



Community & Economic Development Department  
Planning & Development  
4430 S. Adams County Pkwy.  
1st Floor, Suite W2000B  
Brighton, CO 80601-8218  
PHONE 720.523.6800 | FAX 720.523.6967  
adcogov.org

### Development Team Review Comments

The following comments have been provided by reviewers of your land use application. At this time, a resubmittal of your application is required before this case is ready to be scheduled for public hearing.

To prepare your resubmittal, you will be expected to provide:

- A response to each comment with a description of the revisions and the page of the response on the site plan;
- Any revised plans or renderings; and
- A list identifying any additional changes made to the original submission other than those required by staff.

Resubmittal documents must be provided electronically through e-mail or a flash drive delivered to the One-Stop Customer Service Center. The following items will be expected by our One-Stop Customer Service Center:

- One digital copy of all new materials
  - All digital materials shall be in a single PDF document
  - The single PDF document shall be bookmarked
  - If a Subdivision Improvements Agreement, Legal Description, or Development Agreement is required, then an additional Microsoft Word version of these documents shall also be provided
  - Electronic copies can be emailed to [epermitcenter@adcogov.org](mailto:epermitcenter@adcogov.org) as a PDF attachment. If the files are too large to attach, the email should include an unlocked Microsoft OneDrive link. Alternatively, the resubmittal can be delivered to the One-Stop counter on a flash drive.

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Eva J. Henry  
DISTRICT 1

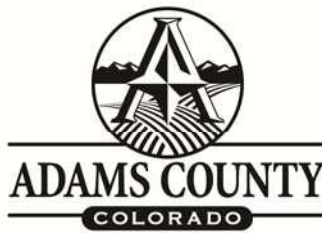
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DISTRICT 3

Steve J. O'Dorisio  
DISTRICT 4

Lynn E. Baca  
DISTRICT 5





## Re-submittal Form

Case Name/ Number: RCU2025-00001

Case Manager: Lia Campbell

### Re-submitted Items:

- ☒ Development Plan/ Site Plan
- ☐ Plat
- ☐ Parking/ Landscape Plan
- ☒ Engineering Documents
- ☐ Subdivision Improvements Agreement (Microsoft Word version)
- ☐ Other: \_\_\_\_\_

**\* All re-submittals must have this cover sheet and a cover letter addressing review comments.**

**Please note the re-submittal review period is 21 days.**

The cover letter must include the following information:

- Restate each comment that requires a response
- Provide a response below the comment with a description of the revisions
- Identify any additional changes made to the original document

For County Use Only:

Date Accepted:

Staff (accepting intake):

Resubmittal Active: **Engineering; Planner;** ~~Right-of-Way; Addressing; Building Safety;~~

~~Neighborhood Services; Environmental; Parks; Attorney; Finance;~~ **Plan Coordination**





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[adcogov.org](http://adcogov.org)

### **Development Review Team Comments**

**Date:** 3/28/2025

**Project Number:** RCU2025-00001

**Project Name:** 6820 PECOS ST REZONE

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**Commenting Division:** Development Engineering Review

**Name of Reviewer:** Arthur Gajdys

**Date:** 03/28/2025

**Email:**

**Resubmittal Required**

--- Unresolved, response required ---

ENG1: The applicant appears to be proposing to install over three thousand square feet (3,000-sf) of impervious area on the project site, which exceeds the Storm Drainage Study (DS) thresholds cited in Table 9.1 of Adams County Development Standards and Regulations (ACDSR). The applicant must submit a Level 1 Storm Drainage Study/Letter that quantifies the total increase in impervious area, includes a grading plan, demonstrates that historic drainage will be maintained and states that there will be no adverse impacts on neighboring properties.

**Response:** Level 1 Storm Drainage Study and Letter have been included in the resubmittal

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**Commenting Division:** Development Engineering Review

**Name of Reviewer:** Arthur Gajdys

**Date:** 03/28/2025

**Email:**

**Comment**

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--- The following WILL be required at the time of Development, but are NOT required for the Rezone ---

ENG2: Property IS in Adams County MS4 Stormwater Permit area. Proposed improvements appear to disturb more than one (1) acre of ground. A Stormwater Quality (SWQ) Permit WILL be required as long as (1) acre or more of ground is disturbed, and a State Permit COR400000 WILL be required as long as one (1) acre or more of ground is disturbed. Applicant is responsible for installation and maintenance of Erosion and Sediment Control BMPs. Builder/developer is responsible for adhering to all the regulations of Adams County Ordinance 11 regarding illicit discharge. The applicant should contact Juliana Archuleta, the County's Stormwater Program Manager, to inquire about obtaining a SWQ Permit. Ms. Archuleta can be contacted at 720-523-6869 or by email at [mjarchuleta@adcogov.org](mailto:mjarchuleta@adcogov.org).

**Response: Noted. Stormwater Quality Permit will be obtained upon construction.**

ENG3: Applicant has submitted a Trip Generation Analysis. Since this development is expected to generate over 20 vpd, a Traffic Impact Study will be required.

**Response: Noted. Traffic Impact Study will be provided once development program is determined. We are seeking a rezoning of this property at this time and the site plan provided is a conceptual layout and not intended for development.**

ENG4: PENG3: Prior to scheduling the final plat/FDP BOCC hearing, the developer is required to submit for review and receive approval of all Construction Documents (CDs), Drainage Report and Drainage Plan, and Traffic Impact Study (TIS). All CDs must meet the requirements of the Adams County Development Standards and Regulations (ADCO DSR). CDs shall include, at a minimum, onsite and public improvements construction plans. The Drainage Report and Drainage Plan must be in accordance with and meet the requirements of Chapter 9 of the ADCO DSR. The TIS must be in accordance with and meet the requirements of Chapter 8 of the ADCO DSR. The CD's, Drainage Report and Drainage Plan, and TIS must all be signed and stamped by a Professional Engineer licensed in the State of Colorado.

**Response: Noted. These documents will be provided during FDP process.**

ENG5: The applicant/developer shall submit to the Adams County Development Review Engineering division the following items:

- Development Engineering Review Application
- Development Engineering Review Fee
- One (1) copy of all Construction Documents
- One (1) copy of the Drainage Report and Drainage Plan
- One (1) copy of the Traffic Impact Study

The Complete Development Engineering Review (EGR) Application can be found at the following URL:

<https://adcogov.org/sites/default/files/Development-Engineering-Review.pdf>

The Development Review fee can be found in the Community and Economic Development Department Fee Schedule, at the following URL:

[https://adcogov.org/sites/default/files/2022-12/final\\_2023%20Fee%20Schedule%20Planning\\_CED%20%28003%29.pdf](https://adcogov.org/sites/default/files/2022-12/final_2023%20Fee%20Schedule%20Planning_CED%20%28003%29.pdf)

The Engineering Checklist and Standard Details can be found within Appendix B of the ADCO DSR, at the following URL:

<https://adcogov.org/appendix-b-engineering-checklists-and-standard-details>

The Engineering Road Standards can be found within Appendix C of the ADCO DSR, at the following URL:

<https://adcogov.org/appendix-c-engineering-road-standards>

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--- Information only, no response required ---

ENG6: According to the Federal Emergency Management Agency's January 20, 2016 Flood Insurance Rate Map (FIRM Panel #08001C0584H), the project site is NOT located within a regulated 100-yr floodplain. A Floodplain Use Permit is NOT required.

**Response:** Noted

ENG7: If the applicant proposes to import greater than 10 CY of soil to this site, additional permitting is required. Per Section 4-04-02-02, of the Adams County Development Standards and Regulations, a Temporary or Special Use Permit is required to ensure that only clean, inert soil is imported into any site within un-incorporated Adams County. A Conditional Use Permit will be required if the importation exceeds 500,000 CY.

**Response:** No grading operations are planned at this time

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**Commenting Division:** Planner Review

**Name of Reviewer:** Lia Campbell

**Date:** 03/28/2025

**Email:**

**Resubmittal Required**

PLN01: No minimum lot size requirement. Minimum lot width of 75'. Width not marked on site plan, but GIS shows about 145'. Please confirm lot width on site plan. **Response:** Lot size added to site plan

PLN02: Future Land Use (FLU) is Mixed Use - C-3 is not a typical zone district for this designation. Staff recommends considering a less intensive zone district. C-0, C-1, and C-2 are more typical zone districts for the FLU. Based on response from the community, C-0 or C-1 seem more appropriate due to the earlier allowed hours of operation.

PLN03: I have received 34 comments of opposition to this case. Let's discuss at meeting.

**Response:** Request has been revised to the C-2 Zone District.

FYI, No Action Needed

PLN01: Not in a subdivision, but legally created prior to 1972.

PLN02: No minimum lot size requirement.

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**Commenting Division:** ROW Review

**Name of Reviewer:** David Dittmer

**Date:** 03/27/2025

**Email:**

**Complete**

\*ADVISORY - THESE COMMENTS WILL APPLY TO THE USE PERMIT FOR THE RETAIL OPERATIONS

ROW1: Site plan appears to remove existing sidewalk and installing a detached one. This provides for a landscaped area between edge of ROW and Sidewalk. In doing this there are two things that need to be addressed:

a) No trees or large shrubs can be located within the ROW.

b) The detached portion of the sidewalk must be located in an access easement dedicated to the county, to be owned and maintained by the owner(s).

ROW2: An address (current) will be the only address assigned to the building. All sub-addressing to the individual units will be between the owner and the USPS.

ROW3: Any detention location, water quality and storm water facility construction must be dedicated to the county based upon the engineering review. Exhibits will be required providing the m/b legal and illustration to match, wet stamped on all pages. If the detention location does not abut a dedicated ROW, an access easement will be required with the same requirements outlined above.

ROW4: Pending TIS review, the access to each road may be restricted by engineering review.

ROW5: Pecos and W. 68th have been built out and no further improvements are expected.

**Response:** Noted. These will be provided during the Plat and Site Plan Review process.

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**Commenting Division:** Long Range Planner Review

**Name of Reviewer:** Ella Gleason

**Date:** 03/27/2025

**Email:**

**Complete**

LR1: The property is currently zoned R-1-C, and the future land use designation is Mixed Use. This future land use category is intended for commercial, office, multifamily residential, and institutional uses and is most compatible with the C-0, C-1, C-2, R-3, R-4, MU, and TOD zone districts.

LR2: The Adams County Comprehensive Plan identifies Pecos Street (from W 52nd Ave to US Hwy 36) as a strategic corridor for the County. This portion of the corridor is identified as the "Northern Mixed Use Connection." The following strategies for the corridor apply here:

Strategy CSP 3.2: Improve transitions between industrial, commercial, and residential land use adjacencies through updated performance standards, land-use buffers, and coordinating with property owners on operations and plans.

- As this property is surrounded by residential properties, care should be taken to provide retail and service opportunities that serve the community and a space that is welcoming and accessible to pedestrians from the nearby neighborhoods.

Strategy CSP 3.6: Expand public art for this district at key locations, such as at transit stops, and as part of property redevelopment to enhance placemaking.

- Grant funds are available for placemaking and public art from the Adams County Parks, Open Space, and Cultural Heritage department.

LR3: In conclusion, we recommend that the applicant consider rezoning to C-2, C-1, or C-0 rather than C-3. The C-2 and C-3 zone districts follow the same dimensional requirements and have very similar use allowances. However, the C-3 zone district allows for more intense uses, such as accessory outdoor storage, which would detract from the envisioned mixed-use character of this corridor.

**Response:** The rezoning request has been modified to the C-2 zone district.

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**Commenting Division:** Environmental Analyst Review

**Name of Reviewer:** Megan Grant

**Date:** 03/27/2025

**Email:**

**Complete**

The following comments apply to construction and operations and are provided for applicant information:

ENV1. A Nuisance Control Plan or descriptions that address how nuisance hazard impacts, including offsite vehicle tracking, fugitive dust, noise, waste, and lighting will be controlled during construction and operations may be required with subsequent permit application(s).

ENV2. Exposure to air pollution is associated with numerous health problems including asthma, lung cancer, and heart disease. Construction and traffic in unpaved areas may contribute to increased fugitive dust emissions and offsite vehicle tracking. Adams County recommends the applicant utilize all available methods to minimize fugitive dust during all phases of construction.

ENV3. An inert fill permit must be obtained prior to importing any volume of fill material onto the parcel as part of site development. The permit type will depend on the duration and total volume of fill imported to the site. The fill must meet the definition of clean, inert material.

ENV4. Regular exposure to elevated sound levels can have a negative impact on both physical and mental health by increasing the risk of stress, hearing impairment, hypertension, ischemic heart disease, and sleep disturbance. Noise attenuation shall comply with the Colorado Noise Statute (CRS 25-12-103) and applicable, local noise regulations. All necessary steps should be taken to mitigate off-site noise.

ENV5. The operator will need to ensure that refuse (trash) is properly controlled and collected as often as necessary to prevent nuisance conditions.

ENV6. Lighting facilities shall be arranged and positioned so no direct light or reflection creates a nuisance or hazard on any adjacent property or right-of-way.

**Response:** These requirements will be met during the Site Plan, Building Permit and Construction process.

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DISTRICT 5



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**Commenting Division:** Environmental Analyst Review

**Name of Reviewer:** Megan Grant

**Date:** 03/27/2025

**Email:**

**Comment**

The following comments apply to design:

ENV7. The way that buildings are designed impacts health through the materials used and the amount of volatile organic compounds (VOCs) or other harmful chemicals that they contain; the air and water quality; the amount of daylight; and even by encouraging physical activity and social interaction. Adams County encourages the applicant to consider incorporating design standards into the development to ensure a health-promoting environment. The applicant could pursue building certifications such as LEED, WELL Building Standard, Certified Healthy, or Living Building Challenge. **Response:** LEED certification will be explored during the Site Plan review process

ENV8. Adams County recommends the incorporation of bicycle parking into the overall site design. Bicycle parking locations and design should allow for safe access from external roads and sidewalks and to/from buildings and internal pedestrian paths. **Response:** Bike parking will be provided during the Site Plan review process

ENV9. The applicant may want to consider crosswalk(s) where pedestrian access and/or sidewalk crosses internal site drive lanes, as these pedestrian crossings may not be easily visible to drivers since they are not at a street intersection. The simplest crossing design would be to post signs and provide striping on the pavement. A safer design alternative would be to provide a raised pedestrian crossing, with striping and a contrasting color, to clearly delineate the crossing. The raised crossing will provide the added benefit of slowing traffic and improving driver awareness of the crossings. **Response:** Pedestrian circulation details will be explored during the Site Plan review process

ENV10. Where public transportation systems exist, direct pedestrian access should be provided to increase transit use and reduce unnecessary vehicle trips, and related vehicle emissions. The pedestrian/bicycle networks should be integrated with the existing and future transit plans for the area.

**Response:** Transit connections will be explored during the Site Plan review process

The following comments apply to applicants proposing food and beverage business:

ENV11. Illness-causing organisms are spread easily to the public through food and beverages. To reduce the risk of food borne illnesses, Adams County Health Department (ACHD) reviews plans for new and remodeled retail food establishments for conformance with the Colorado Retail Food Establishment Rules and Regulations. The applicant shall submit plans for the proposed food establishment to 7190 Colorado Blvd., Ste. 200, Commerce City, CO 80022, along with the appropriate Plan Review Packet found at <https://adamscountyhealthdepartment.org/food-license-application>.

**Response:** The appropriate plans will be submitted to the Health Department once development occurs.

ENV12. Plans must be approved by ACHD before the start of construction; therefore, staff recommends completion of the ACHD plans review before issuance of a building permit for the construction. The applicant may call ACHD's Plan Review at 303-288-6816 to determine requirements and schedule inspections. Instructions for opening a retail food establishment can be found at <https://adamscountyhealthdepartment.org/retail-food-licensing>.

**Response:** The appropriate plans will be submitted to the Health Department once development occurs.

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**Commenting Division:** Neighborhood Services Review

**Name of Reviewer:** Gail Moon

**Date:** 03/03/2025

**Email:** gmoon@adcogov.org

**Complete**

There are no OPEN violation cases at this location at this time. NO COMMENT

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# ADAMS COUNTY FIRE RESCUE FIRE PREVENTION BUREAU

7980 Elmwood Lane  
Denver, CO 80221  
P: (303) 539-6862  
E: [fireprevention@acfpd.org](mailto:fireprevention@acfpd.org)

**Project:** 6820 Pecos Street Re-Zone  
**Address:** 6820 Pecos Street/0182504100070  
**Reviewed By:** Carla Gutierrez

**Case #:** RCU2025-00001  
**Review Date:** 3/25/25

The following information provides guidance on general fire code requirements typically applicable to new development projects. However, please be aware that this list is NOT all encompassing. **It is the responsibility of the applicant to read this comment letter in its entirety and make sure that all requirements are satisfied.**

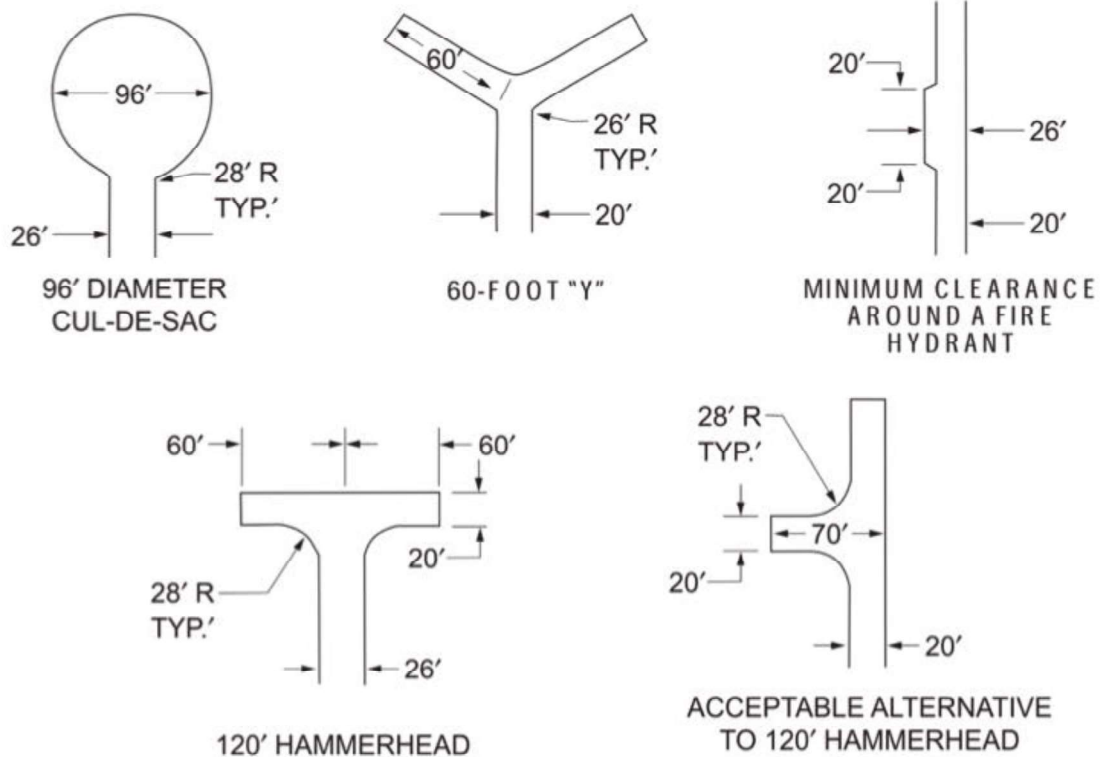
## General

1. The 2018 International Fire Code is the current fire code adopted within the city and all development must be in compliance with its requirements. The 2018 IFC can be accessed online for free by going to <https://codes.iccsafe.org/public/document/IFC2018>. Amendments to this code can be located by going to [http://www.adcogov.org/sites/default/files/Ordinance%20No.%204\\_1.pdf](http://www.adcogov.org/sites/default/files/Ordinance%20No.%204_1.pdf).
2. Site and building design and construction shall be in accordance with the provisions of the 2018 International Fire Code (IFC) as adopted by Adams County. All construction shall be in accordance with IFC Chapter 33, *Fire Safety During Construction and Demolition*.
3. Please be aware that these comments are subject to change as more information is received or if there are changes to the plans during subsequent reviews.

## Access Requirements

4. **Approved access roads must be constructed prior to any vertical construction and/or to combustible materials being delivered to the site**, whichever comes first. Temporary access roads are prohibited unless specifically approved by the Fire District. Fire apparatus access must be designed and maintained to support the imposed loads of fire apparatus (i.e., 85,000 lbs.), and must have a surface that provides all-weather driving capabilities. Vehicle access shall be provided to within 150 feet of temporary or permanent fire department connections.  
8/26/24 -
5. Fire apparatus access roads shall be a minimum of 24' wide or 26' when a hydrant is present or the building exceeds 30' in height.  
**3/25/2025 Comments: Will proposed building exceed 30 feet in height? If so, fire apparatus access roads shall have a minimum unobstructed width of 26 feet. Please provide building height. Driveway/access road widths are also not shown on the conceptual plan.**  
**Response:** Building height is unknown at this time. We are only seeking to rezone the property.
6. Fire apparatus access roads shall be within 150' of all ground level exterior portions of the building.  
**3/25/2025 Comments: Appears to be met on conceptual plan.**
7. Any dead-end fire apparatus access road in excess of 150' shall be provided with an approved turnaround.  
**3/25/2025 Comments: Appears to be met on conceptual plan.**





8. Any temporary construction or permanent security gates shall be a minimum of 24 feet and a no parking fire lane sign shall be posted on the gate. The gates shall also have a Knox key switch installed for emergency operation if automatic. For information on how to order this, please go to <https://www.acfpd.org/plan-submittals.html>.  
**3/25/2025 Comments: Note only.**
9. New and existing buildings shall have approved address numbers, building numbers, or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Numbers shall be a minimum of 4 inches high with a minimum stroke width of 0.5 inch. Please be aware that the size of the number may need to be larger than 4 inches is not clearly visible from the street or road. A temporary sign must be provided if the permanent signage is not yet installed.  
**3/25/2025 Comments: Note only.**
10. Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with two separate and approved fire apparatus access roads.
  - a. Exceptions:
    - i. Where there are more than 30 dwelling units on a single public or private fire apparatus access road and all dwelling units are equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3, access from two directions shall not be required. ii. The number of dwelling units on a single fire apparatus access road shall not be



increased unless fire apparatus access roads will connect with future development, as determined by the fire code official.

- b. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

**3/25/2025 Comments: Not applicable.**

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### Fire Protection Water Supply and Hydrants

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11. **Water mains and all required hydrants shall be installed before the delivery of combustible materials to the site.** Hydrants shall be maintained operational at all times thereafter, unless alternate provisions for water supply are approved by the Fire District. Any private fire service mains and fire hydrants and all fire sprinkler service lines shall be installed by a State of Colorado Licensed Fire Suppression System Contractor – Underground Contractor and meet the requirements of National Fire Protection Association Standard 24. Plans for the underground fire sprinkler service line shall be submitted for review and approval to ACFR. A current list of registered contractors can be found by going to <https://www.colorado.gov/dfpc/fire-suppression-system-contractors>. Once installed, all underground fire sprinkler service lines must be inspected by an ACFR inspector before covering. Attached is a guideline for the inspections required for an underground fire sprinkler service line.

**3/25/2025 Comments: Note only.**

12. Unobstructed access to fire hydrants shall be maintained at all times. Fire department personnel shall not be deterred or hindered from gaining immediate access to fire protection equipment or fire hydrants. A 3-foot (radius) clear space shall be maintained around the circumference of fire hydrants. Within that 6-foot diameter circle and within a 6-foot-wide path leading to the 4.5-inch outlet of a hydrant, vegetation shall be no higher than 4 inches above grade. The unobstructed vertical clearance within that 6-foot circle and 6-foot approach path shall not be less than 7 feet, unless otherwise approved by the Fire District.

**3/25/2025 Comments: Note only.**

13. The FDC for each building with a fire sprinkler system must be located within 150 feet of a fire hydrant.

**3/25/2025 Comments: Note only.**

14. A fire hydrant shall be located within 400' (un-sprinklered building) or 600' (fully sprinkled building) of all ground level exterior portions of the building.

**3/25/2025 Comments: Unable to verify, no hydrants are shown on the conceptual plan. A utility plan shall be provided to verify existing or proposed hydrant locations for building.**

**Response:** Utility Plan will be provided during Site Plan review process.

15. The number and distribution of fire hydrants is based on the required fire flow. You may refer to Appendix B and C of the 2018 IFC for guidance.

**3/25/2025 Comments: Fire flow requirements shall meet the 2018 IFC appendix B, Table B105.1(1). Unable to determine the required fire flow for the proposed building. The building**



**construction type is unknown and not shown on the conceptual plan. Without determining the required fire flow, the number of required fire hydrant/s is currently unknown.**

**Response:** Noted

#### **Automatic Fire Sprinkler System**

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16. An automatic fire sprinkler system may be required depending on the use and size of the building.

**3/25/2025 Comments: Unable to determine if an approved fire suppression system will be required for proposed building.**

**Response:** Fire suppression system will be provided during Building Permit process.

#### **Other Helpful Information**

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1. Please be aware that the fire code does not specify building fire rating or set-back requirements. These are located within the building code and therefore are out of our scope. This preliminary review does not approve anything covered under the building code. These requirements need to be verified with the County's Building and Planning Departments.

**Response:** Noted

2. Please be aware that we are a separate entity from the County and anytime you submit to the county, you will need to submit to us separately.

**Response:** Noted

3. The following fire district reviews and permits are often needed for new development projects:

a. Site Development and Water Plans

i. Civil Plans

ii. Utility Plans

iii. Auto-turn Exhibit (use attached apparatus specifications)

b. New Construction Building Plans

i. Architectural

ii. MEP

c. Fire Protection System Plans

i. Fire Alarm

ii. Fire Sprinkler

**Response:** Noted

4. Site development plans must be reviewed and approved before plans for all buildings and fire protection systems are submitted to us for review and permitting. All fees (permit and impact) shall be paid at time of permit pick-up.

**Response:** Noted



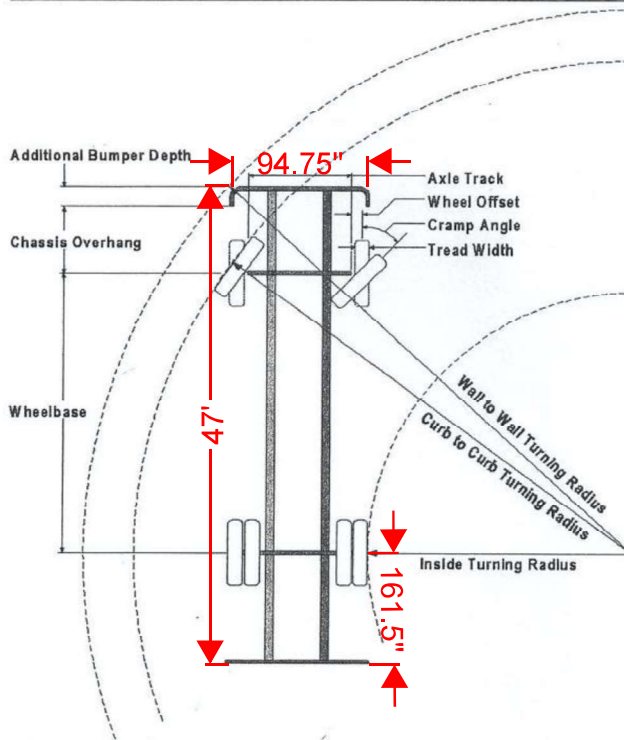


## Turning Performance Analysis

09/28/2017

**Bid Number:** 593  
**Department:** Adams County Fire Rescue

**Chassis:** Arrow XT Chassis, PAP, PUC  
**Body:** Aerial, Platform 100', PUC, Alum Body



### Parameters:

|                          |            |
|--------------------------|------------|
| Inside Cramp Angle:      | 40°        |
| Axle Track:              | 82.92 in.  |
| Wheel Offset:            | 5.30 in.   |
| Tread Width:             | 17.50 in.  |
| Chassis Overhang:        | 68.99 in.  |
| Additional Bumper Depth: | 16.00 in.  |
| Front Overhang:          | 84.99 in.  |
| Wheelbase:               | 277.50 in. |

### Calculated Turning Radii:

|               |              |
|---------------|--------------|
| Inside Turn:  | 26 ft. 5 in. |
| Curb to curb: | 42 ft. 8 in. |
| Wall to wall: | 49 ft. 0 in. |

### Comments:

#### Other Notes:

The front bumper extends 16 inches from the face of the cab.

The width is 19' with outriggers fully extended.

Angle of approach & departure: 15 degree

| Category Description: | OptionID: | Option Description:  |
|-----------------------|-----------|--|
| Axle, Front, Custom   | 0090913   | Axle, Front, Oshkosh TAK-4, Non Drive, 24,000 lb, Qtm/AXT/DCF              |
| Wheels, Front         | 0019618   | Wheels, Front, Alcoa, 22.50" x 13.00", Aluminum, Hub Pilot                 |
| Tires, Front          | 0582746   | Tires, Front, Goodyear, G296 MSA, 445/65R22.50, 20 ply                     |
| Bumpers               | 0606536   | Bumper, 16" Extended, Steel Painted, Arrow XT                              |
| Aerial Devices        | 0592931   | Aerial, 100' Pierce Platform, 50 MPH Wind Rating, 150lb Tip Load Allowance |

### Notes:

Actual Inside cramp angle may be less due to highly specialized options.

Curb to Curb turning radius calculated for 9.00 inch curb.



## Underground Fire Sprinkler Service Line Requirements

When installing an underground fire sprinkler system service line in our jurisdiction, the installing contractor shall be responsible for the following:

1. Notifying the authority having jurisdiction and the owner's representative of the time and date testing is to be performed
2. Performing all required acceptance tests below and completing and signing the contractor's material and test certificate(s)
  - **Visual:** All underground piping and joints must be uncovered and exposed, with labeling of the pipe legible from grade. All thrust blocks will be visually inspected and must be uncovered and exposed to grade. Depth of bury of the pipe shall be measured and verified. All ductile iron, retaining rods, and other non-plastic components shall be externally coated for corrosion and poly wrapped.
  - **Hydrostatic Test:** Underground piping will have to have passed the visual inspection first. The hydrostatic test will be at 200 psi or at 50 psi in excess of the system working pressure, whichever is greater, and shall maintain that pressure  $\pm 5$  psi for 2 hours. Testing to be from the gate valve to the top of the spigot. Pressure loss shall be determined by a drop in gauge pressure or visual leakage. Only liquid filled gauge rated for over 200 PSI will be accepted. Time stamped picture of the gauge will need to be provided to the inspector to show when pressure was put on the line.
  - **Flush:** Underground piping, from the water supply to the system riser, and lead-in connections to the system riser shall be completely flushed before connection is made to downstream fire protection system piping. This flush needs to be witnessed by ACFR staff. The flushing operation shall be continued for a sufficient time to ensure thorough cleaning. The minimum rate of flow shall be not less than one of the following:
    - Hydraulically calculated water demand rate of the system, including any hose requirements
    - Maximum flow rate available to the system under fire conditions
    - Flow necessary to provide a velocity of 10 ft/sec (preferred method)

| Underground<br>Pipe Size (in) | Required<br>Flow Rate (gpm) | Hose/Pipe Sizes |    |    |    |    |    |
|-------------------------------|-----------------------------|-----------------|----|----|----|----|----|
|                               |                             | 2½"             | 3" | 4" | 5" | 6" | 8" |
| 4                             | 390                         | 1               | 1  | 1  | -  | -  | -  |
| 6                             | 880                         | 2               | 2  | 1  | 1  | 1  | -  |
| 8                             | 1560                        | 4               | 3  | 2  | 1  | 1  | 1  |
| 10                            | 2440                        | 6               | 4  | 3  | 2  | 1  | 1  |
| 12                            | 3520                        | 8               | 6  | 4  | 2  | 2  | 1  |

Provision shall be made for the proper disposal of water used for flushing or testing. A mechanical method of securing the discharge flushing line(s), (like a Hose Monster, tube hitch adapter/Pipe Vice shall be used). The flushing discharge line shall be mechanically secured. The inspection will be failed immediately if the flushing line is not mechanically secured and creates a dangerous atmosphere. A diffuser attached to the end of the flushing line should be utilized.



- **Pitot Test:** The contractor shall provide all equipment required to take a pitot reading to ensure that all street or isolation valves are open, and the required flow for base of riser is available.
3. After the riser has been flushed and hydrostatically tested, a blank cover shall be installed /secured to cover any/ all open-end risers.



**From:** [Cicione - CDPHE, Brendan](#)  
**To:** [Lia Campbell](#)  
**Subject:** Re: Request for Comment: RCU2025-00001  
**Date:** Monday, March 3, 2025 3:38:39 PM

---

Please be cautious: This email was sent from outside Adams County

Hi Lia,

Thank you for your email. There are no comments from the Air Pollution Control Division. Please do not hesitate to contact me with any questions.

Thanks,  
Brendan Cicione (*he/him*)  
Air Quality and Transportation Planner



4300 Cherry Creek Drive S. | Denver, CO 80246-1530 [brendan.cicione@state.co.us](mailto:brendan.cicione@state.co.us)  
| <https://cdphe.colorado.gov/>

On Mon, Mar 3, 2025 at 9:28 AM Localreferral - CDPHE, CDPHE  
<[cdphe\\_localreferral@state.co.us](mailto:cdphe_localreferral@state.co.us)> wrote:

Hello,

Please see the email below. Please add comments by 3/24.

Thank you!

----- Forwarded message -----

From: **Lia Campbell** <[LCampbell@adcogov.org](mailto:LCampbell@adcogov.org)>  
Date: Fri, Feb 28, 2025 at 10:47 AM  
Subject: Request for Comment: RCU2025-00001  
To:

Good morning,

Please see the attached request for comment for a rezoning at 6820 Pecos Street. Let me know if you have any comments by March 26, 2025. Let me know if you have any questions or need more information.

Thank you,





Lia Campbell

Planner II, *Community and Economic Development Dept.*

ADAMS COUNTY, COLORADO

[4430 S. Adams County Parkway, 1st Floor](#), Suite W2000A

Brighton, CO 80601-8216

720.523.6949 [LCampbell@adcogov.org](mailto:LCampbell@adcogov.org)

[adcogov.org](http://adcogov.org)

**\*\* New Schedule:\*\***

Monday: Alternating weeks of: 7 am – 3:30 pm and off (work from home)

Tuesday: 7:00 a.m. – 4:30 p.m. (work from home)

Wednesday: 7:00 a.m. – 4:30 p.m. (in office)

Thursday: 7:00 a.m. – 4:30 p.m. (in office)

Friday: 7:00 a.m. – 4:30 p.m. (in office)



--  
[cdphe\\_localreferral@state.co.us](mailto:cdphe_localreferral@state.co.us) | [colorado.gov/cdphe](http://colorado.gov/cdphe)



**From:** [Tripple - CDOT, Joseph](#)  
**To:** [Lia Campbell](#)  
**Cc:** [Aaron Felt - CDOT](#)  
**Subject:** Re: Request for Comment: RCU2025-00001  
**Date:** Friday, February 28, 2025 1:00:19 PM

Please be cautious: This email was sent from outside Adams County

Lia,

Thank you for the referral.

CDOT has no comment as the location is off system.

Joey Tripple  
Permits Unit- Region 1



P 303.656.8692  
2829 W. Howard Pl. 2nd Floor, Denver, CO 80204  
[joseph.tripple@state.co.us](mailto:joseph.tripple@state.co.us) | [www.codot.gov](http://www.codot.gov) | [www.cotrip.org](http://www.cotrip.org)

On Fri, Feb 28, 2025 at 10:47 AM 'Lia Campbell' via CDOT\_R1\_AccessPermitting\_GroupB <[cdot\\_rlaccess\\_groupb@state.co.us](mailto:cdot_rlaccess_groupb@state.co.us)> wrote:

Good morning,

Please see the attached request for comment for a rezoning at 6820 Pecos Street. Let me know if you have any comments by March 26, 2025. Let me know if you have any questions or need more information.

Thank you,



Lia Campbell

Planner II, *Community and Economic Development Dept.*

ADAMS COUNTY, COLORADO

[4430 S. Adams County Parkway, 1st Floor](#), Suite W2000A

Brighton, CO 80601-8216

720.523.6949 | [LCampbell@adcogov.org](mailto:LCampbell@adcogov.org)

[adcogov.org](http://adcogov.org)

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Friday: 7:00 a.m. – 4:30 p.m. (in office)

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You received this message because you are subscribed to the Google Groups "CDOT\_R1\_AccessPermitting\_GroupB" group.

To unsubscribe from this group and stop receiving emails from it, send an email to [cdot\\_rlaccess\\_groupb+unsubscribe@state.co.us](mailto:cdot_rlaccess_groupb+unsubscribe@state.co.us).

To view this discussion visit

[https://groups.google.com/a/state.co.us/d/msgid/cdot\\_rlaccess\\_groupb/MN2PR09MB48424D7AEF69C6EB230A7D0AADCC2%40MN2PR09MB4842.namprd09.prod.outlook.com](https://groups.google.com/a/state.co.us/d/msgid/cdot_rlaccess_groupb/MN2PR09MB48424D7AEF69C6EB230A7D0AADCC2%40MN2PR09MB4842.namprd09.prod.outlook.com).

For more options, visit <https://groups.google.com/a/state.co.us/d/optout>.



**From:** [Kasza, Jacob](#)  
**To:** [Lia Campbell](#)  
**Subject:** Request for Comment: RCU2025-00001  
**Date:** Thursday, March 13, 2025 9:55:58 AM  
**Attachments:** [Outlook-jeat3bbm.png](#)

---

You don't often get email from [jpkasza@westminsterco.gov](mailto:jpkasza@westminsterco.gov). [Learn why this is important](#)

Please be cautious: This email was sent from outside Adams County

Good morning Lisa,

The City of Westminster does not have any comments on this application.

Have a wonderful day!

**Jacob P. Kasza**

**Principal Planner**

City of Westminster | Community Services Department

[jpkasza@westminsterco.gov](mailto:jpkasza@westminsterco.gov) | 303.658.2123

4800 West 92nd Avenue, Westminster, CO 80031



**WESTMINSTER | [WWW.WESTMINSTERCO.GOV](http://WWW.WESTMINSTERCO.GOV)**



**From:** [Tony Cocozzella](#)  
**To:** [Lia Campbell](#)  
**Cc:** [Operations 1](#); [Operations 2](#)  
**Subject:** RE: Request for Comment: RCU2025-00001  
**Date:** Tuesday, March 25, 2025 2:51:40 PM

---

Please be cautious: This email was sent from outside Adams County

Lia,

In response to project Case Number : RCU2025-00001  
Case Name - 6820 NORTH PECOS STREET

Scope: The review by the district with regard to this project is minimal. Depending on the size of the water tap and type of business involved, water and sewer tap fees will be charged. There is also a Denver Water and Metro sewer tap fee.

Depending on the type of business, any restaurant that requires a kitchen with plumbing components that discharge grease, coffee grounds, and or cream, a grease trap will be required on the sewer service line.

Let me know if you have any questions.

Regards,  
Tony

**Tony Cocozzella | District Manager**  
**North Pecos Water and Sanitation District**  
6900 Pecos St | Denver CO 80221  
Ph 303-429-5770

---

**From:** Lia Campbell <LCampbell@adcogov.org>  
**Sent:** Friday, February 28, 2025 10:44 AM  
**Subject:** Request for Comment: RCU2025-00001

Good morning,

Please see the attached request for comment for a rezoning at 6820 Pecos Street. Let me know if you have any comments by March 26, 2025. Let me know if you have any questions or need more information.

Thank you,

Lia Campbell



Planner II, *Community and Economic Development Dept.*

ADAMS COUNTY, COLORADO

[4430 S. Adams County Parkway, 1st Floor](#), Suite W2000A

Brighton, CO 80601-8216

720.523.6949 [LCampbell@adcogov.org](mailto:LCampbell@adcogov.org)

[adcogov.org](http://adcogov.org)

**\*\* New Schedule:\*\***

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Friday: 7:00 a.m. – 4:30 p.m. (in office)





July 28, 2025

Adams County Planning

**RE: 6820 NORTH PECOS STREET**

On behalf of our client, Welcome to Realty, we are submitting Zoning Map Amendment application to Adams County Planning Department to propose a rezoning of their property at 6820 North Pecos Street.

**Existing Conditions**

The 1.03 acre property is at the Northeast corner of 68<sup>th</sup> Ave and North Pecos Street. It is currently undeveloped and zoned R-1-C. The surrounding properties to the north and east are zoned R-1-C, and the property to the west is zoned C-3 and the property to the south is zoned PUD.

**Proposed Rezoning**

Our proposal intends to request C-2 (Commercial-2 District) zoning to allow the development of a commercial retail center. This is a permitted use in the C-2 zone district, and we feel this is appropriate for the context of the neighborhood and an amenity that the surrounding area needs. After coordination with Staff and feedback from our neighborhood meeting, we have included a proposed deed restriction on the property that would prevent the development of a fueling station in perpetuity on the property.

We have provided a conceptual site plan for a retail center with the rezoning application that adheres to the setbacks required in the C-2 Zoning district along the residential frontages. In order to provide the correct parking dimensions and a commercially acceptable depth to the retail spaces, a variance to the front setback would be required as illustrated in the site plan

Although Mixed Use (MU) zoning has been contemplated for this site, the proposed development is unable to achieve the minimum 10 du/ac that is required of the Mixed-Use zoning district.

**Preliminary Drainage Analysis**

The site's stormwater runoff is anticipated to be a combination of an open detention pond and underground storage and will discharge to match existing drainage conditions.

A Level 1 Storm Drainage Plan and Study has been provided to show that the stormwater will be handled on site and released to maintain historic drainage patterns and volumes.









July 25, 2025

Adams County  
Community & Economic Development Department  
4430 S Adams County Pkwy.  
1<sup>st</sup> Floor, Suite W2000B  
Brighton, CO 80601

**RE: 6820 Pecos St Rezone – Level 1 Storm Drainage Letter**

The project site is located within unincorporated Adams County, Colorado, at the northeast corner of Pecos Street and West 68th Avenue. The site lies within Section 4, Township 3 South, Range 68 West of the 6th Principal Meridian. The property is approximately 1 acre in size and is proposed for rezoning to commercial/retail use. Planned development includes an approximately 10,000 square-foot building with associated parking and drives, two access points from the public ROW, and a detention pond.

**EXISTING CONDITIONS**

The existing parcel is undeveloped and consists of relatively flat terrain with sparse vegetation. The property is bounded by existing residential lots to the north and east and public right-of-way to the south and west. The site is currently composed of a mix of compacted soils and native grasses. There are no structures, utilities, or formal drainage infrastructure within the property limits. According to FEMA FIRM Panel No. 08001C0584H, the property is entirely located in Zone X, denoting an Area of Minimal Flood Hazard. Soils per the NRCS Web Soil Survey indicate predominantly Platner loam, classified as Hydrologic Soil Group C.

In the existing condition, the site conveys runoff primarily via overland flow from the northwest to southeast toward 68<sup>th</sup> Avenue Street. There is no record of a previously prepared drainage study for the property. The surrounding street network includes curb and gutter, but no storm sewer inlets are located adjacent to the parcel. There is a storm sewer main running down the western half of Pecos Street right-of-way. Off-site drainage does not contribute significant flow to the parcel under the existing condition.

**PROPOSED CONDITIONS**

The impervious area on site will increase as a result of the planned development. Pavement slopes will be directed towards a surface detention/water quality facility located in the north of site. Runoff from the roof and paved areas will be conveyed via overland flow, curb and gutter, and small swales to the detention pond. The pond will be designed to capture and treat the Water Quality Capture Volume (WQCV) and attenuate the minor and major storm events for the tributary area. Flow from the pond will exit through an outlet structure sized to release the minor (5-year) and major (100-year) storms without overtopping the spillway. The outlet pipe is anticipated to connect to the existing storm main within Pecos Street.



## CONCLUSION

The storm drainage analysis has been completed in accordance with Adams County Level 1 Storm Drainage Study requirements, the MHFD Storm Drainage Criteria Manual, and established engineering principles. The analysis indicates that the site can adequately support the proposed development and associated drainage infrastructure while preserving existing drainage patterns and avoiding adverse impacts to the surrounding area.

The following calculations and supporting material are attached here for your reference:

- Basin Map
- Rational Method Calculations
- Pond Hydraulic Calculations
- FEMA FIRM Panel
- WSS Soil Map
- NOAA Atlas 14 Rainfall Intensity

If you have any questions or need additional information, please contact me at [emorton@sunnycivil.com](mailto:emorton@sunnycivil.com) or 707-419-9988.

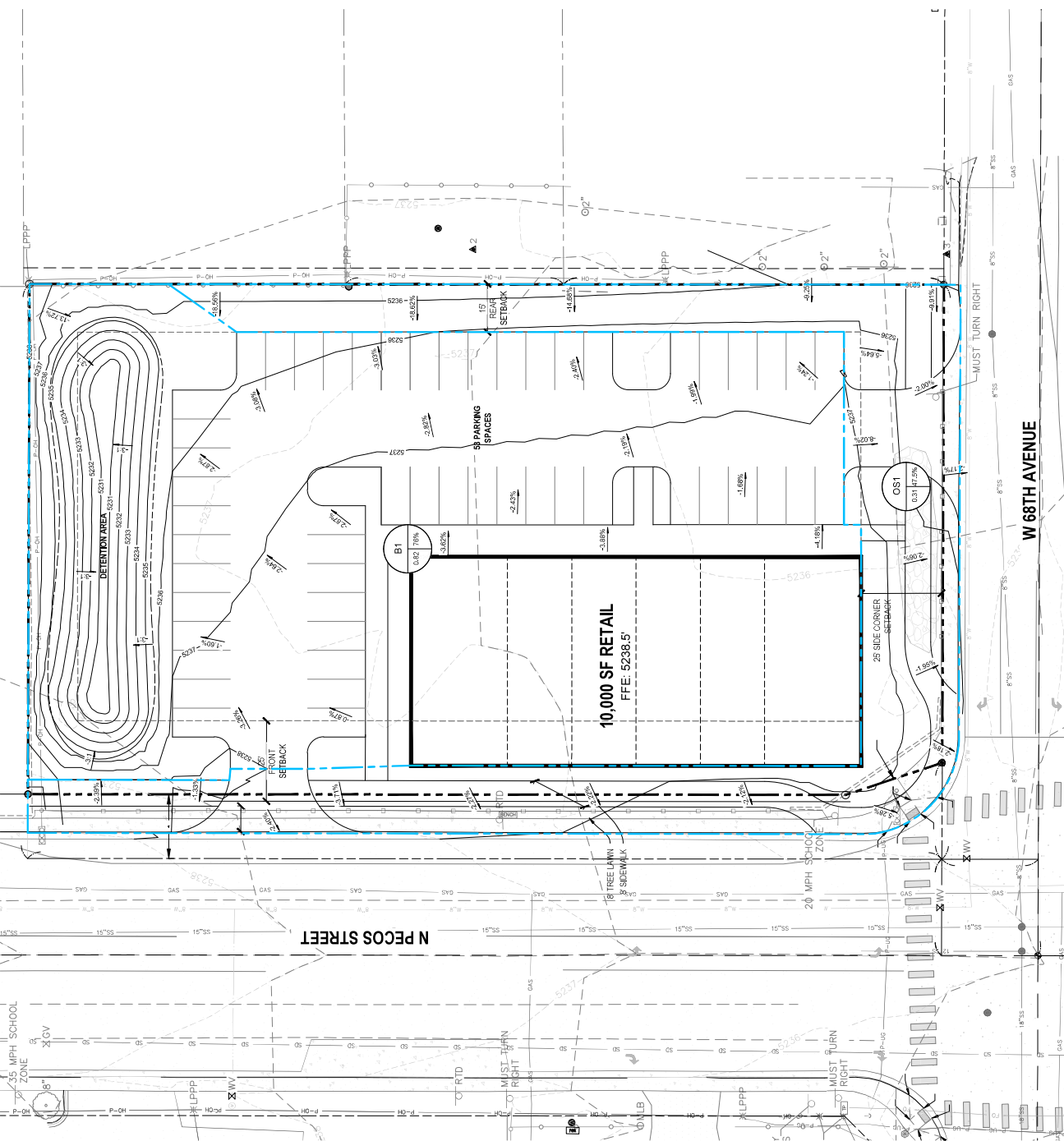
Sincerely,

**Sunny Civil**



Erica Morton, PE  
Registered Professional Engineer  
State of Colorado No. 0059328







# **COMPOSITE RUNOFF COEFFICIENT & PERCENT IMPERVIOUSNESS**

## **EXISTING BASINS**

| Basin Name | Basin Description | Soil Type | Pavement 95% (acres) | Roofs 95% (acres) | Landscape 20% (acres) | Total Area (acres) | C2   | C5   | C10  | C100 | Composite Percent Impervious |
|------------|-------------------|-----------|----------------------|-------------------|-----------------------|--------------------|------|------|------|------|------------------------------|
| EX1        | ROW               | C         | 0.07                 | -                 | 1.07                  | 1.13               | 0.18 | 0.23 | 0.31 | 0.58 | 24.4%                        |

## **DEVELOPED BASINS**

| Basin        | Basin Description | Soil Type | Pavement 95% (acres) | Roofs 95% (acres) | Landscape 20% (acres) | Total Area (acres) | C2   | C5          | C10         | C100        | Composite Percent Impervious |
|--------------|-------------------|-----------|----------------------|-------------------|-----------------------|--------------------|------|-------------|-------------|-------------|------------------------------|
| B1           | To pond           | C         | 0.38                 | 0.23              | 0.21                  | 0.82               | 0.62 | 0.65        | 0.69        | 0.79        | 76.01%                       |
| OS1          | Not to pond       | C         | 0.11                 | -                 | 0.20                  | 0.31               | 0.38 | 0.42        | 0.48        | 0.68        | 47.47%                       |
| <b>TOTAL</b> |                   |           | <b>3.46</b>          | <b>0.36</b>       | <b>2.15</b>           | <b>6.47</b>        |      | <b>0.57</b> | <b>0.61</b> | <b>0.75</b> | <b>67.11%</b>                |



**RUNOFF**

**EXISTING BASINS**

| Basin Characteristics |             |              |      |      |           |            |               |                        |                          |
|-----------------------|-------------|--------------|------|------|-----------|------------|---------------|------------------------|--------------------------|
| Basin Name            | Description | Area (acres) | C5   | C100 | Tc* (min) | I5 (in/hr) | I 100 (in/hr) | Sub-basin Q 5-yr (cfs) | Sub-basin Q 100-yr (cfs) |
| EX1                   | ROW         | 1.13         | 0.18 | 0.58 | 5.00      | 4.21       | 9.28          | 0.84                   | 6.14                     |

**DEVELOPED BASINS**

| Basin Characteristics |             |              |      |      |           |            |               |                        |                          |
|-----------------------|-------------|--------------|------|------|-----------|------------|---------------|------------------------|--------------------------|
| Basin Name            | Description | Area (acres) | C5   | C100 | Tc* (min) | I5 (in/hr) | I 100 (in/hr) | Sub-basin Q 5-yr (cfs) | Sub-basin Q 100-yr (cfs) |
| B1                    | To pond     | 0.82         | 0.65 | 0.79 | 5.00      | 4.21       | 9.28          | 2.26                   | 6.06                     |
| OS1                   | Not to pond | 0.31         | 0.42 | 0.68 | 5.00      | 4.21       | 9.28          | 0.55                   | 1.96                     |

Max release rates (90% of existing runoff):  
5-yr: 0.76 cfs  
100-yr: 5.53 cfs

Pond release rate = max release rate - OS flow  
5-yr: 0.21 cfs  
100-yr: 3.57 cfs



*MHFD-Detention, Version 4.07 (June 2025)*

Basin ID:



Selected SCM Type =

After providing required inputs above including 1-hour rainfall depths, click 'Run CUHP' to generate runoff hydrographs using the embedded Colorado Urban Hydrograph Procedure.

### Optional User Overrides

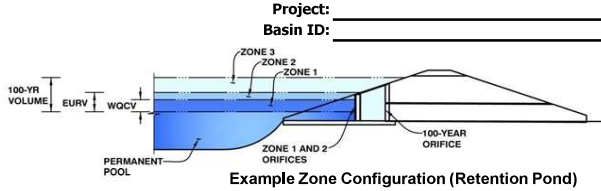
|   |   |      |                 |
|---|---|------|-----------------|
| Initial Surcharge Area ( $A_{SV}$ )           | = | user | ft <sup>2</sup> |
| Surcharge Volume Length ( $L_{SV}$ )          | = | user | ft              |
| Surcharge Volume Width ( $W_{SV}$ )           | = | user | ft              |
| Depth of Basin Floor ( $H_{FLOOR}$ )          | = | user | ft              |
| Length of Basin Floor ( $L_{FLOOR}$ )         | = | user | ft              |
| Width of Basin Floor ( $W_{FLOOR}$ )          | = | user | ft              |
| Area of Basin Floor ( $A_{FLOOR}$ )           | = | user | ft <sup>2</sup> |
| Volume of Basin Floor ( $V_{FLOOR}$ )         | = | user | ft <sup>3</sup> |
| Depth of Main Basin ( $H_{MAB}$ )             | = | user | ft              |
| Length of Main Basin ( $L_{MAB}$ )            | = | user | ft              |
| Width of Main Basin ( $W_{MAB}$ )             | = | user | ft              |
| Area of Main Basin ( $A_{MAB}$ )              | = | user | ft <sup>2</sup> |
| Volume of Main Basin ( $V_{MAB}$ )            | = | user | ft <sup>3</sup> |
| Calculated Total Basin Volume ( $V_{total}$ ) | = | user | acre-feet       |

[illegible]



# DETENTION BASIN OUTLET STRUCTURE DESIGN

MHFD-Detention, Version 4.07 (June 2025)



Example Zone Configuration (Retention Pond)

|                   | Estimated Stage (ft) | Estimated Volume (ac-ft) | Outlet Type          |
|-------------------|----------------------|--------------------------|----------------------|
| Zone 1 (WQCV)     | 1.50                 | 0.022                    | Orifice Plate        |
| Zone 2 (5-year)   | 2.49                 | 0.035                    | Circular Orifice     |
| Zone 3 (100-year) | 3.29                 | 0.041                    | Weir&Pipe (Restrict) |
| Total (all zones) |                      | 0.099                    |                      |

User Input: Orifice at Underdrain Outlet (typically used to drain WQCV in a Filtration SCM)

|                                   |     |  |
|-----------------------------------|-----|--|
| Underdrain Orifice Invert Depth = | N/A | ft (distance below the filtration media surface) |
| Underdrain Orifice Diameter =     | N/A | inches   |

|                                      |                     |
|--------------------------------------|---------------------|
| Calculated Parameters for Underdrain |                     |
| Underdrain Orifice Area =            | N/A ft <sup>2</sup> |
| Underdrain Orifice Centroid =        | N/A feet            |

User Input: Orifice Plate with one or more orifices or Elliptical Slot Weir (typically used to drain WQCV and/or EURV in a sedimentation SCM)

|  |      |   |
|--|------|---|
| Centroid of Lowest Orifice =               | 0.00 | ft (relative to basin bottom at Stage = 0 ft) |
| Depth at top of Zone using Orifice Plate = | 1.98 | ft (relative to basin bottom at Stage = 0 ft) |
| Orifice Plate: Orifice Vertical Spacing =  | N/A  | inches  |
| Orifice Plate: Orifice Area per Row =      | 0.22 | sq. inches (diameter = 1/2 inch)              |

|                                 |                           |
|---------------------------------|---------------------------|
| Calculated Parameters for Plate |                           |
| WQ Orifice Area per Row =       | 1.528E-03 ft <sup>2</sup> |
| Elliptical Half-Width =         | N/A feet                  |
| Elliptical Slot Centroid =      | N/A feet                  |
| Elliptical Slot Area =          | N/A ft <sup>2</sup>       |

User Input: Stage and Total Area of Each Orifice Row (numbered from lowest to highest)

|                                | Row 1 (required) | Row 2 (optional)  | Row 3 (optional)  | Row 4 (optional)  | Row 5 (optional)  | Row 6 (optional)  | Row 7 (optional)  | Row 8 (optional)  |
|--------------------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Stage of Orifice Centroid (ft) | 0.00             |                   |                   |                   |                   |                   |                   |                   |
| Orifice Area (sq. inches)      | 0.22             |                   |                   |                   |                   |                   |                   |                   |
|                                | Row 9 (optional) | Row 10 (optional) | Row 11 (optional) | Row 12 (optional) | Row 13 (optional) | Row 14 (optional) | Row 15 (optional) | Row 16 (optional) |
| Stage of Orifice Centroid (ft) |                  |                   |                   |                   |                   |                   |                   |                   |
| Orifice Area (sq. inches)      |                  |                   |                   |                   |                   |                   |                   |                   |

User Input: Vertical Orifice (Circular or Rectangular)

|   | Zone 2 Circular | Not Selected |   |
|---|-----------------|--------------|---|
| Invert of Vertical Orifice =                  | 1.98            | N/A          | ft (relative to basin bottom at Stage = 0 ft) |
| Depth at top of Zone using Vertical Orifice = | 2.54            | N/A          | ft (relative to basin bottom at Stage = 0 ft) |
| Vertical Orifice Diameter =                   | 1.00            | N/A          | inches  |

|  |                          |
|--|--------------------------|
| Calculated Parameters for Vertical Orifice |                          |
| Zone 2 Circular                            | Not Selected             |
| Vertical Orifice Area =                    | 0.01 N/A ft <sup>2</sup> |
| Vertical Orifice Centroid =                | 0.04 N/A feet            |

User Input: Overflow Weir (Dropbox with Flat or Sloped Gate and Outlet Pipe OR Rectangular/Trapezoidal Weir and No Outlet Pipe)

|   | Zone 3 Weir     | Not Selected |   |
|---|-----------------|--------------|---|
| Overflow Weir Front Edge Height, H <sub>o</sub> = | 2.50            | N/A          | ft (relative to basin bottom at Stage = 0 ft) |
| Overflow Weir Front Edge Length =                 | 2.92            | N/A          | feet  |
| Overflow Weir Gate Slope =                        | 0.00            | N/A          | H:V   |
| Horiz. Length of Weir Sides =                     | 2.92            | N/A          | feet  |
| Overflow Gate Type =                              | Close Mesh Gate | N/A          |   |
| Debris Clogging % =                               | 50%             | N/A          | %   |

|   |                          |
|---|--------------------------|
| Calculated Parameters for Overflow Weir     |                          |
| Zone 3 Weir                                 | Not Selected             |
| Height of Gate Upper Edge, H <sub>u</sub> = | 2.50 N/A feet            |
| Overflow Weir Slope Length =                | 2.92 N/A feet            |
| Gate Open Area / 100-yr Orifice Area =      | 52.90 N/A                |
| Overflow Gate Open Area w/o Debris =        | 6.74 N/A ft <sup>2</sup> |
| Overflow Gate Open Area w/ Debris =         | 3.37 N/A ft <sup>2</sup> |

User Input: Outlet Pipe w/ Flow Restriction Plate (Circular Orifice, Restrictor Plate, or Rectangular Orifice)

|   | Zone 3 Restrictor | Not Selected |  |
|---|-------------------|--------------|--|
| Depth to Invert of Outlet Pipe =            | 0.00              | N/A          | ft (distance below basin bottom at Stage = 0 ft) |
| Outlet Pipe Diameter =                      | 18.00             | N/A          | inches   |
| Restrictor Plate Height Above Pipe Invert = | 2.25              |              | inches   |

|   |                          |
|---|--------------------------|
| Calculated Parameters for Outlet Pipe w/ Flow Restriction Plate |                          |
| Zone 3 Restrictor   | Not Selected             |
| Outlet Orifice Area =   | 0.13 N/A ft <sup>2</sup> |
| Outlet Orifice Centroid =                                       | 0.11 N/A feet            |
| Half-Central Angle of Restrictor Plate on Pipe =                | 0.72 N/A radians         |

User Input: Emergency Spillway (Rectangular or Trapezoidal)

|                                     |       |   |
|-------------------------------------|-------|---|
| Spillway Invert Stage=              | 4.00  | ft (relative to basin bottom at Stage = 0 ft) |
| Spillway Crest Length =             | 10.00 | feet  |
| Spillway End Slopes =               | 4.00  | H:V   |
| Freeboard above Max Water Surface = | 0.00  | feet  |

|                                    |              |
|------------------------------------|--------------|
| Calculated Parameters for Spillway |              |
| Spillway Design Flow Depth=        | 0.19 feet    |
| Stage at Top of Freeboard =        | 4.19 feet    |
| Basin Area at Top of Freeboard =   | 0.08 acres   |
| Basin Volume at Top of Freeboard = | 0.16 acre-ft |

## Routed Hydrograph Results

The user can override the default CUHP hydrographs and runoff volumes by entering new values in the Inflow Hydrographs table (Columns W through AF).

|   | WQCV  | EURV           | 2 Year             | 5 Year             | 10 Year         | 25 Year         | 50 Year        | 100 Year       | 500 Year       |
|---|-------|----------------|--------------------|--------------------|-----------------|-----------------|----------------|----------------|----------------|
| Design Storm Return Period =                    | N/A   | N/A            | 0.82               | 1.09               | 1.34            | 1.72            | 2.03           | 2.37           | 2.73           |
| One-Hour Rainfall Depth (in) =                  | 0.022 | 0.064          | 0.039              | 0.056              | 0.072           | 0.098           | 0.119          | 0.143          | 0.168          |
| CUHP Runoff Volume (acre-ft) =                  | N/A   | N/A            | 0.039              | 0.056              | 0.072           | 0.098           | 0.119          | 0.143          | 0.168          |
| Inflow Hydrograph Volume (acre-ft) =            | N/A   | N/A            | 0.0                | 0.1                | 0.3             | 0.6             | 0.9            | 1.1            | 1.4            |
| CUHP Predevelopment Peak Q (cfs) =              | N/A   | N/A            | 0.03               | 0.12               | 0.31            | 0.76            | 1.04           | 1.38           | 1.71           |
| OPTIONAL Override Predevelopment Peak Q (cfs) = | N/A   | N/A            | 0.8                | 1.0                | 1.3             | 1.9             | 2.3            | 2.7            | 3.2            |
| Predevelopment Unit Peak Flow, q (cfs/acre) =   | N/A   | N/A            | 0.0                | 0.03               | 0.2             | 0.8             | 1.0            | 1.04           | 1.1            |
| Peak Inflow Q (cfs) =                           | N/A   | N/A            | N/A                | 0.3                | 0.7             | 1.2             | 1.2            | 0.9164         | 0.8            |
| Peak Outflow Q (cfs) =                          | Plate | Outlet Plate 1 | Vertical Orifice 1 | Vertical Orifice 1 | Overflow Weir 1 | Overflow Weir 1 | Outlet Plate 1 | Outlet Plate 1 | Outlet Plate 1 |
| Ratio Peak Outflow to Predevelopment Q =        | N/A   | 0.13           | N/A                | N/A                | 0.0             | 0.1             | 0.1            | 0.1            | 0.2            |
| Structure Controlling Flow =                    | N/A   | N/A            | N/A                | N/A                | N/A             | N/A             | N/A            | N/A            | N/A            |
| Max Velocity through Gate 1 (fps) =             | 39    | 67             | 59                 | 67                 | 68              | 66              | 64             | 63             | 61             |
| Max Velocity through Gate 2 (fps) =             | 41    | 71             | 62                 | 71                 | 73              | 72              | 71             | 70             | 69             |
| Time to Drain 97% of Inflow Volume (hours) =    | 1.49  | 2.63           | 1.99               | 2.37               | 2.54            | 2.61            | 2.71           | 2.97           | 3.20           |
| Area at Maximum Ponding Depth (acres) =         | 0.03  | 0.05           | 0.04               | 0.04               | 0.05            | 0.05            | 0.05           | 0.05           | 0.06           |
| Maximum Volume Stored (acre-ft) =               | 0.022 | 0.064          | 0.037              | 0.052              | 0.060           | 0.063           | 0.068          | 0.081          | 0.093          |









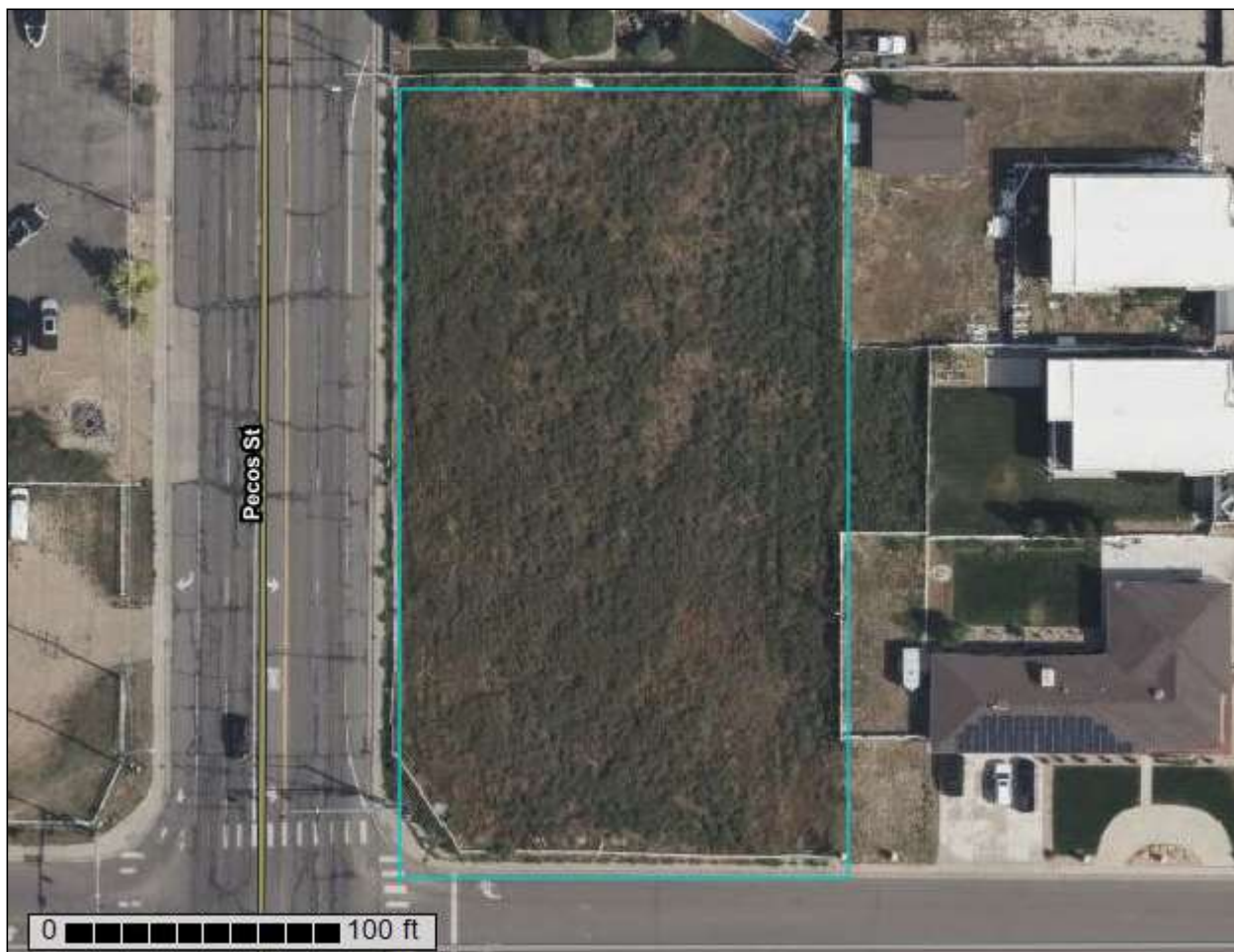
United States  
Department of  
Agriculture

**NRCS**

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for Adams County Area, Parts of Adams and Denver Counties, Colorado





# Custom Soil Resource Report Soil Map





## Map Unit Legend

| Map Unit Symbol                    | Map Unit Name                       | Acres in AOI | Percent of AOI |
|------------------------------------|-------------------------------------|--------------|----------------|
| PIB                                | Platner loam, 0 to 3 percent slopes | 1.1          | 100.0%         |
| <b>Totals for Area of Interest</b> |                                     | <b>1.1</b>   | <b>100.0%</b>  |

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.



## Custom Soil Resource Report

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.



## Adams County Area, Parts of Adams and Denver Counties, Colorado

### PIB—Platner loam, 0 to 3 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2tln0

*Elevation:* 4,000 to 4,930 feet

*Mean annual precipitation:* 14 to 17 inches

*Mean annual air temperature:* 46 to 50 degrees F

*Frost-free period:* 135 to 160 days

*Farmland classification:* Prime farmland if irrigated

#### Map Unit Composition

*Platner and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Platner

##### Setting

*Landform:* Interfluves

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Mixed eolian deposits over tertiary aged alluvium derived from igneous, metamorphic and sedimentary rock

##### Typical profile

*Ap - 0 to 6 inches:* loam

*Bt1 - 6 to 11 inches:* clay

*Bt2 - 11 to 20 inches:* clay

*Bk1 - 20 to 27 inches:* loam

*Bk2 - 27 to 37 inches:* sandy clay loam

*C - 37 to 80 inches:* sandy clay loam

##### Properties and qualities

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Medium

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 15 percent

*Maximum salinity:* Nonsaline (0.0 to 1.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Moderate (about 8.1 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 3s

*Land capability classification (nonirrigated):* 4s

*Hydrologic Soil Group:* C

*Ecological site:* R067BY002CO - Loamy Plains



## Custom Soil Resource Report

*Hydric soil rating:* No

### Minor Components

#### **Ascalon**

*Percent of map unit:* 10 percent

*Landform:* Interfluves

*Landform position (two-dimensional):* Summit, shoulder

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* R067BY002CO - Loamy Plains

*Hydric soil rating:* No

#### **Rago, rarely flooded**

*Percent of map unit:* 4 percent

*Landform:* Drainageways

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Head slope, base slope

*Down-slope shape:* Linear

*Across-slope shape:* Concave

*Ecological site:* R067BY036CO - Overflow

*Hydric soil rating:* No

#### **Rago, ponded**

*Percent of map unit:* 1 percent

*Landform:* Playas

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Ecological site:* R067BY010CO - Closed Depression

*Hydric soil rating:* No





**NOAA Atlas 14, Volume 8, Version 2**  
**Location name: Denver, Colorado, USA\***  
**Latitude: 39.8204°, Longitude: -105.0058°**  
**Elevation: 5240 ft\*\***  
 \* source: ESRI Maps  
 \*\* source: USGS



## POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffrey Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

[PF\\_tabular](#) | [PF\\_graphical](#) | [Maps & aerals](#)

### PF tabular

| PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour) <sup>1</sup> |                                     |                        |                        |                        |                        |                        |                        |                        |                        |                        |
|---|-------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Duration  | Average recurrence interval (years) |                        |                        |                        |                        |                        |                        |                        |                        |                        |
|   | 1                                   | 2                      | 5                      | 10                     | 25                     | 50                     | 100                    | 200                    | 500                    | 1000                   |
| 5-min   | 2.54<br>(1.98-3.26)                 | 3.14<br>(2.45-4.03)    | 4.21<br>(3.26-5.44)    | 5.20<br>(4.01-6.73)    | 6.68<br>(5.04-9.07)    | 7.93<br>(5.82-10.8)    | 9.28<br>(6.58-12.9)    | 10.7<br>(7.31-15.3)    | 12.8<br>(8.38-18.6)    | 14.5<br>(9.19-21.2)    |
| 10-min  | 1.86<br>(1.45-2.39)                 | 2.30<br>(1.79-2.96)    | 3.08<br>(2.39-3.98)    | 3.80<br>(2.93-4.93)    | 4.90<br>(3.69-6.64)    | 5.81<br>(4.27-7.93)    | 6.79<br>(4.82-9.46)    | 7.85<br>(5.35-11.2)    | 9.37<br>(6.13-13.7)    | 10.6<br>(6.73-15.5)    |
| 15-min  | 1.51<br>(1.18-1.94)                 | 1.87<br>(1.45-2.40)    | 2.51<br>(1.95-3.24)    | 3.10<br>(2.39-4.00)    | 3.98<br>(3.00-5.40)    | 4.72<br>(3.47-6.45)    | 5.52<br>(3.92-7.70)    | 6.39<br>(4.35-9.10)    | 7.62<br>(4.99-11.1)    | 8.61<br>(5.47-12.6)    |
| 30-min  | 1.07<br>(0.836-1.38)                | 1.32<br>(1.03-1.70)    | 1.77<br>(1.37-2.28)    | 2.18<br>(1.68-2.81)    | 2.79<br>(2.10-3.77)    | 3.30<br>(2.42-4.50)    | 3.84<br>(2.73-5.35)    | 4.44<br>(3.02-6.32)    | 5.28<br>(3.45-7.68)    | 5.95<br>(3.78-8.72)    |
| 60-min  | 0.665<br>(0.518-0.854)              | 0.819<br>(0.637-1.05)  | 1.09<br>(0.848-1.41)   | 1.34<br>(1.04-1.74)    | 1.72<br>(1.30-2.33)    | 2.03<br>(1.49-2.77)    | 2.37<br>(1.68-3.30)    | 2.73<br>(1.86-3.89)    | 3.24<br>(2.12-4.72)    | 3.66<br>(2.32-5.36)    |
| 2-hr  | 0.396<br>(0.312-0.503)              | 0.488<br>(0.384-0.620) | 0.651<br>(0.510-0.830) | 0.799<br>(0.623-1.02)  | 1.02<br>(0.778-1.37)   | 1.21<br>(0.895-1.63)   | 1.41<br>(1.01-1.93)    | 1.62<br>(1.12-2.28)    | 1.92<br>(1.27-2.77)    | 2.17<br>(1.39-3.14)    |
| 3-hr  | 0.285<br>(0.226-0.360)              | 0.350<br>(0.278-0.443) | 0.467<br>(0.368-0.591) | 0.572<br>(0.449-0.727) | 0.730<br>(0.560-0.971) | 0.863<br>(0.644-1.16)  | 1.00<br>(0.724-1.37)   | 1.16<br>(0.801-1.62)   | 1.37<br>(0.915-1.96)   | 1.55<br>(1.00-2.22)    |
| 6-hr  | 0.169<br>(0.136-0.211)              | 0.206<br>(0.165-0.258) | 0.272<br>(0.217-0.341) | 0.332<br>(0.263-0.417) | 0.421<br>(0.326-0.553) | 0.496<br>(0.374-0.655) | 0.575<br>(0.420-0.776) | 0.661<br>(0.463-0.912) | 0.783<br>(0.527-1.10)  | 0.881<br>(0.575-1.25)  |
| 12-hr   | 0.104<br>(0.084-0.128)              | 0.125<br>(0.102-0.155) | 0.163<br>(0.132-0.202) | 0.197<br>(0.158-0.245) | 0.248<br>(0.194-0.321) | 0.290<br>(0.221-0.378) | 0.334<br>(0.246-0.445) | 0.382<br>(0.270-0.520) | 0.450<br>(0.306-0.626) | 0.504<br>(0.333-0.706) |
| 24-hr   | 0.063<br>(0.052-0.077)              | 0.076<br>(0.062-0.093) | 0.099<br>(0.081-0.121) | 0.118<br>(0.096-0.145) | 0.147<br>(0.116-0.187) | 0.170<br>(0.131-0.219) | 0.195<br>(0.145-0.256) | 0.221<br>(0.158-0.296) | 0.257<br>(0.177-0.353) | 0.286<br>(0.191-0.396) |
| 2-day   | 0.037<br>(0.030-0.044)              | 0.044<br>(0.037-0.054) | 0.057<br>(0.047-0.069) | 0.068<br>(0.056-0.083) | 0.084<br>(0.067-0.105) | 0.097<br>(0.075-0.122) | 0.110<br>(0.082-0.141) | 0.123<br>(0.089-0.162) | 0.141<br>(0.098-0.191) | 0.155<br>(0.105-0.212) |
| 3-day   | 0.027<br>(0.022-0.032)              | 0.032<br>(0.026-0.038) | 0.041<br>(0.034-0.049) | 0.048<br>(0.040-0.058) | 0.059<br>(0.047-0.073) | 0.068<br>(0.053-0.085) | 0.076<br>(0.058-0.098) | 0.086<br>(0.062-0.112) | 0.098<br>(0.068-0.132) | 0.108<br>(0.073-0.146) |
| 4-day   | 0.021<br>(0.018-0.025)              | 0.025<br>(0.021-0.030) | 0.032<br>(0.026-0.038) | 0.037<br>(0.031-0.045) | 0.046<br>(0.037-0.057) | 0.052<br>(0.041-0.065) | 0.059<br>(0.045-0.075) | 0.066<br>(0.048-0.086) | 0.076<br>(0.053-0.101) | 0.083<br>(0.057-0.112) |
| 7-day   | 0.014<br>(0.011-0.016)              | 0.016<br>(0.013-0.019) | 0.020<br>(0.017-0.023) | 0.023<br>(0.019-0.028) | 0.028<br>(0.023-0.034) | 0.032<br>(0.025-0.039) | 0.036<br>(0.027-0.045) | 0.040<br>(0.029-0.052) | 0.046<br>(0.032-0.060) | 0.050<br>(0.034-0.067) |
| 10-day  | 0.010<br>(0.009-0.012)              | 0.012<br>(0.010-0.014) | 0.015<br>(0.013-0.018) | 0.017<br>(0.015-0.021) | 0.021<br>(0.017-0.025) | 0.024<br>(0.019-0.029) | 0.026<br>(0.020-0.033) | 0.029<br>(0.022-0.038) | 0.033<br>(0.024-0.044) | 0.037<br>(0.025-0.049) |
| 20-day  | 0.007<br>(0.006-0.008)              | 0.008<br>(0.006-0.009) | 0.009<br>(0.008-0.011) | 0.011<br>(0.009-0.012) | 0.012<br>(0.010-0.015) | 0.014<br>(0.011-0.017) | 0.015<br>(0.012-0.019) | 0.017<br>(0.013-0.021) | 0.019<br>(0.014-0.025) | 0.021<br>(0.014-0.027) |
| 30-day  | 0.005<br>(0.004-0.006)              | 0.006<br>(0.005-0.007) | 0.007<br>(0.006-0.008) | 0.008<br>(0.007-0.009) | 0.010<br>(0.008-0.011) | 0.011<br>(0.009-0.013) | 0.012<br>(0.009-0.014) | 0.013<br>(0.009-0.016) | 0.014<br>(0.010-0.018) | 0.015<br>(0.011-0.020) |
| 45-day  | 0.004<br>(0.003-0.005)              | 0.005<br>(0.004-0.005) | 0.006<br>(0.005-0.006) | 0.006<br>(0.005-0.007) | 0.007<br>(0.006-0.009) | 0.008<br>(0.007-0.010) | 0.009<br>(0.007-0.011) | 0.010<br>(0.007-0.012) | 0.011<br>(0.008-0.014) | 0.012<br>(0.008-0.015) |
| 60-day  | 0.003<br>(0.003-0.004)              | 0.004<br>(0.003-0.004) | 0.005<br>(0.004-0.005) | 0.005<br>(0.005-0.006) | 0.006<br>(0.005-0.007) | 0.007<br>(0.006-0.008) | 0.008<br>(0.006-0.009) | 0.008<br>(0.006-0.010) | 0.009<br>(0.007-0.012) | 0.010<br>(0.007-0.013) |

<sup>1</sup> Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

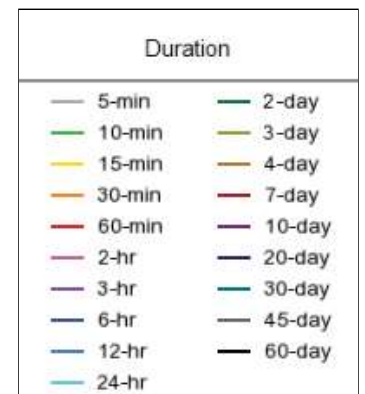
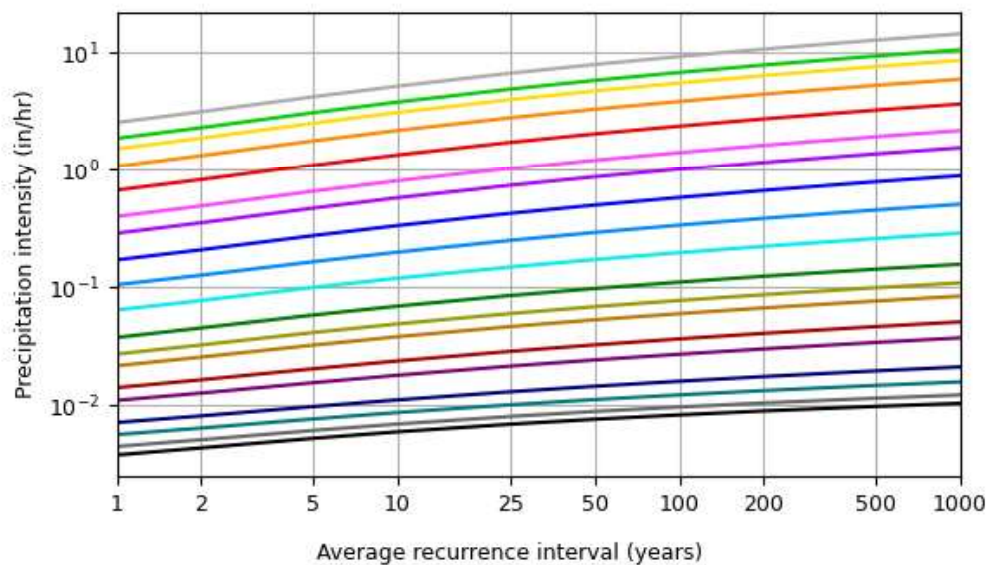
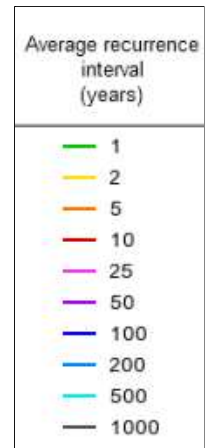
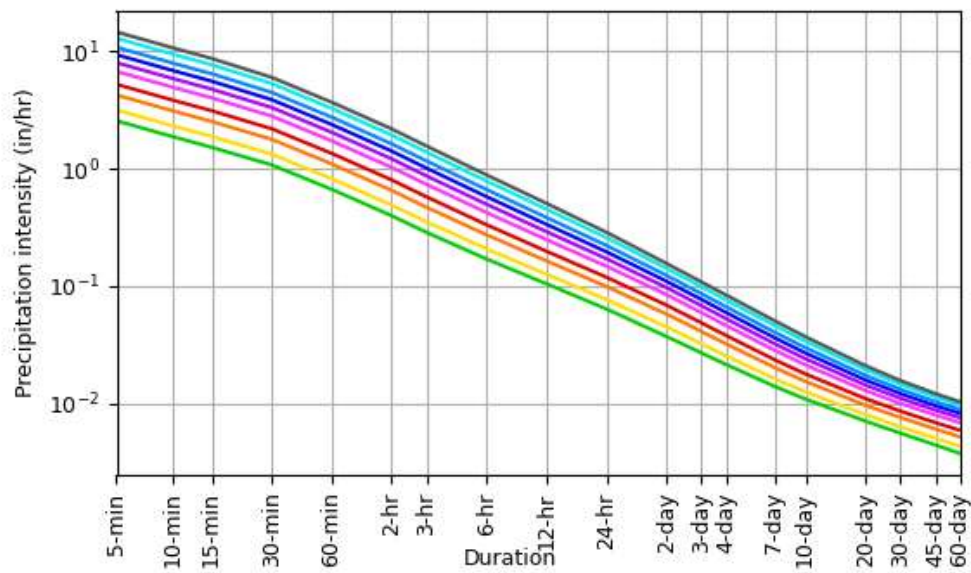
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### PF graphical



## PDS-based intensity-duration-frequency (IDF) curves

Latitude: 39.8204°, Longitude: -105.0058°



NOAA Atlas 14, Volume 8, Version 2

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Large scale terrain



Large scale map



Large scale aerial





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