

CITY OF ALBUQUERQUE



March 4, 2015

Jeff Wooten, PE
Wooten Engineering, Inc.
3708 Saint Andrews SE
Rio Rancho, NM 87124

RE: **Applebee's
Grading Plan
Engineer's Stamp Date 2-27-2015 (File: K09-D038)**

Dear Mr. Wooten:

Based upon the information provided in your submittal received 2-27-15, the above referenced Grading Plan cannot be approved until the following comments are addressed:

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

- 1) For 98th Street, label curb and gutter flowline and top of curb elevations. Label sidewalk elevations to show that the subject site is draining to the street. Also, show and label all proposed inlets on the grading plan along with grate elevations.
- 2) On the Grading Plan, for the on-site drainage system, label the flow that each of the pipe runs is conveying. Provide capacity calculations for both the on-site storm drainage pipes and the inlets.
- 3) In your write-up on the Drainage Calculations sheet, include discussion of off-site flows. Also, mention how the grading of this site will not negatively impact adjacent sites.
- 4) The curb cuts need to be shown in the low spots for the water harvesting areas in between the parking spaces. It makes more sense to have curb cuts where FL Elevation 29.00 is shown for the island instead of upstream close to where Section D-D is shown. Provide capacity calculations for the curb cuts. (You have called out more curb cuts on the Traffic Circulation Plan, but all of these curb cuts need to be called out on the Grading Plan since they influence drainage.)
- 5) All water harvesting area should be labeled as such, and conceptual flow arrows and spot elevations should support the concept. Include discussion of the various individual water harvesting areas in the report write-up. Why is over 15,000 square feet cubic feet of volume being provided if only 3,091 cubic feet is required? Also, due to the amount of impervious area for the Applebee's building alone, provide a water harvesting area north of this building.

6) An elevation of 29.50 is provided next to the inlet on the southwest corner of the site which is lower than the inlet grate. Is this a water harvesting area? If so, label it as such.

7) Show proposed pad height for future building on Tract 3.

8) As per the DPM for restaurants, it is required to have a grease trap that discharges to the sanitary sewerline. (This will be required for the dumpsters for Applebee's.)

9) It will be required to submit the construction work within the COA right-of-way through the DRC Process.

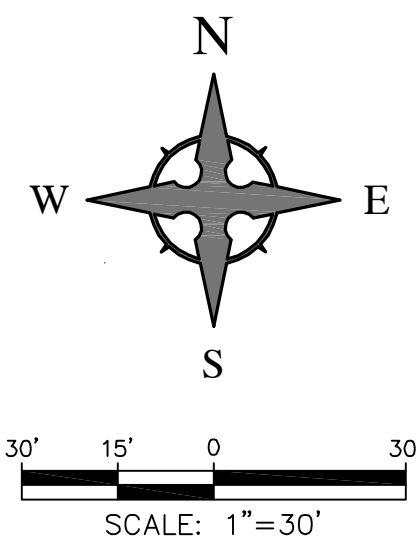
If you have any questions, you can contact me at 924-3924.

Sincerely,



Jeanne Wolfenbarger, P.E.
Senior Engineer, Planning Dept.
Development Review Services

Orig: Drainage file
c.pdf Addressed via Email



CAUTION - NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

Jack-In-The-Box
Tract 1-B-2,
Unit A, Row 2
Town of Atrisco Grant
(07/29/11, 11C-74)

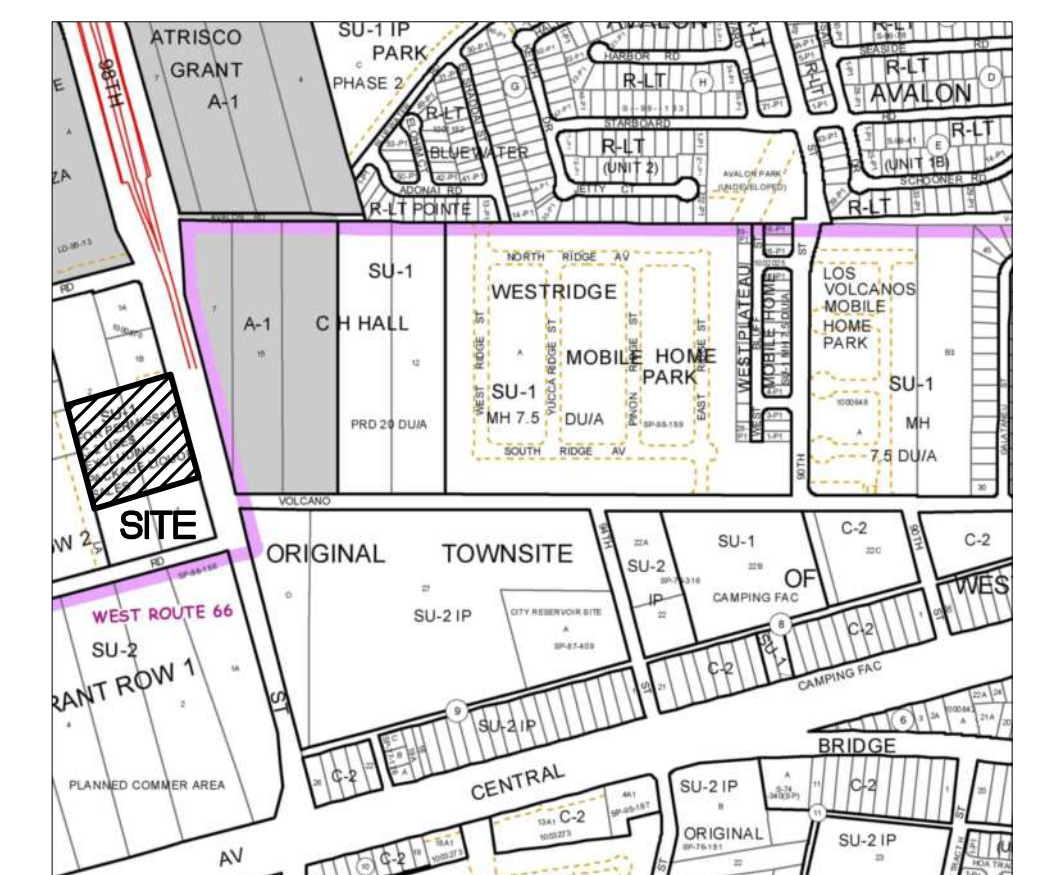
Note: Reference Utility
Plan for Service Con-
nections to be installed
Under Retaining Wall.

Note: All Work Within
98th Street R/W to be
Constructed by Separate
Work Order. Ref. DRC
Plans.

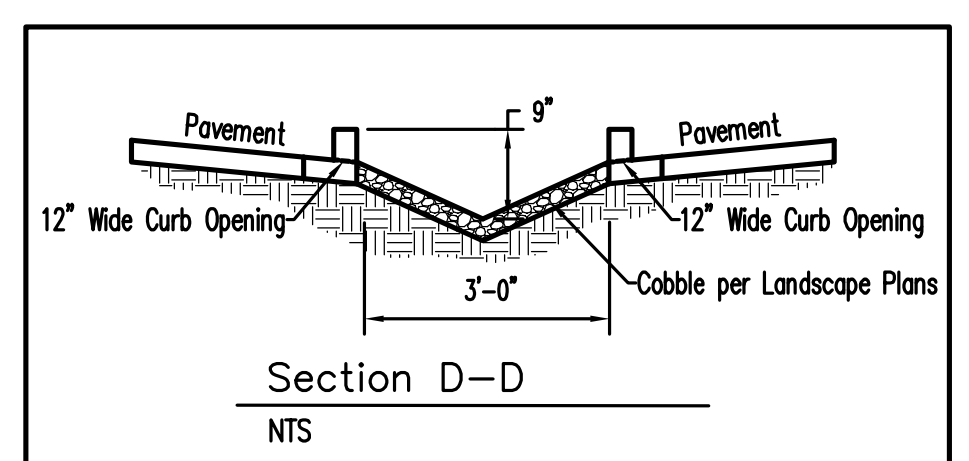
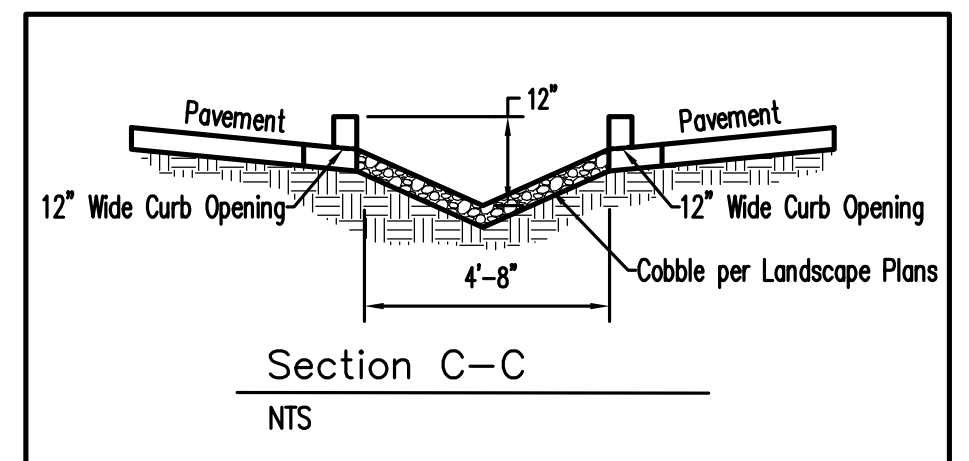
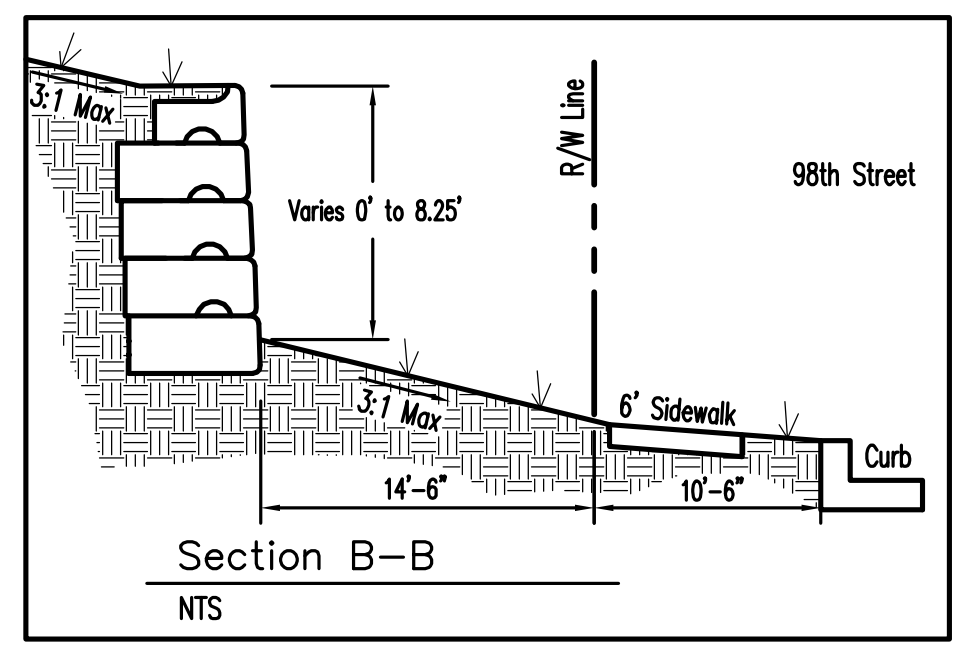
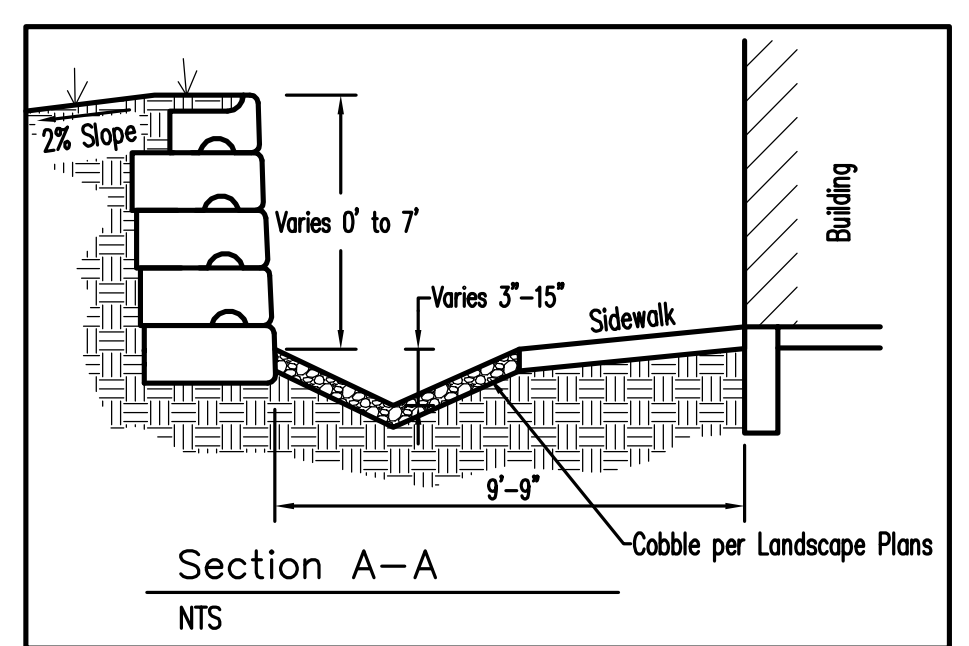
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98th Street R/W to be
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LEGEND

- 27.8 FLOW ARROW
- FL27.8 PROPOSED TOP OF GRADE/PVMT ELEVATIONS
- TC27.8 PROPOSED FLOW LINE/GUTTER ELEVATIONS
- PROPOSED TOP OF CURB ELEVATIONS
- 515 EXISTING CONTOUR
- 515 PROPOSED CONTOUR
- EXISTING STORM DRAIN
- FLOW LINE
- RIDGE LINE



VICINITY MAP - Zone Atlas K-9



DSA
Darren Sowell
ARCHITECTS

4700 Lincoln N.E., Suite 111
Albuquerque, N.M. 87109
Phone: (505) 342-6200
Fax: (505) 342-6201

project title

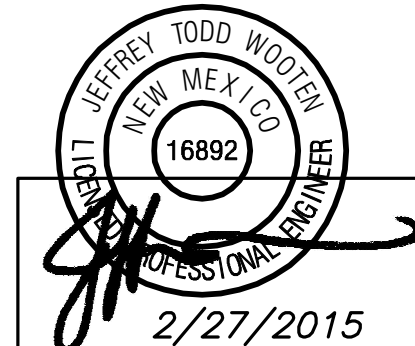
Applebee's
XXY 98TH STREET
ALBUQUERQUE, NEW MEXICO

project number
1420

drawing issuance
PERMIT SET 02.27.2015

drawing revision:
No. Description Date:

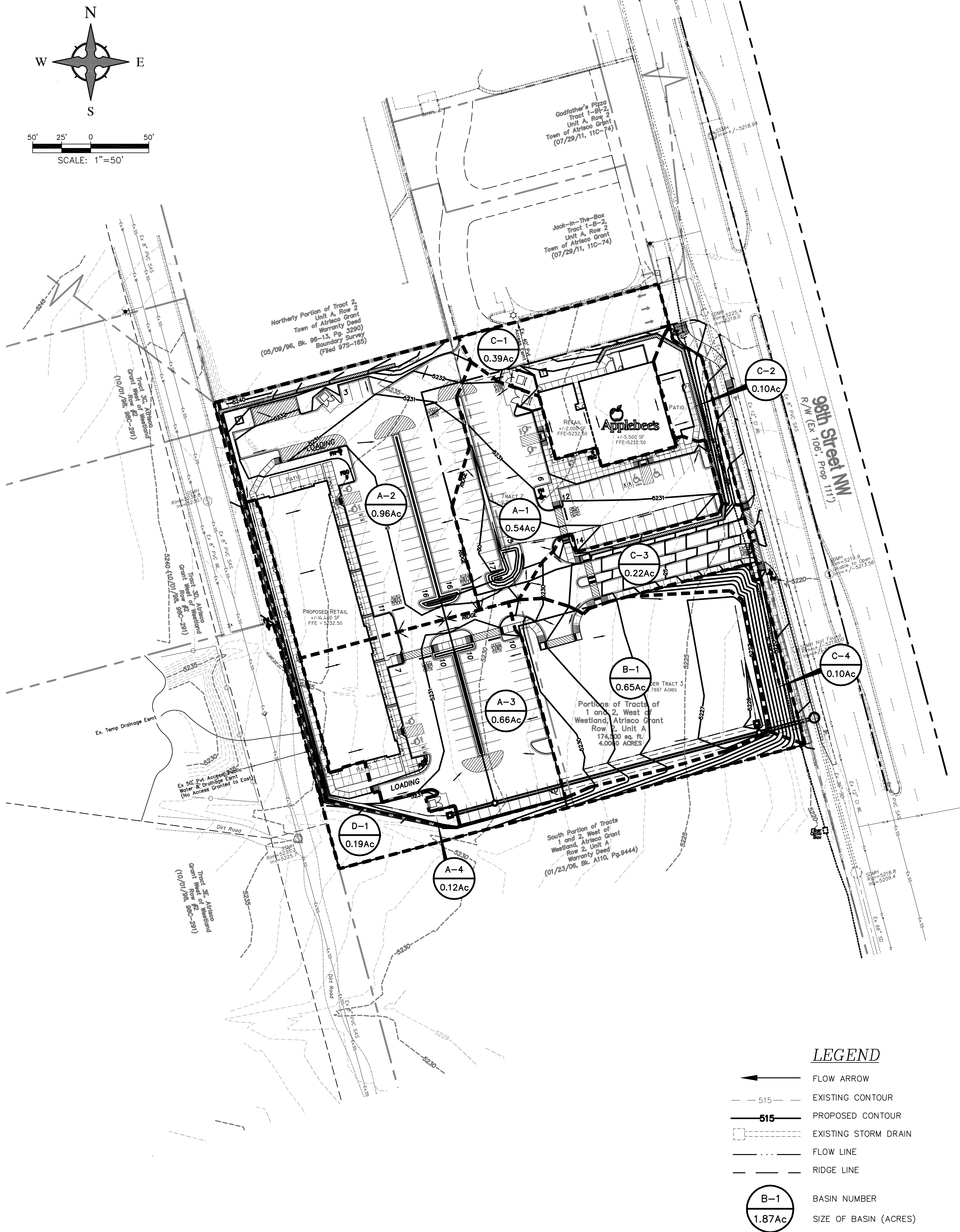
professional seal



drawing title
Grading Plan

drawing number
C2

Wooten Engineering
4700 Lincoln NE, Suite 111
Albuquerque, NM 87109
Ph: 505.980.3560



DRAINAGE MANAGEMENT PLAN

INTRODUCTION

The purpose of this submittal is to provide a final drainage management plan for 98th Street Plaza, located at the NWQ of 98th St and Volcano Rd in Albuquerque, NM.. The site contains approximately 3.93 acres.

EXISTING HYDROLOGIC CONDITIONS

The site is currently vacant and drains via surface flow from west to east into a swale/bar ditch along 98th St. The flow is then conveyed south into existing drop inlets at 98th/Volcano, which then flows in a Storm Drain System and into the Tierra Bayita Phase IIIC Ponds located at the SWQ of 98th/Volcano. The ponds were constructed via City Project Number 4076.92. Per the Tierra Bayita Drainage Facilities DMP by Greiner (File No L10/0000 dated Dec 1997), all 3.93 acres of our project is part of Basin 109.10, which is allowed to have a maximum discharge of 4.241 cfs/acre into the storm drain system and Phase IIIC Ponds.

PROPOSED HYDROLOGIC CONDITIONS

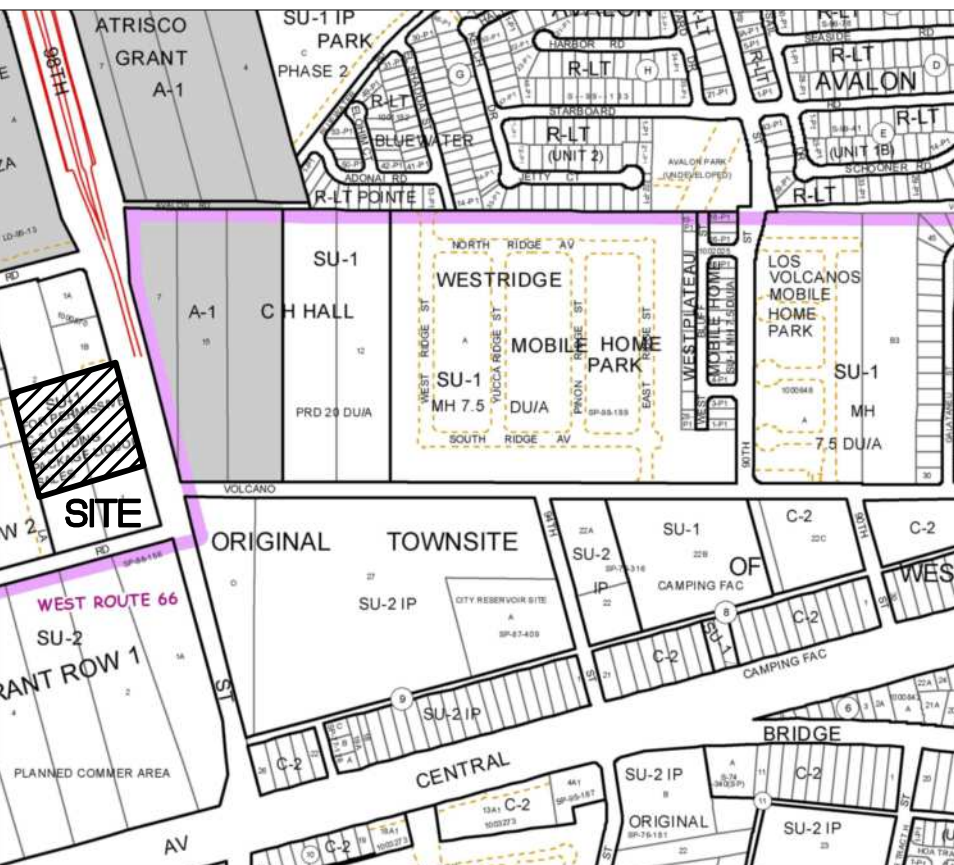
As noted above, our site is allowed to discharge up to 4.241 cfs/acre into the downstream systems. This accounts for the developed flows from our site at a +/-85% pervious land treatment. Each of the three parcels will need to provide water harvesting swales and ponding per the current COA DPM at an effective rate of 0.34" for the impervious area located on site.

FIRST FLUSH CALCULATIONS

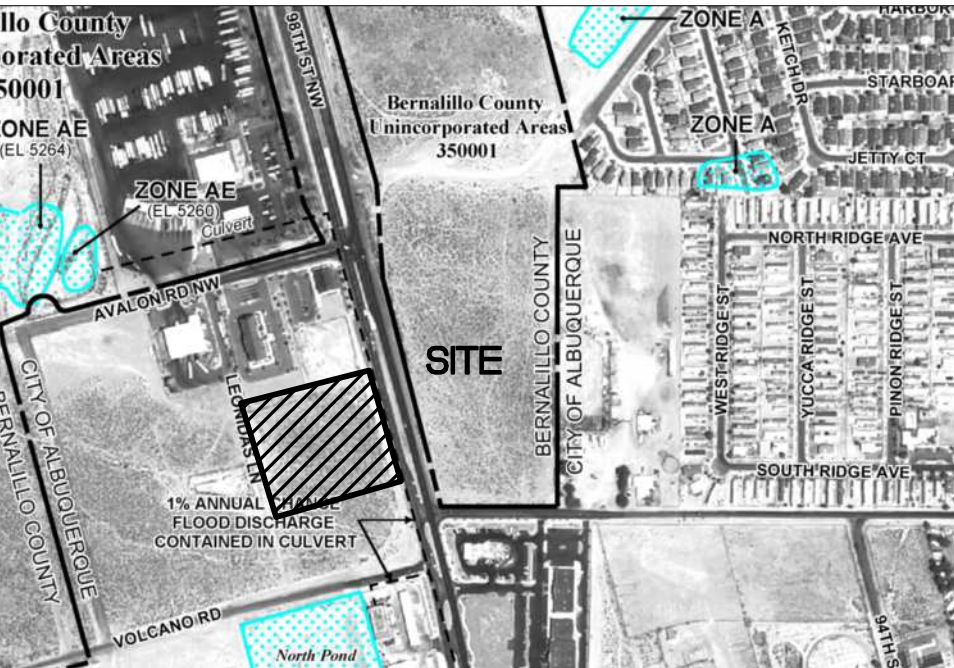
The first flush impervious area is 109,114 SF * 0.34" / 12 = 3,091.56 cubic feet. All of Basins A-1 through A-4 are being routed through Depressed Water Harvesting areas, which equates to a total of 15,078 CF of volume during the 6-Hr Storm. This volume is being routed through the landscaped areas and not directly discharging into the downstream storm drain system.

CONCLUSION

This drainage management plan provides for grading and drainage elements which are capable of safely passing the 100 year storm, does not burden downstream systems, and meet city requirements. The proposed detention pond within Basin B will keep excess drainage flows and volumes from exceeding pre-developed storms. The proposed improvements to the site should not have any negative impacts to facilities downstream. With this submittal, we are requesting building permit approval.



VICINITY MAP - Zone Atlas K-9



FIRM MAP 35001C0328H

Per FIRM Map 35001C0328H, dated August 16, 2012, the site is not located in the Floodplain and determined to be outside the 0.2% chance Annual Floodplain.

Existing 98th St Plaza Drainage Calculations												
This table is based on the COA DPM Section 22.2, Zone: 1												
BASIN	Area (SQ. FT.)	Area (AC.)	Land Treatment Percentages				Q(100) (cfs/ac.)	Q(100) (CFS)	WT E (inches)	V(100) ₃₆₀ (CF)	V(100) ₁₄₄₀ (CF)	V(100) ₁₀₈₀₀ (CF)
A-1	23576.2	0.54	0.0%	0.0%	100.0%	0.0%	2.87	1.55	0.99	1945	1945	1945
A-2	41896.2	0.96	0.0%	0.0%	100.0%	0.0%	2.87	2.76	0.99	3456	3456	3456
A-3	28650.3	0.66	0.0%	0.0%	100.0%	0.0%	2.87	1.89	0.99	2364	2364	2364
A-4	5128.5	0.12	0.0%	0.0%	100.0%	0.0%	2.87	0.34	0.99	423	423	423
B-1	28183.8	0.65	0.0%	0.0%	100.0%	0.0%	2.87	1.86	0.99	2325	2325	2325
C-1	17161.7	0.39	0.0%	0.0%	65.0%	35.0%	3.40	1.34	1.33	1906	2107	2707
C-2	4301.8	0.10	0.0%	0.0%	100.0%	0.0%	2.87	0.28	0.99	355	355	355
C-3	9477.6	0.22	0.0%	0.0%	100.0%	0.0%	2.87	0.62	0.99	782	782	782
C-4	4390.9	0.10	0.0%	0.0%	100.0%	0.0%	2.87	0.29	0.99	362	362	362
D-1	8459	0.19	0.0%	0.0%	100.0%	0.0%	2.87	0.56	0.99	698	698	698
TOTAL	171226	3.93						11.49		14617	14817	15418

Proposed 98th St Plaza Drainage Calculations												
Ultimate Development Conditions Basin Data Table												
This table is based on the COA DPM Section 22.2, Zone: 1												
BASIN	Area (SQ. FT.)	Area (AC.)	Land Treatment Percentages				Q(100) (cfs/ac.)	Q(100) (CFS)	WT E (inches)	V(100) ₃₆₀ (CF)	V(100) ₁₄₄₀ (CF)	V(100) ₁₀₈₀₀ (CF)
A-1	23576.2	0.54	0.0%	0.0%	15.0%	85.0%	4.15	2.24	1.82	3582	4250	6254
A-2	41896.2	0.96	0.0%	0.0%	15.0%	85.0%	4.15	3.99	1.82	6365	7552	11113
A-3	28650.3	0.66	0.0%	0.0%	15.0%	85.0%	4.15	2.73	1.82	4352	5164	7599
A-4	5128.5	0.12	0.0%	0.0%	15.0%	85.0%	4.15	0.49	1.82	779	924	1360
B-1	28183.8	0.65	0.0%	0.0%	15.0%	85.0%	4.15	2.68	1.82	4282	5080	7476
C-1	17161.7	0.39	0.0%	0.0%	15.0%	85.0%	4.15	1.63	1.82	2607	3093	4552
C-2	4301.8	0.10	0.0%	0.0%	15.0%	85.0%	4.15	0.41	1.82	644	775	1141
C-3	9477.6	0.22	0.0%	0.0%	15.0%	85.0%	4.15	0.90	1.82	1440	1708	2514
C-4	4390.9	0.10	0.0%	0.0%	15.0%	85.0%	4.15	0.42	1.82	667	791	1165
D-1	8459	0.19	0.0%	0.0%	100.0%	0.0%	2.87	0.56	0.99	698	698	698
TOTAL	171226	3.93						16.05		25425	30037	43872

IMPERVIOUS AREA CALCULATIONS

PROPOSED SITE CONDITIONS

PERVIOUS AREA: 27,755 SF
IMPERVIOUS AREA: 109,114 SF
TOTAL SITE AREA (TRACTS 1 AND 2): 136,869 SF
% IMPERVIOUS = 79.72%

NOTE: TRACT 3 IS EXCLUDED FROM CALCULATIONS. PRIOR TO DEVELOPMENT, TRACT 3 WILL NEED TO PROVIDE THE REQUIRED CALCULATIONS.

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ARCHITECTS

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Applebees
XXX 98TH STREET
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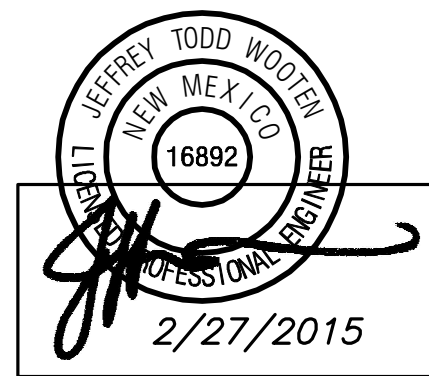
drawing issuance

PERMIT SET 02.27.2015

drawing revisions:

No. Description Date:

professional seal



drawing title

Drainage Calculations

drawing number

C5