GRADING & DRAINAGE PLAN

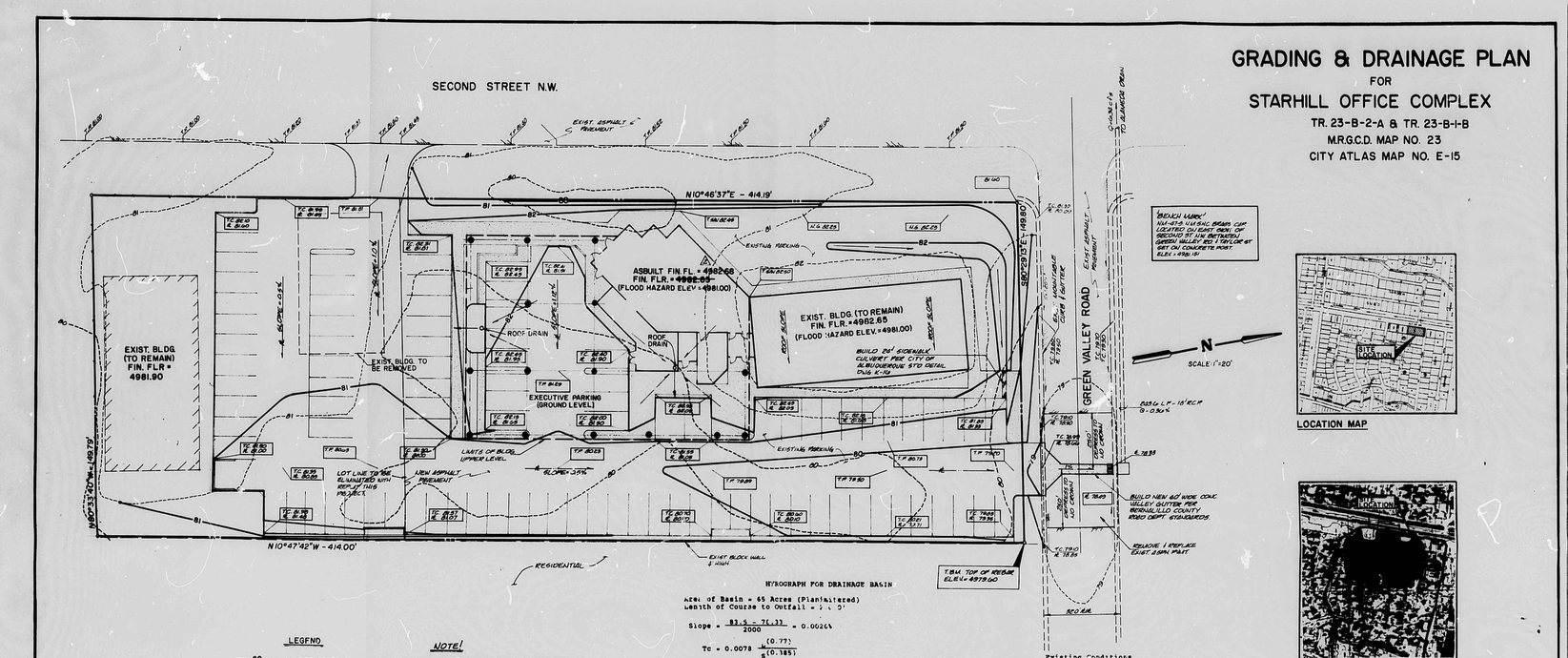
FOR

STARHILL OFFICE COMPLEX

TR. 23-B-2-A & TR. 23-B-1-B

M.R.G.C.D. MAP NO. 23

CITY ATLAS MAP NO. E-15



"BENCH MARK"
VIA ATA V.L.A. BAR. BRASS CAP LOCATED ON EAST SIDE OF GREENBELT ST. N.W. BETWEEN GREEN VALLEY RD. & TAYLOR ST. SET ON CONCRETE POST. ELEV. = 4981.91

LOCATION MAP

FLOODWAY MAP NO. 16

LIMITS OF DRAINAGE BASIN

LEGEND

- 80 — FINISHED CONTOUR
- 80 — EXISTING CONTOUR
- T.C. 74.25 / E. 73.91 — FINISHED SPOT ELEV.
- T.P. 80.49 — EXISTING SPOT ELEV.
- FLOW LINE
- EXIST. PAVEMENT
- CONCRETE
- EXIST. BUILDING
- EXIST. CURB & GUTTER
- PROPERTY LINE
- T.C. — TOP OF CURB
- ℄ — FLOW LINE
- T.P. — TOP OF PAVEMENT

NOTE!

1. CONTRACTOR SHALL PLAN HIS OPERATION TO MINIMIZE EROSION DURING THE CONSTRUCTION PHASE

HYDROGRAPH FOR DRAINAGE BASIN

Area of Basin = 65 Acres (Planimetered)
Length of Course to Outfall = [illegible]

$$\text{Slope} = \frac{83.5 - 76.33}{2000} = 0.0026$$

$$Tc = 0.0078 \frac{L^{(0.77)}}{S^{(0.385)}}$$

$$Tc = 0.0078 \frac{2000^{(0.77)}}{0.0026^{(0.38)}}$$

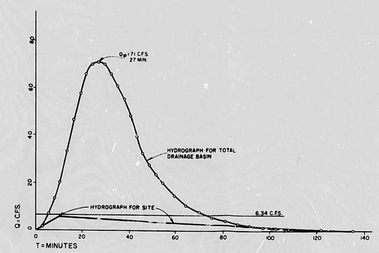
Tc = 27 min

Area of Developed Site = 1.424 Acres
Length of Course over pavement and roof = 520'

$$\text{Slope} = \frac{81.60 - 78.33}{520} = 0.0063\%$$

$$Tc = 0.0078 \frac{520^{(0.77)}}{0.0063^{(0.38)}}$$

Tc = 6.6 min
Use 10 min



Existing Conditions

Soils Gb Plate 21 SCS Bernalillo County
Soils Group "B"

Per Acre Impervious
6 hr. R. Intell Volume from Plate 22.2 D-1 = 2.2"
C = 0.58 from Plate 22.2 C-1
I = 4.65 from Plate 22.2 D-2
A = 1.424 Acres
Q = CIA
Q = (0.58)(4.65)(1.424)
Q = 3.84 cfs

Developed Conditions

90% Impervious (Roof and Pavement)
C = 0.86 from Plate 22.2 C-1
I = 4.65 from Plate 22.2 D-2
A = 1.424
Q = CIA
Q = (0.86)(4.65)(1.424)
Q = 5.49 cfs

Outfall Capacity for 18" R.C.P. to Alameda Drain

Q = AV

$$A = \frac{\pi D^2}{4}$$

A = 1.77 sq. ft.

Circum. = 4.71

$$R = \frac{1.77}{4.71} = 0.38$$

$$S = \frac{75.8 - 74.80}{243.6} = 0.0036\%$$

N = 0.013

$$V = \frac{1.49 \times 0.38^{2/3} \times 0.0036^{1/2}}{0.013}$$

$$V = \frac{1.49 \times 0.57 \times 0.06}{0.013}$$

V = 3.58 '/sec

Q = 1.77 X 3.58

Q = 6.34 cfs

RECEIVED
DEC 17 1986
HYDROLOGY SECTION

Antonio Romero 1/28/86

SANTIAGO ROMERO JR. and ASSOC., Inc.
Registered Professional Engineer
No. 7894
STATE OF NEW MEXICO

⚠ REVISION PER 6/20/85 COMMENTS. 6/20/85
⚠ AS BUILT FIN. FLOOR ELEV. & ENGINEERS AS BUILT CERTIFICATION

S. Jr. Romero & Assoc. Inc.
ENGINEERING SURVEYING
SANTIAGO ROMERO, JR. and ASSOC., Inc.
Le Chateau Condominiums
2020 Lomas N.W. Suite B
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PH. (505) 843-7270

E-15/D003

RF 21 DATE 1-24-93 BY LSP

CITY OF ALBUQUERQUE

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Karen Aragon
CITY CLERK RECORDER

OFFICIAL SEAL
MORIBETA SANCHEZ
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: MAY 8 1996
Moribeta Sanchez

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

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PLANS/PLATS ON FILE

FILE DESC: E-15/D003

PLANS/PLATS 1

F 30 | D 24 | C 20 | B 16 | A 12

CITY OF ALBUQUERQUE

C | D | F

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M.R.G.C.D. MAP NO. 23

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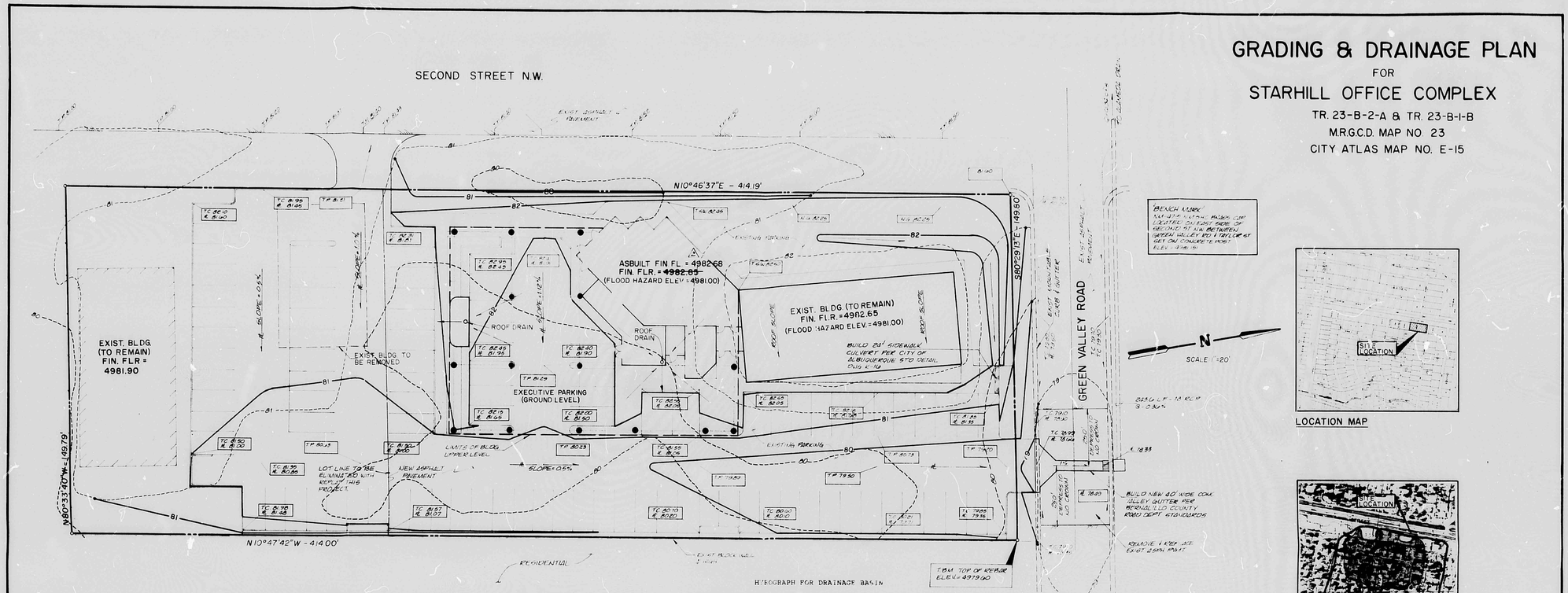
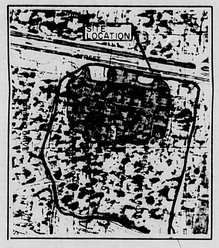


LOCATION MAP



FLOODWAY MAP NO. 16

LIMITS OF DRAINAGE BASIN

LEGEND

80	FINISHED CONTOUR
80	EXISTING CONTOUR
F 79.95 / E 79.95	FINISHED SPOT ELEV.
T.P. 80.25	EXISTING SPOT ELEV.
	FLOW LINE
	EXIST. PAVEMENT
	CONCRETE
	EXIST. BUILDING
	EXIST. CURB & GUTTER
	PROPERTY LINE
T.C.	TOP OF CURB
E	FLOW LINE
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Area of Basin = 65 Acres (Planimetered)
Length of Course to Outfall = 2,100'

$$\text{Slope} = \frac{83.5 - 75.33}{2000} = 0.0026\%$$

$$Tc = 0.0078 \frac{(0.77)}{S^{(0.385)}}$$

$$Tc = 0.0078 \frac{2000^{(0.77)}}{0.0026^{(0.38)}}$$

Tc = 27 min

Area of Developed Site = 1.424 Acres
Length of Course over pavement and roof = 520'

$$\text{Slope} = \frac{81.60 - 78.33}{520} = 0.0063\%$$

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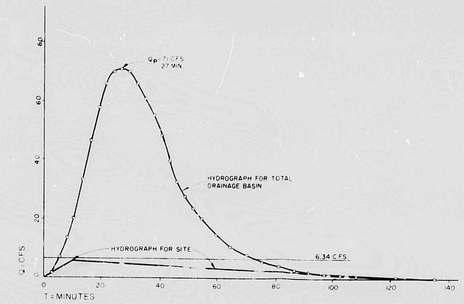

Existing Conditions

Soils Gb Plate 21 SCS Bernalillo County Soils Group "B"

Per Ex. Impervious
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Q = 5.69 cfs

Outfall Capacity for 18" R.C.P. to Alameda Drain

$Q = AV$

$$A = \frac{\pi D^2}{4}$$

A = 1.77 sq ft

Circum. = 4.71

$$R = \frac{1.77}{4.71} = 0.38$$

$$S = \frac{75.8 - 74.80}{243.6} = 0.0036\%$$

N = 0.013

$$V = \frac{1.49 \times (0.38)^{2/3} \times 0.0036^{1/2}}{0.013}$$

$$V = \frac{1.49 \times 0.54 \times 0.06}{0.013}$$

V = 3.58 ft/sec

Q = 1.77 x 3.58

Q = 6.34 cfs

1. REVISION PER 6/20/85 COMMENTS 6/26/85
2. AS BUILT F.N. FLOOR ELEV & ENGINEERS AS BUILT CERTIFICATION

6/26/85

SANTIAGO ROMERO JR. NEW MEXICO 7984 REGISTERED PROFESSIONAL ENGINEER

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