

GRADING & DRAINAGE PLAN

THE PROPOSED GRADING AND DRAINAGE IMPROVEMENT PROJECT IS LOCATED IN THE NORTHWEST AREA OF ALBUQUERQUE ON COORS BLVD. SOUTH OF INTERSTATE 40/FORTUNA ROAD. 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 IMPROVEMENTS.
2. PROPOSED IMPROVEMENT: CONVERSION OF EXISTING RETENTION POND TO A DETENTION FACILITY INCLUDING INSTALLATION OF NEW 12" DIA. CMP DRAINAGE PIPE.
3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS.
4. QUANTIFICATION OF THE EXISTING ON-SITE, DEVELOPED RUNOFF

DESIGN ANALYSIS: THE EXISTING POND CAPACITY WILL BE INCREASED BY EXCAVATING APPROXIMATELY 1' DEPTH OF EARTH. APPROXIMATELY 2/3 OF THE 100-YR. STORM VOLUME WILL BE IMPOUNDED AND RELEASED AT A CONTROLLED RATE VIA A 12" DIA. CMP CULVERT TO AN EXISTING STORM DRAIN INLET LOCATED IN COORS BLVD. THE BALANCE OF THE 100-YR. STORM WILL BE ALLOWED TO POND INTO THE PARKING LOT.

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: $VOLUME = E_{WEIGHTED} \times AREA$
 $P100 = 2.20$ inches, Zone 1 Time of Concentration, $TC = 10$ Minutes
 DESIGN STORM: 100-YEAR/6-HOUR, 10-YEAR/6-HOUR [] = 10 YEAR VALUES

EXISTING DEVELOPED CONDITIONS - BASIN CONTRIBUTING

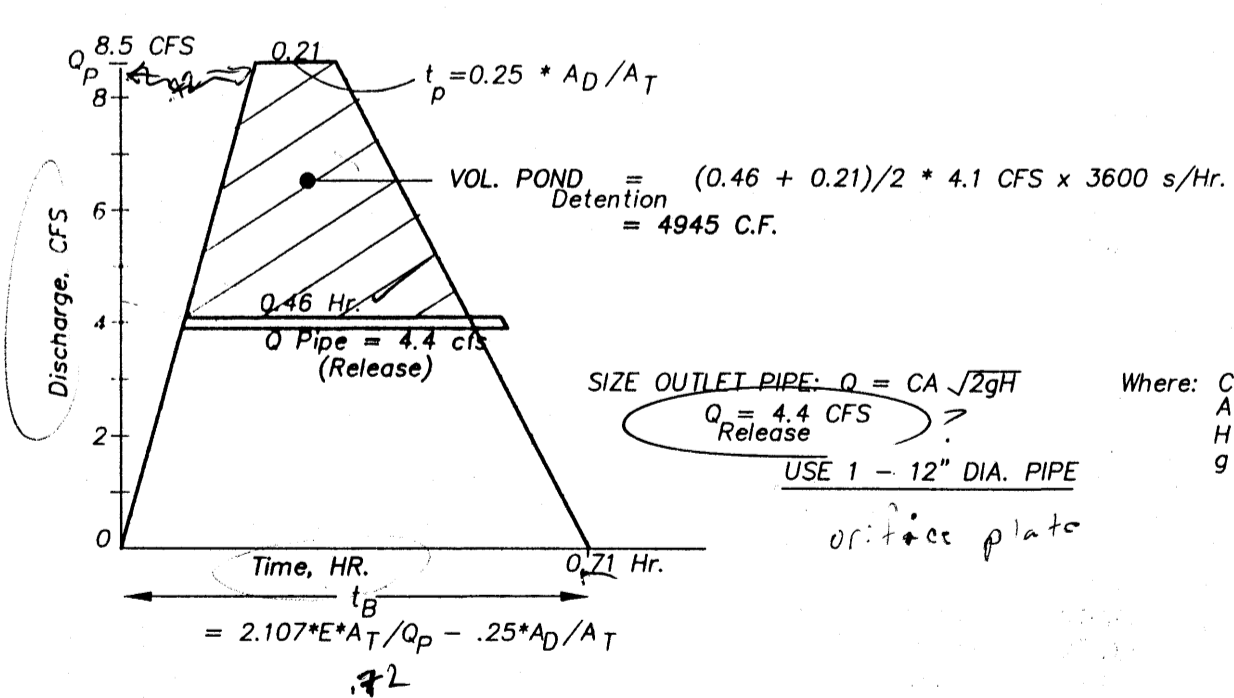
TERMINAL LAND TREATMENTS, PEAK DISCHARGE AND VOLUMETRIC DISCHARGE FOR STUDY AREA

AREA	LAND TREATMENT	Q Peak	E
UNDEVELOPED/POND	0.10 Ac (0%)	1.29 (0.24)	0.49 (0.08)
LANDSCAPING	0.10 Ac (19%)	2.03 (0.76)	0.67 (0.22)
GRAVEL & COMPACTED SOIL	0.10 Ac (11%)	2.87 (1.49)	0.99 (1.14)
ROOF - PAVEMENT	1.80 Ac (70%)	4.40 (2.90)	1.97 (1.24)
2.10 Ac.			

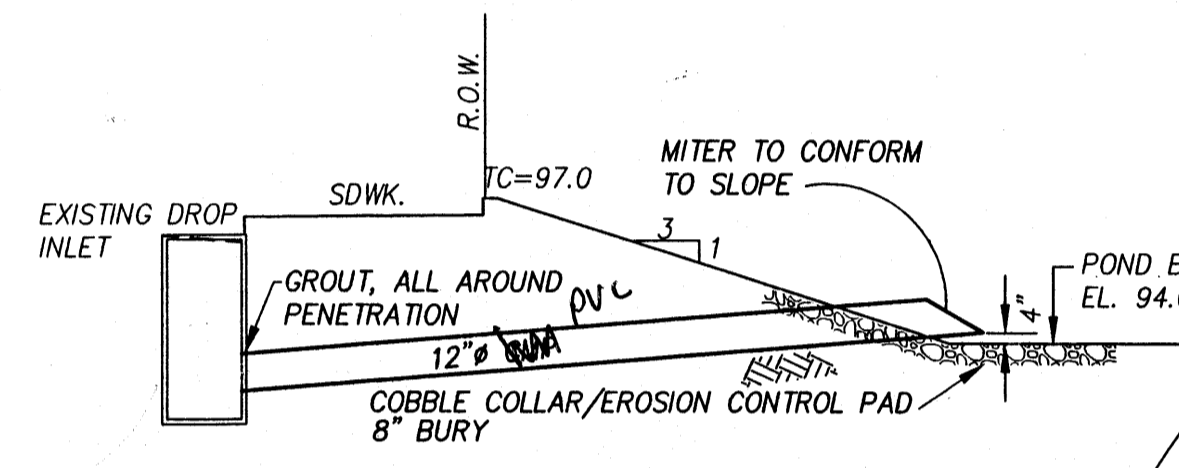
THEREFORE: $E_{WEIGHTED} = 1.79$ in. [1.1] & $VOLUME 100 = 13645$ CF
 $Q100 = 8.5$ CFS $VOLUME 10 = 8385$ CF
 $Q10 = 5.5$ CFS

DETERMINE POND SIZE

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

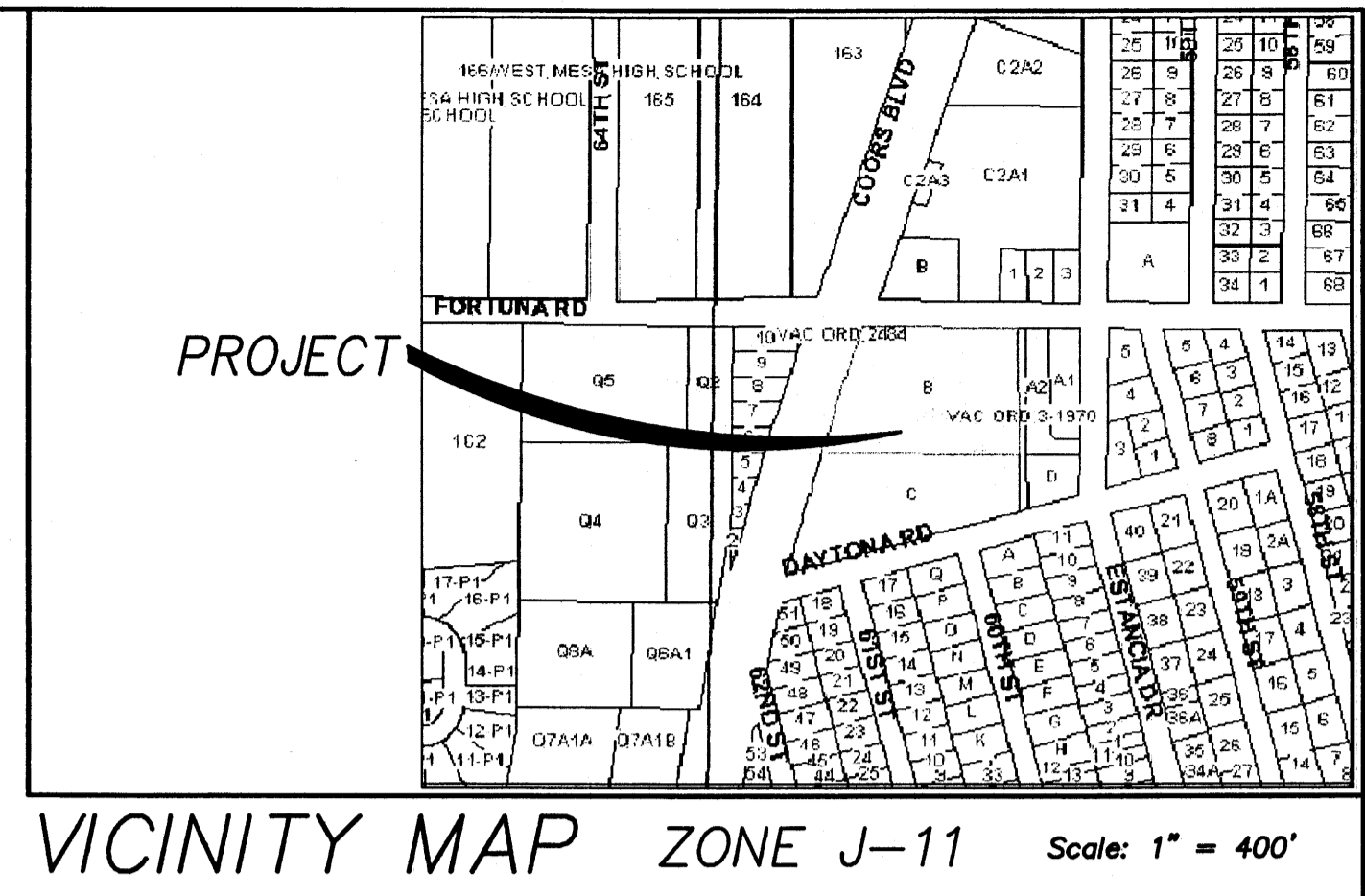
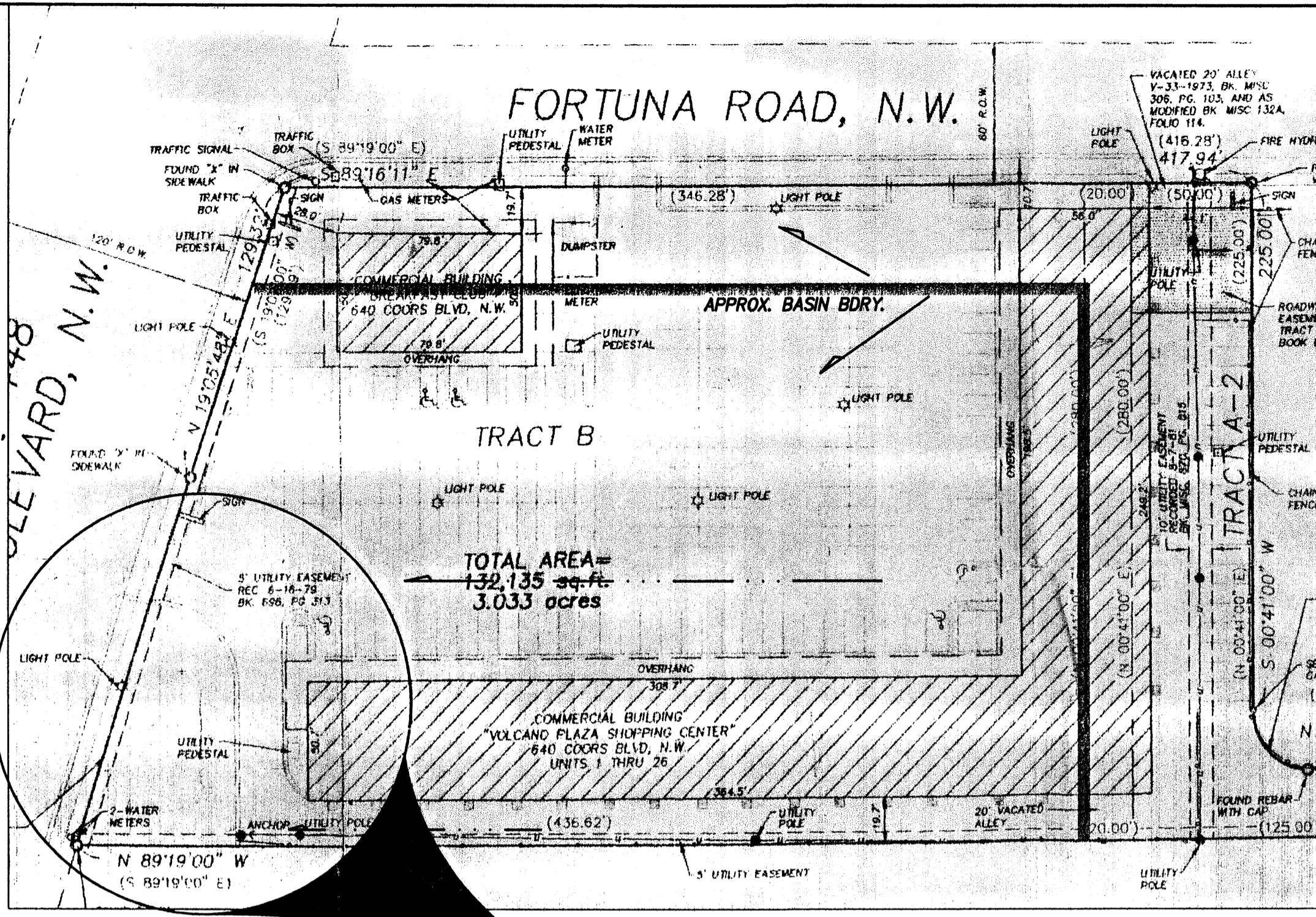


12" CMP SECTION



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.

PWC
 PHILIP W. CLARK NMPE #10265



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, UPDATE #7.
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. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
5. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
6. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
7. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
8. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.
9. CONTRACTOR SHALL ENSURE THAT NO SITE SOILS/SEDIMENT OR SILT ENTER THE RIGHT-OF-WAYS DURING CONSTRUCTION.

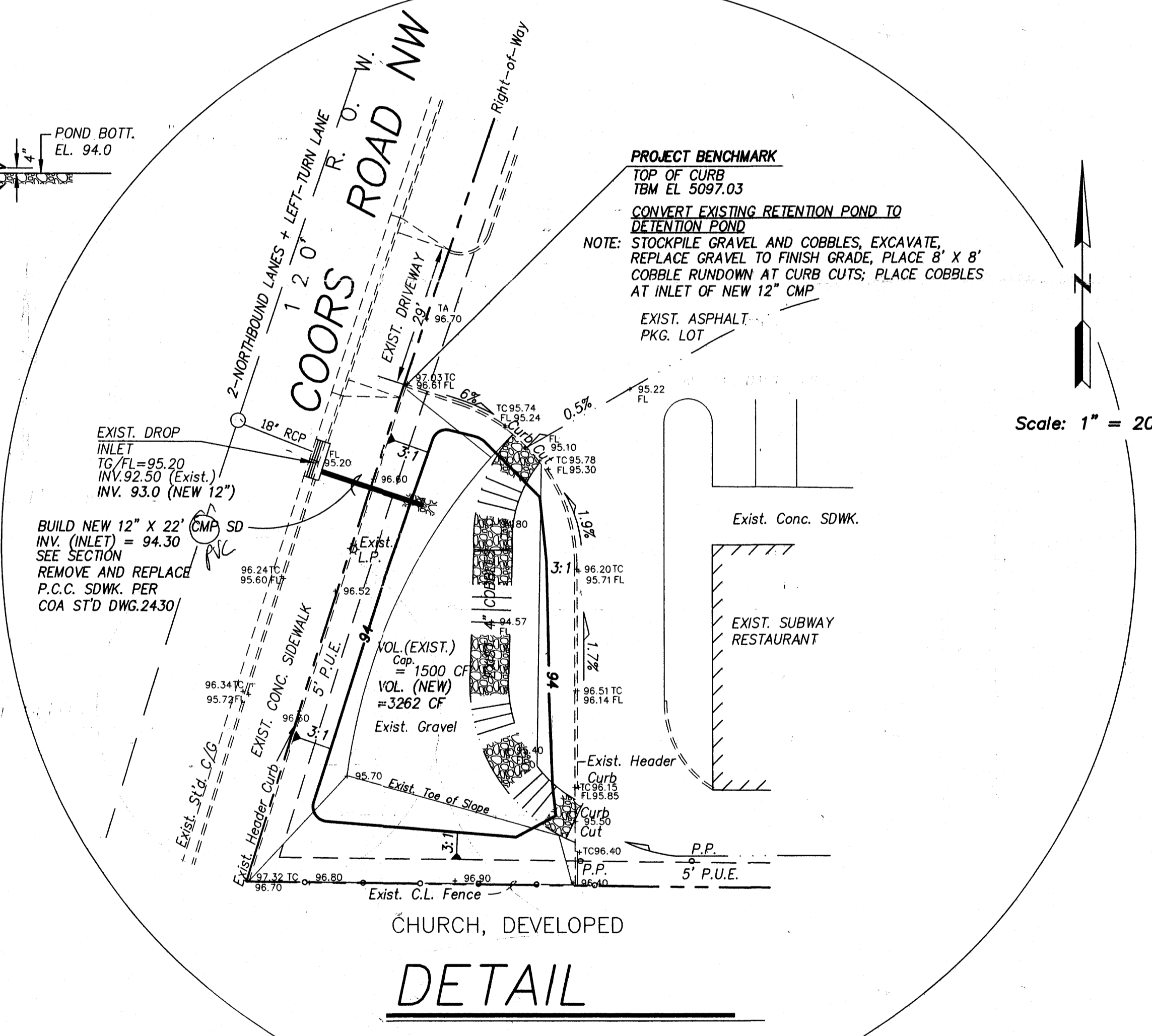
APPROVAL	NAME	DATE
INSPECTOR		

24-HOUR NOTICE REQUIRED, CALL 857-8025

LEGEND

- PROPERTY LINE
- EXIST. CURB/GUTTER
- EXIST. SPOT ELEVATION +24.0
- EXIST. CONTOUR -10
- NEW CONTOUR -54
- NEW SWALE
- DRAINAGE DIRECTION, EXISTING (0.5' HEIGHT)
- NEW P.C.C., CONCRETE
- TOP OF CURB, EXISTING TC
- FLOWLINE FL
- EXISTING POWER POLE O P P
- FACE OF CURB/FACE OF CURB F-F

PHILIP W. CLARK
 NEW MEXICO
 10088
 PROFESSIONAL ENGINEER
 5-29-04



PROJECT DATA

ZONED, C-1; CITY HYDROL. # J-11, D...
LEGAL DESCRIPTION
 TRACT B, NORTHERN HEIGHTS SUBDIVISION
 ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
 FILED OCTOBER 18, 1995
PROJECT BENCHMARK
 TOP OF CURB, SOUTHSIDE OF DRIVEWAY ON COORS BLVD.,
 SEE PLAN.
 (TIED FROM ACS BRASS CAP 17-J-11, MSL=5098.44, NAD 1927)
TOPOGRAPHIC DESIGN SURVEY
 PERFORMED BY GEOMETRIC SERVICES ON 5/27/04

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

DATE	REVISION	DESCRIPTION
		TRACT B, NORTHERN HEIGHTS SUBD. ALBUQUERQUE, NEW MEXICO
		VOLCANO PLAZA SHOPPING CENTER 640 COORS BLVD., NW
		Grading & Drainage Plan

DESIGNED BY: PWC DRAWN BY: CCE JOB #: Crespl_S
 CHECKED BY: PWC DATE: 5/28/04 FILE #: G/D