CITY OF ALBUQUERQUE

April 6, 2018

Fred Arfman, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. N.E
Albuquerque, NM 87108

RE: **Global Storage- Coors**
3421 Coors Blvd NW
Grading and Drainage Plan
Engineer's Stamp Date 03/2018
Hydrology File: G11D071

Dear Mr. Arfman:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Based on the information provided in the submittal received on 3/28/18 the above-referenced submittal cannot be approved until the following are corrected:

Prior to Site Plan for Building Permit:

1. This site discharges to Coors Blvd, an NMDOT facility. Written concurrence must be obtained from NMDOT D3 Drainage that this project can proceed. Please contact Tim Trujillo P.E (TimothyR.Trujillo@state.nm.us).

2. Add note on the plan that "No work shall be performed in the public ROW without an approved Work Order or Excavation Permit."

3. Provide written permission from the property owners to the north and south for the work on their properties to build the new driveway entrances onto this property. If there will be cross-lot drainage occurring at these new access points, that permission should be included as well. Since an access easement will likely be required, the drainage language can likely just be added to that.

4. Provide additional spot elevations along the property line in order to assess the need for cross-lot drainage easements.

5. There appear to be a few areas where impervious areas are not being retained on-site, such as at the driveway entrances and the dumpster access. Please clarify these basins. If unable to capture and retain on-site, quantify the first flush bypass volume and state on plans. Payment of fee in-lieu will then be required at building permit.

Orig: Drainage file

CITY OF ALBUQUERQUE

6. Please clarify areas of impervious vs. pervious surfacing. For instance, Basin 1 seems to be nearly all asphalt and concrete but is claimed as only 75% impervious. Provide a larger basin delineation map showing impervious vs. pervious areas and include a scale.

7. Along Atrisco, provide curb openings and size the retention areas to be able to pond the portions of Atrisco that drain to them. Since this will all occur within the ROW, a work order, or excavation permit at minimum, will be needed.

8. Either a recorded SIA with financial guarantee or close-out of the public work order is required prior to final sign-off of the Site Plan.

Prior to Building Permit:

9. A Drainage Covenant is required for the stormwater quality ponds. The original notarized form, exhibit A (legible on 8.5x11 paper), and recording fee ($25, payable to City of Albuquerque) must be turned into DRC (4th, Plaza del Sol) for routing. Please contact Charlotte LaBadie (clabadie@cabq.gov, 924-3996) or Madeline Carruthers (mtafoya@cabq.gov, 924-3997) regarding the routing and recording process for covenants.

10. This project requires an ESC Plan, submitted to the Stormwater Quality Engineer (Curtis Cherne PE, ccherne@cabq.gov or 924-3420).

11. Payment of the Fee in Lieu for the first flush bypass must be made.

12. Additional comments may be provided at Building Permit, based on the outcome of the above remarks and level of detail shown on plans.

Prior to Certificate of Occupancy:

13. The Drainage Covenant must be recorded with Bernalillo County and a copy included with the drainage certification.

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

Orig: Drainage file

PO Box 1293
Albuquerque
NM 87103
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City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: Global Storage - Coors Building Permit #: _____ City Drainage #: G11

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

Legal Description: Tract A-36-A, Town of Atrisco Grant, Northeast Unit

City Address: 3421 Coors Blvd. NW - Albuquerque, NM 87120

Engineering Firm: Isaacson & Arfman, PA Contact: Fred C. Arfman / Bryan J. Bobrick

Address: 128 Monroe Street NE - Albuquerque, NM 87108

Phone#: (505) 268-8828 Fax#: _____ E-mail: freda@iacivil.com
bryanb@iacivil.com

Owner: _____ Contact: _____

Address: _____

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

Architect: Armando Lopez Architecture Contact: _____

Address: 221 N Main Street, Studio E - Las Cruces, NM 88001

Phone#: (575) 652-5540 Fax#: _____ E-mail: armando@alopezarc.com

Other Contact: _____ Contact: _____

Address: _____

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

Check all that Apply:

DEPARTMENT:

X HYDROLOGY/ DRAINAGE

_____ TRAFFIC/ TRANSPORTATION

_____ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

_____ ENGINEER/ ARCHITECT CERTIFICATION

X CONCEPTUAL G & D PLAN

_____ GRADING PLAN

_____ DRAINAGE MASTER PLAN

_____ DRAINAGE REPORT

_____ CLOMR/LOMR

_____ TRAFFIC CIRCULATION LAYOUT (TCL)

_____ TRAFFIC IMPACT STUDY (TIS)

_____ EROSION & SEDIMENT CONTROL PLAN (ESC)

_____ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: _____ Yes X No

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

_____ BUILDING PERMIT APPROVAL

_____ CERTIFICATE OF OCCUPANCY

_____ PRELIMINARY PLAT APPROVAL

_____ SITE PLAN FOR SUB'D APPROVAL

X 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

_____ PRE-DESIGN MEETING

_____ OTHER (SPECIFY) _____

DATE SUBMITTED: March 28, 2018 By: Fred C. Arfman

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___

PROJECT DATA

PROPERTY: THE SITE IS AN UNDEVELOPED PROPERTY LOCATED WITHIN C.O.A. VICINITY MAP G–11. THE SITE IS BOUND TO THE EAST BY COORS BLVD, TO THE WEST BY ATRISCO DR., TO THE NORTH BY A STORAGE FACILITY COMPLEX AND TO THE SOUTH BY DEVELOPED COMMERCIAL PROPERTY.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE TWO COMMERCIAL BUILDINGS WITH ASSOCIATED ASPHALT PAVED ACCESS, PARKING, AND LANDSCAPING.

LEGAL: TRACT A–36–A TOWN OF ATRISCO GRANT NORTHEAST ADDITION, ALBUQUERQUE, NM

SITE AREA: 4.04 ACRES

BENCHMARK: ACS BRASS TABLET STAMPED "8–G11", ELEVATION = 5116.009 FEET (NAD 1983)

OFF–SITE FLOW: WEST PROPERTY R.O.W. HISTORICALLY DRAINS INTO SITE. A WATER BLOCK WILL BE PROVIDED TO CONTAIN FLOWS WITHIN ATRISCO RD. THE UNDEVELOPED R.O.W. PORTION BETWEEN THE STREET AND PROPERTY LINE WILL BE GRADED TO SELF–POND.

FLOOD HAZARD: PER BERNALILLO COUNTY FIRM MAP #35001C0327J, THE SITE IS LOCATED WITHIN FLOODZONE 'X' DESIGNATED AS AREAS DETERMINED TO BE OUTSIDE 500–YEAR FLOODPLAIN.

DRAINAGE PLAN CONCEPT: THE DEVELOPED PROPERTY IS DIVIDED INTO TWO DRAINAGE BASINS. THE WEST RV STORAGE AREA (BASIN 1 = 1.9 ACRES) WILL DRAIN TO THE MIDPOINT FIRST FLUSH RETENTION POND. FLOW IN EXCESS OF POND CAPACITY WILL DISCHARGE TO THE EAST PAVEMENT AND DRAIN TO COORS BLVD. DISCHARGE FROM THE TWO COMMERCIAL BUILDINGS AND THE EAST PARKING AREA (BASIN 2 = 2.1 ACRES) WILL BE DIRECTED TO FIRST FLUSH PONDING ALONG COORS BLVD. EXCESS FLOW WILL FREE DISCHARGE TO THE COORS R.O.W. TO ENTER THE PUBLIC STORM DRAIN SYSTEM AT THE EXISTING DOMED INLET IN THE R.O.W. THE INCREASE IN DISCHARGE DUE TO DEVELOPMENT IS 4.3 CFS.

ENGINEER: FRED C. ARFMAN: NMPE 7322
ISAACSON & ARFMAN, PA
128 MONROE NE 87108
505–268–8828

SURVEYOR: WILL PLOTNER JR: NMPS NO. 14271
CARTESIAN SURVEYS, INC
P.O. BOX 44414 RIO RANCHO, NM 87174
505–896–3050

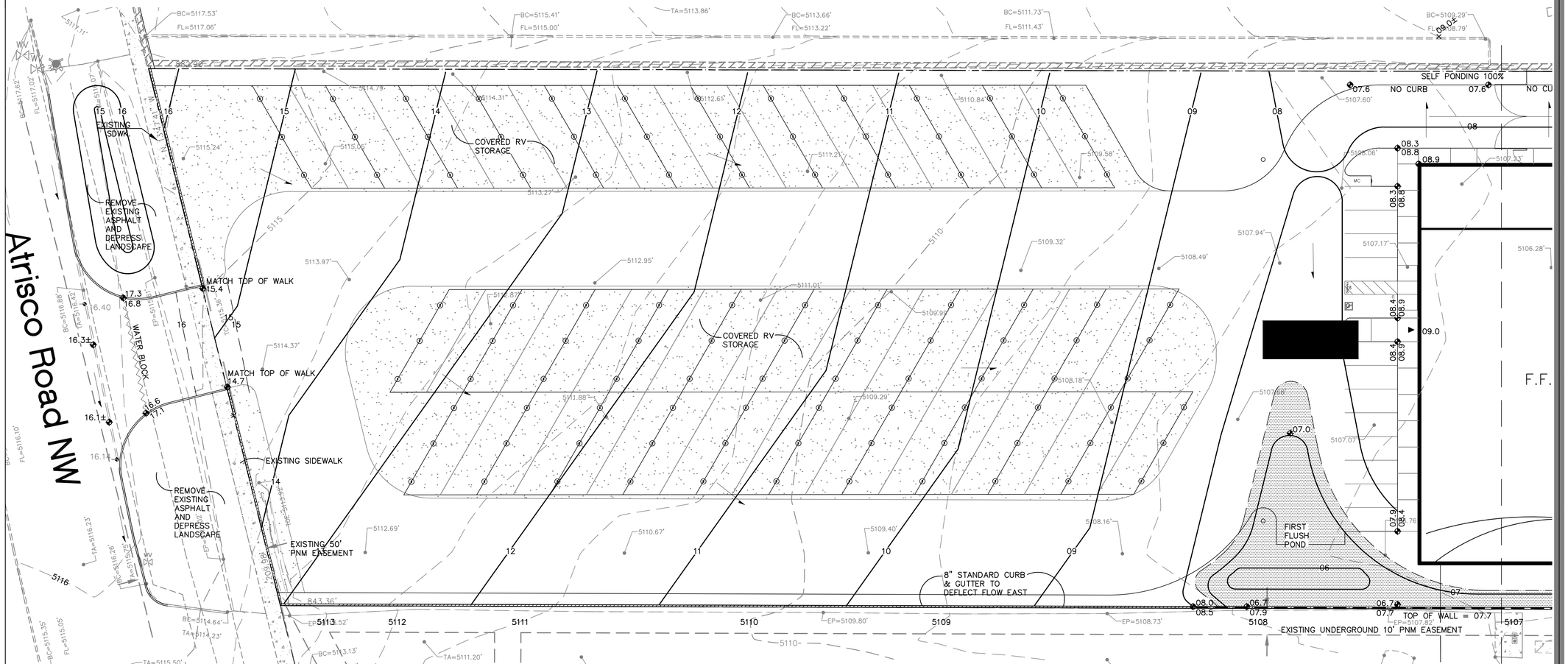
VICINITY MAP

LEGEND

5105.65'	EXISTING SPOT ELEVATION
–5110–	EXISTING CONTOUR
12	PROPOSED CONTOUR (1' INCREMENT)
10	PROPOSED CONTOUR (0.5' INCREMENT)
08.9	PROPOSED SPOT ELEVATION
	FLOW ARROW
	PROPOSED FIRST FLUSH RETENTION POND

0 10 20 40 60

SCALE 1"=20'



AL : A
armando lopez architecture

221 N Main St Studio E
Las Cruces NM 88001

575. 652. 5540
armando@alopezarc.com

FRED C. ARFMAN 7322 NEW MEXICO PROFESSIONAL ENGINEER
CONCEPTUAL NOT FOR CONSTRUCTION MARCH 2018

CONSULTANTS

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque, New Mexico 87108
Ph. 505-268-8828 www.iacivil.com

PROJECT

GLOBAL STORAGE - COORS

3421 Coors Road NW
Albuquerque, New Mexico

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CONCEPTUAL GRADING & DRAINAGE PLAN 1 OF 2

NORTH

CG-101

FIRST FLUSH RETENTION

POND #1		
Contour	Area	Volume
5105.40	1040.7	
5104.00	301.55	940 CF
TOTAL VOL.		**940** CF

POND #2		
Contour	Area	Volume
5107.00	850	
5104.00	128	1467 CF
TOTAL VOL.		**1467** CF

POND #3		
Contour	Area	Volume
5107.20	3752	
5106.00	121	2324 CF
TOTAL VOL.		**2324** CF

ON-SITE DRAINAGE BASINS

BASIN NO. 1 — **DESCRIPTION** WEST-SIDE (RV STORAGE AREA)

Area of basin flows = 91619 SF = 2.1 Ac.

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above): Weighted E = 1.68 in.

Sub-basin Volume of Runoff (see formula above): V_{360} = 12828 CF

Sub-basin Peak Discharge Rate: (see formula above): Q_P = 8.2 cfs

LAND TREATMENT	
A =	0%
B =	14%
C =	11%
D =	75%
FIRST FLUSH VOL.	1947 CF

BASIN NO. 2 — **DESCRIPTION** EAST-SIDE

Area of basin flows = 84561 SF = 1.9 Ac.

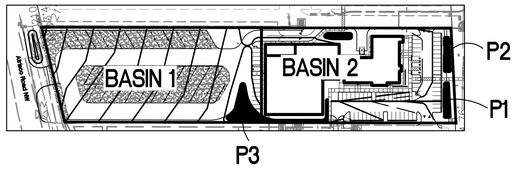
The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above): Weighted E = 1.73 in.

Sub-basin Volume of Runoff (see formula above): V_{360} = 12158 CF

Sub-basin Peak Discharge Rate: (see formula above): Q_P = 7.7 cfs

LAND TREATMENT	
A =	0%
B =	0%
C =	17%
D =	77%
FIRST FLUSH VOL.	1845 CF



100-YEAR 6-HOUR STORM CALCULATIONS

CALCULATIONS: GLOBAL SELF STORAGE :

Based on Drainage Design Criteria for City of Albuquerque Section 22.2, DPM, Vol 2, dated Jan., 1993

ON-SITE

AREA OF SITE: 176180 SF = 4.0

100-year, 6-hour

HISTORIC FLOWS:		Treatment SF	%
Area A	=	0	0%
Area B	=	0	0%
Area C	=	176180	100%
Area D	=	0	0%
Total Area	=	176180	100%

DEVELOPED FLOWS:		Treatment SF	%
Area A	=	0	0%
Area B	=	17618	10%
Area C	=	24665	14%
Area D	=	133897	76%
Total Area	=	176180	100%

EXCESS PRECIP: Precip. Zone 1

E_A = 0.44
E_B = 0.67
E_C = 0.99
E_D = 1.97

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

$$\text{Weighted } E = \frac{E_A A_A + E_B A_B + E_C A_C + E_D A_D}{A_A + A_B + A_C + A_D}$$

Historic E = 0.99 in.	Developed E = 1.70 in.

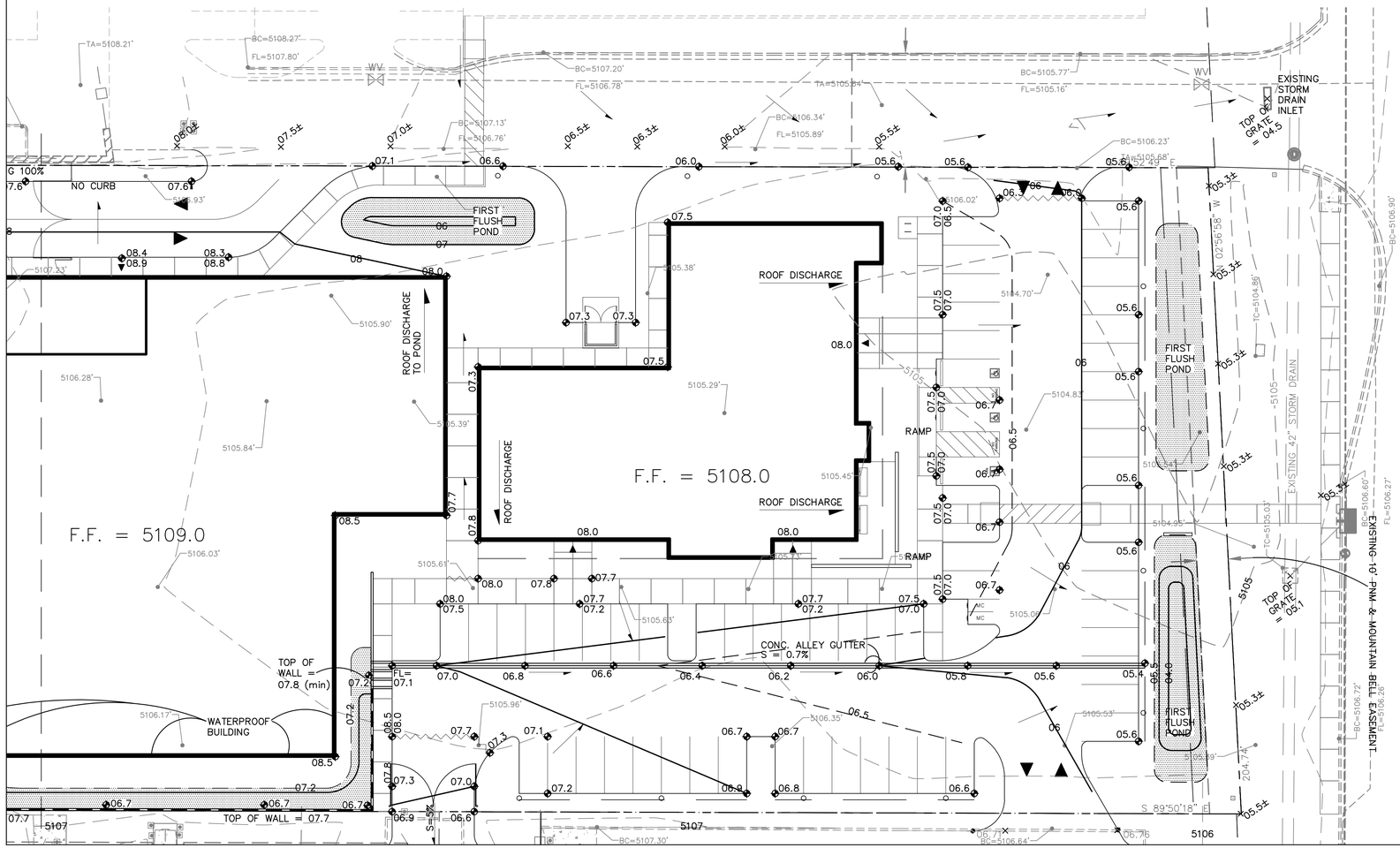
On-Site Volume of Runoff: V_{360} = E*A / 12

Historic V_{360} = 14535 CF	Developed V_{360} = 25000 CF

On-Site Peak Discharge Rate: $Q_p = Q_{pA}A_A + Q_{pB}A_B + Q_{pC}A_C + Q_{pD}A_D / 43{,}560$

For Precipitation Zone 1

Q_{pA} =	1.29	Q_{pC} =	2.87
Q_{pB} =	2.03	Q_{pD} =	4.37
Historic Q_p =	11.6 CFS	Developed Q_p =	15.9 CFS



Coors Boulevard NW

LEGEND

5105.65'	EXISTING SPOT ELEVATION
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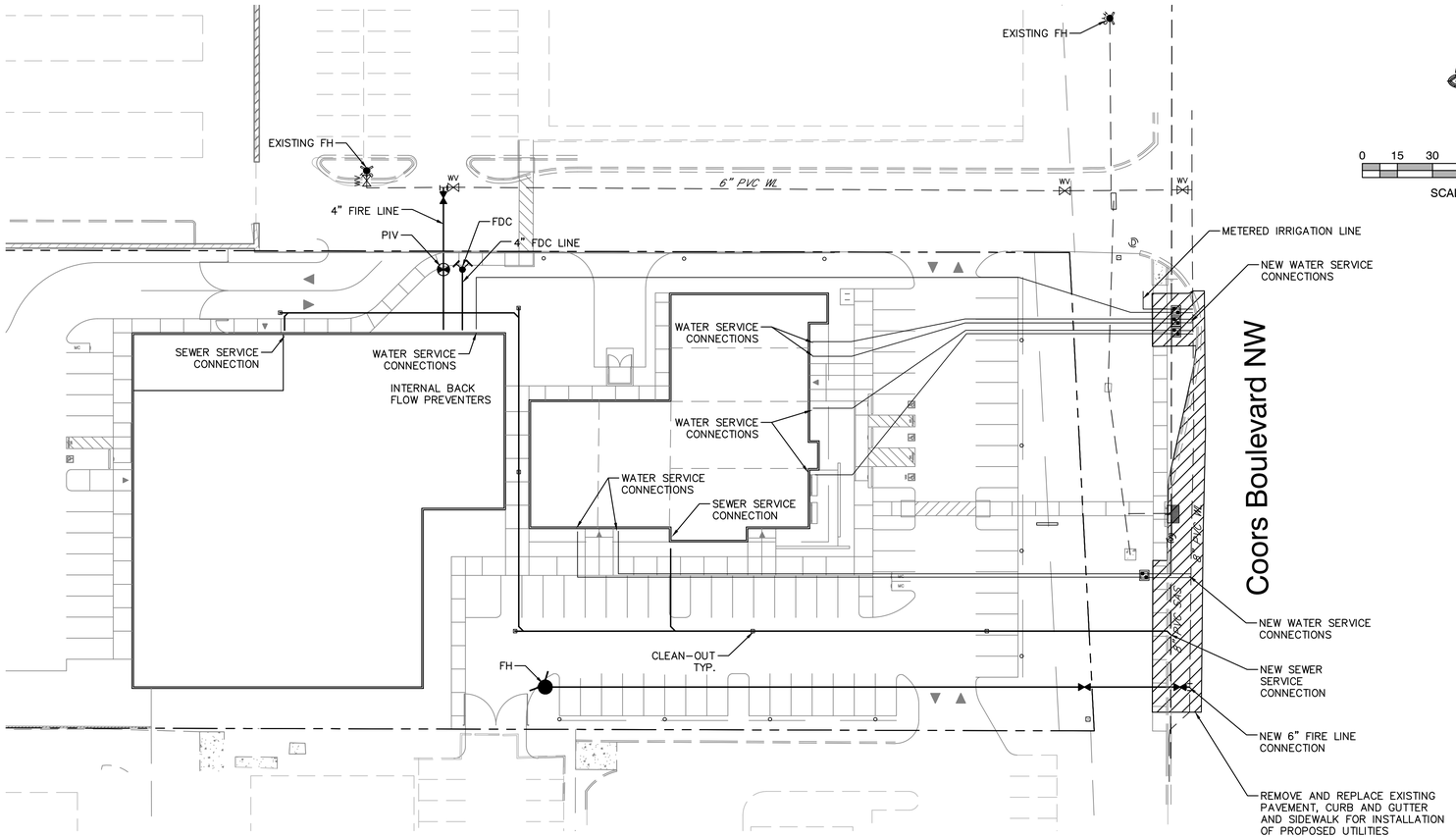
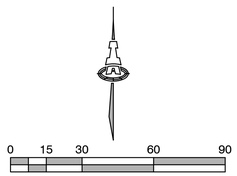
CONCEPTUAL GRADING & DRAINAGE PLAN 2 OF 2

CG-102





PRIVATE FIRE LINE CONNECTIONS TO PUBLIC WATERLINE TO BE CONSTRUCTED UNDER ABCWUA WORK ORDER

Know what's below. Call before you dig.

GENERAL NOTES

1. EXISTING UTILITY LINES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AND MAY BE INCOMPLETE OR OBSOLETE. SUCH LINES MAY OR MAY NOT EXIST WHERE SHOWN OR NOT SHOWN. ALL UTILITIES SHOULD BE FIELD VERIFIED AND LOCATED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES.
2. CONTRACTOR SHALL NOT USE VIBRATORY COMPACTION EQUIPMENT OR HEAVY VEHICLES OVER EXISTING UTILITIES.
3. SITE STORM DRAIN, ELECTRIC LINES & TRANSFORMERS AND GAS LINES ARE SHOWN FOR GENERAL INFORMATION ONLY TO PROVIDE AN OVERVIEW OF SITE UTILITIES AND POTENTIAL CONFLICTS. SEE MECHANICAL PLANS FOR GAS LINE SIZING. SEE CG-101 FOR STORM DRAIN DESIGN.
4. ALL WATER FITTINGS SHALL HAVE JOINT RESTRAINTS (LT). SEE RESTRAINED JOINT CRITERIA NOTES THIS SHEET. (LT) LENGTH SHOWN ON KEYED NOTES.
5. ALL ABOVE GROUND UTILITY EQUIPMENT AND FITTINGS SHALL BE PAINTED IN COLORS TO MATCH BUILDING COLORS.

UTILITY GENERAL NOTES

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE INSTALLATION OF ALL WORK RELATED TO PROPOSED UTILITIES SHOWN ON THIS PLAN INCLUDING: TRENCHING, BACKFILL, SUPPORTS, CLEANOUT PADS, SERVICE STOPS AND BOXES, SERVICE LINES, TESTING, CLEANING, AND STERILIZING. ANY WORK NOT ACCEPTED BY THE ARCHITECT OR ENGINEER DUE TO IMPROPER WORKMANSHIP OR LACK OF PROPER COORDINATION SHALL BE REMOVED AND CORRECTLY INSTALLED AT THE CONTRACTOR'S EXPENSE, AS DIRECTED.

B. MINIMUM COVER SHALL BE 36" FOR WATERLINES AND 48" FOR SANITARY SEWER, EXCEPT AT BUILDING CONNECTIONS.

C. UTILITY LINES SHALL BE INSTALLED AFTER COMPLETION OF THE SITE ROUGH GRADING.

D. UTILITY LINES SHALL BE INSTALLED PRIOR TO SURFACE IMPROVEMENTS SUCH AS PAVEMENT, SIDEWALKS, AND LANDSCAPING.

E. CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTIONS TO BUILDING PLUMBING AND ALL NECESSARY FITTINGS. FITTING COSTS SHALL BE INCIDENTAL. REFER TO THE MECHANICAL AND/OR PLUMBING PLANS FOR SERVICE CONNECTIONS.

F. DRY UTILITY LOCATIONS AND DESIGN ARE NOT A PART OF THIS PLAN. CONTRACTOR SHALL COORDINATE WITH THE LOCAL DRY UTILITY COMPANIES TO DETERMINE THE SIZE, DEPTH, LOCATION, FITTINGS AND REQUIRED APPURTENANCES FOR THE DRY UTILITY SERVICE LINES ON THE SITE. REFER TO MECHANICAL AND ELECTRICAL PLANS FOR SERVICE CONNECTIONS.

G. TRENCHING, BORING, AND JACKING SHALL BE CONSTRUCTED IN ACCORDANCE WITH COA SPEC. SECT. 700. ALL BACKFILL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY PER ASTM D-1557.

H. ALL WATER VALVE BOXES, MANHOLE RINGS & COVERS, AND OTHER SURFACE ITEMS FOR THE UTILITIES SHALL BE ADJUSTED TO FINISHED GRADE.

I. ALL CROSSINGS OF WATER AND SEWER LINES SHALL HAVE 12" MIN CLEARANCE. IF 12" CLEARANCE IS NOT POSSIBLE, BOTH PIPES SHALL BE ENCASED IN CONCRETE OR AS DIRECTED BY THE ENGINEER.

J. VALVES, METERS, SERVICE LINES, METER AND VALVE BOXES, TAPPING SLEEVES, HYDRANTS, AND OTHER WATER APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH COA SPEC. SECT. 800.

K. WATERLINES LESS THAN 4" DIAMETER SHALL BE COPPER TYPE K MEETING ASTM B 88 REQUIREMENTS. WATERLINES 4" IN DIAMETER OR LARGER SHALL BE PVC PIPE MEETING AWWA C900 DR-18 REQUIREMENTS.

L. ALL FITTINGS AND COUPLINGS FOR WATERLINES LESS THAN 4" IN DIAMETER ARE TO BE COPPER, SOLDER JOINT FITTINGS IN ACCORDANCE WITH ASME 16.18 OR ASME B16.22.

M. ALL FITTINGS AND COUPLINGS FOR WATERLINES 4" IN DIAMETER OR LARGER ARE TO BE MEGA LUG MECHANICAL JOINTS OR ENGINEER APPROVED EQUIVALENT.

N. JOINTS SHALL BE RESTRAINED BY MEGA LUG HARNESSES, OR ENGINEER APPROVED EQUIVALENT. JOINT RESTRAINTS SHALL BE INSTALLED AT DISTANCES FROM THE FITTINGS AS SHOWN ON THE JOINT RESTRAINT TABLE IN THESE PLANS.

O. BACKFLOW PREVENTERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

P. FIRE LINES SHALL USE PIPE MATERIALS LISTED AND APPROVED FOR FIRE SERVICE BY UNDERWRITERS LABORATORIES.

Q. FIRE DEPARTMENT CONNECTIONS SHALL MEET UL 405, NFPA 1963, AND LOCAL FIRE DEPARTMENT REQUIREMENTS.

R. ADJUST WATER AND FIRE LINES TO AVOID FOOTINGS, SEWER LINES, AND OTHER CONDUITS. INSTALL FITTINGS AS NEEDED.

S. SEWER MANHOLES, CLEANOUTS, SEWER SERVICE TAPS, AND OTHER SEWER APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH COA SPEC. SECT. 900 / APWA SPEC. SECT. 900 / LOCAL UTILITY COMPANY SPECIFICATIONS

T. SEWER SERVICE LINES SHALL BE INSTALLED AT A 2% MINIMUM SLOPE, UNLESS OTHERWISE SPECIFIED ON THE PLANS. THE PIPE SHALL DRAIN AT A CONSTANT SLOPE BETWEEN FITTINGS. THE PIPE SHALL DRAIN TOWARD THE SEWER MAIN AT ALL LOCATIONS.

U. ALL SANITARY SEWER LINE MATERIALS SHALL BE PVC SDR-35 PIPE.

AL : A
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CONCEPTUAL UTILITY PLAN

CU-101