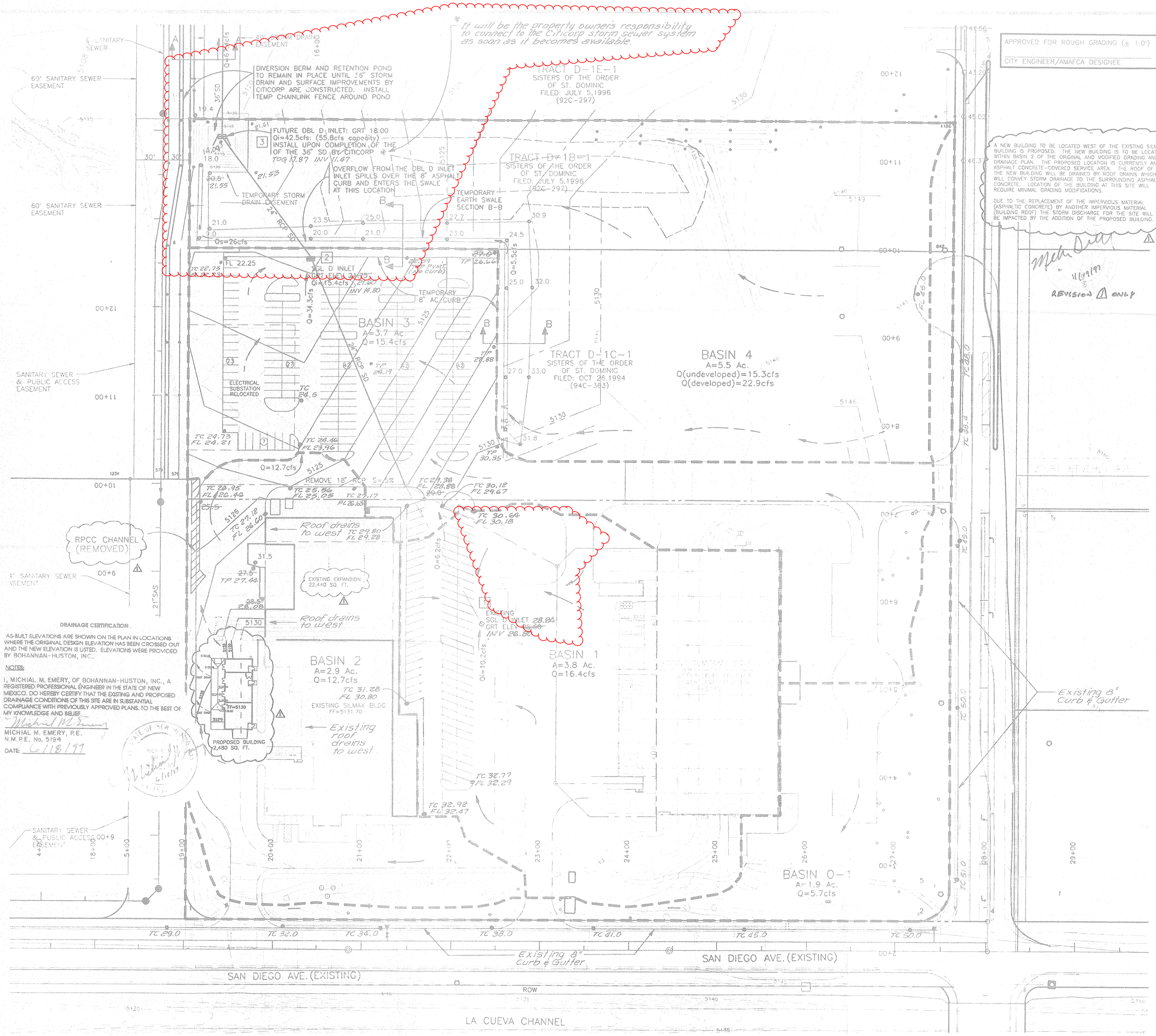

APPROVED FOR ROUGH GRADING (± 1.0')

CITY ENGINEER/AMAFCA DESIGNEE

A NEW BUILDING TO BE LOCATED WEST OF THE EXISTING SILMAX BUILDING IS PROPOSED. THE NEW BUILDING IS TO BE LOCATED WITHIN BASIN 2 OF THE ORIGINAL AND MODIFIED GRADING AND DRAINAGE PLAN. THE PROPOSED LOCATION IS CURRENTLY AN ASPHALT CONCRETE-COVERED SERVICE AREA. THE ROOF OF THE THE NEW BUILDING WILL BE DRAINED BY ROOF DRAINS WHICH WILL CONVEY STORM DRAINAGE TO THE SURROUNDING ASPHALTIC CONCRETE. LOCATION OF THE BUILDING AT THIS SITE WILL REQUIRE MINIMAL GRADING MODIFICATIONS.

DUE TO THE REPLACEMENT OF THE IMPERVIOUS MATERIAL (ASPHALTIC CONCRETE) BY ANOTHER IMPERVIOUS MATERIAL (BUILDING ROOF) THE STORM DISCHARGE FOR THE SITE WILL NOT BE IMPACTED BY THE ADDITION OF THE PROPOSED BUILDING.

11/19/97

REVISION 1 ONLY

APPROVED FOR ROUGH GRADING (± 1.0')

HYDROLOGY ENGINEER DATE

RECEIVED NOV 20 1997 HYDROLOGY SECTION

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SCALE: 1"=50'

GRADING/DRAINAGE PLAN

PURPOSE

The purpose of this report is to provide an updated grading and drainage plan for a proposed light industrial expansion at the northwest corner of San Diego Ave and San Mateo Blvd. The site is legally described as Tract D-1C-1 and Tract D-1B-1, Sisters of the Order of St. Dominic. The total area of the two tracts is approximately 17.8 acres. This plan is submitted for DRB review for the purpose of obtaining rough grading approval and site development plan approval.

EXISTING CONDITIONS

Tract D-1C-1 is the site of Sumitomo Sitix (Project 1) and Silmax (Project 2). It is bounded on the south by San Diego Ave (an existing paved collector street), on the east by San Mateo Blvd., on the north by Citicorp (currently under construction), and on the west by vacant land. The undeveloped portions of this site are lightly vegetated with grasses. FEMA floodplains and Upland Flows are addressed in the Sumitomo Site Development Plan (Conceptual Grading and Drainage Plan, sheet 4 of 9).

Existing site drainage is generally directed to the northwest where it is conveyed by a concrete channel and then an earthen swale to the north. A smaller portion is directed toward the surrounding existing streets. In its current condition, the 10 Ac. site produces approximately 35.9 cfs in a 100-year, 6-hour storm event. 4.7 cfs is discharged to the surrounding streets and 31.2 cfs is discharged to the earthen swale.

Offsite flows are directed to the north via swales and diversion berms and to the south via a 42" storm drain to the La Cueva Channel.

PROPOSED CONDITIONS

It is proposed that the Silmax building (Project 2) be expanded as shown in the original site development plan. This expansion requires additional parking and modifications to the existing parking. Developed flows from the site will be conveyed across parking areas until collected by inlets, and conveyed to the community storm drain (COA #546991 and COA #546981) to be constructed with Citicorp. A small portion of the site will continue to drain to the surrounding streets. Upon completion of the community storm drain all offsite flows east of and including San Mateo will be conveyed underground across the Citicorp Site to an outfall south of Balboa St.

The developed site is comprised of five separate drainage basins. Basin 1, in its developed condition generates a 100-year, 6-hour storm flow of 16.4 cfs. This flow is generally directed to the northwest of the basin where it is collected by a single grate D inlet in sump. The orifice condition of the 18" RCP controls the inlet capacity (Qinlet= 10.2cfs). The remaining 6.2cfs discharges overland to Basin 3.

Basin 2, generates 12.7 cfs in a 100-year, 6-hour storm event. This Basin primarily drains the Silmax building and its proposed expansion. Flows are directed northerly along the west curb face and are discharged to Basin 3. The existing RPCC channel will be removed. The existing west leg of the 18" storm drain will be removed and replaced with a 24" storm drain on a northwesterly alignment.

Basin 3 and Basin 4 have been analyzed for the two following conditions:

Condition 1: Basin 4 is undeveloped and Citicorp storm drain is not in place.
Basin 3 generates approximately 15.4 cfs. This flows is combined with flows from Basin 1 and Basin 2 for a total of 34.3cfs. This flow is directed to a single grate D inlet in sump with a capacity of 15.4cfs (weir controls). The inlet abuts an 8" AC curb. Three of its sides act as a weir. Due to the overflow condition, the head on the inlet is approximately 1.0'. The storm drain will temporarily discharge to a retention pond until the Citicorp storm drain can be built. Overflow from the Basin 3 inlet is discharged into a temporary earth swale in Basin 4. Flows from Basin 4 (Qundeveloped=15.3cfs), the earth swale and the overflow from the retention pond are discharged to a diversion berm/swale for a total flow of 59.8cfs. The single grate D inlet in Basin 3 has an elevation of 5121.75; the water surface elevation in the swale is 5120.2. The flows from this swale are directed northwesterly to the future Citicorp storm drain outfall.

Condition 2: Basin 4 is developed and the Citicorp storm drain is in place.
The combined flows of Basins 1, 2, and 3 remains 34.3 cfs and flows to the single grate D inlet in sump. Without the 8" AC curb, the future parking will need to be graded such that a 6" sump is created. Due to the overflow condition that will occur the head is approximately 0.75'. With all four sides of the inlet acting as a weir the capacity is 14.6cfs. Basin 4 generates 22.9 cfs in the developed condition. The remaining surface flow at the northwest corner of the site is 42.5cfs. This flow will be collected by a double grate D inlet in a landscape pond with a grate elevation of 5116.60. The top of pond elevation will be 5121. With 1' freeboard, the head on the grate is 2' and the inlet capacity is 55.8cfs (orifice control). In the interim condition (prior to Basin 4 development), surround the double D inlet in the landscape pond with wire tied riprap 1'wide by 1'deep for sediment control. The flows are then conveyed by the Citicorp storm drain. The total flow from the Silmax site is 67.4 cfs. This is 9.1cfs higher than the Citicorp drainage report. The Citicorp storm drain HGL is not adversely effected by this change. The revised HGL spreadsheet is included.

The fifth basin (Basin 0-1) generates approximately 5.7 cfs. This flow is discharged to the San Diego Ave and San Mateo Blvd.

CONCLUSION

With this presentation of the grading and drainage plan for the referenced site, we request rough grading approval and site development plan approval.

SUMMARY OF HYDROLOGIC DATA

			EFFECTIVE INFILTRATION RATES (CFS/AC)						