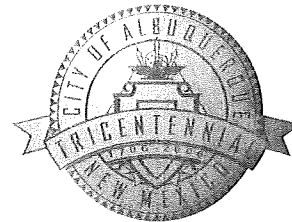


CITY OF ALBUQUERQUE



September 10, 2007

Daniel S. Aguirre, P.E.
Wilson & Company, Inc.
4900 Lang Ave. NE
Albuquerque, NM 87109

**Re: Meridian Business Park II Drainage Report and Basin Map
Engineer's Stamp dated 8-30-07 (J10/D002G)**

Dear Mr. Aguirre,

Based upon the information provided in your submittal dated 9-4-07, the above referenced plan cannot be approved for Preliminary Plat action by the DRB until the following comment is addressed:

- A Conceptual Grading and Drainage Plan is required.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Curtis A. Cherne, P.E.
Engineering Associate, Planning Dept.
Development and Building Services

C: file
Brad Bingham

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 01/06 - KDM)

PROJECT TITLE: FedEx Freight Albuquerque

ZONE MAP: J-10

DRB#: 1000845

EPC#: _____

WORK ORDER#: _____

XXXXXX

LEGAL DESCRIPTION: Lot 3 Tract S-1, Tract S-2A-2, and Tract S-1a, Unit 2 Atrisco Business Park

CITY ADDRESS: Fortuna Drive NW

ENGINEERING FIRM: Wilson & Company

ADDRESS: 4900 Lang Ave NE

CITY, STATE: Albuquerque, NM

CONTACT: Kristine Susco

PHONE: (505) 348-4000

ZIP CODE: 87109

OWNER: Angelo Brunacini

ADDRESS: PO Box 6363

CITY, STATE: Albuquerque, NM

CONTACT: Angelo Brunacini

PHONE: (505) 833-2925

ZIP CODE: 871972

ARCHITECT: _____

ADDRESS: _____

CITY, STATE: _____

CONTACT: _____

PHONE: _____

ZIP CODE: _____

SURVEYING FIRM: _____

ADDRESS: _____

CITY, STATE: _____

LICENSED SURVEYOR: _____

PHONE: _____

ZIP CODE: _____

PROFESSIONAL LICENSED SURVEYOR SIGNATURE

LICENSE NO.

DATE

CONTRACTOR: _____

ADDRESS: _____

CITY, STATE: _____

CONTACT: _____

PHONE: _____

ZIP CODE: _____

TYPE OF SUBMITTAL:

- ☒ DRAINAGE REPORT
- ☐ DRAINAGE PLAN 1st SUBMITTAL
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL G & D PLAN
- ☐ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☐ ENGINEER'S CERT (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT
- ☐ ENGINEER'S CERT (TCL)
- ☐ ENGINEER'S CERT (DRB SITE PLAN)
- ☐ OTHER-

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SIA/FINANCIAL GUARANTEE RELEASE
- ☒ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D APPROVAL
- ☐ S. DEV. FOR BLDG. PERMIT APPROVAL
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ BUILDING PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☐ OTHER (SPECIFY)

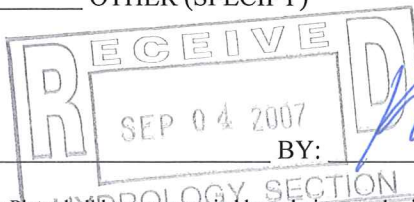
WAS A PRE-DESIGN CONFERENCE ATTENDED:

☐ YES

☐ NO

☐ COPY PROVIDED

DATE SUBMITTED: 8-31-07 9-4-07



Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more.

Drainage Report

for

MERIDIAN BUSINESS PARK II

A Supplement to the
Master Drainage Plan for
Atrisco Business Park
Dated September 1992
Revised March 1993/ October 1993

Prepared by:

Wilson & Company, Inc.
4900 Lang Ave NE
Albuquerque, New Mexico 87109
(505) 348-4191

August 2007
WCI File No: 0760004400

WILSON
& COMPANY

Drainage Report

for

MERIDIAN BUSINESS PARK II

A Supplement to the
Master Drainage Plan for
Atrisco Business Park
Dated September 1992
Revised March 1993/ October 1993



Prepared by:

Daniel S. Aguirre, PE
NM #11955

Wilson & Company, Inc.
4900 Lang Ave NE
Albuquerque, New Mexico 87109
(505) 348-4191

January 2007
WCI File No: 0760004400

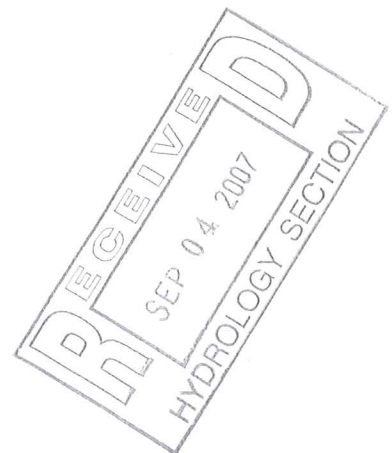


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Dated September 1992, Revised March 1993/October 1993	3
Proposed Improvements	4
Conclusion	5
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Appendix B – FEMA Flood Plan Map	
Plate 1 – Proposed Improvements/Drainage Basin Map-Fully Developed Condition	
Plate 2 – Atrisco Business Park Master Drainage Plan Overall Drainage Plan	

Site Description

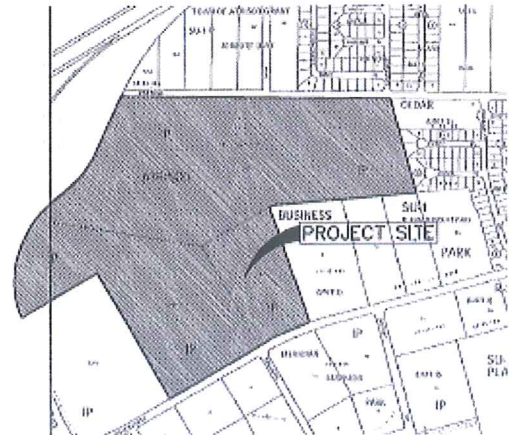
The project site, identified as Meridian Business Park II, is located at the intersection of Los Volcanes Road NW and the new Gallatin Place NW alignment. It is bounded on the north by Fortuna Road NW, on the west by Unser Blvd, on the south by Los Volcanes Road NW, and on the east by Airport Road. The 93.08 acre project site is located on the eastern boundary of the Unser Blvd. right-of-way. The site is currently undeveloped, covered with native grasses, and there has been no previous impact from human activity.

Legal Description

Lot 3 Tract S-1, Lot 2 Tract S-1, Lot 1A Tract S-1, Tract S-1A (Westerly Portion & Remainder), and Tract S-2A-2.

Flood Hazard Zones

A portion of the site is located in a flood zone as shown in Panel 27 of 50 of the FEMA Flood Plains Map. See Appendix B.



LOCATION MAP
ZONE ATLAS MAP NO. J-10

Drainage

Proposed Conditions per the "Master Drainage Plan for Atrisco Business Park" dated September 1992, Revised March 1993/October 1993

The existing ± 93.08 acre project site is identified as part of Basin 200.1, in the "Master Drainage Plan for the Atrisco Business Park" dated September 1992, Revised March 1993/October 1993, refer to Plate 2. The allowable discharge rate determined by this Master Drainage Plan is 0.1 cfs/acre along with fully developed free discharge to the streets with some exceptions. A proposed detention pond is currently located on the eastern portion of Tract S-1A to collect flow from Basin 200.1 per the Master Drainage Plan. The total acreage of Basin 200.1 is 133.2 acres, therefore it has an allowable discharge of 13.3 cfs. There are two watershed outfalls in this Master Drainage Plan, the North/South Coors Connection Storm Drain Watershed and the Tierra Bayita Storm Drain Watershed. The two are divided by the east right-of-way line of Unser Blvd. The Tierra Bayita Storm Drain collects discharge from the west side of the Unser right-of-way, and the North/South Coors Connection Storm Drain collects discharge from the east side of the right-of-way. The 13.3 cfs will be collected in the North/South Coors Connection Watershed in Airport Road.

On the north frontage of the project site, per the "West Mesa Diversion Project Drainage Analysis" at analysis point 13, 136 cfs will be discharged into a 36" storm drain in Fortuna Road NW. Refer to the "Summary of Peak Discharges and Peak Volumes Alternative 2A1 Developed Conditions" table in the "West Mesa Diversion Project Drainage Analysis". The 136 cfs is a total discharge from Basin C4-D and Basin 1-40-2. There is currently a 36" storm drain at the intersection of Fortuna Road NW and Mesa Del Rio Rd. On the west end of the 36" storm drain, a 30" cap has been provided for the continuation of storm drain in Fortuna Road NW, and a 36" cap has been provided for the proposed storm drain in 76th Street.

Proposed Improvements

Since the revised "Master Drainage Report for Atrisco Business Park" dated October 1993, one tract in Basin 200.1 has been developed, one is still for future development, and the remaining tract is being divided into 4 tracts which are treated as sub-basins of the original Basin 200.1. See Plate 1. These 4 sub-basins will each have their own developed flows and ponding requirements adhering to the Master Drainage Report, with an allowable discharge of 0.1 cfs/acre in fully developed conditions.

The fully developed flows were calculated using the Rational Method in Chapter 22 Section 2 of the City of Albuquerque's Development Process Manual. The project site is located in Precipitation Zone 1, and was analyzed using 15% Land Treatment B and 85% Land Treatment D. See Table 1 below for Fully Developed Flows.

Table 1: Summary of Fully Developed Flows		
Basin	Area (acres)	100_{year}-24_{hour} Peak Flow (Q₁₀₀) cfs
200.1A	29.4	118.1
200.1B	21.0	84.4
200.1C	22.4	90.1
200.1D	20.3	81.5

Per the "Master Drainage Plan for the Atrisco Business Park" the allowable discharge rate was calculated using a discharge of 0.1 cfs/acre. Each tract will require a detention pond to limit the discharge to this rate. Table 2 shows the 100 year peak flow discharge allowed from the outlet of each pond.

Table 2: Summary of Allowable Discharge— Fully Developed	
Pond	100_{year} Peak Flow (Q₁₀₀) cfs
1	2.9
2	2.1
3	2.2
4	2.0
Total discharge to North/South Coors Connection	9.2 CFS

The total discharge of 5 cfs from both Pond 1 and Pond 2 will be collected in the conceptual 24" storm drain along Gallatin Place NW. This storm drain will be located in a 20' private maintained easement that will tie into the existing 24" SD in Los Volcanes Road NW.

Pond 3 & 3A will discharge a total of 2.2 cfs into the proposed 24" storm drain that will be located within this site and will tie into the existing 24" storm drain in Los Volcanes Road NW.

Pond 4 will have a discharge of 2 cfs into the proposed 24" SD that will run along Lot1A in a 20' easement and will tie into the existing 24" SD in Los Volcanes Road NW.

An ultimate discharge of 9.2 cfs of the 13.3 cfs will discharge into the North/South Coors Connection, adhering to the Master Drainage Plan.

An extension of the storm drain in Fortuna Road NW will be required to collect the flow generated from Basin C4-D of the "West Mesa Diversion Project Drainage Analysis". This basin is comprised of Lots 185A, 184, 183, 182, and 181. Per this Drainage Analysis, a discharge of 3.76 cfs/acre to the street was determined for the fully developed conditions. Refer to Table 3 below for the allowable discharge.

Table 3: Summary of Allowable Free Discharge to Street – Fully Developed		
Lot	Area (acres)	100^{year}-24^{hour} Peak Flow (Q₁₀₀) cfs
185A	1.37	5.15
184	2.37	8.91
183	3.46	13.01
182	4.21	15.83
181	4.54	17.07

A street flow analysis was completed to determine the location of the of the storm drain extension. See Appendix A. Inlets will be provided at the return of Fortuna Road NW and Gallatin Place NW, and between Lots 182 and 181 with a 30" storm drain tying into the existing 30" cap provided.

Inlets will also be required in 76th Street to accommodate the 60 cfs generated from Basin 1-40-2 of the "West Mesa Diversion Project Drainage Analysis". These inlets will be located at the curb returns of 76th Street and Fortuna Road NW intersection. An extension of the 36" storm drain will be required from the east side of Mesa del Rio Street into the retention pond located in Tract A of the Cedar Ridge Estates.

Conclusion

The development of Meridian Businss Park II has been analyzed in this report. The project's design is adhering to the requirements of the approved " Master Drainage Plan for Atrisco Bunisess Park" dated September 1992, Revised March 1993/October 1993, with an ultimate discharge of 9.2 cfs into the North/South Coors Connection Watershed. As part of this development a segment of Fortuna Road NW will be constructed. A portion of the drainage system will be required to be built with the roadway in accordance with the "West Mesa Diversion Project Drainage Analysis" as described above.

APPENDIX A

Fortuna Rd

Worksheet for Irregular Channel

Project Description	
Worksheet	FORTUNA RD
Flow Element	Irregular Chan
Method	Manning's Forr
Solve For	Channel Depth

Input Data	
Slope	0.022600 ft/ft
Discharge	43.00 cfs

Options	
Current Roughness Method	aved Lotter's Method
Open Channel Weighting	aved Lotter's Method
Closed Channel Weighting	Horton's Method

Results	
Mannings Coefficient	0.019
Water Surface Elev	0.52 ft
Elevation Range	0.00 to 0.67
Flow Area	9.6 ft²
Wetted Perimeter	41.086 ft
Top Width	40.259 ft
Actual Depth	0.52 ft
Critical Elevation	0.61 ft
Critical Slope	0.007871 ft/ft
Velocity	4.47 ft/s
Velocity Head	0.31 ft
Specific Energy	0.83 ft
Froude Number	1.61
Flow Type	Supercritical

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00.000	0+40.334	0.019

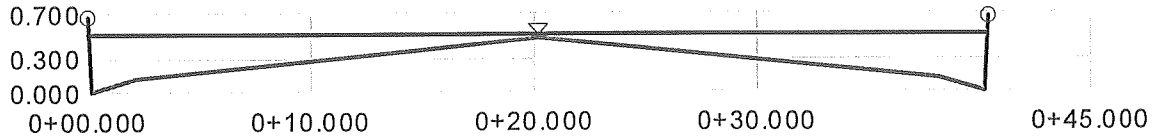
Natural Channel Points	
Station (ft)	Elevation (ft)
0+00.000	0.670
0+00.167	0.000
0+02.167	0.125
0+20.167	0.485
0+38.167	0.125
0+40.167	0.000
0+40.334	0.670

Cross Section

Cross Section for Irregular Channel

Project Description	
Worksheet	FORTUNA RD
Flow Element	Irregular Chanl
Method	Manning's Forr
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.019
Slope	0.022600 ft/ft
Water Surface Elev.	0.52 ft
Elevation Range	.00 to 0.67
Discharge	43.00 cfs



V:5.0
H:1
NTS

APPENDIX B

FLOODWAY
FLOOD BOUNDARY AND
FLOODWAY MAP
CITY OF
ALBUQUERQUE,
NEW MEXICO
BERNALILLO COUNTY

PANEL 27 OF 50

COMMUNITY-PANEL NUMBER
350002 0027
EFFECTIVE DATE:



Federal Emergency Management Agency

LEGEND

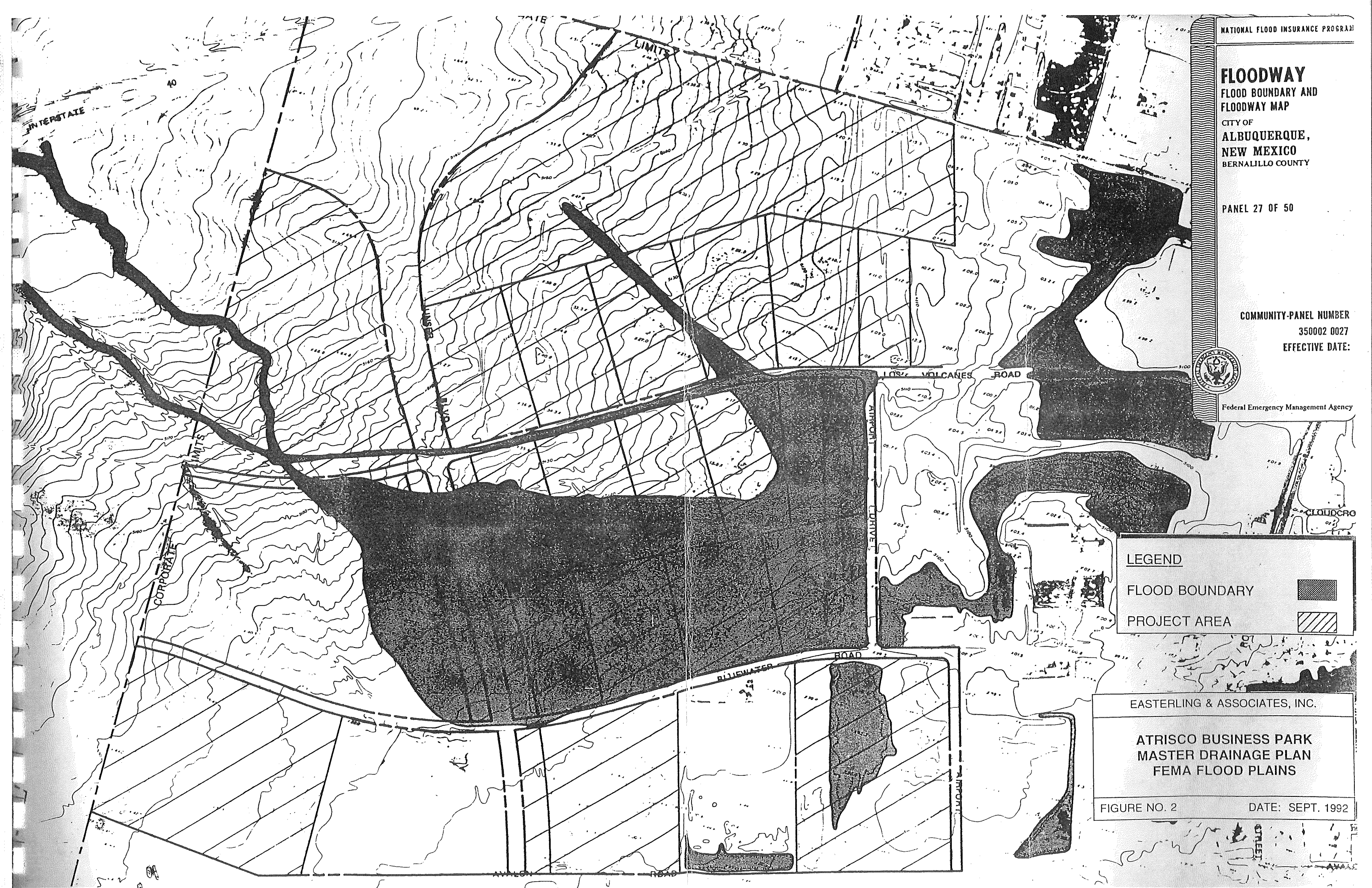
- FLOOD BOUNDARY 
- PROJECT AREA 

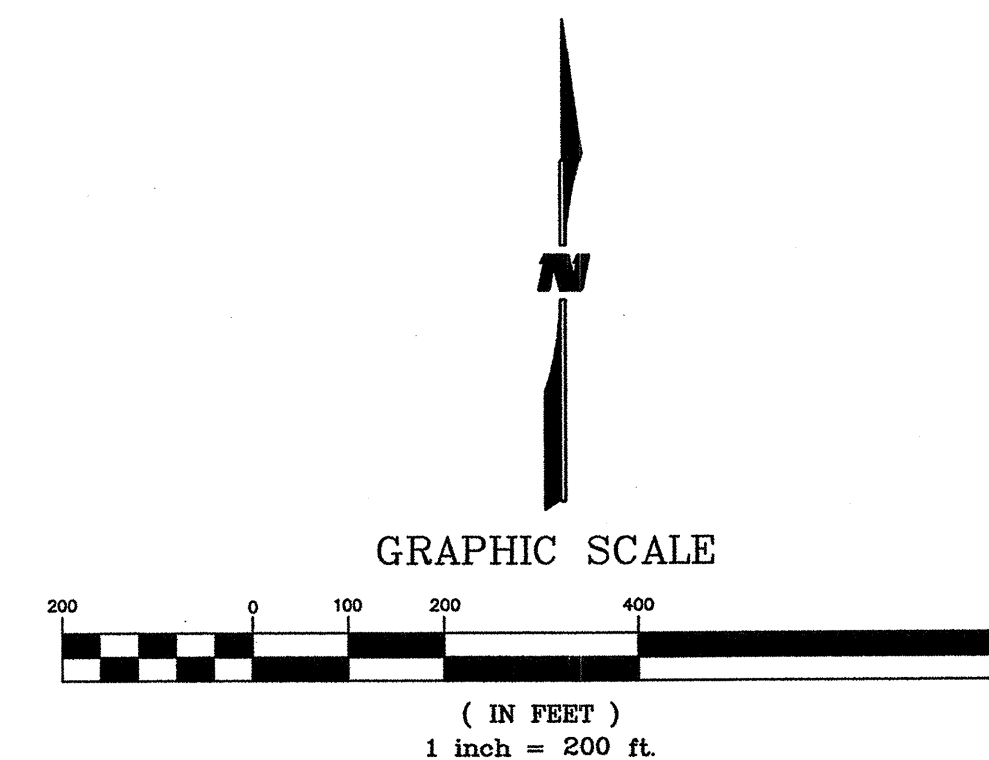
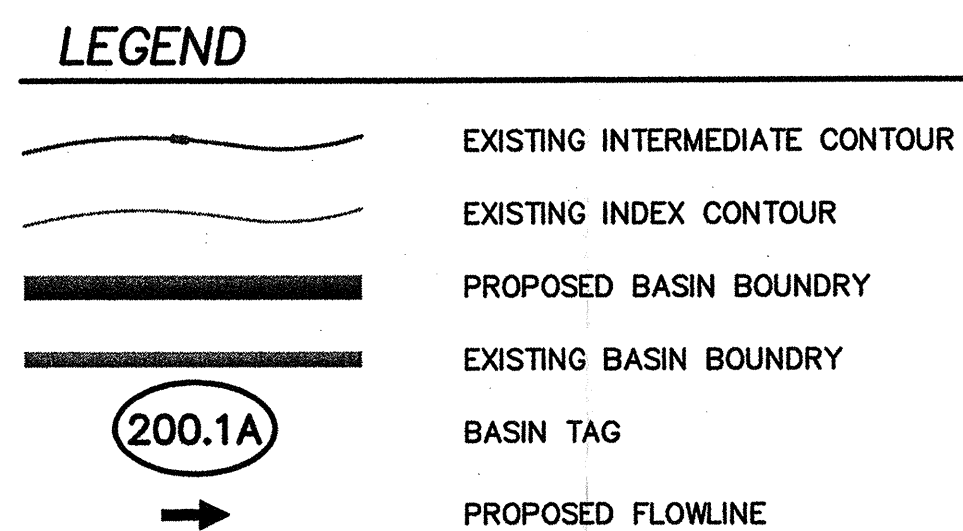
EASTERLING & ASSOCIATES, INC.

ATRISCO BUSINESS PARK
MASTER DRAINAGE PLAN
FEMA FLOOD PLAINS

FIGURE NO. 2

DATE: SEPT. 1992

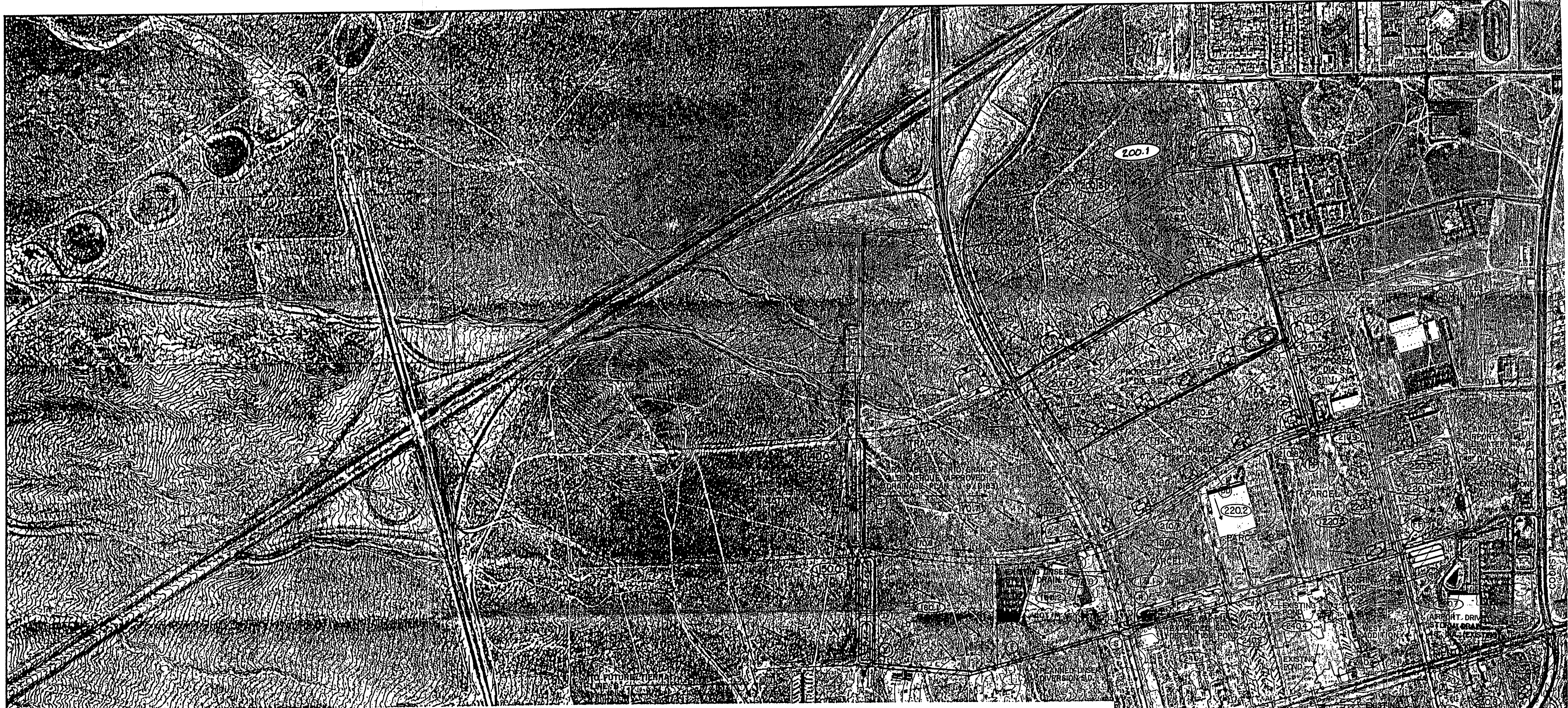




BASIN	AREA (Sq Mi)	AREA (Ac)	%A	%B	%C	%D	Q ₁₀₀	Q ₁₀₀ (ALLOWABLE DISCHARGE)
200.1A	0.046	29.4	0	15	0	85	118.1	2.9
200.1B	0.033	21.0	0	15	0	85	84.4	2.1
200.1C	0.035	22.4	0	15	0	85	90.1	2.2
200.1D	0.032	20.3	0	15	0	85	81.5	2.0
TOTAL	0.146	93.1						

CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING GROUP
MERIDIAN BUSINESS PARK II PROPOSED IMPROVEMENTS/ DRAINAGE BASIN MAP FULLY DEVELOPED CONDITION

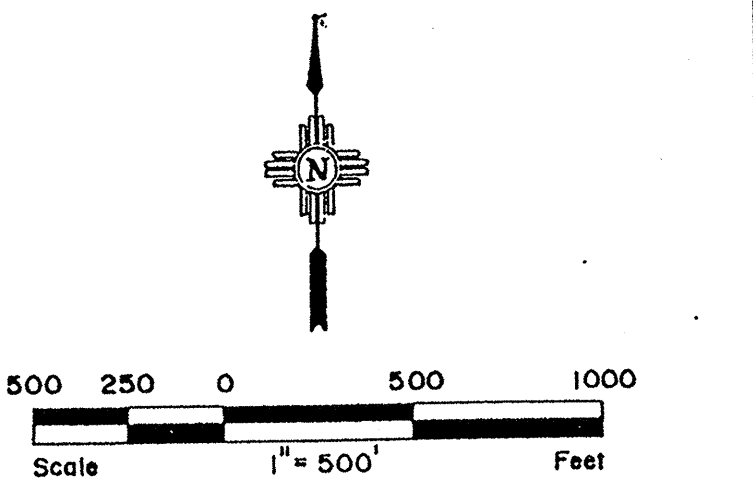
RECEIVED
OCT 09 2007
HYDROLOGY SECTION



LEGEND

- DRAINAGE BASIN BOUNDARY
DRAINAGE BASIN I.D. NUMBER
ANALYSIS POINT
PROPOSED CHANNEL
PROPOSED STORM DRAIN
EXISTING STORM DRAIN
FUTURE DETENTION POND
FUTURE STREET BASIN

THIS BASE MAP WAS PRODUCED BY COMPOSITING THE CONTOURS GENERATED BY BOHANNAN-HUSTON, INC., ALBUQUERQUE, NEW MEXICO, FOR THE 1983 FEMA FLOODWAY MAPS AND 1991 RECTIFIED AERIAL PHOTOGRAPHY.



GENERAL NOTES

- FUTURE PONDS ARE SHOWN SCHEMATICALLY ON THIS PLAN ONLY TO REPRESENT THAT CONTROL OF THE FLOW FROM THE UPSTREAM WATERSHED IS REQUIRED. LOCATION AND CONFIGURATION OF ACTUAL DETENTION PONDS SHALL BE APPROPRIATE FOR THE TYPE OF DEVELOPMENT WHICH OCCURS IN THE WATERSHED TO BE CONTROLLED.
- REFER TO THE REPORT FOR THE MASTER DRAINAGE PLAN FOR THE ATRISCO BUSINESS PARK FOR COMPLETE AHYMO ANALYSIS SUMMARY TABLES AND INPUT DATA.

KEYED NOTES

- FOR THE PURPOSE OF ANALYSIS TRACT "S-1," AND TRACT "M" WERE MODELED AS SINGLE BASINS WITH SINGLE DETENTION PONDS. IF PROPERTY DEVELOPS PER CURRENT SUBDIVISION, EACH LOT WILL REQUIRE A DETENTION POND AS ILLUSTRATED. ALL LOTS WITHIN THESE LARGE TRACTS ARE SUBJECT TO A MAXIMUM ALLOWABLE 100 YEAR PEAK DISCHARGE OF 0.1 CFS/ACRE.
- TO FACILITATE POSSIBLE FUTURE SUBDIVISION, SOME ESTIMATED FUTURE STREET AREAS WERE INCLUDED IN THE AHYMO MODELING OF THE SYSTEM.

ANALYSIS POINT		STREET FLOW						STORM DRAIN FLOW					
		SIDE	AHYMO HYD #	Q ₁₀₀ (cfs)	SLOPE (ft/ft)	FLOW DEPTH (ft)	V ₁₀₀ (fps)	AHYMO HYD #	Q ₁₀₀ (cfs)	DIA. (ft)	SLOPE (ft/ft)		
L	BOTH	170.30	6.3	0.015	0.31	0.35	2.5	--	--	--	--		
M	WEST	170.45	9.8	0.017	0.41	0.63	3.5	170.44	41	41.0	30"	0.010	
N	WEST	--	0	0.020	0	0	0	170.52	50.6	75.1	36"	0.015	
O	BOTH	170.80	9.1	0.014	0.34	0.39	2.7	--	--	--	--		
P	EAST	170.94	0	0.018	0	0.39	0	--	--	--	--		
	WEST	170.95	12.0	0.019	0.44	0.68	3.8	170.92	92.0	92.0	42"	0.008	
Q	EAST	171.11	3.6	0.011	0.33	0.41	2.3	--	--	--	--		
	WEST	171.02	12.6	0.011	0.47	0.76	3.1	170.97	92.3	92.9	42"	0.009	
R								160.21	78.8	111.1	38"x60"	0.005	
								171.13	96.4	99.4	42"	0.010	
S	EAST	171.14	0	0.008	0	0.20	0	161.14	316.0	226.8	72"	0.010	
	WEST	171.04	0	0.008		0.66		180.14					
AA	BOTH	200.41	17.8	0.008	0.46	0.52	2.8	--	--	--	--		
BB	BOTH	200.51	16.7	0.005	0.48	0.57	2.1	200.62	12.4	18.3	30"	0.005	
CC	BOTH	210.31	16.0	0.005	0.47	0.57	2.1	210.43	16.4	31.1	36"	0.005	
DD	BOTH	210.70	5.2	0.003	0.36	0.42	1.4	--	--	2.3	24"	0.005	
EE	--	--	--	--	--	--	--	211.12	48.1	78.4	48"	0.003	
FF	BOTH	220.10	5.5	0.004	0.36	0.41	1.6	211.13	45.4	73.3	48"	0.003	
GG	BOTH	220.70	4.2	0.004	0.32	0.38	1.5	220.72	55.9	89.3	48"	0.004	
HH	BOTH	230.31	12.7	0.008	0.41	0.46	2.3	220.73	54.6	86.3	48"	0.004	
II	--	--	--	--	--	--	--	230.51	5.0	6.5	24"	0.006	
JJ	--	--	--	--	--	--	--	230.82	27.1	38.4	30"	0.010	
KK	--	--	--	--	--	--	--	230.84	83.3	133.1	48"	0.050	
LL		270.22	0.0	0.029	0	0.43	0	270.23	190.3	269.2	54"	0.021	
MM	--	--	--	--	--	--	--	280.31	201.5	287.3	72"	0.010	
NN	--	--	--	--	--	--	--	290.12	221.7	315.6	72"	0.005	
OO	--	--	--	--	--	--	--	290.21	228.6	323.7	72"	0.006	
PP	BOTH	210.91	8.9	0.003	0.43	0.50	1.4	--	--	--	--		
QQ	BOTH	210.51	16.1	0.005	0.40	0.49	1.7	--	--	--	--		
RR	--	--	--	--	--	--	--	230.32	60.8	99.8	48"	0.020	

NOTE: STREET FLOW DEPTHS IN OFF-SITE AREAS WERE NOT ANALYZED IN LOCATIONS WHERE THE STORM DRAIN HAS THE CAPACITY TO CARRY ALL OF THE FLOW FROM THE UPSTREAM STREET

BASIN I.D. NUMBER	ASSUMED LAND USE/ZONING	AREA (AC)	RUNOFF		MAX. ALLOWED Q ₁₀₀ RELEASE (cfs)
			Q ₁₀₀ (cfs)	V ₁₀₀ (Ac-Ft)	
120.0	IP	72.0	273.9	12.10	93.6
130.0	IP	44.0	167.8	7.39	57.2
140.0	IP	95.0	284.1	15.96	123.5
150.0	IP	27.5	104.9	4.62	35.8
160.1	IP	33.0	126.1	5.56	126.1
160.2	IP	22.4	85.3	3.76	85.3
170.1	IP	40.5	160.2	7.03	47.2
170.7	IP	55.0	217.1	9.90	56.6
180.1	IP	21.6	77.9	3.38	77.9
200.1	IP	133.2	513.4	23.19	13.3
200.2	Future Street	2.7	10.2	0.45	10.2
200.3	Future Street	4.9	18.0	0.82	18.0
200.6	IP	4.5	17.4	0.78	0.5
210.1	IP	47.9	185.7	8.34	4.8
210.2	Future Street	5.0	18.1	0.84	18.1
210.4	IP	7.5	29.1	1.30	0.7
210.6	IP	44.8	173.8	7.80	4.5
211.1	IP	7.5	29.1	1.30	0.8
220.2	IP	20.0	77.8	3.49	2.0
220.3	IP	28.6	111.1	4.98	2.9
220.4	Future Street	1.2	4.4	0.19	4.4
220.5	IP	20.0	77.8	3.49	2.0
220.6	C-2	12.7	49.2	2.21	1.3
230.1	C-2	1.2	4.5	0.20	3.8
230.2	C-2	3.3	12.9	0.58	10.9
230.5	C-2	4.2	16.6	0.74	6.5
230.8	C-2	7.2	28.1	1.26	15.8
240.1	IP	21.3	81.2	3.58	1
240.2	IP	8.0	25.7	1.32	1
240.3	C-2	5.1	20.1	0.90	1
240.4	Church	14.8	42.5	2.26	1
250.1	C-2, RT	15.8	62.0	2.77	1
250.2	R-1, C-2	5.0	14.9	0.60	1
260.1	C-2, O-1	25.5	97.1	4.28	1
270.1	Mobile Home Park	14.2	54.2	2.39	1
280.1	RA-1	4.2	16.1	0.71	6.6
290.1	Residential	20.1	67.5	2.79	28.8

- 1 The aggregate peak Q₁₀₀ from basins 240.1, 240.2, 240.3, 240.4, 240.5, 240.6, 250.1, 250.2, 260.1, and 270.1 shall not exceed 146 cfs at the point of discharge to the Coors Connection Storm Drain.
- 2 Basin modeled to verify capacity for future public streets.
- 3 Release rate based on the 1.3 cfs per acre criteria included in the 8-25-93 Agreement for Atrisco Business Park Storm Water Improvements. Actual maximum allowed release rate should be based on downstream capacity as this property is master planned.

UNSER DIVERSION STORM DRAIN DATA SUMMARY

ANALYSIS POINT	AHYMO HYD#	PIPE DIAMETER (FT)	PIPE SLOPE (FT/FT)	FULL PIPE CAPACITY (CFS)	FULL PIPE VELOCITY (FPS)	% FULL PIPE CAPACITY	% FULL PIPE VELOCITY	Q ₁₀₀ (CFS)
A	120.02	36"	0.0270	109.6	15.5	15.0	10.9	65.2
B	130.03	42"	0.0130	114.7	11.9	15.7	8.4	98.6
C	130.05	42"	0.0100	100.6	10.5	13.9	7.4	93.2
D	140.03	48"	0.0125	160.6	12.8	22.0	9.0	144.4
E	150.03	42"	0.0165	129.2	13.4	17.7	9.4	125.0
F	160.12	48"	0.0190	198.0	15.8	27.1	11.0	147.6

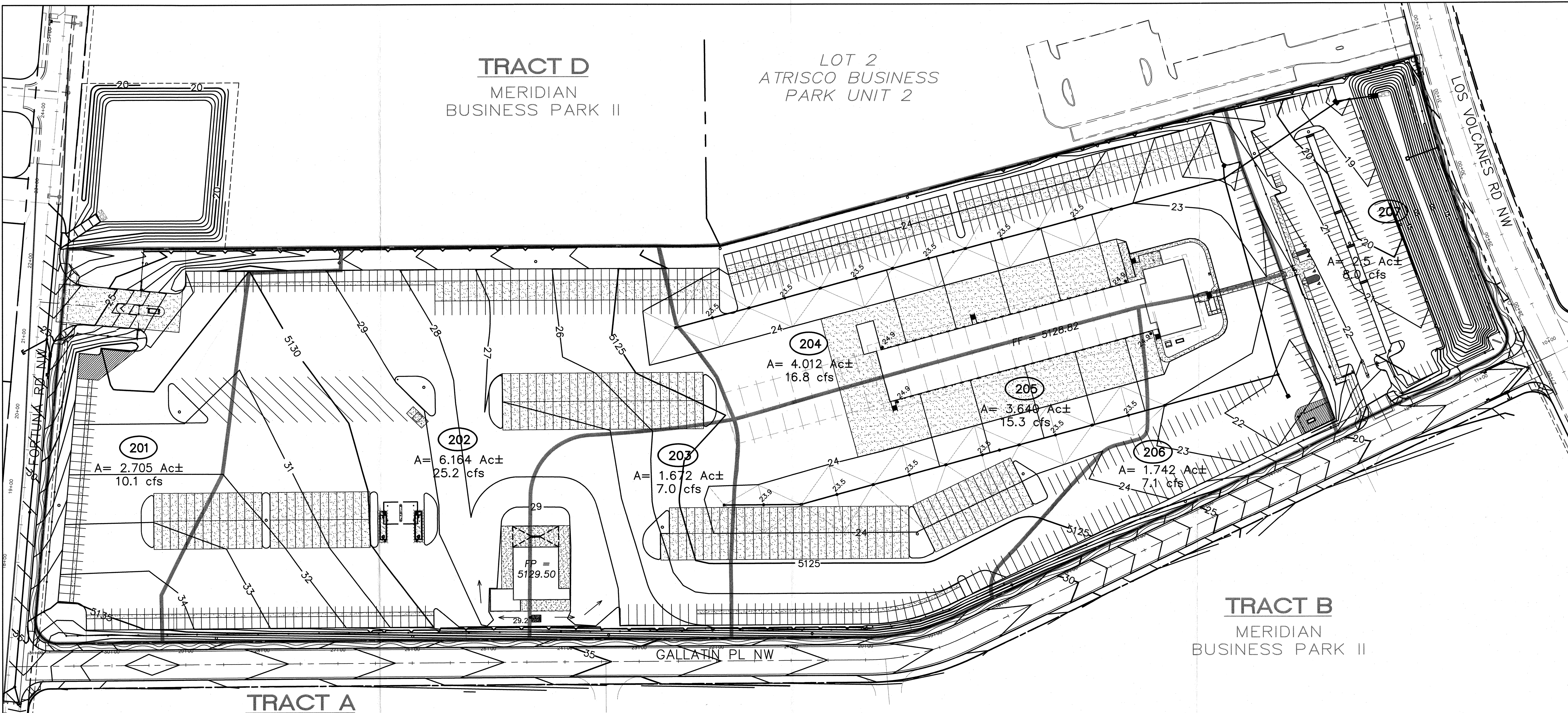
*These peak flow rates are based on assumed detention in the watershed controlling flows to the Unser Diversion to between 2.2 to 2.5 cfs/acre.

- 10-93 REVISION
-- REVISED UNSER DIVERSION SYSTEM
-- UP-DATED RUNOFF DATA TO REFLECT THIS CHANGE

ATRISCO BUSINESS PARK MASTER DRAINAGE PLAN OVERALL DRAINAGE PLAN FULLY DEVELOPED CONDITION

EASTERLING & ASSOCIATES, INC.
CONSULTING ENGINEERS
1031 Coors Rd., NW, Suite H-718
ALBUQUERQUE, NEW MEXICO 87104
(505) 898-8021 FAX (505) 898-8501

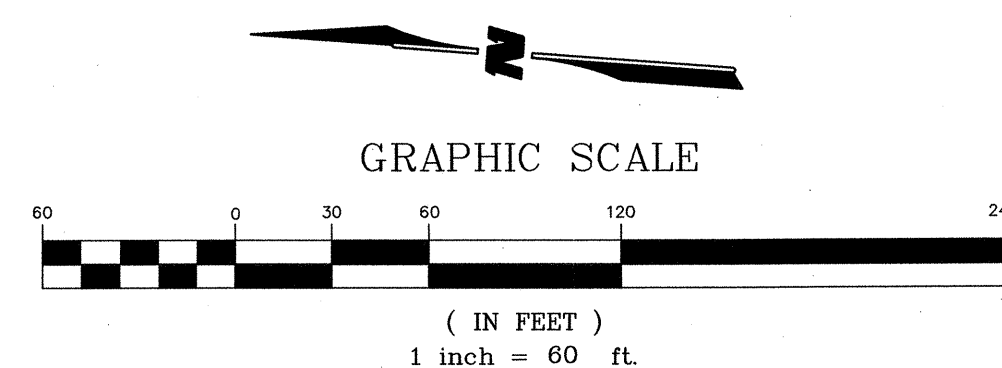
DESIGNED BY: V.S.F.	DRAWN BY: C.L.B.	CHECKED BY: C.M.E.
JOB NO. 3321	DATE FEB., 1992	Plate 2



LEGEND

— PROPOSED BASIN BOUNDARY

(101) BASIN TAG



WCI 0760004400
APR 2008

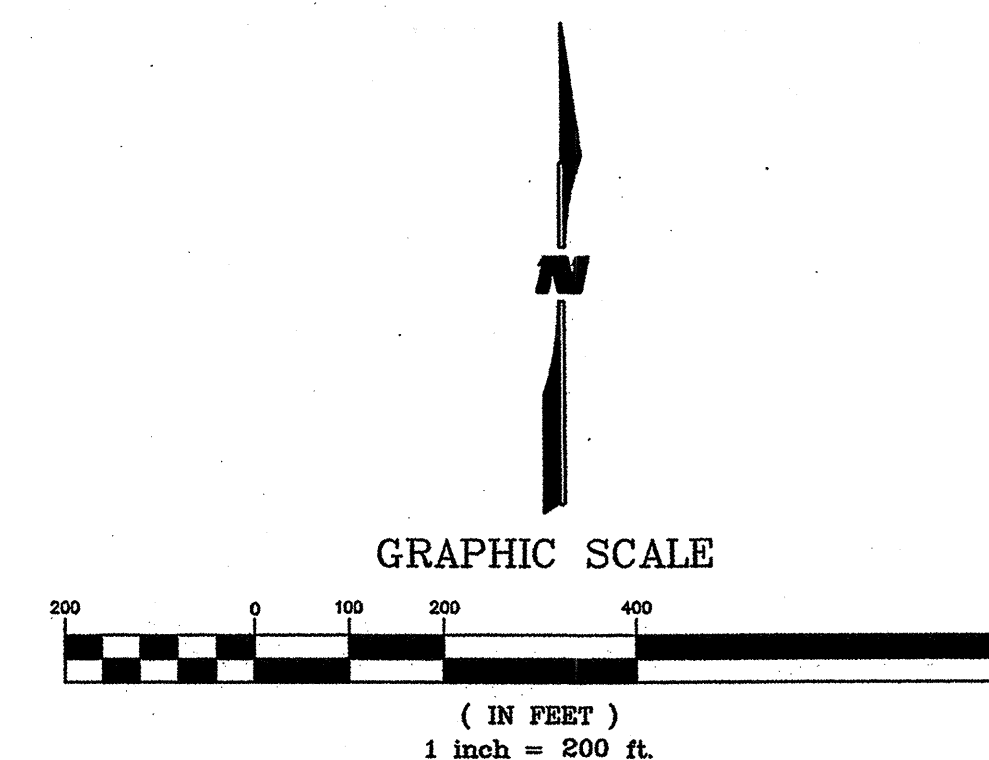
WILSON & COMPANY 4900 LANG AVE. N.E. ALBUQUERQUE, NEW MEXICO 87109 (505) 348-4000	FedEx® Freight			
	FEDEX FREIGHT ALBUQUERQUE SERVICE AND DISTRIBUTION CENTER			
	BASIN BOUNDARY MAP			
REVISIONS	NO.	DATE	REMARKS	BY
DESIGN	KIS	WCI NO. 0760004400	DATE	APR 2008
DRAWN	OBR	Zone Map No.	SHEET NO.	
CHECK	KIS	J-10	1 OF 1	



TABLE A SUB BASIN SUMMARY								
BASIN	AREA (Sq Mi)	AREA (Ac)	%A	%B	%C	%D	Q ₁₀₀	Q ₁₀₀ (ALLOWABLE DISCHARGE)
200.1A	0.046	29.4	0	15	0	85	118.1	2.9
200.1B	0.033	21.0	0	15	0	85	84.4	2.1
200.1C	0.035	22.4	0	15	0	85	90.1	2.2
200.1D	0.032	20.3	0	15	0	85	81.5	2.0
TOTAL	0.146	93.1						

LEGEND

- EXISTING INTERMEDIATE CONTOUR
- EXISTING INDEX CONTOUR
- PROPOSED BASIN BOUNDARY
- EXISTING BASIN BOUNDARY
- BASIN TAG
- PROPOSED FLOWLINE



WILSON & COMPANY 4900 LANG AVE N.E. ALBUQUERQUE, NEW MEXICO 87109 (505) 348-4000	CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING GROUP
	MERIDIAN BUSINESS PARK II PROPOSED IMPROVEMENTS/ DRAINAGE BASIN MAP FULLY DEVELOPED CONDITION

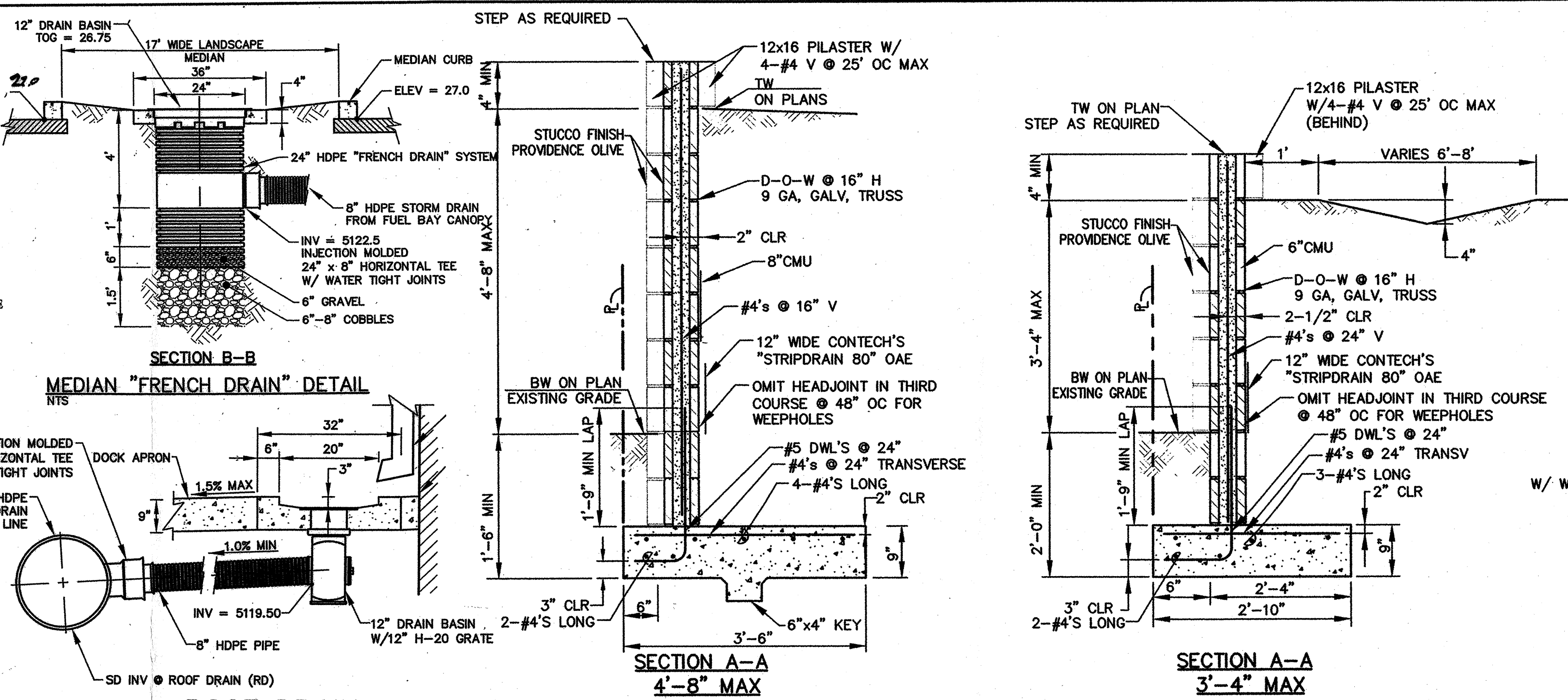
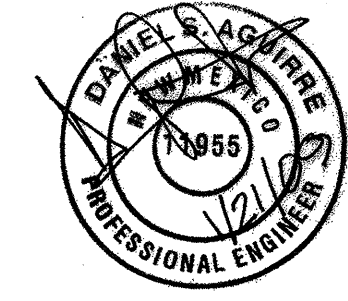
WCI 0760004400
AUG 2007

"DRAINAGE CERTIFICATION"

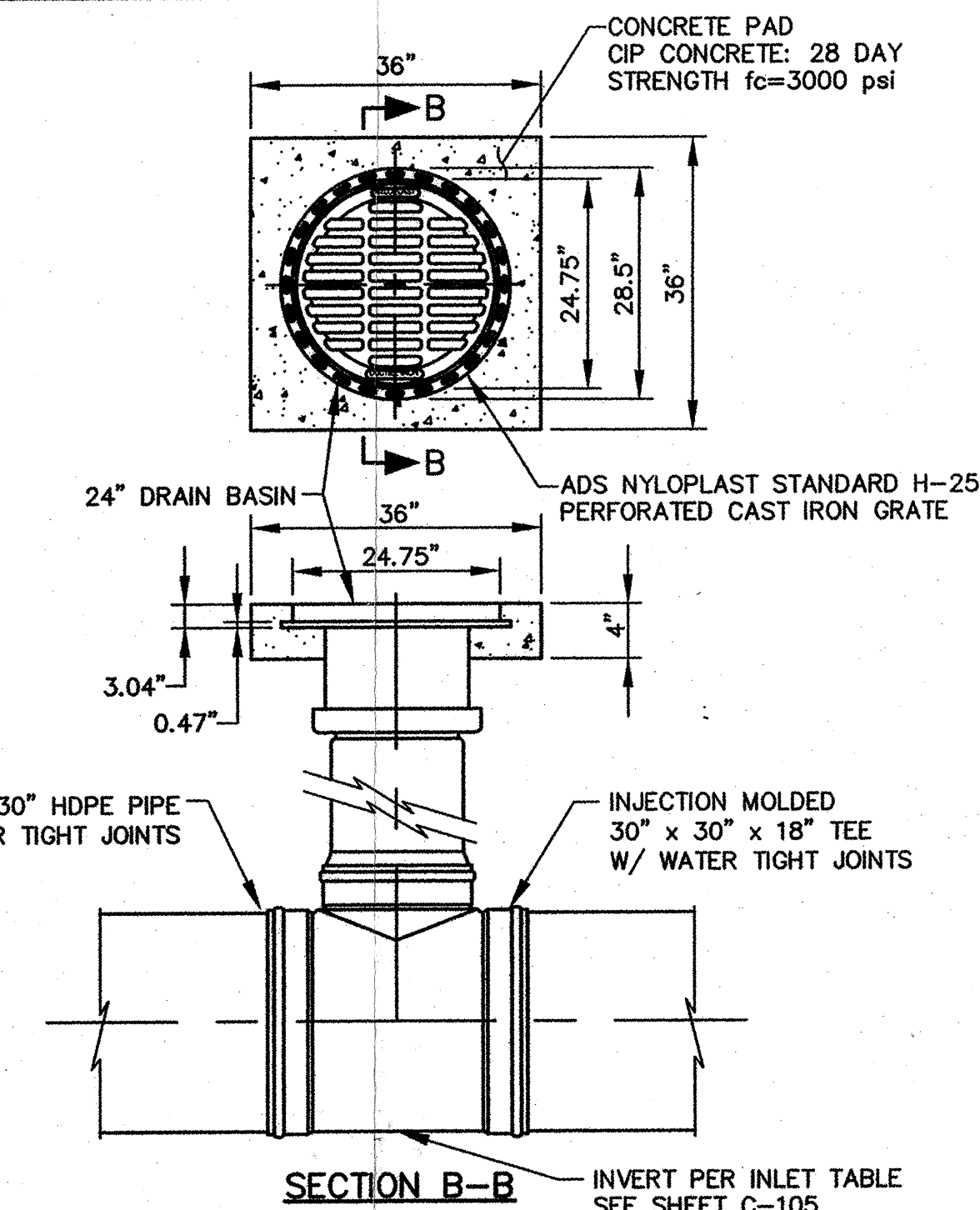
I, **Daniel S. Aguilar**, NMPE # 11955, OF THE FIRM **Wilson & Company**, HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 4-21-08. THE RECORD INFORMATION EDITED ON THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY **Jason Smith**, NMPS # 17122, OF THE FIRM **Doug Smith Surveying Inc.** I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON 1-21-09 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT FOR A REQUEST FOR Certificate of Occupancy.

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 THE RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

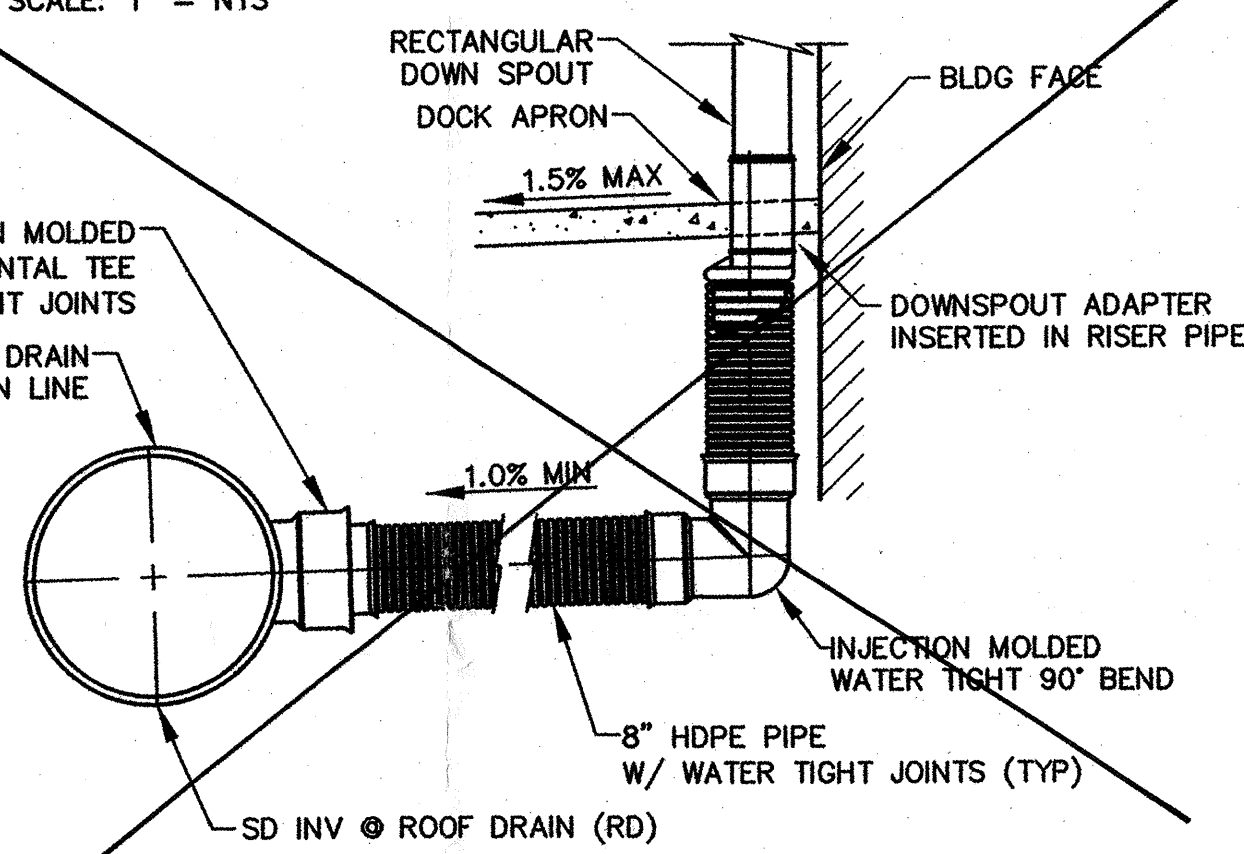
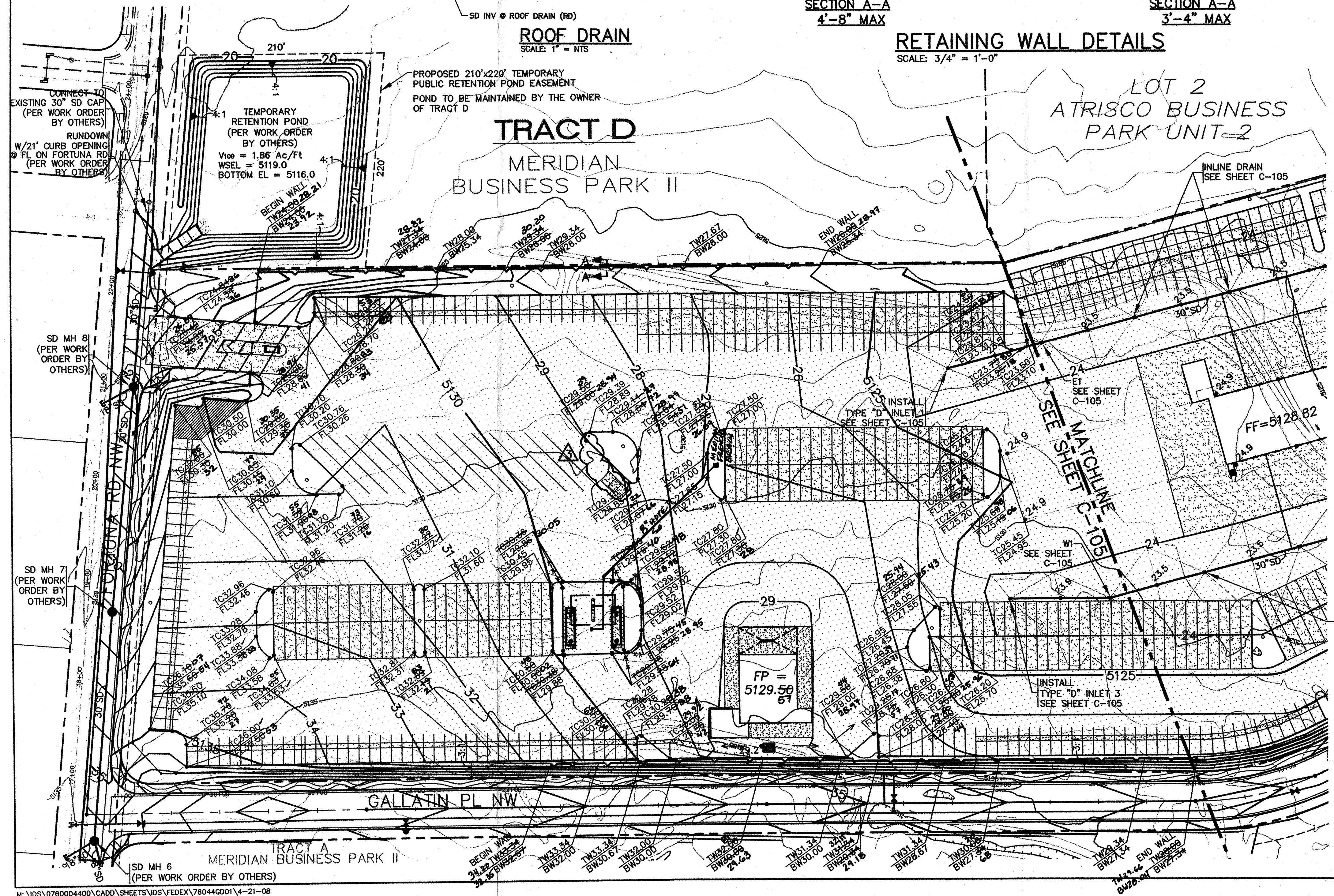
Daniel S. Aguilar, NMPE # 11955
Date 1/23/09



RETAINING WALL DETAILS
SCALE: 3/4" = 1'-0"



INLINE DRAIN BASIN DETAIL
SCALE: 1" = NTS



ROOF DRAIN
SCALE: 1" = NTS

LEGEND

- EXISTING INTERMEDIATE CONTOUR
- EXISTING INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED INDEX CONTOUR
- SWALE
- RETAINING WALL

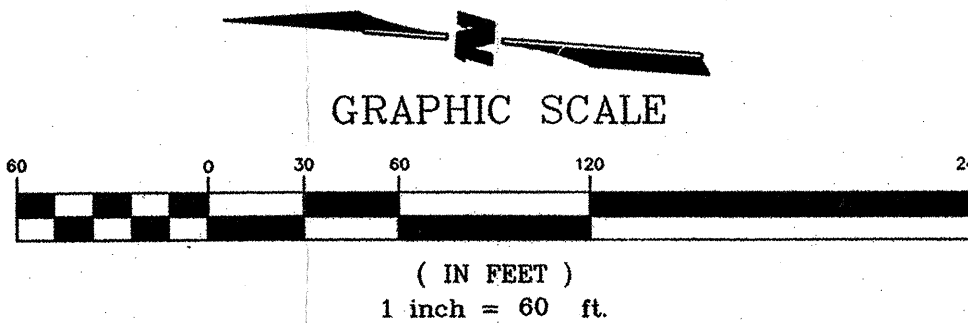
NOTE:
ALL STD DWG REFERENCES REFER TO AMERICAN PUBLIC WORKS ASSOCIATION, NEW MEXICO CHAPTER, NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2006 EDITION.

LEGAL DESCRIPTION

TRACT C MERIDIAN BUSINESS PARK II

BENCH MARK

CITY OF ALBUQUERQUE SURVEY
ACS 1 3/4" ALUMINUM DISK STAMPED "ACS BM, 4-J9", EPOXIED ON CENTER OF A CONCRETE DROP INLET, ON THE EAST SIDE OF UNSER BLVD NW, 0.31 MI± NORTH OF LOS VOLCANES RD, 0.25 MI± SOUTH OF THE CENTERLINE OF I-40.



CLAUDIO VIGIL ARCHITECTS

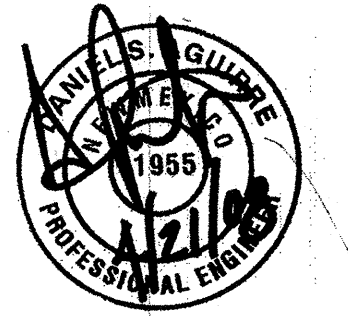
1801 Rio Grande Boulevard, N.W.
Albuquerque, New Mexico
Phone: (505) 842-1113
Fax: (505) 842-1330

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CONSULTANTS

WILSON & COMPANY
4900 LANG AVE N.E.
ALBUQUERQUE, NEW MEXICO 87109
(505) 348-4000

PROFESSIONAL SEAL



FEDEX FREIGHT ALBUQUERQUE SERVICE AND DISTRIBUTION CENTER
7601 LOS VOLCANES ROAD, N.W.
ALBUQUERQUE, NEW MEXICO

MARK	DATE	DESCRIPTION
4	4-21-08	FINAL REVISION
3	3-20-08	BUILDING PERMIT SUBMITTAL

PROJECT NUMBER:	WCI #0760004400
DRAWING FILE:	76044GD01.dwg
DRAWN BY:	OR
CHECK BY:	KISOSA
COPYRIGHT:	WILSON & COMPANY INC.
DATE:	APRIL 21, 2008

SECRET TITLE
GRADING PLAN

SHEET NUMBER
C-104

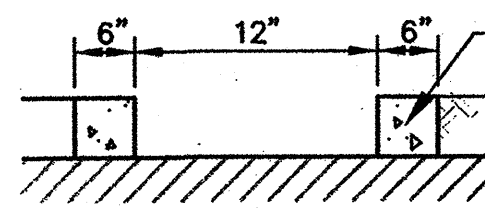
JAN 23 2009

WILSON & COMPANY

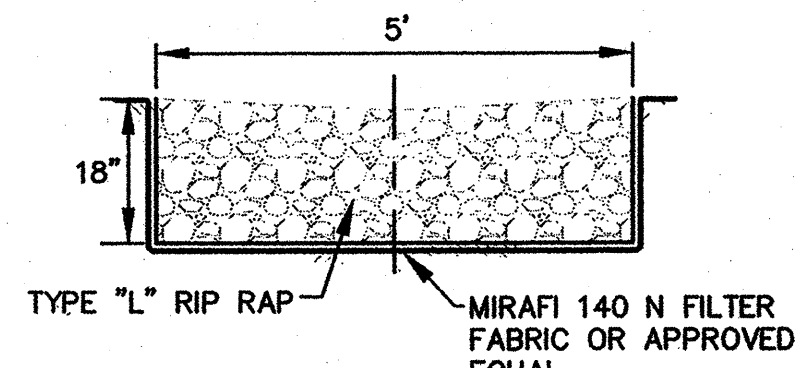
DRAINAGE STRUCTURE TABLE				
STRUCTURE	RIM/TOG	INVERT	DOWNSTREAM LENGTH	SLOPE
"D" INLET 1	23.80'	18.93	98.5'	0.40%
INLINE E1	23.80	18.53	100'	0.40%
INLINE E2	23.80	18.43	100'	0.40%
INLINE E3	23.80	17.73	83.5'	0.40%
SD MH 1	23.47	17.40	16.6'	0.51%
INLINE E4	23.80	17.34	100'	0.51%
INLINE E5	23.80	16.80	100'	0.51%
INLINE E6	23.80	16.20	155'	0.51%
SD MH 4	21.80	15.50	177'	1.04%
"D" INLET 2	21.30	18.00	15'	4.86%
"D" INLET 3	23.50	19.37	102'	0.52%
INLINE W1*	23.80	18.44	100'	0.52%
INLINE W2	23.80	18.32	100'	0.52%
INLINE W3	23.80	17.80	73'	0.52%
SD MH 2	23.27	17.42	26.6'	0.51%
INLINE W4	23.80	17.26	100'	0.51%
INLINE W5	23.80	16.77	100'	0.51%
INLINE W6	23.80	16.26	155.3'	0.51%
SD MH 3	21.80	15.46	270'	0.61%
"D" INLET 4	21.50	17.50	30'	3.47%
"D" INLET 5	17.80	14.30	55'	6.00%

ROOF DRAIN TABLE	
8" HDPE ROOF DRAIN #	SD INV
RD-E1	5117.77
RD-E2	5117.49
RD-E3	5117.14
RD-E4	5116.79
RD-E5	5116.44
RD-W1	5117.85
RD-W2	5117.49
RD-W3	5117.11
RD-W4	5116.76
RD-W5	5116.40

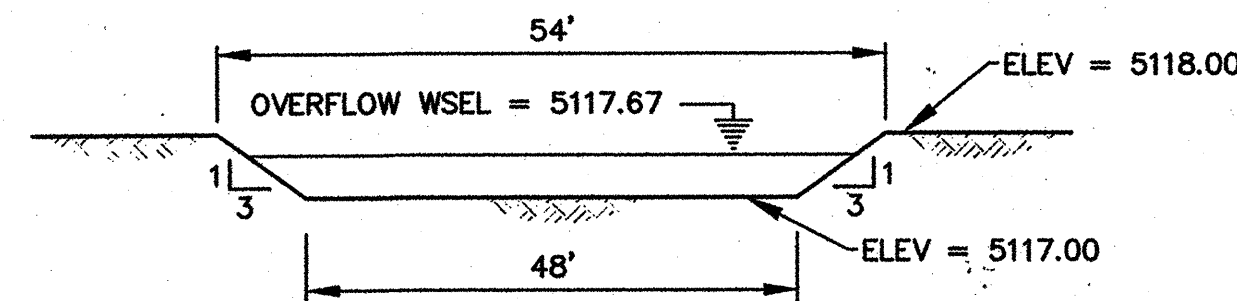
NOTE:
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AMERICAN PUBLIC WORKS ASSOCIATION,
NEW MEXICO CHAPTER, NEW MEXICO
STANDARD SPECIFICATIONS FOR PUBLIC
WORKS CONSTRUCTION, 2006 EDITION.



SECTION C-C
SIDEWALK OPENING DETAIL
SCALE: NTS



RIP RAP BLANKET DETAIL
SCALE: 1" = 2'



EMERGENCY SPILLWAY DETAIL
SCALE: NTS

36" SD POND INLET STRUCTURE
SEE DETAIL SHEET C-110

INSTALL
TYPE DOUBLE "D" INLET 5

INSTALL
15'x5' TYPE "L"
RIP RAP BLANKET
SEE DETAIL THIS SHEET

EMERGENCY SPILLWAY
SEE DETAIL THIS SHEET

POND
OUTLET STRUCTURE
PER DETAIL SHEET C-110
INSTALL 40 LF
18" SD PIPE
CONNECT TO EX SD MH
INV @ MH = 5103.76

GRADE POND
VPOB = 2.93 Ac/Ft
WSEL = 5117.0
BOTTOM EL = 5108.0

18" SD
STUBOUT

4" DIA. MH 5
ON EXISTING 24" SD
(PER WORK ORDER BY OTHERS)

INSTALL
TYPE "D" INLET 4

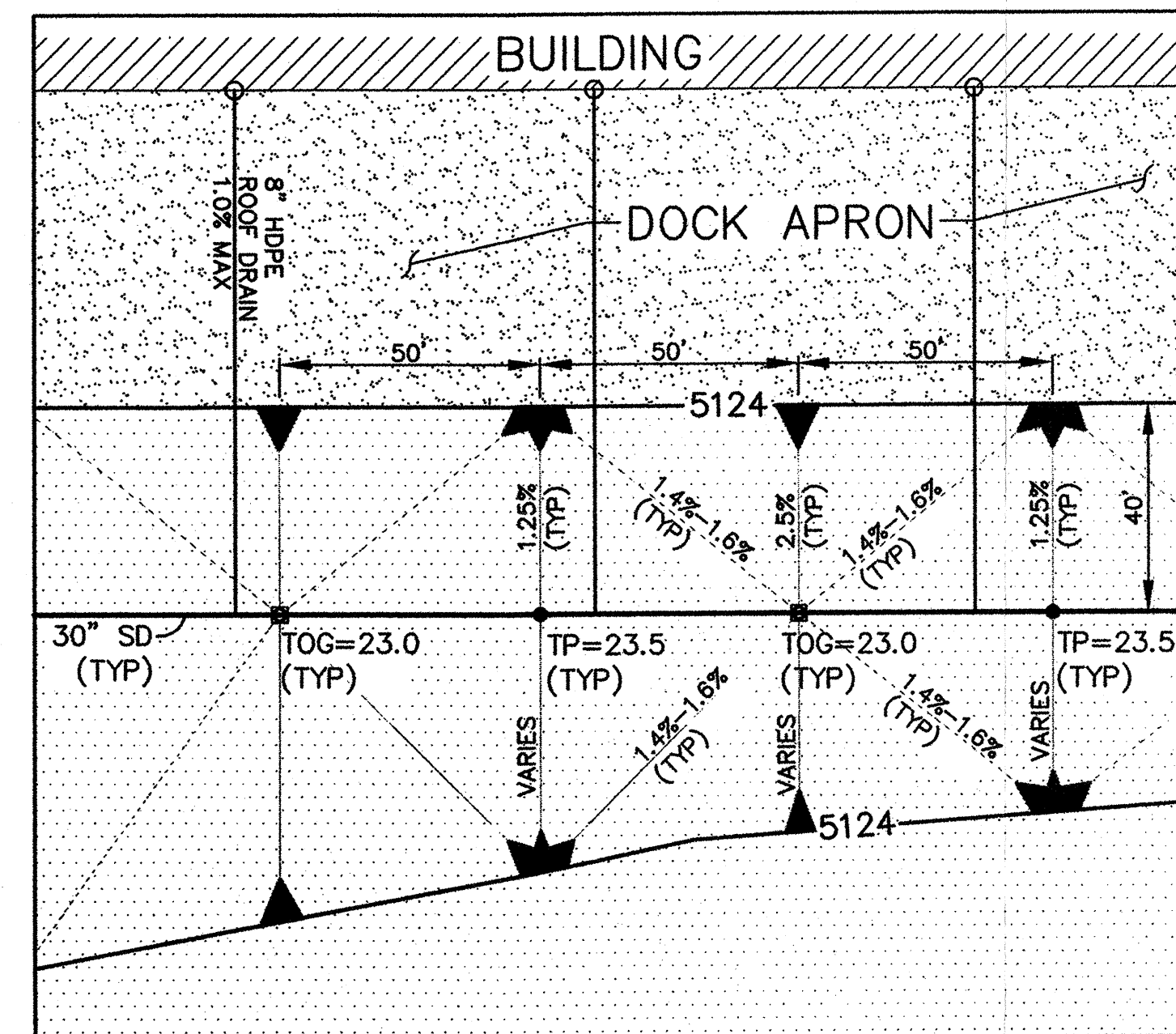
1-6" DIA SD MH 3
SEE TABLE THIS SHEET

1-6" DIA SD MH 2
SEE TABLE THIS SHEET

GRAPHIC SCALE

(IN FEET)

1 inch = 60 ft.



PAVEMENT/INLET TYPICAL GRADING DETAIL
SCALE: 1" = 30'



STANDARD VEHICLE PARKING LOT - ENLARGED GRADING DETAIL
SCALE: 1" = 40'

CLAUDIO VIGIL
ARCHITECTS

1801 Rio Grande Boulevard, N.W.
Albuquerque, New Mexico
Phone: (505) 842-1113
Fax: (505) 842-1330

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CONSULTANTS

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& COMPANY**
4900 LANG AVE N.E.
ALBUQUERQUE, NEW MEXICO
87109
(505) 348-4000

PROFESSIONAL SEAL



**FEDEX FREIGHT
ALBUQUERQUE**
**SERVICE AND
DISTRIBUTION
CENTER**
7601 LOS VOLCANES ROAD, N.W.
ALBUQUERQUE, NEW MEXICO

MARK	DATE	DESCRIPTION
4	4-21-08	FINAL REVISION

PROJECT NUMBER: WCI #0760004400
DRAWING FILE: 76044G002.dwg
DRAWN BY: KIS
CHECK BY: KIS
COPYRIGHT: WILSON & COMPANY INC.
DATE: APRIL 21, 2008

SHEET TITLE
GRADING PLAN

SHEET NUMBER
C-105