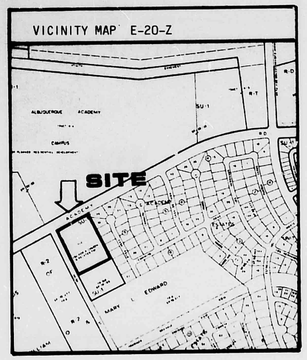
HYDROLOGY

E20/D16A
ONE PLAN

E20/D16A

1 Plan

VICINITY MAP E-20-Z



LEGEND

	SPOT ELEVATION	CONTOUR
EXISTING	○	
NEW	●	
CITY APPROVED	⊕	
NEW ASPHALT		

DRAINAGE:

THE SITE IS LOCATED ON THE SOUTHEAST CORNER OF THE INTERSECTION OF ACADEMY ROAD AND MOON STREET, NE. CONSTRUCTION WILL CONSIST OF PAVING APPROXIMATELY 55,000 S.F. FOR PARKING AND A DRIVING LANE. THE DEVELOPED FLOWS DUE TO THE PROPOSED PAVING WILL BE ALLOWED TO DISCHARGE INTO MOON ST. MOON ST. IS PRESENTLY BEING CONSTRUCTED UNDER SPECIAL ASSESSMENT DISTRICT NO. 210, DESIGNED BY WILSON & COMPANY. THE CONSTRUCTION OF MOON ST. WILL INCLUDE A 36" RCP STORM SEWER THAT HAS BEEN DESIGNED TO INTERCEPT FLOW FROM THE PROPOSED SITE. A CATCH BASIN WILL BE LOCATED AT THE NORTHWEST CORNER OF THE PROPERTY UNDER CONTRACT SAD 210 TO DIRECT FLOWS TO THE 36" RCP. ENCLOSED IS A COPY OF PART OF THE MASTER DRAINAGE REPORT BY WILSON & COMPANY STATING THAT MOON ST. HAS BEEN DESIGNED TO INTERCEPT ALL FLOWS FROM THE PROPOSED SITE.

OFF SITE FLOWS HAVE NO EFFECT ON THE SITE. THERE IS A CMU WALL LOCATED AT THE NORTHEAST PROPERTY LINE OF THE SITE THAT DIVIDES THE CHURCH FROM THE RESIDENTIAL AREA. ALL OTHER OFF SITE FLOWS ARE PREVENTED FROM ENTERING THE SITE BY EXISTING ELEVATIONS.

CALCULATIONS:

SOIL SERIES = ETC.
HYDROLOGIC SOIL GROUP = B
6-HOUR RAINFALL (100 YR. FREQUENCY) = 2.5 IN. (PLATE 22.2 D-1)
I = 2.2 IN./HR. (PLATE 22.2 D-2)
i = (2.5)(2.2) = 5.50 IN./HR.

EXISTING ON SITE CONDITIONS:

AREA = 5.37 ACRES
PERCENT IMPERVIOUS = 66%
C = 0.66 (PLATE 22.2 C-1)
Q(100) = (0.66)(5.50)(5.37) = 19.49 cfs
Q(10) = (19.49)(0.657) = 12.61 cfs
CN = 88 (PLATE 22.2 C-2)
DIRECT RUNOFF = 1.4 IN. (PLATE 22.2 C-4)
V(100) = (1.4)(5.37)(43560)/12 = 27290 CU.FT.
V(10) = (27290)(0.657) = 17930 CU.FT.

PROPOSED ON SITE CONDITIONS:

AREA = 5.37 ACRES
PERCENT IMPERVIOUS = 90%
C = 0.86 (PLATE 22.2 C-1)
Q(100) = (0.86)(5.50)(5.37) = 25.40 cfs
Q(10) = (25.4)(0.657) = 16.69 cfs
CN = 90 (PLATE 22.2 C-2)
DIRECT RUNOFF = 1.55 IN. (PLATE 22.2 C-4)
V(100) = (1.55)(5.37)(43560)/12 = 30214 CU.FT.
V(10) = (30214)(0.657) = 19851 CU.FT.

CAPACITY OF 36" RCP (STORM SEWER):

S = 0.003, d = 3 FT.
N = 0.013
$Q = (0.463)(d)^{8/3}(S)^{1/2}/N$
Q = 36.52 cfs

CAPACITY OF SINGLE "C" CATCH BASIN:

S = 0.004
Q = 20 cfs (PLATE 22.3 D-5)

CAPACITY OF MOON STREET:

65' R/W; 40' STREET; S = 0.004
Q = 80 cfs (PLATE 22.3 D-2)

NOTICE TO CONTRACTOR:

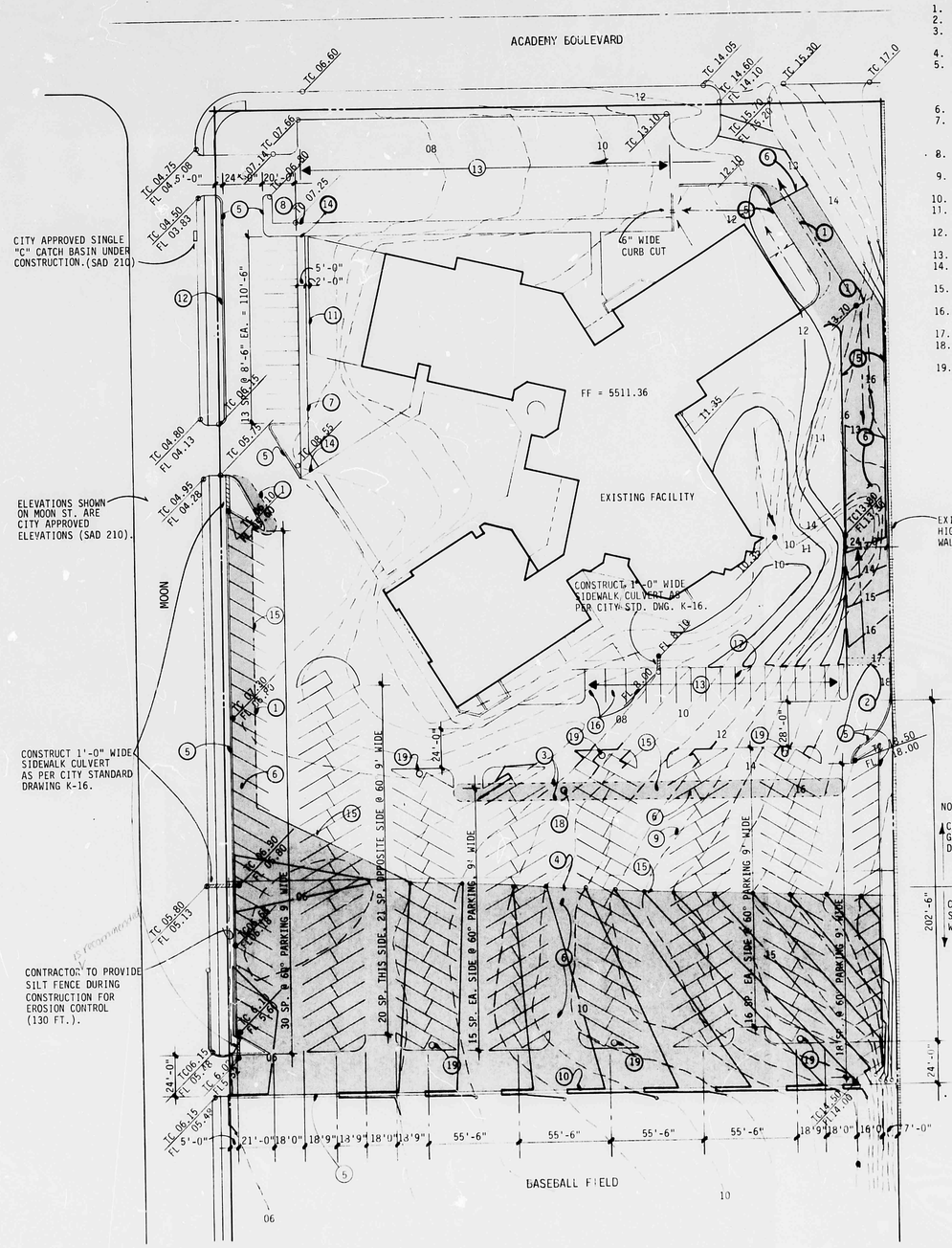
1. NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION - 1979 EDITION WILL BE REFERRED TO HEREON AS THE "STANDARD SPECIFICATION".
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH PUBLIC WORKS CONTRACT NO. 85-1.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
4. 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.

LEGAL DESCRIPTION:

TRACT C, ACADEMY ESTATES.

NOTES:

1. FLOOD HAZARD BOUNDARY MAP - PANEL NO. 17.
2. CONTRACTOR IS recommended TO PROVIDE CITY APPROVED SILT FENCING AT THE SOUTHWEST END OF THE PROPERTY DURING CONSTRUCTION FOR EROSION CONTROL (SEE PLAN FOR LOCATION).
3. SURVEY INFORMATION PROVIDED BY WILSON & COMPANY ENGINEERS & ARCHITECTS. (B.M. LOCATED AT CENTERLINE OF ACADEMY ROAD AND CENTERLINE OF MOON STREET TBM=5506.46).
4. Contractor is responsible to eliminate any sediment that may be deposited during construction.
5. ACS BM 1-E20, Sta. is located approximately 700' South east of the intersection of Academy Rd. and Wyoming Blvd. & about 650' due east of the Academy Hts. Apts. Elev. = 5464.129
6. A topsoil disturbance permit will be required from Environmental Health Department.



KEYED NOTES: ○

1. EXISTING CONCRETE CURB TO BE REMOVED.
2. EXISTING SIDEWALK TO BE REMOVED.
3. EXISTING CONCRETE CURB & GUTTER TO BE REMOVED.
4. EDGE OF EXISTING ASPHALT.
5. 6" WIDE x 18" DEEP CONCRETE CURB W/(1) #4 BAR TOP AND BOTTOM HORIZ. CONT., PROVIDE VERTICAL EXPANSION JOINTS @ 15'-0" O.C., USE ½" EXP. JOINT MATERIAL.
6. 3" ASPHALT SURFACE OVER COMPACTED SUBGRADE.
7. 4" CONCRETE WALK W/½" PREMOLDED EXP. JOINT @ 20'-0" O.C. W/SCORED JOINTS SPACED EQUAL TO WIDTH OF WALK. BROOM FINISH SURFACE.
8. MATCH ELEVATION OF NEW CURB TO EXISTING CURB.
9. PAINT STRIPING W/WHITE TRAFFIC MARKING PAINT.
10. EDGE OF ASPHALT.
11. RELOCATED EXISTING WOOD FENCE, RELOCATE EXISTING TREES AS PER OWNER INSTRUCTIONS.
12. EXISTING LANDSCAPING TO BE RELOCATED AS PER OWNER'S INSTRUCTIONS.
13. EXISTING PARKING.
14. TIE NEW CONCRETE WALK TO EXISTING CONCRETE WALK, PLACE ½" EXP. JOINT BETWEEN WALKS.
15. MATCH NEW ASPHALT SURFACE TO EXISTING ASPHALT ELEVATIONS.
16. HANDICAPPED PARKING SPACE, PAINT HANDICAPPED SYMBOL AT EACH SPACE.
17. STRIPE EXISTING PAVED SURFACE.
18. RELOCATE EXISTING LIGHT STANDARD & BASE, VERIFY W/OWNER NEW LOCATION.
19. NEW LIGHT STANDARD, SEE DETAIL THIS SHEET.

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VICTOR J. CHAVEZ STATE OF NEW MEXICO REGISTERED PROFESSIONAL ENGINEER 6/5/85 Rev 6/20/85

HEIGHTS PRESBYTERIAN CHURCH PARKING LOT ADDITION

GRADING & DRAINAGE PLAN FOR PAVING PERMIT

1" = 40'-0"

NORTH

PAT McMURRAY, ARCHITECT P.A.
TELEPHONE (505) 883-3906
3901 GEORGIA, N.E. SUITE 1
ALBUQUERQUE, N.M. 87110

PROJ. NO. 8410

JUNE, 1985

SHEET 1 OF 1