DEVELOPMENT & BUILDING SERVICE CENTER ONE STOP SHOP

ATTENTION:

600 SECOND ST. N.W.

505-924-3900
Records Withdrawal Form
Project No. 5-13/04 . Date: 6/21/06
Project Title: San Felipe Plaza
a. File b. Mylars c. Redlines/Comments d. Other
Requested by: Murray Thayer-Portuban Felipe Phone No.: 345-8400 Name and Company
Comments: Full size copy of all items in file
Anticipated Return Date:
I hereby accept full responsibility for the security of the above noted records/plans until return receipt acknowledgement is completed. Records/plans will be returned to the Development and Building Services Center on or before the indicted anticipated return date.
Delivery Picked Up By:
Name: Albuquevque Reprographic Organization: Print
Signed 1 - B Date: 6-21-06
Office Use Only
Return Acknowledged:
Received By: Saudy Saudies Date: De 27/00



5639 JEFFERSON STREET NE · ALBUQUERQUE, NEW MEXICO 87109 · PHONE (505) 344-4080 · FAX (505) 343-8759

DRAINAGE REPORT

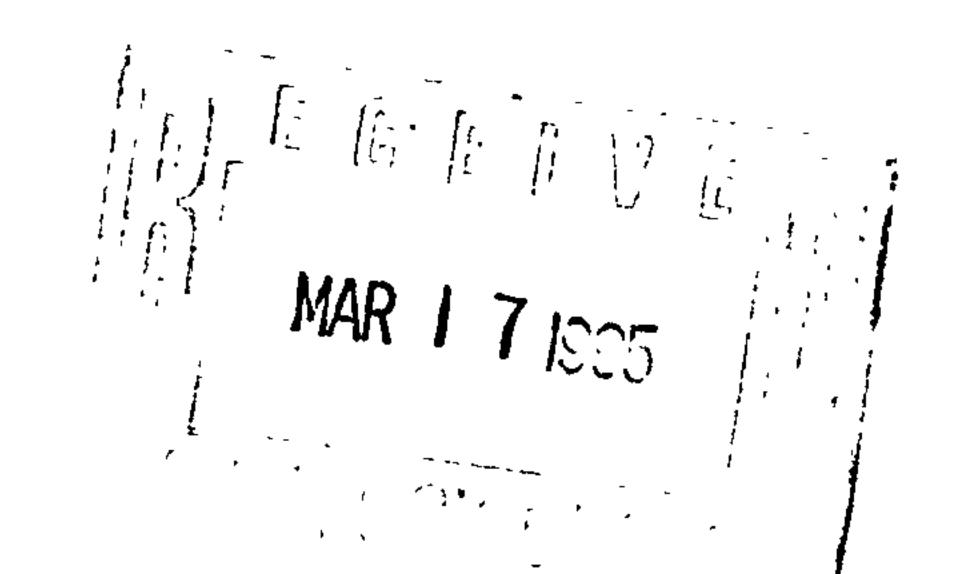
FOR

SAN FELIPE PLAZA

ALBUQUERQUE, NEW. MEXICO



JULY 1994 REY 2/95



GRADING AND DRAINAGE PLAN

LOCATION

This site is located in Bernalillo County near Old Town in Albuquerque. It Is on the north side of Mountain Road N.W. between Rio Grande and 20th Street N.W.

LEGAL DESCRIPTION

The project site is Tract "C" of the Sheraton Old Town Complex north of Mountain Road N.W. The site is shown on the City of Albuquerque Zone Atlas sheet J-13-Z.

FLOOD HAZARD ZONES

As Shown by Panel 3500020028 of the National Flood Insurance Program Flood Insurance Rate Maps for the City of Albuquerque, Dated October 14, 1983, the site is in a designated Flood Hazard Zone AH (El 4956). Zone AH designates "Areas of 100-Year Shallow Flooding Where Depths Are Between One (1) and Three (3) Feet; Average Depths of Inundation are Shown, but No Flood Hazard Factors are Determined".

EXISTING SITE CONDITIONS AND DRAINAGE PATTERN

The existing site is approximately one-half (1.56 acres) paved parking and one-half (1.72 acres) dirt. The dirt area has been graded so that the central area forms a pond. This pond has an existing volume of approximately 0.42 acre-feet below the 4956 flood elevation (per the December, 1993 Topographic Survey by Aldrich Land Surveying).

The Site is divided into two areas by the walkway from the Sheraton Old Town Inn. The western basin drains directly into Mountain Road while the eastern basin drains to the existing on-site pond.

OFF-SITE RUNOFF

As can be seen from the attached Grading Plan, a small portion of runoff from the Sheraton discharges onto the site at the north property line. In addition, during a 100-year storm, runoff spills onto the site over the curb and gutter on 20th Street.

The proposed site grading has minimized runoff to the adjacent property by sloping the site to contain the runoff on-site until there is sufficient capacity in the existing storm sewer on 20th Street for it to discharge into the sewer.

PROPOSED SITE CONDITIONS AND DRAINAGE PATTERN

The site will be developed with six buildings for retail, commercial, and office uses. Additional development consists of a two level parking structure and a plaza area. The entire site will be owned by the developer and will remain in one parcel.

Landscaping provided on the site will consist of grass areas at finished grade, raised planters, and tree grates in the plaza area.

Since this site is in a designated flood plain, the proposed Grading and Drainage design has accommodated the volume of runoff displaced (by development) from the existing ponding area (existing storage capacity below the 4956 maximum flood elevation) plus the additional volume of runoff generated on-site by the development in a combination of surface and subsurface detention facilities. This is consistent with FEMA's requirements for development within a designated flood plain.

This design accommodates the required storage volume by detaining the runoff in a combination of surface and subsurface facilities. The surface storage is provided within the roadway on the northeast corner of the site. The subsurface storage is handled two ways. First, the on-site storm drain system will only discharge to the 20th Street storm sewer when capacity is available in that system. Otherwise, the runoff accumulates in the storm drain system until discharge capacity is available. Second, a subsurface concrete vault has been designed under the parking garage to detain the runoff on-site until capacity is available in the 20th Street storm sewer. Sections of the vault are included in the Appendix of this report for reference. Similar to the on-site storm drain system, runoff generated on-site will backup into this vault if the 20th Street sewer is surcharged. It will only discharge to the 20th Street sewer as capacity is available. A Tideflex style check valve will be installed in the site discharge line near the northeast corner of the site. The tideflex valve will prevent the 20th Street storm sewer from backing up into the on-site subsurface system.

Water blocks have been installed at all driveways to the site to help prevent runoff from entering the site on the surface. The water blocks on 20th Street and the west entrance on Mountain provide the required 10-1/2" high blocks. The east entrance on Mountain only provides a 4-1/4" block. The analysis in Appendix B provides backup analyses to show this is twice the height of the 100-year flow in Mountain past the entrance. This variance has been approved by PWD Hydrology.

The surface and subsurface detention facilities have been sized to detain the increase in runoff volume between historical and the proposed developed site (0.395 ac-ft) plus the existing volume ponded on-site (0.42 ac-ft which includes on-site historical runoff volume). This is a required on-site detention capacity of 0.815 ac-ft. The combination of surface and subsurface detention volumes provided by this design is 0.832 ac-ft which is in excess of the required $V_{100} = 0.815$ ac-ft.

Since runoff from the site must be restricted to historical peak runoff rates, we propose to use a 15-inch diameter sewer installed at a slope of 0.004 ft/ft to restrict flow to less than the historical 4.6 cfs. This is demonstrated by the "circular channel analysis and design calculation following the AHYMO printouts.

MAINTENANCE

The detention facilities proposed herein are on private property. The operation and maintenance of these facilities is simple due to the lack of pumps. Also, since most runoff is generated by developed areas, sediment transport and buildup within the facility should be minimal. When these facilities do require maintenance, they will be maintained by the owner. The interior of the main detention system vault (below the parking garage) can be accessed from the several bolt down manholes in the parking garage. A copy of the maintenance covenant is included in the Appendix of this report for reference.

HYDROLOGY/HYDRAULICS

The runoff calculations and design has been done in accordance with Section 22.2 of the Development Process Manual of the City of Albuquerque, January 1993. The function of the detention facility was modeled using the Environmental Protection Agency's SWMM/Extran computer model. The output is included in the Appendix for reference.

DETERMINATION OF RAINFALL FACTORS FOR AHYMO RUN

The 1-hour, 6-hour, and 24-hour precipitation depths were derived from Figures C-1, C-2, and C-3 of Section 22.2 of the Development Process Manual.

POND VOLUMES

The surface pond shown on the grading plan indicates the elevations at which the 100-year, 6-hour volumes will be reached.

All building Finished Floor Elevations are set at least one foot above the 4956 100-year water surface elevation shown on the Flood Insurance Rate Map Panel 28.

BASIN RUNOFF SUMMARY

	Q ₁₀₀ (cfs)	Q ₁₀ (ac-ft) (a	V ₁₀₀	V_{10}
CONDITION				
Historical	4.6	3.1	0.129	.086
Existing	9.5	6.3	.329	.219
Proposed	14.4	9.6	.524	.349

PONDING PROVIDED

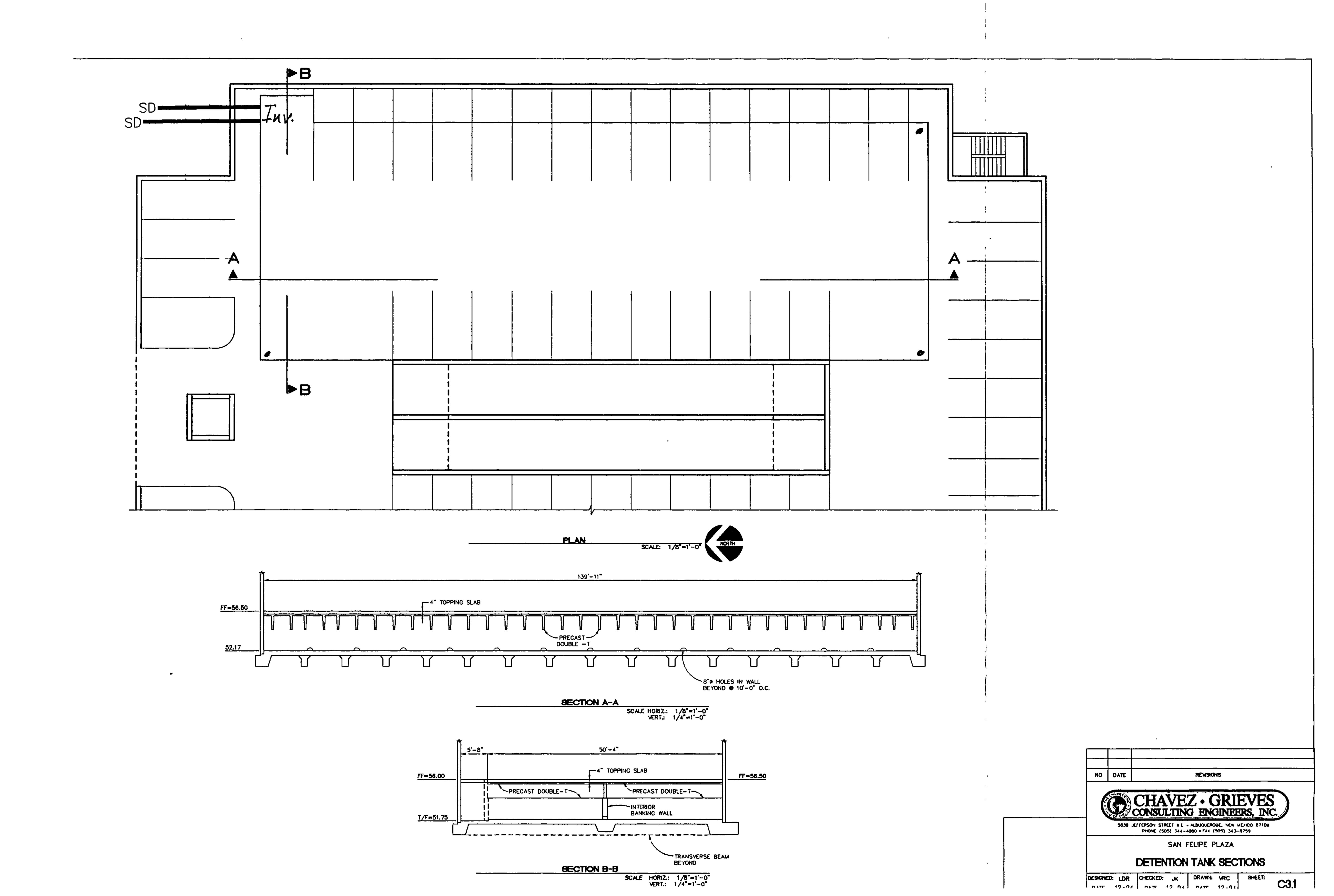
(BELOW EL. 4956)

Surface 0.142 ac-ft

On-site storm drain 0.079 ac-ft

Underground <u>0.611 ac-ft</u>

Total $0.832 \text{ ac-ft} > V_{100} = 0.815 \text{ ac-ft}$



APPENDIX A

AHYHO PROGRAM (AHYHO392) - AMAFCA VERSION OF HYHO - MARCH, 1992 RUN DATE (HON/DAY/YR) = 03/07/1994INPUT FILE = AHYMO.IN

```
****** CHAVEZ-GRIEVES CONSULTING ENGINEERS, INC.
** HYDROLOGIC CALCULATIONS USING THE COMPUTERIZED HYDROLOGIC
   MODEL AHYMO, IN ACCORDANCE WITH SECTION 22.2, HYDROLOGY OF
** THE CITY OF ALBUQUERQUE'S DEVELOPHENT PROCESS HANUAL, JAN.,
   1993.
   AHYMO RUN FOR SAN FELIPE PLAZA--
   ALBUQUERQUE, NEW HEXICO
   FILENAME: C:\SANFELIP\AHYMO.IN/OUT
   100-YEAR, 6-HOUR STORM
   DATE: HARCH 7, 1994
**
**
START
                   0.00
RAINFALL
                   TYPE=1 RAIN QUARTER=0.0 RAIN ONE=1.91
                   RAIN SIX=2.20 RAIN DAY=2.62 DT=0.03333
              COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
                       .033330 HOURS
               DT =
                                          END TIME =
                                                         5.999400 HOURS
                  .0000
                          .0012
                                  .0025
                                          .0038
                                                  .0051
                                                          .0065
                                                                  .0078
                          .0107
                  .0093
                                  .0122
                                          .0137
                                                  .0153
                                                          .0169
                                                                  .0185
                  .0202
                          .0220
                                  .0238
                                                  .0276
                                          .0257
                                                                  .0317
                                                          .0296
                  .0338
                          .0360
                                  .0384
                                                  .0433
                                                          .0460
                                          .0408
                                                                  .0487
                  .0517
                          .0547
                                          .0633
                                  .0580
                                                  .0689
                                                          .0750
                  .1169
                          .1615
                                  .2255
                                         .3130
                                                 .4279
                                                          .5744
                                                                  .7569
                        1.1863 1.2726 1.3455 1.4103
                  .9796
                                                        1.4692 1.5235
```

```
1.5740 1.6210 1.6652 1.7067 1.7459
                                   1.7830 1.8180
1.8512 1.8827 1.9126 1.9409 1.9679
                                   1.9738 1.9793
1.9845 1.9894 1.9941 1.9986 2.0029
                                   2.0070 2.0110
2.0148 2.0185 2.0221 2.0256 2.0290
                                   2.0322 2.0354
2.0385 2.0415 2.0445 2.0473 2.0501
                                   2.0529
2.0582 2.0607 2.0632 2.0657 2.0681 2.0705
2.0751 2.0773 2.0795 2.0817 2.0838 2.0859
2.0900 2.0920 2.0940 2.0959 2.0978 2.0997 2.1016
2.1034 2.1052 2.1070 2.1088 2.1105 2.1123 2.1140
2.1156 2.1173 2.1189 2.1206 2.1222 2.1237 2.1253
2.1269 2.1284 2.1299 2.1314 2.1329 2.1344 2.1358
2.1373 2.1387 2.1401 2.1415 2.1429 2.1443 2.1456
2.1470 2.1483
             2.1497 2.1510 2.1523 2.1536 2.1548
2.1561 2.1574 2.1586 2.1599 2.1611 2.1623 2.1635
2.1647 2.1659 2.1671 2.1683 2.1694 2.1706 2.1717
2.1729 2.1740 2.1751 2.1763 2.1774 2.1785 2.1796
2.1806 2.1817 2.1828 2.1838 2.1849 2.1860 2.1870
2.1880 2.1891 2.1901 2.1911 2.1921 2.1931 2.1941
2.1951 2.1961 2.1971 2.1981 2.1990 2.2000
```

ID=1 HYD=101 DA=.00534 SQ HI

COMPUTE NM HYD

K = .162675HR TP = .133300HR K/TP RATIO = 1.220371 SHAPE CONSTANT, N = 2.916060 UNIT PEAK = 11.013 CFS UNIT VOLUME = .9983 B = 274.91 P60 = 1.9100 AREA = .005340 SQ MI IA = .65000 INCHES INF = 1.67000 INCHES PER HOUR RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 101.00

RUNOFF VOLUME = .45263 INCHES = .1289 ACRE-FEET PEAK DISCHARGE RATE = 4.58 CFS AT 1.533 HOURS BASIN AREA = .0053 SQ. MI.

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420 UNIT PEAK = 9.6980 CFS UNIT VOLUME = .9982 B = $526.28 ext{ } ext{ } ext{P}60 = 1.9100$ AREA = .002456 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

K = .160909HR TP = .133300HR K/TP RATIO = 1.207120 SHAPE CONSTANT, N = 2.945209 UNIT PEAK = 5.9992 CFS UNIT VOLUME = .9974 B = 277.32 P60 = 1.9100 AREA = .002884 SQ MI IA = .64167 INCHES INF = 1.64667 INCHES PER HOUR RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=2 CODE=1

PARTIAL HYDROGRAPH 201.00

RUNOFF VOLUME = 1.15495 INCHES = .3289 ACRE-FEET

PEAK DISCHARGE RATE = 9.49 CFS AT 1.500 HOURS BASIN AREA = .0053 SQ. MI.

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420 UNIT PEAK = 18.974 CFS UNIT VOLUME = .9988 B = 526.28 P60 = 1.9100 AREA = .004806 SQ MI I λ = .10000 INCHES INF = .04000 INCHES PER HOUR RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

K = .130881HR TP = .133300HR K/TP RATIO = .981855 SHAPE CONSTANT, N = 3.596552 UNIT PEAK = 1.3112 CFS UNIT VOLUME = .9903 B = 327.31 P60 = 1.9100 AREA = .000534 SQ HI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=3 CODE=1

HYDROGRAPH FROM AREA 301.00

RUNOFF VOLUME = 1.83849 INCHES = .5236 ACRE-FEET

PEAK DISCHARGE RATE = 14.43 CFS AT 1.500 HOURS BASIN AREA = .0053 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 18:19:23

Circular Channel Analysis & Design Solved with Manning's Equation

Open Channel - Uniform flow

Worksheet Name: SAN FELIPE PLAZA

Comment: SAN FELIPE PLAZA - CONTROL OF FLOW TO 20th

Solve For Full Flow Capacity

Given Input Data:

15'Dia.

Manning's n.... 0.013 Discharge..... 4.57 cfs

Computed Results:

Full Flow Capacity.... 4.57 cfs Full Flow Depth..... 1.25 ft Velocity..... 3.72 fps Flow Area..... 1.23 sf Critical Depth... 0.87 ft Percent Full.... 100.00 % Full Capacity.... 4.57 cfs QMAX @.94D..... 4.91 cfs Froude Number.... FULL

Open Channel Flow Module, Version 2.01 (c) 1990 Haestad Methods, Inc. * 37 Brookside Rd * Waterbury, Ct 06708

STORM WATER MANAGEMENT MODEL (SWMM)

EXTENDED TRANSPORT MODEL (EXTRAN)

To assure that the connector laterals are appropriately sized to allow runoff into and out of the detention vault, the SWMM/Extran model was used. The modeling map indicates the location of the nodes and pipes. The detention system was modeled as two storage facilities connected at nodes 1002 and 1013.

The volume of storage provided is calculated on the following page.

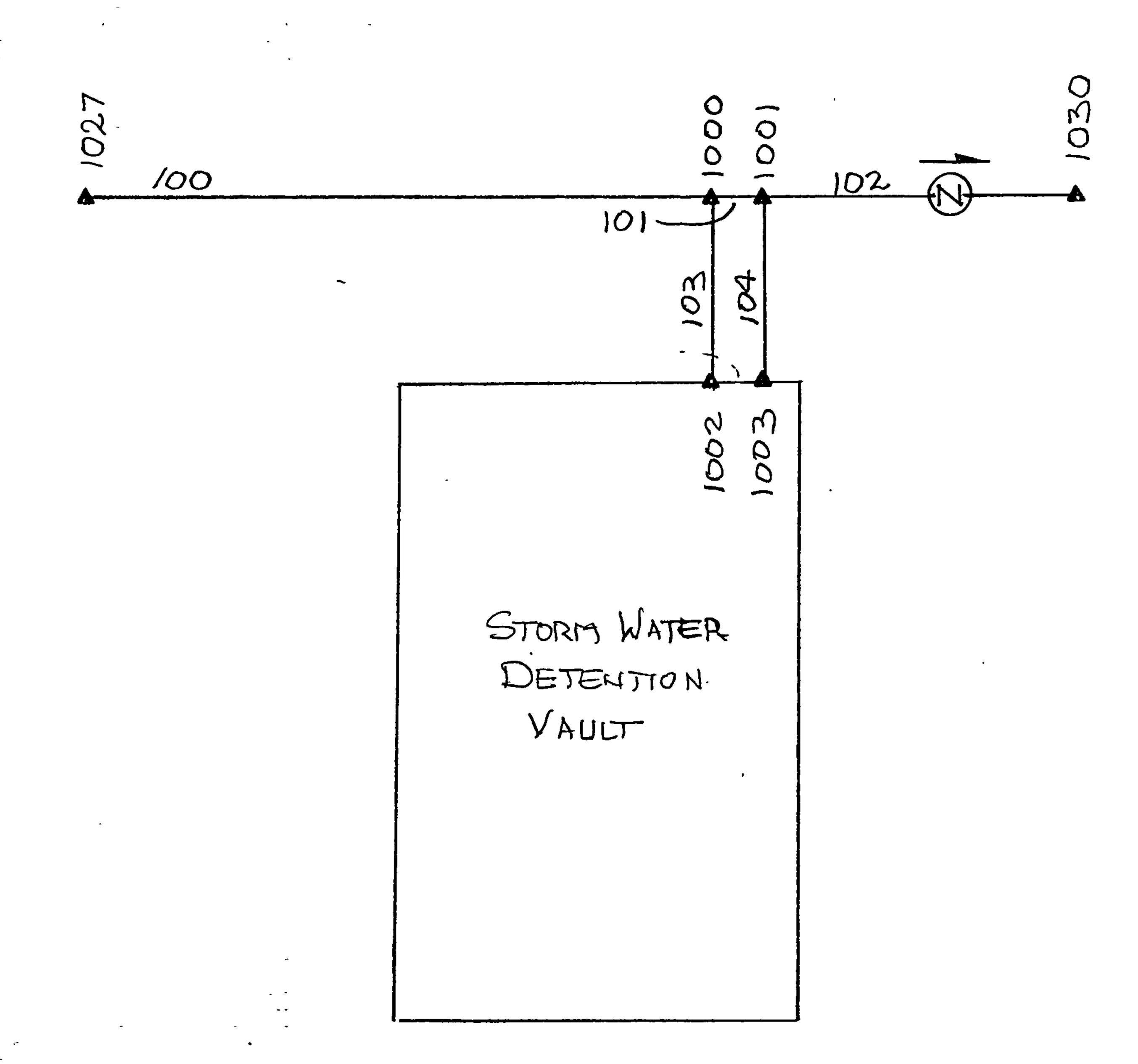
The model shows that the runoff volumes can enter the detention facility. Pipes 100 and 103 are surcharged but the hydraulic grade line remains below ground level.

·C1145			
E CONTRACTOR OF THE PARTY OF TH	CHANGT	CDIEN	EC /
	CIMVEL	- OMEY	
OF CO	CHAVEZ	ENGINEERS,	INC.

5839 JEFFERSON STREET N.E. - ALBUQUERQUE, NEW MEXICO 87109 PHONE (505) 344-4080 - FAX (505) 343-8759

SHEET NO.	OF	
JOB		
SUBJECT	·	
CLIENT	·	
JOB NO.		
BY	DATE	

EXTRAN MODEL MAP



MAX OUTFLOW @ 1030 - 2.7 cfs@ 948 12" pipe 0.5%

Slope



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Grander a series a design of the series

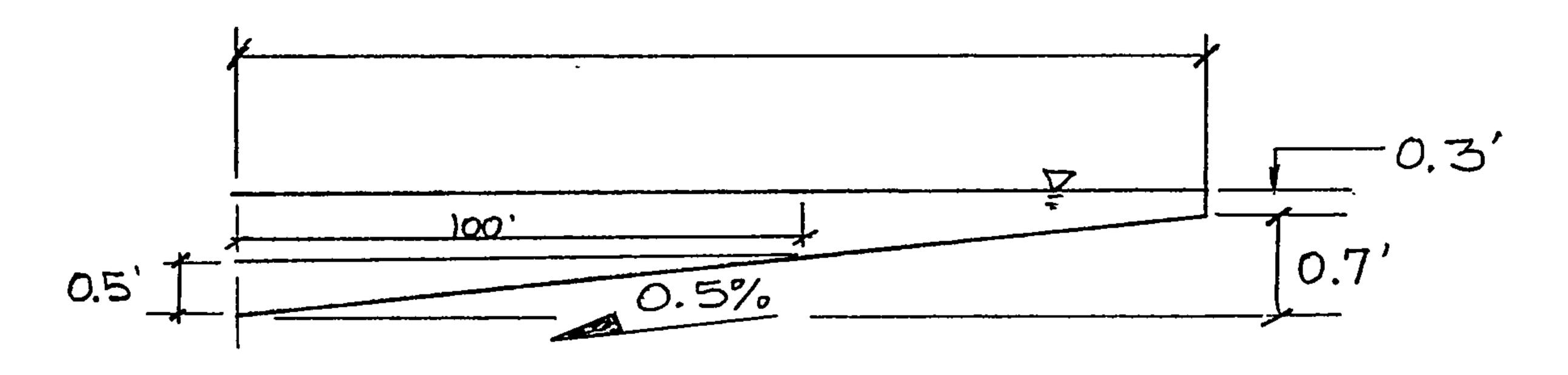
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SHEET NO.	OF
JOB	
SUBJECT	
CLIENT	
JOB NO	
BY	DATE

STORAGE VAULT - DETENTION VOLUME

DIMENSIONS - 139.92'x 50.33'x 5.25' deep
Bottom Slope - 0.5%

SEPARATION WALL-8" Hick Width - Well - 49.66'



WATER DEPTH	Volude	S YOUNE	1/2 V/Pipo
0'	1 i Oct	0 cf -> 0 ac-ft	
.5	1242cF	1242 cf = 0.0285	0.0143
1'	4516cf	5758 ct > 0.132	0.066
2'	6948 cf	12706 cf - 0.292	0.146
3'	6948 cf	19654 ct = 0.451	0.226
4'	6948 cF	26602 ct = 0.611	0.306

The state of the s

```
MM 3 10 11 12
$EXTRAN
A1 'SAN FELIPE PLAZA DETENTION SYSTEM - ANALYSIS OF 100-YR EVENT'
A1 'TO DETERMINE IF SYSTEM FUNCTIONS NORMALLY'
    3250 5 0.0 300 120 120 0
            12.566 30 0.05
            1002 1003
B4 1000 1001
B5 100
            103
        101
        1027 1000 0.0
   100
                                           75 0.0 0.0 0.013 0.0 0.0
C1 101
        1000 1001 0.0
                                          150
                                                         0.013
C1 102
        1001 1030 0.0
                        1 0.0
                                           50
                                                         0.013
                                              0.0
        1000 1002 0.0
                                                         0.013
C1 104
        1001 1003 0.0
                           0.0
                                                         0.013
D1 1000 4954.50 4951.33
                           0.0
D1 1001 4954.70 4951.33
                           0.0
                                  0.0
D1 1002 4955.97 4951.97
                           0.0
                                  0.0
D1 1003 4955.67 4951.97
                                  0.0
                           0.0
D1 1027 4954.70 4952.16
                                  0.0
                           0.0
D1 1030 4955.30 4951.08
                           0.0
                                  0.0
E1 1002 4955.97 -1 6
E2 0.00 0 0.114 0.5 0.1595 1 0.1595 2 0.1595 3 0.1595 4
E1 1003 4955.67 -1 6
E2 0.00 0 0.114 0.5 0.1595 1 0.1595 2 0.1595 3 0.1595 4
K1
    1027
    0.0
            0.0
    1.33
            2.4
           14.4
    1.50
    1.67
    1.75
    5.5
            0.1
    6.0
            0.0
$ENDPROGRAM
```

```
ENVIRONMENTAL PROTECTION AGENCY
                 STORM WATER MANAGEMENT MODEL
                       VERSION 4.0
                     DEVELOPED BY
       *******************
                   METCALF & EDDY, INC.
                  UNIVERSITY OF FLORIDA
              WATER RESOURCES ENGINEERS, INC.
                    SEPTEMBER 1970
                      UPDATED BY
       *******************
                  UNIVERSITY OF FLORIDA
                CAMP DRESSER & MCKEE, INC.
                   1975
          MARCH
                               NOVEMBER
                                        1977
          NOVEMBER
                               SEPTEMBER 1988
           THIS IS A NEW RELEASE OF SWMM. IF ANY
            PROBLEMS OCCUR IN RUNNING THIS MODEL
                  CONTACT WAYNE HUBER
                 UNIVERSITY OF FLORIDA
                  PHONE 1-904-392-0846
       *******************
         THIS IS AN IMPLEMENTATION OF EPA SWMM 4.0
         "NATURE IS FULL OF INFINITE CAUSES WHICH
          HAVE NEVER OCCURED IN EXPERIENCE" da Vinci
       ****************
              DISK OR TAPE ASSIGNMENTS BY BLOCK
               JIN -> INPUT TO A BLOCK
                   -> OUTPUT FROM A BLOCK
              JOUT
       ********************
        BLOCK(1)
                    JIN( 1) 0
                                  JOUT( 1) 0
       **********************
                   SCRATCH DISKS OR TAPES
               THESE CAN BE USED BY ANY BLOCK
       *******************
  NSCRAT(1) NCSRAT(2) NSCRAT(3) NSCRAT(4) NSCRAT(5) NSCRAT(6) NSCRAT(7)
**********************
* ENTRY MADE TO EXTENDED TRANSPORT MODEL (EXTRAN)
* UPDATED BY THE UNIVERSITY OF FLORIDA (UF) AND
 CAMP DRESSER AND MCKEE INC. (CDM), SEPTEMBER, 1988. *
* "Smooth runs the water where the brook is deep."
                Shakespeare, Henry VI, II, III, 1 *
*********************
                                    ****
ENVIRONMENTAL PROTECTION AGENCY
                                          EXTENDED TRANSPORT PROGRAM
                                                                   ****
                                                                             WATER RESOURCES DIVISION
                                    ****
WASHINGTON, D.C.
                                                                   ****
                                                                             CAMP DRESSER & MCKEE INC.
                                     ****
                                                                   ****
                                               ANALYSIS MODULE
                                                                             ANNANDALE, VIRGINIA
```

CONTROL INFORMATION FOR SIMULATION LENGTH OF INTEGRATION STEP IS..... 5. SECONDS CREATE EQUIVALENT CONDUITS BASED ON THE COURANT CONDITION..... USE U.S. CUSTOMARY UNITS FOR I/O... PRINTING STARTS IN CYCLE..... INTERMEDIATE PRINTOUT INTERVALS OF. 120 CYCLES SUMMARY PRINTOUT INTERVALS OF.... 120 CYCLES HOT START FILE MANIPULATION (REDO).. INITIAL TIME..... 0.00 HOURS ITERATION VARIABLES: ITMAX..... SURTOL..... 0.050 DEFAULT SURFACE AREA OF JUNCTIONS.. 12.57 CUB FT. EXPLICIT EXTRAN SOLUTION.(ISOL=0)... A PREISSMAN SLOT IS NOT USED DURING SURCHARGE. NORMAL FLOW OPTION WHEN THE WATER SURFACE SLOPE IS LESS THAN THE GROUND SURFACE SLOPE (KSUPER=0).... NJSW INPUT HYDROGRAPH JUNCTIONS.... PRINTED OUTPUT FOR THE FOLLOWING 4 JUNCTIONS 1000 1001 1002 1003 PRINTED OUTPUT FOR THE FOLLOWING 4 CONDUITS 100 101 103 104 **** EXTENDED TRANSPORT PROGRAM ENVIRONMENTAL PROTECTION AGENCY **** WASHINGTON, D.C. **** ANALYSIS MODULE SAN FELIPE PLAZA DETENTION SYSTEM - ANALYSIS OF 100-YR EVENT

TO DETERMINE IF SYSTEM FUNCTIONS NORMALLY

' *****	**********	*****
*	CONDUIT DATA	*
****	**********	*****

	CONDUIT	LENGTH (FT)	CLASS	AREA MANNING (SQ FT) COEF.	MAX WIDTH (FT)	DEPTH (FT)	JUNCTIONS AT ENDS	INVERT HEIGHT ABOVE JUNCTIONS	TRAPEZOID SIDE SLOPE
1	100	75.	1	0.013 المر 1.77	1.50	1.50	1027 1000	0.00 0.00	
2	101	150.	1	1.77 0.013 0.79 12 0.013	1.50	1.50	1000 1001	0.00 0.00	
3	102	50.	1	0.79 /2, 0.013	1.00	1.00	1001 1030	0.00 0.00	
4	103	48.	1	1.77 /8 0.013	1.50	1.50	1000 1002	0.00 0.00	
5	104	48.	1	1.77 0.013	1.50	1.50	1001 1003	0.00 0.00	

WATER RESOURCES DIVISION

CAMP DRESSER & MCKEE INC.

ANNANDALE, VIRGINIA

WARNING !! UPSTREAM AND DOWNSTREAM FOR CONDUIT REVERSED TO CORRESPOND TO POSITIVE

103

FLOW AND DECREASING SLOPE CONVENTION.

- 104 ===> WARNING !! UPSTREAM AND DOWNSTREAM FOR CONDUIT

REVERSED TO CORRESPOND TO POSITIVE FLOW AND DECREASING SLOPE CONVENTION. EXTENDED TRANSPORT PROGRAM ENVIRONMENTAL PROTECTION AGENCY WATER RESOURCES DIVISION *** **** WASHINGTON, D.C. CAMP DRESSER & MCKEE INC. **** ANALYSIS MODULE *** ANNANDALE, VIRGINIA SAN FELIPE PLAZA DETENTION SYSTEM - ANALYSIS OF 100-YR EVENT TO DETERMINE IF SYSTEM FUNCTIONS NORMALLY JUNCTION DATA GROUND CROWN JUNCTION INVERT QINST DEPTH CONNECTING CONDUITS NUMBER ELEV. ELEV. ELEV. CFS FEET 1000 4954.50 4952.83 4951.33 0.00 0.00 100 101 103 1001 4954.70 4952.83 4951.33 0.00 0.00 101 102 104 4953.47 1002 4955.97 4951.97 0.00 0.00 103 1003 4955.67 4953.47 4951.97 0.00 0.00 104 1027 4953.66 4954.70 4952.16 0.00 0.00 100 1030 4952.08 4955.30 4951.08 0.00 0.00102 **** ENVIRONMENTAL PROTECTION AGENCY EXTENDED TRANSPORT PROGRAM **** WATER RESOURCES DIVISION **** WASHINGTON, D.C. **** CAMP DRESSER & MCKEE INC. **** **** ANALYSIS MODULE ANNANDALE, VIRGINIA SAN FELIPE PLAZA DETENTION SYSTEM - ANALYSIS OF 100-YR EVENT TO DETERMINE IF SYSTEM FUNCTIONS NORMALLY STORAGE JUNCTION DATA STORAGE JUNCTION SURFACE AREA VOLUME CROWN ELEVATION (FT2) (CF) (FT) 1002 -4.00 -1.00 **** **** 1003 -1.00 -3.70 *** ENVIRONMENTAL PROTECTION AGENCY EXTENDED TRANSPORT PROGRAM WATER RESOURCES DIVISION **** WASHINGTON, D.C. *** CAMP DRESSER & MCKEE INC. **** **** ANALYSIS MODULE ANNANDALE, VIRGINIA SAN FELIPE PLAZA DETENTION SYSTEM - ANALYSIS OF 100-YR EVENT TO DETERMINE IF SYSTEM FUNCTIONS NORMALLY SURCHARGE ITERATION SUMMARY MAXIMUM NUMBER OF ITERATIONS IN A TIME STEP.... TOTAL NUMBER OF ITERATIONS IN THE SIMULATION.... 644 SURCHARGE ITERATIONS DURING THE SIMULATION..... MAXIMUM SURCHARGE FLOW ERROR DURING SIMULATION.. 2.37E-01 CFS TOTAL NUMBER OF TIME STEPS DURING SIMULATION.... 3264 0.04 CU FT INITIAL SYSTEM VOLUME =

TOTAL SYSTEM INFLOW VOLUME =

29367.00 CU FT

INFLOW + INITIAL VOLUME = 29367.03 CU FT

JUNCTION OUTFLOWS/STREET FLOODING

JUNCTION OUTFLOW, FT3
1027 32.14

TOTAL SYSTEM OUTFLOW = 32.14 CU FT VOLUME LEFT IN SYSTEM = 29200.85 CU FT OUTFLOW + FINAL VOLUME = 29232.99 CU FT ERROR IN CONTINUITY, PERCENT = 0.46

ENVIRONMENTAL PROTECTION AGENCY *** EXTENDED TRANSPORT PROGRAM *** WATER RESOURCES DIVISION *** CAMP DRESSER & MCKEE INC. *** ANNANDALE, VIRGINIA

SAN FELIPE PLAZA DETENTION SYSTEM - ANALYSIS OF 100-YR EVENT TO DETERMINE IF SYSTEM FUNCTIONS NORMALLY

TIME	JUNCTION GRND	1000 4954.50	JUNCTION GRND	1001 4954.70	JUNCTIO GRND	N 100. 4955.97	2 JUNCT I GRND	ON 1003 4955.67
HR:MIN	ELEV	DEPTH	ELEV	DEPTH	ELEA	DEPTH	ELEV	DEPTH
0-10	/OE1 //	 0 77	/OF4 F7	0.24	/054.07			
0:10	4951.66	0.33	4951.57	0.24	4951.97	0.00	4951.97	0.00
0:20	4952.10	0.77	4951.81	0.48	4952.13	0.16	4952.01	0.04
0:30	4952.09	0.76	4951.96	0.63	4952.21	0.24	4952.20	0.23
0:40	4951.96	0.63	4951.96	0.63	4952.35	0.38	4952.28	0.31
0:50	4952.48	1.14	4952.33	1.00	4952.44	0.47	4952.36	0.39
1: 0	4952.36	1.03	4952.36	1.03	4952.54	0.57	4952.46	0.49
1:10	4952.70	1.37	4952.58	1.25	4952.65	0.68	4952.56	0.59
1:20	4952.75	1.42	· · · · · · · ·	1.36	4952.77	0.79	4952.67	0.70
1:30	4953.41	2.08	4953.00	1.67	4953.21	1.24	4952.98	1.01
1:40	4953.68	2.35	4953.47	2.14	4953.67	1.70	4953.41	1.44
1:50	4953.68	2.35	4953.66	2.33	4953.67	1.70	4953.65	1.68
2: 0	4953.74	2.41	4953.73	2.40	4953.73	1.76	4953.73	1.76
2:10	4953.80	2.47	4953.80	2.47	4953.80	1.83	4953.79	1.82
2:20	4953.87		4953.86	2.53	4953.86	1.89	4953.86	1.89
2:30	4953.93	2.60	4953.92	2.59	4953.92	1.95	4953.92	1.95
2:40	4953.98	2.65	4953.98	2.65	4953.98	2.01	4953.98	2.01
2:50	4954.04	2.71	4954.03	2.70	4954.04	2.07	4954.03	2.06
3: 0	4954.09	2.76	4954.08	2.75	4954.09	2.12	4954.08	2.11
3:10	4954.14	2.81	4954.13	2.80	4954.14	2.17	4954.13	2.16
3:20	4954.18	2.85	4954.18	2.85	4954.18	2.21	4954.18	2.21
3:30	4954.22	2.89	4954.22	2.89	4954.22	2.25	4954.22	2.25
3:40	4954.26	2.93	4954.26	2.93	4954.26	2.29	4954.26	2.29
3:50	4954.30	2.97	4954.30	2.97	4954.30	2.33	4954.30	2.33
4: 0	4954.33	3.00	4954.33	3.00	4954.33	2.36	4954.33	2.36
4:10	4954.36	3.03	4954.36	3.03	4954.36	2.39	4954.36	2.39
4:20	4954.39	3.06	4954.39	3.06	4954.39	2.42	4954.39	2.42
4:30	4954.41	3.08	4954.41	3.08	4954.41	2.44	4954.41	2.44
MEAN	/OEZ ZZ	2 4/	/OE7 77	2 00	/OE7 /4	4 57	/057 77	4 46
MEAN			4953.33		4953.41		4953.37	1.49
	4954.42 <u>-</u>	,·				- 2.45		2.45
MINIMUM	4951.33	0.00	4957.55	U.UU	4951.97	0.00	4951.97	0.00

ENVIRONMENTAL PROTECTION AGENCY *** EXTENDED TRANSPORT PROGRAM *** WATER RESOURCES DIVISION *** CAMP DRESSER & MCKEE INC. *** ANNANDALE, VIRGINIA

SAN FELIPE PLAZA DETENTION SYSTEM - ANALYSIS OF 100-YR EVENT TO DETERMINE IF SYSTEM FUNCTIONS NORMALLY

***** SUMMARY STATISTICS FOR JUNCTIONS *****

JUNCTION NUMBER	GROUND ELEVATION (FT)	UPPERMOST PIPE CROWN ELEVATION (FT)	MAXIMUM COMPUTED DEPTH (FT)	C	ME F IRENCE MIN.	FEET OF SURCHARGE AT MAX DEPTH	FEET MAX. DEPTH IS BELOW GROUND ELEVATION	LENGTH OF SURCHARGE (MIN)	LENGTH OF FLOODING (MIN)	MAXIMUM JUNCTION AREA ACRES
1000	4954.50	4952.83	3.09	4	32	1.59	0.00	100 7	~ ~ ~ ~ ~ ~	· · · · · · · · · · · · · · · · · · ·
1001	4954.70	_	,				0.08	188.7	0.0	6.622E-09
		4952.83	3.09	4	31	1.59	0.28	185.6	0.0	6.622E-09
1002	4955.97	4955.97	2.45	4	32	0.00	1.55	0.0	0.0	3.668E-06
1003	4955.67	4955.67	2.45	4	32	0.00	1.25			
								0.0	0.0	3.668E-06
1027	4954.70	4953.66	. ~ 2.5 4~.		29	1.04	0.00		1.8	6.622E-09
1030	4955.30	4952.08	3.34	4	32	2.34	0.88	237.7	0.0	6.622E-09

ENVIRONMENTAL PROTECTION AGENCY *** EXTENDED TRANSPORT PROGRAM *** WATER RESOURCES DIVISION *** CAMP DRESSER & MCKEE INC. *** ANNANDALE, VIRGINIA

SAN FELIPE PLAZA DETENTION SYSTEM - ANALYSIS OF 100-YR EVENT TO DETERMINE IF SYSTEM FUNCTIONS NORMALLY

TIME HR:MIN	CONDUIT	100 VELOC.	CONDUIT	101 VELOC.	CONDUIT	103 VELOC.	CONDUIT	104 VELOC.
0:10	0.29	1.51	0.26	1.11	0.00	0.00	0.00	0.00
0:20	0.60	1.12	0.86	0.92	0.00	0.00	0.00	0.00
0:30	0.90	1.58	2.01	2.47	0.70	0.61 1.31	0.02	0.07
0:40	1.20	2.47	0.57	0.79	0.70	-0.59	0.62	1.00
0:50	1.62	1.49	0.27	0.08	-2.84	-2.39	0.92	1.16
1: 0	2.05	2.47	-0.02	-0.01	-0.11	— -	-2.77	-2.93
1:10	1.91	1.77	0.48	0.17	-0.82	-0.78	1.10	0.96
1:20	2.43	1.81	1.00	0.54	· -	-0.50	-0.05	0.01
1:30	13.82	7.84	⁴ 5.43	3.06	-1.31 -8.36	-0.99 -4.90	-1.00	-0.71
1:40	6.29	3.60	4.05	2.30	-2.24		(-5.39 î	- -
1:50	1.67	0.94	1.51	0.86	-0.16	-1.30	-4.04	-2.30
2: 0	1.59	0.90	0.77	0.44	-0.81	-0.08	-1.50	-0.86
2:10	1.52	0.86	0.76	0.43	-0.75	-0.46 -0.43	-0.77	-0.44
2:20	1.45	0.82	0.73	0.43		-0.42	-0.76	-0.43
2:30	1.38	0.78	0.69	0.39	-0.72	-0.41	-0.72	-0.41
2:40	1.31	0.74			-0.69	-0.39	-0.69	-0.39
2:50			0.66	0.37	-0.65	-0.37	-0.65	-0.37
•	1.24	0.70	0.62	0.35	-0.61	-0.35	-0.62	-0.35
3: 0	1.16	0.66	0.59	0.33	-0.58	-0.33	-0.59	-0.33
3:10	1.09	0.62	0.55	0.31	-0.54	-0.31	-0.55	-0.31
3:20	1.02	0.58	0.52	0.29	-0.51	-0.29	-0.51	-0.29
3:30	0.95	0.54	0.48	0.27	-0.47	-0.27	-0.48	-0.27
3:40	0.88	0.50	0.44	0.25	-0.44	-0.25	-0.44	-0.25
3:50	0.81	0.46	0.41	0.23	-0.40	-0.23	-0.41	-0.23
4: 0	0.74	0.42	0.37	0.21	-0.37	-0.21	-0.37	-0.21
4:10	0.67	0.38	0.34	0.19	-0.33	-0.19	-0.34	-0.19
4:20	0.60	0.34	0.30	0.17	-0.29	-0.17	-0.30	-0.17
4:30	0.53	0.30	0.26	0.15	-0.26	-0.15	-0.27	-0.15
MEAN	1.79	1.31	0.90	0.57	-0.88	-0.64	-0.88	-0.63
MAXIMUM		7.85	5.55	3.14	1.72	2.49	1.43	2.23
MINIMUM	0.00	0.00	-1.31	-2.11	-8.49	-19.92	-5.61	-21.83
TOTAL	2.93E+04	0.00	1.46E+04		-1.43E+04		-1.43E+04	-21.03

ENVIRONMENTAL PROTECTION AGENCY *** EXTENDED TRANSPORT PROGRAM *** WATER RESOURCES DIVISION *** CAMP DRESSER & MCKEE INC. *** ANNANDALE, VIRGINIA

SAN FELIPE PLAZA DETENTION SYSTEM - ANALYSIS OF 100-YR EVENT TO DETERMINE IF SYSTEM FUNCTIONS NORMALLY

OF GROU	ND		CONDUIT	MAXIMUM	7	IME	MAXIMUM	T	IME	RATIO OF	MAXIMU	M DEPTH ABOVE	LENGTH
SLOPE	DESIGN	DESIGN	VERTICAL	COMPUTED	OF	- C	OMPUTED	OF	MA	X. TO INV	ERT AT COND	UIT ENDS SUPE	ERCRITICAL
CONDUIT NUMBER (FT/FT)	FLOW_ (CFS)	VELOCITY (FPS)	DEPTH (IN)	FLOW - (CFS)		RENCE MIN.	VELOCITY (FPS)		JRENCE, MIN.	DESIGN	UPSTREAM (FT)	DOWNSTREAM (FT)	FLOW (MIN)
100 0.01107	11.05	6.25	18.00	13.86	1	29	7.85	1	29	1.25	2.54	3.09	38.2
101 0.00000	0.00	0.00	18.00	5.55	1	31	3.14	1	31	0.00	3.09	3.09	3.7
102 0.00500	2.52	3.21	12.00	1.53	0	23	2.53	0	23	0.61	3.09	3.34	1.2
103 0.01334	12.13	6.86	18.00	-8.49	1	29	-19.92	0	25	-0.70	2.45	3.09	4.8
104 0.01334	12.13	6.86	18.00	-5.61	0	22	-21.83	0	22	-0.46	2.45	3.09	8.1

ENVIRONMENTAL PROTECTION AGENCY *** EXTENDED TRANSPORT PROGRAM *** WATER RESOURCES DIVISION *** CAMP DRESSER & MCKEE INC. *** ANNANDALE, VIRGINIA

0.00

0.00

SAN FELIPE PLAZA DETENTION SYSTEM - ANALYSIS OF 100-YR EVENT TO DETERMINE IF SYSTEM FUNCTIONS NORMALLY

LENGTH LENGTH LENGTH LENGTH OF OF OF UPSTR. OF DOWNSTR. CONDUIT DRY CRITICAL SUBCRITICAL CRITICAL NUMBER FLOW(MIN) FLOW(MIN) FLOW(MIN) FLOW(MIN) 100 271.92 0.00 0.08 0.00 101 0.83 271.17 0.00 0.00 102 3.08 268.92 0.00 0.00

256.33

104 16.33 255.67 0.00 0.00 ===> EXTENDED TRANSPORT MODEL SIMULATION ENDED NORMALLY.

===> CORRECT BLOCK NAME NOT FOUND - ' - PROGRAM STOPPED.

===> YOUR INPUT FILE WAS NAMED: plaza4.dat ===> YOUR OUTPUT FILE WAS NAMED: plaza4.out

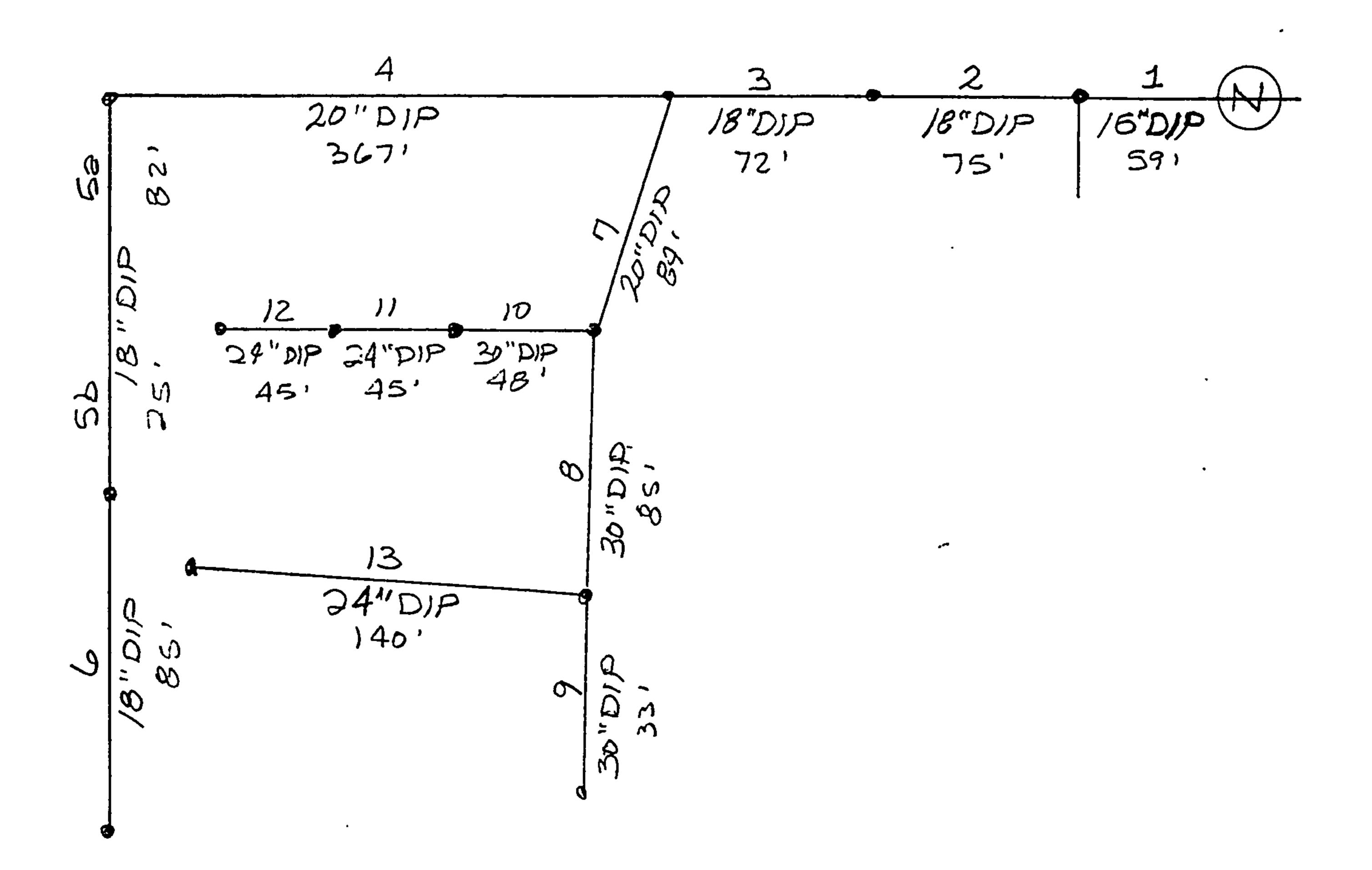
15.67

103



5839 JEFFERSON STREET N.E. • ALBUQUERQUE, NEW MEXICO 87109 PHONE (505) 344-4080 • FAX (505) 343-8759

SHEET NO.	OF
JOB	
SUBJECT	·
CLIENT	
JOB NO	
BY	DATE



TOTAL ON-SITE STORAGE VOLUME PROVIDED

SEGMENT	PIPE SIZE (DIP - IN)	PIPE ID (IN)	VOL./LF (CF)	LENGTH (FT)	VOLUME (CF)	CUM. VOL (CF)	(AC-FT) VOLU	ON-SITE VOLUME (AC-FT)
1	16	16.72	1.525	59	89.960		(, , , , , , , , , , , , , , , , , , , 	• /
2	18	18.80	1.928	75	144.579	234.539	0.0054	
3	18	18.80	1.928	72	138.795	373.334	0.0086	
4	20	20.88	2.378	367	872.678	1246.013	0.0286	
5A	18	18.80	1.928	82	158.073	1404.085	0.0322	
5B	18	18.80	1.815 *	25	45.375	1449.460	0.0333	
, 6	18	18.80	1.380 *	85	117.300	1566.760	0.0360	
7	20	20.88	2.378	84	199.741	1766.501	0.0406	
8	30	31.22	5.316	85	451.868	2218.369	0.0509	
9	30	31.22	5.316	33	175.431	2393.801	0.0550	
10	30	31.22	5.316	48	255.173	2648.973	0.0608	
.11	24	25.04	3.420	45	153.889	2802.862	0.0643	
12	24	25.04	3.420	45	153.889	2956.752	0.0679	
13	24	25.04	3.420	140	478.766	3435.518	0.0789	
VAULT					26602	30037.518	0.6896 0	.690

SURFACE

* NOTE: PIPE NOT FULL

0.832 > 0.815

APPENDIX B

January 25, 1995

Mr. John Curtin, PE
City of Albuquerque
Public Works Department/Hydrology
PO Box 1293
Albuquerque, New Mexico 87103

RE: San Felipe Plaza Development
Drivepads on Mountain and 20th Street

Dear Mr. Curtin:

Thank you for your assistance yesterday. Per our discussion I have assembled the two attached exhibits. The first is a copy of the Floodway Map topography. The second exhibit is the pre-construction site survey prepared by Aldrich Land Surveying In December 1993.

The Floodway Map clearly shows that a high spot exists in Mountain Road in the vicinity of the eastern drivepad location and that slope exists to convey minor flows away from the drivepad in question. The pre-construction survey also indicates that a high spot exists in Mountain near the 57.20 flow line elevation 72' east of the drivepad centerline. This exhibit shows flowline slopes of 0.36% toward the east and 0.39% toward the west from the 57.20 high point.

By our calculations for the drainage area 72' long and 26' wide (from the high spot on Mountain to the centerline of drivepad and back of sidewalk to the pavement crown on Mountain) the 10-year and 100-year flows are 0.14 cfs and 0.21 cfs respectively per the attached AHYMO printout. Using DPM Plate 22.3 D-2, the depth of flow in the gutter would be less than 0.17 feet in during a 100-year storm.

Based on the above information, we are requesting a variance from the 0.87' water block requirement for the eastern drivepad on Mountain Road to allow the drivepad to be constructed with the 0.35' water block as designed in the approved drainage plan for this project.

January 25, 1995 Mr. John Curtin, PE San Felipe Plaza Development Page 2

The western drivepad on Mountain Road and the one on 20th Street will be adjusted to provide the standard 0.87' water block as required by the City.

If you have any questions or comments, please call me at 858-3165.

Sincerely,

CHAVEZ-GRIEVES CONSULTING ENGINEERS, INC.

Larry D. Read, PE

AHYMO PROGRAM (AHYMO993) - AMAFCA VERSION OF HYMO - SEPTEMBER, 1993
RUN DATE (MON/DAY/YR) = 01/25/1995
START TIME (HR:MIN:SEC) = 09:24:32
USER NO.= LRY_READ.S93
INPUT FILE = SFDRIVE.DAT

START

TIME=0.0 PUNCH CODE=0 PRINT LINES=0

SAN FELIPE PLAZA MOUNTAIN RD DRIVE PAD FILE NAME: SFDRIVE.DAT

--- DEVELOPED CONDITIONS ---- USING - 6 HOUR STORM ----- PER COA DPM SECTION 22.2 ---

* --

RAINFALL

TYPE=-1 RAIN QUARTER=0.0 RAIN ONE=2.01 RAIN SIX=2.35 RAIN DAY=2.75 DT=.033333

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.

DT = .0333333 HOURS END TIME = 5.999940 HOURS

*S 100-YEAR STORM _____ *S ONE HALF MOUNTAIN ROAD NW : COMPUTE NM HYD ID=1 HYD NO=101.1 DA=.000067 PER A=0

ID=1 HYD NO=101.1 DA=.000067 PER A=0
PER B=0 PER C=0 PER D=100 TP=-0.133 RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420 UNIT PEAK = .26512 CFS UNIT VOLUME = .9550 B = 526.28 P60 = 2.0100 AREA = .000067 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD

ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = 2.11535 INCHES = .0076 ACRE-FEET
PEAK DISCHARGE RATE = .21 CFS AT 1.500 HOURS BASIN AREA = .0001 SQ. MI.

RAINFALL

*

TYPE=-1 RAIN QUARTER=0.0 RAIN ONE=1.34 RAIN SIX=1.57 RAIN DAY=1.83 DT=.033333

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.

DT = .033333 HOURS END TIME = 5.999940 HOURS

*S 10-YEAR STORM

*S ONE HALF MOUNTAIN ROAD NW

COMPUTE NM HYD ID=2 HYD NO=101.2 DA=.000067 PER A=0

PER B=0 PER C=0 PER D=100 TP=-0.133 RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420 UNIT PEAK = .26512 CFS UNIT VOLUME = .9550 B = 526.28 P60 = 1.3400 AREA = .000067 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD

ID=2 CODE=1

PARTIAL HYDROGRAPH 101.20

RUNOFF VOLUME = 1.33764 INCHES = .0048 ACRE-FEET
PEAK DISCHARGE RATE = .1.14 CFS AT 1.500 HOURS BASIN AREA = .0001 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 09:24:33

AHYMO SUMMARY TABLE (AHYMO993) - AMAFCA VERSION OF HYMO - SEPTEMBER, 1993 INPUT FILE = SFDRIVE.DAT

RUN DATE (MON/DAY/YR) =01/25/1995 USER NO.= LRY_READ.S93

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE :	-
*S 100-YEAR										TIME= RAIN6=	.00 2.350
COMPUTE NM	TYPE= 1	-	1	.00007	.21	.008	2.11535	1.500	4.923	PER IMP= RAIN6=	100.00 1.570
	MOUNTAIN ROAD NW	-	2	.00007	.14	.005	1.33764	1.500	3.254	PER IMP=	100.00





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 27, 1995

Joe P Kelley, PE CHAVEZ-GRIEVES 5639 Jefferson St NE Albuquerque, NM 87109

RE: ENGINEER'S CERTIFICATION FOR SAN FELIPE PLAZA (J-13/D4)

RECEIVED OCTOBER 19, 1995 FOR CERTIFICATE OF OCCUPANCY

ENGINEER'S STAMP DATED 10/19/95

Dear Mr. Kelley:

Based on the information included in the submittal referenced above, City Hydrology accepts the Engineer's Certification of grading & drainage for a Permanent Certificate of Occupancy at 2001, 2011, 2021, 2031, 2101 & 2103 Mountain Road NW.

If I can be of further assistance, You may contact me at 768-2727.

Sincerely,

John P. Curtin, P.E.

Civil Engineer/Hydrology

c: Andrew Garcia

Tom Woodsen, S.C. Sherman & Co, 6400 Indian School NE 87110

DRAINAGE INFORMATION

PROJECT TITLE SAN FELIPE PLAZA	ZONE ATLAS/DRNG. FILE #: 5/3/p-9
DRB#: EPC #:	WORK ORDER #:
LEGAL DESCRIPTION: 2/0/2	WORK ORDER #: 103,#94//898 14/18/
CITY ADDRESS: 2000 BLK OF MYN Rp. NW 2	001,2011,202/,203/,
	CONTACT: JOE KELLEY
ADDRESS: 5639 JEFFERSON NE	PHONE: 344-4080
OWNER: S.C. SHERNAN CO.	CONTACT: 70M WOURSEN
ADDRESS:	PHONE: 88/-8900
ARCHITECT: ULIBARA & Assoc.	CONTACT:
ADDRESS:	PHONE:
SURVEYOR: DEICH SURVEYING	CONTACT:
ADDRESS:	PHONE:
CONTRACTOR: BRADBURY & STAMM	CONTACT:
ADDRESS:	PHONE: 765-1200
DRAINAGE REPORT DRAINAGE PLAN CONCEPTUAL GRADING & DRAINAGE PLAN GRADING PLAN EROSION CONTROL PLAN X ENGINEER'S CERTIFICATION OTHER	S. DEV. PLAN FOR BLDG. PRMT, APPROVAL SECTOR PLAN APPROVAL FINAL PLAT APPROVAL FOUNDATION PERMIT APPROVAL BUILDING PERMIT APPROVAL CERTIFICATE OF OCCUPANCY APPROVAL GRADING PERMIT APPROVAL PAVING PERMIT APPROVAL S.A.D. DRAINAGE REPORT DRAINAGE REQUIREMENTS
	OTHER (SPECIFY)
DATE SUBMITTED: 10/19/95	
BY: LARRY READ	

OCT 1 9 1995



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

August 4, 1995

Joe P Kelley, PE CHAVEZ-GRIEVES 5639 Jefferson St NE Albuquerque, NM 87109

RE:

ENGINEER'S CERTIFICATION FOR SAN FELIPE PLAZA (J-13/D4).
RECEIVED JULY 25, 1995 FOR CERTIFICATE OF OCCUPANCY
ENGINEER'S STAMP DATED 7/25/95

Dear Mr. Kelley:

Based on the information included in the submittal referenced above, City Hydrology accepts the Engineer's Certification of grading & drainage for a 30 day Temporary Certificate of Occupancy. The following comments must be addressed before the Engineer's Certification is accepted for a Permanent Certificate of Occupancy:

On the Detention Tank Sections sheet used as Exhibit "A" for the Private Facilities Drainage Covenant, provide as-built elevations at all four corners of the detention tank and the as-built tank volume. All inverts of the private storm drain must be as-built. Attached is a marked up copy of the Plan indicating additional as-built elevation required.

As-built elevations for the "HI PT" at the 20th St entrance indicate that the water block was not properly constructed. The as-built water block is about 0.12' instead of the required 0.87'. Justify why the as-built water block is adequate at this location.

If I can be of further assistance, You may contact me at 768-2727.

Sincerely,

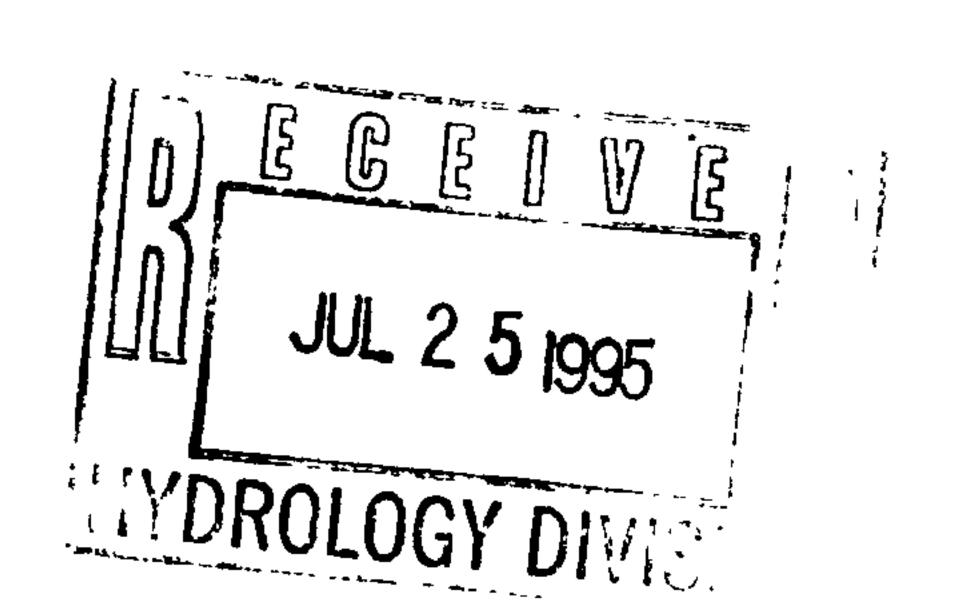
John P. Curtin, P.E.

Civil Engineer/Hydrology

c: Andrew Garcia

Tom Woodsen, S.C. Sherman & Co, 6400 Indian School NE 87110

PRAINAGE IN	FORMATION 1-/3
PROJECT TITLE SAN FEUPE PLAZ	A ZONE ATLAS/DRNG. FILE #: 5/3/5
DRB#: EPC #:	WORK ORDER #:
LEGAL DESCRIPTION:	
CITY ADDRESS: 2000 BLock of Mountain	RdNN
CITY ADDRESS: 2000 BLOCK of Mountain ENGINEERING FIRM: CHAVEZ-GRIEVES	CONTACT: J. Kelley
ADDRESS: 5639 JEFFERSON NE	PHONE: 344-4080
OWNER: Jon woodsen stau Stomm	CONTACT: ZOM Woodsen
ADDRESS:	PHONE: 881-8900
ARCHITECT: ULSbavvi & Assoc	CONTACT: E Ulibarri
ADDRESS: 2.0. BOX 1159	PHONE: 242-15157
SURVEYOR: ALDRICH SURVEY	CONTACT: ALDACH
ADDRESS:	PHONE: 884 1990
CONTRACTOR: BRADBULY & STAU	CONTACT: <u>765-/280</u>
ADDRESS:	PHONE:
TYPE OF SUBMITTAL:	HECK TYPE OF APPROVAL SOUGHT:
DRAINAGE REPORT	SKETCH PLAT APPROVAL
DRAINAGE PLAN	PRELIMINARY PLAT APPROVAL
CONCEPTUAL GRADING & DRAINAGE PLAN _	S. DEV. PLAN FOR SUB'D. APPROVAL
GRADING PLAN	S. DEV. PLAN FOR BLDG. PRMT, APPROVAL
EROSION CONTROL PLAN	SECTOR PLAN APPROVAL
ENGINEER'S CERTIFICATION _	FINAL PLAT APPROVAL
OTHER	FOUNDATION PERMIT APPROVAL
•	BUILDING PERMIT APPROVAL
PRE-DESIGN MEETING:	CERTIFICATE OF OCCUPANCY APPROVAL
YES	GRADING PERMIT APPROVAL
<u> </u>	PAVING PERMIT APPROVAL
COPY PROVIDED	S.A.D. DRAINAGE REPORT
	DRAINAGE REQUIREMENTS
	OTHER (SPECIFY)
DATE SUBMITTED: $7-25-75$	
BY:	



The



City of Albuquerque

P. O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103
PUBLIC WORKS DEPARTMENT

July 21, 1995

CERTIFICATE OF COMPLETION AND ACCEPTANCE

San Felipe Plaza Ltd. Liability Co. 6400 Indian School Rd NE #204 Albuquerque, NM 87197

RE: PROJECT NO. 4995.81, SAN FELIPE PLAZA, MAP NO. J-13-Z

Dear Sir:

This is to certify that the City of Albuquerque accepts Project No. 4995.81 as being completed according to approved plans and construction specifications. Please be advised this certificate of completion and acceptance shall only become effective upon final plat approval and filing in the office of the Bernalillo County Clerk's Office.

The project is described as follows:

- Construction of a bus bay entailing curbs and gutters, asphalt paving and valley gutters on Mountain Road just west of 20th Street.
- Modification of the intersection entailing curb returns, median, and traffic signalization at Mountain Road and San Felipe Street.

The contractor's correction period began the date of this letter and is effective for a period of one (1) year.

Rick Roybal, P.E

City Engineer,

Engineering Group

Public Works Department

Sincerely

Russell B. Givler, P.E.

Chief Construction Engineer,

Engineering Group

Public Works Department

Ltr. San Felipe Plaza Page 2 July 21, 1995

Chavez Grieves Consultant Eng. cc: Condore Construction Fred Aguirre, Engineering Group, PWD Theresa Lucero, Engineering Group, PWD Terri Martin, Engineering Group, PWD Martin Barker, Engineering Group, PWD Steve Gonzales, Special Assessments, DFM Sam Hall, Operations Group, PWD Jim Fink, Operations Group, PWD Dean Wall, Engineering Group, PWD Stuart Reeder, Water/Wastewater Group, PWD Ray Chavez, Traffic Engineering, PWD Josie Gutierrez, New Meter Sales, Finance Group, PWD Richard Zamora, Engineering Group, PWD f/Project No. 4995.81 f/Readers f/Warranty:Contract

95036478

PRIVATE FACILITY DRAINAGE COVENANT

This Drainage Covenant, between [state the name of the present real property owner exactly as shown on the real estate document conveying title to the present owner and state the legal status of the owner, for example, "single person," "husband and wife," "comporation of the State of New Mexico" "partnership!"; San Felipe Plaza Ltd., Liability Company

whose address is 6400 Indian School Rd., NE, Suite 204, NM 87110 and the City of Albuquerque, a New Mexico municipal corporation ("City"), whose address is P. O. Box 1293, Albuquerque, New Mexico 87103, is made in Albuquerque, Bernalillo County, New Mexico and is entered, into as of the date Owner signs this Covenant.

1. Recital. The Comer is the owner of the following described real property littled at [give legal description, and street address:] Tract C - Sheraton Old Town Complex, 2000 Block of Mountain Road NW.

in Bernalillo County, New Mexico (the "Property").

Pursuant to City ordinances, regulations and other applicable laws, the Cwner is required to construct and maintain certain drainage facilities on the Property, and the parties wish to enter into this Covenant to establish the obligations and responsibilities of the parties.

- 2. Description and Construction of Drainage Facility. The Cwner shall construct the following "Drainage Facility" within the Property at the Owner's sole expense in accordance with the standards, plans and specifications approved by the City: Onsite storm sewer system with associated inlets and a subsurface storm runoff detention facility with a combined storage volume of 0.6397 ac-ft below 100 year fleed plain elevation of 4956.

 The Drainage Facility is some particularly described in Exhibit A attached hereto and made a part hereof.
- 3. Maintenance of Drainage Facility. The Owner shall maintain the Drainage Facility at the Owner's sole cost in accordance with the approved Drainage Report and plans.
- 4. Benefit to Property. The Owner acknowledges and understands that the Drainage Facility required herein to be constructed on the Owner's property is for the private benefit

and protection the Owner's property and that failure to maintain such facility could result in damage or loss to the Property.

- 5. Inspection of Drainage Facility. The City shall have no duty or obligation whatscever to perform any inspection, maintenance or repair of the Drainage Facility, it being the duty of the Cwner, its heirs, successors and assigns to construct and maintain the facility in accordance with approved plans and specifications.
- 6. Liability of City The Owner understands and agrees that the City shall not be liable to the Owner, its heirs, successors or assigns, or to any third parties for any damages resulting from the Owner's failure to construct, maintain or repair the Drainage Facility.
- 7. Indemnification: The Owner owns and controls the Drainage Facility and shall not permit the Drainage Facility to constitute a hazard to the health or safety of the general public. The Owner agrees to indemnify, defend and hold harmiess the City, its officials, agents and employees, from any claims, actions, suits or other proceedings arising from or out of the negligent acts or emissions of the Owner, its agents, representatives, contractors or subcontractors or arising from the failure of the Owner, its agents, representatives, contractors or subcontractors to perform any act or duty required of the Owner herein; provided, however, to the extent, if at all. Section 56-7-1 NMSA 1978 is applicable to this Agreement; this Agreement to indemnify will not extend to liability, claims, damages, losses or expenses, including attorney's fees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications by the respective indemnitee, or the agents or employees of the respective indemnitee; or (2) the giving of or the failure to give direction or instructions by the respective indemnitee, where such giving or failure to give directions or instructions is the primary cause of bodily injury to persons or damage to property.
- 8. Assessment. Nothing in this Covenant shall be construed to relieve the Owner, its beirs, assigns and successors from an assessment against the Owner's Property for improvements to the Property under a duly authorized and approved Special Assessment District. The parties specifically agree that the value of the Drainage Facility will not reduce the amount assessed by the City.
- 9. Binding on Owner's Property. The covenants and obligations of the Cyner set forth herein shall be binding on the Öwner, its heirs, assigns and successors and on the Owner's Property and constitute covenants running with the Owner's 88F -2- APPROVED AS TO FORM LEGAL DEPT. 8/19/88

and the second s

Property until released by the City. This Covenant can only be released by the City's Chief Administrative Officer with the concurrence of the City Engineer.

- 10. Entire Covenant. This Covenant contains the entire agreement of the parties and supersedes any and all other agreements or understandings, oral or written, whether previous to the execution hereof or contemporaneous herewith.
- 11. Changes to Covenant. Changes to this Covenant are not binding unless made in writing, signed by both parties.
- 12. Effective Date of Covenant. This Covenant shall be effective as of the date of signature of the Owner.

OWNER: SAW FELIPE PLAZA LIMITED
LIABILITY COMPANY

By: Limen Lanson

Its: Genual Frank

Dated: 7.23.95

STATE OF MILL Intrology) ...) ss COUNTY OF Bernald)

The foregoing instrument was acknowledged before me this as a day of February, 1975, by [name of person signing:] The foregoing instrument was acknowledged before me this as a day of February, 1975, by [name of person signing:] The foregoing of [name of capacity, for instance, of [name of the entity which owns the Property if other than the individual signing, for instance, the name of the corporation, partnership, or joint venture:] Sun Telipo Plaza Limited Lightly Co.

Notary Public Salicult

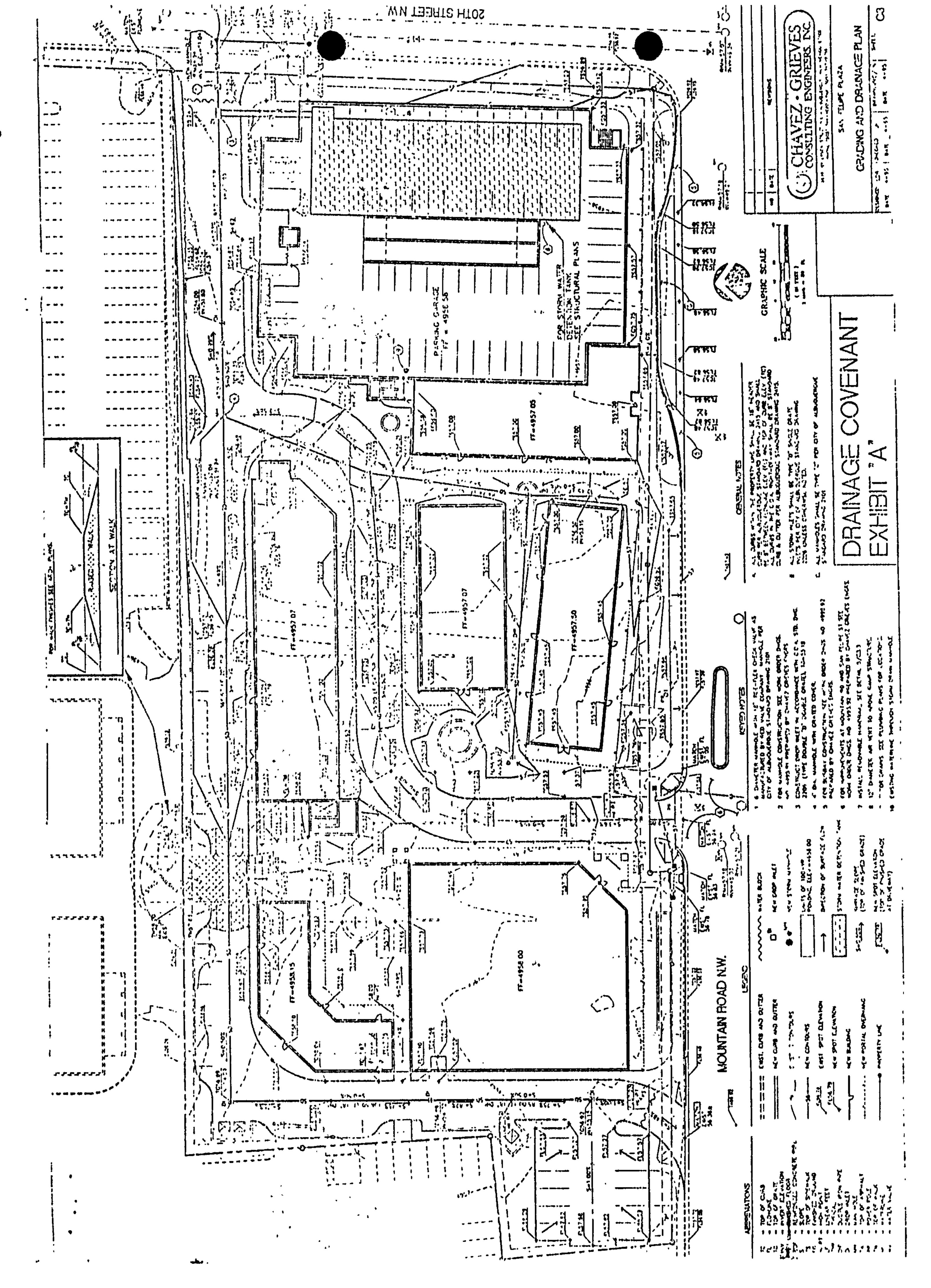
My Commission Expires:

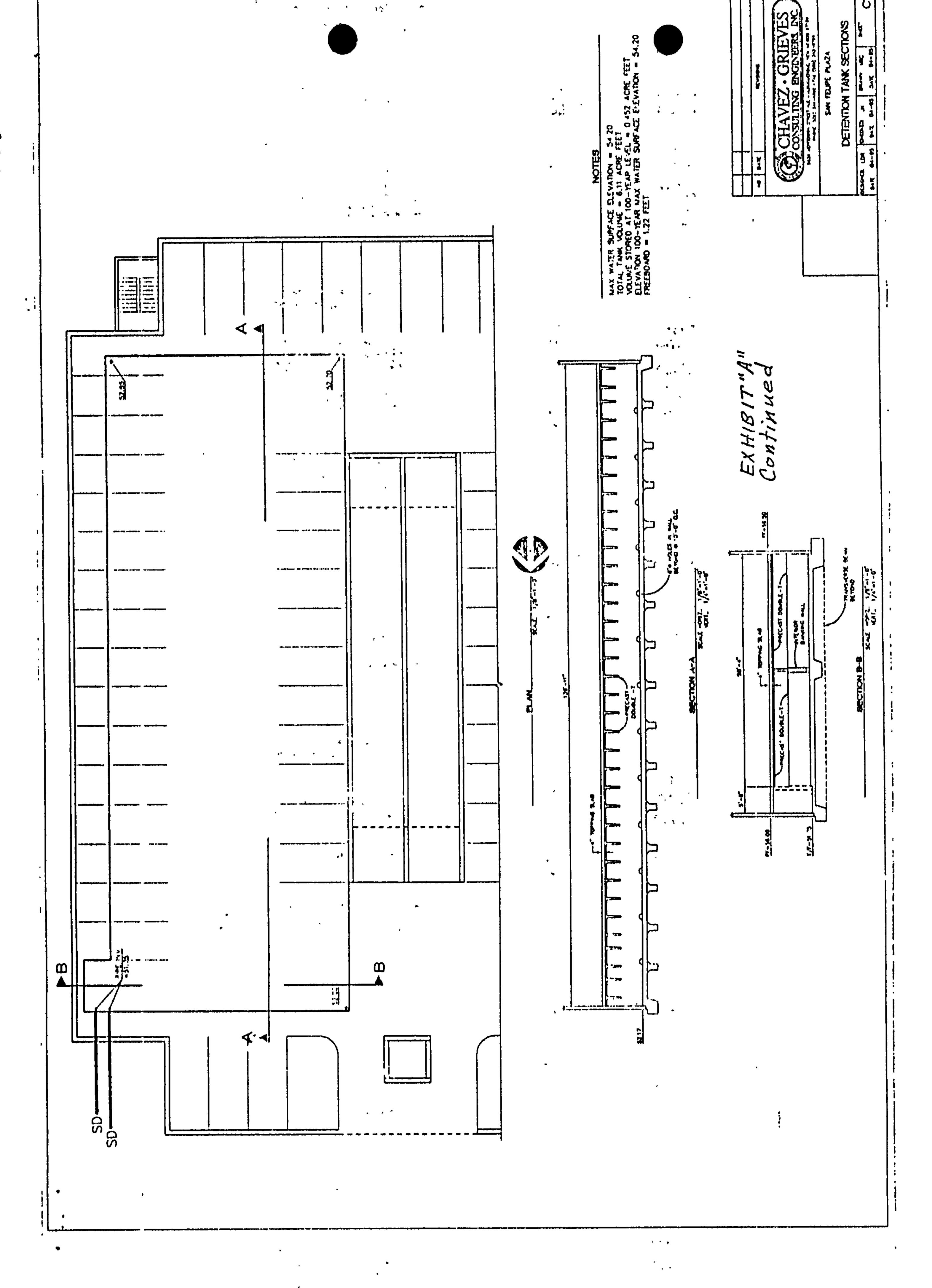
CITY OF ALBUQUERQUE:

Accepted:

By: John P. Custin Title: Ear The City Engineer Dates: 4-5-95

[IMEIBIT A ATTACHED]







City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 3, 1995

Larry D. Read, PE CHAVEZ-GRIEVES 5639 Jefferson St NE Albuquerque, NM 87109

RE: REVISED DRAINAGE REPORT FOR SAN FELIPE PLAZA (J-13/D4)

RECEIVED MARCH 17, 1995 FOR BUILDING PERMIT

ENGINEER'S STAMP DATED 2/22/95

Dear Mr. Read:

Based on the information included in the submittal referenced above, City Hydrology accepts the Revised Drainage Report. It is City Hydrology's understanding that Building Permits have been issued for all the structures on this site, the purpose of this submittal is to expedite acceptance of the Engineer's Certification.

Engineer's Certification must include as-built elevations at all four corners of the vault and the as-built storage volume of the vault. All inverts for the private storm drain must be as-built.

If I can be of further assistance, You may contact me at 768-2727.

Sincerely,

John P. Curtin, P.E.

Civil Engineer/Hydrology

c: Andrew Garcia

Tom Woodsen, S.C. Sherman & Co, 6400 Indian School NE 87110

DRAINAGE INFORMATION

J13/104

PROJECT TITLE <u>San Felipe Plaza</u>	ZONE ATLAS/DRNG. FILE #: J-13-7		
DRB#: EPC #:	WORK ORDER #:		
_GAL DESCRIPTION:Tract "C" Sheraton Old			
CITY ADDRESS:			
ENGINEERING FIRM: Chavez-Grieves Engineers	CONTACT: Larry Read		
ADDRESS: 5639 JEFFERSON NE, ALBQ.	PHONE: 344-4080		
OWNER: S. C. Sherman & Company	CONTACT:Tom Woodsen		
ADDRESS: 6400 Indian School NE, Albq			
ARCHITECT: <u>Stu Sherman</u>	CONTACT:		
ADDRESS:	PHONE:		
SURVEYOR:	CONTACT:		
ADDRESS:	PHONE:		
CONTRACTOR:	CONTACT:		
ADDRESS:	PHONE:		
TYPE OF SUBMITTAL:	TE TUDE OU BUILDOURS TO COMME		
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OTHER	FINAL PLAT APPROVAL		
	FOUNDATION PERMIT APPROVAL		
PRE-DESIGN MEETING:	BUILDING PERMIT APPROVAL		
X YES	CERTIFICATE OF OCCUPANCY APPROVAI		
NO	GRADING PERMIT APPROVAL		
COPY PROVIDED	PAVING PERMIT APPROVAL		
	S.A.D. DRAINAGE REPORT		
• • • • • • • • • • • • • • • • • • •	DRAINAGE REQUIREMENTS		
-	OTHER: UPDATE VICINITY MAP TO REFLEC PROPOSED REPLATTING.		
DATE SUBMITTED; 23/95	•		
BY: () augh () Gant			
	— — — — — — — — — — — — — — — — — — —		

MAR 1 7 1835



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 27, 1995

Larry D. Read, PE CHAVEZ-GRIEVES 5639 Jefferson St NE Albuquerque, NM 87109

RE: JUSTIFICATION REQUEST FOR SAN FELIPE PLAZA (J-13/D4)

RECEIVED JAN 25, 1995 FOR WATER BLOCK VARIANCE

LETTER DATED JANUARY 25, 1995

Dear Mr. Read:

Based on the information included in the letter referenced above, City Hydrology agrees that .

- The eastern entrance on Mountain is located near a drainage divide and the flow in the street would be less than the proposed water block.
- 2. The proposed water block elevation of 57.30 is above the FIRM FHZ AH elevation of 56.00 and no off-site water will enter through this entrance.
- 3. Raising this water block to the standard .87' will conflict with the ADA requirements.

Therefore City Hydrology, acting for the City Engineer, grants a variance of a .35' water block instead of a .87' water block at the eastern entrance on Mountain.

If I can be of further assistance, You may contact me at 768-2727.

Sincerely,

John P. Curtin, P.E.

Civil Engineer/Hydrology

c: Andrew Garcia
Fred Aguirre
Rick Roybal, City Engineer

January 25, 1995

Mr. John Curtin, PE
City of Albuquerque
Public Works Department/Hydrology
PO Box 1293
Albuquerque, New Mexico 87103

RE: San Felipe Plaza Development

Drivepads on Mountain and 20th Street

Dear Mr. Curtin:

Thank you for your assistance yesterday. Per our discussion I have assembled the two attached exhibits. The first is a copy of the Floodway Map topography. The second exhibit is the pre-construction site survey prepared by Aldrich Land Surveying In December 1993.

The Floodway Map clearly shows that a high spot exists in Mountain Road in the vicinity of the eastern drivepad location and that slope exists to convey minor flows away from the drivepad in question. The pre-construction survey also indicates that a high spot exists in Mountain near the 57.20 flow line elevation 72' east of the drivepad centerline. This exhibit shows flowline slopes of 0.36% toward the east and 0.39% toward the west from the 57.20 high point.

By our calculations for the drainage area 72' long and 26' wide (from the high spot on Mountain to the centerline of drivepad and back of sidewalk to the pavement crown on Mountain) the 10-year and 100-year flows are 0.14 cfs and 0.21 cfs respectively per the attached AHYMO printout. Using DPM Plate 22.3 D-2, the depth of flow in the gutter would be less than 0.17 feet in during a 100-year storm.

Based on the above information, we are requesting a variance from the 0.87' water block requirement for the eastern drivepad on Mountain Road to allow the drivepad to be constructed with the 0.35' water block as designed in the approved drainage plan for this project.

JAN 2 5 1905

January 25, 1995 Mr. John Curtin, PE San Felipe Plaza Development Page 2

The western drivepad on Mountain Road and the one on 20th Street will be adjusted to provide the standard 0.87' water block as required by the City.

If you have any questions or comments, please call me at 858-3165.

Sincerely,

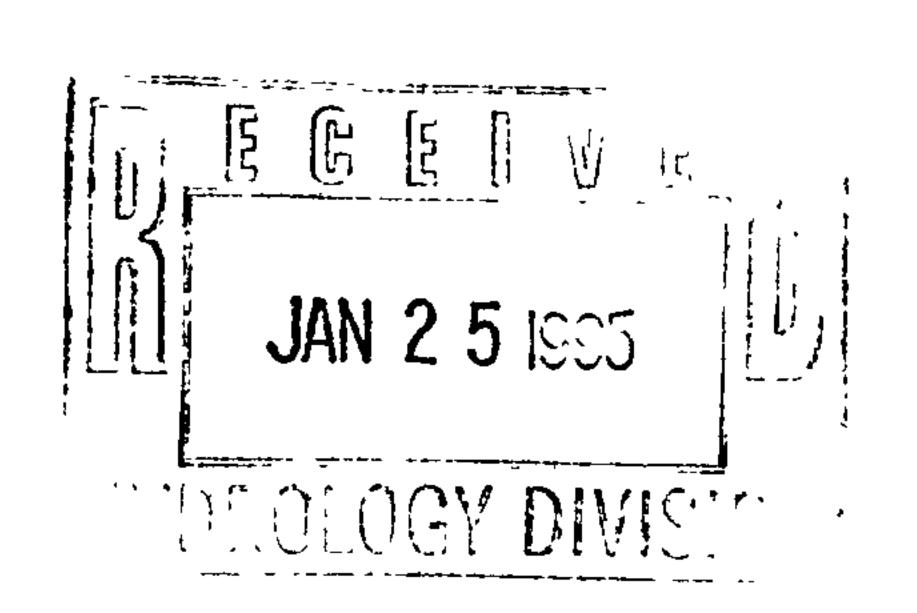
CHAVEZ-GRIEVES CONSULTING ENGINEERS, INC.

Larry D. Read, PE

Additionally the 57.30 water block is above the BGOO flood elevation so no offsile water will enter. Raising the water block to .87'.

will violate the ADA 270 crossslope requirement and create grade toward the buildings on-sile.

Yay Words



制制

AHYMO PROGRAM (AHYMO993) - AMAFCA VERSION OF HYMO - SEPTEMBER, 1993
RUN DATE (MON/DAY/YR) = 01/25/1995
START TIME (HR:MIN:SEC) = 09:24:32
INPUT FILE = SFDRIVE.DAT

JAN 2 5 1905

* * SAN FELIPE PLAZA MOUNTAIN RD DRIVE PAD

* FILE NAME: SFDRIVE.DAT

* --- DEVELOPED CONDITIONS --
* -- USING - 6 HOUR STORM --
* --- PER COA DPM SECTION 22.2 ---

RAINFALL

*

*

TYPE=-1 RAIN QUARTER=0.0 RAIN ONE=2.01 RAIN SIX=2.35 RAIN DAY=2.75 DT=.033333

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.

DT = .033333 HOURS END TIME = 5.999940 HOURS

PRINT LINES=0

*
*S 100-YEAR STORM
*S ONE HALF MOUNTAIN ROAD NW
COMPUTE NM HYD

ID=1 HYD NO=101.1 DA=.000067 PER A=0
PER B=0 PER C=0 PER D=100 TP=-0.133 RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420 UNIT PEAK = .26512 CFS UNIT VOLUME = .9550 B = 526.28 P60 = 2.0100 AREA = .000067 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .0333333

PRINT HYD

ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = 2.11535 INCHES = .0076 ACRE-FEET
PEAK DISCHARGE RATE = .21 CFS AT 1.500 HOURS BASIN AREA = .0001 SQ. MI.

RAINFALL

*

*

TYPE=-1 RAIN QUARTER=0.0 RAIN ONE=1.34 RAIN SIX=1.57 RAIN DAY=1.83 DT=.033333

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.

DT = .033333 HOURS END TIME = 5.999940 HOURS

*S 10-YEAR STORM
*S ONE HALF MOUNTAIN ROAD NW
COMPUTE NM HYD ID=2 HYD NO=101.2 DA=.000067 PER A=0
PER B=0 PER C=0 PER D=100 TP=-0.133 RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420 UNIT PEAK = .26512 CFS UNIT VOLUME = .9550 B = 526.28 P60 = 1.3400 AREA = .000067 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .0333333

PRINT HYD

ID=2 CODE=1

PARTIAL HYDROGRAPH 101.20

RUNOFF VOLUME = 1.33764 INCHES = .0048 ACRE-FEET
PEAK DISCHARGE RATE = .14 CFS AT 1.500 HOURS BASIN AREA = .0001 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

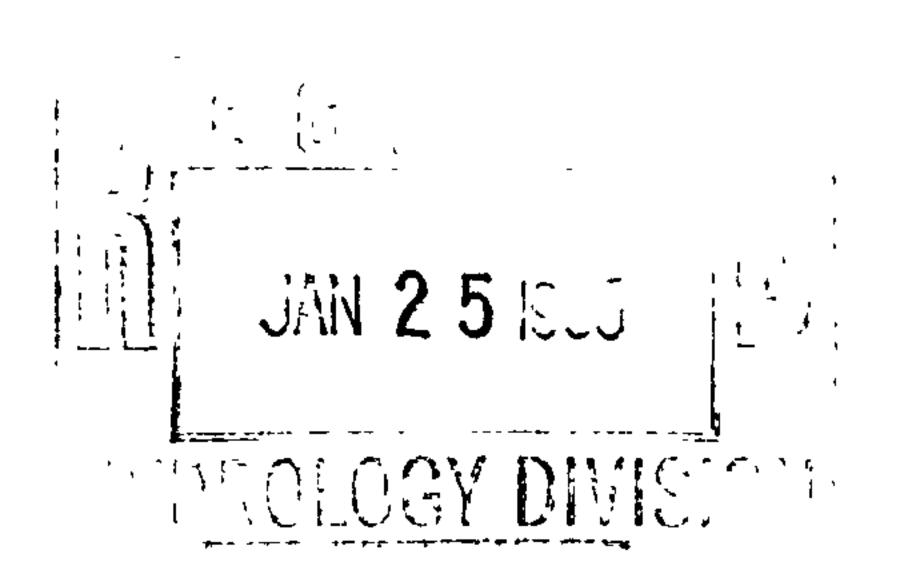
END TIME (HR:MIN:SEC) = 09:24:33

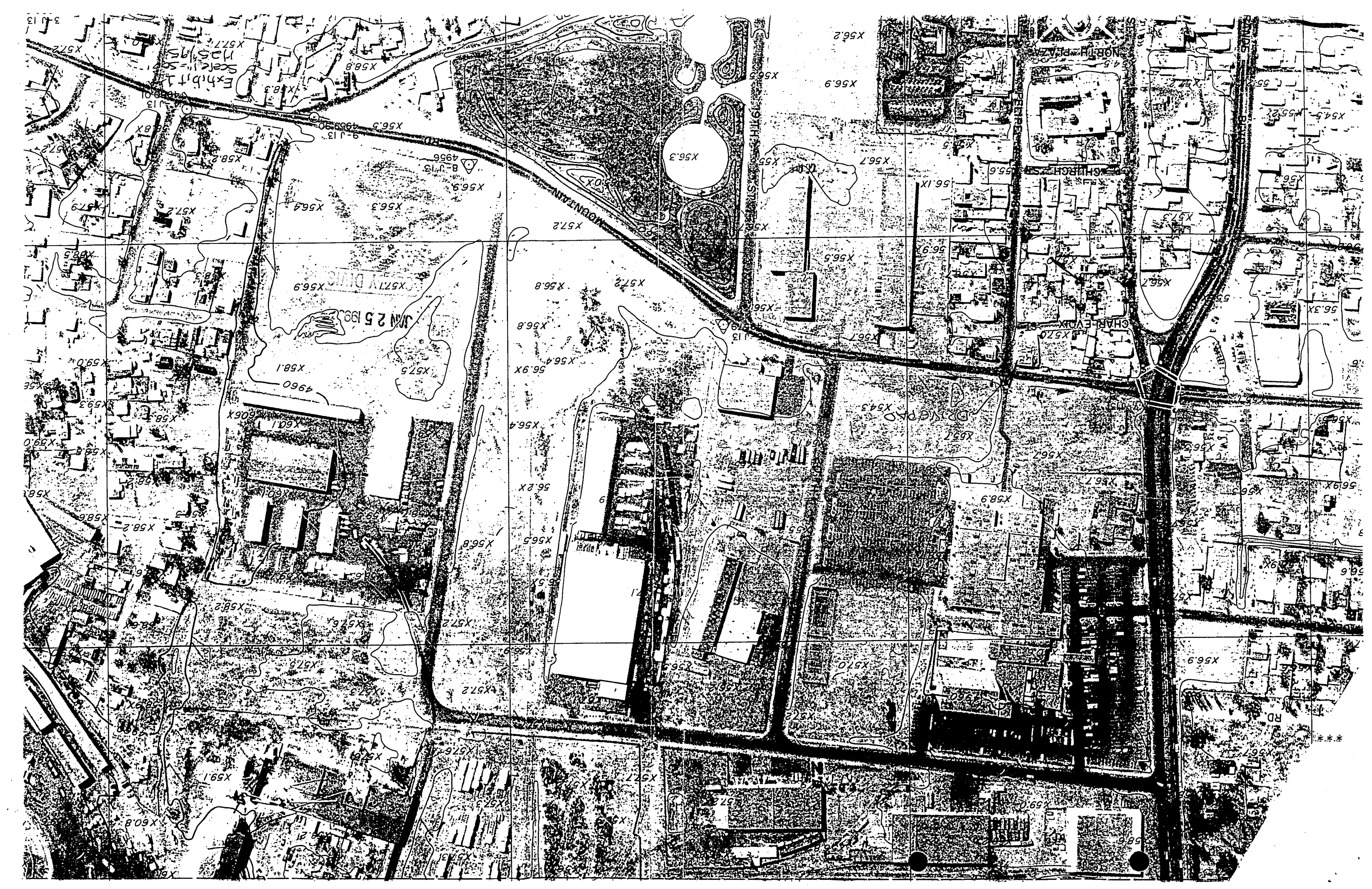
JAN 2 5 1995

AHYMO SUMMARY TABLE (AHYMO993) - AMAFCA VERSION OF HYMO - SEPTEMBER, 1993
INPUT FILE = SFDRIVE.DAT

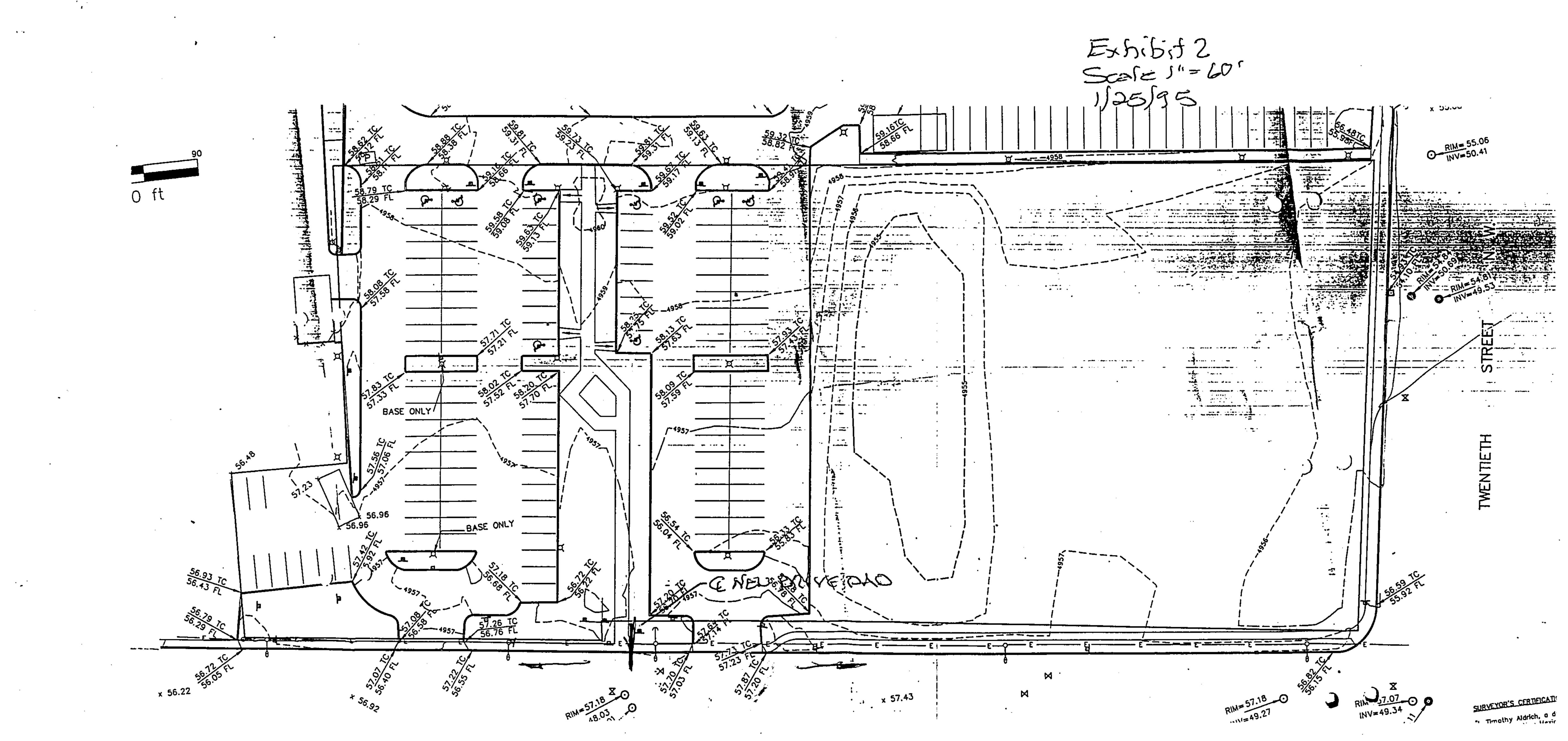
RUN DATE (MON/DAY/YR) =01/25/1995 USER NO.= LRY_READ.S93

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE =	
*S 100-YEAR										TIME= RAIN6=	.00 2.350
COMPUTE NM	YPE= 1	-	1	.00007	.21	.008	2.11535	1.500	4.923	PER IMP= RAIN6=	100.00 1.570
*S ONE HALF COMPUTE NM FINISH	MOUNTAIN ROAD NW HYD 101.20	-	2	.00007	.14	.005	1.33764	1.500	3.254	PER IMP=	100.00





IS (F) IS ISC



EAST of Rio (Trans Morth A 1-13-95: Larry Kepd minimum or they must be justified 1-23-495 1-23-495

ITY OF ALBUQUERQUE NOTICE OF D.R.C. MEETING

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		PROJECT NO: 4995.91
	(DATE)	ZONE ATLAS: 7-13
		. 1
	ELIPE PLAZA - ST. I	MOROU
LOCATION: (SAN F	EERIPE, MOUNTAIN & ZO	2'' \$7.
TYPE OF PROJECT: AHBA	CIP PWC SAD ALI	PRIVATE
Contact Person: CARLY R	$\Delta \Delta \Delta \Delta$	$\alpha = \alpha = 0$
Firm: CHAVER-	Phone: 344-9	<u>7080</u>
'	•	•
Scheduled with the D	.R.C. on 9-22-94-at-2:30	in-Conf. Room 302
	uled. Please return any commer	
,		
The Project Is Scheduled For	· · · · · · · · · · · · · · · · · · ·	•
// Design Report Review	/ / Final Plan Review (Ar	proved Infra. List)
/ / Pre-Design Meeting	// Signoff of Plans (My)	
冷⊄ Preliminary Plan Rev:	iew / /	
The Project Relates To:		
//Water //San. Sewer	r 🚧 Paving 🔑 Storm Drain	nage / /
The Attention Dealtree Trailings	· ·	
The Attached Package Includes	s /E/ Estimate / R/ Report	/M/ Mama Onles
/D/ DIAMINES /U/ DDCC .	s / m/ matter. / k/ keport	7117 Memo Only
Indicated below are the Der	partments/Divisions that have	received project
documents and/or are invited	to attend. It will be the	Project Managers
responsiblity to notify con	sulting engineering firms of	date and time of
scheduled meetings.		
	•	
/D/ DRC Chairman	Project Review Section	A11
/DY Traffic Repres	Transportation Developme	ent All
/// Water Repres. /// Hydro Repres. //// Const. Repres.	Utility Design	All
M Hydro Repres.	Hydrology	All
¬ • • • • • • • • • • • • • • • • • • •	Construction	A11
// Bill Coleman	Traffic Operations	•
// Dick Salas	Street Maintenance	
// Sergio Miranda	Water (Shutoff Plan)	LL WATER SHUTOFF
// Diane Scena	Parks & Recreation	ALL LANDSCAPING
// Joe Luehring		ALL PWC & CIP
// Sheryl Germack	Transit Department	
/ Rick Roybal	Construction Coordinator	
/ Jim Fink	Line Maintenance	CIP-SAS/Memo
/ / Joe Dellalonga / / Lee Lunsford	City Architect	ARCHITECTURAL
/ / Lee Lunsrord / / Brett Locke	SAD Engineer Transportation Devolor	SAD/Memo
/ / Roger Green	Transportation Develop. Utility Design	CIP/Memo
/ / Mike Minturn	General Services Dept.	CIP/WATER & SAS
/ / Greg Smith	PWD/Legal	BUILDINGS
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RG/tm (WP+123400) Rev. 11/05/91

5-48 10/2/10/1

for applerground

5639 JEFFERSON STREET NE · ALBUQUERQUE, NEW MEXICO 87109 · PHONE (505) 344·4080 · FAX (505) 343·8759

September 12, 1994

Mr. Billy Goolsby, P.E. Chairman - Design Review Committee City of Albuquerque P. O. Box 1293 Albuquerque, New Mexico 87103

RE: COA PROJECT NO. 4995.91 - SAN FELIPE PLAZA DRC REVIEW, SEPTEMBER 1, 1994

Dear Mr. Goolsby:

This letter documents the changes incorporated into the above referenced project plan based on the comments DRC provide to us. Each comment is addressed on the plans as follows:

- 1. General Note Number 1 was repeated as part of General Note Number 5.
 - The duplicated verbiage in General Note Number 5 was deleted.
- 2. The water valves shown did not have a "WV" notation and were not shown in the legend.
 - "WV" notation was added to the symbol and the resulting symbol was added to the legend.
- 3. Mr. Curtin for Hydrology had no adverse comments.
- 4. Mr. Dourte requested all radii be designed 15-feet or larger at the San Felipe/Mountain Road Street Intersection.
 - All radii have been revised to 15-feet or larger.
- 5. Mr. Dourte requested a cross-section of the bus bay.
 - A section was added on sheet C3.
- 6. Mr. Dourte requested the northwest and southeast returns have one 8-foot bottom handicap ramp each instead of the two smaller ramp previously shown.
 - Due to the cross walk alignment, offset street alignment, and traffic signal standards, one ramp per return would not allow direct access to the cross walk. We relocated the two smaller ramps (4-foot bottom) to increase the width of the raised nose between them. They also provide direct access to the cross walks. Dave Coleman is reviewing this layout.

- 7. Mr. Dourte requested painted traffic direction arrows. Arrows and lane lines have been added to the plans.
- 8. DRC requested Note 6 be changed to read "Mountable Median Curb and Gutter".
 - The note has been changed.

We trust that these changes have address DRC's comments. If you have any questions or comments please call me.

Sincerely,

CHAVEZ-GRIEVES CONSULTING ENGINEER'S, INC.

Larry D. Read, P.E.

LDR/cjr

Enclosures

DESIGN REVIEW COMMITTEE MEETING

09-01-94

3:30 P.M.

PROJECT:

San Felipe Plaza - Busbay, S.D.

Project No. 4995.91

Manhole & Intersection Improvement

CONSULTANT:

Chavez-Grieves

PRESENT:

Billy Goolsby, DRC Chairman

Richard Dourte, Transportation Development

John Curtin, Hydrology Larry Read, Consultant

Kristine Palmer, Landmarks Commission, Planning Dept.

c: Rick Roybal, City Engineer

COMMENTS:

- 1. Kristine expressed a concern regarding the intersection and the ability of the large trucks to make deliveries to the Museum. The response by the Consultant was that the median will be pulled back to allow a larger turning radius. This will be put in writing by the Consultant to her. A traffic control light will also be installed.
- 2. John Curtin did not have any adverse comments.
- 3. Utility Development was not present at this session. However, the Chairman was advised that there were no adverse comments.
- 4. Richard Dourte did not have previous knowledge regarding the approved design. Joe David Montano was the representative from Transportation Development that coordinated on the design. He was not available. Richard Said he would have to confer with Joe David before he can provide any comments.
- 5. The Chairman provided mark-ups with minor drafting comments.

The Consultant will make the appropriate corrections to the mylars based on th outcome of the resolutions of the concerns and submit these, two (2) sets of review prints and all the mark-ups to the Master Scheduler to schedule a final review/signature session.



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

August 1, 1994

Lawrence D. Read, P.E. Chavez-Grieves, Inc. 5639 Jefferson St. NE Albuquerque, N.M. 87109

RE: DRAINAGE REPORT FOR SAN FELIPE PLAZA (J-13/D4)

RECEIVED JULY 28, 1994 FOR BUILDING PERMIT APPROVAL

ENGINEER'S STAMP DATED 7/27/94

Dear Mr. Read:

Based on the information included in the submittal referenced above, City Hydrology approves this project for Building Permit.

Include a copy of the approved Grading & Drainage Plan in the set of construction documents that are submitted to the "one stop" for the Building Permit.

The Contractor must obtain a "Topsoil Disturbance Permit" from the Environmental Health Department prior to any grading or construction.

Engineer's Certification of grading & drainage per DPM checklist must be approved before any Certificate of Occupancy will be released. A Private Facility Drainage Covenant for the private storm drain & storage facility must also be executed & filed before any Certificate of Occupancy will be released (form attached).

If you have any questions about this project, You may contact me at 768-2727.

Sincerely,

John P. Curtin, P.E.

Civil Engineer/Hydrology

c: Andrew Garcia

WPHYD/8396/jpc

DRAINAGE INFORMATION

J13/14

PROJECT TITLE <u>San Felipe Plaza</u>	ZONE ATLAS/DRNG. FILE #: J-13-7		
DRB#: EPC #:	WORK ORDER #:		
_GAL DESCRIPTION: <u>Tract "C" Sheraton Old</u>	Town Complex		
CITY ADDRESS:			
ENGINEERING FIRM: Chavez-Grieves Engineers	CONTACT: Larry Read		
ADDRESS: 5639 JEFFERSON NE, ALBQ.	PHONE: 344-4080		
OWNER: S. C. Sherman & Company	CONTACT:Tom Woodsen		
ADDRESS: 6400 Indian School NE, Albq	PHONE: 881-8900		
ARCHITECT:	CONTACT:		
ADDRESS:	PHONE:		
SURVEYOR:	CONTACT:		
ADDRESS:	PHONE:		
CONTRACTOR:	CONTACT:		
ADDRESS:	PHONE:		
X DRAINAGE REPORT X DRAINAGE PLAN CONCEPTUAL GRADING & DRAINAGE PLAN X GRADING PLAN EROSION CONTROL PLAN ENGINEER'S CERTIFICATION OTHER	S. DEV. PLAN FOR BLDG. PRMT. APPROVAL SECTOR PLAN APPROVAL FINAL PLAT APPROVAL FOUNDATION PERMIT APPROVAL BUILDING PERMIT APPROVAL		
PRE-DESIGN MEETING:	_ CERTIFICATE OF OCCUPANCY APPROVA		
X YES	GRADING PERMIT APPROVAL		
NO	PAVING PERMIT APPROVAL		
COPY PROVIDED	S.A.D. DRAINAGE REPORT		
	DRAINAGE REQUIREMENTS		
	OTHER: UPDATE VICINITY MAP TO REFLECT PROPOSED REPLATTING.		
DATE SUBMITTED: 7/27/94			

JUL 2 8 1994



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 19, 1994

Lawrence D. Read, P.E. Chavez-Grieves, Inc. 5639 Jefferson St. NE Albuquerque, N.M. 87109

RE: LETTER OF UNDERSTANDING FOR SAN FELIPE PLAZA (J-13/D4)
RECEIVED JULY 19, 1994 FOR FOUNDATION PERMIT APPROVAL

DATED JULY 18, 1994

Dear Mr. Read:

Based on the information included in the submittal referenced above, City Hydrology approves this project for Foundation Permit.

If you have any questions about this project, You may contact me at 768-2727.

Sincerely,

John P. Curtin, P.E. Civil Engineer/Hydrology

c: Andrew Garcia

WPHYD/8396/jpc

DRAINAGE INFORMATION

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PROJECT TITLE <u>San Felipe Plaza</u>	ZONE ATLAS/DRNG. FILE #: J-13-7
DRB#: EPC #:	WORK ORDER #:
LEGAL DESCRIPTION: <u>Tract "C" Sheraton Old</u>	Town Complex
CITY ADDRESS:	
ENGINEERING FIRM: Chavez-Grieves Engineers	CONTACT: Larry Read
ADDRESS: 5639 JEFFERSON NE, ALBQ.	PHONE: 344-4080
OWNER: S. C. Sherman & Company	CONTACT:Tom Woodsen
ADDRESS: 6400 Indian School NE, Albq	PHONE: 881-8900
ARCHITECT:	CONTACT:
ADDRESS:	PHONE:
SURVEYOR:	CONTACT:
ADDRESS:	PHONE:
CONTRACTOR:	CONTACT:
ADDRESS:	PHONE:
TYPE OF SUBMITTAL: CHEC	CK TYPE OF APPROVAL SOUGHT:
DRAINAGE REPORT	SKETCH PLAT APPROVAL
DRAINAGE PLAN	PRELIMINARY PLAT APPROVAL
CONCEPTUAL GRADING & DRAINAGE PLAN	S. DEV. PLAN FOR SUB'D. APPROVAL
GRADING PLAN	S. DEV. PLAN FOR BLDG. PRMT. APPROVAL
EROSION CONTROL PLAN	SECTOR PLAN APPROVAL
ENGINEER'S CERTIFICATION	FINAL PLAT APPROVAL
X OTHER Letter	FOUNDATION PERMIT APPROVAL
	BUILDING PERMIT APPROVAL
PRE-DESIGN MEETING:	CERTIFICATE OF OCCUPANCY APPROVAL
<u>X</u> YES	GRADING PERMIT APPROVAL
NO	PAVING PERMIT APPROVAL
COPY PROVIDED	_ S.A.D. DRAINAGE REPORT
	DRAINAGE REQUIREMENTS
	OTHER: UPDATE VICINITY MAP TO REFLECT PROPOSED REPLATTING.
DATE SUBMITTED: July 19, 1994 BY:	Tul 19 1994
	HYDKULUGY DIVISIUN

8396

5639 JEFFERSON STREET NE · ALBUQUERQUE, NEW MEXICO 87109 · PHONE (505) 344·4080 · FAX (505) 343·8759

July 18, 1994

Mr. Fred Aguirre, P.E.
Public Works Department/Hydrology
City of Albuquerque
P. O. Box 1293
Albuquerque, New Mexico 87103

RE: SAN FELIPE PLAZA DEVELOPMENT
MOUNTAIN RD. NW AND 20TH STREET NW
ALBUQUERQUE, NEW MEXICO

Dear Mr. Aguirre:

Thank you for meeting with us this morning to discuss the drainage issues for the above referenced project. This letter will serve to document the issues agreed upon during this meeting. Our understanding of the agreements made is as follows:

- 1. The maximum 100-year flood elevation is 4956 based on the October 14, 1983 Flood Rate Insurance Map, Panel 350002 0028.
- 2. The required ponding for this project will be based on the displaced volume plus the increased volume generated by this development.
- The basis of displaced volume will be the December 27, 1993 topographic survey provided by Aldrich Land Surveying Company. We calculate the maximum ponding volume below the 4956 maximum 100-year flood elevation to be 0.42 acre-feet.
- 4. Our previous submittal to PWD/Hydrology identified the historical 100-year runoff volume to be 0.129 acre-feet. This same report identified the developed 100-year runoff volume to be 0.524 acre-feet. This indicates the increase volume due to development to be 0.395 acre-feet. These volumes were calculated using a 100-year, 6-hour storm modeled using the March 1992 AMAFCA Version of HYMO as adopted by the City of Albuquerque.

JL 2 2 1994

Per the above agreements, the developer will be required to pond a total volume of 0.815 acre-feet (0.42+0.395) of runoff onsite. Additional agreements: allow the developer to obtain a Permit to Construct Foundations upon receipt of this letter, and PWD/Hydrology will provide a review of the submitted Revised Drainage Report and Grading Plan as quickly as possible. The revised report and plan will be ready in a few days and will be based on the agreements above.

This is our understanding of the agreements reached during our meeting today. If you have any questions or revisions to these agreements, please notify me by 5:00 p.m. tomorrow. Otherwise, please initial a copy of this letter and return to me by that time.

Again, we wish to thank you and Mr. Curtin for you help with this project.

Sincerely,

CHAVEZ - GRIEVES CONSULTING ENGINEERS, INC.

Larry D. Read, P. B

LDR/cjr

Cy: John Curtin, P.E., City of Albuquerque Stu Sherman, San Felipe Plaza Ltd. Liability Company Tom Woodson, San Felipe Plaza Ltd. Liability Company Victoria Prince, City of Albuquerque Eric Pfeiffer, City of Albuquerque Victor J. Chavez, Chavez-Grieves A A A

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MEMORANDUM

To:

Tom Woodson

From:

Larry Read

Subject:

San Felipe Plaza - Drainage Report

Date:

April 11, 1994

Based on the City's response to the submitted Grading and Drainage Plan and their response to our letter dated March 31, 1994 we have prepared the following comments:

Initially the City wanted us to pond 5.1 ac-ft (222,156 cubic feet) of runoff based on a previous report that incorrectly identified the 100 flood elevation (4957.0). PWD/Hydrology has admitted that the 4957 flood elevation is incorrect and that true flood elevation should be 4956.0. This lowered the "required" ponding to about 1.8 ac-ft (78,403 cubic feet). They have based this figure on ponding all runoff that exists on the site at this time (due to flooding) plus the additional runoff created by development of this site. This in effect means to pond all runoff from the site since what is currently generated on site will remain there due to the elevations.

We have designed a system to detain all site runoff, not just the increase due to development, on site until the storm drains in 20th Street can accept the runoff from the site. This proposed storage is 0.557 ac-ft (24,263 cubic feet). Note that per the City's letter dated April 6, 1994 they "suggest" ponding of the increase in runoff due to development.

The difference between the 1.8 ac-ft the City is proposing and the 0.557 ac-ft we are proposing is assumed to be the amount of runoff currently ponded on the site due to flooding conditions. This runoff is generated by other properties in the drainage area and runs to this site because it is the lowest point and the City's storm drain system is too small to accept it.

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With regards to the REI development east of our site, they were only required to pond the increase in runoff due to development (1988) of a small building and parking lot. They were not required to pond all runoff from the site as we have proposed or even to pond the increase in runoff between the historical (undeveloped) and current development. In other words they were not required to pond the existing volume that was ponded on site because of flooding conditions as the City is requiring us to do. This in effect has worsened the conditions on your site because the runoff that was previously ponded on site due to flooding is now pushed onto your site for you to pond. They even set the high point in the driveways above the 4956 100 year flood elevation. This eliminates any flood runoff from entering their site and contrary to their letter on April 6, has pushed the flood area completely off their property.

- The flood area was known when REI was added onto in 1988. The Flood Rate Insurance Maps were issued in 1983 and the Albuquerque Master Drainage Plan identified this area as a flood area in 1981.
- Although constructed before 1981, the Old Town Sheraton project north of your parcel does not incorporate any ponding we can locate. This has also worsened the flooding on your parcel by forcing all runoff from that site onto yours.
- The City is in effect requiring you to pay for ponding a significant amount of runoff (1.2 ac-īt) generated by other properties since they were not required to pond this runoff when they developed or altered their development.
- Hydrology is part of the Site Development Plan process. Why did they not identify this ponding issue when they reviewed the development plans for EPC and DRB?
- We don't see any feasible method of ponding 1.8 ac-ft of runoff on your site. The only way this could be accomplished is to build a yault under the parking structure that is 4 feet deep and covers the footprint of the structure.

Tom, if you have any questions please call me.



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 6, 1994

Lawrence D. Read, P.E. Chavez-Grieves, Inc. 5639 Jefferson St. NE Albuquerque, N.M. 87109

RE: LETTER FOR SAN FELIPE PLAZA (J-13/D4)

DATED MARCH 29, 1994; RECEIVED MARCH 31, 1994

Dear Mr. Read:

City Hydrology has not attempted to set requirements for the volume of ponding required. We have only attempted to point out flaws in your design and suggest possible approaches to the solution. It is your responsibility to design a plan to prevent the proposed development from damaging other properties.

City Hydrology believes that there are significant differences between the San Felipe Plaza and REI. First, the REI Addition did not significantly alter the flood hazard zone as San Felipe Plaza will. Second, the 0.18 ac-ft of ponding provided by REI was additional volume required to compensate for the increased impervious condition of the site.

If you wish to use a similar approach for San Felipe Plaza, you could:

- 1. Calculate the existing volume of the AH (El. 6956) flood hazard zone on the site based on current elevations.
- Calculate the additional volume required to compensate for the increased runoff resulting from the proposed conditions.
- 3. Design Drainage Plan to provided sufficient volume to exceed the volume required for the sum of 1 & 2.

If you have any questions about this project, You may contact me at 768-2727.

Sincerely,

John P. Curtin, P.E.

Civil Engineer/Hydrology

c: Fred Aguirre

5639 JEFFERSON STREET NE · ALBUQUERQUE, NEW MEXICO 87109 · PHONE (505) 344·4080 · FAX (505) 343·8759

March 29, 1994

Mr. John P. Curtin, P.E. Civil Engineer/Hydrology City of Albuquerque Public Works Department P. O. Box 1293 Albuquerque, New Mexico 87103

RE: San Felipe Plaza Drainage (J-13/D4)
Mountain Road east of Rio Grande Blvd.
Albuquerque, New Mexico

Dear Mr. Curtin:

I wish to thank you for meeting with me yesterday to discuss the drainage on the referenced development. With regards to the proposed system, we agree it is not a type normally used in Albuquerque. However, this type of system is common in areas of the country where parcels are developed to a much higher density than in Albuquerque. In fact Hancor, Inc., the product this design is based on, has published an entire catalog named "LandMax" that specifically addressed this type of system. We will be happy to provide the profiles of the system you have requested.

The January 1979 report and subsequent letter from Bruno Coneqliano on the subject property addresses the 100 year flood elevation as 4957.0. Having reviewed the 1980 and 1983 topography on the subject site and comparing it to the flood plane as published on the 1983 Flood Rate Insurance Map we are convinced that the maximum flood elevation is only 4856.0. We believe this is the where the discrepancy in the ponding volume originated. If you multiply the 1 foot discrepancy by the total site area $(1.0 \times 3.42ac)$ this is the difference between the 1.8 ac-ft you calculated versus the 5.1 ac-ft Mr. Coneqliano required. Therefore, we request you reevaluate the 5.1 ac-ft ponding requirement.

The plan we submitted to you on March 7, 1994 provides for 0.557 ac-ft of ponding. This is based on temporary retention of full site runoff from a 100 year 6 hour storm. This is in excess of the ponding that was required on the Recreational Equipment, Inc. (REI) site directly east of this property. REI obtained approval of their drainage plan in 1988 by providing only slightly more ponding than the increase in runoff created by their development.

Proportionally, the 0.18 ac-ft of ponding REI provided equates to 0.41 ac-ft for a parcel the size of the subject site. We realize that the approved site plan for the subject site provides more density of buildings than the REI site contains but the majority of the REI site is impervious surfaces.

With regards to your suggestion of surface ponding in the parking garage, we agree it is a possibility using the 0.557 ac-ft we have proposed. This is approximately 11 inches of runoff stored above the parking surface. At this depth the owner can expect some liability claims for damage to vehicles. To pond the 1.8 ac-ft you have proposed in the parking garage, we would be ponding the runoff 3 feet deep. At these depths the owner can expect significant liability losses.

We respectfully request that you reanalyze your requirements for this property based on the above discussions and the following:

- Ponding of 1.8 ac-ft is significantly in excess of the requirements that have been imposed on similar properties within the same area and flood plain,
- Ponding the 1.8 ac-ft will require an expenditure of approximately \$300,000 for a system such as we have proposed, or require removal of at least one of the proposed buildings from the development which will make the planned and approved development economically unfeasible, or provide a dangerous facility that will expose the owner and City to extensive liability.
- Ponding 1.8 ac-ft on the site is requiring the developer/owner to expend monies to accommodate 1.2 ac-ft of runoff that is generated off-site and is considered public runoff.

Please call me to arrange a meeting so we may further discuss this issue after you have had the opportunity to evaluate these comments. Thank you in advance for your consideration.

Sincerely,

CHAVEZ-GRIEVES CONSULTING ENGINEERS, INC.

Larry D. Read, P.E.



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 18, 1994

Lawrence D. Read, P.E. Chavez-Grieves, Inc. 5639 Jefferson St. NE Albuquerque, N.M. 87109

RE: DRAINAGE REPORT FOR SAN FELIPE PLAZA (J-13/D4). RECEIVED MARCH 10, 1994 FOR BUILDING PERMIT APPROVAL ENGINEER'S STAMP DATED 3/7/94

Dear Mr. Read:

Based on the information included in the submittal referenced above, City Hydrology has the following comments that must be addressed prior to Building Permit approval.

- City Hydrology does not have a copy of the Pre-Design Form from your meeting. Include a copy of the Form with the drainage submittal.
- The previous Drainage Report dated January 1979 was not accepted by Bruno Conegliano in the Letter dated March 19, 1979. Also, Bruno required an additional 4.3 acre-ft of ponding when the undeveloped east side of the Lot was developed, in the Letter dated April 2, 1979. Unless extensive study is provided to determine the volume of ponding required, this site is required to provide 5.1 acre-ft of ponding below elevation 4956.00.
- City Hydrology is concerned that the proposed system is too complicated to function properly. It is recommended that a simpler plan involving surface ponding be considered. Considering the difficult nature of this site it might be worthwhile to schedule a meeting to discuss this project.

If you have any questions about this project, You may contact me at 768-2727.

Sincerely, alm P. Mutho

John P. Curtin, P.E. Civil Engineer/Hydrology

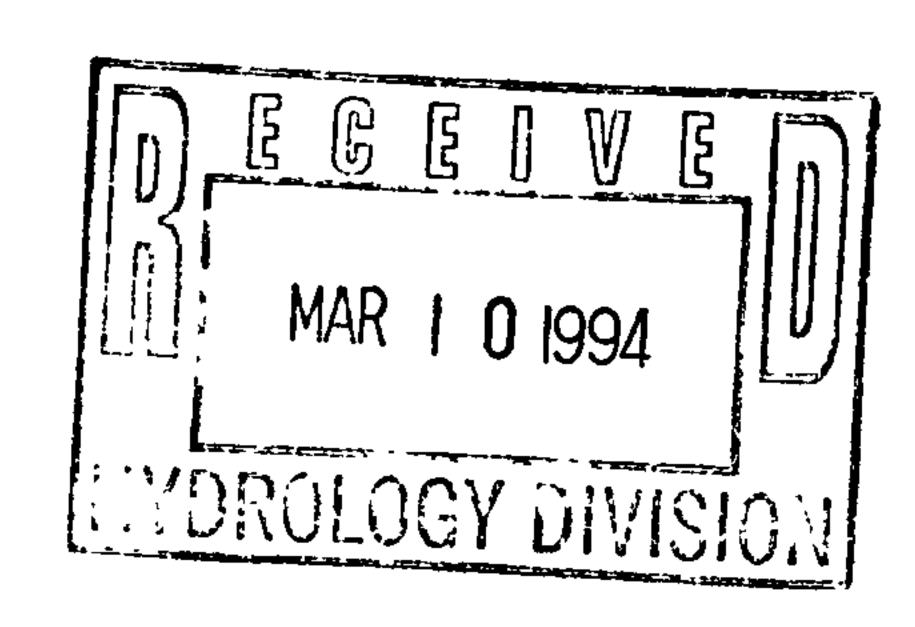
WPHYD/8396/jpc

DRAINAGE INFORMATION

PROJECT TITLE <u>San Felipe Plaza</u>	ZONE ATLAS/DRNG. FILE #: J-13-7/
DRB#: EPC #:	WORK ORDER #:
LEGAL DESCRIPTION: <u>Tract "C" Sheraton Old</u>	Town Complex
CITY ADDRESS:	
ENGINEERING FIRM: Chavez-Grieves Engineers	CONTACT: Larry Read
ADDRESS: <u>5639 JEFFERSON NE, ALBQ.</u>	PHONE: 344-4080
OWNER: S. C. Sherman & Company	CONTACT:Tom Woodsen
ADDRESS: 6400 Indian School NE, Albq	PHONE: <u>881-8900</u>
ARCHITECT:	CONTACT:
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ADDRESS:	PHONE:
X DRAINAGE REPORT	CK TYPE OF APPROVAL SOUGHT: _ SKETCH PLAT APPROVAL
X DRAINAGE PLAN	PRELIMINARY PLAT APPROVAL
CONCEPTUAL GRADING & DRAINAGE PLAN	_ S. DEV. PLAN FOR SUB'D. APPROVAL
X GRADING PLAN	_ S. DEV. PLAN FOR BLDG. PRMT. APPROVAL
EROSION CONTROL PLAN	_ SECTOR PLAN APPROVAL
ENGINEER'S CERTIFICATION	_ FINAL PLAT APPROVAL
OTHER	FOUNDATION PERMIT APPROVAL
X	_BUILDING PERMIT APPROVAL
PRE-DESIGN MEETING:	CERTIFICATE OF OCCUPANCY APPROVAL
<u>X</u> YES	_ GRADING PERMIT APPROVAL
NO	_ PAVING PERMIT APPROVAL
COPY PROVIDED	S.A.D. DRAINAGE REPORT
	_ DRAINAGE REQUIREMENTS
•	OTHER: UPDATE VICINITY MAP TO REFLECT PROPOSED REPLATTING.
DATE SUBMITTED:	

8396

BY:





City of . Ilbuquerque

PO BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MAYOR

David Rusk

. March 19, 1979

- Gardner Engineers, Inc. 7833 Lomas Blvd. N.E. Albuquerque, New Mexico 87110

Attention: Gil Gardner

Re: Mercado Mall Development, Tract C

Dear Mr. Gardner:

I have reviewed the drainage report for the captioned project and my comments are as follows:

The existing topography shows that the site contains depressed areas such that no runoff appears to be leaving the site while the drainage report evaluate in 6.47cfs the peak rate of runoff discharge. Also the site grading plan on Sheet 3 shows the ponding as a located in the area labelled "Future Building Area" on Sheet 1 which implies that the pond would be obliterated at a future date. I cannot therefore accept the drainage report as submitted.

The consulting firm of Bohannan and Huston has submitted to the City of the results of the first phase of their study of drainage for the City of Albuquerque. This study indicates that during a 100 years flooding occurrence most of the parcel would be inundated with the water reaching an elevation of 4957.0 feet in. s.l. This condition is the result of insufficient storm sewer capabilities in the valley area. Development of this parcel will require that the amount of retention volume presently provided by this site be maintained to prevent increased flooding to adjacent areas. I suggest that a meeting be held in my office to discuss this matter and evaluate possible solutions.

Very truly yours,

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Bruno Conegliano Assistant City Engineer-Hydrology

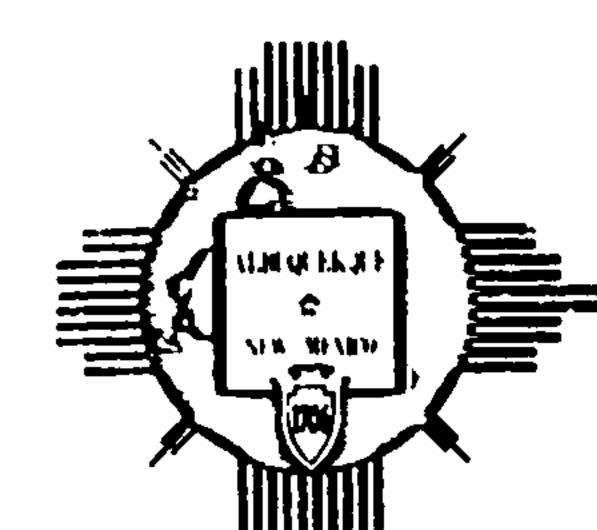
BC/fs
cc - Dick Heller
Rich Leonard
Brainage File

- AN EQUAL OPPORTUNITY EMPLOYER -

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(ily of . Ilbuquerque

PO BOX 1293 ALBUQUERQUE NEW MEXICO 87103

MAYOR David Rusk

Apr. 2, 1979

Mr. Gil Gardenr Gardner Engineer* Ir . 7833 Lomas Blvd. " 2 Albuquerque, Nev Aico 87110

Re: Mercado mall Development, Tract C

Dear Mr. Gardner:

Following our conversation with Mr. John Meyers of last Thursday, March 29, 1979, please be advised of the following: Building in the area labelled Puture Building Area on Sheet 1 of the plans for the captioned development, would displace an amount of water approximately evaluated in 4.3 acre feet. Unless a compensatory depression is provided on this site, the developer may become subject to liability action by the neighboring property owners.

The only option available at this time appears to be a depression of the proposed parking area to accommodate the appropriate water volume. A direct connection to the storm sewer would be provided if the depth of the sewer is such as to be able to receive the outflow from the parking lot by gravity. Otherwise, a pumping facility may be required if the elevation difference is not adequate or there is a potential for backflow into the parking lot. This letter is also written to advise the owner of the potential consequences of development before future storm sewer facilities are constructed.

Very truly yours,

Bruno Conegliano Assistant City Engineer-Hydrology

BC/fs cc - Gerald Davenport Dick Heller John Meyers Rich Leonard

-Drainage File

====== AN EQUAL OPPORTUNITY EMPLOYER =

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