Check Set

APPROVED

CITY ENGINEER
2/20/73

planners · consultants · engineers

REVISED -

GENTRY INNERSPACE DEVELOPMENT

MASTER DRAINAGE REPORT

UNITED ENGINEERS

planners · consultants · engineers

Suite 200
4525 Northpark Drive
Colorado Springs, Colo. 80907

(303) 598-3222

February 8, 1973

Mr. DeWitt Miller
Director of Public Works
P.O. Box 1575
City Hall
Colorado Springs, Colo.

Subject: Revised Master Drainage Report, Gentry Innerspace Development

Dear Deke:

Transmitted herewith is subject drainage report for your review and approval.

This report is prepared in accordance with extensive revisions to the Master Development and Grading Plans and will supercede the report approved by George Jury on August 2, 1972.

Structures proposed within parks are to be maintained by the Homeowners Association. All other structures are to be maintained by the City as provided in the Drainage Ordinance. Please note that the street names within this report are subject to change upon platting.

Please call me if I may answer any questions.

Respectfully,

UNITED WESTERN ENGINEERS

O. E. Watts
Engineering Director

/dst

GENTRY INNERSPACE DEVELOPMENT
MASTER DRAINAGE PLAN (REVISED)

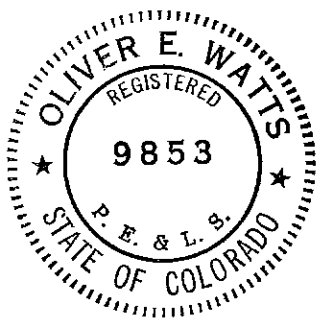
Certifications and Approvals

Registered Engineer

I, Oliver E. Watts, a registered engineer in the State of Colorado, hereby certify that the attached drainage plan and report were prepared under my direction and supervision and are correct to the best of my knowledge and belief. I further certify that said drainage report is in accordance with all City of Colorado Springs Ordinances and specifications and criteria.

Oliver E. Watts

Colorado P.E. - L.S. No. 9853



Owner or developer of the site:

"The developer has read and will comply with all of the requirements specified in this drainage report as approved by the City Engineer."

By Clyde Summers

Title Construction Manager

Approved:

City of Colorado Springs, Department of Public Works:

City Engineer

Date

1. Description of Location:

a. The Gentry Innerspace Development is located as shown on the vicinity map on the enclosed drainage plan, occupying a portion of the Northwest quarter on Section 5 and the Northeast quarter of Section 6 in Township 15 South, Range 66 West of the 6th P.M., within the City of Colorado Springs, Colorado.

b. The total area enclosed by the development is approximately 67.252 acres.

c. The development lies in a drainage basin for which no study has been made for the City of Colorado Springs. Hartzell - Pfeiffenberger and Associates, Inc. of Denver, Colorado, prepared a drainage study on Cheyenne Mountain Ranch for Gates Land Company, which includes the area of this report. The rational method of analysis was used, therefore, the quantities of flow of the major basin study may be less than those of this report.

d. Natural drainage is defined by the topography shown on the attached plan, generally Southerly across the development. The natural drainage pattern is maintained although considerable grading will be accomplished within the development. Slopes conforming to this grading are shown on the plan.

2. Method of Runoff Computations:

a. Method: The method of computations utilized in this report is the SCS synthetic hydrograph method as modified by the Bureau of Reclamation Small Dams Publication. The 50-year storm of two-inch intensity, duration of one hour was used in all computations in accordance with criteria of the City of Colorado Springs. Runoff computation sheets are included in this report.

b. Soil Types: The soil types within the area are shown on an enclosed drawing. The Limon series (A1-B) varies from silty clay loam to clay; calcium carbonate occurs at variable depths. This type falls in the "C" hydrologic group.

The wet alluvial land (XWI) consists of dark colored sandy loams to light clay loams to a depth of 20 inches or more, sand and gravel occurs at 20 to 40 inches. This type falls in the "D" hydrologic group.

The RB2 type is an association of Samsil soils and gravelly, cobbly materials over shale. The Samsil series consist of shallow clayey soils over shale at a depth of 20 inches or less. The gravelly, cobbly material is 30 to 70% coarse fragments and may extend to a depth of 1 to 30 feet over shale. This soil type is in the "D" hydrologic group.

3. External Water Entering the Subdivision:

6.9 CFS enters along the borrow ditch on Highway 115, and 5.6 CFS contributes to this flow from Highway 115.

Several inflows along the North boundary enter as concentrated runoff in natural channels. 10.1 CFS enters in the Northwest, 8.0 CFS in the North - center, two inflows of 1.5 CFS in the Northeast, and 1.6 and 2.8 CFS in the Eastern portion.

Several inflows along the North boundary enter as "sheet" flows across broad areas of terrain with no defined natural channels along the North boundary: 5.6 CFS along an area 760 feet long; 1.4 CFS over 500 feet; 0.7 CFS over 190 feet; 0.8 CFS over 380 feet; and 0.4 CFS over 240 feet.

No structures to convey the above inflow exist or are proposed, other than the existing Highway borrow ditch.

4. Flow Through the Subdivision:

Considerable effort was made so that the storm runoff routing would conform to the previously approval master plan and the Hartzell - Pfeiffenberger report which was approved on June 28, 1972.

Concentrated inflows from the North are routed to the street system by various RCP-lined ditch combinations as dictated by the 2=1 grading slopes.

The Westerly portion of the development flows are routed along Highway 115 in a storm sewer to the existing greenbelt.

Flows down Aquarius Drive West are routed to a previously approved system in the filing number one profile sheets, to which there is no change proposed. It is necessary to divert runoff at Inner Way West so as not to exceed the capacity of the system.

The central portion of the development is routed along the five Southerly cul-de-sacs to the Homeowners Park System and thence to Cheyenne Meadows Boulevard.

The Easterly portion is routed by street flows to Cheyenne Meadows Boulevard.

5. Outfall Points:

The outfall for the Westerly portion is the existing greenbelt. All other flows will outfall into Cheyenne Meadows Boulevard and the previously approved storm sewer system of Hartzell - Pfeiffenberger. A comparison of the revised outfall flows and those approved in our report of May 12, 1972 is as follows.

OUTFALL POINT	REVISED FLOW-CFS	PREVIOUSLY APPROVED FLOW-CFS
West Greenbelt	69.6	56.2
Aquarius Drive-West	46.8	48.1
Existing Catch Basin at Westmeadow Dr.	24.7	31.1
Long Place	5.0	4.9
Aquarius Drive-East	16.2	34.0
Orbit Place	15.3	14.0
Orbit Court	8.1	8.9
Cheyenne Meadows (Bubble)	3.2	6.4

Because of the above comparison of flows, it is readily seen that the existing H-P system is now somewhat oversized, except at the special catch basin at Westmeadow Drive. This facility was designed to catch the flow from the back and will now contain the runoff only when submerged and supported with the other two catch basins. For this reason this catch basin will be replaced and the costs attributed to this report.

6. Internal Design Computations:

a. Streets: All computations are enclosed. All streets are 36 foot mats except Cheyenne Meadows Boulevard.

Street	Location	Curb Type	Slope-Min	Runoff	Capacity
Aquarius Way	Aquarius Court	Ramp	1.6%	19.1CFS	20.8CFS
Aquarius Court	C.B.	Vert.	2.0%	23.8	59.0
Aquarius Way	Aquarius Dr.	Ramp	0.5%	6.7	11.6
Aquarius Dr.	Astro Crt.	Vert.	0.5%	15.9	29.5
Aquarius Dr.	Aquarius Way	Vert.	2.0%	31.7	59.0
Aquarius Dr.	Afar Way	Vert.	1.0%	33.1	41.7
Aquarius Dr.	Cheyenne Mead. E.	Vert.	2.6%	16.2	67.2
Astro Crt.	C.B.	Ramp	2.0%	4.0	23.2
Yester Way	Cheyenne M.	Ramp	4.0%	13.5	32.8
Orbit Pl.	Cheyenne M.	Ramp	2.2%	15.3	24.3
Orbit Crt.	Cheyenne M.	Ramp	5.1%	8.1	37.0CFS

b. Channel Sections: Channels are concrete lined (n=0.015) with wwf, and grass lined swales (n=0.034). All channels are within parks and homeowners easements and are to be maintained by the Homeowners Association.

CONCRETE CHANNELS:

Basin Location	Size	Slope	Runoff	Capacity
II B	4' x 1'	6.77%	10.1CFS	30.2 CFS
III A	4' x 1'	9.7%	8.0	36.2
VI A	3' x 0.75'	10.1%	1.5	17.2
VII A	3' x 0.75'	12.1%	1.5	18.8
VIII A	3' x 0.75'	7.0%	1.6	14.3
IX A	3' x 0.75'	14.0%	2.8CFS	20.1 CFS

GRASS LINED SWALES: (Park Areas)

IV C	10' x 1'	2.5%	8.6	25.2 CFS
V D	10' x 1'	2.5%	11.2	25.2 CFS

c. Concrete Pipe (N=0.013): All pipe is RCP with minimum size 18" exept in park areas where 12" is used. Park areas to be maintained by the Homeowners Association. Calculations pertaining to the size and capacity of the storm drains are enclosed, summarized as follows:

Location	Size In.	Slope %	Design Flows -CFS-	Max. Capacity -CFS-
Hwy 115 G.B.	21	1.50	19.4	19.4
Aquarius Crt.	24	1.30	23.8	25.8
Hwy 115 G.B.	30	1.30	43.2	46.7
Alone Way	18	0.50	5.7	7.4
Hwy 115 G.B.	36	0.75	48.9	57.8
Aquarius Dr. C.B.	18	0.50	5.6	7.4
Inner Way West	21	0.50	11.2	11.2
Inner Way West	24	0.75	16.4	19.6
Hwy 115 G.B.	36	1.20	65.3	73.0
Outer Way West	18	0.25	4.3	5.2
Aquarius Dr.	24	1.00	18.3	22.6
Aquarius Dr.	30	0.80	36.6	36.7
Aquarius Dr.	18	1.00	5.1	10.5
Parks	12	1.50	4.0 Max.	4.4

d. Curb inlets were sized in accordance with the enclosed plans. The flows from these outlets will adequately dissipate within the streets.

7. Cost Estimate:

ITEM	QUANTITY	ITEM COST	TOTAL
4' catch basin	12 ea.	$601.00	$7212.00
6' catch basin	2 ea.	829.00	1658.00
8' catch basin	2 ea.	1144.00	2288.00
10' catch basin	1 ea.	1346.00	1346.00
4' to 10' catch basin	1 ea.	2000.00	2000.00
2' curb inlet	4 ea.	325.00	1300.00
4' curb inlet	3 ea.	350.00	1050.00
6' curb inlet	1 ea.	375.00	375.00
18" RCP	272 LF	8.50	2312.00
21" RCP	530 LF	9.00	4770.00
21" CFES	1 ea.	120.00	120.00
24" RCP	134 LF	10.50	1407.00
30" RCP	502 LF	13.50	6777.00
36" RCP	464 LF	19.00	8816.00
		SUB TOTAL	$41431.00

HOMEOWNERS ASSOCIATION FACILITIES

12" RCP	544 LF	6.50	$3536.00
10' Conc. Trans.	2 ea.	100.00	200.00
10' Grass Channel	1260 LF	1.25	1575.00
3' x 0.75' Conc. Channel	422 LF	4.52	1907.44
4' x 1' Conc. Channel	310 LF	6.09	1887.90
		SUB TOTAL	$9106.34
		SUB TOTALS	$41431.00
		SUB TOTAL	$50537.34
		10% Engr'g. & Cont.	$ 5053.73
		TOTAL	$55591.07

8. The developer is required to construct all facilities in accordance with a previous agreement and no drainage fees are to be assessed.

1" = 80'

MAJOR BASIN	SUB BASIN	AREA Planim. Read	AREA MILE	BASIN LENGTH	BASIN HEIGHT	Tc	LAND USE TYPE SOIL	LAND USE %	CURVE	TPO	FLOW Q	FLOW qp	Tb
II	A	21.62	.00496	785	27	.080	SF/D GB/D	.952x 97 .048x 80	96	.548	1.57	6.88	1.46
	B	21.95	.00504	710	22	.077	SF/D	1 x 97	97	.546	1.67	7.46	1.46
	C	14.74	.00338	520	8	.080	SF/D SF/C GB/D	.80 x 97 .14 x 96 .06 x 80	96	.548	1.57	4.69	1.46
	D	17.02	.00391	545	7	.087	SF/C SF/D	.144 x 96 .856 x 97	97	.552	1.67	5.73	1.47
	E	15.50	.00356	520	7	.082	SF/D	1 x 97	97	.549	1.67	5.24	1.47
	F	12.61	.00289	390	5	.070	SF/D	1 x 97	97	.542	1.67	4.31	1.45
III	A	19.55	.00449	705	27	.070	SF/D	1 x 97	97	.542	1.67	6.70	1.45
	B	22.34	.00513	785	38	.070	SF/D	1 x 97	97	.542	1.67	7.65	1.45
	C	14.74	.00338	510	36	.042	SF/D	1 x 97	97	.525	1.67	5.21	1.40
	D	21.95	.00504	545	8	.084	SF/D SF/C GB/D	.814 x 97 .113 x 96 .073 x 80	96	.550	1.57	6.96	1.47
	E	16.76	.00385	530	6	.090	SF/D SF/C	.65 x 97 .35 x 96	97	.554	1.67	5.61	1.48
	F	31.32	.00719	560	7	.090	SF/D	1 x 97	97	.554	1.67	10.49	1.48
	G	9.17	.00211	310	4	.056	SF/D	1 x 97	97	.534	1.67	3.19	1.43

HYDROLOGIC COMPUTATION – BASIC DATA

PROJ: GENTRY DRAINAGE

By: B.E.J.

Date: 1-31-73

UNITED WESTERN ENGINEERS
planners · consultants · engineers
Suite 200
4525 Northpark Drive
Colorado Springs, Colo. 80907

MAJOR BASIN	SUB BASIN	AREA Planim. Read	AREA MILE	BASIN LENGTH	BASIN HEIGHT	Tc	LAND USE TYPE SOIL	LAND USE %	CURVE	TPO	FLOW Q	FLOW qp	Tb
IV	A	8.93	.00205	335	5	.058	SF/D	1X97	97	.535	1.67	3.10	1.43
	B	11.53	.00265	385	6	.065	SF/D SF/C	.86 x 97 .14 x 96	97	.539	1.67	3.97	1.44
	C	18.25	.00419	650	19	.074	GB/D GB/C	.29 x 80 .71 x 74	76	.544	0.41	1.53	1.45
	D	14.20	.00326	410	7	.060	SF/D SF/C	.33 x 97 .67 x 96	97	.536	1.67	4.92	1.43
	E	12.40	.00285	95	3	.020	SF/D SF/C	.31 x 97 .69 x 96	97	.512	1.67	4.50	1.37
V	A	9.58	.00220	450	5	.080	SF/D	1X97	97	.548	1.67	3.24	1.46
	B	10.16	.00233	430	6	.070	SF/D	1X97	97	.542	1.67	3.47	1.45
	C	8.76	.00201	440	5	.080	SF/D	1X97	97	.548	1.67	2.96	1.46
	D	17.46	.00401	1025	17	.130	GB/C GB/D	.52 x 74 .48 x 80	77	.578	0.45	1.51	1.54
	E	14.70	.00337	535	9	.078	SF/C SF/D	.38 x 96 .62 x 97	97	.547	1.67	4.98	1.46
	F	13.61	.00312	95	4	.025	SF/C SF/D	.45 x 96 .55 x 97	97	.515	1.67	4.90	1.38
VI	A	38.74	.00889	1135	47	.094	SF/D	1X97	97	.556	1.67	12.92	1.49

HYDROLOGIC COMPUTATION – BASIC DATA

PROJ: GENTRY DRAINAGE

By: B.E.J.

Date: 1-31-73

UNITED WESTERN ENGINEERS
planners · consultants · engineers
Suite 200
4525 Northpark Drive
Colorado Springs, Colo. 80907

1" = 80'

MAJOR BASIN	SUB BASIN	AREA Planim. Read	AREA MILE	BASIN LENGTH	BASIN HEIGHT	Tc	LAND USE TYPE SOIL	LAND USE %	CURVE	TPO	FLOW Q	FLOW qp	Tb
VII	A	38.12	.00875	670	46	.052	SF/D	1x97	97	.531	1.67	13.32	1.42
VIII	A	16.60	.00381	385	30	.034	SF/D	1x97	97	.520	1.67	5.92	1.39
IX	A	8.97	.00206	200	14	.023	SF/D	1x97	97	.514	1.67	3.24	1.37

HYDROLOGIC COMPUTATION – BASIC DATA

PROJ: GENTRY DRAINAGE

By: BEJ

Date: 1-31-73

UNITED WESTERN ENGINEERS
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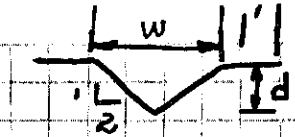
Suite 200
4525 Northpark Drive
Colorado Springs, Colo 80907

Culvert & Channel Calculations

Inflows from North



$n = 0.015$ Conc.

AREA	LOCATION & DISTANCE	ELEV & S%	S 1/2	Q50	HYD. r.	PERM.	S F AREA	USE DITCH w x d	FREE BOARD	Q MAX.
	IIB 180'	71 5 6.77% 59 3	0.2602	10.1	5" 0.30	2.98	0.89	4.0' x 1.00'	4"	30.2
								5.0' x 1.25'	7"	54.7
	III A 220'	77 4 9.73% 56 0	0.3119	8.0	7" 0.26	2.61	0.68	4.0' x 1.0'	5"	36.2
	VI A 110'	76 0 10.18% 64 8	0.3191	1.5	4" 0.15	1.48	0.22	4.0' x 1.0'	8"	36.2
								3.0' x 0.75'	5"	17.2
	VII A 148'	85 0 12.16% 67 0	0.3487	1.5	3½" 0.13	1.30	0.17	3.0' x 0.75'	5½"	18.8
	VIII A 54'	74 0 7.04% 70 2	0.2653	1.6	4" 0.15	1.48	0.22	3.0' x 0.75'	5"	14.3
	IX A 130'	82 0 14.00% 63 8	0.3742	2.8	4½" 0.45	4.47	2.00	4.0' x 1.0'	7½"	43.4
					40.17	1.68	0.28	3.0' x 0.75'	4½"	20.1

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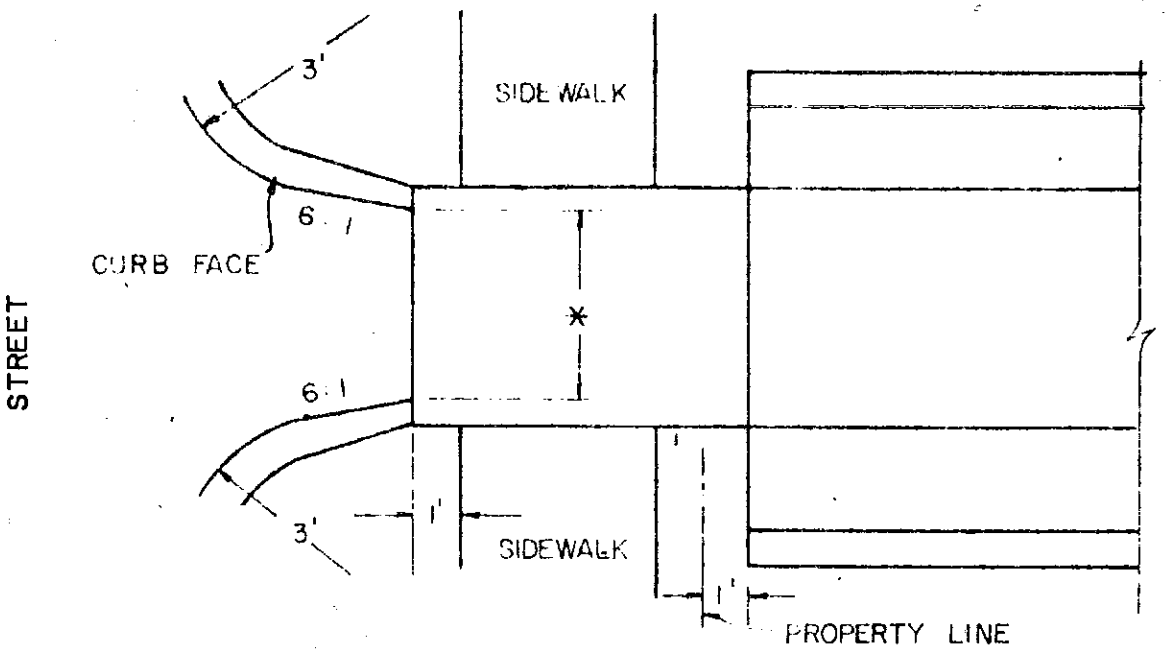
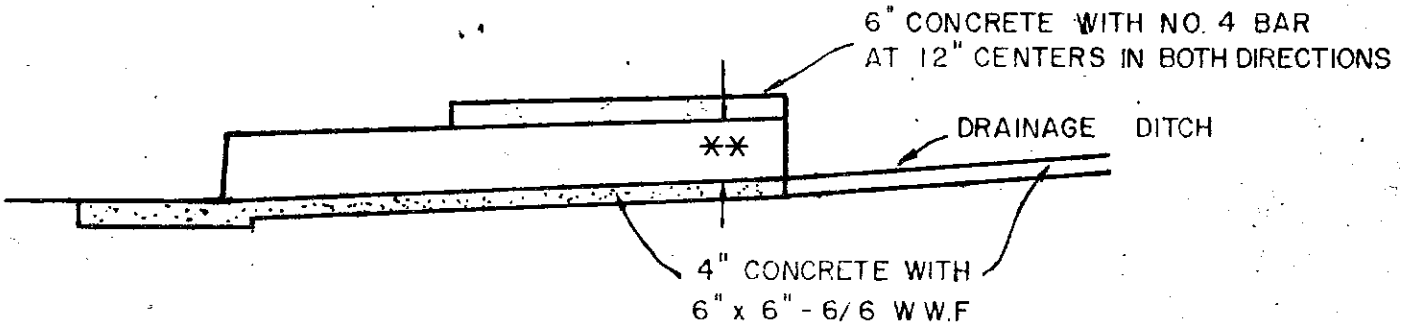
Project GENTRY MASTER DRAIN Page ___ of ___

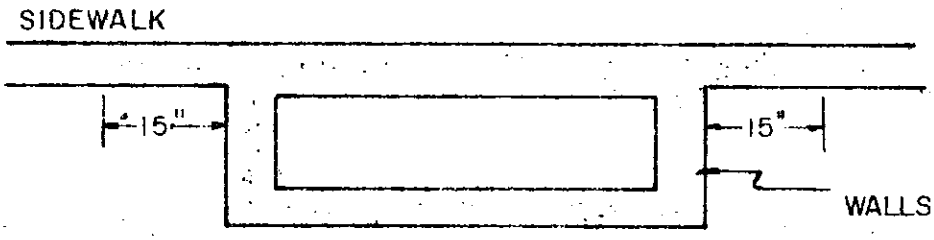
Calc. by B.E.J. date 2-7-73

Checked by ___ date ___





EXTEND EVERY OTHER BAR 15"
INTO SIDEWALK ON BOTH SIDES,
BEND EVERY OTHER BAR INTO WALLS



NOTES:

1. SIDEWALK MAY BE PLACED ANYWHERE FROM CURB TO PROPERTY LINE BY EXTENDING THE TOP SLAB TO MATCH THE POSITION OF THE SIDEWALK
2. * VARIABLE DEPENDING ON QUANTITY OF WATER. MINIMUM '4'
   ** VARIABLE DEPENDING ON QUANTITY OF WATER. MINIMUM 1'

CURB INLET

Street and Storm Sewer Calculations

STREET	LOCATION	DIST	ELEVATION & SLOPE	TOTAL RUNOFF	STREET FLOW CAPACITY	PIPE FLOW	TYPE PIPE, CATCH BASIN & SLOPE %
			Min.				
Aquarius Crt	Greenbelt	60'	1.3%	23.8	23.8 / 59.0	23.8	10' C.B., 24" RCP, S = 1.3%
Basin II A So.	Basin II C Greenbelt	100'	1.5%	19.4		19.4	21" CFES, 21" RCP, S = 1.5%
Basin II C G.B.	Basin II D G.B.	220'	1.3%	43.2		43.2	30" RCP, S = 1.3%
Alone Way	Basin II D G.B.	90'	0.5%	5.7	5.7 / 18.7	5.7	4' C.B., 18" RCP, S = 0.5%
Basin II D G.B.	Basin II E G.B.	210'	0.75%	48.9		48.9	36" RCP, S = 0.75%
Aquarius Dr.	Inner Way West	425'	0.75%	27.5	27.5 / 59.0	11.2	21" RCP, S = 0.75%
		70'+30'	0.5%	2(5.6)		2(5.6)	2-4' C.B., 18" RCP, S = 0.5%
Inner Way West	Greenbelt	90'	0.75%	16.4	5.2 / 18.7	16.4	4' C.B., 24" RCP, S = 0.75%
Outer Way West	Greenbelt	90'	0.25%	4.3	4.3 / 16.4	4.3	4' C.B., 18" RCP, S = 0.25%
Basin II E Greenblt	Open Channel	268'	1.2%	69.6		69.6	36" RCP, S = 1.20%
Aquarius Dr.	Afar West	290'	0.8%	43.6	43.6 / 51.1	36.6	30" RCP, S = 0.8%
		25'+15'	1.0%	2(18.3)		2(18.3)	2-8' C.B., 24" RCP, S = 1.0%
Aquarius Dr.	Cheyenne Meadows	25'+15'	1.0%	2(5.1)	10.2 / 41.7	2(5.1)	2-4' C.B., 18" RCP, S = 1.0%
5 Cul-de Sacs Aquarius Dr N.	Park Areas	—	1.0%	4.0 max	4.0 max / 23.2	4.0 max	5-4' C.B., 12" RCP, S = 1.0% min.

UNITED WESTERN ENGINEERS

Project GENTRY MASTER DRAIN - REV Page 1 of 1

Calc. by B.E.V. date 2-9-73

Checked by _____ date _____

MOUNTAIN RANCH IN CHEYENNE

gentry

P.O. Box 2516
Dublin, Calif.

PRELIMINARY DEVELOPMENT PLAN

BASIN I

SHEET FLOW

ALL SHEET FLOW DRAINAGE WILL BE THE RESPONSIBILITY OF THE DEVELOPER AND WILL NOT BE ACCEPTED BY THE CITY OF COLORADO SPRINGS

HOME OWNERS ASSOCIATION ACCESS AND DRAINAGE EASEMENTS

Lineal Park

APPROX. LIMITS 2:1 SLOPE

Aquarius Way

Aquarius Ct.

Aquarius Drive

Aquarius Pl.

Aquarius Drive

Zona Ct.

Astro Way

Odessy Ct.

Odessy Place

Orbit Place

Orbit Ct.

Stone Way

Inner Way West

Outer Way West

Yester Way

Afar Way West

Long Street

Jr. High Site

Vicinity Map

STATE HIGHWAY 115

COMM.

Legal:
A portion of the Northwest 1/4 of Section 5 and the Northeast 1/4 of Section 6, all in Township 15 South, Range 66 West of the 6th P.M., El Paso County, Colorado.

DRAINAGE PLAN

- MAJOR BASIN BOUNDARY
- SUB-BASIN BOUNDARY
- SOIL TYPE BOUNDARY
- (RB-2 (D)) SOIL TYPE & HYDR. GROUP
- III A (6.7) SUB-BASIN NO. (FLOW)
- FLOW DIRECTION
- R.C.P.
- OPEN CHANNEL
- 8.0 FLOW AT POINT IN C.F.S.
- GRASS LINED SWALE

NOTE: DRAINAGE FACILITIES IN CHEYENNE MEADOWS BLVD. TO BE DESIGNED AND PROVIDED BY OTHERS, SEE REPORT BY HARTZELL - PFEIFFENBERGER APPROVED BY THE CITY OF COLORADO SPRINGS 6-28-72.

APIS

MASTER PLAN APPROVAL ONLY. 6" FREEBOARD ACCEPTED SUBJECT TO FINAL STREET DESIGN APPROVAL.

ALL FACILITIES WITHIN PARK TO BE UNDER HOME OWNERS ASSOC. MAINTENANCE

DETAIL REQ'D. WITH PLAT

WESTMEADOW DRIVE

COMBINATION GRATE AND CURB INLET

GRASS LINED DRAINAGE SWALE
PROVIDE RIP RAP RIPRAP AT PIPE TO GRASS TRANSITION, TYPICAL ALL PIPES.

PLAN - FLARED INLET

SECTION - INFLOW CHANNEL

4" CONCRETE LINING W/6x6-6.6 WWF

CHANNEL DIMENSIONS LISTED AS W x D

NOTE: CIRCLED COMMENTS REQUIRED BY CITY ENGINEER. REV. 2-19-73

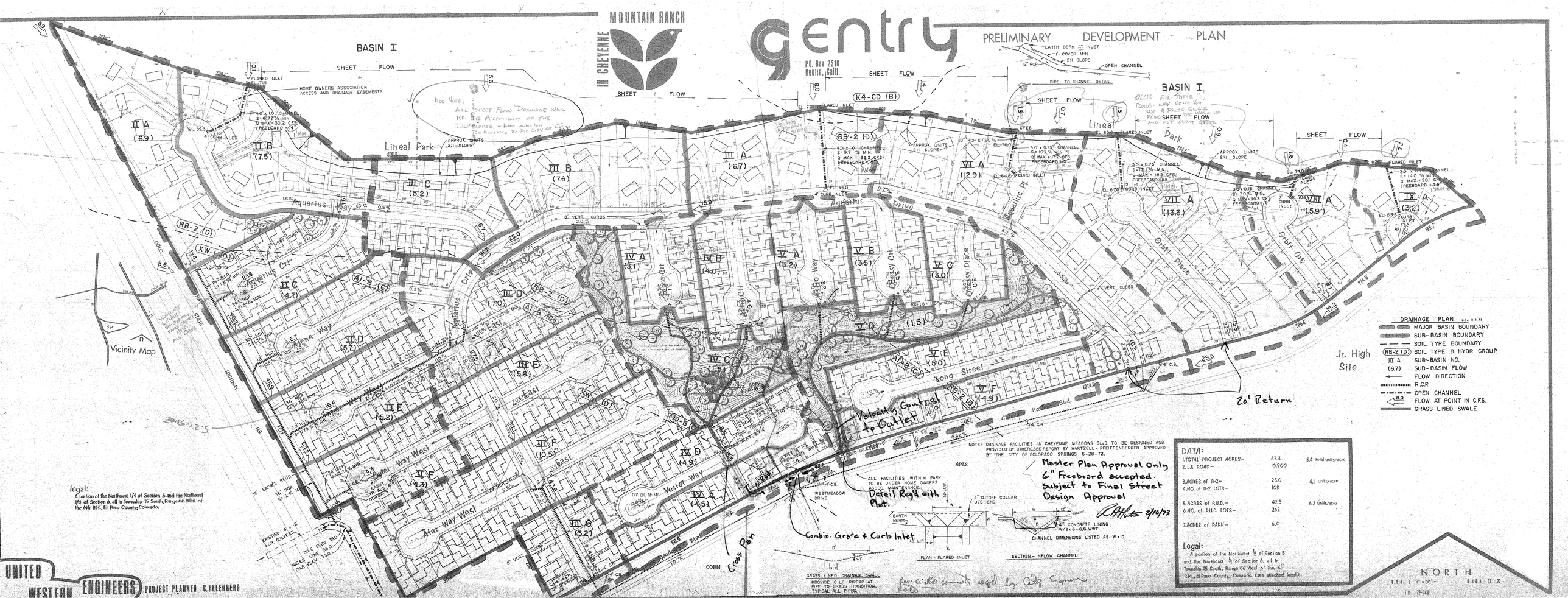
DATA:

1. TOTAL PROJECT ACRES –	67.3	5.4 total units/acre
2. L.E. ROAD –	10,900	
3. ACRES of R-2 –	25.0	4.1 units/acre
4. NO. of R-2 LOTS –	103	
5. ACRES of R.U.D. –	42.3	6.2 units/acre
6. NO. of R.U.D. LOTS –	262	
7. ACRES of PARK –	6.4	

Legal:
A portion of the Northwest 1/4 of Section 5 and the Northeast 1/4 of Section 6, all in Township 15 South, Range 66 West of the 6th P.M., El Paso County, Colorado. (See attached legal)

UNITED WESTERN ENGINEERS
ROOSEVELT DRIVE COLORADO SPRINGS, COLO.
PROJECT PLANNER C. HELENBERG

NORTH
SCALE 1" = 80' ±
DATE 12 72
JOB 72-1401


MOUNTAIN RANCH
IN CHEYENNE
gentry
P.O. Box 2518
Dublin, Calif.
PRELIMINARY DEVELOPMENT PLAN
BASIN I
SHEET FLOW
HOME OWNERS ASSOCIATION ACCESS AND DRAINAGE EASEMENTS
Lineal Park
Aquarius Drive
Aquarius Ct.
Aquarius Way
Aquarius Pl.
Obit Ct.
Obit Place
Long Street
Outer Way West
Yester Way
After Way West
Jr. High Site
Vicinity Map
Velocity Control to Outlet
Master Plan Approval Only
6" Freeboard accepted.
Subject to Final Street Design Approval
Detail Reqd with Plat.
Combin. Grate & Curb Inlet
Cross Pan
20' Return
DRAINAGE PLAN
MAJOR BASIN BOUNDARY
SUB-BASIN BOUNDARY
SOIL TYPE BOUNDARY
SOIL TYPE & HYDR. GROUP
SUB-BASIN NO.
SUB-BASIN FLOW
FLOW DIRECTION
R.C.P.
OPEN CHANNEL
FLOW AT POINT IN C.F.S.
GRASS LINED SWALE
DATA:
1. TOTAL PROJECT ACRES- 67.3
2. L.I.F. ROAD- 10,900
3. ACRES of R-2- 25.0
4. NO. of R-2 LOTS- 103
5. ACRES of R.L.D.- 42.3
6. NO. of R.L.D. LOTS- 262
7. ACRES of PARK- 6.4
5.4 total units/acre
4.1 units/acre
6.2 units/acre
Legal:
A portion of the Northwest 1/4 of Section 5 and the Northeast 1/4 of Section 6, all in Township 15 South, Range 66 West of the 6th P.M., El Paso County, Colorado. (See attached legal.)
legal:
A portion of the Northwest 1/4 of Section 5 and the Northeast 1/4 of Section 6, all in Township 15 South, Range 66 West of the 6th P.M., El Paso County, Colorado.
NOTE: DRAINAGE FACILITIES IN CHEYENNE MEADOWS BLVD TO BE DESIGNED AND PROVIDED BY OTHERS. SEE REPORT BY HARTZELL - PFEIFFENBERGER APPROVED BY THE CITY OF COLORADO SPRINGS 6-28-72.
ALL FACILITIES WITHIN PARK TO BE UNDER HOME OWNERS ASSOC. MAINTENANCE
PLAN - FLARED INLET
SECTION - INFLOW CHANNEL
CHANNEL DIMENSIONS LISTED AS W x D
GRASS LINED DRAINAGE SWALE
PROVIDE 10 L.F. RIPRAP AT PIPE TO GRASS TRANSITION. TYPICAL ALL PIPES.
few details comments reqd by City Engineer
UNITED WESTERN ENGINEERS
PROJECT PLANNER E. HELENBERG
NORTH
SCALE 1" = 80' ±
DATE 12-72
JOB 72-1431

WEISS CONSULTING ENGINEERS, INC.
Professional Engineer and Land Surveyor

October 9, 1982

Mr. Gerald Gromko
City Engineer
P. O. Box 1575
Colorado Springs, Colorado 80901

Dear Jerry:

Submitted herewith is a Drainage Letter for a Replat of Cheyenne Autumn Subdivision No. 1. A drainage report for the original subdivision was dated February 24, 1981. This subdivision contains 9.25 acres and lies within an unstudied drainage basin. The site lies south of Cheyenne Meadows Drive between Highway 115 and Westmeadow Drive. The site is zoned P. U. D.

The drainage flows are in conformance with the original drainage report. No drainage facilities are required and no drainage fees are due.

Sincerely,

WEISS CONSULTING ENGINEERS, INC.

G. J. Weiss P.E. 4124

1815 North Tejon • Colorado Springs, CO 80907 • (303) 634-0373

DRAINAGE REPORT STATEMENTS

Engineer's Statement:

The attached drainage plan and report were prepared under my direction and supervision and are correct to the best of my knowledge and belief. Said drainage report has been prepared according to the criteria established by the City for drainage reports and said report is in conformity with the master plan of the drainage basin. I accept responsibility for any liability caused by the negligent acts, errors or omissions on my part in preparing this report.

Gerald J. Weiss

Gerald J. Weiss P.E. - L.S. 4124

Developer US Home Corporation
Business Name

The developer has read and will comply with all of the requirements specified in the drainage report.

By: Mauro M. Lamella

Title: Division President

Address: 4406 Berry Knoll Dr.

Acknowledgement

City of Colorado Springs, Department of Public Works.

City Engineer _____ Date _____

Comments:

WEISS CONSULTING ENGINEERS, INC.
Professional Engineer and Land Surveyor

October 6, 1982

Mr. Richard L. Marsh
Director, Single Family Evaluation
Department of Housing and Urban Development
Executive Tower 1405 Curtis Street
Denver CO 80202

Dear Mr. Marsh:

Reference is made to your letter dated March 24, 1981 to Allen Jensen of U.S. Home regarding application for Environmental Review for Cheyenne Autumn Townhomes, ASP-6030, PUD-770, located in Colorado Springs, Colorado. We are replying to your comments.

1. The statement regarding steep natural slopes must be in error since the maximum natural slopes on the site do not exceed 4%. The foundation for the units will be designed according to the soils engineer's recommendations for the bearing pressure of the soil at that location giving consideration to expansive soils if they are found at that location.

2. We are enclosing a copy of Map No. 31, Department of Housing and Urban Development, Flood Hazard Boundary Map, City of Colorado Springs. We have sketched on this copy the approximate location of the subject development. Please note that this map is schematic, it does not provide any contours or elevations, and it is drawn at a 1"=1000' scale. The flood hazard map was last revised on 4-4-78 and does not show the existance of a major drainage channel (indicated by dashed lines) constructed by Gates Land Company prior to the date on the HUD map.

On the basis of the above official flood plain map, I cannot accurately delineate the 100 year flood plain line. I would like to add that I have reviewed the updated FEMA, Flood Boundary and Flood-

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way Map, El Paso County, Panel 0025 on file in the City Engineers office in Colorado Springs. This site does not appear to have been included in the new study and no flood plain has been shown on the new map.

3. We are enclosing a copy of the replat map for Cheyenne Autumn Filing No. 1 showing the location of the line lying 185' from the centerline of Highway 115. The R.O.W. for US-115 is 180' so the noise line lies 95' inside the project. It includes lots 34 through 50 so these units will need to fall under category b or c in your letter.

I am also including a copy of certification for the subdivision grading plans. If you have any questions, please call me.

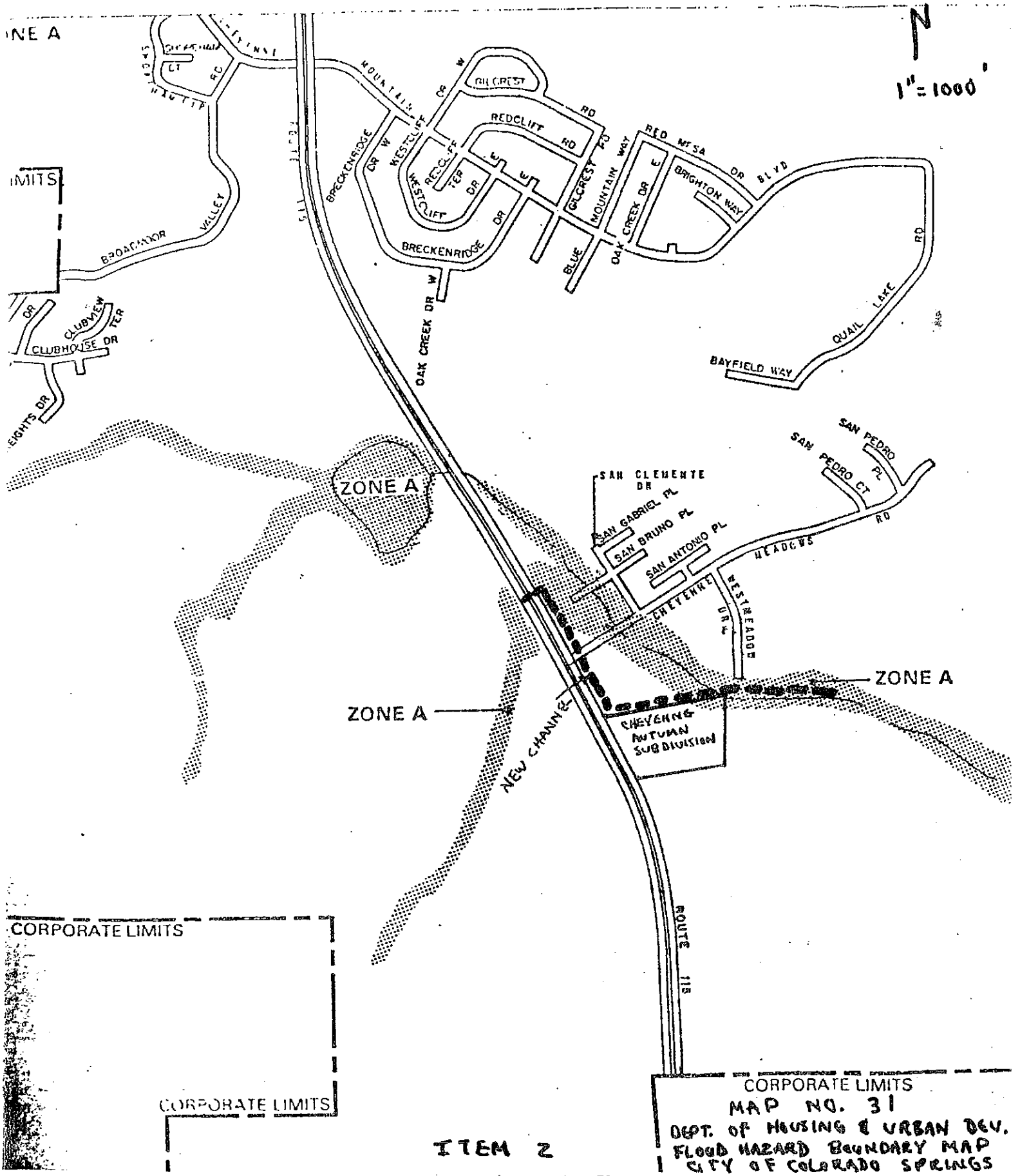
Sincerely,

Weiss Consulting Engineers, Inc.

Gerald J. Weiss

Gerald J. Weiss PE-4124

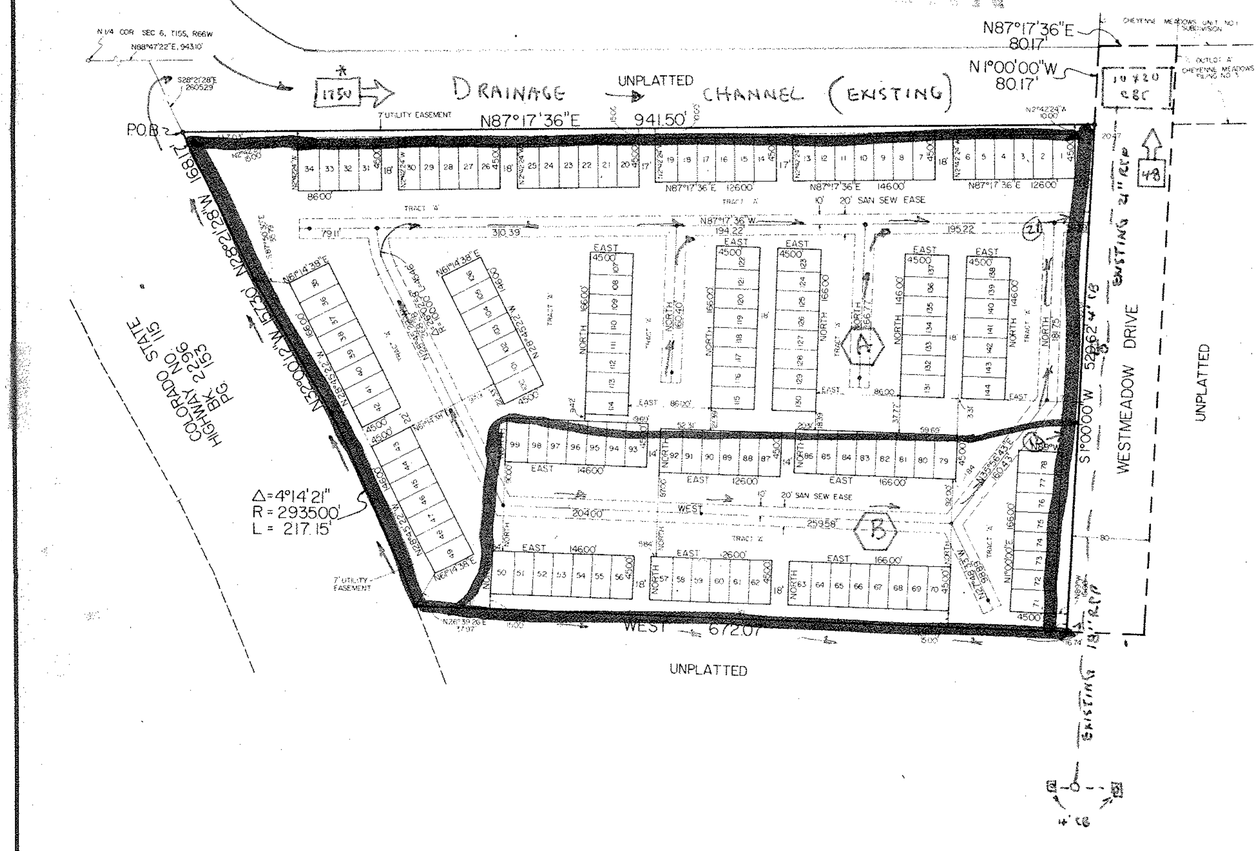
GJW/lk
Enclosure
cc U.S. Home


N
1" = 1000'
ZONE A
ZONE A
ZONE A
CORPORATE LIMITS
CORPORATE LIMITS
CORPORATE LIMITS
MAP NO. 31
DEPT. OF HOUSING & URBAN DEV.
FLOOD HAZARD BOUNDARY MAP
CITY OF COLORADO SPRINGS
ITEM 2
OAK CREEK DR W
BRECKENRIDGE DR W
BRECKENRIDGE DR
WESTCLIFF DR W
WESTCLIFF DR E
WESTCLIFF DR
REDCLIFF RD
REDCLIFF TER
GILCREST RD
MOUNTAIN WAY
OAK CREEK DR E
RED MESA DR BLVD
BRIGHTON WAY
BLUE
QUAIL LAKE RD
BAYFIELD WAY
BROADMOOR VALLEY
CLUBVIEW TER
CLUBHOUSE DR
SAN CLEMENTE DR
SAN GABRIEL PL
SAN BRUNO PL
SAN ANTONIO PL
SAN PEDRO PL
SAN PEDRO CT
MEADOWS RD
CHEYENNE
WESTMEADOW
NEW CHANNEL
CHEYENNE AUTUMN SUBDIVISION
ROUTE 115

REPLAT OF A PORTION OF
CHEYENNE AUTUMN SUBDIVISION NO. 1
IN THE CITY OF COLORADO SPRINGS, COLORADO

100 0 100
SCALE: 1" = 100'

DRAINAGE PLAN



KNOW ALL MEN BY THESE PRESENTS:

That U. S. Home Corporation, a Delaware Corporation, Vivian B. Armstrong, Division President and Jerome D. Melton, Vice President and Manager, being the owners of the following described tract of land, to wit:

Replat of a Portion of Cheyenne Autumn Subdivision No. 1 in the City of Colorado Springs, Colorado described as follows:

All of Lots 1 through 144 and all of Tract "A" as platted in Plat Book L-3 at Page 47 in the records of El Paso County, Colorado, containing 7.75 acres more or less.

DEDICATION:

The above parties in interest have caused said tract to be platted into lots, a tract and a sanitary sewer easement as shown on the plat. All streets and the sanitary sewer easement are hereby dedicated to the use of Colorado Springs for public use. This tract of land herein platted shall be known as "REPLAT OF A PORTION OF CHEYENNE AUTUMN SUBDIVISION NO. 1" in the City of Colorado Springs, Colorado.

IN WITNESS WHEREOF:

The aforementioned U. S. Home Corporation, a Delaware Corporation, Vivian B. Armstrong, Division President and Jerome D. Melton, Vice President and Manager, have executed this instrument this _____ day of _____, 1982 A.D.

U. S. HOME CORPORATION, A Delaware Corporation

_____ Vivian B. Armstrong, Division President

_____ Jerome D. Melton, Vice President and Manager

STATE OF COLORADO)
) S.S.
COUNTY OF EL PASO)
The foregoing instrument was acknowledged before me this _____ day of _____, 1982 A.D. by Vivian B. Armstrong, Division President, and Jerome D. Melton, Vice President and Manager of U.S. Home Corporation.

Witness my hand and seal:

My Commission expires: _____

_____ Notary Public

The undersigned hereby approve for filing the accompanying plat of Replat of a Portion of Cheyenne Autumn Subdivision No. 1.

_____ Director of Planning Date:

_____ Director of Public Works Date:

KNOW ALL MEN BY THESE PRESENTS:

That the City Council of the City of Colorado Springs, Colorado authorized the platting of the above described tract of land as set forth in this plat at a meeting of said City Council held on this _____ day of _____, 1982 A.D., and at the same time authorized the undersigned to acknowledge the same which is done accordingly on behalf of the City of Colorado Springs, this _____ day of _____, 1982 A.D.

City Council of the City of Colorado Springs

ATTEST: _____ City Clerk

BY: _____ Mayor

CERTIFICATION:

The undersigned registered land surveyor in the State of Colorado hereby certifies that the accompanying plat was surveyed and drawn under his supervision and accurately shows the described tract of land, and the subdivision thereof, and that the requirements of Title 50 of the Colorado Revised Statutes, 1973, as amended, have been met to the best of his knowledge and belief.

_____ Gerald G. Weiss
State of Colorado L.S. No. 8424

NOTICE IS HEREBY GIVEN:

That the area included in the plat described herein is subject to the Code of the City of Colorado Springs, Colorado, as amended. No building permits shall be issued for building sites within this plat until all required fees have been paid and all required public improvements and utilities have been installed as specified by the City of Colorado Springs, or, alternatively until acceptable assurance, including but not limited to letters of credit, cash, construction bonds, or combinations thereof, guaranteeing the payment of the fees and the completion of all public improvements and utilities have been placed in file with the City of Colorado Springs. All streets, alleys, and easements shown on this plat for access purposes are excepted from this provision.

STATE OF COLORADO)
) S.S.
COUNTY OF EL PASO)
I hereby certify that this instrument was filed for record in my office at _____ o'clock _____ . M. this _____ day of _____, 198 __ A.D. and is duly recorded in Plat Book _____ at Page _____ of the records of El Paso County, Colorado.

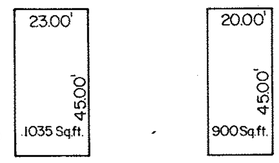
ARDIS SCHMITT, RECORDER

RECEPTION NO. _____

FEE _____

BY: _____ Deputy

TYPICAL LOT DIMENSIONS



LOT NUMBER	LOT AREA 1035 Sq. Ft.	LOT AREA 900 Sq. Ft.
	1, 6, 7, 13	ALL OTHERS NOT LISTED
	14, 19, 20, 25	
	26, 30, 31, 34	
	35, 42, 43, 49	
	50, 56, 57, 62	
	63, 70, 71, 78	
	79, 86, 87, 92	
	93, 99, 100, 106	
	107, 114, 115, 122	
	123, 130, 131, 137	
	138, 144.	

RATIONAL METHOD

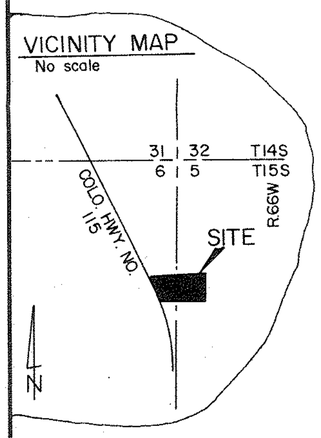
$Q = AIT$

AREA A $Q = (6.3)(0.7)(6.2) = 27$ CFS

AREA B $Q = (2.75)(0.7)(6.2) = 12$ CFS

* FLOW INFO FROM GATES

VICINITY MAP
No scale



NOTES:
1. ALL POINTS FOUND INDICATED BY --●--.
2. ALL BEARINGS ARE RELATIVE TO THE RECORDED PLAT OF CHEYENNE MEADOWS FILING NO. 3 AS RECORDED IN PLAT BOOK L-3 AT PAGE 56 WHICH WERE BASED ON TRUE MERIDIAN FROM CELESTIAL OBSERVATION.
3. THERE SHALL BE NO ACCESS TO STATE HWY. NO. 115.

Drainage Fees _____
Bridge Fees _____
School Fees _____
Park Fees _____

SEPTEMBER, 1982
WEISS CONSULTING ENGINEERS, INC.
COLORADO SPRINGS, COLORADO

DJWeiss PE-4724 10-14-82

DRAINAGE PLAN