

CHAVEZ • GRIEVES
CONSULTING ENGINEERS, INC.

5639 JEFFERSON STREET NE • ALBUQUERQUE, NEW MEXICO 87109 • PHONE (505) 344-4080 • FAX (505) 343-8759

GRADING AND DRAINAGE PLAN

FOR

CIVIC PLAZA

PHASE II RENOVATIONS

ALBUQUERQUE, NEW MEXICO

SEPTEMBER, 1995



5639 JEFFERSON STREET NE • ALBUQUERQUE, NEW MEXICO 87109 • PHONE (505) 344-4080 • FAX (505) 343-8759

GRADING AND DRAINAGE PLAN

CIVIC PLAZA

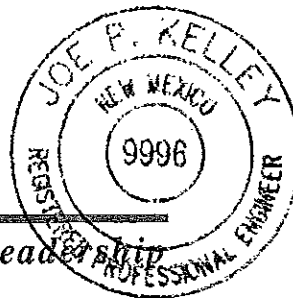
PHASE II RENOVATIONS

September 1995

ENGINEER'S STATEMENT

I certify that I am a Registered Professional Engineer in the State of New Mexico and that this report was prepared by me or under my supervision. I have personally inspected this site, and it appears that no grading, filling, or excavation has occurred thereon since the existing topographic map was prepared.

Joe Kelley 9/28/95



Celebrating 15 Years of Engineering Leadership

LOCATION

This site is located in downtown Albuquerque on Third Street between Marquette and Tijeras. It is the site of the existing downtown Civic Plaza owned by the City of Albuquerque.

LEGAL DESCRIPTION

Blocks 1, 2, 4, B, and C, Mandells Business & Residence Addition to the City of Albuquerque.

ZONING AND SURROUNDING DEVELOPMENT

The site is zoned SU-3, Special Center Zone, and has been developed in accordance with this designation. Fully-developed City streets abut the site on all sides. The surrounding area is the downtown business district.

FLOOD HAZARD ZONES

As shown by Panel 3500020028 of the National Flood Insurance Rate Maps for the City of Albuquerque, dated October 14, 1983, the site is not in or adjacent to a designated flood hazard zone.

RELATED REPORTS

No drainage reports for Civic Plaza are in City Hydrology records. However, a report for the City/County Municipal Office Building dated 12/7/83 is on file (J14/D30A). That report includes the hydrology for the runoff from the storm drainage system that is on the west side of the site. It shows how some inlets on the upper level of Civic Plaza discharge to the south via a force main, while others discharge to the west and north via gravity discharge lines.

EXISTING SITE CONDITIONS AND DRAINAGE PATTERN

The site consists of multi-story buildings, with a two-story parking garage whose roof is at ground level. The roof also serves as the downtown Civic Plaza, which is being remodeled as part of this project. The primary reason for the remodeling is to replace the liner between the ceiling and the roof of the parking garage, because the existing liner leaks.

The existing plaza/roof has a large fountain with benches, landscaped areas, and penetrations for elevators, plumbing, and stairs. Roof drains (which are at ground level or under landscaping in planters) discharge all the surface runoff to a sump pit in the basement of the building via internal plumbing. This runoff is automatically pumped out of the sump pit into a storm inlet that is located on Third Street. This inlet is 40' long, and the line from the sump pit discharges into the north end of the inlet. An 18" RCP exits the inlet on the south end, and discharges to an existing 66" RCP storm drain in Third Street.

An attempt was made to determine why the inlet is 40' long, as it appears that it collects very little surface runoff. The 66" RCP was constructed as shown on the City of Albuquerque record drawings for "P.D. 157 3rd St. Storm Sewer Extensions", dated 1-63. An inlet was also constructed at that time where the 40' inlet exists today. The inlet was modified to its current conditions with the construction of the Civic Plaza parking garage in 1974. No records could be found for the design of the 40' inlet, but it was found that the original designer was Mr. Bob Kielich. He was contacted on June 7, 1993 for information about the design of the inlet. Mr. Kielich couldn't recall all the details, but did remember that the inlet's length helped dissipate the high velocities produced by the pump discharge line prior to entering the 66" storm main. The dissipating effect is caused by storm water from the force main entering the inlet at the north end, and then traveling 40' under gravity conditions to exit the inlet at the south end. The 40' length was not selected as a function of high surface flows that might enter the inlet, because the amount of runoff from the surface is minimal. This was confirmed in site inspections, which reveal that the inlet is at a fairly high elevation, not in a sump condition, with very little surface area discharging to the inlet.

PROPOSED SITE CONDITIONS AND DRAINAGE PATTERN

The proposed drainage pattern is the same as the existing pattern. Minor relocations of some of the drains on the plaza will be made, but the existing system appears to serve the area well, and there is no compelling reason to modify it in any substantial way. No calculations of existing or proposed runoff were made as part of this report, as the runoff quantity will not change, and will continue to discharge at the same locations.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20