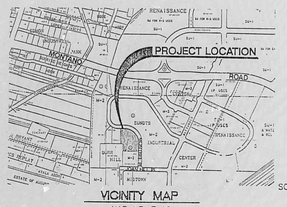
PUBLIC WORKS/HYDROLOGY

F16/D11



VICINITY MAP
MAP NO. F-16

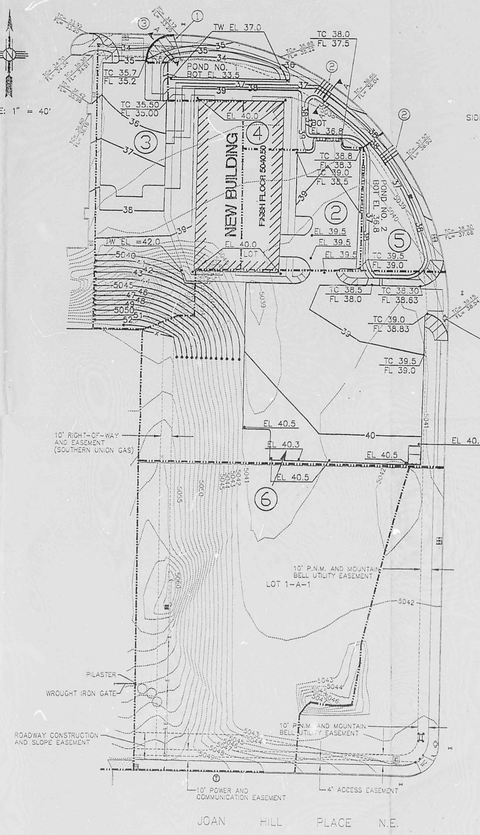
SCALE: 1" = 40'

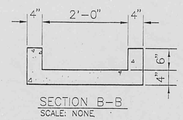
LEGAL DESCRIPTION

LOTS 1 AND 1-A-1, BLOCK 1, SUNDT'S INDUSTRIAL CENTER, SECTIONS 33 AND 34, T11N, R3E, NMPM CITY OF ALBUQUERQUE

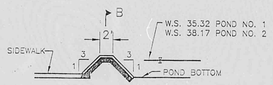
BENCH MARK

ACS MONUMENT "2-F16"
ELEVATION = 5062.02





SECTION B-B
SCALE: NONE



SECTION A-A
SCALE: NONE

	DESIGN VOLUME (ACRE FT)	AS-BUILT VOLUME (ACRE FT)
POND NO. 1	0.15	0.15
POND NO. 2	0.24	0.24

EXISTING DRAINAGE CONDITIONS				DEVELOPED DRAINAGE CONDITIONS			
ZONE 2	TREATMENT	VOL$_{360}$ (ACR FT)	Q$_{100}$ (CFS)	TREATMENT	VOL$_{360}$ (ACR FT)	Q$_{100}$ (CFS)
DRAINAGE AREA 1	0.73 ACRES A 0.32 ACRES C	0.05	2.14	0.32 ACRES B 0.73 ACRES D	0.15	4.16
DRAINAGE AREA 2	0.27 ACRES A	0.01	0.42	0.27 ACRES D	0.05	1.27
DRAINAGE AREA 3	0.49 ACRES A 0.25 ACRES C	0.03	1.55	0.11 ACRES C 0.63 ACRES D	0.10	3.30
DRAINAGE AREA 4	0.30 ACRES A	0.01	0.47	0.30 ACRES D	0.05	1.41
DRAINAGE AREA 5	0.22 ACRES A	0.01	0.34	0.22 ACRES D	0.04	1.03
OFFSITE DRAINAGE AREA 6	0.68 ACRES A 0.68 ACRES C	0.09	3.20	0.68 ACRES A 0.68 ACRES C	0.09	3.20
TOTAL	3.94 ACRES			3.94 ACRES		

EROSION CONTROL PLAN

CONTRACTOR IS RESPONSIBLE FOR THE ABATEMENT OF SEDIMENT ONTO ADJOINING PUBLIC RIGHT-OF-WAY, PUBLIC AND/OR PRIVATE LAND DURING CONSTRUCTION AND FOR THE REMOVAL OF ANY SEDIMENT DEPOSITED ON ANY ADJOINING AREAS.

CONTRACTOR IS ALSO RESPONSIBLE FOR OBTAINING A "TOP SOIL DISTURBANCE PERMIT", PROTECTING ADJACENT PROPERTY FROM SEDIMENT (SEE ABOVE NOTE) AND REPAIRING ANY DAMAGE PROMPTLY.

EXISTING SITE CONDITIONS

THE EXISTING SITE IS PRESENTLY UNDEVELOPED. THE EXISTING DRAINAGE ON THE SOUTHERN PORTION OF THE SITE AND OFF SITE FLOWS DRAIN EASTERLY ACROSS THE SITE AND INTO MONTBEL PL NE. THE DRAINAGE ON THE NORTHERN PORTION OF THE SITE DRAINS NORTHERLY INTO MONTBEL PL NE, A PAVED STREET. PRESENTLY, MONTBEL PL STREET FLOWS DRAIN NORTHERLY ALONG MONTBEL PL TO A STREET RUNOOVN ON THE WEST SIDE OF MONTBEL PL INTO AN EXISTING DETENTION BASIN.

PROPOSED SITE DRAINAGE PLAN

THE DEVELOPED SITE WILL INCLUDE A 12,800 SQUARE FOOT BUILDING, NEW PARKING AREAS, NEW CURB AND GUTTER, A RETAINING WALL, LANDSCAPING, AND MISCELLANEOUS SIDE WALK.

THE PROPOSED SITE DRAINAGE MUST COMPLY WITH THE MASTER DRAINAGE PLAN (F16-D3). THE ALLOWABLE DISCHARGE INTO THE STREET IS 0.1 CFS/ACRE. THE SITE WILL REQUIRE TWO DETENTION PONDS IN ORDER TO COMPLY WITH THE MASTER DRAINAGE PLAN. AN OFFSITE FLOW OF 3.20 CFS WILL BE ALLOWED TO PASS THROUGH THE PONDS. THE TOTAL AREA OF THE SITE IS 3.94 ACRES. THE TOTAL ALLOWABLE OUTFLOW FROM THE PONDS EQUALS 3.20 + 0.1 (3.94) = 3.59 CFS.

ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THE FINAL CONSTRUCTION IS IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED DRAINAGE PLAN. THE FINISHED GRADE ELEVATIONS MATCH THE DESIGN ELEVATIONS UNLESS OTHERWISE NOTED.

HYDROGRAPHS HAVE BEEN DEVELOPED FOR POND NO. 1 AND POND NO. 2 IN ACCORDANCE WITH THE FOLLOWING DPM FORMULAS:

$t_p = (2.107 \times E \times A_i/Q_p) - (0.25 \times A_i/A_T)$

$t_p = (0.7 \times TC) + [(1.6 \div A_i/A_T) \div 12]$

POND NO. 1

POND NO. 1 WILL IMPOUND DRAINAGE AREAS 3 AND 4. REFER TO THE DRAINAGE TABLES SHOWN ON SHEET C-3. HYDROGRAPH COMPUTATIONS FOR POND NO. 1 ARE AS FOLLOWS:

$Q_p = (3.14 \times 0.36) + (4.70 \times .66) = 4.29$ CFS

WEIGHTED E = $\frac{(1.13 \times 0.36) + (2.12 \times 0.66)}{0.11 + 0.63}$ = 1.76

VOL = 1.76 X $\frac{1.04}{12}$ = 0.15 ACRE FT

$t_p = (2.107 \times 1.76 \times \frac{1.04}{4.29}) - (0.25 \times \frac{0.66}{1.04})$

= 0.68 HOURS

$t_p = 0.7 \times 0.2 + [(1.6 \div \frac{0.66}{1.04}) \div 12]$

= 0.22 HOURS

POND NO. 2

POND NO. 2 WILL IMPOUND DRAINAGE AREAS 1, 2, AND 5 AND WILL RELEASE OFFSITE DRAINAGE AREA 6. HYDROGRAPH COMPUTATIONS FOR POND NO. 2 ARE AS FOLLOWS:

$Q_p = (2.28 \times 0.32) + (4.70 \times 1.22) = 6.46$ CFS

WEIGHTED E = $\frac{(0.79 \times 0.32) + (2.12 \times 1.22)}{1.22 + 0.32}$ = 1.84

VOL = 1.84 X $\frac{1.54}{12}$ = 0.24 ACRE FT

$t_p = (2.107 \times 1.84 \times \frac{1.54}{6.46}) - (0.25 \times \frac{0.22}{1.54})$ = 0.94 HOUR

$t_p = (0.7 \times 0.2 + [(1.6 \div \frac{1.22}{1.24}) \div 12]$

= 0.21 HOURS

FLOWS WERE ROUTED THROUGH PONDS NO. 1 AND 2 USING THE H DRAFLOW HYDROGRAPHS COMPUTER PROGRAM. SEE RESERVOIR OUTPUT AND HYDROGRAPH SUMMARY REPORT.

POND NO. 1 OUTFLOW = 0.44 CFS (1 - 4" PVC OUTFLOW PIPE)
POND NO. 2 OUTFLOW = 3.04 CFS (8 - 4" PVC OUTFLOW PIPES)

TOTAL = 3.48 CFS
ALLOWABLE = 3.59 CFS ∴ OK

6501 AMERICAS PARKWAY, NE
SUITE 700 (505)889-4100
ALBUQUERQUE, NM 87110
Holmes & Narver

REVISIONS

DATE	DESCRIPTION

CHK. D.L. DATE
DRN. JLT1
CKD. D.L. SUBMITTED BY:
APPROVED:

PROJECT TITLE: J.A.T.C. BUILDING
GRADING PLAN

SHEET 3 OF 25

C3

RR 15 DATE 3-15-02 OPER. ERP

CITY OF ALBUQUERQUE

This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the Public Works Department and was created in the normal course of business.

The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS115-1977)

DIRECTOR 11/5/02

NOTARY PUBLIC
OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 12/01/02

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

PLANS/PLATS ON FILE

FILE DESC: F16/D11

PLANS/PLATS 1

E 30 D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D F