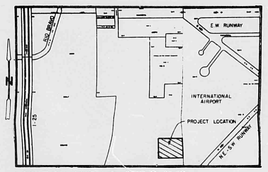
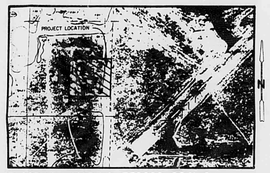


LOCATION MAP NO. N15 & N16



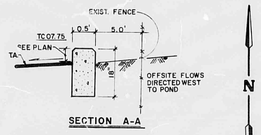
FLOODWAY MAP NO. 350002-0041-C

GRADING & DRAINAGE PLAN

for F.A.A.

ENVIRONMENTAL BUILDING

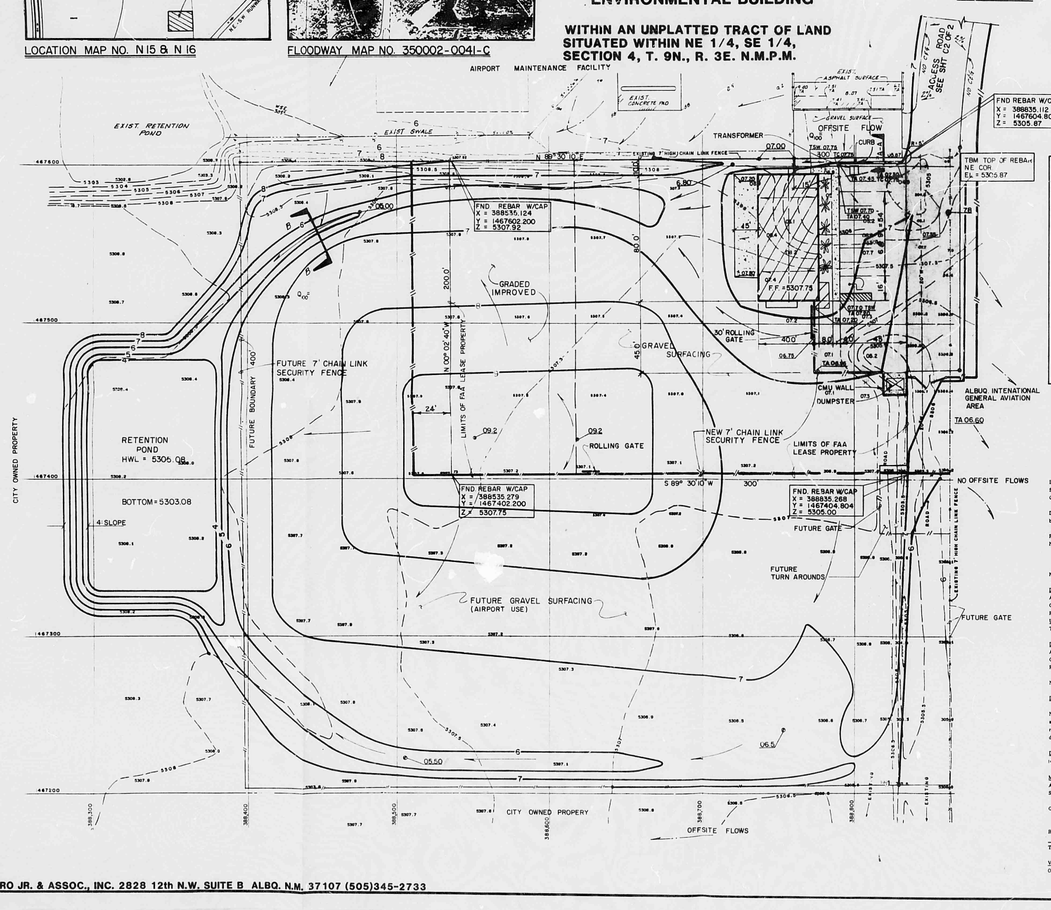
WITHIN AN UNPLATTED TRACT OF LAND SITUATED WITHIN NE 1/4, SE 1/4, SECTION 4, T. 9N., R. 3E. N.M.P.M.



SECTION A-A

N

SCALE 1"=30'



LEGEND

7	FINISHED CONTOURS
7	EXISTING CONTOURS
0.00	EXISTING SPOT ELEV.
	FLOW LINE
	EXISTING. PAVEMENT
	CONCRETE
T.C.	TOP OF CURB
T.A.	TOP OF ASPHALT
0.00	FINISHED SPOT ELEV.
	VEHICLE PARKING
	CHAIN LINK FENCE
	EXISTING CURB & GUTTER

GENERAL NOTES

1. LEGAL- SEE ARCHITECTUAL SURVEY FOR "F.A.A. SITE" PREPARED BY GREINER ENGINEER, DEC. 1986

2. BENCH MARK- U.N.M. BRASS CAP "A-GIN" ACS ELEVATION 5308.725

3. THIS FACILITY IS NOT LOCATED WITHIN A FLOOD HAZARD AREA. SEE FIRM PANEL NUMBER 350002-0041-C. SHT. 41 OF 50

4. THERE EXISTS NO DOWNSTREAM INFRASTRUCTURE TO ACCEPT DEVELOPED FLOWS FROM THIS SITE. UNTILL SUCH TIME INFRASTRUCTURE IMPROVEMENTS ARE IN PLACE, ALL STORM RUNOFF GENERATED WITHIN THIS SITE SHALL BE RETAINED WITHIN POND. MAINTENANCE OF POND SHALL BE PROVIDED FOR BY THE CITY OF ALBUQUERQUE AVIATION DEPARTMENT. WHEN STORM SEWERS ARE CONSTRUCTED, THE POND WILL BE REMOVED PROVIDED FUTURE INFRASTRUCTURE ALLOWS FREE DISCHARGE. IF NOT, DETENTION PONDS WITH CONTROLLED DISCHARGE WILL BE REQUIRED.

5. NO OFFSITE FLOWS OTHER THAN THAT PRESENTLY DISCHARGING TO EXIST. POND CROSSES THE SITE.

6. EROSION CONTROL- ALL GRADED AREAS NOT GRAVELED OR PAVED SHALL BE SEEDED IN ACCORDANCE WITH GRASS SEEDING SPEC. SECTION 02485

7. PAVED ACCESS TO THE SITE THROUGH F.A.A. MAINTENANCE SITE WILL BE PROVIDED.

8. THE RETENTION POND AND RELATED FACILITIES SHALL BE MAINTAINED BY THE CITY OF ALBUQUERQUE AVIATION DIVISION.

DRAINAGE CALCULATIONS

Lot Size = 4.04 acres within fenced area plus offsite flow of 0.09
Soils Type: Hydrologic Group B
Q_{100} = 2 Hr. Storm Rainfall = 3.30" per Plate 22.2 D1

Developed drainage runoff concerning this project (4.04 Acres) shall be retained within 1 designed drainage basin.

RUNOFF CURVE NUMBER:	Asphalt Surface	=	98
	Gravel Surface	=	85
	Roof Surface	=	98
	Undeveloped Surface	=	70

NOTE: Runoff Curve Number (CN) taken from Plate 22.2 C-2

DRAINAGE BASIN AREA IN ACRES

Asphalt & Sidewalk	0.26
Gravel	3.76
Roof	0.08
Undeveloped	0.00
Total Acres	4.20

DRAINAGE RUNOFF

Asphalt	98	1.20"
Gravel	85	1.10"
Roof	98	1.20"

NOTE: Drainage Runoff taken from Plate 22.2 C-4

DRAINAGE BASIN POND

NOTE: Pond contains an additional 9,840 CU. FT. capacity to accomodate the offsite flows from development. This runoff was retained in the pond which was deleted by this development. See drainage plan approval for F.A.A. Maintenance Facility.

DRAINAGE BASIN POND AREA

$=48 \times 79 \times 3.0 = 10,296$ C.F.

MINIMUM PONDING REQUIREMENTS

Asphalt & Sidewalk	1.2" x 0.26 = 0.07 / 12	
Gravel	1.1" x 3.76 = 0.34 / 12	
Roof	1.2" x 0.08 = 0.01 / 12	
Total Ac. Ft.		0.42 + 0.09 = 0.51

VOLUME IN CUBIC FEET

$0.51 \times 43,560 = 22,250$

SCALE CAPACITY
Section 8.8

Q: C·i·A (developed (from above incl offsite flow)
C = (.04)(.0 ac grass) / 3.76 ac @ .85 Mod-Lawn / .26 @ .95 roof
Adjusted C = .04 + .08 = .12
Tc = 60 (0.0 ft/ft Colorado Conservation Plan D = 0.5')
Tc = 8 min
Use 10 min
I = 2.57 × 6.34 × (10min^-.49)
I = 4.97
Q = .12 × 4.97 × 3.8
Q = 2.29 cfs (developed (67% of the which is overflow on max. 1hr. 5% of 24hr))

Swale

Q = 2.0 cfs n = 0.03
S = 0.5%
Q = 1.49/n A R^2/3 S^1/2
Q = 1.7 × 0.5 × 0.03 × 0.02
Q = 0.7 cfs > 2.29 cfs
V = 0.8 fps if no swale (Q = 0.6)
Conclusion: Swale's have the capacity to transmit flows to pond
Detention flows will not create adverse conditions to the swale

SANTIAGO ROMERO
NEW MEXICO
12141
REGISTERED PROFESSIONAL ENGINEER

RESUBMITTAL

SANTIAGO ROMERO
NEW MEXICO
12141
REGISTERED PROFESSIONAL ENGINEER

SANTIAGO ROMERO JR. & ASSOC., INC. 2828 12th N.W. SUITE B ALBQ. N.M. 37107 (505)345-2733

SHEET C1

87-06

REF 22 DATE 6-25-93 OR 87

CITY OF ALBUQUERQUE

This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the PUBLIC WORKS DEPARTMENT - HYDROLOGY DIVISION and was filmed in the normal course of business. The photographic processes used meet the Basic Microfilm Standards of the National Micrographics Association (NMA) (MS115-1977).

Karen Acuna
CITY CLERK RECORDER

OFFICIAL SEAL
NORBERTA SANCHEZ
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: May 8, 1992
Norberta Sanchez

THIS PLAN SHOT TWICE ONCE ON LIGHT AND ONCE ON DARK.

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

PLANS/PLATS ON FILE

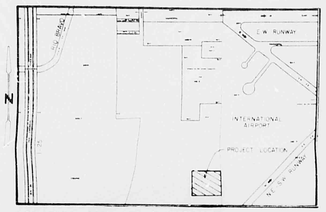
FILE DESC: N-15/D004

PLANS/PLATS 2

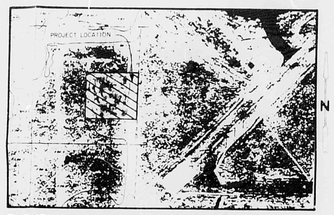
F 30 D 24 C 20 B 16 A 12

CITY OF ALBUQUERQUE

C D F



LOCATION MAP NO. N15 & N16



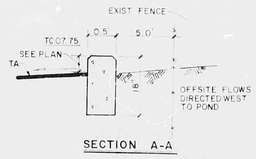
FLOODWAY MAP NO. 350002-0041-C

GRADING & DRAINAGE PLAN

for F.A.A.

ENVIRONMENTAL BUILDING

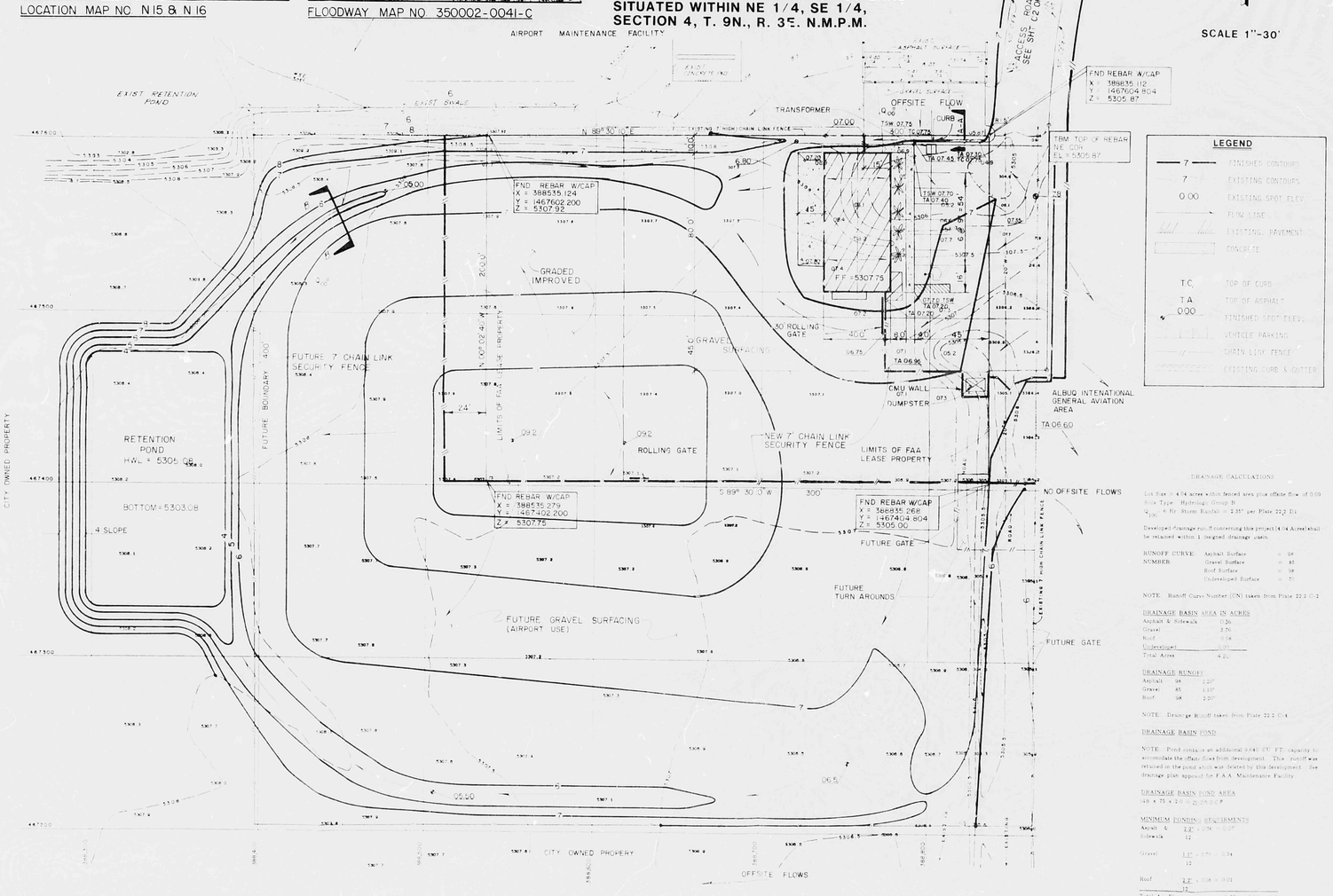
WITHIN AN UNPLATTED TRACT OF LAND SITUATED WITHIN NE 1/4, SE 1/4, SECTION 4, T. 9N., R. 3E. N.M.P.M.



SECTION A-A

N

SCALE 1"=30'



LEGEND

—7—	FINISHED CONTOURS
7	EXISTING CONTOURS
0.00	EXISTING SPOT ELEV.
	FLOW LINE
	EXISTING PAVEMENT
	CONCRETE
TC	TOP OF CURB
TA	TOP OF ASPHALT
0.00	FINISHED SPOT ELEV.
	VEHICLE PARKING
	CHAIN LINK FENCE
	EXISTING CURB & GUTTER

GENERAL NOTES

1. LEGAL: SEE "ARCHITECTUAL SURVEY FOR F.A.A. SITE" PREPARED BY GREINER ENGINEER, DEC. 1986.

2. BENCH MARK: U.S.M.L. BRASS CAP "A-GIN" ACS ELEVATION 5308.225

3. THIS FACILITY IS NOT LOCATED WITHIN A FLOOD HAZARD AREA. SEE FIRM PANEL NUMBER 350002-0041-C, SHT. 41 OF 50.

4. THERE EXISTS NO DOWNSTREAM INFRASTRUCTURE TO ACCEPT DEVELOPED FLOWS FROM THIS SITE. UNTILL SUCH TIME INFRASTRUCTURE IMPROVEMENTS ARE IN PLACE, ALL STORM RUNOFF GENERATED WITHIN THIS SITE SHALL BE RETAINED WITHIN POND. MAINTENANCE OF POND SHALL BE PROVIDED FOR BY THE CITY OF ALBUQUERQUE AVIATION DEPARTMENT. WHEN STORM SEWERS ARE CONSTRUCTED, THE POND WILL BE REMOVED. PROVIDED FUTURE INFRASTRUCTURE ALLOWS FREE DISCHARGE. IF NOT, DETENTION PONDS WITH CONTROLLED DISCHARGE WILL BE REQUIRED.

5. NO OFFSITE FLOWS OTHER THAN THAT PRESENTLY DISCHARGING TO EXIST. POND CROSSES THE SITE.

6. EROSION CONTROL: ALL GRADED AREAS NOT GRAVELED OR PAVED SHALL BE SEEDED IN ACCORDANCE WITH GRASS SEEDING SPEC. SECTION 02485

7. PAVED ACCESS TO THE SITE THROUGH F.A.A. MAINTENANCE SITE WILL BE PROVIDED.

8. THE RETENTION POND AND RELATED FACILITIES SHALL BE MAINTAINED BY THE CITY OF ALBUQUERQUE AVIATION DIVISION.

DRAINAGE CALCULATIONS

Lot Size = 4.14 acres within fenced area, plus offsite flow of 0.09
Soils Type: Hydrologic Group B
P_{360} = 6 Hr. Storm Rainfall = 2.35" per Plate 22.2 D-1

Developed drainage runoff concerning this project (4.14 Acres) shall be retained within 1 designed drainage basin.

RUNOFF CURVE NUMBER:	Asphalt Surface	=	98
	Gravel Surface	=	85
	Roof Surface	=	98
	Undeveloped Surface	=	71

NOTE: Runoff Curve Number (CN) taken from Plate 22.2 D-2

DRAINAGE BASIN AREA IN ACRES

Asphalt & Sidewalk	0.36
Gravel	3.70
Roof	0.04
Undeveloped	0.00
Total Acres	4.10

DRAINAGE RUNOFF

Asphalt	98	1.20"
Gravel	85	1.10"
Roof	98	1.20"

NOTE: Drainage Runoff taken from Plate 22.2 D-4

DRAINAGE BASIN POND

NOTE: Pond contains an additional 9640 CU. FT. capacity to accommodate the offsite flows from development. This runoff was retained in the pond which was located by the development. See drainage plan approved for F.A.A. Maintenance Facility.

DRAINAGE BASIN POND AREA
48' x 75' x 2' = 0.08 x 0.02 =

MINIMUM PONDING REQUIREMENTS

Asphalt & Sidewalk	1.2" / 12	x 0.36 = 0.03'
Gravel	1.1" / 12	x 3.70 = 0.34
Roof	1.2" / 12	x 0.04 = 0.00
Total Ac. Ft.		0.42 + 0.00 = 0.42

VOLUME IN CUBIC FEET
0.42 x 43,560 = 22,915

SANTIAGO ROMERO N.M. 1293 REGISTERED PROFESSIONAL ENGINEER
RESUBMITTAL

SANTIAGO ROMERO N.M. 1293 REGISTERED PROFESSIONAL ENGINEER

SITE CAPACITY
Section B-B

THIS PLAN SHOT TWICE ONCE ON LIGHT AND ONCE ON DARK.

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

RF 22 DATE 3-3-93 OP

CITY OF ALBUQUERQUE

This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the PUBLIC WORKS DEPARTMENT - HYDROLOGY DIVISION and was filmed in the normal course of business. The photographic processes used meet the Basic Microfilm Standards of the National Micrographics Association (NSIS-1977).

Karen Aiken
CITY CLERK RECORDER

OFFICIAL SEAL
NORBERTA SANCHEZ
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires MAY 8, 1993
Norberta Sanchez

SANTIAGO ROMERO JR. & ASSOC., INC. 2828 12th N.W. SUITE B ALBQ. N.M. 87107 (505)345-2733

SHEET C1

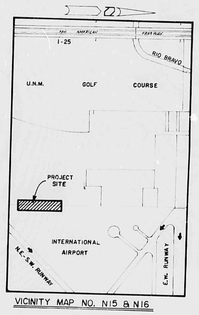
87-06

D 24 | C 20 | B 16 | A 12 | CITY OF ALBUQUERQUE | C | D

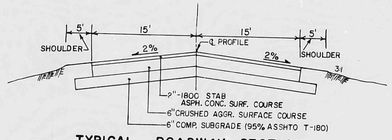
N-15 & 16-Z

SCALE: 1" = 30'

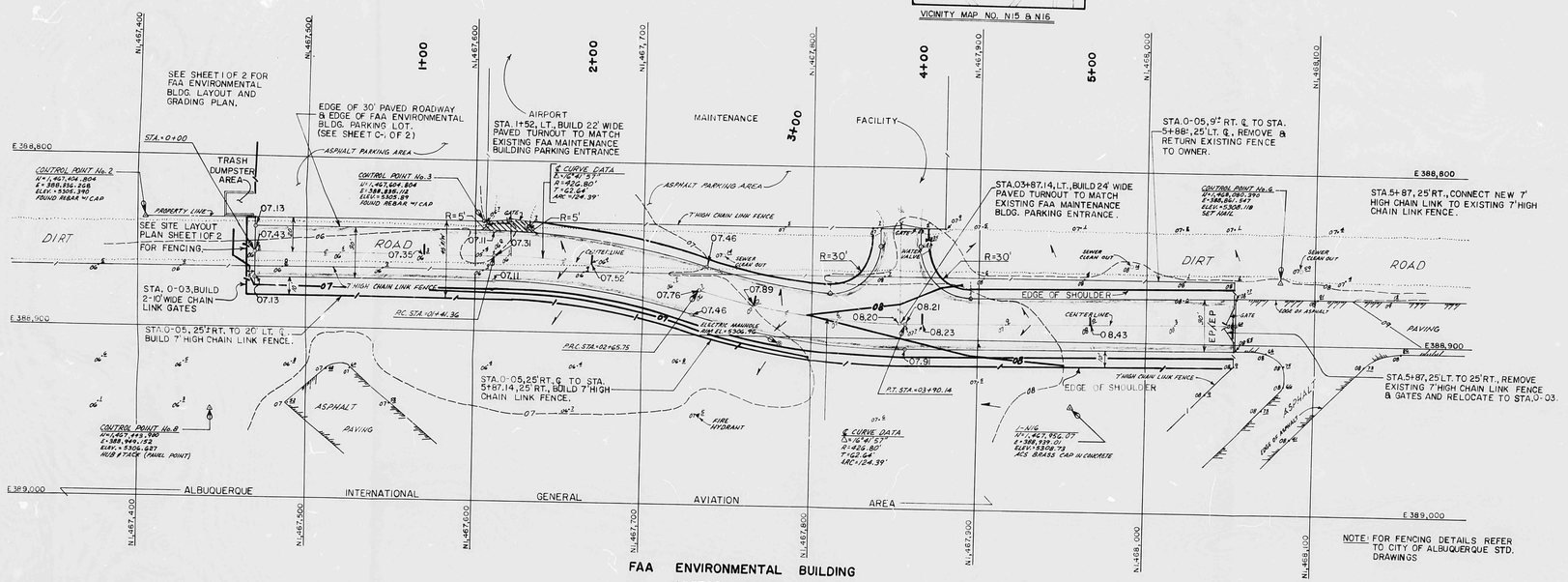
LEGEND:
1. CONTOURS
2. RIDGE LINE
3. DIRT ROAD
4. WATER VALVE
5. SEWER CLEANOUT
6. EDGE OF ASPHALT
7. MANHOLE
8. FIRE HYDRANT
9. SPOT ELEVATION



VICINITY MAP NO. N15 & N16

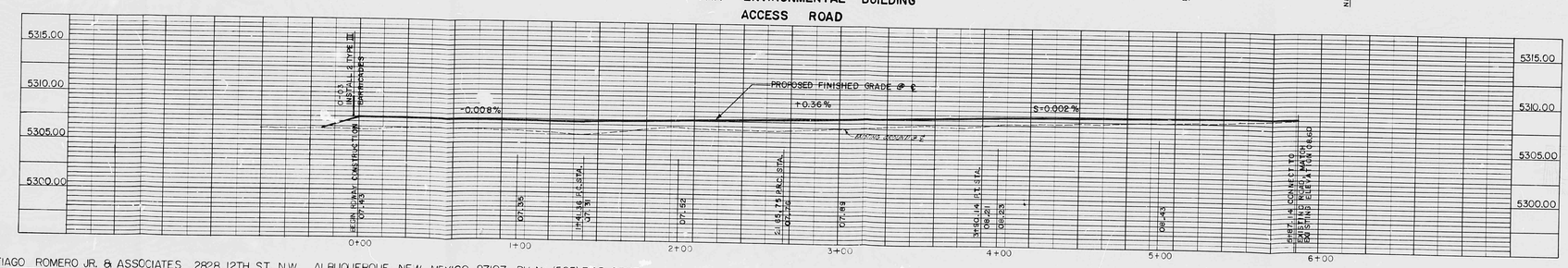


TYPICAL ROADWAY SECTION



NOTE: FOR FENCING DETAILS REFER TO CITY OF ALBUQUERQUE STD. DRAWINGS

FAA ENVIRONMENTAL BUILDING ACCESS ROAD



SANTIAGO ROMERO JR. & ASSOCIATES 2828 12TH ST. N.W. ALBUQUERQUE, NEW MEXICO 87107 PH. NO. (505) 345-2733

SHEET C2

87-06-02

REF. 22 DATE 6-26-93 OR 87P

CITY OF ALBUQUERQUE

This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the PUBLIC WORKS DEPARTMENT - HYDROLOGY DIVISION and was filmed in the normal course of business. The photographic processes used meet the Basic Microfilm Standards of the National Micrographics Association (NBS15-1977).

CITY CLERK RECORDER

OFFICIAL SEAL NORBERTA SANCHEZ NOTARY PUBLIC STATE OF NEW MEXICO My Commission Expires MAY 8 1996

D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D