HEART HOSPITAL OF NEW MEXICO
DRAINAGE REPORT

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JUNE 9, 1998

PREPARED FOR:

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James R. Topmiller, P.E. Date

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EXHIBITS

I. INTRODUCTION

The purpose of this report is to provide a Drainage Management Plan for the proposed development of a New Heart Hospital, on the grounds of St. Joseph Medical Complex, in downtown Albuquerque. This building is to be constructed on land which is currently a paved parking lot located North of Martin Luther King Boulevard, and between Elm Street and Interstate 25. The site is currently legally described as Tract 2, St. Joseph Hospital Complex. Under the replat currently before the DRB, the new legal description will be Tract 2B, St. Joseph Medical Complex.

The St. Joseph organization also plans to construct a parking structure on the west side of Elm Street. The project will require a separate building permit and hydrology approval of the parking structure building permit will be sought with a separate submittal.

II. PURPOSE

This report and the final grading plan are submitted for Hydrology Division review for the purpose of obtaining building permit approval for the Heart Hospital of New Mexico, as well as final plat approval (DRB 98-97). The majority of this report focuses on the normal drainage report requirements for building permit approval for a commercial site. However, Section VI.B., "Existing Conditions, Offsite," is included in order to receive final plat approval. Also included in this report in order to support final plat approval is Plate 3 - "Existing Conditions Basin Map for St. Joseph Medical Complex." No variances are requested with this submittal.

III. METHODOLOGIES AND REFERENCES

This report is prepared in accordance with DPM criteria , specifically the procedure outlined in DPM Section 22.2.A. No AHYMO analysis was done for this site.

IV. SUMMARY OF RELATED PLATTING/SITE DEVELOPMENT PLAN ACTIONS

A site development plan for this project was presented to and approved (with findings and conditions, included in Appendix 6 of this report) by the EPC on February 5, 1998 as Case Number Z-98-8. Subsequently, the Site Development Plan and preliminary/final plat were heard by the DRB on May 12th, as Case # 98-97. The Site Development plan was delegated while the preliminary plat was approved, and the infrastructure list was signed off. We anticipate submitting the SIA package within the first two weeks of June. With approval of the SIA and this report, we will request final plat approval by the DRB.

V. SITE LOCATION AND CHARACTERISTICS

This site is located North of Martin Luther King Boulevard, and between Elm Street and Interstate 25. The site is currently a paved parking lot with no landscaping islands. The site drains to the west to the Elm Street Public right-of-way.

VI. EXISTING CONDITIONS

A. Onsite

Currently, the site is primarily a paved parking lot sloping from east to west. The very eastern edge of the site is a sloped at 5:1 or greater from the existing parking lot to the Interstate 25 right-of-way line. The existing parking lot does not contain any landscaped islands, and is therefore 100% land treatment "D" as described in Table A-4 of the DPM Section 22.2.

Under existing conditions, the drainage from the site surface flows to the Elm Street right-of-way on the west boundary of the site. Currently a high point exists in Elm Street just south of the new entrance to the Heart Hospital. The existing conditions basin map shows that the entire proposed site drains to Elm Street, north of the high point. Public waters in Elm Street flow north to High Street, then west on High Street to a series of inlets on both sides of the road at the intersection of Fruit Avenue.

B. Offsite

The purpose of this section of this report is to provide additional documentation of existing drainage conditions in the area of the easement to be vacated with the final plat (see letter from James Topmiller to Fred Aguirre, dated April 30, 1998 included as Figure 2). This documentation has been required by Mr. Fred Aguirre of the City of Albuquerque Hydrology Section as a condition of approval of the final plat. Accordingly, several concerns which Mr. Aguirre raised are addressed below.

The first issue was to determine if vacated Marquette Avenue with its current narrow roadway section has adequate capacity. The calculations provided in Appendix 2 (Steps 1 through 11) verify that the existing roadway section does have sufficient capacity. Please note that proposed conditions do not generate any additional flows, and therefore the existing roadway section has adequate capacity under proposed conditions as well.

The second issue was to demonstrate that the existing drainage easement, which is being vacated by the proposed plat, is not required for surface drainage. The calculations mentioned above (provided to satisfy the first issue) demonstrate that the easement is not required to convey flows from Marquette Avenue. Furthermore, the site development plan calls for the parking structure to be constructed over the easement, therefore, the final grades at the south end of the existing easement will keep the water in Marquette.

The third issue was to verify that the proposed realignment of the storm drain (ee pullout map in Appendix 2) has enough capacity. A Hydraulic Grade Line Analysis, which shows that the proposed line can carry the flows, has been included in Appendix 2.

VII. PROPOSED CONDITIONS

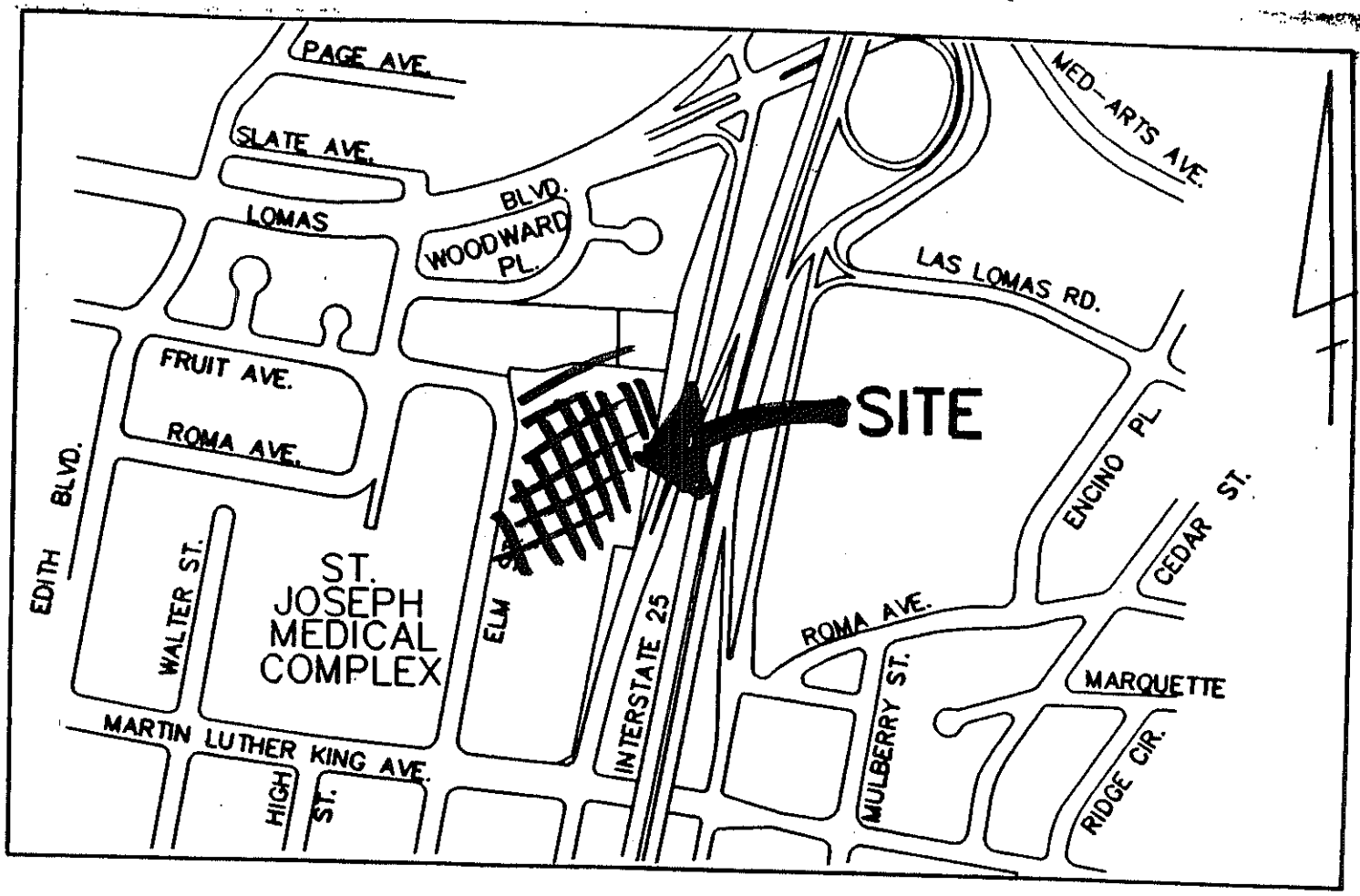
The proposed development consists of a new Heart Hospital with associated parking and driveways. Please refer to the enclosed Grading/Drainage Plan (rear pocket) and the Drainage Basins Map. The proposed construction does not increase the overall discharge from the St. Joseph Medical Center.

As under Existing Conditions (described in the section above), the site will collect flows and discharge them in a westerly direction to existing the existing Elm Street right of way. Proposed on-site Basins 1 through 7 and off-site Basins 01 through 03 (total Q_{100} of 24.2 cfs) are collected by onsite underground storm drains and discharged to the surface just east of the Elm Street right of way. The storm drain pipe daylights via a new flared end section, which connects to a concrete rundown, leading to three new 24" sidewalk culverts. The sidewalk culverts are designed to carry the 10-year storm (Q_{10} = 15.5 cfs) under the existing sidewalk. The 100-year storm (will safely enter the public street by overflowing the sidewalk. The remaining Basins 8 through 12 enter Elm Street by surface flow through the two site entrances.

All of the proposed hydraulics for the new facilities shown on the grading plan are analyzed in the Proposed Hydraulics section, Appendix 4. Please note that much of the new onsite storm drain operates under low pressure flow. A hydraulic grade line analysis is provided in Appendix 2.

VIII. CONCLUSION

This report has given a comprehensive drainage management plan for the proposed development that complies with the DPM and drainage ordinance. It is recommended that with this submittal final plat and building permit approvals be granted.



VICINITY MAP

ZONE ATLAS MAP No. J-15-Z & K-15-Z

LEGAL DESCRIPTION

TRACTS 1 AND 2 AND THE ENTIRETY OF BLOCK 9, ST. JOSEPH HOSPITAL COMPLEX.

FIGURE 1