



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 4, 1995

Jeff Mortensen
Jeff Mortensen & Associates
6010-B Midway Park Blvd. NE
Albuquerque, NM 87109

RE: ENGINEER CERTIFICATION FOR SAN MATEO PFH @ 401 SAN MATEO
BLVD. SE (K17-D71) CERTIFICATION STATEMENT DATED 11/28/95.

Dear Mr. Mortensen:

Based on the information provided on your November 29, 1995
submittal, Engineer Certification for the above referenced site
is acceptable.

If I can be of further assistance, please feel free to contact me
at 768-2667.

Sincerely,

Bernie J. Montoya, CE
Engineering Associate

BJM/dl

c: Andrew Garcia
File

941146

PROJECT TITLE: SAN MATEO PFH ZONE ATLAS/DRNG. FILE #: K17/D71

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: _____

CITY ADDRESS: 401 SAN MATEO SEENGINEERING FIRM: JEFF MORTENSEN & ASSOC. CONTACT: JEFF MORTENSENADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250OWNER: PRESBYTERIAN HEALTHCARE CONTACT: ARCHITECT

ADDRESS: _____ PHONE: _____

ARCHITECT: KEVIN GEORGES & ASSOC CONTACT: SIMONADDRESS: 127 JEFFERSON NE PHONE: 255-4975SURVEYOR: JEFF MORTENSEN & ASSOC CONTACT: JEFF MORTENSENADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250CONTRACTOR: KLINGER CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
☐ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☐ GRADING PLAN
☐ EROSION CONTROL PLAN
☒ ENGINEER'S CERTIFICATION
☐ OTHER

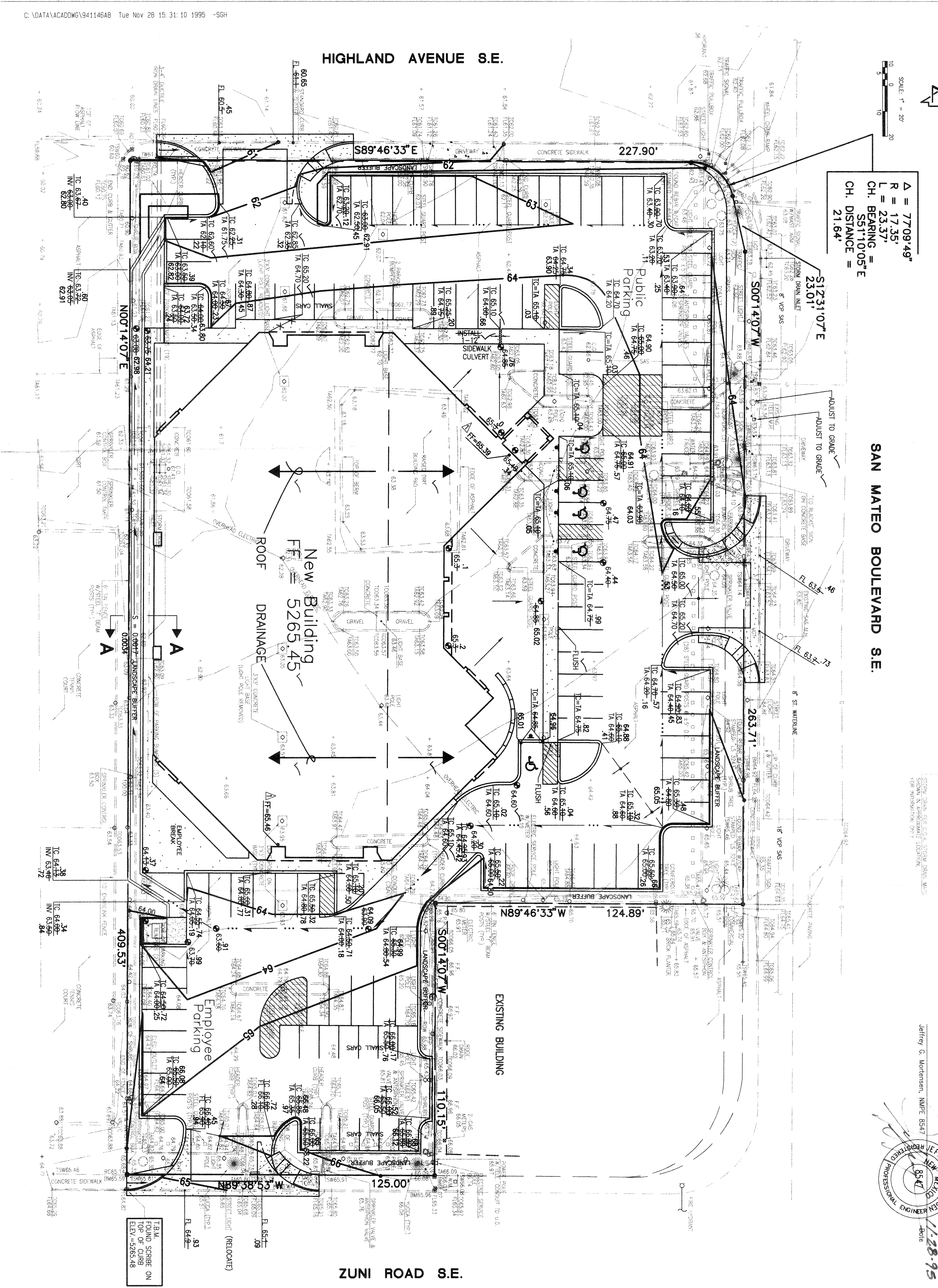
PRE-DESIGN MEETING:

- ☐ YES
☐ NO
☐ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SKETCH PLAT APPROVAL
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D. APPROVAL
☐ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☐ BUILDING PERMIT APPROVAL
☒ CERTIFICATE OF OCCUPANCY APPROVAL
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ S.A.D. DRAINAGE REPORT
☐ DRAINAGE REQUIREMENTS
☐ OTHER _____ (SPECIFY)

DATE SUBMITTED: 11-29-95BY: JEFFREY G. MORTENSEN



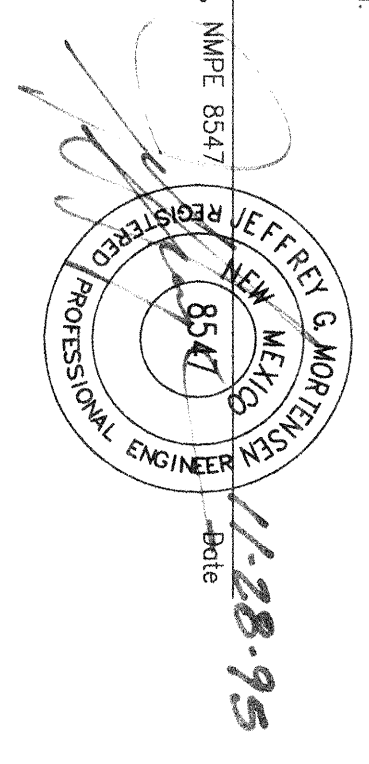
$\Delta = 77.09'49''$
 $R = 17.35'$
 $L = 23.37'$
 $CH. BEARING = S81°10'05''E$
 $CH. DISTANCE = 21.64'$

SAN MATEO BOULEVARD S.E.

11-28-95

DRAINAGE CERTIFICATION

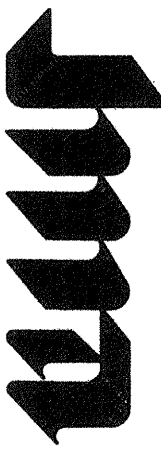
As indicated by the as-built information shown hereon, the San Mateo PTH project has been constructed in substantial compliance with the approved drainage plan. The information presented hereon has been obtained by me or under my direct supervision and is true and correct to the best of my knowledge and belief. It is based on a field inspection of the project and is hereby recommended.



- Construction Notes:**
- Two (2) working days prior to any excavation, contractor must contact New Mexico Department of Transportation, District 1, for location of existing utilities.
 - Prior to construction, the contractor shall excavate and verify the horizontal and vertical location of all potential obstructions. Should a conflict exist, the contractor shall notify the engineer immediately. The engineer shall resolve the conflict with a minimum amount of delay.
 - All work on this project shall be performed in accordance with applicable federal, state and local laws, rules and regulations concerning construction safety and health.
 - All construction within public right-of-way shall be performed in accordance with applicable City of Albuquerque Standards and Procedures.
 - If any utility lines, pipelines, or underground utility lines are shown on these drawings, they are shown in an approximate manner only, and such lines may exist where none are shown. If any such existing lines are shown, the location is based upon information provided by the owner of said utility. The contractor shall be responsible for the location, depth, size, or type of existing utility lines, pipelines, or underground utility lines. This information is provided for informational purposes only and does not constitute a representation or warranty, and may not be complete, therefore, makes no assumption of responsibility or liability therefor. The contractor shall inform itself of the location of any utility line, pipeline, or underground utility line, and shall be responsible for the location, depth, size, or type of existing utility lines, pipelines, or underground utility lines. The contractor shall be responsible for the location, depth, size, or type of existing utility lines, pipelines, or underground utility lines. The contractor shall be responsible for the location, depth, size, or type of existing utility lines, pipelines, or underground utility lines.

- The contractor shall ensure that no soil erodes from the site into public right-of-way or onto private property.
- The contractor shall promptly clean up any material excavated from the public right-of-way so that the excavated material is not susceptible to being washed down the street.
- The contractor shall secure "topsoil" Disturbance Permit prior to beginning construction.

ZUNI ROAD S.E.



San Mateo PTH
401 San Mateo Boulevard SE
Albuquerque, New Mexico
Presbyterian Project No. R314

Project Title

Drawn C.J.H. By Checked J.G.M.

Proj 944100, Date 01/95

Revisions

11/95 AS BUILT & CERTIFY

Architect

Engineer

Professional Seal for Jeffrey G. Mortensen, N.M.P.E. 8547, dated 11-28-95.

The following items concerning the San Mateo P.F.H. site are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Sections & Details
4. Calculations

As shown by the Vicinity Map, the site is located at the southwest corner of the intersection of Highland Avenue S.E. and San Mateo Boulevard S.E. At present, the site is developed as a vacant lot. Inasmuch, the site is currently characterized by an abandoned building pad, existing asphalt paving, and landscaping.

As shown by Panel 29 of 50 of the National Flood Insurance Program Flood Insurance Rate Maps published by F.E.M.A. for the City of Albuquerque, New Mexico dated October 14, 1983, this site does not lie within a designated flood hazard zone. This Panel does indicate, however, that both San Mateo Boulevard S.E. and Zuni Road S.E. are designated flood hazard zones (Zone AO-Depth 1). In flood areas, the elevations of the site adjacent to those streets have been elevated a minimum of 1 foot above the corresponding flood elevation. The proposed construction of the Highland Detention Basin which is situated downstream from the site. At present, the site drains from south to north to Highland Avenue S.E., which is situated to the north. At its intersection with Coal Avenue S.E., the runoff flows in a westerly direction to the Highland Detention Pond clearly delineated on the Vicinity Map.

The Grading Plan 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, and 4) continuity between existing and proposed improvements. This plan, the proposed improvements consist of the construction of a rectilinear facility, along with adjacent paving and landscaping. The existing site improvements will be demolished. As stated above, the site currently drains to Highland Avenue S.E. This trend it will exit via a new private entrance. A portion of the site runoff will be conveyed along the west boundary of the site via a private concrete drainage channel. A typical section for the private concrete drainage channel is shown below, along with supporting hydraulic calculations.

Offsite flows do not impact this site. The designated flood hazard zone referenced above appears to be contained within the adjacent public streets (San Mateo Boulevard and Highland Avenue S.E.) and is already developed, making this a modification to an existing site within an infill area. This, combined with the presence of downstream public drainage improvements (i.e., Highland Detention Pond), the continued free discharge of runoff from this site is appropriate.

The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Procedure for 40-acre and Smolder Basins, as set forth in the Revision of Section 22.2, Hydrology of the Development Process Manual, As shown, the existing site conditions are used to determine the peak rate of discharge and volume of runoff generated. This is due to the fact that more previous (undesignated) area is being developed and the hydraulic calculations which appear hereon rely upon the Manning Equation for open channel flow within the private drainage channel.

CALCULATIONS

Site Characteristics

1. Precipitation Zone = 2
2. $P_{6,100} = P_{360} = 2.35$ in.
3. Total Area (A_T) = 2.03 ac.

4. Existing Land Treatment
Treatment Area (A_T) = 2.03 ac
% 8.2
4.4
87.4

5. Developed Land Treatment
Treatment Area (A_T) = 2.03 ac
% 17.0
83.0

Existing Condition

1. Volume
 $E_w = (E_A A + E_B + E_C + E_D) / A_T$
 $E_w = [(0.78)(0.17) + (1.13)(0.09) + (2.12)(1.77)] / (2.03) = 1.96$ in.

2. Peak Discharge
 $Q_p = Q_{PA} A_A + Q_{PB} B_B + Q_{PC} C_C + Q_{PD} D_D$
 $Q_p = 0.100 = (2.28)(0.17) + (3.14)(0.09) + (4.70)(1.77) = 9.0$ cfs

Developed Condition

1. Volume
 $E_w = (E_A A + E_B + E_C + E_D) / A_T$
 $E_w = [(0.78)(0.35) + (2.12)(1.68)] / (2.03) = 1.89$ in.

2. Peak Discharge
 $Q_p = Q_{PA} A_A + Q_{PB} B_B + Q_{PC} C_C + Q_{PD} D_D$
 $Q_p = 0.100 = (2.28)(0.35) + (4.70)(1.68) = 8.7$ cfs

- Comparison
1. $\Delta V_{100} = 14,470 - 13,920 = 550$ cf (decrease)
 2. $\Delta Q_{100} = 9.0 - 8.7 = 0.3$ cfs (decrease)

SECTION A-A CAPACITY

$Q = (1.49/n) A R^{2/3} S^{1/2}$ (Manning Eq.)
where $n = 0.013$
 $A = 0.67(6) = 0.35$ sf
 $R = 0.67(6) = 0.35$ sf
 $S = 0.35/500 = 0.0007$
 $Q_{capacity} = 11.3$ cfs $> Q_{100}$

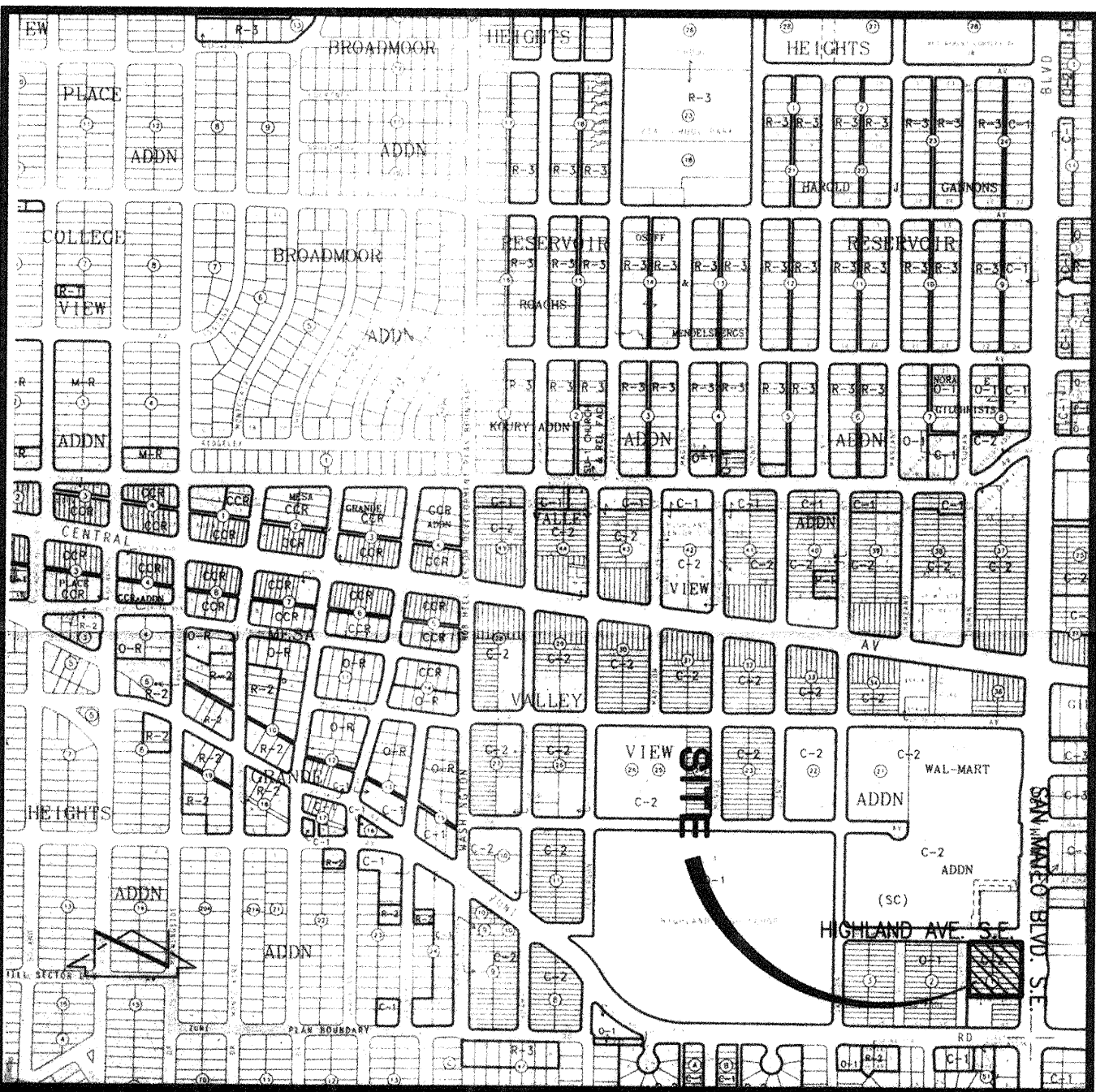
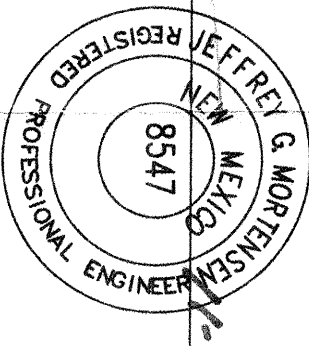
AS-BUILT CAPACITY

Let $n = 0.013$
 $A = 0.66(4) = 2.64$ sf
 $R = 0.66 + 4 = 0.66 = 5.32$ ft
 $S = A/P = 0.496$ ft
 $S = 0.0034$
 $Q_{capacity} = 11.0$ cfs $\approx Q_{DESIGN}$
 $= 11.0 > Q_{100} \therefore OK$

DRAINAGE CERTIFICATION

As indicated by the as-built information shown hereon, the San Mateo P.F.H. project has been constructed in substantial compliance with the approved Grading and Drainage Plan. The intent of this project is to provide a permanent solution to the drainage problem. The information presented hereon has been obtained by me or under my direct supervision and is true and correct to the best of my knowledge and belief. It is based upon this information that issuance of a Permanent Certificate of Occupancy for drainage purposes is hereby recommended.

Jeffrey G. Norfengren, NWE 8547



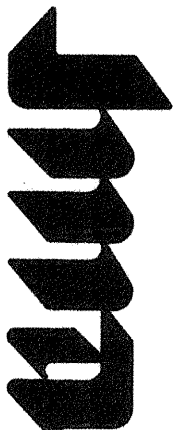
VICINITY MAP

SCALE: 1" = 750'

K-17

Keyed Notes :

1. Two (2) working days prior to any excavation, contractor must contact New Mexico State Surveyors (600-1950), for location of existing utilities.
2. Prior to construction, the contractor shall verify the horizontal and vertical location of all existing obstructions. Should a conflict exist, the contractor shall notify the engineer in writing so that the conflict can be resolved with a minimum amount of delay. All work on this project shall be performed in accordance with applicable federal, state and local laws, rules and regulations concerning construction safety and health.
3. All construction within public right-of-way shall be performed in accordance with applicable City of Albuquerque Standards and Procedures.
4. If any utility lines, pipelines, or underground utility lines are shown on these drawings, they are shown in an approximate manner only, and such lines may exist where none are shown, if any such existing lines are shown, the contractor shall verify the location, depth, size, or type of existing utility lines, pipelines, or underground utility lines, and if the information may be incomplete, or may be obsolete by the time construction only preliminary investigation of the location, depth, size, or type of existing utility lines, pipelines, or underground utility lines, and if the information is not conclusive, not be complete, therefore, makes no representation pertaining thereto, and assumes no responsibility or liability therefor. The contractor shall inform himself of the location of any utility lines prior to the start of any excavation work. The contractor is fully responsible for any and all damage caused by its failure to locate, identify and preserve any and all existing utilities, pipelines, and underground utility lines, and the contractor shall comply with state statutes, municipal and local ordinances, rules and regulations, if any, pertaining to the location of these lines and facilities.
5. The design of planters and landscaped areas is not part of this plan. All planters and landscaped areas adjacent to the building(s) shall be provided with positive drainage to avoid any ponding adjacent to the structure. For landscaping plan, refer to landscaping plan.
6. Erosion Control Measures:
 1. The contractor shall ensure that no soil erodes from the site into public right-of-way or onto private property.
 2. The contractor shall promptly clean up any material excavated within the public right-of-way so that the excavated material is not susceptible to being washed down the street.
 3. The contractor shall secure "Topsoil Disturbance Permit" prior to beginning construction.



KEVIN GEORGES & ASSOCIATES, INC.
609 S. NEW MEXICO AVE. S.W.
ALBUQUERQUE, N.M. 87102
TEL: 505-262-4876
FAX: 505-262-4876

San Mateo P.F.H.
401 San Mateo Boulevard SE
Albuquerque, New Mexico
Presbyterian Project No. R314

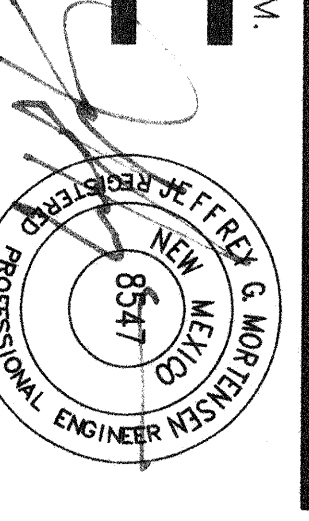
Project Title

Drawn C.J.H. By Checked J.G.M.

Proj 9441.00 Date 01/95

11/95 AS BUILT & CERTIFY

Revisions Architect



DRAINAGE PLAN, CALCULATIONS, AND SECTIONS

Sheet Title Sheet — of —