FINAL
DRAINAGE STUDY

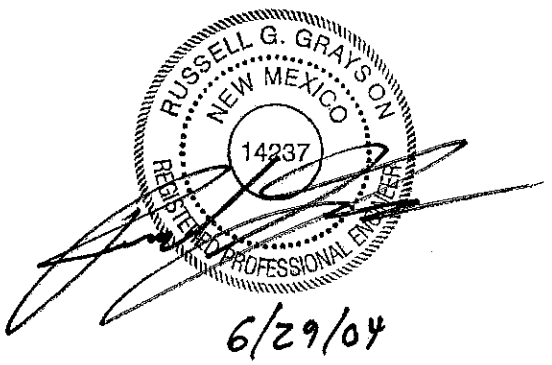
CABEZON REDEVLOPMENT
YUCATAN AT CABEZON SUBDIVISION

Rio Rancho Estates Unit 16
Rio Rancho, New Mexico

for

CURB NORTH, INC
5160 SAN FRANCISCO NE
ALBUQUERQUE, NEW MEXICO 87109

June 29, 2004



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DRAINAGE STUDY
FOR
YUCATAN AT CABEZON SUBDIVISION

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DRAINAGE STUDY
FOR
YUCATAN AT CABEZON SUBDIVISION

PURPOSE

This drainage report addresses the storm water runoff and proposed infrastructure needed to convey the runoff from the Yucatan at Cabezon Subdivision of the Cabezon Redevelopment. This report will also demonstrate that the development of this project complies with the approved Master Drainage Plan for the Cabezon Redevelopment.

PROJECT LOCATION AND DESCRIPTION

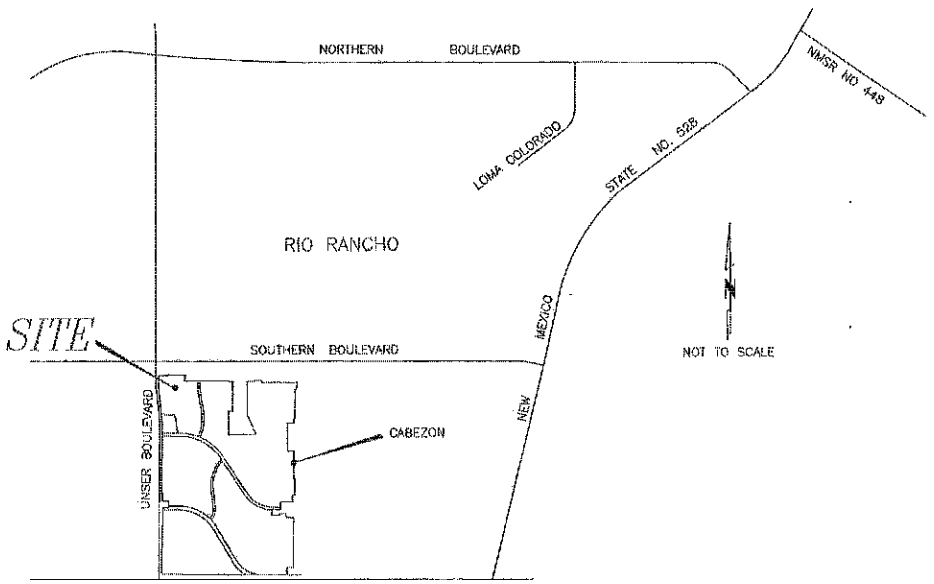


Exhibit 1 – Vicinity Map

The project is located at the southeast corner of the intersection of Unser Boulevard and Southern Boulevard within Unit 16 of Rio Rancho Estates, City of Rio Rancho; see **Exhibit 1**. The site is currently undeveloped and in its natural condition. Unser Boulevard is paved to the west of the development. Southern Boulevard is paved to the north of the development. The development to bound by Western Hills Street to the east and Cabezon Road to the south which are both currently under construction.

ZONING AND PLATTING STATUS

The zoning for this project is R-4, Single Family Residential, of approximately 70 acres. The project is located in Tract 3 within Rio Rancho Estates Unit 16. The Preliminary Plat for this project was approved at the June 8, 2004 City of Rio Rancho Planning and Zoning Board Meeting.

This report is an attachment to the Final Plat and Infrastructure Plan Submittal for this project.

FLOOD HAZARD ZONES

Per FEMA's Flood Insurance Rate Map (FIRM) 35043C0894 C, dated July 16, 1996, a portion of the project site is located within a FEMA 100-year Flood Hazard Zone. See **Appendix A-1**. Wilson & Co. is under contract with the developer for the corresponding CLOMR and LOMR needed to eliminate the existing flood zone. The CLOMR has been submitted to FEMA by Wilson & Co. Per discussions with the City of Rio Rancho, the developer has agreed to restrict building permit requests for the lots that are located within the current FEMA Floodplain. Once the CLOMR/LOMR process has revised the Floodplain, the developer can proceed with building permits for the affected lots. Refer to **Appendix A-2** for an exhibit indicating the affected lots.

JURISDICTIONS OF PUBLIC AGENCIES

Local
This project is located entirely within the City of Rio Rancho (CoRR) Municipal Limits and is therefore within their jurisdiction and must comply with the City's development requirements.

Regional
This project is located within the jurisdiction of the Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA) and is therefore subject to their review.

RELATED REPORTS

The ***Cabezon Communities Phase I Drainage Management Plan*** prepared by Wilson & Company, Engineers & Architects and dated April 2004, provides an overall master plan for this area. This report has been approved by the City and SSCAFCA. It determined the pre-developed drainage patterns of this development and the design parameters for the buildout of the subdivision. However, that study only gave a conceptual design for the Yucatan at Cabezon Subdivision.

METHODOLOGY

This drainage study is based on the procedures outlined in the CoRR's "Grading and Drainage Design Requirements and Policies for Land Development in Rio Rancho

(Revised 3-18-93)." That policy states, "The minimum criteria for hydrology and hydraulic calculations and design shall be as described in the Development Process Manual Section 22.2, City of Albuquerque (CoA DPM), latest revision, or the AHYMO version of the ARS HYMO Computer Program." This drainage study follows the procedures outlined in both the CoA DPM Section 22.2 and the AHYMO Computer Program.

PRECIPITATION

This project will not utilize an on-site detention pond. Storm water will be conveyed through a underground pipe system to main trunk lines in Western Hills Road and Cabezon Road to off-site detention ponds. The 100-yr 24-hr design storm was used for this analysis. The AHYMO Computer Program requires the 1, 6 and 24-hour precipitation values. These values were obtained from the ***Cabezon Communities Phase I Drainage Management Plan*** and are shown on **Table 1.**

Table 1
Precipitation Values

Return Period (yrs)	24 hr Rainfall (in)	6 hr Rainfall (in)	1 hr Rainfall (in)
100	2.7	2.2	1.8

LAND TREATMENTS

The land treatments used in the AHYMO Computer model are as described by Table A-4 of the CoA DPM Section 22.2, 1993 revision, and are summarized in **Table 2.**

Table 2
Land Treatment Classifications

Treatment	Land Condition
A	Soil uncompacted by human activity with 0 to 10 percent slopes. Native grasses, weeds and shrubs in typical densities with minimal disturbance to grading, groundcover and infiltration capacity. Croplands. Unlined Arroyos.
B	Irrigated lawns, parks and golf courses with 0 to 10 percent slopes. Soil uncompacted by human activity with slopes greater than 10 percent and less than 20 percent.
C	Soil compacted by human activity. Unpaved parking, roads and trail. Most vacant lots. Gravel or rock on plastic (desert landscaping)
D	Impervious areas, pavement and roofs.

Table A-5 of the CoA DPM Section 22.2, 1993 revision summarizes the Percent of Treatment D with a corresponding land use. Since this project site is a Single Family Residential Subdivision, the corresponding Percent of Treatment D is determined by the equation: 7*((N*N)+(5*N))^0.5 where, N=units/acre (N=397units/71.59=5.55). The remaining was split between Treatment B and C. Therefore the Land Treatments for this site are as follows: **%A = 0, %B = 23, %C = 23, and %D = 54**. Basins 103, 105 and

106 are slope and landscape areas within the development and therefore have land treatments as follows: **%A = 0, %B = 0, %C = 100, and %D = 0**. Basin 104 (Tract 11) is a future commercial site and was designated with land treatments of **%A = 0, %B = 5, %C = 5, and %D = 90.**

The Land Treatments for the Off-Site Basins Off_1A, 1B, 1C and 1D were taken directly from ***Cabezon Communities Phase I Drainage Management Plan.***

STREET AND INLET CAPACITY CALCULATIONS

Both street and inlet capacities were calculated using the plates in the *City of Albuquerque DPM.* Yucatan Subdivision at Cabezon incorporated flow splits into the creation of each actual drainage basin. See Appendix C for additional information.

STORM DRAIN HYDRAULICS

Storm Drains were modeled using Haestad Method's "StormCad" software (see Appendix C). Headlosses were calculated using the procedures outlined in the *City of Albuquerque DPM.* The main line of the storm drain was designed based on the routed peak discharges as indicated in the AHYMO model and the storm drain design is included in Appendix C. The lateral lines into the main system were designed for the peak flow for each particular line without reference to any routing in the main line.

PRE-DEVELOPMENT CONDITIONS

This project site is in its pre-development condition with existing natural vegetation throughout the site. The project site naturally slopes from northwest to the southeast across the site. Unser Boulevard to the west and ½ Acre Lots and Southern Boulevard to the north bound the property. Both Unser and Southern Blvd are paved with curb and gutter. On-site runoff sheet flows across the site and concentrates into Tributary 'B' of the East Branch of the Black Arroyo. The runoff discharges through Unit 16 of Rio Rancho Estates, crosses into Bernalillo County and into the Blacks Arroyo Dam.

There is a small off-site basin (Basins Off_1A, 1B, 1C & 1D) between the Tract 3 Boundary and Southern Boulevard that discharges onto the subject property. The Unser Channel located along the western right-of-way of Unser Boulevard intercepts off-site runoff from the west. Runoff from the north of Southern Boulevard discharges across Southern at 22nd Street within a graded dirt road to the east of Tract 3. Please refer to the ***Cabezon Communities Phase I Drainage Management Plan*** for further information and analysis of the pre-developed condition.

ULTIMATE DEVELOPED CONDITIONS

Drainage Patterns

As indicated in **Exhibit 2**, the developed drainage design consists of several drainage basins. **Basins Off_1A, 1B, 1C & 1D** are the off-site flows that discharge into Tract 3. Basins within the 300 series are the developed on-site basins within Tract 3.

The developed conditions of the off-site basins (**Basins Off_1A, 1B, 1C & 1D**) were taken directly from the approved ***Cabezon Communities Phase I Drainage Management Plan*** and were not altered.

Basins Off_1A and Off_1C consists of ½ Acre Commercial Lots that discharge onto **Basin 301** at the intersection of 11th Street and 21st Street to create Analysis Point 'A'. Point 'A' then will combine with ½ Acre Commercial and Residential Lots that will discharge to create Analysis Point 'B' (**Basins Off_1B and Off_1D**). Point 'B' will release into the storm drain system. **Basin 302** drains lots to Analysis Point 'C' where a portion of the basin will enter the storm drain system. The remaining portion of **Basin 302** will bypass the inlets at 'C' and combine with runoff from **Basin 303** to create Analysis Point 'H'. Storm Water bypassing Point 'H' will enter **Basin 312**. **Basin 304** will drain to Analysis Point 'D'. A portion of Point 'D' will enter the storm water system. The remaining portion of Point 'D' will bypass the inlet and join **Basin 308**. **Basin 305** will drain residential lots to Analysis Point 'E' and enter the storm drain system. Storm water bypassing Point 'E' will combine with waters in **Basin 308**. **Basin 306** and **Basin 307** combine to enter the storm drain system at Analysis Point 'F'. Storm water bypassing the inlets will join with other waters within **Basin 308**. The combined waters in **Basin 308** will drain to the storm water system at Analysis Point 'G'. Any storm water bypassing the inlets at Point 'G' will enter **Basin 311**. The storm water collected in the northern half of Tract 3 will discharge into an underground pipeline within the Western Hills Road right of way at the intersecting roadway entrance. The storm water trunk line within Western Hills Road will be designed to accept discharge from Tract 3 at this point (see **Related Reports**).

Basin 309 and **Basin 311** will drain residential lots and combine at Analysis Point 'J'. Storm water bypassing Point 'J' will join with waters in **Basin 312**. **Basin 310** will drain lots to Analysis Point 'K'. Again, flows bypassing Point 'K' will join flows within **Basin 312**. **Basin 312** combined with the flows bypassing Points 'J' and 'K' will discharge through a trench grate inlet at Analysis Point 'L'. The storm water collected in the southern half of Tract 3 will discharge into an underground pipeline within the Cabezon Road right of way at a drainage easement at the southeast corner of Tract 3. The storm water trunk line within Cabezon Road will be designed to accept discharge from Tract 3 at this point (see **Related Reports**).

The remaining drainage basins will collect storm water from slope areas and a potential commercial site. **Basin 103** will drain a sloped area along the commercial area. The basin will drain along the back of residential lots and onto the **Basin 104**. The two basins will combine with **Basin 105** at Point 'M' and drain onto Cabezon Road. The

commercial site will be required to pond and release at pre-developed rates. **Basin 106** will drain directly onto Western Hills Road.

PROJECT PHASING

Yucatan at Cabezon Subdivision will be graded in its entirety. However, infrastructure will be installed in two main phases with Phase 1 and 2 being constructed first with Phase 3 to follow at a later date. Because Phase 1 and 2 will be constructed concurrently, this report does not include any phasing mitigation between the development of Phase 1 and 2. The only interim phasing improvements planned will be between the construction buildout of Phase 2 and 3. These mitigation improvements will require the construction of temporary retention ponds at the phase line between Phases 2 and 3. See **Exhibit #3** for locations of the temporary retention ponds.

Table 3 depicts the required 100-Yr Runoff Volume for each retention pond.

Table 3
Retention Pond Runoff Volume

Description	100-Yr Runoff Volume (Ac-ft)
Retention Pond #1	0.3
Retention Pond #2	3.8

CONCLUSION

Table 4 compares the findings of the analysis of the northern portion of Yucatan Subdivision (Phase 3) with the results of the approved Cabezon ***Communities Phase I Drainage Management Plan***.

Table 4
Runoff Comparison for Western Hills Discharge Point

Description	Basin Area (Mi^2)	Time to Peak (hr)	100-Yr Runoff Volume (Ac-ft)	100-Yr Peak Discharge (Ft^3/s)
Wilson & Co. Phase 1 DMP	0.082	1.50	8.1	127
HZI Plan	0.081	1.50	8.1	126

Table 5 compares the findings of the analysis of the southern portion of Yucatan Subdivision (Phase 1 and 2) with the results of the approved Cabezon ***Communities Phase I Drainage Management Plan***.

Table 5
Runoff Comparison for Cabezon Discharge Point

Description	Basin Area (Mi^2)	Time to Peak (hr)	100-Yr Runoff Volume (Ac-ft)	100-Yr Peak Discharge (Ft^3/s)
Wilson & Co. Phase 1 DMP	0.062	1.50	5.99	141
HZI Plan	0.058	1.50	5.51	130

As indicated by these tables, the flow from the Yucatan Subdivision (Tract 3) is below the Master Plan values. Therefore, the analysis presented in this report is in compliance with the approved ***Cabezon Communities Phase I Drainage Management Plan***.

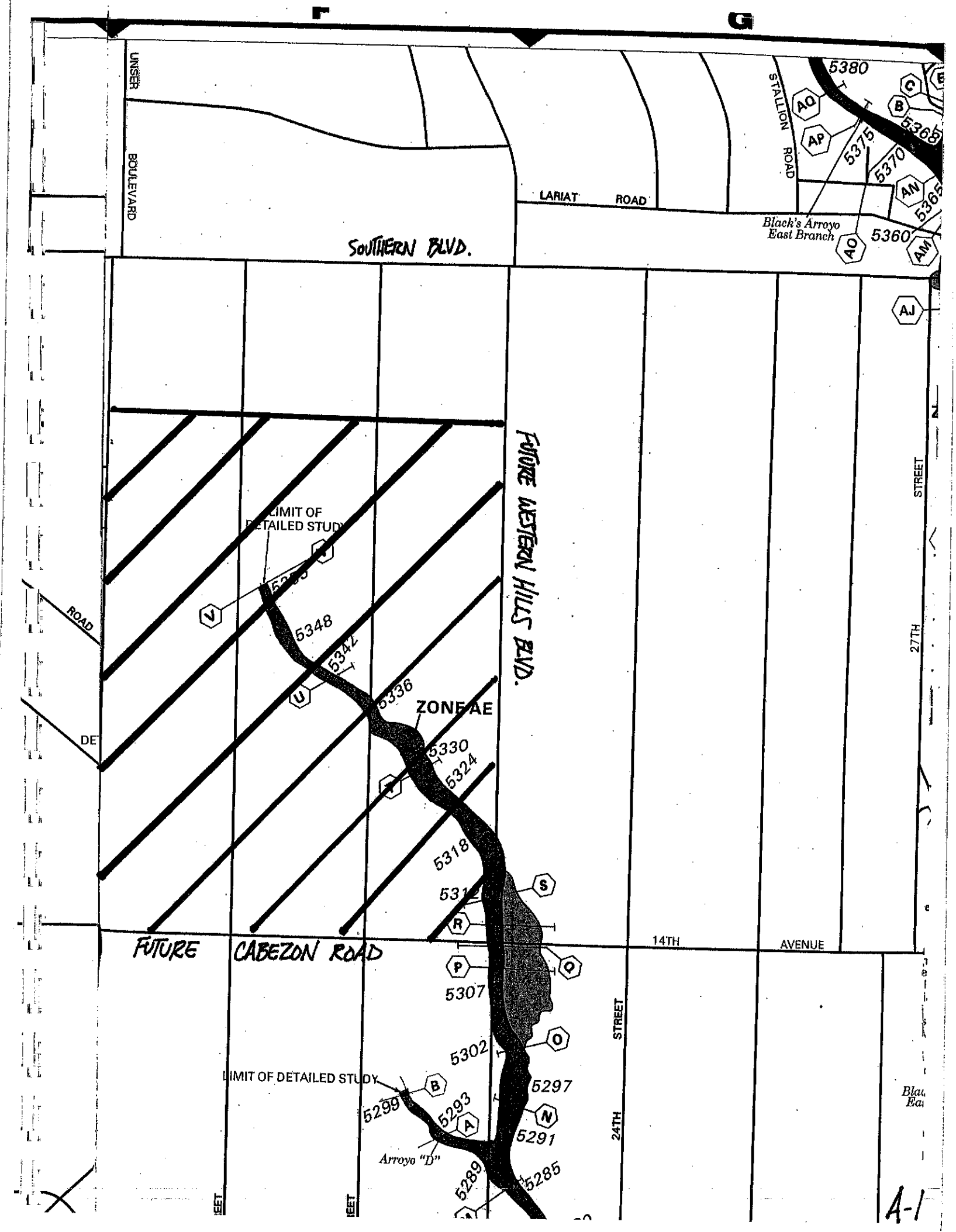
The slight differences in basin areas indicated in Tables 5 and 6 can be attributed to small basin boundary changes that occurred from the ***Cabezon Communities Phase I Drainage Management Plan*** to the final subdivision layout presented in this report. Also, the final layout contributed some small additional basin area to drain into the commercial Tract 11 that was originally indicated to drain into the Yucatan subdivsion.

Table 6 compares the impact of the commercial portion (Tract 11) of the Yucatan Subdivision on the ***Cabezon Communities Phase I Drainage Management Plan*** (Master Plan).

Table 6
Runoff Comparison for Commercial Discharge Point

Description	Basin Area (Mi^2)	Time to Peak (hr)	100-Yr Runoff Volume (Ac-ft)	100-Yr Peak Discharge (Ft^3/s)
Wilson & Co. Phase 1 DMP	0.016	1.50	0.4	14
HZI Plan	0.018	1.50	2.1	46

The peak discharge of 46 cfs calculated in the HZI Plan is the fully developed runoff without any on-site mitigation. As indicated in Table 6, that results in a higher discharge than the 14 cfs allowed in the ***Cabezon Communities Phase I Drainage Management Plan.*** As indicated in Master Plan, this commercial site will need to design a detention pond that will release at or below the Master Plan flow rate of 14 cfs.


F
G
UNSER
BOULEVARD
SOUTHERN BLVD.
LARIAT ROAD
STALLION ROAD
5380
5375
5370
5365
5360
Black's Arroyo
East Branch
AO
AP
AQ
AN
AM
AJ
B
C
FUTURE WESTERN HILLS BLVD.
LIMIT OF
DETAILED STUDY
ROAD
5348
5342
5336
ZONE AE
5330
5324
5318
5312
5307
5302
5297
5293
5291
5289
5285
Arroyo "D"
LIMIT OF DETAILED STUDY
5299
FUTURE CABEZON ROAD
14TH AVENUE
27TH STREET
24TH STREET
STREET
A-1

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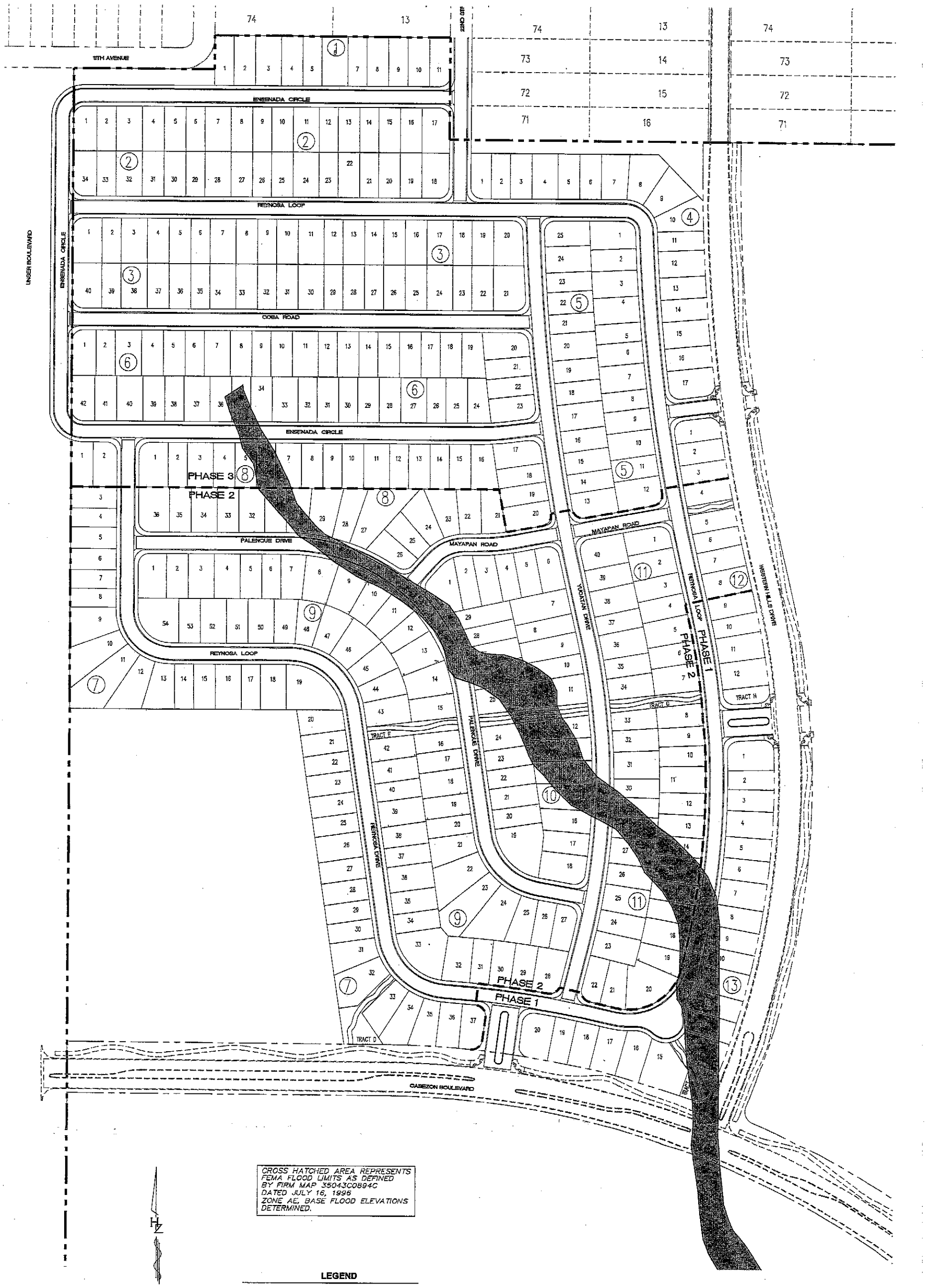

A-2

Designed For:

CURB NORTH, LLC

EXISTING FEMA FLOOD ZONE

YUCATAN AT CABAZON

JUNE 2004

Designed By:

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Yucatan at Cabezon Subdivision-Cabezon Redevelopment
100-Year 24-Hour Duration Storm-Developed
AHYMO Summary File

□(s16.67h8.5v0T□&18D

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START											TIME= .00
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*S											
*S	YUCATAN AT CABEZON FINAL DRAINAGE STUDY										
*S											
*S	FN:TRACT3FIN.DAT - HYMO PER JAN 1997 DPM REVISIONS										
*S											
*S											
*S											
*S RAINFALL TAKEN FROM WILSON & CO PHASE 1 DMP											
RAINFALL	TYPE= 2										RAIN24= 2.703
*S**********											
SEDIMENT	BULK										PK BF = 1.06
*S**********											
*S THE FOLLOWING IS WILSON AND CO AHYMO FILE FOR OFF_1A,1B,2A AND 2B											
*S FROM THE PHASE 1 DMP. ESTABLISHES OFF-SITE FLOW RATES FOR 21ST AND 22ND											
*S**********											
COMPUTE NM HYD	Off_1A	-	1	.00540	14.55	.683	2.37034	1.500	4.211	PER IMP=	85.00
*S ROUTE OFF_1A through existing pond											
*S Pond Exists in field; Volume and outflow assumed to											
*S limit flowrate to predevelopment level											
*S											
ROUTE RESERVOIR	P.Out	1	17	.00540	5.18	.682	2.36893	1.800	1.499	AC-FT=	.200
*S **********DIVIDE HYD TO UNBULK BY 3% **********											
DIVIDE HYD	P.Out.1	17	17	.00524	5.03	.662	2.36891	1.800	1.499		
	SEDIMENT	and	52	.00016	.16	.020	2.36892	1.800	1.499		
ROUTE MCUNGE	Off_1A.9	17	2	.00524	5.02	.662	2.36826	1.900	1.499	CCODE =	.1
COMPUTE NM HYD	Off_1C	-	1	.00540	10.98	.414	1.43633	1.500	3.178	PER IMP=	34.30
ADD HYD	Off1C.1	1& 2	2	.01064	14.08	1.075	1.89503	1.500	2.069		
COMPUTE NM HYD	21ST	-	1	.00100	2.75	.131	2.45016	1.500	4.303	PER IMP=	90.00
ADD HYD	21ST.1	1& 2	2	.01164	16.84	1.206	1.94270	1.500	2.261		
ROUTE MCUNGE	21ST.9	2	3	.01164	16.40	1.204	1.93931	1.800	2.202	CCODE =	.1
*S**********											
COMPUTE NM HYD	Off_1B	-	1	.00560	15.09	.708	2.37034	1.500	4.211	PER IMP=	85.00
*S ROUTE OFF_1B through existing pond											
*S Pond Exists in field; Total volume = 0.22 ac-ft											
*S limited flowrate to predevelopment level											
*S											
ROUTE RESERVOIR	P.Out	1	17	.00560	5.26	.709	2.37246	1.800	1.467	AC-FT=	.211
*S **********DIVIDE HYD TO UNBULK BY 3% **********											
DIVIDE HYD	P.Out.1	17	17	.00543	5.10	.687	2.37245	1.800	1.467		
	SEDIMENT	and	52	.00017	.16	.021	2.37245	1.800	1.467		
ROUTE MCUNGE	Off_1B.9	17	2	.00543	5.10	.687	2.37182	1.900	1.467	CCODE =	.1
COMPUTE NM HYD	Off_1D	-	1	.00470	8.76	.316	1.25884	1.500	2.911	PER IMP=	27.00
ADD HYD	Off1D.1	1& 2	2	.01013	11.92	1.003	1.85535	1.500	1.838		
COMPUTE NM HYD	22ND	-	1	.00100	2.75	.131	2.45016	1.500	4.303	PER IMP=	90.00
ADD HYD	22ND.1	1& 2	2	.01113	14.67	1.133	1.90875	1.500	2.059		
ROUTE MCUNGE	22ND.9	2	1	.01113	14.42	1.133	1.90904	1.550	2.025	CCODE =	.2
COMPUTE NM HYD	Off_2B	-	2	.00470	12.67	.594	2.37033	1.500	4.212	PER IMP=	85.00
*S ROUTE OFF_2B through existing pond											
*S Pond Exists in field; Total volume = 0.18 ac-ft											
*S limited flowrate to predevelopment level											
*S											
ROUTE RESERVOIR	P.Out	2	17	.00470	4.88	.595	2.37213	1.800	1.623	AC-FT=	.160
*S **********DIVIDE HYD TO UNBULK BY 3% **********											
DIVIDE HYD	P.Out.1	17	17	.00456	4.73	.577	2.37212	1.800	1.623		
	SEDIMENT	and	52	.00014	.15	.018	2.37212	1.800	1.623		
ADD HYD	Off2B.1	1&17	2	.01569	18.74	1.710	2.04352	1.550	1.866		
ROUTE MCUNGE	OFF2B.9	2	1	.01569	18.45	1.708	2.04142	1.700	1.837	CCODE =	.1
*S**********											
*S HZI ANALYSIS FOR ON-SITE YUCATAN AT CABEZON TRACT 3											
*S**********											
*S----------											
*S COMPUTE DEVELOPED OFF-SITE BASIN 103 (SLOPE AREA ALONG UNSER)											
COMPUTE NM HYD	103.H	-	11	.00236	3.78	.104	.82952	1.500	2.501	PER IMP=	.00
*S----------											
*S COMPUTE DEVELOPED OFF-SITE BASIN 104 (COMMERCIAL)											
COMPUTE NM HYD	104.D	-	12	.01563	41.78	1.976	2.37034	1.500	4.177	PER IMP=	85.00
*S----------											
*S COMPUTE DEVELOPED OFF-SITE BASIN 105 (COMMON AREA ALONG CABEZON)											

Yucatan at Cabezon Subdivision-Cabezon Redevelopment
100-Year 24-Hour Duration Storm-Developed
AHYMO Summary File

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	NOTATION
COMPUTE NM HYD	105.D	-	13	.00030	.49	.013	.82952	1.500	2.535	PER IMP= .00
*S----------										
*S COMPUTE DEVELOPED OFF-SITE BASIN 106 (COMMON AREA)										
COMPUTE NM HYD	106.D	-	14	.00077	1.23	.034	.82952	1.500	2.513	PER IMP= .00
*S----------										
*S COMPUTE DEVELOPED BASIN 301										
COMPUTE NM HYD	301.D	-	15	.00786	17.72	.751	1.79087	1.500	3.523	PER IMP= 54.00
*S----------										
*S COMPUTE DEVELOPED BASIN 302										
COMPUTE NM HYD	ANLYPT.C	-	16	.00436	9.84	.416	1.79087	1.500	3.526	PER IMP= 54.00
*S----------										
*S COMPUTE DEVELOPED BASIN 303										
COMPUTE NM HYD	303.D	-	17	.00836	18.85	.798	1.79087	1.500	3.523	PER IMP= 54.00
*S----------										
*S COMPUTE DEVELOPED BASIN 304										
COMPUTE NM HYD	ANLYPT.D	-	18	.00456	10.29	.436	1.79087	1.500	3.525	PER IMP= 54.00
*S----------										
*S COMPUTE DEVELOPED BASIN 305										
COMPUTE NM HYD	ANLYPT.E	-	19	.00934	21.06	.892	1.79087	1.500	3.523	PER IMP= 54.00
*S----------										
*S COMPUTE DEVELOPED BASIN 306										
COMPUTE NM HYD	306.D	-	20	.00489	11.03	.467	1.79087	1.500	3.525	PER IMP= 54.00
*S----------										
*S COMPUTE DEVELOPED BASIN 307										
COMPUTE NM HYD	307.D	-	21	.00895	20.18	.855	1.79087	1.500	3.523	PER IMP= 54.00
*S----------										
*S COMPUTE DEVELOPED BASIN 308										
COMPUTE NM HYD	308.D	-	22	.00584	13.17	.558	1.79087	1.500	3.524	PER IMP= 54.00
*S----------										
*S COMPUTE DEVELOPED BASIN 309										
COMPUTE NM HYD	309.D	-	23	.01492	33.63	1.425	1.79087	1.500	3.522	PER IMP= 54.00
*S----------										
*S COMPUTE DEVELOPED BASIN 310										
COMPUTE NM HYD	ANLYPT.K	-	24	.01753	39.51	1.674	1.79087	1.500	3.522	PER IMP= 54.00
*S----------										
*S COMPUTE DEVELOPED BASIN 311										
COMPUTE NM HYD	311.D	-	25	.01095	24.69	1.046	1.79087	1.500	3.523	PER IMP= 54.00
*S----------										
*S COMPUTE DEVELOPED BASIN 312										
COMPUTE NM HYD	312.D	-	26	.01420	32.01	1.356	1.79087	1.500	3.522	PER IMP= 54.00
*S----------										
*S----------										
*S NORTHERN PORTION OF CABEZON TRACT 3										
*S----------										
*S----------										
*S ADD 21st Off-Site Flow to 301										
ADD HYD	ANLYPT.A	3&15	27	.01950	22.01	1.954	1.87942	1.800	1.764	
*S----------										
*S ADD A TO 22nd St Off-SIte Flow										
ADD HYD	ANLYPT.B	1&27	28	.03519	39.96	3.663	1.95163	1.750	1.774	
*S----------										
*S DIVIDE ANALYSIS PT. C										
*S ID=30 IS FLOW INTO INLET										
*S ID=31 IS BYPASSING INLET TO BASIN 303										
DIVIDE HYD	C.TO.INLET	16	30	.00436	9.84	.416	1.79080	1.500	3.526	
	C.BYPASS.INL	and	31	.00000	.00	.000	.00000	-.050	.000	
*S----------										
*S DIVIDE ANALYSIS PT. D										
*S ID=32 IS FLOW INTO INLET										
*S ID=33 IS BYPASSING INLET TO BASIN 308										
DIVIDE HYD	D.TO.INLET	18	32	.00455	10.00	.434	1.79081	1.500	3.436	
	D.BYPASS.INL	and	33	.00001	.29	.001	1.79081	1.500	36.115	
*S----------										
*S DIVIDE ANALYSIS PT. E										
*S ID=34 IS FLOW INTO INLET										
*S ID=35 IS BYPASSING INLET TO BASIN 308										
DIVIDE HYD	E.TO.INLET	19	34	.00929	20.00	.888	1.79084	1.500	3.362	
	E.BYPASS.INL	and	35	.00005	1.06	.004	1.79084	1.500	36.115	
*S----------										
*S ADD BYPASS FROM D TO BYPASS FROM E										
ADD HYD	BYP.DE	33&35	36	.00006	1.34	.006	1.79083	1.500	36.115	
*S----------										

Yucatan at Cabezon Subdivision-Cabezon Redevelopment
100-Year 24-Hour Duration Storm-Developed
AHYMO Summary File

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	NOTATION
*S ADD 306 TO 307										
ADD HYD	ANLYPT.F	20&21	37	.01384	31.21	1.322	1.79082	1.500	3.524	
*S----------										
*S DIVIDE ANALYSIS PT. F										
*S ID=38 IS FLOW INTO INLET										
*S ID=39 IS BYPASSING INLET TO BASIN 308										
DIVIDE HYD	F.TO.INLET	37	38	.01379	30.00	1.317	1.79082	1.500	3.400	
	F.BYPASS.INL	and	39	.00005	1.21	.005	1.79083	1.500	36.115	
*S----------										
*S ADD BYPASS FROM D,E TO BYPASS FROM F										
ADD HYD	BYP.DEF	36&39	40	.00011	2.56	.011	1.79083	1.500	36.115	
*S----------										
*S ADD BYPASS FROM D,E,F TO 308										
ADD HYD	ANLYPT.G	22&40	41	.00595	15.73	.568	1.79082	1.500	4.130	
*S----------										
*S DIVIDE ANALYSIS PT. G										
*S ID=42 IS FLOW INTO INLET										
*S ID=43 IS BYPASSING INLET TO BASIN 311										
DIVIDE HYD	G.TO.INLET	41	42	.00592	15.00	.565	1.79082	1.500	3.960	
	G.BYPASS.INL	and	43	.00003	.73	.003	1.79082	1.500	36.115	
*S----------										
*S ADD BYPASS FROM C TO 303										
ADD HYD	ANLYPT.H	17&31	44	.00836	18.85	.798	1.79083	1.500	3.523	
*S----------										
*S ADD Q INTO INLET AT C AND D										
ADD HYD	P.CD	30&32	45	.00891	19.84	.851	1.79081	1.500	3.480	
*S----------										
*S ADD Q INTO INLET AT C,D TO B										
ADD HYD	P.BCD	28&45	46	.04410	47.39	4.513	1.91915	1.750	1.679	
*S----------										
*S ADD Q INTO INLET AT B,C,D TO E										
ADD HYD	P.BCDE	34&46	47	.05339	61.65	5.401	1.89681	1.500	1.804	
*S----------										
*S ADD Q INTO INLET AT B,C,D,E TO F										
ADD HYD	P.BCDEF	38&47	48	.06718	91.65	6.718	1.87506	1.500	2.132	
*S----------										
*S ADD Q INTO INLET AT B,C,D,E,F TO G										
ADD HYD	P.BCDEF	42&48	49	.07310	106.65	7.283	1.86824	1.500	2.280	
*S----------										
*S TOTAL Q INTO MAIN TRUNK LINE AT WESTERN HILLS										
*S ADD Q INTO INLET AT B,C,D,E,F,G TO H										
ADD HYD	TOT.WH	44&49	50	.08146	125.50	8.082	1.86030	1.500	2.407	
*S----------										
*S----------										
*S SOUTHERN PORTION OF CABEZON TRACT 3										
*S----------										
*S----------										
*S ADD 309 TO 311										
ADD HYD	ANLYPT.J	23&25	51	.02587	58.31	2.471	1.79085	1.500	3.522	
*S----------										
*S DIVIDE ANALYSIS PT. J										
*S ID=52 IS CFS INTO INLET										
*S ID=53 IS CFS BYPASSING INLET TO BASIN 312										
DIVIDE HYD	J.TO.INLET	51	52	.02305	34.00	2.202	1.79085	1.450	2.304	
	J.BYPASS.INL	and	53	.00282	24.31	.269	1.79085	1.500	13.496	
*S----------										
*S DIVIDE ANALYSIS PT. K										
*S ID=54 IS CFS INTO INLET										
*S ID=55 IS CFS BYPASSING INLET TO BASIN 312										
DIVIDE HYD	K.TO.INLET	24	54	.01671	30.00	1.596	1.79085	1.450	2.805	
	K.BYPASS.INL	and	55	.00082	9.51	.078	1.79085	1.500	18.202	
*S----------										
*S ADD BYPASS FROM J AND K										
ADD HYD	BYP.JK	53&55	56	.00363	33.82	.347	1.79085	1.500	14.554	
*S----------										
*S ADD BYPASS FROM J,K TO 312										
ADD HYD	ANLYPT.L	26&56	57	.01783	65.83	1.703	1.79085	1.500	5.768	
*S----------										
*S ADD Q INTO INLET J AND K										
ADD HYD	P.JK	52&54	58	.03977	64.00	3.798	1.79085	1.450	2.515	
*S----------										
*S TOTAL Q INTO MAIN TRUNK LINE AT CABEZON ROAD										

Yucatan at Cabezon Subdivision-Cabezon Redevelopment
100-Year 24-Hour Duration Storm-Developed
AHYMO Summary File

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	NOTATION
*S ADD Q INTO INLET AT J,K TO L										
ADD HYD	TOT.CAB	57&58	59	.05760	129.83	5.501	1.79085	1.500	3.522	
*S----------										
*S TOTAL STORM WATER RELEASED FROM CABEZON TRACT 3										
*S----------										
*S----------										
*S ADD TOTAL NORTH TO TOTAL SOUTH										
ADD HYD	TOT.1	50&59	62	.13906	255.33	13.583	1.83153	1.500	2.869	
*S----------										
*S ADD TOTAL FROM 105 AND 106 - DIRECT DISCHARGE										
ADD HYD	TOT.2	13&14	63	.00107	1.72	.047	.82931	1.500	2.519	
*S----------										
*S ADD TOTAL FROM CABEZONT TRACT 3										
ADD HYD	TOT.3	62&63	64	.14012	257.05	13.630	1.82390	1.500	2.866	
*S----------										
*S----------										
*S----------										
*S COMMERCIAL PORTION OF CABEZON TRACT 1										
*S----------										
*S----------										
*S ADD 103 TO 104										
ADD HYD	ANLYPT.M	12&11	60	.01799	45.56	2.080	2.16818	1.500	3.957	
*S----------										
*S----------										
*S----------										
*S INTERIM RETENTION PONDS BETWEEN PHASES 2 AND 3										
*S----------										
*S----------										
*S----------										
*S COMPUTE RETENTION POND #1 (BASIN 306)										
COMPUTE NM HYD	101.H	-	1	.00490	9.23	.265	1.01341	1.500	2.944	PER IMP= .00
*S----------										
*S COMPUTE RETENTION POND #2										
COMPUTE NM HYD	102.H	-	2	.07040	132.53	3.805	1.01341	1.500	2.942	PER IMP= .00
FINISH										

□(s0p10h4099T□&16D

FINISH

□(s0p10h4099T□&16D□□

Yucatan at Cabezon Subdivision-Cabezon Redevelopment
100-Year 24-Hour Duration Storm-Developed
AHYMO Output File

```
□(s16.67h8.5v0T□&l8D

      AHYMO PROGRAM (AHYMO_97) -                          - Version:  1997.02c
           RUN DATE (MON/DAY/YR) = 06/16/2004
           START TIME (HR:MIN:SEC) = 16:48:38     USER NO.= AHYMO-I-9702a01000150-SH
           INPUT FILE = G:\Proj\170438-1\DRN_ST-1\AHYMO\TRACT3-2.DAT

   START                TIME=0.0 CODE 0 LINES -6
   LOCATION            RIO RANCHO
        City of Rio Rancho soil infiltration values (LAND FACTORS) used for computations.
        Land Treatment     Initial Abstr.(in)     Unif. Infilt.(in/hour)
              A            0.65                   1.67
              B            0.50                   1.25
              C            0.35                   0.83
              D            0.10                   0.04

   *S
   *S    YUCATAN AT CABEZON FINAL DRAINAGE STUDY
   *S
   *S    FN:TRACT3FIN.DAT  -  HYMO PER JAN 1997 DPM REVISIONS
   *S
   *S
   *S
   *S RAINFALL TAKEN FROM WILSON & CO PHASE 1 DMP
   RAINFALL             TYPE=2  RAIN QUARTER=0.0  RAIN ONE=1.799
                        RAIN SIX=2.205      RAIN DAY=2.703      DT=.05

                  COMPUTED 24-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
                  DT =     .050000 HOURS       END TIME =    24.000000 HOURS
                     .0000   .0038   .0077   .0118   .0160   .0203   .0248
                     .0295   .0343   .0394   .0447   .0502   .0559   .0620
                     .0684   .0751   .0823   .0899   .0981   .1069   .1164
                     .1240   .1324   .1567   .2140   .3127   .4653   .6849
                     .9854  1.2323  1.3293  1.4187  1.4970  1.5670  1.6304
                    1.6882  1.7413  1.7901  1.8352  1.8769  1.9154  1.9248
                    1.9335  1.9417  1.9493  1.9566  1.9635  1.9701  1.9764
                    1.9825  1.9883  1.9939  1.9994  2.0046  2.0097  2.0146
                    2.0194  2.0241  2.0286  2.0331  2.0374  2.0416  2.0458
                    2.0498  2.0538  2.0576  2.0614  2.0651  2.0688  2.0724
                    2.0759  2.0794  2.0828  2.0861  2.0894  2.0927  2.0959
                    2.0990  2.1021  2.1052  2.1082  2.1112  2.1141  2.1170
                    2.1199  2.1227  2.1255  2.1282  2.1310  2.1336  2.1363
                    2.1389  2.1415  2.1441  2.1466  2.1492  2.1517  2.1541
                    2.1566  2.1590  2.1614  2.1637  2.1661  2.1684  2.1707
                    2.1730  2.1753  2.1775  2.1797  2.1819  2.1841  2.1863
                    2.1884  2.1906  2.1927  2.1948  2.1968  2.1989  2.2010
                    2.2030  2.2050  2.2071  2.2092  2.2113  2.2134  2.2155
                    2.2176  2.2196  2.2217  2.2237  2.2258  2.2278  2.2299
                    2.2319  2.2339  2.2359  2.2379  2.2399  2.2419  2.2439
                    2.2459  2.2479  2.2498  2.2518  2.2537  2.2557  2.2576
                    2.2596  2.2615  2.2634  2.2653  2.2672  2.2691  2.2710
                    2.2729  2.2748  2.2767  2.2786  2.2804  2.2823  2.2842
                    2.2860  2.2879  2.2897  2.2915  2.2934  2.2952  2.2970
                    2.2988  2.3006  2.3024  2.3042  2.3060  2.3078  2.3096
                    2.3114  2.3131  2.3149  2.3167  2.3184  2.3202  2.3219
                    2.3237  2.3254  2.3271  2.3289  2.3306  2.3323  2.3340
                    2.3357  2.3374  2.3391  2.3408  2.3425  2.3442  2.3459
                    2.3475  2.3492  2.3509  2.3525  2.3542  2.3559  2.3575
                    2.3591  2.3608  2.3624  2.3641  2.3657  2.3673  2.3689
                    2.3705  2.3721  2.3737  2.3754  2.3769  2.3785  2.3801
                    2.3817  2.3833  2.3849  2.3865  2.3880  2.3896  2.3911
                    2.3927  2.3943  2.3958  2.3974  2.3989  2.4004  2.4020
                    2.4035  2.4050  2.4066  2.4081  2.4096  2.4111  2.4126
                    2.4141  2.4156  2.4171  2.4186  2.4201  2.4216  2.4231
                    2.4246  2.4260  2.4275  2.4290  2.4305  2.4319  2.4334
                    2.4348  2.4363  2.4377  2.4392  2.4406  2.4421  2.4435
                    2.4449  2.4464  2.4478  2.4492  2.4507  2.4521  2.4535
                    2.4549  2.4563  2.4577  2.4591  2.4605  2.4619  2.4633
                    2.4647  2.4661  2.4675  2.4688  2.4702  2.4716  2.4730
                    2.4743  2.4757  2.4771  2.4784  2.4798  2.4812  2.4825
                    2.4839  2.4852  2.4865  2.4879  2.4892  2.4906  2.4919
                    2.4932  2.4945  2.4959  2.4972  2.4985  2.4998  2.5011
                    2.5025  2.5038  2.5051  2.5064  2.5077  2.5090  2.5103
                    2.5116  2.5129  2.5141  2.5154  2.5167  2.5180  2.5193
                    2.5205  2.5218  2.5231  2.5243  2.5256  2.5269  2.5281
                    2.5294  2.5306  2.5319  2.5332  2.5344  2.5356  2.5369
                    2.5381  2.5394  2.5406  2.5418  2.5431  2.5443  2.5455
                    2.5468  2.5480  2.5492  2.5504  2.5516  2.5528  2.5541
                    2.5553  2.5565  2.5577  2.5589  2.5601  2.5613  2.5625
                    2.5637  2.5649  2.5660  2.5672  2.5684  2.5696  2.5708
                    2.5720  2.5731  2.5743  2.5755  2.5766  2.5778  2.5790
                    2.5801  2.5813  2.5825  2.5836  2.5848  2.5859  2.5871
                    2.5882  2.5894  2.5905  2.5917  2.5928  2.5940  2.5951
                    2.5962  2.5974  2.5985  2.5996  2.6008  2.6019  2.6030
                    2.6041  2.6052  2.6064  2.6075  2.6086  2.6097  2.6108
                    2.6119  2.6130  2.6141  2.6152  2.6164  2.6175  2.6186
                    2.6196  2.6207  2.6218  2.6229  2.6240  2.6251  2.6262
                    2.6273  2.6284  2.6294  2.6305  2.6316  2.6327  2.6337
                    2.6348  2.6359  2.6370  2.6380  2.6391  2.6401  2.6412
                    2.6423  2.6433  2.6444  2.6454  2.6465  2.6475  2.6486
                    2.6496  2.6507  2.6517  2.6528  2.6538  2.6549  2.6559
                    2.6569  2.6580  2.6590  2.6600  2.6611  2.6621  2.6631
                    2.6642  2.6652  2.6662  2.6672  2.6682  2.6693  2.6703
                    2.6713  2.6723  2.6733  2.6743  2.6753  2.6763  2.6774
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                2.6784  2.6794  2.6804  2.6814  2.6824  2.6834  2.6844
                2.6853  2.6863  2.6873  2.6883  2.6893  2.6903  2.6913
                2.6923  2.6932  2.6942  2.6952  2.6962  2.6972  2.6981
                2.6991  2.7001  2.7011  2.7020  2.7030

*
*S**************************************************************************
* BULK FOR SEDIMENT - TAKEN FROM WILSON PHASE 1 DMP
SEDIMENT BULK            CODE=1    BULK FACTOR=1.06
*

*
*************************************************************
*S************************************************************
*S THE FOLLOWING IS WILSON AND CO AHYMO FILE FOR OFF_1A,1B,2A AND 2B
*S FROM THE PHASE 1 DMP.  ESTABLISHES OFF-SITE FLOW RATES FOR 21ST AND 22ND
*S************************************************************
**************************************************************
COMPUTE NM HYD        ID=1    HYD=Off_1A    DA=0.0054   SQ MI
                      PER A=0    B=0    C=15    D=85
                      TP=0.13 HRS        RAIN=-1

     K =   .070850HR    TP =   .130000HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   18.582    CFS   UNIT VOLUME =    .9988       B =   526.28      P60 = 1.7990
     AREA =       .004590 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


     K =   .102465HR    TP =   .130000HR    K/TP RATIO =   .788191     SHAPE CONSTANT, N =  4.553549
     UNIT PEAK =   2.4333    CFS   UNIT VOLUME =    .9964       B =   390.52      P60 = 1.7990
     AREA =       .000810 SQ MI    IA =    .35000 INCHES    INF =    .83000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

    BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

*
PRINT HYD             ID=1    CODE=1

                                        HYDROGRAPH FROM AREA Off_1A


    RUNOFF VOLUME =     2.37034 INCHES     =        .6827 ACRE-FEET
    PEAK DISCHARGE RATE =      14.55 CFS  AT   1.500 HOURS   BASIN AREA =   .0054 SQ. MI.



*
*S  ROUTE OFF_1A through existing pond
*S  Pond Exists in field; Volume and outflow assumed to
*S  limit flowrate to predevelopment level
*S
ROUTE RESERVOIR           ID=17  HYD NO=P.Out   INFLOW ID=1 CODE=4.2
                    OUTFLOW (CFS)    STORAGE (AF)      ELEV (FT)
                          0               0               1
                          1.60            0.0074          1.5
                          2.26            0.0166          2
                          2.77            0.0279          2.5
                          3.20            0.0414          3
                          3.57            0.0574          3.5
                          3.91            0.076           4
                          4.23            0.0976          4.5
                          4.52            0.1222          5
                          4.79            0.15            5.5
                          5.05            0.18            6.0
                          5.30            0.217           6.5
                          5.54            0.256           7.0
                          5.76            0.300           7.5

  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *

    TIME      INFLOW    ELEV      VOLUME    OUTFLOW
    (HRS)     (CFS)     (FEET)    (AC-FT)   (CFS)

      .00        .00      1.00      .000       .00
      .20        .00      1.00      .000       .00
      .40        .00      1.00      .000       .00
      .60        .00      1.00      .000       .00
      .80        .00      1.00      .000       .00
     1.00        .11      1.01      .000       .04
     1.20        .73      1.14      .002       .45
     1.40       9.25      2.92      .039      3.13
     1.60       9.59      5.89      .174      4.99
     1.80       4.99      6.26      .200      5.18
     2.00       3.34      6.03      .182      5.07
     2.20       1.19      5.30      .139      4.68
     2.40        .60      4.11      .081      3.98
     2.60        .37      2.62      .031      2.88
     2.80        .25      1.24      .004       .76
     3.00        .18      1.07      .001       .21
     3.20        .15      1.05      .001       .16
     3.40        .13      1.04      .001       .14
     3.60        .12      1.04      .001       .13
     3.80        .12      1.04      .001       .12
```

4.00	.11	1.03	.001	.11
4.20	.11	1.03	.001	.11
4.40	.11	1.03	.000	.11
4.60	.11	1.03	.000	.11
4.80	.11	1.03	.000	.11
5.00	.11	1.03	.001	.11
5.20	.11	1.03	.001	.11
5.40	.11	1.04	.001	.11
5.60	.12	1.04	.001	.12
5.80	.12	1.04	.001	.12
6.00	.13	1.04	.001	.12
6.20	.13	1.04	.001	.13
6.40	.13	1.04	.001	.13
6.60	.13	1.04	.001	.13
6.80	.13	1.04	.001	.13
7.00	.13	1.04	.001	.13
7.20	.12	1.04	.001	.12
7.40	.12	1.04	.001	.12
7.60	.12	1.04	.001	.12
7.80	.12	1.04	.001	.12
8.00	.12	1.04	.001	.12
8.20	.12	1.04	.001	.12
8.40	.11	1.04	.001	.12
8.60	.11	1.04	.001	.11
8.80	.11	1.04	.001	.11
9.00	.11	1.03	.001	.11
9.20	.11	1.03	.001	.11
9.40	.11	1.03	.001	.11
9.60	.11	1.03	.000	.11
9.80	.11	1.03	.000	.11
10.00	.10	1.03	.000	.11
10.20	.10	1.03	.000	.10
10.40	.10	1.03	.000	.10
10.60	.10	1.03	.000	.10
10.80	.10	1.03	.000	.10
11.00	.10	1.03	.000	.10

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
11.20	.10	1.03	.000	.10
11.40	.10	1.03	.000	.10
11.60	.10	1.03	.000	.10
11.80	.10	1.03	.000	.10
12.00	.09	1.03	.000	.09
12.20	.09	1.03	.000	.09
12.40	.09	1.03	.000	.09
12.60	.09	1.03	.000	.09
12.80	.09	1.03	.000	.09
13.00	.09	1.03	.000	.09
13.20	.09	1.03	.000	.09
13.40	.09	1.03	.000	.09
13.60	.09	1.03	.000	.09
13.80	.09	1.03	.000	.09
14.00	.09	1.03	.000	.09
14.20	.09	1.03	.000	.09
14.40	.09	1.03	.000	.09
14.60	.08	1.03	.000	.08
14.80	.08	1.03	.000	.08
15.00	.08	1.03	.000	.08
15.20	.08	1.03	.000	.08
15.40	.08	1.03	.000	.08
15.60	.08	1.03	.000	.08
15.80	.08	1.03	.000	.08
16.00	.08	1.02	.000	.08
16.20	.08	1.02	.000	.08
16.40	.08	1.02	.000	.08
16.60	.08	1.02	.000	.08
16.80	.08	1.02	.000	.08
17.00	.08	1.02	.000	.08
17.20	.08	1.02	.000	.08
17.40	.08	1.02	.000	.08
17.60	.08	1.02	.000	.08
17.80	.07	1.02	.000	.07
18.00	.07	1.02	.000	.07
18.20	.07	1.02	.000	.07
18.40	.07	1.02	.000	.07
18.60	.07	1.02	.000	.07
18.80	.07	1.02	.000	.07
19.00	.07	1.02	.000	.07
19.20	.07	1.02	.000	.07
19.40	.07	1.02	.000	.07
19.60	.07	1.02	.000	.07
19.80	.07	1.02	.000	.07
20.00	.07	1.02	.000	.07
20.20	.07	1.02	.000	.07
20.40	.07	1.02	.000	.07
20.60	.07	1.02	.000	.07
20.80	.07	1.02	.000	.07
21.00	.07	1.02	.000	.07
21.20	.07	1.02	.000	.07
21.40	.07	1.02	.000	.07
21.60	.07	1.02	.000	.07
21.80	.07	1.02	.000	.07

```
      22.00        .07       1.02        .000        .07
      22.20        .06       1.02        .000        .06

      TIME       INFLOW     ELEV       VOLUME     OUTFLOW
      (HRS)      (CFS)      (FEET)     (AC-FT)    (CFS)

      22.40        .06       1.02        .000        .06
      22.60        .06       1.02        .000        .06
      22.80        .06       1.02        .000        .06
      23.00        .06       1.02        .000        .06
      23.20        .06       1.02        .000        .06
      23.40        .06       1.02        .000        .06
      23.60        .06       1.02        .000        .06
      23.80        .06       1.02        .000        .06
      24.00        .06       1.02        .000        .06
      24.20        .01       1.01        .000        .03
      24.40        .00       1.00        .000        .01
      24.60        .00       1.00        .000        .00
 PEAK DISCHARGE =         5.182 CFS - PEAK OCCURS AT HOUR    1.80
 MAXIMUM WATER SURFACE ELEVATION =         6.264
 MAXIMUM STORAGE =          .1995 AC-FT       INCREMENTAL TIME=      .100000HRS

*
PRINT HYD                 ID=17  CODE=1

                                        HYDROGRAPH FROM AREA P.Out


    RUNOFF VOLUME =      2.36893 INCHES      =         .6822 ACRE-FEET
    PEAK DISCHARGE RATE =        5.18 CFS  AT   1.800 HOURS   BASIN AREA =    .0054 SQ. MI.



*
*
*S *************DIVIDE HYD TO UNBULK BY 3% **********************
DIVIDE HYD           ID=17   %=-97             ID I=17  HYD=P.Out.1
                                                      ID II=52 HYD=SEDIMENT
*
*
*
COMPUTE RATING CURVE CID=1  VALLEY SECTION=1  NUMBER OF SEGMENTS=3
                    MINIMUM ELEV=99.13 FT  MAXIMUM ELEV=100 FT
                    CHANNEL SLOPE=0.02  FLOOD PLAIN SLOPE=0.02
                    N=0.030  DIST=9  N=-0.017  DIST=41 N=0.030 DIST=50
                    DIST  ELEV    DIST   ELEV    DIST   ELEV   DIST   ELEV
                    0.0   100.0    9.0   99.82    9.2   99.13    11   99.26
                    25.0   99.54  39.0   99.26   41.0   99.13   41.2  99.82
                    50.0  100.0

                                  RATING CURVE VALLEY SECTION  1.0
                                      WATER        FLOW         FLOW         TOP
                                    SURFACE       AREA         RATE        WIDTH
                                     ELEV         SQ FT        CFS          FT
                                     99.13          .00          .00          .00
                                     99.18          .03          .03         1.37
                                     99.22          .13          .19         2.73
                                     99.27          .28          .53         4.62
                                     99.31          .60         1.18         9.22
                                     99.36         1.13         2.58        13.83
                                     99.40         1.87         4.95        18.43
                                     99.45         2.82         8.47        23.04
                                     99.50         3.98        13.35        27.65
                                     99.54         5.35        19.83        32.04
                                     99.59         6.82        29.68        32.07
                                     99.63         8.28        41.05        32.09
                                     99.68         9.75        53.83        32.12
                                     99.73        11.23        67.96        32.15
                                     99.77        12.70        83.36        32.17
                                     99.82        14.17        99.98        32.20
                                     99.86        15.74       117.88        36.42
                                     99.91        17.51       137.25        40.95
                                     99.95        19.49       158.15        45.48
                                    100.00        21.67       180.68        50.00
*
ROUTE MCUNGE              ID=2    HYD=Off_1A.9  INFLOW ID=17  DT=0.00
                                          L=250   NO VS=1  SLP=0.02

      INFLOW END= 248             TABLE PTS= 20
      DT=  .100000                QMED=         2.51  CKMED=       2.6618
      WIDTH MED=        13.60     NREACH=  1          DX=       250.00

  DEPTH    AREA      Q     TRAVEL  WIDTH      ck       VEL      C       D       C1      C2      C3      Q-M      C1-M    C2-M    C3-M
   (FT)  (SQ FT)   (CFS)  TIME(HR) (FT)     (FPS)    (FPS)                                                  (CFS)
    .00      .0      .0     .098     .0       .69      .45    1.000   .000   1.000   .000    .000       .0    1.000   .000    .000
    .05      .0      .0     .071    1.4      1.36      .97    1.951   .003    .998   .323   -.321       .0    .998    .083   -.081
    .09      .1      .2     .045    2.7      2.03     1.54    2.924   .007    .996   .491   -.488       .1    .997    .416   -.413
    .14      .3      .5     .037    4.6      2.23     1.88    3.210   .010    .995   .526   -.521       .3    .995    .481   -.476
    .18      .6     1.2     .035    9.2      2.39     1.96    3.441   .011    .995   .551   -.546       .8    .994    .484   -.478
    .23     1.1     2.6     .030   13.8      2.96     2.29    4.266   .013    .995   .621   -.616      1.8    .995    .584   -.579
    .27     1.9     4.9     .026   18.4      3.48     2.65    5.018   .015    .995   .669   -.663      3.7    .995    .643   -.638
    .32     2.8     8.5     .023   23.0      3.98     3.01    5.732   .018    .995   .704   -.698      6.6    .995    .685   -.679
    .37     4.0    13.3     .021   27.6      4.48     3.36    6.455   .022    .994   .732   -.727     10.8    .994    .716   -.711
    .41     5.3    19.8     .019   32.0      5.48     3.71    7.886   .023    .995   .776   -.770     16.5    .994    .745   -.739
```

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      .46    6.8     29.7    .016    32.1     7.24    4.35   10.423   .026   .996   .825  -.821     24.6    .996    .813   -.809
      .50    8.3     41.0    .014    32.1     8.23    4.95   11.848   .031   .995   .845  -.840     35.2    .995    .836   -.831
      .55    9.8     53.8    .013    32.1     9.16    5.52   13.186   .037   .995   .859  -.854     47.3    .995    .853   -.848
      .60   11.2     68.0    .011    32.1    10.04    6.05   14.451   .042   .995   .871  -.865     60.7    .995    .865   -.860
      .64   12.7     83.4    .011    32.2    10.87    6.56   15.657   .048   .994   .880  -.875     75.5    .994    .876   -.870
      .69   14.2    100.0    .010    32.2    11.68    7.05   16.817   .053   .994   .888  -.882     91.5    .994    .884   -.879
      .73   15.7    117.9    .009    36.4    11.21    7.49   16.149   .058   .993   .884  -.877    108.7    .994    .885   -.879
      .78   17.5    137.3    .009    40.9    10.77    7.84   15.512   .062   .992   .879  -.872    127.4    .993    .881   -.874
      .82   19.5    158.2    .009    45.5    10.45    8.12   15.055   .067   .992   .876  -.868    147.6    .992    .877   -.869
      .87   21.7    180.7    .008    50.0    10.09    8.34   14.526   .072   .991   .872  -.863    169.3    .991    .874   -.866
MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) =   3 OCCURRED       2 TIMES.  AVERAGE NUMBER ITERATIONS =  1.0390
  DEPTH    AREA       Q    TRAVEL  WIDTH      ck      VEL       C       D      C1      C2      C3      Q-M     C1-M    C2-M    C3-M
   (FT)  (SQ FT)   (CFS)  TIME(HR)  (FT)    (FPS)    (FPS)                                          (CFS)
      .00     .0      .0    .098      .0      .69      .45   1.000    .000  1.000    .000    .000       .0   1.000    .000    .000
      .05     .0      .0    .071     1.4      .70      .97   1.006    .006   .994    .006    .000       .0    .998    .002    .000
      .09     .1      .2    .045     2.7      .71     1.54   1.020    .020   .980    .020    .000       .1    .988    .012    .000
      .14     .3      .5    .037     4.6      .72     1.88   1.032    .032   .969    .031    .000       .3    .975    .025    .000
      .18     .6     1.2    .035     9.2      .72     1.96   1.036    .036   .966    .034    .000       .8    .968    .032    .000
      .23    1.1     2.6    .030    13.8      .73     2.29   1.051    .051   .951    .049    .000      1.8    .958    .042    .000
      .27    1.9     4.9    .026    18.4      .74     2.65   1.072    .072   .933    .067    .000      3.7    .942    .058    .000
      .32    2.8     8.5    .023    23.0      .76     3.01   1.097    .097   .912    .088    .000      6.6    .922    .078    .000
      .37    4.0    13.3    .021    27.6      .78     3.36   1.124    .124   .890    .110    .000     10.8    .901    .099    .000
      .41    5.3    19.8    .019    32.0      .80     3.71   1.154    .154   .866    .134    .000     16.5    .878    .122    .000
      .46    6.8    29.7    .016    32.1      .85     4.35   1.219    .219   .821    .179    .000     24.6    .843    .157    .000
      .50    8.3    41.0    .014    32.1      .89     4.95   1.286    .286   .777    .223    .000     35.2    .799    .201    .000
      .55    9.8    53.8    .013    32.1      .94     5.52   1.356    .356   .737    .263    .000     47.3    .757    .243    .000
      .60   11.2    68.0    .011    32.1      .99     6.05   1.427    .427   .701    .299    .000     60.7    .719    .281    .000
      .64   12.7    83.4    .011    32.2     1.04     6.56   1.498    .498   .668    .332    .000     75.5    .684    .316    .000
      .69   14.2   100.0    .010    32.2     1.09     7.05   1.570    .570   .637    .363    .000     91.5    .652    .348    .000
      .73   15.7   117.9    .009    36.4     1.10     7.49   1.587    .587   .630    .370    .000    108.7    .634    .366    .000
      .78   17.5   137.3    .009    40.9     1.11     7.84   1.602    .602   .624    .376    .000    127.4    .627    .373    .000
      .82   19.5   158.2    .009    45.5     1.12     8.12   1.619    .619   .618    .382    .000    147.6    .621    .379    .000
      .87   21.7   180.7    .008    50.0     1.14     8.34   1.636    .636   .611    .389    .000    169.3    .614    .386    .000
MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) =   2 OCCURRED      19 TIMES.  AVERAGE NUMBER ITERATIONS =  1.0322
Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3
PRINT HYD                 ID=2    CODE=1

                                    HYDROGRAPH FROM AREA Off_1A.9

    RUNOFF VOLUME =     2.36826 INCHES     =         .6616 ACRE-FEET
    PEAK DISCHARGE RATE =       5.02 CFS  AT   1.900 HOURS   BASIN AREA =    .0052 SQ. MI.


*
*
PUNCH HYD           ID=2
*
COMPUTE NM HYD       ID=1    HYD=Off_1C    DA=0.0054   SQ MI
                     PER A=0    B=34    C=31.7    D=34.3
                     TP=0.13 HRS        RAIN=-1

     K =   .070850HR    TP =   .130000HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   7.4982    CFS   UNIT VOLUME =    .9980       B =   526.28       P60 = 1.7990
     AREA =      .001852 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


     K =   .116180HR    TP =   .130000HR    K/TP RATIO =   .893693     SHAPE CONSTANT, N =  3.967435
     UNIT PEAK =   9.6335    CFS   UNIT VOLUME =   1.000       B =   352.99       P60 = 1.7990
     AREA =      .003548 SQ MI    IA =    .42763 INCHES    INF =   1.04735 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

    BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

*
PRINT HYD           ID=1    CODE=1

                                    HYDROGRAPH FROM AREA Off_1C

    RUNOFF VOLUME =     1.43633 INCHES     =         .4137 ACRE-FEET
    PEAK DISCHARGE RATE =      10.98 CFS  AT   1.500 HOURS   BASIN AREA =    .0054 SQ. MI.


*
*
ADD HYD             ID=2   HYD=Off1C.1   ID I=1      ID II=2
*
PRINT HYD           ID=2    CODE=1

                                    HYDROGRAPH FROM AREA Off1C.1

    RUNOFF VOLUME =     1.89503 INCHES     =       1.0752 ACRE-FEET
    PEAK DISCHARGE RATE =      14.08 CFS  AT   1.500 HOURS   BASIN AREA =    .0106 SQ. MI.


*
*
COMPUTE NM HYD       ID=1    HYD=21ST    DA=0.0010   SQ MI
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Yucatan at Cabezon Subdivision-Cabezon Redevelopment
100-Year 24-Hour Duration Storm-Developed
AHYMO Output File

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                    PER A=0    B=0    C=10    D=90
                    TP=0.13 HRS        RAIN=-1

      K =  .070850HR    TP =  .130000HR    K/TP RATIO =  .545000     SHAPE CONSTANT, N =  7.106420
      UNIT PEAK =  3.6434    CFS   UNIT VOLUME =  .9965       B =  526.28      P60 = 1.7990
      AREA =      .000900 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  .050000


      K =  .102465HR    TP =  .130000HR    K/TP RATIO =  .788191     SHAPE CONSTANT, N =  4.553549
      UNIT PEAK =  .30040    CFS   UNIT VOLUME =  .9613       B =  390.52      P60 = 1.7990
      AREA =      .000100 SQ MI    IA =    .35000 INCHES    INF =    .83000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  .050000

    BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

*
PRINT HYD            ID=1    CODE=1

                                    HYDROGRAPH FROM AREA 21ST


    RUNOFF VOLUME =     2.45016 INCHES      =        .1307 ACRE-FEET
    PEAK DISCHARGE RATE =       2.75 CFS  AT   1.500 HOURS   BASIN AREA =   .0010 SQ. MI.



*
*
ADD HYD              ID=2   HYD=21ST.1   ID I=1      ID II=2
*
PRINT HYD            ID=2    CODE=1

                                    HYDROGRAPH FROM AREA 21ST.1


    RUNOFF VOLUME =     1.94270 INCHES      =       1.2058 ACRE-FEET
    PEAK DISCHARGE RATE =      16.84 CFS  AT   1.500 HOURS   BASIN AREA =   .0116 SQ. MI.



*
*
COMPUTE RATING CURVE CID=1  VALLEY SECTION=1  NUMBER OF SEGMENTS=3
                    MINIMUM ELEV=99.13 FT  MAXIMUM ELEV=100 FT
                    CHANNEL SLOPE=0.015  FLOOD PLAIN SLOPE=0.015
                    N=0.030  DIST=9  N=-0.017  DIST=41 N=0.030 DIST=50
                    DIST  ELEV    DIST   ELEV    DIST   ELEV   DIST   ELEV
                    0.0   100.0    9.0   99.82    9.2   99.13    11   99.26
                    25.0   99.54  39.0   99.26   41.0   99.13   41.2  99.82
                    50.0  100.0

                                  RATING CURVE VALLEY SECTION  1.0
                                     WATER        FLOW         FLOW         TOP
                                    SURFACE       AREA         RATE        WIDTH
                                     ELEV        SQ FT         CFS          FT
                                     99.13          .00          .00          .00
                                     99.18          .03          .03         1.37
                                     99.22          .13          .17         2.73
                                     99.27          .28          .46         4.62
                                     99.31          .60         1.02         9.22
                                     99.36         1.13         2.24        13.83
                                     99.40         1.87         4.28        18.43
                                     99.45         2.82         7.34        23.04
                                     99.50         3.98        11.56        27.65
                                     99.54         5.35        17.17        32.04
                                     99.59         6.82        25.70        32.07
                                     99.63         8.28        35.55        32.09
                                     99.68         9.75        46.62        32.12
                                     99.73        11.23        58.85        32.15
                                     99.77        12.70        72.19        32.17
                                     99.82        14.17        86.58        32.20
                                     99.86        15.74       102.09        36.42
                                     99.91        17.51       118.86        40.95
                                     99.95        19.49       136.96        45.48
                                    100.00        21.67       156.47        50.00
ROUTE MCUNGE              ID=3   HYD=21ST.9  INFLOW ID=2  DT=0.00
                                     L=1800   NO VS=1  SLP=0.015

      INFLOW END= 503             TABLE PTS= 20
      DT=  .050000                QMED=       8.42  CKMED=      3.6367
      WIDTH MED=       24.22      NREACH=  6          DX=      300.00

  DEPTH    AREA      Q     TRAVEL  WIDTH      ck      VEL      C       D       C1      C2      C3      Q-M      C1-M    C2-M    C3-M
   (FT)  (SQ FT)  (CFS)  TIME(HR)  (FT)     (FPS)    (FPS)                                                    (CFS)
    .00      .0      .0     .814     .0      1.67      .39   1.000    .000   1.000    .000    .000       .0   1.000    .000    .000
    .05      .0      .0     .594    1.4      1.66      .84    .997    .003    .997    .000    .003       .0   1.000    .000    .000
    .09      .1      .2     .374    2.7      1.76     1.34   1.055    .008    .993    .030   -.023       .1    .996    .011   -.007
    .14      .3      .5     .308    4.6      1.93     1.63   1.158    .011    .989    .078   -.068       .3    .990    .018   -.008
    .18      .6     1.0     .294    9.2      2.07     1.70   1.242    .012    .989    .113   -.102       .7    .987    .023   -.010
    .23     1.1     2.2     .252   13.8      2.57     1.98   1.539    .014    .989    .217   -.206      1.6    .989    .161   -.149
    .27     1.9     4.3     .218   18.4      3.02     2.30   1.811    .017    .988    .293   -.281      3.2    .988    .251   -.239
    .32     2.8     7.3     .192   23.0      3.45     2.61   2.068    .021    .987    .353   -.339      5.7    .987    .320   -.307
    .37     4.0    11.6     .172   27.6      3.88     2.91   2.329    .024    .986    .404   -.389      9.3    .986    .375   -.361
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```
      .41    5.3     17.2    .156    32.0     4.74    3.21    2.846   .025   .987   .483   -.470     14.3    .985    .426   -.412
      .46    6.8     25.7    .133    32.1     6.27    3.77    3.761   .028   .988   .582   -.571     21.3    .989    .557   -.546
      .50    8.3     35.5    .117    32.1     7.13    4.29    4.275   .035   .987   .623   -.610     30.5    .988    .604   -.592
      .55    9.8     46.6    .105    32.1     7.93    4.78    4.758   .041   .986   .655   -.641     40.9    .986    .640   -.627
      .60   11.2     58.9    .095    32.1     8.69    5.24    5.215   .047   .985   .681   -.666     52.6    .985    .668   -.654
      .64   12.7     72.2    .088    32.2     9.42    5.68    5.650   .053   .984   .702   -.686     65.4    .985    .692   -.676
      .69   14.2     86.6    .082    32.2    10.11    6.11    6.068   .059   .983   .719   -.703     79.3    .984    .711   -.695
      .73   15.7    102.1    .077    36.4     9.71    6.49    5.827   .064   .981   .710   -.691     94.2    .982    .713   -.696
      .78   17.5    118.9    .074    40.9     9.33    6.79    5.597   .069   .979   .700   -.679    110.3    .980    .703   -.684
      .82   19.5    137.0    .071    45.5     9.05    7.03    5.432   .074   .977   .693   -.670    127.8    .978    .695   -.673
      .87   21.7    156.5    .069    50.0     8.74    7.22    5.242   .080   .975   .684   -.658    146.6    .976    .689   -.665
MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) =   4 OCCURRED       1 TIMES.  AVERAGE NUMBER ITERATIONS =  1.0819
  DEPTH    AREA      Q     TRAVEL  WIDTH      ck      VEL       C        D       C1      C2      C3      Q-M      C1-M    C2-M    C3-M
   (FT)  (SQ FT)   (CFS)   TIME(HR) (FT)     (FPS)   (FPS)                                              (CFS)
      .00     .0      .0    .814     .0     1.67     .39    1.000   .000  1.000   .000    .000       .0   1.000   .000    .000
      .05     .0      .0    .594    1.4     1.66     .84     .997   .003   .997   .000    .003       .0   1.000   .000    .000
      .09     .1      .2    .374    2.7     1.68    1.34    1.008   .008   .992   .008    .000       .1   .995    .005    .000
      .14     .3      .5    .308    4.6     1.69    1.63    1.013   .013   .987   .013    .000       .3   .990    .010    .000
      .18     .6     1.0    .294    9.2     1.69    1.70    1.015   .015   .986   .014    .000       .7   .987    .013    .000
      .23    1.1     2.2    .252   13.8     1.70    1.98    1.021   .021   .979   .021    .000      1.6   .982    .018    .000
      .27    1.9     4.3    .218   18.4     1.72    2.30    1.030   .030   .971   .029    .000      3.2   .975    .025    .000
      .32    2.8     7.3    .192   23.0     1.73    2.61    1.041   .041   .961   .039    .000      5.7   .966    .034    .000
      .37    4.0    11.6    .172   27.6     1.75    2.91    1.053   .053   .950   .050    .000      9.3   .955    .045    .000
      .41    5.3    17.2    .156   32.0     1.78    3.21    1.067   .067   .937   .063    .000     14.3   .943    .057    .000
      .46    6.8    25.7    .133   32.1     1.83    3.77    1.097   .097   .911   .089    .000     21.3   .924    .076    .000
      .50    8.3    35.5    .117   32.1     1.88    4.29    1.131   .131   .884   .116    .000     30.5   .898    .102    .000
      .55    9.8    46.6    .105   32.1     1.94    4.78    1.166   .166   .858   .142    .000     40.9   .871    .129    .000
      .60   11.2    58.9    .095   32.1     2.00    5.24    1.203   .203   .831   .169    .000     52.6   .844    .156    .000
      .64   12.7    72.2    .088   32.2     2.07    5.68    1.241   .241   .806   .194    .000     65.4   .818    .182    .000
      .69   14.2    86.6    .082   32.2     2.13    6.11    1.280   .280   .781   .219    .000     79.3   .793    .207    .000
      .73   15.7   102.1    .077   36.4     2.15    6.49    1.290   .290   .775   .225    .000     94.2   .778    .222    .000
      .78   17.5   118.9    .074   40.9     2.16    6.79    1.298   .298   .770   .230    .000    110.3   .773    .227    .000
      .82   19.5   137.0    .071   45.5     2.18    7.03    1.307   .307   .765   .235    .000    127.8   .768    .232    .000
      .87   21.7   156.5    .069   50.0     2.19    7.22    1.317   .317   .759   .241    .000    146.6   .762    .238    .000
MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) =   2 OCCURRED     190 TIMES.  AVERAGE NUMBER ITERATIONS =  1.0544
Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3
*
PRINT HYD                 ID=3    CODE=1

                                  HYDROGRAPH FROM AREA 21ST.9


    RUNOFF VOLUME =     1.93931 INCHES     =       1.2037 ACRE-FEET
    PEAK DISCHARGE RATE =      16.40 CFS  AT   1.800 HOURS   BASIN AREA =   .0116 SQ. MI.



*********************************************************************
*S*******************************************************************
*
COMPUTE NM HYD        ID=1   HYD=Off_1B    DA=0.0056   SQ MI
                      PER A=0    B=0    C=15    D=85
                      TP=0.13 HRS        RAIN=-1

     K =   .070850HR    TP =   .130000HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   19.270    CFS   UNIT VOLUME =    .9988       B =   526.28      P60 = 1.7990
     AREA =       .004760 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


     K =   .102465HR    TP =   .130000HR    K/TP RATIO =   .788191     SHAPE CONSTANT, N =  4.553549
     UNIT PEAK =   2.5234    CFS   UNIT VOLUME =    .9964       B =   390.52      P60 = 1.7990
     AREA =       .000840 SQ MI    IA =    .35000 INCHES    INF =    .83000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

    BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

*
PRINT HYD             ID=1    CODE=1

                                  HYDROGRAPH FROM AREA Off_1B


    RUNOFF VOLUME =     2.37034 INCHES     =        .7079 ACRE-FEET
    PEAK DISCHARGE RATE =      15.09 CFS  AT   1.500 HOURS   BASIN AREA =   .0056 SQ. MI.



*
PUNCH HYD             ID=1
*
*S  ROUTE OFF_1B through existing pond
*S  Pond Exists in field; Total volume = 0.22 ac-ft
*S  limited flowrate to predevelopment level
*S
ROUTE RESERVOIR           ID=17  HYD NO=P.Out    INFLOW ID=1 CODE=4.2
                     OUTFLOW (CFS)    STORAGE (AF)      ELEV (FT)
                           0               0               1
                           1.60            0.0074          1.5
                           2.26            0.0166          2
                           2.77            0.0279          2.5
                           3.20            0.0414          3
                           3.57            0.0574          3.5
```

3.91	0.076	4
4.23	0.0976	4.5
4.52	0.1222	5
4.79	0.15	5.5
5.05	0.18	6.0
5.30	0.217	6.5
5.54	0.256	7.0
5.76	0.300	7.5

* * * * * * * * * * * * * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	1.00	.000	.00
.20	.00	1.00	.000	.00
.40	.00	1.00	.000	.00
.60	.00	1.00	.000	.00
.80	.00	1.00	.000	.00
1.00	.11	1.01	.000	.04
1.20	.75	1.15	.002	.46
1.40	9.59	2.99	.041	3.19
1.60	9.95	6.03	.182	5.06
1.80	5.17	6.42	.211	5.26
2.00	3.47	6.20	.195	5.15
2.20	1.23	5.52	.151	4.80
2.40	.62	4.36	.091	4.14
2.60	.38	2.91	.039	3.12
2.80	.26	1.40	.006	1.29
3.00	.19	1.07	.001	.23
3.20	.16	1.05	.001	.16
3.40	.14	1.04	.001	.14
3.60	.13	1.04	.001	.13
3.80	.12	1.04	.001	.12
4.00	.11	1.04	.001	.12
4.20	.11	1.04	.001	.11
4.40	.11	1.03	.001	.11
4.60	.11	1.03	.001	.11
4.80	.11	1.03	.001	.11
5.00	.11	1.04	.001	.11
5.20	.12	1.04	.001	.11
5.40	.12	1.04	.001	.12
5.60	.12	1.04	.001	.12
5.80	.13	1.04	.001	.13
6.00	.13	1.04	.001	.13
6.20	.13	1.04	.001	.13
6.40	.13	1.04	.001	.14
6.60	.13	1.04	.001	.13
6.80	.13	1.04	.001	.13
7.00	.13	1.04	.001	.13
7.20	.13	1.04	.001	.13
7.40	.13	1.04	.001	.13
7.60	.12	1.04	.001	.13
7.80	.12	1.04	.001	.12
8.00	.12	1.04	.001	.12
8.20	.12	1.04	.001	.12
8.40	.12	1.04	.001	.12
8.60	.12	1.04	.001	.12
8.80	.12	1.04	.001	.12
9.00	.11	1.04	.001	.12
9.20	.11	1.04	.001	.11
9.40	.11	1.04	.001	.11
9.60	.11	1.03	.001	.11
9.80	.11	1.03	.001	.11
10.00	.11	1.03	.001	.11
10.20	.11	1.03	.000	.11
10.40	.11	1.03	.000	.11
10.60	.10	1.03	.000	.10
10.80	.10	1.03	.000	.10
11.00	.10	1.03	.000	.10

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
11.20	.10	1.03	.000	.10
11.40	.10	1.03	.000	.10
11.60	.10	1.03	.000	.10
11.80	.10	1.03	.000	.10
12.00	.10	1.03	.000	.10
12.20	.10	1.03	.000	.10
12.40	.10	1.03	.000	.10
12.60	.10	1.03	.000	.10
12.80	.09	1.03	.000	.09
13.00	.09	1.03	.000	.09
13.20	.09	1.03	.000	.09
13.40	.09	1.03	.000	.09
13.60	.09	1.03	.000	.09
13.80	.09	1.03	.000	.09
14.00	.09	1.03	.000	.09
14.20	.09	1.03	.000	.09
14.40	.09	1.03	.000	.09
14.60	.09	1.03	.000	.09
14.80	.09	1.03	.000	.09
15.00	.09	1.03	.000	.09

```
      15.20        .09       1.03        .000        .09
      15.40        .08       1.03        .000        .08
      15.60        .08       1.03        .000        .08
      15.80        .08       1.03        .000        .08
      16.00        .08       1.03        .000        .08
      16.20        .08       1.03        .000        .08
      16.40        .08       1.03        .000        .08
      16.60        .08       1.03        .000        .08
      16.80        .08       1.03        .000        .08
      17.00        .08       1.02        .000        .08
      17.20        .08       1.02        .000        .08
      17.40        .08       1.02        .000        .08
      17.60        .08       1.02        .000        .08
      17.80        .08       1.02        .000        .08
      18.00        .08       1.02        .000        .08
      18.20        .08       1.02        .000        .08
      18.40        .08       1.02        .000        .08
      18.60        .07       1.02        .000        .08
      18.80        .07       1.02        .000        .07
      19.00        .07       1.02        .000        .07
      19.20        .07       1.02        .000        .07
      19.40        .07       1.02        .000        .07
      19.60        .07       1.02        .000        .07
      19.80        .07       1.02        .000        .07
      20.00        .07       1.02        .000        .07
      20.20        .07       1.02        .000        .07
      20.40        .07       1.02        .000        .07
      20.60        .07       1.02        .000        .07
      20.80        .07       1.02        .000        .07
      21.00        .07       1.02        .000        .07
      21.20        .07       1.02        .000        .07
      21.40        .07       1.02        .000        .07
      21.60        .07       1.02        .000        .07
      21.80        .07       1.02        .000        .07
      22.00        .07       1.02        .000        .07
      22.20        .07       1.02        .000        .07

      TIME       INFLOW     ELEV       VOLUME     OUTFLOW
      (HRS)      (CFS)      (FEET)     (AC-FT)    (CFS)

      22.40        .07       1.02        .000        .07
      22.60        .07       1.02        .000        .07
      22.80        .07       1.02        .000        .07
      23.00        .07       1.02        .000        .07
      23.20        .06       1.02        .000        .06
      23.40        .06       1.02        .000        .06
      23.60        .06       1.02        .000        .06
      23.80        .06       1.02        .000        .06
      24.00        .06       1.02        .000        .06
      24.20        .02       1.01        .000        .03
      24.40        .00       1.00        .000        .01
      24.60        .00       1.00        .000        .00
   PEAK DISCHARGE =         5.259 CFS - PEAK OCCURS AT HOUR    1.80
   MAXIMUM WATER SURFACE ELEVATION =         6.418
   MAXIMUM STORAGE =          .2109 AC-FT       INCREMENTAL TIME=      .100000HRS

  *
  PRINT HYD                 ID=17  CODE=1

                                        HYDROGRAPH FROM AREA P.Out


      RUNOFF VOLUME =      2.37246 INCHES      =         .7086 ACRE-FEET
      PEAK DISCHARGE RATE =        5.26 CFS  AT   1.800 HOURS   BASIN AREA =    .0056 SQ. MI.



  *
  *
  *$ *************DIVIDE HYD TO UNBULK BY 3% **********************
  DIVIDE HYD           ID=17   %=-97             ID I=17  HYD=P.Out.1
                                                        ID II=52 HYD=SEDIMENT
  *
  *
  *
  COMPUTE RATING CURVE CID=1  VALLEY SECTION=1  NUMBER OF SEGMENTS=3
                       MINIMUM ELEV=99.13 FT  MAXIMUM ELEV=100 FT
                       CHANNEL SLOPE=0.02  FLOOD PLAIN SLOPE=0.02
                       N=0.030  DIST=9  N=-0.017  DIST=41 N=0.030 DIST=50
                       DIST  ELEV    DIST   ELEV    DIST   ELEV   DIST   ELEV
                       0.0   100.0    9.0   99.82    9.2   99.13    11   99.26
                       25.0   99.54  39.0   99.26   41.0   99.13   41.2  99.82
                       50.0  100.0

                                    RATING CURVE VALLEY SECTION  1.0
                                       WATER       FLOW        FLOW        TOP
                                     SURFACE       AREA        RATE       WIDTH
                                      ELEV        SQ FT        CFS         FT
                                      99.13         .00          .00         .00
                                      99.18         .03          .03        1.37
                                      99.22         .13          .19        2.73
                                      99.27         .28          .53        4.62
                                      99.31         .60         1.18        9.22
                                      99.36        1.13         2.58       13.83
```

```
                                  99.40        1.87        4.95       18.43
                                  99.45        2.82        8.47       23.04
                                  99.50        3.98       13.35       27.65
                                  99.54        5.35       19.83       32.04
                                  99.59        6.82       29.68       32.07
                                  99.63        8.28       41.05       32.09
                                  99.68        9.75       53.83       32.12
                                  99.73       11.23       67.96       32.15
                                  99.77       12.70       83.36       32.17
                                  99.82       14.17       99.98       32.20
                                  99.86       15.74      117.88       36.42
                                  99.91       17.51      137.25       40.95
                                  99.95       19.49      158.15       45.48
                                 100.00       21.67      180.68       50.00
*
ROUTE MCUNGE                ID=2   HYD=Off_1B.9  INFLOW ID=17  DT=0.00
                                       L=250   NO VS=1  SLP=0.02

     INFLOW END= 248             TABLE PTS= 20
     DT=  .100000                QMED=        2.55  CKMED=       2.6618
     WIDTH MED=       13.72      NREACH=  1          DX=       250.00

  DEPTH   AREA      Q    TRAVEL  WIDTH      ck      VEL      C       D       C1      C2      C3      Q-M      C1-M    C2-M    C3-M
   (FT) (SQ FT)  (CFS)  TIME(HR) (FT)     (FPS)   (FPS)                                              (CFS)
    .00     .0     .0     .098     .0       .69     .45   1.000    .000   1.000    .000    .000       .0   1.000    .000    .000
    .05     .0     .0     .071    1.4      1.36     .97   1.951    .003    .998    .323   -.321       .0    .998    .083   -.081
    .09     .1     .2     .045    2.7      2.03    1.54   2.924    .007    .996    .491   -.488       .1    .997    .416   -.413
    .14     .3     .5     .037    4.6      2.23    1.88   3.210    .010    .995    .526   -.521       .3    .995    .481   -.476
    .18     .6    1.2     .035    9.2      2.39    1.96   3.441    .011    .995    .551   -.546       .8    .994    .484   -.478
    .23    1.1    2.6     .030   13.8      2.96    2.29   4.266    .013    .995    .621   -.616      1.8    .995    .584   -.579
    .27    1.9    4.9     .026   18.4      3.48    2.65   5.018    .015    .995    .669   -.663      3.7    .995    .643   -.638
    .32    2.8    8.5     .023   23.0      3.98    3.01   5.732    .018    .995    .704   -.698      6.6    .995    .685   -.679
    .37    4.0   13.3     .021   27.6      4.48    3.36   6.455    .022    .994    .732   -.727     10.8    .994    .716   -.711
    .41    5.3   19.8     .019   32.0      5.48    3.71   7.886    .023    .995    .776   -.770     16.5    .994    .745   -.739
    .46    6.8   29.7     .016   32.1      7.24    4.35  10.423    .026    .996    .825   -.821     24.6    .996    .813   -.809
    .50    8.3   41.0     .014   32.1      8.23    4.95  11.848    .031    .995    .845   -.840     35.2    .995    .836   -.831
    .55    9.8   53.8     .013   32.1      9.16    5.52  13.186    .037    .995    .859   -.854     47.3    .995    .853   -.848
    .60   11.2   68.0     .011   32.1     10.04    6.05  14.451    .042    .995    .871   -.865     60.7    .995    .865   -.860
    .64   12.7   83.4     .011   32.2     10.87    6.56  15.657    .048    .994    .880   -.875     75.5    .994    .876   -.870
    .69   14.2  100.0     .010   32.2     11.68    7.05  16.817    .053    .994    .888   -.882     91.5    .994    .884   -.879
    .73   15.7  117.9     .009   36.4     11.21    7.49  16.149    .058    .993    .884   -.877    108.7    .994    .885   -.879
    .78   17.5  137.3     .009   40.9     10.77    7.84  15.512    .062    .992    .879   -.872    127.4    .993    .881   -.874
    .82   19.5  158.2     .009   45.5     10.45    8.12  15.055    .067    .992    .876   -.868    147.6    .992    .877   -.869
    .87   21.7  180.7     .008   50.0     10.09    8.34  14.526    .072    .991    .872   -.863    169.3    .991    .874   -.866
MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) =   3 OCCURRED       2 TIMES.  AVERAGE NUMBER ITERATIONS =  1.0424
  DEPTH   AREA      Q    TRAVEL  WIDTH      ck      VEL      C       D       C1      C2      C3      Q-M      C1-M    C2-M    C3-M
   (FT) (SQ FT)  (CFS)  TIME(HR) (FT)     (FPS)   (FPS)                                              (CFS)
    .00     .0     .0     .098     .0       .69     .45   1.000    .000   1.000    .000    .000       .0   1.000    .000    .000
    .05     .0     .0     .071    1.4      .70      .97   1.006    .006    .994    .006    .000       .0    .998    .002    .000
    .09     .1     .2     .045    2.7      .71     1.54   1.020    .020    .980    .020    .000       .1    .988    .012    .000
    .14     .3     .5     .037    4.6      .72     1.88   1.032    .032    .969    .031    .000       .3    .975    .025    .000
    .18     .6    1.2     .035    9.2      .72     1.96   1.036    .036    .966    .034    .000       .8    .968    .032    .000
    .23    1.1    2.6     .030   13.8      .73     2.29   1.051    .051    .951    .049    .000      1.8    .958    .042    .000
    .27    1.9    4.9     .026   18.4      .74     2.65   1.072    .072    .933    .067    .000      3.7    .942    .058    .000
    .32    2.8    8.5     .023   23.0      .76     3.01   1.097    .097    .912    .088    .000      6.6    .922    .078    .000
    .37    4.0   13.3     .021   27.6      .78     3.36   1.124    .124    .890    .110    .000     10.8    .901    .099    .000
    .41    5.3   19.8     .019   32.0      .80     3.71   1.154    .154    .866    .134    .000     16.5    .878    .122    .000
    .46    6.8   29.7     .016   32.1      .85     4.35   1.219    .219    .821    .179    .000     24.6    .843    .157    .000
    .50    8.3   41.0     .014   32.1      .89     4.95   1.286    .286    .777    .223    .000     35.2    .799    .201    .000
    .55    9.8   53.8     .013   32.1      .94     5.52   1.356    .356    .737    .263    .000     47.3    .757    .243    .000
    .60   11.2   68.0     .011   32.1      .99     6.05   1.427    .427    .701    .299    .000     60.7    .719    .281    .000
    .64   12.7   83.4     .011   32.2     1.04     6.56   1.498    .498    .668    .332    .000     75.5    .684    .316    .000
    .69   14.2  100.0     .010   32.2     1.09     7.05   1.570    .570    .637    .363    .000     91.5    .652    .348    .000
    .73   15.7  117.9     .009   36.4     1.10     7.49   1.587    .587    .630    .370    .000    108.7    .634    .366    .000
    .78   17.5  137.3     .009   40.9     1.11     7.84   1.602    .602    .624    .376    .000    127.4    .627    .373    .000
    .82   19.5  158.2     .009   45.5     1.12     8.12   1.619    .619    .618    .382    .000    147.6    .621    .379    .000
    .87   21.7  180.7     .008   50.0     1.14     8.34   1.636    .636    .611    .389    .000    169.3    .614    .386    .000
MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) =   2 OCCURRED      16 TIMES.  AVERAGE NUMBER ITERATIONS =  1.0271
Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3
PRINT HYD                   ID=2    CODE=1

                                  HYDROGRAPH FROM AREA Off_1B.9


    RUNOFF VOLUME =      2.37182 INCHES      =         .6871 ACRE-FEET
    PEAK DISCHARGE RATE =        5.10 CFS  AT   1.900 HOURS   BASIN AREA =    .0054 SQ. MI.



*
*
COMPUTE NM HYD        ID=1    HYD=Off_1D    DA=0.0047   SQ MI
                      PER A=10    B=33    C=30    D=27
                      TP=0.13 HRS         RAIN=-1

     K =   .070850HR    TP =   .130000HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   5.1373    CFS   UNIT VOLUME =    .9971      B =   526.28      P60 = 1.7990
     AREA =       .001269 SQ MI    IA =    .10000 INCHES     INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


     K =   .122516HR    TP =   .130000HR    K/TP RATIO =   .942428     SHAPE CONSTANT, N =  3.751639
     UNIT PEAK =   8.9274    CFS   UNIT VOLUME =    .9996      B =   338.26      P60 = 1.7990
     AREA =       .003431 SQ MI    IA =    .45890 INCHES     INF =   1.13493 INCHES PER HOUR
```

Yucatan at Cabezon Subdivision-Cabezon Redevelopment
100-Year 24-Hour Duration Storm-Developed
AHYMO Output File

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 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

 BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

*
PRINT HYD            ID=1    CODE=1

                                    HYDROGRAPH FROM AREA Off_1D

 RUNOFF VOLUME =     1.25884 INCHES     =        .3155 ACRE-FEET
 PEAK DISCHARGE RATE =       8.76 CFS  AT   1.500 HOURS   BASIN AREA =   .0047 SQ. MI.


*
*
ADD HYD              ID=2   HYD=Off1D.1   ID I=1      ID II=2
*
PRINT HYD            ID=2    CODE=1

                                    HYDROGRAPH FROM AREA Off1D.1

 RUNOFF VOLUME =     1.85535 INCHES     =       1.0026 ACRE-FEET
 PEAK DISCHARGE RATE =      11.92 CFS  AT   1.500 HOURS   BASIN AREA =   .0101 SQ. MI.


*
*
COMPUTE NM HYD       ID=1    HYD=22ND    DA=0.0010   SQ MI
                     PER A=0    B=0    C=10    D=90
                     TP=0.13 HRS        RAIN=-1

 K =   .070850HR    TP =   .130000HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
 UNIT PEAK =   3.6434    CFS   UNIT VOLUME =    .9965       B =   526.28       P60 = 1.7990
 AREA =      .000900 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


 K =   .102465HR    TP =   .130000HR    K/TP RATIO =   .788191     SHAPE CONSTANT, N =  4.553549
 UNIT PEAK =   .30040    CFS   UNIT VOLUME =    .9613       B =   390.52       P60 = 1.7990
 AREA =      .000100 SQ MI    IA =    .35000 INCHES    INF =    .83000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

 BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

*
PRINT HYD            ID=1    CODE=1

                                    HYDROGRAPH FROM AREA 22ND

 RUNOFF VOLUME =     2.45016 INCHES     =        .1307 ACRE-FEET
 PEAK DISCHARGE RATE =       2.75 CFS  AT   1.500 HOURS   BASIN AREA =   .0010 SQ. MI.


*
*
ADD HYD              ID=2   HYD=22ND.1   ID I=1      ID II=2
*
PRINT HYD            ID=2    CODE=1

                                    HYDROGRAPH FROM AREA 22ND.1

 RUNOFF VOLUME =     1.90875 INCHES     =       1.1332 ACRE-FEET
 PEAK DISCHARGE RATE =      14.67 CFS  AT   1.500 HOURS   BASIN AREA =   .0111 SQ. MI.


*
*
COMPUTE RATING CURVE CID=1  VALLEY SECTION=1  NUMBER OF SEGMENTS=3
                    MINIMUM ELEV=99.13 FT  MAXIMUM ELEV=100 FT
                    CHANNEL SLOPE=0.02  FLOOD PLAIN SLOPE=0.02
                    N=0.030  DIST=9  N=-0.017  DIST=41 N=0.030 DIST=50
                    DIST  ELEV    DIST   ELEV    DIST   ELEV   DIST   ELEV
                    0.0   100.0    9.0   99.82    9.2   99.13    11   99.26
                    25.0   99.54  39.0   99.26   41.0   99.13   41.2  99.82
                    50.0  100.0

                                 RATING CURVE VALLEY SECTION  1.0
                                    WATER       FLOW        FLOW        TOP
                                  SURFACE       AREA        RATE       WIDTH
                                   ELEV        SQ FT       CFS         FT
                                   99.13         .00         .00         .00
                                   99.18         .03         .03        1.37
                                   99.22         .13         .19        2.73
                                   99.27         .28         .53        4.62
                                   99.31         .60        1.18        9.22
                                   99.36        1.13        2.58       13.83
```

```
                                  99.40        1.87        4.95       18.43
                                  99.45        2.82        8.47       23.04
                                  99.50        3.98       13.35       27.65
                                  99.54        5.35       19.83       32.04
                                  99.59        6.82       29.68       32.07
                                  99.63        8.28       41.05       32.09
                                  99.68        9.75       53.83       32.12
                                  99.73       11.23       67.96       32.15
                                  99.77       12.70       83.36       32.17
                                  99.82       14.17       99.98       32.20
                                  99.86       15.74      117.88       36.42
                                  99.91       17.51      137.25       40.95
                                  99.95       19.49      158.15       45.48
                                 100.00       21.67      180.68       50.00
*
ROUTE MCUNGE              ID=1   HYD=22ND.9  INFLOW ID=2  DT=0.00
                                    L=250   NO VS=1  SLP=0.02

     INFLOW END= 503             TABLE PTS= 20
     DT=  .050000                QMED=       7.34  CKMED=      3.7118
     WIDTH MED=       21.56      NREACH=  1         DX=      250.00

  DEPTH   AREA      Q    TRAVEL  WIDTH      ck      VEL       C       D       C1      C2      C3      Q-M      C1-M    C2-M    C3-M
   (FT)  (SQ FT)  (CFS)  TIME(HR) (FT)     (FPS)   (FPS)                                                (CFS)
    .00      .0      .0     .098     .0      1.39     .45   1.000    .000   1.000    .000    .000       .0   1.000    .000    .000
    .05      .0      .0     .071    1.4      1.38     .97    .997    .003    .997    .000    .003       .0    .999    .000    .001
    .09      .1      .2     .045    2.7      2.03    1.54   1.462    .007    .994    .190   -.184       .1    .995    .097   -.092
    .14      .3      .5     .037    4.6      2.23    1.88   1.605    .010    .992    .235   -.227       .3    .992    .177   -.170
    .18      .6     1.2     .035    9.2      2.39    1.96   1.721    .011    .992    .268   -.260       .8    .990    .182   -.172
    .23     1.1     2.6     .030   13.8      2.96    2.29   2.133    .013    .992    .364   -.356      1.8    .992    .313   -.304
    .27     1.9     4.9     .026   18.4      3.48    2.65   2.509    .015    .991    .433   -.424      3.7    .991    .395   -.386
    .32     2.8     8.5     .023   23.0      3.98    3.01   2.866    .018    .990    .485   -.476      6.6    .991    .457   -.447
    .37     4.0    13.3     .021   27.6      4.48    3.36   3.227    .022    .990    .529   -.519     10.8    .990    .504   -.494
    .41     5.3    19.8     .019   32.0      5.48    3.71   3.943    .023    .991    .597   -.588     16.5    .989    .549   -.538
    .46     6.8    29.7     .016   32.1      7.24    4.35   5.212    .026    .992    .679   -.671     24.6    .992    .659   -.651
    .50     8.3    41.0     .014   32.1      8.23    4.95   5.924    .031    .991    .712   -.704     35.2    .991    .697   -.688
    .55     9.8    53.8     .013   32.1      9.16    5.52   6.593    .037    .990    .738   -.728     47.3    .991    .726   -.717
    .60    11.2    68.0     .011   32.1     10.04    6.05   7.226    .042    .990    .758   -.748     60.7    .990    .749   -.739
    .64    12.7    83.4     .011   32.2     10.87    6.56   7.829    .048    .989    .775   -.764     75.5    .990    .767   -.756
    .69    14.2   100.0     .010   32.2     11.68    7.05   8.409    .053    .989    .789   -.777     91.5    .989    .782   -.771
    .73    15.7   117.9     .009   36.4     11.21    7.49   8.074    .058    .987    .781   -.768    108.7    .988    .784   -.772
    .78    17.5   137.3     .009   40.9     10.77    7.84   7.756    .062    .986    .773   -.759    127.4    .986    .776   -.762
    .82    19.5   158.2     .009   45.5     10.45    8.12   7.527    .067    .985    .767   -.752    147.6    .985    .769   -.754
    .87    21.7   180.7     .008   50.0     10.09    8.34   7.263    .072    .983    .760   -.743    169.3    .984    .764   -.748
MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) =   3 OCCURRED       3 TIMES.  AVERAGE NUMBER ITERATIONS =  1.0756
Equations solved using the Ponce correction to C2
PRINT HYD                 ID=1    CODE=1

                                    HYDROGRAPH FROM AREA 22ND.9

    RUNOFF VOLUME =     1.90904 INCHES      =       1.1334 ACRE-FEET
    PEAK DISCHARGE RATE =      14.42 CFS  AT   1.550 HOURS   BASIN AREA =    .0111 SQ. MI.


*
*
COMPUTE NM HYD       ID=2    HYD=Off_2B    DA=0.0047   SQ MI
                     PER A=0    B=0    C=15    D=85
                     TP=0.13 HRS        RAIN=-1

    K =   .070850HR    TP =   .130000HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
    UNIT PEAK =   16.173    CFS   UNIT VOLUME =    .9987      B =   526.28      P60 = 1.7990
    AREA =      .003995 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


    K =   .102465HR    TP =   .130000HR    K/TP RATIO =   .788191     SHAPE CONSTANT, N =  4.553549
    UNIT PEAK =   2.1178    CFS   UNIT VOLUME =    .9955      B =   390.52      P60 = 1.7990
    AREA =      .000705 SQ MI    IA =    .35000 INCHES    INF =    .83000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

    BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

*
PRINT HYD            ID=2    CODE=1

                                    HYDROGRAPH FROM AREA Off_2B

    RUNOFF VOLUME =     2.37033 INCHES      =        .5942 ACRE-FEET
    PEAK DISCHARGE RATE =      12.67 CFS  AT   1.500 HOURS   BASIN AREA =    .0047 SQ. MI.


*
PUNCH HYD            ID=2
*
*S  ROUTE OFF_2B through existing pond
*S  Pond Exists in field; Total volume = 0.18 ac-ft
*S  limited flowrate to predevelopment level
*S
ROUTE RESERVOIR          ID=17  HYD NO=P.Out   INFLOW ID=2 CODE=4.2
```

Yucatan at Cabezon Subdivision-Cabezon Redevelopment
100-Year 24-Hour Duration Storm-Developed
AHYMO Output File

OUTFLOW (CFS)	STORAGE (AF)	ELEV (FT)
0	0	1
1.60	0.0074	1.5
2.26	0.0156	2
2.77	0.0279	2.5
3.20	0.0414	3
3.57	0.0574	3.5
3.91	0.076	4
4.23	0.0976	4.5
4.52	0.1222	5
4.79	0.15	5.5
5.05	0.18	6.0
5.30	0.217	6.5
5.54	0.256	7.0
5.76	0.300	7.5

* * * * * * * * * * * * * * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	1.00	.000	.00
.20	.00	1.00	.000	.00
.40	.00	1.00	.000	.00
.60	.00	1.00	.000	.00
.80	.00	1.00	.000	.00
1.00	.09	1.01	.000	.03
1.20	.63	1.12	.002	.39
1.40	8.05	2.68	.033	2.92
1.60	8.35	5.40	.144	4.73
1.80	4.34	5.67	.160	4.88
2.00	2.91	5.32	.140	4.69
2.20	1.04	4.52	.099	4.24
2.40	.52	3.19	.047	3.34
2.60	.32	1.66	.010	1.81
2.80	.21	1.09	.001	.29
3.00	.16	1.05	.001	.17
3.20	.13	1.04	.001	.14
3.40	.11	1.04	.001	.12
3.60	.11	1.03	.001	.11
3.80	.10	1.03	.000	.10
4.00	.10	1.03	.000	.10
4.20	.09	1.03	.000	.09
4.40	.09	1.03	.000	.09
4.60	.09	1.03	.000	.09
4.80	.09	1.03	.000	.09
5.00	.10	1.03	.000	.09
5.20	.10	1.03	.000	.10
5.40	.10	1.03	.000	.10
5.60	.10	1.03	.000	.10
5.80	.11	1.03	.000	.11
6.00	.11	1.03	.001	.11
6.20	.11	1.03	.001	.11
6.40	.11	1.04	.001	.11
6.60	.11	1.04	.001	.11
6.80	.11	1.03	.001	.11
7.00	.11	1.03	.001	.11
7.20	.11	1.03	.001	.11
7.40	.11	1.03	.000	.11
7.60	.10	1.03	.000	.10
7.80	.10	1.03	.000	.10
8.00	.10	1.03	.000	.10
8.20	.10	1.03	.000	.10
8.40	.10	1.03	.000	.10
8.60	.10	1.03	.000	.10
8.80	.10	1.03	.000	.10
9.00	.10	1.03	.000	.10
9.20	.10	1.03	.000	.10
9.40	.09	1.03	.000	.09
9.60	.09	1.03	.000	.09
9.80	.09	1.03	.000	.09
10.00	.09	1.03	.000	.09
10.20	.09	1.03	.000	.09
10.40	.09	1.03	.000	.09
10.60	.09	1.03	.000	.09
10.80	.09	1.03	.000	.09
11.00	.09	1.03	.000	.09

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
11.20	.09	1.03	.000	.09
11.40	.09	1.03	.000	.09
11.60	.08	1.03	.000	.08
11.80	.08	1.03	.000	.08
12.00	.08	1.03	.000	.08
12.20	.08	1.03	.000	.08
12.40	.08	1.03	.000	.08
12.60	.08	1.03	.000	.08
12.80	.08	1.02	.000	.08
13.00	.08	1.02	.000	.08
13.20	.08	1.02	.000	.08
13.40	.08	1.02	.000	.08
13.60	.08	1.02	.000	.08

```
      13.80        .08       1.02        .000        .08
      14.00        .08       1.02        .000        .08
      14.20        .07       1.02        .000        .07
      14.40        .07       1.02        .000        .07
      14.60        .07       1.02        .000        .07
      14.80        .07       1.02        .000        .07
      15.00        .07       1.02        .000        .07
      15.20        .07       1.02        .000        .07
      15.40        .07       1.02        .000        .07
      15.60        .07       1.02        .000        .07
      15.80        .07       1.02        .000        .07
      16.00        .07       1.02        .000        .07
      16.20        .07       1.02        .000        .07
      16.40        .07       1.02        .000        .07
      16.60        .07       1.02        .000        .07
      16.80        .07       1.02        .000        .07
      17.00        .07       1.02        .000        .07
      17.20        .07       1.02        .000        .07
      17.40        .07       1.02        .000        .07
      17.60        .07       1.02        .000        .07
      17.80        .07       1.02        .000        .06
      18.00        .06       1.02        .000        .06
      18.20        .06       1.02        .000        .06
      18.40        .06       1.02        .000        .06
      18.60        .06       1.02        .000        .06
      18.80        .06       1.02        .000        .06
      19.00        .06       1.02        .000        .06
      19.20        .06       1.02        .000        .06
      19.40        .06       1.02        .000        .06
      19.60        .06       1.02        .000        .06
      19.80        .06       1.02        .000        .06
      20.00        .06       1.02        .000        .06
      20.20        .06       1.02        .000        .06
      20.40        .06       1.02        .000        .06
      20.60        .06       1.02        .000        .06
      20.80        .06       1.02        .000        .06
      21.00        .06       1.02        .000        .06
      21.20        .06       1.02        .000        .06
      21.40        .06       1.02        .000        .06
      21.60        .06       1.02        .000        .06
      21.80        .06       1.02        .000        .06
      22.00        .06       1.02        .000        .06
      22.20        .06       1.02        .000        .06

      TIME       INFLOW     ELEV       VOLUME     OUTFLOW
      (HRS)      (CFS)      (FEET)     (AC-FT)    (CFS)

      22.40        .06       1.02        .000        .06
      22.60        .05       1.02        .000        .06
      22.80        .06       1.02        .000        .06
      23.00        .05       1.02        .000        .05
      23.20        .05       1.02        .000        .05
      23.40        .05       1.02        .000        .05
      23.60        .05       1.02        .000        .05
      23.80        .05       1.02        .000        .05
      24.00        .05       1.02        .000        .05
      24.20        .01       1.01        .000        .02
      24.40        .00       1.00        .000        .01
      24.60        .00       1.00        .000        .00
   PEAK DISCHARGE =         4.881 CFS - PEAK OCCURS AT HOUR    1.80
   MAXIMUM WATER SURFACE ELEVATION =          5.674
   MAXIMUM STORAGE =          .1605 AC-FT       INCREMENTAL TIME=      .100000HRS

*
PRINT HYD                 ID=17  CODE=1

                                        HYDROGRAPH FROM AREA P.Out


      RUNOFF VOLUME =      2.37213 INCHES      =         .5946 ACRE-FEET
      PEAK DISCHARGE RATE =        4.88 CFS  AT    1.800 HOURS   BASIN AREA =    .0047 SQ. MI.


*
*
*S *************DIVIDE HYD TO UNBULK BY 3% ***********************
DIVIDE HYD           ID=17   %=-97             ID I=17  HYD=P.Out.1
                                                        ID II=52 HYD=SEDIMENT
*
*
*
ADD HYD               ID=2   HYD=Off2B.1   ID I=1      ID II=17
*
PRINT HYD             ID=2    CODE=1

                                        HYDROGRAPH FROM AREA Off2B.1


      RUNOFF VOLUME =      2.04352 INCHES      =        1.7101 ACRE-FEET
      PEAK DISCHARGE RATE =       18.74 CFS  AT    1.550 HOURS   BASIN AREA =    .0157 SQ. MI.
```

Yucatan at Cabezon Subdivision-Cabezon Redevelopment
100-Year 24-Hour Duration Storm-Developed
AHYMO Output File

```
*
*
COMPUTE RATING CURVE CID=1  VALLEY SECTION=1  NUMBER OF SEGMENTS=3
                    MINIMUM ELEV=99.13 FT  MAXIMUM ELEV=100 FT
                    CHANNEL SLOPE=0.015  FLOOD PLAIN SLOPE=0.015
                    N=0.030  DIST=9  N=-0.017  DIST=41 N=0.030 DIST=50
                    DIST  ELEV    DIST   ELEV    DIST   ELEV   DIST   ELEV
                    0.0   100.0    9.0   99.82    9.2   99.13    11   99.26
                    25.0   99.54  39.0   99.26   41.0   99.13   41.2  99.82
                    50.0  100.0
```

RATING CURVE VALLEY SECTION 1.0

WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
99.13	.00	.00	.00
99.18	.03	.03	1.37
99.22	.13	.17	2.73
99.27	.28	.46	4.62
99.31	.60	1.02	9.22
99.36	1.13	2.24	13.83
99.40	1.87	4.28	18.43
99.45	2.82	7.34	23.04
99.50	3.98	11.56	27.65
99.54	5.35	17.17	32.04
99.59	6.82	25.70	32.07
99.63	8.28	35.55	32.09
99.68	9.75	46.62	32.12
99.73	11.23	58.85	32.15
99.77	12.70	72.19	32.17
99.82	14.17	86.58	32.20
99.86	15.74	102.09	36.42
99.91	17.51	118.86	40.95
99.95	19.49	136.96	45.48
100.00	21.67	156.47	50.00

```
*
ROUTE MCUNGE                ID=1   HYD=OFF2B.9  INFLOW ID=2  DT=0.00
                                      L=1100   NO VS=1  SLP=0.015

      INFLOW END= 503             TABLE PTS= 20
      DT=  .050000                QMED=       9.37  CKMED=      3.6367
      WIDTH MED=       25.26      NREACH=  4        DX=       275.00
```

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.497	.0	1.53	.39	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.05	.0	.0	.363	1.4	1.52	.84	.997	.003	.997	.000	.003	.0	1.000	.000	.000
.09	.1	.2	.229	2.7	1.76	1.34	1.151	.008	.992	.074	-.066	.1	.995	.027	-.023
.14	.3	.5	.188	4.6	1.93	1.63	1.264	.013	.989	.121	-.110	.3	.989	.061	-.051
.18	.6	1.0	.180	9.2	2.07	1.70	1.355	.013	.989	.155	-.144	.7	.987	.066	-.053
.23	1.1	2.2	.154	13.8	2.57	1.98	1.679	.015	.989	.258	-.246	1.6	.988	.203	-.191
.27	1.9	4.3	.133	18.4	3.02	2.30	1.975	.019	.988	.332	-.320	3.2	.988	.291	-.279
.32	2.8	7.3	.117	23.0	3.45	2.61	2.256	.022	.986	.390	-.376	5.7	.987	.358	-.345
.37	4.0	11.6	.105	27.6	3.88	2.91	2.541	.026	.985	.439	-.425	9.3	.985	.412	-.397
.41	5.3	17.2	.095	32.0	4.74	3.21	3.104	.027	.987	.516	-.503	14.3	.985	.461	-.446
.46	6.8	25.7	.081	32.1	6.27	3.77	4.103	.031	.988	.610	-.598	21.3	.989	.586	-.575
.50	8.3	35.5	.071	32.1	7.13	4.29	4.664	.038	.987	.649	-.636	30.5	.987	.631	-.619
.55	9.8	46.6	.064	32.1	7.93	4.78	5.190	.044	.986	.679	-.665	40.9	.986	.665	-.651
.60	11.2	58.9	.058	32.1	8.69	5.24	5.689	.051	.985	.703	-.688	52.6	.985	.692	-.677
.64	12.7	72.2	.054	32.2	9.42	5.68	6.164	.058	.984	.723	-.707	65.4	.984	.714	-.698
.69	14.2	86.6	.050	32.2	10.11	6.11	6.620	.064	.983	.740	-.723	79.3	.984	.732	-.715
.73	15.7	102.1	.047	36.4	9.71	6.49	6.357	.070	.981	.731	-.712	94.2	.982	.734	-.716
.78	17.5	118.9	.045	40.9	9.33	6.79	6.106	.075	.979	.722	-.701	110.3	.980	.725	-.705
.82	19.5	137.0	.043	45.5	9.05	7.03	5.926	.081	.977	.715	-.692	127.8	.978	.717	-.695
.87	21.7	156.5	.042	50.0	8.74	7.22	5.718	.087	.974	.706	-.681	146.6	.976	.711	-.687

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 22 TIMES. AVERAGE NUMBER ITERATIONS = 1.0838

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.497	.0	1.53	.39	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.05	.0	.0	.363	1.4	1.52	.84	.997	.003	.997	.000	.003	.0	1.000	.000	.000
.09	.1	.2	.229	2.7	1.54	1.34	1.010	.010	.990	.010	.000	.1	.994	.006	.000
.14	.3	.5	.188	4.6	1.55	1.63	1.016	.016	.985	.015	.000	.3	.988	.012	.000
.18	.6	1.0	.180	9.2	1.55	1.70	1.017	.017	.983	.017	.000	.7	.984	.016	.000
.23	1.1	2.2	.154	13.8	1.57	1.98	1.025	.025	.976	.024	.000	1.6	.979	.021	.000
.27	1.9	4.3	.133	18.4	1.58	2.30	1.036	.036	.966	.034	.000	3.2	.970	.030	.000
.32	2.8	7.3	.117	23.0	1.60	2.61	1.048	.048	.954	.046	.000	5.7	.960	.040	.000
.37	4.0	11.6	.105	27.6	1.62	2.91	1.062	.062	.941	.059	.000	9.3	.947	.053	.000
.41	5.3	17.2	.095	32.0	1.65	3.21	1.079	.079	.927	.073	.000	14.3	.934	.066	.000
.46	6.8	25.7	.081	32.1	1.70	3.77	1.114	.114	.898	.102	.000	21.3	.912	.088	.000
.50	8.3	35.5	.071	32.1	1.76	4.29	1.153	.153	.868	.132	.000	30.5	.883	.117	.000
.55	9.8	46.6	.064	32.1	1.82	4.78	1.193	.193	.838	.162	.000	40.9	.853	.147	.000
.60	11.2	58.9	.058	32.1	1.89	5.24	1.235	.235	.810	.190	.000	52.6	.824	.176	.000
.64	12.7	72.2	.054	32.2	1.95	5.68	1.278	.278	.782	.218	.000	65.4	.796	.204	.000
.69	14.2	86.6	.050	32.2	2.02	6.11	1.323	.323	.756	.244	.000	79.3	.769	.231	.000
.73	15.7	102.1	.047	36.4	2.04	6.49	1.334	.334	.750	.250	.000	94.2	.753	.247	.000
.78	17.5	118.9	.045	40.9	2.05	6.79	1.343	.343	.745	.255	.000	110.3	.747	.253	.000
.82	19.5	137.0	.043	45.5	2.07	7.03	1.353	.353	.739	.261	.000	127.8	.742	.258	.000
.87	21.7	156.5	.042	50.0	2.08	7.22	1.364	.364	.733	.267	.000	146.6	.736	.264	.000

```
MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) =  2 OCCURRED     150 TIMES.  AVERAGE NUMBER ITERATIONS =  1.0644
Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3
PRINT HYD                   ID=1    CODE=1

                                HYDROGRAPH FROM AREA OFF2B.9
```

```
    RUNOFF VOLUME =      2.04142 INCHES      =        1.7084 ACRE-FEET
    PEAK DISCHARGE RATE =       18.45 CFS  AT   1.700 HOURS   BASIN AREA =    .0157 SQ. MI.


*
*S*****************************************************************
*S HZI ANALYSIS FOR ON-SITE YUCATAN AT CABEZON TRACT 3
*S*****************************************************************
*S-----------------------------------------------------------------
*S COMPUTE DEVELOPED OFF-SITE BASIN 103 (SLOPE AREA ALONG UNSER)
COMPUTE NM HYD         ID=11 HYD=103.H AREA=0.00236 SQ MI
                       %A=0 %B=50 %C=50 %D=0 TP=-0.133 HR
                       MASS RAINFALL=-1

     K =   .118387HR    TP =   .133000HR    K/TP RATIO =   .890124     SHAPE CONSTANT, N =  3.984413
     UNIT PEAK =   6.2838    CFS   UNIT VOLUME =    .9991       B =   354.13       P60 = 1.7990
     AREA =      .002360 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

    BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

PRINT HYD              ID=11 CODE=10

                                        HYDROGRAPH FROM AREA 103.H

     TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW
      HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS
     .000       .0          1.000       .0          2.000       .3          3.000       .0
     .500       .0          1.500      3.8          2.500       .1

    RUNOFF VOLUME =      .82952 INCHES      =        .1044 ACRE-FEET
    PEAK DISCHARGE RATE =       3.78 CFS  AT   1.500 HOURS   BASIN AREA =    .0024 SQ. MI.


*S-----------------------------------------------------------------
*S COMPUTE DEVELOPED OFF-SITE BASIN 104 (COMMERCIAL)
COMPUTE NM HYD         ID=12 HYD=104.D AREA=0.01563 SQ MI
                       %A=0 %B=0 %C=15 %D=85 TP=-0.133 HR
                       MASS RAINFALL=-1

     K =   .072485HR    TP =   .133000HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   52.570    CFS   UNIT VOLUME =    .9989       B =   526.28       P60 = 1.7990
     AREA =      .013286 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


     K =   .104829HR    TP =   .133000HR    K/TP RATIO =   .788191     SHAPE CONSTANT, N =  4.553549
     UNIT PEAK =   6.8841    CFS   UNIT VOLUME =    .9999       B =   390.52       P60 = 1.7990
     AREA =      .002345 SQ MI    IA =    .35000 INCHES    INF =    .83000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

    BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

PRINT HYD              ID=12 CODE=10

                                        HYDROGRAPH FROM AREA 104.D

     TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW
      HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS
     .000       .0          5.000       .3         10.000       .3         15.000       .2         20.000       .2
     .500       .0          5.500       .3         10.500       .3         15.500       .2         20.500       .2
    1.000       .3          6.000       .4         11.000       .3         16.000       .2         21.000       .2
    1.500     41.8          6.500       .4         11.500       .3         16.500       .2         21.500       .2
    2.000      9.8          7.000       .4         12.000       .3         17.000       .2         22.000       .2
    2.500      1.4          7.500       .4         12.500       .3         17.500       .2         22.500       .2
    3.000       .6          8.000       .3         13.000       .3         18.000       .2         23.000       .2
    3.500       .4          8.500       .3         13.500       .3         18.500       .2         23.500       .2
    4.000       .3          9.000       .3         14.000       .3         19.000       .2         24.000       .2
    4.500       .3          9.500       .3         14.500       .2         19.500       .2         24.500       .0

    RUNOFF VOLUME =      2.37034 INCHES      =       1.9759 ACRE-FEET
    PEAK DISCHARGE RATE =      41.78 CFS  AT   1.500 HOURS   BASIN AREA =    .0156 SQ. MI.


*S-----------------------------------------------------------------
*S COMPUTE DEVELOPED OFF-SITE BASIN 105 (COMMON AREA ALONG CABEZON)
COMPUTE NM HYD         ID=13 HYD=105.D AREA=0.0003 SQ MI
                       %A=0 %B=50 %C=50 %D=0 TP=-0.133 HR
                       MASS RAINFALL=-1

     K =   .118387HR    TP =   .133000HR    K/TP RATIO =   .890124     SHAPE CONSTANT, N =  3.984413
     UNIT PEAK =   .79879    CFS   UNIT VOLUME =    .9859       B =   354.13       P60 = 1.7990
     AREA =      .000300 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

    BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

PRINT HYD              ID=13 CODE=10

                                        HYDROGRAPH FROM AREA 105.D
```

Yucatan at Cabezon Subdivision-Cabezon Redevelopment
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AHYMO Output File

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.000	.0	2.000	.0				
.500	.0	1.500	.5	2.500	.0				

RUNOFF VOLUME = .82952 INCHES = .0133 ACRE-FEET
PEAK DISCHARGE RATE = .49 CFS AT 1.500 HOURS BASIN AREA = .0003 SQ. MI.

```
*S--------------------------------------------------------------------
*S COMPUTE DEVELOPED OFF-SITE BASIN 106 (COMMON AREA)
COMPUTE NM HYD          ID=14 HYD=106.D AREA=0.000766 SQ MI
                        %A=0 %B=50 %C=50 %D=0 TP=-0.133 HR
                        MASS RAINFALL=-1
```

K = .118387HR TP = .133000HR K/TP RATIO = .890124 SHAPE CONSTANT, N = 3.984413
UNIT PEAK = 2.0396 CFS UNIT VOLUME = .9946 B = 354.13 P60 = 1.7990
AREA = .000766 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.06000 AT PEAK FLOW.

```
PRINT HYD               ID=14 CODE=10
```

HYDROGRAPH FROM AREA 106.D

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.000	.0	2.000	.1	3.000	.0		
.500	.0	1.500	1.2	2.500	.0				

RUNOFF VOLUME = .82952 INCHES = .0339 ACRE-FEET
PEAK DISCHARGE RATE = 1.23 CFS AT 1.500 HOURS BASIN AREA = .0008 SQ. MI.

```
*S--------------------------------------------------------------------
*S COMPUTE DEVELOPED BASIN 301
COMPUTE NM HYD          ID=15 HYD=301.D AREA=0.00786 SQ MI
                        %A=0 %B=23 %C=23 %D=54 TP=-0.133 HR
                        MASS RAINFALL=-1
```

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 16.795 CFS UNIT VOLUME = .9985 B = 526.28 P60 = 1.7990
AREA = .004244 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118387HR TP = .133000HR K/TP RATIO = .890124 SHAPE CONSTANT, N = 3.984413
UNIT PEAK = 9.6270 CFS UNIT VOLUME = .9998 B = 354.13 P60 = 1.7990
AREA = .003616 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.06000 AT PEAK FLOW.

```
PRINT HYD               ID=15 CODE=10
```

HYDROGRAPH FROM AREA 301.D

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.1	10.000	.1	15.000	.1	20.000	.1
.500	.0	5.500	.1	10.500	.1	15.500	.1	20.500	.1
1.000	.1	6.000	.1	11.000	.1	16.000	.1	21.000	.1
1.500	17.7	6.500	.1	11.500	.1	16.500	.1	21.500	.1
2.000	3.5	7.000	.1	12.000	.1	17.000	.1	22.000	.1
2.500	.5	7.500	.1	12.500	.1	17.500	.1	22.500	.1
3.000	.2	8.000	.1	13.000	.1	18.000	.1	23.000	.1
3.500	.1	8.500	.1	13.500	.1	18.500	.1	23.500	.1
4.000	.1	9.000	.1	14.000	.1	19.000	.1	24.000	.1
4.500	.1	9.500	.1	14.500	.1	19.500	.1	24.500	.0

RUNOFF VOLUME = 1.79087 INCHES = .7507 ACRE-FEET
PEAK DISCHARGE RATE = 17.72 CFS AT 1.500 HOURS BASIN AREA = .0079 SQ. MI.

```
*S--------------------------------------------------------------------
*S COMPUTE DEVELOPED BASIN 302
COMPUTE NM HYD          ID=16 HYD=ANLYPT.C AREA=0.00436 SQ MI
                        %A=0 %B=23 %C=23 %D=54 TP=-0.133 HR
                        MASS RAINFALL=-1
```

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 9.3163 CFS UNIT VOLUME = .9979 B = 526.28 P60 = 1.7990
AREA = .002354 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118387HR TP = .133000HR K/TP RATIO = .890124 SHAPE CONSTANT, N = 3.984413
UNIT PEAK = 5.3402 CFS UNIT VOLUME = .9988 B = 354.13 P60 = 1.7990
AREA = .002006 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR

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      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .050000

     BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

PRINT HYD              ID=16 CODE=10

                                        HYDROGRAPH FROM AREA ANLYPT.C

     TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW
      HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS
     .000        .0         5.000        .1        10.000        .1        15.000        .0        20.000        .0
     .500        .0         5.500        .1        10.500        .1        15.500        .0        20.500        .0
    1.000        .1         6.000        .1        11.000        .1        16.000        .0        21.000        .0
    1.500       9.8         6.500        .1        11.500        .0        16.500        .0        21.500        .0
    2.000       1.9         7.000        .1        12.000        .0        17.000        .0        22.000        .0
    2.500        .3         7.500        .1        12.500        .0        17.500        .0        22.500        .0
    3.000        .1         8.000        .1        13.000        .0        18.000        .0        23.000        .0
    3.500        .1         8.500        .1        13.500        .0        18.500        .0        23.500        .0
    4.000        .1         9.000        .1        14.000        .0        19.000        .0        24.000        .0
    4.500        .1         9.500        .1        14.500        .0        19.500        .0        24.500        .0

     RUNOFF VOLUME =     1.79087 INCHES      =         .4164 ACRE-FEET
     PEAK DISCHARGE RATE =       9.84 CFS  AT    1.500 HOURS   BASIN AREA =    .0044 SQ. MI.


*S--------------------------------------------------------------------------
*S COMPUTE DEVELOPED BASIN 303
COMPUTE NM HYD         ID=17 HYD=303.D AREA=0.00836 SQ MI
                       %A=0 %B=23 %C=23 %D=54 TP=-0.133 HR
                       MASS RAINFALL=-1

     K =   .072485HR    TP =   .133000HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   17.863    CFS   UNIT VOLUME =    .9985       B =   526.28      P60 = 1.7990
     AREA =       .004514 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .050000


     K =   .118387HR    TP =   .133000HR    K/TP RATIO =   .890124     SHAPE CONSTANT, N =  3.984413
     UNIT PEAK =   10.239    CFS   UNIT VOLUME =    1.000       B =   354.13      P60 = 1.7990
     AREA =       .003846 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .050000

    BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

PRINT HYD              ID=17 CODE=10

                                        HYDROGRAPH FROM AREA 303.D

     TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW
      HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS
     .000        .0         5.000        .1        10.000        .1        15.000        .1        20.000        .1
     .500        .0         5.500        .1        10.500        .1        15.500        .1        20.500        .1
    1.000        .1         6.000        .1        11.000        .1        16.000        .1        21.000        .1
    1.500      18.9         6.500        .1        11.500        .1        16.500        .1        21.500        .1
    2.000       3.7         7.000        .1        12.000        .1        17.000        .1        22.000        .1
    2.500        .6         7.500        .1        12.500        .1        17.500        .1        22.500        .1
    3.000        .2         8.000        .1        13.000        .1        18.000        .1        23.000        .1
    3.500        .1         8.500        .1        13.500        .1        18.500        .1        23.500        .1
    4.000        .1         9.000        .1        14.000        .1        19.000        .1        24.000        .1
    4.500        .1         9.500        .1        14.500        .1        19.500        .1        24.500        .0

     RUNOFF VOLUME =     1.79087 INCHES      =         .7985 ACRE-FEET
     PEAK DISCHARGE RATE =      18.85 CFS  AT    1.500 HOURS   BASIN AREA =    .0084 SQ. MI.


*S--------------------------------------------------------------------------
*S COMPUTE DEVELOPED BASIN 304
COMPUTE NM HYD         ID=18 HYD=ANLYPT.D AREA=0.00456 SQ MI
                       %A=0 %B=23 %C=23 %D=54 TP=-0.133 HR
                       MASS RAINFALL=-1

     K =   .072485HR    TP =   .133000HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =    9.7436    CFS   UNIT VOLUME =    .9981       B =   526.28      P60 = 1.7990
     AREA =       .002462 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .050000


     K =   .118387HR    TP =   .133000HR    K/TP RATIO =   .890124     SHAPE CONSTANT, N =  3.984413
     UNIT PEAK =    5.5851    CFS   UNIT VOLUME =    .9991       B =   354.13      P60 = 1.7990
     AREA =       .002098 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .050000

    BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

PRINT HYD              ID=18 CODE=10

                                        HYDROGRAPH FROM AREA ANLYPT.D

     TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW
      HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS
     .000        .0         5.000        .1        10.000        .1        15.000        .0        20.000        .0
     .500        .0         5.500        .1        10.500        .1        15.500        .0        20.500        .0
```

1.000	.1	6.000	.1	11.000	.1	16.000	.0	21.000	.0
1.500	10.3	6.500	.1	11.500	.1	16.500	.0	21.500	.0
2.000	2.0	7.000	.1	12.000	.1	17.000	.0	22.000	.0
2.500	.3	7.500	.1	12.500	.1	17.500	.0	22.500	.0
3.000	.1	8.000	.1	13.000	.0	18.000	.0	23.000	.0
3.500	.1	8.500	.1	13.500	.0	18.500	.0	23.500	.0
4.000	.1	9.000	.1	14.000	.0	19.000	.0	24.000	.0
4.500	.1	9.500	.1	14.500	.0	19.500	.0	24.500	.0

RUNOFF VOLUME = 1.79087 INCHES = .4355 ACRE-FEET
PEAK DISCHARGE RATE = 10.29 CFS AT 1.500 HOURS BASIN AREA = .0046 SQ. MI.

```
*S--------------------------------------------------------------------
*S COMPUTE DEVELOPED BASIN 305
COMPUTE NM HYD          ID=19 HYD=ANLYPT.E AREA=0.00934 SQ MI
                        %A=0 %B=23 %C=23 %D=54 TP=-0.133 HR
                        MASS RAINFALL=-1
```

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 19.957 CFS UNIT VOLUME = .9986 B = 526.28 P60 = 1.7990
AREA = .005044 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118387HR TP = .133000HR K/TP RATIO = .890124 SHAPE CONSTANT, N = 3.984413
UNIT PEAK = 11.440 CFS UNIT VOLUME = 1.000 B = 354.13 P60 = 1.7990
AREA = .004296 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.06000 AT PEAK FLOW.

```
PRINT HYD               ID=19 CODE=10
```

HYDROGRAPH FROM AREA ANLYPT.E

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.1	10.000	.1	15.000	.1	20.000	.1
.500	.0	5.500	.1	10.500	.1	15.500	.1	20.500	.1
1.000	.1	6.000	.1	11.000	.1	16.000	.1	21.000	.1
1.500	21.1	6.500	.1	11.500	.1	16.500	.1	21.500	.1
2.000	4.1	7.000	.1	12.000	.1	17.000	.1	22.000	.1
2.500	.6	7.500	.1	12.500	.1	17.500	.1	22.500	.1
3.000	.2	8.000	.1	13.000	.1	18.000	.1	23.000	.1
3.500	.1	8.500	.1	13.500	.1	18.500	.1	23.500	.1
4.000	.1	9.000	.1	14.000	.1	19.000	.1	24.000	.1
4.500	.1	9.500	.1	14.500	.1	19.500	.1	24.500	.0

RUNOFF VOLUME = 1.79087 INCHES = .8921 ACRE-FEET
PEAK DISCHARGE RATE = 21.06 CFS AT 1.500 HOURS BASIN AREA = .0093 SQ. MI.

```
*S--------------------------------------------------------------------
*S COMPUTE DEVELOPED BASIN 306
COMPUTE NM HYD          ID=20 HYD=306.D AREA=0.00489 SQ MI
                        %A=0 %B=23 %C=23 %D=54 TP=-0.133 HR
                        MASS RAINFALL=-1
```

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 10.449 CFS UNIT VOLUME = .9981 B = 526.28 P60 = 1.7990
AREA = .002641 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118387HR TP = .133000HR K/TP RATIO = .890124 SHAPE CONSTANT, N = 3.984413
UNIT PEAK = 5.9893 CFS UNIT VOLUME = .9991 B = 354.13 P60 = 1.7990
AREA = .002249 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.06000 AT PEAK FLOW.

```
PRINT HYD               ID=20 CODE=10
```

HYDROGRAPH FROM AREA 306.D

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.1	10.000	.1	15.000	.0	20.000	.0
.500	.0	5.500	.1	10.500	.1	15.500	.0	20.500	.0
1.000	.1	6.000	.1	11.000	.1	16.000	.0	21.000	.0
1.500	11.0	6.500	.1	11.500	.1	16.500	.0	21.500	.0
2.000	2.2	7.000	.1	12.000	.1	17.000	.0	22.000	.0
2.500	.3	7.500	.1	12.500	.1	17.500	.0	22.500	.0
3.000	.1	8.000	.1	13.000	.1	18.000	.0	23.000	.0
3.500	.1	8.500	.1	13.500	.1	18.500	.0	23.500	.0
4.000	.1	9.000	.1	14.000	.1	19.000	.0	24.000	.0
4.500	.1	9.500	.1	14.500	.0	19.500	.0	24.500	.0

RUNOFF VOLUME = 1.79087 INCHES = .4671 ACRE-FEET
PEAK DISCHARGE RATE = 11.03 CFS AT 1.500 HOURS BASIN AREA = .0049 SQ. MI.

Yucatan at Cabezon Subdivision-Cabezon Redevelopment
100-Year 24-Hour Duration Storm-Developed
AHYMO Output File

```
*S--------------------------------------------------------------------
*S COMPUTE DEVELOPED BASIN 307
COMPUTE NM HYD          ID=21 HYD=307.D AREA=0.00895 SQ MI
                        %A=0 %B=23 %C=23 %D=54 TP=-0.133 HR
                        MASS RAINFALL=-1

     K =   .072485HR    TP =   .133000HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   19.124    CFS   UNIT VOLUME =    .9986       B =   526.28      P60 = 1.7990
     AREA =       .004833 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


     K =   .118387HR    TP =   .133000HR    K/TP RATIO =   .890124     SHAPE CONSTANT, N =  3.984413
     UNIT PEAK =   10.962    CFS   UNIT VOLUME =    1.000       B =   354.13      P60 = 1.7990
     AREA =       .004117 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

   BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

PRINT HYD               ID=21 CODE=10

                                    HYDROGRAPH FROM AREA 307.D

     TIME      FLOW      TIME      FLOW      TIME      FLOW      TIME      FLOW      TIME      FLOW
      HRS       CFS       HRS       CFS       HRS       CFS       HRS       CFS       HRS       CFS
     .000       .0      5.000       .1     10.000       .1     15.000       .1     20.000       .1
     .500       .0      5.500       .1     10.500       .1     15.500       .1     20.500       .1
    1.000       .1      6.000       .1     11.000       .1     16.000       .1     21.000       .1
    1.500     20.2      6.500       .1     11.500       .1     16.500       .1     21.500       .1
    2.000      4.0      7.000       .1     12.000       .1     17.000       .1     22.000       .1
    2.500       .6      7.500       .1     12.500       .1     17.500       .1     22.500       .1
    3.000       .2      8.000       .1     13.000       .1     18.000       .1     23.000       .1
    3.500       .1      8.500       .1     13.500       .1     18.500       .1     23.500       .1
    4.000       .1      9.000       .1     14.000       .1     19.000       .1     24.000       .1
    4.500       .1      9.500       .1     14.500       .1     19.500       .1     24.500       .0

   RUNOFF VOLUME =     1.79087 INCHES      =        .8548 ACRE-FEET
   PEAK DISCHARGE RATE =      20.18 CFS  AT   1.500 HOURS   BASIN AREA =   .0090 SQ. MI.


*S--------------------------------------------------------------------
*S COMPUTE DEVELOPED BASIN 308
COMPUTE NM HYD          ID=22 HYD=308.D AREA=0.00584 SQ MI
                        %A=0 %B=23 %C=23 %D=54 TP=-0.133 HR
                        MASS RAINFALL=-1

     K =   .072485HR    TP =   .133000HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   12.479    CFS   UNIT VOLUME =    .9983       B =   526.28      P60 = 1.7990
     AREA =       .003154 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


     K =   .118387HR    TP =   .133000HR    K/TP RATIO =   .890124     SHAPE CONSTANT, N =  3.984413
     UNIT PEAK =    7.1529    CFS   UNIT VOLUME =    .9994       B =   354.13      P60 = 1.7990
     AREA =       .002686 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

   BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

PRINT HYD               ID=22 CODE=10

                                    HYDROGRAPH FROM AREA 308.D

     TIME      FLOW      TIME      FLOW      TIME      FLOW      TIME      FLOW      TIME      FLOW
      HRS       CFS       HRS       CFS       HRS       CFS       HRS       CFS       HRS       CFS
     .000       .0      5.000       .1     10.000       .1     15.000       .1     20.000       .0
     .500       .0      5.500       .1     10.500       .1     15.500       .1     20.500       .0
    1.000       .1      6.000       .1     11.000       .1     16.000       .1     21.000       .0
    1.500     13.2      6.500       .1     11.500       .1     16.500       .1     21.500       .0
    2.000      2.6      7.000       .1     12.000       .1     17.000       .1     22.000       .0
    2.500       .4      7.500       .1     12.500       .1     17.500       .1     22.500       .0
    3.000       .1      8.000       .1     13.000       .1     18.000       .1     23.000       .0
    3.500       .1      8.500       .1     13.500       .1     18.500       .0     23.500       .0
    4.000       .1      9.000       .1     14.000       .1     19.000       .0     24.000       .0
    4.500       .1      9.500       .1     14.500       .1     19.500       .0     24.500       .0

   RUNOFF VOLUME =     1.79087 INCHES      =        .5578 ACRE-FEET
   PEAK DISCHARGE RATE =      13.17 CFS  AT   1.500 HOURS   BASIN AREA =   .0058 SQ. MI.


*S--------------------------------------------------------------------
*S COMPUTE DEVELOPED BASIN 309
COMPUTE NM HYD          ID=23 HYD=309.D AREA=0.01492 SQ MI
                        %A=0 %B=23 %C=23 %D=54 TP=-0.133 HR
                        MASS RAINFALL=-1

     K =   .072485HR    TP =   .133000HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   31.880    CFS   UNIT VOLUME =    .9988       B =   526.28      P60 = 1.7990
     AREA =       .008057 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000
```

```
      K =   .118387HR    TP =   .133000HR    K/TP RATIO =   .890124     SHAPE CONSTANT, N =  3.984413
      UNIT PEAK =   18.274    CFS   UNIT VOLUME =    1.001       B =   354.13       P60 = 1.7990
      AREA =      .006863 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

    BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

PRINT HYD             ID=23 CODE=10

                                    HYDROGRAPH FROM AREA 309.D

     TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW
      HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS
     .000        .0         5.000        .2        10.000        .2        15.000        .1        20.000        .1
     .500        .0         5.500        .2        10.500        .2        15.500        .1        20.500        .1
    1.000        .2         6.000        .2        11.000        .2        16.000        .1        21.000        .1
    1.500      33.6         6.500        .2        11.500        .2        16.500        .1        21.500        .1
    2.000       6.6         7.000        .2        12.000        .2        17.000        .1        22.000        .1
    2.500       1.0         7.500        .2        12.500        .2        17.500        .1        22.500        .1
    3.000        .4         8.000        .2        13.000        .2        18.000        .1        23.000        .1
    3.500        .2         8.500        .2        13.500        .2        18.500        .1        23.500        .1
    4.000        .2         9.000        .2        14.000        .2        19.000        .1        24.000        .1
    4.500        .2         9.500        .2        14.500        .1        19.500        .1        24.500        .0

    RUNOFF VOLUME =     1.79087 INCHES      =       1.4250 ACRE-FEET
    PEAK DISCHARGE RATE =      33.63 CFS  AT   1.500 HOURS   BASIN AREA =   .0149 SQ. MI.


*S--------------------------------------------------------------------
*S COMPUTE DEVELOPED BASIN 310
COMPUTE NM HYD        ID=24 HYD=ANLYPT.K AREA=0.01753 SQ MI
                      %A=0 %B=23 %C=23 %D=54 TP=-0.133 HR
                      MASS RAINFALL=-1

      K =   .072485HR    TP =   .133000HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
      UNIT PEAK =   37.457    CFS   UNIT VOLUME =    .9989       B =   526.28       P60 = 1.7990
      AREA =      .009466 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


      K =   .118387HR    TP =   .133000HR    K/TP RATIO =   .890124     SHAPE CONSTANT, N =  3.984413
      UNIT PEAK =   21.471    CFS   UNIT VOLUME =    1.001       B =   354.13       P60 = 1.7990
      AREA =      .008064 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

    BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

PRINT HYD             ID=24 CODE=10

                                    HYDROGRAPH FROM AREA ANLYPT.K

     TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW
      HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS
     .000        .0         5.000        .2        10.000        .2        15.000        .2        20.000        .1
     .500        .0         5.500        .2        10.500        .2        15.500        .2        20.500        .1
    1.000        .2         6.000        .3        11.000        .2        16.000        .2        21.000        .1
    1.500      39.5         6.500        .3        11.500        .2        16.500        .2        21.500        .1
    2.000       7.7         7.000        .3        12.000        .2        17.000        .2        22.000        .1
    2.500       1.2         7.500        .2        12.500        .2        17.500        .2        22.500        .1
    3.000        .4         8.000        .2        13.000        .2        18.000        .2        23.000        .1
    3.500        .3         8.500        .2        13.500        .2        18.500        .1        23.500        .1
    4.000        .2         9.000        .2        14.000        .2        19.000        .1        24.000        .1
    4.500        .2         9.500        .2        14.500        .2        19.500        .1        24.500        .0

    RUNOFF VOLUME =     1.79087 INCHES      =       1.6743 ACRE-FEET
    PEAK DISCHARGE RATE =      39.51 CFS  AT   1.500 HOURS   BASIN AREA =   .0175 SQ. MI.


*S--------------------------------------------------------------------
*S COMPUTE DEVELOPED BASIN 311
COMPUTE NM HYD        ID=25 HYD=311.D AREA=0.01095 SQ MI
                      %A=0 %B=23 %C=23 %D=54 TP=-0.133 HR
                      MASS RAINFALL=-1

      K =   .072485HR    TP =   .133000HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
      UNIT PEAK =   23.397    CFS   UNIT VOLUME =    .9986       B =   526.28       P60 = 1.7990
      AREA =      .005913 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


      K =   .118387HR    TP =   .133000HR    K/TP RATIO =   .890124     SHAPE CONSTANT, N =  3.984413
      UNIT PEAK =   13.412    CFS   UNIT VOLUME =    1.000       B =   354.13       P60 = 1.7990
      AREA =      .005037 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

    BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

PRINT HYD             ID=25 CODE=10

                                    HYDROGRAPH FROM AREA 311.D
```

Yucatan at Cabezon Subdivision-Cabezon Redevelopment
100-Year 24-Hour Duration Storm-Developed
AHYMO Output File

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.1	10.000	.1	15.000	.1	20.000	.1
.500	.0	5.500	.1	10.500	.1	15.500	.1	20.500	.1
1.000	.1	6.000	.2	11.000	.1	16.000	.1	21.000	.1
1.500	24.7	6.500	.2	11.500	.1	16.500	.1	21.500	.1
2.000	4.8	7.000	.2	12.000	.1	17.000	.1	22.000	.1
2.500	.7	7.500	.2	12.500	.1	17.500	.1	22.500	.1
3.000	.3	8.000	.2	13.000	.1	18.000	.1	23.000	.1
3.500	.2	8.500	.1	13.500	.1	18.500	.1	23.500	.1
4.000	.1	9.000	.1	14.000	.1	19.000	.1	24.000	.1
4.500	.1	9.500	.1	14.500	.1	19.500	.1	24.500	.0

RUNOFF VOLUME = 1.79087 INCHES = 1.0459 ACRE-FEET
PEAK DISCHARGE RATE = 24.69 CFS AT 1.500 HOURS BASIN AREA = .0110 SQ. MI.

```
*S--------------------------------------------------------------------
*S COMPUTE DEVELOPED BASIN 312
COMPUTE NM HYD          ID=26 HYD=312.D AREA=0.0142 SQ MI
                        %A=0 %B=23 %C=23 %D=54 TP=-0.133 HR
                        MASS RAINFALL=-1
```

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 30.342 CFS UNIT VOLUME = .9988 B = 526.28 P60 = 1.7990
AREA = .007668 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118387HR TP = .133000HR K/TP RATIO = .890124 SHAPE CONSTANT, N = 3.984413
UNIT PEAK = 17.392 CFS UNIT VOLUME = 1.001 B = 354.13 P60 = 1.7990
AREA = .006532 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.06000 AT PEAK FLOW.

```
PRINT HYD               ID=26 CODE=10
```

HYDROGRAPH FROM AREA 312.D

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.2	10.000	.2	15.000	.1	20.000	.1
.500	.0	5.500	.2	10.500	.2	15.500	.1	20.500	.1
1.000	.2	6.000	.2	11.000	.2	16.000	.1	21.000	.1
1.500	32.0	6.500	.2	11.500	.2	16.500	.1	21.500	.1
2.000	6.3	7.000	.2	12.000	.2	17.000	.1	22.000	.1
2.500	1.0	7.500	.2	12.500	.2	17.500	.1	22.500	.1
3.000	.4	8.000	.2	13.000	.2	18.000	.1	23.000	.1
3.500	.2	8.500	.2	13.500	.1	18.500	.1	23.500	.1
4.000	.2	9.000	.2	14.000	.1	19.000	.1	24.000	.1
4.500	.2	9.500	.2	14.500	.1	19.500	.1	24.500	.0

RUNOFF VOLUME = 1.79087 INCHES = 1.3563 ACRE-FEET
PEAK DISCHARGE RATE = 32.01 CFS AT 1.500 HOURS BASIN AREA = .0142 SQ. MI.

```
*S--------------------------------------------------------------------
*S--------------------------------------------------------------------
*S NORTHERN PORTION OF CABEZON TRACT 3
*S--------------------------------------------------------------------
*S--------------------------------------------------------------------
*S ADD 21st Off-Site Flow to 301
ADD HYD                 ID=27 HYD=ANLYPT.A IDi=3 IDii=15
PRINT HYD               ID=27 CODE=10
```

HYDROGRAPH FROM AREA ANLYPT.A

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.500	.3	11.000	.3	16.500	.2	22.000	.2
.500	.0	6.000	.3	11.500	.2	17.000	.2	22.500	.2
1.000	.1	6.500	.3	12.000	.2	17.500	.2	23.000	.2
1.500	18.4	7.000	.3	12.500	.2	18.000	.2	23.500	.2
2.000	13.9	7.500	.3	13.000	.2	18.500	.2	24.000	.2
2.500	6.2	8.000	.3	13.500	.2	19.000	.2	24.500	.1
3.000	3.1	8.500	.3	14.000	.2	19.500	.2	25.000	.0
3.500	.4	9.000	.3	14.500	.2	20.000	.2		
4.000	.3	9.500	.3	15.000	.2	20.500	.2		
4.500	.3	10.000	.3	15.500	.2	21.000	.2		
5.000	.3	10.500	.3	16.000	.2	21.500	.2		

RUNOFF VOLUME = 1.87942 INCHES = 1.9544 ACRE-FEET
PEAK DISCHARGE RATE = 22.01 CFS AT 1.800 HOURS BASIN AREA = .0195 SQ. MI.

```
*S--------------------------------------------------------------------
*S ADD A TO 22nd St Off-SIte Flow
ADD HYD                 ID=28 HYD=ANLYPT.B IDi=1 IDii=27
PRINT HYD               ID=28 CODE=10
```

Yucatan at Cabezon Subdivision-Cabezon Redevelopment
100-Year 24-Hour Duration Storm-Developed
AHYMO Output File

HYDROGRAPH FROM AREA ANLYPT.B

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.500	.5	11.000	.5	16.500	.4	22.000	.3
.500	.0	6.000	.6	11.500	.5	17.000	.4	22.500	.3
1.000	.1	6.500	.6	12.000	.5	17.500	.4	23.000	.3
1.500	21.8	7.000	.6	12.500	.5	18.000	.4	23.500	.3
2.000	27.1	7.500	.6	13.000	.4	18.500	.4	24.000	.3
2.500	15.1	8.000	.6	13.500	.4	19.000	.3	24.500	.1
3.000	5.9	8.500	.6	14.000	.4	19.500	.3	25.000	.0
3.500	.8	9.000	.5	14.500	.4	20.000	.3		
4.000	.6	9.500	.5	15.000	.4	20.500	.3		
4.500	.5	10.000	.5	15.500	.4	21.000	.3		
5.000	.5	10.500	.5	16.000	.4	21.500	.3		

RUNOFF VOLUME = 1.95163 INCHES = 3.6627 ACRE-FEET
PEAK DISCHARGE RATE = 39.96 CFS AT 1.750 HOURS BASIN AREA = .0352 SQ. MI.

```
*S--------------------------------------------------------------------
*S DIVIDE ANALYSIS PT. C
*S ID=30 IS FLOW INTO INLET
*S ID=31 IS BYPASSING INLET TO BASIN 303
DIVIDE HYD              ID=16 Q=10 ID I=30 HYD=C.TO.INLET
                        ID II=31 HYD=C.BYPASS.INLET
*S--------------------------------------------------------------------
*S DIVIDE ANALYSIS PT. D
*S ID=32 IS FLOW INTO INLET
*S ID=33 IS BYPASSING INLET TO BASIN 308
DIVIDE HYD              ID=18 Q=10 ID I=32 HYD=D.TO.INLET
                        ID II=33 HYD=D.BYPASS.INLET
*S--------------------------------------------------------------------
*S DIVIDE ANALYSIS PT. E
*S ID=34 IS FLOW INTO INLET
*S ID=35 IS BYPASSING INLET TO BASIN 308
DIVIDE HYD              ID=19 Q=20 ID I=34 HYD=E.TO.INLET
                        ID II=35 HYD=E.BYPASS.INLET
*S--------------------------------------------------------------------
*S ADD BYPASS FROM D TO BYPASS FROM E
ADD HYD                 ID=36 HYD=BYP.DE IDi=33 IDii=35
PRINT HYD               ID=36 CODE=10
```

HYDROGRAPH FROM AREA BYP.DE

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	.500	.0	1.000	.0	1.500	1.3		

RUNOFF VOLUME = 1.79083 INCHES = .0056 ACRE-FEET
PEAK DISCHARGE RATE = 1.34 CFS AT 1.500 HOURS BASIN AREA = .0001 SQ. MI.

```
*S--------------------------------------------------------------------
*S ADD 306 TO 307
ADD HYD                 ID=37 HYD=ANLYPT.F IDi=20 IDii=21
PRINT HYD               ID=37 CODE=10
```

HYDROGRAPH FROM AREA ANLYPT.F

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.2	10.000	.2	15.000	.1	20.000	.1
.500	.0	5.500	.2	10.500	.2	15.500	.1	20.500	.1
1.000	.2	6.000	.2	11.000	.2	16.000	.1	21.000	.1
1.500	31.2	6.500	.2	11.500	.2	16.500	.1	21.500	.1
2.000	6.1	7.000	.2	12.000	.2	17.000	.1	22.000	.1
2.500	.9	7.500	.2	12.500	.2	17.500	.1	22.500	.1
3.000	.3	8.000	.2	13.000	.1	18.000	.1	23.000	.1
3.500	.2	8.500	.2	13.500	.1	18.500	.1	23.500	.1
4.000	.2	9.000	.2	14.000	.1	19.000	.1	24.000	.1
4.500	.2	9.500	.2	14.500	.1	19.500	.1	24.500	.0

RUNOFF VOLUME = 1.79082 INCHES = 1.3219 ACRE-FEET
PEAK DISCHARGE RATE = 31.21 CFS AT 1.500 HOURS BASIN AREA = .0138 SQ. MI.

```
*S--------------------------------------------------------------------
*S DIVIDE ANALYSIS PT. F
*S ID=38 IS FLOW INTO INLET
*S ID=39 IS BYPASSING INLET TO BASIN 308
DIVIDE HYD              ID=37 Q=30 ID I=38 HYD=F.TO.INLET
                        ID II=39 HYD=F.BYPASS.INLET
*S--------------------------------------------------------------------
*S ADD BYPASS FROM D,E TO BYPASS FROM F
ADD HYD                 ID=40 HYD=BYP.DEF IDi=36 IDii=39
PRINT HYD               ID=40 CODE=10
```

HYDROGRAPH FROM AREA BYP.DEF

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	.500	.0	1.000	.0	1.500	2.6		

RUNOFF VOLUME = 1.79083 INCHES = .0106 ACRE-FEET
PEAK DISCHARGE RATE = 2.56 CFS AT 1.500 HOURS BASIN AREA = .0001 SQ. MI.

```
*S--------------------------------------------------------------------
*S ADD BYPASS FROM D,E,F TO 308
ADD HYD                ID=41 HYD=ANLYPT.G IDi=22 IDii=40
PRINT HYD              ID=41 CODE=10
```

HYDROGRAPH FROM AREA ANLYPT.G

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.1	10.000	.1	15.000	.1	20.000	.0
.500	.0	5.500	.1	10.500	.1	15.500	.1	20.500	.0
1.000	.1	6.000	.1	11.000	.1	16.000	.1	21.000	.0
1.500	15.7	6.500	.1	11.500	.1	16.500	.1	21.500	.0
2.000	2.6	7.000	.1	12.000	.1	17.000	.1	22.000	.0
2.500	.4	7.500	.1	12.500	.1	17.500	.1	22.500	.0
3.000	.1	8.000	.1	13.000	.1	18.000	.1	23.000	.0
3.500	.1	8.500	.1	13.500	.1	18.500	.0	23.500	.0
4.000	.1	9.000	.1	14.000	.1	19.000	.0	24.000	.0
4.500	.1	9.500	.1	14.500	.1	19.500	.0	24.500	.0

RUNOFF VOLUME = 1.79082 INCHES = .5683 ACRE-FEET
PEAK DISCHARGE RATE = 15.73 CFS AT 1.500 HOURS BASIN AREA = .0060 SQ. MI.

```
*S--------------------------------------------------------------------
*S DIVIDE ANALYSIS PT. G
*S ID=42 IS FLOW INTO INLET
*S ID=43 IS BYPASSING INLET TO BASIN 311
DIVIDE HYD             ID=41 Q=15 ID I=42 HYD=G.TO.INLET
                       ID II=43 HYD=G.BYPASS.INLET
*S--------------------------------------------------------------------
*S ADD BYPASS FROM C TO 303
ADD HYD                ID=44 HYD=ANLYPT.H IDi=17 IDii=31
PRINT HYD              ID=44 CODE=10
```

HYDROGRAPH FROM AREA ANLYPT.H

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.1	10.000	.1	15.000	.1	20.000	.1
.500	.0	5.500	.1	10.500	.1	15.500	.1	20.500	.1
1.000	.1	6.000	.1	11.000	.1	16.000	.1	21.000	.1
1.500	18.9	6.500	.1	11.500	.1	16.500	.1	21.500	.1
2.000	3.7	7.000	.1	12.000	.1	17.000	.1	22.000	.1
2.500	.6	7.500	.1	12.500	.1	17.500	.1	22.500	.1
3.000	.2	8.000	.1	13.000	.1	18.000	.1	23.000	.1
3.500	.1	8.500	.1	13.500	.1	18.500	.1	23.500	.1
4.000	.1	9.000	.1	14.000	.1	19.000	.1	24.000	.1
4.500	.1	9.500	.1	14.500	.1	19.500	.1	24.500	.0

RUNOFF VOLUME = 1.79083 INCHES = .7985 ACRE-FEET
PEAK DISCHARGE RATE = 18.85 CFS AT 1.500 HOURS BASIN AREA = .0084 SQ. MI.

```
*S--------------------------------------------------------------------
*S ADD Q INTO INLET AT C AND D
ADD HYD                ID=45 HYD=P.CD IDi=30 IDii=32
PRINT HYD              ID=45 CODE=10
```

HYDROGRAPH FROM AREA P.CD

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.1	10.000	.1	15.000	.1	20.000	.1
.500	.0	5.500	.1	10.500	.1	15.500	.1	20.500	.1
1.000	.1	6.000	.1	11.000	.1	16.000	.1	21.000	.1
1.500	19.8	6.500	.1	11.500	.1	16.500	.1	21.500	.1
2.000	3.9	7.000	.1	12.000	.1	17.000	.1	22.000	.1
2.500	.6	7.500	.1	12.500	.1	17.500	.1	22.500	.1
3.000	.2	8.000	.1	13.000	.1	18.000	.1	23.000	.1
3.500	.1	8.500	.1	13.500	.1	18.500	.1	23.500	.1
4.000	.1	9.000	.1	14.000	.1	19.000	.1	24.000	.1
4.500	.1	9.500	.1	14.500	.1	19.500	.1	24.500	.0

RUNOFF VOLUME = 1.79081 INCHES = .8508 ACRE-FEET
PEAK DISCHARGE RATE = 19.84 CFS AT 1.500 HOURS BASIN AREA = .0089 SQ. MI.

```
*S--------------------------------------------------------------------
*S ADD Q INTO INLET AT C,D TO B
ADD HYD                ID=46 HYD=P.BCD IDi=28 IDii=45
PRINT HYD              ID=46 CODE=10
```

Yucatan at Cabezon Subdivision-Cabezon Redevelopment
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AHYMO Output File

HYDROGRAPH FROM AREA P.BCD

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.500	.7	11.000	.6	16.500	.5	22.000	.4
.500	.0	6.000	.7	11.500	.6	17.000	.5	22.500	.4
1.000	.2	6.500	.8	12.000	.6	17.500	.4	23.000	.4
1.500	41.7	7.000	.7	12.500	.6	18.000	.4	23.500	.4
2.000	31.0	7.500	.7	13.000	.5	18.500	.4	24.000	.4
2.500	15.7	8.000	.7	13.500	.5	19.000	.4	24.500	.1
3.000	6.1	8.500	.7	14.000	.5	19.500	.4	25.000	.0
3.500	.9	9.000	.7	14.500	.5	20.000	.4		
4.000	.7	9.500	.6	15.000	.5	20.500	.4		
4.500	.6	10.000	.6	15.500	.5	21.000	.4		
5.000	.6	10.500	.6	16.000	.5	21.500	.4		

RUNOFF VOLUME = 1.91915 INCHES = 4.5135 ACRE-FEET
PEAK DISCHARGE RATE = 47.39 CFS AT 1.750 HOURS BASIN AREA = .0441 SQ. MI.

```
*S--------------------------------------------------------------------
*S ADD Q INTO INLET AT B,C,D TO E
ADD HYD              ID=47 HYD=P.BCDE IDi=34 IDii=46
PRINT HYD            ID=47 CODE=10
```

HYDROGRAPH FROM AREA P.BCDE

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.500	.8	11.000	.7	16.500	.5	22.000	.5
.500	.0	6.000	.8	11.500	.7	17.000	.5	22.500	.4
1.000	.3	6.500	.9	12.000	.7	17.500	.5	23.000	.4
1.500	61.7	7.000	.9	12.500	.7	18.000	.5	23.500	.4
2.000	35.1	7.500	.9	13.000	.6	18.500	.5	24.000	.4
2.500	16.3	8.000	.8	13.500	.6	19.000	.5	24.500	.1
3.000	6.4	8.500	.8	14.000	.6	19.500	.5	25.000	.0
3.500	1.0	9.000	.8	14.500	.6	20.000	.5		
4.000	.8	9.500	.8	15.000	.6	20.500	.5		
4.500	.7	10.000	.7	15.500	.6	21.000	.5		
5.000	.8	10.500	.7	16.000	.6	21.500	.5		

RUNOFF VOLUME = 1.89681 INCHES = 5.4012 ACRE-FEET
PEAK DISCHARGE RATE = 61.65 CFS AT 1.500 HOURS BASIN AREA = .0534 SQ. MI.

```
*S--------------------------------------------------------------------
*S ADD Q INTO INLET AT B,C,D,E TO F
ADD HYD              ID=48 HYD=P.BCDEF IDi=38 IDii=47
PRINT HYD            ID=48 CODE=10
```

HYDROGRAPH FROM AREA P.BCDEF

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.500	1.0	11.000	.9	16.500	.7	22.000	.6
.500	.0	6.000	1.1	11.500	.8	17.000	.7	22.500	.5
1.000	.5	6.500	1.1	12.000	.8	17.500	.7	23.000	.5
1.500	91.7	7.000	1.1	12.500	.8	18.000	.6	23.500	.5
2.000	41.3	7.500	1.1	13.000	.8	18.500	.6	24.000	.5
2.500	17.2	8.000	1.0	13.500	.8	19.000	.6	24.500	.1
3.000	6.7	8.500	1.0	14.000	.8	19.500	.6	25.000	.0
3.500	1.3	9.000	1.0	14.500	.7	20.000	.6		
4.000	1.0	9.500	.9	15.000	.7	20.500	.6		
4.500	.9	10.000	.9	15.500	.7	21.000	.6		
5.000	.9	10.500	.9	16.000	.7	21.500	.6		

RUNOFF VOLUME = 1.87506 INCHES = 6.7180 ACRE-FEET
PEAK DISCHARGE RATE = 91.65 CFS AT 1.500 HOURS BASIN AREA = .0672 SQ. MI.

```
*S--------------------------------------------------------------------
*S ADD Q INTO INLET AT B,C,D,E,F TO G
ADD HYD              ID=49 HYD=P.BCDEF IDi=42 IDii=48
PRINT HYD            ID=49 CODE=10
```

HYDROGRAPH FROM AREA P.BCDEF

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.500	1.1	11.000	.9	16.500	.7	22.000	.6
.500	.0	6.000	1.1	11.500	.9	17.000	.7	22.500	.6
1.000	.5	6.500	1.2	12.000	.9	17.500	.7	23.000	.6
1.500	106.7	7.000	1.2	12.500	.9	18.000	.7	23.500	.6
2.000	43.8	7.500	1.1	13.000	.8	18.500	.7	24.000	.6
2.500	17.6	8.000	1.1	13.500	.8	19.000	.7	24.500	.1
3.000	6.9	8.500	1.1	14.000	.8	19.500	.7	25.000	.0
3.500	1.3	9.000	1.0	14.500	.8	20.000	.6		
4.000	1.1	9.500	1.0	15.000	.8	20.500	.6		
4.500	1.0	10.000	1.0	15.500	.8	21.000	.6		
5.000	1.0	10.500	1.0	16.000	.7	21.500	.6		

```
    RUNOFF VOLUME =      1.86824 INCHES      =        7.2833 ACRE-FEET
    PEAK DISCHARGE RATE =      106.65 CFS  AT    1.500 HOURS    BASIN AREA =    .0731 SQ. MI.


*S--------------------------------------------------------------------
*S TOTAL Q INTO MAIN TRUNK LINE AT WESTERN HILLS
*S ADD Q INTO INLET AT B,C,D,E,F,G TO H
ADD HYD                ID=50 HYD=TOT.WH IDi=44 IDii=49
PRINT HYD              ID=50 CODE=10

                                    HYDROGRAPH FROM AREA TOT.WH

     TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW
      HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS
     .000        .0         5.500       1.2        11.000       1.0        16.500        .8        22.000        .7
     .500        .0         6.000       1.3        11.500       1.0        17.000        .8        22.500        .7
    1.000        .6         6.500       1.3        12.000       1.0        17.500        .8        23.000        .6
    1.500      125.5         7.000       1.3        12.500       1.0        18.000        .8        23.500        .6
    2.000       47.5         7.500       1.3        13.000        .9        18.500        .7        24.000        .6
    2.500       18.2         8.000       1.2        13.500        .9        19.000        .7        24.500        .1
    3.000        7.1         8.500       1.2        14.000        .9        19.500        .7        25.000        .0
    3.500        1.5         9.000       1.1        14.500        .9        20.000        .7
    4.000        1.2         9.500       1.1        15.000        .9        20.500        .7
    4.500        1.1        10.000       1.1        15.500        .8        21.000        .7
    5.000        1.1        10.500       1.1        16.000        .8        21.500        .7

    RUNOFF VOLUME =      1.86030 INCHES      =        8.0818 ACRE-FEET
    PEAK DISCHARGE RATE =      125.50 CFS  AT    1.500 HOURS    BASIN AREA =    .0815 SQ. MI.


*S--------------------------------------------------------------------
*S--------------------------------------------------------------------
*S SOUTHERN PORTION OF CABEZON TRACT 3
*S--------------------------------------------------------------------
*S--------------------------------------------------------------------
*S ADD 309 TO 311
ADD HYD                ID=51 HYD=ANLYPT.J IDi=23 IDii=25
PRINT HYD              ID=51 CODE=10

                                    HYDROGRAPH FROM AREA ANLYPT.J

     TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW
      HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS
     .000        .0         5.000        .3        10.000        .3        15.000        .3        20.000        .2
     .500        .0         5.500        .4        10.500        .3        15.500        .2        20.500        .2
    1.000        .3         6.000        .4        11.000        .3        16.000        .2        21.000        .2
    1.500      58.3         6.500        .4        11.500        .3        16.500        .2        21.500        .2
    2.000      11.4         7.000        .4        12.000        .3        17.000        .2        22.000        .2
    2.500       1.8         7.500        .4        12.500        .3        17.500        .2        22.500        .2
    3.000        .7         8.000        .4        13.000        .3        18.000        .2        23.000        .2
    3.500        .4         8.500        .3        13.500        .3        18.500        .2        23.500        .2
    4.000        .3         9.000        .3        14.000        .3        19.000        .2        24.000        .2
    4.500        .3         9.500        .3        14.500        .3        19.500        .2        24.500        .0

    RUNOFF VOLUME =      1.79085 INCHES      =        2.4709 ACRE-FEET
    PEAK DISCHARGE RATE =       58.31 CFS  AT    1.500 HOURS    BASIN AREA =    .0259 SQ. MI.


*S--------------------------------------------------------------------
*S DIVIDE ANALYSIS PT. J
*S ID=52 IS CFS INTO INLET
*S ID=53 IS CFS BYPASSING INLET TO BASIN 312
DIVIDE HYD             ID=51 Q=34 ID I=52 HYD=J.TO.INLET
                       ID II=53 HYD=J.BYPASS.INLET
*S--------------------------------------------------------------------
*S DIVIDE ANALYSIS PT. K
*S ID=54 IS CFS INTO INLET
*S ID=55 IS CFS BYPASSING INLET TO BASIN 312
DIVIDE HYD             ID=24 Q=30 ID I=54 HYD=K.TO.INLET
                       ID II=55 HYD=K.BYPASS.INLET
*S--------------------------------------------------------------------
*S ADD BYPASS FROM J AND K
ADD HYD                ID=56 HYD=BYP.JK IDi=53 IDii=55
PRINT HYD              ID=56 CODE=10

                                    HYDROGRAPH FROM AREA BYP.JK

     TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW
      HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS
     .000        .0          .500        .0         1.000        .0         1.500       33.8

    RUNOFF VOLUME =      1.79085 INCHES      =         .3468 ACRE-FEET
    PEAK DISCHARGE RATE =       33.82 CFS  AT    1.500 HOURS    BASIN AREA =    .0036 SQ. MI.


*S--------------------------------------------------------------------
*S ADD BYPASS FROM J,K TO 312
ADD HYD                ID=57 HYD=ANLYPT.L IDi=26 IDii=56
PRINT HYD              ID=57 CODE=10
```

Yucatan at Cabezon Subdivision-Cabezon Redevelopment
100-Year 24-Hour Duration Storm-Developed
AHYMO Output File

HYDROGRAPH FROM AREA ANLYPT.L

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.2	10.000	.2	15.000	.1	20.000	.1
.500	.0	5.500	.2	10.500	.2	15.500	.1	20.500	.1
1.000	.2	6.000	.2	11.000	.2	16.000	.1	21.000	.1
1.500	65.8	6.500	.2	11.500	.2	16.500	.1	21.500	.1
2.000	6.3	7.000	.2	12.000	.2	17.000	.1	22.000	.1
2.500	1.0	7.500	.2	12.500	.2	17.500	.1	22.500	.1
3.000	.4	8.000	.2	13.000	.2	18.000	.1	23.000	.1
3.500	.2	8.500	.2	13.500	.1	18.500	.1	23.500	.1
4.000	.2	9.000	.2	14.000	.1	19.000	.1	24.000	.1
4.500	.2	9.500	.2	14.500	.1	19.500	.1	24.500	.0

RUNOFF VOLUME = 1.79085 INCHES = 1.7031 ACRE-FEET
PEAK DISCHARGE RATE = 65.83 CFS AT 1.500 HOURS BASIN AREA = .0178 SQ. MI.

```
*S--------------------------------------------------------------------
*S ADD Q INTO INLET J AND K
ADD HYD                ID=58 HYD=P.JK IDi=52 IDii=54
PRINT HYD              ID=58 CODE=10
```

HYDROGRAPH FROM AREA P.JK

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.6	10.000	.5	15.000	.4	20.000	.3
.500	.0	5.500	.6	10.500	.5	15.500	.4	20.500	.3
1.000	.5	6.000	.6	11.000	.5	16.000	.4	21.000	.3
1.500	64.0	6.500	.7	11.500	.5	16.500	.4	21.500	.3
2.000	19.2	7.000	.6	12.000	.5	17.000	.4	22.000	.3
2.500	2.9	7.500	.6	12.500	.5	17.500	.4	22.500	.3
3.000	1.1	8.000	.6	13.000	.5	18.000	.4	23.000	.3
3.500	.7	8.500	.6	13.500	.5	18.500	.4	23.500	.3
4.000	.6	9.000	.6	14.000	.4	19.000	.4	24.000	.3
4.500	.5	9.500	.5	14.500	.4	19.500	.4	24.500	.0

RUNOFF VOLUME = 1.79085 INCHES = 3.7984 ACRE-FEET
PEAK DISCHARGE RATE = 64.00 CFS AT 1.450 HOURS BASIN AREA = .0398 SQ. MI.

```
*S--------------------------------------------------------------------
*S TOTAL Q INTO MAIN TRUNK LINE AT CABEZON ROAD
*S ADD Q INTO INLET AT J,K TO L
ADD HYD                ID=59 HYD=TOT.CAB IDi=57 IDii=58
PRINT HYD              ID=59 CODE=10
```

HYDROGRAPH FROM AREA TOT.CAB

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.7	10.000	.7	15.000	.6	20.000	.5
.500	.0	5.500	.8	10.500	.7	15.500	.6	20.500	.5
1.000	.7	6.000	.9	11.000	.7	16.000	.5	21.000	.5
1.500	129.8	6.500	.9	11.500	.7	16.500	.5	21.500	.4
2.000	25.5	7.000	.9	12.000	.6	17.000	.5	22.000	.4
2.500	3.9	7.500	.8	12.500	.6	17.500	.5	22.500	.4
3.000	1.5	8.000	.8	13.000	.6	18.000	.5	23.000	.4
3.500	.9	8.500	.8	13.500	.6	18.500	.5	23.500	.4
4.000	.8	9.000	.8	14.000	.6	19.000	.5	24.000	.4
4.500	.7	9.500	.7	14.500	.6	19.500	.5	24.500	.0

RUNOFF VOLUME = 1.79085 INCHES = 5.5014 ACRE-FEET
PEAK DISCHARGE RATE = 129.83 CFS AT 1.500 HOURS BASIN AREA = .0576 SQ. MI.

```
*S--------------------------------------------------------------------
*S TOTAL STORM WATER RELEASED FROM CABEZON TRACT 3
*S--------------------------------------------------------------------
*S--------------------------------------------------------------------
*S ADD TOTAL NORTH TO TOTAL SOUTH
ADD HYD                ID=62 HYD=TOT.1 IDi=50 IDii=59
PRINT HYD              ID=62 CODE=10
```

HYDROGRAPH FROM AREA TOT.1

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.500	1.9	11.000	1.7	16.500	1.3	22.000	1.1
.500	.0	6.000	2.1	11.500	1.7	17.000	1.3	22.500	1.1
1.000	1.3	6.500	2.2	12.000	1.6	17.500	1.3	23.000	1.1
1.500	255.3	7.000	2.2	12.500	1.6	18.000	1.3	23.500	1.1
2.000	73.0	7.500	2.1	13.000	1.5	18.500	1.2	24.000	1.0
2.500	22.1	8.000	2.0	13.500	1.5	19.000	1.2	24.500	.2
3.000	8.6	8.500	1.9	14.000	1.5	19.500	1.2	25.000	.0
3.500	2.4	9.000	1.9	14.500	1.4	20.000	1.2		
4.000	1.9	9.500	1.8	15.000	1.4	20.500	1.1		
4.500	1.8	10.000	1.8	15.500	1.4	21.000	1.1		

```
 5.000      1.9        10.500      1.7        16.000      1.4        21.500      1.1

 RUNOFF VOLUME =     1.83153 INCHES      =      13.5833 ACRE-FEET
 PEAK DISCHARGE RATE =     255.33 CFS  AT   1.500 HOURS   BASIN AREA =    .1391 SQ. MI.


*$-----------------------------------------------------------------------
*$ ADD TOTAL FROM 105 AND 106 - DIRECT DISCHARGE
ADD HYD              ID=63 HYD=TOT.2 IDi=13 IDii=14
PRINT HYD            ID=63 CODE=10

                                HYDROGRAPH FROM AREA TOT.2

  TIME      FLOW        TIME      FLOW        TIME      FLOW        TIME      FLOW        TIME      FLOW
   HRS       CFS         HRS       CFS         HRS       CFS         HRS       CFS         HRS       CFS
  .000       .0        1.000       .0        2.000       .2        3.000       .0
  .500       .0        1.500      1.7        2.500       .0

 RUNOFF VOLUME =      .82931 INCHES      =       .0471 ACRE-FEET
 PEAK DISCHARGE RATE =       1.72 CFS  AT   1.500 HOURS   BASIN AREA =    .0011 SQ. MI.


*$-----------------------------------------------------------------------
*$ ADD TOTAL FROM CABEZONT TRACT 3
ADD HYD              ID=64 HYD=TOT.3 IDi=62 IDii=63
PRINT HYD            ID=64 CODE=10

                                HYDROGRAPH FROM AREA TOT.3

  TIME      FLOW        TIME      FLOW        TIME      FLOW        TIME      FLOW        TIME      FLOW
   HRS       CFS         HRS       CFS         HRS       CFS         HRS       CFS         HRS       CFS
  .000       .0        5.500      1.9       11.000      1.7       16.500      1.3       22.000      1.1
  .500       .0        6.000      2.1       11.500      1.7       17.000      1.3       22.500      1.1
 1.000       1.3       6.500      2.2       12.000      1.6       17.500      1.3       23.000      1.1
 1.500     257.1       7.000      2.2       12.500      1.6       18.000      1.3       23.500      1.1
 2.000      73.1       7.500      2.1       13.000      1.5       18.500      1.2       24.000      1.0
 2.500      22.1       8.000      2.0       13.500      1.5       19.000      1.2       24.500       .2
 3.000       8.6       8.500      1.9       14.000      1.5       19.500      1.2       25.000       .0
 3.500       2.4       9.000      1.9       14.500      1.4       20.000      1.2
 4.000       1.9       9.500      1.8       15.000      1.4       20.500      1.1
 4.500       1.8      10.000      1.8       15.500      1.4       21.000      1.1
 5.000       1.9      10.500      1.7       16.000      1.4       21.500      1.1

 RUNOFF VOLUME =     1.82390 INCHES      =      13.6304 ACRE-FEET
 PEAK DISCHARGE RATE =     257.05 CFS  AT   1.500 HOURS   BASIN AREA =    .1401 SQ. MI.


*$-----------------------------------------------------------------------
*$-----------------------------------------------------------------------
*$-----------------------------------------------------------------------
*$ COMMERCIAL PORTION OF CABEZON TRACT 1
*$-----------------------------------------------------------------------
*$-----------------------------------------------------------------------
*$ ADD 103 TO 104
ADD HYD              ID=60 HYD=ANLYPT.M IDi=12 IDii=11
PRINT HYD            ID=60 CODE=10

                                HYDROGRAPH FROM AREA ANLYPT.M

  TIME      FLOW        TIME      FLOW        TIME      FLOW        TIME      FLOW        TIME      FLOW
   HRS       CFS         HRS       CFS         HRS       CFS         HRS       CFS         HRS       CFS
  .000       .0        5.000       .3       10.000       .3       15.000       .2       20.000       .2
  .500       .0        5.500       .3       10.500       .3       15.500       .2       20.500       .2
 1.000       .3        6.000       .4       11.000       .3       16.000       .2       21.000       .2
 1.500     45.6        6.500       .4       11.500       .3       16.500       .2       21.500       .2
 2.000     10.1        7.000       .4       12.000       .3       17.000       .2       22.000       .2
 2.500      1.5        7.500       .4       12.500       .3       17.500       .2       22.500       .2
 3.000       .6        8.000       .3       13.000       .3       18.000       .2       23.000       .2
 3.500       .4        8.500       .3       13.500       .3       18.500       .2       23.500       .2
 4.000       .3        9.000       .3       14.000       .3       19.000       .2       24.000       .2
 4.500       .3        9.500       .3       14.500       .2       19.500       .2       24.500       .0

 RUNOFF VOLUME =     2.16818 INCHES      =       2.0803 ACRE-FEET
 PEAK DISCHARGE RATE =      45.56 CFS  AT   1.500 HOURS   BASIN AREA =    .0180 SQ. MI.


*$-----------------------------------------------------------------------
*$-----------------------------------------------------------------------
*$-----------------------------------------------------------------------
*$ INTERIM RETENTION PONDS BETWEEN PHASES 2 AND 3
*$-----------------------------------------------------------------------
*$-----------------------------------------------------------------------
*$-----------------------------------------------------------------------
*$ COMPUTE RETENTION POND #1 (BASIN 306)
COMPUTE NM HYD       ID=1 HYD=101.H AREA=0.0049 SQ MI
                     %A=0 %B=0 %C=100 %D=0 TP=-0.133 HR
                     MASS RAINFALL=-1

 K =    .104829HR     TP =    .133000HR     K/TP RATIO =    .788191     SHAPE CONSTANT, N =  4.553549
 UNIT PEAK =    14.388     CFS   UNIT VOLUME =     1.001       B =    390.52       P60 = 1.7990
 AREA =        .004900 SQ MI     IA =     .35000 INCHES     INF =     .83000 INCHES PER HOUR
```

Yucatan at Cabezon Subdivision-Cabezon Redevelopment
100-Year 24-Hour Duration Storm-Developed
AHYMO Output File

```
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .050000

      BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

PRINT HYD             ID=1 CODE=10

                                        HYDROGRAPH FROM AREA 101.H

      TIME     FLOW          TIME     FLOW          TIME     FLOW          TIME     FLOW          TIME     FLOW
       HRS      CFS           HRS      CFS           HRS      CFS           HRS      CFS           HRS      CFS
      .000       .0         1.000       .0         2.000      1.0         3.000       .0
      .500       .0         1.500      9.2         2.500       .2         3.500       .0

      RUNOFF VOLUME =     1.01341 INCHES      =        .2648 ACRE-FEET
      PEAK DISCHARGE RATE =       9.23 CFS  AT   1.500 HOURS   BASIN AREA =    .0049 SQ. MI.


*S--------------------------------------------------------------------
*S COMPUTE RETENTION POND #2
COMPUTE NM HYD        ID=2 HYD=102.H AREA=0.0704 SQ MI
                      %A=00 %B=0 %C=100 %D=0 TP=-0.133 HR
                      MASS RAINFALL=-1

      K =   .104858HR    TP =   .133000HR    K/TP RATIO =   .788409     SHAPE CONSTANT, N =  4.552135
      UNIT PEAK =   206.67    CFS   UNIT VOLUME =    1.002       B =   390.44      P60 = 1.7990
      AREA =       .070400 SQ MI    IA =    .35000 INCHES    INF =    .83000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .050000

      BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.06000 AT PEAK FLOW.

PRINT HYD             ID=2 CODE=10

                                        HYDROGRAPH FROM AREA 102.H

      TIME     FLOW          TIME     FLOW          TIME     FLOW          TIME     FLOW          TIME     FLOW
       HRS      CFS           HRS      CFS           HRS      CFS           HRS      CFS           HRS      CFS
      .000       .0         1.000       .0         2.000     14.5         3.000       .5         4.000       .0
      .500       .0         1.500     132.5         2.500      2.3         3.500       .1

      RUNOFF VOLUME =     1.01341 INCHES      =       3.8050 ACRE-FEET
      PEAK DISCHARGE RATE =     132.53 CFS  AT   1.500 HOURS   BASIN AREA =    .0704 SQ. MI.




FINISH

      NORMAL PROGRAM FINISH          END TIME (HR:MIN:SEC) = 07:29:27
□(s0p10h4099T□&16D

FINISH

      NORMAL PROGRAM FINISH          END TIME (HR:MIN:SEC) = 16:48:39
□(s0p10h4099T□&16D□□
```

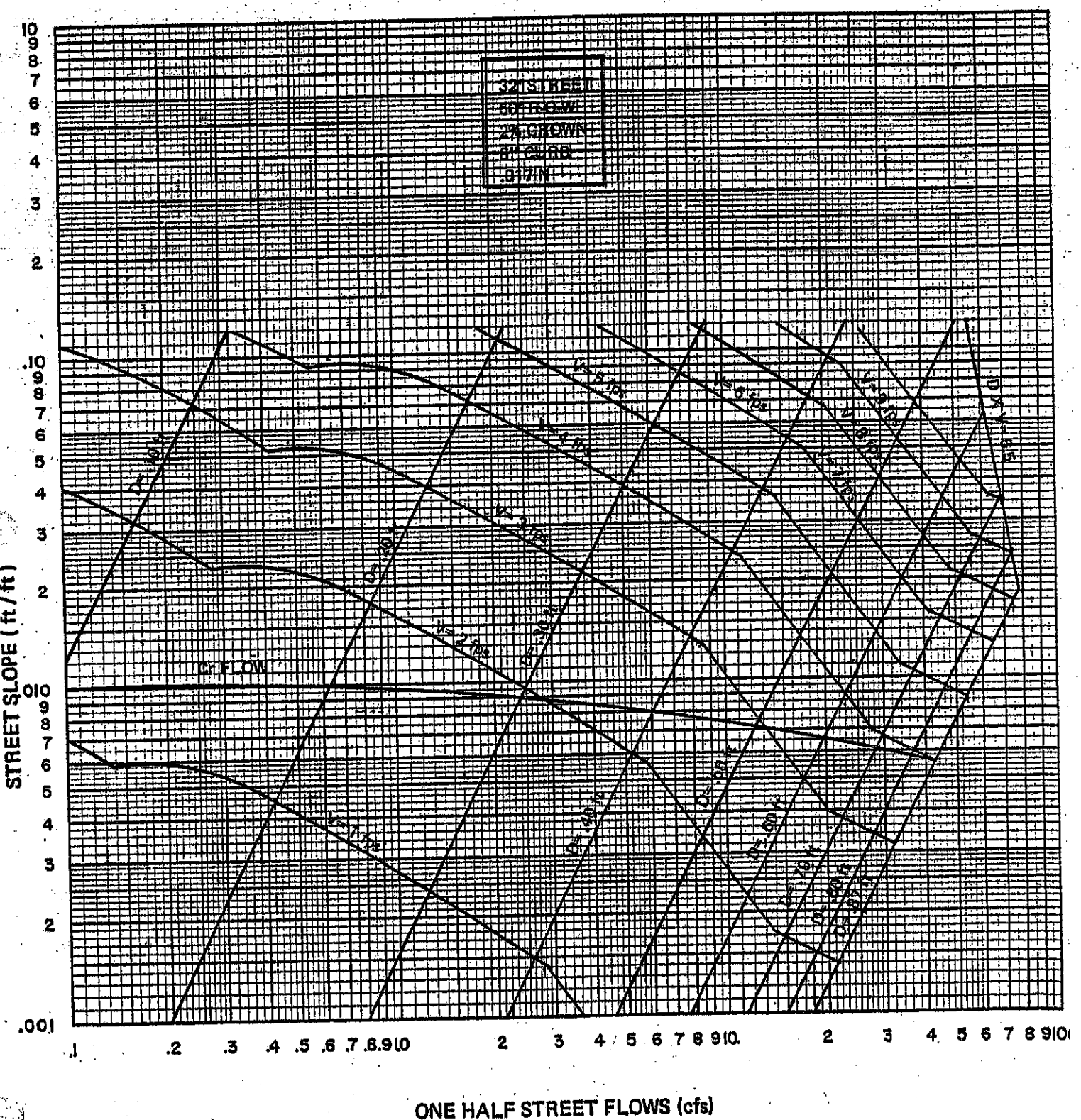
Yucatan at Cabezon - Tract 3 Final Drainage Study
Street Flow Analysis

					Inlet #1						Inlet #2				
Analysis Point	Hyrdogrpah ID	Q (cfs)	Road Slope	Q Half Street (cfs)	Flow Depth (ft)	Velocity (ft/s)	Depth x Velocity	Inlet Type	Q Inlet (cfs)	Q Bypass (cfs)	Inlet Type	Flow Depth (ft)	Q Inlet (cfs)	Q Bypass (cfs)	Notes
A	ANYLPT.A	22	0.5%	No Inlet											
B	ANYLPT.B	40	0.5%	20	0.63	3.4	2.1	Double C	14	6	C	0.43	6	0	
C	ANYLPT.C	10	1.5%	10	0.43	3.3	1.4	Trip C*	10	0					*Double C collects 8 cfs - Use Triple C Assume no bypass
D	ANYLPT.D	10	1.5%	10	0.43	3.3	1.4	Trip C*	10	0					*Double C collects 8 cfs - Use Triple C
E	ANYLPT.E	21	2.0%	11	0.42	3.8	1.6	Trip C*	11	0					*Double C collects 8 cfs - Use Triple C Assume no bypass
F	ANYLPT.F	32	2.0%	16	0.45	4.5	2.0	Double C	8	8	Trip C*	0.38	8	0	*Double C collects 5.5 cfs - Use Triple C Assume no bypass
G	ANYLPT.G	15	2.5%	8	0.38	3.8	1.4	Trip C*	7.5	0					*Double C collects 5.5 cfs - Use Triple C
H	ANYLPT.H	19	2.5%	9	0.4	4	1.6	Trip C*	9	0					*Double C collects 6.0 cfs - Use Triple C Assume no bypass
J	ANYLPT.J	58	1.8%	29	0.55	7	3.9	Trip C*	17	12					*Double C collects 12 cfs - Use Triple C Assume 17 cfs total
K	ANYLPT.K	40	1.5%	20	0.52	3.5	1.8	Trip C*	15	5					*Double C collects 11 cfs - Use Triple C Assume 15 cfs total
L	ANYLPT.L	66		33	Sump Condition										

Assumptions

1. Street Flow Depths and Velocities taken from City of Albuquerque Plate 22.3 D-1
2. Double C Grate Capacities taken from City of Albuquerque Plate 22.3 D-6
3. Triple C Grate Capacities were extrapolated from the Double C Capacities.
4. All Grate Capacities do not account for curb opening inflow. Therefore, inlet inflows shown are conservative and provide a safety factor for items such as inlet clogging

STREET CAPACITY

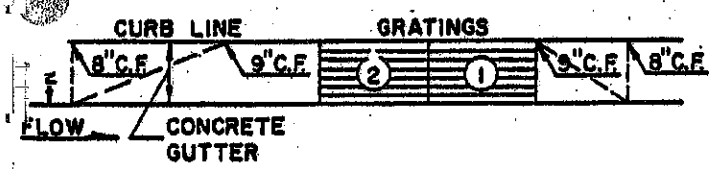


REV. 3-83

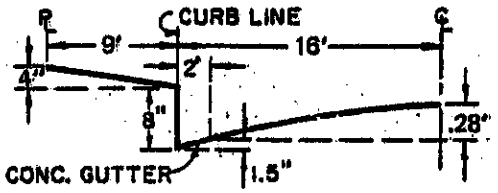
PLATE 22.3 D-1

C-2

GRATING CAPACITIES FOR TYPE DOUBLE "C," AND "D"



GRATING & GUTTER PLAN



TYPICAL HALF STREET SECTION
(ABOVE BASIN)

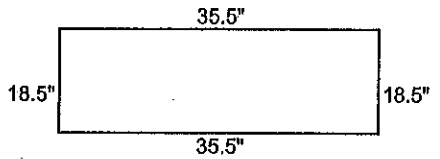
Huitt~Zollars, Inc.

Inlet Worksheet (Sump Condition) Analysis Point 'L'

Objective: Design a Quad C Inlet in Sump Condition for a 100-year flow of: 33 cfs

1 Inlet to collect discharge before overtopping curb.
Standard 8" curb and gutter.
Dmax=10.75 in (0.9 ft) - Not 8" because standard inlet has 10.75" depression.

2 Grate Dimensions



**Net dimensions of open area of a single grate. (Total Area less Area of Bars)

Weir Perimeter - Quad 'C' = 2x18.5" + 4x35.5" = 14.92 ft
Area of Orifice - Quad 'C' =18.5" x (4x35.5") = 18.24 sq ft

3 Calculate Orifice and Weir Flow into Grate at Design Depth (0.9 ft)

Orifice Equation		Weir Equation		
Q = 0.6 x A x (2 x g x h)^1/2		Q=2.65 x P x H^1/2		
Where		Where		
A =	18.240 sq. ft.	P=	14.920	ft
g =	32.2 ft ^2/sec	H=	0.9	ft
h =	0.9 ft			
Therefore		Therefore		
Q =	83.31827556 cfs	Q =	38	cfs

Weir Equation controls

Quad "C" Inlet flow @ TBC =	38 cfs

C-4

Scenario: Base

Pipe Report

Label	Total Flow (cfs)	Average Velocity (ft/s)	Constructed Slope (ft/ft)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Hydraulic Grade Line In (ft)	Upstream Ground Elevation (ft)	Hydraulic Grade Line Out (ft)	Downstream Ground Elevation (ft)	Length (ft)	Total System Flow (cfs)	Downstream Node	Upstream Node	Section Size
P-1	4.00	2.26	0.016129	5,352.50	5,352.00	5,354.20	5,358.26	5,354.15	5,358.17	31.00	4.00	J-1	I-1	18 inch
P-2	4.00	2.26	0.021739	5,352.50	5,352.00	5,354.19	5,358.09	5,354.15	5,358.17	23.00	4.00	J-1	I-2	18 inch
P-3	48.00	11.04	0.013433	5,351.00	5,350.10	5,353.27	5,358.17	5,352.54	5,357.22	67.00	48.00	J-2	J-1	30 inch
P-4	48.00	12.88	0.018846	5,350.00	5,345.10	5,352.27	5,357.22	5,348.66	5,352.60	260.00	48.00	J-4	J-2	30 inch
P-5	7.00	8.72	0.023000	5,349.00	5,348.54	5,350.02	5,354.21	5,349.94	5,354.23	20.00	7.00	J-3	I-3	18 inch
P-6	7.00	8.28	0.020000	5,349.00	5,348.54	5,350.02	5,354.21	5,349.94	5,354.23	23.00	7.00	J-3	I-4	18 inch
P-7	14.00	12.77	0.024051	5,347.00	5,345.10	5,348.80	5,354.23	5,348.66	5,352.60	79.00	14.00	J-4	J-3	24 inch
P-8	62.00	14.24	0.020000	5,345.00	5,340.10	5,347.54	5,352.60	5,345.20	5,347.30	245.00	62.00	J-6	J-4	36 inch
P-9	4.00	2.26	0.023810	5,342.50	5,342.00	5,346.70	5,348.05	5,346.66	5,347.62	21.00	4.00	J-5	I-5	18 inch
P-10	4.00	2.26	0.021739	5,342.50	5,342.00	5,346.70	5,347.93	5,346.66	5,347.62	23.00	4.00	J-5	I-6	18 inch
P-11	30.00	4.24	0.013684	5,340.62	5,340.10	5,345.27	5,347.62	5,345.20	5,347.30	38.00	30.00	J-6	J-5	36 inch
P-12	17.50	5.57	0.045000	5,308.00	5,307.10	5,310.14	5,314.61	5,310.02	5,314.20	20.00	17.50	J-14	I-12	24 inch
P-13	17.00	5.41	0.033333	5,308.00	5,307.10	5,310.17	5,314.72	5,310.02	5,314.20	27.00	17.00	J-14	I-13	24 inch
P-14	15.00	14.78	0.057692	5,310.00	5,308.50	5,311.40	5,315.80	5,310.40	5,316.03	26.00	15.00	J-12	I-14	24 inch
P-18	34.50	15.23	0.035897	5,307.00	5,305.60	5,308.91	5,314.20	5,309.18	5,314.00	39.00	34.50	J-15	J-14	36 inch
P-19	66.50	13.84	0.017521	5,305.50	5,301.40	5,308.06	5,314.00	5,306.41	5,309.40	234.00	66.50	J-16	J-15	42 inch
P-20	33.00	4.67	0.030189	5,303.00	5,301.40	5,306.54	5,309.67	5,306.41	5,309.40	53.00	33.00	J-16	I-16	36 inch
P-21	99.50	17.21	0.024000	5,301.30	5,300.70	5,304.32	5,309.40	5,304.06	5,309.17	25.00	99.50	I-26	J-16	48 inch
P-22	20.00	6.37	0.050000	5,354.00	5,353.10	5,357.54	5,359.56	5,357.40	5,359.42	18.00	20.00	J-17	I-18	24 inch
P-23	20.00	6.37	0.042857	5,354.00	5,353.10	5,357.57	5,359.46	5,357.40	5,359.42	21.00	20.00	J-17	I-19	24 inch
P-24	40.00	11.28	0.014754	5,353.00	5,352.10	5,355.38	5,359.42	5,354.85	5,358.99	61.00	40.00	J-18	J-17	30 inch
P-25	40.00	8.15	0.015254	5,352.00	5,351.10	5,354.71	5,358.99	5,354.15	5,358.17	59.00	40.00	J-1	J-18	30 inch
P-26	11.00	2.24	0.029412	5,343.50	5,343.00	5,348.30	5,349.07	5,348.29	5,349.04	17.00	11.00	J-19	I-20	30 inch
P-27	11.00	2.24	0.023810	5,343.50	5,343.00	5,348.30	5,349.07	5,348.29	5,349.04	21.00	11.00	J-19	I-21	30 inch
P-28	22.00	3.11	0.022857	5,342.00	5,340.72	5,346.73	5,349.04	5,346.66	5,347.62	56.00	22.00	J-5	J-19	36 inch
P-29	92.00	16.35	0.023444	5,340.00	5,335.78	5,342.86	5,347.30	5,339.21	5,342.68	180.00	92.00	J-20	J-6	36 inch
P-30	107.00	17.31	0.023200	5,335.68	5,334.52	5,338.81	5,342.68	5,337.67	5,341.42	50.00	107.00	J-7	J-20	48 inch
P-31	7.50	4.24	0.020000	5,337.00	5,336.68	5,339.29	5,342.60	5,339.21	5,342.68	16.00	7.50	J-20	I-22	18 inch
P-32	7.50	4.24	0.020000	5,337.00	5,336.58	5,339.32	5,342.74	5,339.21	5,342.68	21.00	7.50	J-20	I-23	18 inch
P-33	107.00	18.78	0.028846	5,334.42	5,333.67	5,337.55	5,341.42	5,337.40	5,340.57	26.00	107.00	J-8	J-7	48 inch
P-34	9.00	5.09	0.025000	5,334.00	5,333.50	5,337.73	5,339.27	5,337.58	5,338.96	20.00	9.00	J-21	I-24	18 inch
P-35	9.00	5.09	0.022727	5,334.00	5,333.50	5,337.74	5,339.27	5,337.58	5,338.96	22.00	9.00	J-21	I-25	18 inch
P-39	18.00	5.73	0.010133	5,331.96	5,331.20	5,336.49	5,338.96	5,336.01	5,337.32	75.00	18.00	J-26	J-21	24 inch
P-40	107.00	12.40	0.009753	5,333.57	5,331.20	5,337.25	5,340.57	5,336.01	5,337.32	243.00	107.00	J-26	J-8	48 inch
P-55	17.00	9.62	0.038462	5,309.00	5,308.50	5,310.74	5,314.80	5,310.40	5,316.03	13.00	17.00	J-12	I-15	18 inch

Scenario: Base

Pipe Report

Label	Total Flow (cfs)	Average Velocity (ft/s)	Constructed Slope (ft/ft)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Hydraulic Grade Line In (ft)	Upstream Ground Elevation (ft)	Hydraulic Grade Line Out (ft)	Downstream Ground Elevation (ft)	Length (ft)	Total System Flow (cfs)	Downstream Node	Upstream Node	Section Size
P-56	132.50	16.58	0.018151	5,300.60	5,298.44	5,304.04	5,309.17	5,301.06	5,309.00	119.00	132.50	J-23	I-26	48 inch
P-57	132.50	12.97	0.010000	5,298.44	5,298.17	5,301.88	5,309.00	5,301.38	5,309.00	27.00	132.50	O-4	J-23	48 inch
P-58	32.00	18.62	0.063043	5,308.40	5,305.50	5,310.29	5,316.03	5,309.18	5,314.00	46.00	32.00	J-15	J-12	24 inch
P-59	125.00	9.95	0.006220	5,331.10	5,330.31	5,334.77	5,337.32	5,333.67	5,337.06	127.00	125.00	O-5	J-26	48 inch

Scenario: Base

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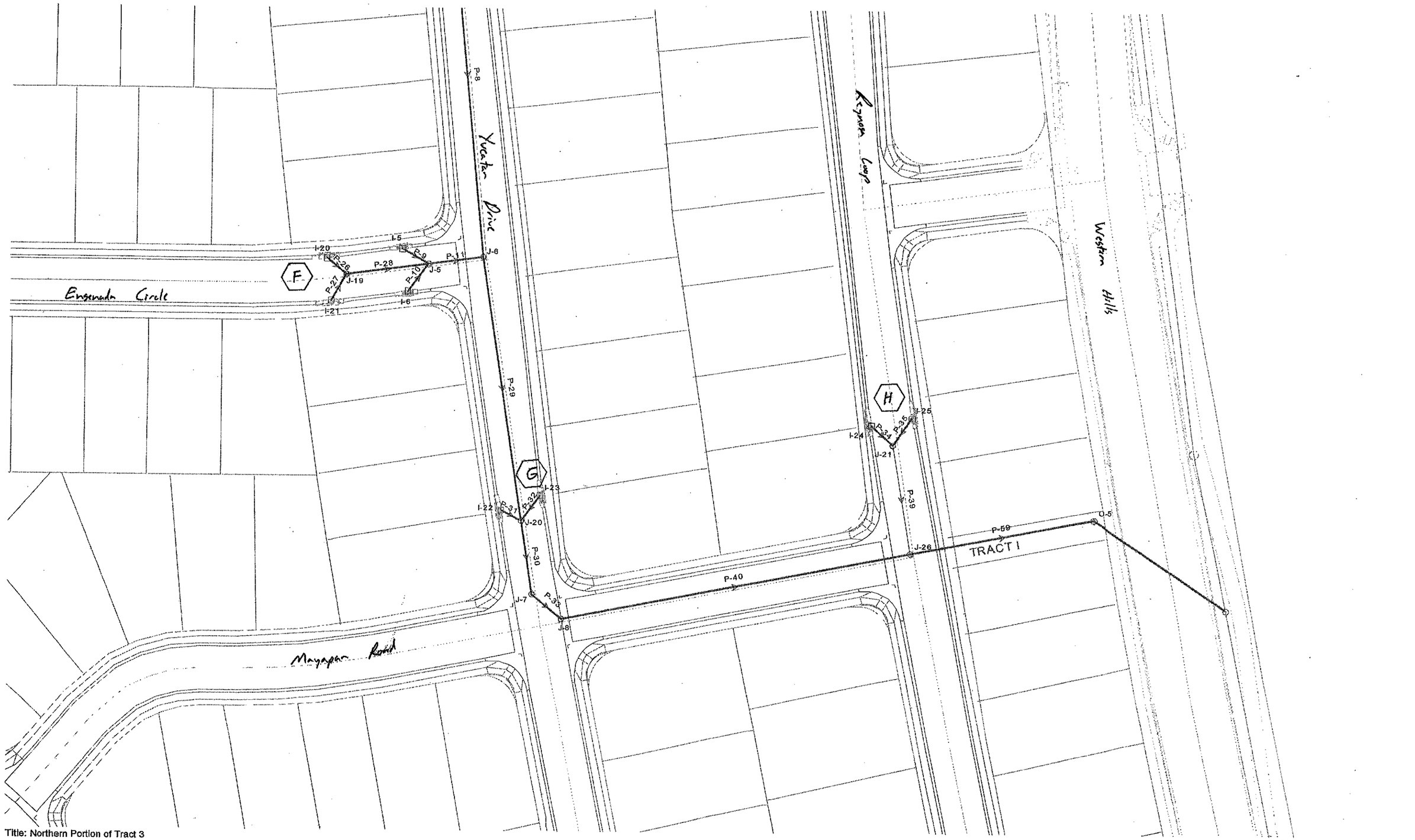
Huitt-Zollars, Inc.
37 Brookside Road Waterbury, CT 06708 USA +1-203-755-1666

Project Engineer: Jarrod Likar
StormCAD v5.5 [5.5003]

Scenario: Base



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Project Engineer: Jarrod Likar
StormCAD v5.5 [5.5003]
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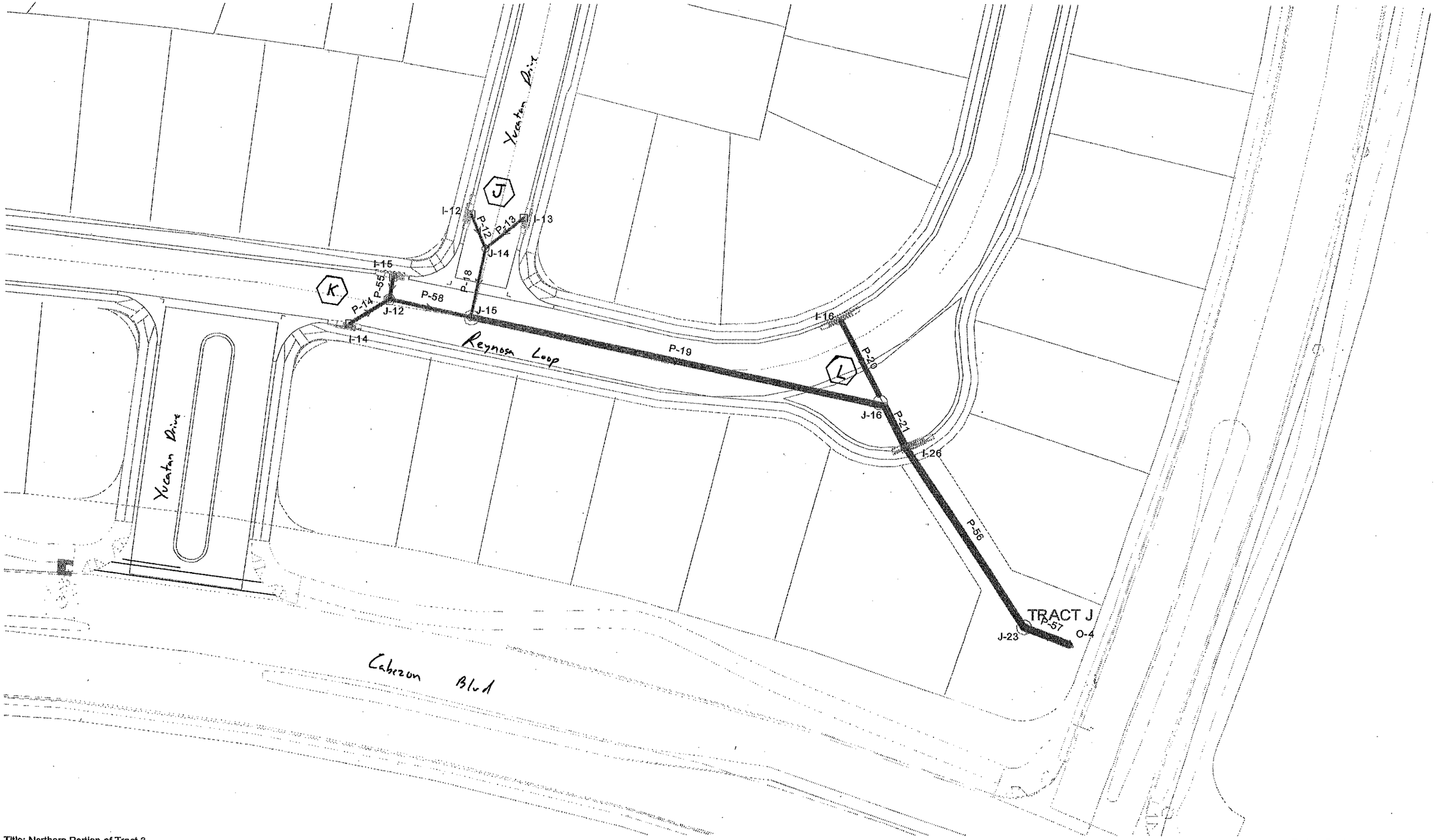
Scenario: Base



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Project Engineer: Jarrod Likar
StormCAD v5.5 [5.5003]
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