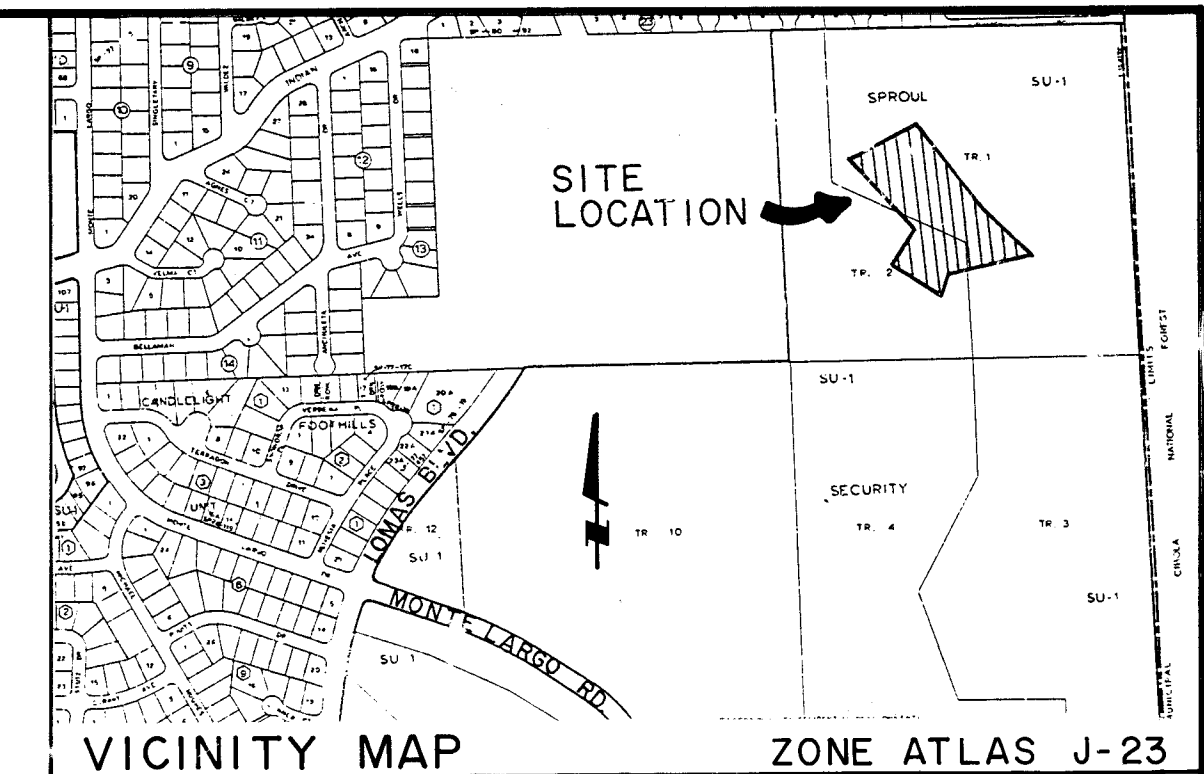


CONSTRUCTION PLANS
FOR
VILLA SANDIA
SUBDIVISION
ALBUQUERQUE, NEW MEXICO
MARCH 1986

INDEX TO DRAWINGS

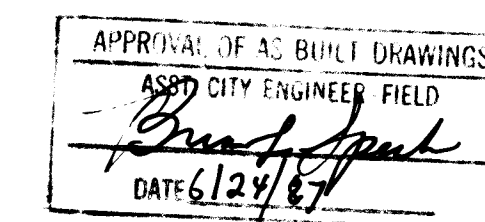
<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET
2	SUBDIVISION PLAT
3-4	GRADING PLAN
5	OVERALL STREET PAVING PLAN
6	OVERALL STREET UTILITY PLAN
7	VILLA SANDIA STREET PAVING PLAN & PROFILE
8	VILLA SANDIA STREET UTILITY PLAN & PROFILE
9	CRESTED BUTTE STREET PAVING AND STREET UTILITY PLAN & PROFILE
10	DRAINAGE CHANNEL PLAN & PROFILE
11	DETAIL SHEET



GENERAL NOTES

- All work detailed on these plans to be performed under contract shall, except as otherwise stated or provided for hereon, be constructed in accordance with the City of Albuquerque Interim Standard Specifications, 1985.
- Two (2) working days prior to any excavation, Contractor must contact line locating service 765-1234, for location of existing utilities.
- Prior to construction, the Contractor shall excavate and verify the horizontal and vertical locations of all obstructions, should a conflict exist, the Contractor shall notify the Engineer or Surveyor so that the conflict can be resolved with minimum amount of delay.
- All utilities and utility service lines shall be installed prior to paving.
- Backfill compaction shall be according to specified street use.
- Tack coat requirements shall be determined by the City Engineer.
- Sidewalks and wheelchair ramps within the curb returns shall be constructed wherever a new curb return is constructed.
- If curb is depressed for a driveway or a handicap ramp, the driveway or ramp shall be constructed prior to acceptance of the curb and gutter.
- All storm drainage facilities shall be completed prior to final acceptance.
- Manholes shall be 4' inside diameter Type "C" or "E" except as noted.
- Electronic Marker Disks (EMD's) are to be installed per Section 131. In addition to those shown on the plans, the following EMD's are required:
 - Sewer - At the property line for all service lines.
 - Water - Single service. Over the main line at the service tap.
 - Water - Double service. Over the main line halfway between the service taps.

PREPARED FOR:
AMERICAN SERVICE CORPORATION
2400 LOUISIANA N.E.
ALBUQUERQUE, NEW MEXICO 87110



26 28 0 1 0 1 8 7

REV	SHEETS	CITY ENGR	DATE	USER	DEPT.	DATE	USER	DEPT.	DATE
△	5,7		6/4/86	For	David W. Hunter	6/4/86			
APPROVAL OF REVISIONS									

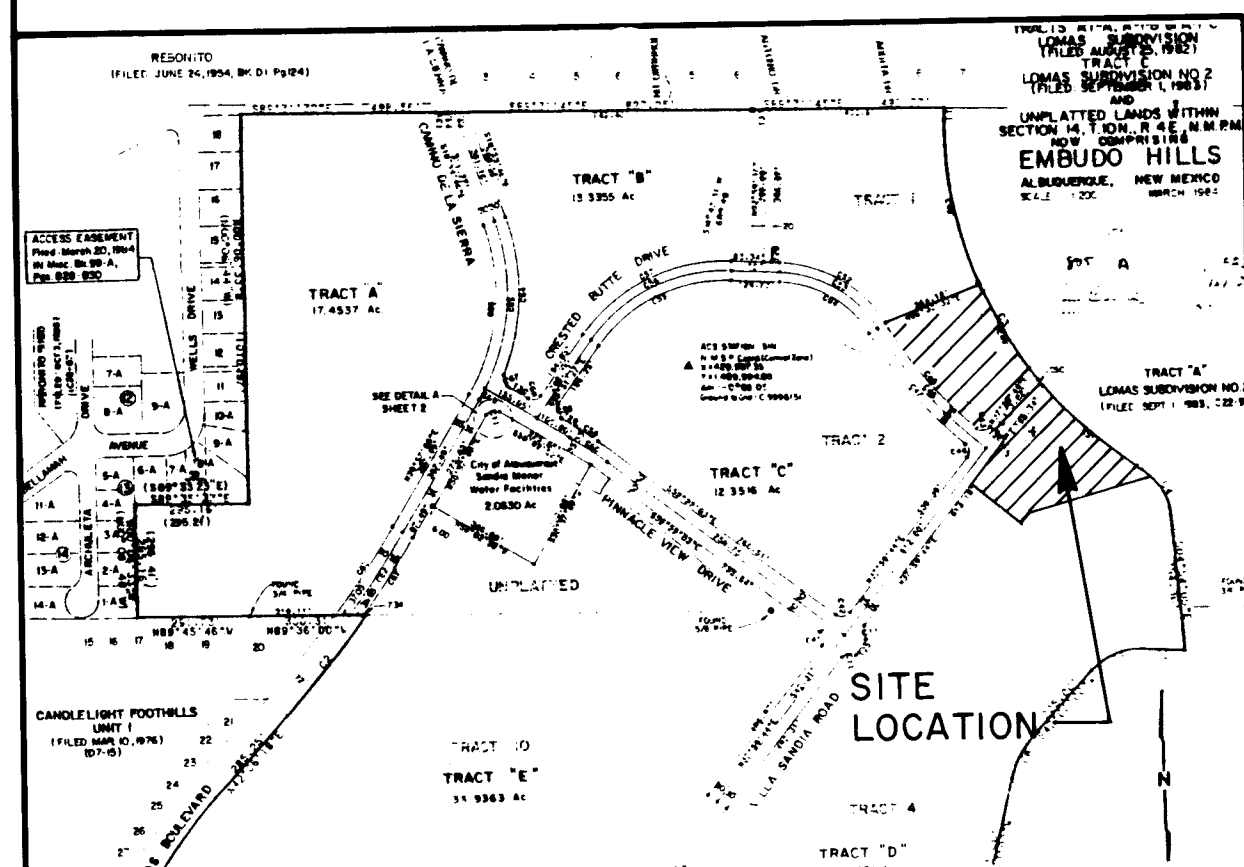
Prepared by: <u>Daniel L. Morehead</u> Daniel L. Morehead, Project Manager <u>Robert Molina</u> Robert Molina, Project Engineer	3-13-86 Date 3-12-86 Date	<u>Daniel L. Morehead</u> 3-13-86 Greiner Job No. 0641010	GREINER ENGINEERING 2601 WYOMING BLVD., NE ALBUQUERQUE, NM 87112 (505) 292-1936	APPROVED FOR CONSTRUCTION <u>Daniel L. Morehead</u> 6/24/86
Prepared Under the Supervision of: <u>Carl A. Tebbens</u> Carl A. Tebbens, Vice-President	3-13-86 Date		PROJECT NUMBER 2801	SHEET 1 OF 11

VILLA SANDIA SUBDIVISION
CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO

SITUATE WITHIN
SECTION 14
TOWNSHIP 10 NORTH, RANGE 4 EAST

BEING A REPLAT
OF
TRACT A
VISTA DEL MUNDO SUBDIVISION

MARCH, 1986



VICINITY MAP

LOT ACREAGE TABLE

NO.	ACRES	SQ. FT.
BLOCK 1		
1	0.134	5821
2	0.115	5006
3	0.119	5183
4	0.127	5527
5	0.126	5467
6	0.116	5056
7	0.115	5000
8	0.115	5000
9	0.109	4758
10	0.125	5454
11	0.138	6022
12	0.146	6344
13	0.124	5398
14	0.230	10,039
15	0.277	12,084
16	0.149	6483
17	0.124	5384
18	0.164	8034
19	0.142	6197
20	0.129	5620
21	0.119	5180
22	0.122	5298
23	0.115	5001
24	0.148	6428
BLOCK 2		
1	0.115	5001
2	0.115	5003
3	0.145	6326

Replat Data

D.R.B. Case Number	84-522
Zone Atlas Number	J-23
Gross Acreage	4.506
Total Number Tracts Created	27
Total Mileage of Streets Created	0.114
Date of Survey	3/8/86

SP-86-224

APPROVED BY: *[Signature]* 4-1-86
Traffic Engineer, Transportation Department
[Signature] 4-1-86
Date
[Signature] 4/1/86
Date
Chief City Surveyor, Engineering Division
[Signature] 4-1-86
Date
Water Resources Department
[Signature] 4-1-86
Date
Property Management
[Signature] 6-20-86
Date
Albuquerque Metropolitan Arroyo Flood
Control Authority
[Signature] 6-20-86
Date
City Engineer, Engineering Division
[Signature] 6-20-86
Date
City Planner, Albuquerque/Bernalillo
County Planning Division
[Signature] 3-12-86
Date
Public Service Company of New Mexico
[Signature] 3-11-86
Date
Mountain Bell
[Signature] 3-12-86
Date
Gas Company of New Mexico

CERTIFICATION

I, Daniel L. Morehead, New Mexico Registered Land Surveyor No. 8324, do hereby certify that this replat was prepared under my supervision, that an actual field survey was performed on March 8, 1986, that this replat shows all easements of record, and that this replat meets the minimum requirements of the Albuquerque Subdivision Ordinance and is true and correct to the best of my knowledge and belief.

Daniel L. Morehead
N.M.R.L.S. No. 8324

The foregoing instrument was acknowledged before me this 11th day of March, 1986 by

[Signature]
Notary Public

State of New Mexico
County of Bernalillo
This instrument was filed for record on
JUN 2 3 1986
C.30
Records of said County

LEGAL DESCRIPTION

A Tract of land situate within Section 14, Township 10 North, Range 4 East, New Mexico Principal Meridian, being Tract A of VISTA DEL MUNDO SUBDIVISION, Albuquerque, New Mexico as the same is shown and designated on said plat filed in the office of the County Clerk of Bernalillo County, New Mexico on December 5, 1984 (Vol. C25, Folio 164). Now comprising VILLA SANDIA SUBDIVISION and being more particularly described as follows:

Beginning at a point being the intersection of the Southeastly R/W line of Villa Sandia Rd., N.E., and the Northerly boundary of VISTA DEL MUNDO, Block 1, from whence A.C.S. brass cap Sta. "DANNY" bears S 27° 45' 31" W, 3138.13 feet;

Thence along the Southeastly R/W line of Villa Sandia Rd., N.E., N 37° 59' 44" E, 180.15 feet; thence N 52° 00' 16" W, 50.00 feet; thence 40.44 feet along a curve to the right whose radius is 25.00 feet and whose chord bears S 84° 20' 22" W, 36.17 feet through a central angle of 92° 11' 15" to a point on the Northerly R/W line of Crested Butte Dr., N.E.; thence along said R/W line 361.86 feet along a curve to the right whose radius is 1091.34 feet and whose chord bears N 39° 49' 05" W, 360.21 feet through a central angle of 18° 59' 15" to the Westerly most corner; thence N 68° 00' 32" E, 264.18 feet to the Northerly most corner, being a point on the Westerly boundary of LOMAS SUBDIVISION No. 2, Tract "A"; thence along said boundary 649.39 feet on a curve to the left whose radius is 1074.41 feet and whose chord bears S 40° 01' 26" E, 639.55 feet through a central angle of 34° 37' 50"; thence continuing 82.32 feet along a curve to the right whose radius is 160.00 feet and whose chord bears S 42° 36' 04" E, 81.41 feet through a central angle of 29° 28' 13" to the Easterly most corner, being a point on the Northerly boundary of VISTA DEL MUNDO, Block 1; thence along said boundary S 66° 00' 00" W, 310.02 feet; thence continuing S 82° 30' 00" W, 60.00 feet; thence N 47° 30' 00" W, 259.92 feet to the beginning corner of the Tract herein described and containing 4.506 acres (196,269 sq. ft.), more or less.

CONSENT AND DEDICATION

The above described subdivision is with the free consent of the undersigned owner and said owner does hereby dedicate to the public in fee simple the 0.044 acre parcel (as shown hereon) as drainage R/W, and does hereby dedicate, streets shown hereon together with all easements shown hereon, including the rights of ingress, egress, maintenance and the right to trim interfering trees.

Electrical Power and Communication easements are reserved for overhead distribution lines for pole type utilities and buried distribution lines, conduits, and pipes for underground utilities where shown or indicated, and including the right of ingress and egress for construction and maintenance, and the right to trim interfering trees and shrubs. Also included are easements for the right to install power and communication service lines along side lot lines.

Additional PNM easements may be required to serve future customers. These easements shall include minimum working space requirements for single and three phase transformers. See Public Service Company of New Mexico (PNM) Distribution Standard Drawing DS-7-16.2 for details.

OMEGA BUILDERS, INC.

[Signature]
Richard L. Coats, President

State of New Mexico ss.
County of Bernalillo

The foregoing instrument was acknowledged before me this 11th day of March, 1986, by Richard L. Coats, President of Omega Builders, Inc.

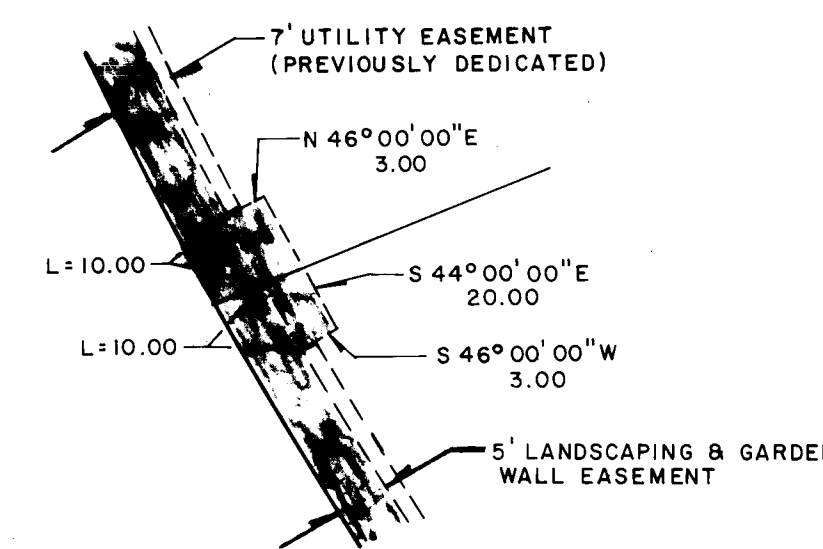
[Signature] 3/11/86
Notary Public

OFFICIAL SEAL
CHRISTINA M. HENDERSON
Notary Public
My Commission Expires 12/31/88

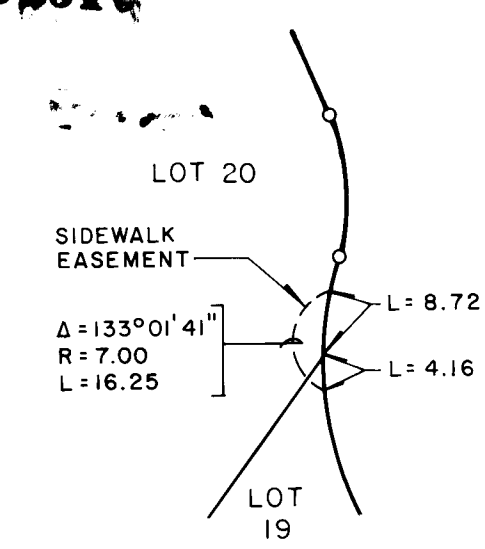
GREINER ENGINEERING SCIENCES, INC.

CONSULTING ENGINEERS • SURVEYORS • PLANNERS
2601 Wyoming Blvd., N.E. Albuquerque, New Mexico 87112
(505) 292-1936

DRAWN BY: KM
DESIGNED BY: KM
CHECKED BY: DRF
APPROVED BY: DRF
DATE: 3-11-86
SHEET NO: 1 of 2
VILLA SANDIA SUBDIVISION



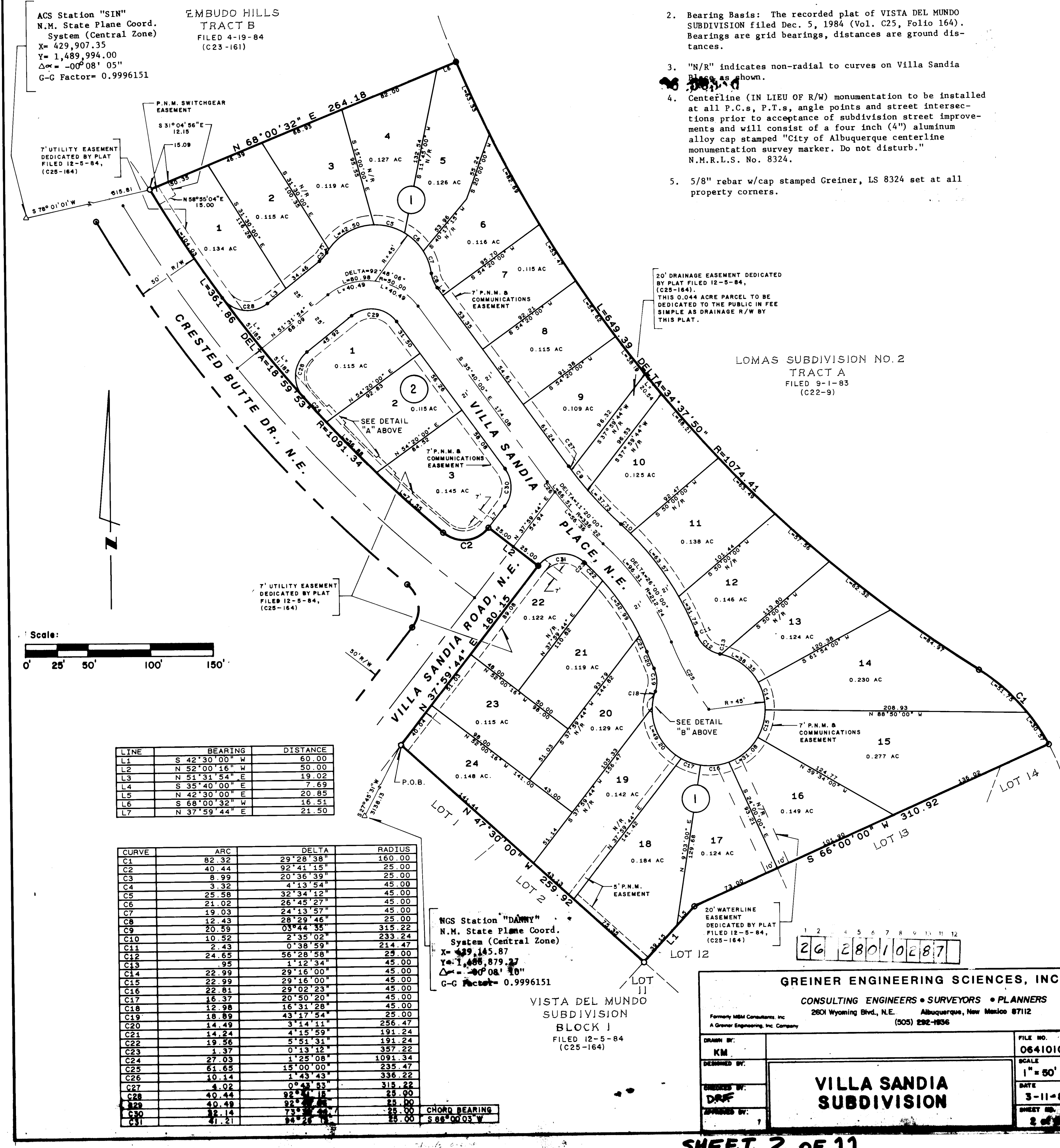
DETAIL "A"
N.T.S.



DETAIL "B"
N.T.S.

GENERAL NOTES:

- Purpose of this replat is to create a 27 lot townhouse subdivision.
- Bearing Basis: The recorded plat of VISTA DEL MUNDO SUBDIVISION filed Dec. 5, 1984 (Vol. C25, Folio 164). Bearings are grid bearings, distances are ground distances.
- "N/R" indicates non-radial to curves on Villa Sandia as shown.
- Centerline (IN LIEU OF R/W) monumentation to be installed at all P.C.s, P.T.s, angle points and street intersections prior to acceptance of subdivision street improvements and will consist of a four inch (4") aluminum alloy cap stamped "City of Albuquerque centerline monumentation survey marker. Do not disturb." N.M.R.L.S. No. 8324.
- 5/8" rebar w/cap stamped Greiner, LS 8324 set at all property corners.



LINE	BEARING	DISTANCE
L1	S 42° 30' 00" W	50.00
L2	N 52° 00' 16" W	50.00
L3	N 57° 31' 54" E	19.02
L4	S 35° 40' 00" E	7.69
L5	N 42° 30' 00" E	20.85
L6	S 68° 00' 32" E	16.51
L7	N 37° 59' 44" E	21.50

CURVE	ARC	DELTA	RADIUS
C1	82.32	29° 28' 38"	160.00
C2	40.44	92° 41' 15"	25.00
C3	8.99	20° 36' 59"	25.00
C4	3.32	4° 13' 54"	45.00
C5	25.58	32° 34' 12"	45.00
C6	21.02	26° 45' 27"	45.00
C7	19.03	24° 13' 57"	45.00
C8	12.43	28° 29' 46"	25.00
C9	20.59	01° 44' 35"	315.22
C10	10.52	2° 35' 02"	233.24
C11	22.99	29° 16' 00"	45.00
C12	2.43	0° 38' 59"	21.47
C13	24.65	56° 28' 58"	25.00
C14	9.5	1° 12' 34"	45.00
C15	22.99	29° 16' 00"	45.00
C16	22.81	29° 02' 23"	45.00
C17	16.37	20° 50' 20"	45.00
C18	12.98	16° 31' 28"	45.00
C19	18.89	43° 37' 54"	25.00
C20	14.49	1° 14' 11"	256.47
C21	14.24	4° 15' 59"	191.24
C22	19.56	5° 51' 31"	191.24
C23	1.37	0° 13' 12"	357.22
C24	27.03	1° 25' 08"	1091.34
C25	61.65	15° 00' 00"	235.47
C26	10.14	0° 43' 43"	336.22
C27	2.43	0° 38' 59"	21.47
C28	40.44	92° 41' 15"	25.00
C29	40.49	92° 41' 15"	25.00
C30	12.14	74° 21' 16"	25.00
C31	41.21	74° 21' 16"	25.00

WGS Station "DANNY"
N.M. State Plane Coord.
System (Central Zone)
X= 429,907.35
Y= 1,489,994.00
Z= -400.08' 05"
G-C Factor= 0.9996151

VISTA DEL MUNDO
SUBDIVISION
BLOCK 1
FILED 12-5-84
(C25-164)

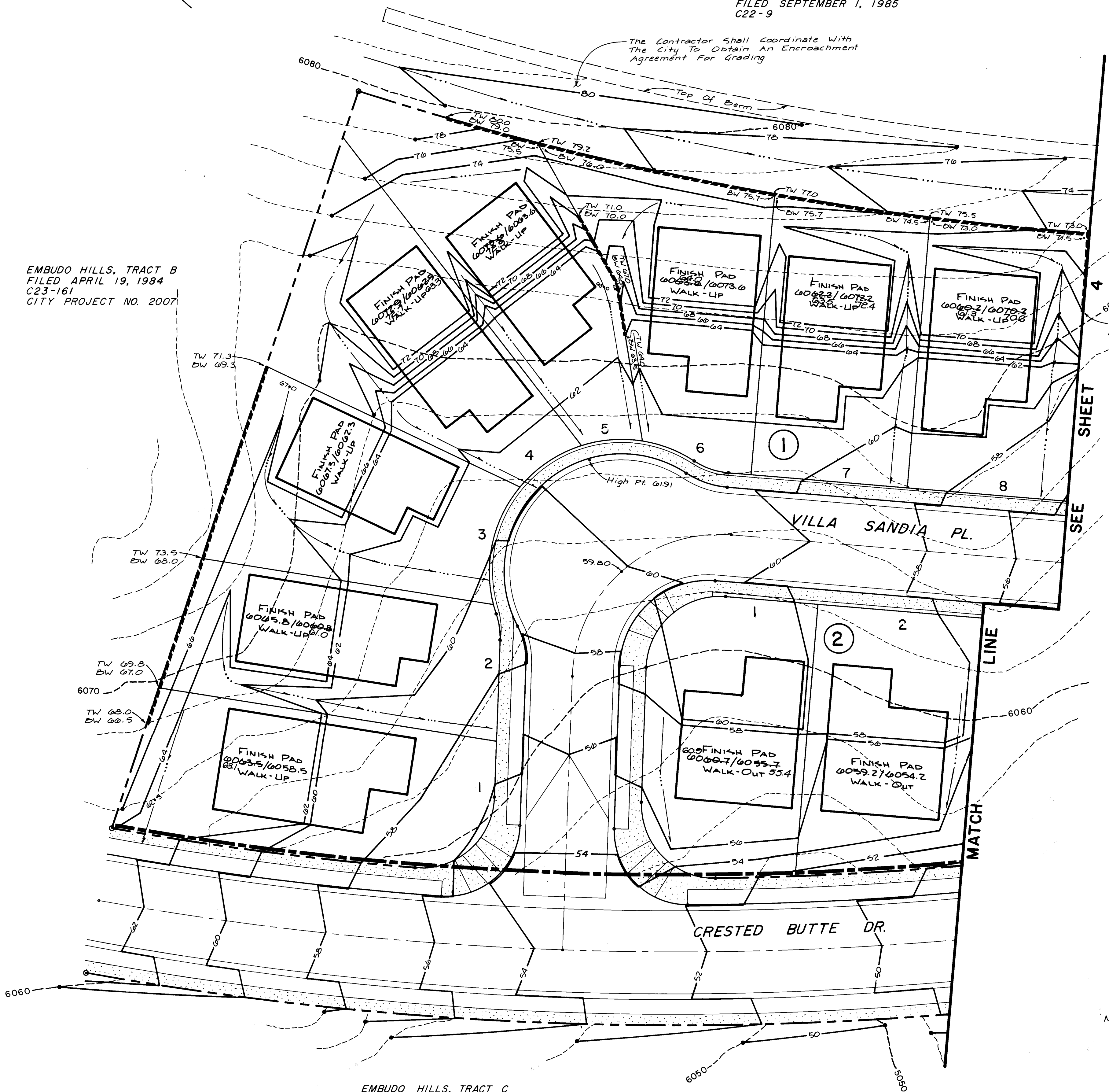
GREINER ENGINEERING SCIENCES, INC.
CONSULTING ENGINEERS • SURVEYORS • PLANNERS
2601 Wyoming Blvd., N.E. Albuquerque, New Mexico 87112
(505) 292-1936

DRAWN BY: KM
DESIGNED BY: KM
CHECKED BY: DRF
APPROVED BY: DRF
DATE: 3-11-86
SHEET NO: 2 of 2
VILLA SANDIA SUBDIVISION

EMBUDO HILLS, TRACT B
FILED APRIL 19, 1984
C23-161
CITY PROJECT NO. 2007

LOMAS SUBDIVISION NO. 2, TRACT A
FILED SEPTEMBER 1, 1985
C22-9

The Contractor Shall Coordinate With
The City To Obtain An Encroachment
Agreement For Grading



EMBUDO HILLS, TRACT C
FILED APRIL 19, 1984
C23-161
CITY PROJECT NO. 2007

ROCK EXCAVATION NOTE

Section 801.11 of the City of Albuquerque Interim Standard Specifications Contract shall apply to utilities, street and over lot grading.

If blasting must be required, coordination with City Inspection Department shall be the Contractors responsibility.

Any existing utility or drainage structure damage due to blasting operations shall be the Contractors responsibility.

The quantity of rock excavation as included in the engineer's estimate, item for utility trench rock and item for over lot rock, are estimated quantities only. The Contractor will be paid for actual quantities excavated.

SEISMIC SURVEY

Excerpt from Fox & Associates Seismic Refraction Investigation for Villa Sandia Townhomes, Job No. 0115870.

The seismic profiles generated, generally depict two near surface layers with an occasional third deeper layer. The surficial layer (soil plus very weathered granite) may be excavated with a conventional backhoe. The second layer (moderately weathered granite) will be excavatable with heavy equipment and some limited blasting. If light equipment is utilized, significantly more blasting will be required. The third deeper layer (competent, hard granite) will require blasting.

Generally, the first layer is a combination of overburden and some very weathered granite. The velocity of this layer averages 899 feet per second. This layer may be readily excavated with conventional equipment.

The second layer is composed of moderately weathered and fractured granite. This material has an average velocity of 4943 feet per second. Portions of this layer will be ripplable and excavatable if heavy equipment is utilized. The amount of blasting required will depend upon the equipment used.

The occasionally detected third layer is composed of more competent granite. This material has a velocity in excess of 10,000 feet per second. This material is not ripplable and will require blasting.

In summation, the north and northwest portions of the site will encounter shallow variably weathered bedrock at depths ranging from three (3) to five (5) feet. Portions of the southern half of the site will also encounter shallow weathered bedrock. Large residual granitic boulders should also be encountered.

LEGEND

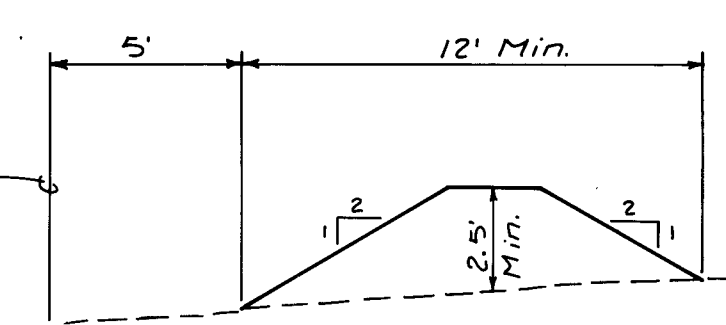
- SUBDIVISION BOUNDARY
- LOT LINE
- LOT NUMBER
- CENTERLINE OF STREET
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- EXISTING SIDEWALK
- PROPOSED SIDEWALK
- EXISTING WHEELCHAIR RAMP
- PROPOSED WHEELCHAIR RAMP
- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED FINISH FLOOR ELEV. (Front Pad/Back Pad)
- PROPOSED SPOT ELEVATION
- EXISTING RETAINING WALL
- PROPOSED RETAINING WALL
- TOP OF WALL ELEV.
- BOTTOM OF WALL ELEV.
- FLOW ARROW
- EROSION CONTROL BERM

EROSION CONTROL NOTE

The erosion control berm shall be constructed of clean earth material and compacted to 90% of Modified Proctor Density. The berm shall be constructed after the initial clearing of the site and maintained throughout the construction of proposed site improvements. The berm shall be removed prior to final grading.

See Sheet 11 For Retaining Wall Details & Erosion Control Plan.

Road R/W Or Property Line

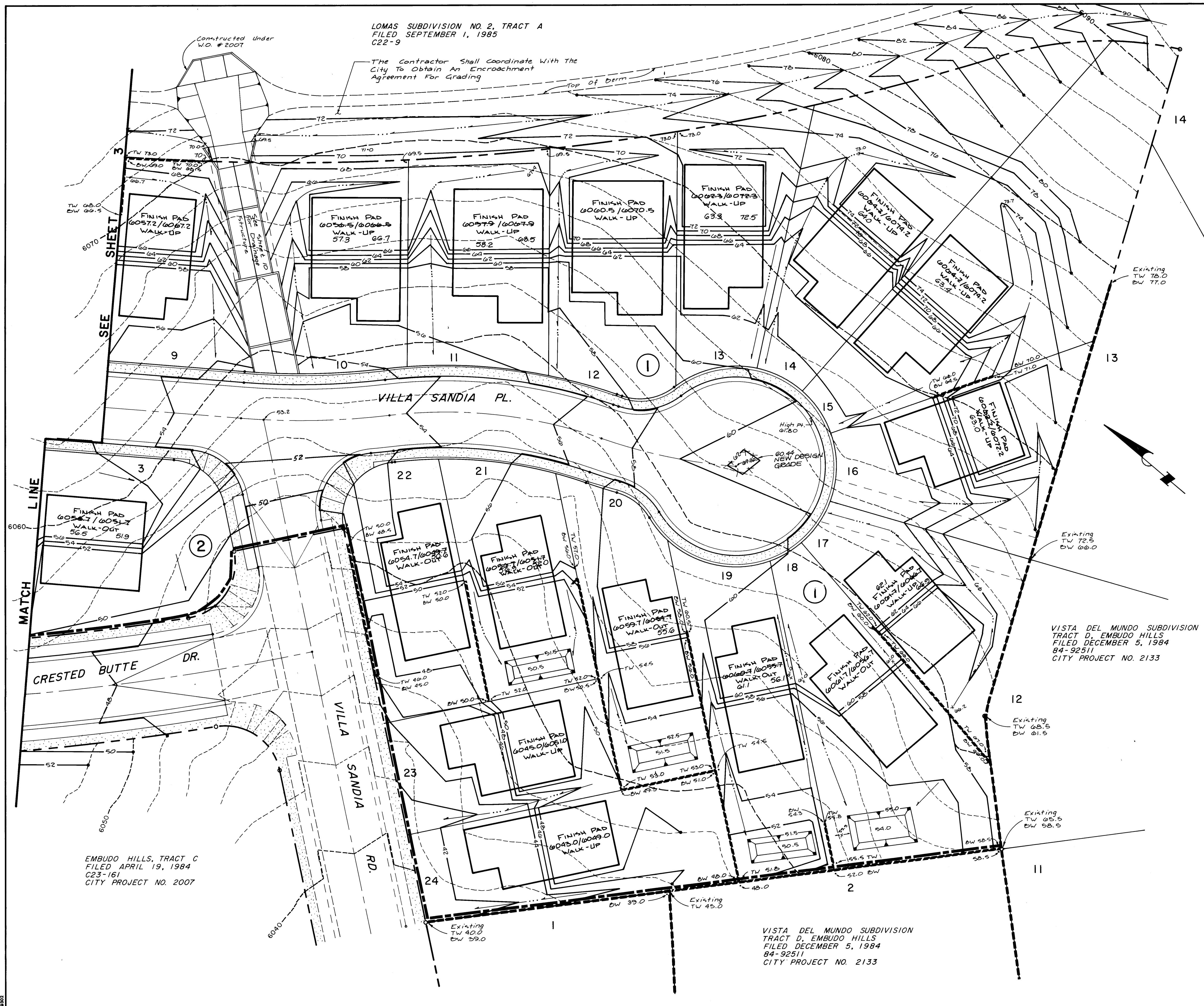


Note: The berm shall be constructed of clean earth material and compacted to 90% of Modified Proctor Density. The berm shall be constructed after the initial clearing of the site and maintained throughout construction of site improvements. The berm shall be removed prior to final grading.

EROSION CONTROL BERM DETAIL

N.T.S.

AS BUILT INFORMATION		CONTRACTOR UNIVERSAL CONCRET		WORK STARTED BY		DATE 5/86		EHA		DATE 5/86	
BENCH MARKS		Top Of Header Curb At Southwest Corner Of Sandia Manor Pump Station		Elevation = 6011.62		T.B.M. #3		DATE 1-5-84		DATE 10-25-88	
SURVEY INFORMATION		FIELD NOTES		NO.		BY		DATE		REMARKS	
ENGINEER'S SEAL		No. 1087		Greiner		M.S.M.		1-5-84		10-25-88	
DESIGNED BY		DRAWN BY		CHECKED BY		DATE 1-2-86		DATE 1-2-86		DATE 1-2-86	
APPROVALS		ENGINEER		DATE		APPROVALS		ENGINEER		DATE	
City Engineer		[Signature]		4/27/86		Liquid Waste		N/A [Signature]		3/21/86	
A.C.E. Design		[Signature]		4/1/86		Traffic		D.A. [Signature]		3/21/86	
A.C. E-Hydrology		[Signature]		4/1/86		Water		N/A [Signature]		3/21/86	
DRAWING NO.		2801		MAP NO.		J-23		SHEET		3 OF 11	



LEGEND

- SUBDIVISION BOUNDARY
- ① LOT LINE
- 3 LOT NUMBER
- CENTERLINE OF STREET
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- EXISTING SIDEWALK
- PROPOSED SIDEWALK
- EXISTING WHEELCHAIR RAMP
- PROPOSED WHEELCHAIR RAMP
- 6050--- EXISTING CONTOURS
- 56--- PROPOSED CONTOURS
- 6060/6055 PROPOSED FINISH FLOOR ELEV. (Front Pad/Back Pad)
- 60.77 PROPOSED SPOT ELEVATION
- EXISTING RETAINING WALL
- PROPOSED RETAINING WALL
- TW 68.0 TOP OF WALL ELEV.
- BW 66.5 BOTTOM OF WALL ELEV.
- FLOW ARROW
- EROSION CONTROL BERM

See Sheet 11 For Retaining Wall Details & Erosion Control Plan.
See Sheet 3 For Rock Excavation Note & Seismic Survey.

AS BUILT INFORMATION

CONTRACTOR	UNIVERSAL CONST.	DATE	5/86
WORK	AS BUILT	DATE	5/86
INSPECTOR	AS BUILT	DATE	5/86
ACCEPTANCE BY	AS BUILT	DATE	5/86
RECORDING BY	AS BUILT	DATE	5/86
DATE	5/86	DATE	5/86

BENCH MARKS

Top Of Header Curb At Southwest Corner Of Sandia Manor Pump Station	DATE	8-85
Elevation = 6011.62 T.B.M. #3	BY	Greiner
9-J23: Located On The North Side Of The Arrow Rd. N.E., About 100' East Of The Intersection With Striz Dr. A Square, Chiselled On The Top Of Curb.	DATE	1-5-84
Elevation = 5836.90	BY	M.S.M.
	DATE	10-25-83

SURVEY INFORMATION

FIELD NOTES	DATE	8-85
BY	Greiner	
NO.	1087	
	1036	
	1028	

ENGINEER'S SEAL

[Signature]

Greiner Job No. 064100

1 2 3 4 5 6 7 8 9 10 11 12

26 28 01 04 87

SCALE: HORIZ. 1" = 20'

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

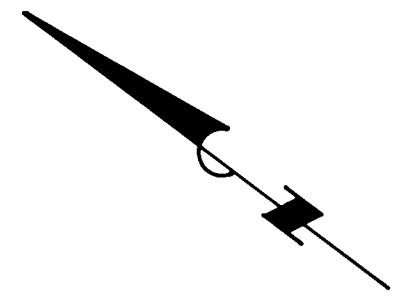
TITLE: **VILLA SANDIA TOWNHOMES GRADING PLAN**

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer	<i>[Signature]</i>	4/27/86	Liquid Waste	<i>[Signature]</i>	3/21/86
A.C.E. Design	<i>[Signature]</i>	3/11/86	Traffic	<i>[Signature]</i>	3/21/86
A.C.E.-Hydrology	<i>[Signature]</i>	4/1/86	Water	<i>[Signature]</i>	3/21/86

DRAWING NO. **2801**

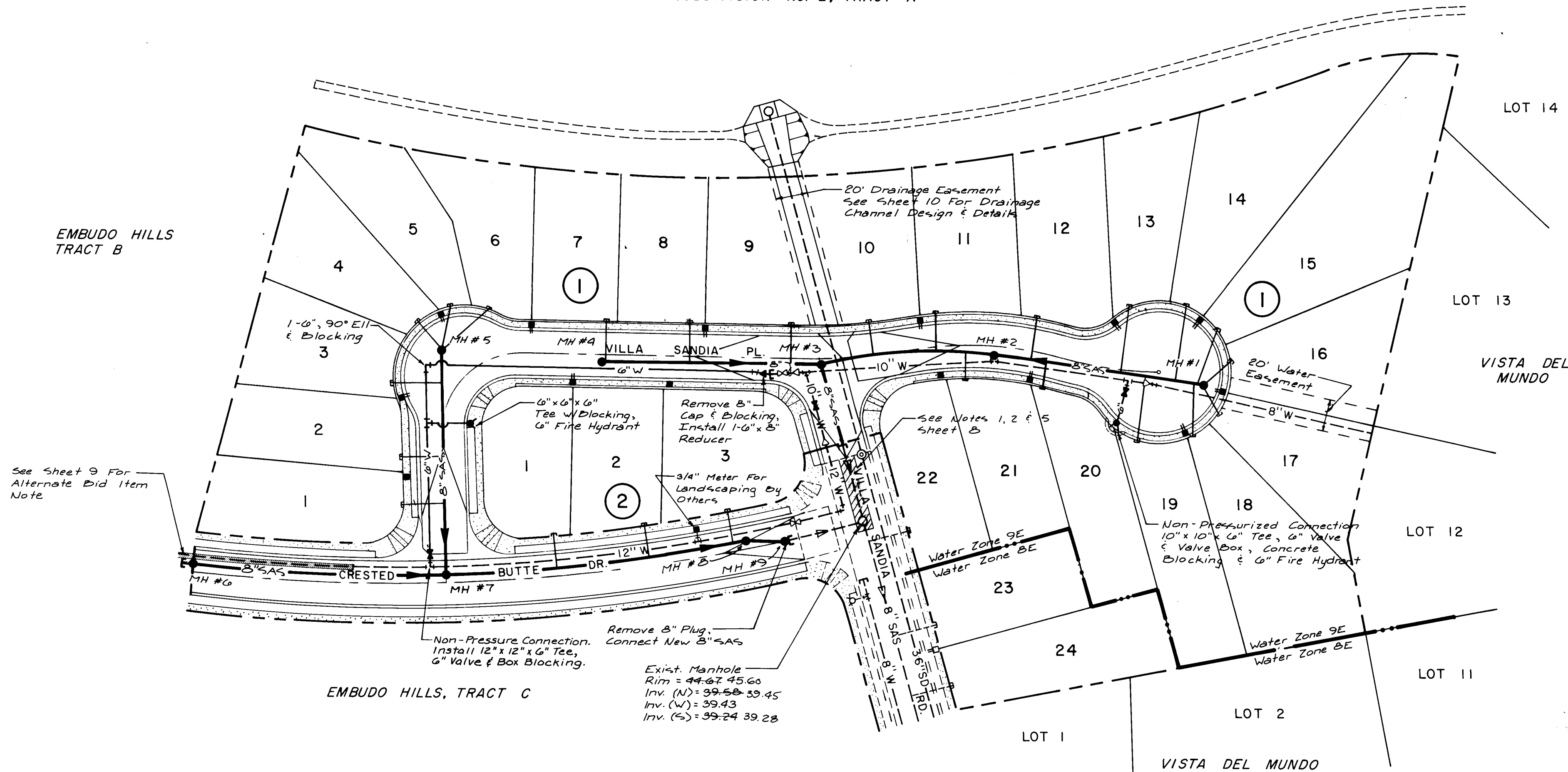
MAP NO. **J-23**

SHEET **4** OF **11**



LOMAS SUBDIVISION NO. 2, TRACT A

EMBUDO HILLS
TRACT B



EMBUDO HILLS, TRACT C

LOT 14

LOT 13

VISTA DEL MUNDO

LOT 12

LOT 11

VISTA DEL MUNDO

ROCK EXCAVATION NOTE

Section 801.11 of the City of Albuquerque Interim Standard Specifications Contract shall apply to utilities, street and over lot grading.

If blasting must be required, coordination with City Inspection Department shall be the Contractor's responsibility.

Any existing utility or drainage structure damage due to blasting operations shall be the Contractor's responsibility.

The quantity of rock excavation as included in the engineer's estimate, item for utility trench rock and item for over lot rock, are estimated quantities only. The Contractor will be paid for actual quantities excavated.

CHANNEL NOTES

Channel construction shall be per Sections 601 & 602 of the Albuquerque Interim Standard Specifications Contract.

GENERAL NOTES

- Extend all water and sanitary sewer services to 2' beyond the 7' utility and sidewalk easement line.
- All water pipe shall be PVC AMWA C900 DR18, Class 150 unless otherwise noted.
- All sewer pipe shall be PVC AMWA C900 DR18, Class 150, push on joint.

SANITARY SEWER NOTES

- Sanitary sewer and sewer service installation shall comply with all applicable City of Albuquerque Standards.
- All stationing is based on street centerline, and in some cases is different than the stationing for the street paving improvements.
- Slopes shown on the profiles are based on true distances, not centerline stationing. Lengths shown on profiles are true distances from outside of manhole to outside of manhole.
- All manholes shall be 4-foot diameter type 'E' as per City of Albuquerque Standard Drawing S-12. EMD shall be provided in accordance with Section 170 of the City of Albuquerque Interim Standard Specifications for Public Works Construction.
- Sewer service laterals shall be provided with Electronic Marker Disks as per City of Albuquerque Standard Drawing S-12.

- Where the sewer line is to be deflected maximum allowable deflection shall be two-thirds (2/3) of the manufacturer's recommended allowable deflection.
- All service connections shall be made such that the service is perpendicular or radial to the sewer main. (See note 10)
- All service connections shall have a minimum slope of 1/4" per foot toward the main within the public right-of-way and shall have a minimum depth of 4' below the top of curb elevation from the finished surface projected to the property line measured to the pipe invert.
- All service connections must be made to the main line except at the end of cul-de-sacs where connection to a manhole is permitted in the manner shown in the Standard Details Drawing S-5.

WATERLINE NOTES

- Waterline and water service (3/4") installation shall comply with all applicable City of Albuquerque Standards.
- Waterline shall have a minimum cover of 4'0" for water transmission lines 10" and over, and a minimum cover of 3'0" for water distribution lines 8" and under, unless otherwise noted.
- Electronic Marker Disks (EMD) shall be installed in accordance with Section 170 of the City of Albuquerque Interim Standard Specifications for Public Works Construction.
- All stationing is based on street centerline, and in some cases is different than the stationing for the street paving improvements.
- Where the waterline is to be deflected, maximum allowable deflection shall be two-thirds (2/3) of the manufacturer's recommended allowable deflection.
- Water services shall have a minimum of 1'0" clearance from plugs at connection to water mains.

26 28010687

SCALE:
HORIZ. 1" = 50'

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION
TITLE: VILLA SANDIA TOWNHOMES
OVERALL STREET UTILITY PLAN

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer	<i>[Signature]</i>	4/27/06	Liquid Waste	<i>[Signature]</i>	3/21/06
A.C.E. Design	<i>[Signature]</i>	3/1/06	Traffic W/A	<i>[Signature]</i>	3/21/06
A.C.E. - Hydrology	<i>[Signature]</i>	4/1/06	Water	<i>[Signature]</i>	3/21/06

DRAWING NO. 2801 MAP NO. J-23 SHEET 6 OF 11

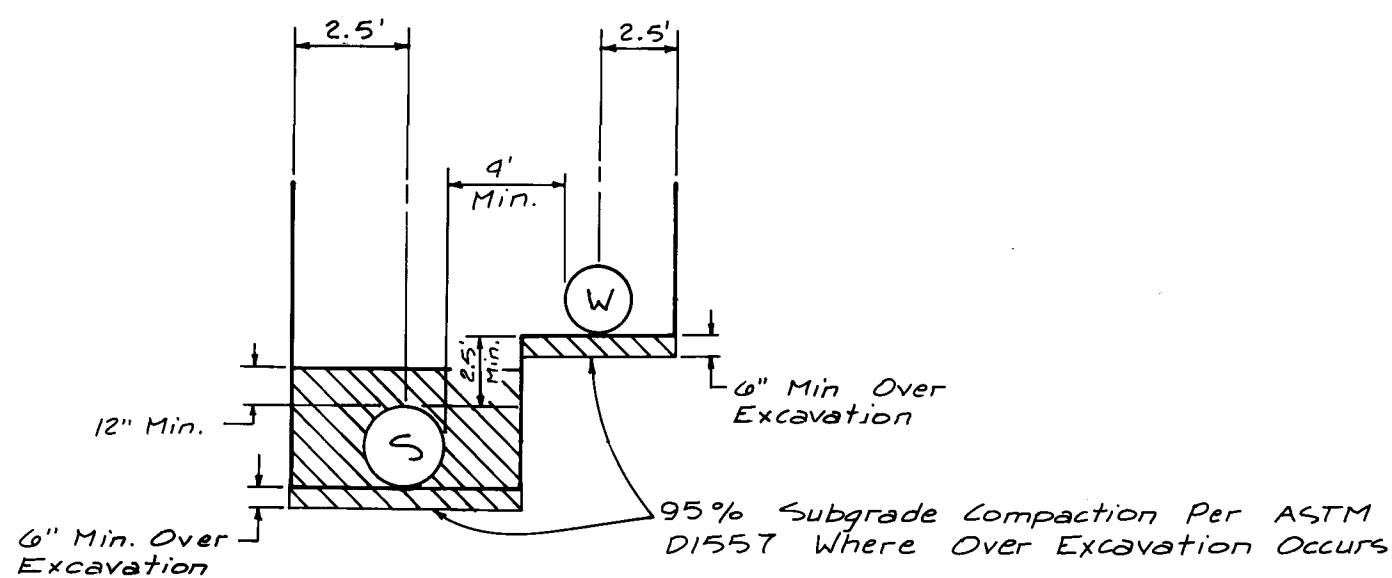
LEGEND

PROPOSED

- SAS SANITARY SEWER LINE
- SANITARY SEWER MANHOLE
- DIRECTION OF FLOW
- W WATER LINE
- ⋈ WATER VALVE
- REDUCER
- PRESSURE RELEASE VALVE
- FIRE HYDRANT
- TEE
- ELBOW
- CAP
- CURB AND GUTTER
- SIDWALK
- CENTERLINE
- SUBDIVISION BOUNDARY
- LOT LINE
- LOT NUMBER
- 1 BLOCK NUMBER
- TRANSITION SECTION
- SINGLE WATER SERVICE
- DOUBLE WATER SERVICE

EXISTING

- SAS SANITARY SEWER LINE
- SANITARY SEWER MANHOLE
- DIRECTION OF FLOW
- SD STORM DRAIN LINE
- STORM DRAIN MANHOLE
- W WATER LINE
- ⋈ WATER VALVE
- TEE
- ELBOW
- CAP
- CURB AND GUTTER
- SIDWALK
- DOUBLE WATER SERVICE



- Pressure Tight Joints On SAS Line
- See Rock Excavation Note This Sheet
- Trench Bedding & Backfill Shall Be For PVC Pipe Per Sec. 801.18.3 Standard Specs. Where Rock Conditions Prevent Proper Pipe Envelope, D.I. Pipe May Be Substituted For PVC Between Manholes.

COMMON UTILITY TRENCH IN ROCK DETAIL
N.T.S.

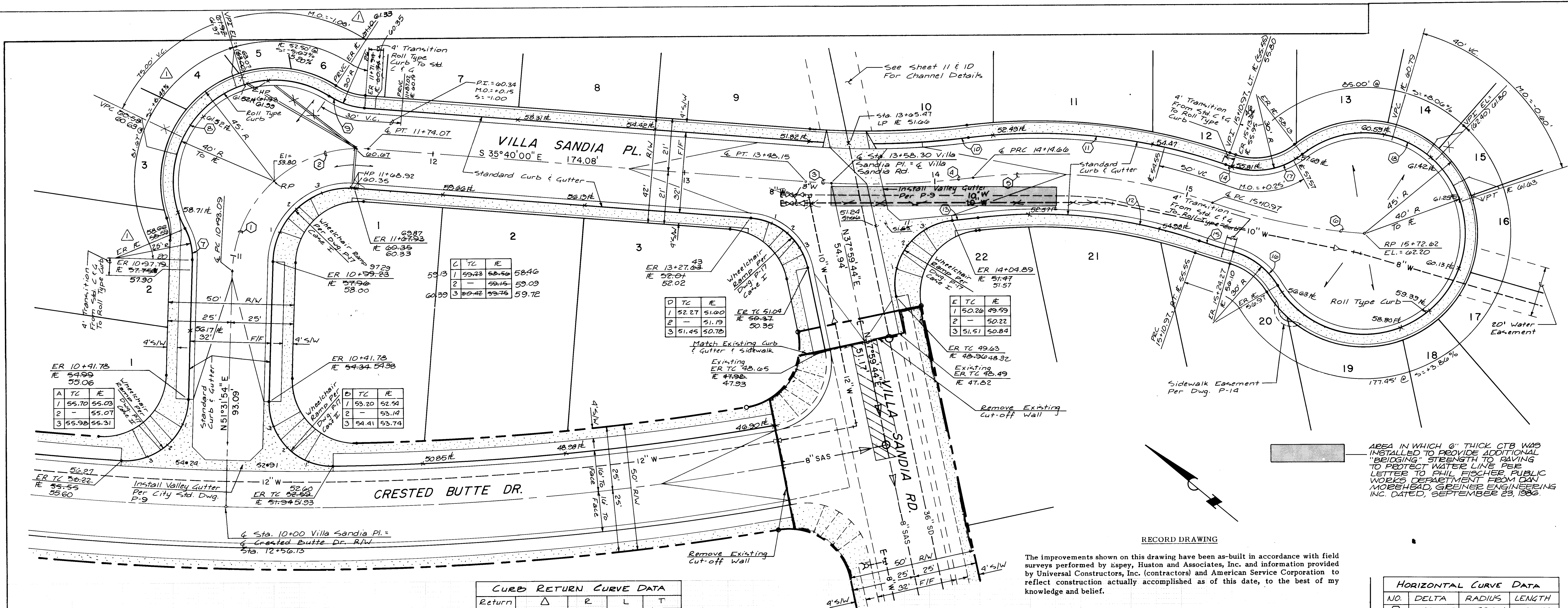
AS BUILT INFORMATION	
CONTRACTOR	Top Of Header Curb At Southwest Corner Of Sandia Manor Pump Station.
WORK STARTED BY	Elevation = 6011.62 T.B.M. #3
DATE	4-25-06
FIELD ACCEPTANCE BY	1-5-04
DATE	10-25-03
FIELD ACTION BY	9-12-03: Located On The North Side Of The Arrow Rd. NE, About 100' East Of The Intersection With Shute Dr. A Square, 1, Chiseled On The Top Of Curb.
DATE	Elevation = 5836.80
RECORDED BY	
NO.	

BENCH MARKS	
Top Of Header Curb At Southwest Corner Of Sandia Manor Pump Station.	
Elevation = 6011.62 T.B.M. #3	
9-12-03: Located On The North Side Of The Arrow Rd. NE, About 100' East Of The Intersection With Shute Dr. A Square, 1, Chiseled On The Top Of Curb.	
Elevation = 5836.80	

SURVEY INFORMATION	
DATE	4-25-06
BY	C.R.M.
NO.	1687
DATE	1-5-04
BY	M.S.M.
NO.	1628
DATE	10-25-03
BY	M.S.M.
NO.	

ENGINEER'S SEAL	
<i>[Signature]</i>	
Greiner Job No. 0641010	

REVISIONS	
DATE	3-26-06
DESIGNED BY	BA
DRAWN BY	BA
CHECKED BY	BA



CURB RETURN CURVE DATA				
Return	Δ	R	L	T
A	92° 11' 06"	25.00'	40.22'	25.97'
B	92° 11' 06"	25.00'	40.22'	25.97'
C	92° 48' 06"	30.00'	48.59'	31.50'
D	73° 39' 44"	25.00'	32.14'	18.72'
E	96° 40' 05"	25.00'	42.18'	28.09'

The improvements shown on this drawing have been as-built in accordance with field surveys performed by Espey, Huston and Associates, Inc. and information provided by Universal Constructors, Inc. (contractors) and American Service Corporation to reflect construction actually accomplished as of this date, to the best of my knowledge and belief.

William F. Coleman, P.E. 5945

11/19/84
Date

HORIZONTAL CURVE DATA			
NO.	DELTA	RADIUS	LENGTH
1	46° 24' 03"	50.00'	40.49'
2	46° 24' 03"	50.00'	40.49'
3	1° 43' 43"	336.22'	10.15'
4	9° 36' 07"	336.22'	56.36'
5	26° 00' 00"	212.24'	96.31'
6	1° 50' 00"	235.47'	61.65'
7	29° 35' 45"	25.00'	12.91'
8	150° 53' 36"	40.00'	105.34'
9	28° 29' 46"	30.00'	14.92'
10	11° 20' 00"	320.22'	63.34'
11	26° 00' 00"	228.24'	103.51'
12	26° 00' 00"	196.24'	89.05'
13	1° 39' 49"	352.22'	10.23'
14	0° 38' 59"	219.47'	2.49'
15	3° 14' 11"	251.47'	14.20'
16	43° 17' 54"	30.00'	22.67'
17	56° 28' 58"	30.00'	29.51'
18	27° 11' 40"	40.00'	193.52'

SCALE:
HORIZ. 1" = 20'
VERT. 1" = 5'

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

TITLE: **VILLA SANDIA TOWNHOMES**
VILLA SANDIA PL.
STREET PAVING PLAN & PROFILE

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer	<i>[Signature]</i>	4/1/86	Liquid Waste	<i>[Signature]</i>	3/21/86
A.C.E. - Design	<i>[Signature]</i>	4/1/86	Traffic	<i>[Signature]</i>	3/21/86
A.C.E. - Hydrology	<i>[Signature]</i>	4/1/86	Water	<i>[Signature]</i>	3/21/86

DESIGNED BY *[Signature]* DATE 3/86
DRAWN BY *[Signature]* DATE 1-86
CHECKED BY *[Signature]* DATE 2/86

DRAWING NO. **2801** MAP NO. **J-23** SHEET **7** OF **11**

Alternate Construction Bid Item:
During Construction Of Proposed 8" SAS
Line The Contractor May Encounter Extra
Dense Rock Within This Area. If This
Should Occur, A Decision Will Be Made
In The Field By The City Inspectors
And Developers To Remove Approximately
110' Of Existing 12" Waterline Before
Any BLASTING Is Done. The Removal
And Replacement Of 12" Waterline Is
To Minimize Anticipated Damage To
Existing Waterline By The
Required BLASTING.

Sta. 10+97.35
Limit Of Construction
This Contract. End
Pavement, Sidewalk,
Curb & Gutter. Construct
8" x 2' x 20' Concrete Cutoff
Wall. Install Type III
Barricade, 1'-0" Min. On
West Side Of Cutoff Wall.

Sta. 10+97.35 To
Sta. 12+56.13
Curvilinear Sewer Data
 $\Delta = 9.4892^\circ$
 $R = 1111.00'$
 $L = 158.02'$ @ MH To MH
7-20' Section
1-54.02' Section
1.1347° Max. Deflection
Per Joint

TC	E
1	55.70 55.03
2	55.07
3	55.98 55.31

TC	E
1	53.20 52.54
2	53.14
3	54.41 53.74

Sta. 12+56.13 To
Sta. 14+36.99
Curvilinear Sewer Data
 $\Delta = 9.4892^\circ$
 $R = 1111.00'$
 $L = 184.00'$ @ MH To MH
9-20' Section
1.0314° Max. Deflection
Per Joint

The Contractor Shall
Match Existing Top
Of Curb & Asphalt
Elevation

Existing SAS 50' Stub
Out To Be Removed &
Relayed See Note 4,
1, 2, & 3 On Sheet B

Std. Curb & Gutter

VILLA
SANDIA PL.

CRESTED BUTTE DR.

VILLA
SANDIA
RD

22

Sta. 12+56.13, 5.34' Rt.
Build MH #7

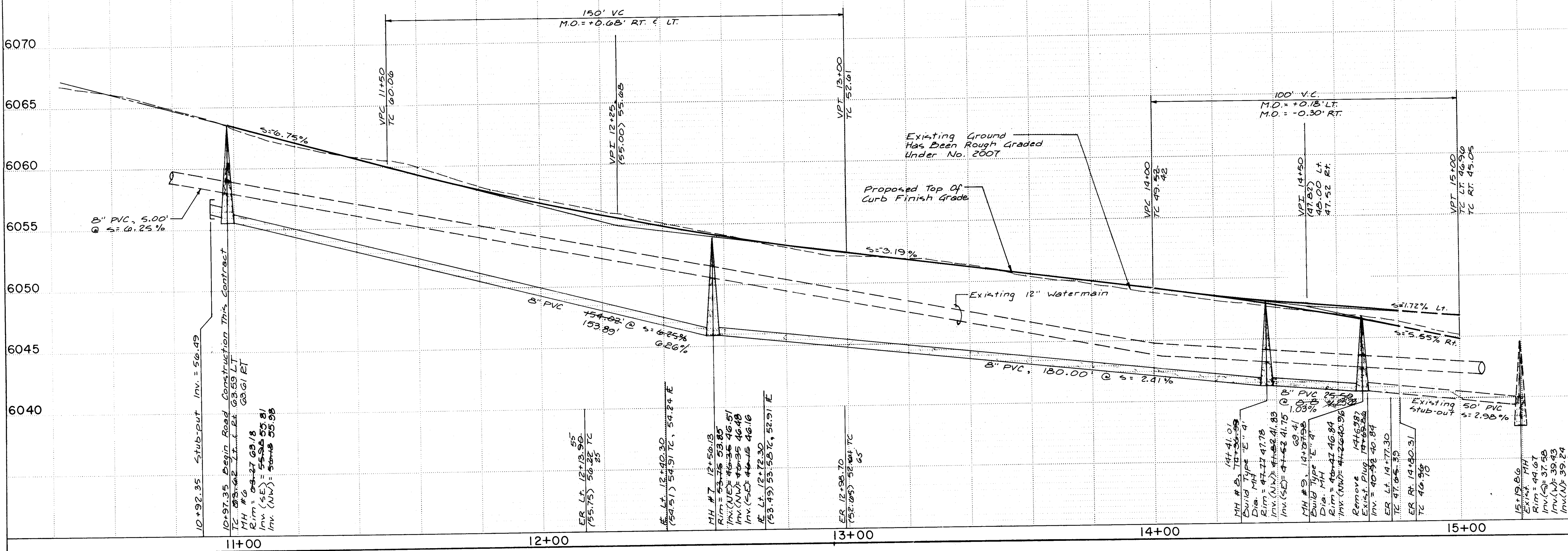
Sta. 12+56.13 Crested
Butte Dr. @ Sta. 10+00.00
Villa Sandia Pl.

See Sheet 5 For Crested
Butte Dr. Pavement Section

14+63.87
± Sta. 14+63.87 The Contractor
Shall Field Verify Existing SAS,
Stub - Out.
Inv. (S) = 40.92, Construct Type "E"
4' Dia. MH #9

Sta. 15+19.80 Crested
Butte Dr. @ Villa Sandia Rd.
Existing MH
Rim = 44.67 45.60
Inv. (S) = 39.04 39.45
Inv. (W) = 37.50
Inv. (W) = 39.43 39.28

Note: Proposed Top Of Curb Grades
Taken From City Plans 2007, Sheet
22 Of 25, Crested Butte Dr. Has Been
Rough Graded Under Work Order No. 2007



CRESTED BUTTE DR. SERVICES

BLK.	LOT	STATION	INV. @ R	LENGTH
2	1	13+25.80	46.5054	22'
**2	2	13+83.86	46.00	22'
**2	3	14+31.00	44.5028	22'

** See Note 4, Sheet B.

CURVE DATA

CURVE	Δ	RADIUS	LENGTH
(1)	8°08'58"	1110.34'	158.76'
(2)	13°29'54"	1110.34'	203.74'
* (3)	5°57'51"	1110.34'	114.54'
* (4)	9°09'58"	1110.34'	176.03'
* (5)	19°30'03"	1132.34'	385.40'

* Curve Data To Face Of Curb

RECORD DRAWING
The improvements shown on this drawing have been as-built in accordance with field
surveys performed by H. H. and Associates, Inc. and information provided
to the City of Albuquerque by the City Engineer and the City Engineer's
representatives. The City Engineer and the City Engineer's representatives
reflect construction actually accomplished as of this date, to the best of my
knowledge and belief.

William F. Coleman, P.E. 5945
11/17/86
Date

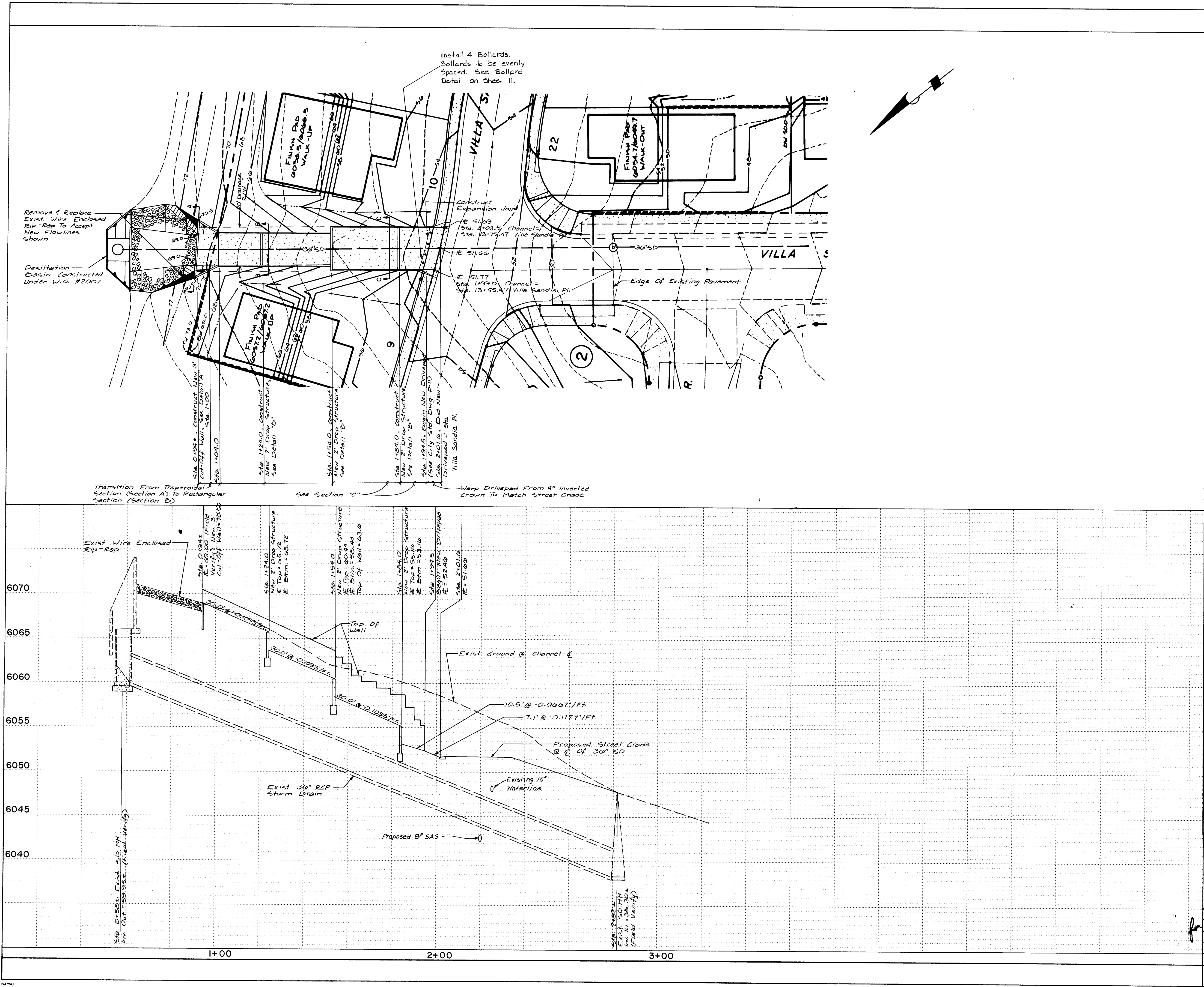
SCALE:
HORIZ. 1" = 20'
VERT. 1" = 5'

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

TITLE: VILLA SANDIA TOWNHOMES
CRESTED BUTTE DR.
STREET PAVING & STREET UTILITY PLAN & PROFILE

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer	John H. H.	4/1/86	Liquid Waste	B. R. R.	3/21/86
ACE - Design	John H. H.	4/1/86	Traffic	B. R. R.	3/21/86
ACE - Hydrology	John H. H.	4/1/86	Water	B. R. R.	3/21/86

DRAWING NO. 2801
MAP NO. J-23
SHEET 9 OF 11



RECORD DRAWING

The improvements shown on this drawing have been as-built in accordance with field surveys performed by Espey, Huston and Associates, Inc. and information provided by Universal Constructors, Inc. (contractors) and American Service Corporation to reflect construction actually accomplished as of this date, to the best of my knowledge and belief.

William F. Coleman, P.E. 5915

11/19/86

Date

26

28011087

SCALE:

HORIZ. 1" = 20'

VERT. 1" = 5'

CITY OF ALBUQUERQUE

MUNICIPAL DEVELOPMENT DEPARTMENT

ENGINEERING DIVISION

TITLE:

VILLA SANDIA TOWNHOMES

CHANNEL PLAN & PROFILE

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer	<i>[Signature]</i>	4/27/86	Liquid Waste	N/A	3/21/86
A.C.E. - Design	<i>[Signature]</i>	4/1/86	Traffic	N/A	3/21/86
A.C.E. - Hydrology	<i>[Signature]</i>	4/1/86	Water	N/A	3/21/86

DRAWING NO.

2801

MAP NO.

J-23

SHEET

10

OF

11

AS BUILT INFORMATION

CONTRACTOR UNIVERSAL CONSTR.

STARTED BY EHA

DATE 5/86

INSPECTOR'S FIELD CHECK BY EHA

DATE 5/86

RECORDED BY EHA

DATE 5/86

DATE 5/86

SURVEY INFORMATION

FIELD NOTES

NO. BY DATE

1087 Greiner 8-85

1636 M.S.M. 1-5-84

1628 M.S.M. 10-25-83

ENGINEER'S SEAL

[Signature]

3-13-86

Greiner Job No. 0641010

BENCH MARKS

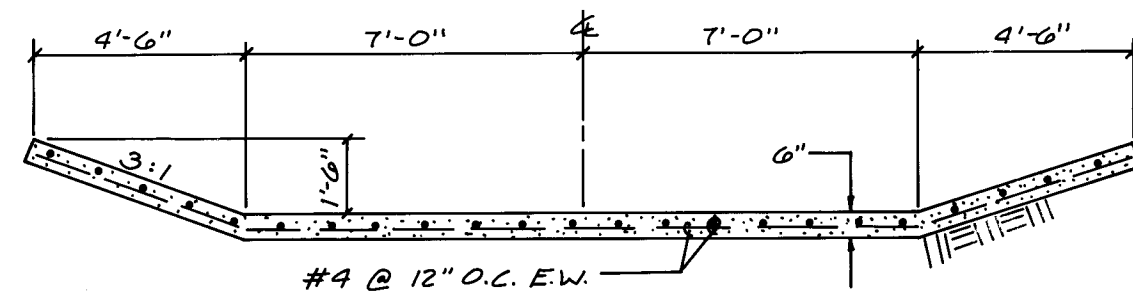
Top of Header Curb at Southwest Corner

Of Sandia Manor Pump Station.

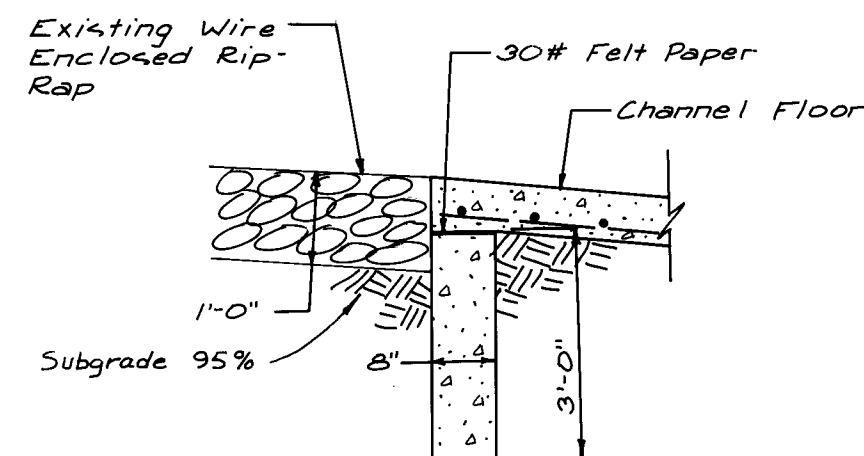
Elevation = 6011.62 T.B.M. #3

9-123: Located On The North Side Of Pierce Arrow Rd. N.E., About 100' East Of The Intersection With Stutz Dr. A Square, 1/2, Chiseled On The Top Of Curb.

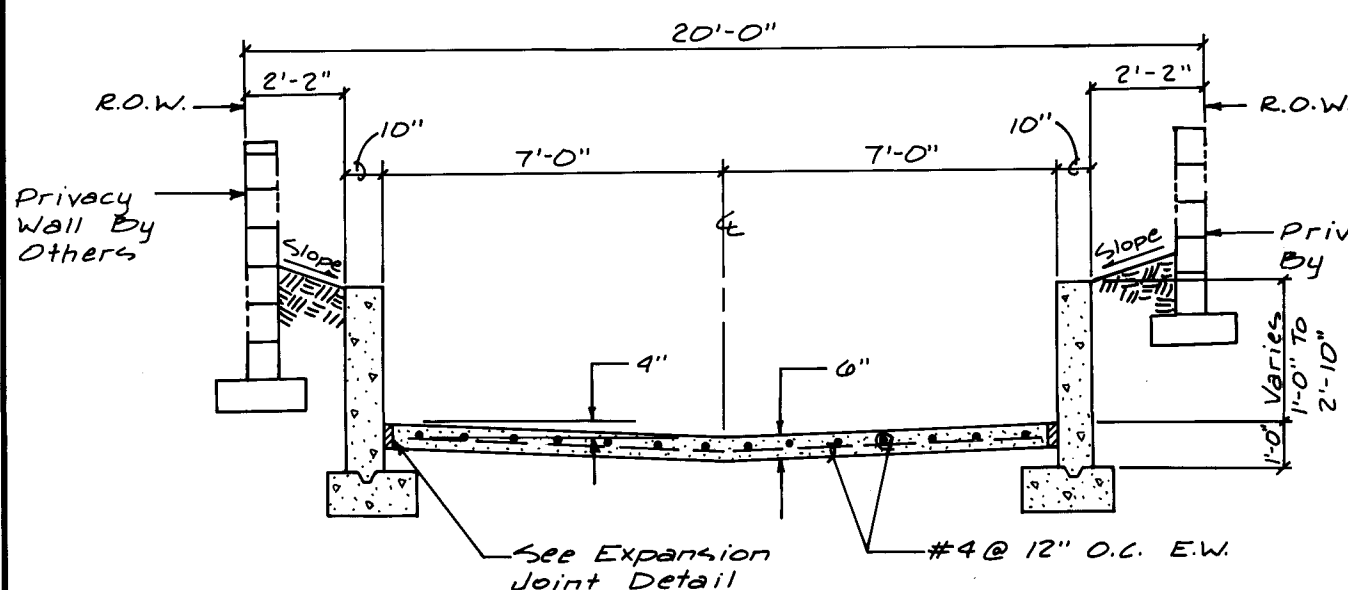
Elevation = 5836.90



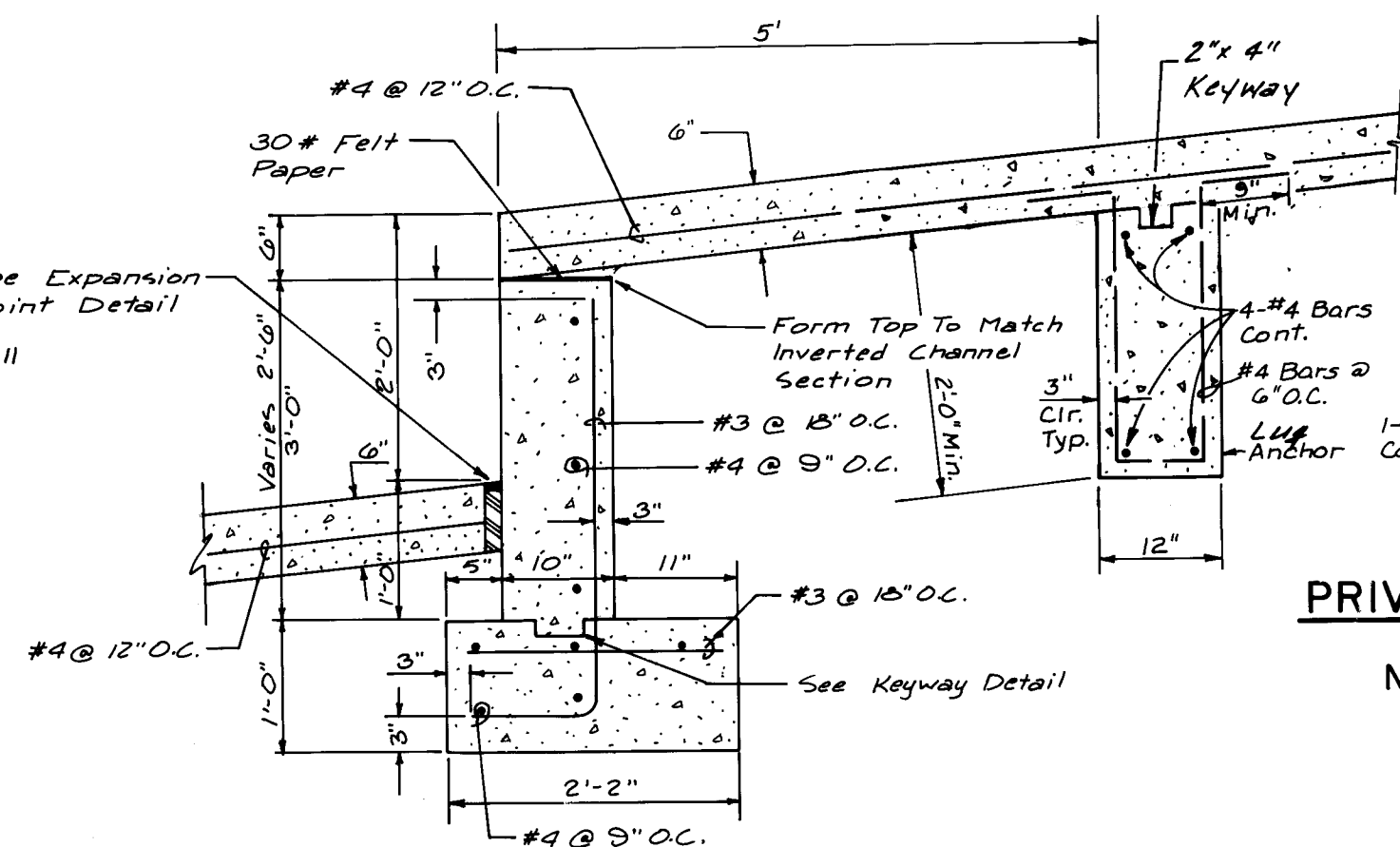
CHANNEL
SECTION A STA. 0+94
SCALE: 1/4" = 1'-0"



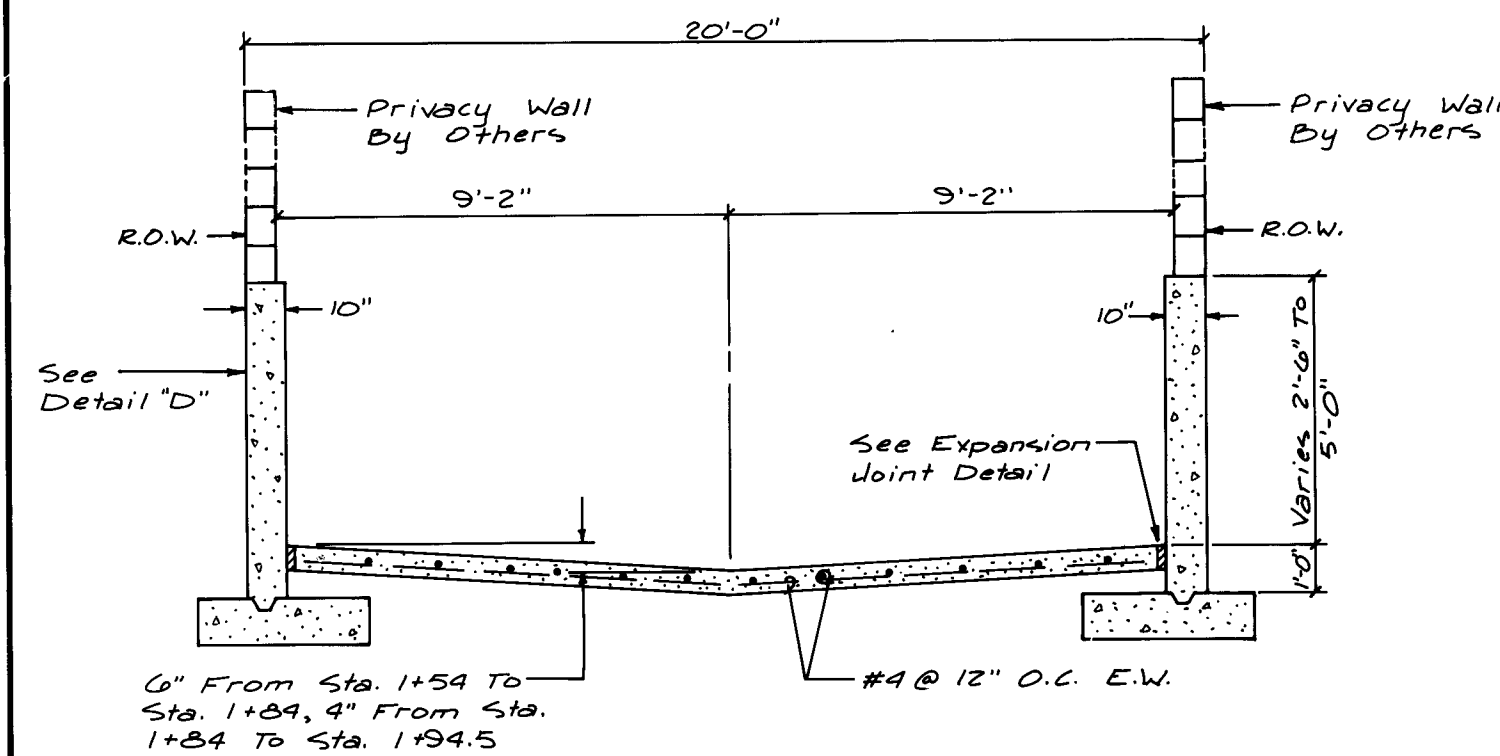
CHANNEL DETAIL "A"
SCALE: 1/2" = 1'-0"



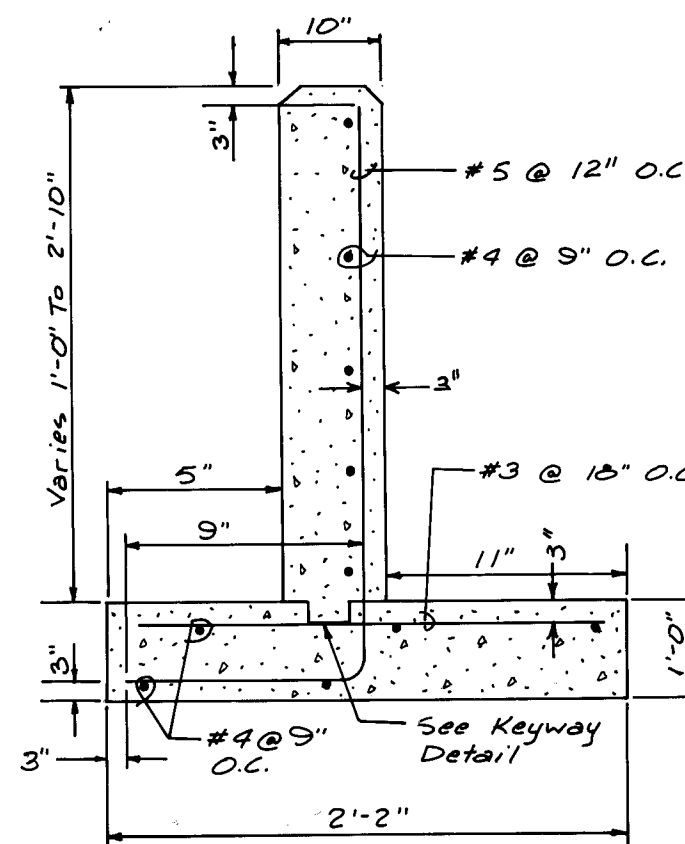
CHANNEL
SECTION B STA. 1+04 to STA. 1+54
SCALE: 1/4" = 1'-0"



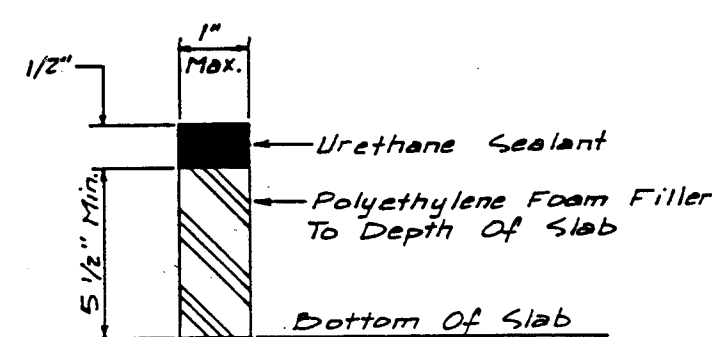
CHANNEL DETAIL "B"
2' DROP STRUCTURE
N.T.S.



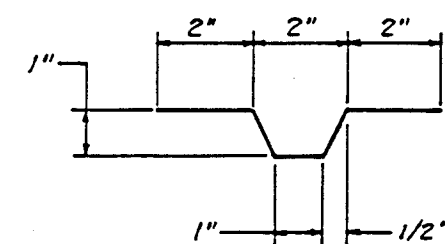
CHANNEL
SECTION C STA. 1+54 to STA. 1+94.5
SCALE: 1/4" = 1'-0"



CHANNEL DETAIL "C"
N.T.S.

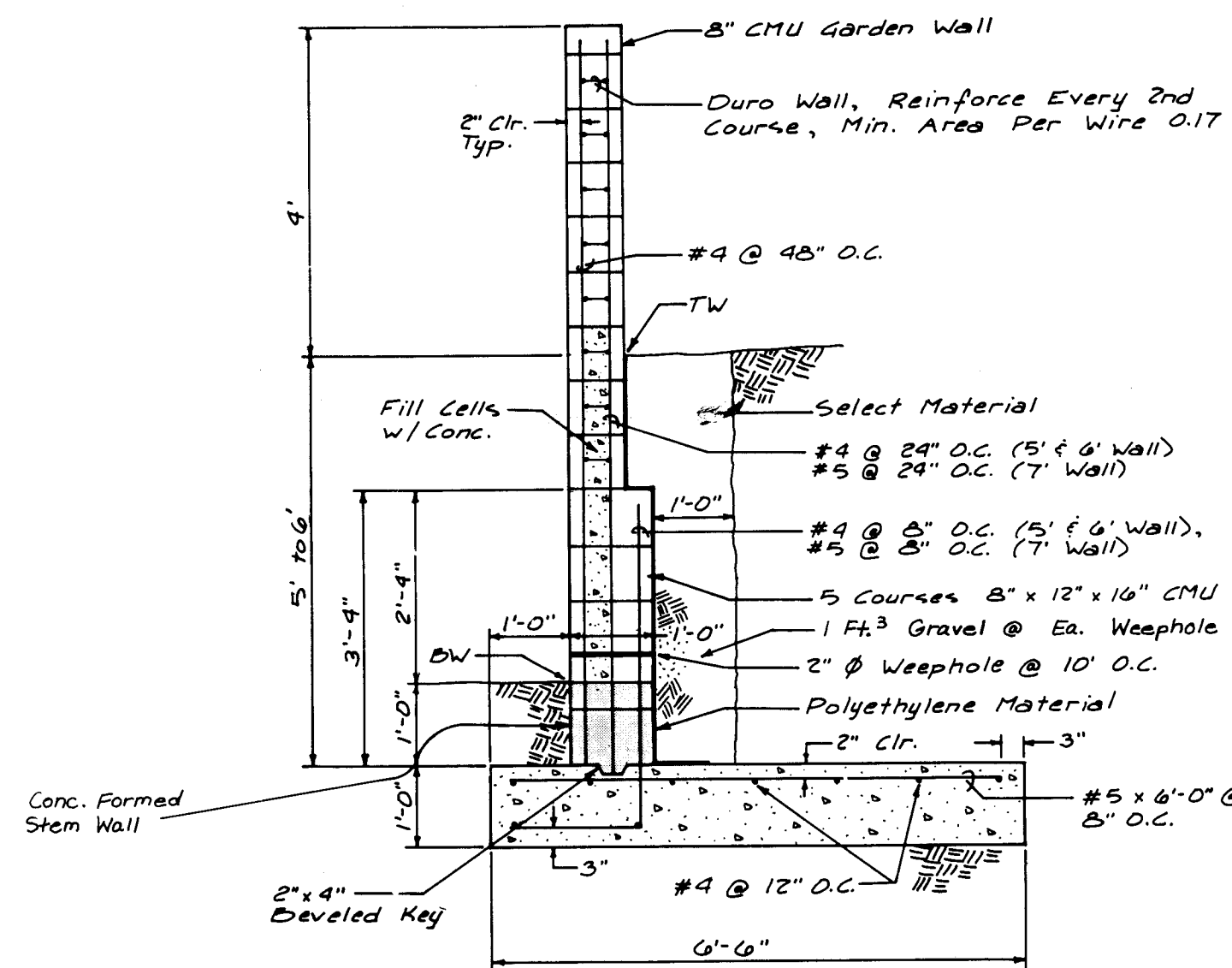


CHANNEL EXPANSION JOINT DETAIL
N.T.S.

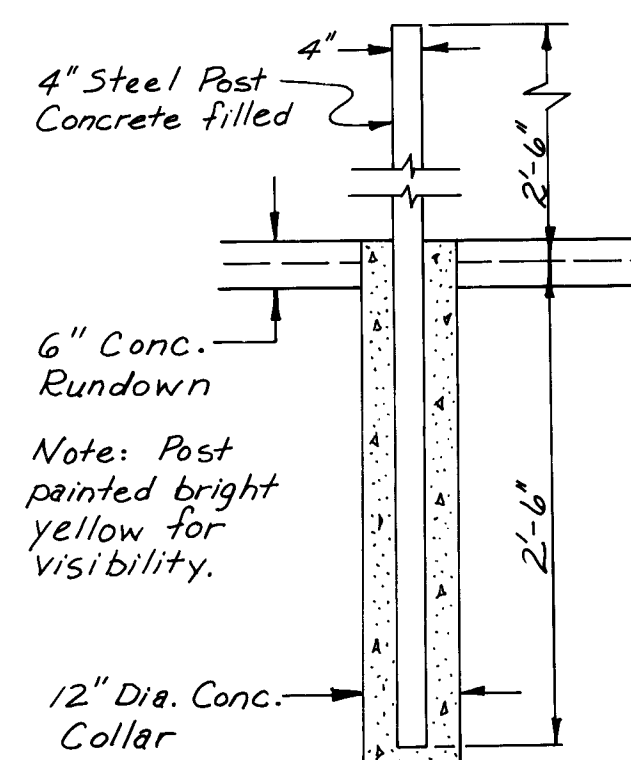


CHANNEL KEYWAY DETAIL
N.T.S.

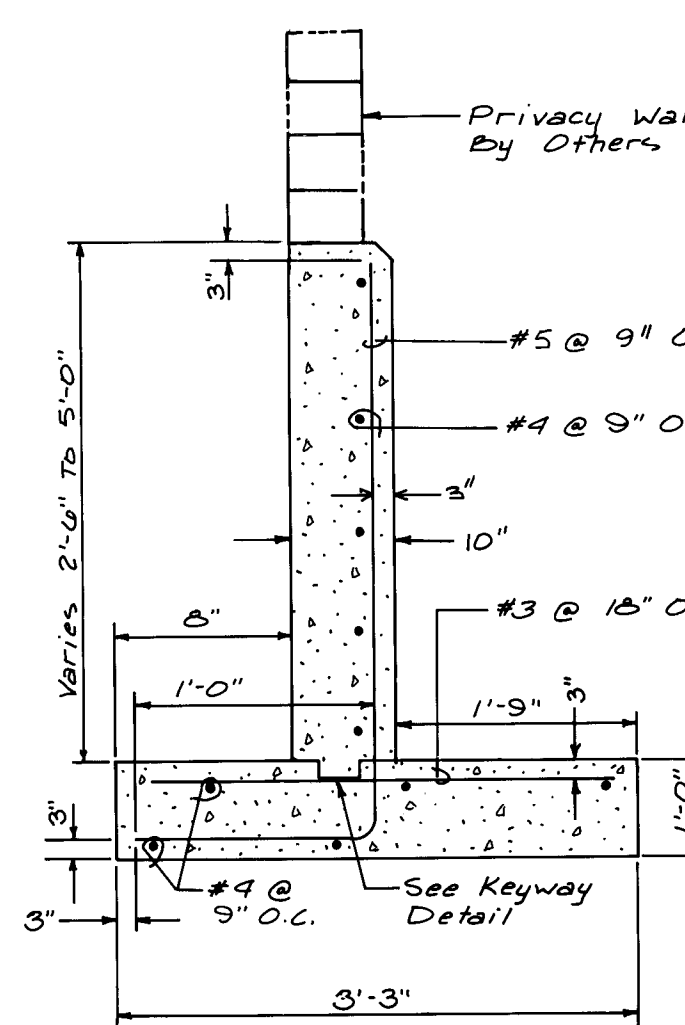
PRIVATE RETAINING WALL - 4' MAX.
N.T.S.
NOT A PART OF WORK ORDER



PRIVATE RETAINING WALL - 5' TO 6'
N.T.S.
NOT A PART OF WORK ORDER



BOLLARD DETAIL
N.T.S.



CHANNEL DETAIL "D"
N.T.S.

GENERAL NOTES - CHANNEL:

- Concrete shall be 3000 psi 28 day concrete with maximum aggregate size of 3/4" and 5% air entrainment as stated in specifications.
- All steel shall be Grade 60 deformed bars unless noted otherwise.
- Splices in rebar shall be 1'-0" or greater for #3 and #4 bars, 1'-3" for #5 bars and 1'-8" for #6 bars.
- All steel spacings are given to the centerline of the bar.
- All exposed edges shall have a 1" chamfer.
- All rebar shall be supported on 3" continuous sand chairs placed perpendicular to the channel centerline at 5' (max.) intervals.
- All areas disturbed during construction shall be reseeded in accordance with the Erosion Plan.
- Subgrade shall be 95% compaction.

EROSION CONTROL PLAN

All areas disturbed during construction shall be seeded in accordance with the following Erosion Control Plan:

- Native grass in the given mix quantities shall be used to cover graded areas:
50% Sideoats grama 2.0 lb. PLS/ac.
40% Blue grama 0.6 lb. PLS/ac.
10% Indian ricegrass 0.6 lb. PLS/ac.
PLS stands for Pure Live Seed and is computed by the following equation:
$$\% \text{ Purity} \times \% \text{ Germination} = \% \text{ PLS}$$

The grass sack tag contains the purity and germination of each species.
- A grass drill shall be used to seed areas that are fairly level, such as the channel maintenance road. Where this is not possible, a "cyclone" or "whirlbird" type seeder shall be used.
- Small grain straw shall be applied immediately after seeding at the rate of 2.5 tons per acre. Straw shall be spread by blower, flail spreader or by hand.
- Supplemental water shall be applied lightly immediately after straw mulch is applied.
- The contractor shall notify the engineer prior to application of the seed mix and shall have the engineer on-site for the duration of the work.

GENERAL NOTES - RETAINING WALL:

- MATERIAL SPECIFICATIONS:**
Masonry units: ASTM C-90
Mortar: Type 3, ASTM C-270
Grout: f'g = 2000 psi @ 28 days
Concrete: f'c = 3000 psi @ 28 days
Bar reinforcing: ASTM A-615, Grade 60
Joint reinforcing: ASTM A-82
- DESIGN CRITERIA**
Horizontal earth pressure: 100 psf
Soil bearing pressure: 1500 psf
Wind load: 20 psf
Friction factor: 0.44
Retaining walls are not designed for saturated earth conditions - grade for positive drainage.
- Lap bar reinforcing minimum 1'-4"
- Lap joint reinforcing minimum 9"
- Requirements for constructing masonry and placing concrete during cold weather shall be enforced.
- All reinforcing shall have the following concrete cover:
Bottom and sides - 3 inches
Top - 2 inches
- Construction of retaining walls shall conform to ACI318.1 - Specification for Concrete Masonry Construction

REF: NCMA - 144, "Design of Reinforced Masonry for Lateral Soil Pressure"

CITY OF ALBUQUERQUE MUNICIPAL DEVELOPMENT DEPARTMENT ENGINEERING DIVISION					
TITLE: VILLA SANDIA TOWNHOMES DETAILS					
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer	<i>[Signature]</i>	3/11/86	Liquid Waste	N/A	3/11/86
A.C.E. Design	<i>[Signature]</i>	3/11/86	Traffic	N/A	3/11/86
A.C.E.-Hydrology	<i>[Signature]</i>	3/11/86	Water	N/A	3/11/86
DRAWING NO.	2801	MAP NO.	J-23	SHEET	11 OF 11

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	WORK	Top of Header Curb At Southwest	Top of Header Curb At Southwest	NO.	BY	DATE	DATE
STAKED BY	DATE	Corner Of Sandia Manor Pump	Corner Of Sandia Manor Pump	1087	Greiner	8-85	1-5-84
FIELD ACCEPTANCE BY	DATE	Station	Station	1086	M.S.M.	10-86	1-5-84
DRAWINGS CORRECTED BY	DATE	9-1231 Located On The North Side Of Pierce	9-1231 Located On The North Side Of Pierce	1028	M.S.M.	10-86	1-5-84
MICRO-FILM INFORMATION	DATE	Arrow Rd. N.E., About 100' East Of The	Arrow Rd. N.E., About 100' East Of The				
RECORDED BY	DATE	Intersection With Stutz Dr. A Square, 1/2,	Intersection With Stutz Dr. A Square, 1/2,				
NO.	DATE	Chisled On The Top Of Curb.	Chisled On The Top Of Curb.				
		Elevation = 5836.90	Elevation = 5836.90				

[Signature]
3-13-86
Greiner Job No. 06410