

GRADING & DRAINAGE PLAN

PROJECT IS NOT LOCATED WITHIN A FLOODPLAIN  
DESIGNED ELEVATION HEIGHT 20ft

FIRM MAP PANEL # 354 H

PROVIDE ADDITIONAL SURVEY  
INFO TO CONFIRM THAT FLOWS  
WILL NOT CROSS OVER TO THE  
LOTS NORTH OF THE VACATED  
ALLEY / DRAINAGE EASEMENT

CALCULATIONS

DESIGN CRITERIA  
HYDROLOGIC METHODS PER SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL (DPM)  
REVISED JANUARY 1993 FOR CITY OF ALBUQUERQUE ADOPTED BY THE COUNTY OF BERNALILLO  
DISCHARGE RATE:  $Q = Q_{PEAK} \times AREA$ , "Peak Discharge Rates For Small Watersheds"  
VOLUMETRIC DISCHARGE:  $VOLUME = E_{weighted} \times AREA$   
 $P100 = 2.60$  inches, Zone 3 Time of Concentration,  $T_C = 10$  Minutes  
DESIGN STORM: 100-YEAR/6-HOUR, 10-YEAR/6-HOUR [ ] = 10 YEAR VALUES  
EXISTING CONDITIONS  
LOT AREA = 0.51 ACRES, WHERE EXCESS PRECIP. 'C' = 1.29 in. [0.62]  
PEAK DISCHARGE,  $Q100 = 1.76$  CFS [1], WHERE UNIT PEAK DISCHARGE 'C' = 3.45 CFS/AC [2.0]  
THEREFORE:  $VOLUME_{100} = 2388$  CF [1148]

DEVELOPED CONDITIONS  
DETERMINE LAND TREATMENTS, PEAK DISCHARGE AND VOLUMETRIC DISCHARGE FOR STUDY AREA

AREA	LAND TREATMENT	Q Peak	E
UNDEVELOPED	A	1.87(0.58)	0.66(0.19)
LANDSCAPING	0.06 AC.(12%) B	2.60(1.19)	0.92(0.36)
GRAVEL & COMPACTED SOIL	0.04 AC.(8%) C	3.45(1.00)	1.29(0.62)
ROOF - PAVEMENT	0.41 AC.(80%) D	5.02(3.39)	2.36(1.50)
0.51 AC.			

THEREFORE:  $E_{weighted} = 2.10$  in. [1.29] &  $VOLUME_{100} = 3887$  CF  
 $Q100 = 2.36$  CFS  $Q10 = 1.53$  CFS  
DETERMINE CAPACITY OF EAST BASIN TO HARVESTING AREA  
BASIN AREA = 0.20 AC, THEREFORE @  $E100=2.1$  IN = 1500 C.F.F.±  
THEN:  $3887$  CF -  $1500$  CF =  $2390.4$  CF VOL. TO WEST.OK

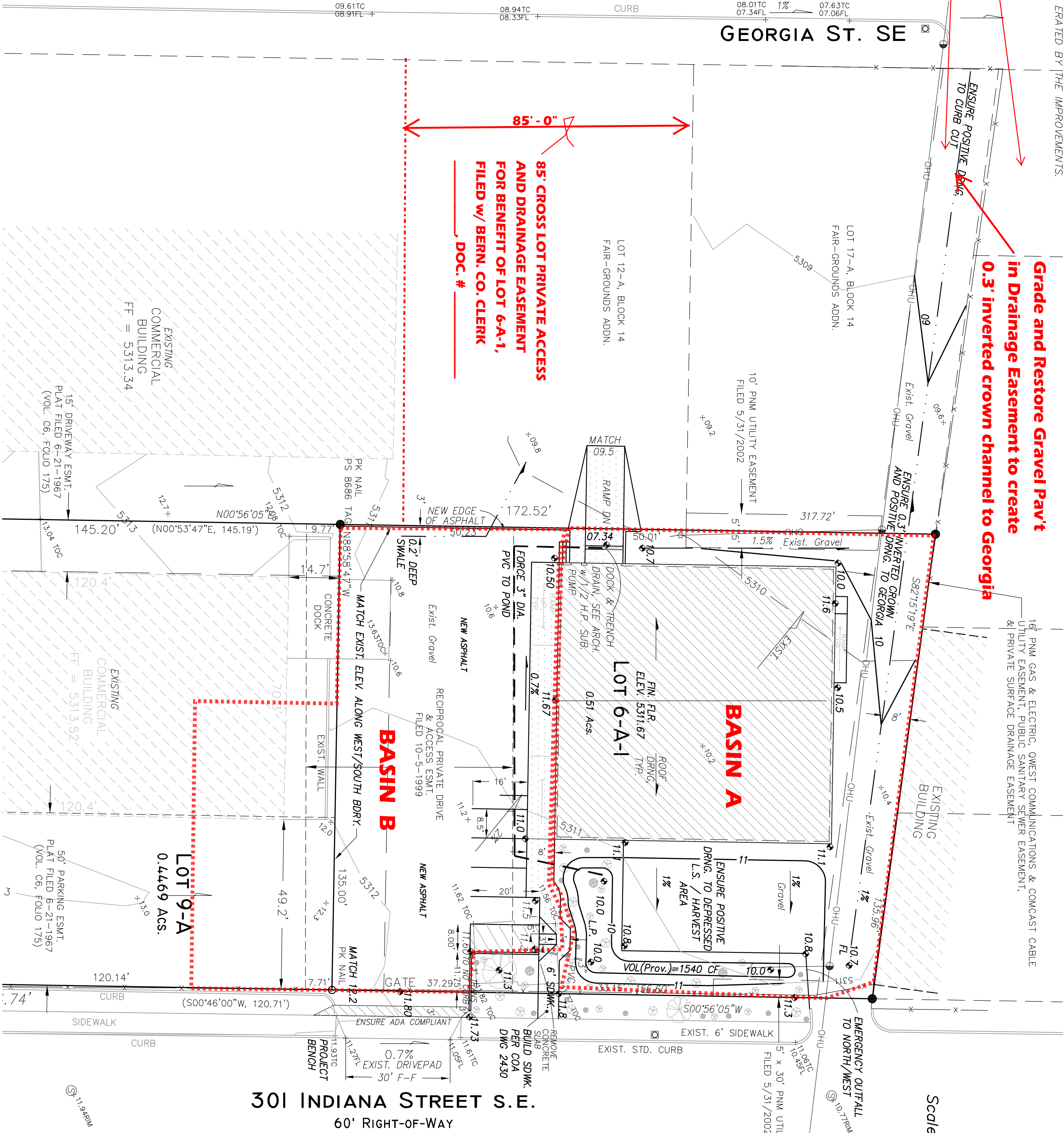
BREAK DOWN DRAINAGE FOR  
THE TWO BASINS, TO ENSURE  
THAT FLOWS DIRECTED TO THE  
NORTHERN DRAINAGE EASEMENT  
WILL REMAIN IN THE 0.3 SWALE

- THE COMMERCIAL WAREHOUSE PROJECT IS LOCATED IN THE FAIR-GROUNDS ADDN. OF ALBUQUERQUE APPROXIMATELY 5 MILES EAST OF THE DOWNTOWN CORE OF ALBUQUERQUE, NM. THE GRADING & DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE BERNALILLO COUNTY FLOOD HAZARD ORDINANCE, NO.88-46, AND THE CITY STORM DRAINAGE ORDINANCE. THE PLAN IS REQUIRED IN ORDER TO FACILITATE THE OWNER'S REQUEST FOR BUILDING PERMIT. THE PLAN SHOWS:
1. EXISTING CONTOURS, AND SPOT ELEVATIONS AND EXISTING DRAINAGE PATTERNS AND IMPROVEMENTS OF STRUCTURE
  2. PROPOSED IMPROVEMENTS, SINGLE & GRADE ELEVATIONS AND LANDSCAPING WATER HARVESTING AREAS
  3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS, QUANTIFICATION AND ACCEPTANCE OF UPSTREAM OFF-SITE FLOWS WHICH CONTRIBUTE TO THE DEVELOPED FLOWS GENERATED BY THE IMPROVEMENTS.

THE PURPOSE OF THE PLAN IS TO ESTABLISH CRITERIA FOR CONTROLLING STORM RUNOFF AND EROSION, AND ESSENTIALLY ALLOWING HISTORIC FLOWS TO CONTINUE TO DRAIN THROUGH THE PROPERTY. PRESENTLY, THE SITE IS BOUNDED ON THE NORTH AND SOUTH BY DEVELOPED PROPERTY, INDIANA & GEORGIA STREETS ON THE EAST AND WEST ARE PAVED WITH CURB, GUTTER AND SIDEWALK, AND MAINTAINED BY THE CITY OF ALBUQUERQUE. THE SITE FALLS GENERALLY AT 28° FROM SOUTHEAST TO NORTHWEST.

HISTORICAL SITE RUNOFF OUTFALL LOCATIONS WILL REMAIN UNCHANGED. SINCE THE EXIST. DRIVEWAY WILL BE USED ONLY MINIMAL GRADING IS PROPOSED WITHIN THE CITY ROW. FREE DISCHARGE OF DEVELOPED FLOW IS ACCEPTABLE SINCE THE TOTAL GENERATED DEVELOPED FLOW IS MINIMAL. WATER HARVESTING IS PROPOSED IN ORDER TO MITIGATE STORM RUNOFF (DISCHARGE) FROM THE SITE DUE TO THE IMPROVEMENTS.

Grade and Restore Gravel Pavt  
in Drainage Easement to create  
0.3' inverted crown channel to Georgia



LEGEND

- EXIST. SPOT ELEVATION
- EXIST. CONTOUR
- NEW SPOT ELEVATION
- NEW CONTOUR
- NEW SWALE
- DRAINAGE DIRECTION, EXISTING
- NEW CONCRETE CURB (0.5' HEIGHT)
- NEW P.C.C., CONCRETE
- TOP OF CURB, EXISTING
- FLOWLINE
- EXISTING POWER POLE
- FACE OF CURB/FACE OF CURB

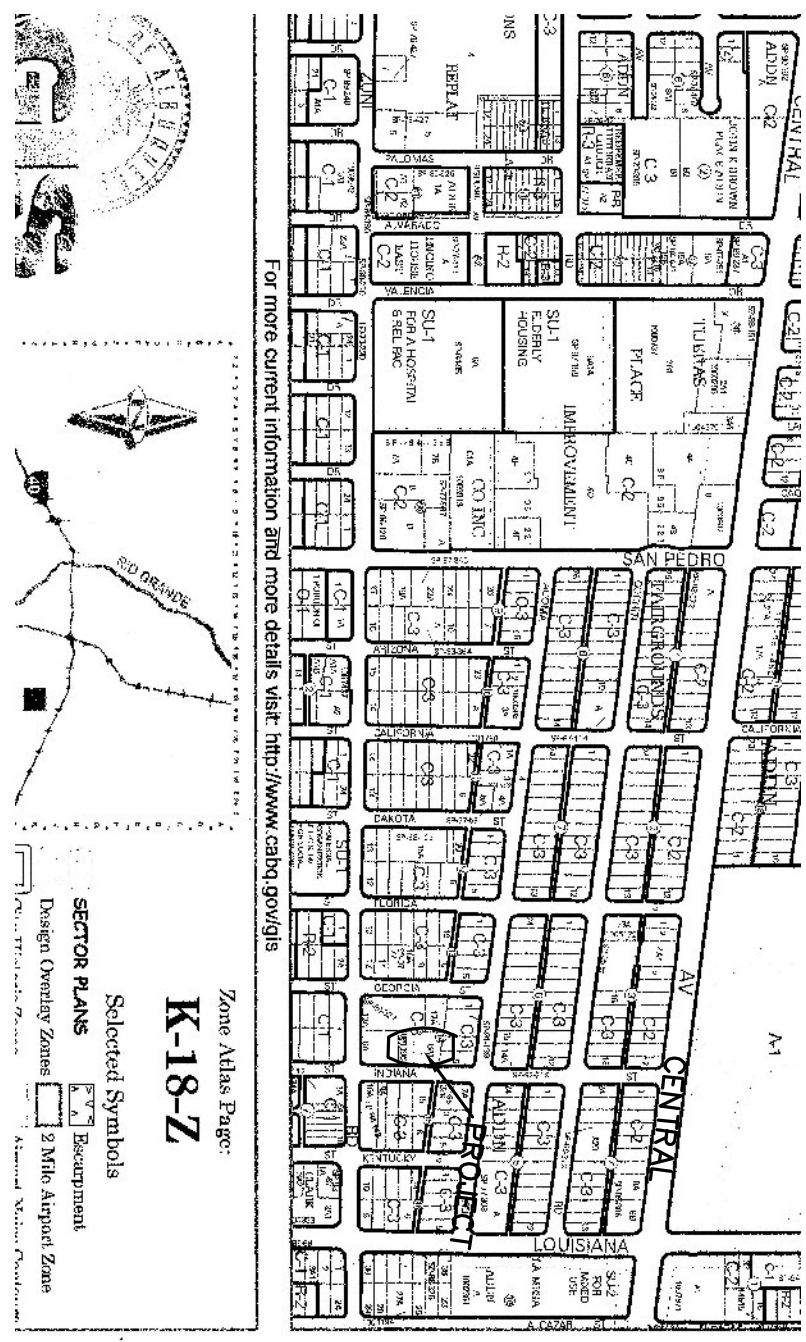
Scale: 1" = 20'

NOTES

1. ALL WORK WITHIN THE RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION, W/ 8 UPDATES.
2. ALL EXCAVATION/CONSTRUCTION PERMIT IS REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY ROW AND APPROVED COPY OF THIS PLAN MUST BE SUBMITTED AT THE TIME OF APPLICATION.
3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES, AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
4. ALL LANDSCAPING AREA SHALL BE SOFT-LINED WITH NATIVE VEGETATION AND/OR GRAVEL, ASPHALT PARKING AREA SHALL DRAIN DIRECTLY ALONG EXISTING HISTORIC LOCATION.
5. CONTRACTOR SHALL ENSURE THAT NO SITE SOILS/SEDIMENT OR SILT ENTER THE RIGHT-OF-WAYS DURING CONSTRUCTION.
6. REVEGETATE ALL AREAS DISTURBED DUE TO CONSTRUCTION PER CITY OF ALBUQ. SPEC. 1001, NATIVE SEED MIX.
7. MAXIMUM SITE GRADING WITHOUT EROSION PROTECTION: 3' HORIZONTAL TO 1 VERTICAL, 3:1. ALL DIMENSIONS TO FACE OF CURB, UNLESS NOTED OTHERWISE.

VICINITY MAP

ZONE K-18  
1" = 750'



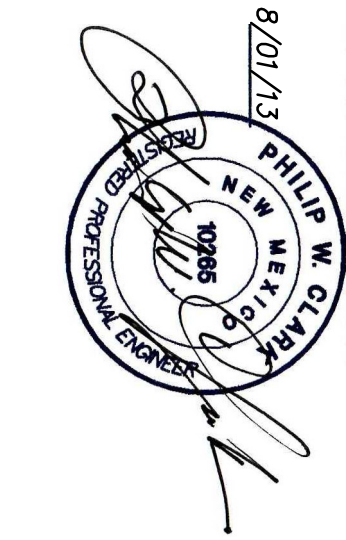
PROJECT DATA

LEGAL DESCRIPTION  
LOT 6-A-1, BLOCK 14, FAIRGROUNDS ADDITION  
Albuquerque, Bernalillo County, New Mexico  
PROJECT BENCHMARK  
Top of Curb at the Projection of the Project Southeast Corner  
MSL Elevation = 5311.93, as Tied From COA BRASS  
CAP, 7. K19, MSL 5325.99, NAVD88  
TOPOGRAPHIC DESIGN SURVEY  
PERFORMED BY ALPHA PRO SURVEYING, LLC, Date DEC. 2012

Clark Consulting Engineers  
19 Ryan Road  
Edgewood, New Mexico 87015  
Tel: (505) 281-2444 Fax: (505) 281-2444

DATE: LOT 6-A-1, BLOCK 14, FAIRGROUNDS ADDITION  
REVISION: 301 INDIANA STREET, NE ALBUQUERQUE  
A KIPCO PROJECT  
Grading & Drainage Plan

DESIGNED BY: PWC DRAINED BY: COE JOB #: KIPCO.GD  
CHECKED BY: PWC DATE: 6/17/13 FILE #: G/D 1 OF 1



I, PHILIP W. CLARK, A PROFESSIONAL ENGINEER LICENSED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT I HAVE VISITED THE SITE SHOWN HEREON, AND THAT THE CONTOURS SHOWN REPRESENT THE EXISTING GROUND CONDITIONS, AND DO FURTHER CERTIFY THAT NO EARTHWORK OF ANY KIND, NOR ANY DISTURBANCE OF THE EXISTING GROUND HAS OCCURRED ON THIS SITE SINCE THE CONTOURS WERE DETERMINED.

PHILIP W. CLARK NME #10265