

DEVELOPMENT ENGINEERING/TRAFFIC Contact: Kyle Gillitzer Phone: 720-898-7656 Email: kgillitzer@arvada.org Additional Comments Not Specifically Identified by a Mark-up: Colorado Department of Public Health and Environment (CDPHE) approval of the Voluntary Clean Up (VCUP) application will be required prior to approval of the DA. CDPHE approval of the VCUP completion signified by the No Action Determination will be required prior to certificate of occupancy issuance for the site. A 404 permit from the Army Corps of Engineers will be required to be approved for work along Ralston Creek and the northern portion of this site. Please include a copy of this permit with your next submittal. Please reach out to me with any questions. Additional Items to Include With Next Submittal: The stream bank stabilization plan for Ralston Creek along your property frontage must be included with your next submittal. The plan will need to be coordinated and approved by MHFD. Include a turning analysis for the site showing adequate ability for the large anticipated vehicles to be able to turn and maneuver throughout the site. Include an Autoturn program analysis showing vehicles can navigate proposed path including large trucks if necessary. Include roadway plan and profile sheet or detail for the portion of ROW you will be required to construct. A utility report with water modeling for the reducer is required for the site. 404 permit. The City of Arvada Engineering Division reserves the right to provide additional comments for subsequent submittals. front

I have extreme concerns regarding the drainage plan for this site. The VCUP proposal only includes a geomembrane to ensure commingling of potentially contaminated water is prevented only in the area of the site where the EDB is located. This leaves the entirety of the rest of the site to collect potential surface runoff that is contaminated with hazardous materials from the site's previous use and spread the pollution. As you are proposing to outfall directly into Ralston Creek this could concentrate pollution flows and spread them over vast areas where the creek flows. Neighborhood comments and concerns to the city thus far have highlighted environmental issues as a primary topic for the site. For staff to be able to recommend approval for the major modifications we would need to see this hazard mitigated. There are potential options to mitigate the risk of polluted runoff pickup. - The site could create a permeable paver system rather than the gravel driveways using the same separating membrane between it and the polluted soil as the EDB proposes and provide an under drain under the permeable paver system to filter water to the EDB. This would ensure a total separation of the fresh runoff from the polluted soil while providing extra treatment to the runoff as required by the state MS4 program. This same method could also be accomplished by hard-scaping such as with asphalt roadways and concrete channels which would all filter to the EDB without allowing runoff to interact with the soil while still providing detention/WQ. - The site could instead encourage maximum infiltration into to soil below. Groundwater is traditionally more stable and could potentially filter pollutants out over longer periods of time while suspended in the soil. This would also prevent the direct runoff to Ralston Creek as it proposed now. You could accomplish this by incorporating multiple porous landscape gardens (rain gardens) throughout the site, incorporate a permeable paver system for drive lanes, keep as much native seed landscaped areas as possible, etc. - The site could interchange the EDB with a constructed wetland system. Constructed wetlands have been shown to be extremely effective at treating polluted waters in a natural way through vegetation uptake and settling. A constructed wetland system could actually improve the overall site quality over time by collecting and removing polluted soil contaminants via runoff. This could be a huge benefit to the site long term and could aid with the neighbor's concerns as you will be improving the site's environmental quality over a long term period. Please schedule a meeting with me to discuss some drainage options kgillitzer@arvada.org. Any drainage plan will need to have approval by CDPHE through the VCUP entry. p29

Much greater detail is needed on the drainage plan. Please include slope lines and percents throughout all parts of the plan so runoff patterns can be clearly evaluated. Due to lack of detail expect additional comments on third review. p29

Due to lack of detail on plans expect additional comments on third review p30

STORMWATER Contact: Jake Moyer Phone/email: 720-898-7812/jmoyer@arvada.org Additional Comments Not Identified by a Mark-up: Stormwater Group reserves the right to provide additional comments on subsequent submissions. Additional Items to Include With Next Submittal: Recommend an alternative approach to address water quality aside from a detention pond. Considering the existing contaminants on site, a more comprehensive design including, but not limited to, infiltration control measures (rain gardens) or a constructed wetland would be preferred. Include updated Operation and Maintenance Manual for proposed control measure. front

Why is the emergency spillway rundown going into the pond? It should be placed so that the rundown slopes to the north. Please provide detail p 39

Due to the contamination on site, a liner will be required for the pond area. Please include this in details and include the method for attachment (anchor to concrete wall, j-hook, etc.). Please note that this liner will need to be inspected by the City prior to backfilling with CLEAN fill. This clean fill will need to be tested. p 40

The Site is located within the Ralston Creek Drainage Basin according to the Mile High Flood District (hereinafter referred to as "MHFD"). The Ralston Creek Drainage Basin begins in Gilpin County, the creek flows easterly to its confluence with Clear Creek located in the City of Arvada. The westernmost section of the basin primarily consists of mountain and foothill terrain with grassy meadow surround by lodgepole pine forest, intermixed with stands of aspen, fir, and spruce. The basin transitions from foothills to high plains as Ralston Creek reach Ralston Reservoir (RalstonCreekFWP). Federally delineated wetlands need to be addressed. p 48

LAND DIVISION Contact: Kari Ayers Phone/email: 720-898-7657 Kayers@arvada.org Date: 3/8/2022 Additional Comments Not Identified by a Mark-up: As per last review, all areas of encroachment and overlap regarding the Croke Canal need to be resolved by the developer before approval of the Subdivision Plat. Please address all comments. Additional Items to Include With Next Submittal: City of Arvada Land Division reserves the right to provide additional comments for subsequent submittals. front

FLOODPLAIN Contact: Andy Stewart Phone: 720-898-7644 Email: astewart@arvada.org Additional Items to Include With Next Submittal: Same as Kyle's comment: "The stream bank stabilization plan for Ralston Creek along your property frontage must be included with your next submittal. The plan will need to be coordinated and approved by MHFD." Any work in a floodway must be reviewed to determine if the project will increase flood heights. An engineering analysis must be conducted before a permit can be issued. The community's permit file must have a record of the results of this analysis, which can be in the form of a No-rise Certification. This No-rise Certification must be supported by technical data and signed by a registered professional engineer. front

