

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director



Mayor Timothy M. Keller

January 9, 2023

Jesse Sullivan, P.E.
Matrix Design Group, Inc.
2435 Research Parkway, Suite 300
Colorado Springs, CO 80920

RE: Circle K – 9620 Eagle Ranch Rd. NW
Conceptual Grading & Drainage Plans
Engineer's Stamp Date: No Date
Hydrology File: C13D028

Dear Mr. Sullivan:

Based upon the information provided in your submittal received 12/21/2022, the Conceptual Drainage Management Plan **is not** approved for action by the Development Facilitation Team (DFT) for Site Plan for Building Permit. The following comments need to be addressed for approval of the above referenced project:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

1. Please provide a date with the engineer's stamp & a signature. Please note that this is the date of signature and not the expiration date of the New Mexico engineer's stamp.
2. Please use the procedure for 40 acre and smaller basins as outlined in Development Process Manual (DPM) Article 6-2(a). Please provide both the existing conditions and proposed conditions for the 100 year-6 hour storm event.
3. Please follow the DPM Article 6-12 Stormwater Quality and Low-Impact Development for the sizing calculations. To calculate the required SWQV, multiply the impervious area draining to the BMP by 0.42 inches for new development sites. For this site, the impervious area is 1.24 AC or **54,014.4 SF**. Times the SF by 0.42 then divide by 12. This gets a required SWQ volume of **1,890.50 CF**.
4. Please provide sections of the Stormwater Quality Pond. This should include the top of pond elevation, bottom of pond elevation, side slopes, Stormwater Quality water surface elevation (the required volume). Also include items such as retaining walls, pipes with inverts coming into the pond, and the outfall structure or emergency spillway.
5. All gas stations must drain to an oil/water separator (the Owner's choice) prior to discharge. This is mainly for the area around the pumps so some previous stations have placed this prior the remainder of the runoff going into the Stormwater quality pond. Since this site appears to be collected in a pipe system, instead of a manhole, this can be an oil/water separator.

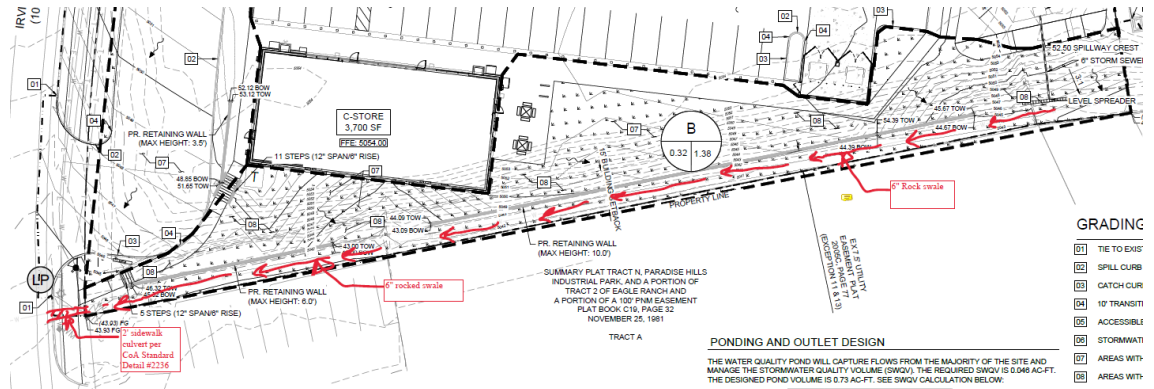
CITY OF ALBUQUERQUE

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Mayor Timothy M. Keller

- Please provide a 6-in swale along the south property line to direct the SWQ Pond's flow to Irving Blvd. At the R.O.W., please a 2-ft sidewalk culvert and reference City of Albuquerque standard detail No. 2236 – Sidewalk Culvert with Steel Plate Top at the sidewalk culvert.



- Per the IDO § 6-4(Q), the property owner of the property is responsible for building the sidewalks along both Eagle Ranch Rd and Irving Blvd. Please consult the Transportation Section to determine the width of the proposed sidewalks. Please note ADA ramps may also be required.

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As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Doug Hughes, PE, jhughes@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely,

Renée C. Brissette

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

Project Title: _____ **Building Permit #:** _____ **Hydrology File #:** _____

DRB#: _____ **EPC#:** _____ **Work Order#:** _____

Legal Description: _____

City Address: _____

Applicant: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

Owner: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

TYPE OF SUBMITTAL: _____ PLAT (___# OF LOTS) _____ RESIDENCE _____ DRB SITE _____ ADMIN SITE

IS THIS A RESUBMITTAL?: _____ Yes _____ No

DEPARTMENT: _____ TRAFFIC/ TRANSPORTATION _____ HYDROLOGY/ DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

- _____ ENGINEER/ARCHITECT CERTIFICATION
- _____ PAD CERTIFICATION
- _____ CONCEPTUAL G & D PLAN
- _____ GRADING PLAN
- _____ DRAINAGE MASTER PLAN
- _____ DRAINAGE REPORT
- _____ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
- _____ ELEVATION CERTIFICATE
- _____ CLOMR/LOMR
- _____ TRAFFIC CIRCULATION LAYOUT (TCL)
- _____ TRAFFIC IMPACT STUDY (TIS)
- _____ OTHER (SPECIFY) _____
- _____ PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- _____ BUILDING PERMIT APPROVAL
- _____ CERTIFICATE OF OCCUPANCY
- _____ PRELIMINARY PLAT APPROVAL
- _____ SITE PLAN FOR SUB'D APPROVAL
- _____ SITE PLAN FOR BLDG. PERMIT APPROVAL
- _____ FINAL PLAT APPROVAL
- _____ SIA/ RELEASE OF FINANCIAL GUARANTEE
- _____ FOUNDATION PERMIT APPROVAL
- _____ GRADING PERMIT APPROVAL
- _____ SO-19 APPROVAL
- _____ PAVING PERMIT APPROVAL
- _____ GRADING/ PAD CERTIFICATION
- _____ WORK ORDER APPROVAL
- _____ CLOMR/LOMR
- _____ FLOODPLAIN DEVELOPMENT PERMIT
- _____ OTHER (SPECIFY) _____

DATE SUBMITTED: _____ **By:** _____

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

FILE LOCATION: S:\CIRCLE K\IRVING & EAGLE RANCH\4500 CADDOUGH PLAN SET\CONCEPTUAL GRADING AND DRAINAGE PLAN\TS01.DWG

CONCEPTUAL GRADING & DRAINAGE PLAN

CIRCLE K

9620 EAGLE RANCH RD NW

ALBUQUERQUE, NM 87114



Know what's below.
Call before you dig.



Excellence by Design

2435 RESEARCH PARKWAY, SUITE
300 COLORADO SPRINGS, CO 80920
PHONE: (719) 575-0100
FAX : (719) 575-0208



LAND DEVELOPMENT
CONSULTANTS, LLC

950 S. CHERRY STREET, SUITE 512
DENVER, CO 80246

OWNER/DEVELOPER:



ROCKY MOUNTAINS DIVISION
5500 S QUEBEC STREET, SUITE 100
GREENWOOD VILLAGE, CO 80111

FLOOD ZONE INFORMATION

IT IS DETERMINED THAT THE SUBJECT PROPERTY RESIDES IN THE FOLLOWING FLOOD ZONE 'X' AS DETERMINED BY OR SHOWN BY FIRM COMMUNITY PANEL NO. 35001C0108G DATED 09/26/2008.

BENCHMARK

ALL BEARINGS AND DISTANCES SHOWN MATCH THE PLAT OF TRACTS A-1 AND A-2, ADOBE WELLS SUBDIVISION, PLAT BOOK 2005C, PAGE 77, FEBRUARY 24, 2005 IN THE OFFICE OF THE COUNTY CLERK OF THE COUNTY OF BERNALILLO, NEW MEXICO.

LEGAL DESCRIPTION

TRACT A-1, AS SHOWN ON THE PLAT OF PLAT OF TRACTS A-1 AND A-2, ADOBE WELLS SUBDIVISION, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON FEBRUARY 24, 2005, IN PLAT BOOK 2005C, PAGE 77, AS DOCUMENT NO. 2005026221; AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT AN NGS BENCHMARK FOR A 3" BRASS CAP MARKED REEVES 2 FOUND AT THE EAST EDGE OF A CONCRETE DRAINAGE CHANNEL STRUCTURE, THENCE N.66°28'16"W., 19,058.32 FEET TO A 5/8" IRON ROD FOUND WITH CAP 11184 FOR THE TRUE POINT OF BEGINNING AT THE SOUTHEAST CORNER OF THIS TRACT;

THENCE S.43°18'52"W., 34.74 FEET TO A 5/8" IRON ROD FOUND WITH CAP 11184 FOR A CORNER OF THIS TRACT;

THENCE S.38°37'12"W., 358.97 FEET TO A 1/2" IRON ROD SET CAP 23259 FOR THE SOUTHWEST CORNER OF THIS TRACT AT THE EAST RIGHT-OF-WAY OF IRVING BOULEVARD NW;

THENCE ALONG THE SAID RIGHT-OF-WAY, AROUND THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 786.30 FEET, AN ARC LENGTH OF 205.62 FEET, THROUGH A CENTRAL ANGLE OF 14°58'58" AND WHOSE LONG CHORD BEARS N.34°08'01"W., A DISTANCE OF 205.03 FEET TO A 1/2" IRON ROD SET CAP 23259 FOR THE NORTHWEST CORNER OF THIS TRACT AND THE POINT OF CONTINUOUS CURVATURE;

THENCE AT THE SOUTHERLY RIGHT-OF-WAY OF EAGLE RANCH ROAD NW, AROUND THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 40.00 FEET, AN ARC LENGTH OF 58.24 FEET, THROUGH A CENTRAL ANGLE OF 83°25'20" AND WHOSE LONG CHORD BEARS N.14°58'02"E., A DISTANCE OF 53.23 FEET TO A 1/2" IRON ROD SET CAP 23259 FOR THE POINT OF TANGENCY;

THENCE ALONG THE SAID RIGHT-OF-WAY, N.56°40'32"E., 90.11 FEET TO A 5/8" IRON ROD FOUND WITH CAP 11184 FOR A CORNER OF THIS TRACT;

THENCE ALONG THE SAID RIGHT-OF-WAY, AROUND THE ARC OF A CURVE TO THE LEFT HAVING A RADIUS OF 628.00 FEET, AN ARC LENGTH OF 208.05 FEET, THROUGH A CENTRAL ANGLE OF 18°58'55" AND WHOSE LONG CHORD BEARS N.47°11'36"E., A DISTANCE OF 207.10 FEET TO A 5/8" IRON ROD FOUND WITH CAP 11184 FOR A THE NORTHEAST CORNER OF THIS TRACT;

THENCE LEAVING THE SAID RIGHT-OF-WAY, S.49°06'04"E., 161.34 FEET TO THE TRUE POINT OF BEGINNING, CONTAINING 1.57 ACRES OF LAND, MORE OR LESS.

SOILS

THE ON-SITE SOILS INCLUDE BLUEPOINT-KOKAN ASSOCIATION (BKD) PER THE NATIONAL RESOURCES CONSERVATION SERVICE (NRCS) WEB SOIL SURVEY. BKD IS RATED HYDROLOGIC GROUP A. THE INFILTRATION RATE IS 5 MINUTES PER INCH, ACCORDING TO THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY TERRACON CONSULTANTS, INC., DATED APRIL 21, 2021, PROJECT NUMBER 661215073.

PROJECT DESCRIPTION

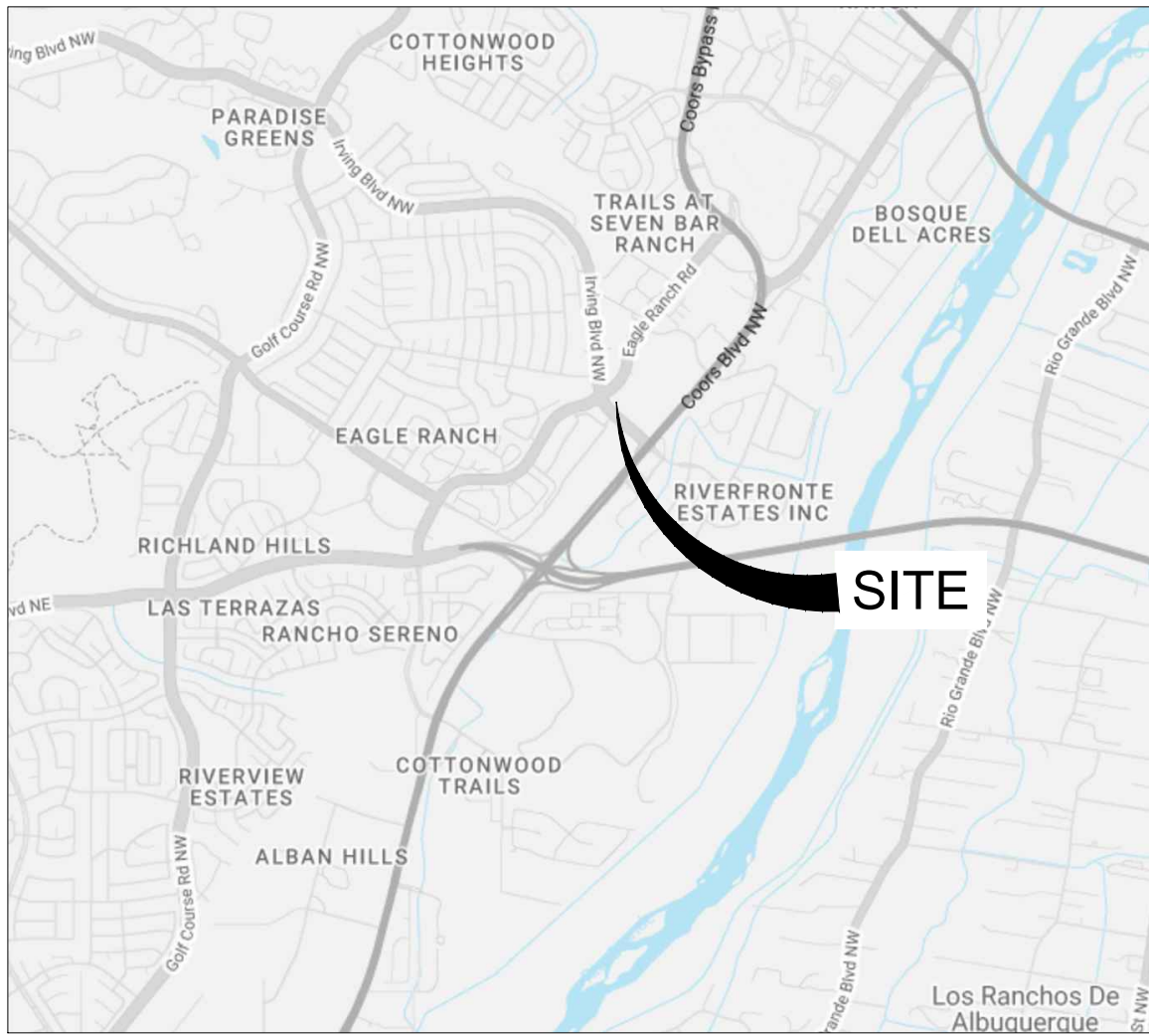
THE 1.57-ACRE SITE WILL CONSIST OF A CIRCLE K CONVENIENCE STORE, GAS PUMPS, PAVED DRIVE AISLES, AND PAVED PARKING.

GENERAL COVER SHEET NOTES

- TOPOGRAPHIC BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, SITE TOPOGRAPHY WITH SPOT ELEVATIONS, OUTSTANDING PHYSICAL FEATURES AND EXISTING STRUCTURE LOCATIONS WAS PROVIDED BY THE FOLLOWING COMPANY, AS A CONTRACTOR TO THE SELLER/OWNER:
TOPOGRAPHY/BOUNDARY:
PRECISION LAND SURVEYORS
4419 KINGSTON ROAD
LAS CRUCES, NM 88012
575-640-0474
- MATRIX DESIGN GROUP AND ITS ASSOCIATES WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS OR OMISSIONS RESULTING FROM SURVEY INACCURACIES.
- ALL PHASES OF SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE OWNER / DEVELOPER SITE WORK SPECIFICATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, UNDERGROUND STORAGE TANKS, PAVING AND ANY OTHER EXISTING IMPROVEMENTS AS SHOWN ON DEMOLITIONS PLANS. REFER SITE WORK SPECIFICATIONS.
- CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIAL RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
- THE GENERAL CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASE OF THIS PROJECT.
- WARRANTY/DISCLAIMER: THE DESIGN REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTION SAND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER THE ENGINEER NOR ITS PERSONNEL CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THE ENGINEER INSPECTS AND CONTROLS THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.
- SAFETY NOTICE TO CONTRACTOR: IN ACCORDANCE WITH THE GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION
- WETLANDS NOTE: ANY DEVELOPMENT, EXCAVATION, CONSTRUCTION, OR FILLING IN A DESIGNATED WETLAND IS SUBJECT TO LOCAL, STATE AND FEDERAL APPROVALS. THE CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS AND/OR RESTRICTIONS AND ANY VIOLATION WILL BE SUBJECT TO FEDERAL PENALTY. THE CONTRACTOR SHALL HOLD THE OWNER/DEVELOPER, THE ENGINEER AND THE LOCAL GOVERNING AGENCIES HARMLESS AGAINST SUCH VIOLATION.
- RESIDENT ENGINEERS SERVICES: UPON WRITTEN REQUEST, RESIDENT ENGINEERING SERVICES SHALL BE PROVIDED BY THE ENGINEERS (ON A TIME AND FREQUENCY BASIS) ACCEPTABLE TO THE CITY ENGINEER FOR IMPROVEMENTS TO PUBLIC WATER MAINS, PUBLIC SEWER, AND CITY STREETS. AT THE COMPLETION OF CONSTRUCTION, THE ENGINEER SHALL CERTIFY THE CONSTRUCTION TO BE IN COMPLIANCE WITH THE PLANS AND SPECIFICATIONS, THIS WORK WILL BE AT THE OWNER/DEVELOPER'S DIRECT EXPENSE AND SHALL BE COORDINATED WITH MATRIX DESIGN GROUP. IT WILL BE THE CONSTRUCTION CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE RESIDENT ENGINEER OF ANY PRE-CONSTRUCTION / CONSTRUCTION CONFERENCES AND ANY PUBLIC CONSTRUCTION 24 HOURS PRIOR TO SAID ACTION.
- PRIOR TO CONSTRUCTION WITHIN ANY EXISTING PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE AUTHORITY HAVING JURISDICTION.
- ALL CONSTRUCTION IN STATE HIGHWAY DEPARTMENT RIGHT-OF-WAY SHALL BE COORDINATED WITH THE HIGHWAY DEPARTMENT RESIDENT ENGINEER.
- CALCULATIONS AND QUANTITIES SHOWN ON THE PLANS ARE FOR ENGINEERS ESTIMATES ONLY, FOR THE SOLE PURPOSES OF DETERMINING PLAN CHECK AND PERMIT FEES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING HIS / HER OWN QUANTITIES FOR BIDDING AND CONSTRUCTING.
- SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS, AND PRECISE BUILDING DIMENSIONS.

INDEX OF SHEETS

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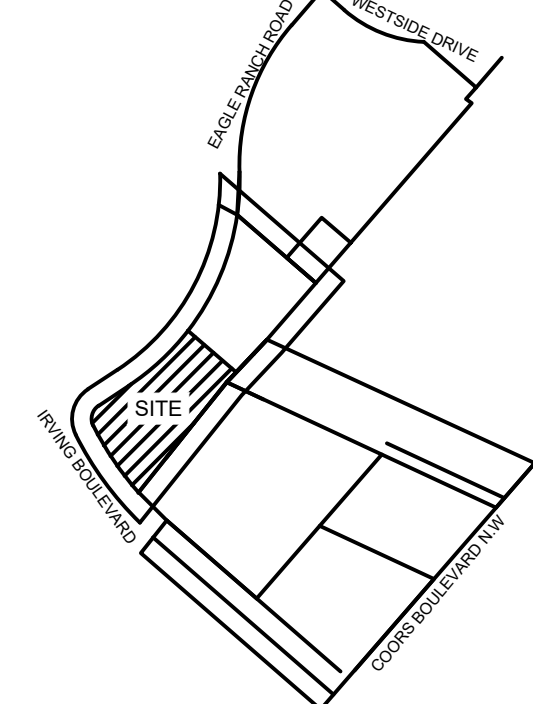


VICINITY MAP
N.T.S.

SEAL

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.

VICINITY MAP: 1"=500'



PROJECT:

CIRCLE K STORES INC.

CONCEPTUAL GRADING & DRAINAGE PLAN

9620 EAGLE RANCH ROAD NW
ALBUQUERQUE, NM 87114

REVISION HISTORY:

NO.	DATE	DESCRIPTION	BY

DRAWING INFORMATION:

PROJECT NO: 21.1207.001

DRAWN BY: RPD

CHECKED BY: NMS

SHEET TITLE:

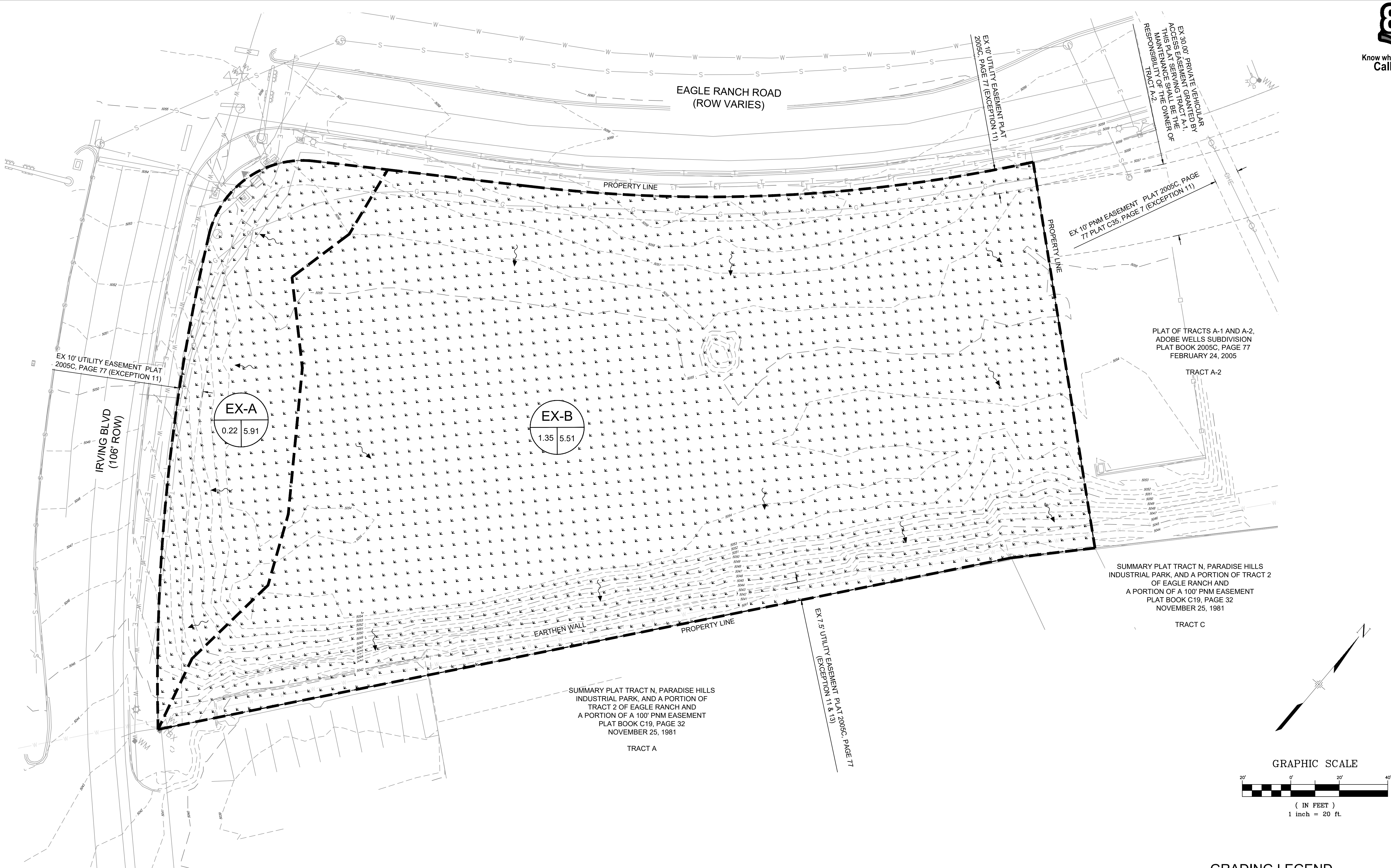
TITLE SHEET

TS01

SHEET 1 OF 3

DATE: AUGUST 2022

FILE LOCATION: S:\CIRCLE K\IRVING & EAGLE RANCH\500 CAD\504 PLANS\CONCEPTUAL GRADING AND DRAINAGE\E\ANGR01.DWG



EXISTING CONDITIONS NARRATIVE

THE EXISTING SITE IS PREDOMINATELY UNDISTURBED SANDY SOIL, MODERATELY VEGETATED WITH VARIOUS SHRUBS AND GRASSES. GENERAL EXISTING TOPOGRAPHY OF THE SITE, AND WITHIN 100 FEET OF THE PROPERTY LINE, SLOPES TO THE SOUTHEAST AT ABOUT 5-8%. AN EXISTING EARTHEN WALL RUNS NEAR AND PARALLEL TO THE SOUTHEAST PROPERTY LINE.

THE MAJORITY OF THE SITE (BASIN EX-B) DRAINS TO THE SOUTHEAST PROPERTY LINE AND ONTO THE ADJACENT PROPERTY. THE REMAINDER OF THE SITE (BASIN EX-A) DRAINS TO IRVING BOULEVARD AND IS ROUTED TO THE SOUTHEAST VIA EXISTING CURB AND GUTTER.

PROPOSED CONDITIONS RUNOFF SUMMARY (RATIONAL METHOD)										
Basin ID	Area [ac] (Land Treatment)			C Value			Tc [min]	100-Year Event		Notes
	IMPERVIOUS (D)	Pervious (C)	Total	Impervious	Pervious	Weighted		Intensity [in/hr]	Runoff [cfs]	
EX-A	0.00	0.22	0.22	0.9	0.63	0.63	5	6.46	0.91	Flows overland to Irving Blvd curb and gutter.
EX-B	0.00	1.35	1.35	0.9	0.63	0.63	5	6.46	5.51	Flows overland to southern property line.
Total	0.00	1.58	1.58	0.90	0.63	0.63	5	6.46	6.41	

GRADING LEGEND

- EXISTING CONTOURS
- PERVIOUS AREA
- DRAINAGE BASIN BOUNDARY
- FLOW DIRECTION

BASIN ID
BASIN AREA [AC]
100-YR RUNOFF [CFS]



Matrix
Excellence by Design
2435 RESEARCH PARKWAY, SUITE 300
COLORADO SPRINGS, CO 80920
PHONE: (719) 575-0100
FAX: (719) 575-0208

LAND DEVELOPMENT
CONSULTANTS, LLC
950 S. CHERRY STREET, SUITE 512
DENVER, CO 80246

OWNER/DEVELOPER:



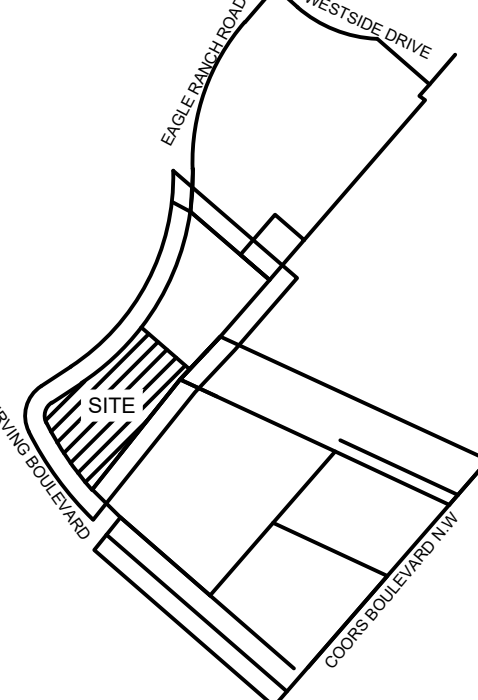
ROCKY MOUNTAINS DIVISION
5500 S. QUEBEC STREET, SUITE 100
GREENWOOD VILLAGE, CO 80111

SEAL



PRELIMINARY - NOT FOR CONSTRUCTION
FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.

VICINITY MAP: 1"=500'



PROJECT:

CIRCLE K STORES INC.

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ALBUQUERQUE, NM 87114

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NO.	DATE	DESCRIPTION	BY

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CHECKED BY: NMS

SHEET TITLE:

EXISTING
CONDITIONS

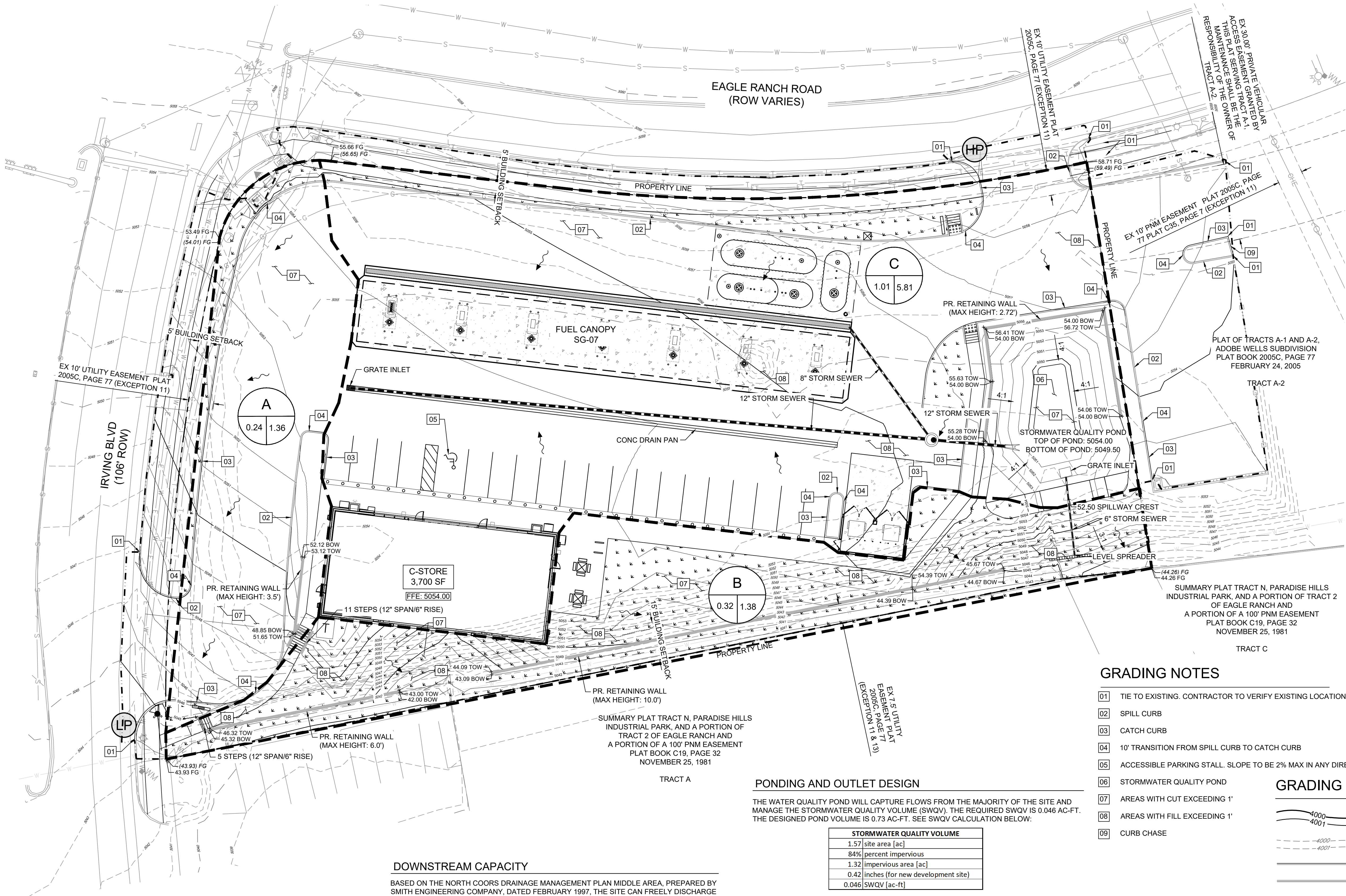
GR01

SHEET 2 OF 3

DATE:

AUGUST 2022

FILE LOCATION: S:\CIRCLE K\IRVING & EAGLE RANCH\500 CAD\504 PLAN SETS\CONCEPTUAL GRADING AND DRAINAGE PLAN\GR02.DWG



PROPOSED CONDITIONS NARRATIVE

THE PROPOSED SITE WILL TYPICALLY DRAIN FROM NORTHWEST TO SOUTHEAST. THE MAJORITY OF SITE RUNOFF (FROM BASIN C) WILL BE ROUTED, VIA CONCRETE PANS AND STORM SEWER, TO THE PROPOSED WATER QUALITY POND IN THE NORTHEAST PORTION OF THE SITE.

RUNOFF FROM BASIN A (Q100 = 1.36 CFS) WILL FLOW SOUTH/SOUTHEAST TO IRVING BOULEVARD. THE ANTICIPATED 100-YEAR FLOW IS SIGNIFICANTLY LESS THAN THE ALLOWABLE DISCHARGE (6.8 CFS), THEREFORE, NO DOWNSTREAM IMPACTS ARE ANTICIPATED.

RUNOFF FROM BASIN B (Q100 = 1.38 CFS) WILL FLOW SOUTHEAST TO THE SOUTHEASTERN PROPERTY LINE, WHERE IT ENTERS THE ADJACENT PROPERTY. THE ANTICIPATED 100-YEAR FLOW IS SIGNIFICANTLY LESS THAN THE EXISTING RUNOFF (Q100 = 5.51 CFS) TO THE SOUTHEASTERN PROPERTY LINE, THEREFORE NO DOWNSTREAM IMPACTS ARE ANTICIPATED.

RUNOFF FROM BASIN C (Q100 = 5.81) IS ROUTED VIA CONCRETE PANS AND STORM SEWER TO THE WATER QUALITY POND LOCATED IN THE NORTHEAST PORTION OF THE SITE. THE POND IS DESIGNED TO INFILTRATE THE STORMWATER QUALITY VOLUME (SWQV), TAKING ADVANTAGE OF THE EXISTING SANDY SOILS FOUND ON-SITE. THE POND INCLUDES A GRATE INLET SET AT AN ELEVATION ABOVE THE SWQV WATER SURFACE ELEVATION. THE GRATE INLET WILL DISCHARGE, VIA A 6" STORM SEWER, TO THE SOUTHEASTERN PROPERTY LINE. A LEVEL-SPREADER WILL DISSIPATE THE FLOW FROM THE STORM SEWER IN ORDER TO MITIGATE THE EROSION EFFECT OF CONCENTRATED FLOWS. IN THE EVENT THAT THE POND OVERTOPS, THE STORMWATER WILL BE ROUTED VIA AN EMERGENCY SPILLWAY AND SOIL RIPRAP RUNDOWN TO THE SOUTHEASTERN PROPERTY LINE. THE ANTICIPATED 100-YEAR FLOW ROUTED THROUGH THE POND IS SIGNIFICANTLY LESS THAN THE EXISTING 100-YEAR RUNOFF THAT FLOWS ONTO THE SOUTHEASTERN PROPERTY LINE (Q100 = 5.51 CFS), THEREFORE, NO DOWNSTREAM IMPACTS ARE ANTICIPATED. NOTE THAT THE RUNOFF FROM BASINS B AND C ARE NOT COMBINED BECAUSE THE PEAK FLOWS FROM EACH BASIN WILL EXIT THE SITE AT DIFFERENT TIMES DUE TO THE TIME THE POND TAKES TO FILL UP TO THE LEVEL OF THE GRATE INLET.

DOWNSTREAM CAPACITY

BASED ON THE NORTH COORS DRAINAGE MANAGEMENT PLAN MIDDLE AREA, PREPARED BY SMITH ENGINEERING COMPANY, DATED FEBRUARY 1997, THE SITE CAN FREELY DISCHARGE 4.32 CFS/ACRE. AT 1.57 ACRES, THE ALLOWABLE SITE DISCHARGE IS 6.8 CFS. THE ANTICIPATED TOTAL DISCHARGE FROM THE SITE IS 3.94 CFS, SO NO DOWNSTREAM CAPACITY CONCERNS ARE ANTICIPATED BASED ON THE DEVELOPMENT OF THE SITE.

FURTHERMORE, AS SHOWN IN THE EXISTING CONDITIONS GRADING PLAN, MOST OF THE SITE RUNOFF (Q100 = 5.51 CFS) FLOWS ONTO THE ADJACENT SITE TO THE SOUTHEAST. BASED ON STREET VIEW AND SATELLITE IMAGERY, IT APPEARS THE ADJACENT PROPERTY CAN HANDLE THE OFFSITE FLOW WITHOUT EXPERIENCING PROPERTY DAMAGE. THE ANTICIPATED RUNOFF FROM THE SITE IS SIGNIFICANTLY LOWER, THEREFORE, NO DOWNSTREAM CAPACITY CONCERNS ARE ANTICIPATED BASED ON THE DEVELOPMENT OF THIS SITE.

PROPOSED CONDITIONS RUNOFF SUMMARY (RATIONAL METHOD)										
Basin ID	Area [ac] [Land Treatment]			C Value			Tc [min]	100-Year Event		Notes
	Impervious (D)	Pervious (C)	Total	Impervious	Pervious	Weighted		Intensity [in/hr]	Runoff [cfs]	
A	0.22	0.02	0.24	0.9	0.63	0.87	5	6.46	1.36	Flows routed via onsite curb and gutter to Irving Blvd. curb and gutter.
B	0.05	0.27	0.32	0.9	0.63	0.67	5	6.46	1.38	Flows overland to southern property line.
C	0.97	0.04	1.01	0.9	0.63	0.89	5	6.46	5.81	Flows routed via concrete pans and storm sewer to WQ infiltration pond.
Total	1.24	0.33	1.57	0.90	0.63	0.84	5	6.46	3.94	Flows routed through grate inlet in pond and 6" storm sewer discharges to southeastern property line through level spreader.

PONDING AND OUTLET DESIGN

THE WATER QUALITY POND WILL CAPTURE FLOWS FROM THE MAJORITY OF THE SITE AND MANAGE THE STORMWATER QUALITY VOLUME (SWQV). THE REQUIRED SWQV IS 0.046 AC-FT. THE DESIGNED POND VOLUME IS 0.73 AC-FT. SEE SWQV CALCULATION BELOW:

STORMWATER QUALITY VOLUME	
1.57 site area [ac]	
84% percent impervious	
1.32 impervious area [ac]	
0.42 inches (for new development site)	
0.046 SWQV [ac-ft]	

THE SWQV IS ANTICIPATED TO INFILTRATE THROUGH THE POND BOTTOM DUE TO THE SANDY SOILS. BASED ON THE INFILTRATION RATE (5 MINUTES PER INCH) DETERMINED IN THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY TERRACON CONSULTANTS, INC., DATED APRIL 21, 2021, THE SWQV DRAINS IN 2.31 HOURS. TO BE CONSERVATIVE, A DRAIN TIME OF 7 HOURS IS ASSUMED.

THE POND INCLUDES A GRATE INLET SET AT 4051.9, ABOVE THE MAXIMUM SWQV WATER SURFACE ELEVATION (4051.81). THE GRATE INLET ROUTES FLOWS, VIA A 6" STORM SEWER AND LEVEL SPREADER, TO THE SOUTHEASTERN PROPERTY LINE.

IN THE EVENT THAT THE POND OVERTOPS, THE FLOW WILL BE ROUTED VIA AN EMERGENCY SPILLWAY AND SOIL RIPRAP RUNDOWN TO THE SOUTHEASTERN PROPERTY LINE. THE SPILLWAY CREST ELEVATION IS SET AT 4052.5.

GRADING NOTES

- 01 TIE TO EXISTING. CONTRACTOR TO VERIFY EXISTING LOCATION & ELEVATION.
- 02 SPILL CURB
- 03 CATCH CURB
- 04 10' TRANSITION FROM SPILL CURB TO CATCH CURB
- 05 ACCESSIBLE PARKING STALL. SLOPE TO BE 2% MAX IN ANY DIRECTION IN THIS AREA
- 06 STORMWATER QUALITY POND
- 07 AREAS WITH CUT EXCEEDING 1'
- 08 AREAS WITH FILL EXCEEDING 1'
- 09 CURB CHASE

GRADING LEGEND

- PROPOSED CONTOURS
- EXISTING CONTOURS
- CONCRETE CATCH CURB
- CONCRETE SPILL CURB
- LIMITS OF GRADING
- PERVIOUS AREA
- DRAINAGE BASIN BOUNDARY
- FLOW DIRECTION
- PROPOSED SPOT ELEVATION:
- EXISTING SPOT ELEVATION:

BASIN ID
BASIN AREA [AC]
100-YR RUNOFF [CFS]



Know what's below.
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Excellence by Design

2435 RESEARCH PARKWAY, SUITE
300 COLORADO SPRINGS, CO 80920
PHONE: (719) 575-0100
FAX : (719) 575-0208



LAND DEVELOPMENT
CONSULTANTS, LLC

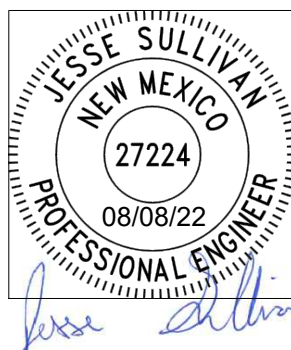
950 S. CHERRY STREET, SUITE 512
DENVER, CO 80246

OWNER/DEVELOPER:



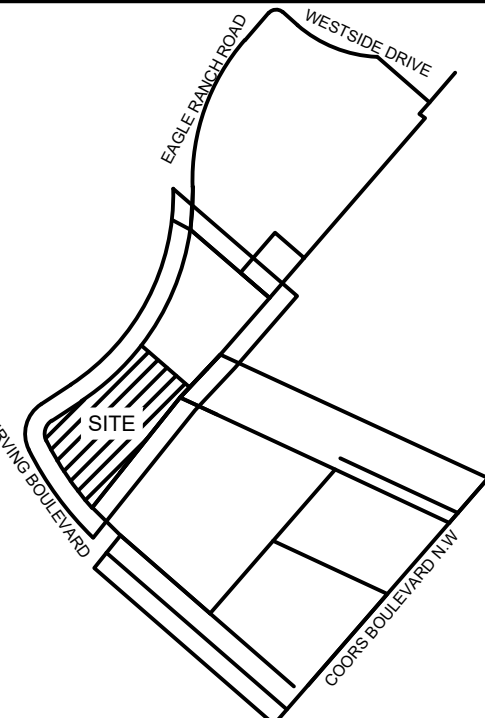
ROCKY MOUNTAINS DIVISION
5500 S QUEBEC STREET, SUITE 100
GREENWOOD VILLAGE, CO 80111

SEAL



PRELIMINARY - NOT FOR CONSTRUCTION
FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.

VICINITY MAP: 1"=500'



PROJECT:

CIRCLE K STORES INC.

CONCEPTUAL GRADING &
DRAINAGE PLAN

9620 EAGLE RANCH ROAD NW
ALBUQUERQUE, NM 87114

REVISION HISTORY:

NO.	DATE	DESCRIPTION	BY

DRAWING INFORMATION:

PROJECT NO: 21.1207.001

DRAWN BY: RPD

CHECKED BY: NMS

SHEET TITLE:

PROPOSED
CONDITIONS

GR02

SHEET 3 OF 3

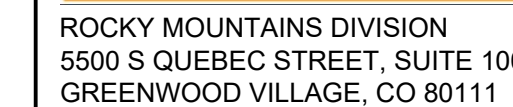
DATE:

AUGUST 2022



950 S. CHERRY STREET, SUITE 512
DENVER, CO 80246

OWNER/DEVELOPER:



SEAL

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.

VICINITY MAP: NTS



PROJECT:

CIRCLE K STORES, INC.

IRVING & EAGLE RANCH
ALBUQUERQUE, NM

REVISION HISTORY:

NO.	DATE	DESCRIPTION

DRAWING INFORMATION:

PROJECT NO: 21.1207.001

DRAWN BY: RPD

CHECKED BY: NMS

RBD

SHEET TITLE:

PRELIMINARY
GRADING
EXHIBIT

SHEET 1 OF 1

CITY FILE NO.:



GRAPHIC SCALE

