City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

13 May, 1999

Jake Bordenave
Bordenave Designs
P.O. Box 91194
Albuquerque, NM 87199

RE: AMERICAN POLYSTEEL FORMS (F-15/D26) ENGINEER CERTIFICATION FOR CERTIFICATE OF OCCUPANCY APPROVAL. ENGINEER'S CERTIFICATION DATED 4-12-99

Dear Mr. Bordenave:

Based upon the information provided in your 4-13-99 submittal, Engineer's Certification is acceptable for Certificate of Occupancy approval.

If I can be of further assistance, feel free to contact me at 768-2766.

Sincerely,

Scott Davis
P.D., Hydrology Division

c: file

CITY OF
Albuquerque

October 30,1998

Jake Bordenave
Bordenave Designs
P.O. Box 91194
Albuquerque, New Mexico 87199

RE: DRAINAGE PLAN FOR AN ADDITION TO AMERICAN POLYSTEEL FORMS
(F15-D26) ENGINEER'S STAMP DATED 10/1/98

Dear Mr. Bordenave:

Based on the information provided on your October 8,1998 submittal, the above referenced site is approved for Building Permit.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

Also, prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If I can be of further assistance, please feel free to contact me at 924-3986.

C: Andrew Garcia
File

Sincerely

Bernie J. Montoya

Bernie J. Montoya CE
Associate Engineer

CITY OF
Albuquerque
Public Works Department

Martin J. Chávez, Mayor

Robert E. Gurulé, Director

May 22,1997

Jake Bordenave
Bordenave Designs
P.O. Box 91194
Albuquerque, New Mexico 87199

RE: ENGINEER CERTIFICATION FOR AMERICAN POLYSTEEL FORMS (F15-D26)
ENGINEER'S CERTIFICATION STATEMENT DATED 5/5/97

Dear Mr. Bordenave:

Based on the information provided on your May 6,1997 submittal, Engineer Certification for the above referenced site is acceptable.

If I can be of further assistance, please feel free to contact me 924-3986.

C: Andrew Garcia
File

Sincerely

Bernie J. Montoya

Bernie J. Montoya CE
Associate Engineer

CITY OF
Albuquerque

September 26, 1996

Martin J. Chávez, Mayor

Jake Bordenave
Bordenave Designs
P.O. Box 91194
Albuquerque, NM 87199

RE: AMERICAN POLYSTEEL FORMS (F15-D26). GRADING AND DRAINAGE PLAN FOR BUILDING PERMIT APPROVAL. ENGINEER'S STAMP DATED 8-30-96.

Dear Mr. Bordenave:

Based on the information provided on your September 5, 1996 submittal, the above referenced project is approved for Building Permit.

Prior to Certificate of Occupancy approval, an Engineer's Certification will be required.

If I can be of further assistance, please feel free to contact me at 768-3622.

Sincerely,

Lisa Ann Manwill
Engineering Assoc./Hyd.

c: Andrew Garcia
File

AMERICAN POLYSTEEL

9822	1/1
JJB	10/01/98

POND ROUTING

6" ORIFICE, C = 0.6 (note: consider pipe as weir til depth 20.25)
2.5' LONG BROAD CRESTED WEIR, C = 2.8

TIME	RUNOFF	INFLOW	DEPTH	OR. HEAD	OR. FLOW	WEIR HD	WEIR FLOW	STORAGE	
MIN	CFS	CU.FT.	FT	FT	CU.FT	FT	CU FT	CU FT	
70	0								
		0	0	0	0	0	0		
72	0								
		6		-	-	0.005	0		
74	0.1		0.008					6	
		18		-	-	0.014	0		
76	0.2		0.032					24	24
		30		-	-	0.034	1		
78	0.3		0.070					53	53
		48		-	-	0.070	2		
80	0.5		0.130					99	99
		72		-	-	0.125	7		
82	0.7		0.214					164	164
		96				0.212	16		
84	0.9		0.318					244	246
		111		0.163	36	-	-		
86	1.4		0.409					319	319
		174		0.235	54	-	-		
88	1.5		0.556					439	440
		174		0.3678	69	-	-		
90	1.4		0.680					544	543
		156		0.475	78	-	-		
92	1.2		0.770					622	620
		132		0.548	84	-	-		
94	1.0		0.827					670	669
		114		0.591	87	-	-		
96	0.9		0.855					697	694
		102		0.615	89	-	-		
98	0.8		0.875					710	711
		90		0.625	89	-	-		
100	0.7		0.874					711	710
		78		0.619	89	-	-		
102	0.6		0.863					700	701

```
    AHYMO PROGRAM (AHYMO_97) -                          - Version:  1997.02c
         RUN DATE (MON/DAY/YR) = 10/05/1998
         START TIME (HR:MIN:SEC) = 17:20:31     USER NO.= AHYMO-I-9702a01000B03-AH
         INPUT FILE = c:\msoffice\winword\9822\9822ain.txt

*S                    AMERICAN_POLYSTEEL
*S                    BASIN_A
*S                    FILE:9822AIN.TXT
START                 TIME = 0.0  PUNCH CODE = 0 LINES = 63
RAINFALL              TYPE = -1
                      QUARTER = 0   ONE = 2.01   SIX = 2.35
                      DT = 0.0333333 HR

                  COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
                  DT =    .033333 HOURS       END TIME =     5.999940 HOURS
COMPUTE LT TP         LCODE = 1   NK = 1   ISLOPE = -1
                      LENGTH = 200   SLOPE = 0.007   K = 2
                      KN = 0.016  CENTROID RATIO = 0.5

     Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

     SCS UPLAND METHOD FACTORS
                               LENGTH (FT)      SLOPE (FT/FT)       COMPOSITE K
     SHEET FLOW PORTION              .0           .000000             .0000
     SHALLOW FLOW PORTION          200.0          .007000            2.0000
     CHANNEL FLOW PORTION            .0           .000000             .0000
     TOTAL BASIN                   200.0          .007000            2.0000


     TIME OF CONCENTRATION (HRS)=   .0332     TIME TO PEAK (HRS)=   .0221     LAG TIME (HRS)=   .0249


     TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
     REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333     LAG TIME (HRS)=   .1500

COMPUTE NM HYD        ID = 1   HYD NO = 101   DA = 0.0011 SQ MI
                      PER A=0   PER B=32   PER C=0   PER D=68
                      TP = 0.0   MASS RAIN = -1
     TIME TO PEAK (hrs)=   .1333

     K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   2.9524    CFS   UNIT VOLUME =    .9955       B =   526.28      P60 = 2.0100
     AREA =      .000748 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033333


     K =   .132120HR    TP =   .133333HR    K/TP RATIO =   .990905     SHAPE CONSTANT, N =  3.563129
     UNIT PEAK =   .85776    CFS   UNIT VOLUME =    .9845       B =   324.91      P60 = 2.0100
     AREA =      .000352 SQ MI    IA =    .50000 INCHES    INF =   1.25000 INCHES PER HOUR
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RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD ID = 1 CODE = 2

PARTIAL HYDROGRAPH 101.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.333	.7	2.667	.1	4.000	.0	5.333	.0
.067	.0	1.400	1.5	2.733	.0	4.067	.0	5.400	.0
.133	.0	1.467	2.5	2.800	.0	4.133	.0	5.467	.0
.200	.0	1.533	2.7	2.867	.0	4.200	.0	5.533	.0
.267	.0	1.600	2.0	2.933	.0	4.267	.0	5.600	.0
.333	.0	1.667	1.4	3.000	.0	4.333	.0	5.667	.0
.400	.0	1.733	1.1	3.067	.0	4.400	.0	5.733	.0
.467	.0	1.800	.9	3.133	.0	4.467	.0	5.800	.0
.533	.0	1.867	.8	3.200	.0	4.533	.0	5.867	.0
.600	.0	1.933	.7	3.267	.0	4.600	.0	5.933	.0
.667	.0	2.000	.6	3.333	.0	4.667	.0	6.000	.0
.733	.0	2.067	.5	3.400	.0	4.733	.0	6.067	.0
.800	.0	2.133	.4	3.467	.0	4.800	.0	6.133	.0
.867	.0	2.200	.2	3.533	.0	4.867	.0	6.200	.0
.933	.0	2.267	.2	3.600	.0	4.933	.0	6.267	.0
1.000	.0	2.333	.1	3.667	.0	5.000	.0	6.333	.0
1.067	.0	2.400	.1	3.733	.0	5.067	.0	6.400	.0
1.133	.0	2.467	.1	3.800	.0	5.133	.0		
1.200	.0	2.533	.1	3.867	.0	5.200	.0		
1.267	.3	2.600	.1	3.933	.0	5.267	.0		

RUNOFF VOLUME = 1.68748 INCHES = .0990 ACRE-FEET
PEAK DISCHARGE RATE = 2.78 CFS AT 1.500 HOURS BASIN AREA = .0011 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 17:20:31

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    AHYMO PROGRAM (AHYMO_97) -                          - Version:  1997.02c
         RUN DATE (MON/DAY/YR) = 10/06/1998
         START TIME (HR:MIN:SEC) = 08:26:50     USER NO.= AHYMO-I-9702a01000B03-AH
         INPUT FILE = c:\msoffice\winword\9822\9822bin.txt

*S                    AMERICAN-POLYSTEEL
*S                    BASIN_B
*S                    FILE:9822BIN.TXT
START                 TIME = 0.0  PUNCH CODE = 0 LINES = 63
RAINFALL              TYPE = -1
                      QUARTER = 0   ONE = 2.01   SIX = 2.35
                      DT = 0.0333333 HR

                  COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
                  DT =    .033333 HOURS       END TIME =     5.999940 HOURS
COMPUTE LT TP         LCODE = 1   NK = 1   ISLOPE = -1
                      LENGTH = 200   SLOPE = 0.009   K = 2
                      KN = 0.016  CENTROID RATIO = 0.5

     Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

     SCS UPLAND METHOD FACTORS
                                LENGTH (FT)       SLOPE (FT/FT)        COMPOSITE K
     SHEET FLOW PORTION              .0            .000000              .0000
     SHALLOW FLOW PORTION          200.0           .009000             2.0000
     CHANNEL FLOW PORTION            .0            .000000              .0000
     TOTAL BASIN                   200.0           .009000             2.0000


     TIME OF CONCENTRATION (HRS)=   .0293     TIME TO PEAK (HRS)=   .0195     LAG TIME (HRS)=   .0220


     TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
     REVISED VALUES: TIME OF CONCENTRATION (HRS)=   .2000     TIME TO PEAK (HRS)=   .1333     LAG TIME (HRS)=   .1500

COMPUTE NM HYD        ID = 1   HYD NO = 101   DA = 0.0005 SQ MI
                      PER A=0   PER B=0   PER C=0   PER D=100
                      TP = 0.0   MASS RAIN = -1
     TIME TO PEAK (hrs)=   .1333

     K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   1.9735    CFS   UNIT VOLUME =    .9932       B =   526.28      P60 = 2.0100
     AREA =      .000500 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 = 0

PARTIAL HYDROGRAPH 101.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.300	.3	2.600	.0	3.900	.0	5.200	
.0									
.033	.0	1.333	.5	2.633	.0	3.933	.0	5.233	
.0									
.067	.0	1.367	.7	2.667	.0	3.967	.0	5.267	
.0									
.100	.0	1.400	.9	2.700	.0	4.000	.0	5.300	
.0									
.133	.0	1.433	1.1	2.733	.0	4.033	.0	5.333	
.0									
.167	.0	1.467	1.4	2.767	.0	4.067	.0	5.367	
.0									
.200	.0	1.500	1.5	2.800	.0	4.100	.0	5.400	
.0									
.233	.0	1.533	1.4	2.833	.0	4.133	.0	5.433	
.0									
.267	.0	1.567	1.2	2.867	.0	4.167	.0	5.467	
.0									
.300	.0	1.600	1.0	2.900	.0	4.200	.0	5.500	
.0									
.333	.0	1.633	.9	2.933	.0	4.233	.0	5.533	
.0									
.367	.0	1.667	.8	2.967	.0	4.267	.0	5.567	
.0									
.400	.0	1.700	.7	3.000	.0	4.300	.0	5.600	
.0									
.433	.0	1.733	.6	3.033	.0	4.333	.0	5.633	
.0									
.467	.0	1.767	.6	3.067	.0	4.367	.0	5.667	
.0									
.500	.0	1.800	.5	3.100	.0	4.400	.0	5.700	
.0									
.533	.0	1.833	.5	3.133	.0	4.433	.0	5.733	
.0									
.567	.0	1.867	.5	3.167	.0	4.467	.0	5.767	
.0									
.600	.0	1.900	.4	3.200	.0	4.500	.0	5.800	
.0									

	.633	.0	1.933	.4	3.233	.0	4.533	.0	5.833
.0									
	.667	.0	1.967	.4	3.267	.0	4.567	.0	5.867
.0									
	.700	.0	2.000	.4	3.300	.0	4.600	.0	5.900
.0									
	.733	.0	2.033	.4	3.333	.0	4.633	.0	5.933
.0									
	.767	.0	2.067	.3	3.367	.0	4.667	.0	5.967
.0									
	.800	.0	2.100	.3	3.400	.0	4.700	.0	6.000
.0									
	.833	.0	2.133	.2	3.433	.0	4.733	.0	6.033
.0									
	.867	.0	2.167	.2	3.467	.0	4.767	.0	6.067
.0									
	.900	.0	2.200	.1	3.500	.0	4.800	.0	6.100
.0									
	.933	.0	2.233	.1	3.533	.0	4.833	.0	6.133
.0									
	.967	.0	2.267	.1	3.567	.0	4.867	.0	6.167
.0									
	1.000	.0	2.300	.1	3.600	.0	4.900	.0	6.200
.0									
	1.033	.0	2.333	.1	3.633	.0	4.933	.0	6.233
.0									
	1.067	.0	2.367	.1	3.667	.0	4.967	.0	6.267
.0									
	1.100	.0	2.400	.1	3.700	.0	5.000	.0	6.300
.0									
	1.133	.0	2.433	.1	3.733	.0	5.033	.0	6.333
.0									
	1.167	.0	2.467	.0	3.767	.0	5.067	.0	
	1.200	.0	2.500	.0	3.800	.0	5.100	.0	
	1.233	.1	2.533	.0	3.833	.0	5.133	.0	
	1.267	.2	2.567	.0	3.867	.0	5.167	.0	

RUNOFF VOLUME = 2.11535 INCHES = .0564 ACRE-FEET
PEAK DISCHARGE RATE = 1.51 CFS AT 1.500 HOURS BASIN AREA = .0005 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 08:26:50

JRDENAVE DESIGNS	American Polysteel Forms	9349	1/1
		JJB	12/28/94

ROUTING

Zone C 6 hour rainfall = 2.35 in. assume 6" Pipe

Time	Rainfall	Runoff	Inflow	Depth	Head	Outflow	Storage	
min.	in	in	cu.ft.	ft.	ft.	cu.ft.	cu.ft.	
0	0	0	0	0	0	0	0	
20	0.0203	0	0					
40	0.0264	0	0					base ft
60	0.0385	0	0					
70	0.0621	0.0473	53	0.10	0.02	2	41	
74	0.1144	0.1117	124	0.21	0.06	21	144	
76	0.0920	0.0907	101	0.36	0.12	23	220	220
78	0.1210	0.1197	133	0.47	0.19	44	309	312
80	0.1541	0.1528	170	0.60	0.28	61	418	427
82	0.1921	0.1908	212	0.75	0.43	74	556	555
84	0.2343	0.2330	259	0.81	0.53	82	733	733
86	0.2167	0.2154	239	1.00	0.66	92	878	880
88	0.0907	0.0894	99	1.00	0.75	98	879	854
90	0.0766	0.0753	84	0.92	0.71	96	867	
92	0.0682	0.0669	74					
94	0.0620	0.0613	68					
96	0.0572	0.0559	62					
98	0.0530	0.0517	57					
100	0.0495	0.0482	54					
02	0.0465	0.0452	50					
04	0.0437	0.0434	48					
106	0.0411	0.0398	44					
108	0.0390	0.0377	42					
110	0.0369	0.0356	40					

SEP - 5