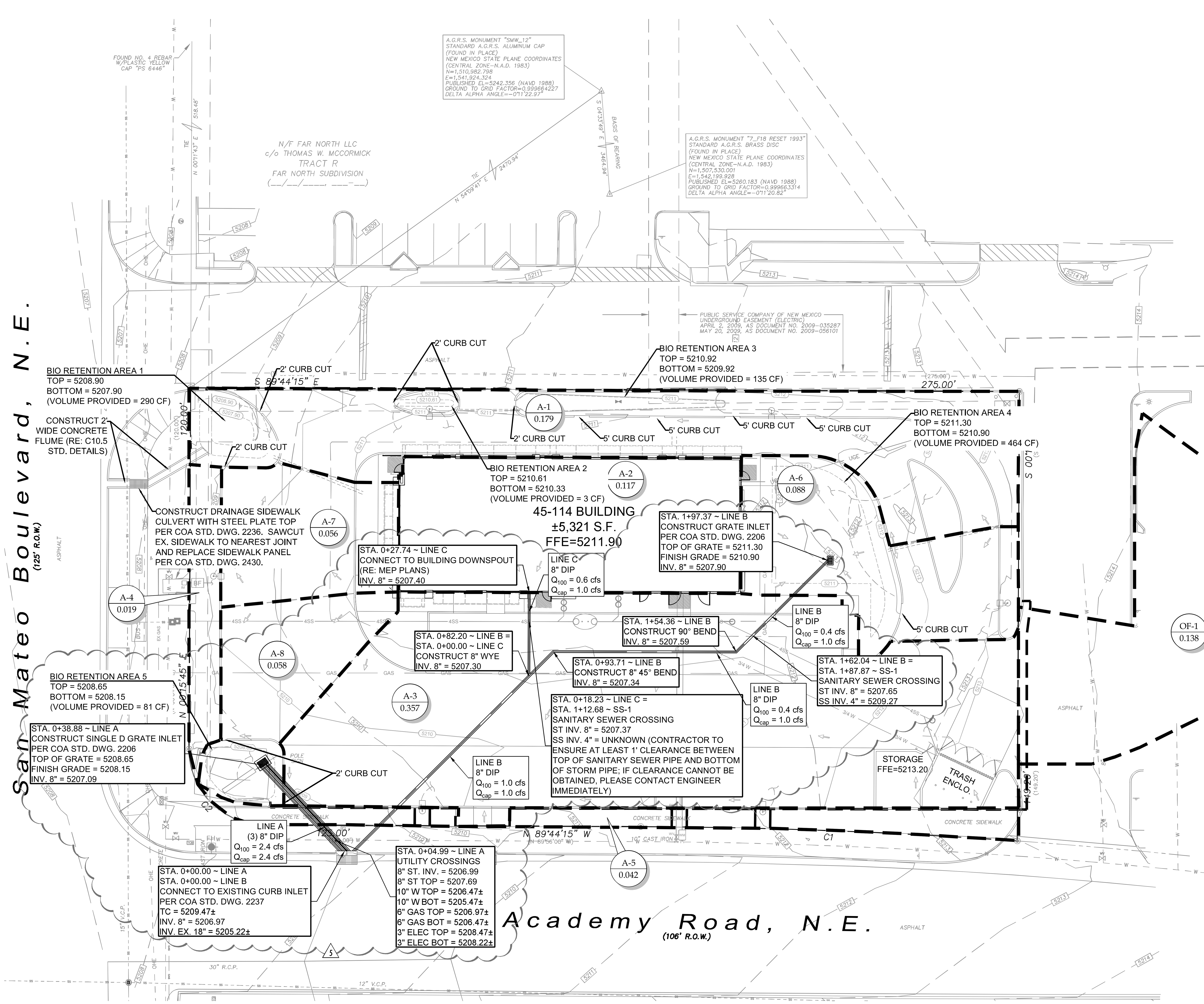
FULL PATH: I:\Projects\2013\2013.244 Mcdonalds - Albuquerque, Nm (6300 San Mateo Ne)\Drawings I:\Projects\2013\2013.244 Mcdonalds - Albuquerque, Nm (6300 San Mateo Ne)\Drawings\C8.1 POST DEVELOPED DRAINAGE PLAN

PLOTTER: DWG To PDF.pc3 PLOT TIME: 7:28:20 AM PLOT DATE: Tuesday, February 09, 2016 PLOTTED BY: Heather Macomber FILENAME: C8.1 POST DEVELOPED DRAINAGE PLAN.dwg



SCALE: 1" = 20'

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

OWNER INFORMATION

MCDONALD'S USA, LLC
GREATER SOUTHWEST REGION
511 E. CARPENTER FRWY, STE. 375
IRVING, TEXAS 75062
(972) 869-5346
CONTACT: LEE MORRIS

BENCHMARK DESCRIPTION

BENCHMARK

1. A.G.R.S. MONUMENT "SMW_12"
STANDARD A.G.R.S. ALUMINUM CAP
(FOUND IN PLACE) NEW MEXICO STATE
PLANE COORDINATES (CENTRAL ZONE-N.A.D. 1983)
N=1,510,982.798 E=1,541,924.324
PUBLISHED EL=5242.356 (NAVD 1988)
GROUND TO GRID FACTOR=0.999664227
DELTA ALPHA ANGLE=-0°11'22.97"

2. A.G.R.S. MONUMENT "7_F18 RESET 1993"
STANDARD A.G.R.S. BRASS DISC
(FOUND IN PLACE) NEW MEXICO STATE
PLANE COORDINATES (CENTRAL ZONE-N.A.D. 1983)
N=1,507,530.001 E=1,542,199.928
PUBLISHED EL=5260.183 (NAVD 1988)
GROUND TO GRID FACTOR=0.999663314
DELTA ALPHA ANGLE=-0°11'20.82"

DRAINAGE REPORT

Site Location – The site is located on an approximately 0.92 acre site at the northeast corner of San Mateo Boulevard, N.E. and Academy Road, N.E. The site is bordered to the north and east by restaurants and retail development. 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 3. The 100-year, 6-hour frequency rainfall event was used to calculate peak discharge rates and runoff volumes from the site under existing and proposed conditions.

Existing Conditions – Refer to Sheet C8.0 for the Pre-Developed Drainage Plan for this site. Storm water runoff generally drains from the east to the west across the site under existing conditions. Sheet C8.0 identifies four drainage divides for this site. Area OF-1 consists of 0.138 acres flowing onto the site from the west. Area X-1 contains 0.32 acres along the northern portion of the site, including the building area, and drains out the north entrance drives. Area X-2 contains 0.556 acres, and drains to three existing flumes along the west curb line in the parking area and onto San Mateo Boulevard N.E. Area X-3 is a 0.041 acre strip of sidewalk area along the south property line which drains onto Academy Road NE. Peak discharge rate and runoff volume calculations for existing 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 OF-1 is the off-site area to the west flowing across the property as identified above. Area A-1 contains 0.179 acres along the northern portion of the site and drains off the site through Bioretention Areas 3 and 2 to Area 1 and then west to San Mateo Boulevard. Area A-2 consists of 0.117 acres of building roof area. Roof drainage will be collected in a subsurface piping system and routed to a proposed grate inlet in the southwest corner of the site in Bioretention Area 5. Area A-3 contains 0.357 acres in the southern portion of the parking area, which is also collected by the proposed grate inlet. The grate inlet will be connected to an existing curb inlet in the north curb line of Academy Road NE. This inlet connection to the Academy Road system is at the request of the City of Albuquerque, and serves to alleviate runoff from flowing across the sidewalk along the east side of San Mateo Boulevard NE, which was identified by the City in a pre-design Site Investigation as an icing hazard to pedestrians. Areas A-4 and A-5, consist of 0.019 and 0.042 acres, and sheet flow onto San Mateo and Academy, respectively. Area A-6 contains 0.088 acres just east of the building, and will be collected in a proposed grate inlet in Bioretention Area 4 and routed to the system in Academy to the south. The entire site contains 0.741 acres of impervious area. Based on the City of Albuquerque requirement that 0.34 inches of retention area is required for each acre of impervious area, this required retention volume for this site is 915 cubic feet. The proposed bioretention volume at the site is 973 cubic feet.

Conclusions – The overall amount of impervious area at this site will be reduced under the proposed conditions, when compared to the existing site. As such, the proposed conditions at the site will not create any increase in either the peak runoff rate or overall runoff volume from the site when compared to existing conditions. Therefore this development should have no adverse impact on the storm water management system already in place.

POST-DEVELOPMENT 100-YEAR, 6-HOUR RUNOFF CALCULATIONS

Drainage Area Number	Area	Land Treatment Condition				Excess Precipitation	Volume	Peak Discharge	Remarks
	(ac)	A	B	C	D	(in)	(ac/ft)	(cfs)	-
A-1	0.179	0.000	0.000	0.062	0.117	1.99	0.03	0.80	TO BIORETENTION AREAS 1, 2 AND 3
A-2	0.117	0.000	0.000	0.000	0.117	2.36	0.02	0.59	BUILDING ROOF AREA
A-3	0.357	0.000	0.000	0.009	0.348	2.33	0.07	1.78	TO BIORETENTION AREA 5
A-4	0.019	0.000	0.000	0.019	0.000	1.29	0.00	0.07	OFF-SITE TO THE WEST TO SAN MATEO BLVD.
A-5	0.042	0.000	0.000	0.000	0.042	2.36	0.01	0.21	OFF-SITE TO THE SOUTH TO ACADEMY RD.
A-6	0.088	0.000	0.000	0.057	0.031	1.67	0.01	0.35	TO BIORETENTION AREA 4
A-7	0.056	0.000	0.000	0.005	0.051	2.26	0.01	0.27	TO BIORETENTION AREA 1
A-8	0.058	0.000	0.000	0.015	0.043	2.08	0.01	0.27	TO BIORETENTION AREA 5
OF-1	0.138	0.000	0.000	0.000	0.138	2.36	0.03	0.69	OFF-SITE FLOW FROM EAST (APPROX.)

Note: Calculations in accordance with the City of Albuquerque Development Process Manual. The site is in Precipitation Zone 3.

BIORETENTION VOLUME CALCULATIONS

Impervious Area = 32,280 square feet (0.741 acres)

Required Retention Volume (0.34"/acre) = 915 cubic feet

Retention Volume Provided = 973 cubic feet

Know what's below. Call before you dig.

Private Drainage Facilities within City Right-of-Way (SO-19)

A separate Excavation/Barricading Permit is required for SO-19 construction within City ROW. A copy of this approval letter must be on hand when applying for the permit. If there is a Work Order associated with this project, this work is to be included in the Work Order. To obtain a C.O., the storm drain work in the City ROW must be inspected and accepted. Please contact Jason Rodriguez, 857-8074, to schedule an inspection.

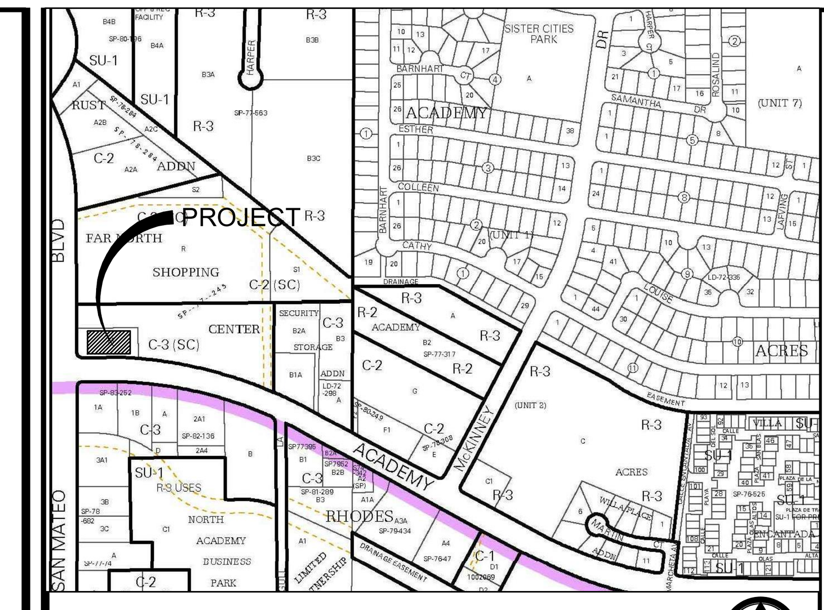
1. An excavation permit will be required before beginning any work within City Right-Of-Way.
2. All work on this project shall be performed in accordance with applicable federal, state and local laws, rules and regulations concerning construction safety and health.
3. Two working days prior to any excavation, the contractor must contact New Mexico One Call, dial "811" [or (505) 260-1990] for the location of existing utilities.
4. 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.
5. Backfill compaction shall be according to traffic/street use.
6. Maintenance of the facility shall be the responsibility of the owner of the property being served.
7. Work on arterial streets shall be performed on a 24-hour basis.

INSPECTOR DATE

THE PRIVATE DRAINAGE FACILITIES WITHIN THE CITY RIGHT-OF-WAY HAVE BEEN INSPECTED AND ARE IN ACCORDANCE WITH SO-19 REQUIREMENTS.

LEGEND

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



ZONE ATLAS PAGE: E-18-Z

VICINITY MAP N.T.S.

GENERAL NOTES

1. Bases, anchor bolts, conduit, and wiring for all signs are by the General Contractor.
2. ¾" empty conduit to locations shown at the lot perimeter for lot lighting is by the General Contractor. Lighting fixtures, bases, poles, conduit, and wiring are by the General Contractor.
3. Lot lighting concrete footings to conform with the soils report recommendations for this site.
4. Bases for flagpoles are by the General Contractor. Anchor bolts are by the flagpole supplier. General contractor shall coordinate with flag pole supplier prior to construction.
5. The Contractor shall coordinate with all utility companies to determine exact point of service connection at existing utility. Refer to the building electrical and plumbing drawings for utility service entrance locations, sizes, and circuiting.
6. General Contractor must provide exact "as built" information upon completion.
7. All elevations shown are in reference to the benchmark and must be verified by the General Contractor at groundbreak.
8. Curb elevations shall be 6" above finish pavement unless noted otherwise.
9. All landscape areas shall be rough graded to 6" below top of all walks and curbs. Finished grading, landscaping and sprinkler systems are by the Owner / Operator.
10. It is strongly recommended that no contractual agreements of any kind be signed prior to receiving and thoroughly reviewing all approvals from all of the regulatory authorities having jurisdiction over this project.
11. Due to the nature of the work, all dimensions shown shall be considered approximate. Contractor shall field verify all dimensions prior to beginning construction. Shop drawings shall be submitted to the Architect and/or Engineer for approval prior to fabrication or installation of any item. Failure to adhere to this procedure shall place full responsibility for any errors directly upon the Contractor.
12. Contractor shall contact appropriate jurisdictional agencies prior to construction to confirm if independent testing or inspections will be required prior to their acceptance of work. Contractor shall make necessary arrangements to insure proper testing & inspections are documented such that work will be accepted at project completion.
13. Sidewalks around building shall have same subgrade preparation as building foundation.
14. All materials and construction within easements and R.O.W. shall conform to all governing authorities' jurisdictional standard construction details and specifications.
15. Topographic information taken from a Topographic Survey performed by PRECISION SURVEYS, INC . The Contractor shall notify the Engineer immediately, in writing, of any discrepancies or omissions to the topographic information. The Contractor(s) shall be responsible for confirming the location (horizontal/vertical) of any buried cables, conduits, pipes, and structures (storm sewer, sanitary sewer, water, gas, television, telephone, etc.) which impact the construction site. The Contractor(s) shall notify the Owner and Engineer if any discrepancies are found between the actual conditions versus the data contained in the construction plans. Any costs incurred as the result of not confirming the actual location (horizontal/vertical) of said cables, conduits, pipes, and structures shall be borne by the Contractor. Additionally, the Contractor(s) shall notify the Owner and Engineer if any errors or discrepancies are found on the construction documents (ps&e), which negatively impact the project. The Engineer and Owner shall be indemnified of problems and/or cost which may result from Contractor's failure to notify Engineer and Owner.
16. McDonald's reserves the right to request a compaction and/or a core sample. If tests prove correct, per the soils report, tests will be at the expense of McDonald's, otherwise G.C. will be charged.
17. Contractor shall comply to the fullest extent with the latest standards of OSHA directives or any other agency having jurisdiction for excavation and trenching procedure. Contractor shall use support systems, sloping, benching, or other means of protection, including but is not limited to, access and egress from all excavation and trenching. Contractor is responsible to comply with performance criteria for OSHA.

PAVING SPECIFICATION				
	VERIFY W/MCDONALD'S:	ASPHALT: ☐	CONCRETE: ☒
	CONTRACTOR TO BID:	ASPHALT: ☐	CONCRETE: ☒

NOTE: ALL PAVING & SUBGRADE SPECIFICATIONS TO COMPLY WITH GEOTECHNICAL REPORT AS PREPARED BY: TERRACON CONSULTANTS, INC. AUGUST 29, 2014 PROJECT NO. 66145053

ASPHALT PAVEMENT RECOMMENDATIONS -ALTERNATE BID		
PAVEMENT MATERIALS	LIGHT DUTY	HEAVY DUTY
Asphalt Surface Course	3" –OR– 4.5"	4" –OR– 5.5"
Aggregate Base Course	6"	6"

CONCRETE PAVEMENT RECOMMENDATIONS - BASE BID		
PAVEMENT MATERIALS	LIGHT DUTY	HEAVY DUTY
Portland Cement Concrete PVMT	5"	5.5"

PAVEMENT NOTES:
1. PAVEMENT AND SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY TERRACON CONSULTANTS, INC. DATED AUGUST 29, 2014. [PROJECT NUMBER 66145053]
2. SUBGRADE SHOULD BE SCARIFIED AND COMPACTED TO AT LEAST 98 PERCENT OF THE STANDARD PROCTOR (ASTM D 698) MAXIMUM DRY DENSITY FOR A DEPTH OF AT LEAST 10 INCHES BELOW THE SURFACE. SEE SECTION 4.2 OF GEOTECH REPORT
3. PAVEMENT MAY BE PLACED AFTER THE SUBGRADE HAS BEEN PROPERLY COMPACTED, FINE-GRADED AND PROOF ROLLED AS SPECIFIED IN THE SOILS REPORT.
4. ALL WORK SHALL BE IN ACCORDANCE WITH THE NEW MEXICO STATE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS AND CITY OF ALBUQUERQUE SPECIFICATIONS.
5. WATER SHOULD NOT BE ALLOWED TO POND BEHIND CURBS AND SATURATE THE BASE MATERIALS. GRANULAR BASE MATERIAL SHOULD EXTEND THROUGH THE SLOPE PROVIDING UNDERGROUND DRAINAGE AN EXIT PATH.
6. REFER TO C10.2 FOR CONCRETE JOINT SPECIFICATIONS UNLESS NOTED OTHERWISE IN THE SOILS REPORT.
7. ALL CONCRETE PAVEMENT SHALL BE 4,000 PSI @ 28 DAYS AND REINFORCED WITH #3 BARS @ 18" O.C.E.W.
8. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.

THE INFORMATION ABOVE IS BEING PROVIDED FOR REFERENCE ONLY AND SHALL NOT BE RELIED ON AS ACCURATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REFERRING TO THE GEOTECHNICAL REPORT REFERENCED ABOVE FOR ALL PAVEMENT/EARTHWORK REQUIREMENTS.

SURVEY INFORMATION

PREPARED BY:
PRECISION SURVEYS, INC.
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NEW MEXICO
505-856-5700
DATE: 05-14-2014

LEGAL DESCRIPTION:
TRACT M OF THE FAR NORTH SHOPPING CENTER, PLAT BOOK B12, PAGE 192 OF WHICH WAS FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO

PLAN SCALE: 1" = 20'

ADDITION: FAR NORTH SHOPPING CENTER

STREET ADDRESS: 6300 SAN MATEO BLVD NE

CITY: ALBUQUERQUE STATE: NEW MEXICO

COUNTY:	SURVEY:	ABSTRACT NO.
BERNALILLO	---	---

L/C NUMBER: 030-0021

CORPORATE DWG. NAME: POST DEVELOPED DRAINAGE PLAN

REV	DATE	DESCRIPTION	BY	ISSUE REF
----	10/07/2014	ISSUE FOR PERMIT	HJM	----
1	11/05/2014	PER CITY COMMENTS	HJM	----
2	11/17/2014	PER DRAINAGE COMMENTS	MEG	----
5	02/09/2016	PER CONSTRUCTION RFI	HJM	----

Adams
910 S. Kimball Avenue ■ Southlake, Texas 76092 ■ (817) 328-3200

G. ROBERT ADAMS NEW MEXICO 15142 LICENSED PROFESSIONAL ENGINEER
2.9.16

OFFICE: GREATER SOUTHWEST
ADDRESS: KROC DRIVE - OAK BROOK, ILLINOIS 60521

McDONALD'S®

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF McDONALD'S CORPORATION AND SHALL NOT BE REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.

6300 SAN MATEO BLVD NE
ALBUQUERQUE, NEW MEXICO

McDONALD'S L/C: 030-0021
ADAMS ENGINEERING No. 2013.244

PLAN APPROVALS — DATE — SIGNATURE (2 REQUIRED): REGIONAL MGR., CONST. MGR., OPERATIONS DEPT., REAL ESTATE DEPT.

CO-SIGN SIGNATURES: CONTRACTOR, OWNER

STATUS	DATE	BY
DATE DRAWN	OCT 2014	PH
PLAN CHECKED	11/5/14	DWL
AS-BUILT		

C8.1