

Landfill Gas Survey
Site: Proposed Office/Warehouse Building
5660 Pino Avenue, Albuquerque, NM

Client: Newt & Butch's Roofing
V&A Project No. 05-1-012
No Scale
Figure 4



IBC 2003 CODE ANALYSIS

OCCUPANCY AND USE CLASSIFICATION: = B, OFFICE (TABLE 503)
= S-1, WAREHOUSE (TABLE 503)

TYPE OF CONSTRUCTION: = V-B (TABLE 503)

ALLOWABLE HEIGHT AND BUILDING AREA: = 1 STORY, 9,000 S.F. (TABLE 503)

OFFICE AREA: = 1,273 S.F.
WAREHOUSE AREA: = 4,977 S.F.
TOTAL BUILDING AREA: = 6,250 S.F.
OCCUPANT LOAD (TABLE 1004.1.2): = 1,273 S.F./100 = 12 OCC. (OFFICE)
= 4,977 S.F./500 = 10 OCC. (WAREHOUSE)

FIRE-RESISTANCE RATING REQUIREMENTS: NOT REQUIRED PER SECTION 302.3.1
OCCUPANCY B AND OCCUPANCY S-1: NON-SEPARATED USES

PARKING AND LANDSCAPING CALCULATIONS

ZONE = M-1
GROSS LOT AREA = 38,378 S.F. (.88 ACRES)
NET LOT AREA = 38,378 S.F. - 6,250 S.F. = 32,128 S.F.

LANDSCAPING REQUIRED = 32,128 x 15% = 4,819 S.F.
LANDSCAPE PROVIDED = 4,948 SF

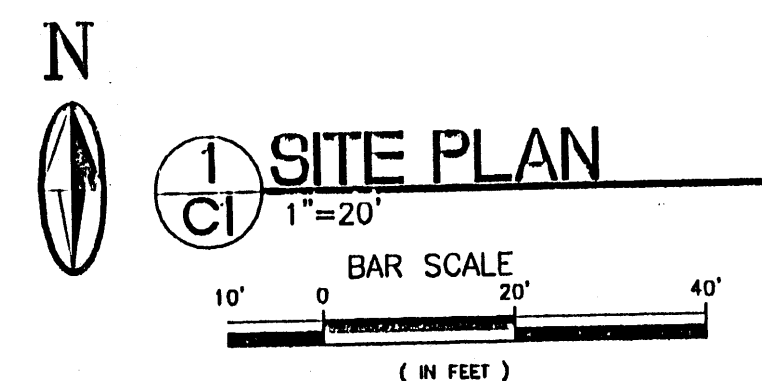
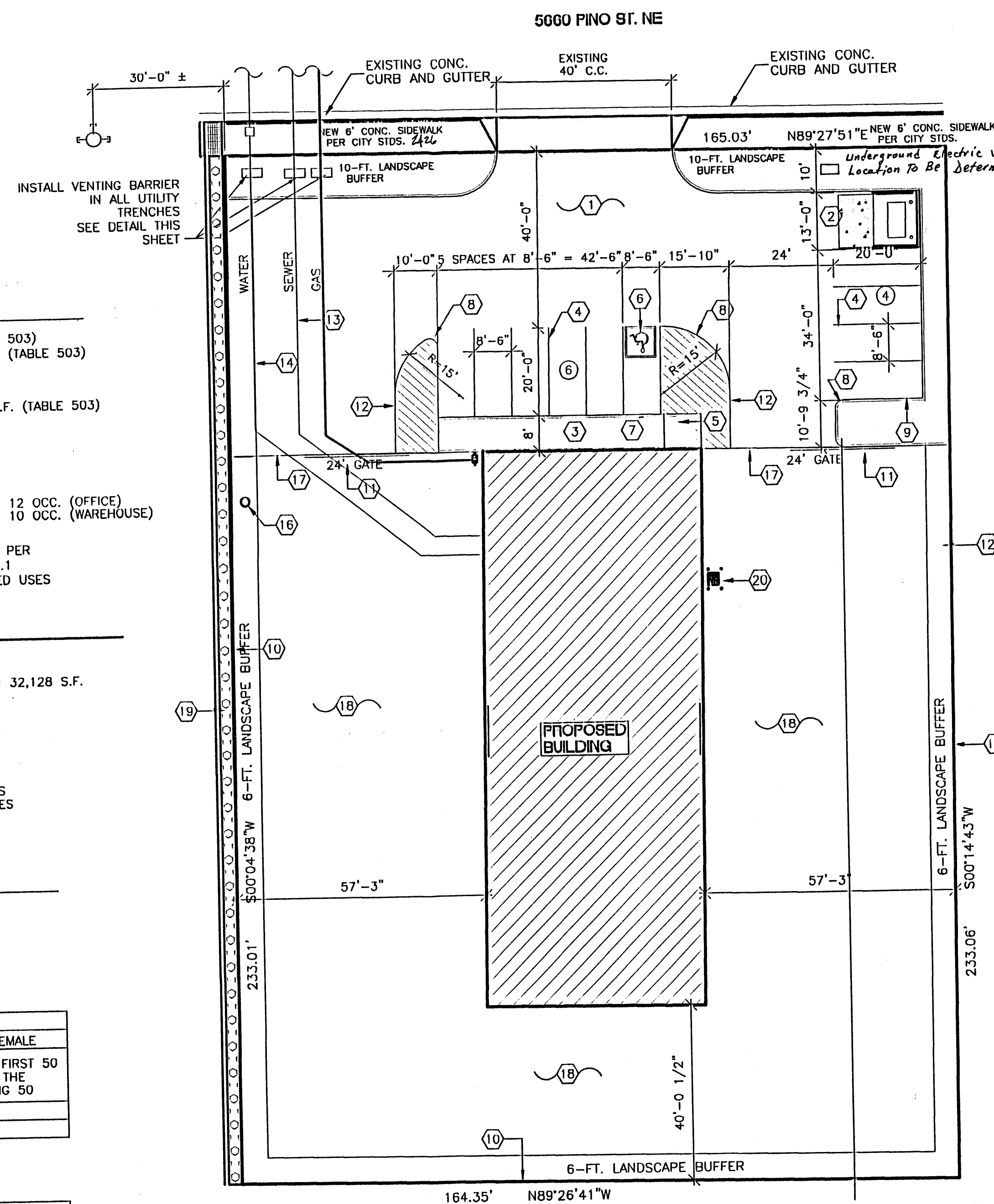
PARKING REQUIRED
OFFICE AREA = 1,273/200 S.F. = 6 SPACES
WAREHOUSE AREA = 4,977/2000 S.F. = 2 SPACES
TOTAL PARKING REQUIRED = 8 SPACES
TOTAL PARKING PROVIDED = 10 SPACES (1 H.C.)

MINIMUM NUMBER OF REQUIRED PLUMBING FACILITIES

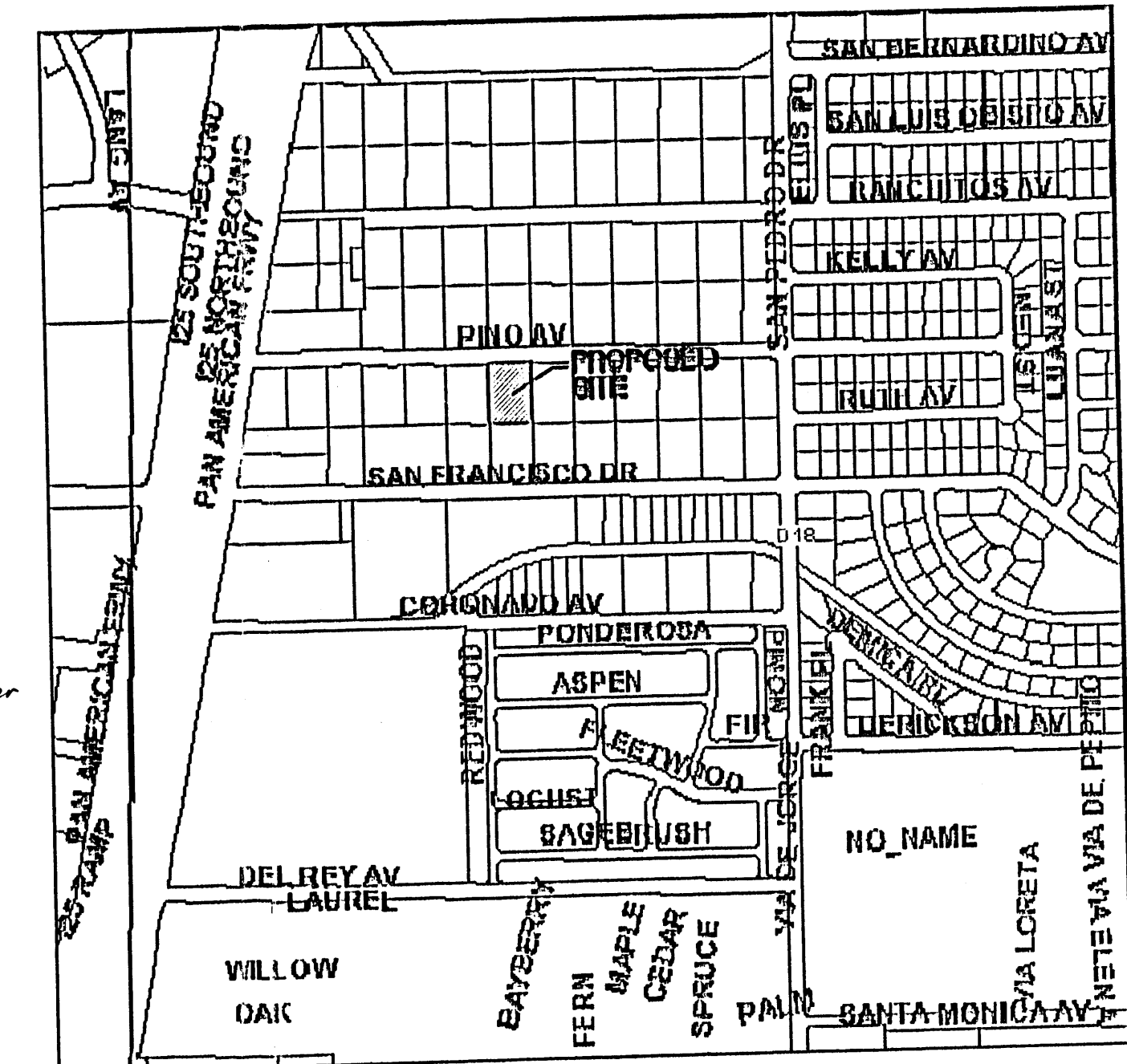
PER IBC 2003, TABLE 2902.1
GROUP B: 12 OCC.
GROUP S-1: 10 OCC.
TOTAL OCCUPANTS: 22 OCC.

PLUMBING FIXTURES REQUIRED			
GROUP B: 1,273 S.F./100 = 12 OCC.			
WATER CLOSET		LAVATORIES	
MALE	FEMALE	MALE	FEMALE
1 PER 25 FOR THE FIRST 50 AND 1 PER 50 FOR THE REMAINDER EXCEEDING 50		1 PER 40 FOR THE FIRST 50 AND 1 PER 80 FOR THE REMAINDER EXCEEDING 50	
DRINKING FOUNTAINS		1 PER 100	
OTHER		1 SERVICE SINK	

PLUMBING FIXTURES PROVIDED			
GROUP B/S-1: 22 OCC.			
WATER CLOSET		LAVATORIES	
MALE	FEMALE	MALE	FEMALE
1 W.C.	1 W.C.	1 LAV.	1 LAV.
DRINKING FOUNTAINS		1 D.F.	
SERVICE SINK		1 SERVICE SINK	



ALVA L. WILSON AND MARTHA K. WILSON
LOT 10, BLOCK 6
TRACT A - UNIT A
NORTH ALBUQUERQUE ACRES
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
84510



LOCATION MAP
ZONE ATLAS MAP NO. D-10-Z

KEYED NOTES

- 3" ASPHALT PAVING OVER 4" BASE COURSE.
- DUMPSTER ON CONC. PAD, SEE DET. 3/C2.
- 6" CONCRETE SIDEWALK, SEE DET. 3/C2.
- PAINTED PARKING STRIPES PER CITY OF ALBU.
- H.C. ACCESSIBLE RAMP W/ PAINTED STRIPES, SEE DET. 8/C2.
- PAINTED H.C. ACCESSIBLE SYMBOL.
- H.C. PARKING SIGNAGE, SEE DET. 5/C2.
- 2' RADIUS TYPICAL.
- 6" CONC. CURB, SEE DET. 2/C2.
- EXISTING 6" HIGH CHAINLINK FENCE.
- NEW 6" HIGH CHAINLINK FENCE W/ 24" GATE.
- PAINTED STRIPES PER CITY OF ALBU.
- 4" SEWER LINE.
- 1 1/2" WATER LINE.
- 1 1/4" GAS LINE.
- EXISTING POWER POLE (F.V.).
- EDGE OF ASPHALT PAVING.
- GRAVEL GROUND COVER.
- EXIST. 3" RIP RAP.
- MECHANICAL UNIT W/ 4" PIPE BOLLARDS.

TRAFFIC CIRCULATION LAYOUT APPROVED

Signed: *[Signature]* Date: 4-20-05

THE SUBJECT PROPERTY IS LOCATED NEAR A FORMER LANDFILL. DUE TO THE SUBJECT PROPERTY BEING NEAR A FORMER LANDFILL, CERTAIN PRECAUTIONARY MEASURES MAY NEED TO BE TAKEN TO ENSURE THE HEALTH AND SAFETY OF THE PUBLIC. RECOMMENDATIONS MADE BY A PROFESSIONAL ENGINEER WITH EXPERTISE IN LANDFILLS AND LANDFILL GAS ISSUES (AS REQUIRED BY THE MOST CURRENT VERSION OF THE INTERIM GUIDELINES FOR DEVELOPMENT WITHIN CITY DESIGNATED LANDFILL BUFFER ZONES) SHALL BE CONSULTED PRIOR TO DEVELOPMENT OF THE SITE.

LANDFILL GAS ASSESSMENT PERFORMED BY VINYARD & ASSOCIATES, ALBUQUERQUE, NM
JOB NUMBER: _____ DATE: _____

SIGNATURE: _____ DATE: _____

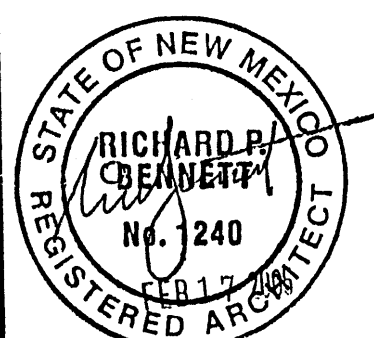
CITY OF ALBUQUERQUE
ENVIRONMENTAL HEALTH DEPARTMENT

SIGNATURE: _____ DATE: _____

RECEIVED
NOV 28 2005
HYDROLOGY SECTION

PINO STREET OFFICE/WAREHOUSE
ALBUQUERQUE, NEW MEXICO
PROJECT #0455

REVISION DATE



1104 East Avenue SW - Albuquerque, New Mexico 87102
(505) 242-1859 - Fax (505) 242-5630

DATE
12-14-04

SHEET NUMBER

C-1

DRAINAGE CALCULATIONS:

EXISTING CONDITIONS:

The site is located on Lot 10, Block 5, Tract A, Unit A, North Albuquerque Acres. The site is on the South side of Pino Avenue, NE, which is paved with standard curb and gutter. The lot directly to the West, Lot 9, is developed and has a drainage plan on File, Project D18 / D45. Lot 9 is developed with drainage channels on the East and West boundaries. The channel on the East boundary is for the purpose of intercepting off-site flow, the majority of which is generated on Lot 10.

PROPOSED CONDITIONS:

It is proposed to construct a metal building, asphalt paving and landscaping on the site as shown. It is proposed to discharge all site drainage into the drainage channel along the east side of Lot 9. The two lots have the same owner. The previous drainage plan shows that the channel was designed to carry a flow from Lots 10 & 11 of 8.1 cfs, assuming both lots are fully developed at 10% Treatment B and 90% Treatment D. (See OFF-SITE CHANNEL, Worksheet for Rectangular Channel)

DRAINAGE CRITERIA:

The calculations shown on this plan were prepared in accordance with Section 22.2, Hydrology, of the Development Process Manual, Volume 2, Design Criteria, for the City of Albuquerque in cooperation with Bernalillo County, New Mexico and the Metropolitan Arroyo Flood Control Authority, January, 1993.

PRECIPITATION ZONE:

The site is between the Rio Grande River and San Mateo Blvd. and is, therefore, in Precipitation Zone 2.

LAND TREATMENT AREAS, ETC.:

The peak discharge per acre and excess precipitation are shown for the four land treatments in Zone 2 in the table below, and the values shown are from the City of Albuquerque D.P.M. Also shown are the existing and proposed land treatment areas.

LAND TREAT.	100-yr.	10-yr.	100-yr.	10-yr.	E (in)	Existing Site Areas	Developed Site Areas
	q(cfs/acre)		%	Sq. Ft.	%	Sq. Ft.	Acres
A	1.56	0.38	0.53	0.13	0.0	0.0000	0.0
B	2.28	0.95	0.78	0.28	0.0	0.0000	8.7
C	3.14	1.71	1.13	0.52	100.0	38,377	47.9
D	4.70	3.14	2.12	1.34	0.0	0.0000	43.4
Totals			100.0	38,377	0.8810	100.0	38,377

PEAK DISCHARGE:

EXISTING CONDITIONS:

Q100 = 0.8810 * 3.14 = 2.77 cfs
Q10 = 0.8810 * 1.71 = 1.51 cfs

DEVELOPED CONDITIONS:

Q100 = 0.0765 * 2.28 + 0.4224 * 3.14 + 0.3821 * 4.70 = 3.30 cfs
Q10 = 0.0765 * 0.95 + 0.4224 * 1.71 + 0.3821 * 3.14 = 1.99 cfs

VOLUME, 100-YEAR AND 10-YEAR, 6-HOUR:

EXISTING CONDITIONS:

V100 = (38,377 * 1.13) / 12 = 3,614 cf
V10 = (38,377 * 0.52) / 12 = 1,663 cf

DEVELOPED CONDITIONS:

V100 = (3,334 * 0.78 + 18,398 * 1.13 + 16,645 * 2.12) / 12 = 4,890 cf
V10 = (3,334 * 0.28 + 18,398 * 0.52 + 16,645 * 1.34) / 12 = 2,734 cf

SUMMARY OF ON-SITE VOLUMES AND DISCH. RATES:

	V100(CF)	V10(CF)	Q100(CFS)	Q10(CFS)
DEVELOPED	4,890	2,740	3.30	1.99
EXISTING	3,614	1,663	2.77	1.51
INCREASE	1,276	1,077	0.53	0.48

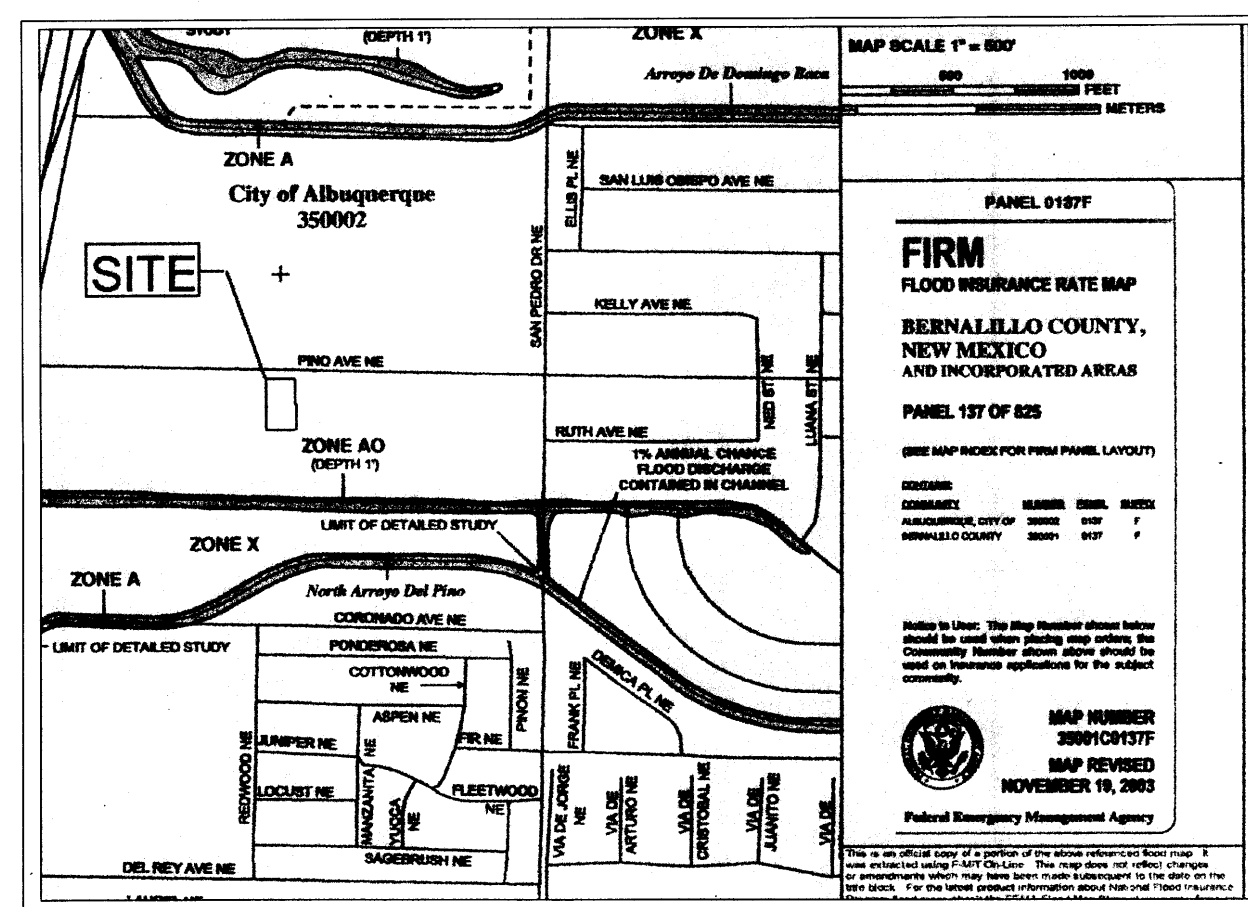
OFF-SITE FLOW:

There is no possibility of off-site flow from the South because there is a berm in that area. The lot to the East will generate off-site flow as discussed above. The lot is undeveloped and is the same size as the site. Therefore, the runoff generated would be the same as the undeveloped runoff for this site. Q = 2.77 cfs

EROSION CONTROL NOTES:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE FOLLOWING:

- NO SEDIMENT-BEARING WATER SHALL BE ALLOWED TO DISCHARGE FROM THE SITE DURING CONSTRUCTION.
- DURING GRADING OPERATIONS AND UNTIL THE PROJECT HAS BEEN COMPLETED, ALL ADJACENT PROPERTY, RIGHTS-OF-WAY, AND EASEMENTS SHALL BE PROTECTED FROM FLOODING BY RUNOFF FROM THE SITE.
- SHOULD THE CONTRACTOR FAIL TO PREVENT SEDIMENT-BEARING WATER FROM ENTERING PUBLIC RIGHT-OF-WAY, HE SHALL PROMPTLY REMOVE FROM THE PUBLIC RIGHT-OF-WAY ANY AND ALL SEDIMENT ORIGINATING FROM THE SITE.
- CONTROL OF SEDIMENT-LADEN WATERS WILL BE ACCOMPLISHED BY USE OF A COMPACTED EARTH BERM OF ADEQUATE HEIGHT. THE BERM SHALL BE LOCATED ALONG THE DOWNSTREAM PERIMETER OF THE PROPERTY.



FIRMETTE

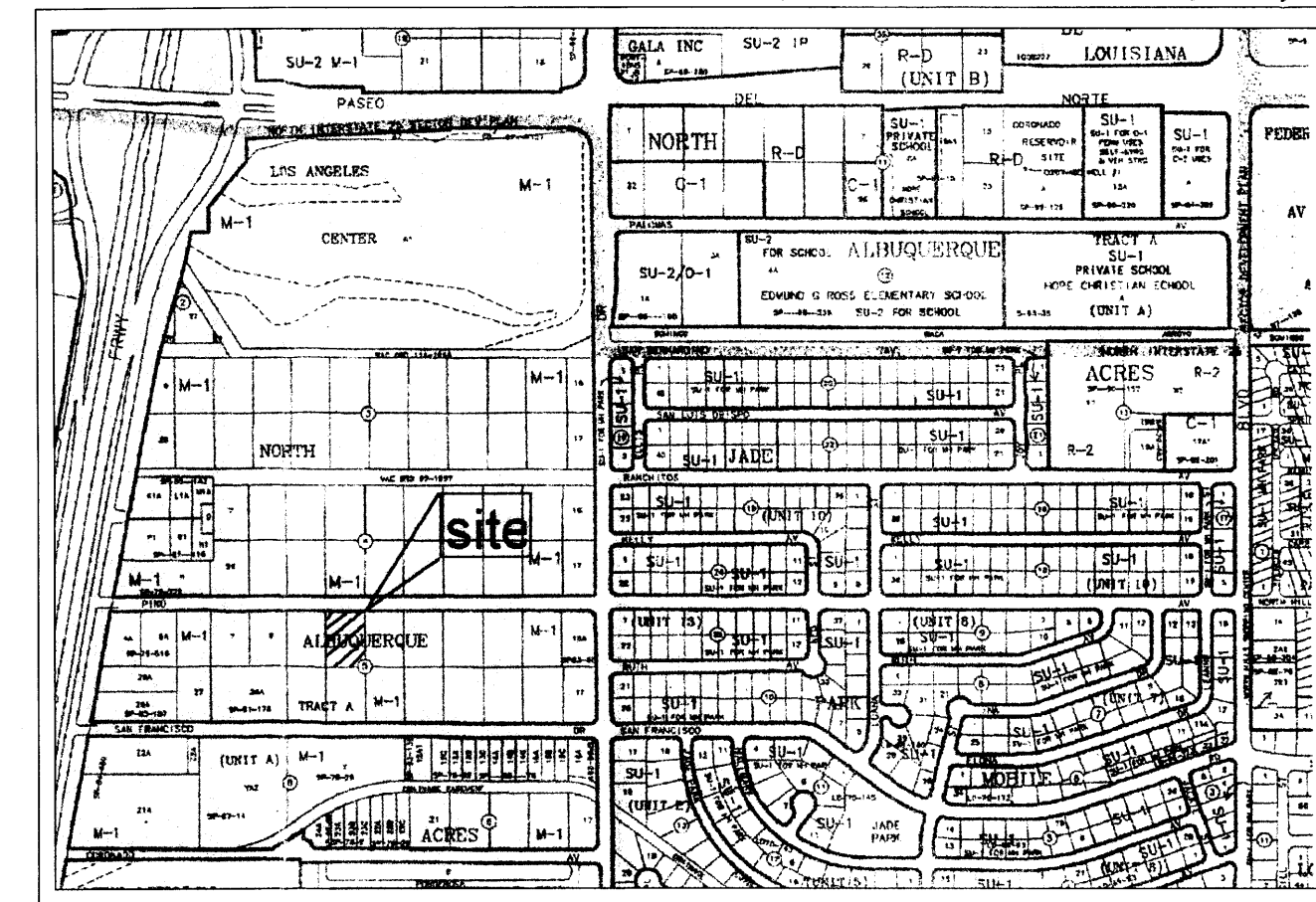
DRAINAGE CERTIFICATION WITH VERIFICATION BY ENGINEER OF RECORD

I, FRANK D. LOVELADY, NMPE 6512 OF THE FIRM FRANK D. LOVELADY P.E. HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND PAVED IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 10-25-2004. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY ME OR UNDER MY DIRECT SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

Frank D. Lovelady
NMPE 6512
11-17-05

DATE

FRANK D. LOVELADY
NMPE 6512
11-17-05
REGISTERED PROFESSIONAL ENGINEER



VICINITY MAP

ZONE ATLAS NO. D-18-Z

LEGEND:

EXISTING	NEW	DESCRIPTION
15.00	15.00	CONTOUR
15.00	15.00	SPOT ELEVATION
15.00	15.00	PROPERTY LINE
15.00	15.00	SWALE
15.00	15.00	SHEET FLOW
15.00	15.00	ROOF FLOW
15.00	15.00	LEGEND
15.00	15.00	TC = TOP OF CONCRETE
15.00	15.00	FL = FLOW LINE
15.00	15.00	TG = TOP OF GRADE
15.00	15.00	EW = END OF WALL
15.00	15.00	INDICATES AS-CONSTRUCTED SPOT ELEVATION

LEGAL DESCRIPTION

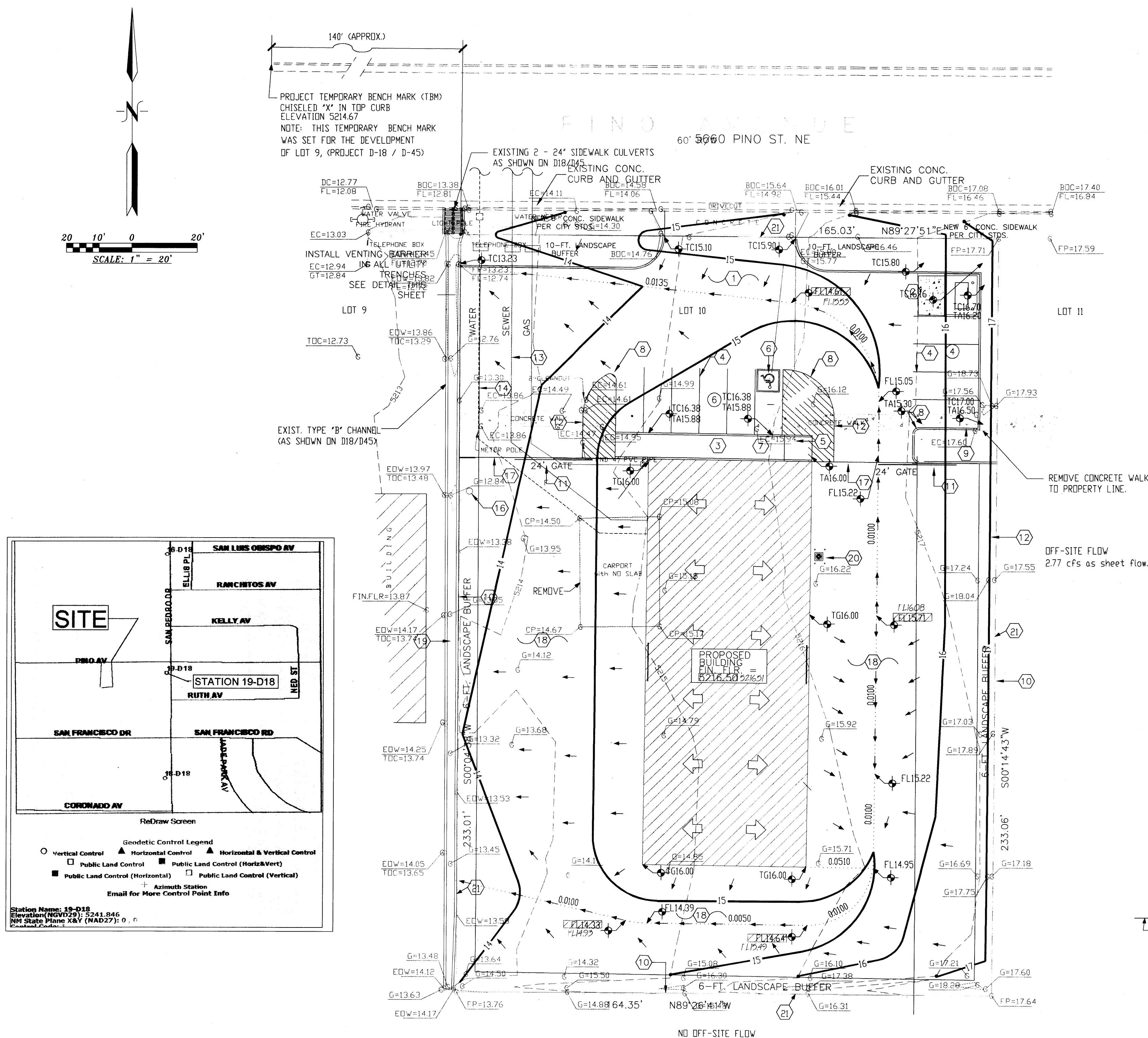
LOT 10, BLOCK 5, TRACT A, UNIT A, NORTH ALBUQUERQUE ACRES. 5660 PINO AVENUE NE, ALBUQUERQUE, NEW MEXICO

GENERAL NOTES:

- CONTOUR INTERVAL IS ONE (1) FOOT.
- ELEVATIONS ARE BASED ON CITY OF ALBUQUERQUE STATION No. "19-D18", HAVING AN ELEVATION OF 5238.009.
- UTILITIES SHOWN HEREON ARE IN THEIR APPROXIMATE LOCATION BASED ONLY ON ABOVE GROUND EVIDENCE FOUND IN THE FIELD AND AS-BUILT INFORMATION PROVIDED BY THE CLIENT. UTILITIES SHOWN HEREON, WHETHER INDICATED AS ABANDONED OR NOT, SHALL BE VERIFIED BY OTHERS FOR EXACT LOCATION AND/OR DEPTH PRIOR TO EXCAVATION OR DESIGN CONSIDERATIONS.
- THIS IS NOT A BOUNDARY SURVEY. BEARINGS AND DISTANCES SHOWN HEREON ARE FOR REFERENCE ONLY.

KEYED NOTES

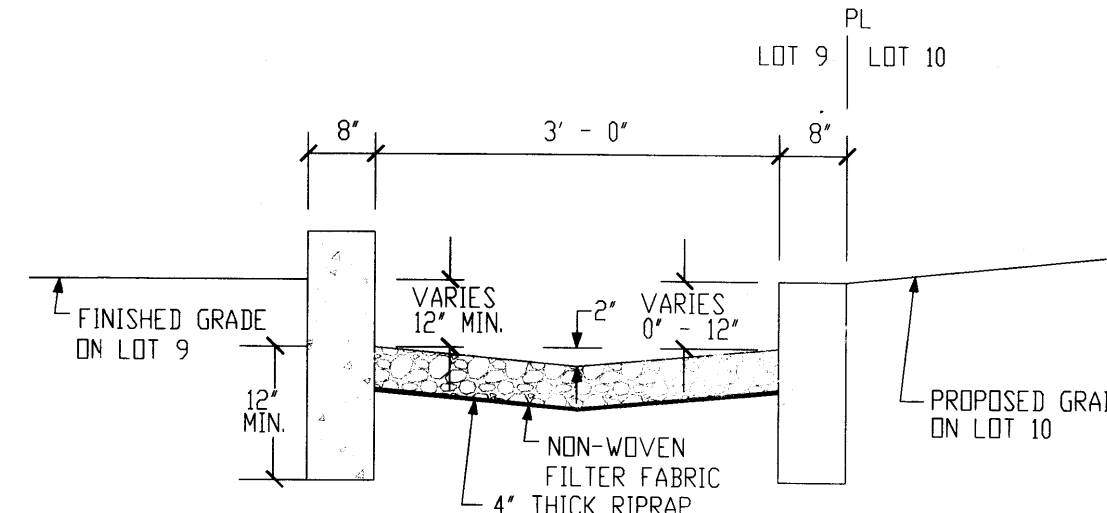
- 3" ASPHALT PAVING OVER 4" BASE COURSE.
- DUMPSITE ON CONC. PAD, SEE DET. 1/C2.
- 6" CONCRETE SIDEWALK, SEE DET. 3/C2.
- PAINTED PARKING STRIPES PER CITY OF ALBO.
- H.C. ACCESSIBLE RAMP W/ PAINTED STRIPES, SEE DET. 8/C2.
- PAINTED H.C. ACCESSIBLE SYMBOL.
- H.C. PARKING SIGNAGE, SEE DET. 5/C2.
- 2" RADIUS TYPICAL.
- 6" CONC. CURB, SEE DET. 2/C2.
- EXISTING 6" HIGH CHAINLINK FENCE.
- NEW 6" HIGH CHAINLINK FENCE W/ 24" GATE.
- PAINTED STRIPES PER CITY OF ALBO.
- 4" SEWER LINE.
- 1 1/2" WATER LINE.
- 1 1/4" GAS LINE.
- EXISTING POWER POLE (F.V.)
- EDGE OF ASPHALT PAVING.
- GRAVEL GROUND COVER.
- EXIST. 3" RIP RAP.
- MECHANICAL UNIT W/ 4" PIPE BOLLARDS.
- PROPERTY LINE.



NO OFF-SITE FLOW

EXISTING TYPE "B" CHANNEL DETAIL:

(AS SHOWN ON D18/D45)



FINISHED GRADE ON LOT 9

PROPOSED GRADE ON LOT 10

VARIES 12" MIN.

VARIES 0" - 12"

NON-WOVEN FILTER FABRIC

4" THICK RIPRAP

D50 = 2"

HYDROLOGY SECTION

CERTIFIED GRADING AND DRAINAGE PLAN
PINO AVENUE OFFICE/WAREHOUSE
5660 PINO ROAD N.E.
ALBUQUERQUE, NEW MEXICO

FRANK D. LOVELADY, P.E.

(505) 345-2267 • Fax (505) 345-2115 • 300 ALAMOS RD. NW • Albuquerque, NM • 87107

JOB NO. 676

DATE: 11/17/ 2005

REVISIONS

1. LENGTHENED BLDG. BY 25'

SHEET NO.

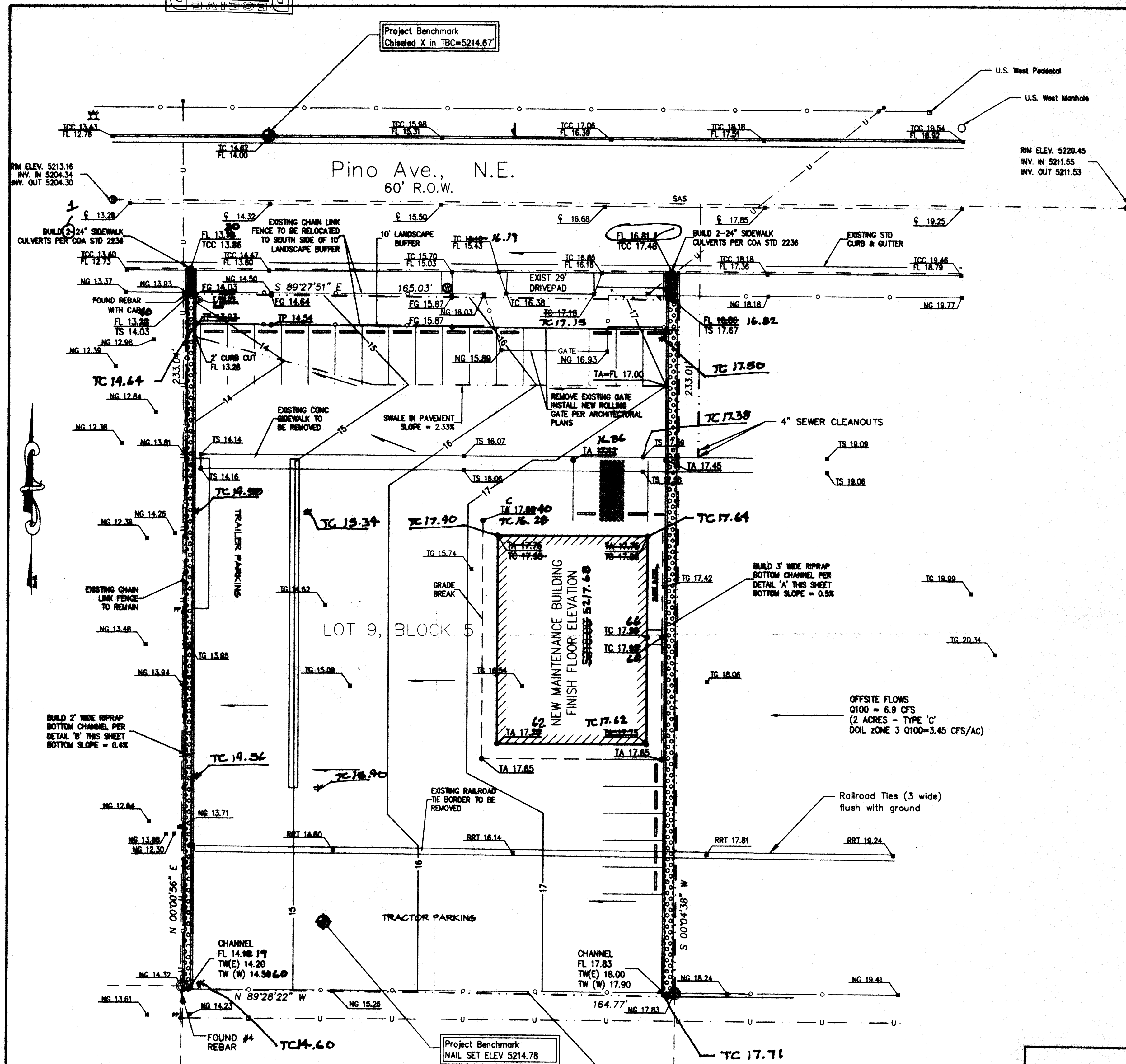
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HYDROLOGY SECTION
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HYDROLOGY SECTION
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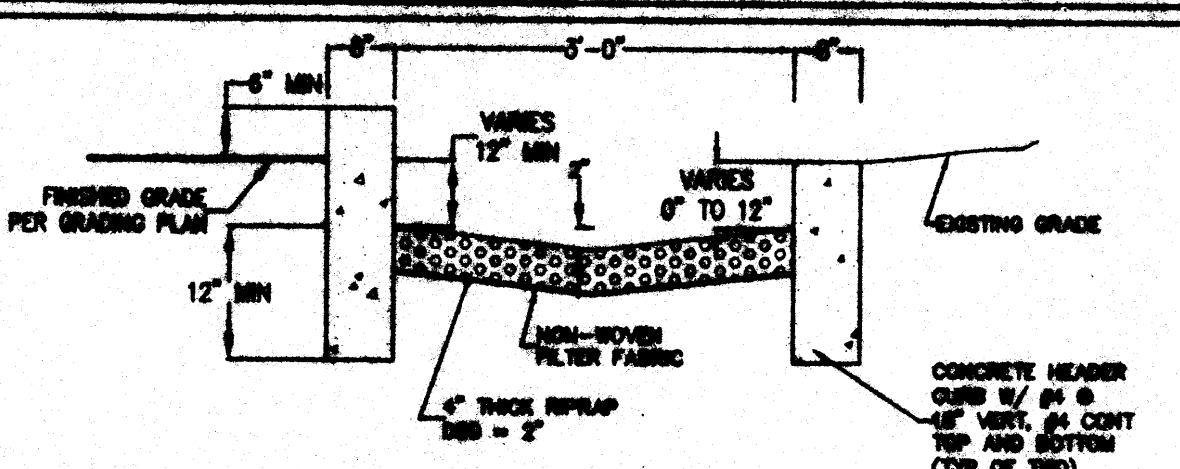
VICINITY MAP D-18-Z



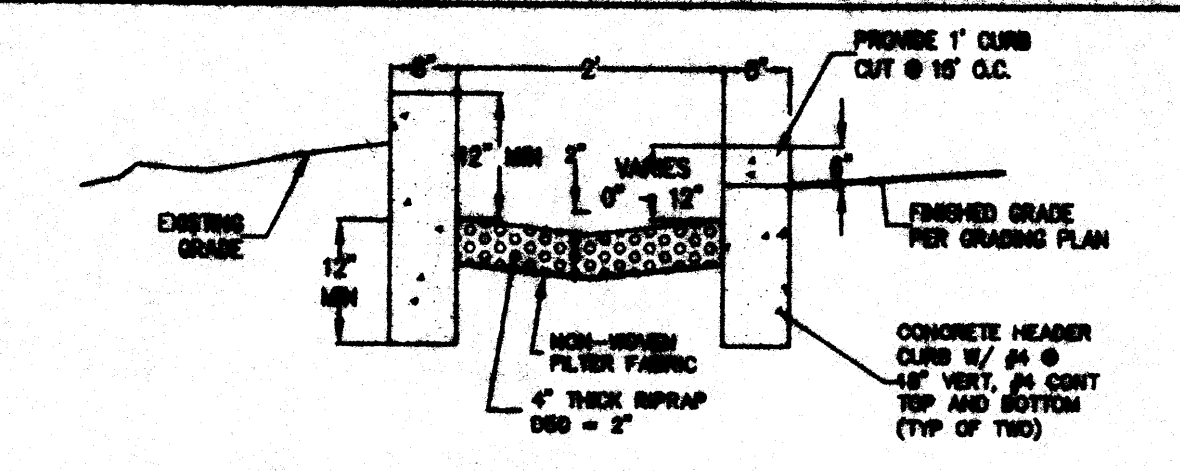
GENERAL NOTES

- PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE STATE HIGHWAY DEPARTMENT FOR LOCATION OF EXISTING UTILITIES. THIS SERVICE REQUIRES AT LEAST TWO WORKING DAYS.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITIES SHOWN ON THE PLANS OR NOT SHOWN ON THESE PLANS. ANY DAMAGE TO UTILITIES BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- WHEN REMOVAL OF EXISTING CONCRETE SIDEWALKS OR CURBS AND GUTTERS IS CALLED FOR, REMOVE THEM TO THE EXISTING FINISH JOINTS ONLY. SAWING OR BREAKING WILL NOT BE ALLOWED.

TYPE 'A' CHANNEL - DETAIL



TYPE 'B' CHANNEL - DETAIL



LEGAL DESCRIPTION: LOT 9, BLOCK 5
NORTH ALBUQUERQUE ACRES
ALBUQUERQUE, NEW MEXICO

BENCHMARK

ACS BENCHMARK 1-25-14. ELEVATION 5196.73.

LEGEND

- SURFACE FLOW DIRECTION
- PROPERTY LINE
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING BUILDING
- AS CONSTRUCTED ELEVATION

ABBREVIATIONS

FG	FINISH GRADE
FL	FLOWLINE
TS	TOP OF SIDEWALK
TCC	TOP OF CONCRETE CURB
TP	TOP OF PROPOSED PAVEMENT
TA	TOP OF ASPHALT PAVEMENT
TG	TOP OF GRAVEL EXISTING

80-10 FORM

NOTICE TO CONTRACTOR

- AN EXAMINATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN THE CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
 - ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED WITHIN THE CITY RIGHT-OF-WAY SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE ACCORDANCE WITH A.D.A. STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 1998.
 - TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 380-1086, FOR LOCATION OF EXISTING UTILITIES.
 - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR SURVEYOR SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMUM AMOUNT OF DELAY.
 - BACKFILL COMP ACTION SHALL BE ACCORDING TO ARTERIAL STREET USE.
 - MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER SERVED.
- THE FOLLOWING NOTES ALSO APPLY WHEN CHECKED
- ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
 - BACKFILL COMP ACTION SHALL BE ACCORDING TO ARTERIAL STREET USE.
 - PAVEMENT REQUIREMENTS SHALL BE DETERMINED BY THE CITY ENGINEER.
 - SIDEWALKS AND WHEELCHAIR RAMPS WITHIN THE CURB RETURNS SHALL BE CONSTRUCTED WHEREVER A NEW CURB RETURN IS CONSTRUCTED.
 - IF CURB IS DEEPER FOR A DRIVEPAD OR A HANDICAP RAMP, THE DRIVEPAD OR RAMP SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF THE CURB AND GUTTER.
 - ALL STORM DRAINAGE FACILITIES SHALL BE COMPLETED, INSPECTED AND APPROVED PRIOR TO FINAL ACCEPTANCE.

APPROVALS	ENGINEERING DATE
A.C.E./DESIGN	
INSPECTOR	
A.C.E./FIELD	

ENGINEER'S CERTIFICATION

THE SITE HAS BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED GRADING AND DRAINAGE PLAN EXCEPT AS NOTED ON THE PLAN AND DISCUSSED BELOW. AS-CONSTRUCTED ELEVATIONS WERE PROVIDED BY CARTESIAN SURVEYORS ON 2/2/2000.

-PAVEMENT ON THE SITE IS CONSTRUCTED OF CONCRETE INSTEAD OF ASPHALT.

-ONLY ONE 24" SIDEWALK CULVERT WAS CONSTRUCTED ON THE DRAINAGE SHALE ON THE WEST PROPERTY LINE. CALCULATIONS INDICATE THIS SIZE CULVERT IS ADEQUATE.

-THE FINISHED FLOOR WAS CONSTRUCTED 4" LOWER TO FLATTEN THE DRIVEWAY ACCESS RAMP. SURROUNDING GRADES WERE ADJUSTED ACCORDINGLY TO PROVIDE DRAINAGE.

LARRY D. READ P.E.
FEB 3, 2000



jnr
PARTNERS, INC.
985 Loma Circle NW Albuquerque, NM 87102
Phone (505)248-8700 Fax (505)248-8114



Date: 01/08/01
Drawn by: LDR
Checked by: LDR

Project Name: Project #: 58004

LOGEX INSPECTION BUILDING

Sheet Title: GRADING PLAN

Sheet #: C1