

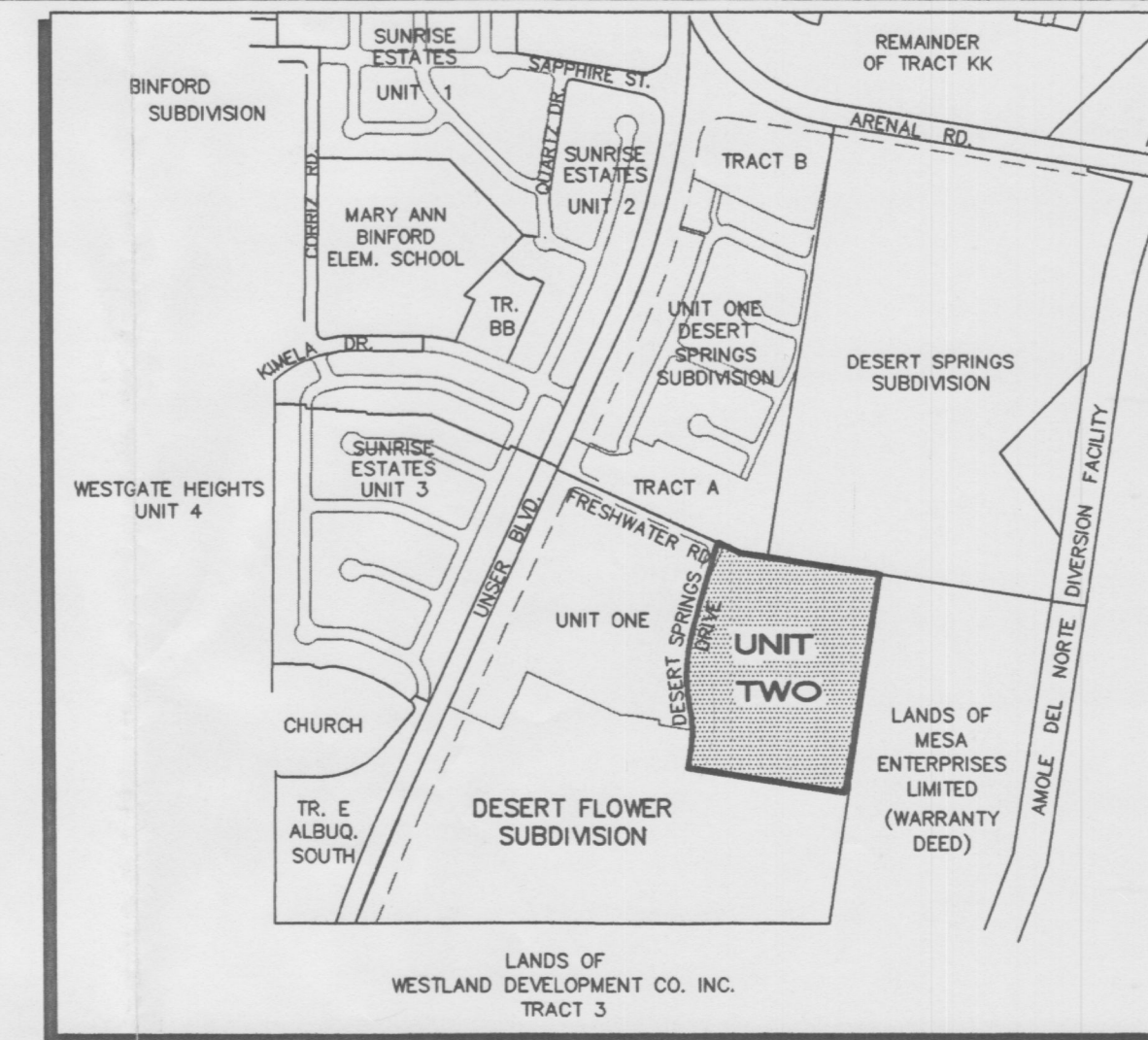
BOUNDARY CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHD. DIR.	CHORD
C1	173.83	500.00	19°55'11"	87.80	N 01°00'38" W	172.96
C2	313.06	675.00	26°34'23"	159.40	S 02°18'58" W	310.26
C3	54.93	350.00	08°59'34"	27.52	S 20°05'56" W	54.88

LEGEND		
5012	EXISTING CONTOUR	
15	PROPOSED CONTOUR	
+78.3	EXISTING SPOT ELEVATION	
+78.3	PROPOSED SPOT ELEVATION	
PG=	FLOW ARROW	
5022.0	PAD GRADE ELEVATION	
TC=25.74	PROPOSED TOP OF CURB ELEVATION	
FL=24.07	PROPOSED FLOW LINE ELEVATION	
	UNIT BOUNDARY	
	EROSION CONTROL BERM	

EARTHWORK QUANTITIES		
	CUT (CY)	FILL (CY)
BANK VOL.	13331	9029
LOOSE VOL.	13331	11286
		4302
		2045

NOTES

- LEGAL DESCRIPTION: A PORTION OF TRACT B, DESERT FLOWER SUBDIVISION, filed June 5, 1997, Vol. 97C, Folio 175.
- BENCHMARK: ACS MONUMENT "1-M10" ELEV = 5079.88
- ENGINEER: ISAACSON & ARFMAN, P.A.
128 Monroe Street NE, Albuquerque, NM
Attn: Fred Arfman
- SURVEYOR: ALS, Inc.
P.O. Box 30701, Albuquerque, NM
Attn: Tim Aldrich
- FLOOD HAZARD STATEMENT: No part of this development is affected nor contributes to a flood hazard area as determined by Panel No. (3500103360-3371) of the September 20, 1996 Edition of the F.E.M.A. Maps.
- SOILS: From the SCS Soil Survey of Bernalillo County site soils are identified as Bluepoint Lomay Fine Sands which are classified as hydrologic group "A" soils.



1"=750'±

VICINITY MAP

(M-10)

SCALE:
1"=60'



ENGINEER'S CERTIFICATION
I, FRED C. ARFMAN, LICENSED UNDER THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT THIS PROJECT WAS CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THOSE GRADES AND IMPROVEMENTS SHOWN HEREON AS FIELD 3, VERIFIED BY WALKER SURVEYING COMPANY ON AUGUST 25, 1998, IN ACCORDANCE WITH THE NEW MEXICO ENGINEERING AND SURVEYING ACT (SECTION 61-23-1 THROUGH 61-23-32 NMSD (1979)).

NO RETAINING WALLS WERE REQUIRED ON THE APPROVED FINAL GRADING PLAN, DATED 06/09/98 AND NONE WERE CONSTRUCTED AS PART OF THE DESERT FLOWER SUBDIVISION, UNIT TWO (M10/D12B).

Fred C. Arfman 12-21-98
FRED C. ARFMAN
NMPE NO. 7322

SECTION A-A
TEMPORARY
DRAINAGE RUNDOWN

1"=20' (H)
1"=5' (V)

ISAACSON & ARFMAN, P.A. Consulting Engineering Associates 128 Monroe Street N.E. Albuquerque, New Mexico 986MMGRD.DWGonw VIEW: 1 05/21/98		CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING GROUP	
MAR 31 1999		TITLE: DESERT FLOWER SUBDIVISION--UNIT TWO GRADING & DRAINAGE PLAN	
Design Review Committee	City Engineer Approval	Mo./Day/Yr.	
APPROVED AT DBB 02-03-98		Last Design Update	
City Project No. 5739.83	Zone Map No. M-10	Sheet 4	Of 23

AS-BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	DATE	WORK BY	DATE	FIELD NOTES	REVISIONS	NO.	DATE
ACS MONUMENT "1-M10" LOCATED AT THE SOUTHEAST CORNER OF SAGE RD. & UNSER BLVD.	5/96	ALS	1	ALS	DESIGN		
ELEV. = 5079.88							
TBM: RIM OF SOUTHWESTERLY MANHOLE AT SAPPHIRE ST. & UNSER BLVD.							
ELEV. = 5035.84							

BOUNDARY CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHD. DIR.	CHORD
C1	173.83	500.00	19°55'11"	87.80	N 01°00'38" W	172.96
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C3	54.93	350.00	08°59'34"	27.52	S 20°05'56" W	54.88

LEGEND

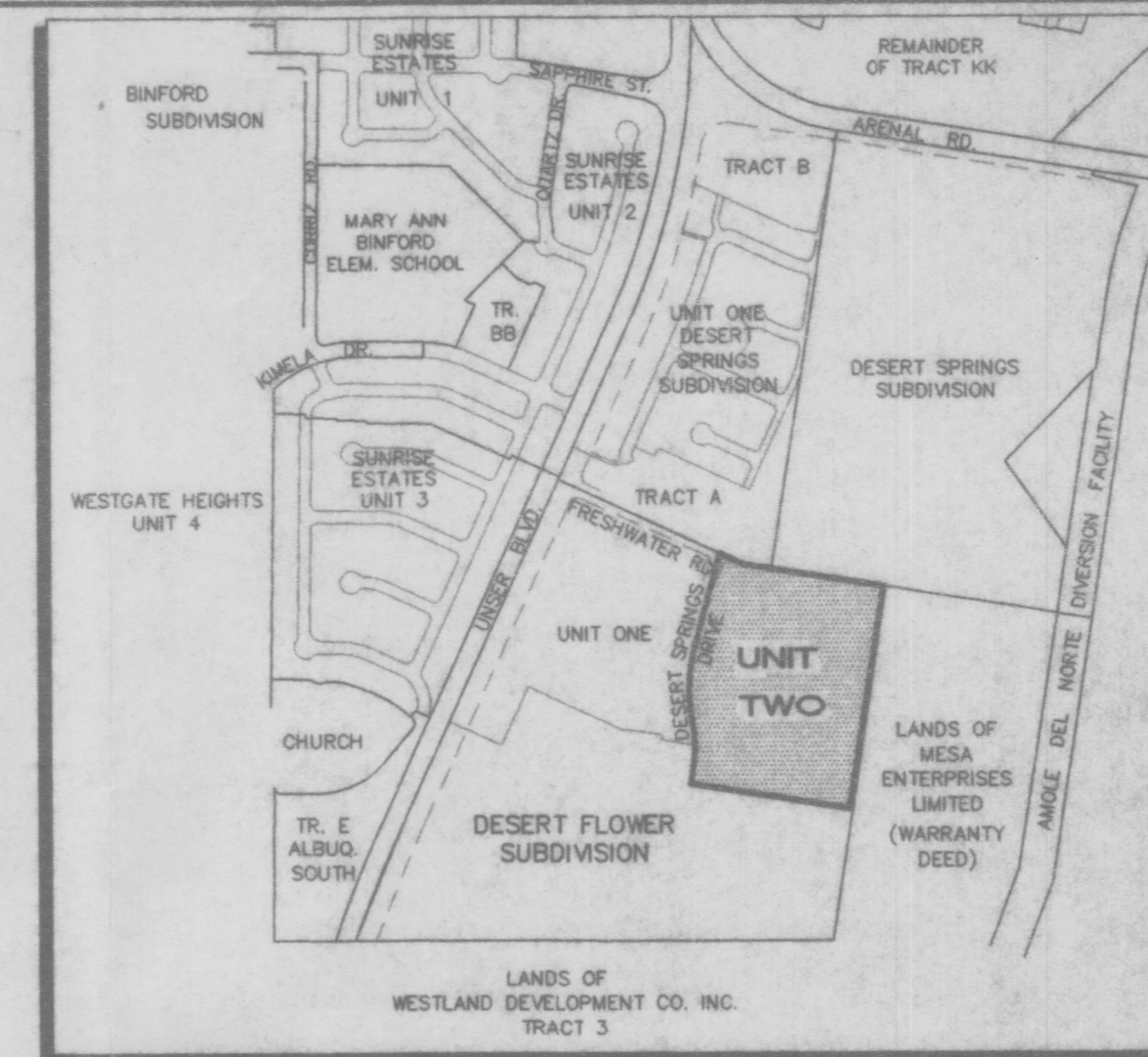
- 5012 EXISTING CONTOUR
- 15 PROPOSED CONTOUR
- + 78.3 EXISTING SPOT ELEVATION
- + 78.3 PROPOSED SPOT ELEVATION
- PG= PAD GRADE ELEVATION
- * TC=25.74 PROPOSED TOP OF CURB ELEVATION
- * FL=24.07 PROPOSED FLOW LINE ELEVATION
- UNIT BOUNDARY
- EROSION CONTROL BERM

EARTHWORK QUANTITIES

	CUT (CY)	FILL (CY)	NET (CY)
BANK VOL.	13331	9029	4302
LOOSE VOL.	13331	11286	2045
SUBSIDENCE FACTOR(S) @ 0.1'=2100 CY			
@ 0.2'=4200 CY			

NOTES

- LEGAL DESCRIPTION: A PORTION OF TRACT B, DESERT FLOWER SUBDIVISION, filed June 5, 1997, Vol. 97C, Folio 175.
- BENCHMARK: ACS MONUMENT "1-M10" ELEV = 5079.88
- ENGINEER: ISAACSON & ARFMAN, P.A.
128 Monroe Street NE, Albuquerque, NM
Attn: Fred Arfman
- SURVEYOR: ALS, Inc.
P.O. Box 30701, Albuquerque, NM
Attn: Tim Aldrich
- FLOOD HAZARD STATEMENT: No part of this development is affected nor contributes to a flood hazard area as determined by Panel No. (35001C03360-3371) of the September 20, 1996 Edition of the F.E.M.A. Maps.
- SOILS: From the SCS Soil Survey of Bernalillo County site soils are identified as Bluepoint Lomay Fine Sands which are classified as hydrologic group "A" soils.



VICINITY MAP
1"=750'± (M-10)



SECTION A-A
TEMPORARY DRAINAGE RUNDOWN
1"=20' (H)
1"=5' (V)

AS-BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	DATE	ACS MONUMENT "1-M10" LOCATED AT THE SOUTHEAST CORNER OF SAGE RD. & UNSER BLVD.	5/96	FIELD NOTES	1	AL	REMARKS
DESIGNED BY	DATE	ELEV. = 5079.88					DESIGN
DRAWN BY	DATE	DATE					REVISIONS
CHECKED BY	DATE	DATE					DATE
RECORDED BY	DATE	DATE					DATE
NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE
5739.83	12/97	5739.83	12/97	5739.83	12/97	5739.83	12/97

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque, New Mexico 87102
986MGRD.DWG Date: 05/21/98

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

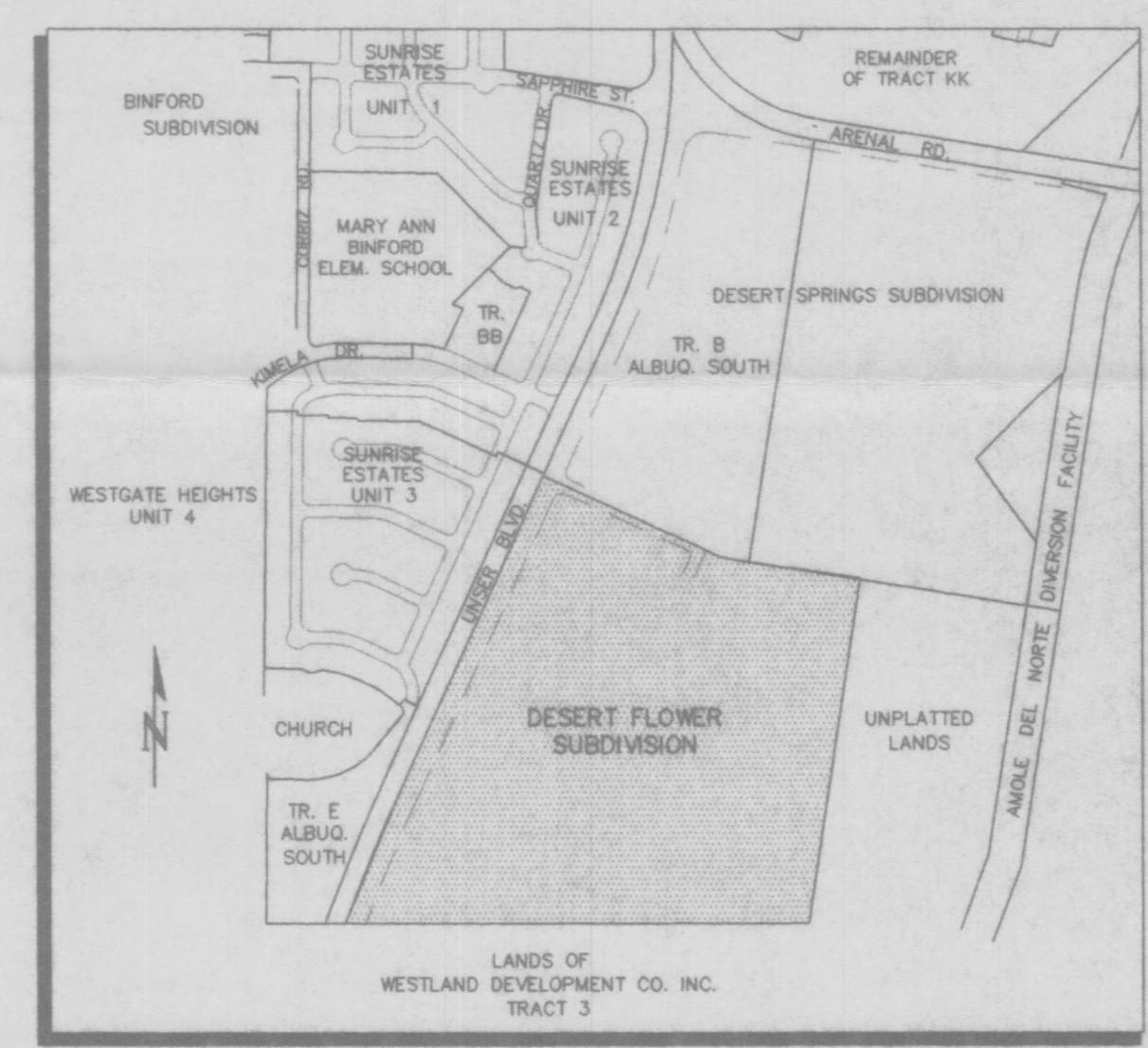
TITLE: **DESERT FLOWER SUBDIVISION--UNIT TWO GRADING & DRAINAGE PLAN**

Design Review Committee: _____ City Engineer Approval: _____

City Project No. **5739.83** Zone Map No. **M-10** Sheet **4** Of **23**



MASTER DRAINAGE PLAN
FOR
DESERT FLOWER SUBDIVISION
UNITS ONE THROUGH FOUR
CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO
APRIL 1997



VICINITY MAP
(M-10)

LEGEND

	UNIT BOUNDARY
	UNIT BOUNDARY (FUTURE)
	PROPERTY LINE
	EXISTING CONTOUR
	PROPOSED DRAINAGE BASIN
	DRAINAGE BASIN BOUNDARY
	FLOW ARROW
	WATER BLOCK
	PROPOSED INLET
	PROPOSED STORM DRAIN MH
	PROPOSED STORM DRAIN
	FUTURE STORM DRAIN

ONSITE MASTER DRAINAGE PLAN

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque, New Mexico

FIGURE 1

BOUNDARY CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHD. DIR.	CHORD
C1	173.83	500.00	19°55'11"	87.80	N 01°00'38" W	172.96
C2	313.06	675.00	26°34'23"	159.40	S 02°18'58" W	310.26
C3	54.93	350.00	08°50'34"	27.52	S 20°05'56" W	54.88

LEGEND

	5012	EXISTING CONTOUR	BANK
	15	PROPOSED CONTOUR	LOOS
	* 78.3	EXISTING SPOT ELEVATION	
	* 78.3	PROPOSED SPOT ELEVATION	
		FLOW ARROW	
PG=		PAD GRADE ELEVATION	
5022.0		PROPOSED TOP OF CURB ELEVATION	
* TC=25.74		PROPOSED FLOW LINE ELEVATION	
* FL=24.07		UNIT BOUNDARY	
		EROSION CONTROL BERM	

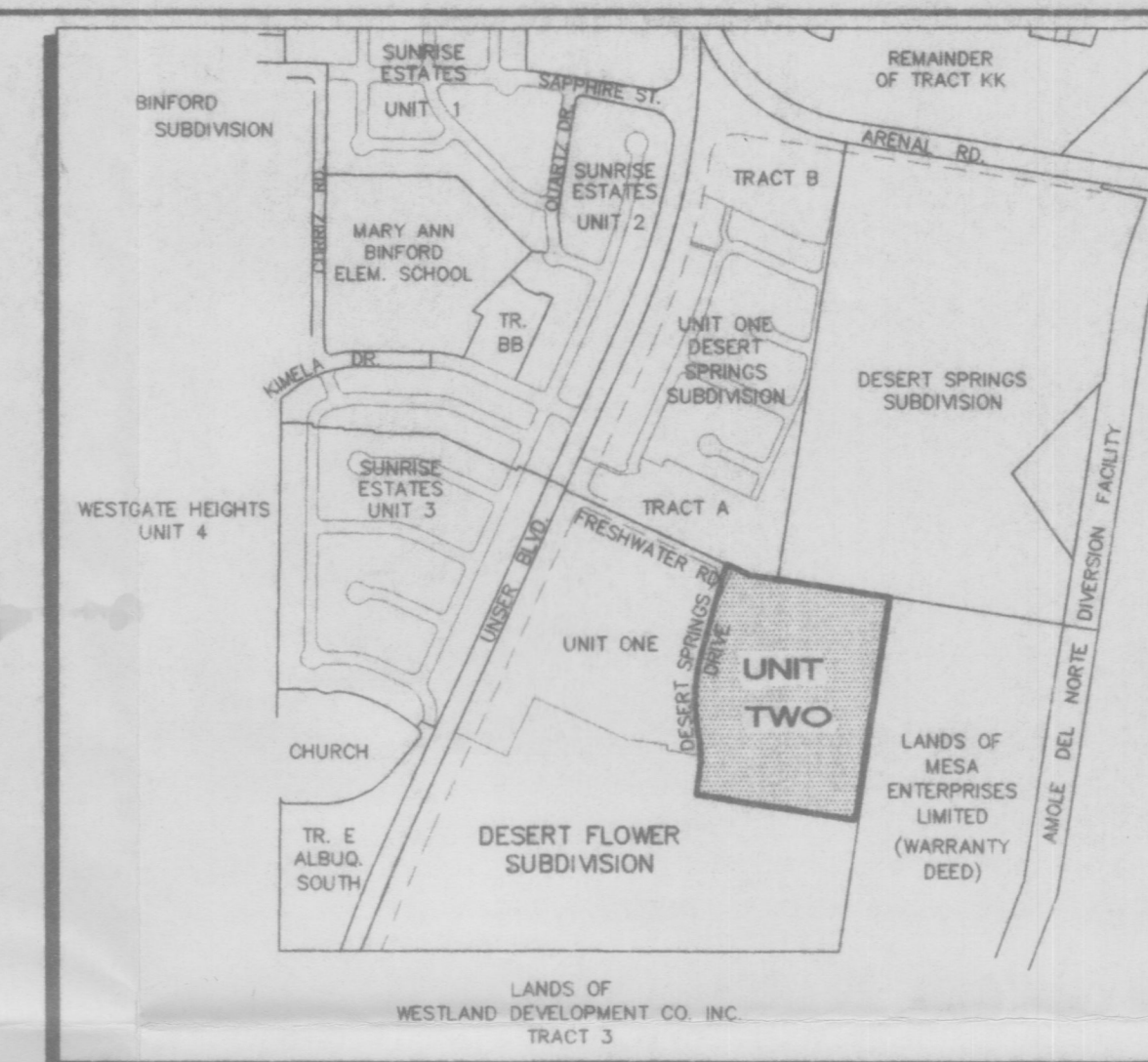
EARTHWORK QUANTITIES

	<u>CUT (CY)</u>	<u>FILL (CY)</u>	<u>NET (CY)</u>
BANK VOL.	13331	9029	4302
LOOSE VOL.	13331	11286	2045

SUBSIDENCE FACTOR(S) @ 0.1'=2100 CY
 @ 0.2'=4200 CY

NOTES

1. LEGAL DESCRIPTION: A PORTION OF TRACT B, DESERT FLOWER SUBDIVISION, filed June 5, 1997, Vol. 97C, Folio 175
2. BENCHMARK: ACS MONUMENT "1-M10"
ELEV = 5079.88
3. ENGINEER: ISAACSON & ARFMAN, P.A.
128 Monroe Street NE, Albuquerque, NM
Attn: Fred Arfman
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6. SOILS: From the SCS Soil Survey of Bernalillo County site soils are identified as Bluepoint Lomoy Fine Sands which are classified as hydrologic group "A" soils.



VICINITY MAP

 $1'' = 750' \pm$

(M-10)

SCALE
1"=60'



SECTION A-A TEMPORARY DRAINAGE RUNDOWN

$$1'' = 20' \text{ (H)}$$

$$1'' = 5' \text{ (V)}$$

SURVEY INFORMATION		BENCH MARKS	AS-BUILT INFORMATION	
FIELD	NOTES		CONTRACTOR	INFORMATION
1	ALS	ACS MONUMENT "1-M10" LOCATED AT THE SOUTHEAST CORNER OF SAGE RD. & UNSER BLVD. ELEV. = 5079.88	WORKING BY INSTRUMENTS ACCEPTANCE BY DATE	DATE
		TBM: RIM OF SOUTHWESTERLY MANHOLE AT SAPPHIRE ST & UNSER BLVD. ELEV. = 5035.84	VERIFICATION BY DATE CONNECTIONS CONNECTED BY DATE	DATE
			MICRO-FILM INFORMATION RECORDED BY DATE	DATE

[illegible]

The seal is circular with the text "FRED C. ARFMAN" at the top, "STATE OF NEW MEXICO" around the middle, and "REGISTERED PROFESSIONAL ENGINEER" at the bottom. The license number "7322" is in the center. A handwritten signature "Fred C. Arfman" is written across the seal. Below the seal, the date "05-18-98" is handwritten, and the word "REVIS" is partially visible.

NO.		DATE	REMARKS	BY
<i>REVISIONS</i>				
<i>DESIGN</i>				
DESIGNED BY		MJC	DATE	12/97
DRAWN BY		ANW	DATE	1/97

--	--

 **ISAACSON & ARFMAN, P.A.**
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque New Mexico

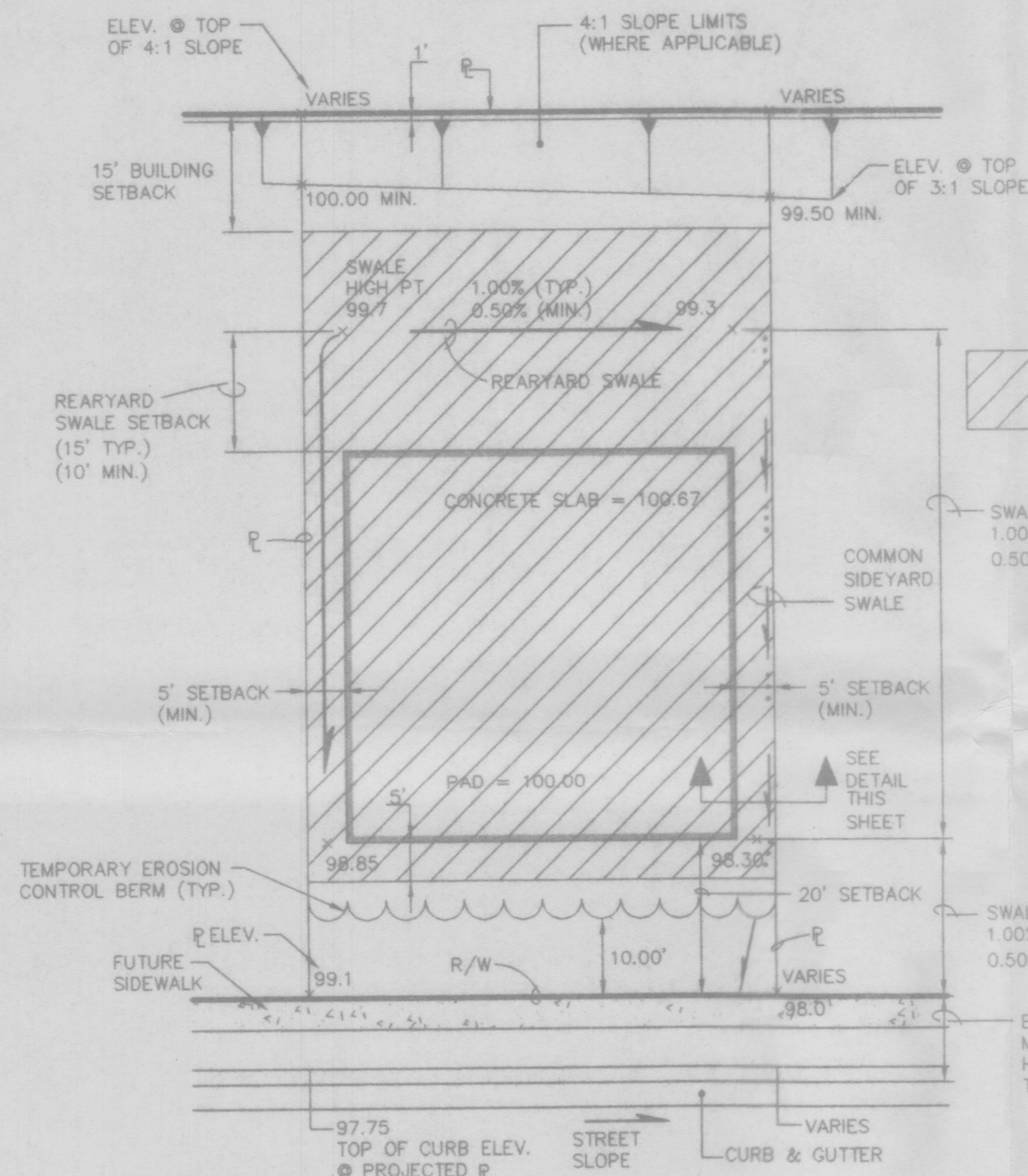
986GRDU2.DWGems VIEW: 1 05/20/98

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

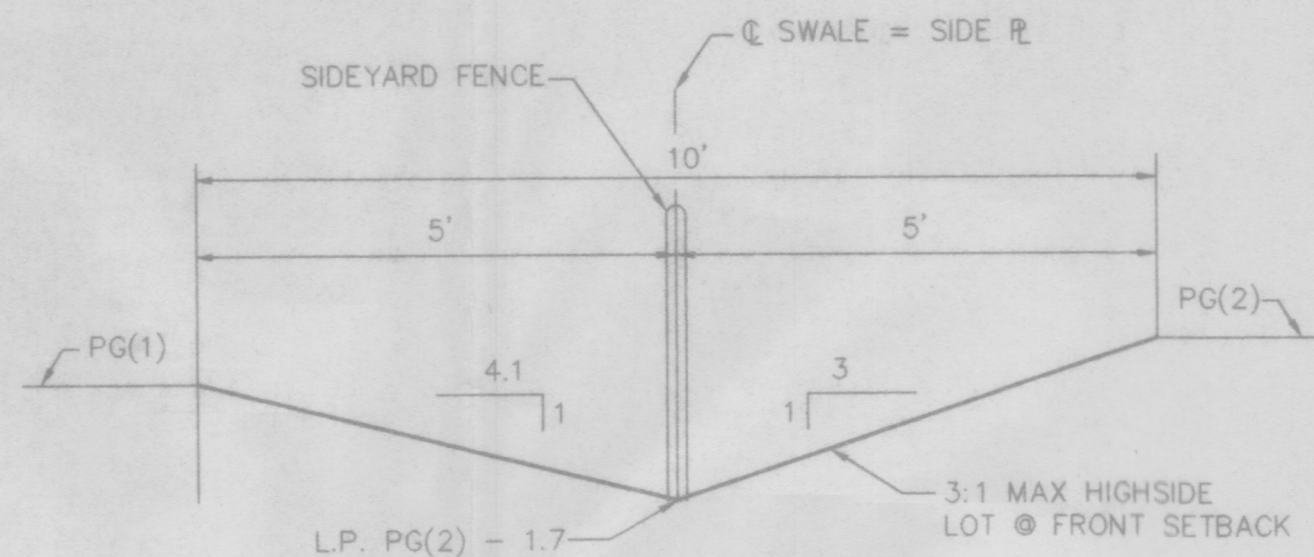
TITLE: DESERT FLOWER SUBDIVISION--UNIT TWO
GRADING & DRAINAGE PLAN

Design Review Committee	City Engineer Approval
-------------------------	------------------------

City Project No.	Zone
5730 83	A

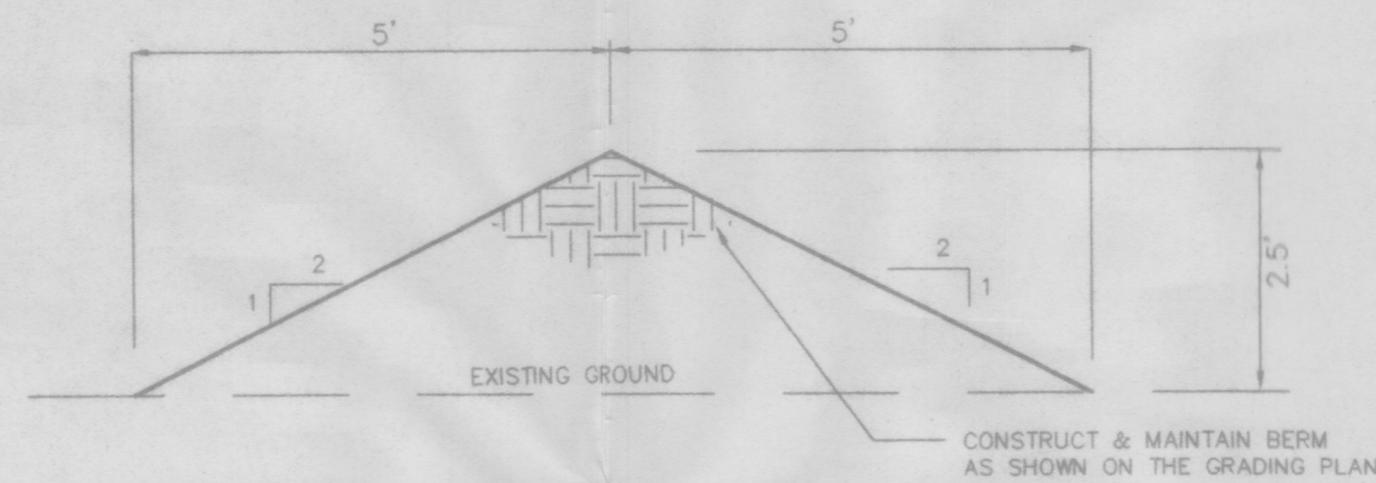


TYPICAL LOT GRADING SHOWING COMPACTION ZONE
1"=20'

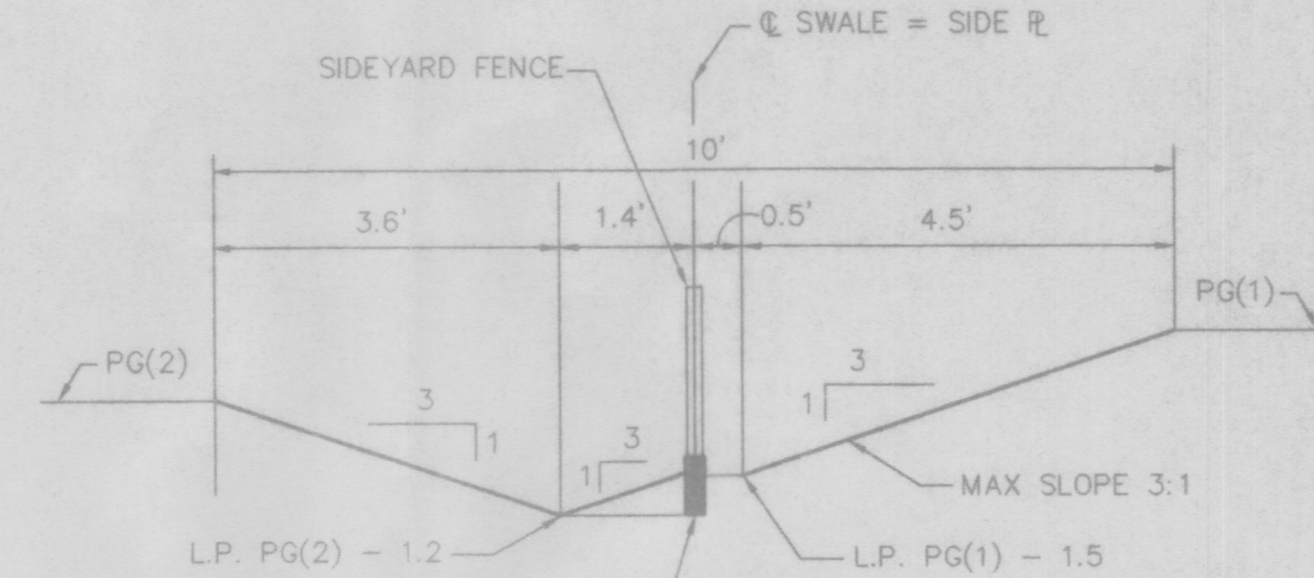


COMMON SIDEYARD DRAINAGE SWALE AT FRONTYARD SETBACK
SCALE: NTS

(FOR MAX Δ PG=0.6)



EROSION CONTROL BERM
SCALE: 1"=2'



GARDEN WALL BETWEEN LOTS AT FRONTYARD SETBACK
SCALE: NTS

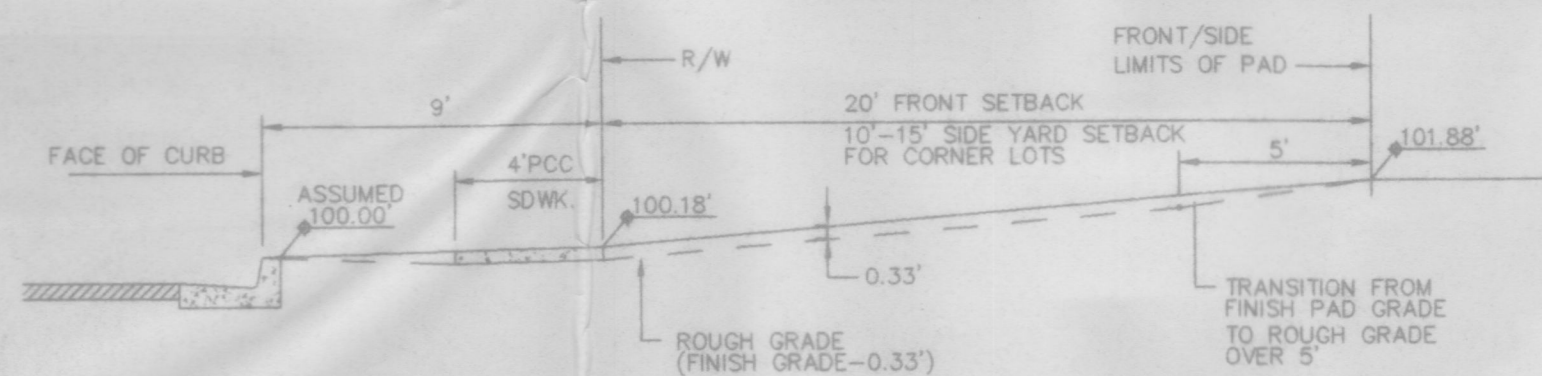
(FOR Δ PG>0.6)

GRADING NOTES:

- ALL TRASH, DEBRIS, & SURFACE VEGETATION SHALL BE CLEARED AND LEGALLY DISPOSED OFFSITE.
- ALL SUBGRADE AND FILL SHALL BE COMPACTED TO A MINIMUM OF 90% ASTM D-1557.
- EXCAVATION IS UNCLASSIFIED AND INCLUDES EXCAVATION TO SUBGRADE ELEVATIONS INDICATED, REGARDLESS OF CHARACTER OF MATERIALS ENCOUNTERED.
- CONFORM TO ELEVATIONS AND DIMENSIONS SHOWN ON PLANS WITHIN A TOLERANCE OF 0.3± FEET.
- SCARIFY AND COMPACT SUBGRADE FOR FILLS. PLACE FILL MATERIALS IN LAYERS NOT MORE THAN 8" IN LOOSE DEPTH. MOISTEN AS NECESSARY TO PROVIDE OPTIMUM MOISTURE (±2%) CONTENT.
- UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING AS SHOWN ON PLAN. SMOOTH FINISHED SURFACE WITHIN SPECIFIED TOLERANCE. COMPACT WITH UNIFORM SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE INDICATED.
- MAXIMUM SLOPES SHALL BE 3:1; MINIMUM SLOPES SHALL BE 1%.
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, 260-1990, FOR LOCATION OF EXISTING UTILITIES.
- IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE, THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFORE. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES IN PLANNING AND CONDUCTING EXCAVATION. THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
- THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT ERODED AND WASHED DOWN THE STREET.
- OWNER WILL PROVIDE SOIL TESTING AND INSPECTION SERVICES DURING EARTHWORK OPERATIONS. ALLOW TESTING SERVICE TO INSPECT AND APPROVE COMPACTED SUBGRADES AND FILL LAYERS BEFORE FURTHER CONSTRUCTION WORK IS DONE. SHALL COMPACTION TESTS INDICATE INADEQUATE DENSITY, CONTRACTOR SHALL PROVIDE ADDITIONAL COMPACTION AND TESTING AT NO ADDITIONAL EXPENSE.
- OWNER HAS ESTABLISHED SUBDIVISION BOUNDARY CORNERS. CONTRACTOR SHALL PROVIDE ALL OTHER CONSTRUCTION STAKING INCLUDING TRACT CORNERS. CONTRACTOR SHALL LOCATE AND PRESERVE ALL BOUNDARY CORNERS AND REPLACE ANY LOST OR DISTURBED CORNERS.
- ISAACSON & ARFMAN, P.A. (THE ENGINEER) HAS PREPARED THIS GRADING PLAN TO ESTABLISH FINAL SURFACE GRADES FOR BOTH THE PROPOSED INDIVIDUAL RESIDENTIAL LOTS AND THE PUBLIC RIGHTS-OF-WAY.
- THE EARTHWORK CONTRACTOR (CONTRACTOR) IS REQUIRED TO REVIEW THE FOLLOWING: GEOTECHNICAL ENGINEERING EVALUATION FOR TRACT 38 HIGH DESERT DEVELOPMENT, PREPARED BY GEO-TEST, DATED DECEMBER 19, 1994, FOR CHAMA DEVELOPMENT CORP. COPIES OF THIS DOCUMENT MAY BE REVIEWED AT THE OFFICE OF ISAACSON & ARFMAN, P.A., 128 MONROE STREET N.E., ALBUQUERQUE, NEW MEXICO, (505) 266-8828. THE EARTHWORK CONTRACTOR'S BID SHALL INCLUDE ALL COSTS ASSOCIATED WITH THE IMPLEMENTATION OF ALL RECOMMENDATIONS CONTAINED IN THESE STUDIES.

EROSION CONTROL

- THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO THE PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING EROSION CONTROL BERMS (AS DETAILED BELOW) AS SHOWN ON THE PLAN AND WETTING THE SOIL TO KEEP IT FROM BLOWING.
- THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY ENVIRONMENTAL HEALTH DEPARTMENT PRIOR TO BEGINNING CONSTRUCTION. AN EXCAVATION PERMIT IS REQUIRED FOR ALL WORK WITHIN PUBLIC RIGHT-OF-WAY.
- SEE GRADING NOTES.



FRONT/SIDE YARD GRADING
1"=5'-0'

ESTIMATED EARTHWORK QUANTITIES

EXCAVATION =
FILL =

NOTE:
THE ENGINEER ASSUMES NO LIABILITY AS TO THE CORRECTNESS OF THE ABOVE ESTIMATED QUANTITIES. THE CONTRACTOR SHALL MAKE HIS OWN TAKE-OFF FOR BIDDING PURPOSES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE PROVIDING OF ANY ADDITIONAL FILL MATERIAL OR THE REMOVAL OF EXCESS EXCAVATED MATERIAL IN ORDER TO ACHIEVE A BALANCED JOB.

PNM GRADING:

THE GRADING CONTRACTOR SHALL PROVIDE FOR THE PROPER GRADING OF ALL PNM EASEMENTS WHERE INDICATED ON THE GRADING PLAN. THE EASEMENTS SHALL BE GRADED AS FOLLOWS:

- TO PROVIDE A 10' WIDE TRENCHING PATH ON THE CORRESPONDING LOT LINE
- ±6" (5% MAX. CROSS SLOPE) ACROSS THE PATH'S WIDTH.
- NO GRADE BREAKS (BENCHES) AT LOT LINES OR AT EASEMENT INTERSECTIONS.
- IN AREAS WHERE THE 10' TRENCHING PATH ENCLOSES UPON PONDING AREAS, THOSE PONDS ARE NOT TO BE EXCAVATED OR FORMED UNTIL SUCH TIME THAT ALL UTILITIES HAVE BEEN INSTALLED AND THE TRENCHES PROPERLY BACKFILLED.
- WHERE THE 10' TRENCHING PATH ENCLOSES UPON A DWELLING UNIT'S PAD, THE PATH SHALL BE AT THE SAME ELEVATION AS THE PAD TO INSURE THE PAD'S CERTIFICATION.

ENGINEER'S CERTIFICATION

APPROVAL FOR ROUGH GRADING (±0.1')

CONDITION: TOP SOIL DISTURBANCE PERMIT REQUIRED PRIOR TO COMMENCING EARTHWORK OPERATIONS.

HYDROLOGY DIVISION
PUBLIC WORKS DEPARTMENT
CITY OF ALBUQUERQUE

DATE

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque New Mexico
930GRDU2.DWGonw VIEW: 2 12/19/97

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: DESERT FLOWER SUBDIVISION--UNIT TWO GRADING & DRAINAGE DETAILS

Design Review Committee	City Engineer Approval	Ms./Day/Yr.	Ms./Day/Yr.
City Project No.	Zone Map No.	Sheet	Of
	M-10	5	23

SURVEY INFORMATION

FIELD NOTES

1 ALS 5/96

ENGINEER'S SEAL



REVISIONS

NO.	DATE	REMARKS
DESIGNED BY	MJC	DATE 12/97
DRAWN BY	ANW	DATE 12/97
CHECKED BY	FCA	DATE 12/97

