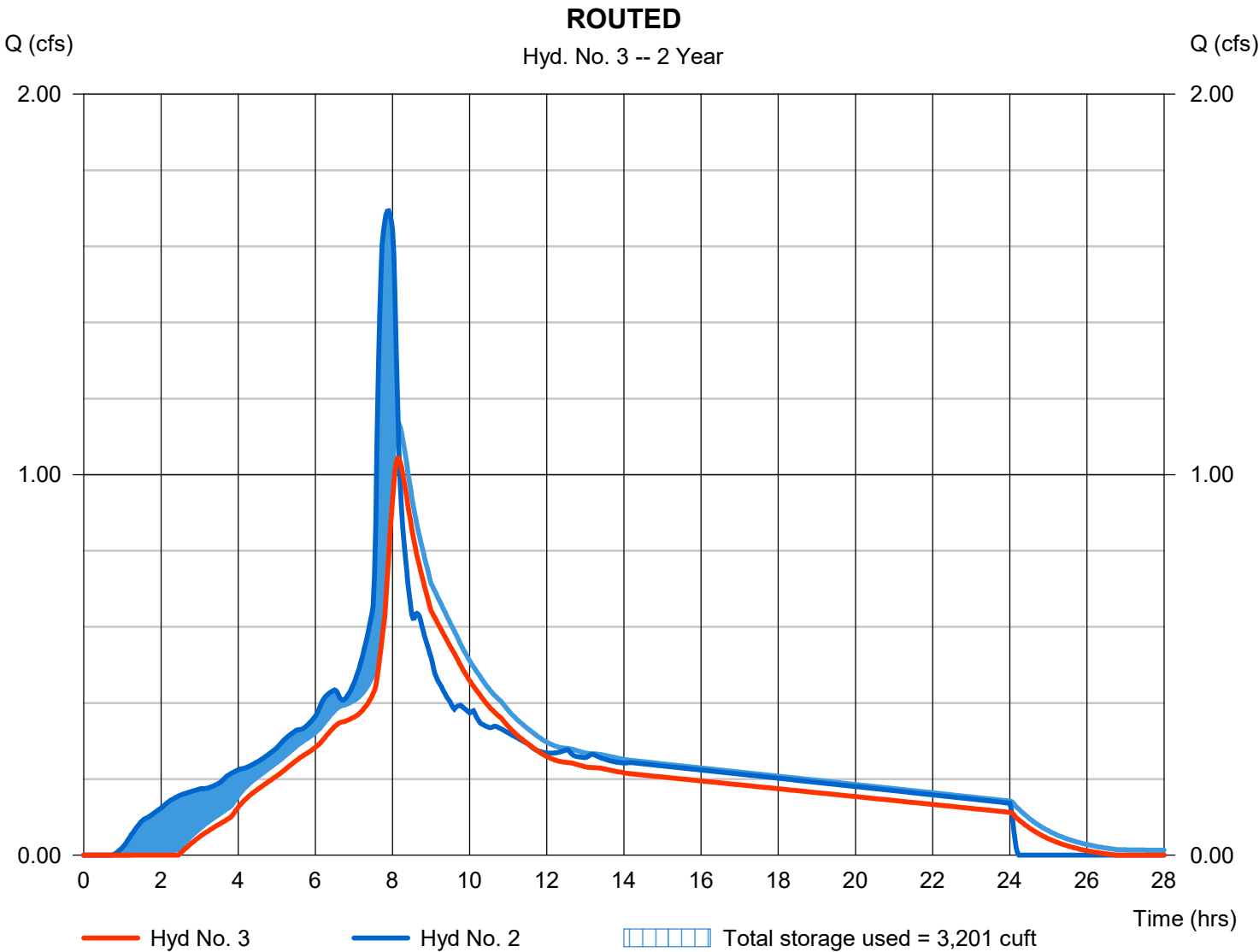
Hydrograph Report

Hyd. No. 3

ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 1.043 cfs
Storm frequency	= 2 yrs	Time to peak	= 8.13 hrs
Time interval	= 2 min	Hyd. volume	= 20,381 cuft
Inflow hyd. No.	= 2 - POST-DEVELOPMENT	Max. Elevation	= 301.28 ft
Reservoir name	= SOUTH FACILITY	Max. Storage	= 3,201 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

7
1.

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Friday, 01 / 31 / 2023

Pond No. 1 - SOUTH FACILITY

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Beginning Elevation = 300.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	300.00	2,500	0	0
2.00	302.00	2,500	5,000	5,000

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 4.00	4.00	Inactive	Inactive
Span (in)	= 4.00	4.00	6.00	0.00
No. Barrels	= 2	2	1	0
Invert El. (ft)	= 300.25	301.00	385.92	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	Inactive	Inactive	Inactive	Inactive
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 2.500 (by Contour)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

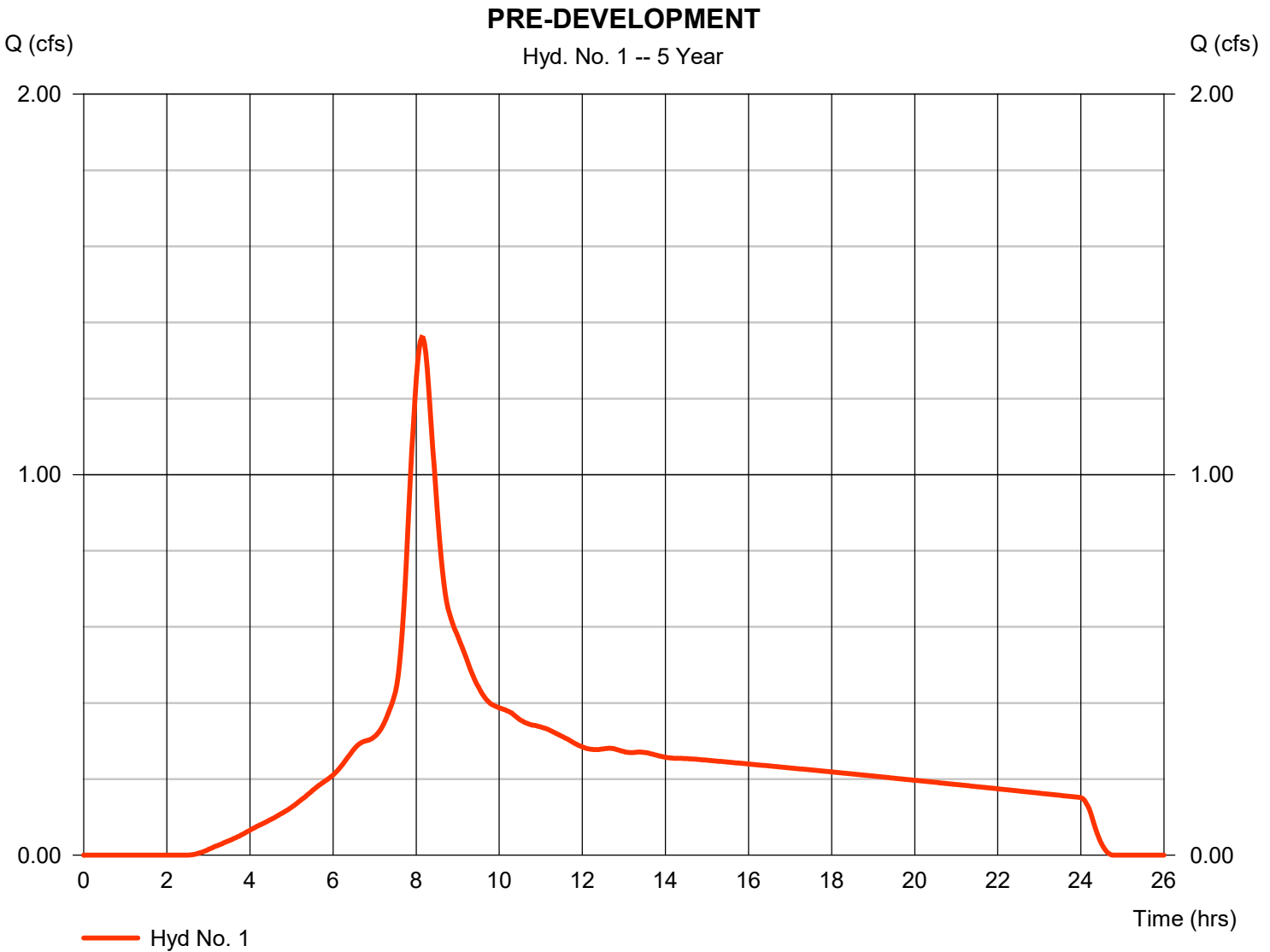
Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	300.00	0.00	0.00	0.00	---	---	---	---	---	0.000	---	0.000
0.20	500	300.20	0.00	0.00	0.00	---	---	---	---	---	0.014	---	0.014
0.40	1,000	300.40	0.10 ic	0.00	0.00	---	---	---	---	---	0.029	---	0.130
0.60	1,500	300.60	0.36 ic	0.00	0.00	---	---	---	---	---	0.043	---	0.403
0.80	2,000	300.80	0.52 ic	0.00	0.00	---	---	---	---	---	0.058	---	0.578
1.00	2,500	301.00	0.64 ic	0.00 ic	0.00	---	---	---	---	---	0.072	---	0.714
1.20	3,000	301.20	0.74 ic	0.17 ic	0.00	---	---	---	---	---	0.087	---	0.997
1.40	3,500	301.40	0.83 ic	0.41 ic	0.00	---	---	---	---	---	0.101	---	1.341
1.60	4,000	301.60	0.91 ic	0.55 ic	0.00	---	---	---	---	---	0.116	---	1.583
1.80	4,500	301.80	0.99 ic	0.67 ic	0.00	---	---	---	---	---	0.130	---	1.787
2.00	5,000	302.00	1.06 ic	0.77 ic	0.00	---	---	---	---	---	0.145	---	1.969

Hydrograph Report

Hyd. No. 1

PRE-DEVELOPMENT

Hydrograph type	= SCS Runoff	Peak discharge	= 1.361 cfs
Storm frequency	= 5 yrs	Time to peak	= 8.13 hrs
Time interval	= 2 min	Hyd. volume	= 21,221 cuft
Drainage area	= 2.300 ac	Curve number	= 90
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 29.20 min
Total precip.	= 3.60 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= 484



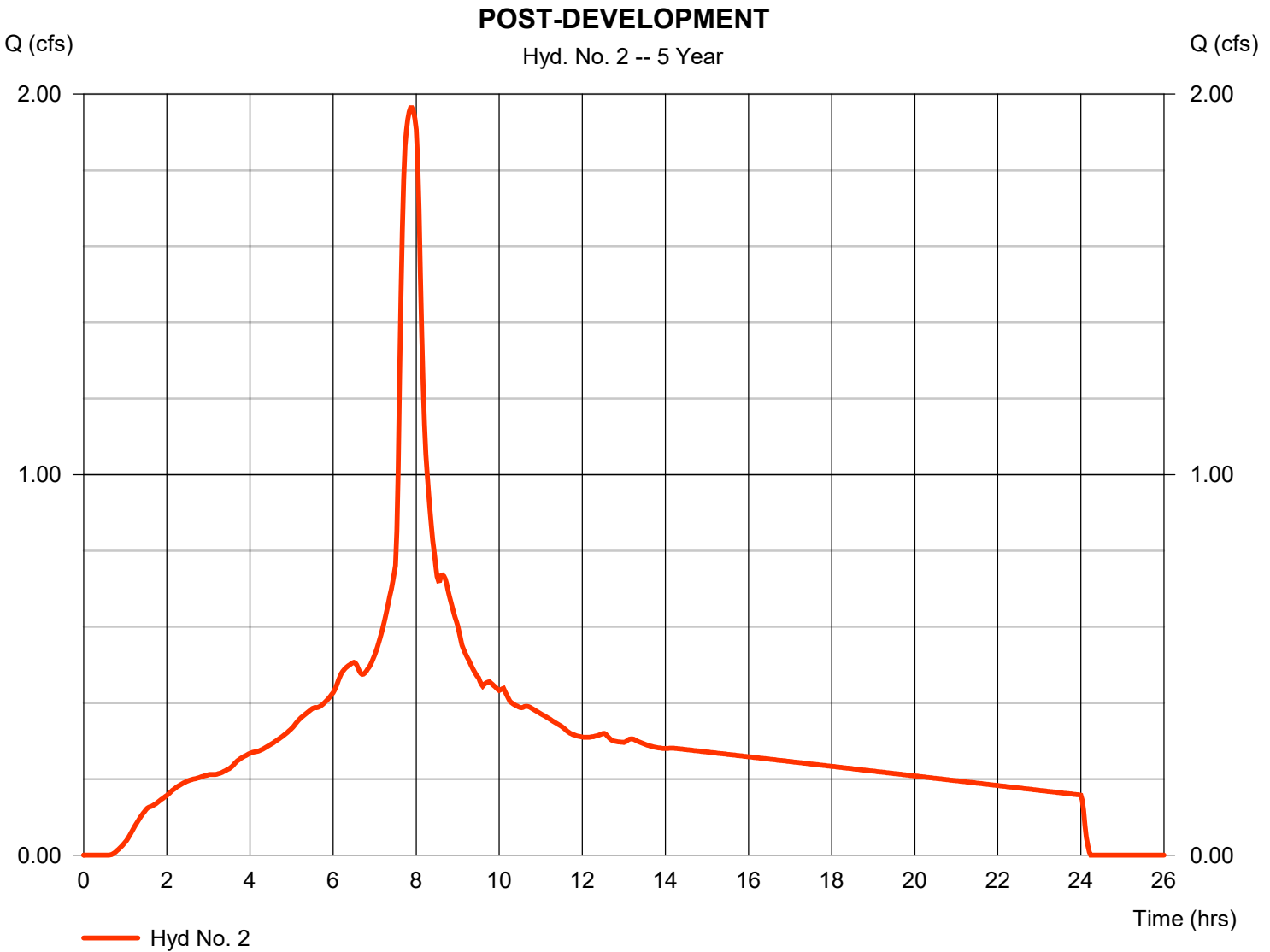
Hydrograph Report

Hyd. No. 2

POST-DEVELOPMENT

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.965 cfs
Storm frequency	=	5 yrs	Time to peak	=	7.90 hrs
Time interval	=	2 min	Hyd. volume	=	28,104 cuft
Drainage area	=	2.300 ac	Curve number	=	98*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	7.10 min
Total precip.	=	3.60 in	Distribution	=	Type IA
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.930 x 98) + (2.770 x 80)] / 2.300



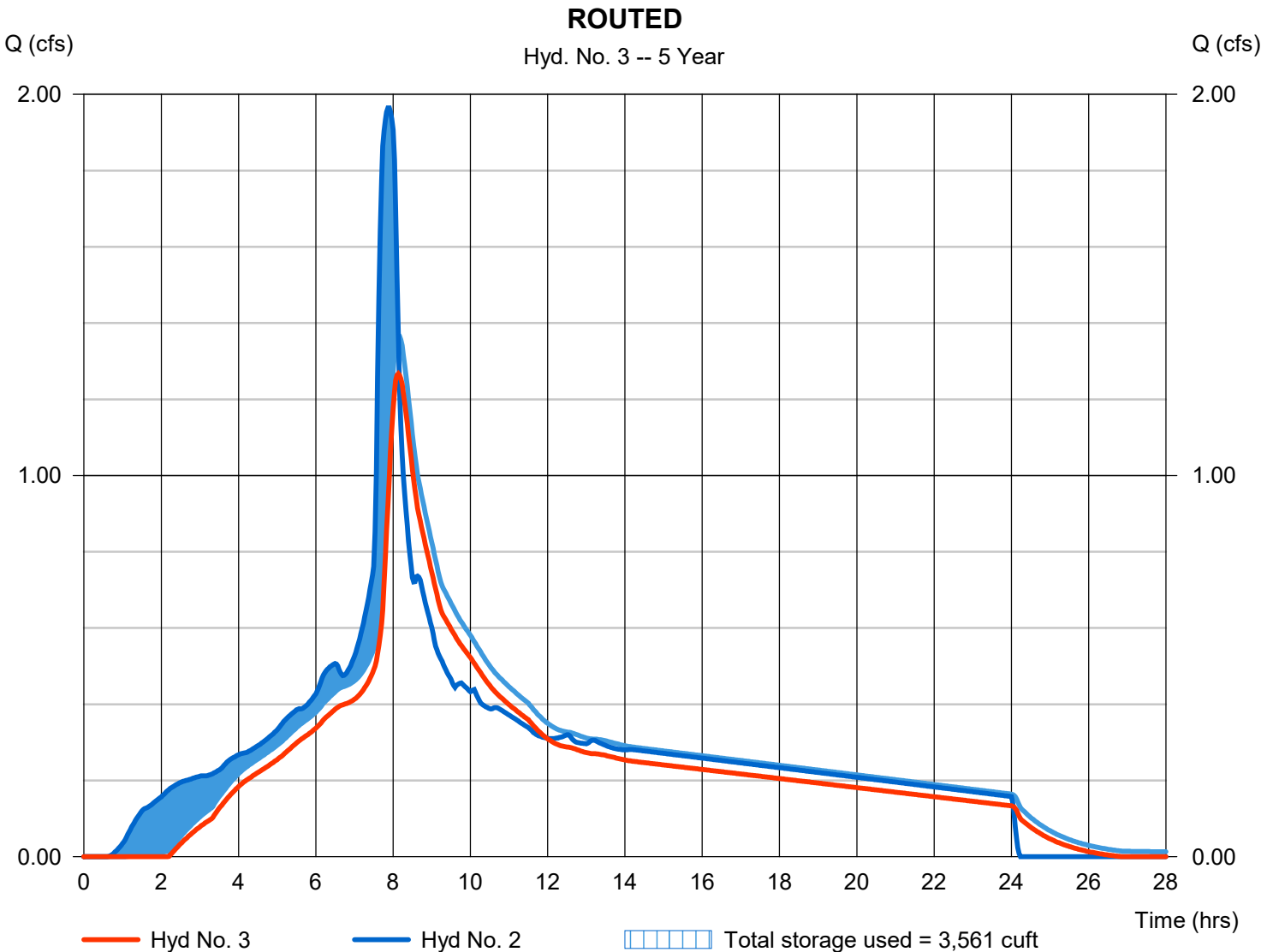
Hydrograph Report

Hyd. No. 3

ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 1.267 cfs
Storm frequency	= 5 yrs	Time to peak	= 8.13 hrs
Time interval	= 2 min	Hyd. volume	= 24,117 cuft
Inflow hyd. No.	= 2 - POST-DEVELOPMENT	Max. Elevation	= 301.42 ft
Reservoir name	= SOUTH FACILITY	Max. Storage	= 3,561 cuft

Storage Indication method used. Exfiltration extracted from Outflow.

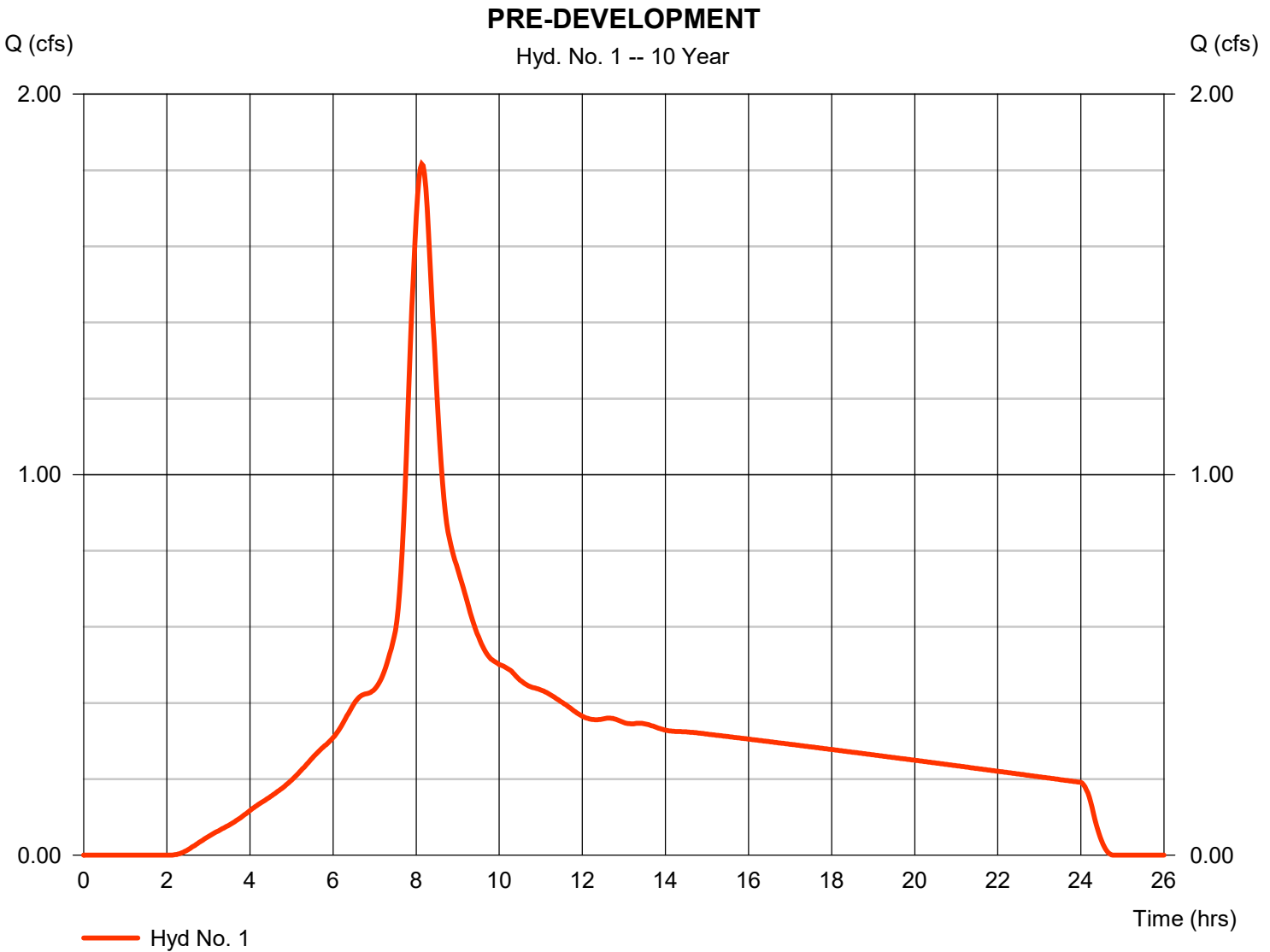


Hydrograph Report

Hyd. No. 1

PRE-DEVELOPMENT

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.817 cfs
Storm frequency	=	10 yrs	Time to peak	=	8.13 hrs
Time interval	=	2 min	Hyd. volume	=	28,032 cuft
Drainage area	=	2.300 ac	Curve number	=	90
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	29.20 min
Total precip.	=	4.46 in	Distribution	=	Type IA
Storm duration	=	24 hrs	Shape factor	=	484

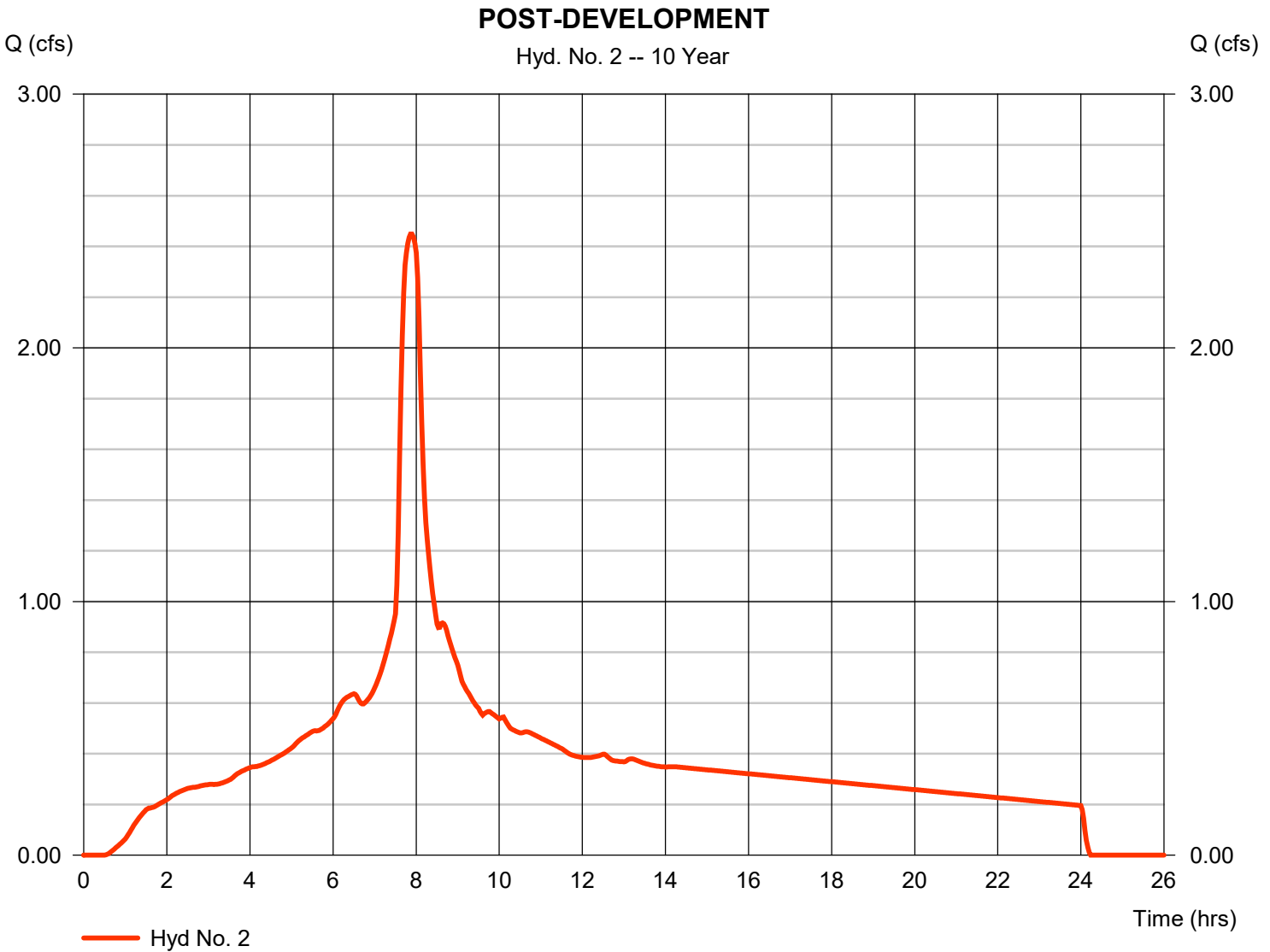


Hyd. No. 2

POST-DEVELOPMENT

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.448 cfs
Storm frequency	=	10 yrs	Time to peak	=	7.90 hrs
Time interval	=	2 min	Hyd. volume	=	35,267 cuft
Drainage area	=	2.300 ac	Curve number	=	98*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	7.10 min
Total precip.	=	4.46 in	Distribution	=	Type IA
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.930 x 98) + (2.770 x 80)] / 2.300



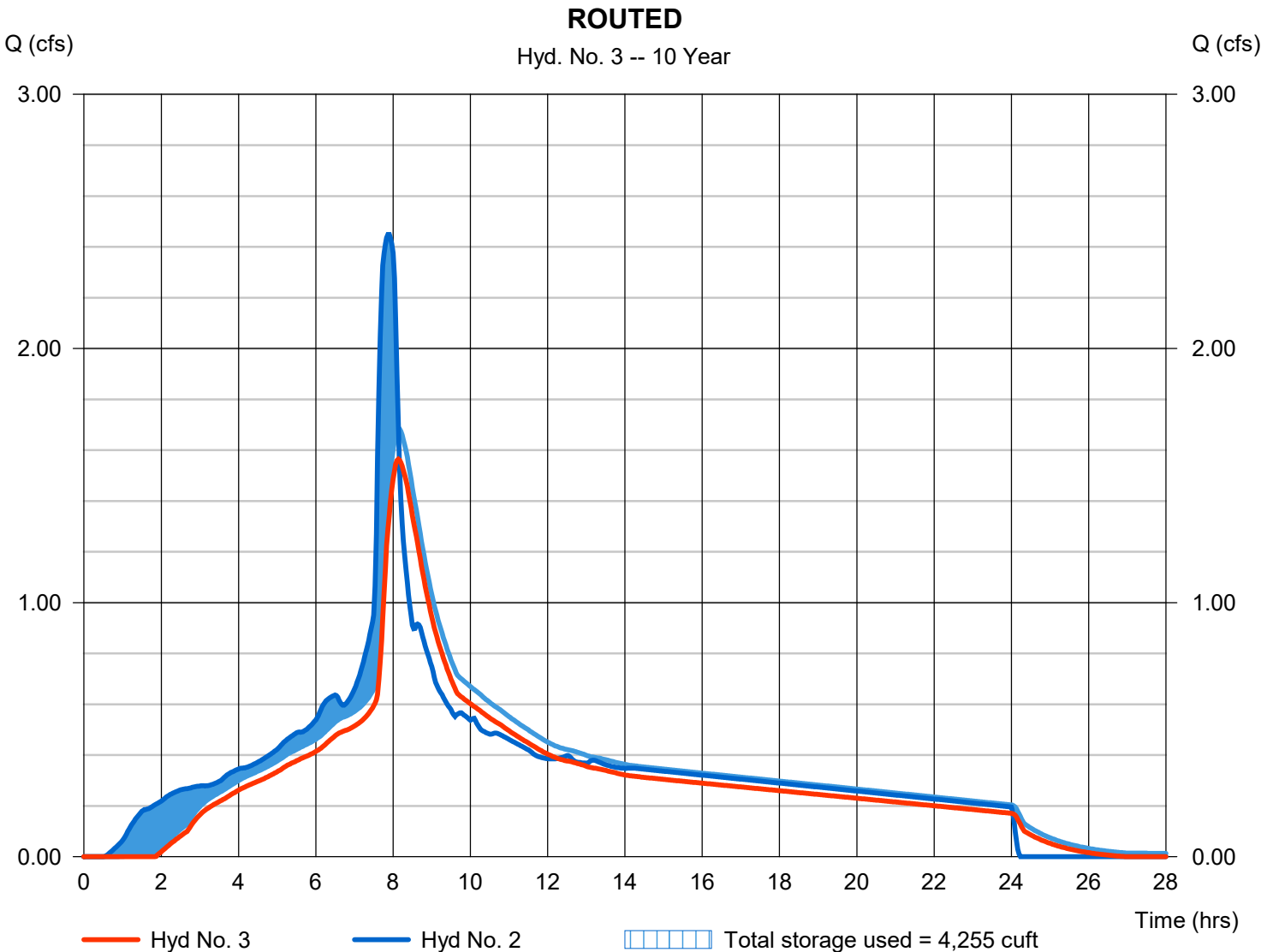
Hydrograph Report

Hyd. No. 3

ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 1.564 cfs
Storm frequency	= 10 yrs	Time to peak	= 8.13 hrs
Time interval	= 2 min	Hyd. volume	= 30,812 cuft
Inflow hyd. No.	= 2 - POST-DEVELOPMENT	Max. Elevation	= 301.70 ft
Reservoir name	= SOUTH FACILITY	Max. Storage	= 4,255 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



ISOVOLTA PREPREG BUILDING STORMWATER NARRATIVE

February 1, 2025

PRE-DEVELOPMENT SITE CHARACTERISTICS

The subject property is comprised of two tax lots, totaling approximately 9.09 acres, north of Territorial St, east of N 4th St; more specifically identified as TLs 15S04W10-CC-02300 and 02402. The site is currently the location of Isovolta, Inc., who is the applicant. NRCS soil classification maps identify this site as having Class D soils and therefore is not suitable for an infiltration facility.

POST-DEVELOPMENT SITE CHARACTERISTICS + FACILITY SIZING

The proposal is for the addition of an approximately 36,000 SF building. Additionally, the applicant plans to eventually pave a portion of the site (approximately 57,000 SF), which has been accounted for in the sizing of the proposed facility. Any future paving will be permitted separately.

Per City of Harrisburg standards, the proposed facility has been sized to detain post-development runoff to less than pre-development rates for the 2, 5, 10, and 25-year storms, utilizing the TR-55 methodology. The attached calculations demonstrate adequate facility sizing to achieve this. For low flows and for larger storms, an overflow structure will be installed that directs runoff eventually into an existing ditch to the northeast of the proposed facility. Low flow orifices have been sized to detain post-development rates to less than pre-development rates. The proposed facility is a sand filter, which provides adequate storage with minimal maintenance. See attached plan for construction details of the proposed facility.

PEAK FLOW RATE (CFS)				
	2-YEAR	5-YEAR	10-YEAR	25-YEAR
PRE-DEVELOPMENT	1.11	1.36	1.82	2.17
POST-DEVELOPMENT	1.69	1.97	2.45	2.82
ROUTED	1.04	1.27	1.56	1.77

As demonstrated in the attached calculations and summarized in the table above, post-development peak runoff rates have been detained to less than peak pre-development rates, consistent with the City of Harrisburg stormwater standards.

ATTACHED DOCUMENTS

1. Hydrograph Report
2. Sand Filter Operations and Maintenance Plan



Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

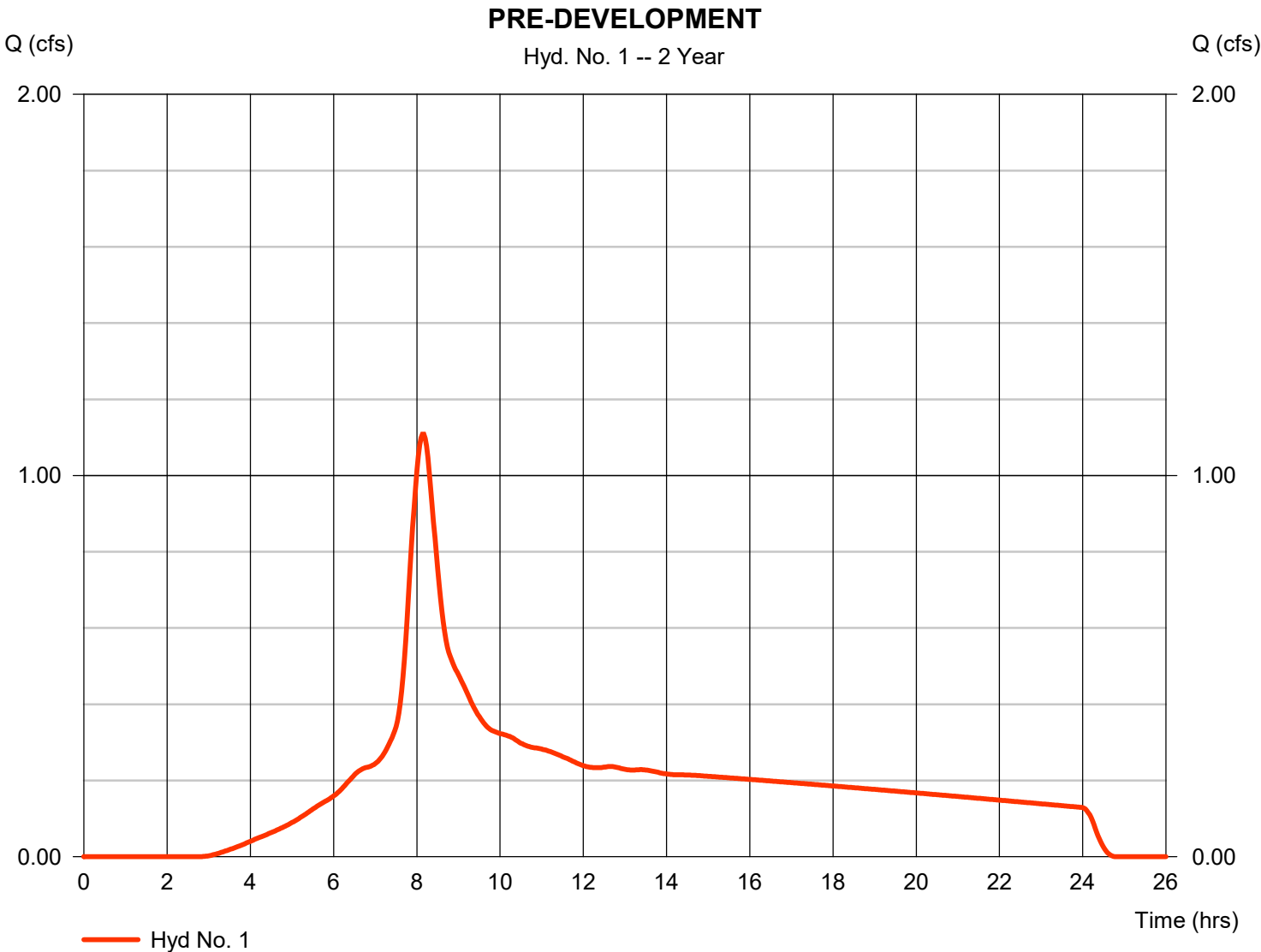
1.

040 |

Hyd. No. 1

PRE-DEVELOPMENT

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.109 cfs
Storm frequency	=	2 yrs	Time to peak	=	8.13 hrs
Time interval	=	2 min	Hyd. volume	=	17,488 cuft
Drainage area	=	2.300 ac	Curve number	=	90
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	29.20 min
Total precip.	=	3.12 in	Distribution	=	Type IA
Storm duration	=	24 hrs	Shape factor	=	484



TR55 Tc Worksheet

3
1.

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No. 1

PRE-DEVELOPMENT

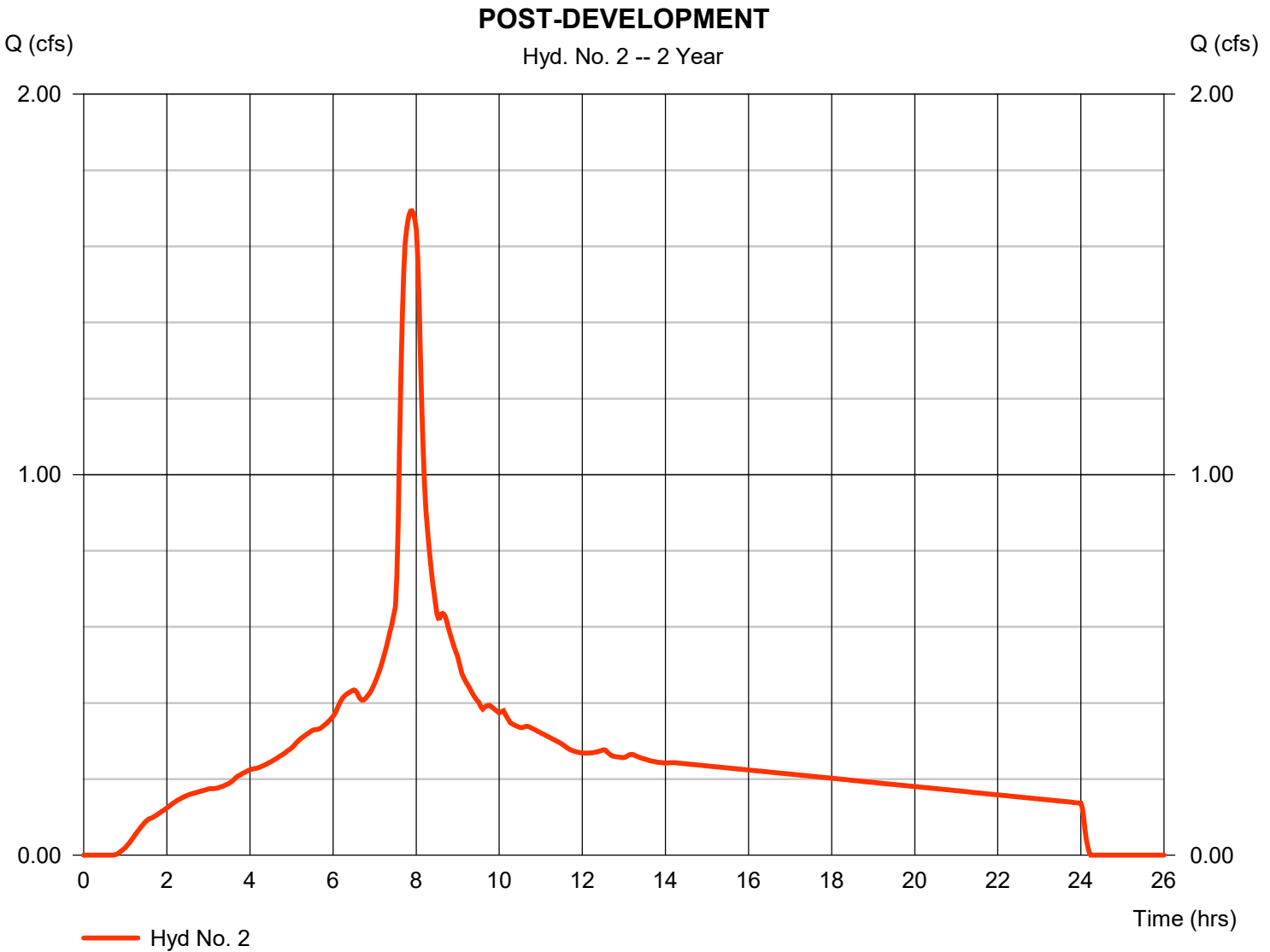
<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.150	0.011	0.011	
Flow length (ft)	= 200.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 3.30	0.00	0.00	
Land slope (%)	= 0.50	0.00	0.00	
Travel Time (min)	= 29.25	+ 0.00	+ 0.00	= 29.25
Shallow Concentrated Flow				
Flow length (ft)	= 0.00	0.00	0.00	
Watercourse slope (%)	= 0.00	0.00	0.00	
Surface description	= Paved	Paved	Paved	
Average velocity (ft/s)	=0.00	0.00	0.00	
Travel Time (min)	= 0.00	+ 0.00	+ 0.00	= 0.00
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	=0.00	0.00	0.00	
Flow length (ft)	(0)0.0	0.0	0.0	
Travel Time (min)	= 0.00	+ 0.00	+ 0.00	= 0.00
Total Travel Time, Tc				29.20 min

Hyd. No. 2

POST-DEVELOPMENT

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.694 cfs
Storm frequency	=	2 yrs	Time to peak	=	7.90 hrs
Time interval	=	2 min	Hyd. volume	=	24,110 cuft
Drainage area	=	2.300 ac	Curve number	=	98*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	7.10 min
Total precip.	=	3.12 in	Distribution	=	Type IA
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.930 x 98) + (2.770 x 80)] / 2.300



TR55 Tc Worksheet

5
1.

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No. 2

POST-DEVELOPMENT

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>			
Sheet Flow							
Manning's n-value	= 0.011	0.011	0.011				
Flow length (ft)	= 200.0	0.0	0.0				
Two-year 24-hr precip. (in)	= 3.30	0.00	0.00				
Land slope (%)	= 0.50	0.00	0.00				
Travel Time (min)	= 3.62	+	0.00	+	0.00	=	3.62
Shallow Concentrated Flow							
Flow length (ft)	= 300.00	0.00	0.00				
Watercourse slope (%)	= 0.50	0.00	0.00				
Surface description	= Paved	Paved	Paved				
Average velocity (ft/s)	=1.44	0.00	0.00				
Travel Time (min)	= 3.48	+	0.00	+	0.00	=	3.48
Channel Flow							
X sectional flow area (sqft)	= 0.00	0.00	0.00				
Wetted perimeter (ft)	= 0.00	0.00	0.00				
Channel slope (%)	= 0.00	0.00	0.00				
Manning's n-value	= 0.015	0.015	0.015				
Velocity (ft/s)	=0.00	0.00	0.00				
Flow length (ft)	(0)0.0	0.0	0.0				
Travel Time (min)	= 0.00	+	0.00	+	0.00	=	0.00
Total Travel Time, Tc				7.10 min			

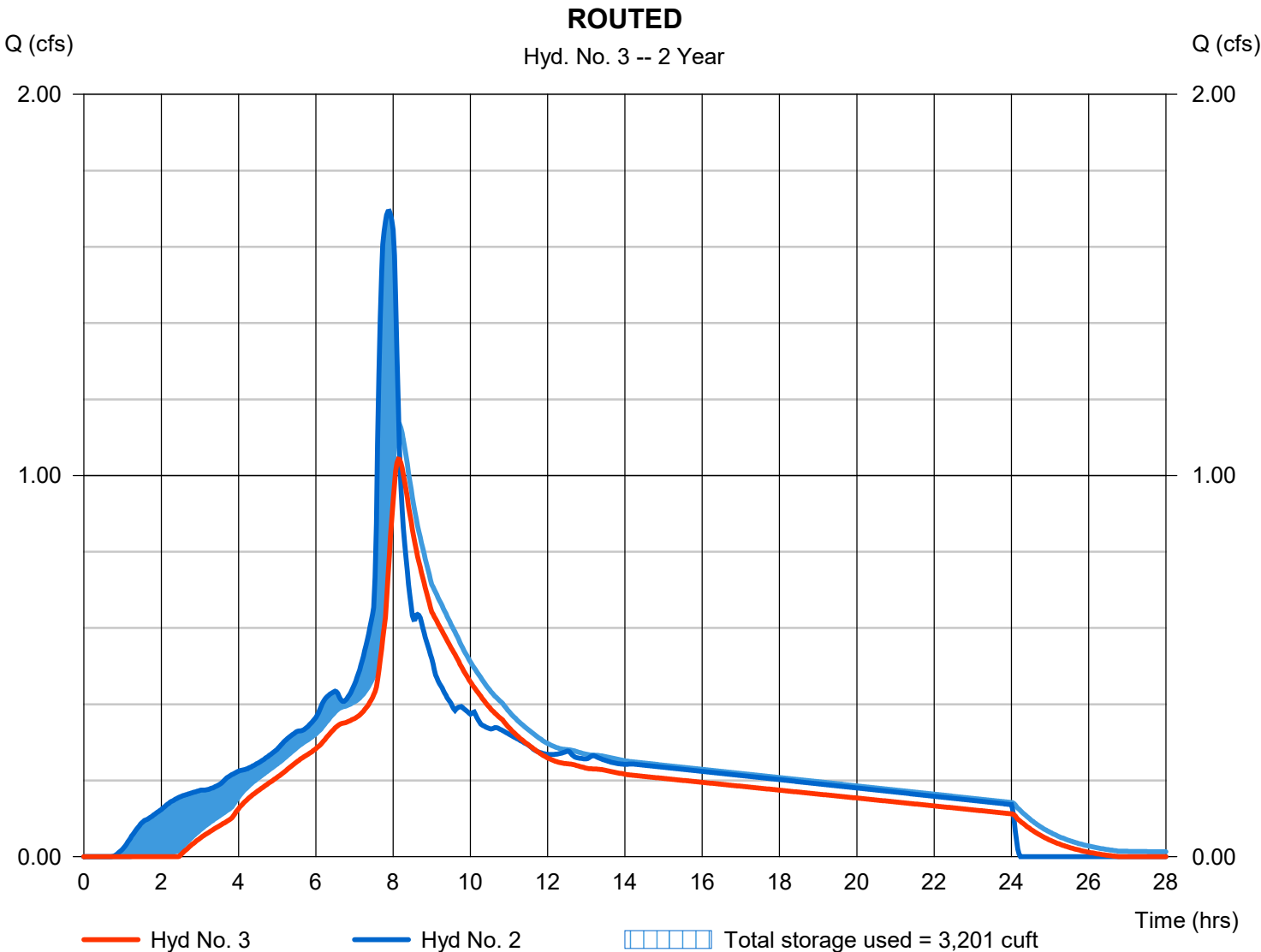
Hydrograph Report

Hyd. No. 3

ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 1.043 cfs
Storm frequency	= 2 yrs	Time to peak	= 8.13 hrs
Time interval	= 2 min	Hyd. volume	= 20,381 cuft
Inflow hyd. No.	= 2 - POST-DEVELOPMENT	Max. Elevation	= 301.28 ft
Reservoir name	= SOUTH FACILITY	Max. Storage	= 3,201 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

7
1.

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Friday, 01 / 31 / 2023

Pond No. 1 - SOUTH FACILITY

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Beginning Elevation = 300.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	300.00	2,500	0	0
2.00	302.00	2,500	5,000	5,000

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 4.00	4.00	Inactive	Inactive
Span (in)	= 4.00	4.00	6.00	0.00
No. Barrels	= 2	2	1	0
Invert El. (ft)	= 300.25	301.00	385.92	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	Inactive	Inactive	Inactive	Inactive
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 2.500 (by Contour)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

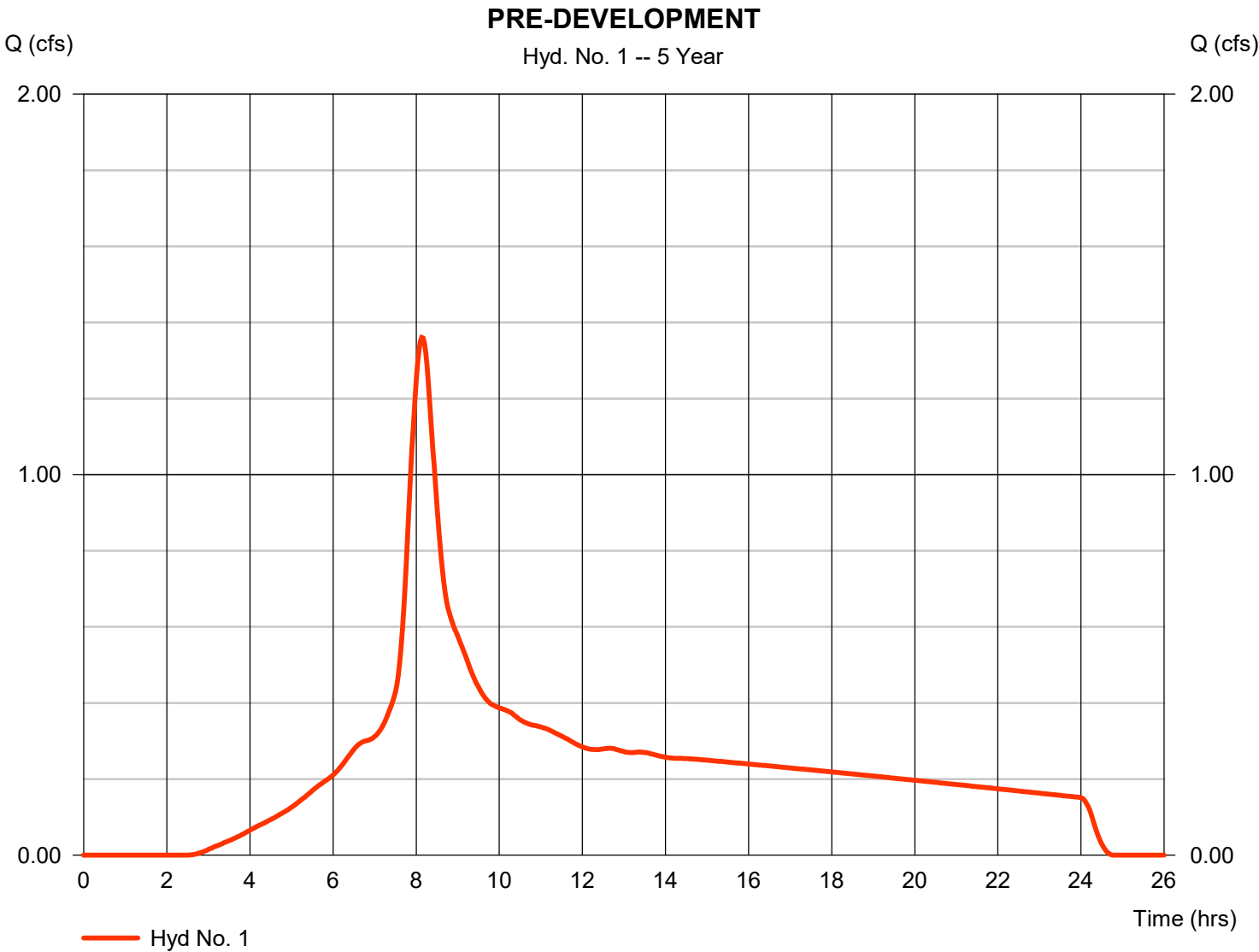
Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	300.00	0.00	0.00	0.00	---	---	---	---	---	0.000	---	0.000
0.20	500	300.20	0.00	0.00	0.00	---	---	---	---	---	0.014	---	0.014
0.40	1,000	300.40	0.10 ic	0.00	0.00	---	---	---	---	---	0.029	---	0.130
0.60	1,500	300.60	0.36 ic	0.00	0.00	---	---	---	---	---	0.043	---	0.403
0.80	2,000	300.80	0.52 ic	0.00	0.00	---	---	---	---	---	0.058	---	0.578
1.00	2,500	301.00	0.64 ic	0.00 ic	0.00	---	---	---	---	---	0.072	---	0.714
1.20	3,000	301.20	0.74 ic	0.17 ic	0.00	---	---	---	---	---	0.087	---	0.997
1.40	3,500	301.40	0.83 ic	0.41 ic	0.00	---	---	---	---	---	0.101	---	1.341
1.60	4,000	301.60	0.91 ic	0.55 ic	0.00	---	---	---	---	---	0.116	---	1.583
1.80	4,500	301.80	0.99 ic	0.67 ic	0.00	---	---	---	---	---	0.130	---	1.787
2.00	5,000	302.00	1.06 ic	0.77 ic	0.00	---	---	---	---	---	0.145	---	1.969

Hyd. No. 1

PRE-DEVELOPMENT

Hydrograph type	= SCS Runoff	Peak discharge	= 1.361 cfs
Storm frequency	= 5 yrs	Time to peak	= 8.13 hrs
Time interval	= 2 min	Hyd. volume	= 21,221 cuft
Drainage area	= 2.300 ac	Curve number	= 90
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 29.20 min
Total precip.	= 3.60 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= 484

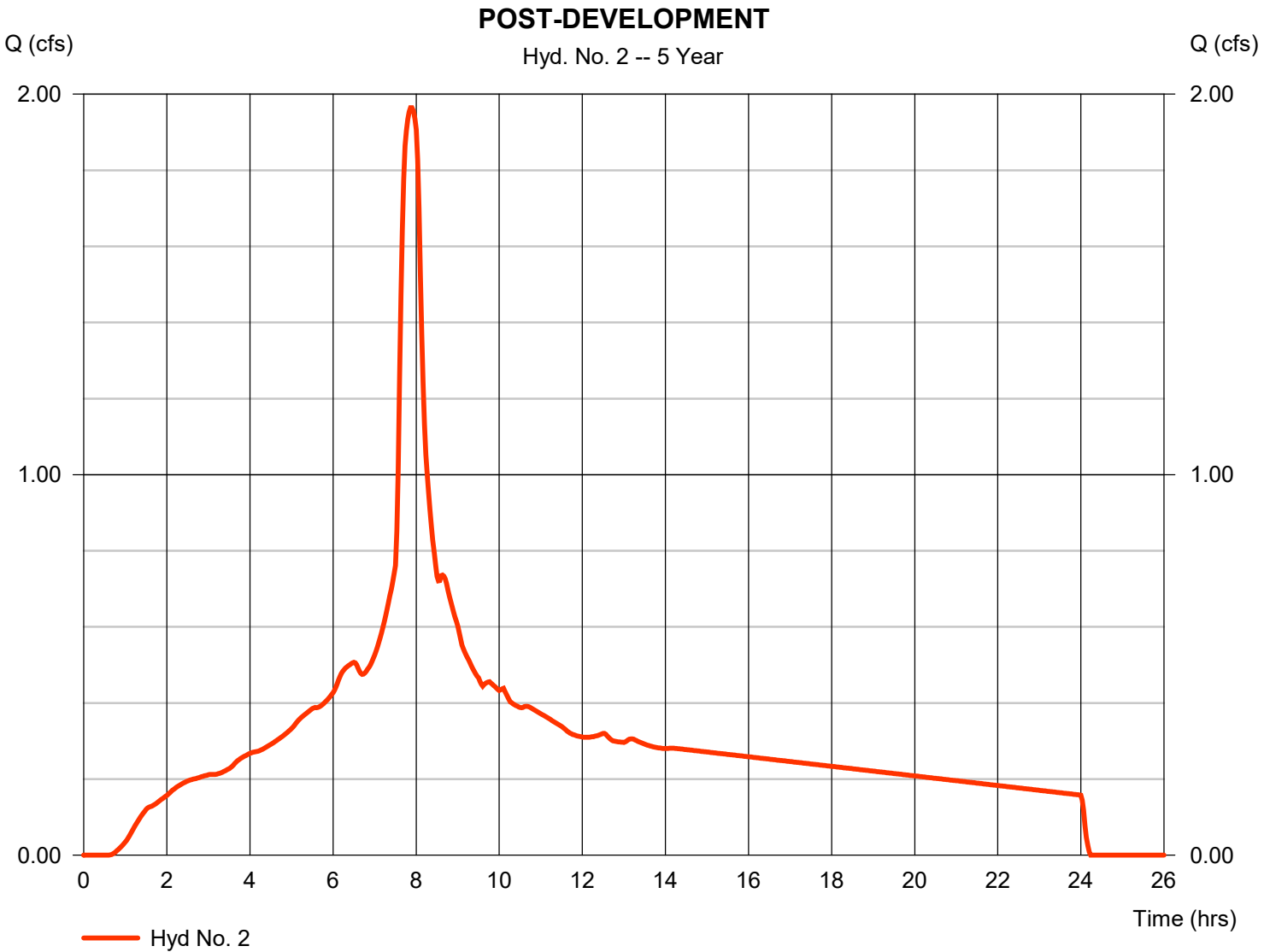


Hyd. No. 2

POST-DEVELOPMENT

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.965 cfs
Storm frequency	=	5 yrs	Time to peak	=	7.90 hrs
Time interval	=	2 min	Hyd. volume	=	28,104 cuft
Drainage area	=	2.300 ac	Curve number	=	98*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	7.10 min
Total precip.	=	3.60 in	Distribution	=	Type IA
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.930 x 98) + (2.770 x 80)] / 2.300



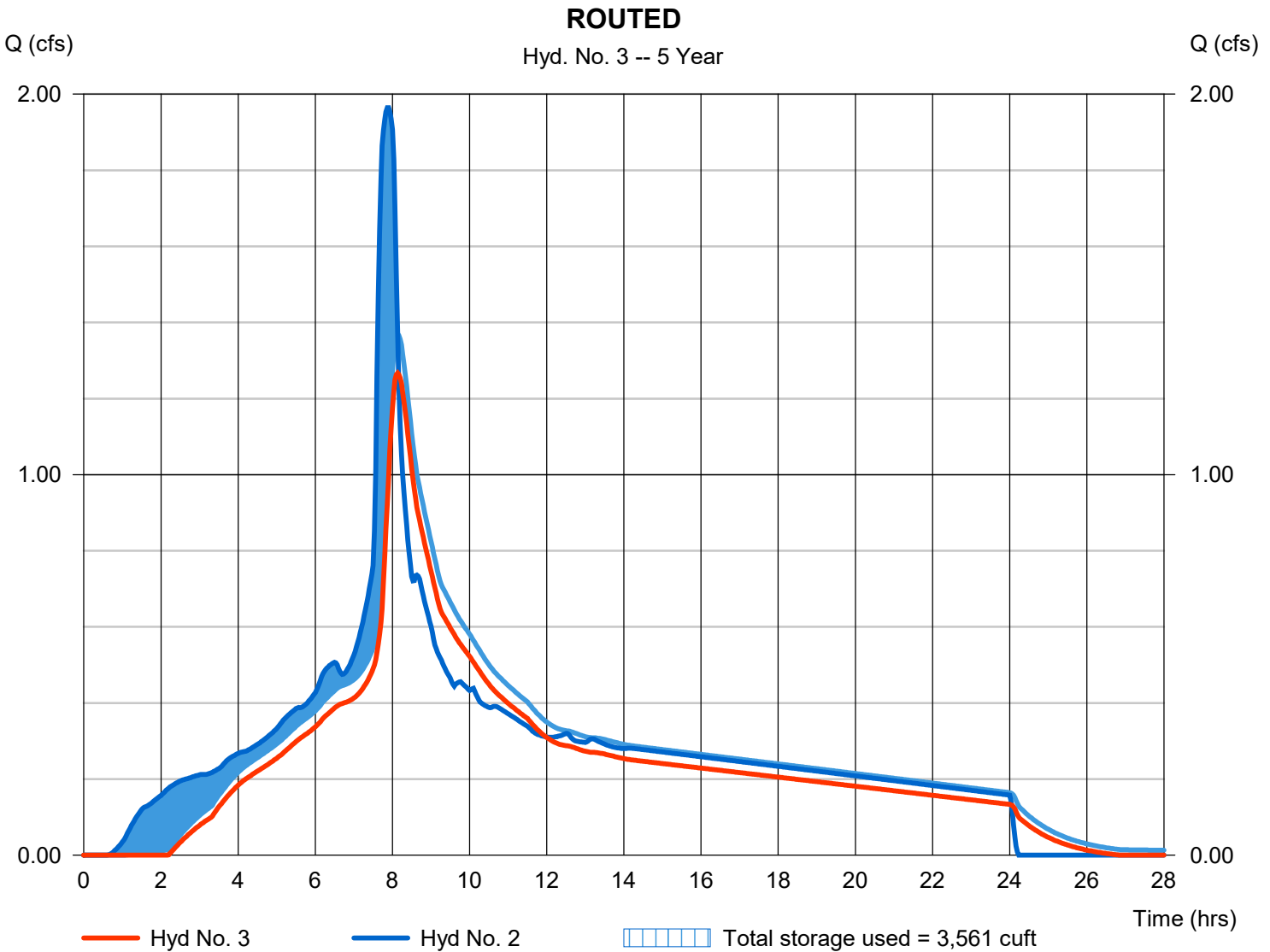
Hydrograph Report

Hyd. No. 3

ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 1.267 cfs
Storm frequency	= 5 yrs	Time to peak	= 8.13 hrs
Time interval	= 2 min	Hyd. volume	= 24,117 cuft
Inflow hyd. No.	= 2 - POST-DEVELOPMENT	Max. Elevation	= 301.42 ft
Reservoir name	= SOUTH FACILITY	Max. Storage	= 3,561 cuft

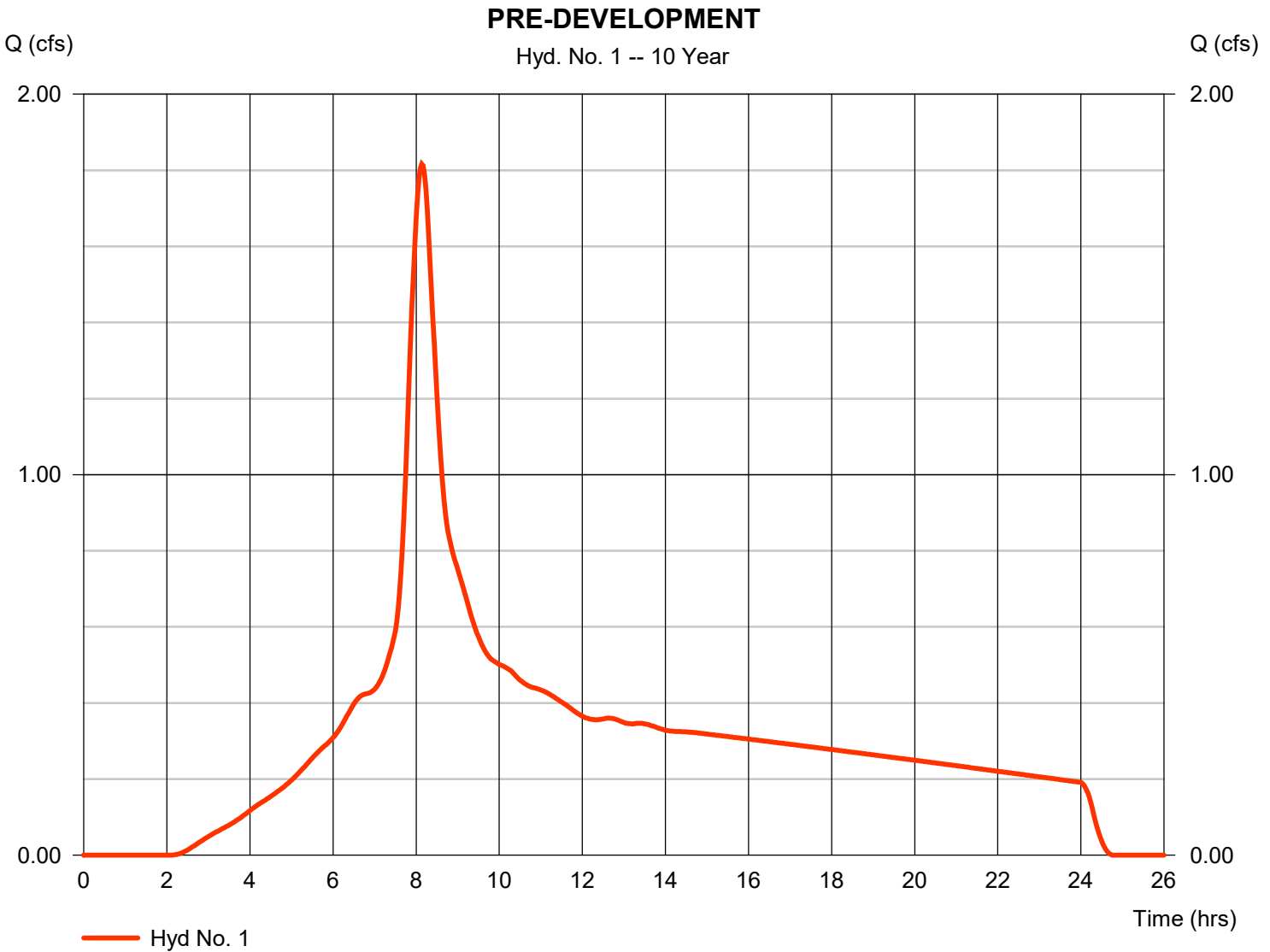
Storage Indication method used. Exfiltration extracted from Outflow.



Hyd. No. 1

PRE-DEVELOPMENT

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.817 cfs
Storm frequency	=	10 yrs	Time to peak	=	8.13 hrs
Time interval	=	2 min	Hyd. volume	=	28,032 cuft
Drainage area	=	2.300 ac	Curve number	=	90
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	29.20 min
Total precip.	=	4.46 in	Distribution	=	Type IA
Storm duration	=	24 hrs	Shape factor	=	484



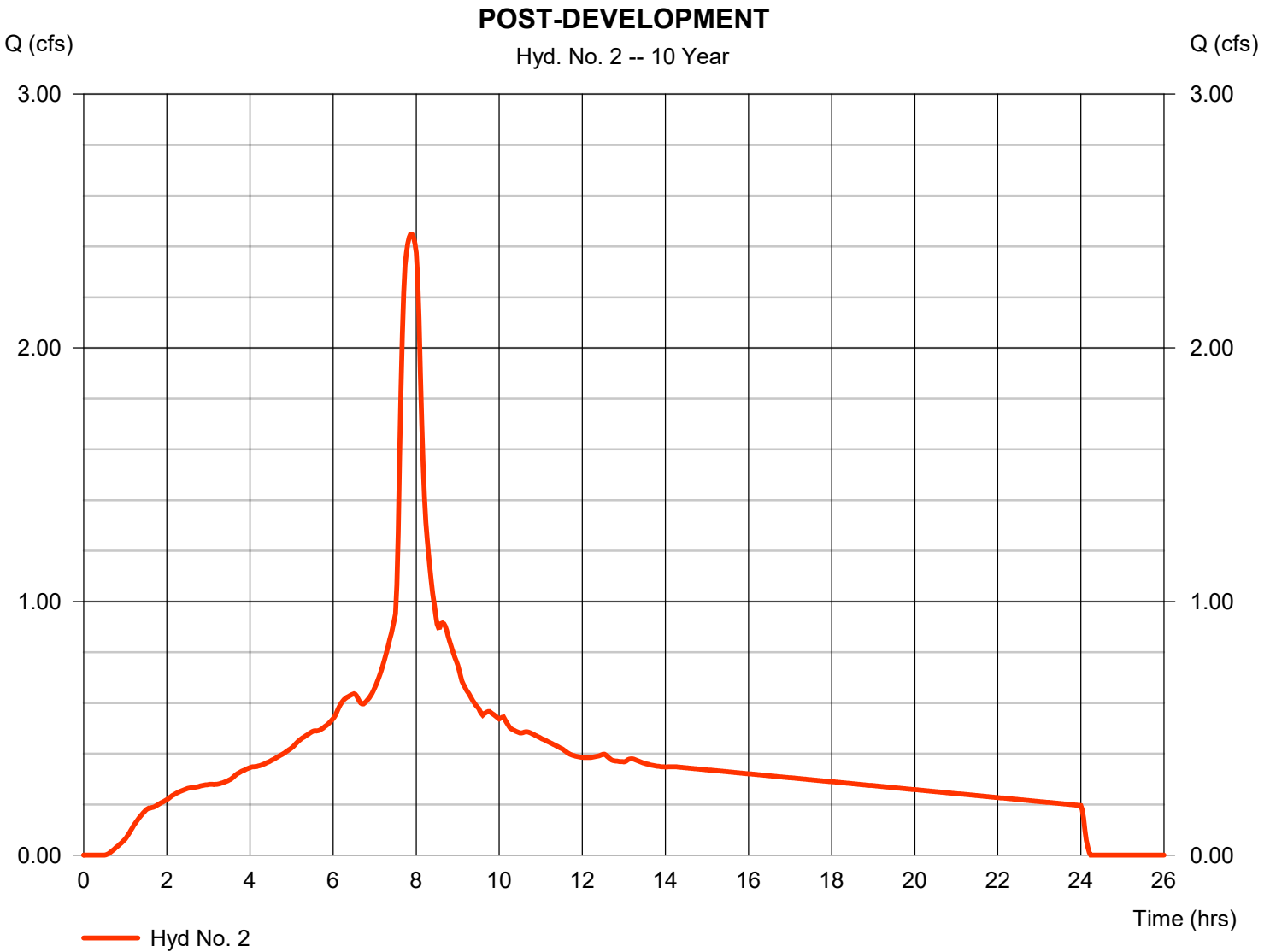
Hydrograph Report

Hyd. No. 2

POST-DEVELOPMENT

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.448 cfs
Storm frequency	=	10 yrs	Time to peak	=	7.90 hrs
Time interval	=	2 min	Hyd. volume	=	35,267 cuft
Drainage area	=	2.300 ac	Curve number	=	98*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	7.10 min
Total precip.	=	4.46 in	Distribution	=	Type IA
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.930 x 98) + (2.770 x 80)] / 2.300



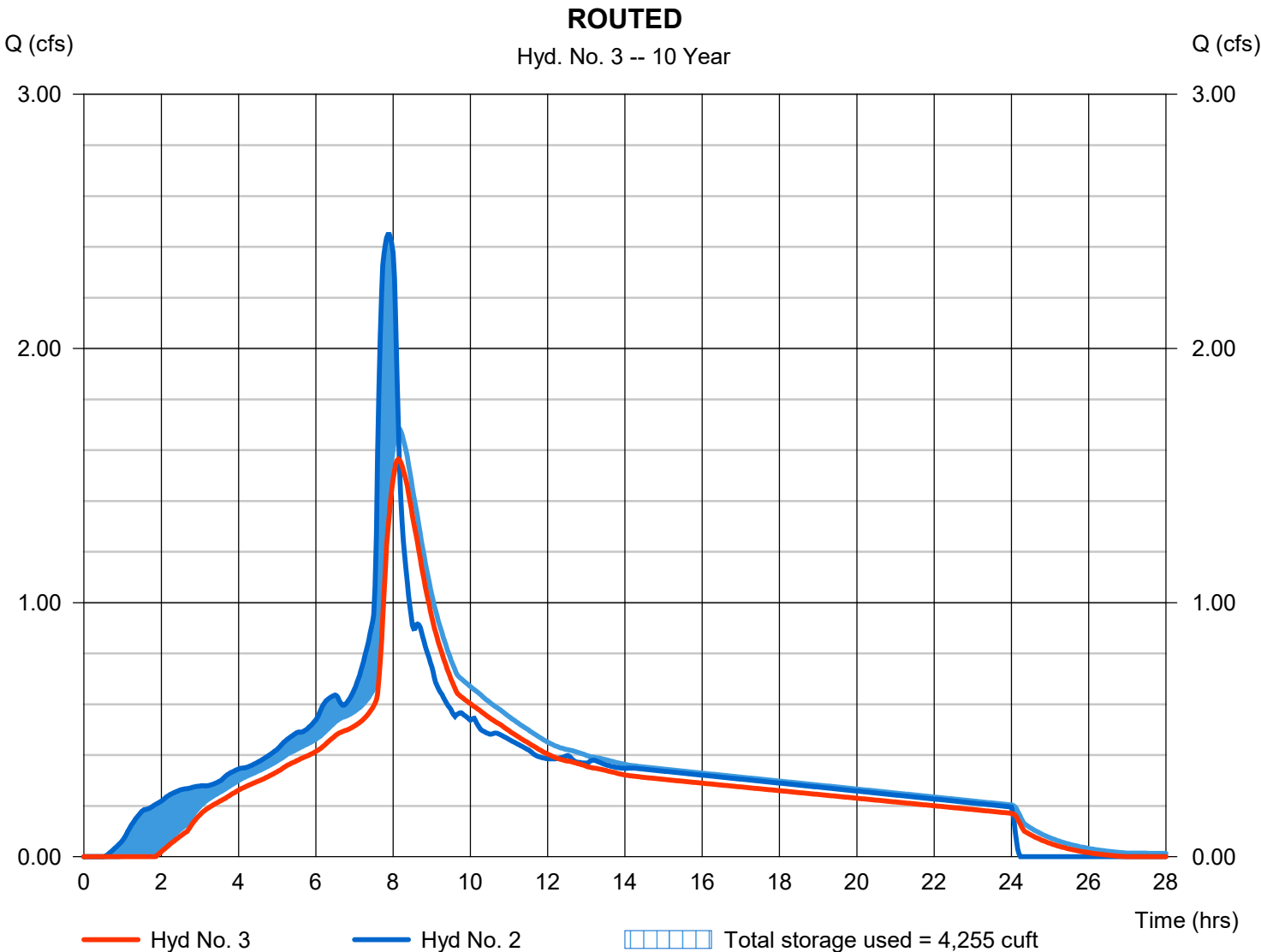
Hydrograph Report

Hyd. No. 3

ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 1.564 cfs
Storm frequency	= 10 yrs	Time to peak	= 8.13 hrs
Time interval	= 2 min	Hyd. volume	= 30,812 cuft
Inflow hyd. No.	= 2 - POST-DEVELOPMENT	Max. Elevation	= 301.70 ft
Reservoir name	= SOUTH FACILITY	Max. Storage	= 4,255 cuft

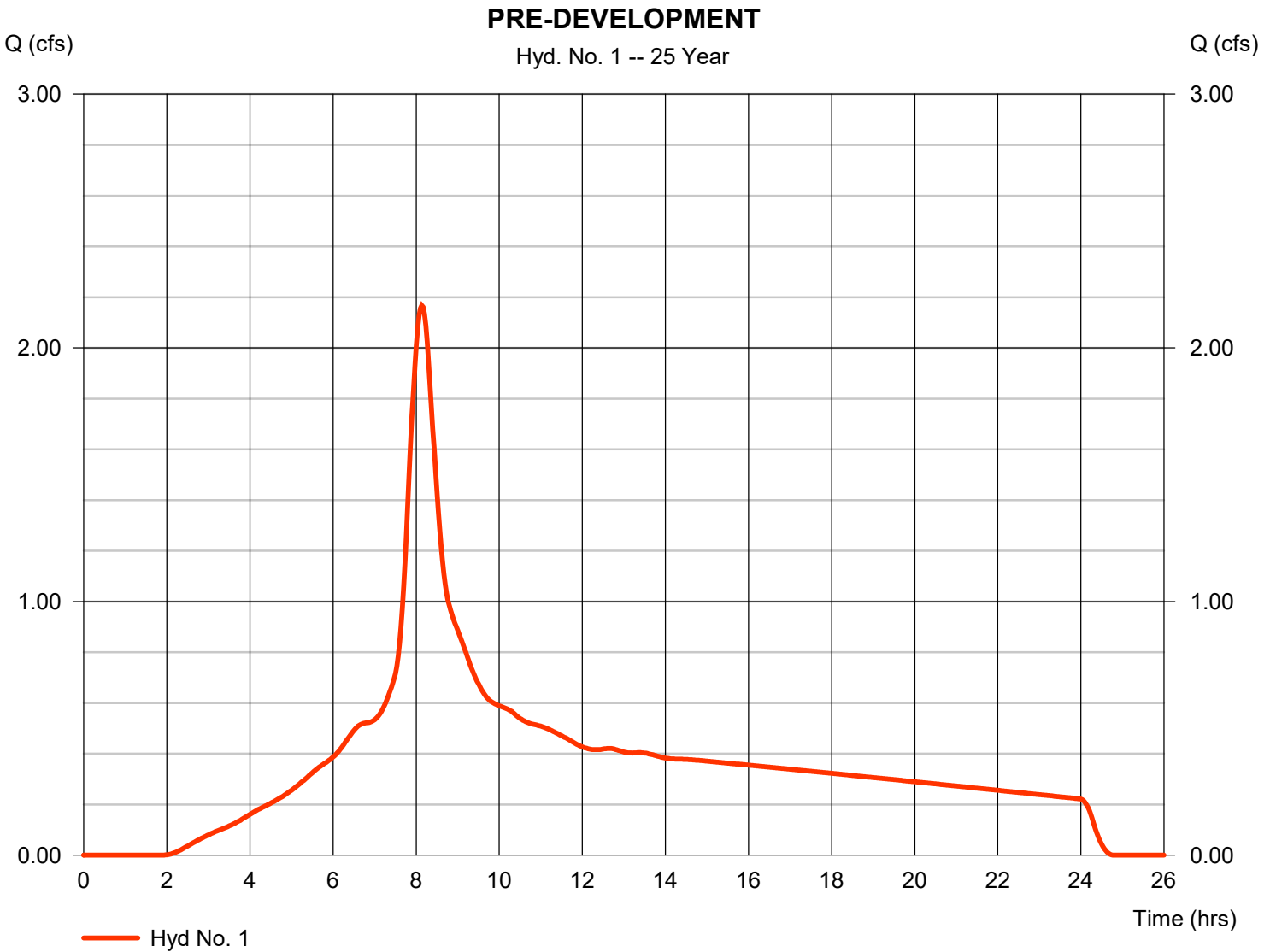
Storage Indication method used. Exfiltration extracted from Outflow.



Hyd. No. 1

PRE-DEVELOPMENT

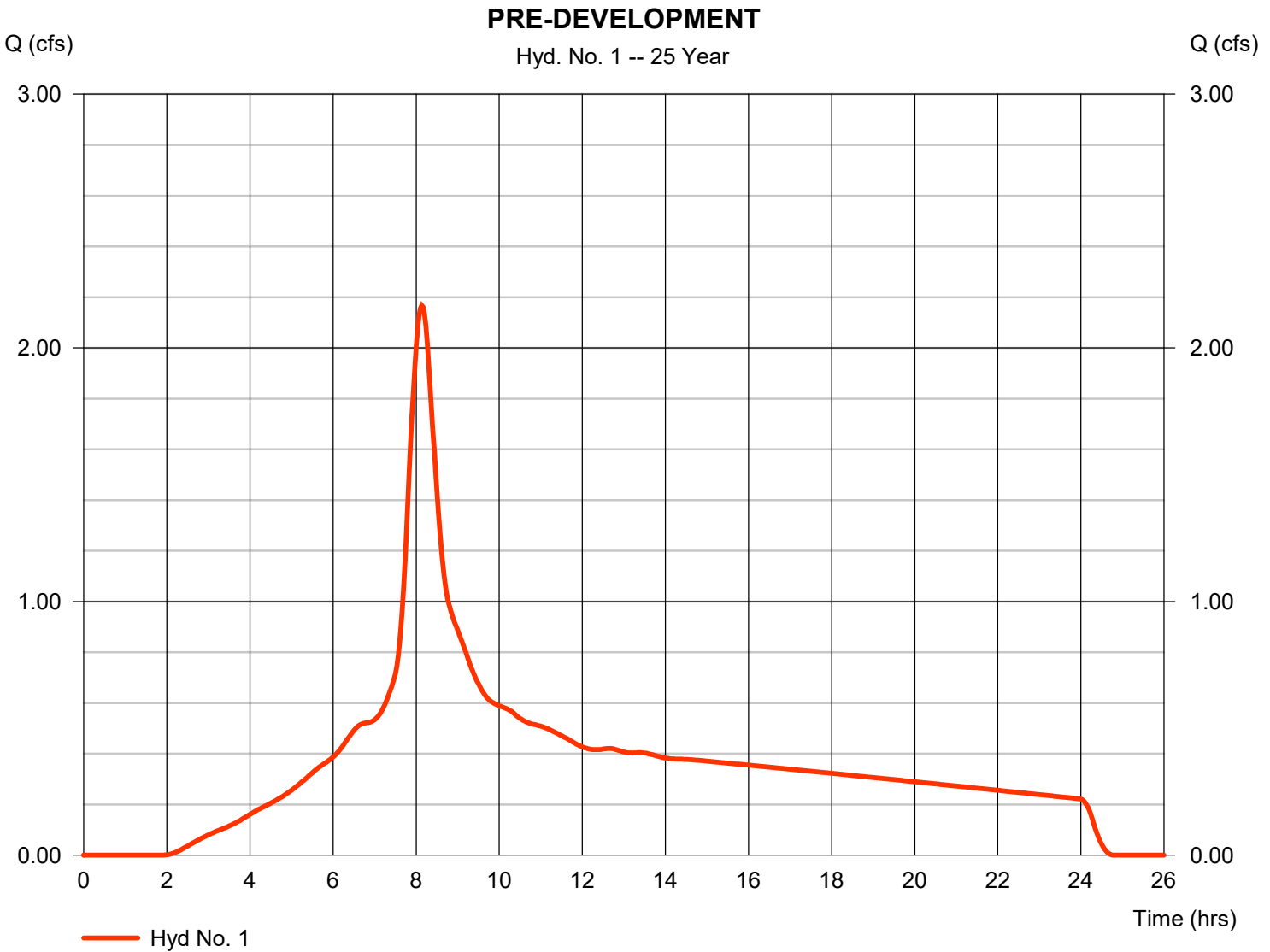
Hydrograph type	=	SCS Runoff	Peak discharge	=	2.168 cfs
Storm frequency	=	25 yrs	Time to peak	=	8.13 hrs
Time interval	=	2 min	Hyd. volume	=	33,330 cuft
Drainage area	=	2.300 ac	Curve number	=	90
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	29.20 min
Total precip.	=	5.12 in	Distribution	=	Type IA
Storm duration	=	24 hrs	Shape factor	=	484



Hyd. No. 1

PRE-DEVELOPMENT

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.168 cfs
Storm frequency	=	25 yrs	Time to peak	=	8.13 hrs
Time interval	=	2 min	Hyd. volume	=	33,330 cuft
Drainage area	=	2.300 ac	Curve number	=	90
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	29.20 min
Total precip.	=	5.12 in	Distribution	=	Type IA
Storm duration	=	24 hrs	Shape factor	=	484

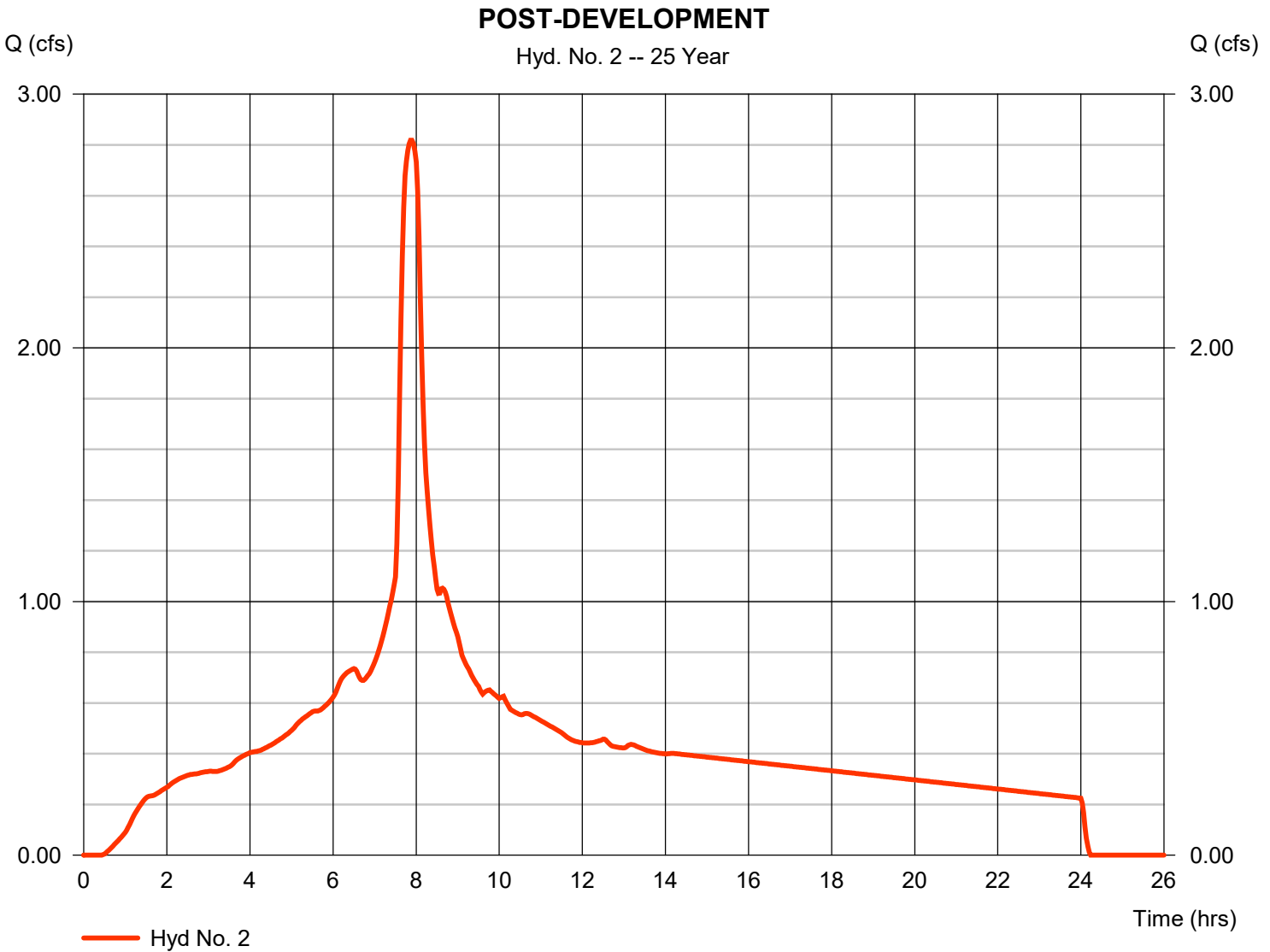


Hyd. No. 2

POST-DEVELOPMENT

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.819 cfs
Storm frequency	=	25 yrs	Time to peak	=	7.87 hrs
Time interval	=	2 min	Hyd. volume	=	40,768 cuft
Drainage area	=	2.300 ac	Curve number	=	98*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	7.10 min
Total precip.	=	5.12 in	Distribution	=	Type IA
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.930 x 98) + (2.770 x 80)] / 2.300



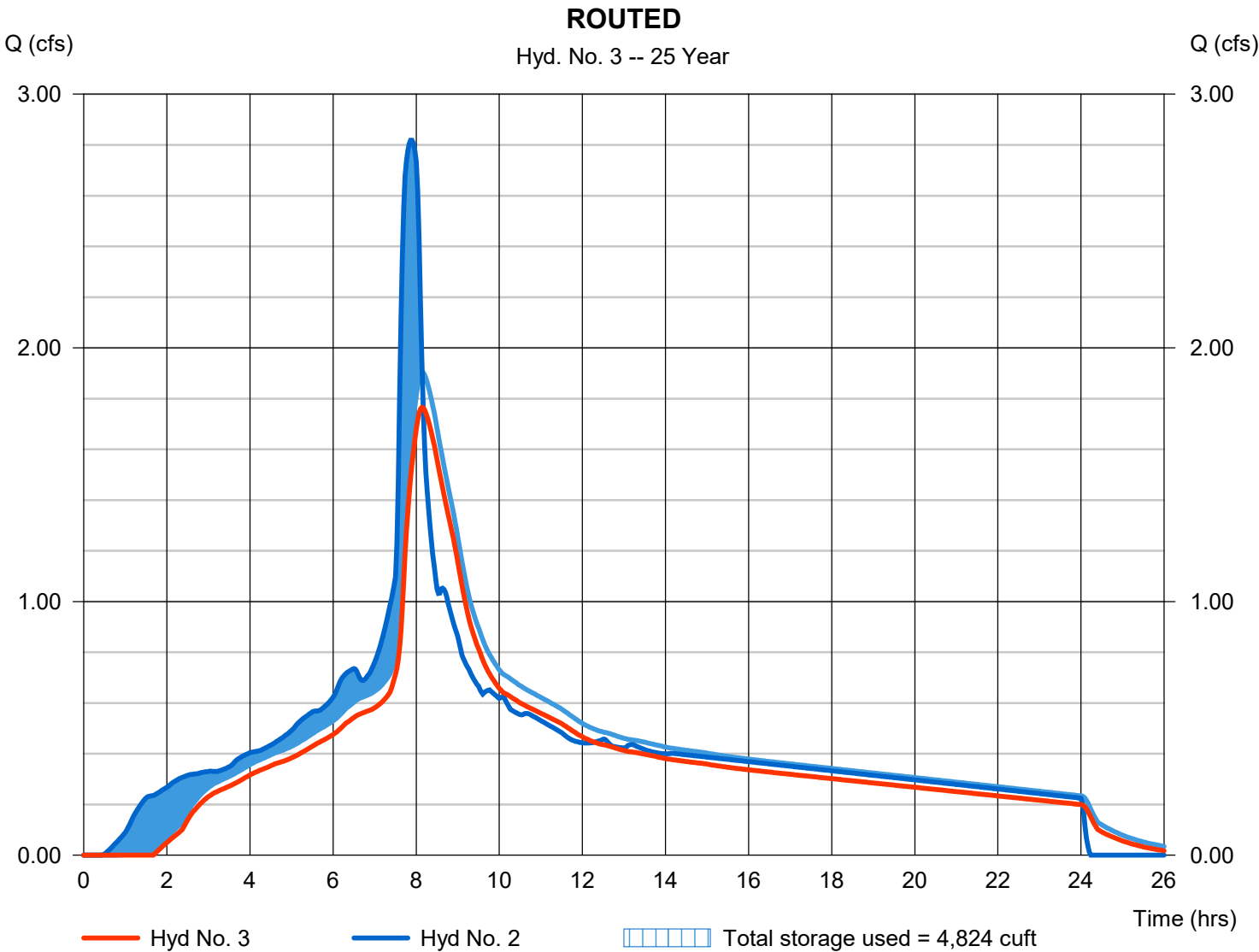
Hydrograph Report

Hyd. No. 3

ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 1.765 cfs
Storm frequency	= 25 yrs	Time to peak	= 8.13 hrs
Time interval	= 2 min	Hyd. volume	= 35,939 cuft
Inflow hyd. No.	= 2 - POST-DEVELOPMENT	Max. Elevation	= 301.93 ft
Reservoir name	= SOUTH FACILITY	Max. Storage	= 4,824 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydraflow Rainfall Report

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1.

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Friday, 01 / 31 / 2025

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	0.0000	0.0000	0.0000	-----
2	69.8703	13.1000	0.8658	-----
3	0.0000	0.0000	0.0000	-----
5	79.2597	14.6000	0.8369	-----
10	88.2351	15.5000	0.8279	-----
25	102.6072	16.5000	0.8217	-----
50	114.8193	17.2000	0.8199	-----
100	127.1596	17.8000	0.8186	-----

File name: SampleFHA.idf

$$\text{Intensity} = B / (T_c + D)^E$$

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5.69	4.61	3.89	3.38	2.99	2.69	2.44	2.24	2.07	1.93	1.81	1.70
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	6.57	5.43	4.65	4.08	3.65	3.30	3.02	2.79	2.59	2.42	2.27	2.15
10	7.24	6.04	5.21	4.59	4.12	3.74	3.43	3.17	2.95	2.77	2.60	2.46
25	8.25	6.95	6.03	5.34	4.80	4.38	4.02	3.73	3.48	3.26	3.07	2.91
50	9.04	7.65	6.66	5.92	5.34	4.87	4.49	4.16	3.88	3.65	3.44	3.25
100	9.83	8.36	7.30	6.50	5.87	5.36	4.94	4.59	4.29	4.03	3.80	3.60

T_c = time in minutes. Values may exceed 60.

Precip. file name: C:\Users\ericf\OneDrive\DRAWINGS\JURASSIC ANNEX (ERIC)\hd\LANE COUNTY.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	0.00	3.12	0.00	3.60	4.46	5.12	0.00	0.00
SCS 6-Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

060

4.5.8 Sand Filter O & M Plan

Sand Filters consist of a layer of sand in a structural box used to trap pollutants. The water filters through the sand and then infiltrates into the ground or has an underdrain system that conveys the filtered stormwater to a discharge point.

All facility components, vegetation, and source controls shall be inspected for proper operations and structural stability. These inspections shall occur, at a minimum, quarterly for the first 2 years from the date of installation, and 2 times per year thereafter, and within 48 hours after each major storm event.

Training and/or Written Guidance information for operating and maintaining Sand Filters shall be provided to all property owners and tenants. A copy of the O & M Plan shall be provided to all property owners and tenants.

Inspection Logs shall be kept by the facility owner demonstrating the following items have been inspected and are being maintained properly:

- **Access** to the Sand Filter shall be safe and efficient. Obstacles preventing maintenance personnel and/or equipment access to the facility shall be removed.
- **Debris and Litter** shall be removed to ensure stormwater infiltration and to prevent clogging. Debris in quantities more than 1 cu ft or sufficient to inhibit operation shall be removed upon discovery. Fallen leaves and debris from deciduous plant foliage shall be raked and removed.
- **Erosion Damage** shall be identified and controlled when native soil is exposed or erosion channels are forming.
- **Infiltrating Sand Filters** shall be excavated and cleaned, and gravel or soil shall be replaced to correct low infiltration rates.
- **Inlet** shall allow water to uniformly enter the Sand Filter as calm flow, in a manner that prevents erosion. Clear sediment and debris when 40% of the conveyance capacity is plugged.
- **Nuisance or Prohibited Vegetation** from the Eugene Plant List (such as blackberries or English Ivy) shall be removed when discovered. Invasive vegetation contributing up to 25% of vegetation of all species shall be removed.
- **Piping** shall be cleared of sediment and debris to maintain conveyance capacity.
- **Sedimentation** shall be hand-removed with minimum damage to vegetation using proper erosion control measures. Sediment shall be removed if it is more than 4 inches thick or so thick as to damage or kill vegetation.
- **Structural Deficiencies** in the Sand Filter box including rot, cracks, and failure shall be repaired upon discovery. Holes that are not consistent with the design structure and allow water to flow directly through the Sand Filter to the ground shall be filled. Rocks or other armament shall be replaced when sand is exposed and eroding from wind or rain.

Spill Prevention Measures shall be exercised on site when handling substances that contaminate stormwater. Releases of pollutants shall be corrected as soon as identified.

Non-Chemical Pest Control measures shall be taken to prevent development of insects, mosquitoes, and rodents.