CITY OF ALBUQUERQUE

September 25, 2017

Jeffery Lucero
Miller Engineering Consultants, Inc.
3500 Comanche NE
Albuquerque, NM 87107

RE: T-Mobile on 4th St
Grading Plan
Engineers Stamp Date: 7/20/17
Hydrology File: F14D075

Dear Mr. Lucero:

Based on the information provided in your submittal received on 8/25/17, the Grading Plan is approved for Building Permit with the following conditions:

1. Prior to Hydrology approval for Certificate of Occupancy, a Bernalillo County Recoded Drainage Covenant is required for the pond.
2. Prior to Hydrology approval for Certificate of Occupancy, close-out of the public work order is required.

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

Sincerely,

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

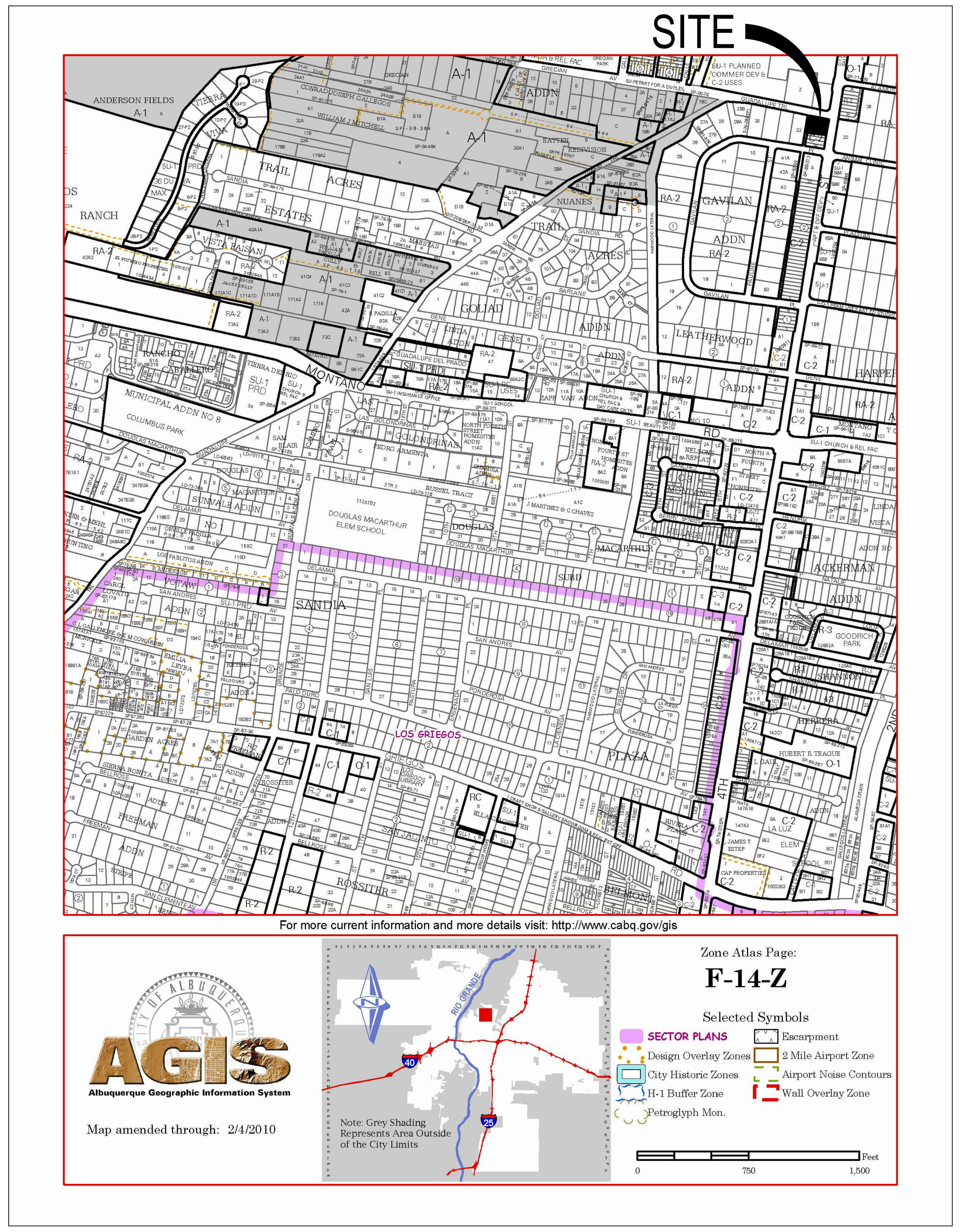
PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Orig: Drainage File



C1 **VICINITY MAP**

ZONE ATLAS MAP F-14-Z

SITE LOCATION

T-MOBILE IS LOCATED AT 6015 4th STREET N.W. IN ALBUQUERQUE, NM. THE BOUNDARY IS RECTANGULAR IN SHAPE AND BOUNDED BY EXISTING RESIDENCES TO THE WEST, EXISTING BUSINESS AND RESIDENCES TO THE SOUTH, AN EXISTING RESIDENCES AND GUADALUE TRAIL N.W. TO THE NORTH, AND 4TH STREET N.W. TO THE EAST.

EXISTING ON SITE CONDITIONS

THE SITE IS PARTIALLY DEVELOPED WITH AN EXISTING BUILDING AND AN EXISTING ASPHALT PAVED PARKING AREA ALONG 4TH STREET. THE SITE IS ACCESSED FROM 4TH STREET ON THE EAST SIDE OF THE SITE. THE PROPERTY HAS ONE DRAINAGE BASIN, WHICH IS IDENTIFIED AS BASIN A. THIS REPORT FOCUSES ON THE PRE AND POST HYDROLOGY. BASIN A DRAINS TO THE WEST SOUTHWEST INTO AN EXISTING ALLEY ADJACENT TO THE SITE ON THE WEST SIDE VIA SURFACE FLOWS. THE DRAINAGE DATA ON THIS PAGE SUMMARIZES THE EXISTING PEAK DISCHARGE AND RUNOFF VOLUME FOR BASIN A.

PROPOSED CONDITIONS

THE PROPOSED DEVELOPMENT OF THE SITE WILL CONSIST OF 2800 SQUARE FOOT BUILDING, ASSOCIATED CONCRETE FLATWORK, SIDEWALKS, ASPHALT PARKING LOT, AND LANDSCAPING. THE PROPOSED IMPROVEMENTS ARE ALL LOCATED IN PROPOSED DRAINAGE BASIN A. A SMALL PORTION OF OF BASIN A WILL FREE DISCHARGE INTO 4TH STREET AND GUADALUPE TRAIL VIA SURFACE FLOW. THE REMAINDER OF BASIN A, INCLUDING THE PROPOSED BUILDING WILL DISCHARGE INTO INTO THE WATER HARVEST AREA (RETENTION) ALONG THE WEST PORTION OF THE PROPERTY. THE DRAINAGE DATA ON THIS PAGE SUMMARIZES THE PROPOSED PEAK DISCHARGE AND RUNOFF VOLUME FOR BASIN A.

OFFSITE FLOWS

THERE ARE NO OFFSITE FLOWS THAT DRAIN ONTO THE SITE.

CONCLUSION

RUNOFF VOLUME AND FLOW RATE INCREASED AS A RESULT OF CHANGES IN LAND TREATMENTS FOR BASIN A A BY 0.011 ACRE FEET AND THE PEAK FLOW RATE HAS INCREASED BY 0.15 CFS. THE PROPOSED RUNOFF VOLUME OF 0.062 AF MINUS THE PROPOSED POND VOLUME OF 0.014 AF IS 0.048 AF WHICH IS LESS THAN THE EXISTING RUNOFF VOLUME OF 0.051 AF. THEREFORE THE PROPOSED IMPROVEMENTS ON THE SITE WILL IMPROVE THE DOWNSTREAM CAPACITY.

THE PROPOSED GRADING IMPROVEMENTS WILL INCLUDE SIDEWALK CULVERTS, VALLEY GUTTERS, CURB AND GUTTERS AND CURB CUTS ALLOWING STORMWATER INTO AND OUT OF THE PROPOSED WATER HARVESTING AREA. THIS WATER HARVESTING AREA WILL BE USED TO MANAGE THE FIRST FLUSH AS REQUIRED BY THE RECENT CITY OF ALBUQUERQUE DRAINAGE ORDINANCE CHANGES. THE VOLUME OF THE FIRST FLUSH FOR THE SITE (0.44–0.1 INCHES * IMPERVIOUS AREA)= 350 cf. THE WATER HARVEST AREA VOLUME = 392 cf (@ SPILLWAY INVERT) > 350 cf. THEREFOR MANAGES THE FIRST FLUSH. (SEE CALCULATIONS BELOW). ALL POSSIBLE IMPERVIOUS AREAS WILL BE DISCHARGED THROUGH THE PROPOSED WATER HARVEST AREA.

GENERAL NOTES:

1. EXISTING TOPOGRAPHIC DATA SHOWN ON THESE PLANS WAS PROVIDED BY SURV–TEK SURVEYING, INC. MILLER ENGINEERING CONSULTANTS HAS UNDERTAKEN NO FIELD VERIFICATION OF THIS INFORMATION.
2. VERTICAL DATUM IS BASED ON THE ALBUQUERQUE CONTROL SURVEY BENCHMARK "12–E14" HAVING A PUBLISHED ELEVATION OF 4978.63' (NAVD 1988).

   TBM SET PK NAIL WITH ALUMINUM DISK "LS 9750" IN ALLEY JUST SOUTHWEST OF THE SOUTHWEST PROPERTY CORNER. ELEV. 4965.21.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES DURING THE CONSTRUCTION PHASE.
4. CONTRACTOR SHALL OBTAIN A GRADING PERMIT FROM THE CITY OF ALBUQUERQUE, PRIOR TO ANY GRADING OR CONSTRUCTION.
5. TWO WORKING DAYS PRIOR TO ANY EXCAVATION CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 260–1990 FOR LOCATION OF EXISTING UTILITIES.
6. ALL EMBANKMENTS SHALL BE PLACED AND COMPACTED IN LIFTS OF MAXIMUM OF 8". THE EMBANKMENTS SHALL BE WETTED AND COMPACTED TO 95% OPTIMUM DENSITY PER ASTM D1557 AND 95% UNDER ALL STRUCTURES INCLUDING DRIVEWAYS AND PARKING LOTS.
7. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER(S) OF THE PROPERTY SERVED.
8. THE CONTRACTOR SHALL FIELD VERIFY LOCATION AND SIZE OF ALL UTILITIES PRIOR TO CONSTRUCTION.
9. THE SUBJECT PROPERTY (AS SHOWN HEREON) APPEARS TO LIE WITHIN ZONE "X" (AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.) IN ACCORDANCE WITH THE NATIONAL FLOOD INSURANCE PROGRAM RATE MAP NO. 35001C0119 G, EFFECTIVE DATE 9–26–2008.
10. ALL WORK PERFORMED SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF ALBUQUERQUE STORM DRAINAGE REGULATIONS. ALL WORK PERFORMED SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF ALBUQUERQUE "GRADING AND DRAINAGE DESIGN REQUIREMENTS AND POLICIES FOR LAND DEVELOPMENT."
11. THE OWNER, CONTRACTOR AND/OR BUILDER SHALL COMPLY WITH ALL APPROPRIATE LOCAL, STATE AND FEDERAL REGULATIONS AND REQUIREMENTS.
12. THE CONTRACTOR SHALL TAKE ALL APPROPRIATE AND REASONABLE MEASURES TO PREVENT SEDIMENT OR POLLUTANT LADEN STORM WATER FROM EXITING THE SITE DURING CONSTRUCTION. STORMWATER MAY BE DISCHARGED IN A MANNER, WHICH COMPLIES WITH THE APPROVED GRADING AND DRAINAGE PLAN.
13. THE CONTRACTOR SHALL TAKE ALL APPROPRIATE MEASURES TO PREVENT THE MOVEMENT OF CONSTRUCTION RELATED SEDIMENT, DUST, MUD, POLLUTANTS, DEBRIS, WASTE, ETC FROM THE SITE BY WIND, STORM FLOW OR ANY OTHER METHOD EXCLUDING THE INTENTIONAL, LEGAL TRANSPORTATION OF SAME IN A MANNER ACCEPTABLE BY THE CITY.
14. THE CONTRACTOR SHALL NOT DISTURB AREAS OUTSIDE THE AREAS SHOWN AS "SLOPE LIMITS" ON THE GRADING AND DRAINAGE PLAN.
15. THE CONTRACTOR SHALL SUBMIT A SEED MIX DESIGN TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO STARTING THE SEEDING ON THE PROJECT. THE SEED MIX DESIGN SHALL BE A SEED MIX RECOMMENDED BY THE NRCS FIELD OFFICE REPRESENTATIVE THAT IS APPROPRIATE FOR THE PROJECT LOCATION. ALL DISTURBED AREAS WITH SLOPES LESS THAN 3:1 SHALL RECEIVE CLASS "A" SEEDING. ALL DISTURBED AREAS WITH SLOPES EQUAL TO OR GREATER THAN 3:1 SHALL RECEIVE STEEP SLOPE SEEDING. THE STEEP SLOPE SEEDING SHALL CONSIST OF SEEDING IN CONJUNCTION WITH A 100% COCONUT FIBER BLEND EROSION BLANKET (NORTH AMERICAN GREEN C125) OR APPROVED EQUAL. ALL MATERIALS, EQUIPMENT AND LABOR ASSOCIATED WITH THE PROPER CONSTRUCTION OF THE STEEP SLOPE SEEDING WILL BE CONSIDERED INCIDENTAL AND NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR THIS MATERIAL OR WORK. THE COCONUT FIBER EROSION BLANKET AND ASSOCIATED SEEDING SHALL BE CONSTRUCTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND APPROVED BY THE PROJECT ENGINEER PRIOR TO CONSTRUCTION.
16. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR CLARIFICATION IF THERE ARE ANY SPOT ELEVATIONS ON THE GRADING AND DRAINAGE PLAN WHICH APPEAR TO BE AMBIGUOUS OR DO NOT MEET THE INTENT OF THE GRADING AND DRAINAGE PLAN.
17. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR CLARIFICATION IF THERE ARE SIDEWALKS OR CONCRETE FLATWORK WHICH DOES NOT MEET ADA ACCESSIBILITY REQUIREMENTS. ALL SIDEWALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2.0%, ALL SIDEWALKS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 5.0%, AND ALL RAMPS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 15:1.
18. ALL SIDEWALKS AND CONCRETE FLATWORK SHALL HAVE A MINIMUM OF 0.5% SLOPE. CONTRACTOR SHALL CONTACT PROJECT ENGINEER IF THERE ARE SIDEWALKS OR CONCRETE FLATWORK WHICH DO NOT MEET THIS REQUIREMENT.
19. THE CONTRACTOR SHALL SUBMIT MATERIAL SUBMITTALS, CUT SHEETS AND SHOP DRAWINGS FOR ALL CIVIL RELATED ITEMS FOR REVIEW PRIOR TO CONSTRUCTION.
20. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS (UPDATE 8, AMENDMENT 1)
21. ALL EXISTING MANHOLES, VALVES AND METERS SHALL BE ADJUSTED TO NEW FINISH GRADE.

WATER HARVEST VOLUMES

WATER HARVEST AREA 1 proposed					
Pond Rating Table					
Side Slope	1:1				
Depth	Area		Volume	Cum Volume	
(ft)	(sq ft)	(ac)	(ac-ft)	(ac-ft)	
74	115	0.003	0.000	0.000	
75	175	0.004	0.003	0.003	
76	341	0.008	0.006	0.009	
76.5	431	0.010	0.004	0.014	spillway
					top of pond

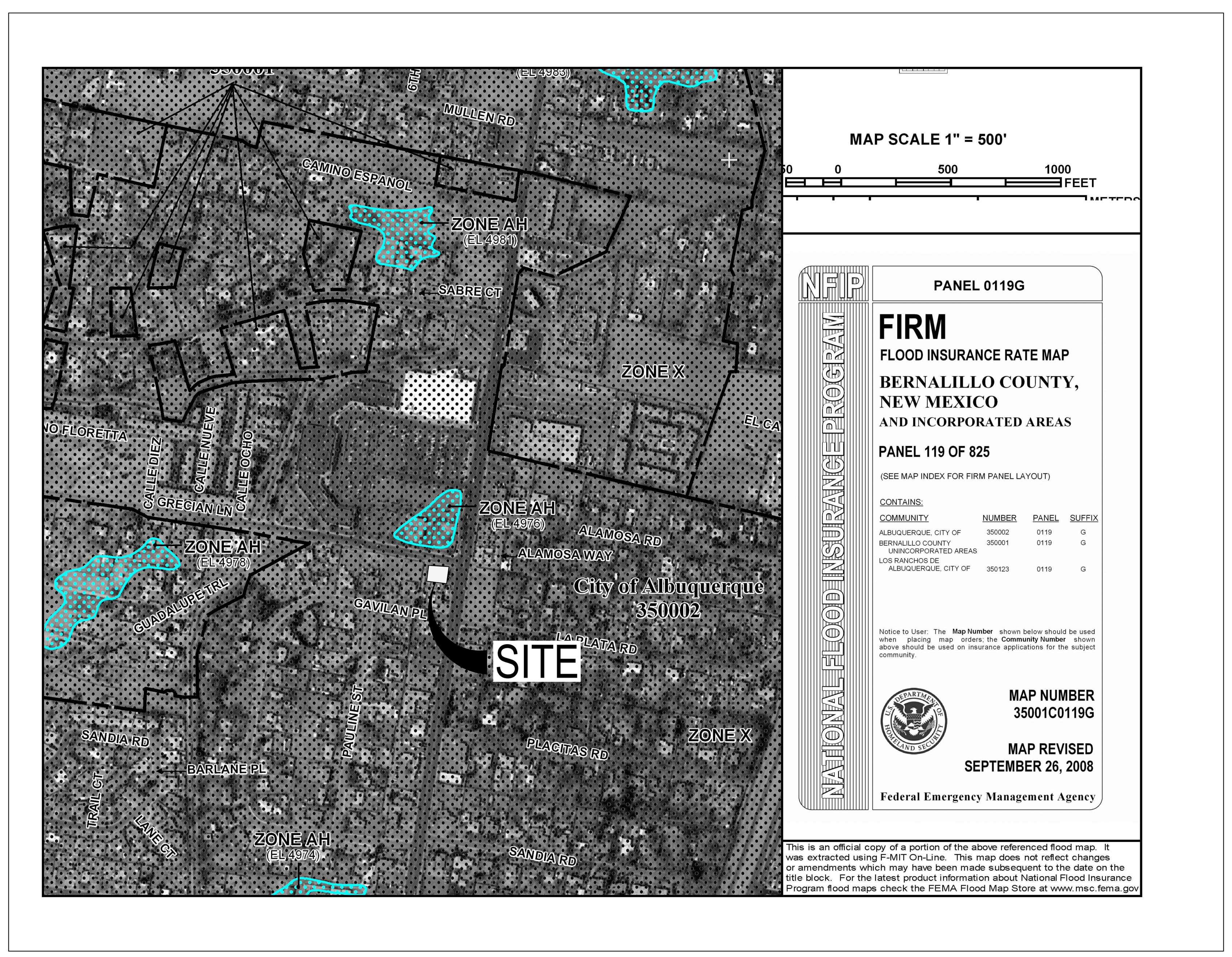
DRAINAGE DATA

Precipitation Zone 2 - 100-year Storm P(360) = 2.33 in P(1440) = 2.75 in

Basin	Basin Area (Ac)	A	B	C	D	Ew (in)	V(100-6) (af)	V(100-24) (af)	Q(100) (cfs)
		Land Treatment Factors (Acres)							
Existing Conditions									
Site	0.315	0.000	0.000	0.128	0.187	1.718	0.045	0.051	1.281
Total	**0.315**							**0.051**	**1.281**
Proposed Conditions									
Site	0.315	0.000	0.000	0.032	0.283	2.02	0.053	0.062	1.431
Total	**0.315**							**0.062**	**1.431**

Precipitation Zone 2 - 10-year Storm P(360) = 1.52 in P(1440) = 1.8 in

Basin	Basin Area (Ac)	A	B	C	D	Ew (in)	V(10-6) (af)	V(10-24) (af)	Q(10) (cfs)
		Land Treatment Factors (Acres)							
Existing Conditions									
Site	0.315	0.000	0.000	0.128	0.187	1.718	0.045	0.051	1.281
Total	**0.315**							**0.051**	**1.281**
Proposed Conditions									
Site	0.315	0.000	0.000	0.032	0.283	1.257	0.033	0.039	0.943
Total	**0.315**							**0.039**	**0.943**



A1 **FLOOD ZONE MAP**

FLOOD ZONE MAP: 35001C0353H

VERLYN A. MILLER JI — NEW MEXICO — 14507 — REGISTERED PROFESSIONAL ENGINEER — REV. 7/20/17

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DRAWN BY: **CJW**

1 – –

ISSUE: **PERMIT SET**

TMOBILE STORE

6015 4th St. NW
Albuquerque, NM

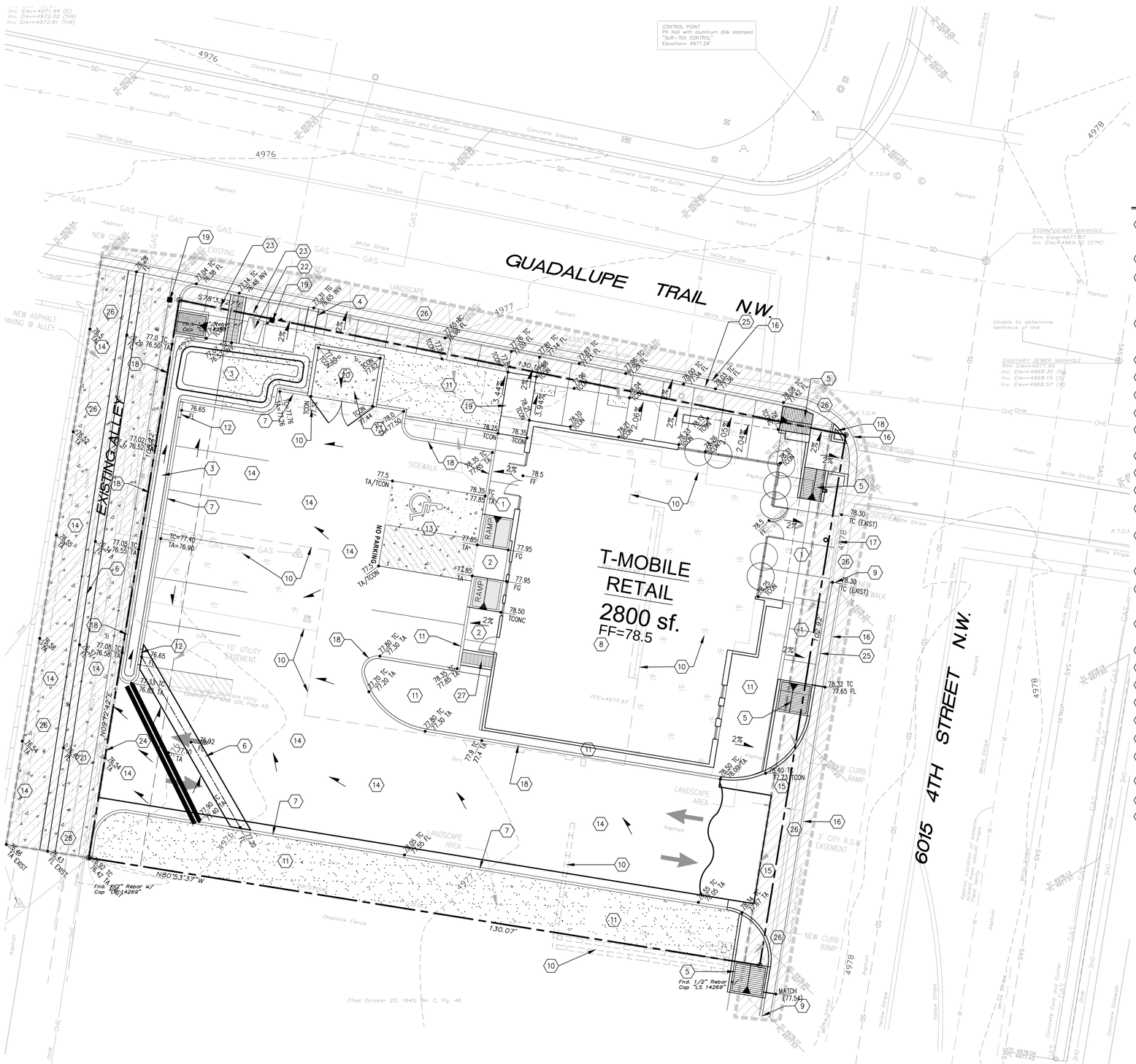
DATE: **5/31/17**

SHEET TITLE:

GRADING AND DRAINAGE REPORT

C-001

8/24/2017 3:59 PM



LEGEND:

38.00 FG	PROPOSED SPOT ELEVATIONS (FINISHED GRADE)		GRADE BREAK–HIGH POINT
MATCH (95.19)	MATCH EXISTING ELEVATIONS		SWALE
TCON	TOP OF CONCRETE	SD	STORM DRAIN LINE
FL	FLOW LINE, CURB		
INV	INVERT		
FG	FINISH GRADE	5895	PROPOSED MAJOR CONTOUR
TBC	TOP OF BASE COURSE		PROPOSED MINOR CONTOUR
TC	TOP OF CURB	5895	EXISTING MAJOR CONTOUR
TG	TOP OF GRATE		EXISTING MINOR CONTOUR
	FLOW ARROW		SEE PUBLIC WORK ORDER PLANS FOR WORK IN CITY RIGHT OF WAY.

KEYED NOTES:

1. NEW CONCRETE SIDEWALK OR CONCRETE FLATWORK AS PER C.O.A. STANDARD DWG 2430. CONTRACTOR SHALL SUBMIT A JOINT PATTERN TO THE PROJECT ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
2. NEW TYPE A HANDICAP RAMP, SEE DETAIL SHEET C–501.
3. NEW WATER HARVEST AREA. TOP=76.65 (INV IN), INV=74.00 (INV OUT). REQ'D. VOL.=0.008 AF. PROVIDED VOL. @ 76.57 (SPILLWAY ELEV.)=0.009 AF. MAX WSEL=76.57. SIDE SLOPE 2:1 WITH FILTER FABRIC AND 6" OF 2–3" COBBLE STONES. SEE DETAIL ON SHEET C–501.
4. NEW 24" WIDE SIDEWALK CULVERT AND EMERGENCY SPILLWAY WITH STEEL PLATE TOP. (FIELD VERIFY ELEVATIONS PRIOR TO CONSTRUCTION) INV. SLOPE AT 2% MIN. AS PER C.O.A. STANDARD DETAIL 2236.
5. NEW TYPE B HANDICAP RAMP, AS PER C.O.A. STANDARD DETAIL.
6. NEW 36" CONCRETE VALLEY GUTTER SEE DETAIL SHEET C–501.
7. NEW CURB AND GUTTER. SEE DETAIL SHEET C–501.
8. NEW BUILDING. SEE ARCHITECTURAL PLANS FOR DETAILS.
9. SAWCUT EXISTING CONCRETE CURB AND GUTTER TO NEAREST CONSTRUCTION JOINT AND MATCH WITH NEW CONCRETE CURB AND GUTTER.
10. EXISTING BUILDING AND ASPHALT TO BE DEMOLISHED. SEE ARCHITECTURAL PLANS.
11. LANDSCAPE AREA. SEE ARCHITECTURAL PLANS FOR DETAILS.
12. NEW 24" WIDE CURB CUT.
13. NEW HEAVY DUTY CONCRETE PAVEMENT SECTION. SEE DETAIL SHEET C–501 FOR PAVING SECTIONS AND IN THE GEOTECHNICAL REPORT.
14. NEW HOT MIX ASPHALT (HMA) PAVING. ALL PARKING SPACES WILL CONSIST OF LIGHT DUTY HOT MIX ASPHALT PAVING. ALL OTHER AREAS SHALL CONSIST OF HEAVY DUTY HOT MIX ASPHALT PAVING. SEE DETAIL SHEET C–501 FOR PAVING SECTIONS.
15. NEW CONCRETE VALLEY GUTTER AS PER COA STANDARD DETAIL 2420.
16. MATCH NEW TOP OF CONCRETE VALLEY GUTTER OR CONCRETE BARRIER CURB WITH EXISTING ASPHALT PAVEMENT AT THE LIP OF EXISTING CURB. CONTRACTOR SHALL FIELD VERIFY ELEVATIONS AND LOCATION PRIOR TO CONSTRUCTION.
17. MATCH EXISTING TOP BACK OF CURB WITH TOP OF CONCRETE ELEVATION. AND SLOPE AT 2% UP MAXIMUM.
18. NEW CONCRETE HEADER CURB. SEE DETAIL SHEET C–501.
19. EXISTING POWER POLE TO REMAIN.
20. NEW TRASH ENCLOSURE. SEE ARCHITECTURAL PLANS FOR DETAILS.
21. NEW ASPHALT OVERLAY. SEE DETAIL SHEET C–501.
22. RAISE EXISTING UTILITY VAULT TO GRADE.
23. EXISTING ANCHOR TO REMAIN.
24. MATCH NEW ASPHALT WITH TOP OF NEW ASPHALT IN ALLEY. CONTRACTOR TO FIELD VERIFY ELEVATION PRIOR TO CONSTRUCTION.
25. NEW STANDARD CURB AND GUTTER. AS PER COA STD. DWG. 2415A.
26. SEE PUBLIC WORK ORDER PLANS FOR WORK IN THE CITY RIGHT OF WAY.
27. NEW 24" WIDE SIDEWALK CULVERT WITH STEEL PLATE TOP. (FIELD VERIFY ELEVATIONS PRIOR TO CONSTRUCTION) INV. SLOPE AT 2% MIN. AS PER C.O.A. STANDARD DETAIL 2236.

SCALE: 1"=10'
CONTOUR INTERVAL = 1'

A1 GRADING AND DRAINAGE PLAN
SCALE: 1" = 10'

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1	7–20–17.	REVISED PER COA COMMENTS.

ISSUE: PERMIT SET

TMOBILE STORE

6015 4th St. NW
Albuquerque, NM

DATE: 5/31/17

SHEET TITLE:
GRADING AND DRAINAGE PLAN

C-101

VERLYN A. MILLER JR. NEW MEXICO 14507 REGISTERED PROFESSIONAL ENGINEER 7/26/17

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