



Arapahoe County Public Works & Development Engineering Services Division Staff Report Planning Commission

Date: September 29, 2025

To: Ernie Rose, Planner, Planning Division

From: Emily Gonzalez, Case Engineer, Engineering Services Division

Cc: Ceila Rethamel, Engineering Services Division, Division Manager
Case File

Re: Arapahoe Retail 7-ELEVEN

Administrative Site Plan

Minor Subdivision

ASP25-003

PM25-001

Scope/Location:

K2 Civil Consultants Inc., on behalf of the property owner, DDK Investments, and the Developer, LASCO Development, is proposing a project within unincorporated Arapahoe County. The project is located at 8300 E Iliff Ave, parcel ID Number 1973-28-4-00-069. The project includes 1.34 acres and is currently zoned B-5.

The proposed use will be a 7-Eleven convenience store, a 4-pack fueling canopy, and a 2-pack fueling canopy. The FAR for the project is approximately 0.07. There is 26% open space on the property and the project will utilize a MEDB for stormwater management. The hours of operations for the proposed 7-Eleven will be 18 hours. The proposed project will require changes to the existing traffic signal at Iliff Ave and Valentia St, adding an additional traffic leg to the intersection and adjustments to the recently installed traffic signal on the SW corner of Iliff and Valentia.

Items included in the application:

- Plan Exhibits – ASP & PM
- Construction Drawings – Civil & Traffic Signal
- Phase III Drainage Report
- GESD Plans & Report
- Ownership & Maintenance Plans
- Traffic Impact Study

Findings:

The Arapahoe County Division of Engineering Services has reviewed this application and has the following findings:

1. This development lies within the boundaries of the following jurisdiction:
 - Southeast Metro Stormwater Authority (SEMSWA)
 - Mile High Flood District (MHFD)
 - Cherry Creek Valley Water and Sanitation District
 - South Metro Fire Rescue District (SMFR)
 - Four-Square Mile Planning Area
2. This parcel is in the Cherry Creek drainage basin.
3. Land development improvements do not directly affect a drainageway or regional stormwater facility, MHFD maintenance eligibility is not required.
4. SEMSWA, through a Memorandum of Understanding and associated Standard Operating Procedures administers the GESC Program on behalf of the County. SEMSWA, with concurrence from the County, will approve the GESC plans, issue the GESC permit and provide GESC inspections.
5. This development will require a Subdivision Improvement Agreement (SIA) to guarantee on-site and off-site public improvements, at time of the Subdivision Plat.
6. No offsite or street parking is proposed with the development.
7. All public streets shall be complete with curb, gutter, sidewalk, and pavement that shall be constructed in accordance with the Arapahoe County IDCS.
8. Engineering review and approval fees are paid in full.
9. The following variances have been requested/granted:
 - a) The use of a modified extended detention basin on a small site. Please refer to attached variance request letter and Technical Review Committee Response Letter.
10. Engineering review and approval fees are paid in full.

Recommendations:

The Division of Engineering Services recommends this case favorably subject to the following conditions:

1. The applicant agrees to address the Division of Engineering Services' comments and concerns as identified within this report.

2. The applicant agrees to address comments issued by the Southeast Metro Stormwater Authority (SEMSWA).
3. The applicant agrees to address all remaining redline comments by the Traffic Operations and Transportation Division comments on Iliff Ave. and the modified traffic signal.
4. The applicant executes a Subdivision Improvement Agreement, Ownership & Maintenance Agreement, and a Drainage Easement & License Agreement.
5. The development is to provide a public access easement to the future trailhead property located to the west of the 7-ELEVEN site.

Staff Comments:

The Arapahoe County Division of Engineering Services has reviewed this application and has the following comments:

1. Pursuant to the Arapahoe County Public Works and Development Fee Schedule and policy, the applicant is provided three (3) resubmittal reviews at no charge. Should items not be addressed by the fourth submittal, the review fee identified in the Fee Schedule may apply to every subsequent submittal.
2. This development will be responsible for the design and construction of a modified traffic signal at East Iliff Avenue and South Valentia Street from three legs to four to allow full movement access to the site and to obtain all necessary Right-of-Way.
3. Per recommendations found in the TIS, additional turn lanes will be necessary in the future. Additional ROW will be required for these lanes and should be included on the plat.
4. The application was referred to SEMSWA for review and comment. SEMSWA jointly reviews and recommends approval of the Drainage Study, Operation & Maintenance Site Plan, and Civil Construction Plans for all stormwater facilities. SEMSWA's recommendation for approval must be obtained prior to final County approvals.
5. This development will be served by Cherry Creek Valley Water & Sanitation District for water and sanitation. The water and sanitary sewer plans will need to be approved by CCVWS prior to final construction plan approvals by the County. Applicant shall submit either signed construction plans or letter of approval from CCVWS.
6. Construction activities that disturb one or more acres are required by the Environmental Protection Agency (EPA) to obtain a Construction Stormwater Permit.

Permits Required

1. Street Cut- Right of Way (ROW) Use Permit
 - Required for access onto the County ROW.
 - Required for any construction and/or lane closures within County ROW.

2. Public Improvement Permit
 - For all public improvement with a County easement or ROW (stormwater facilities, sidewalks etc.)
3. Grading, Erosion and Sediment Control (GESC) Permit
 - Arapahoe County requires that a GESC (Grading, Erosion, and Sedimentation Control) Permit be obtained prior to the start of land disturbing activities within the unincorporated areas of the County. Information on the County's GESC permit requirements can be obtained in the Arapahoe County GESC Manual.
 - This permit will be issued by SEMSWA.
4. Oversize/Overweight Vehicle Permit
 - This permit governs the use of Arapahoe County Roadways where vehicles exceed size or weight limitations as established by the State of Colorado or by Arapahoe County.
5. Traffic, Signing, Striping and Signalization Permit
 - Arapahoe County requires that a Traffic, Signing, Striping and Signalization Permit be obtained prior to the placement, removal or modification to any traffic signs, striping or signals maintained by Arapahoe County.
 - A Traffic, Signing, Striping and Signalization Permit is required for all signs placed within a designated fire lane. Fire Lane designation must have resolution approved by the Board of County Commissioners.



ARAPAHOE COUNTY

PUBLIC WORKS & DEVELOPMENT

BRYAN D. WEIMER, PWLF

Director

6924 South Lima Street
Centennial, CO 80112-3853

Phone: 720-874-6500

Relay Colorado: 711

www.arapahoe.gov

April 16th, 2025

Attn: Michael Drago, Sr. Engineer IV, K2 Civil Consultants Inc.

Project Name: 7-11 Corner Store – Iliff & Valentia
Case Number: ASP25-003
Address: 8300 E. Iliff Ave.

The Arapahoe County Technical Review Committee (TRC) and Southeast Metro Stormwater Authority (SEMSWA) met on April 16th, 2025, for a regularly scheduled meeting to discuss the 7-11 – Iliff and Valentia project and associated variance requests. Variances of the following standards are requested:

1. Table 14-1 Stormwater Management Manual (SMM): Modified Extended Detention Basins (MEDB) require 1 acre of impervious draining to the pond. The proposed pond would have 0.80 acre of impervious.
2. Use of Mile High Flood District's Outlet Structure detail: The outlet pipe would be set 3" below the micropool water surface elevation rather than at the bottom of the outlet structure per the County detail.

Project and Requirement Summary:

TRC has the following comments as it relates to said waiver requests:

- A. The applicant has provided calculations showing that an MEDB should be possible on this site, even though the imperviousness is less than one acre.
- B. K2 Civil Consultants has provided discussion of the other options considered to provide water quality and detention to the project, which included the discussion of the MEDB option (included in attachment)
- C. Because the County's Stormwater Management Manual incorporates Mile High Flood District's Urban Storm Drainage Criteria Manual by reference, item number two does not require a variance.

The Technical Review Committee has reviewed the justification you provided in your waiver requests (copy attached) and has agreed to the following:

1. TRC has approved the use of a Modified Extended Detention Basin on this site, provided that the final design is shown to meet all applicable State and local regulations for MEDB facilities.
2. TRC does not consider this request to be a variance, and such there is no issue with utilizing the MHFD detail.



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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 the development intentions deviate from what was presented within this request, a new request(s) shall be sought from the Engineering Services Division.

If you have any questions, please feel free to contact ESD at 720-874-6500.

Sincerely,

Engineering Services Division

cc: Technical Review Committee
Arapahoe County Case File ASP25-003



April 7, 2025

Ms. Emily Gonzalez
Arapahoe County Planning and Land Development
6924 S. Lima St
Englewood, CO 80112

SUBJECT: Request for Variance Relief
8300 E. Iliff Ave
Denver, CO 80210
7-Eleven – Store 42728 – Iliff and Valentia

Dear Ms. Gonzalez:

This development plan is for the construction of a 3,968 square foot 7-Eleven on a 1.34 acre site. It includes a 4-pack and 2-pack fueling canopies and their associated drives, utilities, and connection to a future trailhead to the west and the existing shopping center to the east. Due to site and existing infrastructure constraints, this is a variance request for two items:

- MEDB Use
- Outlet Structure Adjustment

For the reasons stated below, we request Variance Relief from the following requirements per the Arapahoe County Standard Manuals.

REQUEST: #1

CODE SECTION: Table 14-1 (Modified Extended Detention Basin)

REQUIREMENT: MEDB requires 1 acre of impervious draining to the pond. The proposed pond will have 0.80 acre of impervious.

PROPOSAL: Use a MEDB as it will avoid any backup into the proposed outlet structure, which will occur with other drainage facilities that are typically used for project site of this size (as further described below).

JUSTIFICATION:

K2 is requesting the use of a different stormwater detention and water quality facility to ensure there is no stormwater backup from the existing infrastructure into the proposed outlet structure. As a part of this request, K2 has looked into various alternatives to eliminate the stormwater backup into the system.

Proposed Alternative 1: Shifting the pond to the northeast corner of the site.



K2 looked into this re-design and for the items listed below, this is not a feasible alternative.

- **Stormwater Backup:**
 - K2 performed an analysis based on shifting the pond to the northeast corner while utilizing the approved Arapahoe County and SEMSWA rain garden details. This confirmed stormwater would back up into the system in both the minor and major storm events. The existing site access has an elevation of approximately 5439.20 with stormwater draining towards it from the northeast. Approximately 0.88' of backup will still come into the aggregate base of the proposed stormwater pond. Other jurisdictional details were also evaluated and resulted in similar issues.
- **Site circulation and fuel delivery:**
 - The drive aisle circulation is designed to minimize fuel delivery and pedestrian vehicle points of contact. The current route will circulate the site through the main access, deliver fuel on the southern drive aisle (east of the proposed 7-Eleven), drive in a counterclockwise direction, and exit the site back onto Iliff. With a rain garden proposed on the northern side of the 2-pack canopy, the delivery of fueling will be required to shift to the NW corner of the site. This is detrimental for a few reasons; this shifts the underground storage tanks closer to the existing floodplain and blocks traffic utilizing the Iliff entrance to reach the trailhead, which is not acceptable from a traffic standpoint.
- **Vehicle Stacking:**
 - Traffic signal improvements are proposed as part of this project. This will be the only access to the future County trailhead to the west. The canopies are situated in a position that will allow industry standard traffic signal stacking. This was based on several months of research and evaluation between the design teams' traffic consultant and county traffic. Modifying the drive aisles and stacking at this signal, requirements of shifting the rainwater garden to the NE, would not provide adequate access to the signal.

Proposed Alternative 2: Use of a stormwater pump to safely discharge water to the existing inlet previously built.

K2 explored a variance to construct a pump with backup systems, alarms, and all the additional requirements provided on a previously approved pump within the County. Per previous submittals and discussions with both the County and SEMSWA, this variance would not be granted unless it was the only option. The use of a pump would safely discharge the stormwater onto the site, allow for greater pipe slopes, and avoid any stormwater backup in the rain garden.

Proposed Alternative 3: Provide Underground Detention and Underwater Quality for the proposed site.

K2 investigated the ability to utilize an ADS Underground Detention Facility to provide an underground detention facility and provide water quality treatment using an isolator row.

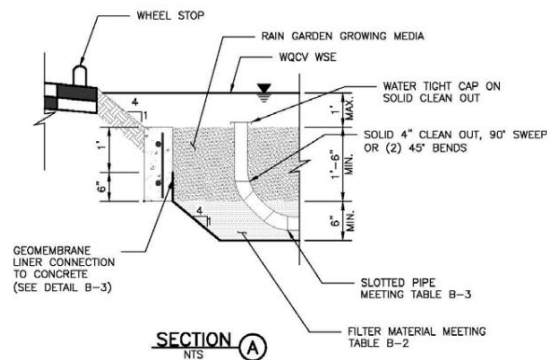


The proposed underground detention could be set directly at the invert of the proposed stormwater pipe (5436.00) with a discharging elevation of approximately 5435.5'. This design would remove any stormwater backup into the proposed system, as the stormwater would fill in the volume of the stormwater from approximately 5435.5 to 5437.83. K2 and 7-Eleven have developed multiple sites that utilize this underground detention system, and it would eliminate any stormwater backup into the proposed site.

In previous variance requests to Arapahoe County and TRC, this underground detention variance has been denied.

Proposed Alternative 4: Eliminate inlet drops, utilize MHFD rain garden reduction in media, and reduce pipe sizes to raise invert into the pond.

In order to gain additional height within the proposed rain garden, two variances could be applied on-site; one to remove the 0.1' drop within the proposed storm structures and one utilizing the MHFD rain garden detail. The proposed detail shown below only requires an 18" cross section and allows for a 0.5% slope within the 4" underdrain. These raised the bottom of the pond elevation to 5433.98'. This would still result in back up into the proposed system (100-yr HGL at 5434.39').

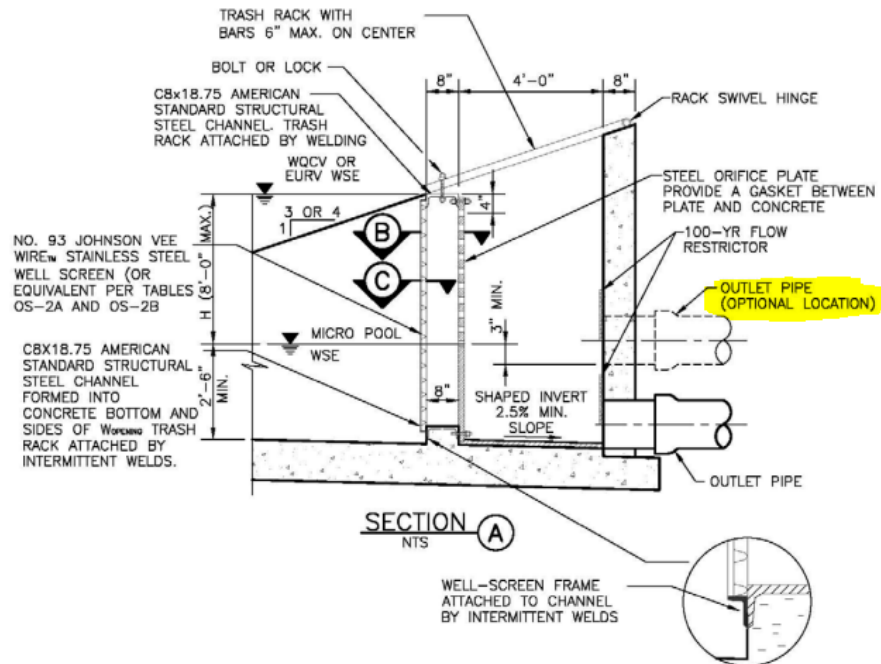


Solution: Modified Extended Detention Basin (MEDB).

A modified extended detention basin per Arapahoe County standards has been explored and determined to be the best solution for this unique situation imposed by the elevation of the HGL in the existing infrastructure. Typically, a MEDB is allowed for sites with impervious areas greater than 1 acre, which the site is slightly less than. After many discussions with the County and SEMSWA, it was agreed that this variance request alternative was the preferred option above all other alternatives explored above. K2 designed a modified extended detention basin on the southern portion of the site. A layout was able to be achieved that would maintain an outlet elevation above the existing 100-year tailwater elevation within Iliff, eliminating the backup that occurs in the alternatives above. The outlet structure will be utilized where the outlet pipe is



set 3" below the micropool elevation, shown in the detail below. Per the County/SEMSWA direction, there will not be a void underneath the outlet, and instead it will be filled with flowfill:



With a design utilizing a modified detention basin and this MHFD outlet structure detail with the outlet pipe 3" below the WQCV, backup into the proposed storm would be eliminated.

With the proposed design, the orifice sizes are larger than the minimum orifice size allowed (3/8"). Additional information regarding the proposed MEDB pond is described below.

- Outlet Invert: 5434.57 (set 3" below micropool WSEL elevation)
- Micropool WSEL: 5434.80
- Bottom of Micropool Elevation: 5432.07 (2.5' depth)
- Freeboard provided: Approximately 1.05'
- Velocity within 18" outlet: 5.97 ft/s
- Trickle channel slope: 1.0%
- Bottom of pond slope minimum: 4%
- 100-yr outflow: 0.89 cfs

Note all calculations are subject to change as the design progresses towards the final design, but they are placed within this variance to indicate they are above County and SEMSWA set minimums.

All calculations for the proposed pond, including rational method, detention sizing, and pipe calculations, are provided within the appendix of this request.



REQUEST: #2

CODE SECTION: Typical County Outlet Structure Detail

REQUIREMENT: Outlet Pipe at bottom of Micropool elevation

PROPOSAL: Use MHFD Outlet Structure to set outlet pipe 3" below micropool WSEL.

JUSTIFICATION: Based on the alternatives explored above, the use of the MHFD Outlet pipe (filled with flowfill per County/SEMSWA request) would eliminate stormwater backup into the proposed MEDB.

K2 has worked very closely with SEMSWA and the County throughout the design process and would like to request the use of the above proposed MEDB and use of the MHFD outlet structure, as it will remove any additional backup from the existing infrastructure and will only require a single variance. Per the other alternatives, K2 believes this is the most effective and most in-line with the County code.

Respectfully Submitted,

Michael Drago

Michael Drago, P.E. –
Project Civil Engineer
K2 Civil Consultants
