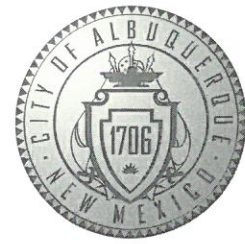


CITY OF ALBUQUERQUE



September 11, 2017

Cesar Segovia
Rogue Architects
513 Main St, Suite 300
Fort Worth, TX 76102

Robert Adams
Adams Engineering
8951 Cypress Waters Blvd, Suite 150
Dallas, TX 75019

RE: **McDonalds – Coors and Hanover**
1501 Coors Blvd NW
Grading Plan Stamp Date: 4/5/17
Drainage Plan Stamp Date (Revision 2): 8/23/17
Hydrology File: J11D037

Dear Mr. Segovia & Mr. Adams:

PO Box 1293

Based on the information provided in your submittal received 9/8/17, the Grading and Drainage Plan is re-approved for Building Permit, Grading Permit, and Paving Permit.

Albuquerque

Prior to Certificate of Occupancy (C.O), a Private Facility Drainage Covenant will be required for the pond areas.

NM 87103

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

www.cabq.gov

Sincerely,

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

****THIS PERMIT IS UNDER FASTRAX REVIEW****



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2016)

FASTRAX REVIEW PERMIT

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

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

Legal Description: _____

City Address: _____

Applicant: _____ Contact: _____

Address: _____

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

Other Contact: _____ Contact: _____

Address: _____

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

Check all that Apply:

DEPARTMENT:

☒ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION

TYPE OF SUBMITTAL:

☐ ENGINEER/ARCHITECT CERTIFICATION

☐ CONCEPTUAL G & D PLAN

☒ GRADING PLAN

☐ DRAINAGE MASTER PLAN

☐ DRAINAGE REPORT

☐ 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

☐ OTHER (SPECIFY) _____

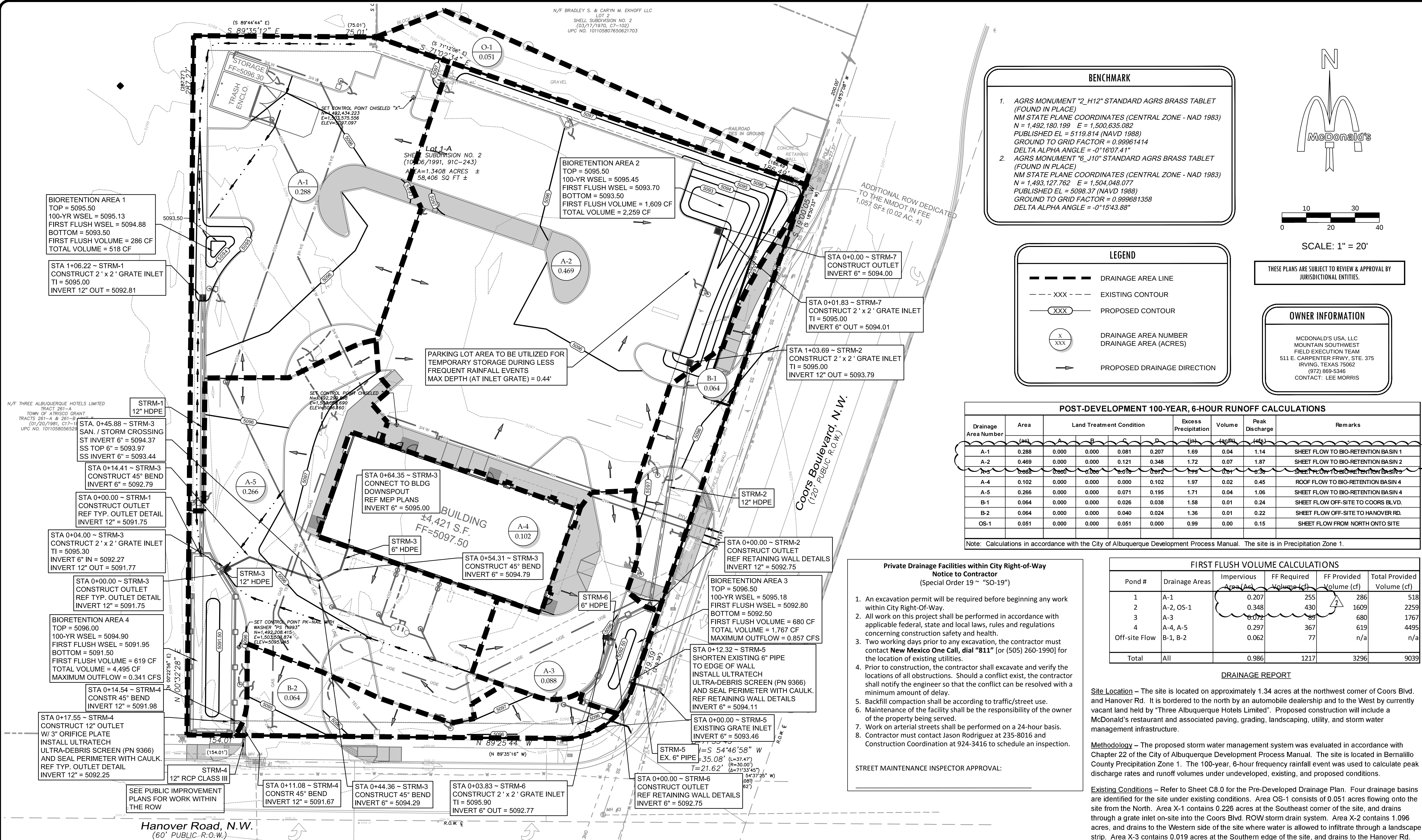
IS THIS A RESUBMITTAL?: ☐ Yes ☐ No

DATE SUBMITTED: _____ By: _____

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____



BENCHMARK

1. AGRS MONUMENT "2_H12" STANDARD AGRS BRASS TABLET (FOUND IN PLACE)
NM STATE PLANE COORDINATES (CENTRAL ZONE - NAD 1983)
N = 1,492,180.199 E = 1,500,635.082
PUBLISHED EL = 5119.814 (NAVD 1988)
GROUND TO GRID FACTOR = 0.99961414
DELTA ALPHA ANGLE = -0°16'07.41"

2. AGRS MONUMENT "6_J10" STANDARD AGRS BRASS TABLET (FOUND IN PLACE)
NM STATE PLANE COORDINATES (CENTRAL ZONE - NAD 1983)
N = 1,493,127.762 E = 1,504,048.077
PUBLISHED EL = 5098.37 (NAVD 1988)
GROUND TO GRID FACTOR = 0.999681358
DELTA ALPHA ANGLE = -0°15'43.88"

LEGEND

--- DRAINAGE AREA LINE
--- XXX --- EXISTING CONTOUR
--- XXX --- PROPOSED CONTOUR
X XXX DRAINAGE AREA NUMBER
DRAINAGE AREA (ACRES)
--- PROPOSED DRAINAGE DIRECTION

McDonald's

SCALE: 1" = 20'

THESE PLANS ARE SUBJECT TO REVIEW & APPROVAL BY JURISDICTIONAL ENTITIES.

OWNER INFORMATION

MCDONALD'S USA, LLC
MOUNTAIN SOUTHWEST
FIELD EXECUTION TEAM
511 E. CARPENTER FRWY, STE. 375
IRVING, TEXAS 75062
(817) 869-5346
CONTACT: LEE MORRIS

POST-DEVELOPMENT 100-YEAR, 6-HOUR RUNOFF CALCULATIONS												
Drainage Area Number	Area (ac)	Land Treatment Condition				Excess Precipitation (in)	Volume (cuft)	Peak Discharge (cfs)	Remarks			
A-1	0.288	0.000	0.000	0.081	0.207	1.69	0.04	1.14	SHEET FLOW TO BIO-RETENTION BASIN 1			
A-2	0.469	0.000	0.000	0.121	0.348	1.72	0.07	1.87	SHEET FLOW TO BIO-RETENTION BASIN 2			
A-5	0.068	0.000	0.000	0.016	0.012	1.19	0.01	0.36	SHEET FLOW TO BIO-RETENTION BASIN 3			
A-4	0.102	0.000	0.000	0.000	0.102	1.97	0.02	0.45	ROOF FLOW TO BIO-RETENTION BASIN 4			
A-5	0.266	0.000	0.000	0.071	0.195	1.71	0.04	1.06	SHEET FLOW TO BIO-RETENTION BASIN 4			
B-1	0.064	0.000	0.000	0.026	0.038	1.58	0.01	0.24	SHEET FLOW OFF-SITE TO COORS BLVD.			
B-2	0.064	0.000	0.000	0.040	0.024	1.36	0.01	0.22	SHEET FLOW OFF-SITE TO HANOVER RD.			
OS-1	0.051	0.000	0.000	0.051	0.000	0.99	0.00	0.15	SHEET FLOW FROM NORTH ONTO SITE			

Note: Calculations in accordance with the City of Albuquerque Development Process Manual. The site is in Precipitation Zone 1.

FIRST FLUSH VOLUME CALCULATIONS					
Pond #	Drainage Areas	Impervious Area (ac)	FF Required Volume (cf)	FF Provided Volume (cf)	Total Provided Volume (cf)
1	A-1	0.207	255	286	518
2	A-2, OS-1	0.348	430	1609	2259
3	A-3	0.072	89	680	1767
4	A-4, A-5	0.297	367	619	4495
Off-site Flow	B-1, B-2	0.062	77	n/a	n/a
Total	All	0.986	1217	3296	9039

DRAINAGE REPORT

Site Location – The site is located on approximately 1.34 acres at the northwest corner of Coors Blvd. and Hanover Rd. It is bordered to the north by an automobile dealership and to the West by currently vacant land held by "Three Albuquerque Hotels Limited". Proposed construction will include a McDonald's restaurant and associated paving, grading, landscaping, utility, and storm water management infrastructure.

Methodology – The proposed storm water management system was evaluated in accordance with Chapter 22 of the City of Albuquerque Development Process Manual. The site is located in Bernalillo County Precipitation Zone 1. The 100-year, 6-hour frequency rainfall event was used to calculate peak discharge rates and runoff volumes under undeveloped, existing, and proposed conditions.

Existing Conditions – Refer to Sheet C8.0 for the Pre-Developed Drainage Plan. Four drainage basins are identified for the site under existing conditions. Area OS-1 consists of 0.051 acres flowing onto the site from the North. Area X-1 contains 0.226 acres at the Southeast corner of the site, and drains through a grate inlet on-site into the Coors Blvd. ROW storm drain system. Area X-2 contains 1.096 acres, and drains to the Western side of the site where water is allowed to infiltrate through a landscape strip. Area X-3 contains 0.019 acres at the Southern edge of the site, and drains to the Hanover Rd. ROW. To accommodate new design standards, the original, undeveloped state of the on- and off-site 1.392 acre site has been analyzed as sheet flow from the North to the South and West, ultimately draining into Hanover Rd. ROW. Peak discharge rate and runoff volume calculations for existing and undeveloped conditions are provided on Sheet C8.0.

Proposed Conditions – Refer to Sheet C8.1 for the Post-Developed Drainage Plan. Nine drainage basins are identified for the site under proposed conditions. Area OS-1 (0.051 acres) flows onto the site from the North into area A-2 (0.469 acres) which both drain through an inlet grate into Bio-Retention Basin 2. Bio-Retention Basin 2 captures the first flush for these areas, then overflows to Bio-Retention Basin 3. Area A-1 (0.288 acres) drains into Bio-Retention Basin 1, from a combination of sheet and channel (swale) flow, which captures the first flush for the area, then overflows to Bio-Retention Basin 4. Area A-3 (0.088 acres) sheet flows to Bio-Retention Basin 3 through a grate inlet where the first flush for A-3 is captured. Roof Area A-4 (0.102) drains through a downspout along with Area A-5 (0.266 acres) through a grate inlet into Bio-Retention Basin 4 where the first flush is retained. The outflow pipes for Bio-Retention Basins 3 and 4 have been sized to limit flow to undeveloped conditions during a 100-year storm event (Undeveloped=1.80CFS, Proposed=1.66CFS). Total bio-retention (0.34", "first flush") is 3.296 cubic feet with an overall total storage of 9,039 cubic feet to accommodate limited flow rates out of Bio-Retention Basins 3 and 4.

Conclusions – The overall amount of impervious area at this site will be similar under the proposed conditions as the existing site; however, rather than a large portion of flow draining directly into the storm system, all areas meet the required bio-retention volume. Additionally, the proposed site will reduce the detention/infiltration burden on the adjacent site to the West. Under more frequent storm events, nearly all flow is retained and infiltrated on-site while even the 100-year storm flows off the site are kept below the undeveloped volumetric flow rate. As a result of the improvements, quality and quantity of flow should be improved when compared to the existing site.

Private Drainage Facilities within City Right-of-Way
Notice to Contractor
(Special Order 19 "50-19")

- An excavation permit will be required before beginning any work within City Right-Of-Way.
- All work on this project shall be performed in accordance with applicable federal, state and local laws, rules and regulations concerning construction safety and health.
- Two working days prior to any excavation, the contractor must contact **New Mexico One Call, dial "811"** for (505) 260-1990 for the location of existing utilities.
- Prior to construction, the contractor shall excavate and verify the locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.
- Backfill compaction shall be according to traffic/street use.
- Maintenance of the facility shall be the responsibility of the owner of the property being served.
- Work on arterial streets shall be performed on a 24-hour basis.
- Contractor must contact Jason Rodriguez at 235-8016 and Construction Coordination at 924-3416 to schedule an inspection.

STREET MAINTENANCE INSPECTOR APPROVAL:

100-YEAR, 6-HOUR HYDRAULIC CALCULATIONS																						
Line ID	Upstream Station	Downstream Station	Pipe Length (ft)	Pipe Slope (ft/ft)	Drainage Area Designation	Time at Inlet (min)	Time in Pipe (min)	Cumulative Time (min)	Peak Flow (cfs)	Pipe Diameter (in)	Friction Slope (ft/ft)	Hydraulic Gradient		Velocity In (ft/sec)	Velocity Out (ft/sec)	V1^2/2g (ft)	V2^2/2g (ft)	Loss Coefficient	Velocity Head Loss (ft)	Upstream Invert Elev. (ft)	Downstream Invert Elev. (ft)	
												Upstream	Downstream									
STRM-1	1+06.22	0+00.00	106.22	0.0100	NW Pond	10.00	1.24	11.24	1.1	12	0.0010	5095.13	5094.90	0.00	1.43	0.00	0.03	1.25	0.03	5092.81	5091.75	
STRM-2	1+03.69	0+00.00	103.69	0.0100	NE Pond	10.00	0.97	10.97	1.4	12	0.0015	5095.44	5095.18	1.43	1.78	0.03	0.05	1.25	0.01	5093.79	5092.75	
STRM-3	0+44.35	0+54.31	10.04	0.0218	A-4	10.00	0.07	10.07	0.5	6	0.0079	5095.60	5095.52	1.78	2.55	0.05	0.10	1.25	0.04	5095.00	5094.79	
STRM-3	0+54.31	0+44.36	9.95	0.0500	-	10.07	0.07	10.13	0.5	6	0.0079	5095.45	5095.37	2.55	2.55	0.10	0.10	0.35	0.07	5094.79	5094.29	
STRM-3	0+44.36	0+14.41	29.95	0.0500	-	10.13	0.20	10.33	0.5	6	0.0079	5095.31	5095.07	2.55	2.55	0.10	0.10	0.35	0.07	5094.29	5092.79	
STRM-3	0+14.41	0+04.00	10.41	0.0500	-	10.33	0.07	10.39	0.5	6	0.0079	5095.00	5094.92	2.55	2.55	0.10	0.10	0.35	0.07	5092.79	5092.27	
STRM-3	0+04.00	0+00.00	4.00	0.0500	A-5	10.39	0.03	10.43	1.6	12	0.0020	5094.91	5094.90	2.55	2.04	0.10	0.06	0.50	0.01	5091.77	5091.75	
STRM-4	0+17.55	0+14.54	3.01	0.0900	SW Pond	37.00	0.13	37.13	0.3	12	0.0001	5094.90	5092.00	2.04	0.38	0.06	0.00	1.25	0.00	5092.25	5091.98	
STRM-4	0+14.54	0+11.08	3.46	0.0900	-	37.13	0.15	37.29	0.3	12	0.0001	5092.00	5092.00	0.38	0.38	0.00	0.00	0.35	0.00	5091.98	5091.67	
STRM-4	0+11.08	0+00.00	11.08	0.0900	-	37.13	0.49	37.62	0.3	12	0.0001	5092.00	5092.00	0.38	0.38	0.00	0.00	0.35	0.00	5091.67	5090.67	
STRM-5	0+12.32	0+00.00	12.32	0.0528	SE Pond	35.00	0.05	35.05	0.9	6	0.0252	5095.18	5094.00	0.38	4.53	0.00	0.32	1.25	0.32	5094.11	5093.46	
STRM-6	0+03.83	0+00.00	3.83	0.0050	A-3	10.00	0.03	10.03	0.4	6	0.0056	5095.20	5095.18	0.38	2.14	0.00	0.07	1.25	0.07	5092.77	5092.75	
STRM-7	0+01.83	0+00.00	1.83	0.0050	A-2	10.00	0.00	10.00	1.8	6	0.1075	5095.44	5095.44	4.53	9.37	0.32	1.36	1.25	0.96	5094.01	5094.00	

811
what's below.
call before you dig.

BY	DATE	DESCRIPTION
HJM	01/16/2017	ISSUE FOR PERMIT
HJM	02/28/2017	PER CITY AND NMDOT COMMENTS
HJM	03/22/2017	PER CITY COMMENTS
MDK	08/23/2017	PER LANDSCAPE RELOCATION

ADAMS JOB NO.: 2012.299

Adams
8951 Cypress Waters Blvd., Suite 150 • Dallas, Texas 75019 • (817) 336-3200

8.23.17
15142
REGISTERED PROFESSIONAL ENGINEER

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McDonald's USA, LLC
1501 COORS BLVD NW
ALBUQUERQUE, NM

REGIONAL MGR.	DATE	BY
CONSTR. MGR.	JAN 2017	MDK
OPERATIONS DEPT.	JAN 2017	MDK
REAL ESTATE DEPT.	JAN 2017	DWL

AS-BUILT

POST-DEVELOPED DRAINAGE PLAN

C8.1

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