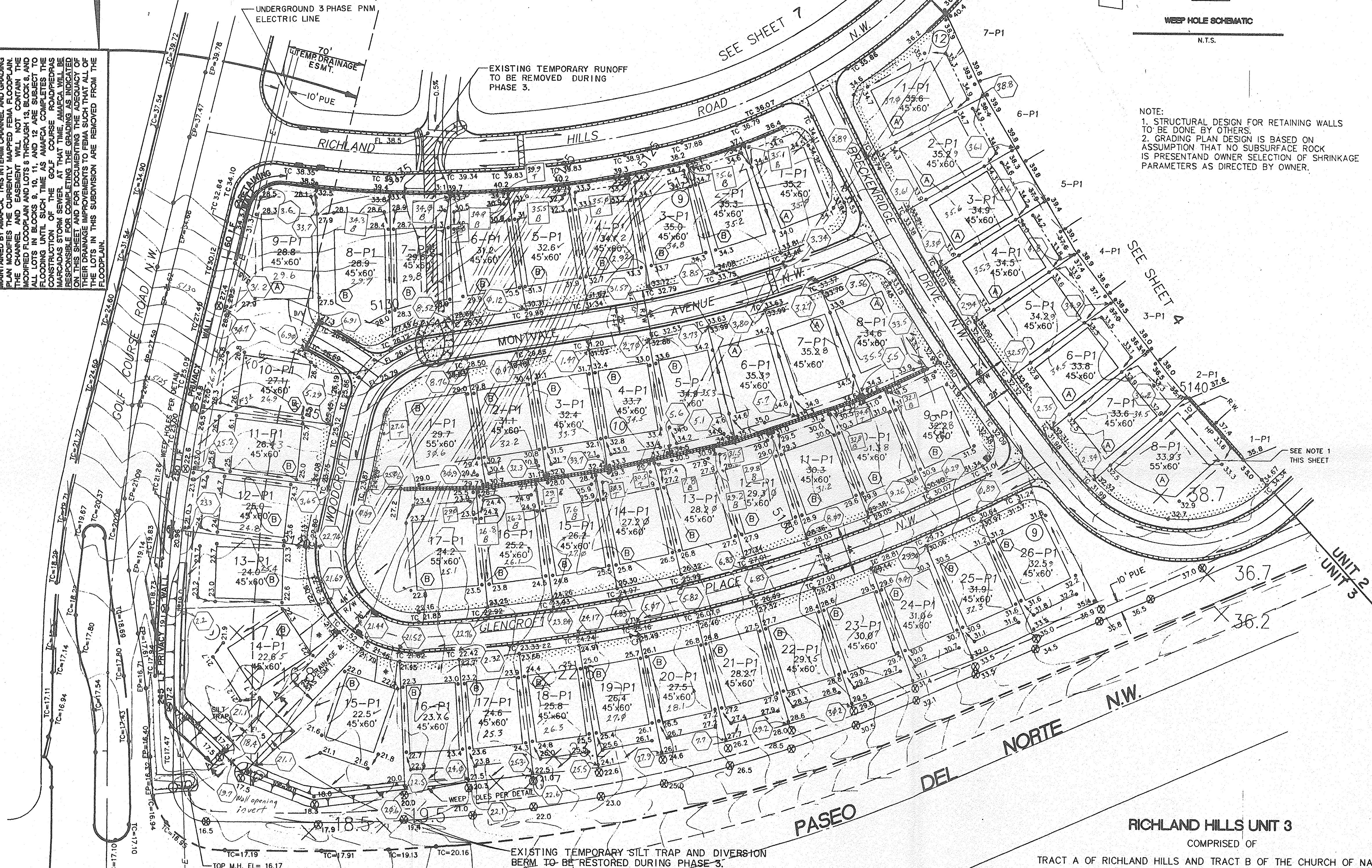


- LEGEND**
- TC-9843 PROPOSED TOP OF CURB ELEVATION
  - 99.0 PROPOSED SPOT ELEVATION
  - 08.0 EXISTING SPOT ELEVATION (GRID & TC)
  - EROSION CONTROL BERM
  - PROPOSED CONCRETE VALLEY GUTTER
  - EXISTING CURB & GUTTER
  - PROPOSED MOUNTABLE CURB & GUTTER
  - PROPOSED STANDARD CURB & GUTTER
  - 4973 EXISTING CONTOUR W/ INDEX ELEVATION
  - PROPOSED SLOPE
  - SWALE
  - FLOW ARROW
  - PROPOSED RETAINING WALL
  - 30" SD EXISTING STORM DRAIN
  - 30" SD PROPOSED STORM DRAIN
  - WATER BLOCK (HIGH POINT)
  - PROPOSED RETAINING/FLOOD WALL
  - 34.7 PROPOSED POND
  - MENDATORY DRIVEWAY



EXISTING TEMPORARY SILT TRAP AND DIVERSION BERM TO BE RESTORED DURING PHASE 3.

HYDRAULIC CALCULATION FOR DROP INLET MANHOLE LOCATED AT N. E. CORNER OF PASEO DEL NORTE AND GOLF COURSE RD.

LOW POINT E.P. = 16.32  
RIM ELEV. = 16.17  
CENTER OF OPENING IS 1.33' BELOW RIM SO SURFACE HEAD AVAILABLE IS 16.32' - (16.17' + 1.33') = 1.42'

OPENING CAPACITY IS:  
 $Q_{max} = 0.87 \times 20.0 \times 0.68 \times 1.42 \times 1.48 = 66.34 \text{ CFS}$   
 $Q_{min} = 53.51 \text{ CFS}$   
CLOGGING FACTOR = 38.02%

I, Ellery A. Bistrow, Jr., P.E., do hereby certify that, to the best of my knowledge, the as constructed grading and drainage features of this subdivision as noted hereon were measured December 26 and 27, 1996, said features being in substantial compliance with the approved grading plans dated July 14, 1995, subject to the issues presented hereon (see Certification Notes on Page 1 of 3).

Ellery A. Bistrow Jr.  
82-26-97

- LEGEND:**
- Elevation, constructed
  - Elevation, constructed; T = Top of Retaining Wall
  - Elevation, constructed; B = Bottom of Retaining Wall

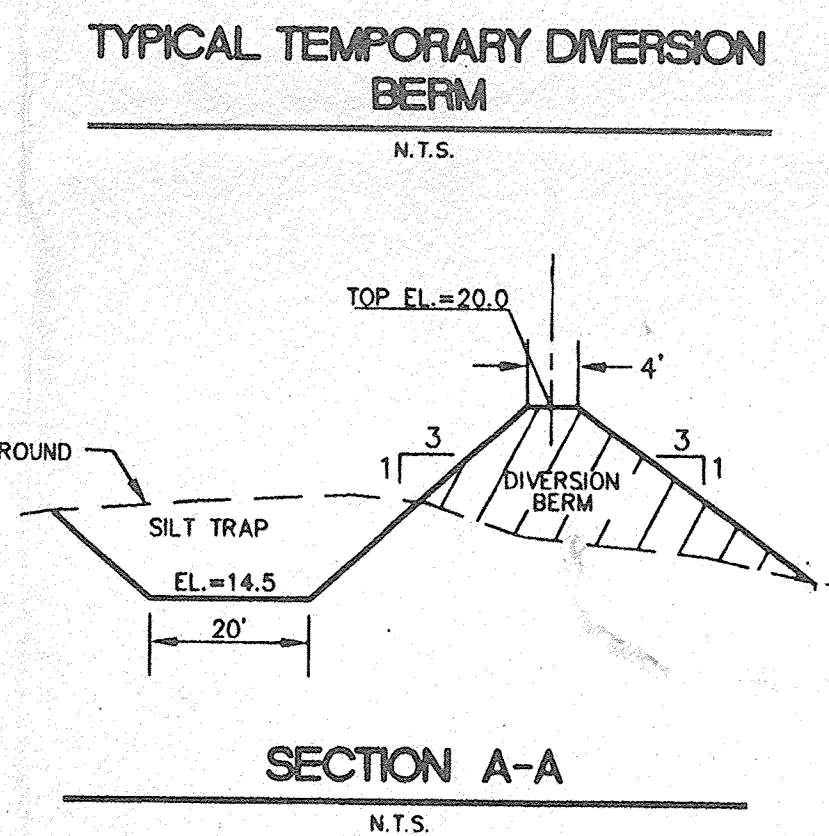
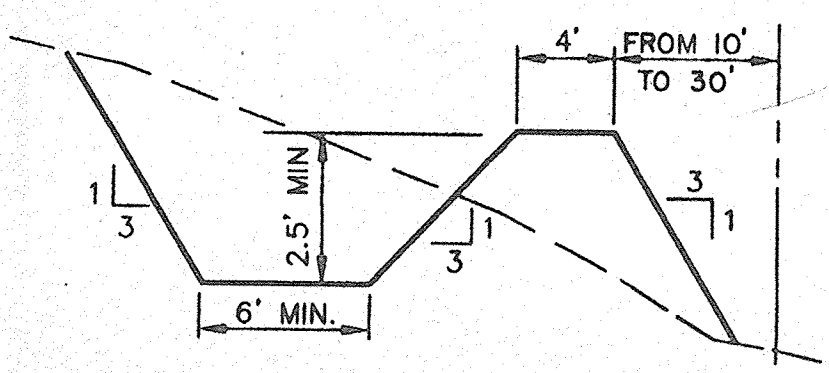
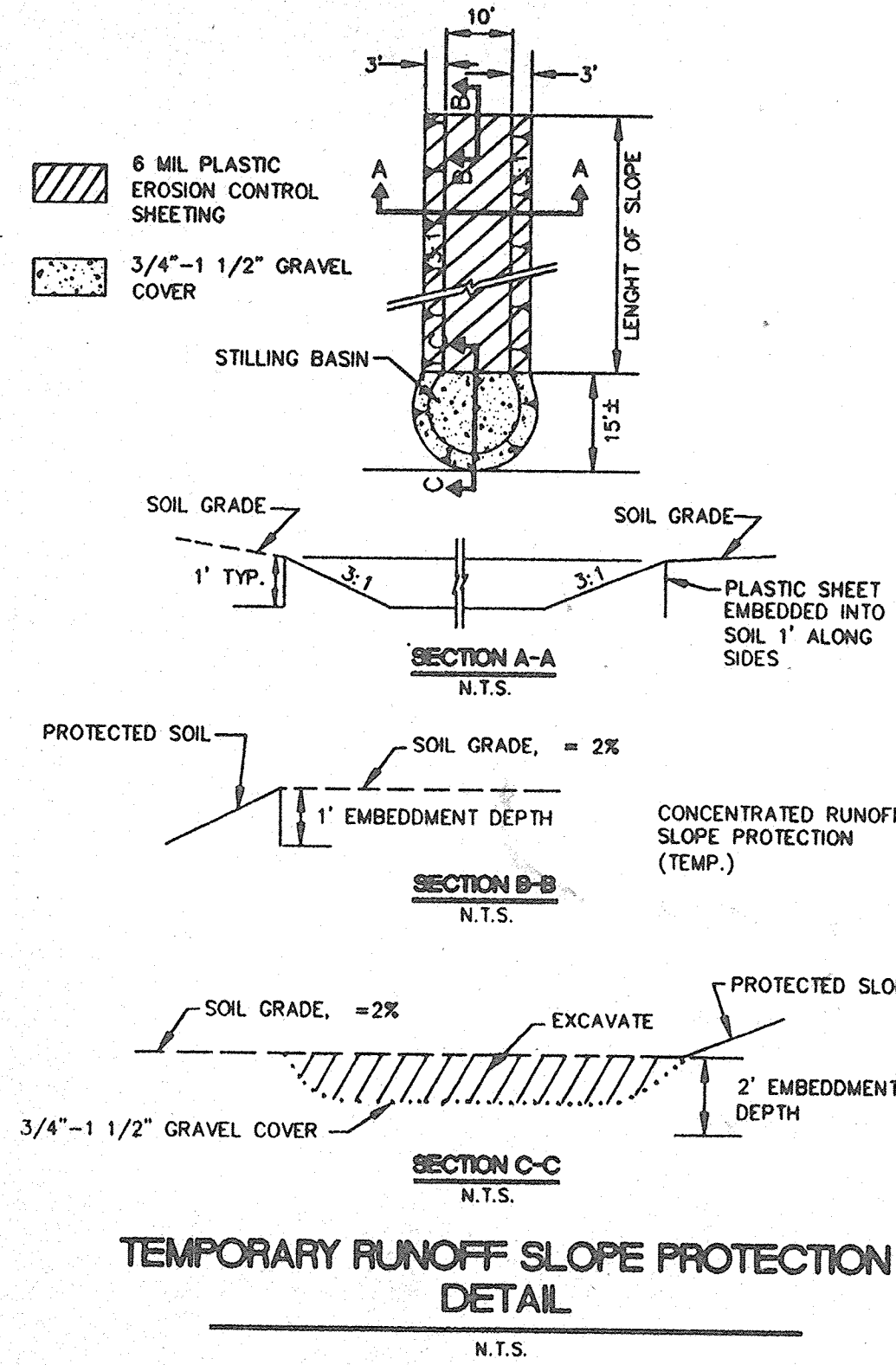
**RICHLAND HILLS UNIT 3**  
COMPRISED OF  
TRACT A OF RICHLAND HILLS AND TRACT B OF THE CHURCH OF NAZARENE  
SITUATE WITHIN  
TOWN OF ALAMEDA GRANT  
"PROJECTED" SECTION 13, T11N, R2E, N.M.P.M.  
CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

JUNE, 1994  
DRB-94-222

APPROVED FOR ROUGH GRADING  
(± 1 FT.)

JPC  
JPC  
CITY HYDROLOGY

7-14-94  
6-22-94  
DATE



DATE: MAY, 1994		community sciences corporation		Z		NO.	DATE	Z	DESIGNED BY	Z	DRAWN BY	Z	CHECKED BY
SCALE: 1"=50'													
DESIGNED: J.R. JDH													
DRAWN: SPS													
JOB NO.: 143-20-037		L&D PLANNING P.O. Box 1328		ENGINEERING Corralia, N.M. 87048									
CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING GROUP													
TITLE: RICHLAND HILLS UNIT THREE GRADING AND EROSION CONTROL PLAN													
APPROVALS		ENGINEER		DATE		APPROVALS		ENGINEER		DATE			
DRC CHAIRMAN		J.R. Smith		3-29-95		WATER		N/A RWK		3-29-95			
TRANSPORTATION		M.A. EDO		3-15-95		WASTE WATER		N/A RWK		3-29-95			
HYDROLOGY		J. Custer		3-15-95		A.M.A.F.C.A.							
PROJECT NO. 4878.92				MAP NO. C-12		SHEET 4		OF 26					



BENCH MARK:

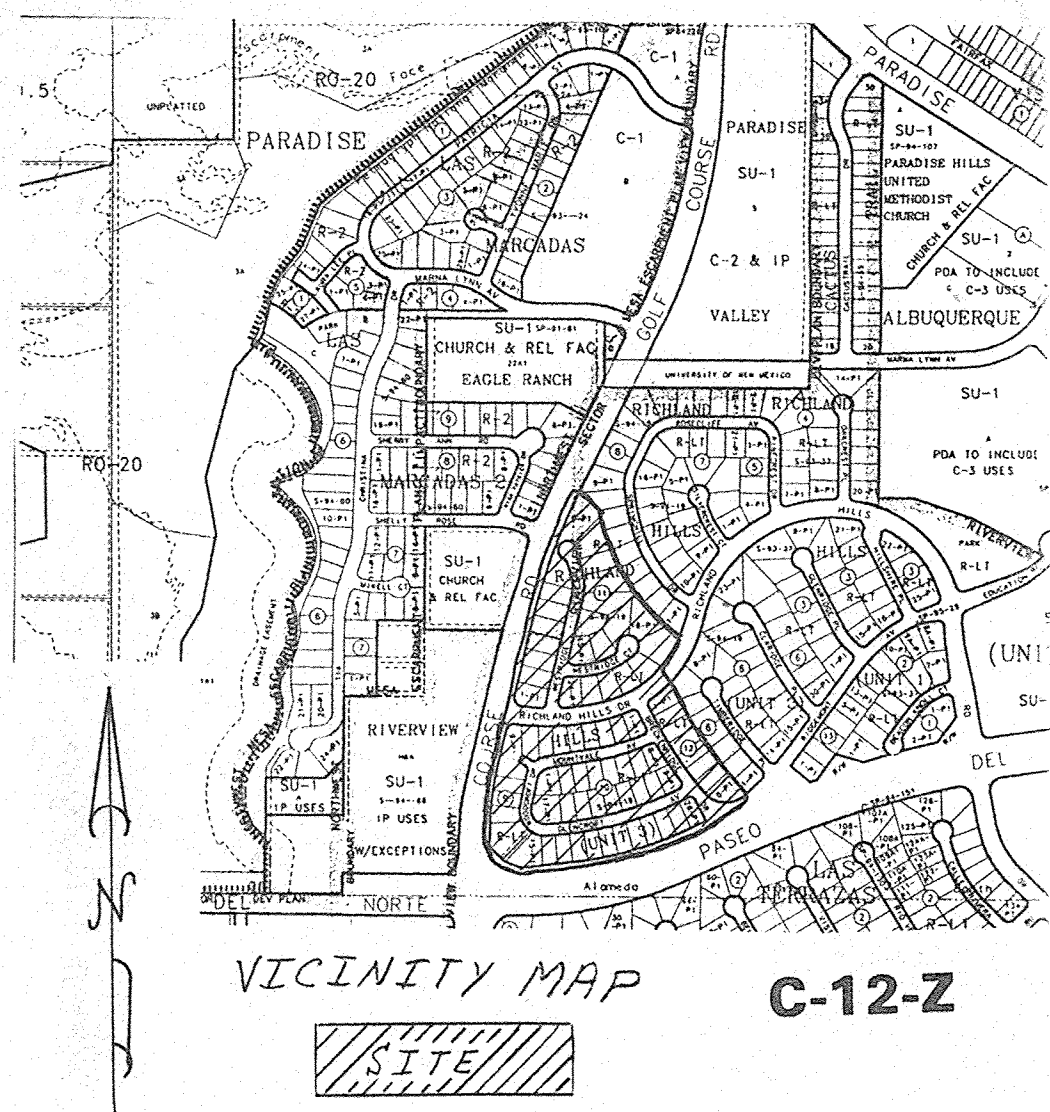
Basis of Record Drawing Elevations is the ACS BM 2-C12, located at the northwest corner of Paradise Blvd., N.W. and Fairfax, N.E., said monument being an aluminum cap in the top of curb, elevation = 5,175.786 feet.

Site Legal Description:

Richland Hills Subdivision, Unit No. 3 as recorded in Volume 95C, Folio 212 at the Bernalillo County Clerk's office on June 15, 1995.

Physical Location:

The subdivision is situated north and adjoining Paseo del Norte, N.W., and Golf Course Road, N.W., Albuquerque, New Mexico.



I, Ellery A. Biathrow, Jr., P.E., do hereby certify that, to the best of my knowledge, the as constructed grading and drainage features of this subdivision as noted hereon were measured December 26 and 27, 1996, said features being in substantial compliance with the approved grading plans dated July 14, 1995, subject to the issues presented hereon (see Certification Notes on Page 1 of 3).

Ellery A. Biathrow, Jr.  
92426-77

Certification Notes:

1. Inspection of the rough graded site was completed during January, 1995 at which time pad grading and major compaction was completed, defined retaining walls, curb, and gutter not being completed.
2. As constructed elevations were obtained by the certifying engineer herein and/or under his direct supervision.
3. Significant deviations of constructed features from the approved (July 14, 1995) grading plan design features are noted below:
  - a. Certain interior pad grade elevations were adjusted, changes noted herein.
4. Outstanding items of drainage control, necessary to complete the intent of the drainage plan, said items being the responsibility of each lot house builder are noted below:
  - a. Completion of the retaining wall extensions between the front of houses to back of sidewalk were not present as of the certifying date.
  - b. Definition of side yard drainage swales will need to be fine graded for each lot upon completion of each house.
  - c. Provision for drainage openings in perimeter wall is necessary for rear yard drainage.
5. Each grading plan defined retaining wall, except as noted above, has been constructed in conformance with the parameters contained on the approved (July 14, 1995) grading plan. Additional retaining walls were constructed to provide drainage control, said additional walls are shown hereon.

F.N.: A-MQ96019-003-12299601

GRADING AND DRAINAGE

CERTIFICATION

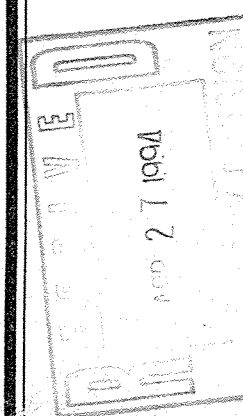
RICHLAND HILLS, UNIT 3

SUBDIVISION

LEGEND:

- |  |   |
|--|---|
|  | -- Elevation, constructed                               |
|  | -- Elevation, constructed; T = Top of Retaining Wall    |
|  | -- Elevation, constructed; B = Bottom of Retaining Wall |





Background Info for  
Report on Richland Hills 2/3  
Engineer Stamp Dated 4-26-99  
by Stephen L. Crawford

**DESCRIPTION**

ALL OF PARCELS H-3, H-4 AND H-5, OF RIVERVIEW, ALBUQUERQUE, NEW MEXICO, SITUATE WITHIN THE TOWN OF ALAMEDA GRANT ("PROJECTED" SECTION 13, T11N, R2E, N.M.P.M.), CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, AS THE SAME IS SHOWN AND DESIGNATED IN VOLUME C30, FOLIO 178, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO ON JUNE 27, 1986, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING FOR A TIE TO THE CORPS OF ENGINEERS CAP "R, ALAMEDA B-2" (METAL TARGET SET IN CONCRETE AND HAVING NEW MEXICO STATE PLANE COORDINATES, CENTRAL ZONE OF X=973,513.20 AND Y=1,520,142.81); THENCE, N24°19'32"N, 1538.46 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY LINE OF PASEO DEL NORTE, N.W. (156' R/W), THE SOUTHWEST CORNER OF LOT 10-A, BLOCK D, ALBUQUERQUE WEST SUBDIVISION (N24°09'57", 211.93 FEET) TO POINT A; THENCE, S04°04'00"E, 50.76 FEET TO POINT B, THE SOUTHEAST CORNER AND TRUE CORNER OF BEGINNING OF THE PARCEL HEREIN DESCRIBED, THENCE, ALONG THE NORTHERLY RIGHT-OF-WAY LINE OF PASEO DEL NORTE, N.W., N84°30'01"W, 428.64 FEET TO A POINT OF CURVATURE; THENCE SOUTHWESTERLY, 2135.86 FEET ALONG THE ARC OF A CURVE BEARING TO THE LEFT (SAID ARC BEARING A RADIUS OF 4219.66 FEET, A CENTRAL ANGLE OF "29°00'05" AND A CHORD THAT BEARS N80°59'57"W, 2119.13 FEET) TO POINT C; THENCE, S04°04'00"E, 50.76 FEET TO POINT D, THE SOUTHWEST CORNER OF LOT 10-A, BLOCK D, ALBUQUERQUE WEST SUBDIVISION (N24°09'57", 211.93 FEET) TO POINT E; THENCE, SOUTHWESTERLY, 548.90 FEET ALONG THE ARC OF A CURVE BEARING TO THE RIGHT (SAID ARC BEARING A RADIUS OF 1322.00 FEET, A CENTRAL ANGLE OF "23°47'22" AND A CHORD THAT BEARS S78°22'28"W, 544.93 FEET) TO A POINT OF TANGENCY; THENCE, N89°43'51"W, 99.76 FEET TO A POINT OF CURVATURE; THENCE, NORTHWESTERLY, 47.13 FEET ALONG THE ARC OF A CURVE BEARING TO THE RIGHT (SAID ARC BEARING A RADIUS OF 30.00 FEET, A CENTRAL ANGLE OF "14°00'00" AND A CHORD THAT BEARS N20°25'29"W, 47.13 FEET) TO POINT F, THE SOUTHWEST CORNER OF LOT 10-A, BLOCK D, ALBUQUERQUE WEST SUBDIVISION (N24°09'57", 211.93 FEET) TO POINT G; THENCE, ALONG THE WESTERLY RIGHT-OF-WAY LINE OF GOLF COURSE ROAD, N.W. (118' R/W), N80°17'00"E, 100.94 FEET TO A POINT OF CURVATURE; THENCE NORTHEASTERLY, 286.04 FEET ALONG THE ARC OF A CURVE BEARING TO THE RIGHT (SAID ARC BEARING A RADIUS OF 1259.06 FEET, A CENTRAL ANGLE OF "13°28'19" AND A CHORD THAT BEARS N07°01'09"E, 285.36 FEET) TO A POINT OF TANGENCY (H06°00'00" R/W); THENCE, N13°45'19"E, 50.76 FEET TO POINT H, THE SOUTHWEST CORNER OF LOT 10-A, BLOCK D, ALBUQUERQUE WEST SUBDIVISION (N24°09'57", 211.93 FEET) TO POINT I; THENCE, NORTHWESTERLY, 293.38 FEET ALONG THE ARC OF A CURVE BEARING TO THE RIGHT (SAID ARC BEARING A RADIUS OF 294.70 FEET, A CENTRAL ANGLE OF "03°23'08" AND A CHORD THAT BEARS N24°53'07"E, 174.11 FEET) TO A POINT OF TANGENCY; THENCE, N26°34'41"E, 335.91 FEET TO A POINT ON THE SOUTH BOUNDARY OF LANDS OF U.N.M. AND THE NORTHWEST CORNER OF TRACT B, CHURCH OF THE NAZARENE; THENCE, THENCE DEPARTING SAID EASTERLY RIGHT-OF-WAY LINE OF GOLF COURSE ROAD, N.W. (118' R/W), N89°48'27"E, 151.20 FEET TO A POINT, SAID POINT BEING THE SOUTHEAST CORNER OF SAID TRACT B, CHURCH OF THE NAZARENE, THENCE ALONG THE EAST BOUNDARY LINE OF SAID TRACT B, CHURCH OF THE NAZARENE AND TRACT 1-A, PARADISE VALLEY, N.M. (185'44", 461.26 FEET TO A POINT ON CURVE ON THE EASTERLY RIGHT-OF-WAY LINE OF GOLF COURSE ROAD, N.W. (118' R/W), N89°48'27"E, 151.20 FEET TO A POINT OF TANGENCY; THENCE, N26°34'41"E, 335.91 FEET TO A POINT ON THE SOUTH BOUNDARY OF LANDS OF U.N.M. AND THE NORTHWEST CORNER OF TRACT B, CHURCH OF THE NAZARENE; THENCE, THENCE DEPARTING SAID EASTERLY RIGHT-OF-WAY LINE OF GOLF COURSE ROAD, N.W. (118' R/W), N89°48'27"E, 151.20 FEET TO A POINT, SAID POINT BEING THE SOUTHEAST CORNER OF SAID TRACT B, CHURCH OF THE NAZARENE, THENCE ALONG THE EASTERLY BOUNDARY OF THE LANDS OF U.N.M. (194'45", 105.69 FEET TO A POINT AND THE NORTHEAST CORNER OF THE LANDS OF U.N.M.); THENCE ALONG THE SOUTHERLY BOUNDARY OF RIVERVIEW PARK, H-1, S89°54'06", 244.00 FEET TO A POINT OF CURVATURE; THENCE SOUTHEASTERLY, 26.19 FEET ALONG THE ARC OF A CURVE BEARING TO THE RIGHT (SAID ARC BEARING A RADIUS OF 26.19 FEET, A CENTRAL ANGLE OF "90°00'00" AND A CHORD THAT BEARS S87°55'37"E, 26.19 FEET) TO A POINT ON THE WEST BOUNDARY OF ALBUQUERQUE WEST, UNIT 1 AT THE WESTERLY TERMINUS OF MARINA LYNN, AVENUE, N.W. (60' R/W) AND THE NORTHEAST CORNER OF THE PARCEL HEREIN DESCRIBED; THENCE ALONG THE WESTERLY BOUNDARY OF TRACT A, ALBUQUERQUE WEST, UNIT 1, S00°28'29", 517.69 FEET TO AN ANGLE POINT; THENCE ALONG THE SOUTHERLY BOUNDARY OF TRACT A, ALBUQUERQUE WEST, UNIT 1, S89°54'06", 132.00 FEET TO AN ANGLE POINT; THENCE, S71°02'00"E, 20.00 FEET TO AN ANGLE POINT; THENCE, S06°09'59", 473.25 FEET TO AN ANGLE POINT; THENCE, S51°44'42"E, 185.01 FEET TO AN ANGLE POINT; THENCE, S74°14'55"E, 62.91 FEET TO AN ANGLE POINT; THENCE, S45°43'55"E, 239.71 FEET TO AN ANGLE POINT; THENCE, S69°43'15"E, 259.52 FEET TO AN ANGLE POINT, SAID POINT BEING THE SOUTHEAST CORNER OF TRACT C, ALBUQUERQUE WEST, UNIT 1 AND THE SOUTHWEST CORNER OF LOT 10-A, BLOCK D, ALBUQUERQUE WEST, THENCE, S00°155'W, 51.25 FEET TO THE PLACE OF THE NORTH LINE OF ASSESSMENT, THE SOUTHEAST CORNER AND TRUE CORNER OF BEGINNING OF THE PARCEL HEREIN DESCRIBED.

THE ABOVE DESCRIBED ENCLOSURE CONTAINS 70.6015 ACRES, MORE OR LESS

**NOTES PERTAINING TO THIS SURVEY**

1. BEARING BASE FOR THIS SURVEY IS THE "RIVERVIEW BULK LAND PLAT" FILED FOR RECORD ON JUNE 27, 1986 IN VOLUME C-30, FOLIO 178. ROTATE ALL BEARINGS CLOCKWISE 00°01'14" TO OBTAIN STATE PLANE BEARINGS. ALL DISTANCES ARE GROUND.
2. STATE PLANE COORDINATES SHOWN FOR "R. ALAMEDA & B" ARE FROM RECORD INFORMATION. COMMUNITY SCIENCES CORPORATE COORDINATE VALUES FOR THIS STATION ARE X = 373,512.40 AND Y = 1,520,143.16.
3. UNLESS OTHERWISE INDICATED, ALL CORNERS ESTABLISHED BY THIS SURVEY WILL BE SET WITH AN ALUMINUM CAP STAMPED "CSC P. 3. 492.2".
4. BEARINGS AND DISTANCES SHOWN IN PARENTHESES ARE RECORD DATA FROM RIVERVIEW BULK LAND PLAT.
5. DRIVEWAY ACCESS TO THIS PROPERTY IS PROHIBITED FROM PASEO DEL NORTE, N.W. (A LIMITED ACCESS FACILITY) AND DISCOURAGED AT GOLF COURSE ROAD, EXCEPT AS PROVIDED FOR AT DESIGNATED ACCESS LOCATIONS.
6. PARCEL H-5 IS SUBJECT TO A TEMPORARY EASEMENT FOR FLOODWAY AND STORM DRAINAGE WORKS BETWEEN WOOD & CO., A TEXAS GENERAL PARTNERSHIP, AND ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY DATED FEBRUARY 4, 1987, FILED FEBRUARY 9, 1987 IN BOOK MISC. 450A, PAGE 359, AS DOCUMENT NO 87-12904, RECORDS OF BERNALILLO COUNTY, NEW MEXICO.
7. LANDS NORTH OF THE ALAMEDA GRANT BOUNDARY ARE WITHIN THE NEW MEXICO UTILITIES (NMU, INC.'S) FRANCHISE AREA. WATER AND SANITARY SEWER SYSTEM UTILITIES ARE OWNED BY NMU, INC.'S FACILITIES, NOT THE CITY OF ALBUQUERQUE. WATER AND SANITARY SEWER INFRASTRUCTURE IMPROVEMENTS MUST, HOWEVER, MEET THE CITY OF ALBUQUERQUE'S AND NMU, INC.'S DESIGN AND CONSTRUCTION STANDARDS.
8. THIS PROPERTY LIES WITHIN THE RIVERVIEW SECTOR DEVELOPMENT PLAN AND IS CURRENTLY ZONED SU-1R FOR 1R WITH EXCEPTIONS. SETBACKS FOR THIS ZONE WILL BE SUBJECT TO SECTIONS 16.01.01 AND 30 OF THE CITY OF ALBUQUERQUE COMPREHENSIVE CITY ZONING CODE.


**SURVEYOR'S CERTIFICATION:**

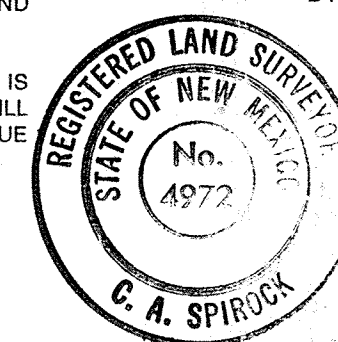
I, CLIFF A. SPIROCK, A NEW MEXICO REGISTERED LAND SURVEYOR, NO. 4972, HEREBY CERTIFY  
TO:

RIO GRANDE TITLE COMPANY, INC.,  
CHICAGO TITLE INSURANCE COMPANY, AND,  
SIVAGE THOMAS HOMES, INC., A NEW MEXICO CORPORATION

THAT THIS MAP AND DEMO SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE "MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS" JOINTLY ESTABLISHED AND ADOPTED BY AMERICAN LAND TITLE ASSOCIATION (A.L.T.A.) AND THE AMERICAN CONGRESS ON SURVEYING AND MAPPING (A.C.S.M.) IN 1988; AND MEETS THE STANDARDS OF A CLASS B SURVEY AS DEFINED THEREIN; AND MEETS THE MINIMUM REQUIREMENTS FOR A CLASS B SURVEY. THE SURVEY DOES NOT MAKE NO GUARANTEE OF NON-EXISTENCE OF ITEMS, WHETHER RECORDED OR NON-RECORDED, WHICH ARE NOT FULLY DISCLOSED IN THE TITLE COMPANY COMMITMENT FOR TITLE INSURANCE NO. 17-23283-K, A SUPPLEMENTED, DATED SEPTEMBER 14, 1992.

I FURTHER CERTIFY THAT A PORTION OF THIS PROPERTY ALONG THE WEST BOUNDARY LINE OF RIVERVIEW PARCELS H-3 AND H-5 LIES WITHIN THE 100 YEAR FLOOD ZONE (APPROXIMATE SCALED LIMITS SHOWN) AND THAT THE REMAINDER OF THE PROPERTY HAS A FLOOD ZONE DESIGNATION OF "C" PER F.E.M.A. FLOOD INSURANCE RATE MAP NO. 350002 0008 C, DATED OCTOBER 14, 1983. (ZONE C DENOTES AREAS OF MINIMAL FLOODING.)

BY:  DATE: 12/18/92  
CLIFF A. SPIROOK, N.M.P.S. NO. 4972

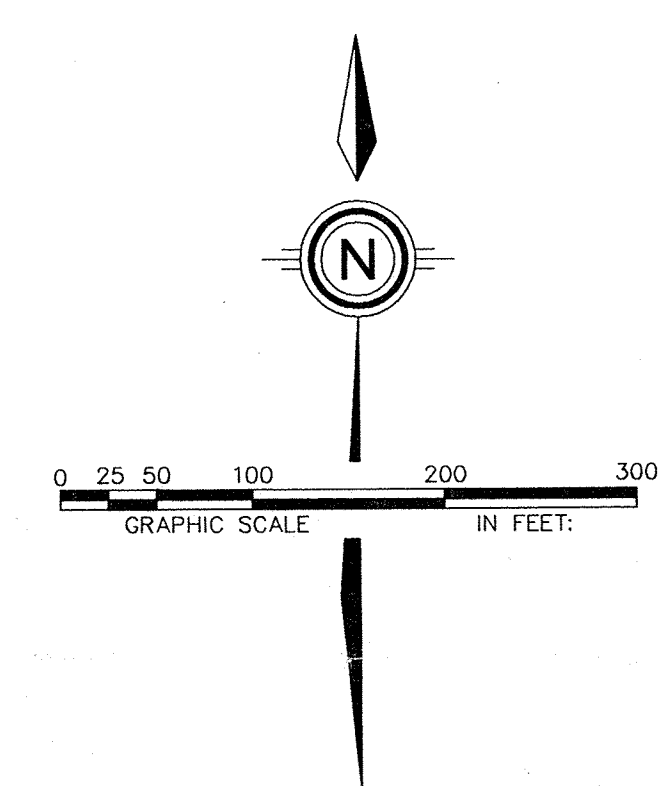
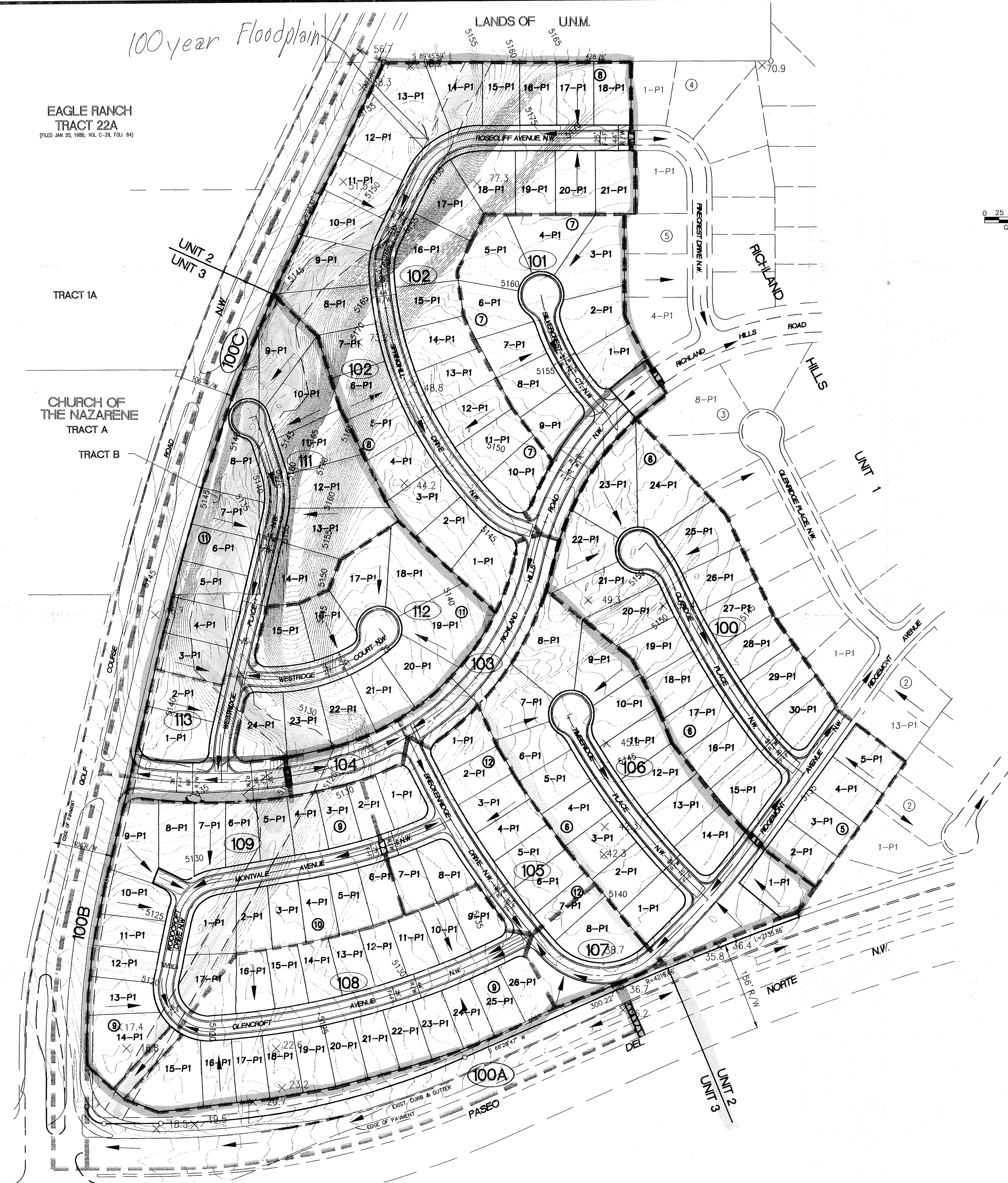


DATE: 12-18-92  
SCALE: 1" = 200'  
DESIGNED: E.R./R.D.Q.  
DRAWN: S.P.S.  
JOB NO.: 277-02-600

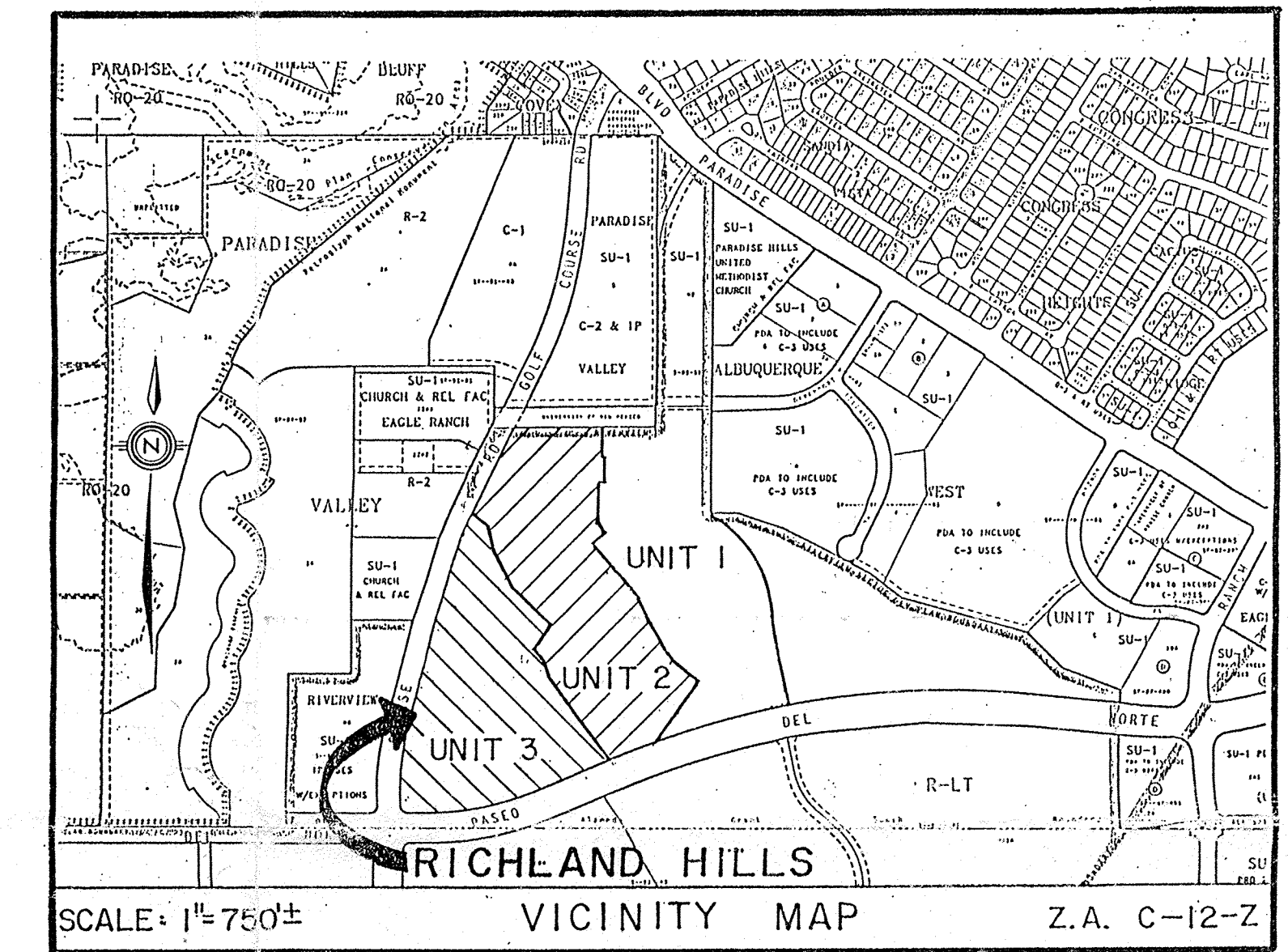
community  
sciences  
corporation

LAND PLANNING ENGINEERING SURVEYING  
P.O. Box 1328 Corvallis, NM 87404





- LEGEND**
- 4973 EXISTING CONTOUR W/ INDEX ELEVATION
  - PROPOSED SLOPE
  - DRAINAGE BASIN DIVIDE
  - UNIT BOUNDARY
  - SWALE
  - FLOW ARROW
  - 30" SD EXISTING STORM DRAIN
  - 30" SD PROPOSED STORM DRAIN
  - WATER BLOCK (HIGH POINT)
  - PROPOSED RETAINING/FLOOD WALL
  - 101 BASIN AREA



**PLATE 2**  
**DRAINAGE BASIN MAP**  
**RICHLAND HILLS UNITS 2 AND 3**

COMPRISED OF  
TRACT A OF RICHLAND HILLS AND TRACT B OF THE CHURCH OF NAZARENE  
SITUATE WITHIN  
TOWN OF ALAMEDA GRANT  
"PROJECTED" SECTION 13, T11N, R2E, N.M.P.M.  
CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

APRIL, 1994  
DRB-94-

BENCHMARK FOR THIS PLAT IS IN THE CITY OF ALBUQUERQUE  
ACS MONUMENT "3-B12" ELEVATION = 5277.26 LOCATED ON  
LAVA ROCK ESCARPMENT APPROXIMATELY 1/2 MILES  
SOUTHEAST INTERSECTION OF RADCLIFFE ROAD N.W.  
AND PARADISE BOULEVARD N.W.

SHEET 1 OF 1

