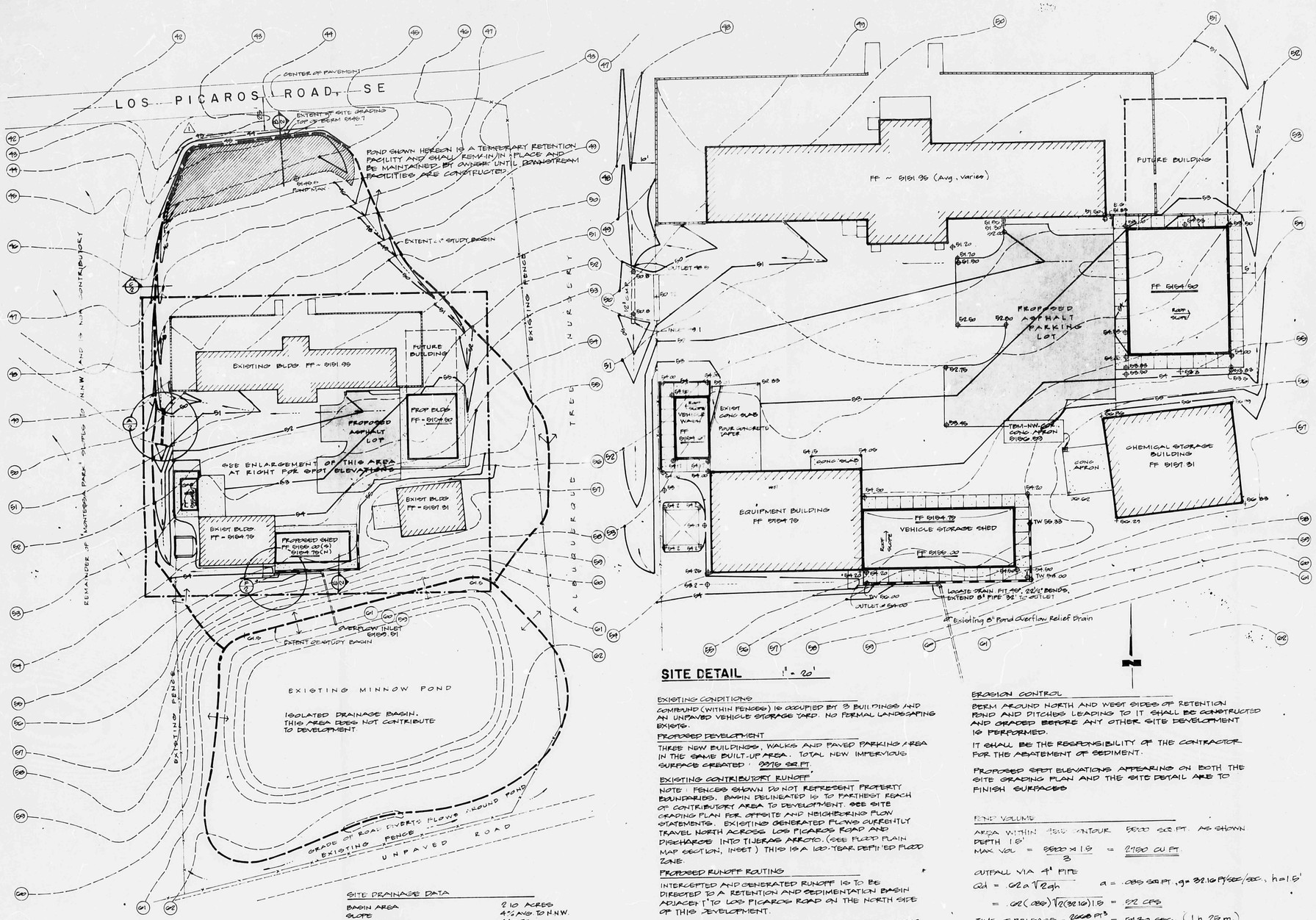
HYDROLOGY

P17/D1
TWO PLANS

P17/D1

2 Plans



SITE GRADING 1" = 40'

SITE DETAIL 1" = 20'

SITE DRAINAGE DATA

BASIN AREA	2.10 ACRES
SLOPE	4% AVG TO N.N.W.
LENGTH OF RUN	440 FT.
TIME OF CONCENTRATION	10 MINUTES
100-YR., 6-HR. RAINFALL (P)	2.3 INCHES (PL. 22.2.D-1, D.P.M.)
SOIL COMPLEX GROUP (Blueprint Series)	A (SOIL SURVEY, BERNALILLO CO.)
INTENSITY	4.80 IN/HR (PL. 22.2.D-2, D.P.M.)
IMPERVIOUS AREA	31%
CURVE NUMBER (RAIN RANGE)	64 (PL. 22.2.C-2, D.P.M.)
COMPOSITE CN	67 (PL. 22.2.C-3, D.P.M.)
DIRECT RUNOFF	.39 INCHES (PL. 22.2.C-4, D.P.M.)

VOLUME OF RUNOFF $\frac{39}{12} \times 2.10 \times 43560$ = 2000 CU.FT

Q_{100} = .49 × 4.80 × 2.10 = 4.08 CFS PEAK

Q_{10} = .667 Q_{100} = 2.68 CFS

FLOWS ARE TOTAL AT ENTRY TO POND

EXISTING CONDITIONS

COMPOUND (WITHIN FENCES) IS OCCUPIED BY 3 BUILDINGS AND AN UNPAVED VEHICLE STORAGE YARD. NO FORMAL LANDSCAPING EXISTS.

PROPOSED DEVELOPMENT

THREE NEW BUILDINGS, WALKS AND PAVED PARKING AREA IN THE SAME BUILT-UP AREA. TOTAL NEW IMPERVIOUS SURFACE CREATED: 22710 SQ.FT.

EXISTING CONTRIBUTORY RUNOFF

NOTE: FENCES SHOWN DO NOT REPRESENT PROPERTY BOUNDARIES. BASIN DELINEATED IS TO FARTHEST REACH OF CONTRIBUTORY AREA TO DEVELOPMENT. SEE SITE GRADING PLAN FOR OFFSITE AND NEIGHBORING FLOW STATEMENTS. EXISTING GENERATED FLOWS CURRENTLY TRAVEL NORTH ACROSS LOS PICAROS ROAD AND DISCHARGE INTO TIJERAS ARROYO. (SEE FLOOD PLAIN MAP SECTION, INSET) THIS IS A 100-YEAR DEPITH FLOOD ZONE.

PROPOSED RUNOFF ROUTING

INTERCEPTED AND GENERATED RUNOFF IS TO BE DIRECTED TO A RETENTION AND SEDIMENTATION BASIN ADJACENT TO LOS PICAROS ROAD ON THE NORTH SIDE OF THIS DEVELOPMENT.

THERE SHALL BE NO RELEASE OF IMPOUNDED WATER ONTO LOS PICAROS ROAD.

BASIN SHALL REMAIN IN PLACE AND BE MAINTAINED BY OWNER UNTIL FUTURE DOWNSTREAM FACILITIES ARE IN PLACE.

LOS PICAROS ROAD HAS NO RECORDED RIGHT-OF-WAY WIDTH. TOE OF CONSTRUCTED BERM SHALL BE NO CLOSER THAN 28 FEET TO THE CENTERLINE OF ROAD PAVEMENT.

EROSION CONTROL

BERM AROUND NORTH AND WEST SIDES OF RETENTION POND AND PITCHES LEADING TO IT SHALL BE CONSTRUCTED AND GRADED BEFORE ANY OTHER SITE DEVELOPMENT IS PERFORMED.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR THE ABATEMENT OF SEDIMENT.

PROPOSED SPOT ELEVATIONS APPEARING ON BOTH THE SITE GRADING PLAN AND THE SITE DETAIL ARE TO FINISH SURFACES

POND VOLUME

AREA WITHIN 5192 CONTOUR 5800 SQ.FT. AS SHOWN

DEPTH 1.8'

MAX VOL = $\frac{5800 \times 1.8}{3}$ = 2780 CU.FT

OUTFALL VIA 4" PIPE

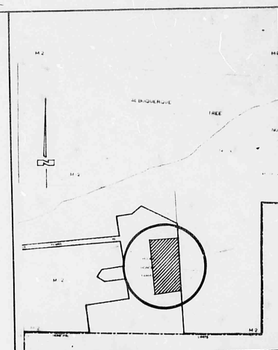
$Q_d = .62 a \sqrt{2gh}$ a = .088 SQ.FT., g = 32.16 FT/SEC/SEC, h = 1.8'

= .62 (.088) $\sqrt{2(32.16)1.8}$ = .52 CFS

TIME OF RELEASE = $\frac{2000 \text{ FT}^3}{.52 \text{ CFS}}$ = 5130 SEC. (1 hr. 25 m.)

Richard Hall 10/23/86

HALL ENGINEERING COMPANY INC.
337 EUBANK N.E., SUITE 103
ALBUQUERQUE, NEW MEXICO 87123
Phones: (505) 292-1115 & 292-1116



VICINITY MAP P-17-Z

FLOOD PLAIN MAP

PORTION, FLOODWAY AND FLOOD BOUNDARY MAP
CITY OF ALBUQUERQUE, NEW MEXICO
PANEL 41 OF 50

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATIONS
- PROPOSED SPOT ELEVATIONS
- EXISTING BUILDING
- PROPOSED BUILDING
- EXTENT OF RETENTION AND SEDIMENTATION BASIN
- FLOWLINE
- DIVISION OF FLOWS
- RETAINING WALL
- FENCE
- EXISTING CONCRETE
- NEW CONCRETE
- NEW ASPHALT

AS BUILT INFORMATION

CONTRACTOR
WORK STAKED BY DATE
FIELD NOTES DATE
ACCEPTANCE BY DATE
FIELD VERIFICATION BY DATE
DRAWINGS CORRECTED BY DATE
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS
STATION 1. PIT SET A.C.S. BRASS TABLET SET IN CONCRETE FOOT PROJECTING 0.1' ABOVE GROUND. STATION IS 580' ± SOUTH OF MAIN BLDG OF MONTESSA PARK RETENTION CENTER.
ELEV. 5184.79
TBM NW CORNER OF CONCRETE APRON AT CHEMICAL STORAGE BUILDING
ELEV. 5186.89

SURVEY INFORMATION

NO.	BY	DATE	FIELD NOTES

ENGINEER'S SEAL

NO.	DATE	REMARKS	BY
1	11-16-86	REVISED 4" RELEASE PIPE FROM 8"	BMK

REVISIONS

DESIGNED BY DATE
DRAWN BY E.W. KIESS DATE 10-10-86
CHECKED BY DATE

RECEIVED NOV 1 1986 HYDROLOGY SECTION

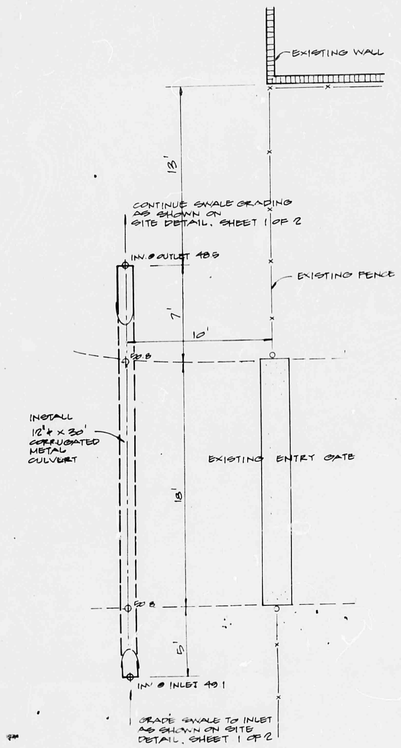
CITY OF ALBUQUERQUE
ENVIRONMENTAL HEALTH DEPARTMENT

TITLE: SITE DRAINAGE & GRADING MONTESSA PARK RENOVATION

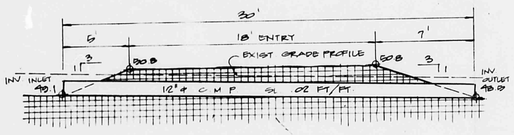
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer			Liquid Waste		
A.C.E.-Design			Traffic		
A.C.E.-Hydrology			Water		

DRAWING NO. 2807 | MAP NO. P-17 | SHEET D1 OF 2

BG-376

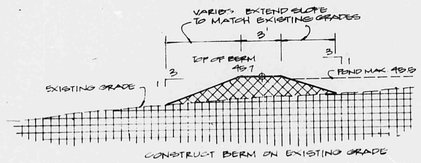


LAYOUT LOCATION
SCALE 1" = 5'

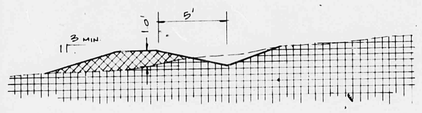


PROFILE SECTION
SCALE 1" = 5'

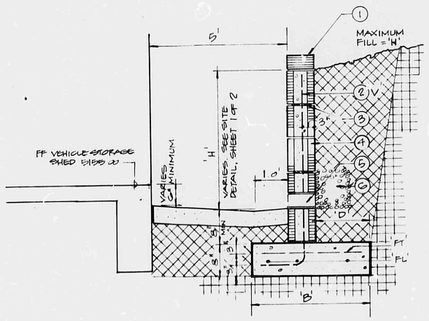
A/2 CULVERT DETAILS @ ENTRY



B/2 BERM @ N. SIDE OF BASIN
SCALE 1" = 5'



C/2 DITCH @ W. SIDE OF SITE
SCALE 1" = 5'



1. 4" C.M.U. CAP BLOCK
2. VERTICAL REINFORCING ALTERNATE VERTICAL RE BARS MAY BE TERMINATED AT MID-HEIGHT OF RETAINER.
3. DUR-O-WAL EA 3RD COURSE REINF. SHALL BE 9 GA MINIMUM, DIAGONAL WEB
4. 8" x 8" x 16" C.M.U. FILL ALL CELLS W/CONCRETE TO FULL WALL HT.
5. 4" DIA WEEPS @ 12' O.C. WRAP 1/4" MESH OVER INLET
6. 1 CU FT GRAVEL CONTINUOUS AT WEEP ELEVATION

WALL HEIGHT 'H'	FOOTING WIDTH 'B'	HEEL 'D'	VERTICAL REINF 'V'	FOOTING REINFORCING 'FT'	'FL'
1'-4"	1'-6"	7"	#3@32" O.C.	/	2-#3 CONT.
2'-0"	1'-10"	9"	#3@32" O.C.	—	2-#3 CONT.
2'-8"	2'-3"	13"	#4@32" O.C.	#3@32" O.C.	2-#3 CONT.
3'-4"	2'-7"	16"	#4@24" O.C.	#3@24" O.C.	3-#3 CONT.

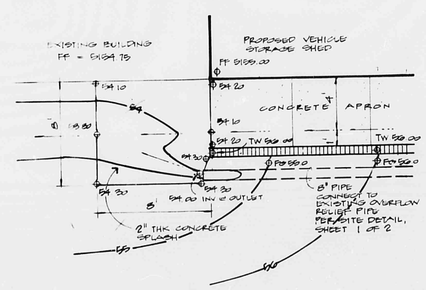
CONTRACTOR SHALL BE RESPONSIBLE FOR SITE PREPARATION INCLUDING EXCAVATION, BACKFILLING, COMPACTION AND GRADING

BACKFILL DENSITY SHALL BE 110 P.C.F. MINIMUM

CONCRETE STRENGTH (f'_c) = 2000 P.S.I. MINIMUM

STEEL STRENGTH (f_y) = 40,000 P.S.I. STEEL SHALL HAVE STANDARD DEFORMATIONS

E/2 RETAINING WALL



F/2 MINNOW POND RELIEF OUTLET
SCALE 1" = 5'

1 REVISION

D/2 DELETED

SURVEY INFORMATION FIELD NOTES		
NO.	BY	DATE

BENCH MARKS

STATION 1-FIT STD A.C.S. BRASS TABLET SET IN CONCRETE POST PROJECTING 0.7' ABOVE GROUND. STATION IS 150' ± SOUTH OF MAIN BLDG. OF MONTESSA PARK DETENTION CENTER.
ELEV. 5164.78

TBM NW CORNER OF CONCRETE APRON AT CHEMICAL STORAGE BUILDING
ELEV. 5166.93

AS BUILT INFORMATION

CONTRACTOR		
WORK STAKED BY		DATE
INSPECTORS ACCEPTANCE BY		DATE
FIELD VERIFICATION BY		DATE
DRAWINGS CORRECTED BY		DATE

MICRO-FILM INFORMATION

RECORDED BY	DATE
NO.	

ENGINEER'S SEAL

RICHARD V. HALL REGISTERED PROFESSIONAL ENGINEER 7844 — 10/23/86

NO.	DATE	REMARKS	BY
1	11-10-86	REVISED ATTENUATION PIPE FROM BASIN	EWK

REVISIONS

DESIGNED BY		DATE
DRAWN BY	E.W. KLESES	DATE 10-18-86
CHECKED BY		DATE

RECEIVED NOV 13 1986 HYDROLOGY SECTION

CITY OF ALBUQUERQUE
ENVIRONMENTAL HEALTH DEPARTMENT

TITLE: DRAINAGE & GRADING DETAILS
MONTESSA PARK RENOVATION

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer			Liquid Waste		
A.C.E.-Design			Traffic		
A.C.E.-Hydrology			Water		

DRAWING NO.	MAP NO.	SHEET	OF
2807	P-17	D2	2

Richard V. Hall 10/23/86
REGISTERED PROFESSIONAL ENGINEER

HALL ENGINEERING COMPANY INC.
337 EUBANK N.E., SUITE 103
ALBUQUERQUE, NEW MEXICO 87123
Phones: (505) 292-1115 & 292-1116

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