

RECTANGULAR CHANNEL

Flow Rate	(cfs)	=	8.822296
Depth	(ft)	=	.45
Velocity	(ft/s)	=	9.802551
Mannings n		=	.013
Slope	(ft/ft)	=	.035
Side Slope	(H:V)	=	0
Bottom Width	(ft)	=	2
Top Width	(ft)	=	2
Area	(ft ²)	=	.9000001
Hydraulic Radius		=	.3103448
Freeboard		=	N/A
Top Width (w/ freebrd)		=	2
Froude Number		=	2.576365



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

August 7, 1992

Rick Beltramo, P.E.
Bohannon-Huston, Inc.
7500 Jefferson Street, NE
Albuquerque, New Mexico 87109

RE: ENGINEER'S CERTIFICATION FOR UNIVERSITY CENTER PARCEL 2
PHASES I & II (L-15/D31C) CERTIFICATION STATEMENT DATED
JULY 29, 1992

Dear Mr. Beltramo:

Based on the information provided on your submittal of July 31, 1992,
Engineer's Certification for the referenced site is acceptable.

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

Cordially,

Bernie J. Montoya, C.E.
Engineering Assistant

xc: Alan Martinez

BJM/bjf
(WP+1626)

PUBLIC WORKS DEPARTMENT

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Univ. Center, Parcel 2
Phases 1 & 2 ZONE ATLAS/DRNG. FILE #: L-15

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Univ. Of NM, South Campus, Parcel 2, 1001 University SE

CITY ADDRESS: Approx. Stadium and University

ENGINEERING FIRM: BOHANNAN HUSTON, INC. CONTACT: RIKE BELTRAMO

ADDRESS: 7500 JEFFERSON NE, ALBUQ. NM 87109 PHONE: 823-1000

OWNER: SANDIA FOUNDATION CONTACT: H. TOM TAYLOR

ADDRESS: _____ PHONE: 242-2684

ARCHITECT: Holmes & Sabatini CONTACT: MARK LEVINE

ADDRESS: _____ PHONE: 247-3705

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: DAVIS AND NEEDLE CONTACT: MR. MURPHY

ADDRESS: _____ PHONE: 247-1812

TYPE OF SUBMITTAL:

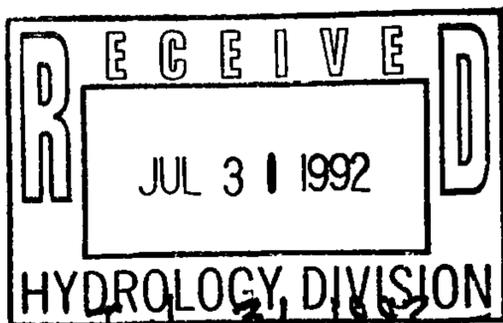
- DRAINAGE REPORT
- DRAINAGE PLAN
- CONCEPTUAL GRADING & DRAINAGE PLAN
- GRADING PLAN
- EROSION CONTROL PLAN
- ENGINEER'S CERTIFICATION
- OTHER

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)

PRE-DESIGN MEETING:

- YES
- NO
- COPY PROVIDED



DATE SUBMITTED: _____

BY: Rike Beltramo



BOHANNAN-HUSTON INC.

Courtyard I 7500 Jefferson Street, N.E. Albuquerque, NM 87109

TEL (505) 823-1000

FAX (505) 821-0892

Transmittal

To: BERNIE MONTANA
CITY OF ALB.
HYDROLOGY DEPT.
CITY/COUNTY BLDG. 3RD floor

<input type="checkbox"/> Parcel post	<input type="checkbox"/> Messenger
<input type="checkbox"/> First Class	<input type="checkbox"/> UPS
<input type="checkbox"/> Express Mail	<input type="checkbox"/> Air Freight
<input type="checkbox"/> Bus	<input type="checkbox"/> _____

Attention: _____

Date: 7/22/92

Our job number: 89103.81

Your job number: _____

Job: Univ. Center, Parcel 2 Phases 1 and 2

We are enclosing:	For:
<u>1 24"x36" Blue line</u>	<u>Grading & Drainage Cont.</u>
_____	<u>L15/D31C</u>
_____	_____
_____	_____
_____	_____

Comments:

Bernie, the improvements shown are for phases 1 & 2.
Your timely response would be greatly appreciated.

By: [Signature] thank you

Rec'd by: [Signature] Date: 7-29-92

Please Return Signed Yellow Copy

FILE COPY



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 11, 1991

Rick Beltramo, p.E.
Bohannon-Huston, Inc.
7500 Jefferson Street, NE
Albuquerque, New Mexico 87109

RE: ENGINEER'S CERTIFICATION FOR NMERI COMPLEX UNIVERSITY CENTER
(L-15/D31C) CERTIFICATION STATEMENT DATED JANUARY 31, 1991

Dear Mr. Beltramo:

Based on the information provided on your submittal of February 5, 1991, the Engineer's Certification for the referenced submittal is acceptable.

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

Cordially,

Bernie J. Montoya
for Fred J. Aguirre, P.E.
Hydrologist

xc: Alan Martinez
BJM:FJA/bsj
(WP+1626)

PUBLIC WORKS DEPARTMENT

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

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER

February 1, 1991

Mr. Fred Aguirre
 Hydrology Division - Development
 Public Works Department
 City of Albuquerque
 P.O. Box 1293
 Albuquerque, NM 87103
 Attention: Mr. Bernie Montoya



RE: Certification of Drainage Improvements
 NMERI Complex, University Center, (L-15/D31C)

Dear Fred:

This submittal is for the purpose of obtaining a Certificate of Occupancy (CO) for the NMERI Building and Building 1 at University Center.

Submitted for certification of the grading and drainage improvements is 1 drawing at 1"=20' scale. On the drawing is the appropriate language which certifies that the improvements are in substantial compliance with the approved drainage and grading report and construction plans, and are so certified by my P.E. stamp.

The storm drain shown was constructed, as-built, and accepted by the City under work order 3588. *COPY*

An additional improvement to the pond was constructed at the inlet, consisting of a concrete rundown. The outlet weir has also been upgraded with an extended rundown. These changes are shown on the plan.

All necessary improvements which support the NMERI building and all storm drains are complete and in place as certified. Based on this, I request approval of the certification and release of the C.O. for both buildings.

The contractor is expecting to obtain a C.O. by Thursday, February 7th. Should you have any problems with this submittal or need additional information, please call me anytime.

Sincerely,

Rick Beltramo
 Rick Beltramo, P.E.
 Project Manager
 Community Development and Planning

Attachment

cc: Michial Emery

LD/al
 Job No. 91116.01

PRINCIPALS
 LARRY W HUSTON
 MICHAL M EMERY, P.E.

BRIAN G. BURNETT, P.E.

BOHANNAN-HUSTON INC.



COURTYARD I, 7500 JEFFERSON STREET, N.E. ALBUQUERQUE, NM 87109
 TEL (505) 823-1000 FAX (505) 821-0892

DRAINAGE INFORMATION SHEET

PROJECT TITLE: NMEZI COMPLEX ZONE ATLAS/DRNG. FILE #: L-151031C

DRB #: 88-449 EPC #: _____ WORK ORDER #: 3588

LEGAL DESCRIPTION: Parcel 2 University of New Mexico South Campus, now comprising University center phase I
CITY ADDRESS: _____

ENGINEERING FIRM: Bohannon-Huston, Inc CONTACT: Rick BeHramo

ADDRESS: 7500 Jefferson, NE PHONE: 823-1000

OWNER: SANDIA FOUNDATION CONTACT: H. TOM TAYLOR

ADDRESS: 3 Woodward Center, 7000 Man PHONE: 242-2684

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

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

CHECK TYPE OF APPROVAL SOUGHT:

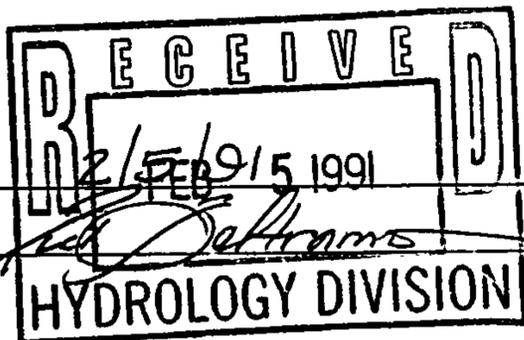
- SKETCH PLAT APPROVAL
- PRELIMINARY PLAT APPROVAL
- S. DEV. PLAN FOR SUB'D. APPROVAL
- S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- SECTOR PLAN APPROVAL
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- CERTIFICATE OF OCCUPANCY APPROVAL
- GRADING PERMIT APPROVAL
- PAVING PERMIT APPROVAL
- S.A.D. DRAINAGE REPORT
- DRAINAGE REQUIREMENTS
- OTHER _____ (SPECIFY)

PRE-DESIGN MEETING:

- YES
- NO
- COPY PROVIDED

DATE SUBMITTED: _____

BY: _____





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 13, 1990

PROJECT ACCEPTANCE LETTER

Mr. Frank Gee
M.C.C., Inc.
7301 Jefferson N.E.
Albuquerque, NM 87109

RE: UNIVERSITY CENTER, PROJECT NO.3588

Dear Mr. Gee:

The above referenced project has been completed according to the plans and specifications. The project consisted of an 8" water line with connections, fittings, valves and fire hydrants; 8" sewer line with connections and manholes; construction of two (2) turn bays on University Blvd. as needed to serve University Center.

The City of Albuquerque accepts the referenced project as a whole and the contractual correction period began August 8, 1990. The correction period on this project is for one (1) year.

Sincerely,

Brian L. Speicher, P.E.
Chief Construction Engineer
Design/Construction Division
Engineering Group
Public Works Department

BLS:kt

*Also included: construction of 1 catch basin \pm 120' by 18" RCP.
Construction observed by city inspection. Done August
P.W. Const. Dept.*

AN EQUAL OPPORTUNITY EMPLOYER

FILE COPY



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

August 28, 1990

Rick Beltramo
Bohannon-Huston, Inc.
7500 Jefferson Street, NE
Albuquerque, New Mexico 87109

RE: DRAINAGE PLAN FOR UNIVERSITY CENTER PARCEL 2
(L-15/D31C) REVISION DATE JULY 25, 1990

Dear Mr. Beltramo

Based on the information provided on your submittal of August 10, 1990, the above referenced plan is approved for Building Permit. Be advised that prior to Certificate of Occupancy release, Engineer's Certification will be required. Also, the proposed bus lane must be reviewed and approved by D.R.C.

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,

for Bernice Montoya
Fred J. Aguirre, P.E.
Hydrologist

BJM:FJA/bsj
(WP+1626)

PUBLIC WORKS DEPARTMENT

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

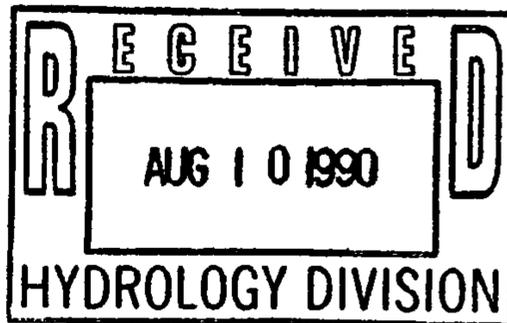
ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER

August 10, 1990

Mr. Fred Aguirre
Hydrology Division
Development Section
City Of Albuquerque
Attn: Mr. Bernie Montoya



RE: University Center Parcel 2, Final Grading and Drainage Plan (L-15/D31C)

Dear Fred:

Submitted for your review is the final grading and drainage plan for the referenced project. Several comments were made during the conceptual review which apply to the final plan (see approval letter dated May 25, 1990). I have provided a response for each comment below.

COMMENT

RESPONSE

- | | | |
|----|---|--|
| #1 | ✓ | Top of curb elevations are provided. |
| #2 | ✓ | A narrative is provided which explains both the interim and ultimate condition. |
| #3 | ✓ | Roof drain direction and drain locations are shown for Phase 1. Phase 2 should have a similar design. The building will have a center located hip which splits the flow on the roof in a manner consistent with the drainage plan. |
| #4 | ✓ | A berm is provided around the property which meets the minimum 1 ft. depth except at drive cuts. At these locations water blocks are provided. |
| #5 | ✓ | A permanent benchmark is provided. |
| #6 | ✓ | The notes requested are for situations where public drainage structures are to be built. However, this is not the case for this project and therefore these notes are not necessary. The rundown drains into a private street. |
| #7 | | Under interim conditions basin 2 discharges to an existing drop inlet. Developed flow produced is slightly reduced from existing conditions. |

Under ultimate developed conditions, as defined in the Master Drainage Report, the existing drop inlet is to be removed and the street extended to meet a series of new streets which will convey flow to the South Diversion Channel.

PRINCIPALS
LARRY W HUSTON
MICHAL M. EMERY, PE.

BRIAN G. BURNETT, PE.

BOHANNAN-HUSTON INC.



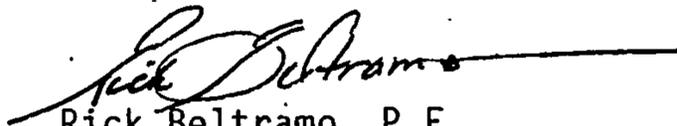
COURTYARD I, 7500 JEFFERSON STREET, N.E. ALBUQUERQUE, NM 87109
TEL (505) 823-1000 FAX (505) 821-0892

Mr. Fred Aguirre
August 10, 1990
Page 2

Final design has resulted in a slight change in the grading and basin limits. The computations have been adjusted accordingly with no adverse affect on the original plan. These changes have been noted on the plan. Offsite drainage improvements are not required for this development.

If I can be of any assistance, please feel free to call at any time.

Sincerely,



Rick Beltramo, P.E.
Project Manager
Community Development and Planning

Attachments

BHI Job No. 89193.33

PROJECT TITLE: University Center Parcel 2 ZONE ATLAS/DRNG. FILE #: L-15/ D31C

DRB #: 88-449 EPC #: 2-88-66-2 WORK ORDER #: NA

LEGAL DESCRIPTION: UNM South Campus Reseach Park, Tract 2

CITY ADDRESS: University & Stadium

ENGINEERING FIRM: Bohannon-Huston Inc. CONTACT: Rick Beltramo

ADDRESS: 7500 Jefferson NE PHONE: 823-1000

OWNER: University Center Joint Venture CONTACT: Laurie Wiggins

ADDRESS: 1400 Central SE PHONE: 242-5800

ARCHITECT: Holmes Sabitini Eeds CONTACT: Mark Levine

ADDRESS: 202 Central PHONE: 247-3705

SURVEYOR: Bohannon-Huston Inc. CONTACT: Tom Klingenhagen

ADDRESS: _____ PHONE: _____

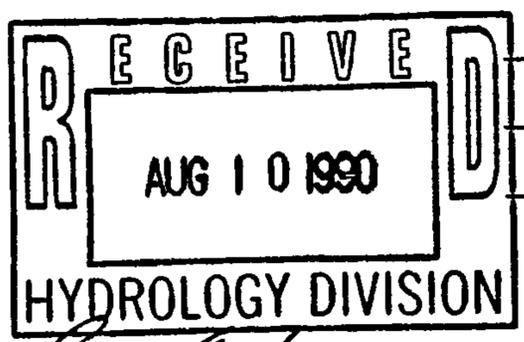
CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

- 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: *Rick Beltramo* 8/10/90

BY: _____

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 218
 20
 45.54
 350

FILE COPY



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 20, 1990

Rick Beltramo
Bohannon-Huston, Inc.
7500 Jefferson Street, NE
Albuquerque, New Mexico 87109

RE: REVISED CONCEPTUAL DRAINAGE PLAN FOR FOUNDATION PERMIT FOR
UNIVERSITY CENTER PARCEL 2 (L-15/D31C)
ENGINEER'S STAMP DATED JUNE 12, 1990

Dear Mr. Beltramo:

Based on the information provided on your resubmittal of June 13, 1990, the referenced site is approved for Foundation Permit only.

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

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

Cordially,

for Bernie J. Montoya
Fred J. Aguirre, P.E.
Hydrologist

BJM:FJA/bsj
(WP+1626)

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: UNIVERSITY CENTER PARCEL 2, PHASE I ZONE ATLAS/DRNG. FILE #: L15 | D31C

DEB #: _____ EPC #: E-88-66-2 WORK ORDER #: _____

LEGAL DESCRIPTION: UNM SOUTH CAMPUS RESEARCH PARK

CITY ADDRESS: _____

ENGINEERING FIRM: BOHANNAN-HUSTON, INC. CONTACT: RICK BELTRAMO

ADDRESS: 7500 JEFFERSON NE PHONE: 823-1000

OWNER: UNM. CENTER JOINT VENTURE CONTACT: LAURIE WIGGINS

ADDRESS: 1400 CENTRAL SE PHONE: 242-5800

ARCHITECT: HOLMES, SABATINI & EEDS CONTACT: MARK LAVINE

ADDRESS: 202 CENTRAL AVE. S.E. PHONE: 243-3705

SURVEYOR: BOHANNAN-HUSTON, INC. CONTACT: DWAIN WEANER

ADDRESS: SAME PHONE: 823-1000

CONTRACTOR: DAVIS AND ASSOC. CONTACT: TED OSBORNE

ADDRESS: P.O. BOX 2184 PHONE: (505) 988-2894

SANTA FE, N. MEX. 87504-2184

TYPE OF SUBMITTAL:

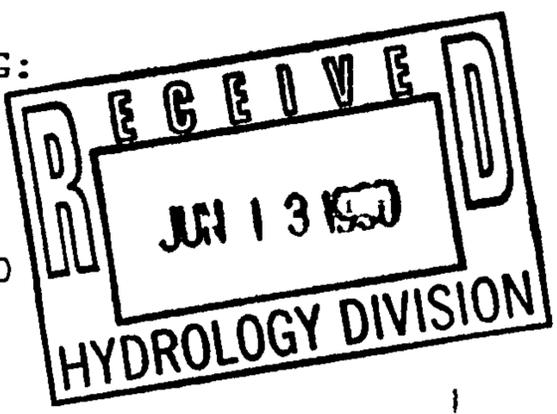
- ___ DRAINAGE REPORT
___ DRAINAGE PLAN
___ CONCEPTUAL GRADING & DRAINAGE PLAN
___ GRADING PLAN
___ EROSION CONTROL PLAN
___ ENGINEER'S CERTIFICATION
___ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ___ SKETCH PLAT APPROVAL
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___ GRADING PERMIT APPROVAL
___ PAVING PERMIT APPROVAL
___ S.A.D. DRAINAGE REPORT
___ DRAINAGE REQUIREMENTS
___ OTHER (SPECIFY)

PRE-DESIGN MEETING:

- ___ YES
___ NO
___ COPY PROVIDED



DATE SUBMITTED: 6/13/90

BY: RICK BELTRAMO, P.E.

PROJECT TITLE: University Center Parcel 2 ZONE ATLAS/DRNG. FILE #: L-15/ D31C
 DRB #: 88-449 EPC #: 2-88-66-2 WORK ORDER #: NA
 LEGAL DESCRIPTION: UNM South Campus Reseach Park, Tract 2
 CITY ADDRESS: University & Stadium
 ENGINEERING FIRM: Bohannon-Huston Inc. CONTACT: Rick Beltramo
 ADDRESS: 7500 Jefferson NE PHONE: 823-1000
 OWNER: University Center Joint Venture CONTACT: Laurie Wiggins
 ADDRESS: 1400 Central SE PHONE: 242-5800
 ARCHITECT: Holmes Sabitini Eeds CONTACT: Mark Levine
 ADDRESS: 202 Central PHONE: 247-3705
 SURVEYOR: Bohannon-Huston Inc. CONTACT: Tom Klingenhagen
 ADDRESS: _____ PHONE: _____
 CONTRACTOR: _____ CONTACT: _____
 ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

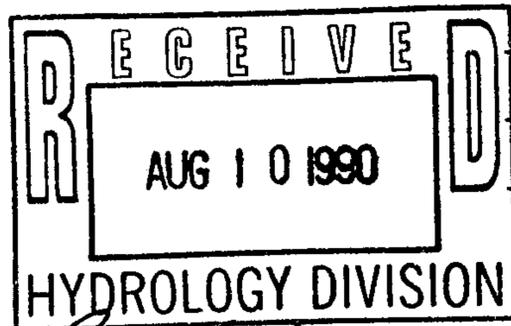
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- DRAINAGE PLAN
- CONCEPTUAL GRADING & DRAINAGE PLAN
- GRADING PLAN
- EROSION CONTROL PLAN
- ENGINEER'S CERTIFICATION
- OTHER _____

PRE-DESIGN MEETING:

- YES
- NO
- COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

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- PRELIMINARY PLAT APPROVAL
- S. DEV. PLAN FOR SUB'D. APPROVAL
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- GRADING PERMIT APPROVAL
- PAVING PERMIT APPROVAL
- S.A.D. DRAINAGE REPORT
- DRAINAGE REQUIREMENTS
- OTHER _____ (SPECIFY)



DATE SUBMITTED: *Rick Beltramo* 8/10/90
 BY: _____



BOHANNAN-HUSTON INC.

Courtyard I 7500 Jefferson Street, N.E. Albuquerque, NM 87109

TEL (505) 823-1000

FAX (505) 821-0892

Transmittal

RECEIVED
JUN 13 1990
HYDROLOGY DIVISION

HYDROLOGY SECTION
3RD FLOOR
ROOM 301
(768-2650)

- Parcel post
- Messenger
- First Class
- UPS
- Express Mail
- Air Freight
- Bus
- _____

Attention: BERNIE MONTOTA

Date: 6/13/90

Our job number: 89193.01

Your job number: _____

Job: UNIVERSITY CENTER PARCEL 2

We are enclosing:	For:
<u>4 PRINTS</u> <u>1 DRAINAGE INFORMATION SHEET</u>	<u>FOUNDATION PERMIT</u> <u>SUBMITTAL</u>
_____	_____
_____	_____
_____	_____
_____	_____

Comments: ATTACHED ARE THE DRAINAGE AND UTILITY PLANS,
SHOWING THE BUILDING CONSTRUCTION PHASES. PER OUR
CONVERSATION ON WEDSDAY 6/16/90 REGARDING THE ROOF
DRAINAGE, THE DRAINAGE BASIN CORRECTLY SHOW THE
ROOF DRAINAGE FOR THE BUILDING PHASES I & II.
PLEASE RETURN 1 OF THE 4 PRINTS WITH YOUR SIGNATURE
AND APPROVAL FOR OUR FILES.

By: RICK BELTRAMO / HRM thank you

Rec'd by: _____ Date: _____

Please Return Signed Yellow Copy



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 25, 1990

Rick Beltramo
Bohannan-Huston Inc.
7500 Jefferson Street NE
Albuquerque, New Mexico 87109

RE: REVISED CONCEPTUAL DRAINAGE PLAN FOR UNIVERSITY CENTER PARCEL 2
(L-15/D31C) REVISION DATED MARCH 20, 1990 RECEIVED MAY 22, 1990

Dear Mr. Beltramo:

Based on the information provided on your May 22, 1990 resubmittal, the above referenced site is approved for Site Development.

Please be advised that prior to Building Permit Approval the following concerns will need to be addressed:

1. Top of curb and flowline elevations on University and all perimeter streets.
2. Narrative within the plan drawing as to what happens to the 5.3 cfs run-off from Basin 2 once it leaves the site.
3. Location & direction of foot drains.
4. Elevation at property line must be 1.0' feet above the flowline.
5. Location, description and elevation of T.B.M. to be used must be permanently marked.
6. You must include the six notes from the S.O.19 format along with the sign-off block, within the plan drawing.

PUBLIC WORKS DEPARTMENT

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

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER

7. If Basin 2 is going to temporarily be retained downstream within a retention pond, you must design that basin for the 24-hour storm, unless it has already been addressed on the other drainage plan for University Center Phase I.

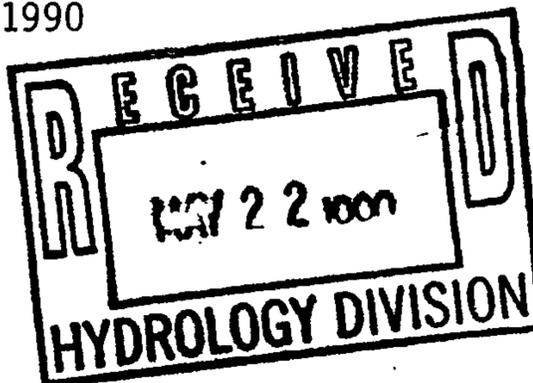
If I can be of further assistance, please feel free to contact me at 768-2650.

Sincerely

for Bernie J. Montoya
Fred Aguirre
Hydrology Division

BJM:jc
WP+1626

May 22, 1990



Mr. Fred Aguirre
 City Hydrology
 City of Albuquerque
 P.O. Box 1293
 Albuquerque, New Mexico 87103

Atten: Bernie J. Montoya, Engineering Assistant

Re: University Center, Parcel 2
 Conceptual Drainage and Grading Plan (L-15/D31C)

Dear Bernie:

Following are responses to your plan review dated February 12, 1990. Some minor revisions to the original plan have occurred since the original submittal. These revisions include modifying the parking layout to accommodate fire lines and fire truck access to hydrants. Also, the grading has been modified. One of the rundowns has been removed and the contributing area rerouted to the remaining rundown, located at the southwest corner.

Below are responses to your comments of the plan:

Comment 1 - Revisions to the original plan reduce the area from Basin 3 which discharges to University Boulevard. This plan shows that the runoff to University Boulevard is less than historic. Therefore, analysis of University Boulevard is unnecessary. The Master Plan is intended to be a large scale plan, and does not address the smaller details. Revisions to the Master Plan to show these details are not justified due to the small magnitude of the flows in question.

Comment 2 - Review of the submittal accompanying the plan revealed that it was, in fact, incorrect. The following information describes the new grading plan.

The proposed grading plan consist of 3 basins. Basin 2 discharges to the northwest corner of the site through a driveway cut. By design, the plan reduces the flow from existing and therefore free discharges is allowed. This is consistent with the Master Plan in which no drainage improvements are required.

Basin 3, discussed previously, discharges to University Boulevard. It too reduces flows from historic and therefore requires no new drainage improvements.

PRINCIPALS
 LARRY W. HUSTON
 MICHAL M. EMERY, P.E.

BRIAN G. BURNETT, P.E.

BOHANNAN-HUSTON INC.



COURTYARD I, 7500 JEFFERSON STREET, N.E. ALBUQUERQUE, NM 87109
 TEL (505) 823-1000 FAX (505) 821-0892

Mr. Fred Aguirre
May 22, 1990
Page -2-

Basin 1, drains to a concrete rundown located at the southwest corner of the parcel. From here this flow is conveyed to Stadium Boulevard via local streets. An increase from 6.1 cfs to 8.8 cfs is the result of this plan. The Master Plan allows for 6.6 cfs based on Pro-Rata of Basin E.

Comment 3 - Based on this analysis, 2.2 cfs is generated from Basin 3 in excess of the flow allowed by the Master Plan. However, the Master Plan also shows several other tracts free discharging developed flows in to Stadium Boulevard. Developed Flows, in the order of 90.6 cfs are allowed by the Master Plan to Stadium Boulevard versus 55.6 cfs under existing conditions. Therefore, Stadium Boulevard has 35.6 cfs additional capacity based on the Master Plan. The excess 2.2 cfs generated from this parcel should be allowed free discharge due to the excessive capacity in Stadium. Development of future downstream tracts may require additional storm drain structures to handle flows greater than those approved by the Master Plan. As each development progresses, this condition will need to be reevaluated on a case-by-case basis. At this time, no interim provisions for drainage are justified or necessary for this project.

If I can be of any help, please call me. anytime.

Sincerely,


Rick Beltramo, P.E.
Project Manager

RB/mls
Job No. 89193.31

RAINAGE INFORMATION SHEET

PROJECT TITLE: UNIV. CENTER, PHASE 2 ZONE ATLAS/DRNG. FILE #: L-15 / 231C

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: _____

CITY ADDRESS: _____

ENGINEERING FIRM: BHZ CONTACT: RICK BELTRAMO

ADDRESS: _____ PHONE: _____

OWNER: UNIV. CENTER JOINT VENTURE CONTACT: LAURIE WIGGINS

ADDRESS: _____ PHONE: _____

ARCHITECT: Holmes, Sabatini & BDD CONTACT: MARK LEVINE

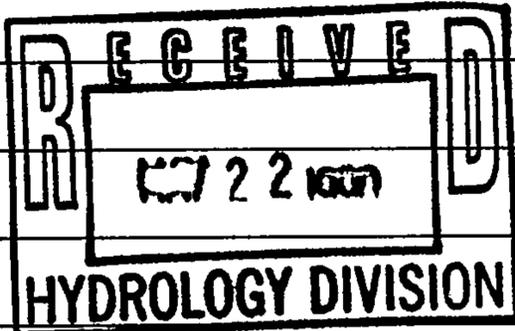
ADDRESS: _____ PHONE: _____

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____



- 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: 5/22/90
BY: [Signature]



BOHANNAN-HUSTON INC.

Courtyard I - 7500 Jefferson Street, N.E. Albuquerque, NM 87109

TEL (505) 823-1000

FAX (505) 827-0892

Transmittal

REG
MAY 22 1990
HYDROLOGY DIVISION

To: HYDROLOGY SECTION

COA

<input type="checkbox"/> Registered	<input checked="" type="checkbox"/> Messenger
<input type="checkbox"/> First Class	<input type="checkbox"/> UPS
<input type="checkbox"/> Express Mail	<input type="checkbox"/> Air Freight
<input type="checkbox"/> Bus	<input type="checkbox"/> _____

Attention: BERNIE MONTOYA

Date: 5/22/90

Our job number: 89193-31

Your job number: _____

Job: UNIV. CENTER, PARCEL 2 (L-15/DSIC)

We are enclosing:	For:
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Comments: _____

By: [Signature] thank you

Rec'd by: [Signature]

Date: 5/22/90

Please Return Signed Yellow Copy

FILE COPY



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 12, 1990

Rick Beltramo
Bohannon-Huston, Inc.
7500 Jefferson Street, NE
Albuquerque, New Mexico 87109

RE: CONCEPTUAL DRAINAGE PLAN FOR UNIVERSITY CENTER, PARCEL 2
(L-15/D31C) RECEIVED FEBRUARY 5, 1990

Dear Mr. Beltramo:

Based on the information provided on your submittal of February 5, 1990, listed are some concerns that will need to be addressed prior to Site Development approval.

1. Master drainage plan does not identify that any runoff from Basin E will be routed towards University Boulevard. Master must be revised to indicate. Please provide justification.
2. As per your letter, I am unable to follow using the plan drawing. It seems that the basins should be changed around to fit your instructions.
3. Main concern is you must identify what will happen downstream. Development is starting at the top end of the master. What provisions are you proposing to take care in the interim period until downstream facilities are built to take care of the runoff?

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

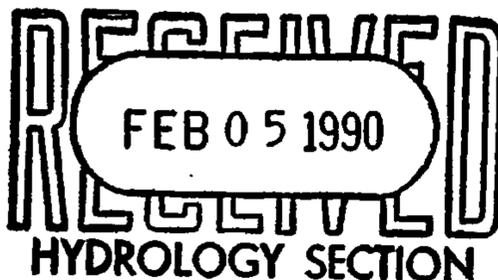
Cordially,

Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj
(WP+1626)

February 5, 1990

Mr. Fred Aguirre
 Drainage Section
 City of Albuquerque
 P.O. Box 1293
 Albuquerque, NM 87103



RE: University Center, Parcel 2, Conceptual Drainage and Grading Plan

Dear Fred:

Submitted for your review is one copy of the conceptual drainage and grading plan for the above referenced project. A copy of the pre-design is attached for your information.

Parcel 2 is part of the University Center Site Development Plan (Z-88-61) and as such is addressed in the approved "Glenborough, University Center, Master Drainage and Grading Plan". This plan does not call for drainage infrastructure to support the development of Parcel 2. (Reference Infrastructure Listing, DRB Case No. 88-449). Free discharge of developed flows are allowed by the Master Drainage Plan.

Currently the site is a gravel parking lot and has a fairly high rational "C" value. For this analysis a "C" of .85 is used to model runoff from the existing gravel surface.

The proposed conceptual drainage and grading plan consists of 3 basins. Basin 1 drains to the north and is designed to discharge less than historic rates. Areas to the north have limited capacity. Runoff reduction is accomplished by reducing the area which drains north, and redirects the flow south to Basin 2.

Basin 3 drains approximately 1.6 acres at 6.6 cfs to University Blvd. The Master Plan does not account for this much area discharging to University Blvd. under existing or developed conditions. This plan redirects portions of the Basin 3 to Basin 2 and discharges 3.6 cfs, under developed conditions, to University Blvd. This is a reduction of 3 cfs from existing conditions.

Basin 2 discharges to the south into Stadium Blvd, via local streets and then to the South Diversion Channel. Based on the Master Plan, free discharge of developed flows from Parcel 2 in the order of 4 cfs/acre are allowed. This detailed drainage plan shows approximately 2.31 cfs/acre. Significant areas of landscaping account for the lesser yield. A total of 4.5 cfs is shown to discharge from Basin 2. The Master Plan allows for 6.6 cfs based on pro-rata calculations for Basin E.

PRINCIPALS
 LARRY W. HUSTON
 MICHAEL M. EMERY, P.E.

BRIAN G. BURNETT, P.E.

BOHANNAN-HUSTON INC.



COURTYARD I, 7500 JEFFERSON STREET, N.E. ALBUQUERQUE, NM 87109
 TEL (505) 823-1000 FAX (505) 821-0892

Mr. Fred Aguirre
February 5, 1990
Page 2

If there are any questions regarding this submittal, please feel free to call.

Sincerely,


Rick Beltramo, P.E.
Project Manager

Attachments

cc: Laurie Wiggins
Mark Levine

RLB/al
Job No. 89193.31

DRAINAGE INFORMATION SHEET

PROJECT TITLE: University Ctr. Parcel 2 ZONE ATLAS/DRNG. FILE #: L-15 /D31c

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: A portion of the second replat of the University of New Mexico South Campus Research Park, Albuquerque, NM

CITY ADDRESS: _____

ENGINEERING FIRM: Bohannon-Huston, Inc. CONTACT: Rick Beltramo

ADDRESS: 7500 Jefferson ST., NE PHONE: 823-1000

OWNER: Glenborough New Mexico CONTACT: Laurie G. Wiggins

ADDRESS: 1400 Central SE, Suite 3200 PHONE: 242-5800

ARCHITECT: Holmes Sabatini Eeds CONTACT: Mark Levine

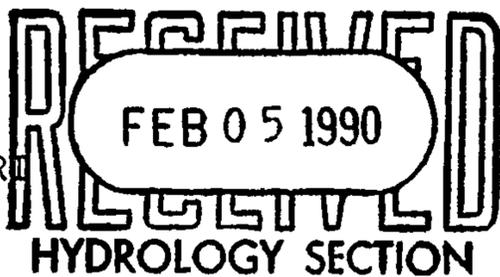
ADDRESS: 202 Central SE PHONE: 247-3705

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____



TYPE OF SUBMITTAL:

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

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
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- 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)

PRE-DESIGN MEETING:

- YES
- NO
- COPY PROVIDED

DATE SUBMITTED: 2/5/90
BY: Rick L. Beltramo, Project Manager

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
UTILITY DEVELOPMENT DIVISION/HYDROLOGY SECTION

PRE-DESIGN CONFERENCE

DRAINAGE FILE/ZONE ATLAS PAGE NO.: L15 DATE: 7 NOV 89 @ 1100
EPC NO.: _____ DRB NO.: _____ ZONE: 0-1
SUBJECT: UNIVERSITY CENTER
STREET ADDRESS: UNIVERSITY BTWN STADIUM & COAL
LEGAL DESCRIPTION: TRACT 2 UNIVERSITY CENTER

APPROVAL REQUESTED: _____ PRELIMINARY PLAT _____ FINAL PLAT
 SITE DEVELOPMENT PLAN _____ BUILDING PERMIT
_____ GRADING/PAVING PERMIT _____ OTHER

ATTENDANCE: RICK BELTRAMO WHO STUART REEDER REPRESENTING B-H, INC
COA - HYDROLOGY DIV.

FINDINGS:
SITE PLAN SIGN-OFF BY THE HYDROLOGY SECTION REQUIRES
AN APPROVED CONCEPTUAL GRADING & DRAINAGE PLAN, PER
THE DPM, AND THE MASTER DRAINAGE REPORT FOR THIS AREA
(L15/D31)

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED: GS Reeder SIGNED: [Signature]
TITLE: CE / HYDROLOGY TITLE: Project Manager
DATE: 7 Nov 89 DATE: 11/7/89

NOTE PLEASE PROVIDE A COPY OF THIS PRE-DESIGN FORM WITH THE DRAINAGE SUBMITTAL.