

The proposed improvement is the addition of 10 new parking stalls along the south side of the existing paved parking area. This area encompasses 1,800 SF of additional pavement added to the site. The addition of these parking spaces is the result of a portion of the building converted to office space.

DRAINAGE PLAN CONCEPT:

LEGAL: Lot 1, Jefferson Commons, Albuquerque, NM.

B.M.: SC ²⁷⁻²⁸/₁₄₋₁₅, a standard BLM brass cap set in concrete, projecting 1.0' above the ground. Cap is located approximately 350' northeast of the intersection of Singer and Midway Park Boulevards, N.E. Elevation = 5,110.41'.

I.B.M.: "X" on top of curb at northeast curb return at intersection of Singer & Midway Park Boulevards, Elevation = 5,113.34'

FLOOD HAZARD: Per FEMA Map 16, the site is not in a flood hazard zone.

OFF-SITE DRAINAGE: No offsite flows reach the site.

CALCULATIONS:

Calculations of the runoff given on the previous site Grading and Revision Plan (dated 2/2/90, prepared by Weiss Hines Engineering and approved by the City Hydrology Department) were calculated using the City of Albuquerque old D.P.M. Rational Method. The current COA D.P.M. (1997) (A.6 PEAK DISCHARGE RATE FOR SMALL WATERSHEDS) was used to compare the existing and newly developed site for this Grading and Drainage Revision.

AREA: 70,486 SF = 1.62 AC

Existing Site: (Current Conditions)

Roof Area = 27.2% SF

Paved Area = 31.5% SF
Landscaped Area = 41.3% SF

Developed Site: (Includes Additional Parking Proposed for this Project)

Roof Area = 27.2%

Paved Area = 34.1%
Landscape Area = 38.7%

Envelope Price 0.0776

RUN-OFF COEFFICIENT CALCULATIONS FROM APPROVED PLAN:

Existing Site

$$C_r = \frac{(19,140)(.90)}{70,486} = .24 \quad Q_{100} = (.64)(4.65)(1.62) = 4.8 \text{ cfs}$$

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$$C_1 = \frac{(29,130)(.25)}{70,486} = .10$$

$$C_p = \frac{(22,218)(.95)}{70.486} = .30$$

Composite C = .64

CURRENT METHOD: (COA D.P.M. Manual 1997) (A.6)

Existing Site:

Treatment	Percentage	Area (AC)	Peak Discharge (cfs/AC) Table A-9	Q (cfs)
D	58.7%	0.95	4.7	4.48
C	20.7%	0.33	3.14	1.05
B	20.7%	0.33	2.28	0.76
A	0.0%	0.00	1.56	0.00

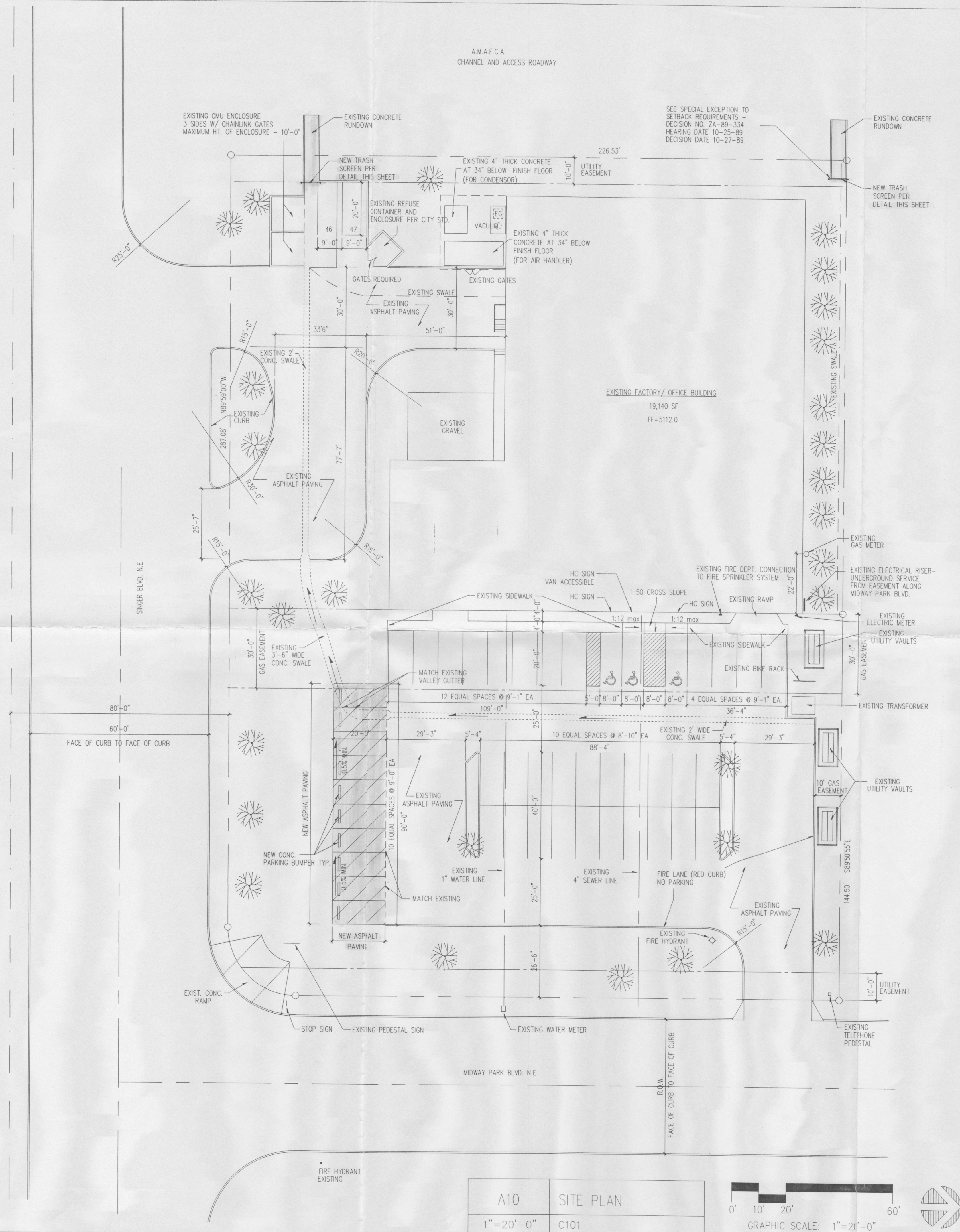
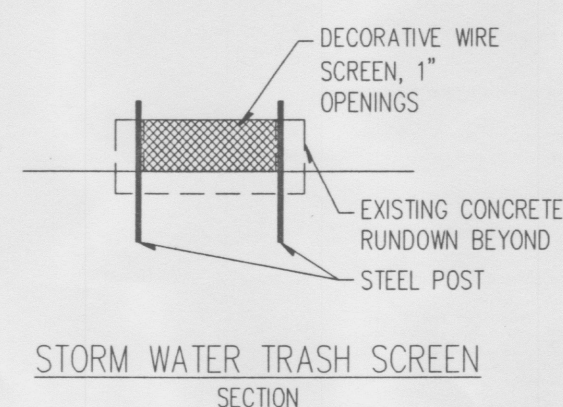
Peak Q - Exfiltration = 6.23

Developed Site:

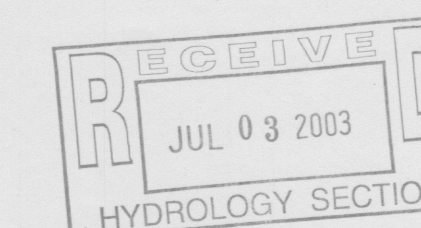
Treatment	Percentage	Area (AC)	Peak Discharge (cfs/AC) Table A-9	Q (cfs)
D	68.8%	1.11	4.7	5.23
C	15.6%	0.25	3.14	0.79
B	15.6%	0.25	2.28	0.58
A	0.0%	0.00	1.56	0.00
			Peak 16.6 Discharge	6.60

SUMMARY:

$$Q_{100} = (6.60) - (6.27) = .33 \text{ cfs (Increase)}$$




Zone map



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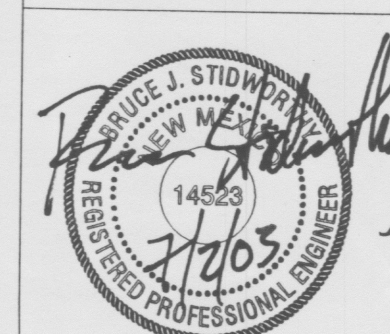
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BIO-TECH IMAGING

REVISD GRADING & DRAINAGE PLAN



REV. #	DATE	PROJECT #: 03028
		DWN BY: KG
		CHK BY: DMH
		DATE: 06/12/03
		C101
		OF

P:\040108\cdp\general\040108gp01.dwg
July 02, 2003 - 5:25pm
Model

The proposed improvement is the addition of 29 new parking stalls along with an option of 9 future spots making a total of 85 spaces. In addition to the parking spaces there will be some minor site improvements including curb and gutter adjustments and landscaping modifications. This area encompasses approximately 5,630 SF of additional pavement added to the site. The addition of these parking spaces is the result of a portion of the building converted to office space.

The original site is divided into 2 basins given by the Grading and Drainage Revision Plan submitted February 2, 1990, prepared by Weiss Hines Engineering and approved by the City Hydrology Department (#17/D61A). Both basins discharge directly to the North Diversion Channel. A revision to this original site was submitted in June of 2003 (Bohannon Huston) which added 10 new parking spaces. This addition increased the Q_{100} approximately 0.33cfs.

Singer Boulevard abuts the site on the south, Midway Park Boulevard on east, north is a tile company and the AMAFCA north diversion channel is to the west of the property.

New developed flows for the site will continue to free discharge into the AMAFCA North Diversion Channel to the west of the site. Runoff will be concentrated in existing concrete swales as shown on the plan and discharged into the North Diversion Channel at locations along the west property line.

LEGAL: Lot 1, Jefferson Commons, Albuquerque, NM

B.M.: SC $\frac{27}{34}$ $\frac{28}{35}$, a standard BLM brass cap set in concrete, projecting 1.0' above the ground. Cap is located approximately 350' northeast of the intersection of Singer and Midway Park Boulevards, N.E. Elevation = 5,110.41'.

I.B.M.: "X" on top of curb at northeast curb return at intersection of Singer & Midway Park Boulevards, Elevation = 5.113.34'.

FLOOD HAZARD: Per FEMA Map 16, the site is not in a flood hazard zone.

OFF-SITE DRAINAGE: No offsite flows reach the site.

CALCULATIONS:
Calculations of the runoff given on the previous site Grading and Revision Plan (dated 2/2/90, prepared by Weiss Hines Engineering and approved by the City Hydrology Department) were calculated using the City of Albuquerque old D.P.M. Rational Method (6.27CFS). The revisions were calculated based on the table below. The current CDA D.P.M. (1997) (A.6 PEAK DISCHARGE RATE FOR SMALL WATERSHEDS) was used to compare the existing and newly developed site for this Grading and Drainage Revision.

AREA: 70.486 SF = 1.62 AC

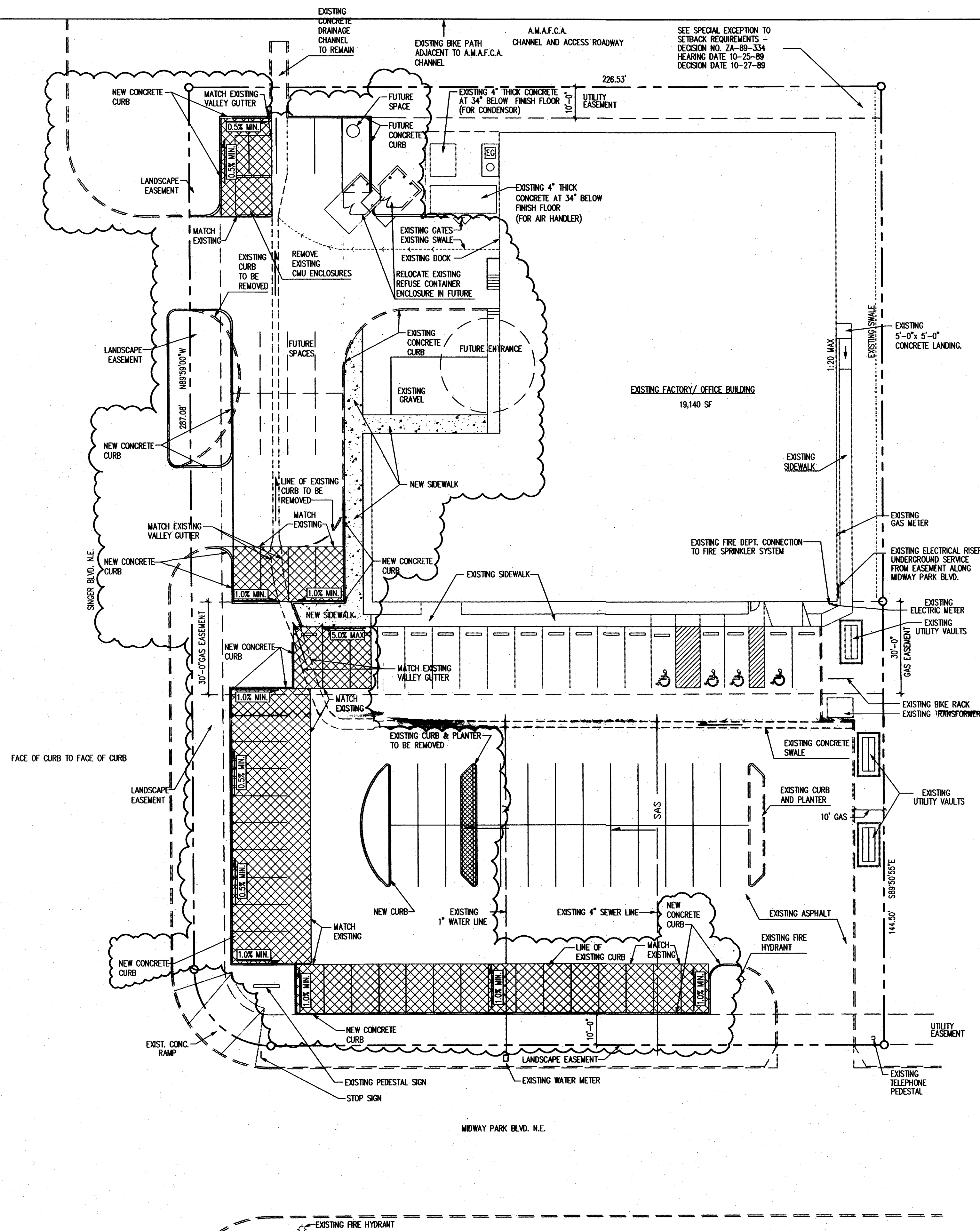
SINGER AND MIDWAY BASIN PROPERTIES										
Existing and Proposed Development Conditions Basins Data Table										
This table is based on the DWS Section 22.3, Zone 3										
Basin ID	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages				Q(100) (cfs)	Q(50) (cfs)	V(100) (inches)	V(100) (CF)
			A	B	C	D				
EXISTING SITE (Rendles June 2003)	70567	1.02	0.0%	15.6%	15.6%	68.8%	4.08	6.81	1.76	10329
DEVELOPED SITE (May 2009)	70567	1.02	0.0%	11.6%	11.6%	76.8%	4.26	6.97	1.85	10677
DIFFERENCE							-0.18	-0.16	-0.09	-248

*Original C(cfs) from the site to the existing North Diversion Channel = 6.27CFS

~~Q₁₀ = (6.64) - (6.07) = 0.08 or (increase)~~

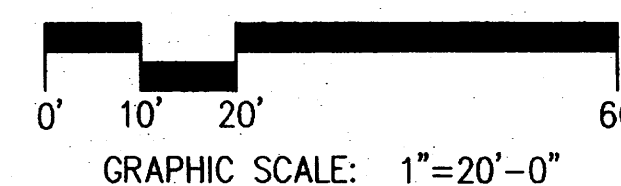
The total flow discharged from the site is 8.87cfs which is an increase of 0.26cfs from the previously approved grading plan (June 2003). This is a total of approximately 0.4cfs from the original approved grading plan by Weiss Haines Engineering which is a minimal increase and shall not have adverse implications as the concrete runoff to the AMAFCA channel is 5' wide and has sufficient capacity to handle this flow. These flows were computed in accordance with section 22.2 of the Development Process Manual. This drainage management plan is capable of safely passing the 100 year storm event and meets city criteria. With this submittal we are seeking Building Permit approval.

1. EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.
2. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST.
3. 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).
4. EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.
5. 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.
6. 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 BERRIS OR SILT FENCE AT THE PROPERTY LINES AND NETTING THE SOIL TO PROTECT IT FROM WIND EROSION.
7. 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.
8. PAVING AND ROADWAY GRADES SHALL BE $\pm 0.1'$ FROM PLAN ELEVATIONS. PAD ELEVATION SHALL BE $\pm 0.05'$ FROM BUILDING PLAN ELEVATION.
9. ALL PROPOSED CONTOURS REFLECT TOP OF PAVEMENT ELEVATIONS IN THE PARKING AREA AND MUST BE ADJUSTED FOR MEDIANS AND ISLANDS.
10. VERIFY ALL ELEVATIONS SHOWN ON PLAN FROM BASIS OF ELEVATION CONTROL STATION PRIOR TO BEGINNING CONSTRUCTION.



NOTE: THE CONTRACTOR SHALL REQUEST THAT THE ENGINEER FIELD INSPECT THE SITE PRIOR TO FINE GRADING AND PRIOR TO CURB & GUTTER/PAVEMENT PLACEMENT.

C101	GRADING PLAN
1"=20'-0"	C101



1. ALL WORK DETAIL ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE PROJECT GEOTECHNICAL REPORT. WHERE APPLICABLE, CITY OF ALBUQUERQUE PUBLIC WORKS STANDARDS SHALL APPLY.
2. THE CONTRACTOR 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.
3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL POTENTIAL OBSTRUCTIONS INCLUDING ALL UNDERGROUND UTILITIES. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION OBSERVER OR ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
4. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE FOR LOCATION OF EXISTING UTILITIES.
5. ALL ELECTRICAL, TELEPHONE, CABLE TV, GAS AND OTHER UTILITY LINES, CABLES, AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION THAT REQUIRE RELOCATION, SHALL BE COORDINATED WITH THAT UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL NECESSARY UTILITY ADJUSTMENTS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DELAYS OR INCONVENIENCES CAUSED BY UTILITY COMPANY WORK OWEING. THE CONTRACTOR MAY BE REQUIRED TO RESCHEDULE HIS ACTIVITIES TO ALLOW UTILITY CREWS TO PERFORM THEIR REQUIRED WORK.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITY LINES WITHIN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AND APPROVED BY THE CONSTRUCTION OBSERVER.
7. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT PROPERTIES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
8. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS OR DESIGNATED TRAFFIC LANEWAYS. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY.
9. THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION (I.E., BARRICADING, TOPSOIL DISTURBANCE, EXCAVATION PERMITS, EPA STORM WATER PERMITS, ETC.).
10. ALL PROPERTY CORNERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL PROPERTY CORNERS MUST BE RESET BY A REGISTERED LAND SURVEYOR.
11. THE CONTRACTOR SHALL PREPARE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN AND OBTAIN APPROVAL OF SUCH PLAN FROM THE CITY OF ALBUQUERQUE, TRAFFIC ENGINEERING DEPARTMENT, PRIOR TO BEGINNING ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.
12. ALL BARRICADES AND CONSTRUCTION SIGNING SHALL CONFORM TO APPLICABLE SECTIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), US DEPARTMENT OF TRANSPORTATION, LATEST EDITION.
13. THE CONTRACTOR SHALL MAINTAIN ALL CONSTRUCTION BARRICADES AND SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.
14. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO CONFORM WITH EPA REQUIREMENTS, INCLUDING COMPLIANCE WITH NPDES PHASE 2 REQUIREMENTS.

 NEW ASPHALT PAVING

 NEW SIDEWALK

 AREA OF NEW WORK

RECEIVED
MAY 21 2009
HYDROLOGY
SECTION

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SMPC
ARCHITECTS

5741 MIDWAY PARK NE ALBUQUERQUE, NM

GRADING PLAN

A circular professional engineer seal for Michael A. McGuire, State of New Mexico, License No. 18187, dated 5-20-09. The seal is stamped over a handwritten 'MJB' and a signature.

REV. #	DATE	PROJECT #: 09008
		DWN BY: MJB
		CHK BY:
		DATE: 04/29/09
		<div>C101</div> <div>OF</div>

NAME: C101 DATE: JUL 10, 2003 TIME: 10:58 AM PLOT SCALE: 1" = 20'-0"