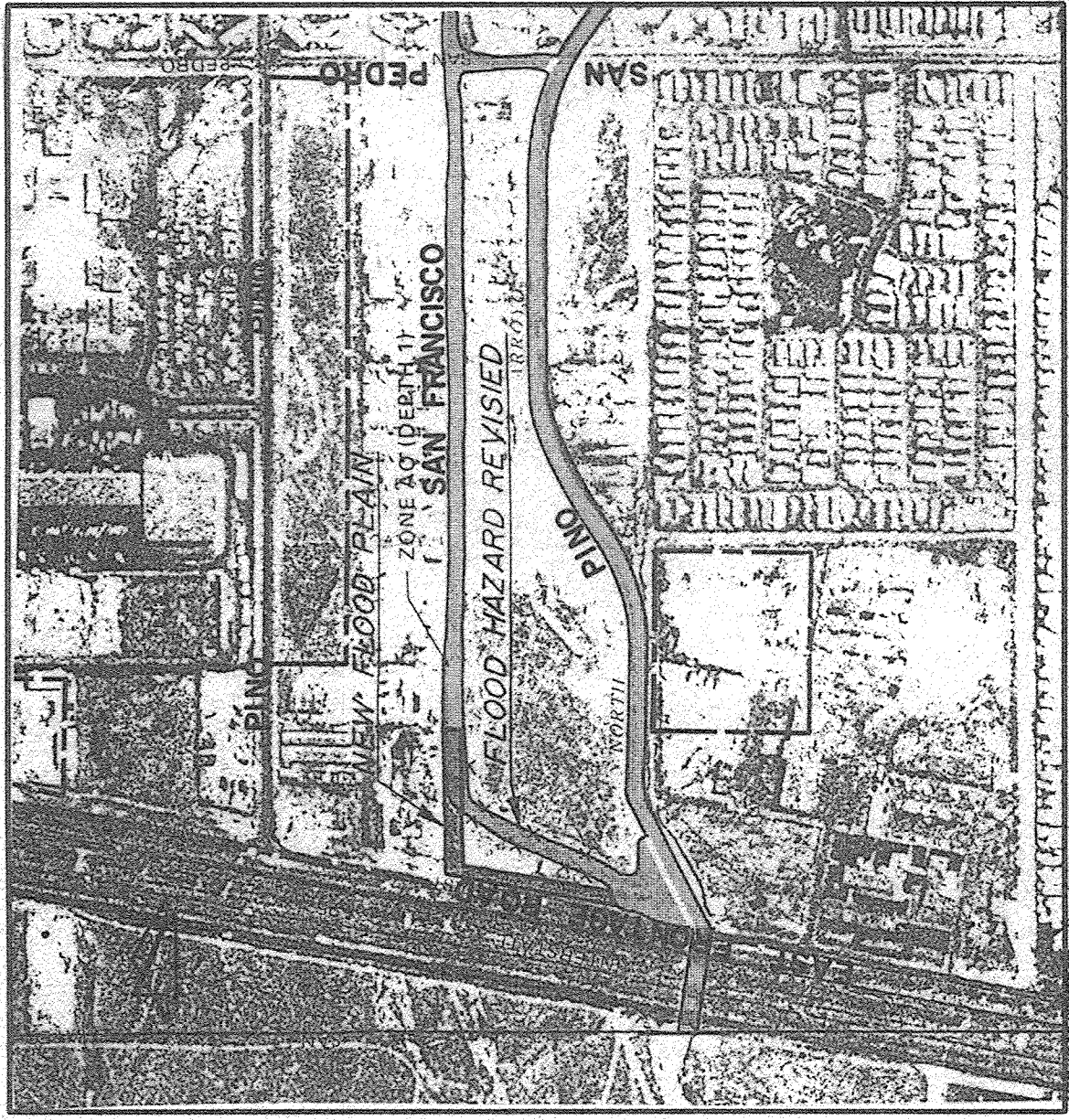




F.I.R.M.
SCALE: 1" = 500'

LEGAL DESCRIPTION
TRACT 22A, BLOCK 6
AMBERLEY SUITE WHICH LIES
TRACT A, UNIT A

PROJECT BENCHMARK
A STANDARD INCH-50 BRASS TABLET,
TOP OF A CONCRETE POST FLUSH WITH
THE GROUND. MARK IS LOCATED 45'
EAST OF THE I-25 FRONTAGE RD. JUST
OFFICES OF THE DRIVE TO THE NORTH
ELEVATION = 5198.73

IBM
SANITARY MANHOLE RIM AS SHOWN ON THE PLAN.
ELEVATION = 5199.93

LEGEND

- TOP OF CURB
- FLOW LINE
- TOP OF ASPHALT
- EXISTING SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED CONTOUR
- FLOW LINE
- RETAINING WALL
- FLOW DIRECTION
- SLOPE
- NEW CONCRETE
- NEW ASPHALT
- AS-BUILT = AS DESIGNED
- AS-BUILT ELEVATIONS
- AREA REQUIRING CORRECTIONS

DRAINAGE PLAN
The following items concerning the Howard Johnson's - San Francisco
Grading and Drainage Plan are contained herein:

- Vicinity Map
- Grading Plan
- Calculations
- F.I.R.M. Map

As shown by the Vicinity Map, the site is located east of the
Interstate 25 Frontage Road and south of San Francisco Drive N.E.
At present, the site is undeveloped.

As shown by Panel 10 of 30 of the Flood Insurance Rate Maps
dated October 14, 1983, this site does not lie within a designated flood
hazard zone, but does lie adjacent to one. This flood hazard zone
is designated "A" and with the depth of one foot, in recognition of
the building have been designed at a minimum of two (2) feet above the
corresponding flowline elevation.

The Grading Plans shows: 1) existing and proposed grades indicated
by spot elevations and contours at 1'0" intervals; 2) the limit and character
of the existing improvements; 3) the limit and character
of the proposed improvements; 4) the limit and character
of the proposed improvements. As shown by this plan, the proposed
improvements consist of the construction of a hotel with associated
parking, and a parking lot. The proposed improvements are located from
east to west onto the I-25 Frontage Road, with an outfall
immediately to the south via bar ditch into the drainage easement
and associated associated with the Northway del Norte. Currently
the site is occupied by a parking lot and a building. The proposed
grading will continue to allow flows from the south to enter the
site. There are no offsite flows entering the site from the north,
west, or east.

Free discharge is proposed for this site. As shown by the
calculations, the free discharge is appropriate for this site as
it lies at the bottom of its watershed, and is consistent with
other properties in the area (e.g., Amberley Suite which lies to
the immediate south of the site).

The Calculations which appear herein analyze both the existing and
proposed conditions. The calculations are based on the
Procedure for 40-acre and Smaller Basins, as set forth in the
Revision of Section 22.2, Hydrology of the Development Process
Manual, Volume 2, Design Criteria, dated January, 1993, has been
generated. As shown by these calculations, the proposed
improvements will cause a net increase of 4 cfs in the peak runoff
of improvements to a site at the bottom of its watershed, public
drainage facilities exist immediately downstream, and "free
discharge" is consistent with the adjacent Amberley Suite site, the
free discharge from this site is appropriate.

CALCULATIONS

Site Characteristics

- Precipitation Zone = 3
- $P_{100} = P_{360} = 2.60$ in.
- Total Area (A_T) = $66,010$ sft / 1.52 ac
- Existing Land Treatment
Treatment A
Area (sft/ac)
53,335 / 122
- Developed Land Treatment
Treatment B
Area (sft/ac)
18.4

Existing Condition

- Volume
 $E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$
 $E_W = [(0.66)(1.52) / (1.52)] = 0.66$ in.
 $V_{100} = (E_W / 12) A_T$
 $V_{100} = (0.66 / 12)(1.52) = 0.0836$ ac. ft.; 3,640 cf
- Peak Discharge
 $Q_p = Q_A A_A + Q_B A_B + Q_C A_C + Q_D A_D$
 $Q_p = Q_{100} = (1.87)(1.52) = 2.8$ cfs

Developed Condition

- Volume
 $E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$
 $E_W = [(0.92)(0.28) + (2.36)(1.22)] / (1.52) = 2.06$ in.
 $V_{100} = (E_W / 12) A_T$
 $V_{100} = (2.06 / 12)(1.52) = 0.2614$ ac. ft.; 11,390 cf
- Peak Discharge
 $Q_p = Q_A A_A + Q_B A_B + Q_C A_C + Q_D A_D$
 $Q_p = Q_{100} = (2.60)(0.28) + (5.02)(1.22) = 6.8$ cfs

Comparison

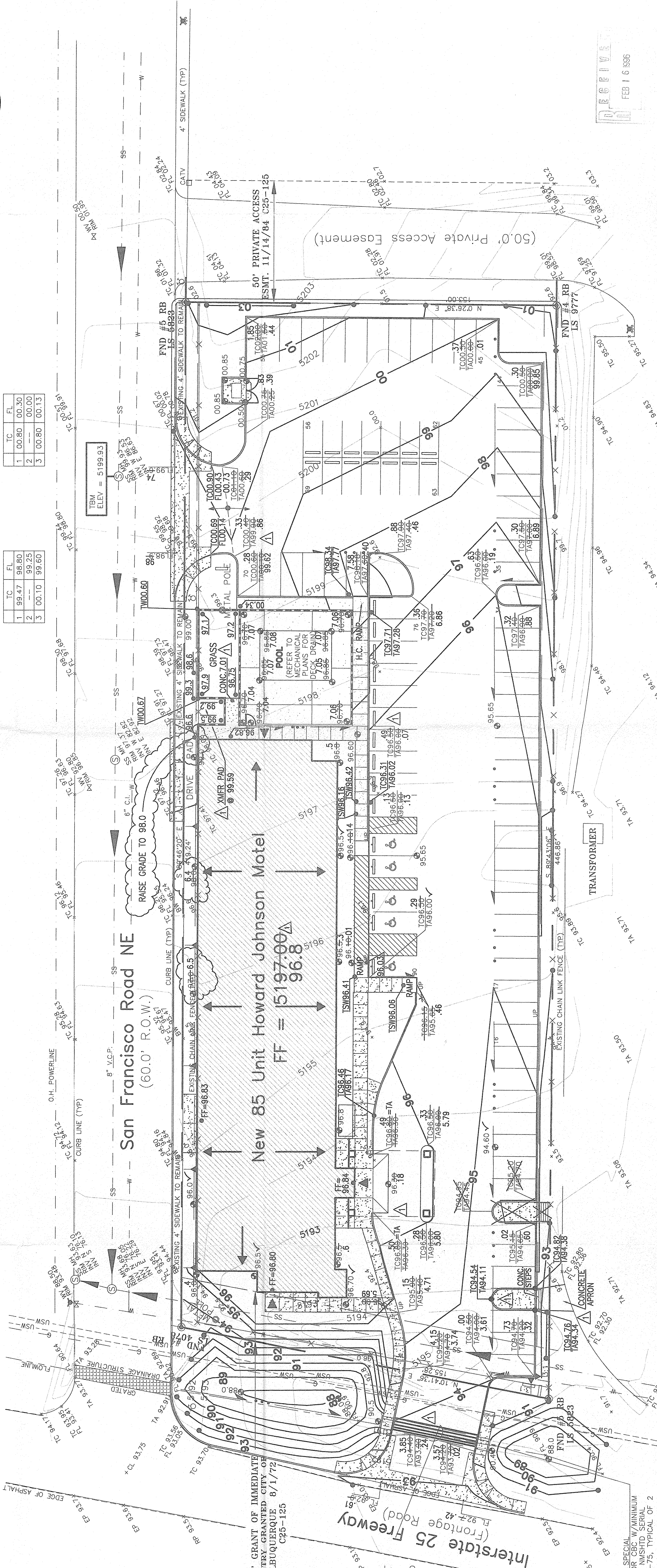
- $\Delta V_{100} = 11,390 - 3,640 = 7,750$ cf (Increase)
- $\Delta Q_{100} = 6.8 - 2.8 = 4.0$ cfs (Increase)

TC	FL
1	94.15 93.65
2	93.40 93.40
3	93.70 93.20

CONSTRUCT & STEEL
1- CATTLE GUARD W/O
ALUMINUM WARNING
SERIAL NO. 15187D
SECC-001-02

TC	FL
1	93.35 92.85
2	93.15 93.15
3	93.90 93.90

CONSTRUCT SPECIAL
CONCRETE MINIMUM
NO. C8-SF-75, TYPICAL OF 2



TC	FL
1	99.47 98.80
2	99.25 99.25
3	99.10 99.60

TC	FL
1	99.47 98.80
2	99.25 99.25
3	99.10 99.60

As indicated by the on-site information shown herein, the Howard
Johnson Motel, San Francisco/25 project has been constructed in
substantial conformance with the approved Grading and Drainage
Plan. However, this slight modification which was handled during
construction, does not adversely impact the drainage concepts
established by the approved plan. Corrective work is required,
which must be corrected have been "bubbled" in. This applies to three
lines in the location of underground utility. The design of the
building. Raising the grade in this area is necessary to maintain
the perimeter grade of the structure at a minimum of one foot above
the corresponding flowline of the road which is a designated flood
hazard zone. It is recommended that a Temporary Certificate of
Occupancy be issued at this time with Permanent Certificate of
Occupancy be issued at this time as the corrected work has been
accomplished and certified.

The information presented herein has been obtained by me or under
my direct supervision and is true and correct to the best of my
knowledge and belief.

Jeff A. Mortensen, N.M.P.E. 8547
Date



VICINITY MAP
SCALE: 1" = 750'

DRAINAGE CERTIFICATION

As indicated by the on-site information shown herein, the Howard
Johnson Motel, San Francisco/25 project has been constructed in
substantial conformance with the approved Grading and Drainage
Plan. However, this slight modification which was handled during
construction, does not adversely impact the drainage concepts
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Jeff A. Mortensen, N.M.P.E. 8547
Date

Erosion Control Measures:

- The contractor shall ensure that no soil
exposed by excavation is left right-
of-way or onto private property.
- The contractor shall promptly clean up
any exposed soil so that the exposed
material is not susceptible to being
washed down the street.
- The contractor shall secure "Topsoil
Disturbance Permit" prior to beginning
construction.

THIS IS NOT A BOUNDARY SURVEY.
TOPOGRAPHIC INFORMATION AND BOUNDARY DATA
PROVIDED BY SOUTHWEST SURVEY
DATED 1-27-95

JMA
JEFF MORTENSEN & ASSOCIATES, INC.
REGISTERED PROFESSIONAL ENGINEERS
ALBUQUERQUE, NEW MEXICO 87109
ENGINEERS & SURVEYORS (SBS) 345-4280

JMA # 950242

Howard Johnson Motel
San Francisco / I-25 NE
Albuquerque, New Mexico

Project Title

Drawn by JMA Checked by JMA
Project No. P-9443.00 Date 4/18/95
AS-BUILT & CERTIFY 2/96 J.C.M.

Revisions Architect Engineer

Sheet Title Sheet of