

SUB-BASIN	AREA (ACRE)	LAND TREATMENT PERCENTAGE (%)				Q ₂₀₁₈ ¹ (CFS)	V ₂₀₁₈ ² (AC-FT)
		A	B	C	D		
OS1	2.98	0	15	58	27	9.4	0.330
OS2	1.00	0	14	80	6	2.8	0.086
101	1.00	0	14.5	83	2.5	2.8	0.082

CONCLUSION
UNDER THE EXISTING CONDITION RUNOFF IS UNDER A SHALLOW CONCENTRATED FLOW AND CROSS DRAINS THROUGH VACANT LAND. WITH THE DEVELOPMENT OF THE ACCESS ROADS AND CUL-DE-SAC, RUNOFF IN THE PROPOSED CONDITION WILL BE CONCENTRATED WITHIN THE DEDICATED EASEMENTS UNTIL IT REACHES 90' STREET. THIS GRADING AND DRAINAGE PLAN SHALL BE USED TO FOLLOW THE CONCEPT GRADING AND DRAINAGE. THIS DRAINAGE REPORT SEEKS APPROVAL FROM ALBUQUERQUE DRAINAGE SECTION FOR THE REPEAT OF TRACT 43-C.

<u>Basin OS1 - Existing</u>		
Area of Treatment A	=	0.000 ft ² 0 ac
Area of Treatment B	=	19000.80 ft ² 0.436 ac
Area of Treatment C	=	76003.20 ft ² 1.745 ac
Area of Treatment D	=	34890.00 ft ² 0.801 ac
Total Area	=	129894.00 ft ² 2.982 ac
<i>Volumetric Flow</i>		
Weighted E	=	1.206 inches
Volume (6hr)	=	0.300 acre-ft
Volume (24hr)	=	0.330 acre-ft
Volume (4days)	=	0.381 acre-ft
Volume (10days)	=	0.398 acre-ft
<i>Peak Rate of Discharge</i>		
Q ₁₀₀	=	9.393 cfs

Gutter Storm Water Conveyance Capacity for Major Event

Project: REPLAT OF TRACT 43-C
Inlet ID: ACCESS ROAD

The diagram illustrates a gutter cross-section adjacent to a street crown. Key dimensions include: Top of Curb or Allowable Depth (H), Gutter Depth (d), Gutter Width (W), Gutter Depression (T), Street Transverse Slope (S_s), Street Longitudinal Slope (S_L), Manning's Roughness (n), Maximum Water Spread for Major Event (T_w), and various flow rates (Q_w, Q_s). The gutter depth is divided into sections 'a' and 'y'. The water surface profile is shown as a dashed line sloping from the curb towards the street crown.

Gutter Geometry	H = 6.0 inches
Allowable Depth to Gutter Flow Line for Major Event	W = 2.00 ft
Gutter Width	a = 1.0 inches
Gutter Depression	S _s = 0.0200 h/h
Street Transverse Slope	S _L = 0.0200 h/h
Street Longitudinal Slope	n = 0.017
Manning's Roughness	T = 12.0 ft
Maximum Water Spread for Major Event	

Gutter Conveyance Capacity Based On Maximum Water Spread	S _w = 0.0617 h/h
Gutter Cross Slope (Eq. ST-8)	y = 2.9 inches
Water Depth without Gutter Depression (Eq. ST-2)	d = 3.9 inches
Water Depth with a Gutter Depression	E _w = 0.46
Gutter Flow is Design Flow Ratio by FHWA HEC-22 method (Eq. ST-7)	T _w = 10.9 ft
Spread for Discharge outside the Gutter Section W(T - W)	Q _w = 3.2 cfs
Discharge outside the Gutter Section W, carried in Section T _w	Q _s = 2.7 cfs
Discharge within the Gutter Section W(Q - Q _w)	Q _t = 5.9 cfs
Flow Rate Based on Maximum Water Spread	

Gutter Full Conveyance Capacity Based on Maximum Allowable Gutter Depth	T = 20.9 ft
Water Spread	E _w = 0.27
Gutter Flow is Design Flow Ratio by FHWA HEC-22 method (Eq. ST-7)	T _w = 18.8 ft
Spread for Discharge outside the Gutter Section W(T - W)	Q _w = 17.2 cfs
Discharge outside the Gutter Section W, carried in Section T _w	Q _s = 6.3 cfs
Discharge within the Gutter Section W(Q - Q _w)	Q _t = 23.5 cfs
Flow Rate Based on Maximum Allowable Gutter Depth	

Gutter Design Conveyance Capacity Based on Minimum of Q_w or Q_t or Q_s	R = 0.84
Reduction Factor for Major Event	Q _{design} = 5.9 cfs
Gutter Design Conveyance Capacity for Major Event	

③ RUNDOWN CAPACITY

[illegible]

PROPOSED BASIN MAP

DRAINAGE PLAN FOR
THE REPLAT OF TRACT 43-C, UNIT 2,
TOWN OF ATRISCO GRANT

PROJECT NAME

[illegible]

PROJECT NO:	141-01
DESIGNED BY:	RJF
DRAWN BY:	OR
CHECKED BY:	RJF
DATE:	MAY 2014

SHEET TITLE

**DRAINAGE REPORT
& BASIN MAP**

SHEET NO:

1

1

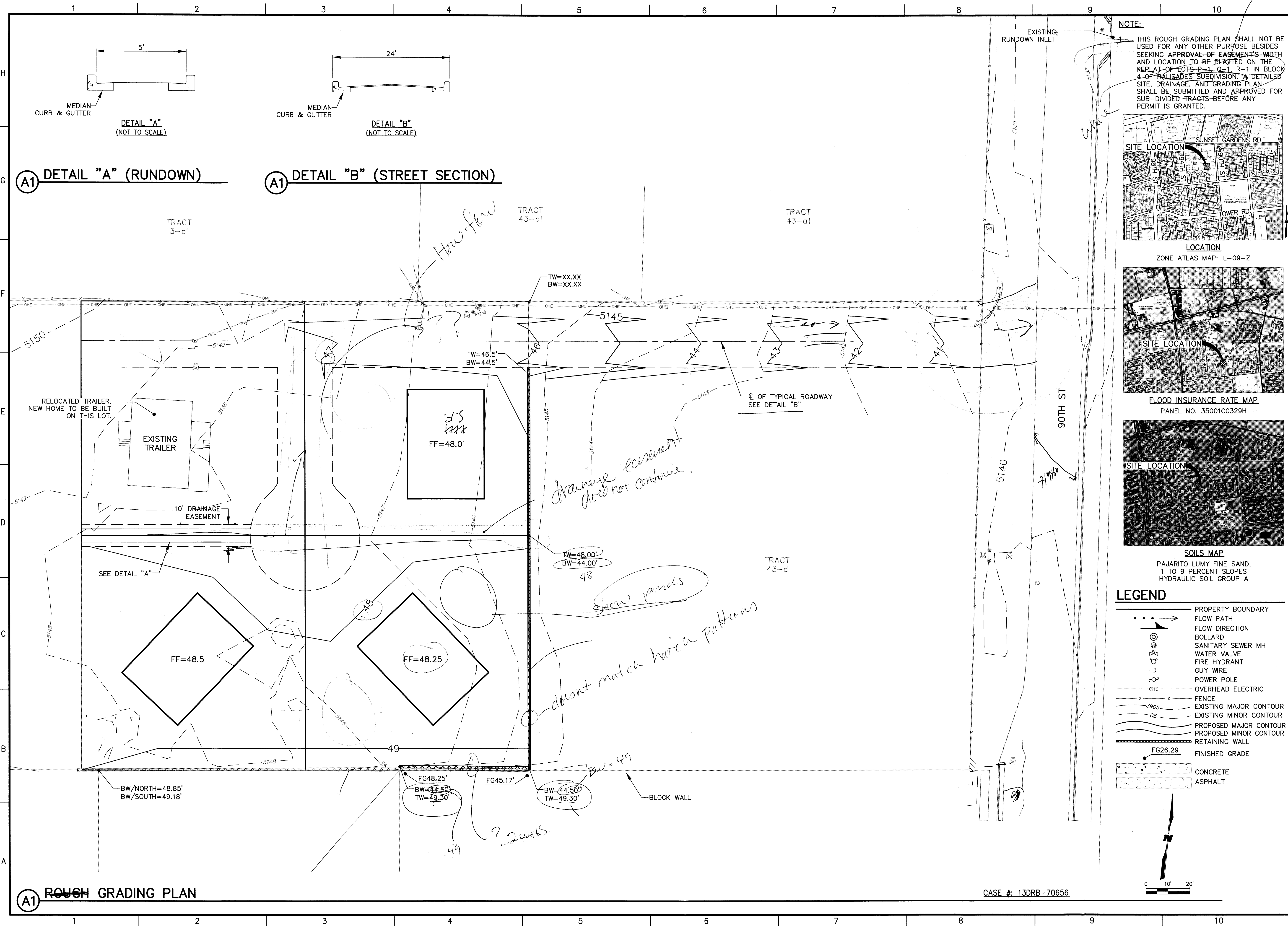
RECEIVED

MAY 16 2014

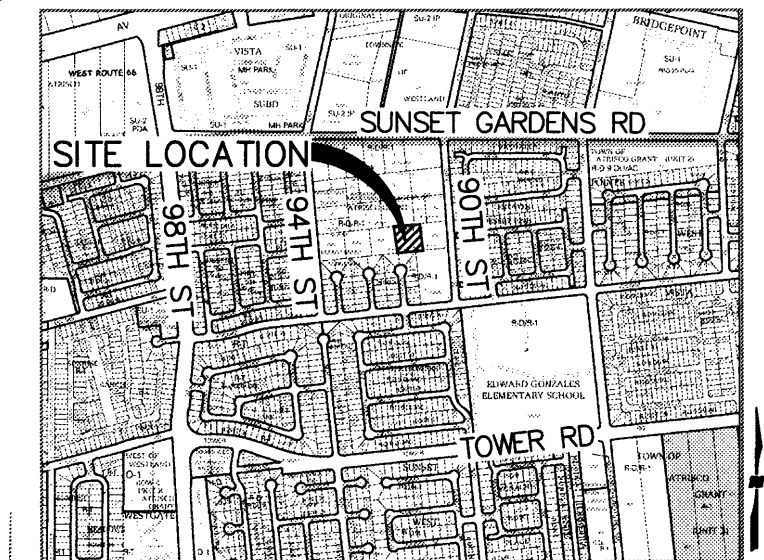
LAND DEVELOPMENT SE

11.40
1.20
12.70
1.0

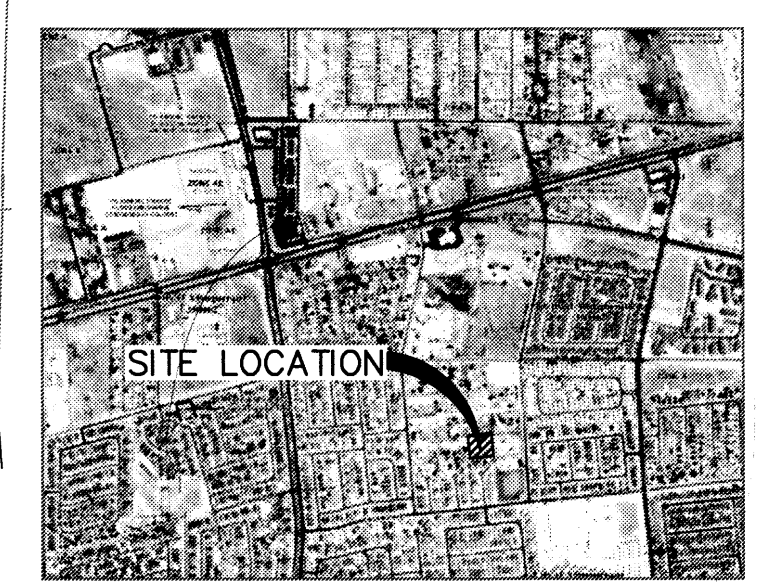
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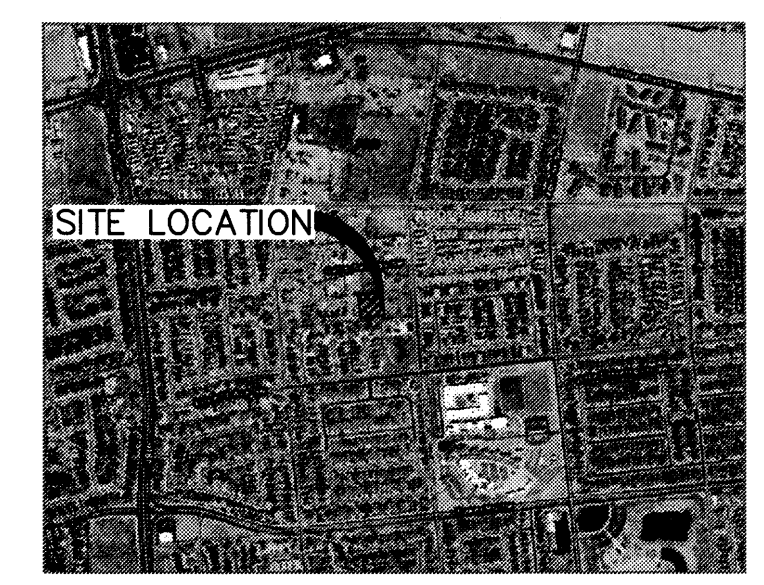
NOTE: THIS ROUGH GRADING PLAN SHALL NOT BE USED FOR ANY OTHER PURPOSE BESIDES SEEKING APPROVAL OF EASEMENTS WIDTH AND LOCATION TO BE PLATTED ON THE REPLAT OF EGS-P-1-Q-1, R-1 IN BLOCK 4 OF PALISADES SUBDIVISION. A DETAILED SITE, DRAINAGE, AND GRADING PLAN SHALL BE SUBMITTED AND APPROVED FOR SUB-DIVIDED TRACTS BEFORE ANY PERMIT IS GRANTED.



LOCATION
ZONE ATLAS MAP: L-09-Z

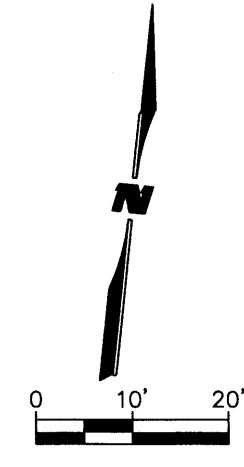


FLOOD INSURANCE RATE MAP
PANEL NO. 35001C0329H

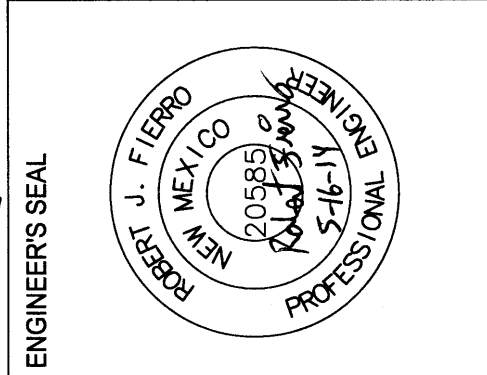


SOILS MAP
PAJARITO LUMY FINE SAND,
1 TO 9 PERCENT SLOPES
HYDRAULIC SOIL GROUP A

- LEGEND**
- PROPERTY BOUNDARY
 - FLOW PATH
 - FLOW DIRECTION
 - BOLLARD
 - SANITARY SEWER MH
 - WATER VALVE
 - FIRE HYDRANT
 - GUY WIRE
 - POWER POLE
 - OVERHEAD ELECTRIC
 - FENCE
 - EXISTING MAJOR CONTOUR
 - EXISTING MINOR CONTOUR
 - PROPOSED MAJOR CONTOUR
 - PROPOSED MINOR CONTOUR
 - RETAINING WALL
 - FINISHED GRADE
 - CONCRETE
 - ASPHALT



Fierro & Company
2929 COORS BLVD. NW
SUITE 307-B
ALBUQUERQUE, NEW MEXICO 87120
PH (505) 503-9546
www.fierrocompany.com



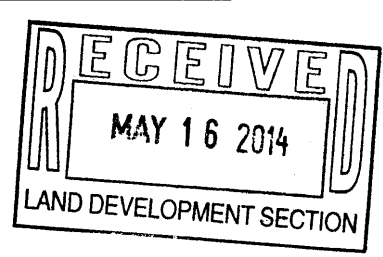
**DRAINAGE PLAN FOR
THE REPLAT OF TRACT 43-C, UNIT 2,
TOWN OF ATRISCO GRANT**

PROJECT NAME	BY	DESCRIPTION	DATE	REV.

PROJECT NO: 141-01
DESIGNED BY: RJF
DRAWN BY: OR
CHECKED BY: RJF
DATE: MAY 2014
SHEET TITLE

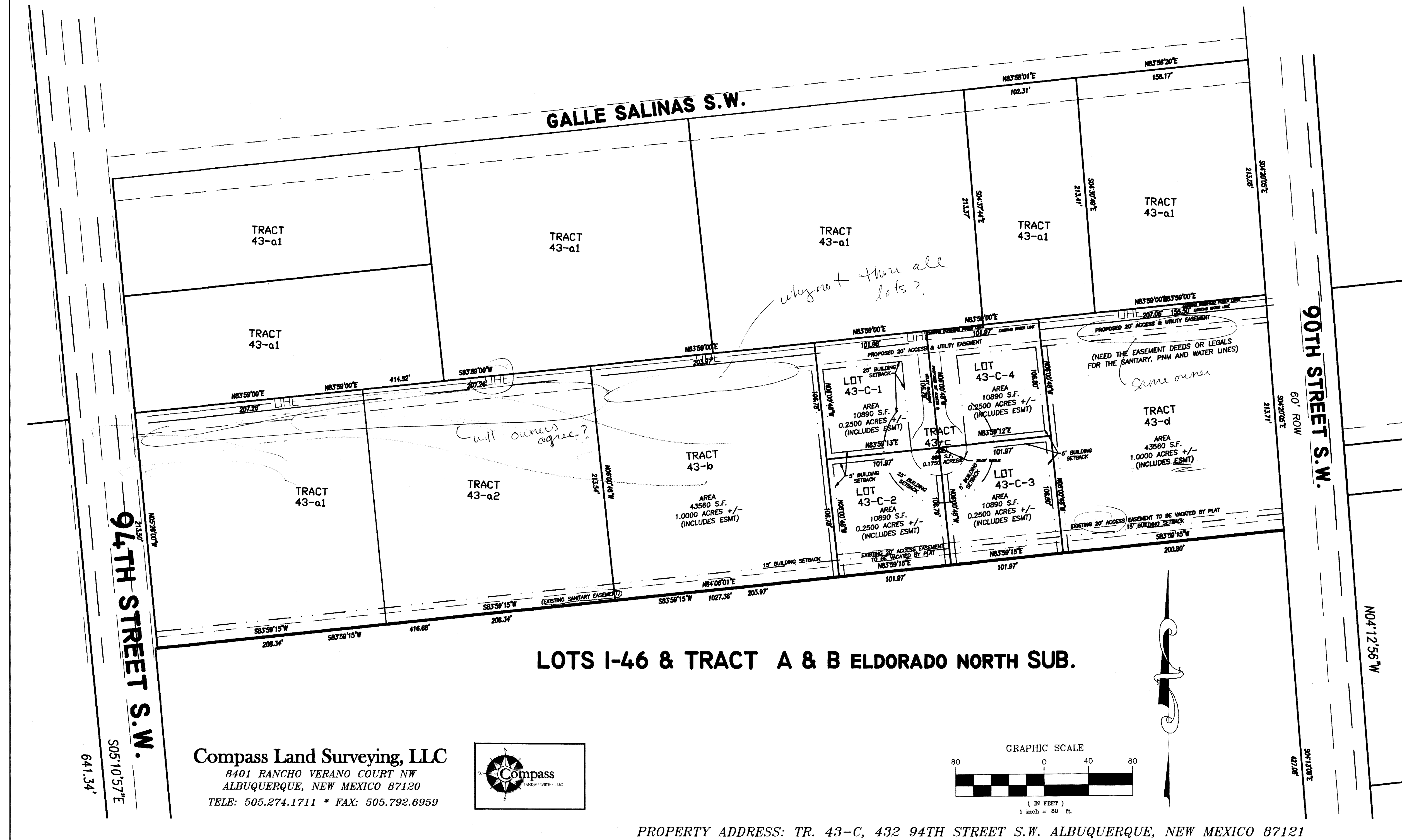
**ROUGH GRADING
PLAN**

SHEET NO: **2**



TRACT 43-c, UNIT 2, A SUBDIVISION IN BERNALILLO COUNTY, NEW MEXICO

TRACT 43-c OF CORRECTED PLAT OF DIVISION OF TRACT 43 UNIT 2, TOWN OF ATRISCO GRANT, ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, AS THE SAME AS SHOWN AND DESIGNATED ON THE MAP OF SAID SUBDIVISION, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON JANUARY 19, 1988 IN VOL. B22, FOLIO 87.



FC

Fierro & Company

2929 COORS BLVD. NW
SUITE 307-B
ALBUQUERQUE, NEW MEXICO 87120
PH (505) 503-9546
www.fierrocompany.com

DRAINAGE PLAN FOR
THE REPLAT OF TRACT 43-C, UNIT 2,
TOWN OF ATRISCO GRANT

[illegible]

PROJECT NO:	141-01
DESIGNED BY:	RJF
DRAWN BY:	OR
CHECKED BY:	RJF
DATE:	MAY 2014
SHEET TITLE	

SKETCH
PLAT

SHEET NO:

3

CASE #: 13DRB-70656

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MAY 10
LAND DEVELOPMENT SECTION