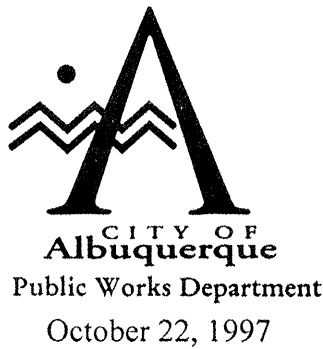




Martin J. Chávez, Mayor

Robert E. Gurulé, Director

Richard A. Stockton, P.E.
Leedshill-Herkenhoff, Inc.
P.O. Box 1217
Albuquerque, NM 87103

**RE: RECONDITIONING FACILITY (K20-D47). GRADING AND DRAINAGE PLAN
SUBMITTAL FOR BUILDING PERMIT APPROVAL. ENGINEER'S STAMP
DATED SEPTEMBER 25, 1997.**

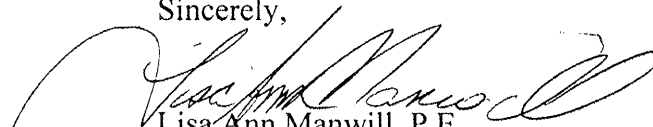
Dear Mr. Stockton:

Based on the information provided on your October 3, 1997 submittal, the above referenced project is approved for Building Permit.

Prior to Certificate of Occupancy approval, an Engineer's Certification will be required.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,



Lisa Ann Manwill, P.E.
Hydrology

c: Andrew Garcia
File

Good for You, Albuquerque!

P.O. Box 1293, Albuquerque, New Mexico 87103



COA/HYDROLOGY DRAINAGE CALCULATIONS

File: reconctr

Project: Recon. Facility

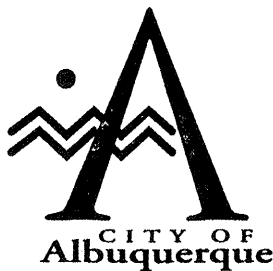
Date: 10-Feb-97

Precipitation Zone (Enter 1-4 from Table A-1): 3

Design Storm Event (Enter 2, 10, or 100): 100

Basin #	Treatment	Existing			Proposed			Subtotal	
		Area (SF)	Area (AC)	Qp (CFS)	Area (SF)	Area (AC)	Qp (CFS)	Existing	Proposed
1	A	0	0.0	0.0	0	0.0	0.0	30.7	30.7
	B	0	0.0	0.0	33,678	0.8	2.0		
	C	52,272	1.2	4.1	0	0.0	0.0		
	D	230,672	5.3	26.6	249,266	5.7	28.7		
	A	0	0.0	0.0	0	0.0	0.0	0.0	0.0
	B	0	0.0	0.0	0	0.0	0.0		
	C	0	0.0	0.0	0	0.0	0.0		
	D	0	0.0	0.0	0	0.0	0.0		
	A	0	0.0	0.0	0	0.0	0.0	0.0	0.0
	B	0	0.0	0.0	0	0.0	0.0		
	C	0	0.0	0.0	0	0.0	0.0		
	D	0	0.0	0.0	0	0.0	0.0		
	A	0	0.0	0.0	0	0.0	0.0	0.0	0.0
	B	0	0.0	0.0	0	0.0	0.0		
	C	0	0.0	0.0	0	0.0	0.0		
	D	0	0.0	0.0	0	0.0	0.0		
TOTALS		282,944	6.5	30.7	282,944	6.5	30.7	30.7	30.7

[illegible]



March 24, 1997

RECEIVED

MAR 28 1997

LEEDSHILL-HERKENHOFF, INC.
ALBUQUERQUE

Martin J. Chávez, Mayor

Richard Stockton, PE
Leedshill-Herkenhoff
500 Copper Ave.
Albuquerque, NM 87102

**RE: RECONDITIONING CENTER WYOMING BLVD. DEALERSHIP (K20-D47).
GRADING AND DRAINAGE PLAN SUBMITTAL FOR BUILDING PERMIT
APPROVAL. ENGINEER'S STAMP DATED 3-11-97.**

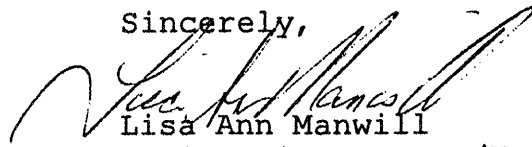
Dear Mr. Stockton:

Based on the information provided on your March 12, 1997 submittal, City Hydrology has the following comments:

1. It appears that this project is an integral part of the dealership building to the west. Both projects should have been submitted together.
2. My letter dated March 4, 1997 had several comments on the dealership building to the west of this project. Until those issues are resolved, this project cannot be approved.
3. It has come to my attention that item number 1, on my March 4, 1997 letter, may not be required. You may install curb and parking in the City right-of-way.

If I can be of further assistance, please feel free to contact me at 768-3622.

Sincerely,


Lisa Ann Manwill
Engineering Assoc./Hyd.

c: Andrew Garcia
File

Good for You, Albuquerque!

P.O. Box 1293, Albuquerque, New Mexico 87103





Martin J. Chávez, Mayor

Robert E. Gurulé, Director

June 17, 1997

Richard Stockton
Leedshill - Herkenhoff
P.O. Box 1217
Albuquerque, New Mexico 87103

RE: REVISED DRAINAGE PLAN FOR THE WYOMING BLVD. DEALERSHIP
(K20-D47) REVISION DATED 6/3/97

Dear Mr. Stockton:

Based on the information provided on your on your June 5, 1997 resubmittal, the above referenced site is approved for Building Permit.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

Also, prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If I can be of further assistance, please feel free to contact me at 924-3986.

C: Andrew Garcia
File

Sincerely


Bernie J. Montoya CE
Associate Engineer

Good for You, Albuquerque!

P.O. Box 1293, Albuquerque, New Mexico 87103





LEEDSHILL - HERKENHOFF, INC.

Albuquerque • Santa Fe

ENGINEERING COMPUTATIONS

NAME OF PROJECT

WYOMING BLVD DEALERSHIP

COMPUTED BY:

JLD

CHECKED BY:

AB

JOB NUMBER

96047.11

SHEET NUMBER

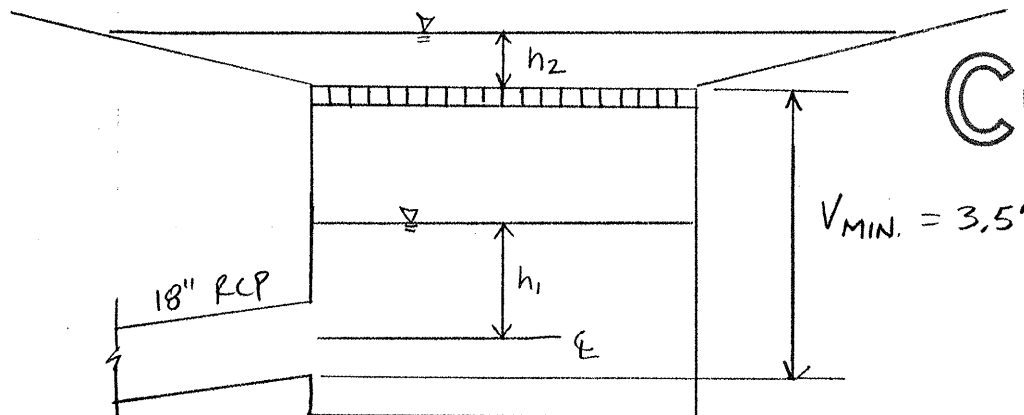
1 OF 5

DATE:

2-19-97

HYDRAULIC CALCULATIONS:

STORM INLET DOUBLE "D" WITH 18" RCP OUTLET



USE ORIFICE EQUATION & PLATE 22.3 D-6 ON
PAGE 75 OF THE DPM TO DETERMINE THE
GRATING CAPACITY FOR A TYPE DOUBLE "D"

$$Q = CA \sqrt{2gh_1} \quad \text{where } C \text{ is the coefficient of discharge}$$

A is the area of the pipe
 g is a constant for gravity

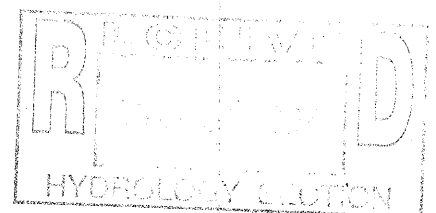
$C = 0.7$ (from Table 4-11 on Page 4-36 of Handbook of
Hydraulics) FOR CONCRETE PIPE

$$A = \pi R^2 = \pi (0.75 \text{ FT})^2 = 1.767 \text{ FT}^2$$

$$g = 32.2 \text{ FT/SEC}^2$$

SOLVE FOR Q AS A FUNCTION OF h_1

h_1 (FT)	Q (CFS)
1.0	9.9
1.25	11.1
1.50	12.2
1.75	13.1
2.0	14.0
2.25	14.9
2.5	15.7





LEEDSHILL - HERKENHOFF, INC.

Albuquerque • Santa Fe

ENGINEERING COMPUTATIONS

NAME OF PROJECT

WYOMING BLVD DEALERSHIP

COMPUTED BY:

JLD

CHECKED BY:

DB

JOB NUMBER

96047.11

SHEET NUMBER

2 OF 5

DATE:

2-19-97

HYDRAULIC CALCULATIONS (CONT.)

THE REQUIRED DEPTH OF FLOW h_2 FOR
A $Q = 13.1$ CFS, IS DETERMINED USING
PLATE 22.3 D-6

FOR $S = 0.002$ & $Q = 13.1$ CFS

$$\underline{h_2 = 0.84 \text{ FT}}$$

$\therefore @ Q_{100} = 13.1$ CFS, THE DEPTH OF HEAD ON 18" PIPE
IS $1.75 + \frac{1.5}{2} = \underline{2.5'}$. THE FREE BOARD TO GRATE IS $3.5 - 2.5 = \underline{1.0'}$
THEREFORE, CONNECT 18" RCP TO MH OF 54" WITH A
SLOPE OF 1.0% OR GREATER.

CALC HGL

$$@ Q = 13.1 \quad S = 0.02 \quad N = 0.013 \quad MH @ MH = 68.24$$

$$S_f = 0.0156 \quad HGL @ MH = 67.73 + 1.09 = \underline{68.82} \quad \checkmark$$

$$DEPTH = \underline{1.09'} \quad (\text{SEE SHT 3})$$

$$\therefore HGL \text{ IN SD LATERAL} = 68.74 + 1.09 = \underline{69.83} \quad \checkmark$$

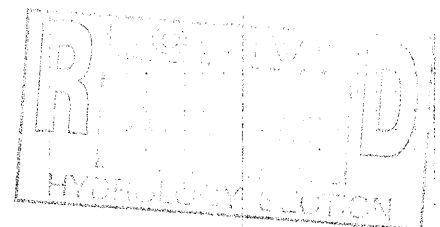
@ INLET

SINCE $71.24 > 69.83$ THEN INLET CONTROL $\checkmark$

CL BACK WATER ON 60" SD

$$INV = 56.50 \quad \text{FLOWING FULL, } HGL = 56.50 + 5.0 = \underline{61.50}$$

SINCE $61.50 < 69.83$ THEN NO BACKWATER AFFECT.



SHIT 3

Circular Channel Analysis & Design
Solved with Manning's Equation

Open Channel - Uniform flow

Worksheet Name:

Comment:

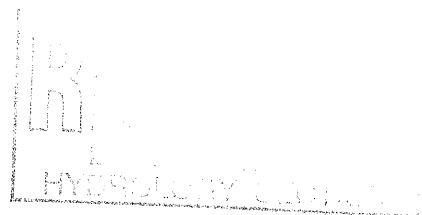
Solve For Actual Depth

Given Input Data:

Diameter.....	1.50 ft
Slope.....	0.0200 ft/ft
Manning's n.....	0.013
Discharge.....	13.10 cfs

Computed Results:

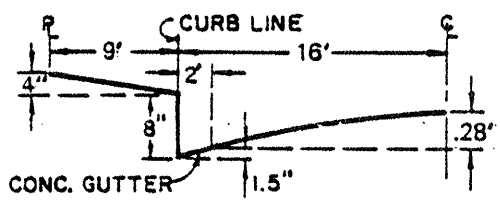
Depth.....	1.09 ft
Velocity.....	9.49 fps
Flow Area.....	1.38 sf
Critical Depth....	1.35 ft
Critical Slope....	0.0137 ft/ft
Percent Full.....	72.93 %
Full Capacity.....	14.86 cfs
QMAX @.94D.....	15.98 cfs
Froude Number.....	1.64 (flow is Supercritical)



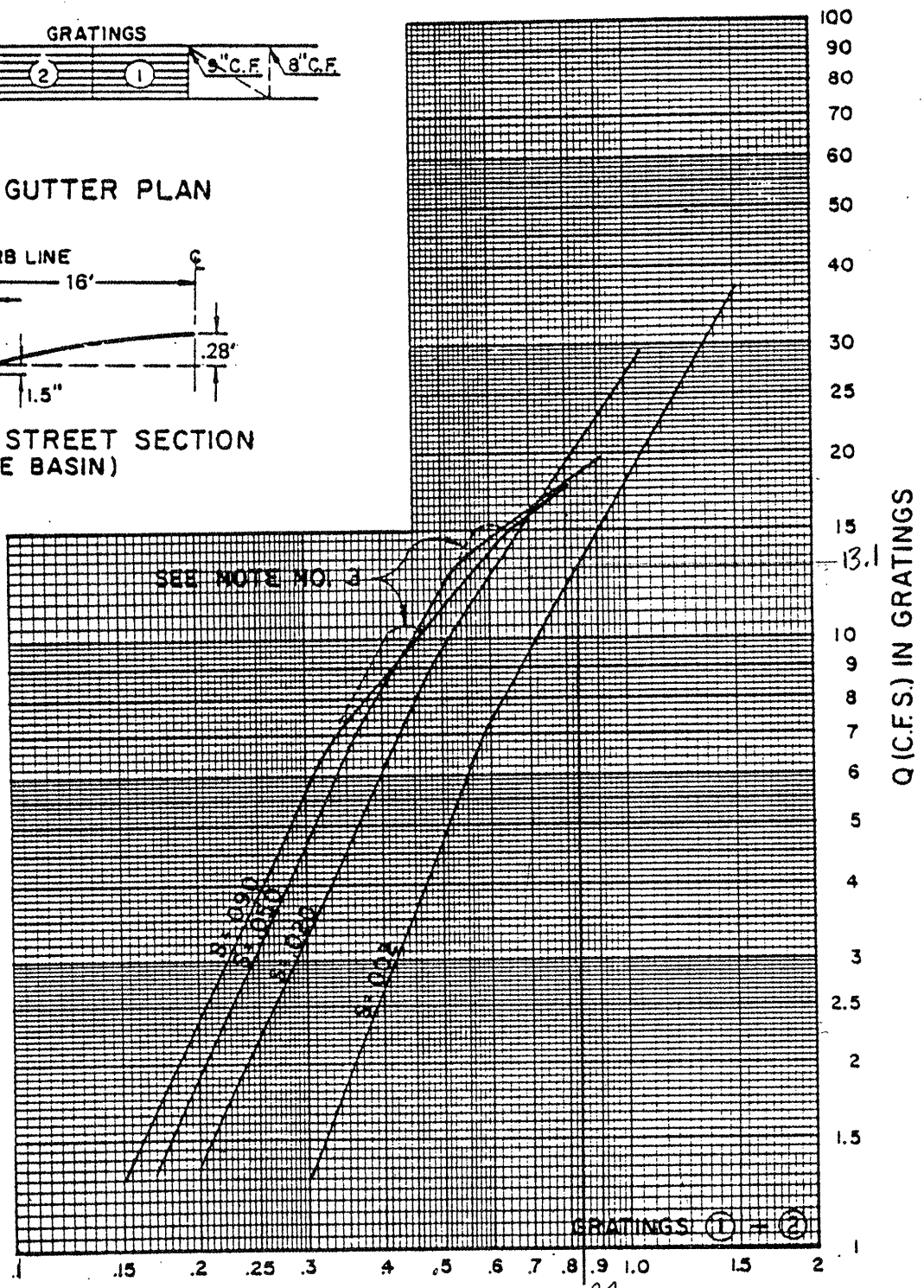
GRATING CAPACITIES FOR TYPE DOUBLE "C," AND "D"



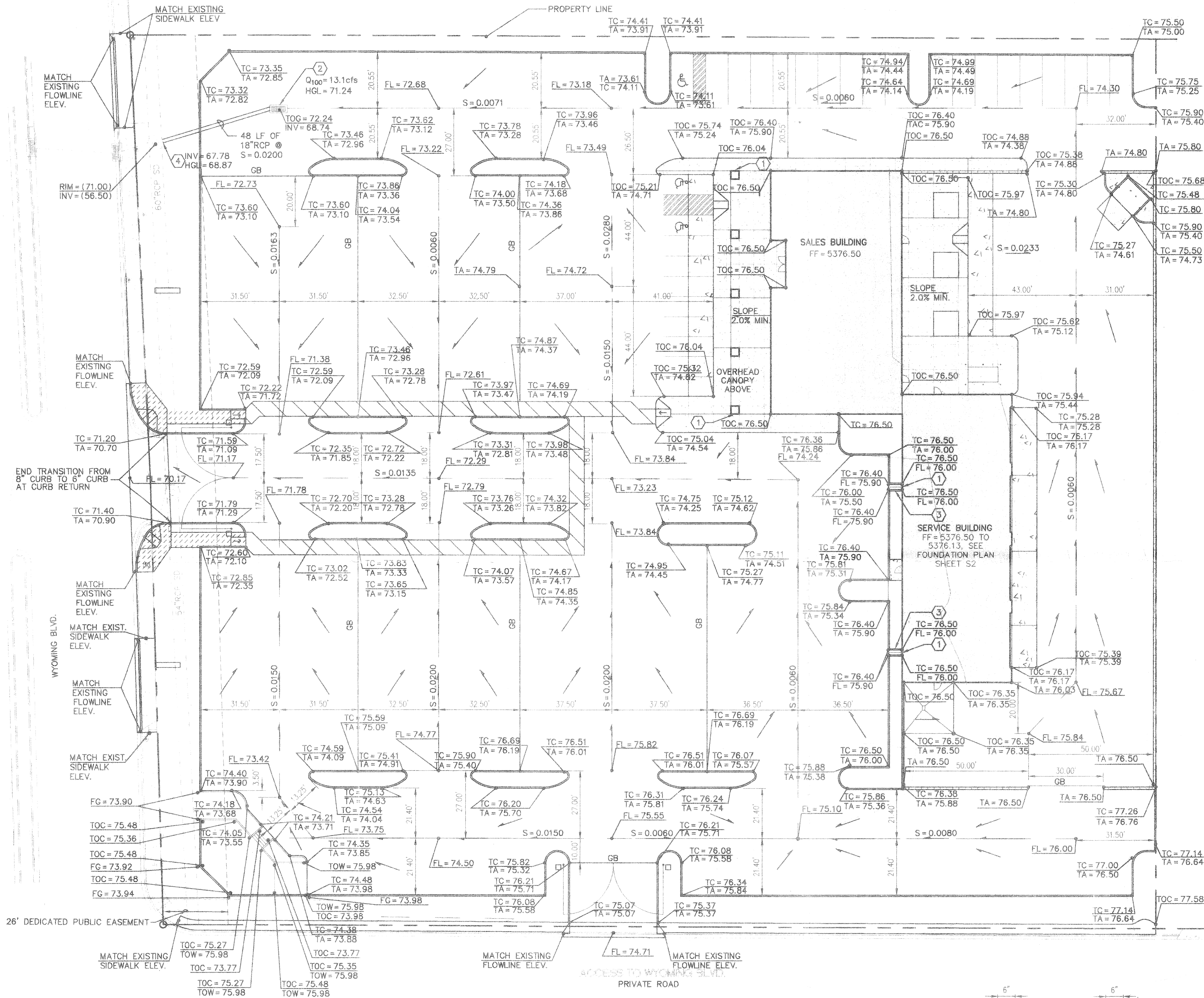
GRATING & GUTTER PLAN



TYPICAL HALF STREET SECTION (ABOVE BASIN)



D = DEPTH OF FLOW (FT.) ABOVE NORMAL GUTTER GRADE



LEGEND

- EXISTING STORM DRAIN INLET
- EXISTING STORM DRAIN MH
- EXISTING CONTOUR
- DRAINAGE SWALE
- PROPERTY LINE
- EASEMENT
- GRADE BREAK
- NEW CMU FENCE
- FLOWLINE
- SPOT ELEVATION
- HYDRAULIC GRADE LINE
- TC
- TOC
- TOG
- TA
- FL
- FF
- FG
- S
- 6" WIDE PAINTED PEDESTRIAN WALKWAY

NOTES

- A GRADING WILL NOT INCREASE PEAK RUNOFF AMOUNTS OR CHANGE DRAINAGE PATTERNS (SEE DRAINAGE TABLE, THIS SHEET).
- B MATCH EXISTING ELEVATIONS AT NEW CURB, GUTTER AND SIDEWALK ALONG WYOMING BLVD.
- C PRIOR TO PLACING STRUCTURAL FILL AND SUBSEQUENT TO GRADING IN CUT AREAS, THE EXPOSED SOILS SHOULD BE SCARIFIED TO A DEPTH OF 8 INCHES AND MOISTURE CONDITIONED TO A NEAR OPTIMUM (± 3) MOISTURE CONTENT, THEN COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557.

KEYED NOTES

- 1 ROOF DRAIN OUTLET.
- 2 INSTALL STORM INLET DOUBLE "D" PER COA DWG 2206.
- 3 CONSTRUCT CONCRETE RUNDOWN, SEE DETAIL 2, THIS SHEET.
- 4 CONNECT 18" RCP SD LATERAL TO EXISTING 48" MANHOLE. SCORE AND REMOVE INSERT FOR 18" RCP. GROUT OPENING TO MANHOLE AND PIPE UTILIZING THE EXPOSED REINFORCING. HYDRAULIC CALCULATIONS ARE ON FILE AT COA HYDROLOGY DEPARTMENT.

DESIGN INFORMATION

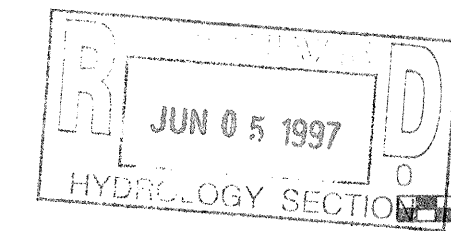
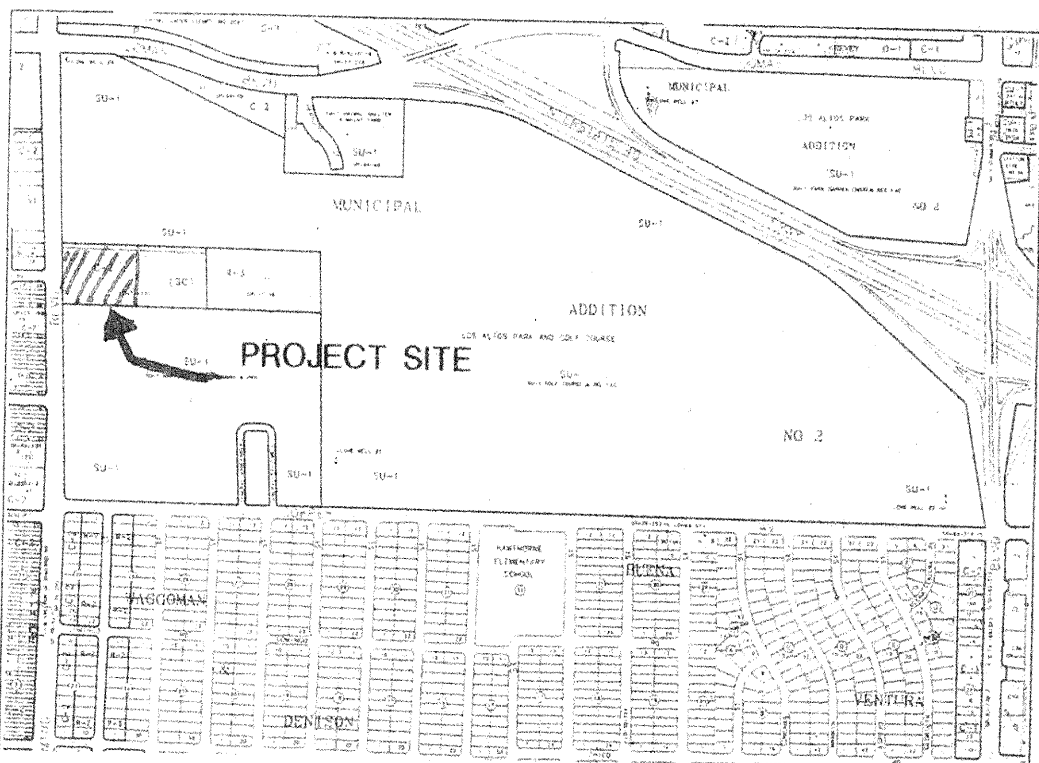
SURVEY DATA:
THE SURVEY DATA USED FOR THIS PROJECT IS FROM THE ALTA/ASCM LAND TITLE SURVEY BY COMMUNITY SCIENCES CORPORATION FOR TRACT "B" TOGETHER WITH VACATED PORTION OF TRACT "A", MUNICIPAL ADDITION NO. 2, CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, JULY 1996/REVISED SEPTEMBER 1996.

PROJECT BENCHMARK:
ACS BRASS CAP "18-K19" ELEV. 5363.320, LOCATED 48.9' SOUTH OF THE CENTER LINE OF LOMAS BLVD. AND 3.8' WEST OF THE CENTER LINE OF WYOMING BLVD.

AREA:
3.20 ACRES - PHASE I DEVELOPMENT
3.30 ACRES - PHASE II DEVELOPMENT
6.50 ACRES TOTAL

FLOOD HAZARD:
NO PART OF THIS WYOMING BLVD. DEALERSHIP NOR THE ADJACENT ROADWAYS ARE SUBJECT TO A FLOOD HAZARD AREA AS DETERMINED BY COMMUNITY PANEL NO. 350002 0030C OF THE FEMA FLOOD INSURANCE RATE MAPS, EFFECTIVE OCTOBER 14, 1983. THE PROJECT AREA IS INDICATED AS "ZONE C", AN AREA OF MINIMAL FLOODING.

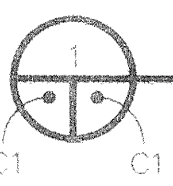
LEGAL DESCRIPTION:
A CERTAIN TRACT OF LAND COMPRISING AND BEING TRACT "B" AND A PORTION OF TRACT "A" OF THE LAND DIVISION WITHIN MUNICIPAL ADDITION NO. 2, ALBUQUERQUE, NEW MEXICO, FOR IMPORTED MOTORS PROFIT SHARING TRUST, AS FILED IN BERNALILLO COUNTY, NEW MEXICO, ON MARCH 7, 1973, IN BOOK A4, FOLIO 90, SAID TRACT HAVING 6.49551 AC (282,944 SF) MORE OR LESS.



VICINITY MAP K-20-Z

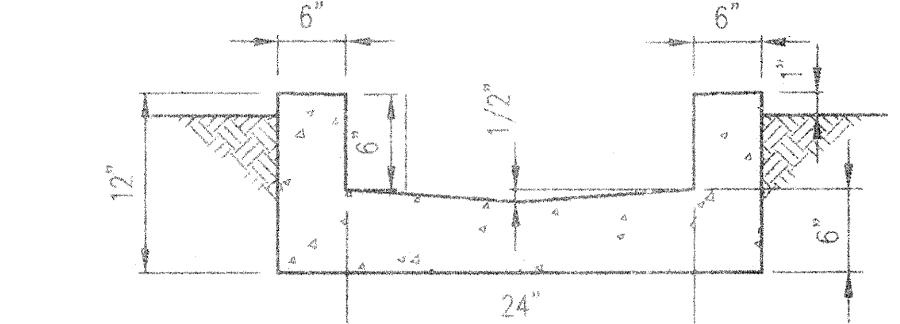
DRAINAGE TABLE

	INLET APPROX. 150' NORTH OF DRIVEWAY ENTRANCE ON WYOMING BLVD.	
EXISTING CONDITIONS	$Q_{100} = 30.7$ cfs	$Q_{10} = 20.4$ cfs
PROPOSED CONDITIONS	$Q_{100} = 26.3$ cfs	$Q_{10} = 16.4$ cfs



GRADING AND DRAINAGE PLAN

SCALE: 1" = 20'



CONCRETE RUNDOWN



6/5/97
Glen Jurgensen
ACCEPTED BY: GLEN JURGENSEN
COA STORM DRAIN MAINTENANCE

	06-3-97	REVISED GRADING AND DRAINAGE SHEET
	02-21-97	REVISED GRADING AND DRAINAGE PLAN
REVISION	DATE	DESCRIPTION
WYOMING BLVD DEALERSHIP		
UGLY DUCKLING CORPORATION		
GRADING AND DRAINAGE PLAN		DESIGN BY JLD
		CHECKED BY KMJ
		DRAWN BY BS
		SCALE AS SHOWN
		DATE NOV 96
 LEEDSHILL — HERKENHOFF, INC.		
ALBUQUERQUE ENGINEERS		SANTA FE ARCHITECTS
LH PROJECT MANAGER		SHEET
JOHN JARRARD		C2 OF 3
		SEQUENCE NO 4

GENERAL NOTES

- GRADING OF THE TOTAL SITE (282,944 SF) UNDER PROPOSED CONDITIONS WILL NOT INCREASE PEAK RUNOFF AMOUNTS (SEE DRAINAGE TABLE, THIS SHEET).
- MATCH EXISTING ELEVATIONS AT NEW DRIVEPAD AND SIDEWALK ALONG PRIVATE ACCESS ROAD.
- PRIOR TO PLACING STRUCTURAL FILL AND SUBSEQUENT TO GRADING IN CUT AREAS, THE EXPOSED SOILS SHOULD BE SCARIFIED TO A DEPTH OF 8 INCHES AND MOISTURE CONDITIONED TO A NEAR OPTIMUM (±3%) MOISTURE CONTENT, THEN COMPACTED TO A MINIMUM DENSITY AS DETERMINED BY ASTM 1557.

KEYED NOTES

- DOWN SPOUT
- 1' WIDE SIDEWALK CULVERT PER COA DWG 2236
- CONCRETE RUNDOWN, SEE DETAIL 2, THIS SHEET.
- STATIONARY BOLLARDS PER COA STD DWG 2250
- CONCRETE SPLASH BLOCK
- 2' WIDE SIDEWALK CULVERT PER COA DWG 2236

DESIGN INFORMATION

SURVEY DATA:
THE SURVEY DATA USED FOR THIS PROJECT IS FROM THE ALTA/ACSM LAND TITLE SURVEY AND TOPOGRAPHIC SURVEY BY COMMUNITY SCIENCES CORPORATION FOR TRACT "B" TOGETHER WITH VACATED PORTION OF TRACT "A", MUNICIPAL ADDITION NO. 2, CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, JULY 1996/REVISED SEPTEMBER 1996.

PROJECT BENCHMARK: "18-K19" ELEV. 5363.320, LOCATED 48.9' SOUTH OF CL LOMAS BLVD. AND 3.8' WEST OF CL WYOMING BLVD.

AREA:
3.20 ACRES - PHASE I DEVELOPMENT
3.30 ACRES - PHASE II DEVELOPMENT
6.50 ACRES TOTAL

FLOOD HAZARD:
NO PART OF THIS SITE NOR THE ADJACENT ROADWAYS ARE SUBJECT TO A FLOOD HAZARD AREA AS DETERMINED BY COMMUNITY PANEL NO. 350002 0030C OF THE FEMA FLOOD INSURANCE RATE MAPS, EFFECTIVE OCTOBER 14, 1983. THE PROJECT AREA IS INDICATED AS "ZONE C", AN AREA OF MINIMAL FLOODING.

LEGAL DESCRIPTION:
A CERTAIN TRACT OF LAND COMPRISING AND BEING TRACT "B" AND A PORTION OF TRACT "A" OF THE LAND DIVISION WITHIN MUNICIPAL ADDITION NO. 2, ALBUQUERQUE, NEW MEXICO, FOR IMPORTED MOTORS PROFIT SHARING TRUST, AS FILED IN BERNALILLO COUNTY, NEW MEXICO, ON MARCH 7, 1973, IN BOOK A4, FOLIO 90, SAID TRACT HAVING 6.49551 AC (282,944 SF) MORE OR LESS.

DRAINAGE TABLE

DESIGN STORM EVENT: 100 YEAR-6 HOUR PRECIPITATION ZONE: 3					
BASIN #	LAND TREATMENT	EXISTING CONDITIONS AREA (SF)	EXISTING CONDITIONS Qp (CFS)	PROPOSED CONDITIONS AREA (SF)	PROPOSED CONDITIONS Qp (CFS)
1	A				
	B			33,678	2.0
	C	52,272	4.1		
	D	230,672	26.6	249,266	28.7
TOTAL		282,944	30.7	282,944	30.7

LEGEND

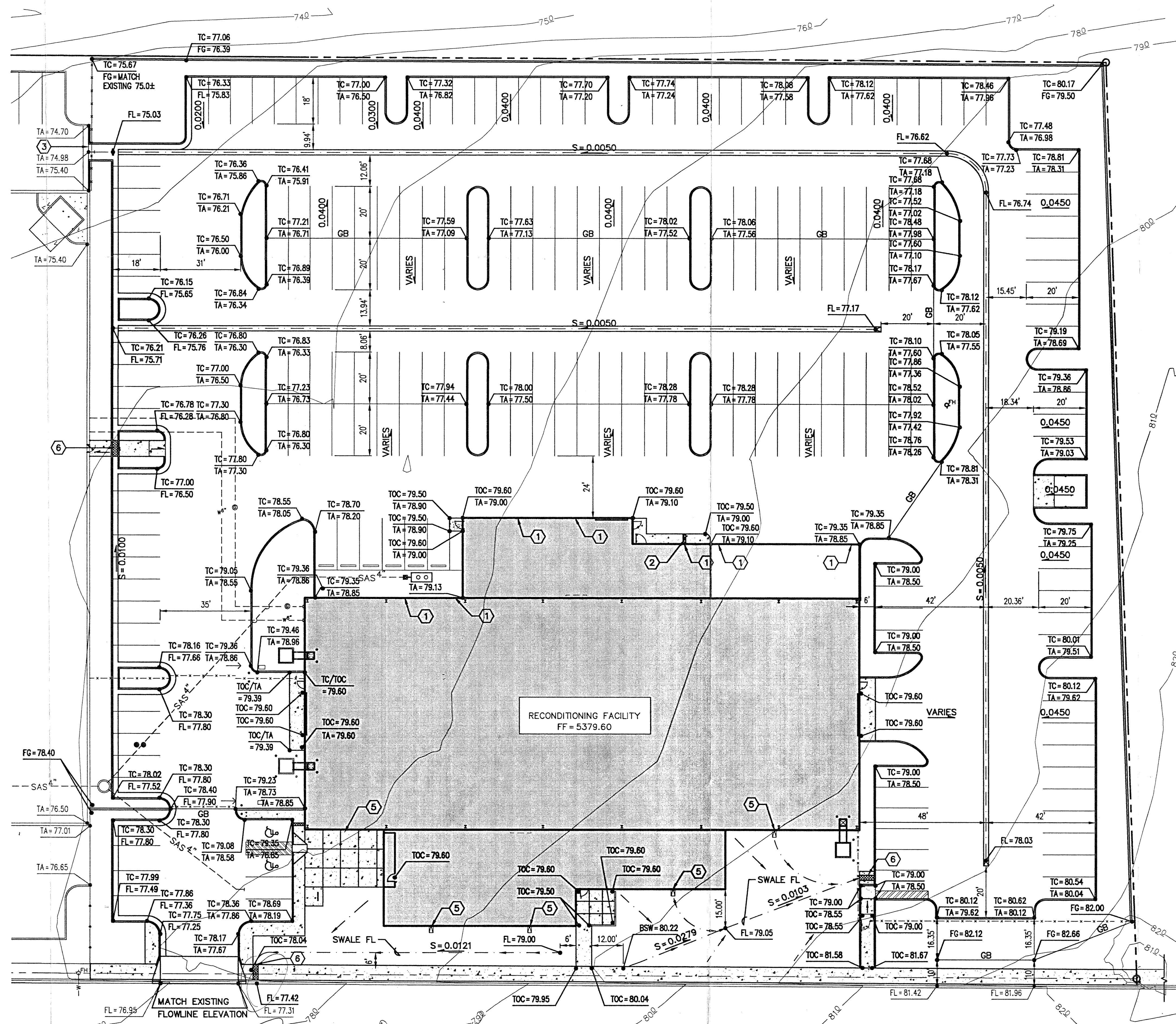
- 5370 — EXISTING CONTOUR
- — — DRAINAGE SWALE
- GB — GRADE BREAK
- — — PROPERTY LINE
- — — FLOWLINE
- ## EXISTING SPOT ELEVATION
- ## PROPOSED SPOT ELEVATION
- TC TOP OF CURB
- TOC TOP OF CONCRETE
- TA TOP OF ASPHALT
- FL FLOWLINE
- FF FINISH FLOOR
- FG FINISH GRADE
- S FINISH GRADE SLOPE
- BSW BACK OF SIDEWALK

0 10' 20' 40' 60'
1" = 20'

RECEIVED
OCT 3 1997
HYDROLOGY SECTION

1/P: 96047_31/DWG/C/C301/9-18-97/KHK

REVISION	DATE	DESCRIPTION
RECONDITIONING FACILITY UGLY DUCKLING CORPORATION		
GRADING AND DRAINAGE PLAN		DESIGN BY TJM CHECKED BY PR DRAWN BY KHK SCALE AS SHOWN DATE SEPT 97 SEQUENCE NO. —
LEEDSHILL - HERKENHOFF, INC. ALBUQUERQUE ENGINEERS ARCHITECTS		SANTA FE
LH PROJECT MANAGER		SHEET C2 OF 2



GRADING AND DRAINAGE PLAN

SCALE: 1" = 20'

CONCRETE RUNDOWN

SCALE: 1" = 1'-0"

Handwritten notes:
1" water block
This is
Main Map
Note much
Goes to