



Board of County Commissioner's Summary Report

Date: March 17, 2026
To: Arapahoe County Board of County Commissioners
Through: Molly Orkild-Larson, Planning Division
From: Sue Liu, PE., Engineering Services Division

Case name: PF25-004 Forest Rim Estates Subdivision Filing No. 2

Purpose and Recommendation

The purpose of this report is to communicate the Engineering Services Staff findings, comments, and recommendations regarding the land use application(s) identified above.

Scope/Location:

Turn Key Ventures, on behalf of the property owner, the Roderick N. and Jane E Guilford Revocable Trust, is proposing to subdivide Lot 3, Block 1 of Forest Rim Estates. The property is currently zoned RR-B and consists of 31.15 acres. The parcel is to be subdivided into 10 lots and 2 tracts for drainage and access.

An onsite private roadway is proposed, and access to the subdivision will be off E. Jamison Circle.

Engineering Services Staff has reviewed the land use application(s) and has the following findings and comments:

1. The site lies within the Sampson Gulch drainage basin, which is tributary to the Piney Creek.
2. This site lies within the Southeast Metro Stormwater Authority (SEMSWA) service area. SEMSWA jointly reviews and recommends approval of the Drainage Study for all stormwater facilities.
3. A regional detention facility was proposed downstream of the site within the City of Aurora according to the Piney Creek Major Drainageway Plan, prepared by WRC Engineering, INC, 2012. This facility was constructed and is functioning.
4. This development will require a Subdivision Improvement Agreement (SIA) to guarantee on-site and off-site public improvements. This will include all public stormwater facilities, any improvements within Tracts and construction within dedicated easements.

5. The water quality pond must be placed within a Tract of Common Ownership and maintenance. A Drainage easement should also be provided for the water quality pond. The drainage easement should be provided to the limits of the water quality capture volumes plus one-foot of freeboard. The drainage easement allows the County the right to enter the property, whereas the tract creates a separate parcel to allow for common ownership and maintenance.
6. A Tract of common ownership & maintenance and an access easement is required for the proposed private roadway.
7. Please know that the pavement design is required and should be submitted to the County for review and approval prior to paving the proposed private roadway.
8. This development is subject to the Rural Transportation Impact Fee (RuTIF). The fee is a one-time payment on new development only to help offset the impacts on roadway infrastructure that occur with development. The fee is for new development in unincorporated Arapahoe County, east of Gun Club Road. It will be collected at the time of building permit issuance of residential, commercial, industrial and office buildings.
9. Please note that Staff requires the applicant to meet with the County Engineering Services Inspector to survey current County Roads conditions that will be affected by construction of the proposed project prior to the construction. This will help determine the impact of the construction on Arapahoe County Roads and subsequent mitigation or compensation measures that will be required.
10. Construction activities that disturb one or more acres are required by the Environment Protection Agency (EPA) to obtain a Construction Stormwater Permit.
11. The waiver and variance requests for the project are attached.

Engineering Services Staff is recommending the land use application(s) favorably subject to the following conditions:

1. The applicant will make all necessary changes as indicated with specificity by the County's staff prior to final execution and approval of the following document: (1) the Plat Set depicting Forest Rim Estates Subdivision Filing No. 2 Project, last submitted February 3, 2026; and (2) Engineer's Cost Estimate, dated January 19, 2026.
2. The Applicant agrees to enter SIA.



June 18, 2025

Daniel Allen, PE
Craft Civil Design
dallen@craftcivil.com
319-899-2345

Project Name: Forest Rim Estates Subdivision #02
Case Number: PF25-004

The Arapahoe County Technical Review Committee (TRC) and the Southeast Metro Stormwater Authority (SEMSWA) met on June 18, 2025, for a regularly scheduled meeting to discuss the Forest Rim Estates Subdivision #02 project and associated variance request. The applicant is requesting a variance to the County’s Stormwater Management Manual, Section 14.5.1.4.h - “Permanent irrigation is required for onsite and sub-regional MEDBs to establish vegetation post construction and to support long-term maintenance. Temporary irrigation is required for standard EDBs until vegetation has been established in accordance with the GESC Manual”. The project proposes no permanent irrigation for the water quality pond due to the reasons listed in the attached variance request letter (copy attached).

This variance request is supported by the TRC with the following conditions:

- Temporary irrigation is required.
- A note should be placed on the Operation and Maintenance Manual as “Water truck and additional temporary irrigation is required, and re-seeding may be required in the future if vegetation has not been established”.
- A note should be placed on the GESC plan as “GESC Permit cannot be closed until final stabilization has been achieved”.

If development intentions deviate from those presented within this request, a new request(s) may be required.

Decisions of the TRC may be appealed to the Director of Public Works & Development. If you wish to appeal the decision of the TRC, please submit a request in writing to my attention. Within 6 working days, you will be notified of a date and time for the appeal meeting with the Director of Public Works & Development. This process is further outlined in Arapahoe County’s Infrastructure & Design Construction Standards Manual, Section 3.2.2.

If you have any questions, please feel free to contact me at 720-874-6546.

Sincerely,

A handwritten signature in cursive script, appearing to read "Sue Liu".

Sue Liu, P.E., CFM

Engineering Services Division

cc: Arapahoe County Case File

Friday, June 13, 2025

Arapahoe County Engineering Services Division
Technical Review Committee
5334 S. Prince Street
Littleton, CO 80120

Subject: Request for waiver of EDB/MEDB Irrigation requirement
Project Name: Forest Rim Subdivision Filing No. 2
Arapahoe County Case Number: Q22-117

Dear Technical Review Committee:

The applicant respectfully requests a variance from the requirement to provide irrigation for the proposed water quality facility based on the following justification:

Criteria from which the applicant seeks a variance:

Per section 14.5.1.4.h of the Arapahoe County Infrastructure Design and Construction Standards, "Permanent irrigation is required for onsite and sub-regional MEDBs to establish vegetation post construction and to support long-term maintenance. Temporary irrigation is required for standard EDBs until vegetation has been established in accordance with the GESC Manual."

Justification for not complying with this criteria and proposed alternatives:

The water quality facility is located within the proposed Forest Rim Subdivision Filing No. 2, which will provide 10 additional single family ~2.5 acre lots to the original Forest Rim Subdivision. There are no water mains within this subdivision, and all future homes will receive water from onsite private wells. The proposed water quality facility will serve the private access road, and will be maintained by the HOA. An irrigation system would require us to extend a water main over 1200' to serve this single water quality facility.

There are two reasons why we feel that this water quality facility will meet the intent of the Arapahoe County Standards:

1. The Arapahoe County Water Supply Study (11/13/2024) recommends limiting irrigation demands.
2. While designed to meet the requirements of an Extended Detention Basin, the proposed water quality facility is only designed to provide water quality control volume. As such, it will be fully inundated with water very frequently. A traditionally EDB requires different irrigation requirements since only a small portion will be inundated with water on a frequent basis. This water quality facility will function closer to a natural wetland, and will not require an irrigation system to maintain permanent vegetation.

We propose that a water quality only facility be allowed which will be inundated frequently by natural stormwater runoff rather than irrigation. This water quality facility will be designed per applicable Arapahoe County and SEMSWA standards and meet the intent of the irrigation criteria which is to provide adequate water to establish and maintain permanent vegetation.

We kindly request your review and consideration of this variance request. Should you require any additional information or wish to discuss this matter further, please do not hesitate to contact me at 319.899.2345 or dallen@craftcivil.com.

Thank you for your attention to this request, and we look forward to your feedback and guidance.

Sincerely,



Daniel Allen, PE
Craft Civil Design
dallen@craftcivil.com
319-899-2345

Attachments:

- Forest Rim Subdivision Filing 2 Utility Plan (to verify there is no water main available)
- Stormwater Facility (Water Quality Only) Exhibit

November 6, 2025

Daniel Allen, PE
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dallen@craftcivil.com
319-899-2345

Project Name: Forest Rim Estates Subdivision #02 – Variance Request to Imperviousness Value (I%)
Case Number: PF25-004

The Arapahoe County Technical Review Committee (TRC) and the Southeast Metro Stormwater Authority (SEMSWA) met on November 5, 2025, for a regularly scheduled meeting to discuss the Forest Rim Estates Subdivision #02 project and associated variance request. The applicant is requesting a variance to the County’s Stormwater Management Manual, Section 6.3.4 - *“The runoff coefficient represents the integrated effects of infiltration, detention storage, evaporation, retention, flow routing, and interception, all of which affect the time distribution and peak rate of runoff. Runoff coefficients are based on the imperviousness of a particular land use and the hydrologic soil type of the area and are to be selected in accordance with the information shown in the Runoff chapter in the UDFCD (now called Mile High Food District (MHFD)) Manual”* (copy attached).

In March of 2024, MHFD issued an updated Criteria Manual Volume I, which revised the impervious values from 2% to 5% for undisturbed soil and 20% for disturbed soils, and changed impervious values by land use for large lot (2.5 acre or larger) from 12% to 35% (35% is for lots with density of 0-3 du/ac and no impervious value is presented for 2.5 acre or larger lot). The applicant requests the Forest Rim Estates Subdivision No. 2 project be allowed to use the MHFD impervious value prior to the March 2024 update.

TRC requested previously that the applicant provides a table comparing runoff values and water quality volumes utilizing the previous MHFD impervious values (values prior to March 2024), the new MHFD impervious values, and the new MHFD impervious values with a runoff reduction design. The applicant has now provided a drainage analysis using different MHFD impervious values to calculate the runoff and the water quality volumes. The comparison of the analysis shows that the differences between the runoff values and the water quality volumes are negligible, and only minimal impacts are generated to the proposed water quality volumes and the runoff at the downstream drainage conveyance system. The TRC and SEMSWA support the variance request.

If development intentions deviate from those presented within this request, a new request(s) may be required.

Decisions of the TRC may appeal to the Director of Public Works & Development. If you wish to appeal the decision of the TRC, please submit a request in writing to my attention. Within 5 working days, you will be notified of a date and time for the appeal meeting with the Director of Public Works & Development. This process is further outlined in Arapahoe County's Infrastructure & Design Construction Standards Manual, Section 3.4.

If you have any questions, please feel free to contact me at 720-874-6546.

Sincerely,



Sue Liu, P.E., CFM

Engineering Services Division

cc: Arapahoe County Case File PF25-004

Monday, November 3, 2025

Arapahoe County Engineering Services Division
Technical Review Committee
5334 S. Prince Street
Littleton, CO 80120

Subject: Request for variance - MHFD impervious values
Arapahoe County Case Title: Forest Rim Subdivision Filing No. 2
Arapahoe County Case Number: PF25-004

Dear Technical Review Committee,

The following variance request has been prepared for your review;

Project Narrative:

The Forest Rim Filing No. 2 subdivides the Forest Rim Filing No. 1 Lot 3 into 10 individual lots with two tracts and private access road. Each lot will be a minimum of 2.5 acres.

Variance Request:

We request that the Forest Rim Filing No. 2 project be allowed to use the MHFD impervious value prior to the March 2024 update. These values are shown on the next page on Table 6-3 (MHFD Impervious values prior to the March 2024 revision). The key differences are that there is no disturbed soil category, landscape/greenbelts/historical areas utilize a 2% impervious value, and Single Family (2.5 acre) land use impervious values are estimated at 12% instead of the current 35%.

Criteria from which the applicant seeks a variance:

Per section 6.3.4 of the Arapahoe County Stormwater Management Manual:

“The runoff coefficient represents the integrated effects of infiltration, detention storage, evaporation, retention, flow routing, and interception, all of which affect the time distribution and peak rate of runoff. Runoff coefficients are based on the imperviousness of a particular land use and the hydrologic soil type of the area and are to be selected in accordance with the information shown in the Runoff chapter in the UDFCD Manual.”

It is assumed that this section implicitly requires that the current values of the MHFD manual are utilized.

Project context and history of MHFD revisions:

The Urban Drainage Flood Control District’s (UDFCD) name was changed in 2019, and is now called the Mile High Food District (MHFD). In March of 2024, MHFD issued an updated Criteria Manual Volume I, which revised the impervious values to 5% for undisturbed soil and 20% for disturbed soils (see Tables 6-2,3 below), and changed impervious values by land use for large lot (2.5 acre or larger) from 12% to 35%. The following were submitted or approved prior to the MHFD impervious value revisions in 2024:

1. The Forest Rim Subdivision Filing No. 1 Final Drainage Report was approved in 2022

2. The Forest Rim Subdivision Filing No. 2 Final Plat and Drainage Report was submitted in 2023 per the project pre-application notes, and was removed after County staff required that a Preliminary Plat process be completed first.
3. The Piney Creek Master Plan, of which Forest Rim Subdivision is part of was approved in 2012
4. Whispering Pines Filing 3 Final Drainage Report (provides regional detention for the Forest Rim Subdivision) was approved in 2015.

MFHD Impervious values prior to the March 2024 revision:

Table 6-3. Recommended percentage imperviousness values

Land Use or Surface Characteristics	Percentage Imperviousness (%)
Business:	
Downtown Areas	95
Suburban Areas	75
Residential lots (lot area only):	
Single-family	
2.5 acres or larger	12
0.75 – 2.5 acres	20
0.25 – 0.75 acres	30
0.25 acres or less	45
Apartments	75
Industrial:	
Light areas	80
Heavy areas	90
Parks, cemeteries	10
Playgrounds	25
Schools	55
Railroad yard areas	50
Undeveloped Areas:	
Historic flow analysis	2
Greenbelts, agricultural	2
Off-site flow analysis (when land use not defined)	45
Streets:	
Paved	100
Gravel (packed)	40
Drive and walks	90
Roofs	90
Lawns, sandy soil	2
Lawns, clayey soil	2

March 2024 MFHD revised Impervious values:

TABLE 6-2. RECOMMENDED IMPERVIOUSNESS BY LAND USE

LAND USE/DENSITY	IMPERVIOUSNESS
Residential	
Single-family Housing (SFH) – Rural (0 – 3 du/ac)	35%
SFH – Low & Medium-density (3 – 5 du/ac)	55%
SFH – High-density (5 – 20 du/ac)	65%
Manufactured Housing (>= 10 du/ac)	65%
Multi-family Housing (MFH) – Medium-density (5 – 20 du/ac)	65%
MFH – High-density MFH (>20 du/ac)	70%

TABLE 6-3. RECOMMENDED IMPERVIOUSNESS BY SURFACE TYPES

SURFACE TYPES	IMPERVIOUSNESS	
Roadways and Paved Streets	95%	
Concrete Driveways and Walks	95%	
Roofs	95%	
Gravel	No Traffic (Pedestrian Use)	40%
	Low-traffic Areas (Maintenance Paths and Substations)	60%
	High-traffic Areas (Roadways and Parking)	80%
Disturbed Soil (Including Lawns, Managed/Active Turf, Landscaped Areas with Water-Wise Vegetation, and Uncompacted Gravel/Mulch Planting Beds)		20%
Undisturbed or Decompacted Soil (Native Grasses and Open Space Areas)		5%
Artificial Turfs ¹	Landscape Applications (without Subgrade Drainage Layer)	25% – 45%
	Sport Fields (with Underdrain Pipe System)	60% – 80%

Justification:

We believe that this variance is justified by the previously approved documents which utilized the MHFD impervious values prior to the March 2024 updated:

1. The Forest Rim Subdivision Filing No. 1 Final Drainage Report was approved in 2022
2. The Piney Creek Master Plan, of which Forest Rim Subdivision is part of was approved in 2012
3. Whispering Pines Filing 3 Final Drainage Report (provides regional detention for the Forest Rim Subdivision) was approved in 2015.

Utilizing the original MHFD values by land cover, and assuming the ultimate impervious of each lot is 20%, the total imperviousness for the Subdivision is 21%. This is less than the Piney Creek and Whispering Pines planned imperviousness for the site, which was expected to be 21.4%.

Additionally, runoff and water quality values have been analyzed to understand potential negative effects of using the original impervious values. These values are provided in the table below.

These calculations, as well as relevant information from previously approved drainage reports, have been included in the attachments at the end of this letter.

Original MHFD impervious values:

2% for landscape/open space, no disturbed area category, lots are analyzed as 20% impervious due to SEMSWA large lot SF allowance.

New (after March 2024) MHFD impervious values:

5% for landscape, 20% for disturbed areas, 35% SF by land use.

	New Values	Original Values	New Value with Volume Reduction	Current Design	Note:
WQCV	0.18 AC-FT	0.14 AC-FT	0.13 AC-FT	0.16 AC-FT	Design volume is to overflow weir, assumes no WQ required for lots that aren't tributary to pond due to SEMSWA large lot single family water quality exclusion.
100 YR Runoff DP3	167 CFS	157 CFS	No flow reduction added	Designed for new values	At furthest downstream end of existing gulch at west end of site, Design Point 3
5 YR Runoff DP3	41 CFS	31 CFS	No flow reduction added	Designed for new values	At furthest downstream end of existing gulch at west end of site, Design Point 3

Based on my professional engineering opinion, the potential WQCV and runoff differences are negligible and justify that the Forest Rim Filing No. 2 Final Drainage report uses the original MHFD values which are in line with the previously approved Forest Rim Filing No. 1 and applicable regional drainage documents.

This Variance Request from the Arapahoe County Infrastructure Design and Construction Standards, Section (include the section number and title) was prepared for the Forest Rim Subdivision Filing No. 2 by me (or under my direct supervision) and is based on sound engineering judgement and practices.

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11.03.2025