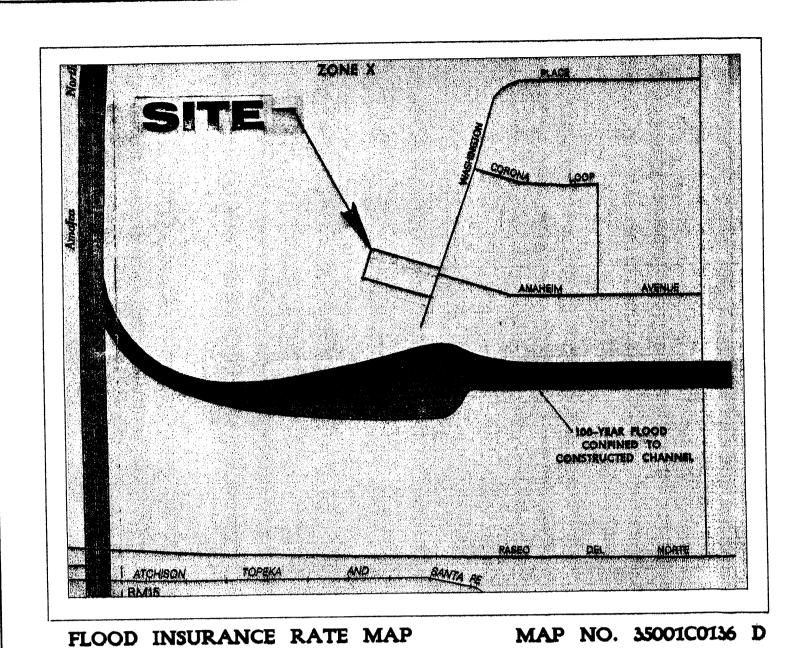


KCI HOVCY, ARCHITCCI

505) 259-8458 * 3808 SIMMS AVENUE SE * ALBUQUERQUE, NM * 87108

J0B	NO:	0309	
DATE	30	MARCH	2004
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SHEET NO.



ASPHALT

35' DRAINAGE ESMT.

CONCRETE

## GENERAL NOTES:

- 1: CONTOUR INTERVAL IS ONE (1) FOOT.
- 2: ELEVATIONS ARE BASED ON CITY OF ALBUQUERQUE STATION No. "12-C17",
- 3: 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 CON-
- 5: THIS IS NOT A BOUNDARY SURVEY, BEARINGS AND DISTANCES SHOWN HEREON ARE FOR REFERENCE ONLY.

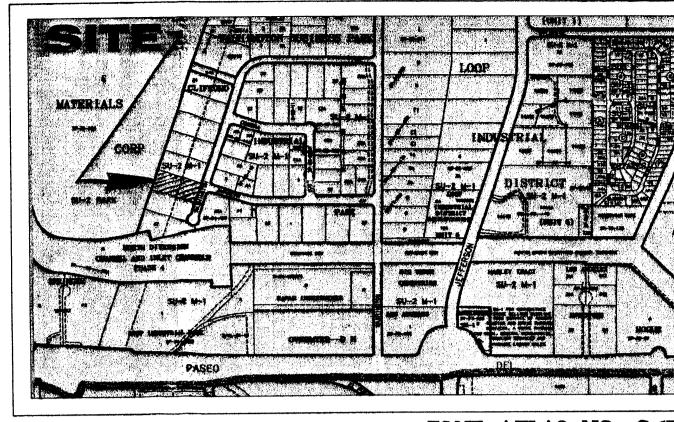
LEGEND: EXISTING	NEW	DESCRIPTION
5080	80	CONTOUR
. 80.00	80.00	SPOT ELEVATION PROPERTY LINE
<b>4</b> - <b>4</b> - <b>4</b> -	<b>4 4</b>	SWALE SHEET FLOW
	<b>\$</b>	SHEET FLOW ROOF FLOW
		ROOF GUTTER DOWNSPOUT
,		LEGEND TC = TOP OF CONCRETE FL = FLOW LINE TG = TOP OF GRADE EOW = END OF WALL

#### EROSION CONTROL NOTES;

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE FOLLOWING 1. NO SEDIMENT-BEARING WATER SHALL BE ALLOWED TO DISCHARGE FROM THE SITE DURING CONSTRUCTION.
- 2. DURING GRADING OPERATIONS AND UNTIL THE PROJECT HAS BEEN COMPLETED, ALL ADJACENT PROPERTY, RIGHTS-OF-VAY, AND EASEMENTS SHALL BE PROTECTED FROM FLOODING BY RUNOFF FROM THE SITE.
- 3. SHOULD THE CONTRACTOR FAIL TO PREVENT SEDIMENT-BEARING WATER FROM ENTER-ING PUBLIC RIGHT-DF-WAY, HE SHALL PROMPLTY REMOVE FROM THE PUBLIC RIGHT-OF-WAY ANY AND ALL SEDIMENT ORIGINATING FROM THE SITE.
- 4. CONTROL OF SEDIMENT-LADEN WATERS WILL BE ACCOMPLISHED BY USE OF A COM-PACTED EARTH BERM OF ADEQUATE HEIGHT. THE BERM SHALL BE LOCATED ALONG THE DOWNSTREAM PERIMETER OF THE PROPERTY.

#### LEGAL DESCRIPTION:

LOT 49, CLIFFORD INDUSTRIAL PARK, ALBUBQUERQUE, NEW MEXICO.



VICINITY MAP

# **GENERAL NOTES**

- 1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE TO
- SAFETY AND HEALTH.
- LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE LOCATION ONLY, AND LINES MAY EXIST WHERE NONE ARE SHOWN. THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE UTILITY OWNER OR FROM EXISTING PLANS, AND THIS INFORMATION MAY BE INCOMPLETE, OR OBSOLETE AT THE TIME OF CONSTRUCTION. THE ENGINEER HAS NOT UNDERTAKEN ANY FIELD VERIFICATION OF THESE LOCATIONS, LINE SIZES OR MATERIAL TYPE, MAKES NO REPRESENTATION THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATIONS OF ANY UTILITY LINE, PIPELINE OR OF OR DURING ANY EXCAVATION WORK. THE CONTRACTOR IS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES AND UNDERGROUND FACILITIES. IN PLANNING AND CONDUCTING EXCAVATIONS, THE CONTRACTOR SHALL COMPLY WITH ALL STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
- 4. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHTS-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AND BY WETTING THE SOIL TO KEEP IT
- 5. THE CONTRACTOR SHALL OBTAIN ANY AND ALL PERMITS REQUIRED BY THE CITY OF ALBUQUERQUE FOR THE COMPLETION

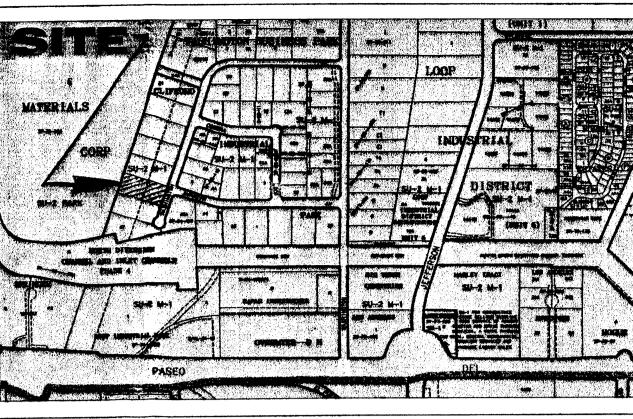
# 

TEMPORARY BENCH MARK (TEM) 2" SQUARE AND LETTERS "TEM"

CHISELED ON TOP OF CONCRETE

CURB. ELEVATION - 5085.70

- 1. EXISTING ASPHALT PAVEMENT.
- 2. EDGE OF EXISTING ASPHALT PAVEMENT.
- 3. EDGE OF ASPHALT REMOVAL AND REPLACEMENT.
- 4. NEW ASPHALT PAVEMENT. 5. EXISTING REFUSE ENCLOSURE - DEMOLISH.
- 6. EXISTING LANDSCAPING.
- 7. PROPERTY LINE. 8. ROOF GUTTER
- 9. DOWNSPOUT.
- 10. EXISTING TEMPORARY BUILDINGS TO BE REMOVED, RELOCATED OR, LEFT IN PLACE, AS DETERMINED BY THE OWNER. NOTE: ALL TEMPORARY BUILDINGS WITHIN THE CHANNEL CONST. AREA HAVE BEEN
- 11. EXISTING CONCRETE PAD. CITY PLANS FOR CLIFFORD CHANNEL, REALIGNMENT CALL FOR REMOVAL AND DISPOSAL OF THIS PAD.



ZONE ATLAS NO. C-17-Z

Revised 1/15/2004

Enterprises

Commercial

Warehouse

DATE: 15 JANUARY 2004 REVISIONS TBM RELOCATED, TEMP. CONST. EASEMENT ADDED.

RESOLVE THE CONFLICT WITH A MINIMUM AMOUNT OF DELAY.

2. ALL WORK ON THIS PLAN SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION

- 3. IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY UNDERGROUND INSTALLATION IN OR NEAR THE AREA IN ADVANCE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES CAUSED BY ITS
- OF THE WORK PRIOR TO BEGINNING CONSTRUCTION.



S 71°43′19" E -32-10' DRAINAGE ESMT. → 10' CONC. DRAIN EXISTING/ OH DOOR DRAINAGE EASEMENT 6' CONC. WALK 200' PUTLIC SERVICE COM. POWER LINE ESMT. APROX. DICATION OF 20' PNM SAS ESMT. V III SHED-NOT LANEWAPERMA CURB 2.00 NEW CMU REFUSE ENCLOSURE NEW LANDSCAPE CONCRETE N 71°43′19″ W

Grading & Drainage Plan
Scale: 1"=20'

The site is located on the west side of Washington Place NE, the third lot north of the Domingo Baca Channel. There is a drainage concrete channel along the north edge of the site. The existing building roof has an east-west ridge and the north side of the building drains directly into the drainage channel via splash blocks that extend over the channel wall. The parking lot is paved and there are several non-permanent buildings on the site. drainage is from east to west. At the NW corner of the site the drainage channel continues west into the old baloon fiesta area. The lots north and south of the site are also developed. (See aerial photo, Sheet C. 1.2)

#### DEVELOPED CONDITIONS:

It is proposed to construct a new metal storage building on the site as shown. The building will be constructed in an area which is now partially paved. The pavement will be extended to the west as shown. All runoff will continue to flow to the west and then north into the existing easement as it presently does.

#### FUTURE IMPROVEMENTS:

The City of Albuquerque proposes to construct "Clifford Channel Realignment at Forner Los Angeles Landfill". Construction plans have been prepared and a reduced set will be submitted with this grading and drainage submittal. No attempt has been made to show the channel grades on this plan.

#### 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 "D";

SURFACE	EXISTING	DEVELOPE
CONCRETE	4, 095	5, 236
ASPHALT PAVING	8,623	9, 698
BUILDING	8, 369	11, 169
TOTAL	21,087	26, 103

#### LAND TREATMENT AREAS

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	q(cf:	5/QC)	E 100-vr	(in)	Exi	sting Si	ite Areas Acres	Devel	oped Site Sa.Ft	
1NEG 1.			0. 53		0. 0		0. 0000		0	
	1, 56	0, 30	0, 00	0, 13	0, 0	0	0. 0000	O. U		0. 0000
В	5' 58	0. 95	0. 78	0. 58	4. 8	2, 720	0. 0624	4. 8	2, 720	0. 0624
C	3. 14	1. 71	1. 13	0. 52	58. <b>0</b>	32, 893	0. 7551	49. 2	27, 877	0. 6400
D	4. 70	3. 14	2. 12	1. 34	35' 5	21,087	0. 4841	46. O	26, 103	0. 5992
Totals					100.0	56,700	1. 3016	100.0	<b>56, 70</b> 0	1. 3016

#### PEAK DISCHARGE:

**EXISTING CONDITIONS:** 

 $Q100 = 0.0624 \times 2.28 + 0.7551 \times 3.14 + 0.4841 \times 4.70 = 4.79 \text{ cfs}$   $Q10 = 0.0624 \times 0.95 + 0.7551 \times 1.71 + 0.4841 \times 3.14 = 2.87 \text{ cfs}$ 

#### DEVELOPED CONDITIONS:

 $Q100 = 0.0624 * 2.28 + 0.6400 \times 3.14 + 0.5992 * 4.70 = 4.97 cfs$  Q10 = 0.0624 * 0.95 + 0.6400 * 1.71 + 0.5992 * 3.14 = 3.04 cfs

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

EXISTING CONDITIONS:

V100 = (2,720 * 0.78 + 32,893 * 1.13 + 21,087 * 2.12) / 12 = 7,000 cf $V10 = (2,720 \times 0.28 + 32,893 \times 0.52 + 21,087 \times 1.34) / 12 = 3,844 cf$ 

## DEVELOPED CONDITIONS:

V100 = (2,720 * 0.78 + 27,877 * 1.13 + 26,103 * 2.12) / 12 = 7,413 cf $V10 = (2,720 \times 0.28 + 27,877 \times 0.52 + 26,103 \times 1.34) / 12 = 4,186 cf$ 

#### SUMMARY OF ON-SITE VOLUMES AND PEAK DISCHARGE RATES:

<b>DE</b> VELOPED	V100(CF) 7, 413	V10(CF) 4, 186	Q100(CFS) 4. 97	Q100CFS 3. 04
EXISTING	7, 000	3, 844	4. 79	2. 87
INCREASE	413	342	0. 18	0. 17

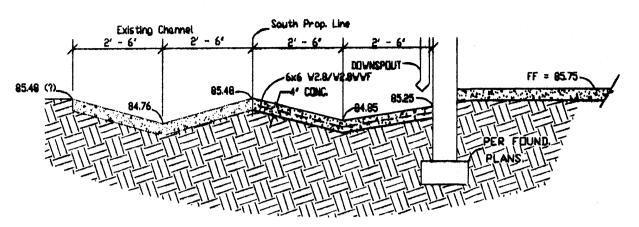
#### NEW BUILDING ROOF RUNOFF

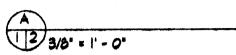
AREA = 3300 SF

 $Q100 = (3300 / 43,560) \times 4.7 = 0.36 CFS$ 

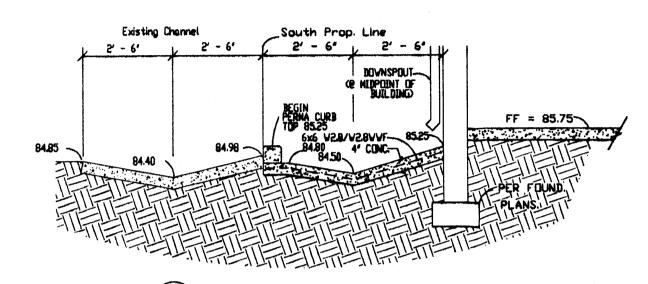
CAPACITY OF SWALE (SECTION D):

SWALE 5' VIDE X 0.5' DEEP P = 5.1 SLOPE = 4.14 = 200 = 0.0207 R = A/P = 1.25 / 5.1 = 0.25 N = 0.035 (GRAVEL) $V = (1.486 / 0.035) (0.25)^{2/3} (0.0207)^{1/2} = 2.4 FPS$  $Q = AV = 1.25 \times 2.4 = 3.00 CFS$ 3. 00 CFS > 0. 36 CFS ADEQUATE





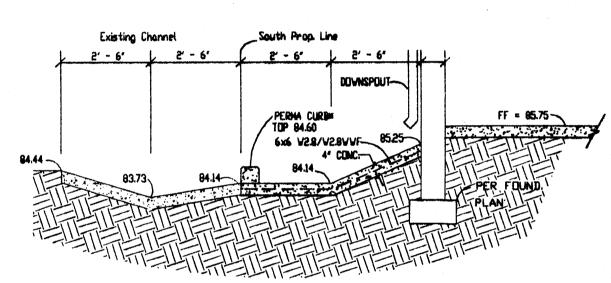
TOTAL DISTANCE BETWEEN SECTIONS 'A' & 'B' IS 43.6' SLOPE = (84.85 - 84.50 ) / 43.6 = 0.0080 FT./FT.

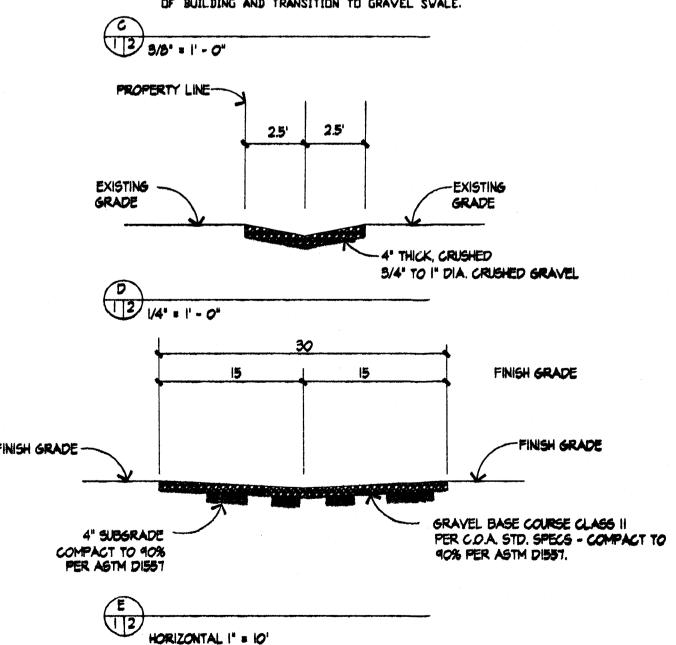




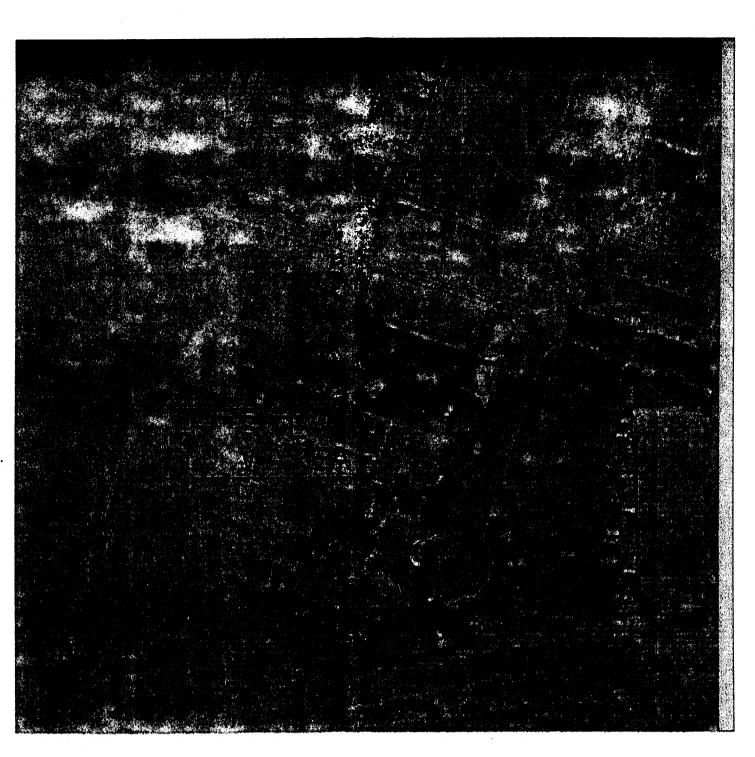
1 2 5/8" = 1' - 0"

TRANSITION FROM 'V' SHAPED CHANNEL TO FLAT BUTTOMED CHANNEL BETVEEN SECTIONS 'B' AND 'C'. TOTAL DISTANCE IS 56.0'. SLOPE = (84.5 - 84.14 ) / 56 = 0.0064 FT./FT.





VERTICAL I" = 3"



AERIAL PHOTO OF SITE AREA APPROX. SCALE 1" = 100'

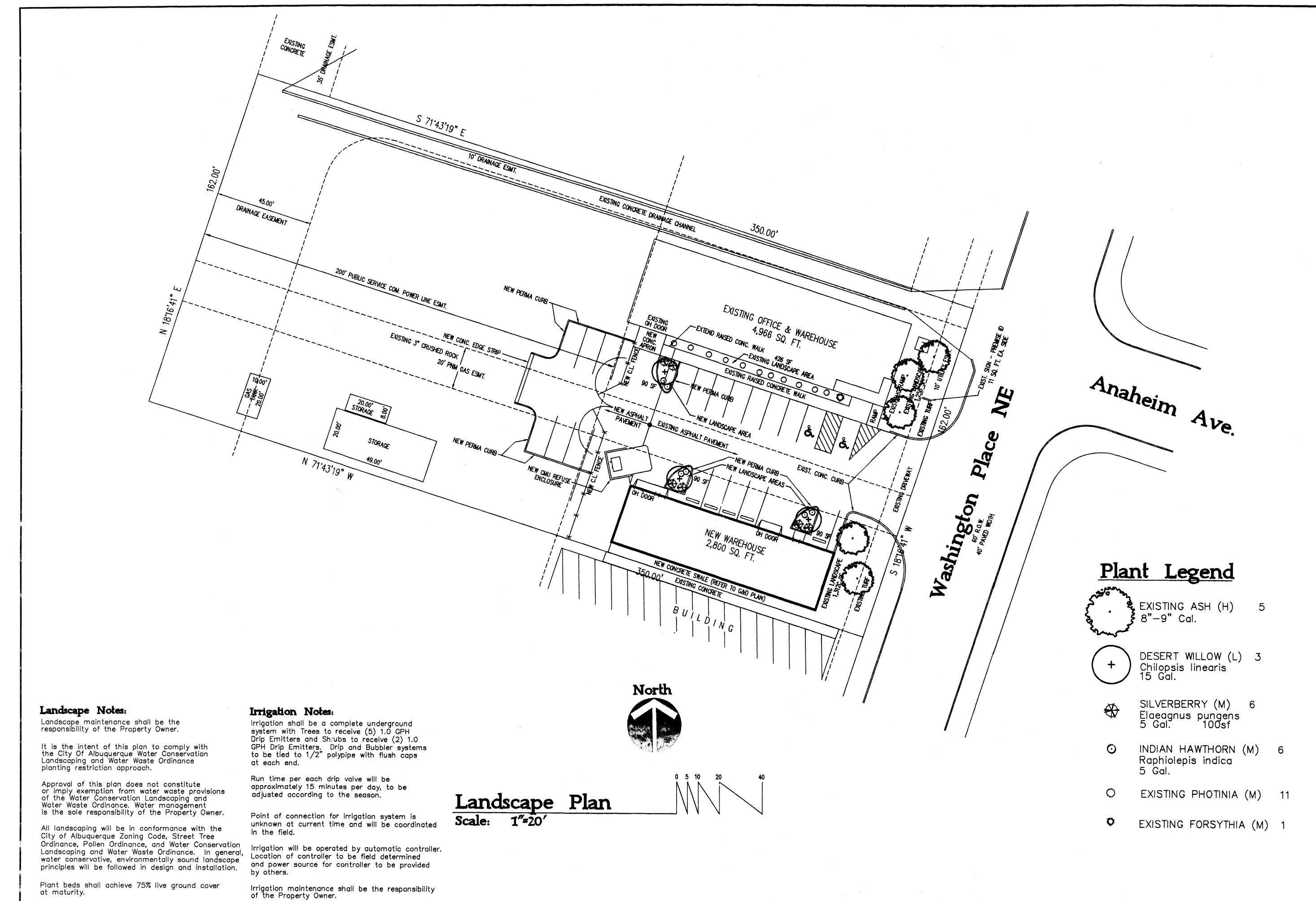
#### OFF-SITE FLOW CALCULATIONS

AREA = 2.72 ACRES - SEE ABOVE MAP. PER TABLE A-5 OF THE DPM, LIGHT INDUSTRIAL IS 70% TREATMENT D. ASSUME 30 PERCENT TREATMENT C. WEIGHTED 100-YEAR PEAK DISCHARGE PER ACRE q w = 0.3 * 3.14 + 0.7 * 4.70 = 4.23 CFS PER ACRE.Q 100 = 4, 23 CFS PER ACRE * 2, 72 ACRES = 11, 51 CFS

Revised 1/15/04

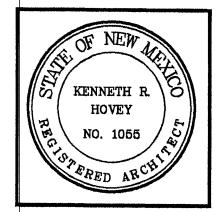
Enferpris ommercia **Solution** /arehouse

DATE: 15 JANUARY 2004 REVISIONS OFF-SITE FLOW AREA & CALCS



3/4" Gray Gravel over Filter Fabric shall be placed in all landscape areas which are

not designated to receive native seed.



Warehouse for Commercial Enterprises

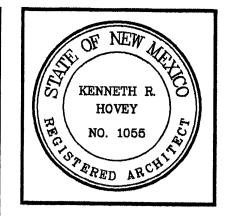
KCH HOVEY, ARCHITECT FOR 1259-8458 * 3808 SIMMS AVENUE SE * ALBUQUERQUE, NM * 87108

JOB NO: 0309

DATE: 30 MARCH 2004

REVISIONS

sheet no.



KEN HOVEY, ARCHITCCI

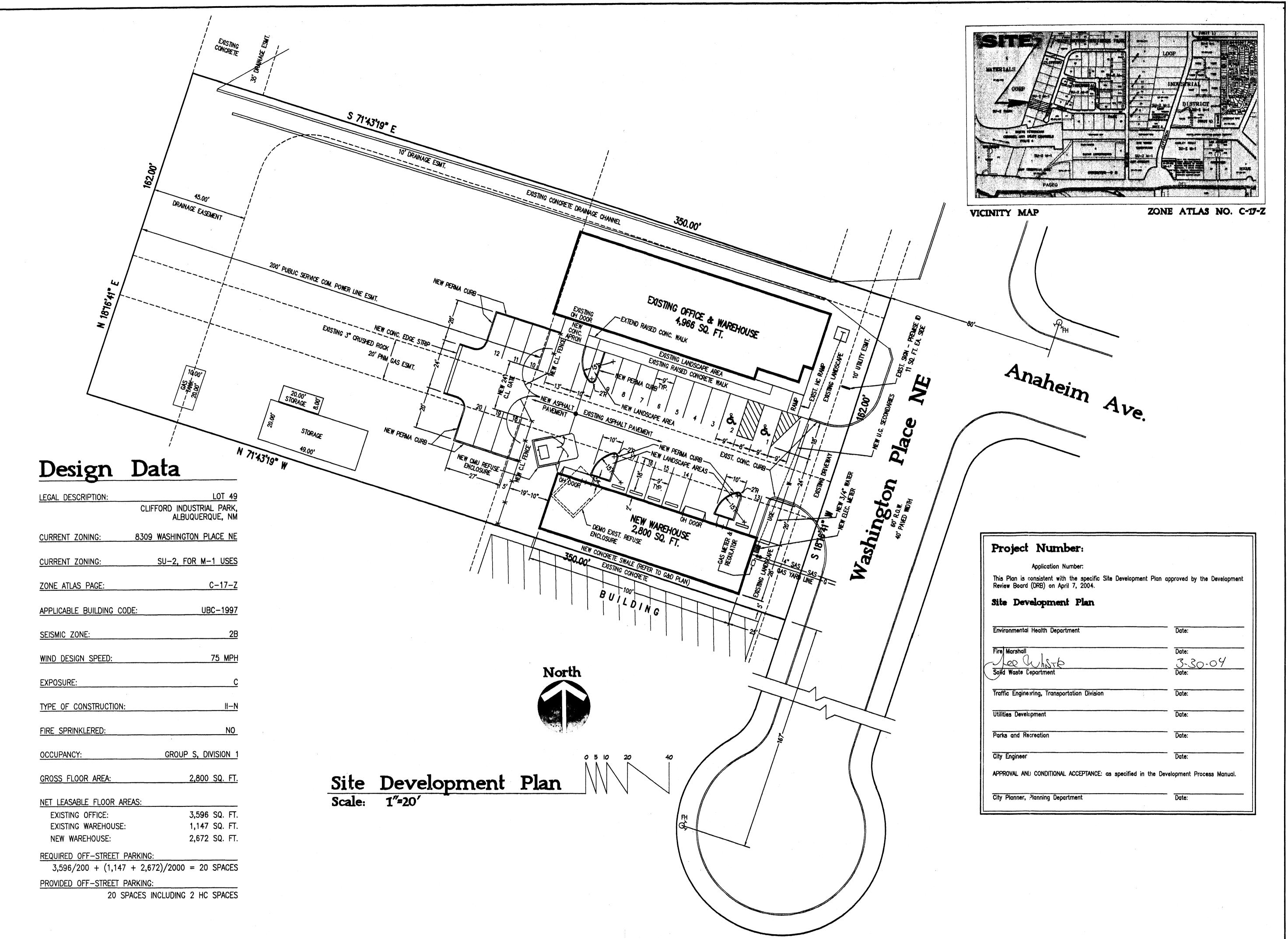
(505) 251-6456 * 3606 51M/5 AVE SE : ALBUQUERQUE, NM : 67108

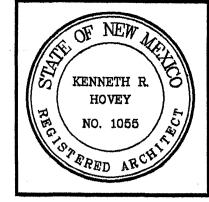
JOB NO: 0309

DATE: 30 MARCH 2004

REVISIONS

A.2

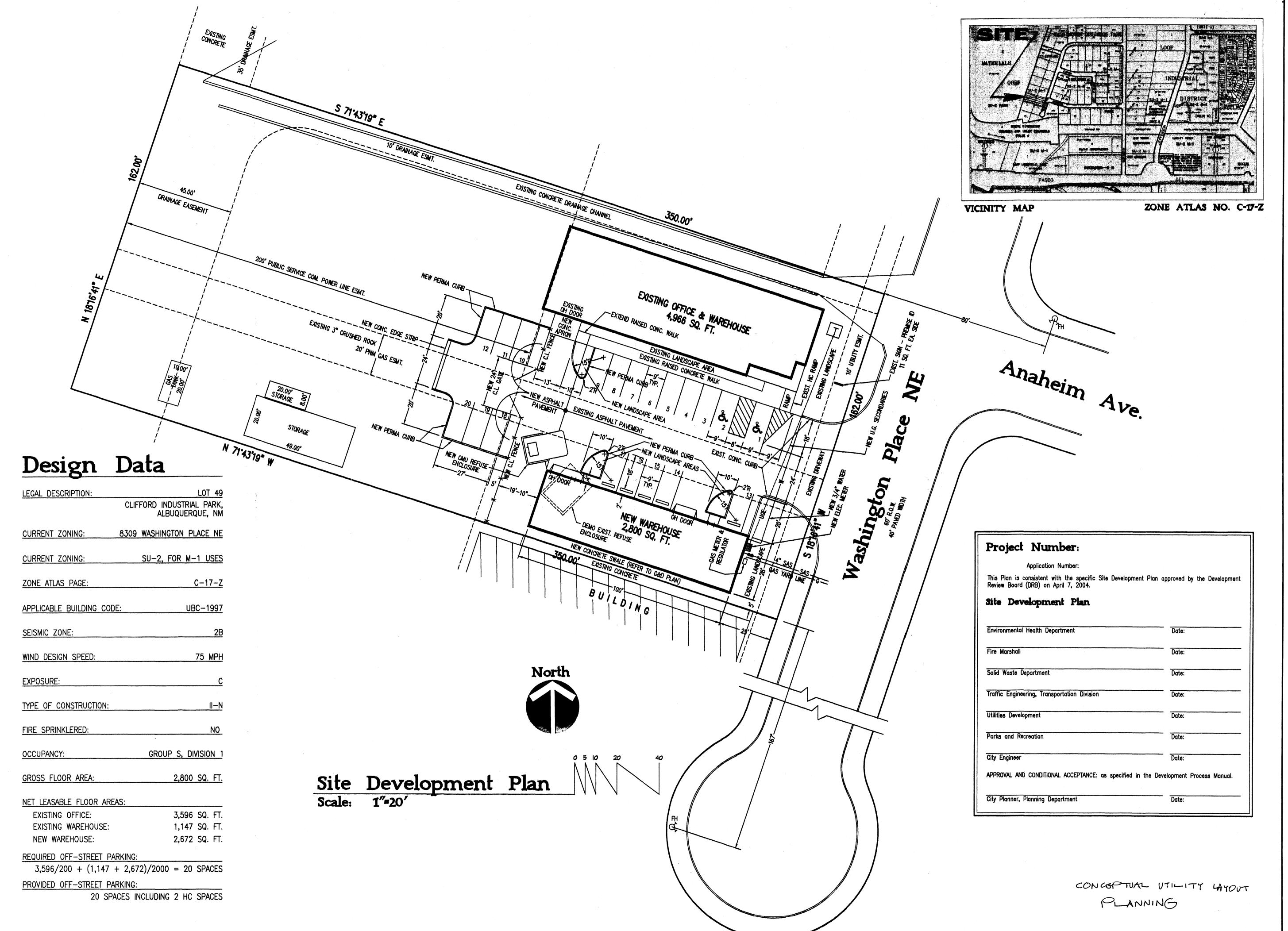


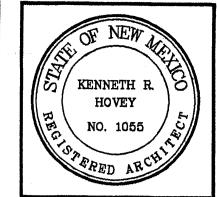


Warehouse for Commercial Enterprises

JOB NO	): 0309
DATE:	30 MARCH 2004
	REVISIONS

SHEET NO.

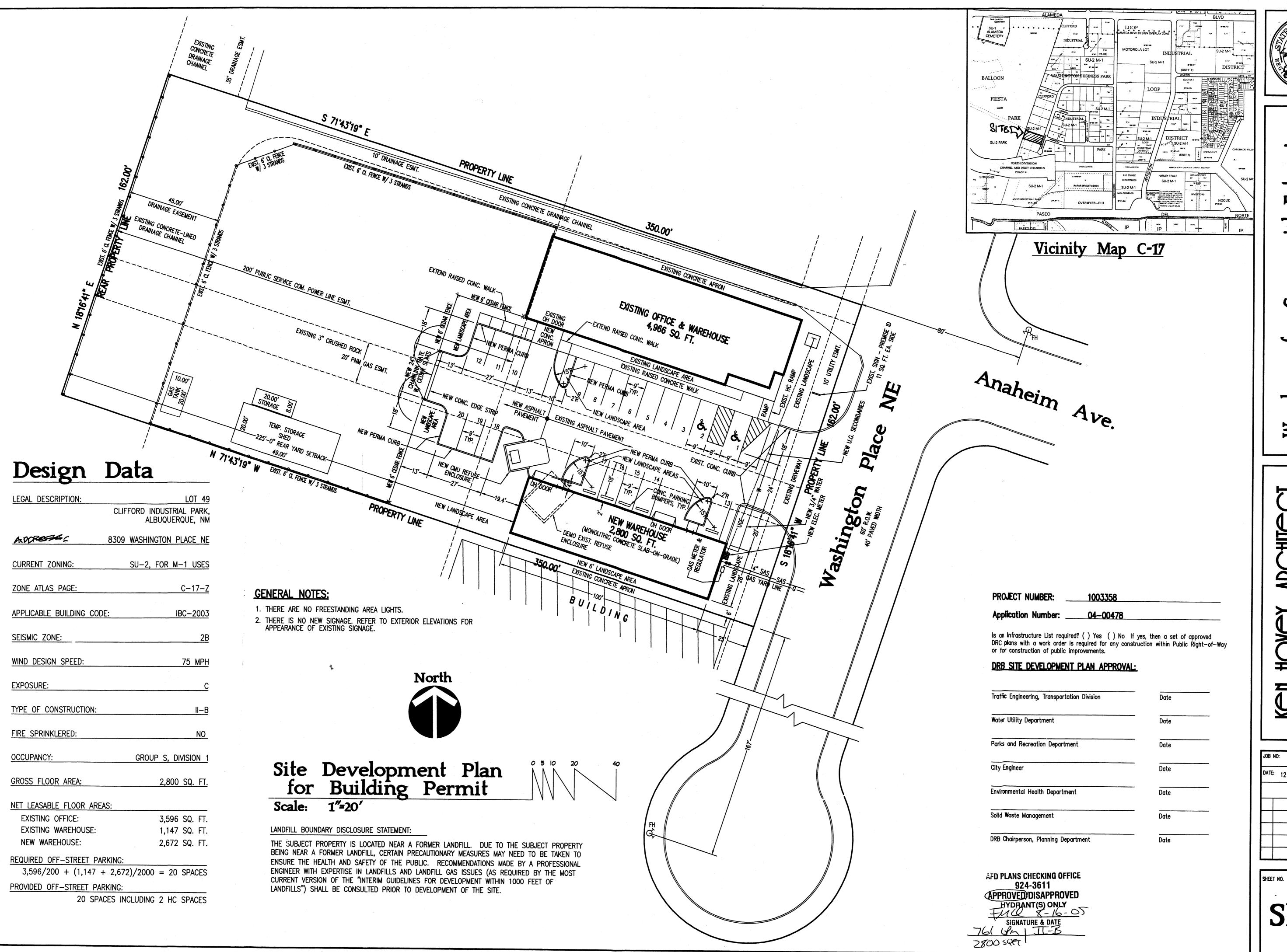


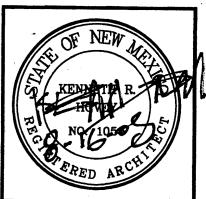


KCII HOVCI, ARCHITCCI 505) 259-8458 * 3808 SIMMS AVENUE SE * ALBUQUERQUE, NM * 87108

JOB NO	: 0309	
DATE:	30 MARCH 2004	
	REVISIONS	

SHEET NO.



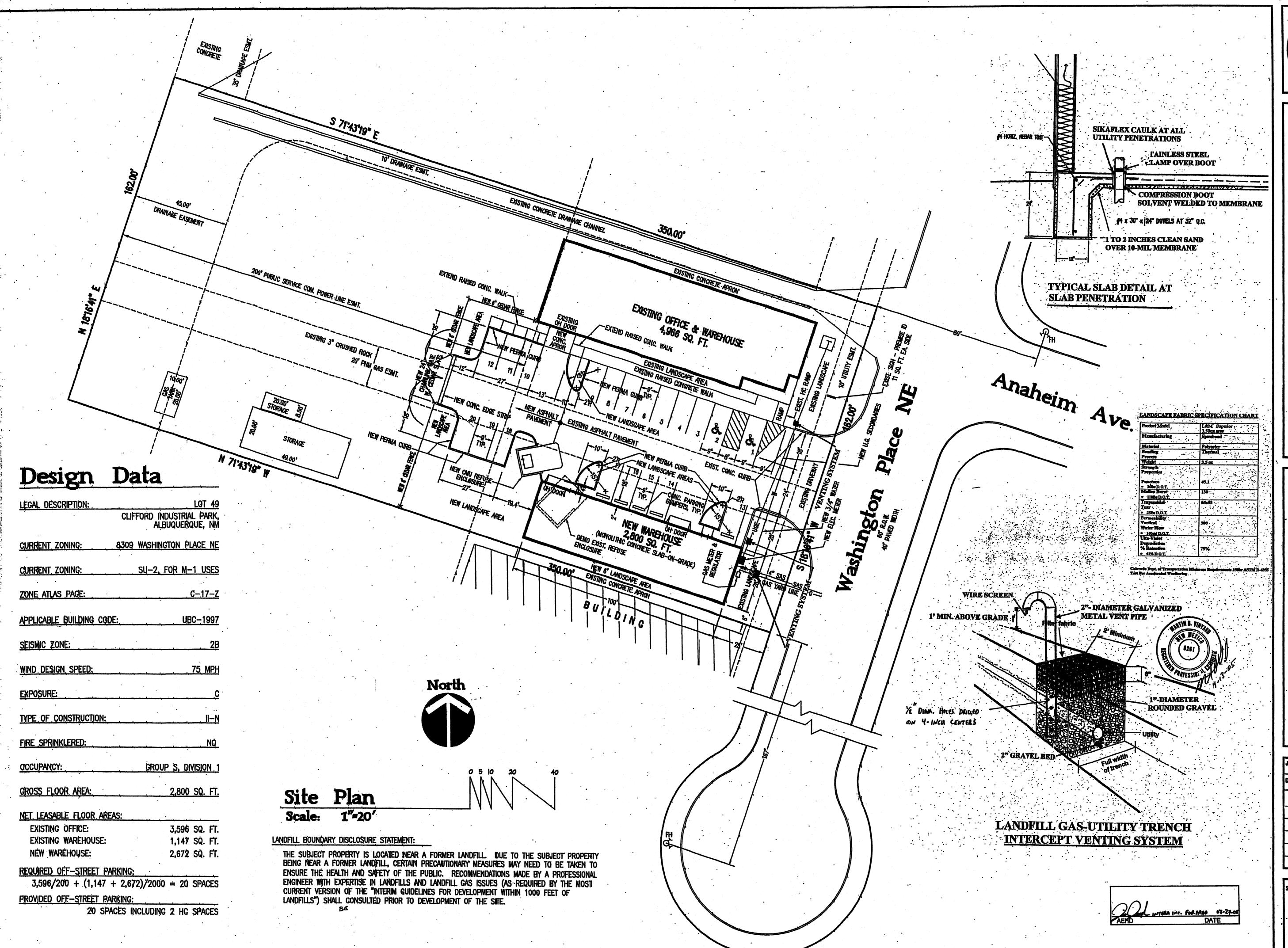


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505) 259-8458 * 3808 SIMMS AVENUE SE * ALBUQUERQUE, NM * 87108

JOB NO: 0309
DATE: 12 AUGUST 2005
REVISIONS
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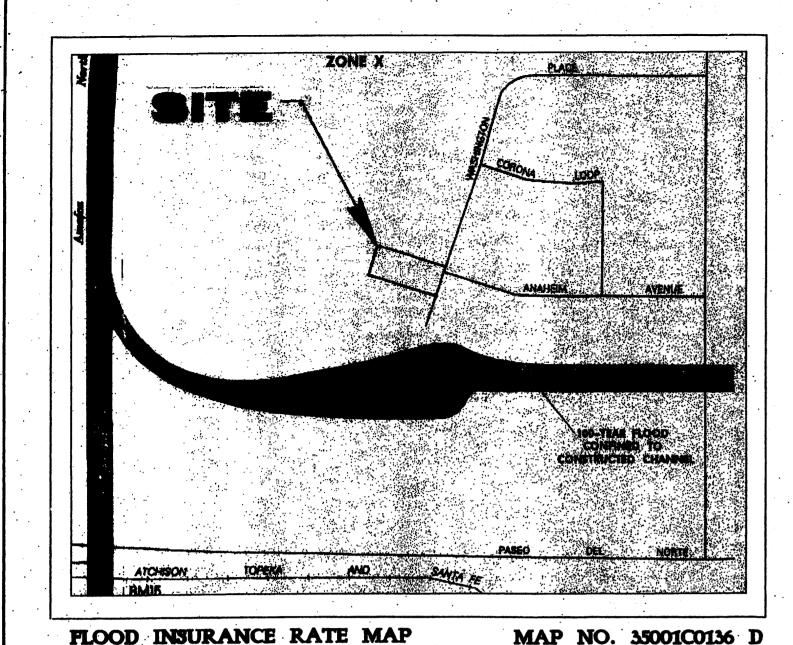




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35' DRAINAGE ESMT

# GENERAL NOTES:

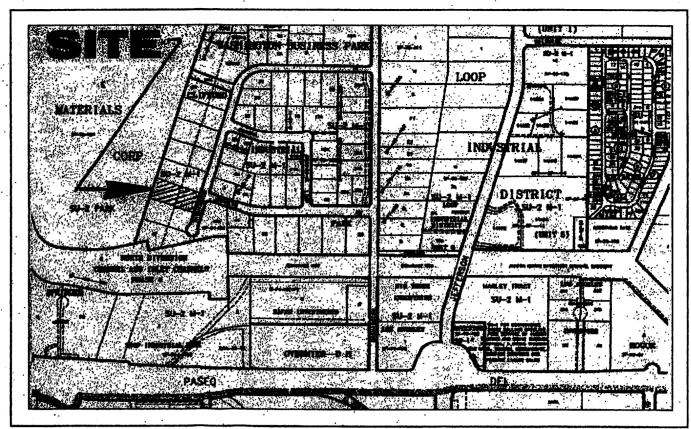
- 1: CONTOUR INTERVAL IS ONE (1) FOOT.
- 2: ELEVATIONS ARE BASED ON CITY OF ALBUQUERQUE STATION No. "12-C17", HAVING AN ELEVATION OF ___5107.95
- 3: Utilities shown hereon are in their approximate location based ONLY ON ABOVE GROUND EVIDENCE FOUND IN THE FIELD AND AS-BUILT INFORMATION PROVIDED BY THE 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 CON-
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LEGEND: EXISTING	NEW	DESCRIPTION
5080	80.00 -	CONTOUR SPOT ELEVATION
<del></del>	<b>+ + + + + +</b>	PROPERTY LINE SWALE SHEET FLOW ROOF FLOW ROOF GUTTER
		DOWNSPOUT  LEGEND  TC = TOP OF CONCRETE  FL = FLOW LINE  TG = TOP OF GRADE  EOW = END OF WALL

#### **EROSION CONTROL NOTES:**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE FOLLOWING
- 1. NO SEDIMENT-BEARING WATER SHALL BE ALLOWED TO DISCHARGE FROM THE SITE DURING CONSTRUCTION.
- 2. DURING GRADING OPERATIONS AND UNTIL THE PROJECT HAS BEEN COMPLETED, ALL ADJACENT PROPERTY, RIGHTS-OF-WAY, AND EASEMENTS SHALL BE PROTECTED FROM FLOODING BY RUNDEF FROM THE SITE.
- 3. SHOULD THE CONTRACTOR FAIL TO PREVENT SEDIMENT-BEARING WATER FROM ENTER-ING PUBLIC RIGHT-OF-VAY, HE SHALL PROMPLTY REMOVE FROM THE PUBLIC RIGHT-OF-VAY ANY AND ALL SEDIMENT DRIGINATING FROM THE SITE.
- CONTROL OF SEDIMENT-LADEN WATERS WILL BE ACCOMPLISHED BY USE OF A COM-PACTED EARTH BERM OF ADEQUATE HEIGHT. THE BERM SHALL BE LOCATED ALDING THE DOWNSTREAM PERIMETER OF THE PROPERTY.

LEGAL DESCRIPTION: LOT 49, CLIFFORD INDUSTRIAL PARK, ALBUBQUERQUE, NEW MEXICO.



VICINITY MAP

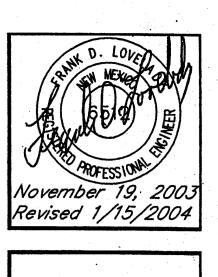
ZONE ATLAS NO. C-17-Z

CENERAL NOTES

- 1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE TO RESOLVE THE CONFLICT WITH A MINIMUM AMOUNT OF DELAY.
- 2. ALL WORK ON THIS PLAN SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- 3. IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE LOCATION ONLY, AND LINES MAY EXIST WHERE NONE ARE SHOWN. THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE UTILITY OWNER OR FROM EXISTING PLANS, AND THIS INFORMATION MAY BE INCOMPLETE. OR OBSOLETE AT THE TIME OF CONSTRUCTION. THE ENGINEER HAS NOT UNDERTAKEN ANY FIELD VERIFICATION OF THESE LOCATIONS, LINE SIZES OR MATERIAL TYPE, MAKES NO REPRESENTATION THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATIONS OF ANY UTILITY LINE, PIPELINE OR UNDERGROUND INSTALLATION IN OR NEAR THE AREA IN ADVANCE OF OR DURING ANY EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES AND UNDERGROUND FACILITIES. IN PLANNING AND CONDUCTING EXCAVATIONS, THE CONTRACTOR SHALL COMPLY WITH ALL STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
- 4. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHTS-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AND BY WETTING THE SOIL TO KEEP IT FROM BLOWING.
- 5. THE CONTRACTOR SHALL OBTAIN ANY AND ALL PERMITS REQUIRED BY THE CITY OF ALBUQUERQUE FOR THE COMPLETION OF THE WORK PRIOR TO BEGINNING CONSTRUCTION.

# 

- 1. EXISTING ASPHALT PAVEMENT.
- 2. EDGE OF EXISTING ASPHALT PAVEMENT.
- 3. EDGE OF ASPHALT REMOVAL AND REPLACEMENT. 4. NEW ASPHALT PAVEMENT.
- 5. EXISTING REFUSE ENCLOSURE DEMOLISH.
- 6. EXISTING LANDSCAPING.
- 7. PROPERTY LINE.
- 8. ROOF GUTTER
- 9. DOWNSPOUT. 10. EXISTING TEMPORARY BUILDINGS TO BE REMOVED, RELOCATED OR, LEFT IN PLACE, AS DETERMINED BY THE OWNER. NOTE: ALL TEMPORARY BUILDINGS WITHIN THE CHANNEL CONST. AREA HAVE BEEN
- 11. EXISTING CONCRETE PAD. CITY PLANS FOR CLIFFORD CHANNEL, REALIGNMENT CALL FOR REMOVAL AND DISPOSAL OF THIS PAD.

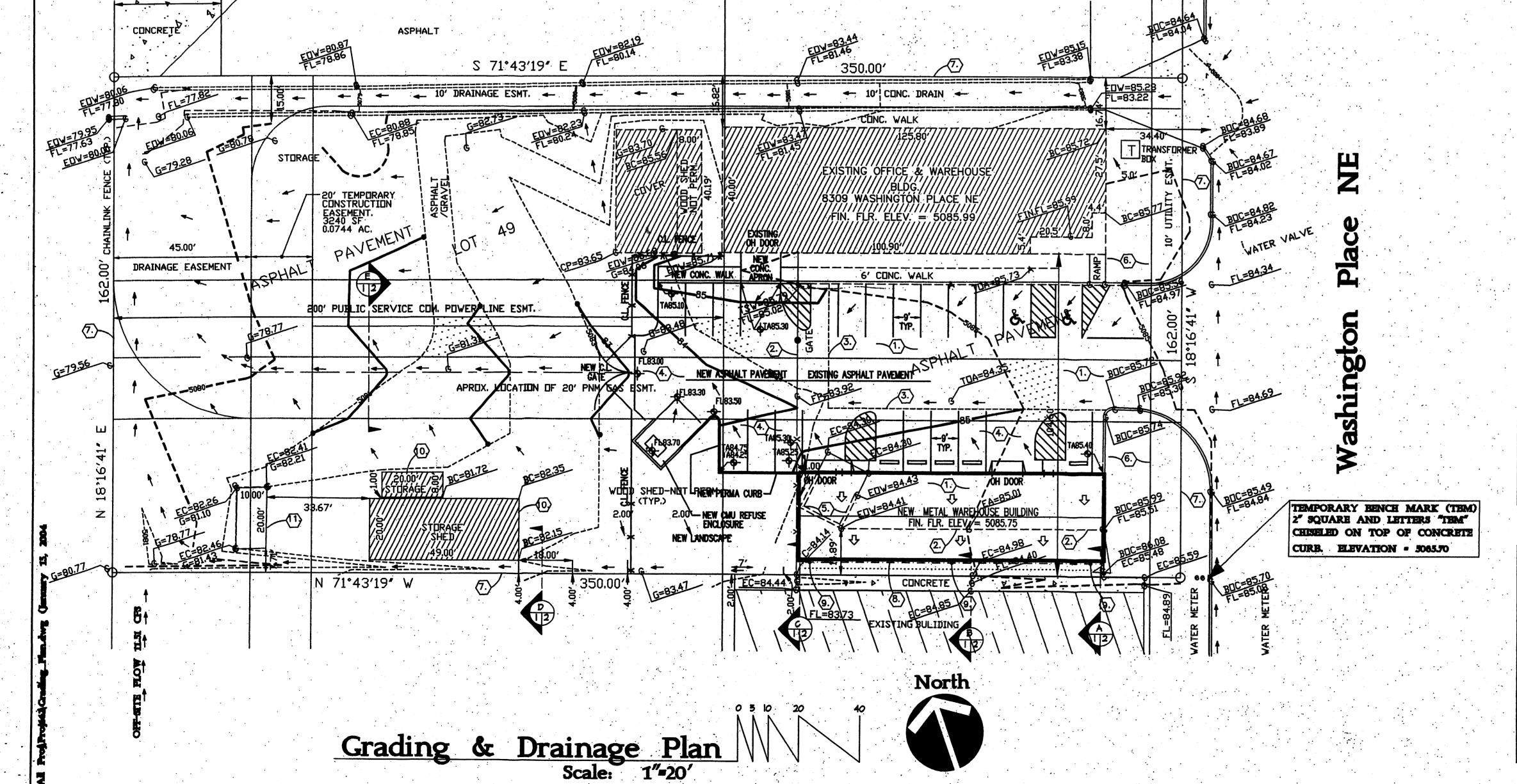


Enterprises Commercial for Warehouse



3	OB	NO: 0309
0	ATE	15 JANUARY 2004
		REVISIONS
	1	TBM RELOCATED, TEMP.
		CONST. EASEMENT ADDED
	!	
		•

SHEET NO.



The site is located on the west side of Washington Place NE, the third lot north of the Domingo Baca Channel. There is a drainage concrete channel along the north edge of the site. The existing building roof has an east-west ridge and the north side of the building drains directly into the drainage channel via splash blocks that extend over the channel wall. The parking lot is paved and there are several non-permanent buildings on the site, drainage is from east to west. At the NW corner of the site the drainage channel continues west into the old baloon fiesta area. The lots north and south of the site are also developed. (See aerial photo, Sheet C. 1. 2)

#### DEVELOPED CONDITIONS:

It is proposed to construct a new metal storage building on the site as shown. The building will be constructed in an area which is now partially paved. The pavement will be extended to the west as shown. All runoff will continue to flow to the west and then north into the existing casement as it presently does.

#### **FUTURE IMPROVEMENTS:**

The City of Albuquerque proposes to construct 'Clifford Channel Realignment at Former Los Angeles Landfill'. Construction plans have been prepared and a reduced set will be submitted with this grading and drainage submittal. No attempt has been made to show the channel grades on this plan.

#### 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 'D':

SURFACE	EXISTING	DEVELOPED
CONCRETE	4,095	5, 236
ASPHALT PAVING	8, 623	9, 698
BUILDING	8, 369	11, 169
TOTAL	21,087	26, 103

#### LAND TREATMENT AREAS:

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.	q(cf 100-yr.	s/ac) 10-vr.	E 100-yr	(In) : 10-yr	Ex 1	sting Si Sa. Ft.	te Areas Acres	Deve l	oped Site	Areas
Á	1. 56	0. 38	0. 53	0.13			0.0000			
В	2. 28	0. 95	0. 78	0. 28	4. 8	2,72G	0.0624	4. 8	2,720	0.062
C							0. 7551			
D							0. 4841		-	
Totals		,					1 2016		56 700	

#### PEAK DISCHARGE:

EXISTING CONDITIONS:

Q100 = 0.0624 * 2.28 + 0.7551 x 3.14 + 0.4841 * 4.70 = 4.79 cfs Q10 = 0.0624 * 0.95 + 0.7551 * 1.71 + 0.4841 * 3.14 = 2.87 cfs

#### DEVELOPED CONDITIONS:

 $Q100 = 0.0624 * 2.28 + 0.6400 \times 3.14 + 0.5992 * 4.70 = 4.97 cfs$ Q10 = 0.0624 * 0.95 + 0.6400 * 1.71 + 0.5992 * 3.14 = 3.04 cfs

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

EXISTING CONDITIONS:

V100 = (2,720 * 0.78 + 32,893 * 1.13 + 21,087 * 2.12) / 12 = 7,000 cf V10 = (2,720 * 0.28 + 32,893 * 0.52 + 21,087 * 1.34) / 12 = 3,844 cf

#### DEVELOPED CONDITIONS:

V100 = (2,720 * 0.78 + 27,877 * 1.13 + 26,103 * 2.12) / 12 = 7,413 cf V10 = (2,720 * 0.28 + 27,877 * 0.52 + 26,103 * 1.34) / 12 = 4,186 cf

# SUMMARY OF ON-SITE VOLUMES AND PEAK DISCHARGE RATES

DEVELOPED	V100(CF) 7,413	V10(CF) 4, 186	Q100( CFS) 4. 97	Q10(CFS) 3. 04
EXISTING	7,000	3.844	4, 79	2. 87
INCREASE	413	342	0. 18	0. 17

#### NEW BUILDING ROOF RUNOFF:

AREA = 3300 SF

Q100 = ( 3300 / 43,560 ) X 4.7 = 0.36 CFS

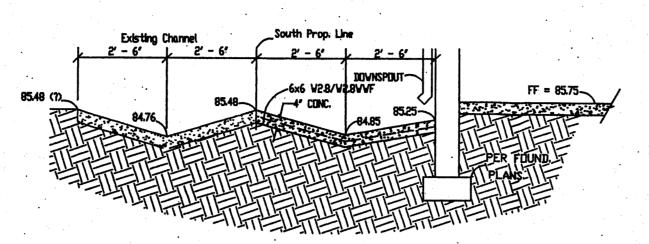
CAPACITY OF SWALE (SECTION D):

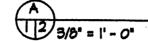
SVALE 5' VIDE X 0.5' DEEP

AREA= 1.25 SF P = 5.1 SLOPE = 4.14 = 200 = 0.0207 R = A/P = 1.25 / 5.1 = 0.25 N = 0.035 (GRAVEL) V = (1.486 / 0.035) (0.25)^{2/3} (0.0207)^{1/2} = 2.4 FPS

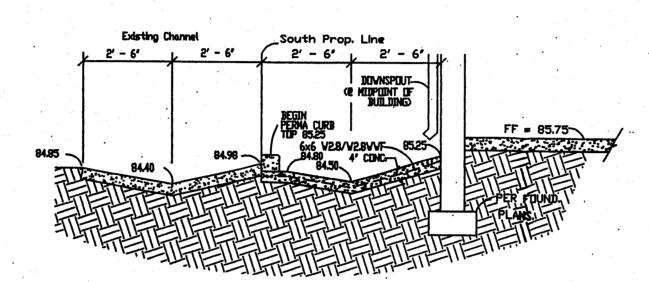
Q = AV = 1.25 X 2.4 = 3.00 CFS

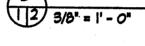
3. 00 CFS > 0. 36 CFS ADEQUATE





TUTAL DISTANCE BETWEEN SECTIONS "A" & "B" IS 43.6"
SLOPE = (84.85 - 84.50 ) / 43.6 = 0.0080 FT./FT.



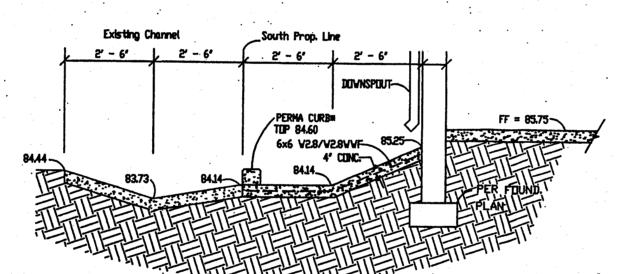


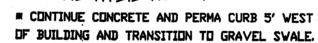
NOTE

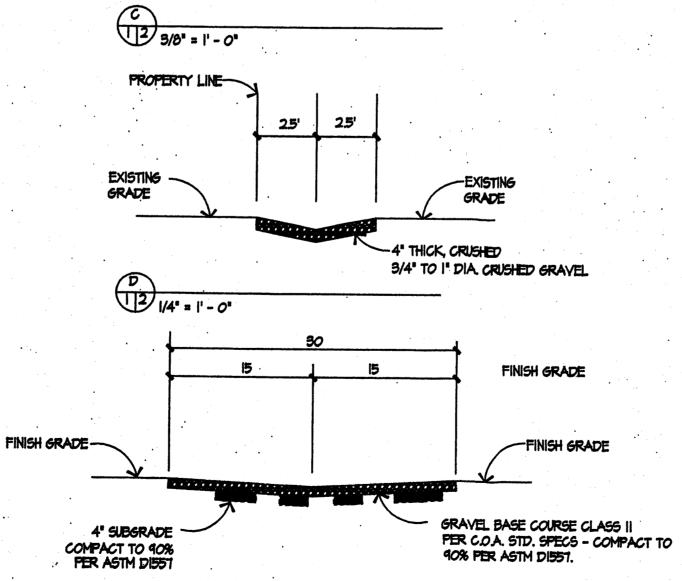
TRANSITION FROM "V" SHAPED CHANNEL TO FLAT BUTTOMED

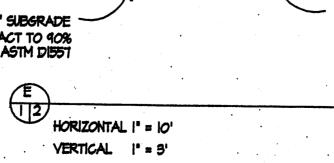
CHANNEL BETWEEN SECTIONS "B" AND "C". TOTAL DISTANCE

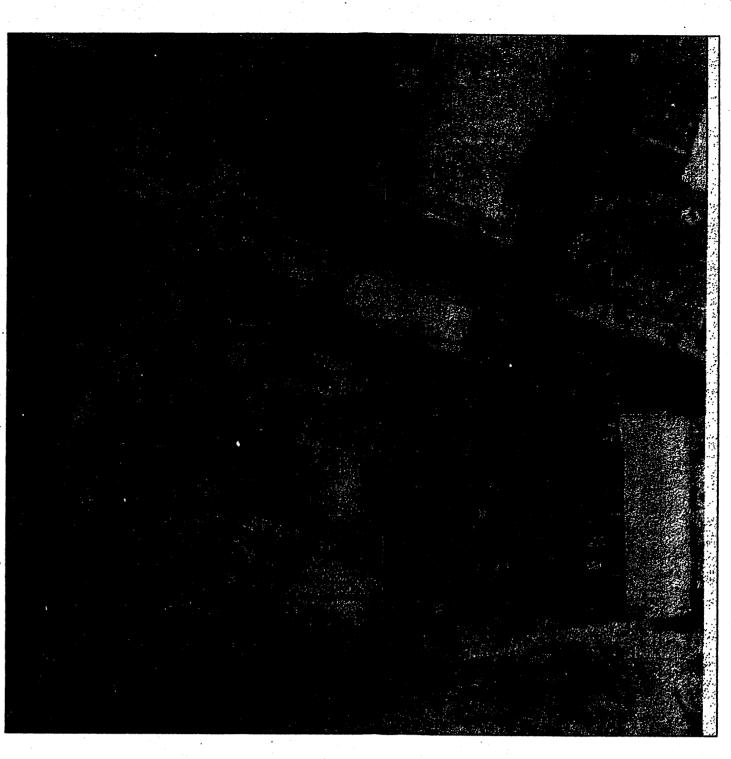
IS 56.0". SLOPE = (84.5 - 84.14 ) / 56 = 0.0064 FT./FT.











AFRIAL PHOTO OF SITE AREA
APPROX. SCALE 1" = 100'

#### OFF-SITE FLOW CALCULATIONS,

AREA = 2.72 ACRES - SEE ABOVE MAP.

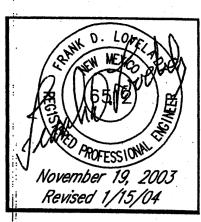
PER TABLE A-5 OF THE DPM, LIGHT INDUSTRIAL IS 70% TREATMENT D.

ASSUME 30 PERCENT TREATMENT C.

VEIGHTED 100-YEAR PEAK DISCHARGE PER ACRE.

Q w = 0.3 * 3.14 + 0.7 * 4.70 = 4.23 CFS PER ACRE.

Q 100 = 4.23 CFS PER ACRE * 2.72 ACRES = 11.51 CFS



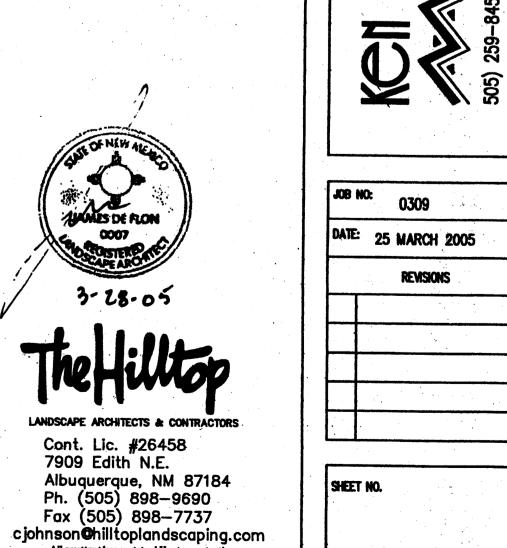
Warehouse for Commercial Enterprises

KEI HOVEY, ARCHITECT AND THE SE * ALBUQUERQUE, NM * 87108

JOB	NO: 0309							
DATE	15 JANUARY 2004							
REVISIONS								
1.	OFF-SITE FLOW AREA & CALC							

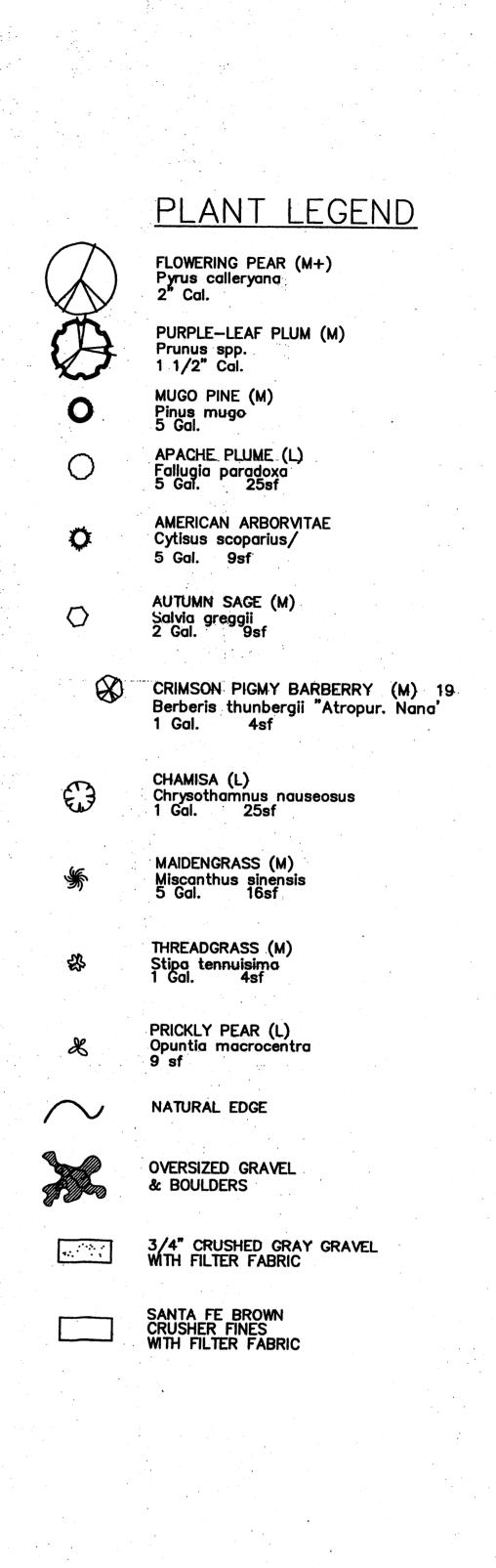
C.1.2





JUMES DE FLON

All creative ideas contained Herein remains the property of The Hilltop Landscape Architects and Contractors and are protected by copyright laws. This is an original design and must not be released or copied unless applicable fees have been paid or job order

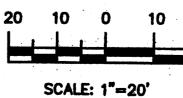


Febco Model 765 12" above the legitural downstrates outlet and the highest point in the downstrates piping BACKFLOW PREVENTOR DETAIL no scale

EXISTING OFFICE & WAREHOUSE

EXISTING PLANTING

GRAPHIC SCALE





3/25/05 drr

7-10 0 24125F 00 0 NEW WAREHOUSE 2,800 SQ. FT. LANDSCAPE NOTES: **IRRIGATION NOTES:** Landscape maintenance shall be the Irrigation shall be a complete underground responsibility of the Property Owner. system with Trees to receive (5) 1.0 GPH Drip Emitters and Shrubs to receive (2) 1.0 It is the intent of this plan to comply with the City Of Albuquerque Water Conservation Landscaping and Water Waste Ordinance planting restriction approach. Approval of this plan does not constitute or imply exemption GPH Drip Emitters. Drip and Bubbler systems to be tied to 1/2" polypipe with flush caps at each end. Run time per each drip valve will be approximately 15 minutes per day, to be adjusted according to the season. from water waste provisions of the Water Conservation Landscaping and Water Waste Point of connection for irrigation system is Water management is the sole responsibility of the Property Owner. All landscaping will be in conformance with the City of Albuquerque Zoning Code, Street Tree Ordinance, Pollen Ordinance, and Water Conservation Landscaping unknown at current time and will be coordinated in the field. Irrigation will be

operated by automatic controller.

Location of controller to be field determined and power source for controller to be provided by others.

5,902 SF

Irrigation maintenance shall be the responsibility of the Property Owner.

Water and Power source shall be the responsibility of the Developer/Builder.

# LANDSCAPE AREA REQUIREMENTS:

PROVIDED LANDSCAPE AREA:

TOTAL SITE AREA: 56,700 SF LESS BUILDING AREAS: (7,766 SF) LESS NON-PUBLIC SITE AREA NOT (28,662 SF) USED FOR REQUIRED PARKING: NET SITE AREA: 20,272 SF REQ'D LANDSCAPE AREA: 72,532 SF  $\times$  15 PERCENT = 3,041 SF

Ordinance.

at maturity.

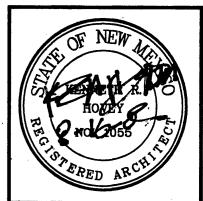
and Water Waste Ordinance. In general, water

conservative, environmentally sound landscape principles will be followed in design and installation.

Plant beds shall achieve 75% live ground cover

Gray Gravel over Filter Fabric shall be placed in all landscape areas which are not

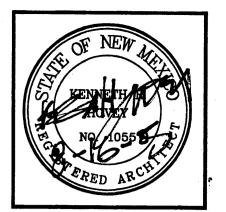
designated to receive native seed.



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JOB NO:	0309
DATE: 30	MARCH 2004
	REVISIONS

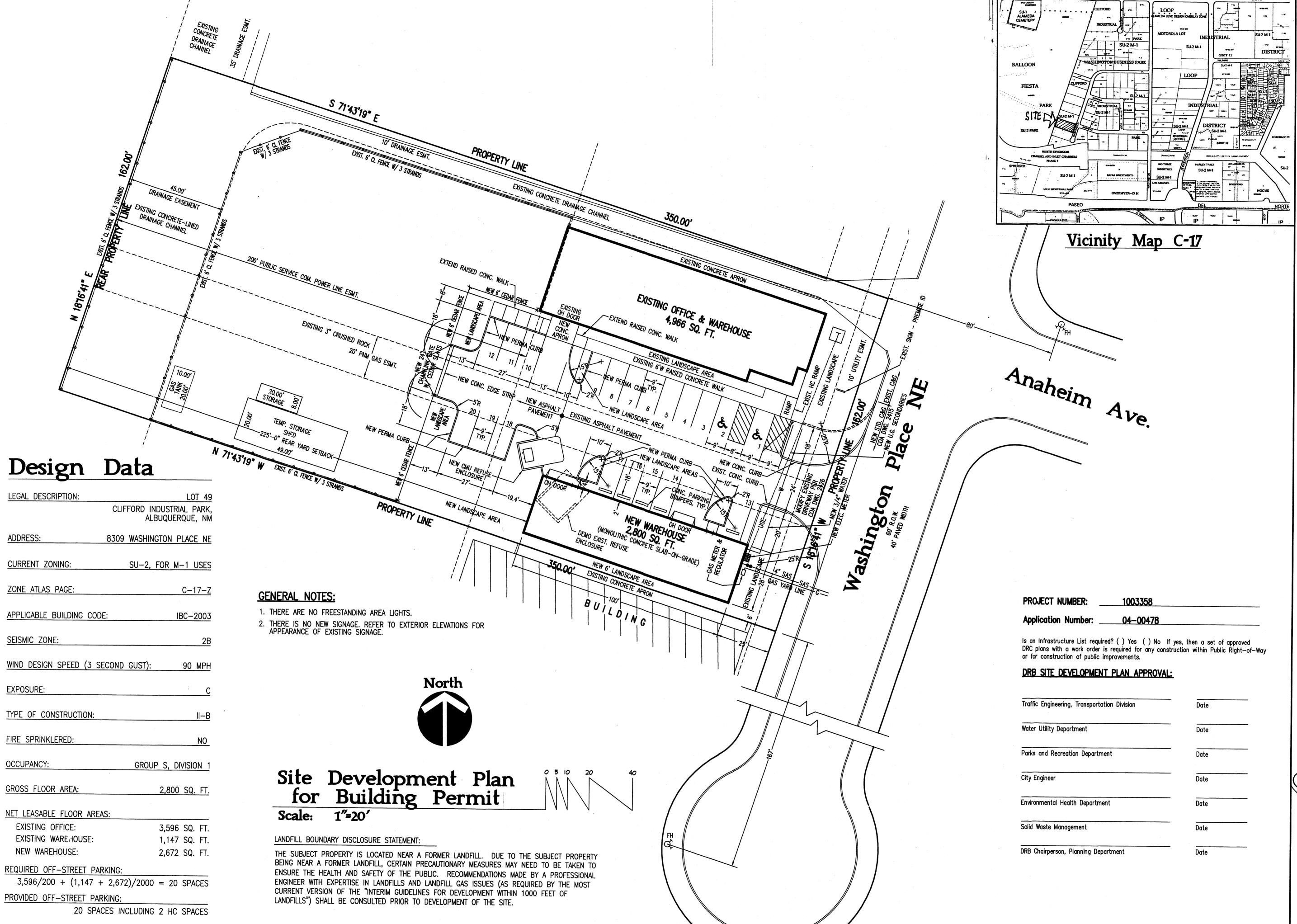
**A.2** 

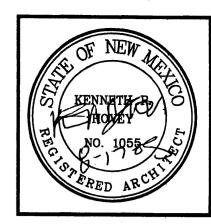


KCH HOVCK, ARCHITCCI (505) 259-8458 * 3808 SIMMS AVENUE. SE * ALBUQUERQUE, NM * 87108

	030	1			
12 AUGUST 2005			)5		
	REVIS	IONS			
	2 /		2 AUGUST REVISIONS		

**A.3** 





CELL HOVEY, ARCHITCCI ACTION OF STORY STO

DATE: 16 AUGUST 2005
REVISIONS

SD.1