

TRAFFIC CIRCULATION LAYOUT APPROVED

4/22/14
Signed _____ Date

ALL WHEELCHAIR RAMPS LOCATED
WITHIN THE PUBLIC RIGHT-OF-WAY
MUST HAVE TRUNCATED CURBS

SITE INFORMATION:

CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT
LOCATIONS AND DIMENSIONS OF EXIT PORTCHES, PRECISE BUILDING
DIMENSIONS, AND EXACT UTILITY ENTRANCE LOCATIONS.

CONTRACTOR TO PROVIDE PARKING LOT STRIPING, FIRELANE AND
HANDICAP STRIPING PER THESE PLANS AND CITY OF ALBUQUERQUE
REQUIREMENTS.

TO PRESERVE THE PAINTING / STRIPING WITHIN PARKING AREAS, DO
NOT APPLY PAINT UNTIL ALL OTHER POTENTIALLY DAMAGING
CONSTRUCTION HAS BEEN COMPLETED.

GRAPHIC SCALE

20 10 0 20

SCALE: 1"=20'

SITE DATA

PROPOSED USAGE: MIXED USR RETAIL AND RESIDENTIAL
LOT AREA: CONTAINING 60,306.32 S.F. (1.16 ACRE).

PARKING CALCULATIONS:

BASED ON THE NORTH 4TH STREET CORRIDOR PLAN

39 DWELING UNITS	X 1.5 SPACES PER UNIT	=	59 SPACES
4,702 SF RETAIL	X 3 SPACES PER 1,000 ST	=	15 SPACES
	SUBTOTAL		74 SPACES
REDUCTION FOR TRANSIT STOP 20%			-14 SPACES

REVISED SUBTOTAL 60 SPACES

PER TABLE 3-5 ON PAGE 37 OF NORTH 4TH CORRIDOR PLAN (60/1.2)

REVISED SUBTOTAL 50 SPACES

TOTAL PARKING REQUIRED: 50 SPACES

TOTAL PARKING PROVIDED INCLUDED HC: (14 COMPACT 24%) 59 SPACES

HC PARKING REQUIRED: 4 SPACES (1 VAN)

HC PARKING PROVIDED: 4 SPACES (2 VAN)

MOTORCYCLE SPACES REQUIRED: 3 SPACES

MOTORCYCLE SPACES PROVIDED: 3 SPACES



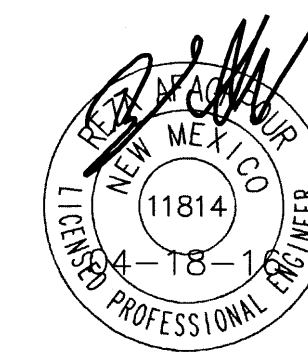
VICINITY MAP:

LEGAL DESCRIPTION:

TRACT 1-A, BLOCK 1, BELMONT PLACE
CONTAINING 60,306.32 S.F. (1.16 ACRE).
ZONING: SU-2 NFMX

KEYED NOTES:

- TRASH AREA LOCATED IN BUILDING PER ARCH PLANS.
- INSTALL MEDIAN CURB/GUTTER (6" HIGH) PER COA STD DWG 2415B.
- CLOSE EXISTING CURB CUT BY INSTALLING STANDARD 8" CURB/GUTTER PER COA STD DWG 2415A.
- INSTALL CURB RAMP WITH DETECTABLE WARNING SURFACE PER DETAILS ON SHEET C6.
- INSTALL PRIVATE CONCRETE SIDEWALK PER COA STD DWG 2430.
- ASPHALT PAVEMENT, SEE PAVING DETAILS ON SHEET C6. FOR MAIN DRIVES, USE HEAVY DUTY PAVEMENT. FOR PARKING SPACES, USE STANDARD DUTY ASPHALT PAVEMENT.
- PROPOSED SITE LIGHTING, SEE MEP PLANS.
- INSTALL 4" WIDE PAINT STRIPES AT 45° ANGLE TO PARKING STRIPES, SPACES AT 1'-6" (WHITE PAINT IN PARKING LOT, BLUE PAINT IN ACCESSIBLE PARKING AREAS). TWO COATS MINIMUM.
- PAINTED WHEELCHAIR SYMBOL (BLUE) TO MEET ADA STANDARDS. TWO COATS MINIMUM.
- INSTALL H/C SIGNAGE PER DETAIL ON DETAIL SHEET. ADD VAN ACCESSIBLE SIGNAGE WHERE NOTED. WHEN A POLE MOUNTED SIGN WILL NOT FIT WITHIN DESIGNATED AREA, SIGN SHALL BE BOLTED TO BUILDING H/C SIGN MUST INCLUDE LANGUAGE PER 66-7-352.4C NMSA 1978 "VIOLATORS ARE SUBJECT TO A FINE AND/OR TOWING".
- INSTALL 4" WIDE PAINT STRIPES (WHITE) FOR ALL PARKING MINIMUM TWO COATS.
- INSTALL "STOP" SIGN (R1-1-36 PER MUTCD STDS). SIGN BASE PER DETAIL ON DETAIL SHEET.
- PROPOSED PERIMETER FENCING PER ARCHITECTURAL DETAILS.
- PAINT WORDS "NO PARKING" WITH LETTERS AT LEAST ONE FOOT HIGH AND 2 INCHES WIDE. TWO COATS MINIMUM.
- INSTALL 12" CURB OPENING AT EVERY PARKING SPACE FOR DRAINAGE INTO PONDING AREA.
- INSTALL BIKE RACK PER DETAIL SHEET. SEVEN (7) SPACES PER RACK.
- MOTORCYCLE PARKING, ADD PAINT LABEL PER COA STDS. TWO COATS MINIMUM.
- INSTALL PRE-CAST WHEEL STOP PER DETAIL THIS SHEET.
- STORM DRAIN INLET, PIPE, & RIP-RAP. REF. SHEET C3.
- DRIVEWAY AND VALLEY GUTTER PER COA STD DWG 2426.
- INSTALL 3" WIDE VALLEY GUTTER PER DETAIL SHEET C6.
- INSTALL AUTOMATIC SWINGING GATE SYSTEM PER ARCH. PLANS.
- INSTALL KNOX BOX FOR FIRE DEPARTMENT ACCESS.
- INSTALL 24" CURB OPENING FOR DRAINAGE.
- INSTALL 6" BOLLARD PER DETAIL, SHEET C6.
- TYPE B WHEELCHAIR RAMP PER DETAIL ON SHEET C6.
- PAINT THE WORD "COMPACT" IN SPACES. MIN 8" TALL. COLOR: WHITE. 2 COATS MIN.
- INSTALL 6" WIDE PUBLIC CONCRETE SIDEWALK PER COA STD DWG 2430.
- 13'X130' CLEAR SIGHT TRIANGLE. LANDSCAPING & SIGNAGE SHALL NOT INTERFERE WITH CLEAR SIGHT REQUIREMENTS. THEREFORE, SIGNS, TREES, AND SHRUBS BETWEEN 3 AND 8 FEET TALL (AS MEASURED FROM GUTTER PAN) WILL NOT BE ACCEPTABLE IN THIS AREA.
- DRIVEWAY AND VALLEY GUTTER PER COA STD DWG 2425.
- REMOVE EXISTING SIDEWALK AND REPLACE WITH 4' WIDE CONCRETE SIDEWALK PER COA STD DWG 2430.
- CLOSE EXISTING CURB CUT BY INSTALLING STANDARD 8" CURB/GUTTER PER COA STD DWG 2415A WITH PHASE II CONSTRUCTION.
- LIMIT OF ASPHALT PAVEMENT.
- LANDSCAPING AREA.



REZA AFAGHPOUR
P.E. #11814

LAST REVISION: 04-18-15

SBS CONSTRUCTION AND ENGINEERING, LLC

10209 SNOWFLAKE CT., NW
ALBUQUERQUE, NEW MEXICO 87114
(505)804-5013

COMMERCIAL & APARTMENT BUILDING 4419 4TH ST., NW., ALBUQUERQUE, NM 87107 TRAFFIC CIRCULATION LAYOUT

DRAWING:	DRAWN BY:	DATE:	SHEET #
201601-ST.DWG	SH-B	04-11-2016	C1 OF 6

Public Infrastructure shown on these plans for information only and not part of approval. Separate DRC permit approval and Work Order required.

SITE INFORMATION

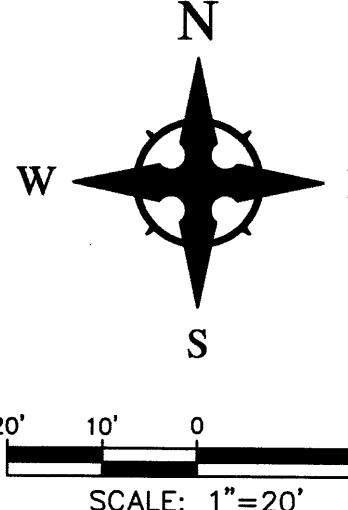
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CAUTION - NOTICE TO CONTRACTOR

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 NEW MEXICO ONE CALL (811) 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.



SITE DEVELOPMENT DATA	
ZONING	
CURRENT ZONING	SU-2 NFMX
PROPOSED ZONING	NO CHANGE
PROPOSED USE	MIXED USE RETAIL AND RESIDENTIAL
PARKING CALCULATIONS	
BASED ON THE NORTH 4th STREET CORRIDOR PLAN	
PARKING:	
39 DWELLING UNITS X 1.5 SPACES PER UNIT = 59 SPACES	
4,702 SF RETAIL X 3 SPACES PER 1,000 SF = 15 SPACES	
SUBTOTAL = 74 SPACES	
REDUCTION FOR TRANSIT STOP 20%	
REVISED SUBTOTAL = 60 SPACES	
PER TABLE 3-5 ON PAGE 37 OF NORTH 4th CORRIDOR PLAN (60/1.2) = 50 SPACES	
OFF STREET PARKING PROVIDED INCLUDING HC = 59 SPACES (14 COMPACT - 24%)	
MOTORCYCLE PARKING PER ZONING CODE = 3	
MOTORCYCLE SPACES PROVIDED = 3	
DISABLED SPACES = 4 (INCLUDED IN TOTAL PARKING COUNT)	



VICINITY MAP Zone Atlas G-14
NTS

Note: Contractor shall provide the necessary traffic control and pull necessary permits when doing any work in Public R/W.

KEYED NOTES

- TRASH AREA LOCATED IN BUILDING PER ARCH PLANS. INSTALL 'NO PARKING SIGN' ABOVE DOOR.
- INSTALL MEDIAN CURB/GUTTER (6" HIGH) PER COA STD DWG 2415B.
- CLOSE EXISTING CURB CUT BY INSTALLING STANDARD 8" CURB/GUTTER PER COA STD DWG 2415A (PUBLIC RIGHT-OF-WAY ONLY). BY SEPARATE WORK ORDER.
- INSTALL CURB RAMP WITH DETECTABLE WARNING SURFACE PER DETAILS ON SHEET C6. RAMP WITHIN PUBLIC RIGHT-OF-WAY BY SEPARATE WORK ORDER.
- INSTALL PRIVATE CONCRETE SIDEWALK PER COA STD DWG 2430.
- ASPHALT PAVEMENT, SEE PAVING DETAILS ON SHEET C6. FOR MAIN DRIVES, USE HEAVY DUTY PAVEMENT. FOR PARKING SPACES, USE STANDARD DUTY ASPHALT PAVEMENT.
- PROPOSED SITE LIGHTING, SEE MEP PLANS.
- INSTALL 4" WIDE PAINT STRIPES AT 45° ANGLE TO PARKING STRIPES, SPACED AT 1'-6" (WHITE PAINT IN PARKING LOT, BLUE PAINT IN ACCESSIBLE PARKING AREAS). TWO COATS MINIMUM.
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- DRIVEWAY AND VALLEY GUTTER PER COA STD DWG 2426 BY SEPARATE WORK ORDER.
- INSTALL 3" WIDE VALLEY GUTTER PER DETAIL, SHEET C6.
- INSTALL AUTOMATIC SWINGING GATE SYSTEM PER ARCH. PLANS.
- INSTALL KNOX BOX FOR FIRE DEPARTMENT ACCESS.
- INSTALL 24" CURB OPENING FOR DRAINAGE.
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- INSTALL PUBLIC CONCRETE SIDEWALK PER COA STD DWG 2430 BY SEPARATE WORK ORDER.
- 13'x130' CLEAR SIGHT TRIANGLE. LANDSCAPING & SIGNAGE SHALL NOT INTERFERE WITH CLEAR SIGHT REQUIREMENTS. THEREFORE, SIGNS, WALLS, TREES, AND SHRUBS BETWEEN 3 AND 8 FEET TALL (AS MEASURED FROM THE GUTTER PAN) WILL NOT BE ACCEPTABLE IN THIS AREA.

No	Revision	Item	Date
SCOTT C. ANDERSON & associates architects 7024 2nd Avenue NW Albuquerque, NM 87120 505.401.7575			
COMMERCIAL & APARTMENT BUILDING PHASE 1 4419 4th ST NW ALBUQUERQUE, NM 87107			
DRAWING TITLE Traffic Circulation Layout			
DESIGNED	JTW	PROJECT NO	WE2014059
DRAWN	JTW	SCALE	See Plan
CHECKED	JTW	DRAWING NO	
REVIEWED	JTW	DATE	12/7/2015
			10/5/15
C1 of 6			



Wooten Engineering
1005 21st Street SE, Suite B1
Rio Rancho, N.M. 87124
Phone: (505) 980-3560

NOTE: ALL WORK WITHIN PUBLIC RIGHT-OF-WAY SHALL BE BY SEPARATE WORK ORDER.

NOTE: ALL WORK WITHIN PUBLIC RIGHT-OF-WAY SHALL BE BY SEPARATE WORK ORDER.

Tract 1-A, Block 1
Belmont Place
50,472 Sq. Ft.
1.16 Acres

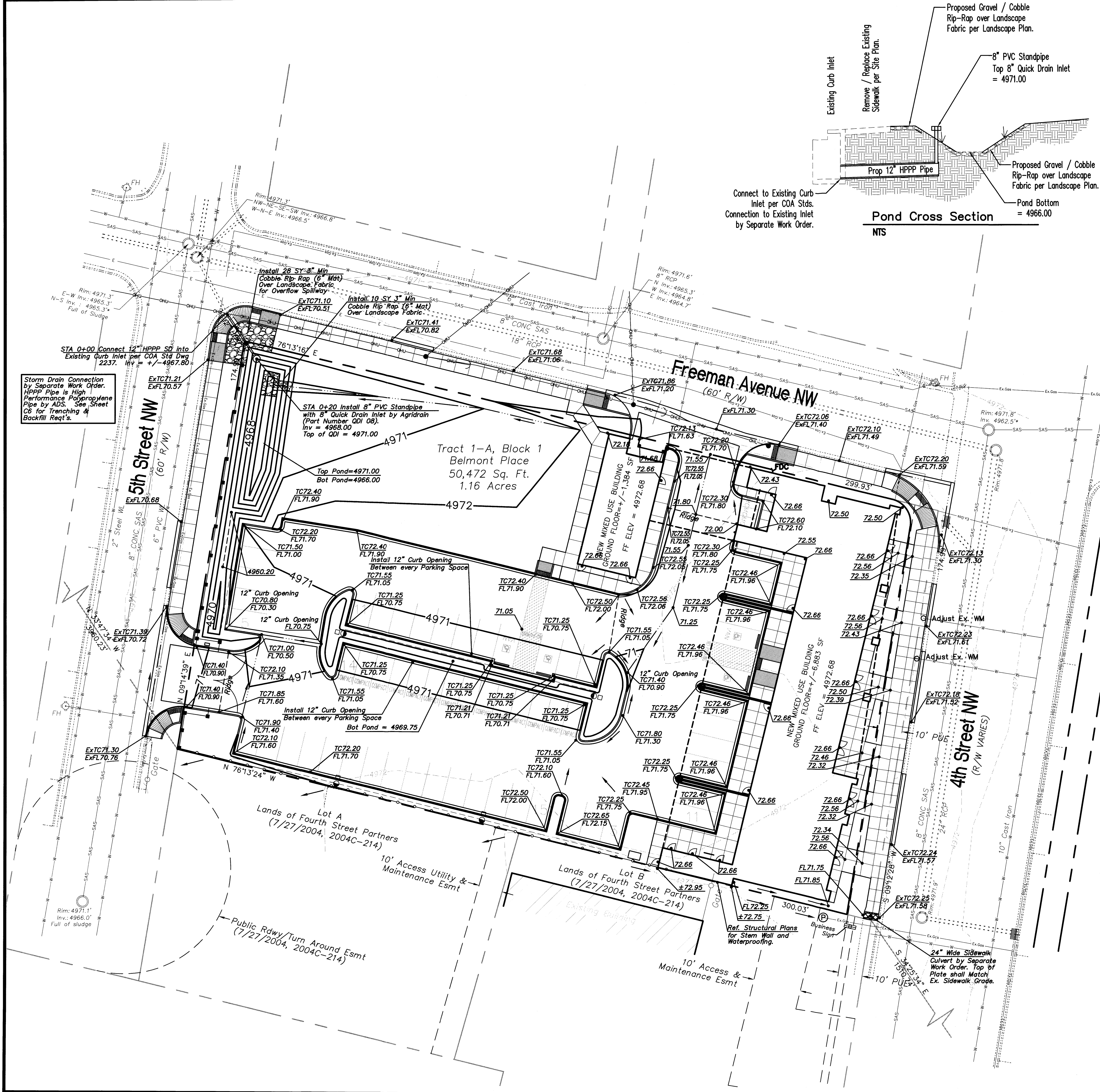
Lot A
Lands of Fourth Street Partners
(7/27/2004, 2004C-214)

Lot B
Lands of Fourth Street Partners
(7/27/2004, 2004C-214)

Public Rdwy/Turn Around Esmt
(7/27/2004, 2004C-214)

10' Access & Maintenance Esmt

10' PUE



CAUTION - NOTICE TO CONTRACTOR

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LEGEND

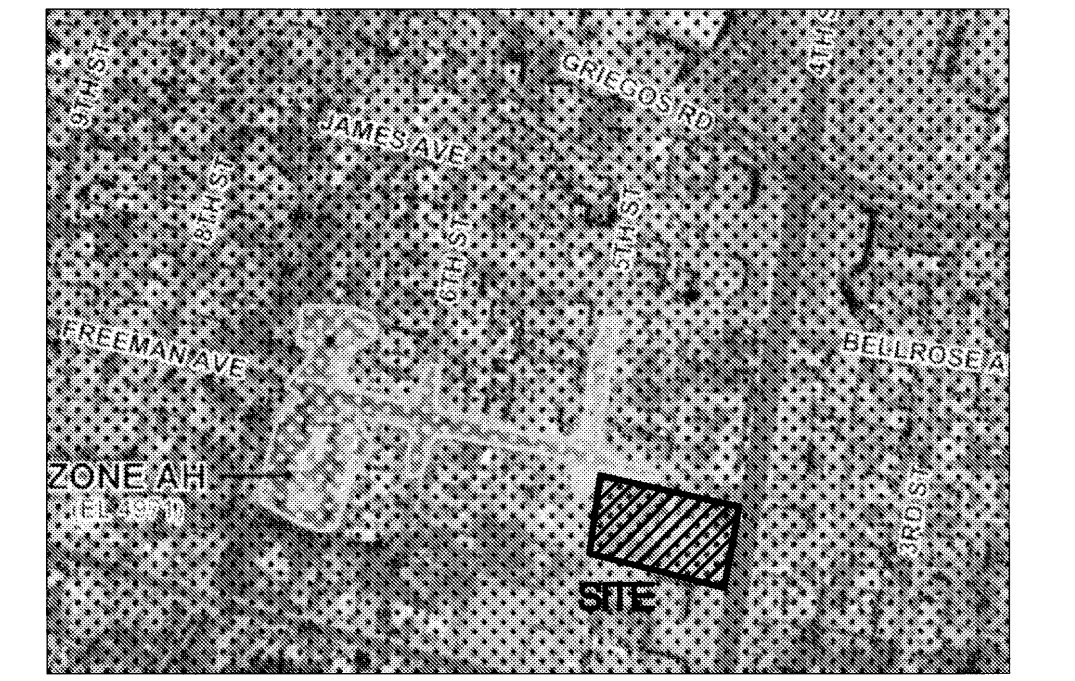
- FLOW ARROW
- PROPOSED TOP OF GRADE/PVMT ELEVATIONS
- PROPOSED FLOW LINE/GUTTER ELEVATIONS
- PROPOSED TOP OF CURB ELEVATIONS
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING STORM DRAIN
- FLOW LINE
- RIDGE LINE

GRADING NOTES

- EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.
- THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST.
- ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "GEOTECHNICAL INVESTIGATION" AS PROVIDED BY THE ARCHITECT OR OWNER. ALL OTHER WORK SHALL, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT, (FIRST PRIORITY) SPECIFICATIONS, AND/OR THE CITY OF ALBUQUERQUE (COA) STANDARD SPECIFICATIONS FOR PUBLIC WORKS (SECOND PRIORITY).
- EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.
- IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES EXCEPT AS REQUIRED BY THIS PLAN.
- THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY. THIS SHOULD BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS OR SILT FENCE AT THE PROPERTY LINES AND WETTING THE SOIL TO PROTECT IT FROM WIND EROSION.
- A DISPOSAL SITE FOR ANY & ALL EXCESS EXCAVATION MATERIAL, AND UNSUITABLE MATERIAL AND/OR A BORROW SITE CONTAINING ACCEPTABLE FILL MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS AND APPROVED BY THE OBSERVER. ALL COSTS INCURRED IN OBTAINING A DISPOSAL OR BORROW SITE AND HAUL TO OR FROM SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.
- PAVING AND ROADWAY GRADES SHALL BE +/- 0.05' FROM PLAN ELEVATIONS. PAD ELEVATION SHALL BE +/- 0.05' FROM BUILDING PLAN ELEVATION.
- ALL PROPOSED CONTOURS AND SPOT ELEVATIONS REFLECT TOP OF PAVEMENT ELEVATIONS IN THE PARKING AREA AND MUST BE ADJUSTED FOR PAVEMENT, MEDIANS, AND ISLANDS.
- VERIFY ALL ELEVATIONS SHOWN ON PLAN FROM BASIS OF ELEVATION CONTROL STATION (IF APPLICABLE) PRIOR TO BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE THE SWPPP DOCUMENT (IF NECESSARY) AND SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA REQUIREMENTS WITH RESPECT TO STORM WATER DISCHARGE.



VICINITY MAP Zone Atlas G-14
Legal Description: Tract 1-A, Block 1, Belmont Place



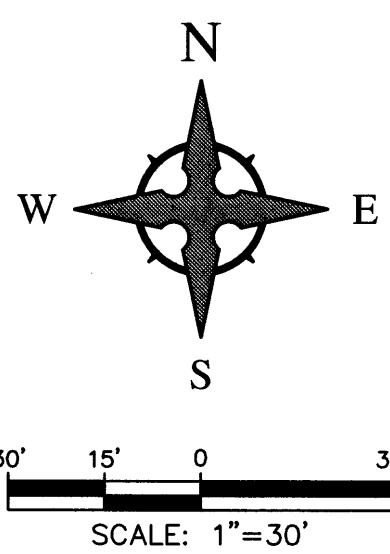
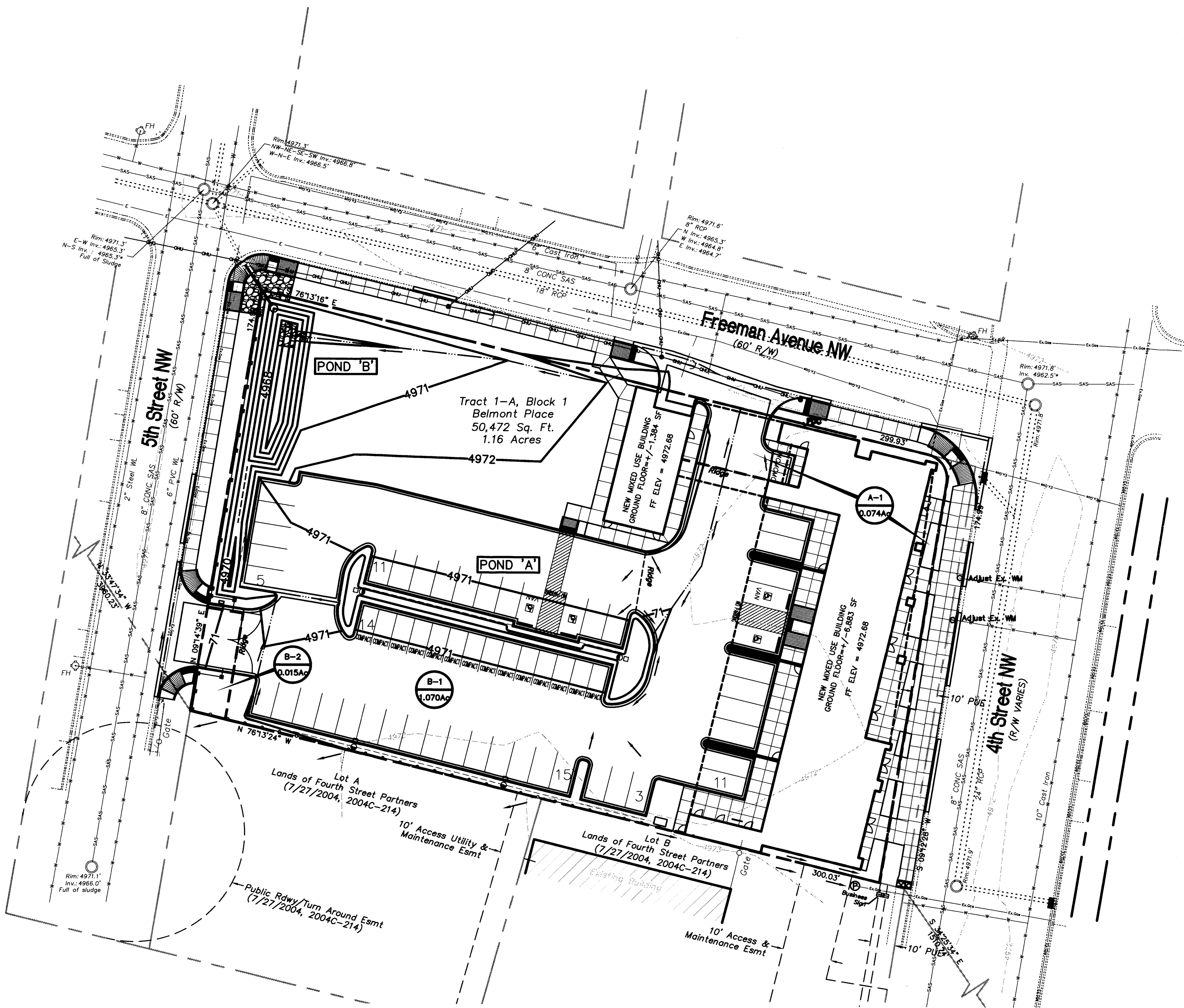
FIRM MAP 35001C0119G
Per Firm Map 35001C0119G, dated September 26, 2008, the site is not located in the Zone X Floodplain and determined to be within the 0.2% chance Annual Floodplain area with depths of less than 1 foot.

- NOTICE TO CONTRACTORS**
- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
 - ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 UPDATE NO. 8.
 - TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NM ONE CALL FOR LOCATION OF EXISTING UTILITIES. (NM ONE CALL = "811")
 - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. 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 THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
 - WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.



Wooten Engineering
1005 21st Street SE, Suite B1
Rio Rancho, N.M. 87124
Phone: (505) 980-3560

No	Revision	Item	Date
<div>SCOTT C. ANDERSON & associates architects Full professional registration State of New Mexico License No. 17120 and/or professional seal 305.401.7575</div>			
COMMERCIAL & APARTMENT BUILDING PHASE 1 4419 4th ST NW ALBUQUERQUE, NM 87107			
DRAWING TITLE			
Grading Plan			
SEAL 	DESIGNED	JTW	PROJECT NO WE2014059
	DRAWN	JTW	SCALE See Plan
	CHECKED	JTW	DRAWING NO
	REVIEWED	JTW	DATE 11/23/2015
DATE 10/5/15			C2 of 6



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DRAINAGE MANAGEMENT PLAN

INTRODUCTION

The purpose of this submittal is to provide a final drainage management plan for the Redevelopment of 4419 4th St NW, located at the SWC of 4th St NW and Freeman Ave NW in Albuquerque, NM. The site contains approximately 1.16 acres. We were unable to locate an existing Drainage Study for the site.

EXISTING HYDROLOGIC CONDITIONS

Although a portion of the site used to be developed as office building, the site was razed in +/-1996 and we are analyzing the site in its current condition. The site is currently undeveloped and sheet flows from east to west into adjacent roadways, Freeman Ave and 5th St. These flows ultimately drain to several existing curb inlets located at the intersection of 5th St/Freeman Ave. This storm drain system flows eastward toward 4th St. Per the Calculations table this sheet, the total existing flow leaving the site is 3.64 cfs during the 100-Yr, 6-Hr Storm Event.

PROPOSED HYDROLOGIC CONDITIONS

The proposed drainage patterns generally remain the same; however, there are a couple of very small drainage basins (A-1 and B-2) that need to be directed directly into adjacent roadways. These two basins equate to a minimal flow rate of 0.40 cfs per the calculations table this sheet. The remaining drainage from the site is calculated to contribute a total of 4.80 cfs during the 100-Yr storm. Since the site is located in the valley area, it is our understanding that the site is limited to a discharge of 2.75 cfs/acre. The subject site is 1.16 acres, so the total allowable discharge from the site is 3.19 cfs. Subtracting Basins A-1 and B-2 (0.40 cfs) which directly discharge into adjacent roadways, the total allowable discharge from the remainder of the site is 2.79 cfs.

In order to effectively reduce the 4.80 cfs discharge from Basin B-1 to the allowable 2.79 cfs rate of discharge, we are implementing a retention pond that is larger than the required first flush rate of 0.34". The proposed ponds 'A' and 'B' provide a total volume of 3,870.50 cubic feet which equates to a total capture of 1.07" of rainfall from the site. This is over 3.0 times that of the required first flush. We are also implementing a stormwater quality outlet (8" Agrigrain outlet) to protect against trash and oils discharging from the site.

FIRST FLUSH CALCULATIONS

Per the First Flush Calculations on this sheet, the total First Flush Volume required to be collected for the site is 1,232 CF. Per the Water Harvesting Pond Calculations table this sheet, we are actually retaining 3,870.50 CF of flow from the site which is just over 3 times the quantity required.

CONCLUSION

This drainage management plan provides for grading and drainage elements which reduce the impact to downstream systems; are capable of safely passing the 100 year storm, do not burden downstream systems, and meet city requirements. In addition, the proposed water harvesting ponds will help treat stormwater runoff per the DPM. The proposed improvements to the site should not have any negative impacts to facilities downstream. With this submittal, we are requesting Drainage Management Plan and Building Permit approval.



VICINITY MAP Zone Atlas G-14
NTS
Legal Description: Tract 1-A, Block 1, Belmont Place



FIRM MAP 35001C0119G
Per FIRM Map 35001C0119G, dated September 26, 2008, the site is not located in the 'Zone X Floodplain' and determined to be within the 0.2% chance Annual Floodplain area with depths of less than 1 foot.

LEGEND

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

IMPERVIOUS AREA CALCULATIONS

PROPOSED SITE CONDITIONS

PERVIOUS AREA: 7,000 SF
IMPERVIOUS AREA: 43,472 SF
TOTAL SITE AREA: 50,472 SF
% IMPERVIOUS = 86.13%

FIRST FLUSH CALCULATION

TOTAL IMPERVIOUS AREA = 43,472 SF
FIRST FLUSH = $43,472 \times 0.34" / 12 = 1,232 \text{ CF}$

WATER HARVESTING POND VOLUME CALCULATIONS

	CONTOUR ELEVATION	AREA (SF)	VOLUME (CF)
POND 'A'	4970.75	1,362 SF	340.50 CF
	4969.75	0 SF	
	TOTAL		
POND 'B'	4970.50	1,864 SF	842 CF
	4970.00	1,504 SF	
	4969.00	1,202 SF	
	4968.00	614 SF	
	4967.00	356 SF	
	4966.00	132 SF	
	TOTAL		3,530 CF
GRAND TOTAL			3,870.50 CF

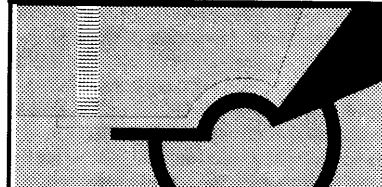
Pre-Developed Drainage Calculations											
This table is based on the COA DPM Section 22.2, Zone: 2											
BASIN	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages				Q(100) (cfs/ac.)	Q(100) (CFS)	WTE (inches)	V(100)360 (CF)	V(100)1440 (CF)
Existing Site	50472	1.159	0.0%	0.0%	100.0%	0.0%	3.14	3.64	1.13	4753	4753
TOTAL	50472	1.159						3.64		4753	4753

Post-Developed Drainage Calculations											
Ultimate Development Conditions Basin Data Table											
This table is based on the COA DPM Section 22.2, Zone: 2											
BASIN	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages				Q(100) (cfs/ac.)	Q(100) (CFS)	WTE (inches)	V(100)360 (CF)	V(100)1440 (CF)
A-1	3205	0.074	0.0%	14.0%	86.0%	4.48	0.33	1.98	529	621	897
B-1	46629	1.070	0.0%	0.0%	14.0%	86.0%	4.48	4.80	1.98	7699	9036
B-2	638	0.015	0.0%	0.0%	14.0%	86.0%	4.48	0.07	1.98	105	124
TOTAL	50472	1.159						5.19		8334	9781

Wooten Engineering

1005 21st Street SE, Suite B1
Rio Rancho, N.M. 87124
Phone: (505) 980-3560

No	Revision	Item	Date



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COMMERCIAL & APARTMENT BUILDING PHASE 1
4419 4th ST NW
ALBUQUERQUE, NM 87107

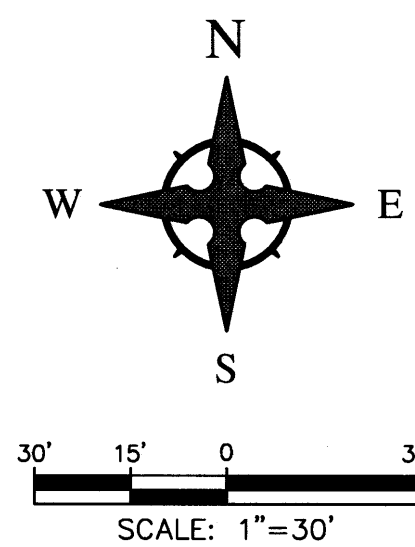
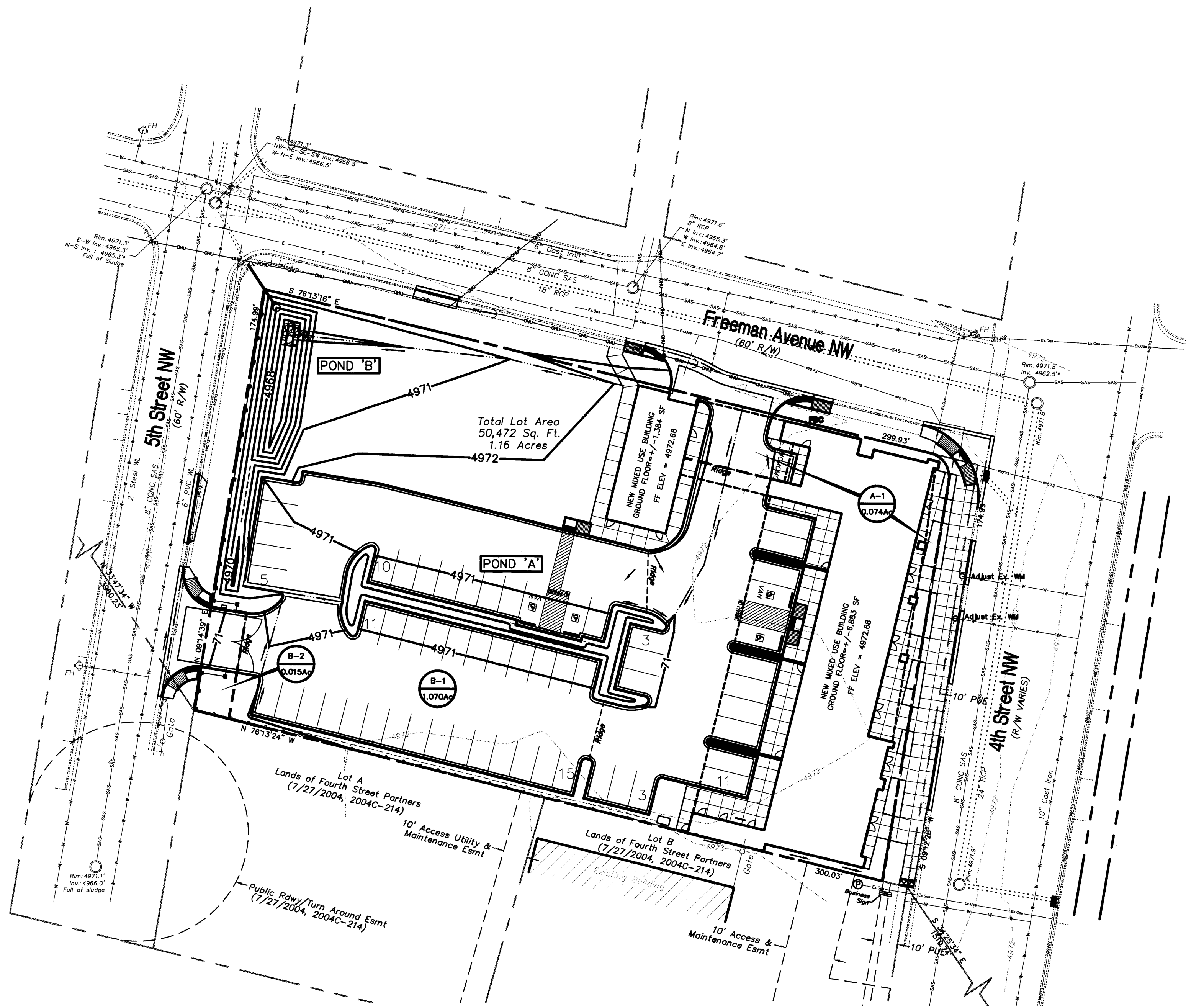
DRAWING TITLE: **Drainage Management Plan**

DESIGNED	JTW	PROJECT NO	WE2014059
DRAWN	JTW	SCALE	See Plan
CHECKED	JTW	DRAWING NO	
REVIEWED	JTW		

11/23/2013 DATE 10/5/15

C3 of **6**





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 NEW MEXICO ONE CALL (811) 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.

DRAINAGE MANAGEMENT PLAN

INTRODUCTION

The purpose of this submittal is to provide a final drainage management plan for the Redevelopment of 4419 4th St NW, located at the SWC of 4th St NW and Freeman Ave NW in Albuquerque, NM. The site contains approximately 1.16 acres. We were unable to locate an existing Drainage Study for the site; however, we did find a file with a complaint from an adjacent property owner such that a prior development intended to impede off-site flows from entering the site. The proposed grading plan will accept any off-site flows from the south as needed.

EXISTING HYDROLOGIC CONDITIONS

Although a portion of the site used to be developed as office building, the site was razed in +/-1996 and we are analyzing the site in its current condition. The site is currently undeveloped and sheet flows from east to west into adjacent roadways, Freeman Ave and 5th St. These flows ultimately drain to several existing curb inlets located at the intersection of 5th St/Freeman Ave. This storm drain system flows eastward toward 4th St. Per the Calculations table this sheet, the total existing flow leaving the site is 3.64 cfs during the 100-Yr, 6-Hr Storm Event.

PROPOSED HYDROLOGIC CONDITIONS

The proposed drainage patterns generally remain the same; however, there are a couple of very small drainage basins (A-1 and B-2) that need to be directed directly into adjacent roadways. These two basins equate to a minimal flow rate of 0.40 cfs per the calculations table this sheet. The remaining drainage from the site is calculated to contribute a total of 4.80 cfs during the 100-Yr storm. Since the site is located in the valley area, it is our understanding that the site is limited to a discharge of 2.75 cfs/acre. The subject site is 1.16 acres, so the total allowable discharge from the site is 3.19 cfs. Subtracting Basins A-1 and B-2 (0.40 cfs) which directly discharge into adjacent roadways, the total allowable discharge from the remainder of the site is 2.79 cfs.

In order to effectively reduce the 4.80 cfs discharge from Basin B-1 to the allowable 2.79 cfs rate of discharge, we are implementing a retention pond that is larger than the required first flush rate of 0.34". The proposed ponds 'A' and 'B' provide a total volume of 3,870.50 cubic feet which equates to a total capture of 1.07" of rainfall from the site. This is over 3.0 times that of the required first flush. We are also implementing a stormwater quality outlet (8" Agrigrain outlet) to protect against trash and oils discharging from the site.

FIRST FLUSH CALCULATIONS

Per the First Flush Calculations on this sheet, the total First Flush Volume required to be collected for the site is 1,232 CF. Per the Water Harvesting Pond Calculations table this sheet, we are actually retaining 3,870.50 CF of flow from the site which is just over 3 times the quantity required.

CONCLUSION

This drainage management plan provides for grading and drainage elements which reduce the impact to downstream systems; are capable of safely passing the 100 year storm, do not burden downstream systems, and meet city requirements. In addition, the proposed water harvesting ponds will help treat stormwater runoff per the DPM. The proposed improvements to the site should not have any negative impacts to facilities downstream. With this submittal, we are requesting Drainage Management Plan and Building Permit approval.



VICINITY MAP Zone Atlas G-14
NTS



FIRM MAP 35001C0119G
Per FIRM Map 35001C0119G, dated September 26, 2008, the site is not located in the "Zone X Floodplain" and determined to be within the 0.2% chance Annual Floodplain area with depths of less than 1 foot.

LEGEND

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

IMPERVIOUS AREA CALCULATIONS

PROPOSED SITE CONDITIONS

PERVIOUS AREA: 7,000 SF
IMPERVIOUS AREA: 43,472 SF
TOTAL SITE AREA: 50,472 SF
% IMPERVIOUS = 86.13%

FIRST FLUSH CALCULATION

TOTAL IMPERVIOUS AREA = 43,472 SF
FIRST FLUSH = $43,472 \cdot 0.34" / 12 = 1,232 \text{ CF}$

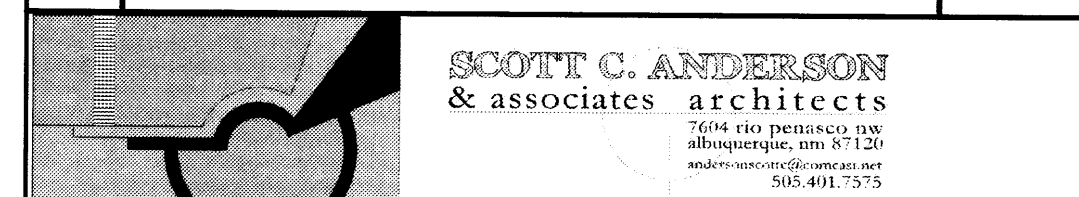
WATER HARVESTING POND VOLUME CALCULATIONS

	CONTOUR ELEVATION	AREA (SF)	VOLUME (CF)
POND 'A'	4970.50	1,362 SF	340.50 CF
	4969.50	0 SF	
	TOTAL		
POND 'B'	4970.50	1,864 SF	842 CF
	4970.00	1,504 SF	
	4969.00	1,202 SF	
	4968.00	614 SF	
	4967.00	356 SF	
	4966.00	132 SF	
	TOTAL		3,530 CF
GRAND TOTAL			3,870.50 CF

Pre-Developed Drainage Calculations										
This table is based on the COA DPM Section 22.2, Zone: 2										
BASIN	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages				Q(100) (cfs/ac.)	Q(100) (CFS)	WTE (inches)	V(100)360 (CF)
Existing Site	50472	1.159	0.0%	0.0%	100.0%	0.0%	3.14	3.64	1.13	4753
TOTAL	50472	1.159						3.64		4753

Post-Developed Drainage Calculations										
Ultimate Development Conditions Basin Data Table										
This table is based on the COA DPM Section 22.2, Zone: 2										
BASIN	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages				Q(100) (cfs/ac.)	Q(100) (CFS)	WTE (inches)	V(100)360 (CF)
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B-2	638	0.015	0.0%	0.0%	14.0%	86.0%	4.48	0.07	1.98	105
TOTAL	50472	1.159						5.19		8334

No	Revision	Item	Date



COMMERCIAL & APARTMENT BUILDING PHASE 1
4419 4th ST NW
ALBUQUERQUE, NM 87107

DRAWING TITLE			
Drainage Management Plan			
SEAL 	DESIGNED	JTW	PROJECT NO WE2014059
	DRAWN	JTW	SCALE See Plan
	CHECKED	JTW	DRAWING NO
	REVIEWED	JTW	DATE 10/5/15
			C4 OF 6

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