

GRADING & DRAINAGE PLAN

THE PROPOSED TENANT—COMMERCIAL PROJECT IS LOCATED IN THE NORTH VALLEY AREA OF METRO ALBUQUERQUE WITHIN THE CITY OF ALBUQUERQUE. THE GRADING AND 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:

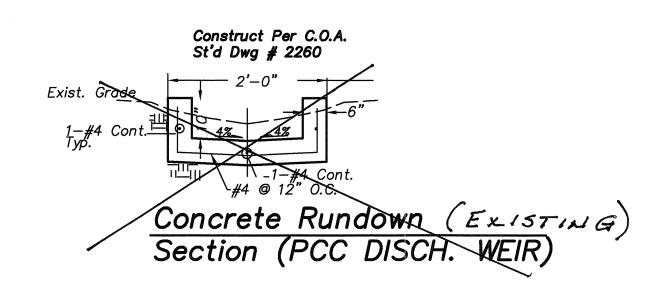
- 1. EXISTING CONTOURS, AND SPOT ELEVATIONS AND EXISTING DRAINAGE PATTERNS AND EXISTING STRUCTURES
- 2. PROPOSED IMPROVEMENTS: TENANT/OWNER OFFICE IMPROVEMENTS, PRIVATE ASPHALT PARKING RECONFIGURATION, NEW GRADE ELEVATIONS, AND LANDSCAPING IMPROVEMENTS.
- 3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS.
 4. QUANTIFICATION OF DEVELOPED FLOWS GENERATED BY THE IMPROVEMENTS WHICH CONTRIBUTE TO THE EXISTING FLOWS.

PRESENTLY, THE SITE IS DEVELOPED, AND IS BOUNDED BY DEVELOPED COMMERCIAL PROPERTY. ALAMEDA BOULEVARD ON THE SOUTH IS A 4-LANE DIVIDED CITY MAINTAINED MINOR ARTERIAL WITH CURB/GUTTER AND 6' SIDEWALK ALONG PROJECT. THE SITE TERRAIN SLOPES FROM SOUTH TO NORTHWEST AT AVERAGE SLOPES UP TO 1-2%.

THE SITE IS NOT WITHIN OR ADJACENT TO A DESIGNATED FEMA FLOOD HAZARD ZONE.
DEVELOPED LOT RUNOFF WILL BE PERMITTED TO DRAIN TO THE EXISTING DETENTION POND.
HISTORICAL OUTFALL LOCATIONS WILL REMAIN UNCHANGED WITH DEVELOPMENT. THE EXISTING POND WILL BE RECONFIGURED, AND COMPLY WITH THE APPROVED PLAN AND OVERALL DRAINAGE PLAN FOR RICHFIELD PARK. A PORTION OF SITE RUNOFF IS ROUTED THROUGH PROPOSED LANDSCAPING TO PROMOTE WATER HARVESTING.

NO DEVELOPED FLOWS ENTER SITE, however is Adjacent to An AO Jone. (in Alameda).

FIRM MAP PANEL # 136H



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: $Q=QPEAK \times AREA$.. "Peak Discharge Rates For Small Watersheds" VOLUMETRIC DISCHARGE: VOLUME = EWeighted $\times AREA$ P100 = 2.35 Inches, Zone 2 Time of Concentration, TC = 10 Minutes DESIGN STORM: 100-YEAR/6-HOUR, 10-YEAR/6-HOUR [] = 10 YEAR VALUES

UNDEVELOPED CONDITIONS

LOT AREA = 1.0 ACRE, WHERE EXCESS PRECIP. 'W' = 0.53 In. [0.13] PEAK DISCHARGE, Q100 = 1.6 CFS [0.40], WHERE UNIT PEAK DISCHARGE = 1.6 CFS/AC. [0.4] THEREFORE: VOLUME 100 = 1924 CF [472]

DEVELOPED CONDITIONS

DETERMINE LAND TREATMENTS, PEAK DISCHARGE AND VOLUMETRIC DISCHARGE

| FOR STUDY AREA | AREA LA | AND TREATM' | <u>T Q</u> Peak | <u>E</u> |
|-------------------------|-----------------------------|-------------|-------------------|------------|
| UNDEVELOPED | 0.00 Ac.(0%) | Α | 1.56[0.38] | 0.53[0.13] |
| LANDSCAPING/POND | 0.22 Ac.(22%) | В | 2.28[0.95] | 0.78[0.28] |
| GRAVEL & COMPACTED SOIL | 0.00 Ac.(0%) | C | 3.14[1.71] | 1.13[0.52] |
| ROOF - PAVEMENT | <u>0.78 Ac.(7</u> 8%) | D | <i>4.70[3.14]</i> | 2.12[1.34] |
| THEREFORE: E Weighted | 1.0 Ac. = 1.82 In.[1.11] | & | | |

 $Q10 = 2.63 \; CFS$ VOLUME $10 = 4029 \; CF$ ER RICHFIELD PARK OVERALL MASTER DRAINAGE PLAN PREPARED BY ESPEY, HUSTON

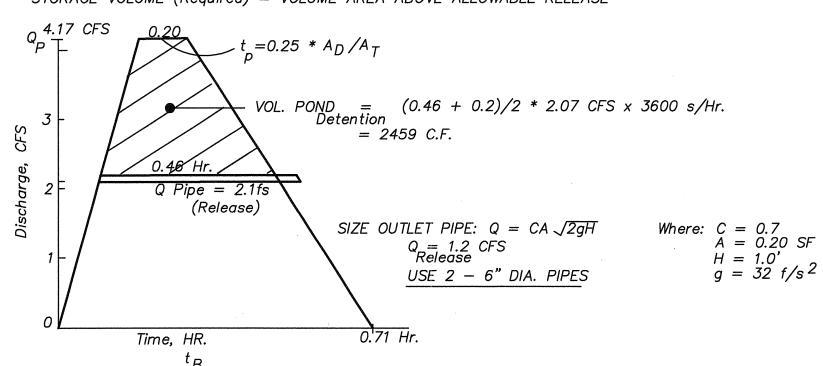
Q100 = 4.17 CFS

PER RICHFIELD PARK OVERALL MASTER DRAINAGE PLAN PREPARED BY ESPEY, HUSTON & ASSOC. AND GRADING & DRAINAGE PLAN FOR TELSTAR BUILDING BY WILSON & CO (JAN1997), 2.10 CFS PER ACRE IS THE ALLOWABLE UNIT—DISCHARGE.

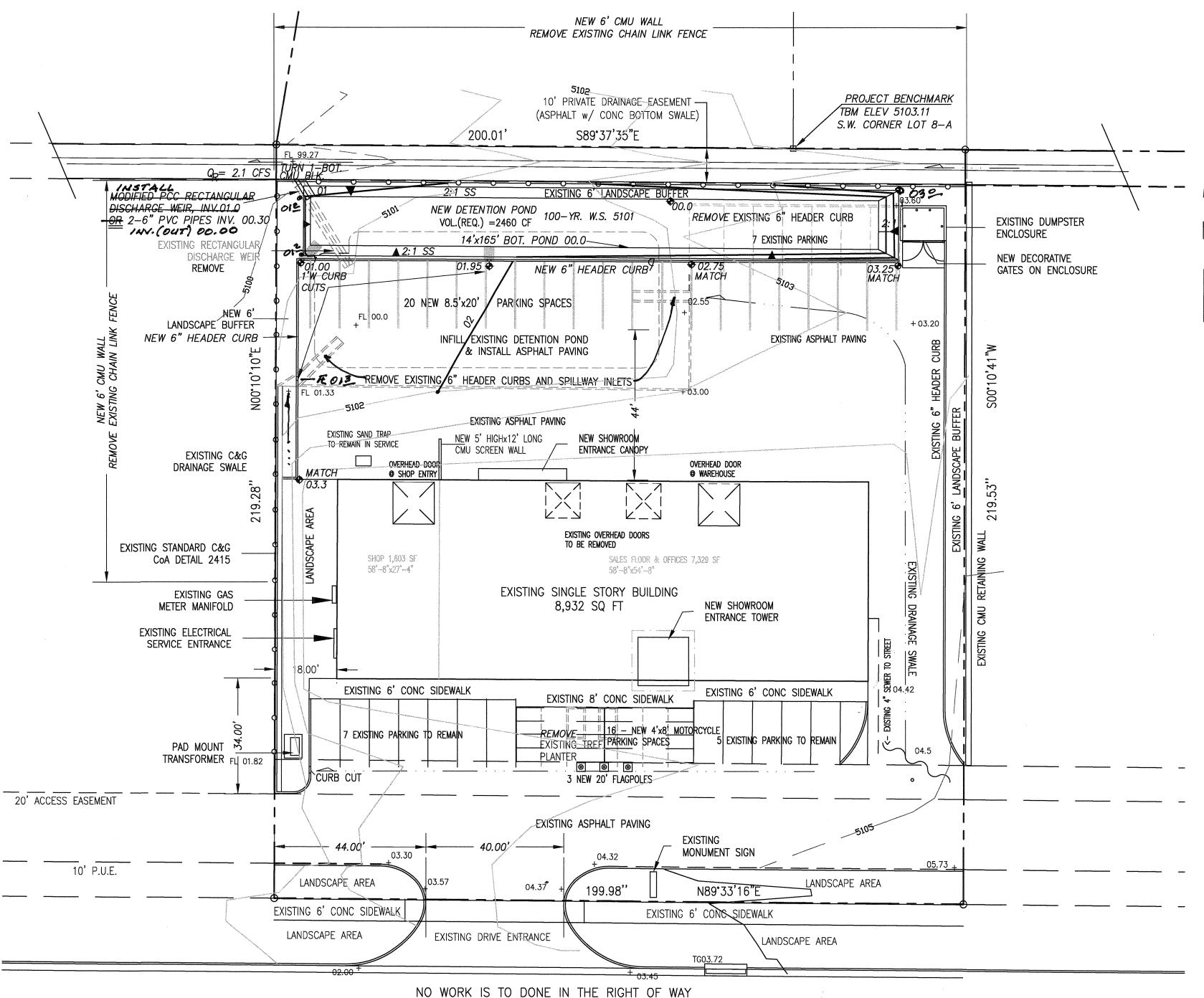
DETERMINE POND SIZE

DETENTION POND PER HYDROGRAPH & DPM, Section A.8 STORAGE VOLUME (Required) = VOLUME AREA ABOVE ALLOWABLE RELEASE

 $= 2.107*E*A_T/Q_D - .25*A_D/A_T$



VOLUME 100 = 6607 CF

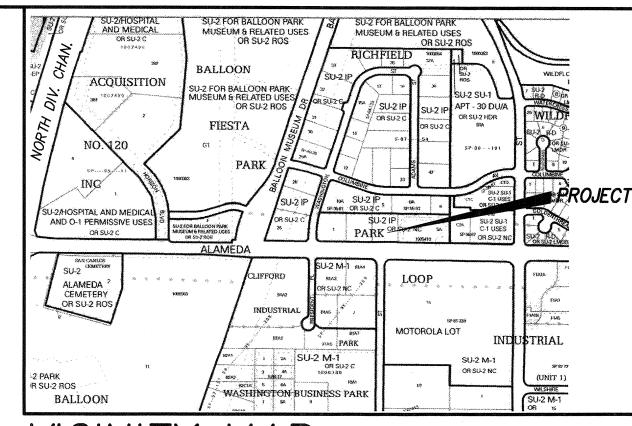


ALAMEDA BLVD NE

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.







VICINITY MAP ZONE C-17

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, INCLUDING UPDATES.
- 2. AN EXCAVATION/CONSTRUCTION PERMIT IS REQUIRED BEFORE BEGINNING ANY WORK WITHIN COUNTY 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. ALL LANDSCAPING AREA SHALL BE SOFT—LINED WITH NATIVE VEGETATION AND/OR GRAVEL.
- 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. 1011, NATIVE SEED MIX.
- 7. MAXIMUM SITE GRADING WITHOUT EROSION PROTECTION: 3 HORIZONTAL TO 1 VERTICAL, 3:1.
- 8. NEW ASPHALT PAVEMENT SHALL CONSIST OF 3" ASPHALT CONCRETE OVER 8" COMPACTED SUBGRADE, 95% MODIFIED PROCTOR, ASTM D-1557.

<u>LEGEND</u>

| +24.0 | EXIST. SPOT ELEVATION |
|----------------------------------------|------------------------------|
| 10 | EXIST. CONTOUR |
| 4 24.0 | NEW SPOT ELEVATION |
| ************************************** | NEW CONTOUR |
| | NEW SWALE |
| | DRAINAGE DIRECTION, EXISTING |
| FL | FLOWLINE |
| 0 PP | EXISTING POWER POLE |
| NG OR G | NATURAL GROUND, EXISTING |
| R/C | REBAR AND CAP, EXISTING |
| CLF | CHAIN LINK FENCE, EXISTING |
| | NEW P.C.C., CONCRETE |
| | NEW RIPRAP, 6" DEPTH, TYPE |

PROJECT DATA

VVL, D = 4" DIA.

LEGAL DESCRIPTION

LOT 3, RICHFIELD PARK SUBDIVISION — CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

PROJECT BENCHMARK

TOP OF REBAR @ SE PROPERTY CORNER OF LOT 8—A
SEE PLAN, ELEVATION = 5103.11, AS TIED FROM AMAFCA B.C.
"NDC 7", LOCATED 2.5' FROM SW HEADWALL OF RICHFIELD BRIDGE
OVER THE NORTH DIVERSION CHANNEL. (NGVD29)

TOPOGRAPHIC DESIGN SURVEY

SUPPLEMENTAL SURVEY, MARCH 2014, COMPILED AND SUPPLEMENTED BY CLARK CONSULTING ENGINEERS

