

March 14, 1998

Fred Arfman
Isaacson & Arfman
128 Monroe St. NE
Albuquerque, New Mexico 87198

RE: DRAINAGE PLAN FOR EAST CENTRAL BUSINESS ADDITION WAREHOUSE
(K-21/D29) ENGINEER'S STAMP DATED 2/16/98.

Dear Mr. Arfman:

Based on the information provided on your February 16, 1998 resubmittal, the above referenced site is approved for Building Permit.

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

Also, prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If I can be of further assistance, please feel free to contact me at 924-3986.

C: Andrew Garcia
File

Sincerely,

Bernie J. Montoya
Bernie Montoya CE
Associate Engineer

Good for You, Albuquerque!



DRAINAGE INFORMATION SHEET

PROJECT EAST CENTRAL BUS. ADD'T WAREHOUSE ZONE ATLAS/DRNG. K-21
 TITLE: FILE#:

DRB # _____ EPC # _____ WORK ORDER # _____

LEGAL DESCRIPTION: LOT 27, EAST CENTRAL BUS. ADDITION

CITY ADDRESS: 317 MURIEL ST. NE.

ENGINEERING FIRM: Isaacson & Arfman, P.A. CONTACT: F. ARFMAN

ADDRESS: 128 Monroe Street NE PHONE: 268-8828

CITY, STATE: Albuquerque, NM ZIP CODE: 87108

OWNER: PHONG & DOAN CONTACT: SAME

ADDRESS: _____ PHONE: 274-2382

CITY, STATE: ALB, NM ZIP CODE: _____

ARCHITECT: GAMIELSKI - BENTON CONTACT: STEVE CUMMINS

ADDRESS: 622 TINSERAS AVE PHONE: 842-8865

CITY, STATE: ALB., NM ZIP CODE: 87102

SURVEYOR: FORSTBAUER SURVEYING CONTACT: RON.

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

CONTRACTOR: UNKNOWN AT THIS TIME CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

TYPE OF SUBMITTAL:

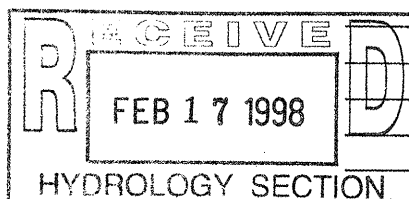
- ☐ DRAINAGE REPORT
- ☒ DRAINAGE PLAN
- ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☐ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☐ ENGINEER'S CERTIFICATION
- ☐ OTHER

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) _____

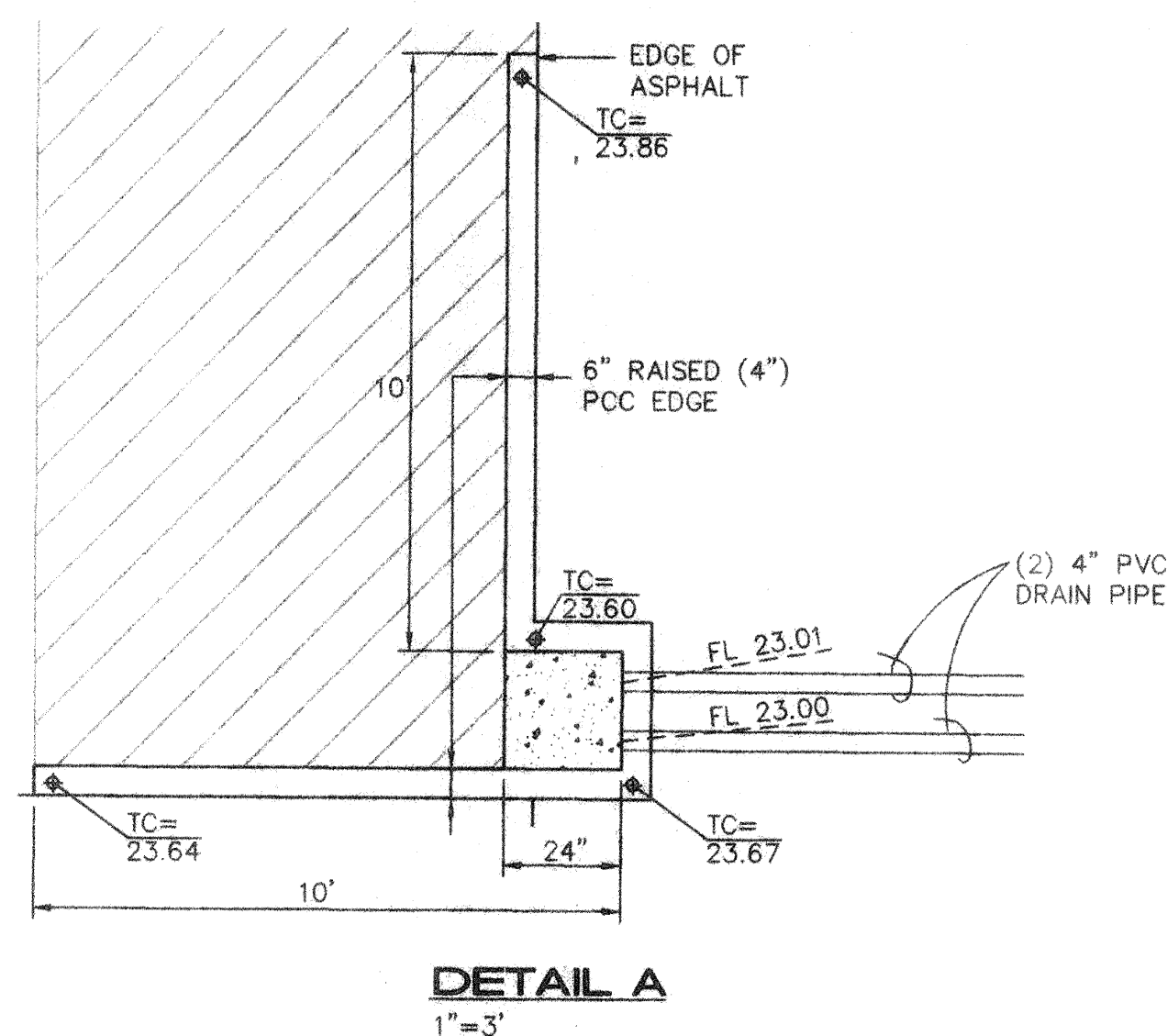
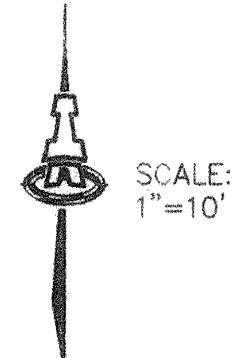


DATE SUBMITTED: 2-16-98

BY: Melissa Combs
 FOR ISAACSON & ARFMAN, P.A.

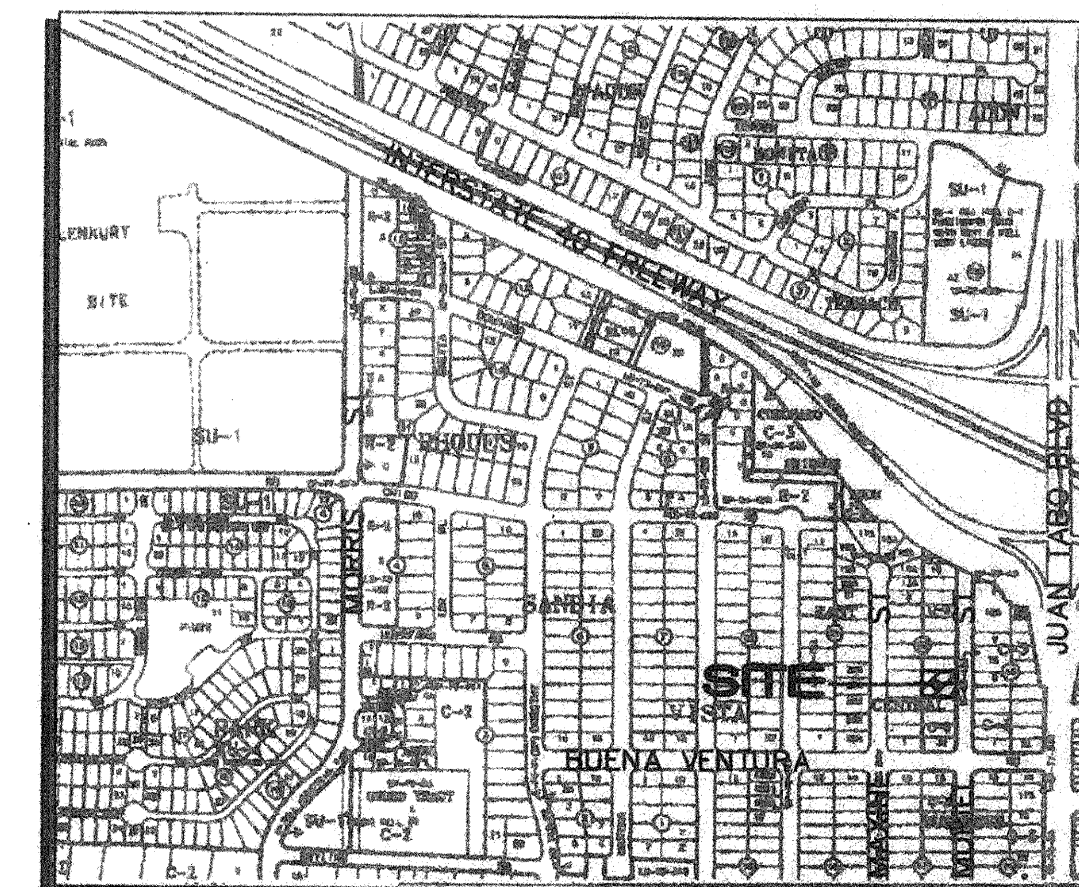
LEGEND

- 23.24 EXISTING SPOT ELEVATION
- TC 23.26
FL 22.64 EXISTING TOP OF CURB ELEV.
EXISTING FLOW LINE ELEV.
- 5523 EXISTING CONTOUR
- EXISTING CURB & GUTTER
- PROPERTY LINE
- FENCE
- EXISTING BUILDING
- PROPOSED BUILDING
- 25.00 PROPOSED SPOT ELEVATION
- 23 PROPOSED CONTOUR
- PROPOSED EDGE OF ASPHALT
- STRIPING
- RAILROAD TIES
- PONDING AREA



PUBLIC R.O.W. CONSTRUCTION NOTES

- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER THIS CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREIN, BE CONSTRUCTED IN ACCORDANCE WITH "CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS PUBLIC WORKS CONSTRUCTION, 1986."
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE, 260-1990, FOR LOCATION OF EXISTING LINES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR SURVEYOR SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM OF DELAY.
- BACKFILL COMPACTION SHALL BE ACCORDING TO SPECIFIED STREET USE (RESIDENTIAL).
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.



VICINITY MAP

APPROVALS	NAME	DATE
HYDROLOGY		
INSPECTOR		
A.C.E./FIELD		
PERMIT NO.	MAP NO. K-21	

LEGAL DESCRIPTION: REPLAT OF LOTS NUMBERED TWENTY-SEVEN (27) AND TWENTY-EIGHT (28) IN BLOCK NUMBERED TWENTY (20) OF THE EAST CENTRAL BUSINESS ADDITION OF THE CITY OF ALBUQUERQUE.

BENCHMARK: ACS MONUMENT "1-L21(R)"
ELEVATION = 5534.63

FLOOD ZONE DESIGNATION: ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 500-YEAR FLOOD PLAIN) PANEL 359 OF 825, FLOOD INSURANCE RATE MAP, CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, DATED SEPTEMBER 20, 1996.

EXISTING CONDITION: THE LOT IS UNDEVELOPED WITH NO VEGETATIVE COVER, EXCEPT FOR A FEW EXISTING TREES. SITE SLOPES RANGE FROM 1% TO 3%. WATER SHEET FLOWS WEST ACROSS THE PROPERTY THROUGH RESIDENTIAL LOTS 5 AND 6 AND INTO MAXINE STREET. HALF OF LOT 26, LOCATED TO THE NORTH OF THE SITE, DRAINS ACROSS LOT 27. TO THE SOUTH IS AN UNDEVELOPED LOT WHICH HAS A FLOW PATTERN SIMILAR TO LOT 27.

EXISTING HYDROLOGY:
PRECIPITATION ZONE: 3
DESIGN STORM: 100-YEAR/6-HOUR, D = 2.14 IN
LAND TREATMENT: 76.3% C, 23.7% D
TOTAL ACREAGE: LOT 27 = 0.1492 AC, LOT 26 = 0.0746 AC
EXCESS PRECIPITATION: $1.29(0.1707) + 2.36(0.0531)/0.2238 = 1.55$ IN
PEAK DISCHARGE: $3.45(0.1707) + 5.02(0.0531) = 0.856$ CFS

PROPOSED CONDITIONS: THE LOT IS PLANNED TO BE DEVELOPED AS A COMMERCIAL WAREHOUSE SITE. THE WESTERN EDGE OF THE PROPERTY WILL BE DEVELOPED AS A LANDSCAPE BUFFER. A RETENTION POND WILL BE LOCATED IN THE SOUTHWEST PROPERTY CORNER TO CAPTURE SOME OF THE FLOWS GENERATED FROM THE POST DEVELOPED SITE. A PORTION OF OFFSITE FLOWS WILL BE RETAINED IN THE POND. THE REMAINING OFFSITE FLOWS WILL OVERFLOW THE POND AND FOLLOW THE HISTORICAL FLOW PATTERN. THE TOTAL FLOW LEAVING POST DEVELOPED LOT 27 WILL BE EQUAL TO 0.267 CFS, 0.589 CFS LESS THAN PREDEVELOPED FLOWS. ALL DEVELOPED RUN-OFF WILL BE ROUTED TOWARDS MURIEL STREET. PRECIPITATION WHICH FALLS DIRECTLY ON THE BUILDING WILL BE DIRECTED BY ROOF GUTTERS TO THE FRONT OF THE PROPERTY. A 4" LINE AND INLET APRON WILL BE INSTALLED AT THE SOUTHEAST PROPERTY CORNER TO CONVEY THE FLOWS TO MURIEL STREET. MURIEL STREET HAS THE CAPACITY TO CONTAIN Q = 68 CFS AT 0.67 FT FLOW DEPTH (PER DPM PLATE D-2). THE POST DEVELOPMENT FLOWS WILL GENERATE A Q = 0.517 CFS, EQUIVALENT TO A FLOW DEPTH OF 0.15 FT (PER DPM PLATE D-2).

PROPOSED HYDROLOGY:
DESIGN STORM: 100-YEAR/6-HOUR, D = 2.14 IN
LAND TREATMENT: FRONT
D = 0.095 AC = 89%
C = 0.0117 AC = 11%
BACK
D = 0.0531 AC = 45.3%
C = 0.064 AC = 54.7%

EXCESS PRECIPITATION:
FRONT: $1.29(0.0117) + 2.36(0.095)/0.1067 = 2.24$ IN
BACK: $1.29(0.064) + 2.36(0.0531)/0.1171 = 1.78$ IN

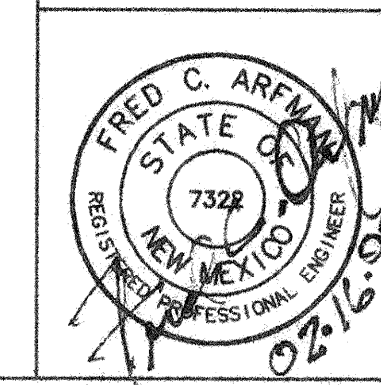
PEAK DISCHARGE:
AP-1 (FRONT YARD) = $3.45(0.0117) + 5.02(0.095) = 0.517$ CFS
AP-2 (BACK YARD) = $3.45(0.064) + 5.02(0.0531) = 0.487$ CFS

POND SIZING:
LOT 27 $V_{0-0.5} = (0.0425 \times 1.29)/12 = 0.004$ AC FT + 0 = 0.004 AC FT
ACTUAL POND VOLUME = .0077 AC FT
EXTRA VOLUME = .0037 AC FT

PIPE HYDRAULICS:

$Q = CA \sqrt{2gh} = 0.67(0.085)(\sqrt{2(32.2)(0.5)}) = 0.323$ CFS
 $2*Q = 0.646$ CFS > 0.517 CFS(REQUIRED)

LOT 27
EAST CENTRAL BUSINESS ADDITION
GRADING AND DRAINAGE PLAN



ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque New Mexico

922GRD.DWGanw 02/13/98

SHEET 1 OF 1