



FIRM
 FLOOD INSURANCE RATE MAP
 BERNILLO COUNTY,
 NEW MEXICO
 PANEL 342 OF 825
 MAP NUMBER
 350010342 G
 MAP REVISED
 SEPTEMBER 29, 2008

MAP SCALE 1" = 500'
 0 500 1000
 FEET

FIRM MAP

PANEL 350010342 G

GRADING & DRAINAGE PLAN

THE LIGHT INDUSTRIAL ZONED PROJECT IS LOCATED IN THE DEVELOPED SUNPORT PARK SUBDIVISION (AIRPORT AREA) APPROX. 2 MILES SOUTH OF THE DOWNTOWN CORE OF ALBUQUERQUE, NM. THE GRADING & DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE BERNILLO COUNTY FLOOD HAZARD ORDINANCE, NO. 88-46, AND THE CITY STORM DRAINAGE THE OWNER'S REQUEST FOR EXCAVATION AND GRADING PERMIT. THE PLAN SHOWS:

1. EXISTING CONTOURS AND SPOT ELEVATIONS AND EXISTING DRAINAGE PATTERNS AND EXISTING IMPROVEMENTS, INCLUDING SURFACE UTILITIES/EASEMENTS.
2. PROPOSED IMPROVEMENTS: 85% IMPROVED HOTEL - RESTAURANT SITE DEVELOPMENT, NEW GRADE ELEVATIONS, PERMETER SILT FENCING AND REVEGETATION.
3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS.
4. QUANTIFICATION AND ANALYSIS OF UPSTREAM OFF-SITE FLOWS (IF APPLICABLE) PLUS THE DEFLECTED FLOWS GENERATED BY THE IMPROVEMENTS, INCLUDING PONDING REQUIREMENTS.

HISTORICAL SITE RUNOFF OUTFALL LOCATIONS WILL REMAIN UNCHANGED. THE SITE IS NOT IMPACTED ADVERSELY BY ANY OFF-SITE DRAINAGE FLOWS. FREE DISCHARGE OF DEVELOPED FLOW IS NOT ACCEPTABLE SINCE THE SITE LIES WITHIN THE OVERALL MASTERPLAN FOR THE SUNPORT PARK REGIONAL AREA. RUNOFF WILL NOT BE ALLOWED TO CONCENTRATE AT THE PROPERTY BOUNDARY. THE NORTH BASIN SHALL DRAIN TO THE DETENTION POND WITH CONTROLLED OUTLET SIZED FOR HISTORIC FLOWS. THE SOUTH BASIN SHALL DRAIN TO THE DRIVEPAD, ROUTING RUNOFF THRU DEPRESSED LANDSCAPE AREAS.

CALCULATIONS

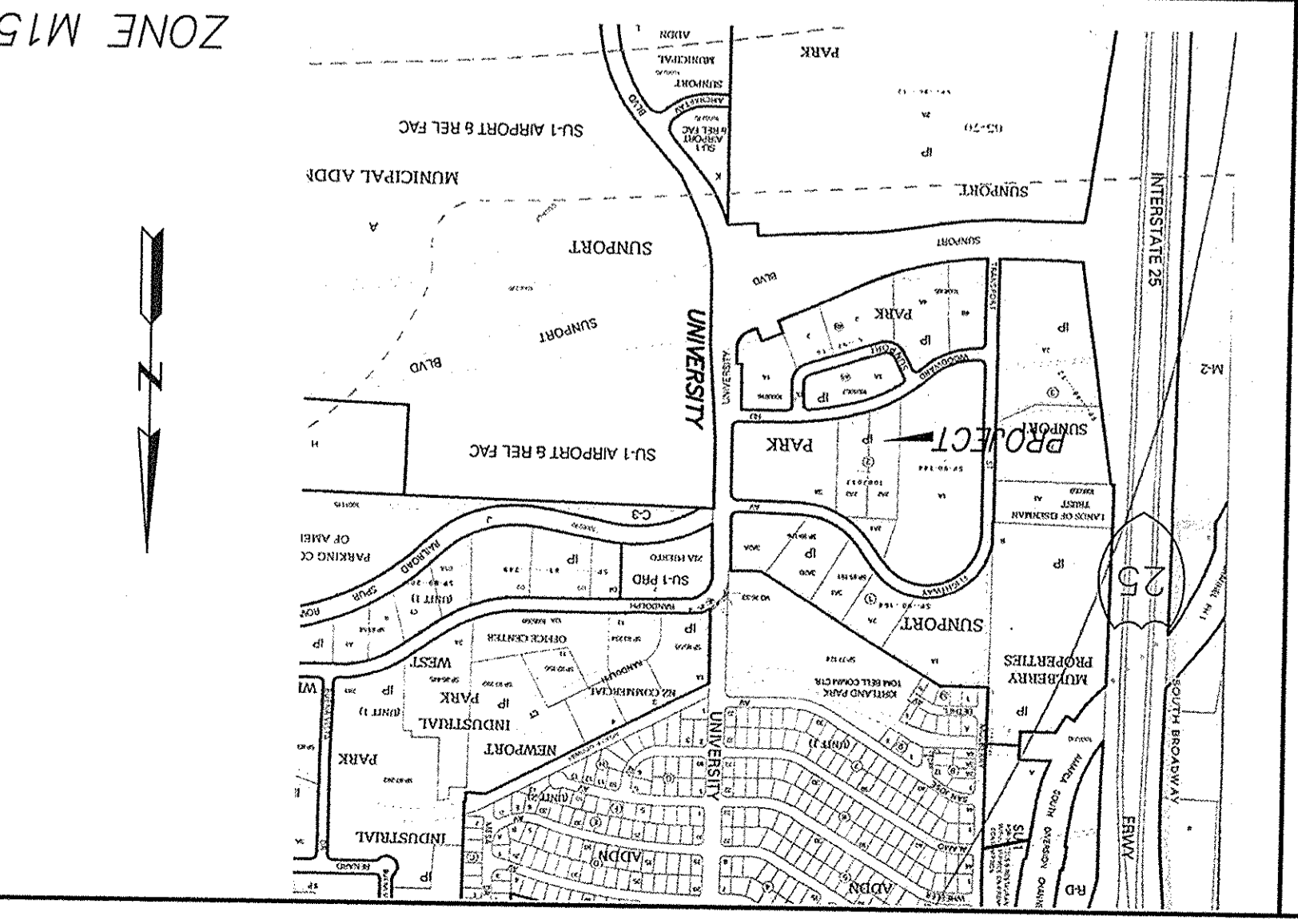
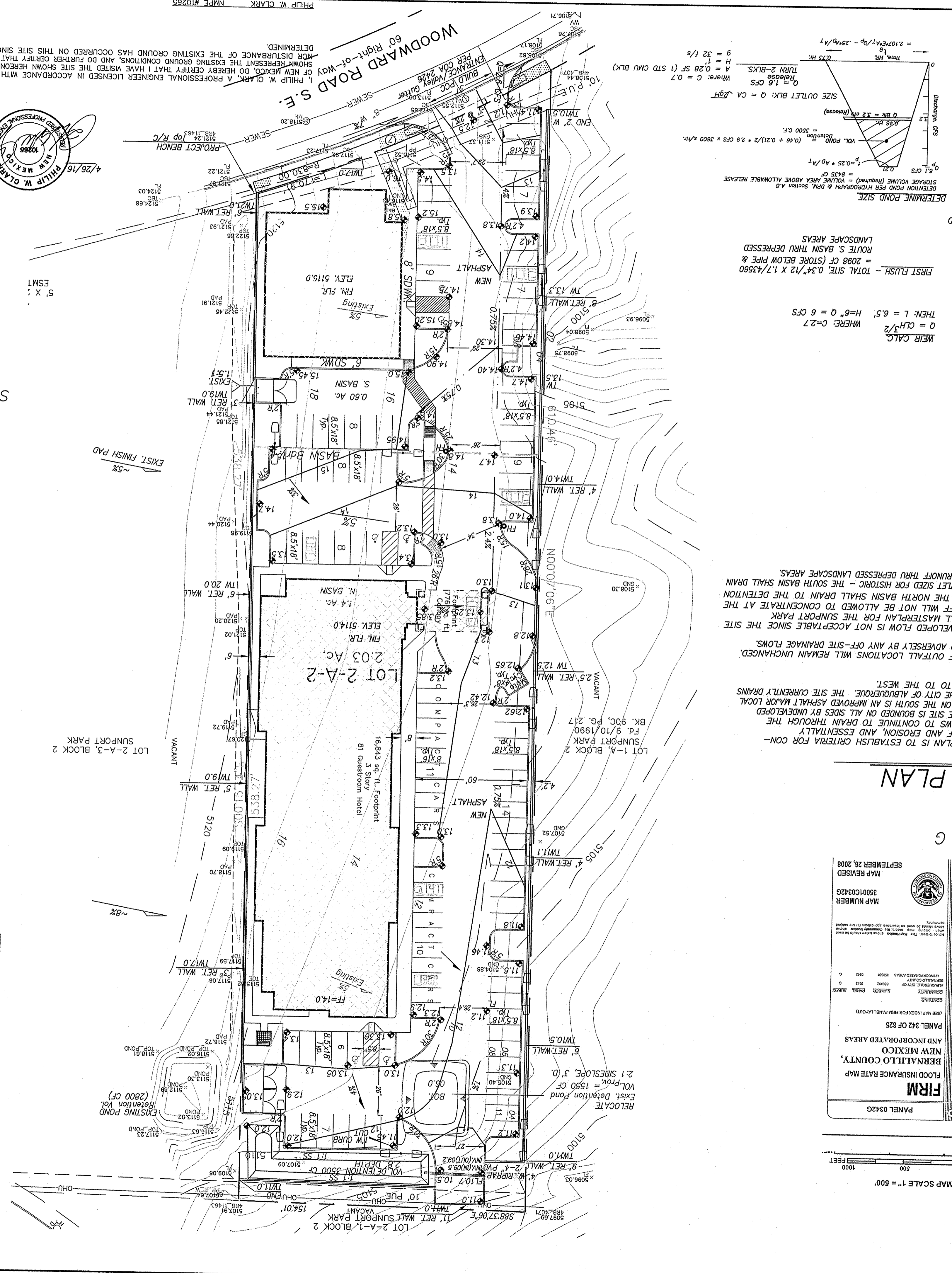
DESIGN CRITERIA
 HYDROLOGIC METHODS PER SECTION 22.2, HYDROLOGIC OF THE DEVELOPMENT PROCESS MANUAL (DPM) REVISION JANUARY 1993 FOR CITY OF ALBUQUERQUE ADOPTED BY THE COUNTY OF BERNILLO DISCHARGE RATE: $Q = C \times P \times A$, "Peak Discharge Rates for Small Watersheds"
 VOLUMETRIC DISCHARGE: VOLUME = Evaporated x AREA
 TIME OF CONCENTRATION, $T_C = 10$ MINUTES
 DESIGN STORM: 100-YEAR/6-HOUR, 10-YEAR/6-HOUR [] = 10 YEAR VALUES
 TOTAL AREA = 2 ACRES, WHERE EXCESS PRECIP. $P = 0.78$ IN. [0.28"]
 PEAK DISCHARGE: $Q_{100} = 4.56$ CFS [1.9] WHERE UNIT PEAK DISCHARGE $B' = 2.28$ CFS/AC. [0.95]
 THEREFORE: VOLUME 100 = 5653 CF [2033"]

EXISTING CONDITIONS - INTERIM WITH PORTION SITE REVEGETATED
 DETERMINE LAND TREATMENTS, PEAK DISCHARGE AND VOLUMETRIC DISCHARGE FOR STUDY AREA
 UNDEVELOPED
 AREA LAND TREATMENT & Peak
 A $1.56(0.38)$
 B $2.28(0.95)$
 C $3.14(1.71)$
 D $4.70(3.14)$
 E 2.03
 THEREFORE: $E_{weighted} = 1.13$ IN. [0.52"]
 VOLUME 100 = 8205 CF±
 VOLUME 10 = 3775 CF±

RECOMMEND : MINIMAL INCREASE, THEREFORE ENSURE THAT HIGH VELOCITY FLOWS ARE NOT ALLOWED AT THE BOUNDARY AND NO CONCENTRATION OF FLOWS CROSS BOUNDARY. RETENTION OF THE INCREASE OF RUN-OFF DUE TO THE INTERIM DEVELOPMENT.

DEVELOPED CONDITIONS - HOTEL - RESTAURANT
 DETERMINE LAND TREATMENTS, PEAK DISCHARGE AND VOLUMETRIC DISCHARGE FOR STUDY AREA
 UNDEVELOPED
 AREA LAND TREATMENT & Peak
 A $1.56(0.38)$
 B $2.28(0.95)$
 C $3.14(1.71)$
 D $4.70(3.14)$
 E 2.03
 THEREFORE: $E_{weighted} = 1.94$ IN. [0.52"]
 VOLUME 100 = 14084 CF±
 VOLUME 10 = 3775 CF±

THEN: N. BASIN $Q_{100} = 6.1$ CFS, VOL.100 = 9859 CF = 2.6 CFS, VOL.100 = 4225 CF
 $Q_{10} = 3.4$ CFS
 THEREFORE: VOLUME 100 = 14084 CF±
 VOLUME 10 = 3775 CF±

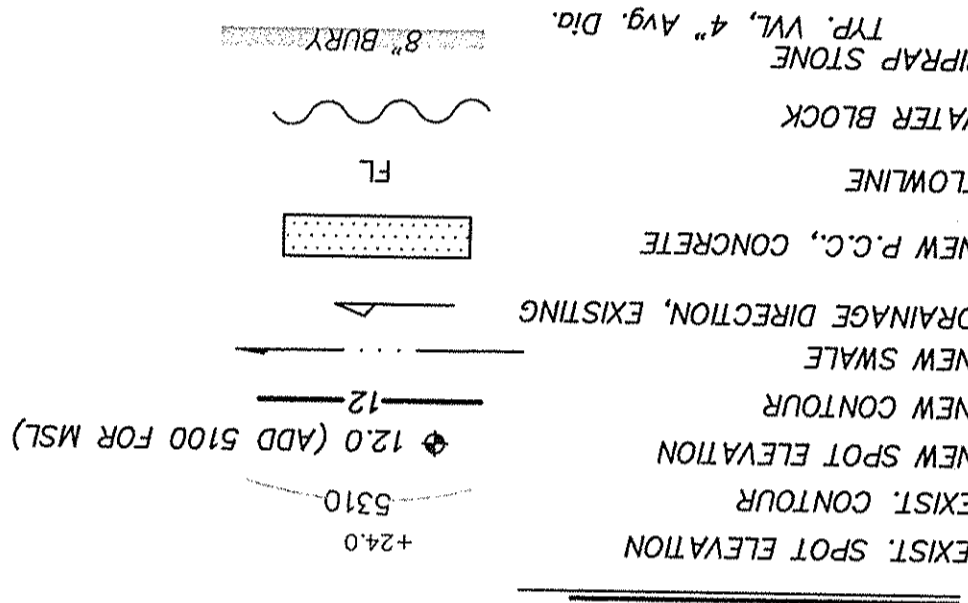


NOTES

VICINITY MAP

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/ 9 UPDATES.
2. AN EXCAVATION/CONSTRUCTION PERMIT IS REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY R.O.W. AN 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. CONTRACTOR SHALL ENSURE THAT NO SITE SOILS/SEDIMENT OR SILT ENTER THE RIGHT-OF-WAYS DURING CONSTRUCTION.
5. REVEGETATE ALL AREAS DISTURBED DUE TO CONSTRUCTION PER CITY OF ALBU. SPEC. 1012. NATIVE SEED MIX USING HAY MULCH FOR EAST SIDE APPLICATION. HATCHED BLUE GRAMA DOMINANT MIX PER PARAGRAPH 4.1.2.
6. MAXIMUM SITE GRADING WITHOUT EROSION PROTECTION: 3 HORIZONTAL TO 1 VERTICAL, 3:1.
7. BUILD 6" PCC SIDEWALK PER COA STD DWG. 2430.

LEGEND



PROJECT DATA

LEGAL DESCRIPTION
 LOT 2-A-2, SUNPORT PARK
 ALBUQUERQUE, BERNILLO COUNTY, NEW MEXICO
 PROJECT BENCHMARK
 TOP OF REBAR/CAF AT THE PROJECT SOUTHEAST CORNER NSL ELEVATION = 5121.24, AS TIED FROM AMARCA SDC 3-1/4" DIAMETER ALUM DISK SET IN CONCRETE, SDC-11-2, MSL, NAD 88, 5001.66, LOCATED
 PROVIDED BY ALPHA PRO SURVEYING, LLC, DATED APRIL 2014, AND SUPPLEMENTED MAR. 2016.
 TOPOGRAPHIC DESIGN SURVEY

Clark Consulting Engineers
 19 Ryan Road
 Edgewood, New Mexico 87015
 TEL: (505) 281-2444
 FAX: (505) 264-8042
 DATE REVISION
 SUNPORT PARK HOSPITALITY / KUMBAR
 Grading & Drainage Plan
 JOB # YOGASH
 FILE # 6/D
 C 102

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 NOT REPRESENT THE CONTOURS OF THE STATE DETERMINED.
 PHILIP W. CLARK
 MAP # 10285