

FILE COPY



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 3, 1990

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

RE: DRAINAGE PLAN FOR BIG "J" ENTERPRISES, INC
(C-17/D1A4) ENGINEER'S STAMP DATED APRIL 24, 1990


Dear Mr. Mortensen:

Based on the information provided on your resubmittal of April 26, 1990,
the referenced drainage plan is approved for Building Permit.

Please attach a copy of this approved 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.

Sincerely,


Fred J. Aguirre, P.E.
Hydrologist

BJM:FJA:jc
WP+389

PUBLIC WORKS DEPARTMENT

Walter H. Nickerson, Jr., P.E.
Assistant Director Public Works

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER

DRAINAGE INFORMATION SHEET

PROJECT TITLE: BIG "J" ENTERPRISES INC. ZONE ATLAS/DRNG. FILE #: C17/DIA4
 LEGAL DESCRIPTION: LOT 29-A, CLIFFORD INDUSTRIAL PARK
 CITY ADDRESS: 8441 WASHINGTON ST. N.E.

ENGINEERING FIRM: JEFF MORTENSEN & ASSOC. CONTACT: LEONARD P. UTTER

ADDRESS: 811 DALLAS N.E. PHONE: 265-5611

OWNER: BIG "J" ENTERPRISES INC. CONTACT: GARY JOHNSON

ADDRESS: 10749 PROSPECT N.E. PHONE: 293-1016

ARCHITECT: JOHN BRISCOE AIA. P.C. CONTACT: JOHN BRISCOE

ADDRESS: 1734 HERMOSA N.E. PHONE: 262-0193

SURVEYOR: JEFF MORTENSEN & ASSOC. CONTACT: LEONARD P. UTTER

ADDRESS: 811 DALLAS N.E. PHONE: 265-5611

CONTRACTOR: _____ CONTACT: GARY JOHNSON

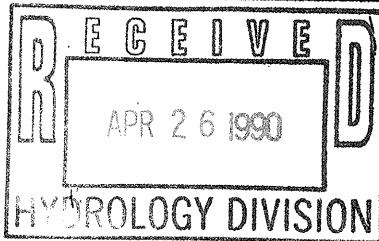
ADDRESS: _____ PHONE: 293-1016

PRE-DESIGN MEETING:

☒ YES

☐ NO

☒ COPY OF CONFERENCE RECAP
SHEET PROVIDED



DRB NO. _____

EPC NO. _____

PROJ. NO. _____

TYPE OF SUBMITTAL:

☐ DRAINAGE REPORT

☒ DRAINAGE PLAN

☐ CONCEPTUAL GRADING & DRAINAGE PLAN

☒ GRADING PLAN

☐ EROSION CONTROL PLAN

☐ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

☐ SKETCH PLAT APPROVAL

☐ PRELIMINARY PLAT APPROVAL

☐ SITE DEVELOPMENT PLAN APPROVAL

☐ FINAL PLAT APPROVAL

☒ BUILDING PERMIT APPROVAL

☐ FOUNDATION PERMIT APPROVAL

☐ CERTIFICATE OF OCCUPANCY APPROVAL

☐ ROUGH GRADING PERMIT APPROVAL

☐ GRADING/PAVING PERMIT APPROVAL

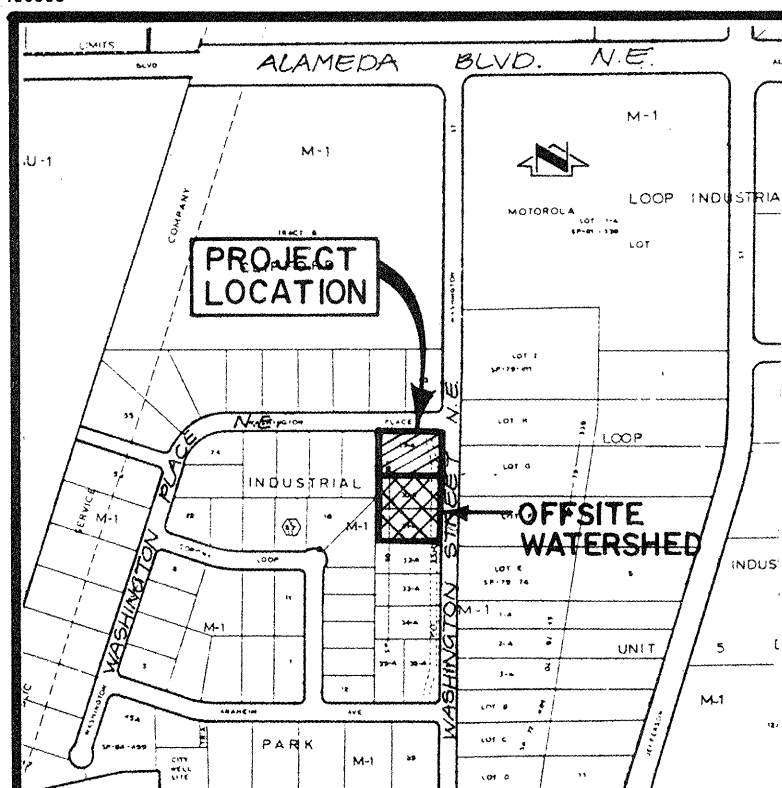
☐ OTHER _____ (SPECIFY)

DATE SUBMITTED:

BY:

04-25-90

Leonard P. Utter



VICINITY MAP
SCALE: 1" = 800'

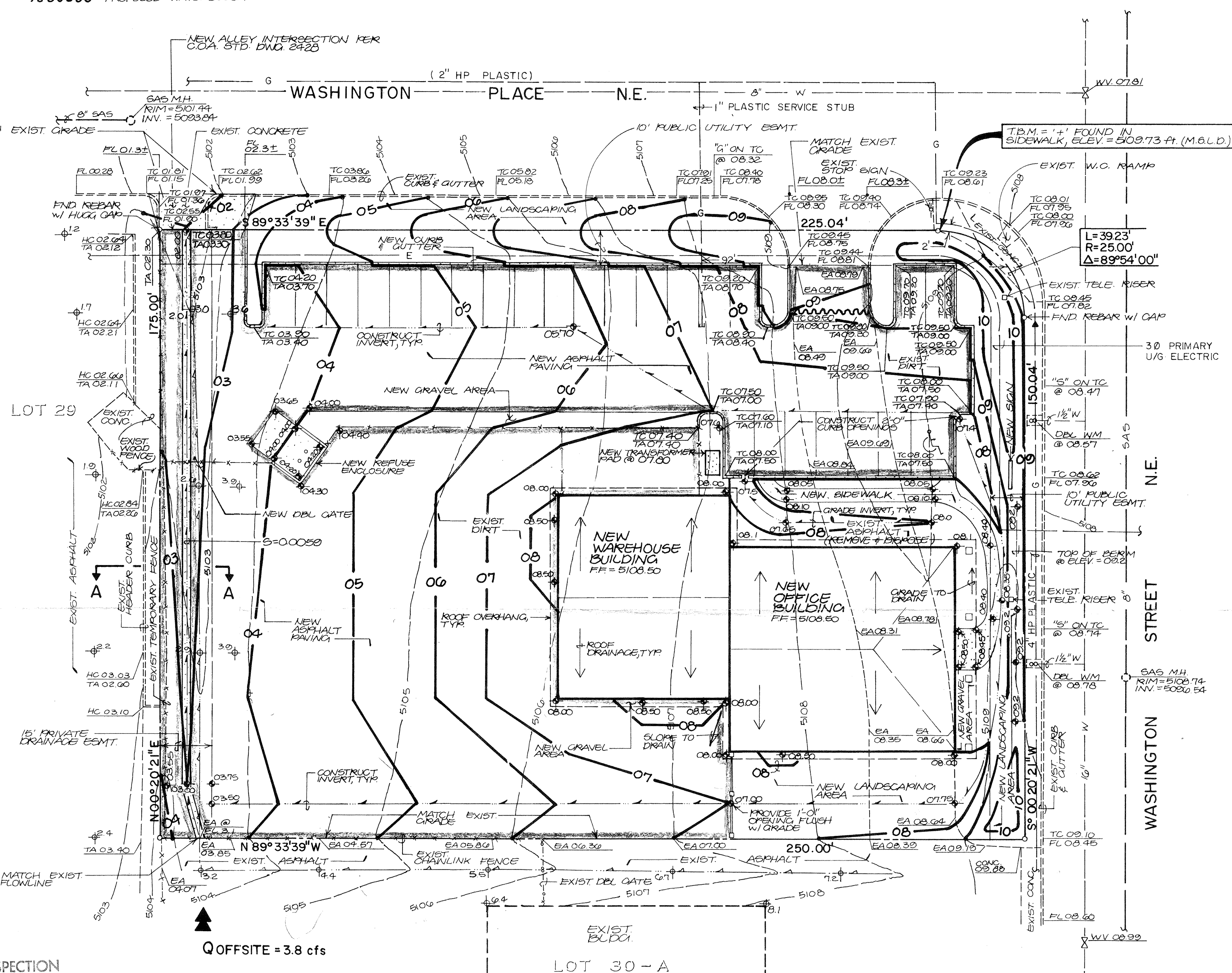
LEGEND

— 5103 — PROPERTY LINE
— 03 — EXISTING CONTOUR
— 03 — PROPOSED CONTOUR
+ EXISTING SPOT ELEV.
+ PROPOSED SPOT ELEV.
+ TOP OF CURB
+ FLOWLINE
+ HC HEADER CURB
+ TA TOP OF ASPHALT
+ EA EDGE OF ASPHALT
+ PROPOSED CONCRETE
+ PROPOSED ASPHALT
+ PROPOSED WATERBLOCK

PROJECT BENCHMARK
ACS. STATION 0+01.1 BEING A STD. BRASS STAMPED "C-17187E" CEASED IN TOP OF CURB STATION 15 LOCATED ON WEST CURB OF WASHINGTON ST. N.E. 0.5 MI. NORTH OF INTERSECTION OF LOS ANGELES ST. N.E. & WASHINGTON ST. N.E. ELEVATION: 5111.03 FT. (M.S.L.D.)

T.B.M.
T.B.M. = "4" CHISELED IN CONCRETE @ N.N.E. PROPERTY CORNER, AS SHOWN HEREON. ELEVATION: 5102.43 FT. (M.S.L.D.)

LEGEND DESCRIPTION
LOT 29-A, CLIFFORD INDUSTRIAL PARK, ALBUQUERQUE, NEW MEXICO



HYDROLOGY APPROVAL & INSPECTION

APPROVED FOR BUILDING PERMIT
ENGINEER: *[Signature]* DATE: 5/2/90
INSPECTION REQUESTED DATE: _____
APPROVAL DATE: _____ DISAPPROVED: _____
S019 APPROVAL DATE: _____
REVIEW DATE: _____
JOB BOOK NO./PAGE NO.: _____
DATE: _____
BY: _____

SECTION A-A

SCALE: 1" = 4'

NOTE: TAKEN FROM DRAINAGE REPORT
CLIFFORD INDUSTRIAL PARK PREPARED
BY BOHANNON HUSTON, INC.

DRAINAGE PLAN

The following items concerning the Big "J" Enterprises Incorporated Drainage Plan are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

As shown by the Vicinity Map, the site is located at the southwest corner of the intersection of Washington Street N.E. and Washington Place N.E. At present, the site is partially developed with minor paving on the east side of the site. Much of the surrounding area is presently developing commercially. As shown by Panel 9 of the National Flood Insurance Program Flood Boundary and Floodway Maps for the City of Albuquerque, New Mexico, this site does not lie within a designated flood hazard zone. Furthermore, the site does not appear to contribute runoff to an existing flood hazard area. At present, the runoff generated by the site drains from east to west then north onto Washington Place N.E. Washington Place N.E. drains westerly to an existing asphalt channel with valley gutter. From that point, runoff drains west then south to an existing concrete runoff. From that point, runoff enters the A.M.A.F.C.A. North Diversion Channel which is the outfall for this site. No offsite flows are anticipated from the east and north property lines because the existing streets appear to divert runoff away from the project site. No offsite flows enter the site along the west property line because the site is topographically higher than the adjacent property. Offsite flows from the south will enter the site at the southwest corner of the site. These flows, quantified hereon, will be channeled through the 15' private drainage easement located the west side of the site.

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 grades. As shown by this plan, the proposed improvements consist of construction of a new office/warehouse building along with adjacent paving and landscaping. Also, the 15' drainage easement will be developed as per the Drainage Report for Clifford Industrial Park prepared by Bohannon-Huston, Inc., dated August 1982 (C17/D1). Runoff generated by the proposed improvements will drain from east to west then north onto Washington Place N.E. Washington Place N.E. drains west as previously discussed. Based upon the fact that this site does not contribute runoff to an existing flooding problem, compliance with the drainage concept previously approved for this site (C17/D1A4), and the proximity of the A.M.A.F.C.A. North Diversion Channel, the free discharge from this site is appropriate. This is in compliance with the Drainage Report discussed above.

The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational Method has been used to quantify the peak rate of discharge and the SCS Method has been used to quantify the volume of runoff. Both Methods have been used in accordance with the City of Albuquerque Development Process Manual, Volume II, and the Mayor's Emergency Rule adopted January 14, 1986. As shown by these calculations, the proposed improvements will increase the peak discharge by approximately 1.6 cfs.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey,
Plate 11: EMB - Embudo Complex
Hydrologic Soil Group: B
Existing Pervious CN = 70 (DPM Plate 22.2 C-2)
Pasture or Range Land: fair condition)
Developed Pervious CN = 69 (DPM Plate 22.2 C-2)
Landscaping: fair condition)

Time of Concentration/Time to Peak

$T_c = 0.0078 L^{0.77} / s^{0.385}$ (Kirpich Equation)

$T_p = T_c = 10$ min.

Point Rainfall

$P_6 = 2.2$ in. (DPM Plate 22.2 D-1)

Rational Method

Discharge: $Q = C i A$

where C varies
 $i = P_6 - (6.84) T_c - 0.51 = 4.05$ in./hr
 $P_6 = 2.2$ in. (DPM Plate 22.2D-1)
 $T_c = 10$ min (minimum)
 $A =$ area, acres

SCS Method

Volume: $V = 3630 (DRO) A$

Where DRO = Direct runoff in inches
 $A =$ area, acres

Existing Condition

$A_{total} = 43,620$ sf = 1.0 Ac
Paved area = 4,250 sf (0.10)
Undeveloped area = 39,370 sf (0.90)
 $C = 0.45$ (Weighted average per Emergency Rule, 1/14/86)
 $Q_{100} = C i A = 0.45(4.05)(1.0) = 1.8$ cfs
 $A_{imp} = 4,250$ sf; % impervious = 10 %
Composite CN = 73 (DPM Plate 22.2 C-2)
DRO = 0.41 in. (DPM Plate 22.2 C-4)
 $V_{100} = 3630 (DRO) A = 1,490$ cf

Developed Condition

$A_{total} = 43,620$ sf = 1.0 Ac
Roof area = 7,750 sf (0.18)
Paved area = 26,410 sf (0.61)
Landscaped area = 9,460 sf (0.21)
 $C = 0.79$ (Weighted average per Emergency Rule, 1/14/86)
 $Q_{100} = C i A = 0.79(4.05)(1.0) = 3.2$ cfs
 $A_{imp} = 34,160$ sf; % impervious = 79 %
Composite CN = 92 (DPM Plate 22.2 C-2)
DRO = 1.4 in. (DPM Plate 22.2 C-4)
 $V_{100} = 3630 (DRO) A = 5,080$ cf

Comparison

$\Delta Q_{100} = 3.2 - 1.8 = 1.4$ cfs (increase)
 $\Delta V_{100} = 5,080 - 1,490 = 3,590$ cf (increase)

Offsite Flow

$A_{total} = 59,780$ sf = 1.37 Ac
Roof area = 6,300 sf (0.11)
Paved area = 17,690 sf (0.30)
Landscaped area = 5,900 sf (0.10)
Undeveloped area = 29,890 sf (0.49)
 $C = 0.60$ (Weighted average per Emergency Rule, 1/14/86)
 $Q_{100} = C i A = 0.60(4.05)(1.37) = 3.3$ cfs

Drainage Easement Capacity (Section A-A) (Manning's Equation)

$Q = 1.49 / n A R^{2/3} S^{1/2} = 18.1$ cfs \pm Onsite + Offsite

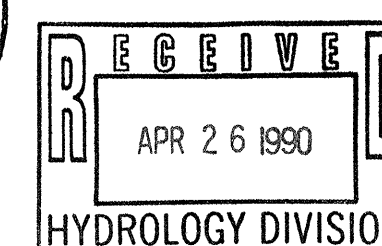
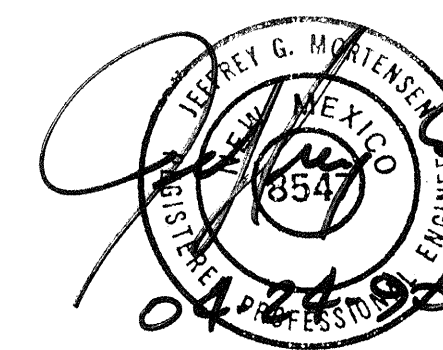
Where $S = 0.0059$ (average)
 $A = 4.3$ sf (average)
 $R = A / wp = 4.3 / 13 = 0.33$
 $n = 0.013$

CONSTRUCTION NOTES:

1. Two (2) working days prior to any excavation, contractor must contact New Mexico One Call Service 260-1990, 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 in writing 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 construction 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 conducted only preliminary investigation of the location, depth, size, or type of existing utility lines, pipelines, or underground utility lines. This investigation is not conclusive, and may not be complete, therefore, 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 and 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.
6. 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 construction details, refer to landscaping plan.

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.



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

GRADING & DRAINAGE PLAN BIG "J" ENTERPRISES, INC.

DESIGNED BY	NO.	DATE	BY	REVISIONS	JOB NO.
L.P.U.					870912
DRAWN BY					DATE
R.A.R.					03/90
APPROVED BY					SHEET
J.G.M.					OF
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