

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103



KEN SCHULTZ
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June 1, 1989

Jeff Mortensen, P.E.
Jeff Mortensen & Associates, Inc.
811 Dallas, NE
Albuquerque, New Mexico 87110

RE: DRAINAGE PLAN FOR AN ADDITION TO WALMART STORE #824
(G-19/D4) ENGINEER'S STAMP DATED MAY 23, 1989

Dear Mr. Mortensen:

Based on the information provided on your submittal of May 24, 1989, the above referenced plan is approved for Building Permit.

Please attach a copy of this plan to the construction sets prior to sign-off by Hydrology.

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

Bernie J. Montoya
Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj
(WP+1114)

LEGAL DESCRIPTION
LOT 1, LA MIRADA ADDITION

PROJECT BENCHMARK
A SQUARE, 10, CHISELED ON TOP OF
CONCRETE CURB AT THE WAW RETURN
AT THE JUNCTION OF MONTGOMERY BLVD.
AND JENNIFER DRIVE.
ELEVATION = 5396.55 FEET (M.S.L.D.)

T.B.M. # 1
TOP OF CURB ELEVATION AS SHOWN
ON THE DRAWING BELOW.
ELEVATION = 5397.34 FEET (M.S.L.D.)
T.B.M. # 2
A SQUARE, 10, CHISELED ON TOP OF CURB
AS SHOWN BELOW. ELEV. = 5403.21 FEET (M.S.L.D.)

DRAINAGE PLAN

The following items concerning the Wal-Mart Store No. 824 Stockroom Addition Drainage Plan are contained hereon:

1. Vicinity Map
2. Site Plan
3. Grading Plan

As shown by the Vicinity Map, the site is located at the southwest corner of the intersection of Montgomery Boulevard N.E. and Wyoming Boulevard N.E. At present, the site is a fully developed shopping center site. The site is bounded on the north by Montgomery Boulevard N.E., on the east by Wyoming Boulevard N.E., and on the south by Hendrix Avenue N.E. All of these streets are fully improved public roadways. The site plan shows the extent of improvements on the site obtained from a recent aerial photograph.

Review of the National Flood Insurance Program Flood Boundary and Floodway Maps for the City of Albuquerque, indicate that downstream flooding has been identified in Hendrix Avenue N.E. Review of the City of Albuquerque Storm Drain facilities maps indicates that there is an existing public storm drain facility within that roadway. The site plan shows the locations of the inlets along Hendrix Avenue N.E. Hendrix Avenue N.E. drains from east to west and eventually outfalls into the Hahn Arroyo.

The Grading Plan shows 1) existing and proposed grades 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 grades. As shown by this plan, the proposed improvements consist of the removal of existing asphalt paving and the construction of a stockroom addition. Minor paving modifications will be required in order to maintain adequate access to the rear portion of the stores. Presently, this portion of the site drains from north to south into Hendrix Avenue N.E. This discharge is through an existing driveway. A storm drain inlet is located at this driveway and serves to collect a portion of the runoff which drains from this site. The runoff captured by this inlet is discharged into the 48" public storm drain facility which lies within Hendrix Avenue N.E.

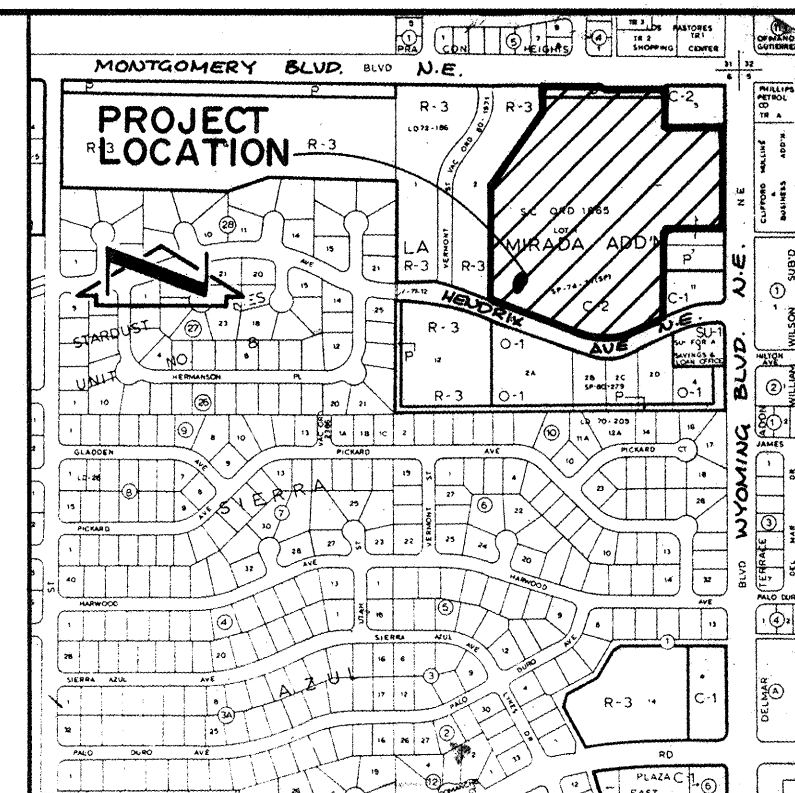
No calculations are provided with this submittal due to the fact that the proposed improvements will not alter the existing quantities of runoff generated by this site. As stated above, the proposed improvements consist of the removal of asphalt paving and the replacement of that hard surface with roof area. This will have negligible affect on the quantity of runoff generated by this site. In view of the fact that this is an existing site located within an infill area, the fact that no additional runoff is being created by the proposed stockroom addition, and the proximity of existing public storm drain facilities, the free discharge of runoff from this site is appropriate.

Construction Notes:

1. Two (2) working days prior to any excavation, contractor must contact line locating service, 765-1234, for location of existing utilities.
2. 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 so that the conflict can be resolved with a minimum amount of delay.
3. All work on this project shall be performed in accordance with applicable federal, state and local laws, rules and regulations concerning safety and health.
4. All construction within public right-of-way shall be performed in accordance with applicable City of Albuquerque Standards and Procedures.
5. 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, and the information may be incomplete, or may be obsolete by the time construction commences. The engineer has undertaken no field verification of the location, depth, size, or type of existing utility lines, pipelines, or underground utility lines, makes no representation pertaining thereto, and assumes no responsibility or liability therefor. The contractor shall inform itself of the location of any utility line, pipeline, or underground utility line in or near the area of the work in advance of and during 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. In planning and conducting excavation, 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.

Erosion Control Measures

1. The contractor shall ensure that no soil erodes from the site into public right-of-way or onto private property. This can be achieved by constructing temporary berms at the property lines and wetting the soil to keep it from blowing.
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.



VICINITY MAP
SCALE: 1" = 800'

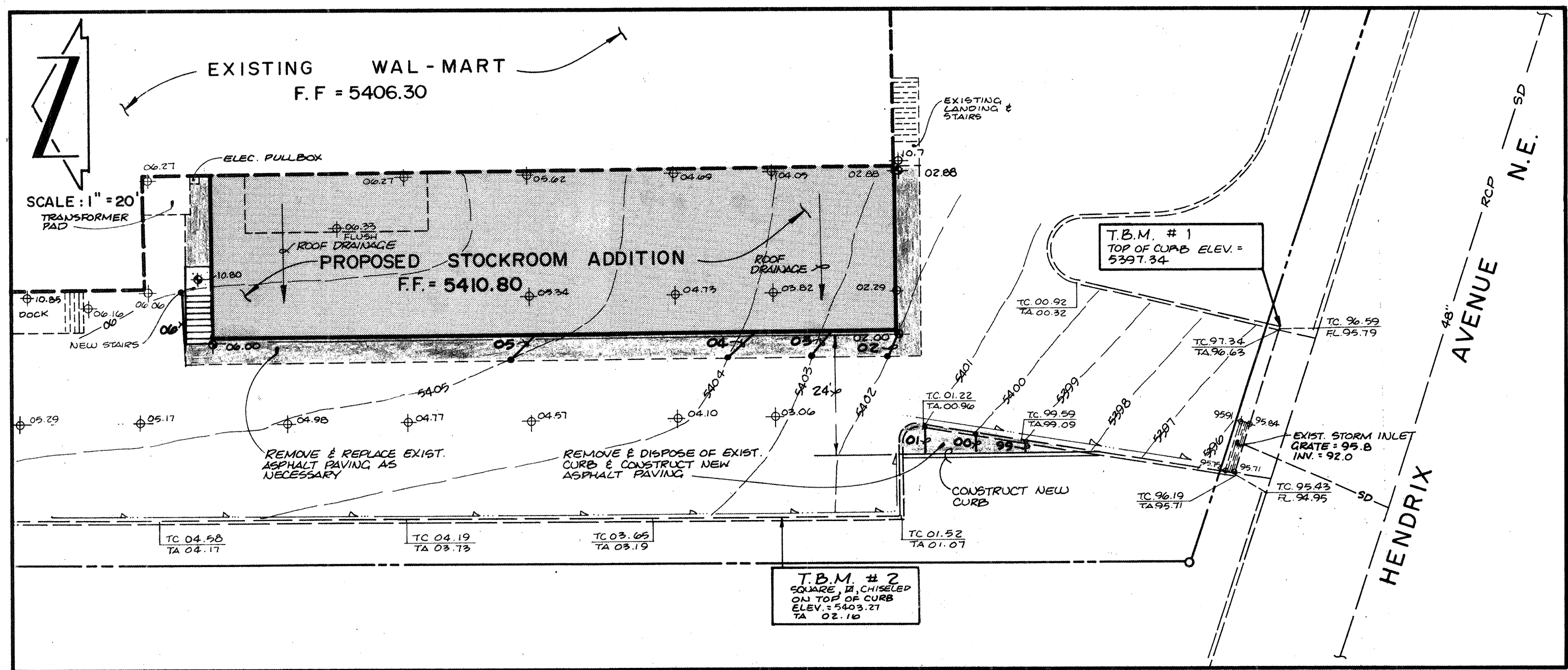
LEGEND

- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- T.C. TOP OF CURB
- T.A. TOP OF ASPHALT
- F.L. FLOW LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED ASPHALT PAVING



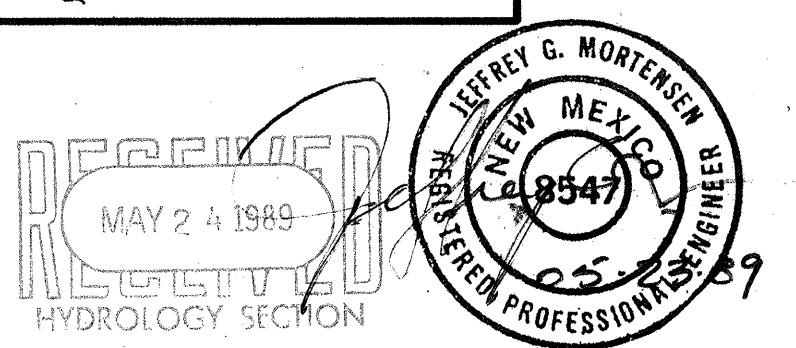
SITE PLAN

SCALE: 1" = 100'



GRADING PLAN ENLARGEMENT

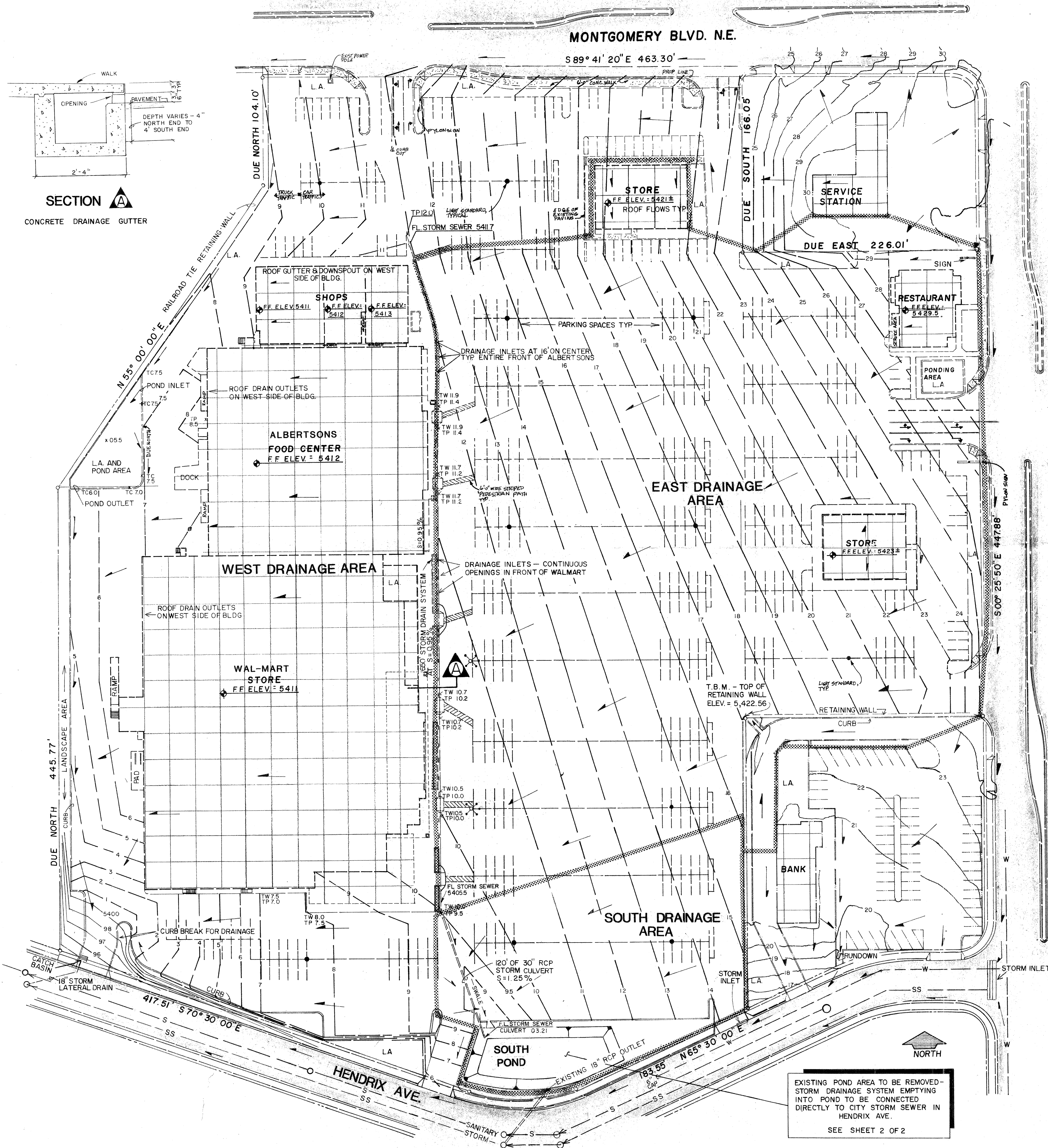
SCALE: 1" = 20'



JEFF MORTENSEN & ASSOCIATES, INC.
811 DALLAS N.E. ALBUQUERQUE, NM 87110
ENGINEERS & TELEPHONE (505) 265-5611

GRADING AND DRAINAGE PLAN
WAL-MART STORE # 824 STOCKROOM ADDITION

DESIGN BY	J. G. M.	No.	Date	By	Revision	JOB NO.	890421
DRAWN BY	S. G. H.					DATE	5-89
APPROVED BY	J. G. M.					SHEET	1 OF 1



SCOPE:

The proposed site is a developed shopping center named La Mirada Square, located at the southwest corner of Wyoming & Montgomery Boulevards. When the site was designed in 1977, the accepted method of controlling runoff routed flows through ponding areas before releasing either to the streets or to a storm drain system. Upstream storm drainage improvements have been made in recent years so that capacity is now available in the Hendrix storm drain system. Thus, the site's main detention pond can be eliminated and the private storm drain system can be connected directly to the City system. The area occupied by this pond will be paved over and used for additional parking.

The intent of this plan is to show:

- The extent of proposed site improvements.
- The flow rate of rainfall runoff to these improvements and methods of handling these flows to meet City requirements for drainage management.

DRAINAGE PLAN CONCEPT:

The site is essentially divided in to three areas, of which only two directly affect the south pond.

The west area is comprised of the main store's roof area, side and rear paved access areas, with all flows exiting onto Hendrix at the southwest corner of the site. A catch basin is located at the exit point to intercept some of this runoff.

The east area contributes runoff to the south pond by way of a storm drainage system located under the walk along the entire front of the main stores. This system outlets to the south pond via a 30" diameter RCP culvert. This culvert will be extended to a new drop inlet in the pond area and then connected directly into the Hendrix storm system.

The south area is the remaining parking area which presently drains to the pond via surface swales, which empty into the pond at the same outlet point as the 30" RCP culvert. A new drop inlet will be constructed to pickup these flows for discharge to the 30" diameter drain extension.

GENERAL NOTES

LEGAL: La Mirada Square Shopping Center, Wyoming Boulevard & Montgomery Boulevard N.E.

B.M.: A square cut in top of curb at north end of northwest curb return at Hendrix Avenue & Wyoming Boulevard N.E. Elevation = 5,222.53'

T.B.M.: Top of retaining wall at northwest corner of Bank site. Elevation = 5,422.56

FLOOD HAZARD: Site is not located in a flood zone except for a small portion along the south side of Montgomery Boulevard, (G-19-City Master Flood Zone Map).

OFF-SITE DRAINAGE: Site is not affected by offsite drainage. Wyoming, Hendrix and Montgomery Boulevards intercept and route flows around the site.

EROSION CONTROL: Material will be used to fill an existing pond depression which is surrounded by existing curbs and pavement. Erosion control measures will be required only to prevent sediment from entering drop inlet prior to resurfacing. A minor temporary berm or a silt fence constructed around the inlet will control sediment movement.

CALCULATIONS:

Calculations are based on the City of Albuquerque D.P.M. Manual, Vol. II for the 100-year, 6-hour storm, using the Rational Formula.

EXISTING CONDITIONS

East Area = 7 Ac.
South Area = 1.3 Ac.
Composit 'C' for both areas = 0.95
Tc = 10 minutes
 $I = P_a(6.84)T_c^{0.51}$, where $P_a = 2.4"$ (DPM 22.2 D-11)
 $I = 5.07"/hour$
 Q_{100} East Area = $(0.95)(5.07)(7) = 34$
 Q_{100} South Area = $(0.95)(5.07)(1.3) = 6$
40 cfs

STORM DRAIN LATERAL EXTENSION/INLET

Capacity of 30" RCP at a minimum $S = 2\%$, $N = 0.013$
 $Q = 55$ cfs (Kutter's formula) > 40 cfs generated by east and south areas - OK.

CAPACITY OF SINGLE 3' X 2' INLET, SUMP CONDITION

Clear grate opening = 4 SF for each 3' long section.
Capacity/SF for a 6" head = 3.5 cfs/SF
Grate capacity = 3.5 cfs/SF x 4 SF = 14 CFS
Reduction factor to allow for debris plugging = 30%
Available capacity of single inlet = $(14 \text{ cfs})(0.70) = 10$ cfs
> 6 cfs generated by south area - OK.

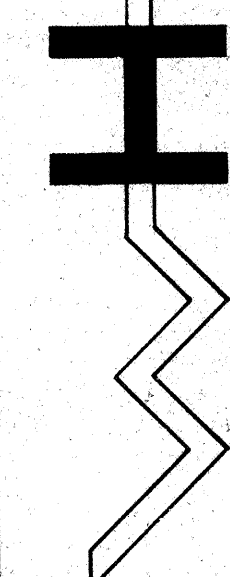
LEGEND

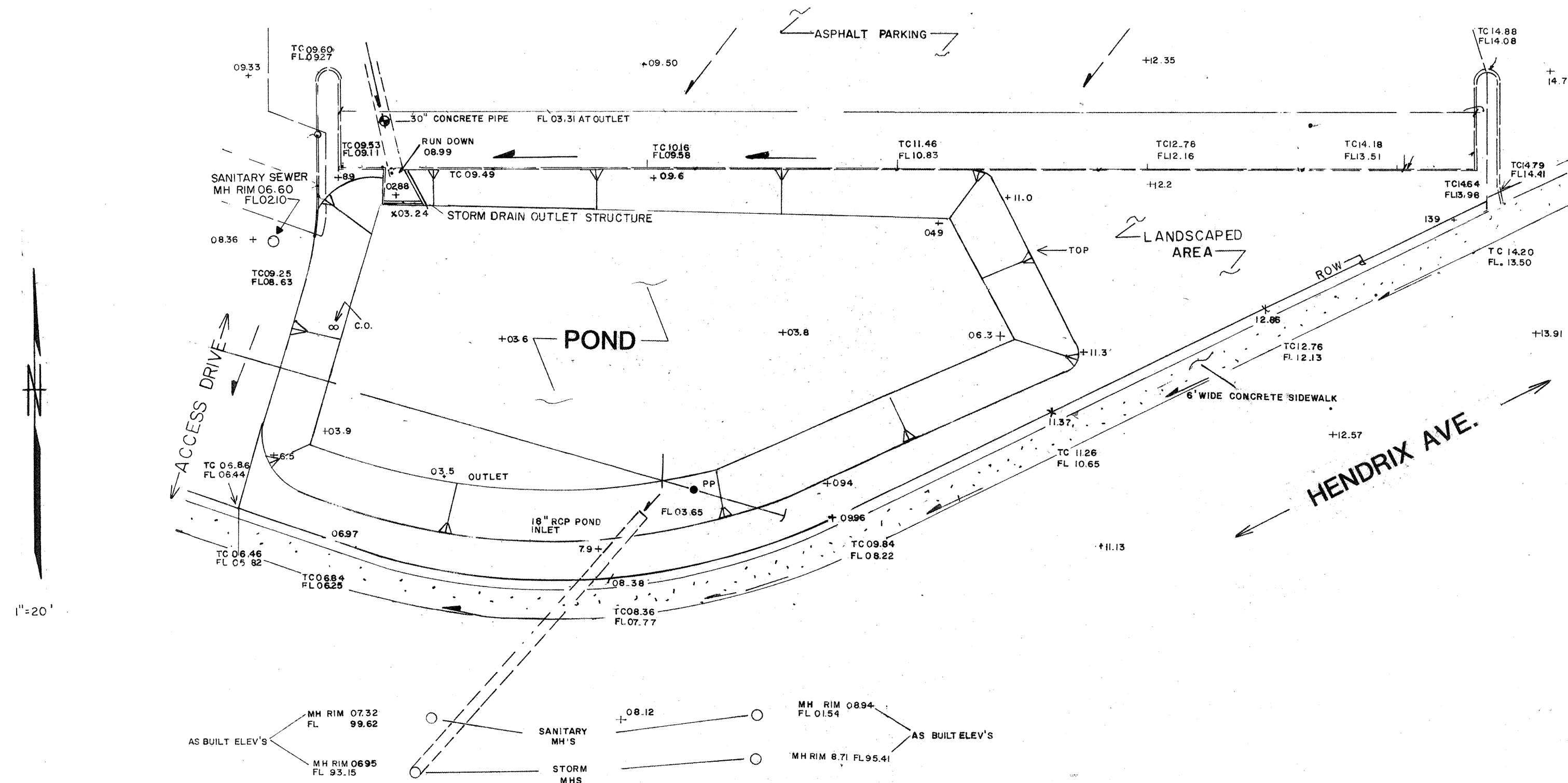
- 25 — FINISHED CONTOUR
- x 17.2 EXISTING SPOT ELEVATION
- — — SURFACE FLOW DIRECTION
- TC TOP OF CURB
- TA TOP OF ASPHALT (PROPOSED)
- TP TOP OF PAVEMENT (EXISTING)
- TW TOP OF WALL
- LA LANDSCAPED AREA

LA MIRADA SQUARE AS BUILT GRADING PLAN SCALE: 1" = 50'-0"

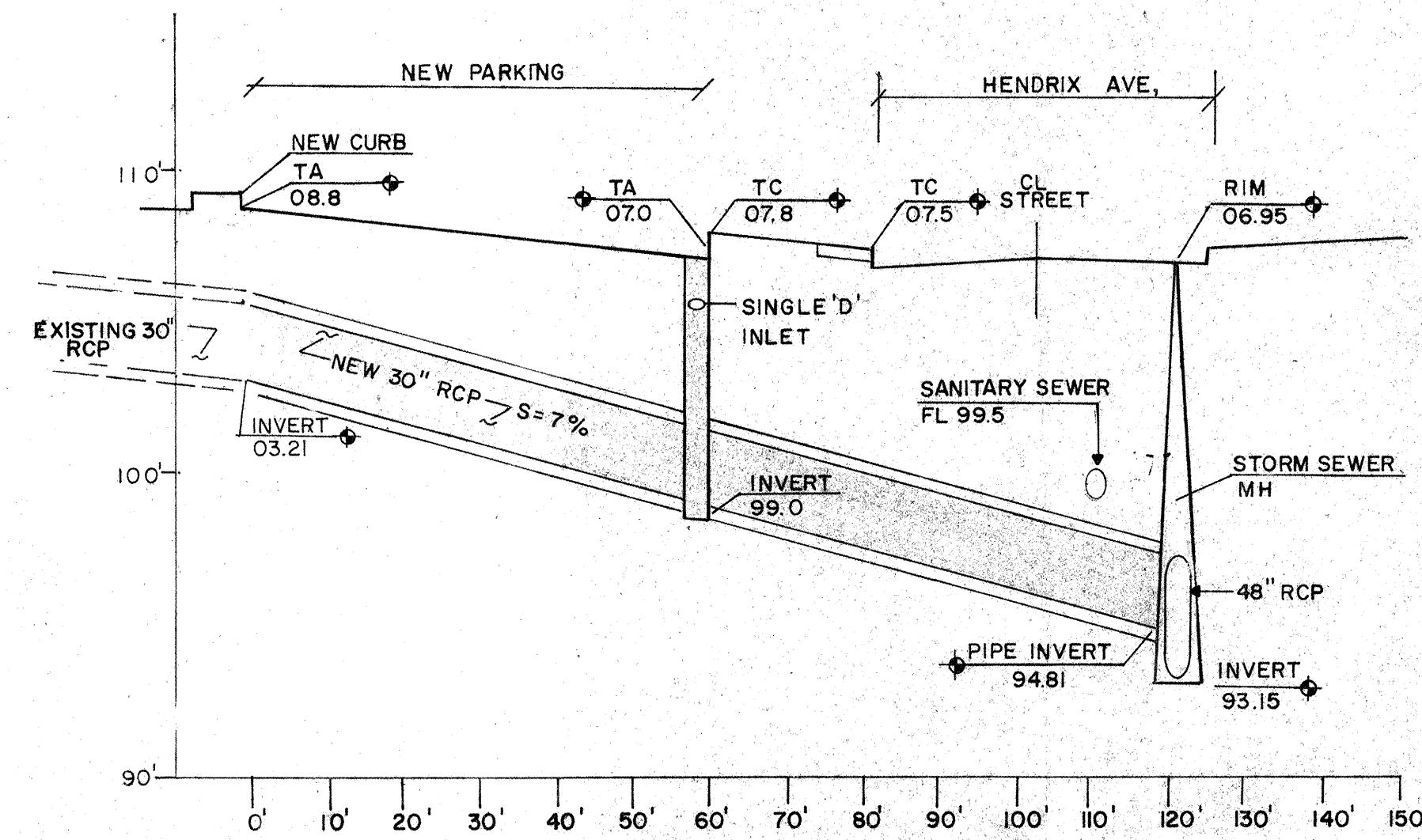
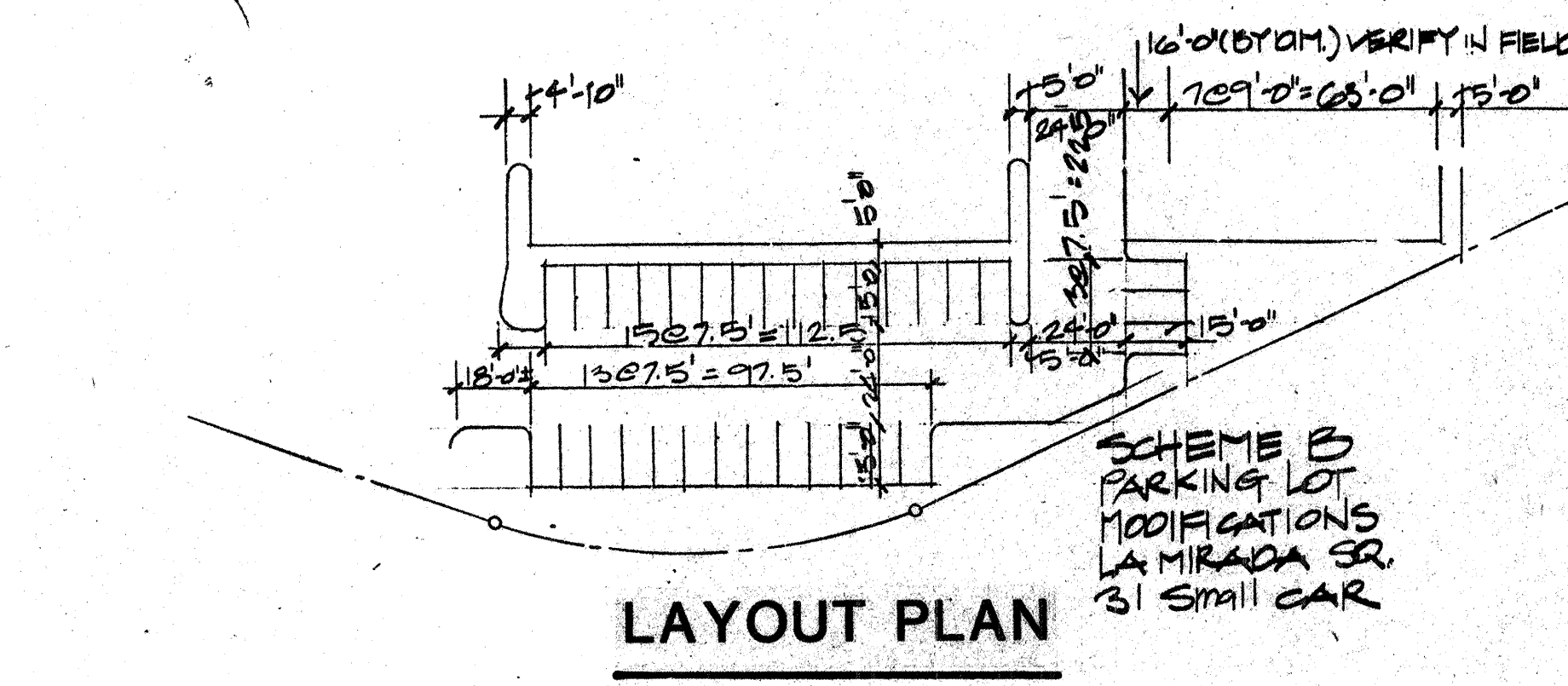
RECEIVED
MAY 18 1989
HYDROLOGY SECTION

LA MIRADA SQUARE AS-BUILT GRADING PLAN

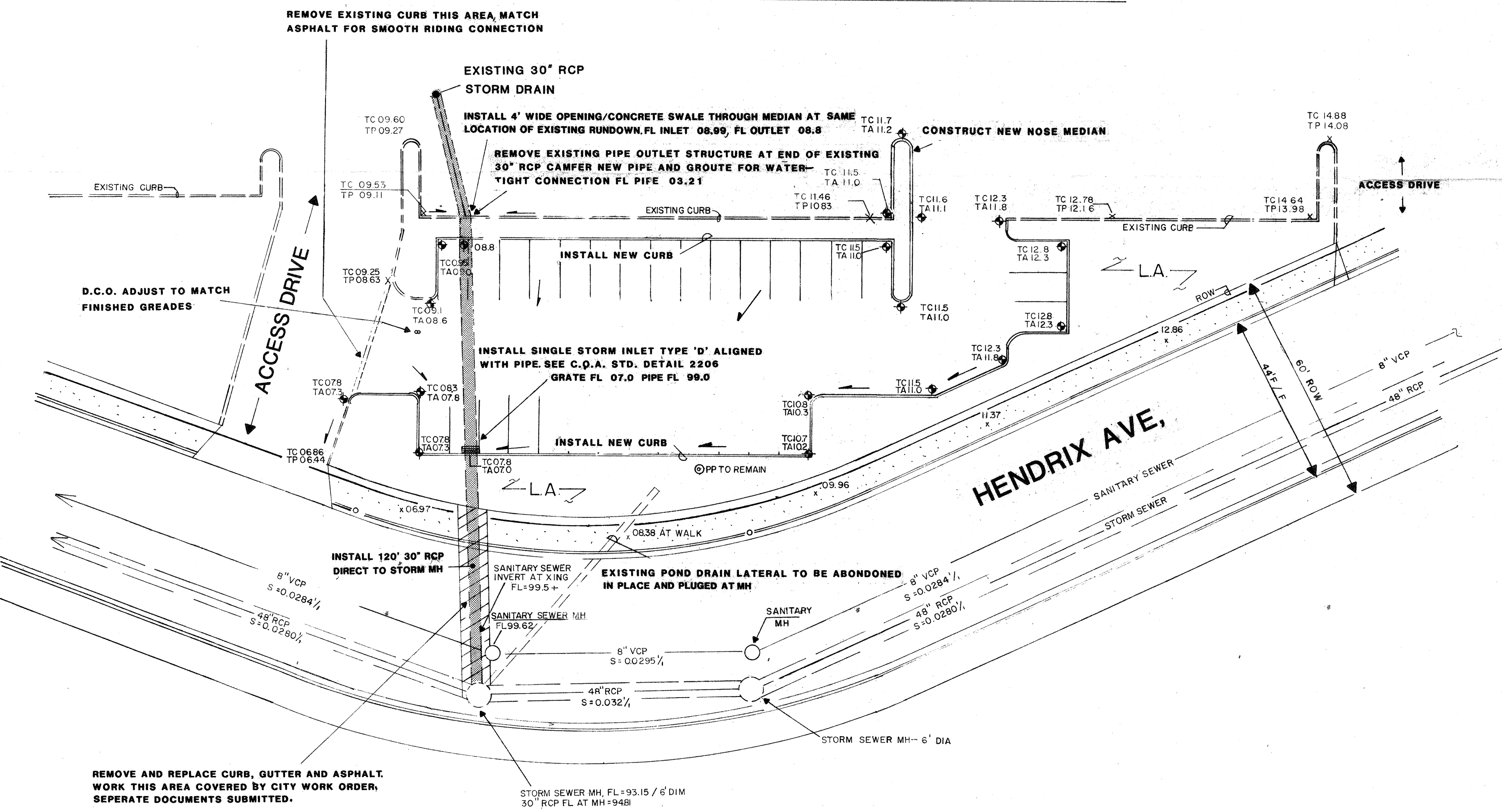
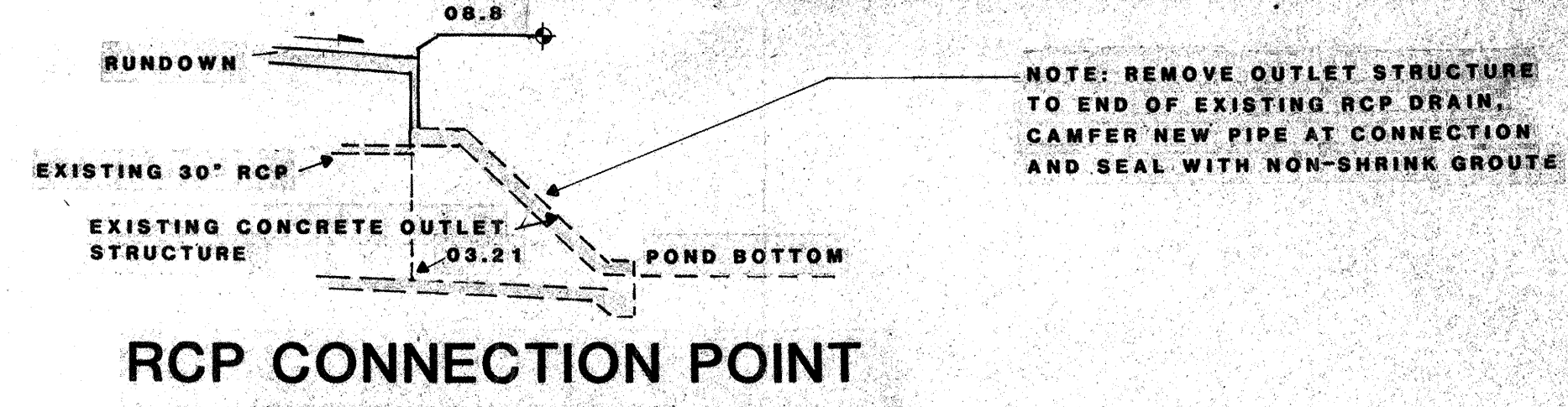




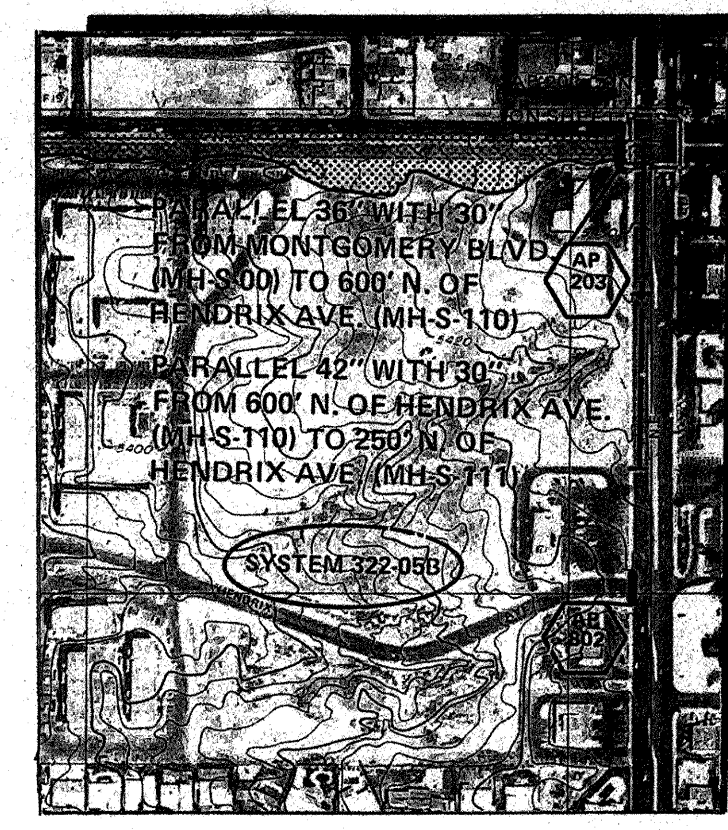
PONDING AREA EXISTING CONDITION



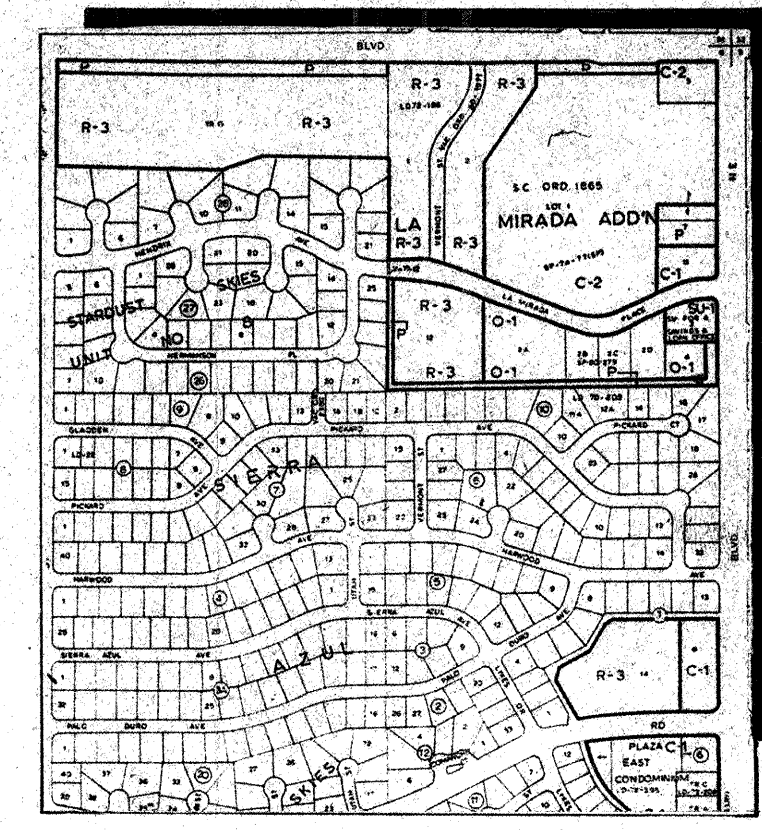
STORM SEWER PROFILE



PROPOSED PARKING ADDITION



FLOOD HAZARD MAP



LOCATION MAP G-19



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June 1, 1989

Chris Weiss, P.E.
Weiss-Hines Engineering
1100 Alvarado, NE
Albuquerque, New Mexico 87108

RE: DRAINAGE PLAN FOR IMPROVEMENTS TO LA MIRADA SQUARE
(G-19/D4) ENGINEER'S STAMP DATED MAY 18, 1989

Dear Mr. Weiss:

Based on the information provided on your submittal of May 18, 1989, the above referenced plan is approved for Grading/Paving.

Please be advised that the tie-in to the existing storm sewer line must go through work order procedure and be reviewed by D.R.C..

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

Bernie J. Montoya
Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj
(WP+1114)