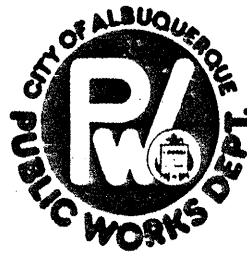


FILE COPY



MEMORANDUM:

May 19, 1987

TO: Tom Aragon, Transportation System Division
FROM: Fred J. Aguirre, Hydrologist; Engineering Group/PWD
SUBJECT: PRIVATE DRAINAGE FACILITIES WITHIN PUBLIC RIGHTS-OF-WAY/EASEMENT
GRACE BAPTIST CHURCH (G-22/D8A)

ENGINEERING GROUP

[Handwritten signature]

Transmitted herewith, is a copy of the approved drainage plan for the referenced project incorporating the S.O. #19 design.

In accordance with the new process, this plan is being submitted to you for permitting and inspection. Please provide this section with a signed-off copy per the signature block upon construction and acceptance by your office.

As you are aware, the signed-off S.O. #19 is required by this office for Certificate of Occupancy release; hence your expeditious processing of this plan would be greatly appreciated and would avoid any unnecessary delay in the release of the Certificate of Occupancy.

Thank you for your cooperation, and if you should have any questions and/or comments regarding the process, please feel free to call me at 768-2650.

FJA/bsj

Attachment

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103



Ken Schultz
Mayor

UTILITY DEVELOPMENT DIVISION
HYDROLOGY SECTION
(505) 768-2650

May 15, 1987

Ron Bohannan
Tierra West Development Mgmt.
4127 Carlisle Boulevard, NE
Albuquerque, New Mexico 87107

RE: REVISED DRAINAGE PLAN FOR AN ADDITION TO GRACE BAPTIST CHURCH
(G-22/D8A) REVISION BLOCK DATED MAY 11, 1987

Dear Mr. Bohannan:

Based on the information provided on your resubmittal of May 11, 1987,
the above referenced plan is approved for Building Permit.

Please be advised that a separate permit is required for construction
within City Right-of-Way. Also, please attach a copy of this approved
plan to the construction sets prior to Hydrology sign-off.

If I can be of further assistance, please feel free to call me at
768-2650.

Cordially,

Bernie J. Montoya, C.E.
Engineering Assistant

cc: Becky Sandoval

BJM/bsj

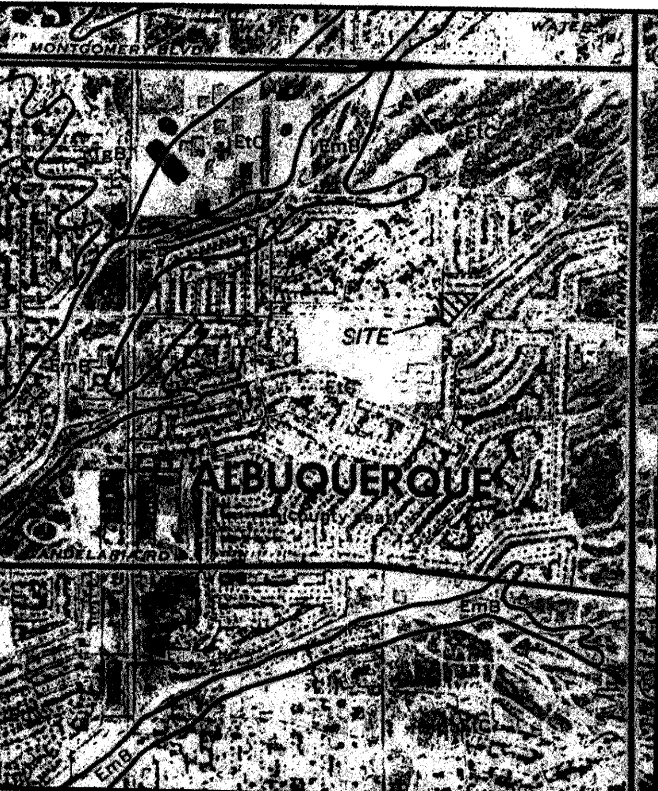
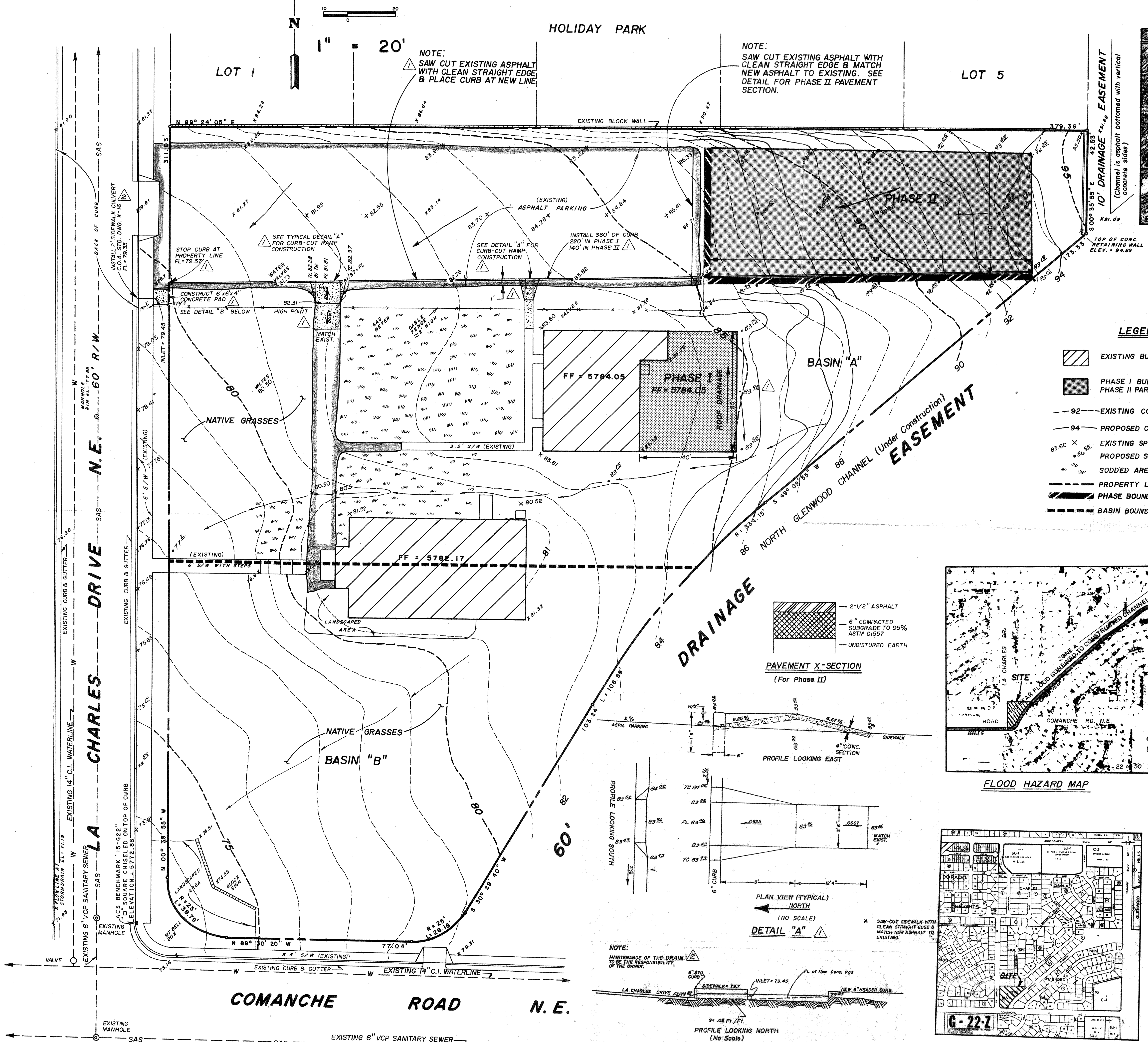
PUBLIC WORKS DEPARTMENT

Walter Nickerson, P.E., City Engineer

ENGINEERING GROUP

Telephone (505) 768-2650

AN EQUAL OPPORTUNITY EMPLOYER



SOILS MAP

Legal Description
The site is located on zone atlas sheet G-22 in the Northeast Heights of Albuquerque, New Mexico. The site is designated Lot A, Block 4 of Holiday Park Unit 10.

Ground Cover Information
The soil on-site consists of the Embudo-Tijeras complex (ETC) as shown on the attached soils map. The location of soil type is indicated on the soils map of the Soil Survey of Bernalillo County and parts of Sandoval and Valencia Counties, New Mexico, prepared by the Soil Conservation Service. This soil type is classified as Hydraulic Soil Group "B".

Site Data
The site is currently a 1.90 acre church site with the majority of the site undeveloped. The only expansion will consist of one 1856 square foot addition to an existing 2,144 square foot classroom building and a later phase II addition of 8,280 square feet of paved parking.

Off-site and Existing Conditions
The site is located at the Northeast Corner of La Charles and Comanche Road, N.E. Development to the north consist of totally developed residential subdivision separated from this site by a block wall. Areas east of this site are protected from off-site flows by the North Glenwood Channel. Drop inlets located in Comanche Road accept street flows and direct same to the Glenwood Channel. La Charles Drive historically accepts sheet flows from this site.

Proposed Conditions
The site will remain in the described historical condition with the exception of the building and parking lot expansion. Increase drainage discharge from these improvements are minor compared to the overall capacity of the watershed basin and will have minor or no impact on the downstream capacity.

Flood Hazard Conditions
The site is located on panel 22 of 50 of the Flood Insurance Rate Maps prepared by F.E.M.A. The site is outside any 100 year flood boundary as shown on this sheet and on panel 22.

Rational Method
Discharge $Q = CIA$
 $R(6) = 2.45$ inches (DPM Plate 22.2 D-1)
 $A = 1.3239$ Acres (57,625 sq.ft.)
 $I = R(6) (6.84) T_c^{-0.51} = 2.11 \times 2.45 \times 5.18$
 $T_c = 10$ minutes (minimum)
 $C =$ Varies

Existing Conditions of Basin "A"
Total Area = 1.3229 Ac (57,625 sq.ft.)
Area (imp) = 32.95% (18,988 sq.ft.)
 $C = .4774$
 $Q(100) = (.4774) (5.18) (1.3229) = 3.27$ cfs.
 $V(100) = (.4774) (1.9) (.0833) (57,625) = 4,354$ cf.

Roofs (3,752 sq.ft.) (.90) = 3,376.8
Drives & Walks (15,236 sq.ft.) (.95) = 14,474.2
Landscapes (38,637 sq.ft.) (.25) = 9,659.2
57,625 sq.ft. = 27,510.2
 $27,510.2 / 57,625 = C = .4774$

Proposed Conditions of Basin "A" Phase I
Total Area = 1.3229 Acres (57,625 sq.ft.)
Area (imp) = 36.17% (20,884 sq.ft.)
 $C = .4983$
 $Q(100) = (.4983) (5.18) (1.3229) = 3.41$ cfs.
 $V(100) = (.4983) (1.9) (.0833) (57,625) = 4,544.65$ cf.

Composite CN = 95
Direct Runoff = 1.9"
Roofs = (5,608 sq.ft.) (.90) = 5,047.2
Drives & Walks = (15,236 sq.ft.) (.95) = 14,474.2
Landscapes = (36,781 sq.ft.) (.25) = 9,195.2
57,625 sq.ft. = 28,716.6
 $28,716.6 / 57,625 = C = .4983$

Proposed Conditions of Basin "A" Phase I & II
Total Area = 1.3229 Acres (57,625 sq.ft.)
Area (imp) = 50.54 (29,124 sq.ft.)
 $C = .5989$
 $Q(100) = (.5989) (5.18) (1.3229) = 4.10$ cfs.
 $V(100) = (.5989) (1.9) (.0833) (57,625) = 5,462$ cf.

Composite CN = 95
Direct Runoff = 1.9"
Roofs = (5,608 sq.ft.) (.90) = 5,047.2
Drives & Walks = (23,516 sq.ft.) (.95) = 22,340.2
Landscapes = (28,501 sq.ft.) (.25) = 7,125.2
57,625 sq.ft. = 34,512.6
 $34,512.6 / 57,625 = C = .5989$

Basin "B"
No change.
PRIVATE DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY
DESIGN APPROVAL *Boone/Montez 5/19/87*
Hydrology Section Date

INSPECTION APPROVAL _____ Date
Trans./Street Maint.

ACCEPTANCE _____ Date
Construction Mgt. Div.

ROUTE AS-BUILT DWG. TO MAPS & RECORDS
MAINT. & COPY OF AS-BUILT TO HYDROLOGY SECTION

REVISED 5-11-87 ADD SIDEWALK/CULVERT/DELETE CURB DRAIN
REVISED 4-20-87 AS NOTED
JOB NO. 870030

**TITLE: GRADING & DRAINAGE PLAN
GRACE BAPTIST CHURCH**

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
CITY ENGR.					
A.C.E. DESIGN					
A.C.E. HYD.					
A.M.A.F.C.A.					
DRAWING NO.					

MAP NO. G-22 SHEET 1 OF 1

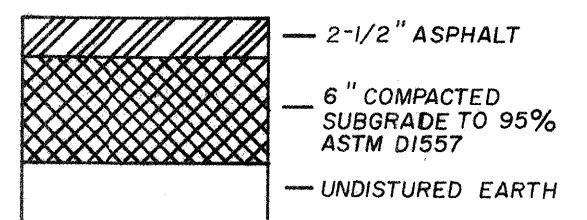
Tierra West Development
Management Services

4127 Carlisle Blvd. NE
Albuquerque, New Mexico 87103
(505) 883-7600

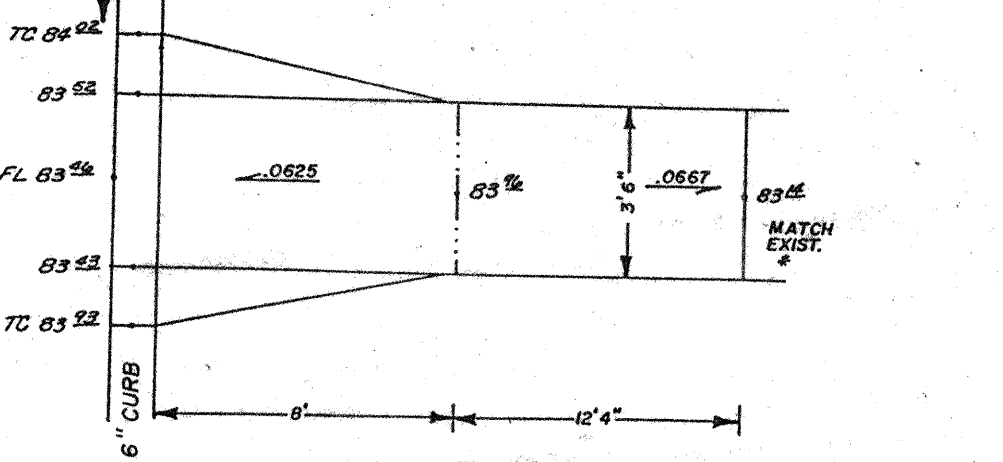
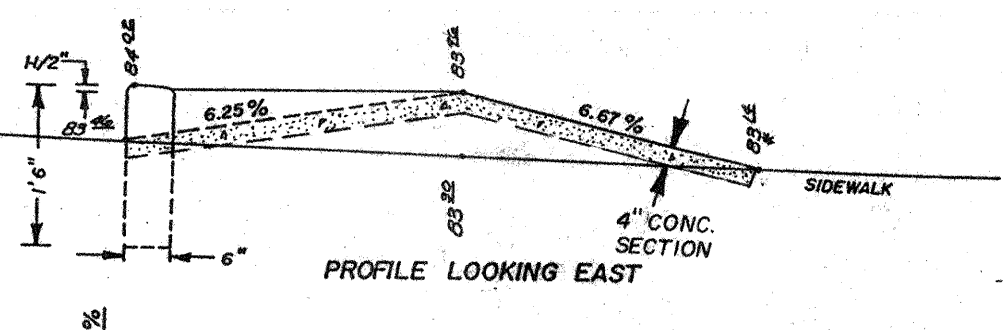
LYNN ENGINEERING & SURVEYING, INC.
22 CHUQUOLE LANE
LOS LUNAS, NEW MEXICO 87031
(505) 869-3648

LEGEND

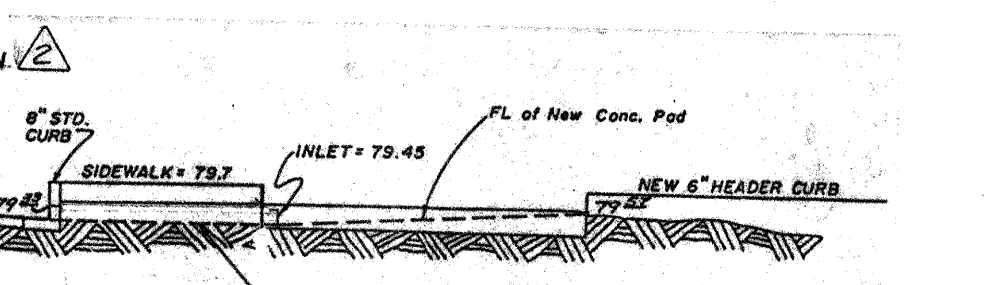
- EXISTING BUILDINGS
- PHASE I BUILDING EXPANSION
PHASE II PARKING LOT EXPANSION
- EXISTING CONTOUR ELEVATIONS
PROPOSED CONTOUR ELEVATIONS
- EXISTING SPOT ELEVATIONS
PROPOSED SPOT ELEVATIONS
- SODDED AREAS (Existing)
- PROPERTY LINE
- PHASE BOUNDARY
- BASIN BOUNDARY



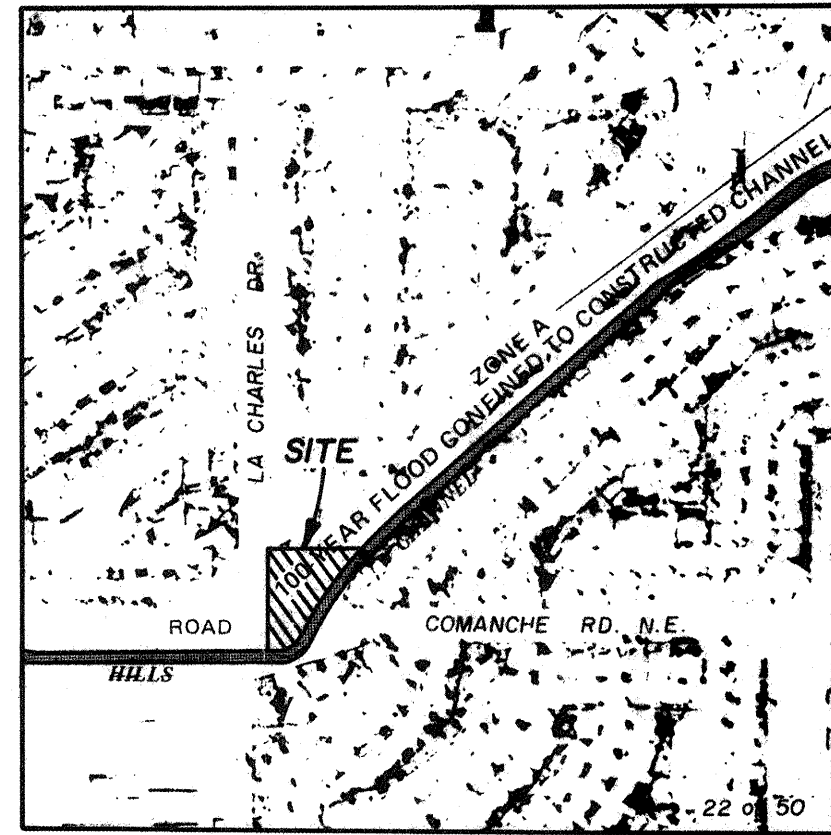
PAVEMENT X-SECTION
(For Phase II)



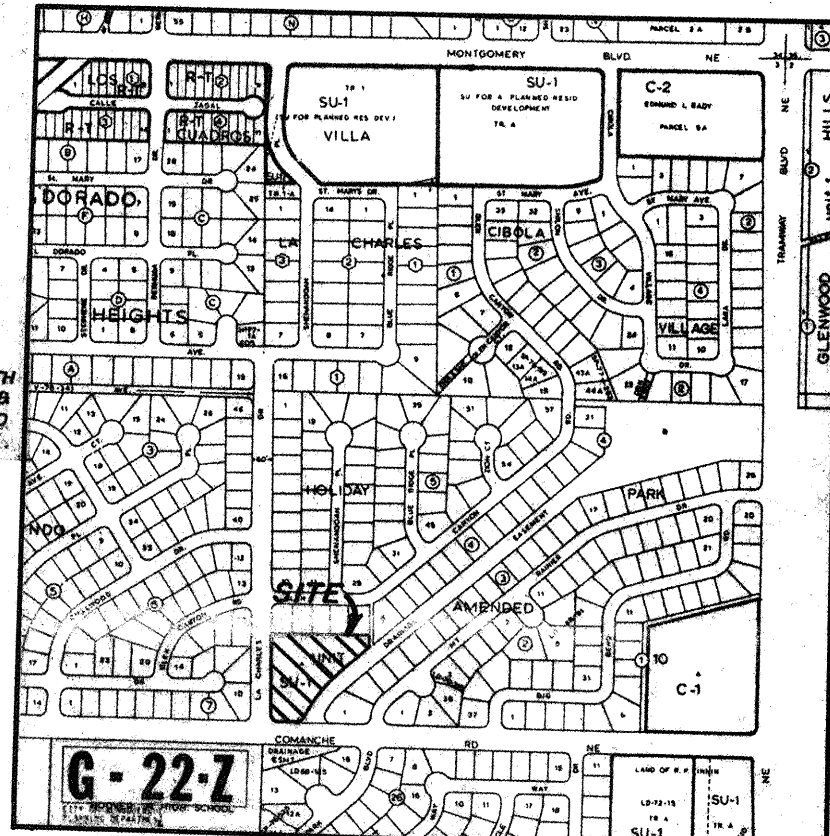
DETAIL "A"



DETAIL "B"



FLOOD HAZARD MAP



VICINITY MAP