

VICINITY MAP

EROSION CONTROL MEASURES:

THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR MANAGEMENT OF STORM RUNOFF DURING CONSTRUCTION. CONTRACTOR SHALL INSURE THAT THE FOLLOWING MEASURES ARE TAKEN:

- ADJACENT PROPERTY SHALL BE PROTECTED AT ALL TIMES BY CONSTRUCTION OF BERMS, DIKES, SWALES, PONDS, AND OTHER TEMPORARY GRADING AS REQUIRED TO PREVENT STORM RUNOFF FROM LEAVING THE SUBJECT SITE AND ENTERING ADJACENT PROPERTIES.
- ADJACENT PUBLIC RIGHT-OF-WAYS SHALL BE PROTECTED AT ALL TIMES FROM STORM WATER RUNOFF FROM THE SUBJECT SITE. NO SEDIMENT BEARING WATER SHALL BE PERMITTED TO ENTER PUBLIC STREET RIGHT-OF-WAYS.
- THE CONTRACTOR SHALL IMMEDIATELY AND THOROUGHLY REMOVE ANY AND ALL SEDIMENT FROM PUBLIC STREETS THAT HAS BEEN ERODED FROM THE SUBJECT SITE AND DEPOSITED THEREON.

CONSTRUCTION NOTES:

- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE AT 260-1990 FOR THE ACTUAL FIELD LOCATION OF THE EXISTING SURFACE OR SUB-SURFACE UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION (S) OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM OF DELAY.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- ALL CONSTRUCTION WITHIN PUBLIC STREET RIGHT-OF-WAY (S) SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE/BERNALILLO COUNTY STANDARDS AND PROCEDURES.

GENERAL NOTES:

- PERIMETER BOUNDARY CORNERS HAVE BEEN FIELD ESTABLISHED BY OWNER'S SURVEY OF THE SUBJECT PROPERTY.
- NO SEARCH HAS BEEN MADE FOR EASEMENTS OF RECORD WITHIN THE SUBJECT SITE OTHER THAN THOSE SHOWN HEREON.
- REFER TO 'ARCHITECTURAL SITE PLAN' FOR FIELD LAYOUT OF THE PROPOSED IMPROVEMENTS.

NOTICE TO CONTRACTOR:

- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THIS PLAN MUST BE SUBMITTED AT THE TIME OF APPLICATION OF THIS PERMIT.
- ALL WORK DETAILED ON THIS PLAN TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF ALBUQUERQUE STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION.
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, (260-1990) FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR SURVEYOR SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- BACKFILL COMPACTONS SHALL BE ACCORDING TO RESIDENTIAL STREET USE.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.

NOTE: ALL WORK WITHIN PUBLIC EASEMENT SHALL BE PERFORMED UNDER SEPARATE PERMIT.

LEGAL DESCRIPTION:

LOT 26 OF NORTH ALBUQUERQUE ACRES TRACT A, UNIT B, BLOCK 9 WITHIN THE ELENA GALLEGOS GRANT PROJECTED SECTION 13 TOWNSHIP 11 NORTH, RANGE 3 EAST, NMPM, CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO.

BENCHMARK REFERENCE:

NMSHC BRASS CAP '125-11', X=401986.77, Y=1526246.66, G-G=0.99966195, =00° 11' 21", CENTRAL ZONE, NAD1927/SLD 1929). ELEVATION=5206.94. THIS DATA WAS OBTAINED FROM BOUNDARY AND TOPOGRAPHIC SURVEY FOR NORTH ALBUQUERQUE ACRES TRACT A, UNIT B, BLOCK 9, REMAINING PORTION OF LOT 23 AND ALL OF LOTS 24 THRU 32 WITHIN THE ELENA GALLEGOS GRANT PROJECTED SECTION 13 TOWNSHIP 11, RANGE 3 EAST, NMPM, CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, FEBRUARY 1999.

FOR THE EXCEPTION OF "TOP OF CURB AND FLOW LINE ELEVATIONS", THE SUBJECT SITE PLAN USED THE EXISTING GROUND ELEVATIONS AS SHOWN ON THE TOPOGRAPHY SURVEY PERFORMED BY "ALDRICH LAND SURVEYING" DATED 2-17-99 BEING SAME "BOUNDARY AND TOPOGRAPHIC SURVEY" NOTED ABOVE.

DRAINAGE COMMENTS:

AS SHOWN ON THE VICINITY MAP HEREON, THE SUBJECT SITE IS LOCATED ON EAGLE ROCK STREET BETWEEN SAN MATEO RD AND THE WEST FRONTAGE ROAD OF I-25 IN THE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, STATE OF NEW MEXICO, ZONE ATLAS MAP C-18-Z.

THE SUBJECT SITE:

- THE SUBJECT SITE AS SHOWN ON FEMA MAP 35001C0129 F (NUMBER 350002, PANEL 0129 SUFFIX F) DATED NOVEMBER 19, 2003, LIES WITHIN AN UNSHADED FLOOD ZONE "X". A PROPERTY IN UNSHADED ZONE "X" IS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.
- THE SITE IS PRESENTLY AN UNDEVELOPED VACANT LOT.
- THE SITE PRESENTLY HAS A NATURAL WATER COURSE (ARROYO) WITHIN THE SUBJECT SITE. THE ARROYO IS LOCATED APPROXIMATELY AT THE CENTER OF THE PROPERTY AND DRAINS FROM EAST TO WEST AND ACCEPTS OFFSITE FLOWS FROM THE TWO ADJACENT LOTS (UNDEVELOPED LOTS) EAST OF THE SUBJECT SITE.
- THE SUBJECT SITE IS LIMITED TO RUNOFF DISCHARGE OF 1.51 CFS ONTO EAGLE ROCK STREET AND REQUIRED TO POND THE REMAINDER OF DEVELOPED FLOWS ON SUBJECT SITE IN ACCORDANCE TO THE "CITY OF ALBUQUERQUE DRAINAGE MASTER PLAN" (1.7 CFS PER ACRE) FOR THIS PORTION OF THE NORTH ALBUQUERQUE AREA. THE DEVELOPED FLOW OF 1.51 CFS WILL BE FREE-DISCHARGED THROUGH A PROPOSED DRIVEPAD ONTO EAGLE ROCK STREET N.E. AND THEN BE DIRECTED INTO A STORM INLET AT THE NORTH EAST CORNER OF SAN MATEO RD AND EAGLE ROCK STREET. THE REMAINDER OF THE DEVELOPED FLOWS WILL BE RETAINED ON-SITE VIA A POND AS SHOWN HEREON.
- THE SUBJECT SITE IS REQUIRED TO ACCEPT THE UNDEVELOPED OFFSITE FLOWS FROM THE TWO EAST ADJACENT LOTS AND DISCHARGE ONTO EAGLE ROCK STREET. THESE FLOWS WILL BE FREE-DISCHARGED THROUGH A PROPOSED SWALE (AS SHOWN HEREON) ONTO EAGLE ROCK STREET N.E. AND THEN BE DIRECTED INTO A STORM INLET AT THE NORTH EAST CORNER OF SAN MATEO RD AND EAGLE ROCK STREET.

REFERENCE: CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, VOL. 2, DESIGN CRITERIA, CHAPTER 22, DRAINAGE, FLOOD CONTROL AND EROSION CONTROL, DATED JULY 1997.

DRAINAGE CALCULATIONS:

SITE AREA: 0.89 ACRES

PRECIPITATION ZONE: 3 (TABLE A-1, FIG. A-1.)

PEAK INTENSITY: 5.38 (TABLE A-10)

RAINFALL: 100-YR. STORM FOR 6 HRS.

TIME OF CONCENTRATION,  $T_c$  = 12 MINUTES.

LAND TREATMENT METHOD (TABLE A-9) FOR CALCULATION OF PEAK DISCHARGE  $Q_p$ :

EXISTING CONDITIONS FOR OFFSITE FLOWS FROM ADJACENT LOTS:

PEAK DISCHARGE  $Q_p$ :

TREATMENT	AREA (AC.)	FACTOR	$Q_p$ (CFS)
A	1.78	1.87	3.33

EXISTING CONDITIONS FOR SUBJECT SITE:

PEAK DISCHARGE  $Q_p$ :

TREATMENT	AREA (AC.)	FACTOR	$Q_p$ (CFS)
A	0.89	1.87	1.66

PROPOSED DEVELOPED CONDITIONS FOR SUBJECT SITE:

SUB-BASIN 1. PEAK DISCHARGE  $Q_p$ :

TREATMENT	AREA (AC.)	FACTOR	$Q_p$ (CFS)
C	0.06	3.45	0.20
D	0.26	5.02	1.30

TOTALS: 0.32 1.50

OFFSITE FLOWS FROM SUBJECT SITE:  $Q_p$  < ALLOWED (1.51 CFS), OK.

SUB-BASIN 2. PEAK DISCHARGE  $Q_p$ :

TREATMENT	AREA (AC.)	FACTOR	$Q_p$ (CFS)
C	0.34	3.45	1.17
D	0.23	5.02	1.15

TOTALS: 0.57 2.32

PONDING REQUIREMENTS ON SUBJECT SITE FOR SUB-BASIN 2:

VOLUME OF RUNOFF FOR SUB-BASIN 2:

EXCESS PRECIPITATION, E (TABLE A-8):

$$\text{WEIGHTED } E = (E_1 A_1 + E_2 A_2) / (A_1 + A_2) \\ = [(1.29 \times 0.34) + (2.36 \times 0.23)] / (0.34 + 0.23) \\ = 1.72 \text{ INCHES}$$

$$V_{80} = E (A_1 + A_2) / 12 \\ = (1.72 \times 0.57) / 12 \\ = 0.08 \text{ AC-FT} \\ = 0.08 \times 43,560 = 3,485 \text{ CF}$$

POND SIZE FOR THE SUBJECT SITE:

$$3485 = 20' \times L' \times 4.5' \\ L = 3485 / 90 = 38'$$

POND SIZE = 20' X 38' X 4.5'

DESIGN OF THE CONCRETE CHANNEL OUTLET:

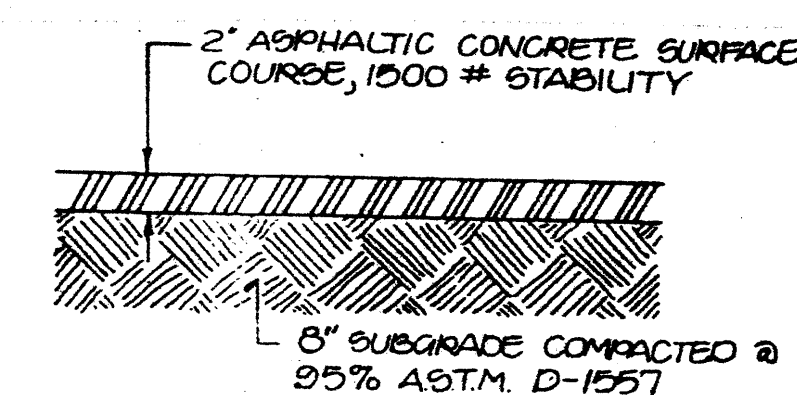
MANNING'S EQUATIONS:

$$V = 1.49 R^{2/3} S^{1/2} \\ Q = AV \\ Q = 1.49 R^{2/3} S^{1/2} A$$

KNOWN:  $Q = 3.33$  CFS,  $N = 0.013$  FOR POURED CONCRETE AND  $S = 0.015$ ; THEN,  $V = 5.0$  FPS

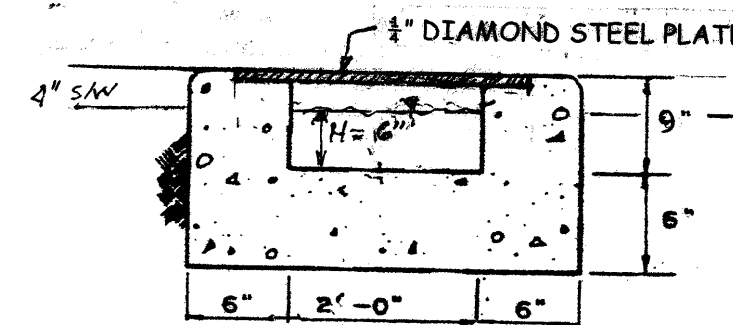
$$A = \frac{Q}{V} = \frac{3.33}{5} = 0.67 \text{ SF} \times \text{SAFETY FACTOR } (1.5) = 1.0 \text{ SF}$$

SIZE OF CHANNEL:  $H = 0.5'$ ,  $L = 2'$   
 $A = H \times L$   
 $1 = 5 \times L$   
 $L = 2'$



TYPICAL PAVEMENT SECTION

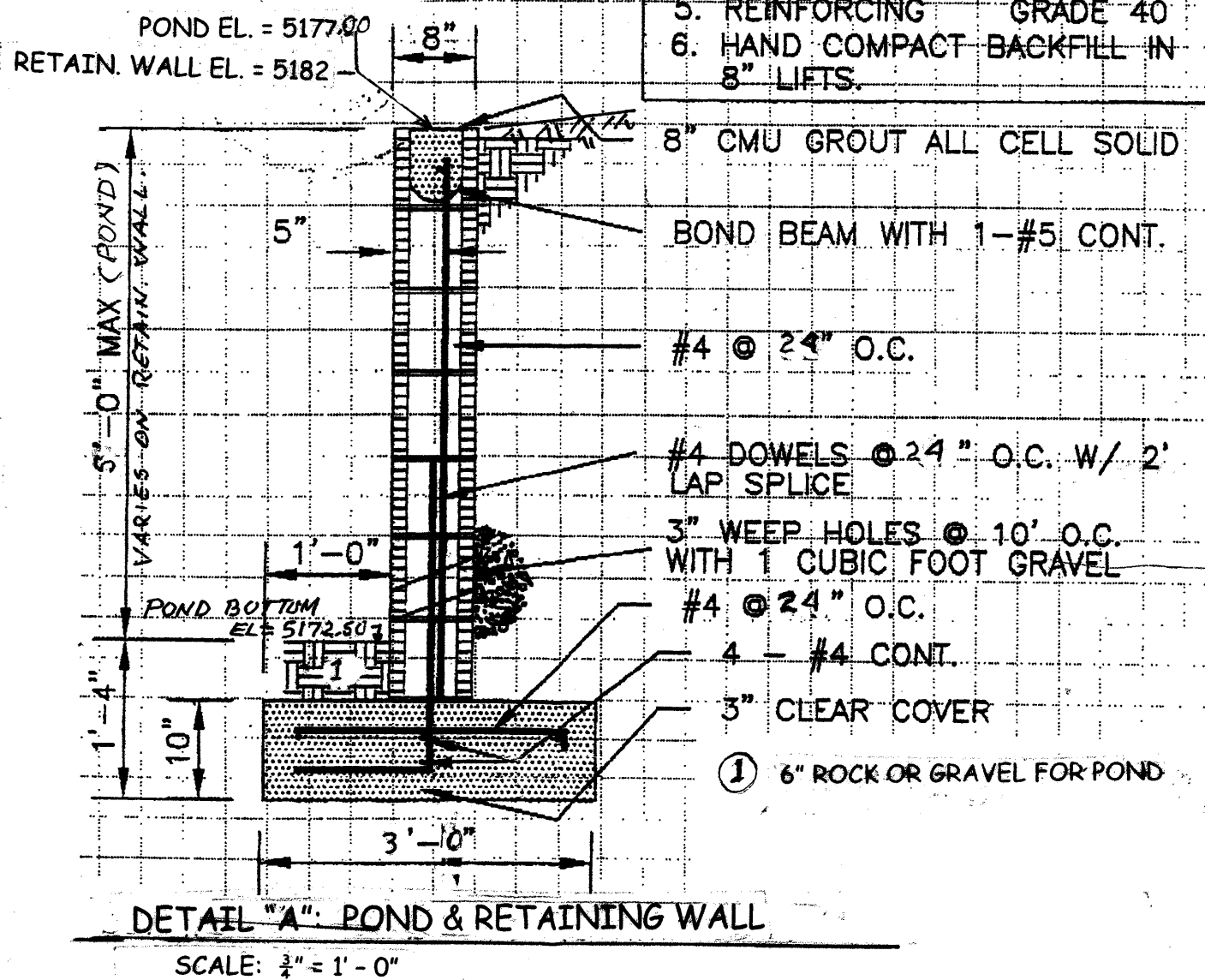
SCALE: 1" = 1'-0"



DETAIL 'C': DRAIN OUTLET

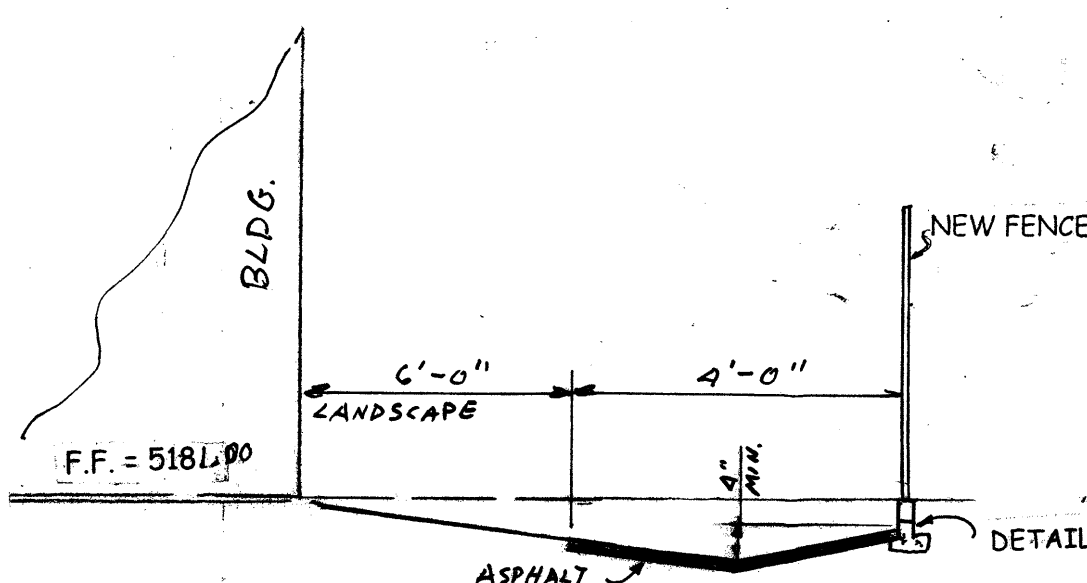
SCALE: N.T.S.

- NOTES:
- CONCRETE  $f'_c = 3000$  PSI
  - GROUT  $f'_c = 2500$  PSI
  - MORTAR TYPE S
  - CMU TYPE N-1
  - REINFORCING GRADE 40
  - HAND COMPACT BACKFILL IN 8" LIFTS



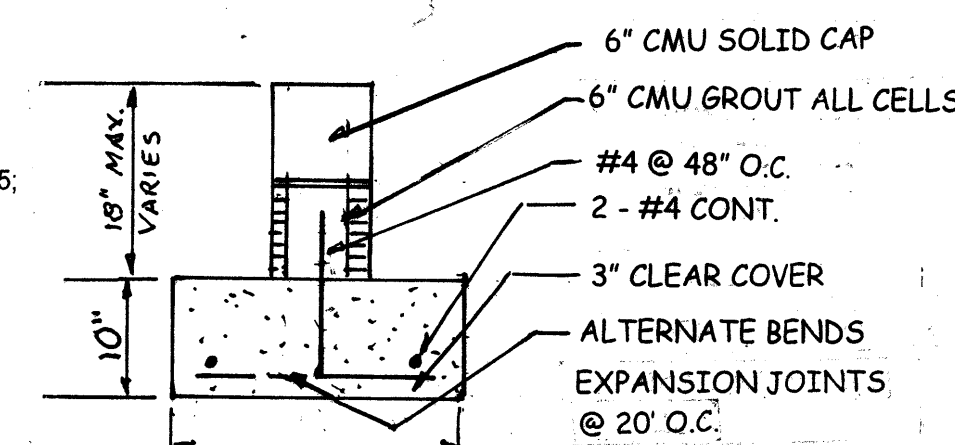
DETAIL 'A': POND & RETAINING WALL

SCALE: 3/4" = 1'-0"



DETAIL 'B': DRAIN SWALE

SCALE: N.T.S.



DETAIL 'D': HEADER BLOCK CURB

SCALE: 3/4" = 1'-0"

LEGEND:

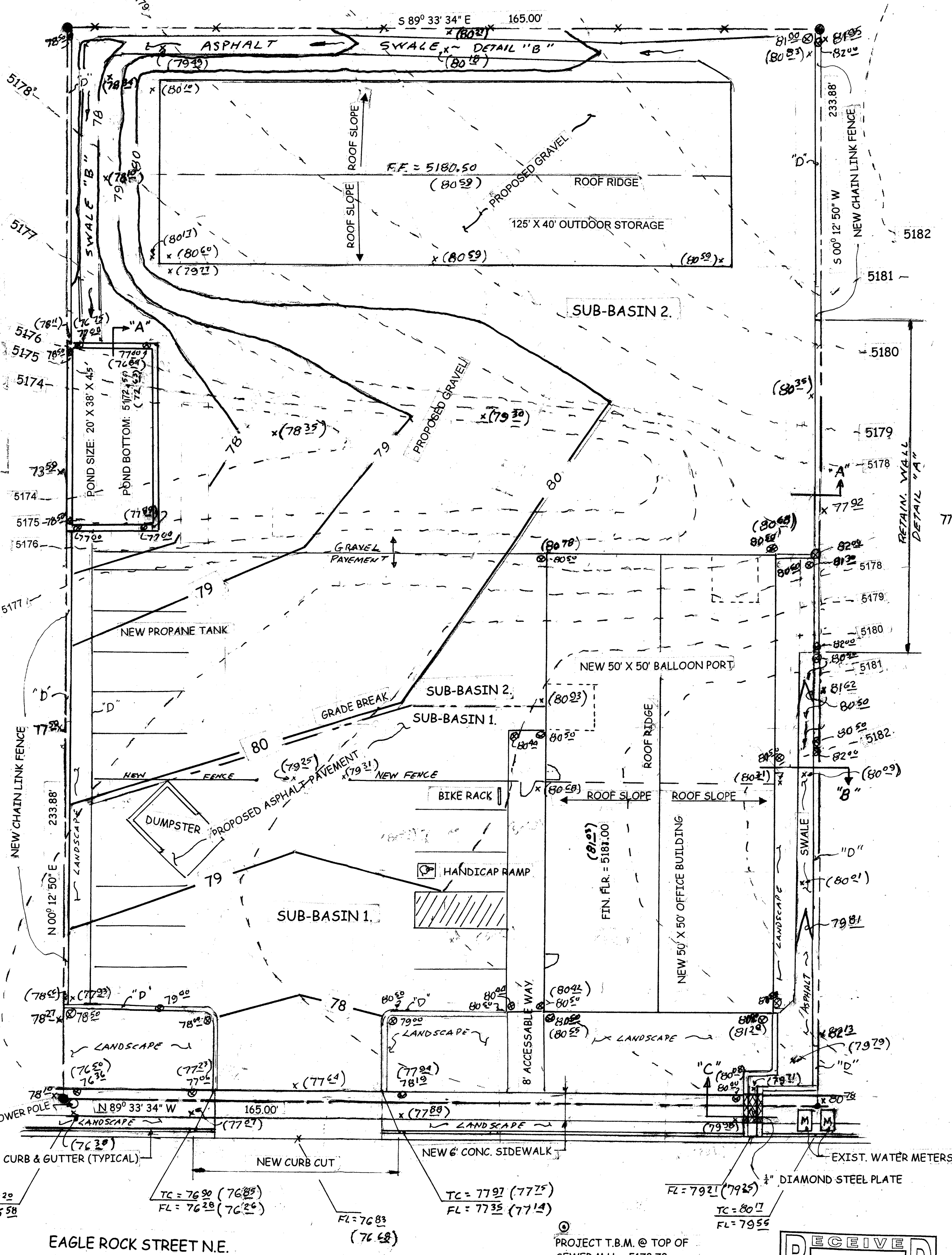
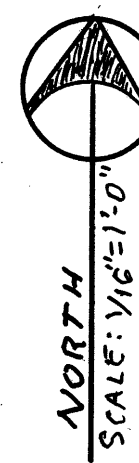
- TC = 79.41 TOP OF CURB ELEVATION
- FL = 79.15 CURB FLOWLINE ELEVATION
- X 79.44 EXIST. SPOT ELEVATIONS
- 5180 - EXIST. CONTOUR ELEVATIONS
- 79.55 PROPOSED SPOT ELEVATIONS
- 79 - PROPOSED CONTOUR ELEVATIONS
- X - X - EXIST. CHAIN LINK FENCE LINE
- EXIST. PROPERTY CORNER REBAR
- x (76.50) AS-BUILT SPOT ELEVATIONS

\* NOTE: CONTRACTOR TO SLOPE GRADE AWAY FROM BUILDING STRUCTURE

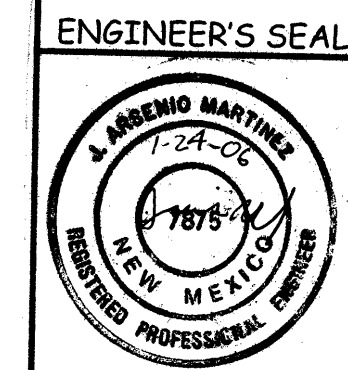
ENGINEER'S "AS-BUILT" DRAINAGE CERTIFICATION

As indicated by the as-built information shown hereon, the Rainbow Ryder Building project located at 5601 Eagle Rock Road NE (Lot 26 North Albuquerque Acres) has been constructed in "substantial compliance" with the approved grading and drainage plan. Slight deviations have been noted in grades and associated improvements. It is based upon the information shown hereon (existing grades shown thus "76.78") that recommendation is made for the issuance of a Permanent Certificate of Occupancy.

Note to the Owner: It is recommended that the Owner clean the retaining pond as sedimentation accumulates.



PROJECT T.B.M. @ TOP OF SEWER M.H. = 5178.72



TITLE: A PROPOSED GRADING & DRAINAGE PLAN FOR LOT 26 NORTH ALBUQUERQUE ACRES TRACT A, UNIT B, BLOCK 9 WITHIN THE ELENA GALLEGOS GRANT ALBUQUERQUE, NEW MEXICO

ENGINEER: ACM ENGINEERING SERVICES  
6615 Tesoro Pl., NE Albuquerque, NM 87113  
(505)822-0737 email: Chen045@msn.com

DATE: DECEMBER 2005