HYDROLOGY

H13/D11

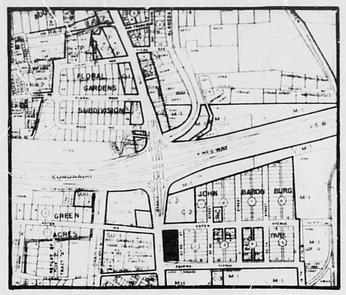
ONE PLAN

I PLAN FOR

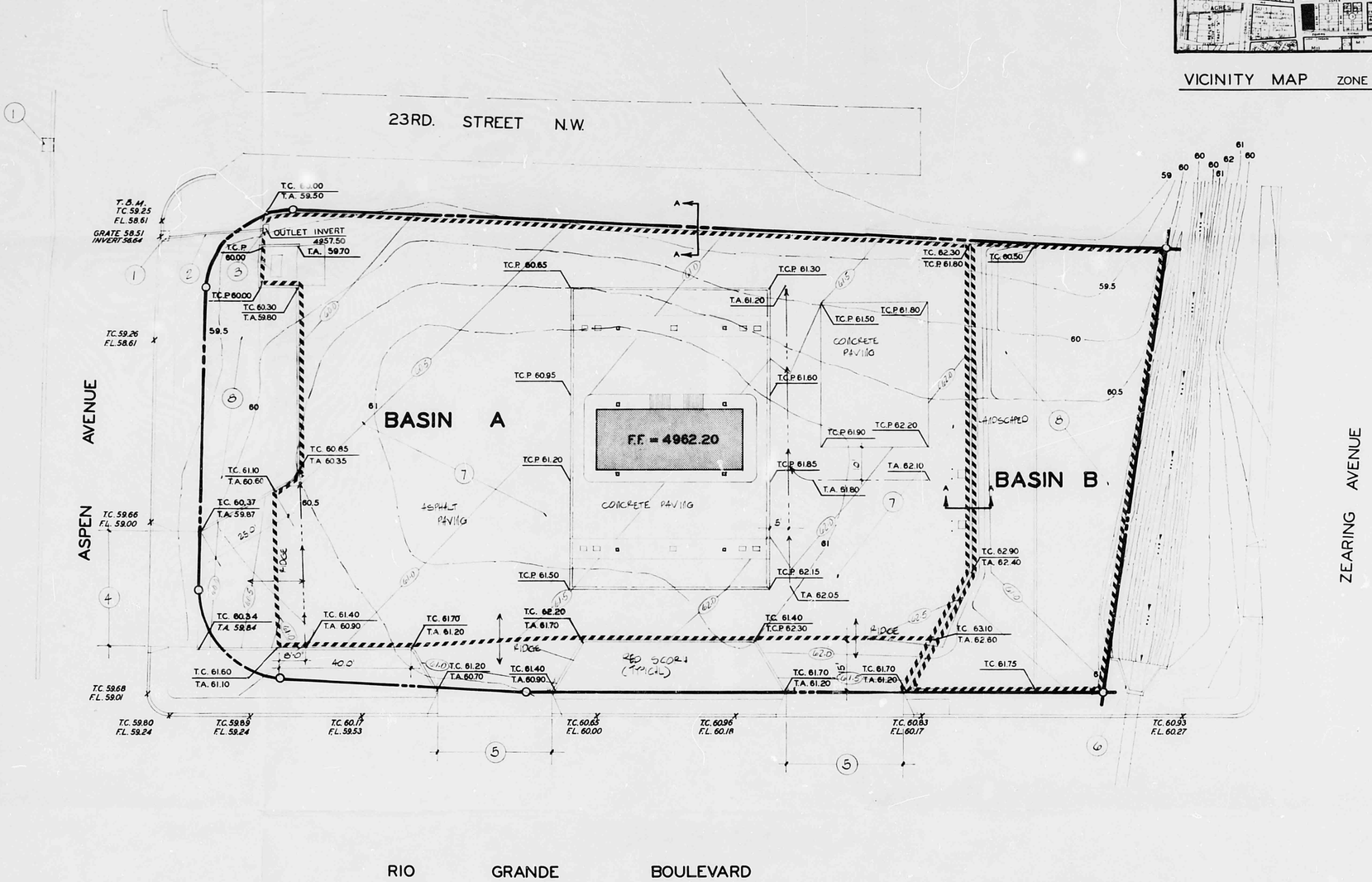
GAS
TEXACO, BAR + GRILL

H 13-D11

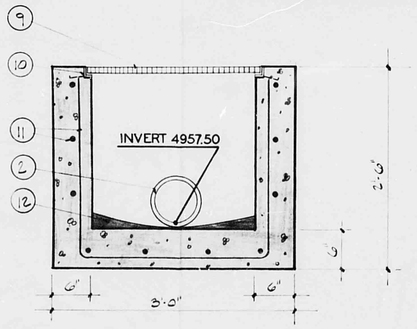
BENCHMARK: ACS BRASS TABLET IN CONC. MON.
STAMPED "7-J 13 A" ELEV. = 4956.09



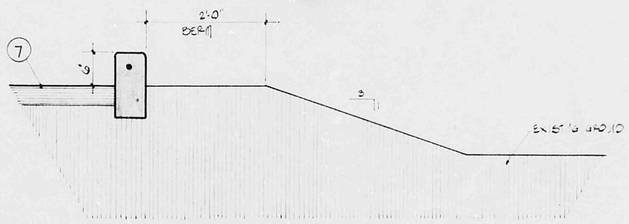
VICINITY MAP ZONE MAP H-13




## GRADING AND DRAINAGE PLAN 1" = 20.00'




CATCH BASIN DETAIL 1"=1'-0"




SECTION A-A 1"=1'-0"

## KEYED NOTES

1. Existing catch basin.
2. 12" PVC pipe. DLB 9/29/83
3. 2'x2' catch basin. See Detail
4. Existing driveway apron.
5. New 36'0" curb cut in driveway apron.
6. Existing irrigation headwall.
7. Paving.
8. Unpaved.
9. Steel Grate.
10. 1-1/2"x1-1/2"x1/4" steel angle with anchors at 12" O.C.
11. #4's at 8" O.C. each way.
12. Grout.

## DRAINAGE NOTES

1. As per City Hydrologist drain direct to existing storm sewer.
2. As per City Hydrologist flood pool elevation 4958 no effect on property.

## DRAINAGE CALCULATIONS

BASIN A

Area = 27,100 sq. ft.
C = 0.95 (roof, paving)
$t_c$ = 10 min.
i = 4.8 in/hr.
Q = 2.8 cfs
Grate:
d = 0.2 ft.
$Q = 0.6a\sqrt{2g(0.2)} = 2.8$ cfs
a = 1.3 ft.
Assume grate @ 70% opening and 50% clogged.
A = 1.3/0.7/0.5 = 3.7 ft.²
Use A = 4 ft.²
Outlet Pipe
d = 2.2 ft.
$Q = 0.6a\sqrt{2g(0.2)} = 2.8$ cfs
a = 0.4 ft.²
Diameter = 0.70
Use 12" diameter PVC
DLB 9/29/83

REGISTERED PROFESSIONAL ENGINEER JAN J. BORDENAVE NO. 5110 STATE OF NEW MEXICO
Grading, Drainage & Taps

APPROVED FOR DRAINAGE
9/29/83
DATE
SIGNATURE TITLE
ADVISE DRANAGE INSPECTOR WHEN GRADING EXECUTED

BASIN B

Area = 7100 sq. ft.
C = 0.55 (existing soil,scoria)
$t_c$ = 10 min.
i = 4.8 in/hr.
Q = 0.4 cfs
6 hr. volume = 720 ft.³
Ponds @ end of 23rd street

REMAINDER

The remaining areas flow directly to either Aspen or Rio Grande and then to existing catch basins.

Area = 4690 sq. ft.
C = 0.8 (paving, scoria)
$t_c$ = 10 min.
i = 4.8 in/hr.
Q = 0.4 cfs

## LEGEND

| | |
|---|---|
| X TA 59.89 | Existing spot elevation |
| TC 61.70 | Proposed spot elevation |
| TCP | Top of concrete paving |
| TC | Top of curb |
| TA | Top of asphalt |
| FG | Finish grade |

STATE OF NEW MEXICO ken hovey no. 1055 REGISTERED ARCHITECT

the ken hovey design group
ARCHITECTS • PLANNERS
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GAS BAR AND MARKET BUILDING FOR TEXACO INC.
924 RIO GRANDE BLVD
ALBUQUERQUE, NEW MEXICO

PROJECT # 8826
DATE 15 JULY 1983
DRAWN [illegible]
CHECKED [illegible]
REVISIONS
[illegible]

GRADING AND DRAINAGE PLAN

C-5

H13/D11