

CITY OF ALBUQUERQUE
DEVELOPMENT & BUILDING SERVICES CENTER
PLANNING DEPARTMENT/HYDROLOGY SECTION

HYDROLOGY & TRANSPORTATION PREDESIGN CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NUMBER: G-17/D039 DATE: April 30, 2010
CROSS REFERENCE NUMBERS: EPC _____ DRB _____ DRC _____
SUBJECT: BEL AIR ELEMENTARY SCHOOL PRE-K CONSOLIDATION
STREET ADDRESS: 4725 CANDELARIA ROAD, NE, ALBUQUERQUE, NEW MEXICO 87110
SUBDIVISION NAME: LOTS H AND J, BEL AIR ELEMENTARY SCHOOL

TYPE OF APPROVAL

- ☐ PRELIMINARY & FINAL PLAT
☐ BUILDING PERMIT
☒ GRADING PERMIT (& PAVING)
☐ SITE DEVELOPMENT PLAN FOR SUBDIVISION
☐ OTHER _____

ATTENDEE:
JEFF MORTENSEN
BRAD BINGHAM

ORGANIZATION:
HMC
HYDROLOGY

PHONE:
345-4250
924-3986

FINDINGS:

- A. AN APPROVED GRADING PLAN PER THE DPM WILL BE REQUIRED TO SUPPORT GRADING AND PAVING PERMITS
B. FREE DISCHARGE PERMISSIVE
1) FOR DIRECT DISCHARGE TO CANDELARIA VIA EXISTING DRIVEPAD
2) FOR SURFACE DISCHARGE THAT HONORS EXISTING DRAINAGE PATTERNS
C. DRAINAGE SUBMITTAL MUST ADDRESS EROSION AT SOUTH EDGE OF SITE ALONG CANDELARIA ROAD NE
D. PROJECT SCOPE APPEARS TO REMOVE AND REPLACE EXISTING PAVING WITH NO INCREASE IN IMPERVIOUSNESS

THE UNDERSIGNED AGREE THAT THE ABOVE FINDINGS ARE SUMMARIZED ACCURATELY AND ARE ONLY SUBJECT TO CHANGE IF FURTHER INVESTIGATION REVEALS THAT THE FINDINGS ARE NOT REASONABLE OR THAT THEY ARE BASED UPON INACCURATE INFORMATION.

SIGNED: Bradley J. Bingham
TITLE: CITY HYDROLOGIST
DATE: 5/13/10

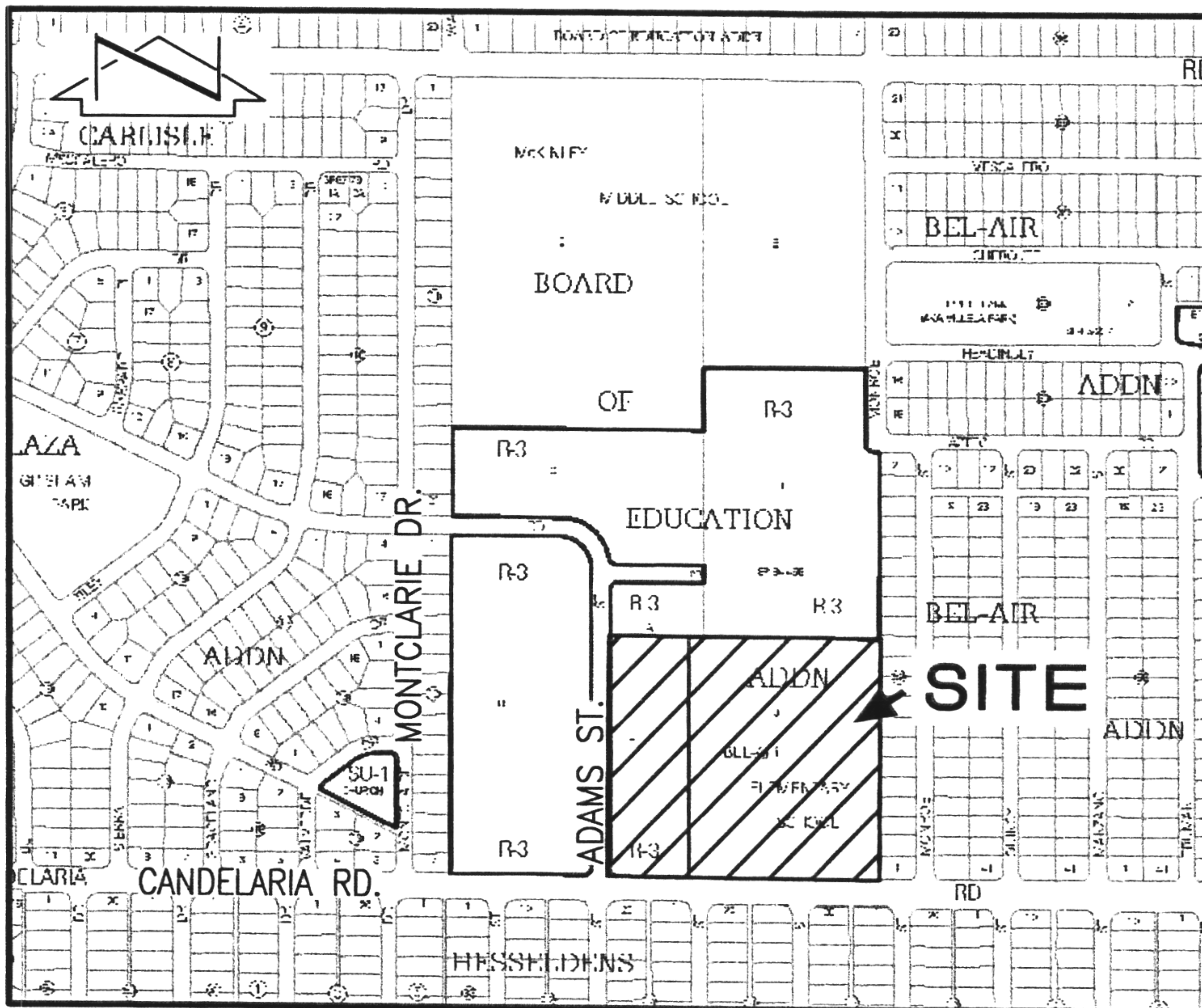
SIGNED: _____
TITLE: CONSULTANT
DATE: _____

NOTE: PLEASE PROVIDE A COPY OF THIS RECAP WITH EACH DRAINAGE & TRANSPORTATION SUBMITTAL.

HMC PROJECT NO. 2008.198.2

Bel Air ES

ZONE ATLAS PAGE:	G-17
HYDROLOGY FILE #	G-17/D039
MASTER DRAINAGE PLAN:	YES
MDP ENGINEER OF RECORD:	SMITH ENG.
MDP DATE:	1996
SUPPORTING PLANS:	
* PAPA CHARTER SCHOOL (HMCG/2008.191.6)	2009

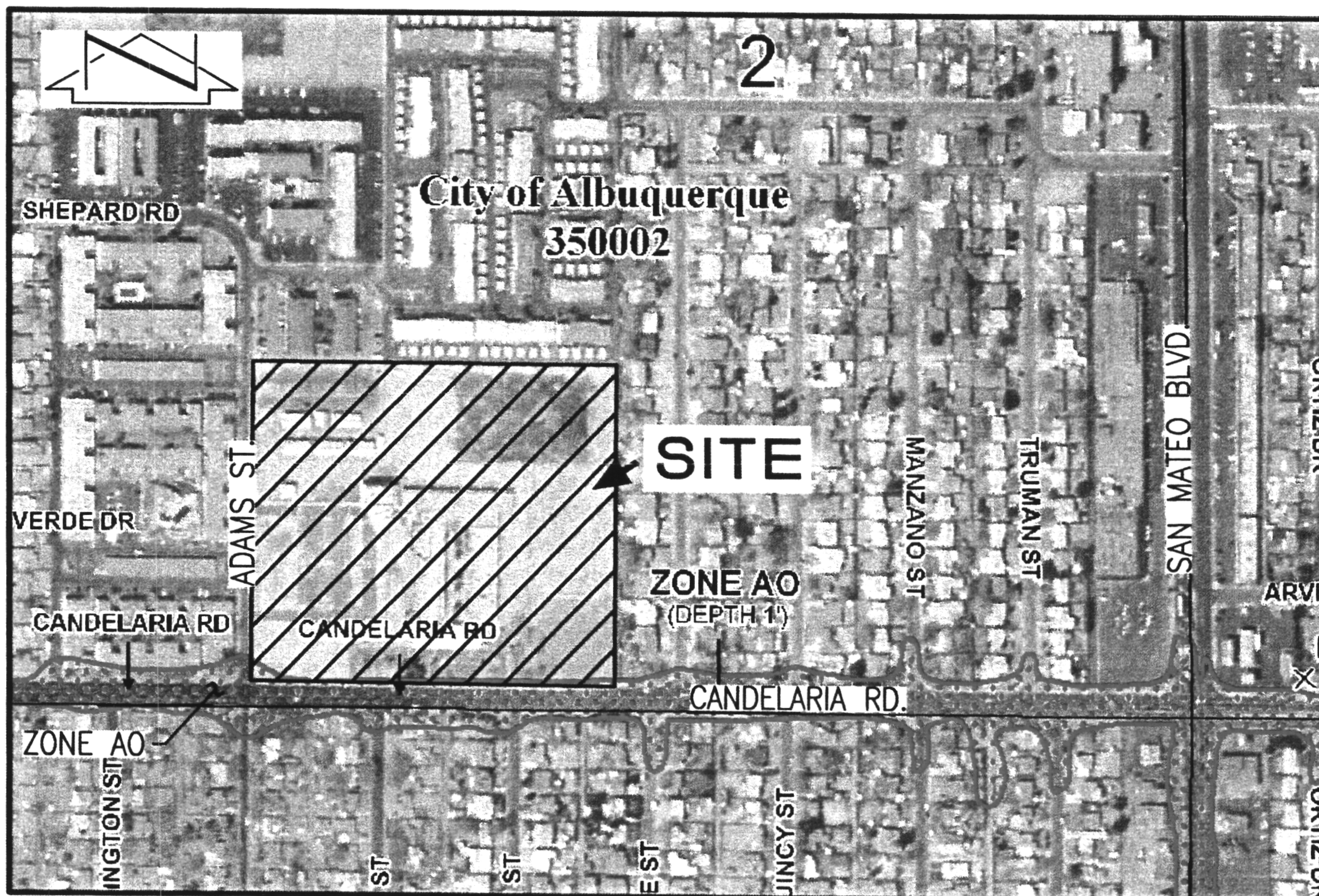


B1

VICINITY MAP

G-17

SCALE: 1" = 750'



A1

F.I.R.M.

PANEL 351 & 352

OF 825

SCALE: 1" = 500'

File Path: E:\DATA\2008.180.1\AIR.DWG
File Name: 81801_AIR.DWG
Plot Date: 08-05-2009
Plot Time: 3:54 pm

BEL AIR ELEMENTARY SCHOOL
4725 CANDELARIA N.E.
ALBUQUERQUE, NM 87110

JOB NO. 2008.180.1
DATE: 07/08/09

CITY OF ALBUQUERQUE



August 13, 2007

Scott M. McGee, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. NE
Albuquerque, NM 87108

Re: Bel-Air Elementary School Drainage and Grading Plan
Engineer's Stamp dated 8-7-07 (G17/D39)

Dear Mr. McGee,

Based upon the information provided in your submittal dated 8-8-07, the above referenced plan is approved for Building Permit and SO19 Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

A separate permit is required for construction within City ROW. A copy of this approval letter must be on hand when applying for the excavation permit.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. Send a copy of your SWPPP on a CD to the following address:

Department of Municipal Development, Storm Drainage Division, P.O. Box 1293, One Civic Plaza, Rm. 301, Albuquerque, NM 87103

If you have any question concerning the SWPPP, please contact Kathy Verhage 768-3654.

To obtain a Temporary or Permanent CO, Engineer Certification of the Grading Plan per the DPM is required and the storm drain work in the City ROW must be inspected and accepted. Please contact Duane Schmitz, 235-8016, to schedule an inspection.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Curtis A. Cherne
Curtis A. Cherne, P.E.

Engineering Associate, Planning Dept.
Development and Building Services

C: file
Kathy Verhage, DMD
Antoinette Baldonado, Excavation and Barricading
Duane Schmitz, Storm Drain Maintenance

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: Bel-Air Elementary School

ZONE MAP / DRG. FILE #: G-17/D39

DRB #: _____ EPC #: _____

WORK ORDER #: _____

LEGAL DESCRIPTION: A portion of Tracts H and J, Board of Education Addition

CITY ADDRESS: 4725 Candelaria Road NE

ENGINEERING FIRM: Isaacson & Arfman Engineering, Assoc.

CONTACT: Bryan Bobrick

ADDRESS: 128 Monroe St. NE

PHONE: 268-8828

CITY, STATE: Albuquerque, NM

ZIP CODE: 87108

OWNER: APS

CONTACT: _____

ADDRESS: _____

PHONE: _____

CITY, STATE: _____

ZIP CODE: _____

ARCHITECT: Garrett Smith Ltd.

CONTACT: Doug L.

ADDRESS: 514 Central SW

PHONE: 766-6968

CITY, STATE: Albuquerque, New Mexico

ZIP CODE: 87102

SURVEYOR: _____

CONTACT: _____

ADDRESS: _____

PHONE: _____

CITY, STATE: _____

ZIP CODE: _____

CONTRACTOR: _____

CONTACT: _____

ADDRESS: _____

PHONE: _____

CITY, STATE: _____

ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

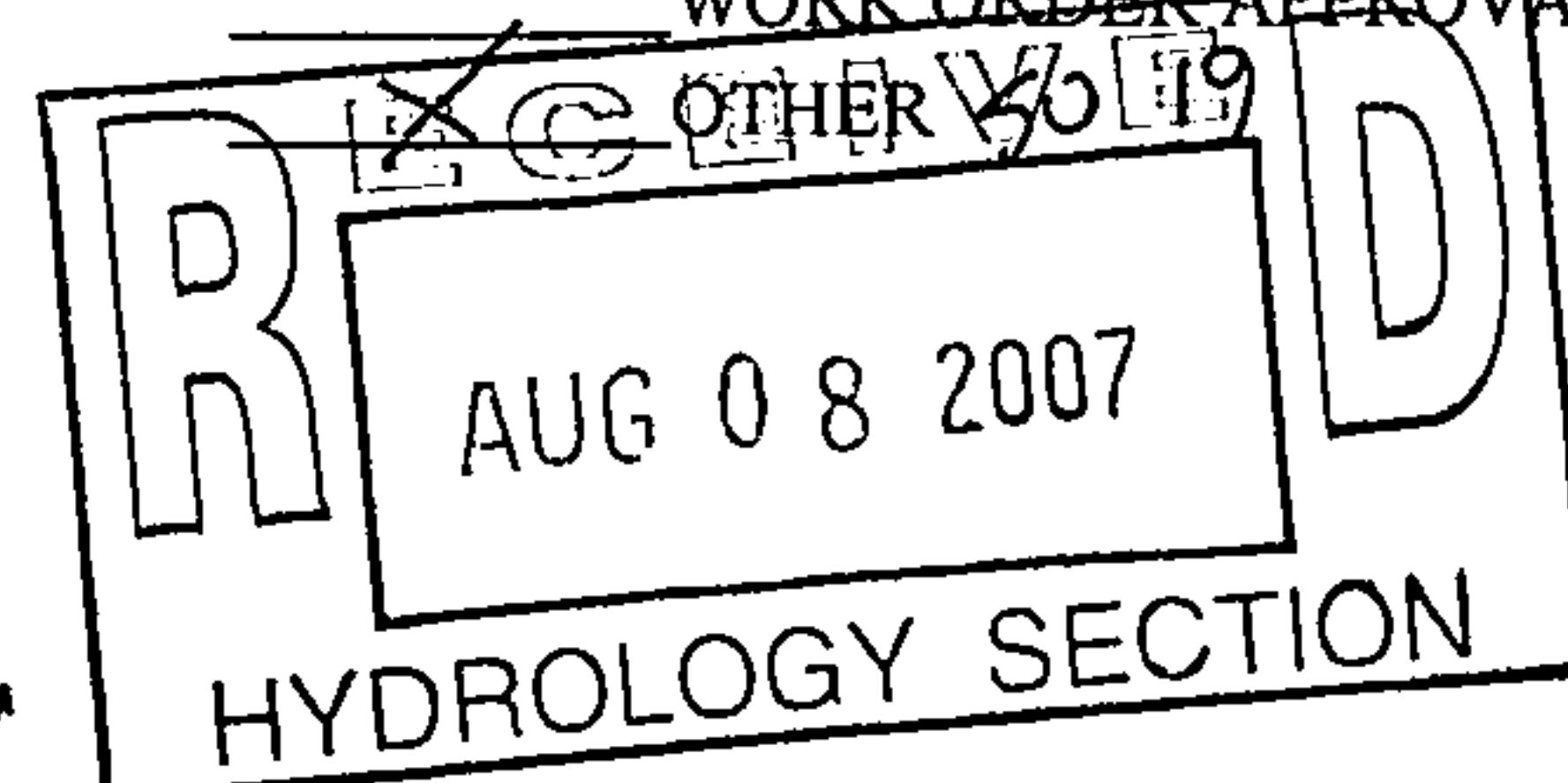
- ☐ DRAINAGE REPORT
☐ DRAINAGE PLAN 1ST *REQUIRES TCL or equal*
☐ DRAINAGE PLAN RESUBMITTAL
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☒ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION (HYDROLOGY)
☐ CLOMR / LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ ENGINEER'S CERTIFICATION (TCL)
☐ ENGINEER'S CERTIFICATION (DRB APPR, SITE PLAN)
☐ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SIA / FINANCIAL GUARANTEE RELEASE
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D APPROVAL
☐ S. DEV. PLAN FOR BLDG. PERMIT APPR.
☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☒ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY (PERM)
☐ CERTIFICATE OF OCCUPANCY (TEMP)
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ WORK ORDER APPROVAL

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☐ YES
☐ NO
☐ COPY PROVIDED



RESUBMITTAL

DATE SUBMITTED: Tuesday, August 07, 2007 - REVISION

BY: Isaacson & Arfman Engr. Assoc.

Requests for approvals of Site Development Plans and / or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. Conceptual Grading and Drainage Plan: Required for approval of Site Development Plans greater than five acres and Sector Plans
2. Drainage Plans: Required for building permits, grading permits, paving permits and site plans less than five acres
3. Drainage Report: Required for subdivisions containing more than ten (10) lots or constituting five acres or more.

CITY OF ALBUQUERQUE



November 10, 2008

Garret Smith, R.A.
Garret Smith LTD
514 Central SW
Albuquerque, NM 87102

**Re: Bel-Air Elementary School Addn & Renovations, 4725 Candelaria Rd NE,
Certificate of Occupancy – Transportation Development
Architect's Stamp dated 5-08-06 (G17-D039)
Certification dated 11-05-08**

Dear Mr. Smith,

PO Box 1293

Based upon the information provided in your submittal received 11-10-08, the above referenced certification is approved for release of permanent Certificate of Occupancy by Transportation Development.

Albuquerque

If you have any questions, you can contact me at 924-3991.

NM 87103

Sincerely,

Kristal D. Metro, P.E.
Traffic Engineer, Planning Dept.
Development and Building Services

www.cabq.gov

C: CO Clerk
File

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 12/2005)

PROJECT TITLE: BEL-AIR ELEMENTARY SCHOOL ZONE MAP: G-17
 DRB#: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: LOT NO. 4 & 5 BLOCK NO. 0000 BOARD OF EDUC. ADDITION
 CITY ADDRESS: 2754 CANDELARIA RD. NE, ALBUQUERQUE, NM 87110 TRACT B-J

ENGINEERING FIRM: GARIBOLDI SMITH LTD. CONTACT: RON JACOBS
 ADDRESS: 514 CENTRAL AVE. SW PHONE: 766-6968
 CITY, STATE: ALBUQUERQUE, NM ZIP CODE: 87102

OWNER: ALBUQUERQUE PUBLIC SCHOOLS CONTACT: RICHARD MILLER
 ADDRESS: 725 UNIVERSITY BLVD. SE PHONE: 848-8835
 CITY, STATE: ALBUQUERQUE, NM 87106 ZIP CODE: 87106

ARCHITECT: _____ CONTACT: _____
 ADDRESS: _____ PHONE: _____
 CITY, STATE: _____ ZIP CODE: _____

SURVEYOR: _____ CONTACT: _____
 ADDRESS: _____ PHONE: _____
 CITY, STATE: _____ ZIP CODE: _____

CONTRACTOR: _____ CONTACT: _____
 ADDRESS: _____ PHONE: _____
 CITY, STATE: _____ ZIP CODE: _____

TYPE OF SUBMITTAL:
 _____ DRAINAGE REPORT
 _____ DRAINAGE PLAN 1st SUBMITTAL
 _____ DRAINAGE PLAN RESUBMITTAL
 _____ CONCEPTUAL G & D PLAN
 _____ GRADING PLAN
 _____ EROSION CONTROL PLAN
 _____ ENGINEER'S CERT (HYDROLOGY)
 _____ CLOMR/LOMR
☒ TRAFFIC CIRCULATION LAYOUT
 _____ ENGINEER'S CERT (TCL)
 _____ ENGINEER'S CERT (DRB SITE PLAN)
 _____ OTHER (SPECIFY) _____

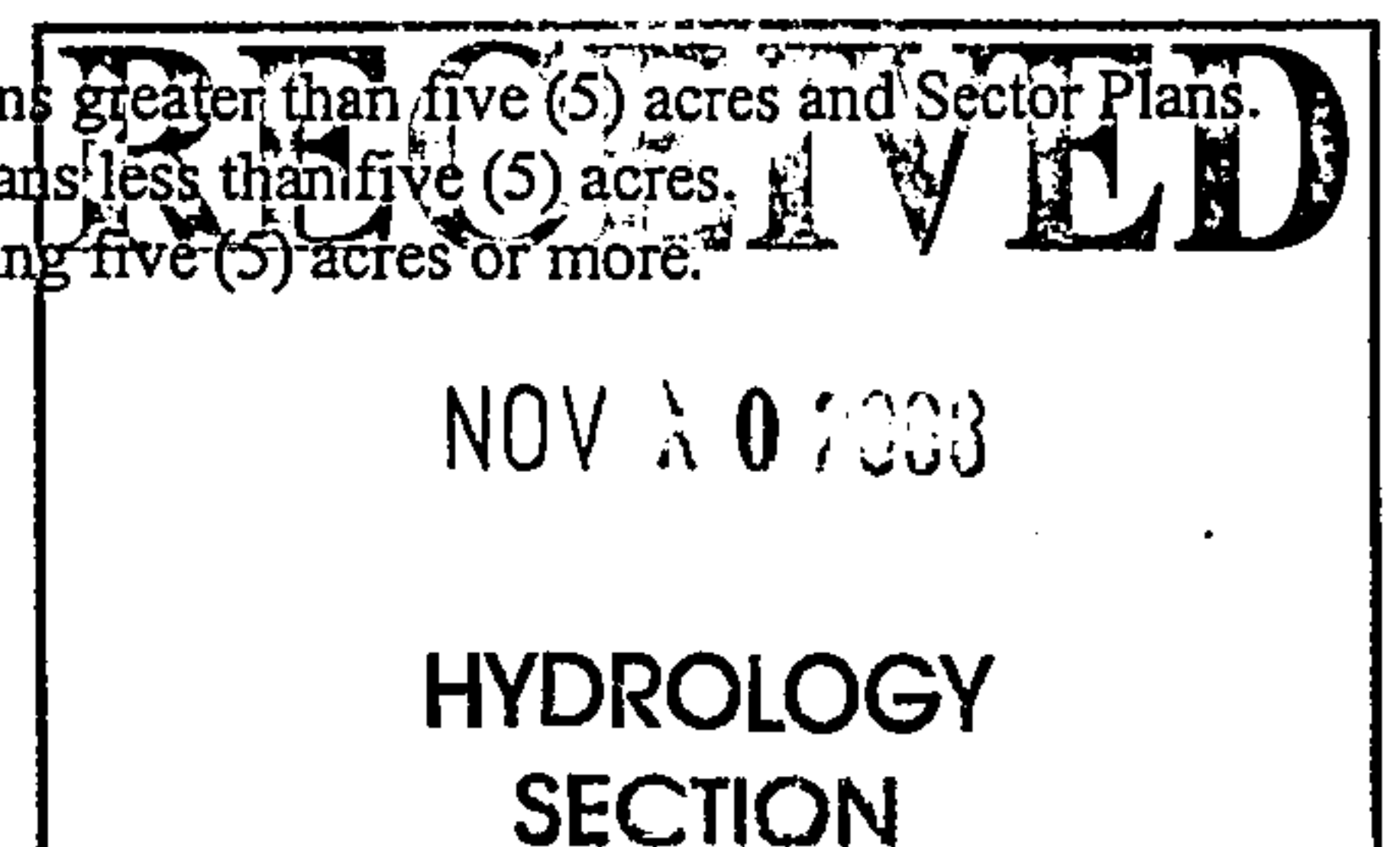
CHECK TYPE OF APPROVAL SOUGHT:
 _____ SIA/FINANCIAL GUARANTEE RELEASE
 _____ PRELIMINARY PLAT APPROVAL
 _____ S. DEV. PLAN FOR SUB'D APPROVAL
 _____ S. DEV. FOR BLDG. PERMIT APPROVAL
 _____ SECTOR PLAN APPROVAL
 _____ FINAL PLAT APPROVAL
 _____ FOUNDATION PERMIT APPROVAL
☒ BUILDING PERMIT APPROVAL
☒ CERTIFICATE OF OCCUPANCY (PERM)
 _____ CERTIFICATE OF OCCUPANCY (TEMP)
 _____ GRADING PERMIT APPROVAL
 _____ PAVING PERMIT APPROVAL
 _____ WORK ORDER APPROVAL
 _____ OTHER (SPECIFY) _____

WAS A PRE-DESIGN CONFERENCE ATTENDED:
 _____ YES
 _____ NO
 _____ COPY PROVIDED

DATE SUBMITTED: 11/10/08 BY: R. J. [Signature]

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more.



GARRETT SMITH LTD
DESIGN, ARCHITECTURE & DEVELOPMENT

www.garrett-smith-ltd.com
gs1@garrett-smith-ltd.com

31 October 2008

Mr. Nilo Salgado-Fernandez, PE
Senior Engineer
Transportation Development Coordination
Planning Department
City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

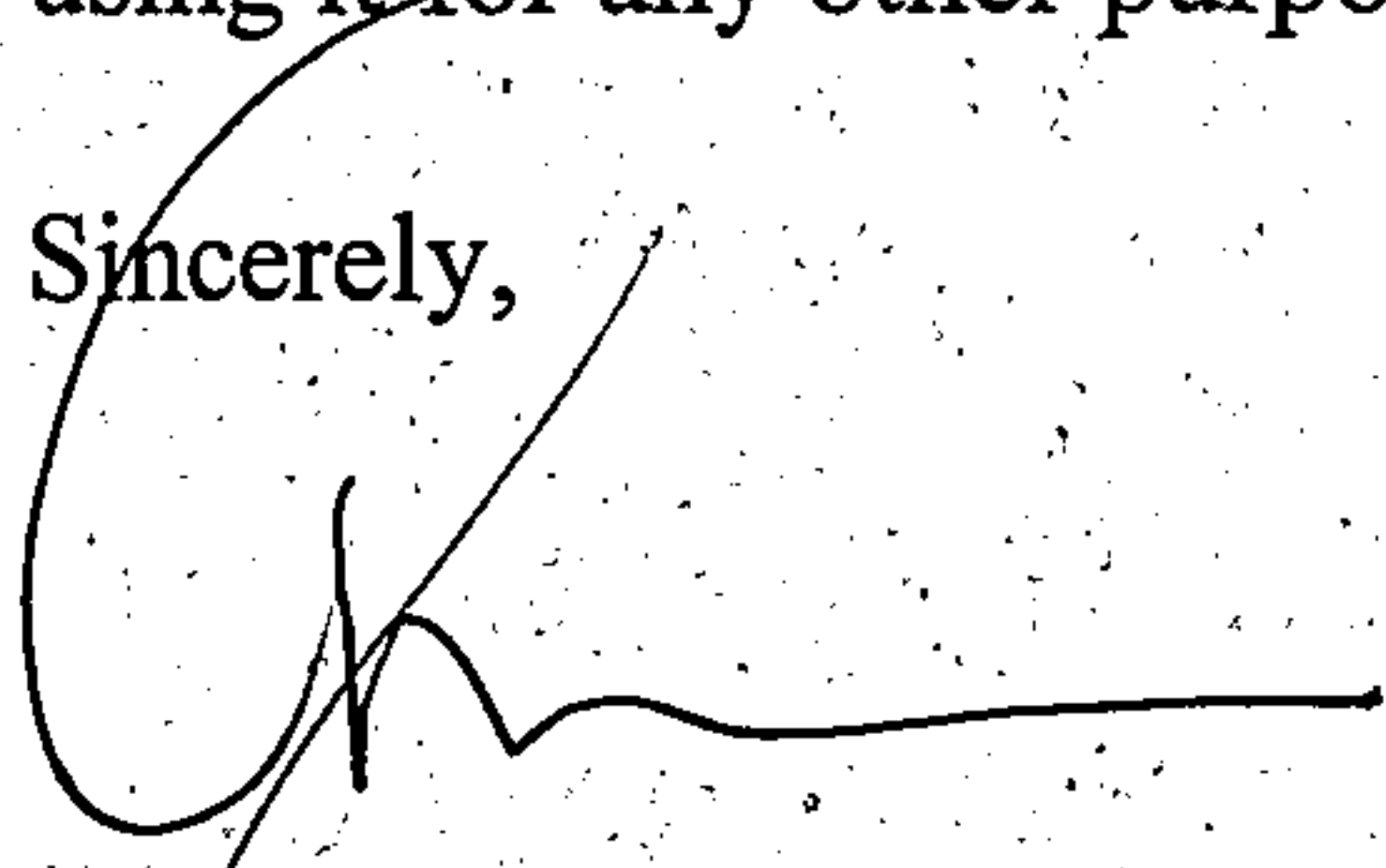
RE: Bel-Air Elementary School, 4725 Candelaria Road NE, Albuquerque, NM 87110

Dear Mr. Salgado-Fernandez,

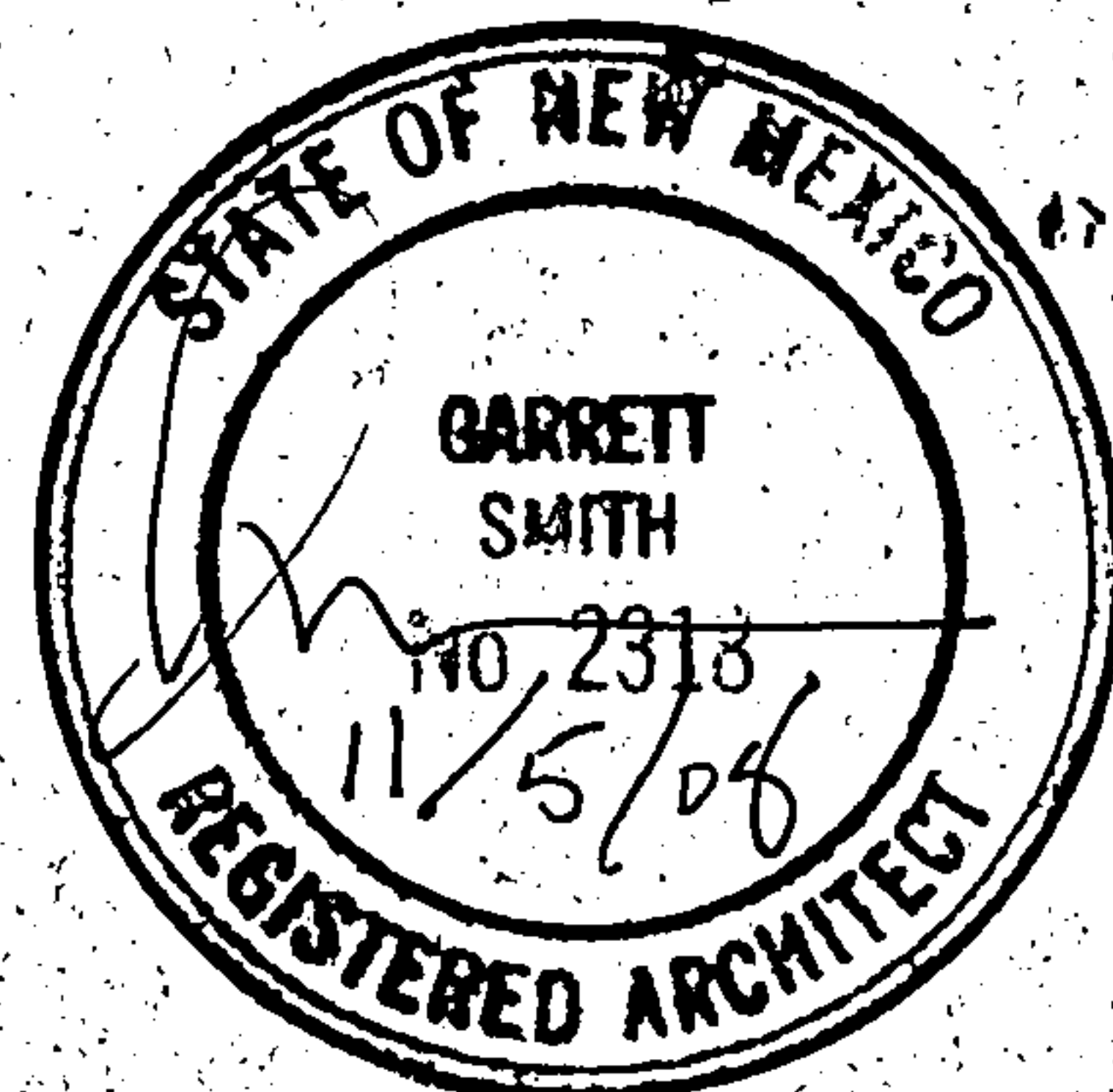
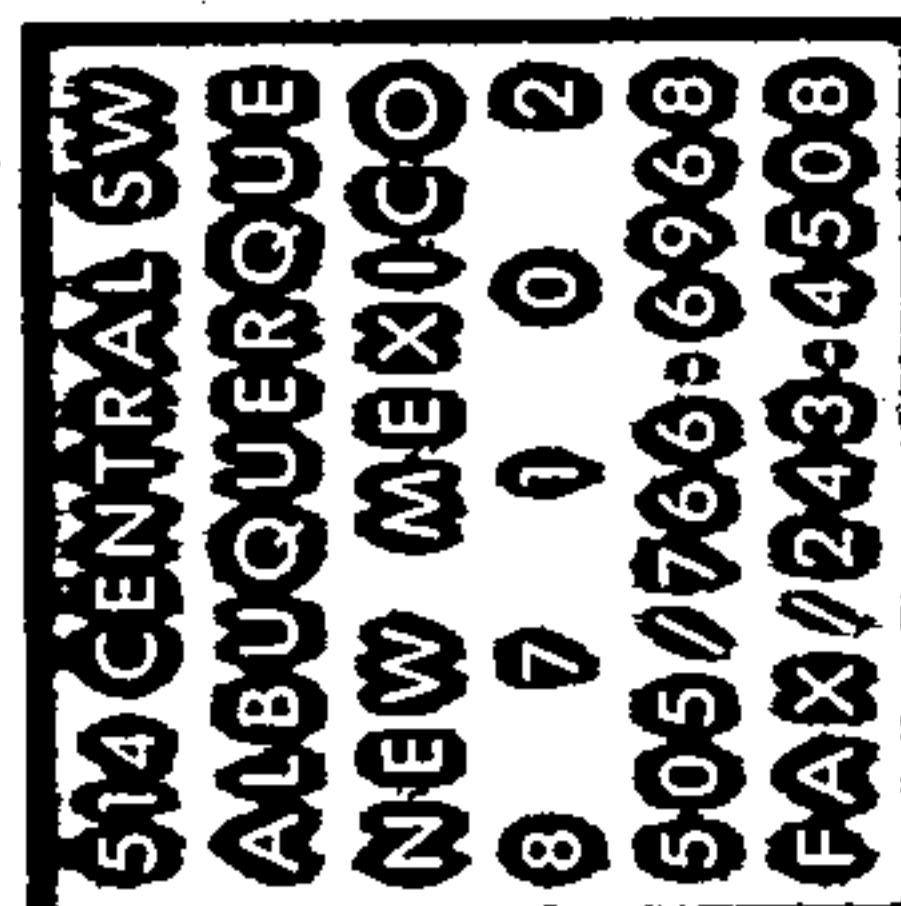
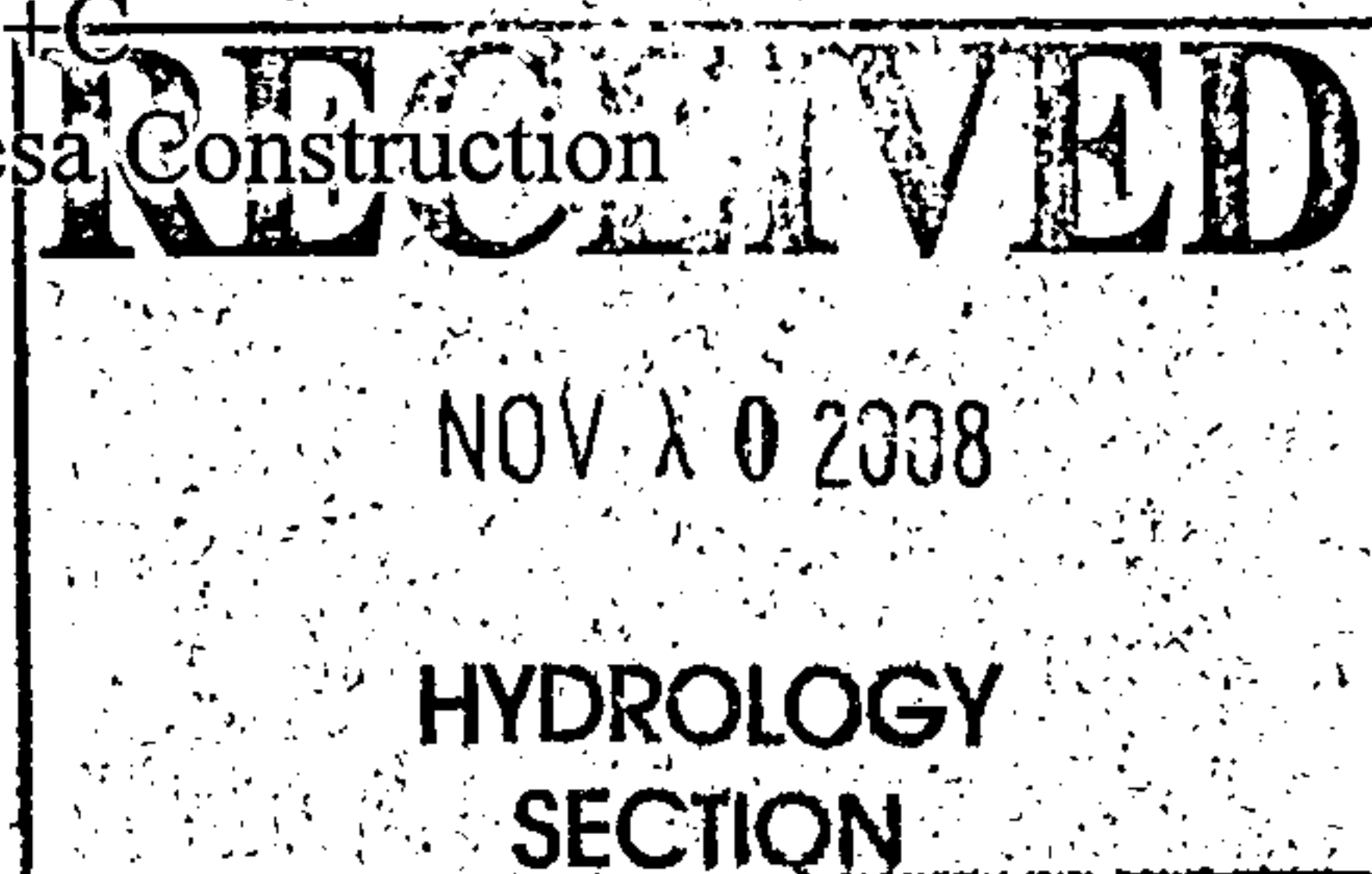
I, Garrett Smith, NMRA No. 2318, of the firm Garrett Smith Ltd., hereby certify that this project is in substantial compliance with and in accordance with the design intent of the TCL approved plan dated 30 June 2006. I further certify that I have personally visited the site on 31 October 2008 and have determined by visual inspection that the survey data provided is representative of actual site conditions and is true and correct to the best of my knowledge and belief. This certification is submitted in support of a request for a 'Permanent Certificate of Occupancy'.

The record information presented hereon is not necessarily complete and intended only to verify substantial compliance of the traffic aspects of this project. Those relying on the record document are advised to obtain independent verification of its accuracy before using it for any other purpose.

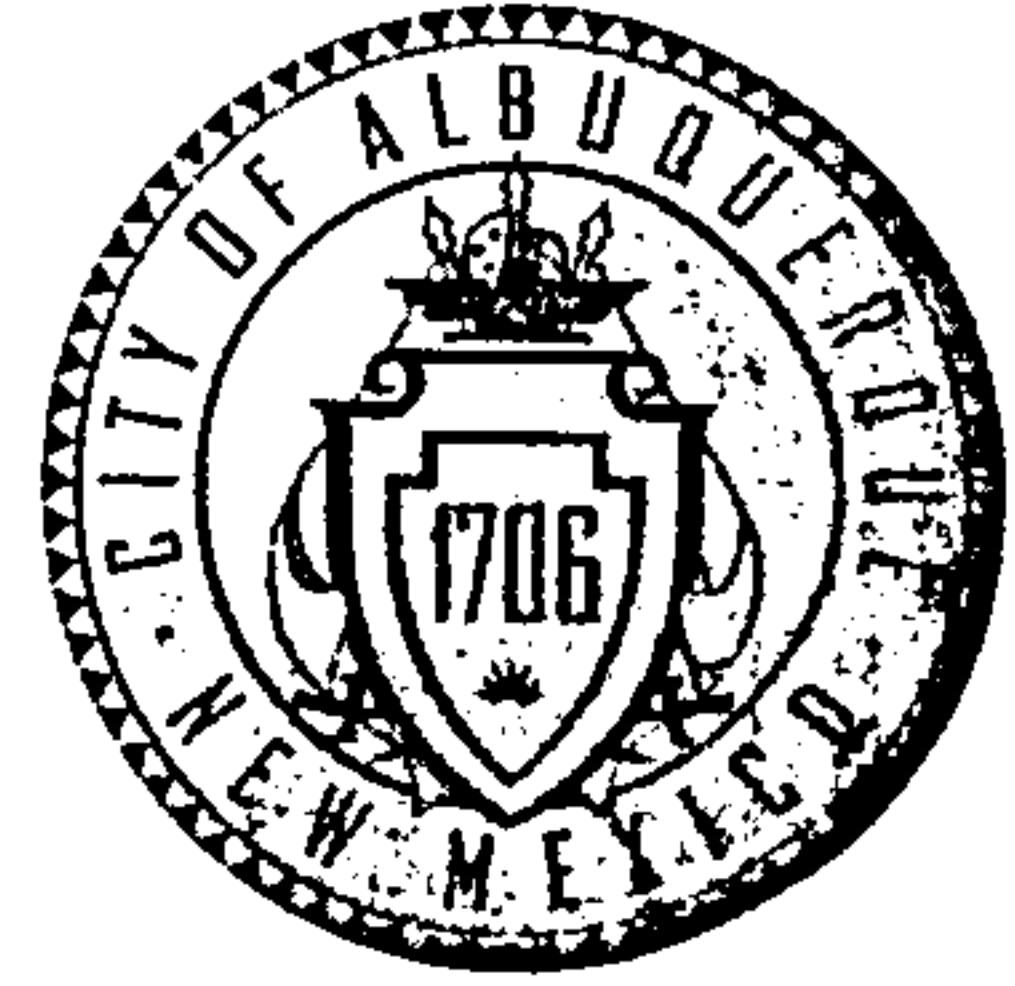
Sincerely,


Garrett Smith, AIA

Copy: APS FD+C
First Mesa Construction



CITY OF ALBUQUERQUE



**Planning Department
Transportation Development Services Section**

August 12, 2008

Garret Smith, Registered Architect,
Garret Smith LTD
514 Central SW
Albuquerque, NM 87102

Re: Approval of Temporary Certificate of Occupancy (C.O.) for
Bel-Air Elementary School Additions & Renovations, [G-17 / D039]
4725 Candelaria NE
Architect's Stamp Dated 08/08/08

Dear Mr. Smith:

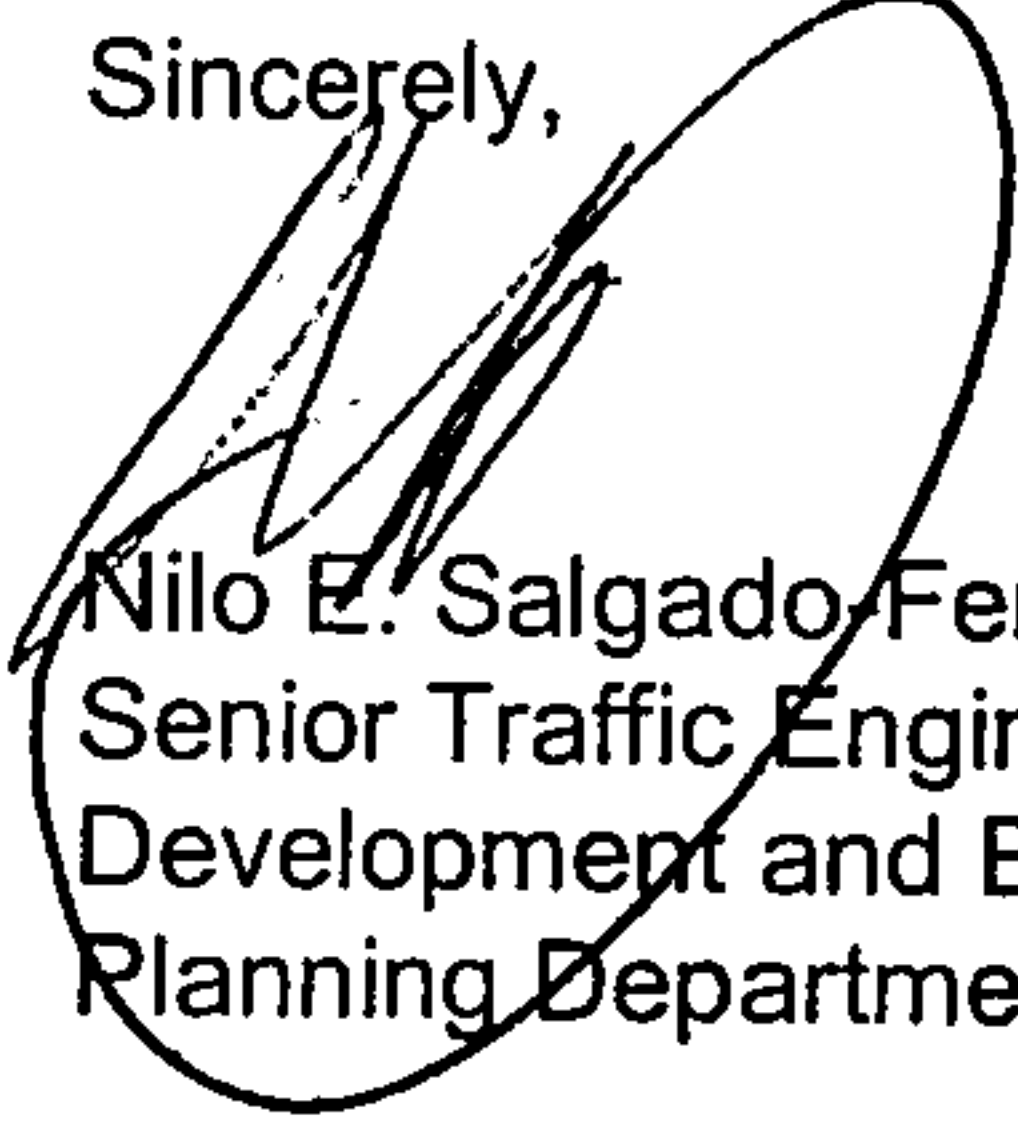
Based on the information provided on your submittal dated August 11, 2008, the above referenced project is approved for a 90-day Temporary C.O.

A Temporary C.O. has been issued allowing the outstanding H.C. ramp detectable warning surfaces (provide truncated domes on ramp landings) issues to be completed within this time period. When these remaining issues have been fully completed, are in substantial compliance, and a final Certification for Transportation has been resubmitted to the City's Hydrology office for approval, a Permanent C.O. will be issued.

The Certification package for Final C.O. must include an exact copy of the approved TCL, or signed off D.R.B. Site Plan, which is in each of the two City Permit Plan Sets—the contractor's City field set and the City's plan set in the basement of the Plaza Del Sol building. Package also must include a letter of certification on designer's letterhead-stamped with his seal, signed, and dated. Submit package along with fully completed Drainage Information Sheet to front counter personnel for log in and evaluation by Transportation.

If you have any questions, please call me at 924-3630.

Sincerely,


Nilo E. Salgado-Fernandez, P.E.
Senior Traffic Engineer
Development and Building Services
Planning Department

c: Engineer
Hydrology file
CO Clerk

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(REV 12/2005)

PROJECT TITLE: BEL AIR Elementary School (office & Warehouse) ZONE MAP: G-17/D39
DRB#: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: LOT NO. H&J, BLOCK NO. 0000
CITY ADDRESS: 4725 CANDELERIA NE

ENGINEERING FIRM: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

OWNER: APS CONTACT: _____
ADDRESS: 4725 CANDELERIA NE PHONE: _____
CITY, STATE: ALB NM 87104 ZIP CODE: _____

ARCHITECT: GARRISON Smith Ltd. CONTACT: _____
ADDRESS: 514 CENTRAL AVE SW PHONE: _____
CITY, STATE: ALB NM 87102 ZIP CODE: _____

SURVEYOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

CONTRACTOR: FIRST MESA CONST. CONTACT: SCOTT
ADDRESS: 8819 2ND STREET PHONE: 843-8840
CITY, STATE: ALB NM 87114 ZIP CODE: 87114

TYPE OF SUBMITTAL:
____ DRAINAGE REPORT
____ DRAINAGE PLAN 1st SUBMITTAL
____ DRAINAGE PLAN RESUBMITTAL
____ CONCEPTUAL G & D PLAN
____ GRADING PLAN
____ EROSION CONTROL PLAN
____ ENGINEER'S CERT (HYDROLOGY)
____ CLOMR/LOMR
☒ TRAFFIC CIRCULATION LAYOUT
____ ENGINEER'S CERT (TCL)
____ ENGINEER'S CERT (DRB SITE PLAN)
____ OTHER (SPECIFY) _____

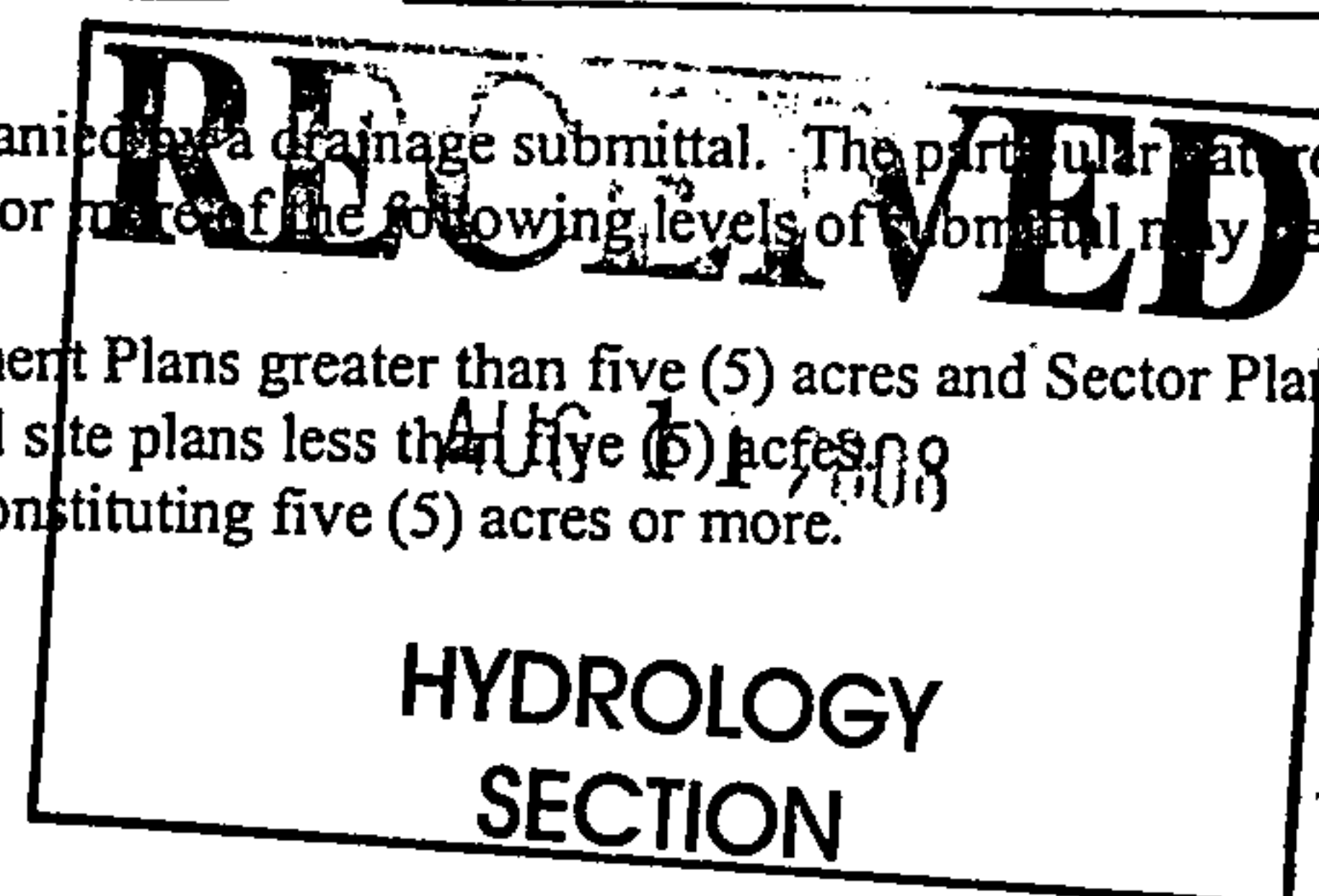
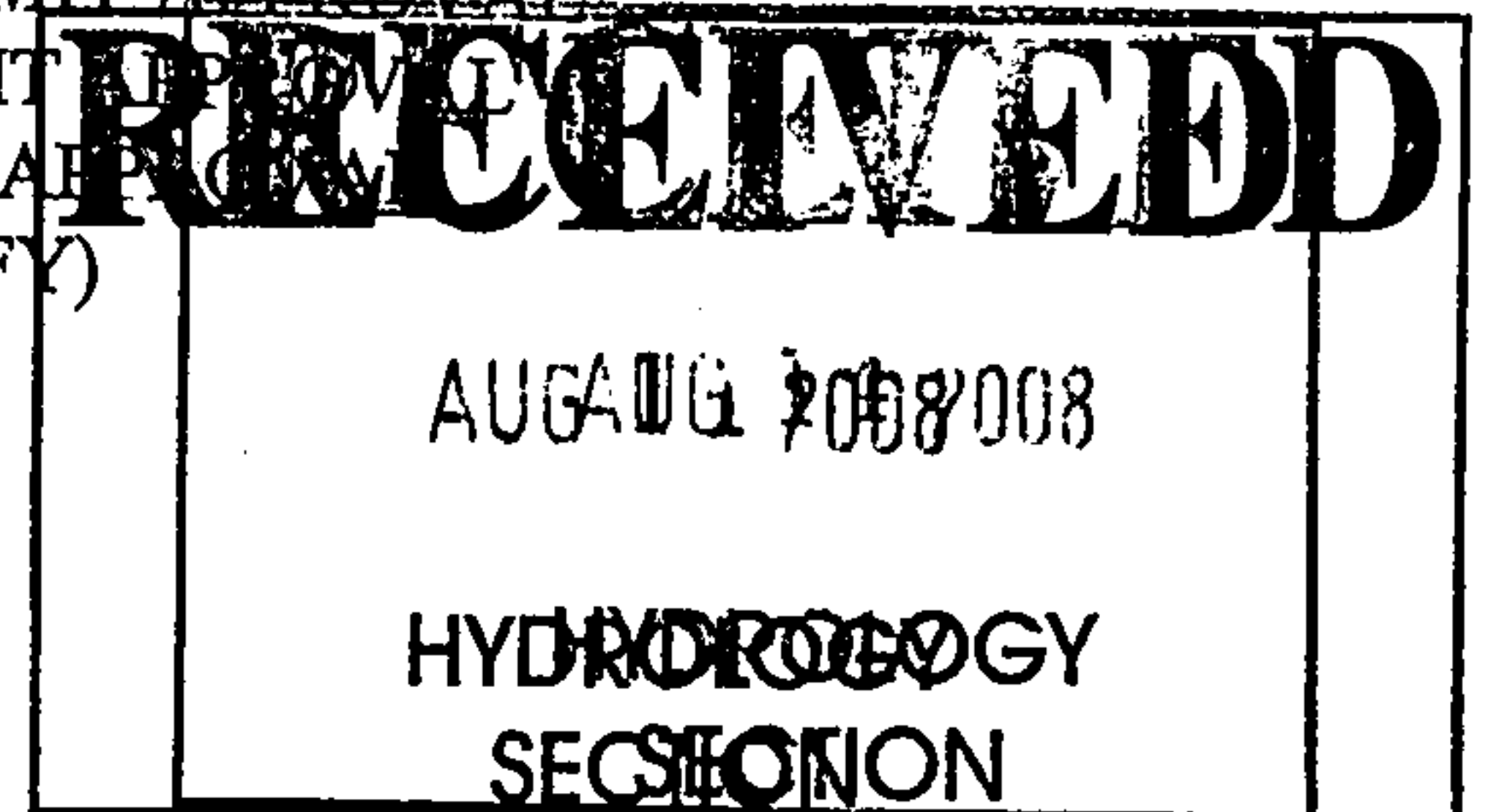
CHECK TYPE OF APPROVAL SOUGHT:
____ SLA/FINANCIAL GUARANTEE RELEASE
____ PRELIMINARY PLAT APPROVAL
____ S. DEV. PLAN FOR SUB'D APPROVAL
____ S. DEV. FOR BLDG. PERMIT APPROVAL
____ SECTOR PLAN APPROVAL
____ FINAL PLAT APPROVAL
____ FOUNDATION PERMIT APPROVAL
____ BUILDING PERMIT APPROVAL
☒ CERTIFICATE OF OCCUPANCY (PERM)
____ CERTIFICATE OF OCCUPANCY (TEMP)
____ GRADING PERMIT APPROVAL
____ PAVING PERMIT APPROVAL
____ WORK ORDER APPROVAL
____ OTHER (SPECIFY) _____

WAS A PRE-DESIGN CONFERENCE ATTENDED:
____ YES
____ NO
____ COPY PROVIDED

DATE SUBMITTED: Scot Smith BY: 8-11-08

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more.



G A R R E T T S M I T H L T D
DESIGN, ARCHITECTURE & DEVELOPMENT

www.garrett-smith-ltd.com
gs1@garrett-smith-ltd.com

8 August 2008

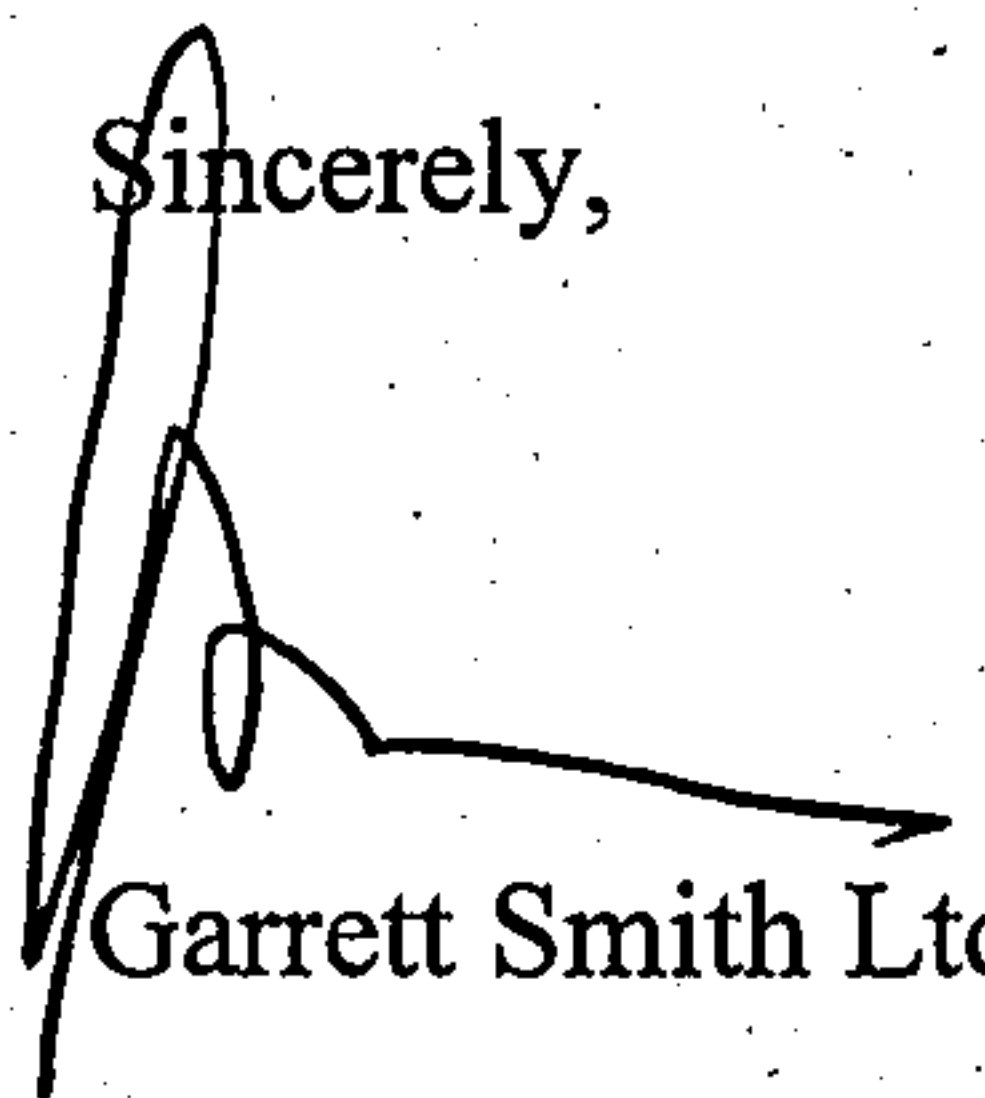
Ms. Kristal Metro, Director
Transportation Development Services Section
Planning Department
City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

RE: Bel-Air Elementary School – 4725 Candelaria Road NE – Albuquerque, NM

I, Garrett Smith, NMRA No. 2318, of the firm Garrett Smith Ltd., hereby certify that this project is in substantial compliance with and in accordance with the design intent of the TCL approved plan dated 30 June 2006. I further certify that I have personally visited the site on 31 July 2008 and have determined by visual inspection that the survey data provided is representative of actual site conditions and is true and correct to the best of my knowledge and belief. This certification is submitted in support of a request for a "Permanent Certificate of Occupancy.

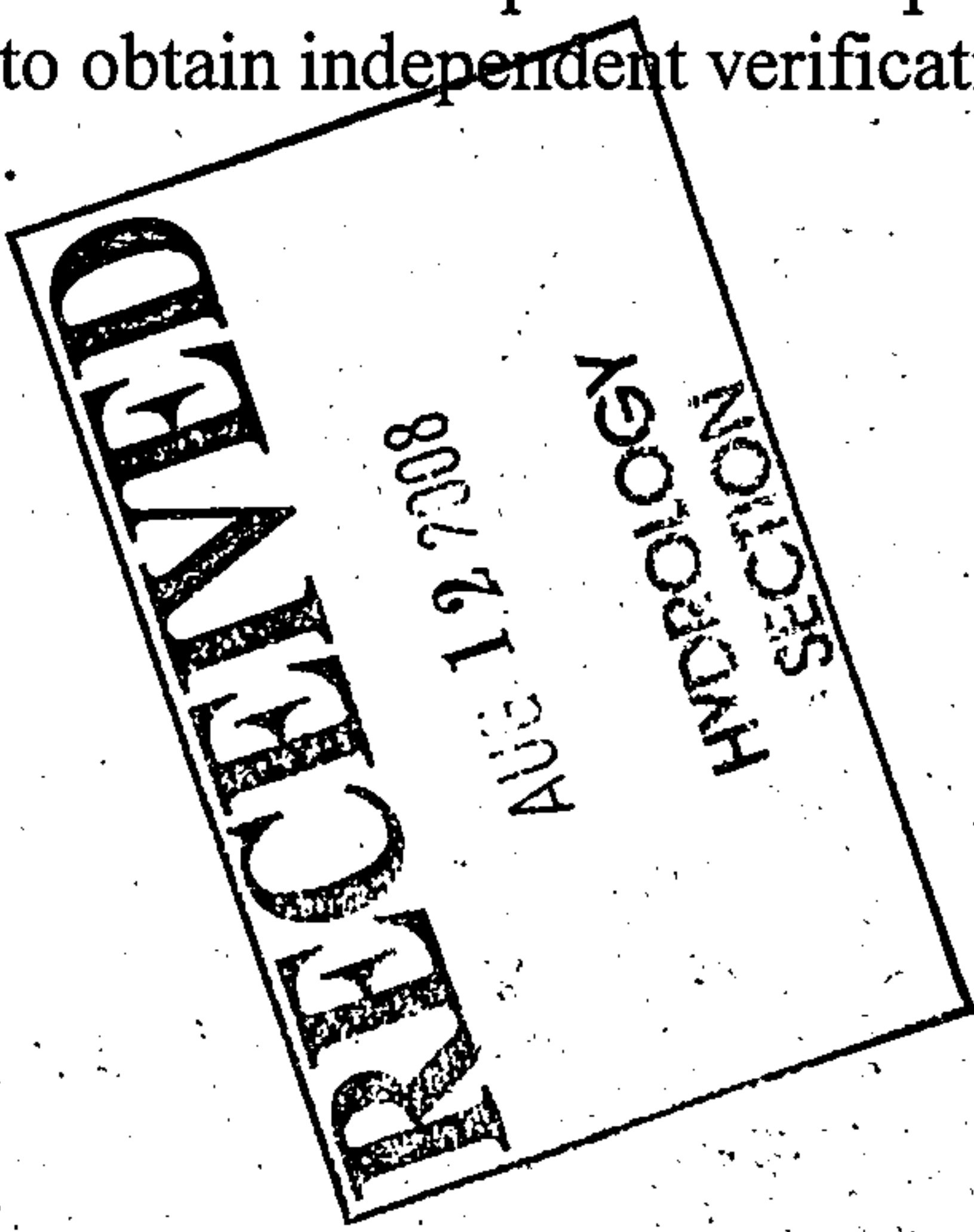
The record information presented hereon is not necessarily complete and intended only to verify substantial compliance of the traffic aspects of this project. Those relying on the record document are advised to obtain independent verification of its accuracy before using it for any other purpose.

Sincerely,



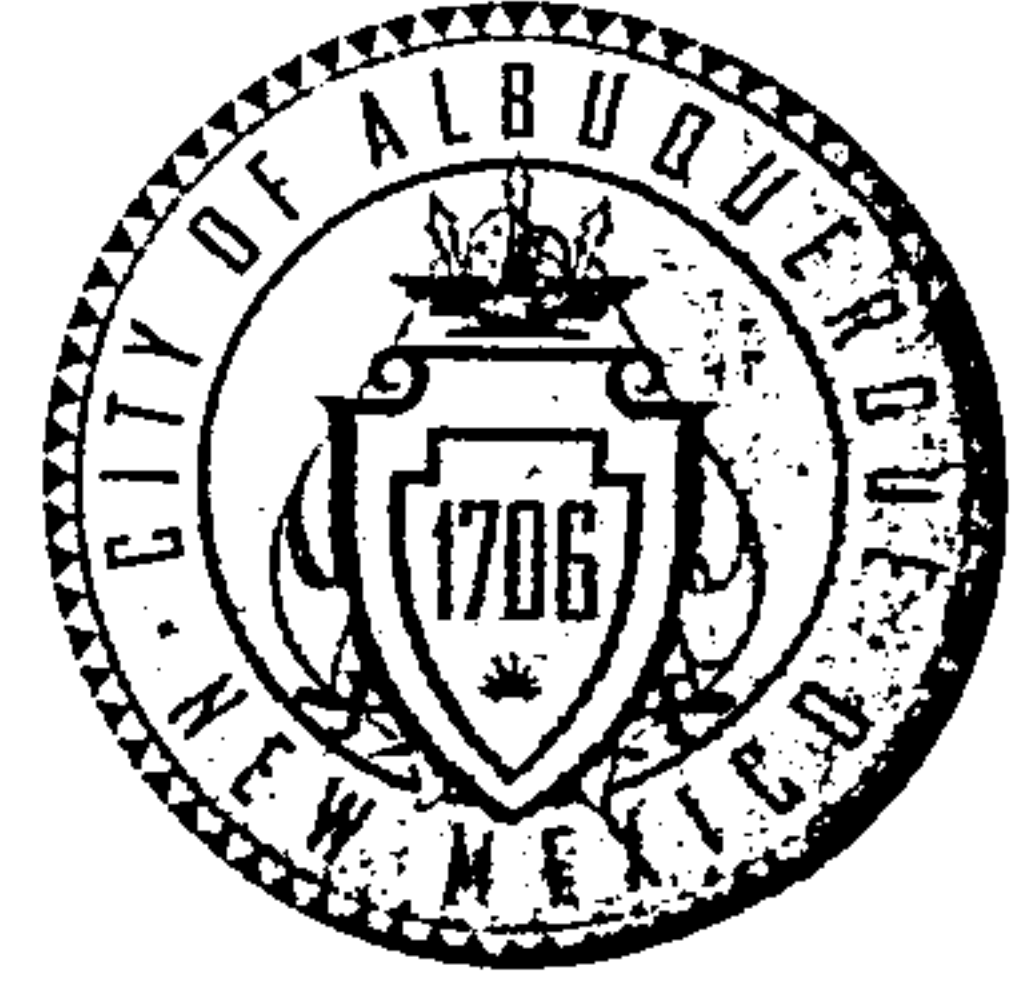
Garrett Smith Ltd., AIA

Copy: APS FD+C
First Mesa Const.



614 CENTRAL SW
ALBUQUERQUE
NEW MEXICO
8 7 1 0 2
505/766-6968
FAX/243-4508

CITY OF ALBUQUERQUE



August 7, 2008

Scott McGee, P.E.
Isaacson & Arfman, P.A.
128 Monroe Street N.E.
Albuquerque, NM 87108

**Re: Bel Air Elementary School, 4725 Candelaria Rd. NE,
Reject of Request for Permanent Certificate of Occupancy (C.O.)
Engineer's Stamp dated 8/07/07 (G-17/D039)
Certification dated 7/10/08**

Mr. McGee,

Based upon the information provided in your submittal received 8/07/08, the above referenced certification is approved for release of Permanent Certificate of Occupancy by Hydrology.

If you have any questions, you can contact me at 924-3982.

Sincerely,

Timothy E. Sims
Plan Checker, Hydrology
Development and Building Services

C: CO-Clerk—Katrina Sigala
File

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

CITY OF ALBUQUERQUE



July 11, 2008

Scott McGee, P.E.
Isaacson & Arfman, P.A.
128 Monroe Street N.E.
Albuquerque, NM 87108

**Re: Bel Air Elementary School, 4725 Candelaria Rd. NE,
Reject of Request for Permanent Certificate of Occupancy (C.O.)
Engineer's Stamp dated 8/07/07 (G-17/D039)
Certification dated 7/10/08**

Mr. McGee,

P.O. Box 1293

Based upon the information provided in your submittal received 7/10/08, the above referenced certification cannot be approved until the following comments are addressed:

Albuquerque

1. A SO#19 inspection must be completed and approved prior to any approval. Please contact Duane Schmitz for approval of SO#19 at 235-8016.
2. Provide the permit, for the sidewalk culvert from Excavation & Barricading.

New Mexico 87103

If you have any questions, you can contact me at 924-3982.

www.cabq.gov

Sincerely,

Timothy E. Sims
Plan Checker, Hydrology
Development and Building Services

C: File

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: Bel-Air Elementary School

ZONE MAP / DRG. FILE #: G-17/D39

DRB #: _____ EPC #: _____

WORK ORDER #: _____

LEGAL DESCRIPTION: A portion of Tracts H and J, Board of Education Addition

CITY ADDRESS: 4725 Candelaria Road NE

ENGINEERING FIRM: Isaacson & Arfman Engineering, Assoc.

CONTACT: Scott McGee

ADDRESS: 128 Monroe St. NE

PHONE: 268-8828

CITY, STATE: Albuquerque, NM

ZIP CODE: 87108

OWNER: APS

CONTACT: _____

ADDRESS: _____

PHONE: _____

CITY, STATE: _____

ZIP CODE: _____

ARCHITECT: Garrett Smith Ltd.

CONTACT: Doug L.

ADDRESS: 514 Central SW

PHONE: 766-6968

CITY, STATE: Albuquerque, New Mexico

ZIP CODE: 87102

SURVEYOR: Wilson & Co.

CONTACT: Ben Aragon NMPS 15268

ADDRESS: 4900 Lang NE

PHONE: 348-4000

CITY, STATE: ABQ, NM

ZIP CODE: 87109

CONTRACTOR: _____

CONTACT: _____

ADDRESS: _____

PHONE: _____

CITY, STATE: _____

ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

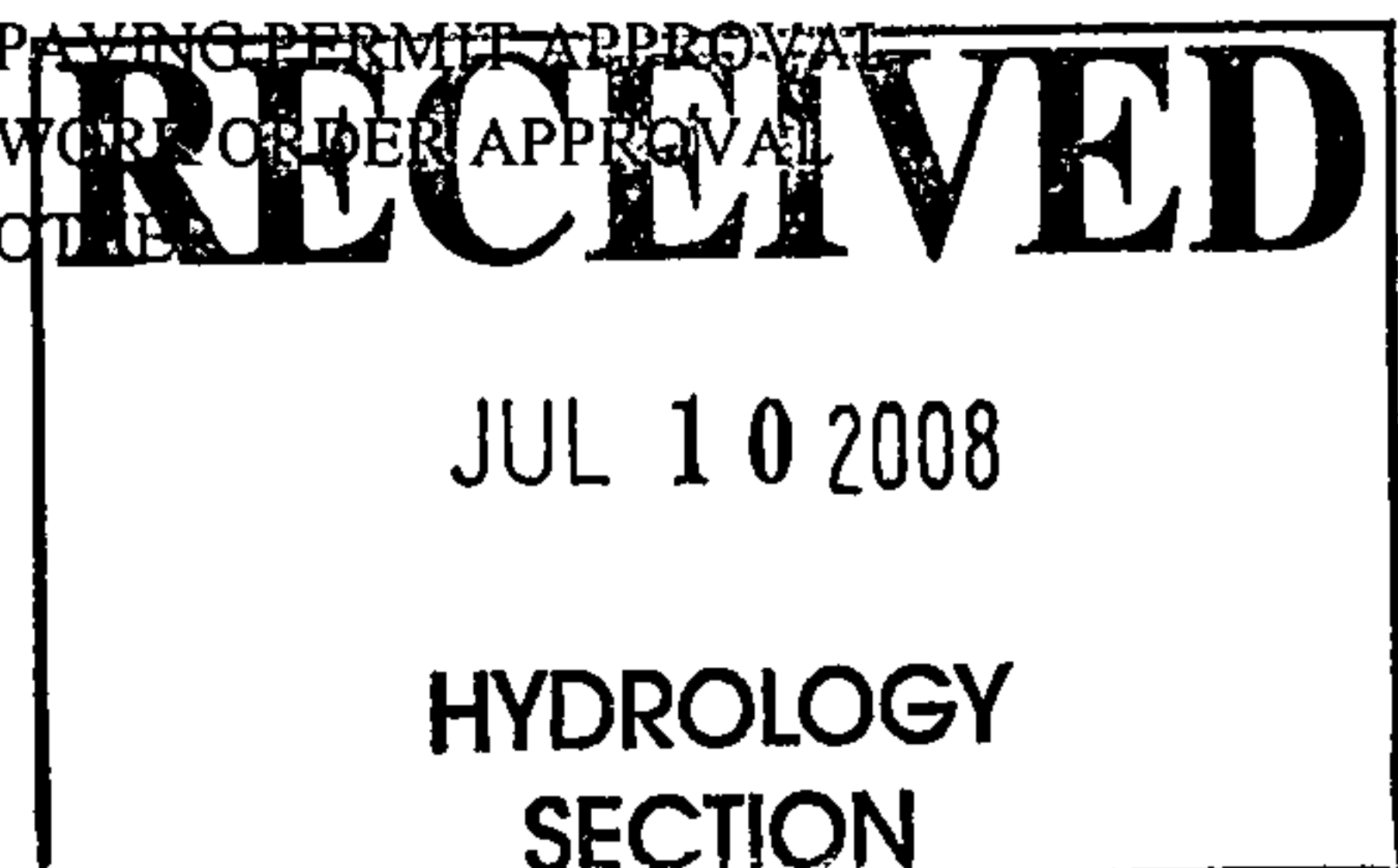
- ☐ DRAINAGE REPORT
- ☐ DRAINAGE PLAN 1ST *REQUIRES TCL or equal*
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☐ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☒ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ☐ CLOMR / LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEER'S CERTIFICATION (TCL)
- ☐ ENGINEER'S CERTIFICATION (DRB APPR, SITE PLAN)
- ☐ OTHER

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☐ YES
- ☐ NO
- ☐ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SIA / FINANCIAL GUARANTEE RELEASE
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D APPROVAL
- ☐ S. DEV. PLAN FOR BLDG. PERMIT APPR.
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ BUILDING PERMIT APPROVAL
- ☒ CERTIFICATE OF OCCUPANCY (PERM)
- ☐ CERTIFICATE OF OCCUPANCY (TEMP)
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☐ OTHER



DATE SUBMITTED: Tuesday, July 08, 2008

BY: Isaacson & Arfman Engr. Assoc.

Requests for approvals of Site Development Plans and / or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. Conceptual Grading and Drainage Plan: Required for approval of Site Development Plans greater than five acres and Sector Plans
2. Drainage Plans: Required for building permits, grading permits, paving permits and site plans less than five acres
3. Drainage Report: Required for subdivisions containing more than ten (10) lots or constituting five acres or more.

CITY OF ALBUQUERQUE



July 7, 2006

Scott M. McGee, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. NE
Albuquerque, NM 87108

Re: Bel-Air Elementary School Grading and Drainage Plan
Engineer's Stamp dated 6-28-06 (G17/D39)

Dear Mr. McGee,

Based upon the information provided in your submittal dated 6-29-06, the above referenced plan is approved for Building Permit and SO19 Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

A separate permit is required for construction within City R/W. A copy of this approval letter must be on hand when applying for the excavation permit.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. If you have any questions feel free to call the Municipal Development Department Hydrology Section at 768-3654 (Charles Caruso).

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

If you have any questions, you can contact me at 924-3695.

Sincerely,

Curtis A. Cherne, E.I.
Engineering Associate, Planning Dept.
Development and Building Services

But

C: file
Charles Caruso, DMD
Antoinette Baldonado, Excavation and Barricading
Edward Elwell, Street/Storm Drain Maintenance

DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(REV. 1/28/2003rd)

COPY

PROJECT TITLE: Bel-Air Elementary School

DRB #:

EPC #:

ZONE MAP / DRG. FILE #: G-17 / D39
WORK ORDER #:

LEGAL DESCRIPTION: A portion of Tracts II and J, Board of Education Addition

CITY ADDRESS: 4725 CANDELARIA NE

ENGINEERING FIRM: Isaacson & Arfinan Engineering, Assoc.

ADDRESS: 128 Monroe St. NE

CITY, STATE: Albuquerque, NM

CONTACT: Bryan Bobrick

PHONE: 268-8828

ZIP CODE: 87108

OWNER: APS

ADDRESS: 6400 UPTOWN NE

CITY, STATE: ABQ, NM

CONTACT:

PHONE:

ZIP CODE: 87110

ARCHITECT: Garrett Smith Ltd.

ADDRESS: 514 Central SW

CITY, STATE: Albuquerque, New Mexico

CONTACT: Doug L.

PHONE: 766-6968

ZIP CODE: 87102

SURVEYOR: JEFF MORTENSEN & ASSOCS

ADDRESS: 6010-B MIDWAY NE

CITY, STATE: ABQ, NM

CONTACT: CHUCK CALA (NMPS # 11184)

PHONE: 345-4250

ZIP CODE: 87109

CONTRACTOR: UNKNOWN

ADDRESS:

CITY, STATE:

CONTACT:

PHONE:

ZIP CODE:

CHECK TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
- ☐ DRAINAGE PLAN 1ST *REQUIRES TCL or equal*
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☒ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☐ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ☐ CLOMR / LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEER'S CERTIFICATION (TCL)
- ☐ ENGINEER'S CERTIFICATION (DRB APPR, SITE PLAN)
- ☐ OTHER

WAS A PRE-DESIGN CONFERENCE ATTENDED:

☐ YES

☐ NO

☐ COPY PROVIDED

RESUBMITTAL

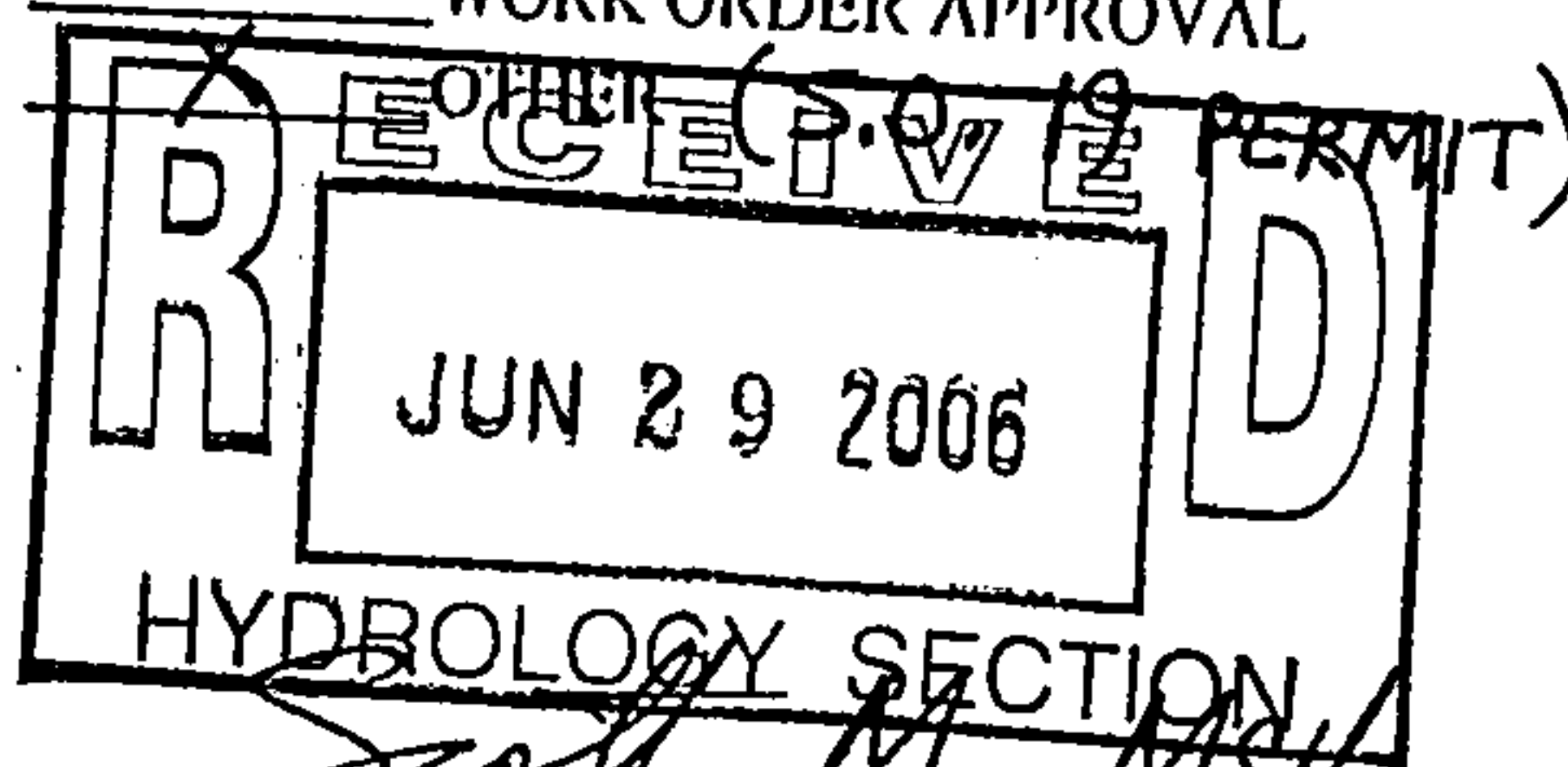
6/28/06

RESUBMITTAL

DATE SUBMITTED: April 24, 2006 - REVISION

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SIA / FINANCIAL GUARANTEE RELEASE
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D APPROVAL
- ☐ S. DEV. PLAN FOR BLDG. PERMIT APPR.
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ FOUNDATION PERMIT APPROVAL
- ☒ BUILDING PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY (PERM)
- ☐ CERTIFICATE OF OCCUPANCY (TEMP)
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL



BY: Isaacson & Arfinan Engr. Assoc.

Requests for approvals of Site Development Plans and / or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

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2. Drainage Plans: Required for building permits, grading permits, paving permits and site plans less than five acres
3. Drainage Report: Required for subdivisions containing more than ten (10) lots or constituting five acres or more.

CITY OF ALBUQUERQUE



**Planning Department
Transportation Development Services Section**

June 30, 2006

Doug Longfield
Garrett Smith Ltd.
514 Central Ave. SE
Albuquerque, NM 87102

Re: Traffic Circulation Layout (TCL) Submittal for Building Permit Approval for
Offices and Warehouse for Bel Air Elementary School [G-17/D-39]
(4725 Candelaria Rd), Albuquerque, NM
Engineer's/Architect's Stamp Dated 05-08-2006

Dear Mr. Longfield,

The TCL submittal dated 06-28-2006 is approved for building permit. The plan is stamped and signed as approved. Two copies of the plan that is stamped as approved will be required: one for each of the building permit plans and the original to be kept by you to be used for certification of the site for final C.O. for Transportation. **Public infrastructure or work done within City Right-of-Way shown on these plans is for information only and is not part of approval. A separate DRC and/or other appropriate permits are required to construct these items.**

If a temporary CO is needed then a copy of the original TCL that was stamped as approved by the City which includes a statement that identifies the outstanding items that need to be constructed or the items that have not been built in "substantial compliance". This statement requires a NM registered architect or engineer stamp to be dated. Submit this TCL with a completed Drainage and Transportation Information Sheet to Hydrology at the Development Services Center of Plaza Del Sol Building.

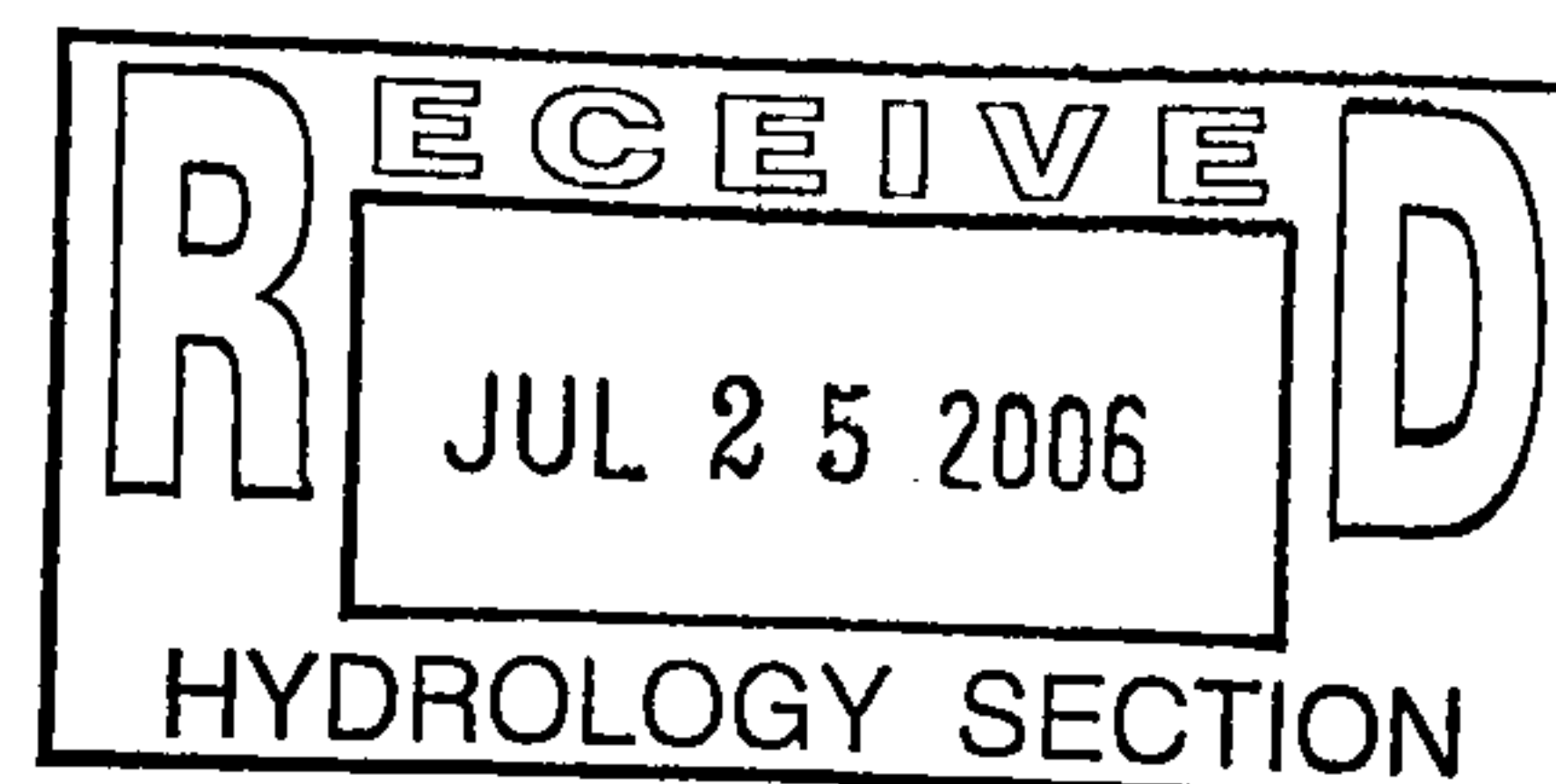
When the site is completed and a final C.O. is requested, use the original City stamped approved TCL for certification. A NM registered architect or engineer needs stamp and date the certification TCL along with indicating that the development was built in "substantial compliance" with the TCL. Submit this certification TCL with a completed Drainage and Transportation Information Sheet to Hydrology at the Development Services Center of Plaza Del Sol Building.

Once verification of certification is completed and approved, notification will be made to Building Safety to issue Final C.O. To confirm that a final C.O. has been issued, call Building Safety at 924-3306.

Sincerely,

Wilfred A. Gallegos, PE
Development and Building Services

cc: Hydrology file
File



CITY OF ALBUQUERQUE



June 15, 2006

Scott M. McGee, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. NE
Albuquerque, NM 87108

**Re: Bel-Air Elementary School Grading and Drainage Plan
Engineer's Stamp dated 4-24-06 (G17/D39)**

Dear Mr. McGee,

Based upon the information provided in your submittal dated 4-25-06, the above referenced plan is approved for Building Permit and SO19 Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

A separate permit is required for construction within City R/W. A copy of this approval letter must be on hand when applying for the excavation permit.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. If you have any questions feel free to call the Municipal Development Department Hydrology Section at 768-3654 (Charles Caruso).

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

If you have any questions, you can contact me at 924-3695.

Sincerely,

Curtis A. Cherne, E.I.
Engineering Associate, Planning Dept.
Development and Building Services

By

C: file
Charles Caruso, DMD
Antoinette Baldonado, Excavation and Barricading
Edward Elwell, Street/Storm Drain Maintenance

CITY OF ALBUQUERQUE



May 4, 2006

Scott McGee, PE
Isaacson & Arfman, P.A.
128 Monroe St. NE
Albuquerque, NM 87108

Re: Bel-Air Elementary School Grading and Drainage Plan
Engineer's Stamp dated 4-24-06 (G17/D39)

Dear Mr. McGee,

Based upon the information provided in your submittal dated 4-25-06, the above referenced plan cannot be approved for Building Permit and SO19 until the following comments are addressed:

- A Master Plan was developed for this site in November 1999 and should be referenced for this project.
- What are the basins and allowable runoff for this site?
- Is the pond adequately sized (100 yr 10-day volume) for existing conditions and for the planned increase?
- The Master Plan showed a connection to the inlet from the pond and probably should be included in this project.

Please contact me so that we can discuss this project. I can be reached at 924-3986.

Sincerely,

Bradley L. Bingham, PE
Principal Engineer, Planning Dept.
Development and Building Services

C: file

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(REV. 1/28/2003rd)

COPY

PROJECT TITLE: Bel-Air Elementary School

DRB #:

EPC #:

ZONE MAP / DRG. FILE #: G-17 / D39

WORK ORDER #:

LEGAL DESCRIPTION: A portion of Tracts H and J, Board of Education Addition

CITY ADDRESS: 4725 CANDELARIA NE

ENGINEERING FIRM: Isaacson & Arfman Engineering, Assoc.

ADDRESS: 128 Monroe St. NE

CITY, STATE: Albuquerque, NM

CONTACT: Bryan Bobrick

PHONE: 268-8828

ZIP CODE: 87108

OWNER: APS

ADDRESS: 6400 UPTOWN NE

CITY, STATE: ABQ, NM

CONTACT:

PHONE:

ZIP CODE: 87110

ARCHITECT: Garrett Smith Ltd.

ADDRESS: 514 Central SW

CITY, STATE: Albuquerque, New Mexico

CONTACT: Doug L.

PHONE: 766-6968

ZIP CODE: 87102

SURVEYOR: JEFF MORTENSEN & ASSOCS

ADDRESS: 6010-B MIDWAY NE

CITY, STATE: ABQ, NM

CONTACT: CHUCK CALA (NMPS # 11184)

PHONE: 345-4250

ZIP CODE: 87109

CONTRACTOR: UNKNOWN

ADDRESS:

CITY, STATE:

CONTACT:

PHONE:

ZIP CODE:

CHECK TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
☐ DRAINAGE PLAN 1ST *REQUIRES TCL or equal*
☐ DRAINAGE PLAN RESUBMITTAL
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☒ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION (HYDROLOGY)
☐ CLOMR / LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ ENGINEER'S CERTIFICATION (TCL)
☐ ENGINEER'S CERTIFICATION (DRB APPR, SITE PLAN)
☐ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SIA / FINANCIAL GUARANTEE RELEASE
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D APPROVAL
☐ S. DEV. PLAN FOR BLDG. PERMIT APPR.
☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☒ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY (PERM)
☐ CERTIFICATE OF OCCUPANCY (TEMP)
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ WORK ORDER APPROVAL
☒ OTHER (S.O. 19 PERMIT)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

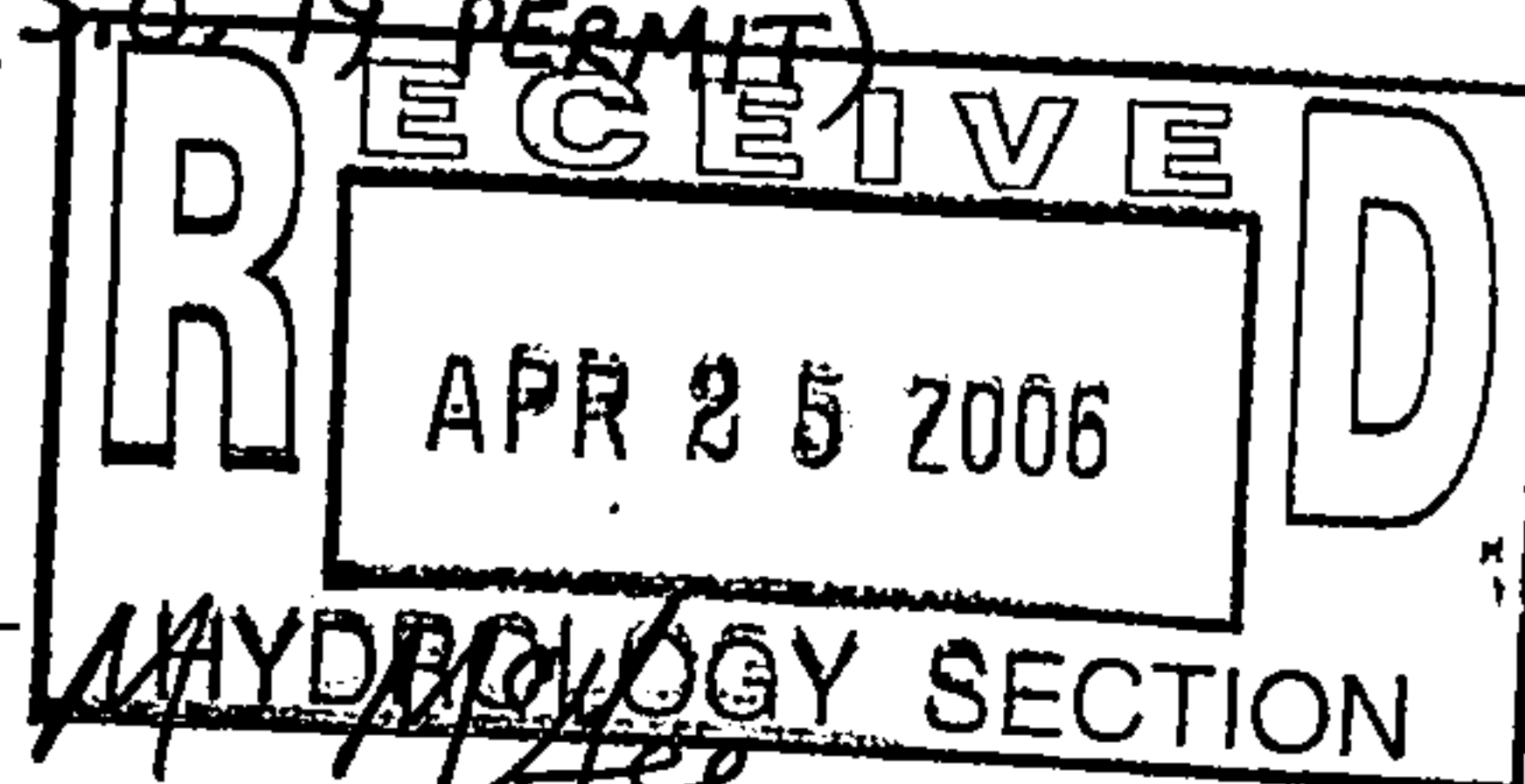
☐ YES

☐ NO

☐ COPY PROVIDED

DATE SUBMITTED: RESUBMITTAL
April 24, 2006 - REVISION

BY: Scott
Isaacson & Arfman Engr. Assoc.



Requests for approvals of Site Development Plans and / or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. Conceptual Grading and Drainage Plan: Required for approval of Site Development Plans greater than five acres and Sector Plans
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CITY OF ALBUQUERQUE



May 29, 2006

Garrett Smith, R.A.
Garrett Smith Ltd.
514 Central Ave SW
Albuquerque, NM 87102

**Re: 4725 Candelaria Rd., Bel Air Elementary, Traffic Circulation Layout
Architect's Stamp dated 05-08-06 (G17-D39)**

Dear Mr. Smith,

Based upon the information provided in your submittal received 05-11-06, the above referenced plan cannot be approved for Building Permit until the following comments are addressed:

1. Label the drive-pads as existing or proposed.
2. Please, refer to all appropriate City Standards; the drawing number should be included in this reference.
3. Do you need a valley gutter at this entrance?
4. How are handicapped pedestrians maneuvering in and out of proposed parking addition? Will sidewalks be required?
5. Label handicapped stalls as regular and van accessible; the van-accessible stall should include one van accessible aisle at 8'.
6. Provide the dimension of the sidewalk along Candelaria Rd.
7. See attached plan for additional comments.

P.O. Box 1293

Albuquerque

New Mexico 87103

If you have any questions, you can contact me at 924-3630.

www.cabq.gov

Sincerely,

Nilo Salgado-Fernandez, P.E.
Senior Traffic Engineer, Planning Dept.
Development and Building Services
C: file

DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(Rev. 12/2005)

G-17/D39

PROJECT TITLE: BEL AIR ELEMENTARY SCHOOL ZONE MAP/DRG. FILE #: _____
DRB#: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: LOT H & J / BEL AIR ELEMENTARY SCHOOL
CITY ADDRESS: 4725 CANDELARIA RD NE

ENGINEERING FIRM: _____
* ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

OWNER: ALBUQUERQUE PUBLIC SCHOOLS
ADDRESS: 6400 UPTOWN BLVD. NE
CITY, STATE: ALBUQUERQUE, NM 87110

CONTACT: RICARDO GUILLERMO
PHONE: _____
ZIP CODE: 87110

ARCHITECT: GARRETT SMITH LTD
ADDRESS: 514 CENTRAL AVE SW
CITY, STATE: ALBUQUERQUE NM

CONTACT: DOUGLAS LONGFIELD
PHONE: 766-6968
ZIP CODE: 87102

SURVEYOR: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

CONTRACTOR: _____
ADDRESS: _____
CITY, STATE: _____

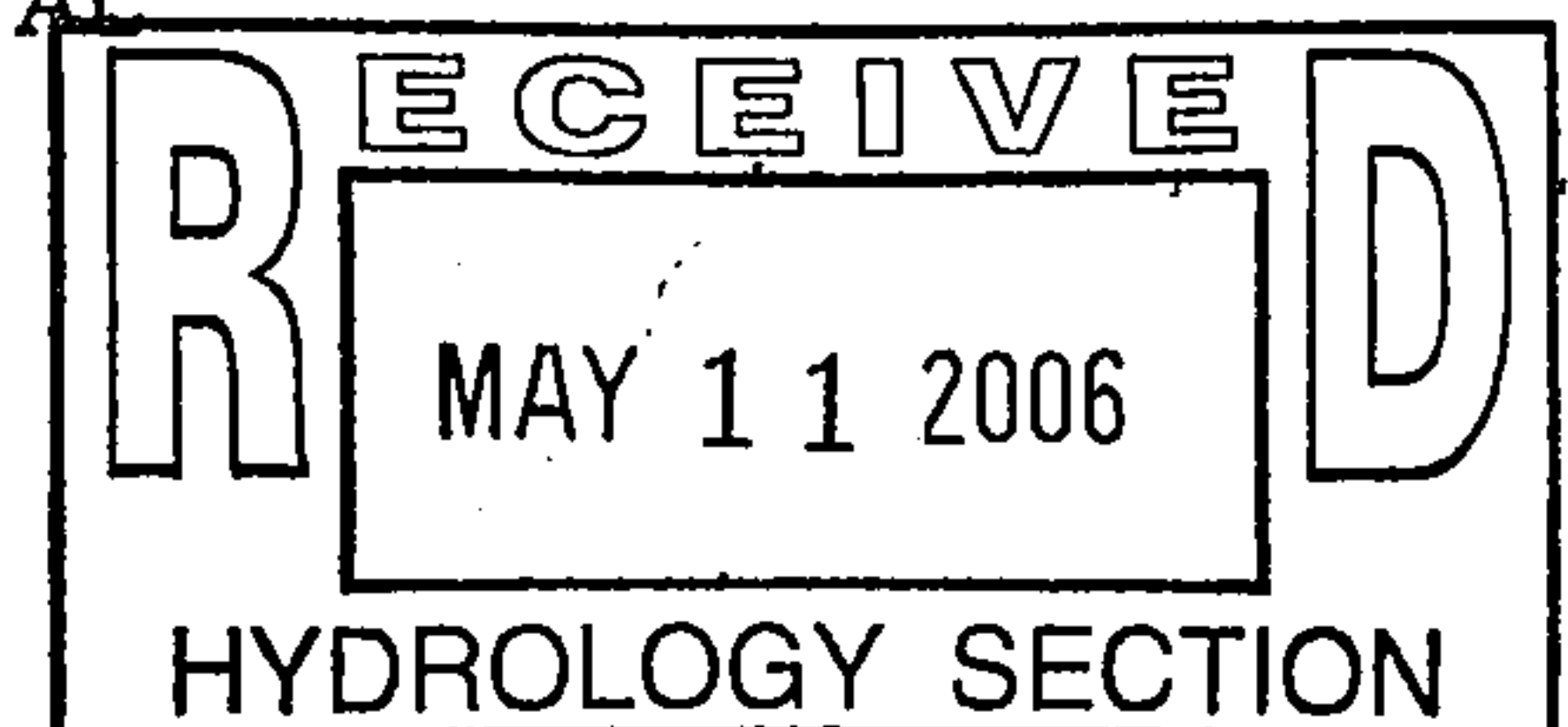
CONTACT: _____
PHONE: _____
ZIP CODE: _____

TYPE OF SUBMITTAL:
☐ DRAINAGE REPORT
☐ DRAINAGE PLAN 1st SUBMITTAL
☐ DRAINAGE PLAN RESUBMITTAL
☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERT (HYDROLOGY)
☐ CLOMR/LOMR
☒ TRAFFIC CIRCULATION LAYOUT
☐ ENGINEER'S/ARCHITECT'S CERT (TCL)
☐ ENGINEER'S CERT (DRB SITE PLAN)
☐ OTHER

CHECK TYPE OF APPROVAL SOUGHT:
☐ SIA/FINANCIAL GUARANTEE RELEASE
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D APPROVAL
☐ S. DEV. FOR BLDG. PERMIT APPROVAL
☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☒ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY (PERM)
☐ CERTIFICATE OF OCCUPANCY (TEMP)
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ WORK ORDER APPROVAL
☐ OTHER (SPECIFY)

Return
File for
Hydro review
Thanks

WAS A PRE-DESIGN CONFERENCE ATTENDED:
☐ YES
☐ NO
☐ COPY PROVIDED



SUBMITTED BY: DOUGLAS LONGFIELD DATE: 5-11-2006

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more.

G-17/D39

ALBUQUERQUE PUBLIC SCHOOLS

BEL AIR ELEMENTARY SCHOOL

MASTER DRAINAGE REPORT

November 1, 1999

Prepared by

Smith Engineering Company
6400 Uptown Blvd. NE, Suite 500E
Albuquerque, New Mexico 87110

SEC No. 199601



Smith Engineering Company

A Full-Service Engineering Company

ALBUQUERQUE PUBLIC SCHOOLS

BEL AIR ELEMENTARY SCHOOL

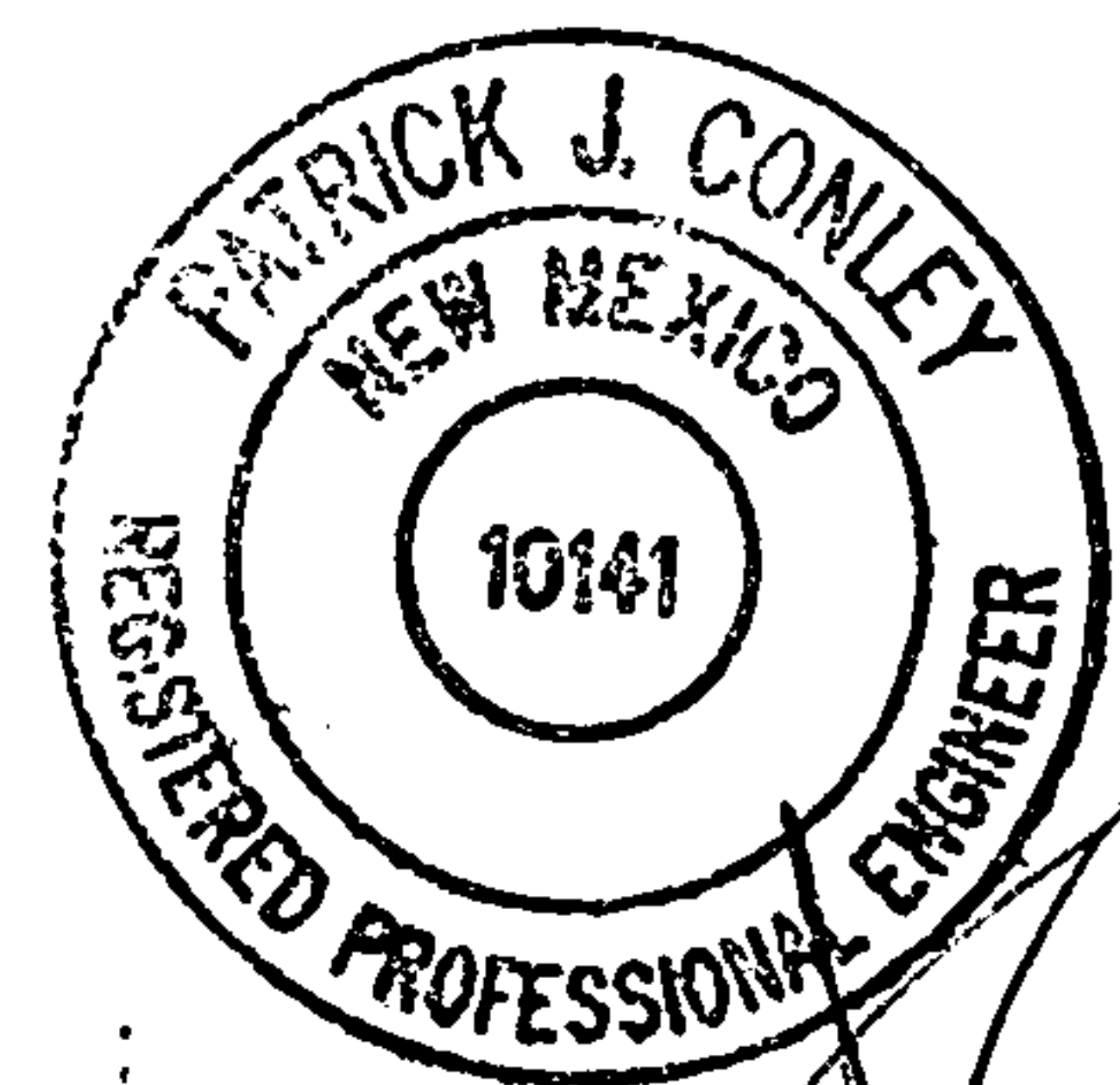
MASTER DRAINAGE REPORT

November 1, 1999

Prepared by

Smith Engineering Company
6400 Uptown Blvd. NE, Suite 500E
Albuquerque, New Mexico 87110

SEC No. 199601



11-1-99

Table of Contents

<u>Section</u>	<u>Page</u>
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Land Use and Site Characteristics	3
Existing Off-Site Drainage Facilities	3
Existing On-Site Drainage Facilities	3
Planned or Pending Development	5
3.0 Hydrology and Hydraulics	5
Hydrologic Criteria	5
Existing Conditions Hydrology	6
Developed Conditions Hydrology	8
4.0 Conclusions	9

Appendices

Appendix A:	Drainage Plan - Existing Conditions
Appendix B:	Drainage Plan - Developed Conditions
Appendix C:	Land Use and Tp Calculations
Appendix D:	Existing Conditions AHYMO Results
Appendix E:	Developed Conditions AHYMO Results

**MASTER DRAINAGE REPORT FOR THE BEL AIR ELEMENTARY SCHOOL
ALBUQUERQUE PUBLIC SCHOOLS
SEC #199601
NOVEMBER 1, 1999**

1.0 INTRODUCTION

Authorization

This report is being prepared for the Albuquerque Public Schools by Smith Engineering Company (SEC) through a contract with Greg Hicks and Associates. The report will be submitted to the City of Albuquerque Hydrology Development Division for review and approval.

Study Area

The site is the Bel Air Elementary School located at the northeast corner of Candelaria and Adams Street. The site consist of two infill tracts which are both owned by the Board of Education. One tract is zoned R-3 and the other tract is not zoned. The property (school and associated grounds) is being used solely for educational purposes and will continue to have this use in the future. The study area also included a limited review of the surrounding properties to the extent that they might have an impact on the drainage of the site. A copy of the Zone Atlas page G-17 is included on Page 2 in the report.

Scope of Report

The scope of this report is to analyze the existing conditions hydrology to determine the runoff generated from the site (i.e., existing condition flows). This runoff reaches Candelaria and Adams Street. The future conditions runoff was also evaluated to compare the impact of development (both Phase I and future phases) on the existing runoff generated from this site and to determine the extent of on-site infrastructure improvements required to mitigate any additional runoff above the existing conditions runoff.

2.0 BASIN CHARACTERISTICS

Basin Boundaries

The general basin boundaries for the site are Candelaria on the south, Adams on the west, and the property lines on the north and east sides of the site. There is a block wall along the east side of the site which separates the school from an existing residential area. This wall blocks any runoff from moving from the residential area onto the school site. There is a block wall along the north property line starting at the east end of the site an going west approximately 550 feet. The remaining north property line has a berm constructed along the length. This wall and berm keep flows from the sites to the north from entering the property. Candelaria Road and Adams Street are both lower than the site. Therefore, no runoff from either of these two public right-of-ways

**MASTER DRAINAGE REPORT FOR THE BEL AIR ELEMENTARY SCHOOL
ALBUQUERQUE PUBLIC SCHOOLS**

SEC #199601

NOVEMBER 1, 1999

will move onto the site. Furthermore, all runoff which impacts the site is generated on-site and there are no off-site impacts to the hydrology.

Land Use and Site Characteristics

This site is currently being used for a school site and will continue as this use in the future. The existing land use is primarily buildings, play areas, parking, and some vacant land for future development (at the northwest corner of the site). There is also a grassed playing field at the northeast corner of the site and an existing detention basin at the west side of the site along Adams Street. The existing site is shown on the Drainage Plan - Existing Conditions sheet in Appendix A. The site generally slopes from the east to the west at approximately 1.5 percent while the areas immediately adjacent to Candelaria slope to Candelaria. Most of the runoff generated from existing conditions will drain towards Candelaria Road. The northern-most basins drain to Adams Street.

Existing Off-Site Drainage Facilities

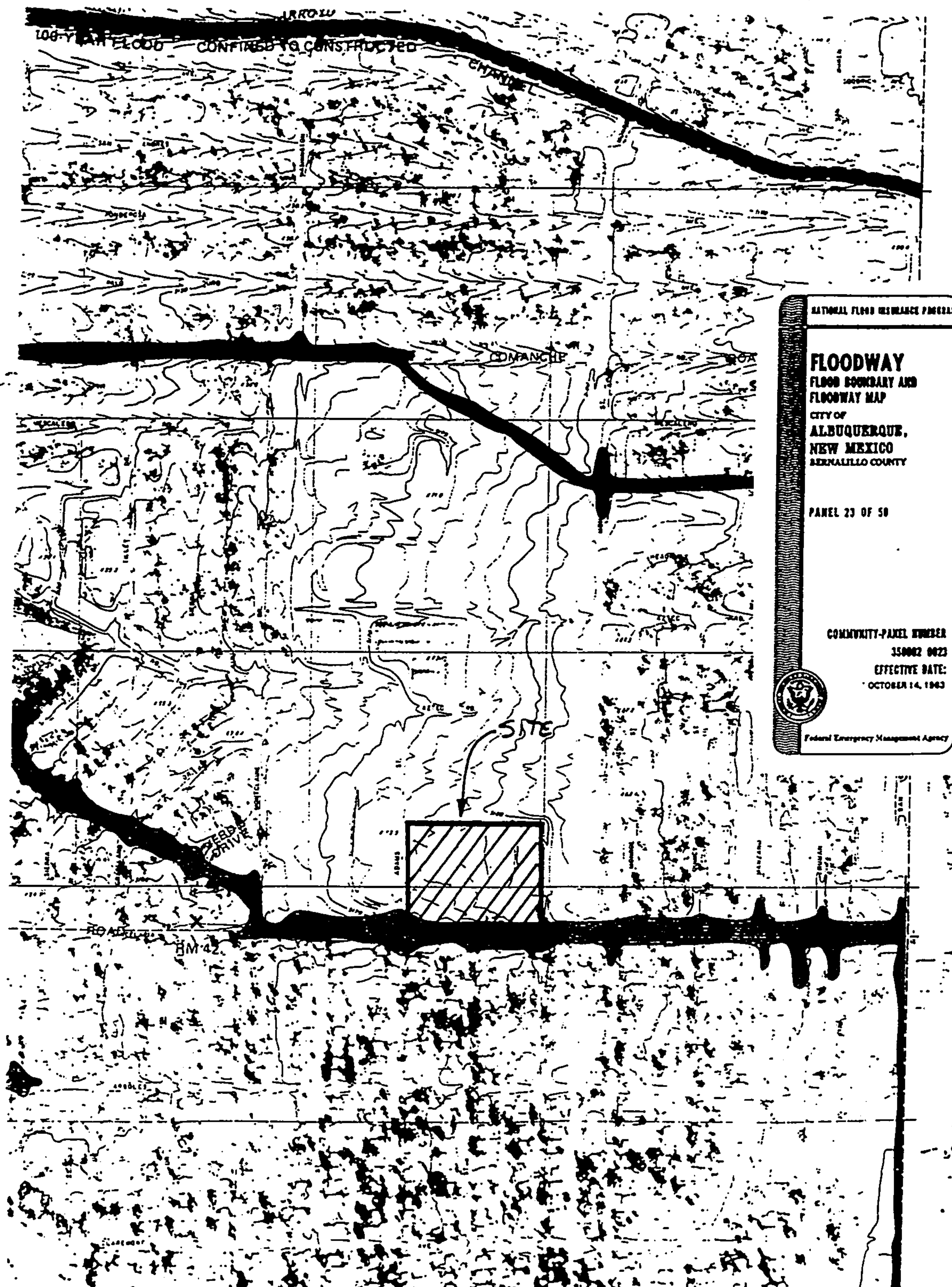
There is an existing 42-inch storm drain in Candelaria running east-to-west. The flood zone maps show that Candelaria is a flood zone with an AO depth (less than one foot). The flood zone map is shown on page 4. Although no calculations were performed to determine the capacity of the existing storm drain system, we assume that the system is running at or near full capacity due to the fact that Candelaria is in a flood zone. The flood zone on Candelaria does not impact the school because the buildings are much higher than Candelaria (generally 2 to 3 feet or more).

There are no storm drain facilities in Adams Street. The flows which reach Adams move to the north in the street to Shepard Road and then west on Shepard. Adams Street is not designated as a flood zone. There is a high point in Adams Street just south of the existing sidewalk culvert from the existing detention basin. Therefore, the runoff from the existing detention basin is at the high point of the street and flow depth in the street is very low. All flows generated from the school site which reach Adams Street are overland flow.

Existing On-Site Drainage Facilities

The only existing on-site drainage facility is the detention basin at the west side of the site. This collects runoff from Drainage Basins #6, 7, 8, and 11 (existing conditions) and Drainage Basins #6, 8, and 11 for the proposed improvements. This facility currently discharges to Adams Street through two 8-inch PVC culverts during low flows and by spilling over the existing sidewalk to Adams Street during high flows (see hydrology section). All other drainage on the site is carried overland by swales or by sheet flow.

MASTER DRAINAGE REPORT FOR THE BEL AIR ELEMENTARY SCHOOL
ALBUQUERQUE PUBLIC SCHOOLS
SEC #199601
NOVEMBER 1, 1999



Planned or Pending Development

The Developed Conditions Hydrology, Appendix B, shows the planned development for the site. The development consists primarily of the addition of some buildings and some paving of the play areas. These modifications are shown on the drawing with specific hatching. Furthermore, Phase I improvements are indicated as separate from future improvements. The planned developments effect on the existing hydrology is minimal because most of the areas that will receive hard surfaces or buildings in the future are already Type C or D land use, thus leaving the overall site hydrology relatively unaffected. Improvements related to Phase I will also have a minimal impact because all surfaces being replaced during Phase I are currently Type C or D land use.

3.0 HYDROLOGY AND HYDRAULICS

Hydrologic Criteria

The hydrologic analysis of the site utilizes the methodology from the COA's Development Process Manual (DPM) - Volume 2, Design Criteria -Section 22.2, Hydrology, 1997 Revision (DPM 22.2). The design storm is the 100-year, 6-hour event.

The computer program, AHYMO (ver. 0194) was used to compute the runoff for the study area. Basin delineation for the Existing Conditions hydrology was developed from existing topographic information. Basin delineation for the Developed Conditions hydrology was developed from existing topographic information and new grading prepared by SEC.

The time-to-peak (T_p) for each basin was computed using the SCS Upland Method for basin lengths less than 4,000 feet. No basin had a length greater than 4,000 feet. A minimum time-to-peak of 0.1333 hours was used for basins that had a shorter time-to-peak than the minimum. The parameter worksheets are presented in Appendix C.

MASTER DRAINAGE REPORT FOR THE BEL AIR ELEMENTARY SCHOOL
 ALBUQUERQUE PUBLIC SCHOOLS
 SEC #199601
 NOVEMBER 1, 1999

Existing Conditions Hydrology

The results of the hydrology for the existing conditions drainage basins is shown in the table below.

Drainage Basin	Runoff, cfs
1	4.36
2	0.73
3	0.75
4	2.71
5	2.63
6	4.59
7	4.86
8	10.78
9	0.38
10	0.15
11	3.75
12	14.01

There is an existing detention basin on the site located in Basin 8. This basin attenuates combined flows from Basins 6, 7, 11, and 8. The basin discharges to Adams Street through two 8-inch PVC pipes and by overflow along the sidewalk fronting Adams Street. The properties for this basin are as follows:

Elevation (ft)	Storage (ac-ft)	Discharge (cfs)
5173.0	0.000	0.00
5173.5	0.038	0.56
5174.0	0.117	2.33
5174.5	0.400	3.40
5175.0	0.602	165.21

Flows are routed through the pond and the outflow is shown on the Analysis Point table as "AP-Pond" (8-inch PVC drains) and "Overflow" (sidewalk flow).

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The following table gives the runoff rates at the Analysis Points for the site.

Analysis Point, AP	Location	Flow, cfs
1	Candelaria just east of Madison	4.36
2	Candelaria just west of Madison	5.09
3	Candelaria between the alley and Jefferson	5.84
4	Candelaria between the alley and Jefferson	8.54
5	Candelaria and Adams	15.57
6	On site	4.59
7	On site	13.21
8	On-site at pond	23.99
AP-Pond	At outlet of pond just north of the high point	3.40
Overflow	Overflow from pond to Candelaria	9.56
9	Adams just north of Candelaria	0.38
10	Adams just north of the high point	3.48
11	On-site	3.75
12	Adams Street at the north property line	16.90

When on-site flow is routed through the existing detention basin, part of the flow will move to Adams through the two 8-inch PVC outlet pipes (on the north side of the high point) and flow north. This flow rate is 3.40 cfs. The pond is not currently large enough to contain the design storm which reaches it. Therefore, the flow rate above the 3.40 cfs will spill out of the pond to Adams south of the high point on Adams and will move south to Candelaria. This flow rate is 9.56 cfs. This flow rate was determined by modeling the existing sidewalk which fronts the pond on the west as a broadcrested weir spillway. The total flow which reaches the intersection of Candelaria and Adams is 15.57 cfs including the spill from the pond. The total flow which reaches the north boundary of the site on Adams is 16.90 cfs.

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Developed Conditions Hydrology

The results of the hydrology for the fully developed drainage basins is shown in the following table.

Drainage Basin	Runoff, cfs
1	2.94
2	1.00
3	0.61
4	1.78
5	2.24
6	11.77
7	1.28
8	13.07
9	0.38
10	0.30
11	3.82
12A	6.69
12B	7.48

The existing detention basin will be modified to accommodate the connection from Basin 11 into the pond. A new 18-inch RCP outfall will be constructed from the pond to Candelaria Road and will connect into the existing storm drain manhole through a proposed catch basin (as shown in the drawing in AppendixB). The pond will no longer discharge to Adams Street. The properties for this basin are as follows:

Elevation (ft)	Storage (ac-ft)	Discharge (cfs)
5171.0	0.000	0.00
5172.0	0.268	2.82
5173.0	0.572	8.82
5174.0	0.915	10.83

Flows from Basins 6, 11, and 8 are routed through the pond and the outflow is shown on the Analysis Point table as "Pipe".

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The following table gives the runoff rates at the Analysis Points for the developed conditions.

Analysis Point, AP	Location	Flow, cfs
1	Candelaria just east of Madison	2.94
2	Candelaria just west of Madison	3.95
3	Candelaria between the alley and Jefferson	4.56
4	Candelaria between the alley and Jefferson	6.34
5	Candelaria and Adams	12.08
6	On site	11.77
7	On site	1.57
8	On-site at pond	28.67
Pipe	18" pipe from pond to Candelaria	7.10
9	Adams just north of Candelaria	0.38
10	Adams just north of the high point	0.30
11	On-site	3.82
12	Adams Street at the north property line	15.74

The total flow at AP-5 will be 12.08 cfs. This is less than the 15.57 cfs which reaches this point in the existing conditions.

The total flow at AP-12 for developed conditions will be 15.74 cfs versus 16.90 cfs in the existing conditions analysis. Therefore, the proposed improvements will not increase the flow rate out of the site at either Candelaria/Adams or at the north boundary line on Adams.

4.0 CONCLUSIONS

The drainage concept discussed in this report attempts to mitigate the impact on downstream flood plains and minimize any adverse effects on adjacent properties (with respect to drainage). This report compares existing condition runoff to proposed condition runoff and demonstrates that the proposed drainage concept for this infill development will have a negligible impact on the downstream drainage system.

The development proposed for the Bel Air School site does not affect the peak runoff rates which currently reach Candelaria to the south and Adams to the north. This is due to the fact that most of the site is currently Land Use C or D and is being replaced with the same land uses. The development will proceed in phases which will be determined by available funding. Therefore, final grading for each phase will have to be completed as the site is developed.

APPENDIX A
Drainage Plan - Existing Conditions

APPENDIX B
Drainage Plan - Developed Conditions

APPENDIX C
Land Use and Tp Calculations

Drainage Summary - Existing

Bel Air Elementary School
Drainage Basin Summary - Existing Conditions
SEC Project Number 199601

Drainage Basin	Area (sq.ft.)	Area (sq.mi.)	Percentage Land Treatment				Tc (hours)	Tc (min.)
			A	B	C	D		
1	35308	0.001267	0	0	10	90	0.069	4.15
2	24559	0.000881	0	0	60	40	0.066	3.97
3	13791	0.000495	0	100	0	0	0.103	6.21
4	8083	0.000290	0	0	0	100	0.032	1.89
5	40735	0.001461	0	0	100	0	0.022	1.32
6	61797	0.002217	0	0	100	0	0.112	6.73
7	47113	0.001690	0	0	20	80	0.095	5.71
8	108556	0.003894	0	0	30	70	0.078	4.69
9	3379	0.000121	0	0	0	100	0.010	0.58
10	1295	0.000046	0	0	0	100	0.005	0.28
11	33911	0.001216	0	0	95	5	0.172	10.33
12	220371	0.007905	0	50	50	0	0.117	7.00

Note: Tp is 2/3 Tc, therefore, will use minimum Tp = 0.1333 hrs (0.67 * 12 minutes) for all basins.

Drainage Summary - Proposed

Bel Air Elementary School
Drainage Basin Summary - Fully Developed Conditions
SEC Project Number 199601

Drainage Basin	Area (sq.ft.)	Area (sq.mi.)	Percentage Land Treatment				Tc (hours)	Tc (min.)
			A	B	C	D		
1	40730	0.001461	0	0	5	95	0.0633	3.80
2	9181	0.000329	0	0	40	60	0.0628	3.77
3	9372	0.000336	0	100	0	0	0.0576	3.45
4	18672	0.000670	0	0	0	100	0.0199	1.19
5	39185	0.001406	0	95	0	5	0.0190	1.14
6	125998	0.004520	0	30	0	70	0.0617	3.70
7	15347	0.000550	0	50	0	50	0.0212	1.27
8	122606	0.004398	0	0	10	90	0.0733	4.40
9	3379	0.000121	0	0	0	100	0.0077	0.46
10	2602	0.000093	0	0	0	100	0.0053	0.32
11	34498	0.001237	0	0	0	100	0.0067	0.40
12A	117210	0.004204	0	85	15	0	0.1575	9.45
12B	73423	0.002634	0	15	0	85	0.0674	4.04

Note: Tp is 2/3 Tc, therefore, will use minimum Tp = 0.1333 hrs (0.67 * 12 minutes)

APPENDIX D
Existing Conditions AHYMO Results

AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
RUN DATE (MON/DAY/YR) = 06/03/1999
START TIME (HR:MIN:SEC) = 14:52:32 USER NO.= C_ANDRSN.I01
INPUT FILE = belexist.IN

* THIS IS THE INPUT FILE FOR THE MASTER DRAINAGE STUDY FOR
* BEL AIR ELEMENTARY SCHOOL.
* EXISTING CONDITIONS
* INPUT FILE NAME: belexist.in
* 100 YEAR 6 HOUR STORM.
*

***** Set time to start *****

START TIME = 0.0

***** COMPUTE RAINFALL DISTRIBUTION

RAINFALL TYPE=1
RAIN QUARTER=0.0 RAIN ONE = 2.05 IN
RAIN SIX=2.40 IN RAIN DAY = 2.75 IN
DT=0.033333

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.

DT =	.033333 HOURS	END TIME =	5.999995 HOURS
.0000	.0017	.0034	.0051
.0069	.0087	.0106	.0125
.0145	.0165	.0185	.0206
.0228	.0250	.0273	.0297
.0321	.0346	.0372	.0399
.0427	.0455	.0485	.0517
.0549	.0583	.0618	.0656
.0695	.0736	.0780	.0837
.0897	.0962	.1101	.1413
.1892	.2581	.3520	.4755
.6330	.8290	1.0682	1.2894
1.3819	1.4601	1.5297	1.5929
1.6512	1.7053	1.7558	1.8032
1.8478	1.8898	1.9296	1.9672
2.0028	2.0366	2.0687	2.0991
2.1280	2.1346	2.1408	2.1467
2.1523	2.1577	2.1628	2.1677
2.1725	2.1770	2.1814	2.1857
2.1898	2.1938	2.1977	2.2015
2.2052	2.2088	2.2123	2.2157
2.2190	2.2223	2.2254	2.2286
2.2316	2.2346	2.2375	2.2404
2.2432	2.2460	2.2487	2.2514
2.2540	2.2566	2.2591	2.2616
2.2641	2.2665	2.2689	2.2712
2.2736	2.2759	2.2781	2.2803
2.2825	2.2847	2.2868	2.2889
2.2910	2.2931	2.2951	2.2971
2.2991	2.3011	2.3030	2.3049
2.3068	2.3087	2.3106	2.3124
2.3142	2.3160	2.3178	2.3196
2.3214	2.3231	2.3248	2.3265
2.3282	2.3299	2.3315	2.3331
2.3348	2.3364	2.3380	2.3396
2.3411	2.3427	2.3442	2.3458
2.3473	2.3488	2.3503	2.3518
2.3532	2.3547	2.3561	2.3576
2.3590	2.3604	2.3618	2.3632
2.3646	2.3660	2.3674	2.3687
2.3701	2.3714	2.3727	2.3741
2.3754	2.3767	2.3780	2.3793
2.3806	2.3818	2.3831	2.3843
2.3856	2.3868	2.3881	2.3893
2.3905	2.3917	2.3929	2.3941
2.3953	2.3965	2.3977	2.3988
2.4000			

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***** BASIN DA-1 : TOTAL FLOW AT AP-1 *****

COMPUTE NM HYD ID=3 HYD NO=DA-1 DRAINAGE AREA=.001461 SQ MI
PERCENT A=0 PERCENT B=0 PERCENT C=10 PERCENT D=90
TP=0.1333 HRS
MASSRAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 5.1913 CFS UNIT VOLUME = .9973 B = 526.28 P60 = 2.0500
AREA = .001315 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

K = .107897HR TP = .133300HR K/TP RATIO = .809431 SHAPE CONSTANT, N = 4.419714
UNIT PEAK = .41895 CFS UNIT VOLUME = .9682 B = 382.25 P60 = 2.0500
AREA = .000146 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

*
PRINT HYD ID=3 CODE=1

HYDROGRAPH FROM AREA DA-1

RUNOFF VOLUME = 2.06540 INCHES = .1609 ACRE-FEET
PEAK DISCHARGE RATE = 4.36 CFS AT 1.500 HOURS BASIN AREA = .0015 SQ. MI.

***** BASIN DA-2 *****

COMPUTE NM HYD ID=4 HYD NO=DA-2 DRAINAGE AREA=.00029 SQ MI
PERCENT A=0 PERCENT B=0 PERCENT C=60 PERCENT D=40
TP=0.1333 HRS
MASSRAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = .45797 CFS UNIT VOLUME = .9751 B = 526.28 P60 = 2.0500
AREA = .000116 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

K = .107897HR TP = .133300HR K/TP RATIO = .809431 SHAPE CONSTANT, N = 4.419714
UNIT PEAK = .49896 CFS UNIT VOLUME = .9742 B = 382.25 P60 = 2.0500
AREA = .000174 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD ID=4 CODE=1

HYDROGRAPH FROM AREA DA-2

RUNOFF VOLUME = 1.56726 INCHES = .0242 ACRE-FEET
PEAK DISCHARGE RATE = .73 CFS AT 1.500 HOURS BASIN AREA = .0003 SQ. MI.

***** ADD HYDROGRAPHS DA-1 AND DA-2 TO GET TOTAL FLOW AT AP-2 *****

ADD HYD ID=10 HYD NO=AP-2 ID I=3 ID II=4

PRINT HYD ID=10 CODE=1

HYDROGRAPH FROM AREA AP-2

RUNOFF VOLUME = 1.98264 INCHES = .1852 ACRE-FEET
PEAK DISCHARGE RATE = 5.09 CFS AT 1.500 HOURS BASIN AREA = .0018 SQ. MI.

***** BASIN DA-3 *****

COMPUTE NM HYD ID=3 HYD NO=DA-3 DRAINAGE AREA=.00049 SQ MI
PERCENT A=0 PERCENT B=100 PERCENT C=0 PERCENT D=0
TP=0.1333 HRS
MASSRAINFALL=-1

K = .132570HR TP = .133300HR K/TP RATIO = .994525 SHAPE CONSTANT, N = 3.549967
UNIT PEAK = 1.1908 CFS UNIT VOLUME = .9889 B = 323.96 P60 = 2.0500
AREA = .000490 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD ID=3 CODE=1

HYDROGRAPH FROM AREA DA-3

RUNOFF VOLUME = .81295 INCHES = .0212 ACRE-FEET
PEAK DISCHARGE RATE = .75 CFS AT 1.500 HOURS BASIN AREA = .0005 SQ. MI.

***** ADD HYDROGRAPHS AP-2 AND DA-3 TO GET TOTAL FLOW AT AP-3 *****

HYDROGRAPH FROM AREA AP-3

RUNOFF VOLUME = 1.72684 INCHES = .2064 ACRE-FEET
 PEAK DISCHARGE RATE = 5.84 CFS AT 1.500 HOURS BASIN AREA = .0022 SQ. MI.

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***** BASIN DA-4 *****

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COMPUTE NM HYD ID=3 HYD NO=DA-4 DRAINAGE AREA=.00088 SQ MI
 PERCENT A=0 PERCENT B=0 PERCENT C=0 PERCENT D=100
 TP=0.1333 HRS
 MASSRAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 3.4743 CFS UNIT VOLUME = .9961 B = 526.28 P60 = 2.0500
 AREA = .000880 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

*

PRINT HYD ID=3 CODE=1

HYDROGRAPH FROM AREA DA-4

RUNOFF VOLUME = 2.16503 INCHES = .1016 ACRE-FEET
 PEAK DISCHARGE RATE = 2.71 CFS AT 1.500 HOURS BASIN AREA = .0009 SQ. MI.

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***** ADD HYDROGRAPHS AP-3 AND DA-4 TO GET TOTAL FLOW AT AP-4 *****

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ADD HYD ID=10 HYD NO=AP-4 ID I=3 ID II=11

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PRINT HYD ID=10 CODE=1

HYDROGRAPH FROM AREA AP-4

RUNOFF VOLUME = 1.85030 INCHES = .3080 ACRE-FEET
 PEAK DISCHARGE RATE = 8.54 CFS AT 1.500 HOURS BASIN AREA = .0031 SQ. MI.

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***** BASIN DA-5 *****

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COMPUTE NM HYD ID=3 HYD NO=DA-5 DRAINAGE AREA=.00127 SQ MI
 PERCENT A=0 PERCENT B=0 PERCENT C=100 PERCENT D=0
 TP=0.1333 HRS
 MASSRAINFALL=-1

K = .107897HR TP = .133300HR K/TP RATIO = .809431 SHAPE CONSTANT, N = 4.419714
 UNIT PEAK = 3.6418 CFS UNIT VOLUME = .9967 B = 382.25 P60 = 2.0500
 AREA = .001270 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

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PRINT HYD ID=3 CODE=1

HYDROGRAPH FROM AREA DA-5

RUNOFF VOLUME = 1.16874 INCHES = .0792 ACRE-FEET
 PEAK DISCHARGE RATE = 2.63 CFS AT 1.500 HOURS BASIN AREA = .0013 SQ. MI.

PRINT HYD

ID=11 CODE=1

HYDROGRAPH FROM AREA AP-5A

RUNOFF VOLUME = 1.65314 INCHES = .3871 ACRE-FEET
PEAK DISCHARGE RATE = 11.18 CFS AT 1.500 HOURS BASIN AREA = .0044 SQ. MI.

***** BASIN DA-9 *****

COMPUTE NM HYD ID=3 HYD NO=DA-9 DRAINAGE AREA=.00012 SQ MI
PERCENT A=0 PERCENT B=0 PERCENT C=0 PERCENT D=100
TP=0.1333 HRS
MASSRAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = .47377 CFS UNIT VOLUME = .9751 B = 526.28 P60 = 2.0500
AREA = .000120 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD

ID=3 CODE=1

HYDROGRAPH FROM AREA DA-9

RUNOFF VOLUME = 2.16503 INCHES = .0139 ACRE-FEET
PEAK DISCHARGE RATE = .38 CFS AT 1.500 HOURS BASIN AREA = .0001 SQ. MI.

***** ADD HYDROGRAPHS AP-5A AND DA-9 TO GET TOTAL PARTIAL FLOW AT AP-5 *****

ADD HYD ID=30 HYD NO=AP-5B ID I=3 ID II=11

PRINT HYD

ID=30 CODE=1

HYDROGRAPH FROM AREA AP-5B

RUNOFF VOLUME = 1.66672 INCHES = .4010 ACRE-FEET
PEAK DISCHARGE RATE = 11.55 CFS AT 1.500 HOURS BASIN AREA = .0045 SQ. MI.

***** BASIN DA-6 *****

COMPUTE NM HYD ID=3 HYD NO=DA-6 DRAINAGE AREA=.00222 SQ MI
PERCENT A=0 PERCENT B=0 PERCENT C=100 PERCENT D=0
TP=0.1333 HRS
MASSRAINFALL=-1

K = .107897HR TP = .133300HR K/TP RATIO = .809431 SHAPE CONSTANT, N = 4.419714
UNIT PEAK = 6.3660 CFS UNIT VOLUME = .9984 B = 382.25 P60 = 2.0500
AREA = .002220 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD

ID=3 CODE=1

HYDROGRAPH FROM AREA DA-6

***** BASIN DA-7 *****

COMPUTE NM HYD ID=4 HYD NO=DA-7 DRAINAGE AREA=.00169 SQ MI
PERCENT A=0 PERCENT B=0 PERCENT C=20 PERCENT D=80
TP=0.1333 HRS
MASSRAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 5.3378 CFS UNIT VOLUME = .9973 B = 526.28 P60 = 2.0500
AREA = .001352 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

K = .107897HR TP = .133300HR K/TP RATIO = .809431 SHAPE CONSTANT, N = 4.419714
UNIT PEAK = .96924 CFS UNIT VOLUME = .9877 B = 382.25 P60 = 2.0500
AREA = .000338 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD ID=4 CODE=1

HYDROGRAPH FROM AREA DA-7

RUNOFF VOLUME = 1.96577 INCHES = .1772 ACRE-FEET
PEAK DISCHARGE RATE = 4.86 CFS AT 1.500 HOURS BASIN AREA = .0017 SQ. MI.

***** ADD HYDROGRAPHS DA-6 AND DA-7 TO GET PARTIAL FLOW AT AP-7 *****

ADD HYD ID=11 HYD NO=AP-7A ID I=3 ID II=4

PRINT HYD ID=11 CODE=1

HYDROGRAPH FROM AREA AP-7A

RUNOFF VOLUME = 1.51313 INCHES = .3155 ACRE-FEET
PEAK DISCHARGE RATE = 9.45 CFS AT 1.500 HOURS BASIN AREA = .0039 SQ. MI.

***** BASIN DA-11 *****

COMPUTE NM HYD ID=3 HYD NO=DA-11 DRAINAGE AREA=.00122 SQ MI
PERCENT A=0 PERCENT B=0 PERCENT C=0 PERCENT D=100
TP=0.1333 HRS
MASSRAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 4.8166 CFS UNIT VOLUME = .9969 B = 526.28 P60 = 2.0500
AREA = .001220 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD ID=3 CODE=1

HYDROGRAPH FROM AREA DA-11

RUNOFF VOLUME = 2.16503 INCHES = .1409 ACRE-FEET
PEAK DISCHARGE RATE = 3.75 CFS AT 1.500 HOURS BASIN AREA = .0012 SQ. MI.

PRINT HYD

ID=12 CODE=1

HYDROGRAPH FROM AREA AP-7

RUNOFF VOLUME = 1.66811 INCHES = .4564 ACRE-FEET
PEAK DISCHARGE RATE = 13.21 CFS AT 1.500 HOURS BASIN AREA = .0051 SQ. MI.

***** BASIN DA-8 *****

COMPUTE NM HYD ID=3 HYD NO=DA-8 DRAINAGE AREA=.00389 SQ MI
PERCENT A=0 PERCENT B=0 PERCENT C=30 PERCENT D=70
TP=0.1333 HRS
MASSRAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 10.751 CFS UNIT VOLUME = .9982 B = 526.28 P60 = 2.0500
AREA = .002723 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

K = .107897HR TP = .133300HR K/TP RATIO = .809431 SHAPE CONSTANT, N = 4.419714
UNIT PEAK = 3.3464 CFS UNIT VOLUME = .9967 B = 382.25 P60 = 2.0500
AREA = .001167 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD

ID=3 CODE=1

HYDROGRAPH FROM AREA DA-8

RUNOFF VOLUME = 1.86614 INCHES = .3872 ACRE-FEET
PEAK DISCHARGE RATE = 10.78 CFS AT 1.500 HOURS BASIN AREA = .0039 SQ. MI.

***** ADD HYDROGRAPHS AP-7 AND DA-8 TO GET TOTAL FLOW AT AP-8 INTO POND *****

ADD HYD ID=11 HYD NO=AP-8 ID I=3 ID II=12

PRINT HYD ID=11 CODE=1

HYDROGRAPH FROM AREA AP-8

RUNOFF VOLUME = 1.75348 INCHES = .8435 ACRE-FEET
PEAK DISCHARGE RATE = 23.99 CFS AT 1.500 HOURS BASIN AREA = .0090 SQ. MI.

***** ROUTE HYDROGRAPH AT AP-8 THROUGH THE ON-SITE DETENTION POND *****

ROUTE RESERVOIR ID=12 HYD NO=AP-POND INFLOW ID=11 CODE=1
OUTFLOW (CFS) STORAGE (AC-FT) ELEVATION (FT)
0.0 0.000 73.0
0.56 0.038 73.5
2.33 0.117 74.0
3.40 0.400 74.5
165.21 0.602 75.0

* * * * *

.07	.00	73.00	.000	.00
.10	.00	73.00	.000	.00
.13	.00	73.00	.000	.00
.17	.00	73.00	.000	.00
.20	.00	73.00	.000	.00
.23	.00	73.00	.000	.00
.27	.00	73.00	.000	.00
.30	.00	73.00	.000	.00
.33	.00	73.00	.000	.00
.37	.00	73.00	.000	.00
.40	.00	73.00	.000	.00
.43	.00	73.00	.000	.00
.47	.00	73.00	.000	.00
.50	.00	73.00	.000	.00
.53	.00	73.00	.000	.00
.57	.00	73.00	.000	.00
.60	.00	73.00	.000	.00
.63	.00	73.00	.000	.00
.67	.00	73.00	.000	.00
.70	.00	73.00	.000	.00
.73	.00	73.00	.000	.00
.77	.00	73.00	.000	.00
.80	.00	73.00	.000	.00
.83	.00	73.00	.000	.00
.87	.00	73.00	.000	.00
.90	.00	73.00	.000	.00
.93	.00	73.00	.000	.00
.97	.00	73.00	.000	.00
1.00	.00	73.00	.000	.00
1.03	.00	73.00	.000	.00
1.07	.00	73.00	.000	.00
1.10	.00	73.00	.000	.00
1.13	.00	73.00	.000	.00
1.17	.07	73.00	.000	.00
1.20	.36	73.01	.001	.01
1.23	1.02	73.03	.003	.04
1.27	2.04	73.09	.007	.10
1.30	3.51	73.18	.014	.20
1.33	5.76	73.34	.026	.38
1.37	8.92	73.54	.045	.71
1.40	12.93	73.71	.072	1.32
1.43	17.57	73.95	.109	2.15
1.47	21.91	74.07	.157	2.48
1.50	23.99	74.17	.213	2.69
1.53	22.99	74.27	.270	2.91
1.57	20.11	74.36	.321	3.10
1.60	16.96	74.44	.364	3.26
1.63	14.38	74.50	.398	3.39
1.67	12.40	74.53	.412	12.96
1.70	10.89	74.53	.410	11.58
1.73	9.76	74.52	.409	10.27
1.77	8.89	74.52	.407	9.28
1.80	8.17	74.52	.406	8.49
1.83	7.54	74.51	.406	7.82

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
1.87	7.00	74.51	.405	7.24
1.90	6.49	74.51	.404	6.72
1.93	6.03	74.51	.404	6.24
1.97	5.60	74.51	.403	5.79
2.00	5.19	74.51	.402	5.37
2.03	4.80	74.50	.402	4.98
2.07	4.32	74.50	.401	4.54
2.10	3.65	74.50	.401	3.96
2.13	2.95	74.50	.400	3.40
2.17	2.36	74.50	.398	3.39
2.20	1.94	74.49	.394	3.38
2.23	1.64	74.48	.390	3.36
2.27	1.42	74.47	.385	3.34
2.30	1.26	74.46	.379	3.32
2.33	1.13	74.45	.373	3.30
2.37	1.02	74.44	.367	3.28
2.40	.92	74.43	.361	3.25
2.43	.84	74.42	.355	3.23
2.47	.76	74.41	.348	3.20
2.50	.69	74.40	.341	3.18
2.53	.63	74.38	.334	3.15
2.57	.57	74.37	.327	3.12
2.60	.52	74.36	.320	3.10
2.63	.47	74.35	.313	3.07
2.67	.44	74.33	.306	3.04
2.70	.40	74.32	.299	3.02
2.73	.37	74.31	.291	2.99
2.77	.34	74.30	.284	2.96
2.80	.32	74.28	.277	2.94

2.85	.50	74.27	.270	2.91
2.87	.28	74.26	.263	2.88
2.90	.26	74.24	.255	2.85
2.93	.24	74.23	.248	2.83
2.97	.23	74.22	.241	2.80
3.00	.21	74.21	.234	2.77
3.03	.20	74.19	.227	2.75
3.07	.19	74.18	.220	2.72
3.10	.18	74.17	.213	2.69
3.13	.17	74.16	.206	2.67
3.17	.16	74.15	.199	2.64
3.20	.15	74.13	.193	2.62
3.23	.15	74.12	.186	2.59
3.27	.14	74.11	.179	2.56
3.30	.14	74.10	.173	2.54
3.33	.13	74.09	.166	2.51
3.37	.13	74.07	.159	2.49
3.40	.13	74.06	.153	2.47
3.43	.13	74.05	.147	2.44
3.47	.12	74.04	.140	2.42
3.50	.12	74.03	.134	2.39
3.53	.12	74.02	.128	2.37
3.57	.11	74.01	.121	2.35
3.60	.11	73.99	.115	2.29
3.63	.11	73.95	.110	2.16
3.67	.11	73.92	.104	2.04
3.70	.11	73.89	.099	1.92

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
---------------	-----------------	----------------	-------------------	------------------

3.73	.11	73.85	.094	1.82
3.77	.11	73.83	.089	1.71
3.80	.10	73.80	.085	1.62
3.83	.10	73.77	.081	1.53
3.87	.10	73.75	.077	1.44
3.90	.10	73.73	.074	1.36
3.93	.10	73.70	.070	1.29
3.97	.10	73.68	.067	1.21
4.00	.10	73.67	.064	1.15
4.03	.10	73.65	.061	1.08
4.07	.10	73.63	.059	1.03
4.10	.10	73.62	.056	.97
4.13	.10	73.60	.054	.92
4.17	.10	73.59	.052	.87
4.20	.10	73.57	.050	.82
4.23	.10	73.56	.048	.78
4.27	.10	73.55	.046	.74
4.30	.09	73.54	.044	.70
4.33	.09	73.53	.043	.66
4.37	.09	73.52	.041	.63
4.40	.09	73.51	.040	.60
4.43	.09	73.50	.038	.57
4.47	.09	73.49	.037	.55
4.50	.09	73.47	.036	.53
4.53	.09	73.46	.035	.51
4.57	.09	73.44	.034	.49
4.60	.09	73.43	.032	.48
4.63	.09	73.41	.031	.46
4.67	.09	73.40	.030	.45
4.70	.09	73.39	.029	.43
4.73	.09	73.38	.029	.42
4.77	.10	73.36	.028	.41
4.80	.10	73.35	.027	.40
4.83	.10	73.34	.026	.38
4.87	.09	73.33	.025	.37
4.90	.09	73.32	.024	.36
4.93	.10	73.31	.024	.35
4.97	.10	73.30	.023	.34
5.00	.10	73.30	.022	.33
5.03	.10	73.29	.022	.32
5.07	.10	73.28	.021	.31
5.10	.10	73.27	.021	.30
5.13	.10	73.26	.020	.30
5.17	.10	73.26	.020	.29
5.20	.10	73.25	.019	.28
5.23	.10	73.24	.019	.27
5.27	.10	73.24	.018	.27
5.30	.10	73.23	.018	.26
5.33	.10	73.23	.017	.25
5.37	.10	73.22	.017	.25
5.40	.10	73.22	.016	.24
5.43	.10	73.21	.016	.24
5.47	.10	73.21	.016	.23
5.50	.10	73.20	.015	.23
5.53	.11	73.20	.015	.22
5.57	.11	73.19	.015	.22

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
5.60	.11	73.19	.014	.21
5.63	.11	73.19	.014	.21
5.67	.11	73.18	.014	.20
5.70	.11	73.18	.014	.20
5.73	.11	73.18	.013	.20
5.77	.11	73.17	.013	.19
5.80	.11	73.17	.013	.19
5.83	.11	73.17	.013	.19
5.87	.11	73.16	.012	.18
5.90	.11	73.16	.012	.18
5.93	.11	73.16	.012	.18
5.97	.11	73.16	.012	.18
6.00	.12	73.15	.012	.17
6.03	.12	73.15	.012	.17
6.07	.11	73.15	.011	.17
6.10	.09	73.15	.011	.17
6.13	.07	73.14	.011	.16
6.17	.05	73.14	.011	.16
6.20	.03	73.14	.010	.15
6.23	.02	73.13	.010	.15
6.27	.02	73.13	.010	.14
6.30	.01	73.12	.009	.14
6.33	.01	73.12	.009	.13
6.37	.01	73.11	.009	.13
6.40	.01	73.11	.008	.12
6.43	.01	73.11	.008	.12
6.47	.01	73.10	.008	.11
6.50	.01	73.10	.007	.11
6.53	.00	73.09	.007	.11
6.57	.00	73.09	.007	.10
6.60	.00	73.09	.007	.10
6.63	.00	73.08	.006	.09
6.67	.00	73.08	.006	.09
6.70	.00	73.08	.006	.09
6.73	.00	73.07	.006	.08
6.77	.00	73.07	.005	.08
6.80	.00	73.07	.005	.08
6.83	.00	73.07	.005	.07
6.87	.00	73.06	.005	.07
6.90	.00	73.06	.005	.07
6.93	.00	73.06	.004	.07
6.97	.00	73.06	.004	.06
7.00	.00	73.05	.004	.06
7.03	.00	73.05	.004	.06
7.07	.00	73.05	.004	.06
7.10	.00	73.05	.004	.05
7.13	.00	73.05	.003	.05
7.17	.00	73.04	.003	.05
7.20	.00	73.04	.003	.05
7.23	.00	73.04	.003	.05
7.27	.00	73.04	.003	.04
7.30	.00	73.04	.003	.04
7.33	.00	73.04	.003	.04
7.37	.00	73.03	.003	.04
7.40	.00	73.03	.003	.04
7.43	.00	73.03	.002	.04

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
7.47	.00	73.03	.002	.03
7.50	.00	73.03	.002	.03
7.53	.00	73.03	.002	.03
7.57	.00	73.03	.002	.03
7.60	.00	73.03	.002	.03
7.63	.00	73.02	.002	.03
7.67	.00	73.02	.002	.03
7.70	.00	73.02	.002	.03
7.73	.00	73.02	.002	.02
7.77	.00	73.02	.002	.02
7.80	.00	73.02	.002	.02
7.83	.00	73.02	.001	.02
7.87	.00	73.02	.001	.02
7.90	.00	73.02	.001	.02
7.93	.00	73.02	.001	.02
7.97	.00	73.02	.001	.02
8.00	.00	73.02	.001	.02
8.03	.00	73.02	.001	.02
8.07	.00	73.01	.001	.02
8.10	.00	73.01	.001	.02
8.13	.00	73.01	.001	.02
8.17	.00	73.01	.001	.01

8.23	.00	73.01	.001	.01
8.27	.00	73.01	.001	.01
8.30	.00	73.01	.001	.01
8.33	.00	73.01	.001	.01
8.37	.00	73.01	.001	.01
8.40	.00	73.01	.001	.01
8.43	.00	73.01	.001	.01
8.47	.00	73.01	.001	.01
8.50	.00	73.01	.001	.01
8.53	.00	73.01	.001	.01
8.57	.00	73.01	.001	.01
8.60	.00	73.01	.001	.01
8.63	.00	73.01	.001	.01
8.67	.00	73.01	.001	.01
8.70	.00	73.01	.001	.01
8.73	.00	73.01	.000	.01
8.77	.00	73.01	.000	.01
8.80	.00	73.01	.000	.01
8.83	.00	73.01	.000	.01
8.87	.00	73.01	.000	.01
8.90	.00	73.01	.000	.01
8.93	.00	73.01	.000	.01
8.97	.00	73.00	.000	.01
9.00	.00	73.00	.000	.01
9.03	.00	73.00	.000	.01
9.07	.00	73.00	.000	.00

PEAK DISCHARGE = 12.956 CFS - PEAK OCCURS AT HOUR 1.67
 MAXIMUM WATER SURFACE ELEVATION = 74.530
 MAXIMUM STORAGE = .4119 AC-FT INCREMENTAL TIME= .033333HRS

*
 * AP-POND = OUTFLOW FROM DETENTION POND
 *

PRINT HYD ID=12 CODE=1

HYDROGRAPH FROM AREA AP-POND

RUNOFF VOLUME = 1.75348 INCHES = .8435 ACRE-FEET
 PEAK DISCHARGE RATE = 12.96 CFS AT 1.667 HOURS BASIN AREA = .0090 SQ. MI.

*
 *
 *
 ***** DIVIDE OUTFLOW FROM POND: PART OF FLOW GOES THROUGH 2-8" CULVERTS *****
 ***** PART OF FLOW IS OVERFLOW OVER SIDEWALK *****
 *

DIVIDE HYD ID=12 Q=3.40 ID I=20 HYD I=120
 ID II=21 HYD II=121

*
 ***** FLOW FROM 2 - 8" CULVERTS TO ADAMS. THIS FLOW *****
 ***** MOVES NORTH ON ADAMS *****
 *

PRINT HYD ID=20 CODE=1

PARTIAL HYDROGRAPH 120.00

RUNOFF VOLUME = 1.75334 INCHES = .6847 ACRE-FEET
 PEAK DISCHARGE RATE = 3.40 CFS AT 1.667 HOURS BASIN AREA = .0073 SQ. MI.

*
 ***** OVERFLOW OVER SIDEWALK TO CANDELARIA *****
 ***** THIS FLOW MOVES SOUTH ON ADAMS *****
 *

PRINT HYD ID=21 CODE=1

PARTIAL HYDROGRAPH 121.00

RUNOFF VOLUME = 1.75334 INCHES = .1588 ACRE-FEET
 PEAK DISCHARGE RATE = 9.56 CFS AT 1.667 HOURS BASIN AREA = .0017 SQ. MI.

*
 *
 *
 ***** BASIN DA-10 *****

MASSRAINFA'IL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = .18161 CFS UNIT VOLUME = .9386 B = 526.28 P60 = 2.0500
AREA = .000046 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD

ID=3 CODE=1

HYDROGRAPH FROM AREA DA-10

RUNOFF VOLUME = 2.16503 INCHES = .0053 ACRE-FEET
PEAK DISCHARGE RATE = .15 CFS AT 1.500 HOURS BASIN AREA = .0000 SQ. MI.

***** ADD FLOW FROM CULVERTS AT POND TO FLOW FROM DA-10 *****
***** TO GET TOTAL FLOW AT AP-10 *****

ADD HYD

ID=50 HYD NO=AP-10 ID I=3 ID II=20

PRINT HYD

ID=50 CODE=1

HYDROGRAPH FROM AREA AP-10

RUNOFF VOLUME = 1.75588 INCHES = .6900 ACRE-FEET
PEAK DISCHARGE RATE = 3.48 CFS AT 1.633 HOURS BASIN AREA = .0074 SQ. MI.

***** BASIN DA-12 *****

COMPUTE NM HYD

ID=4 HYD NO=DA-12 DRAINAGE AREA=.00790 SQ MI
PERCENT A=0 PERCENT B=50 PERCENT C=50 PERCENT D=0
TP=0.1333 HRS
MASSRAINFA'IL=-1

K = .120234HR TP = .133300HR K/TP RATIO = .901978 SHAPE CONSTANT, N = 3.928677
UNIT PEAK = 20.766 CFS UNIT VOLUME = .9998 B = 350.39 P60 = 2.0500
AREA = .007900 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD

ID=4 CODE=1

HYDROGRAPH FROM AREA DA-12

RUNOFF VOLUME = .97429 INCHES = .4105 ACRE-FEET
PEAK DISCHARGE RATE = 14.01 CFS AT 1.500 HOURS BASIN AREA = .0079 SQ. MI.

***** ADD FLOW FROM AP-10 TO FLOW FROM DA-12 TO GET TOTAL FLOW AT AP-12 *****

ADD HYD

ID=51 HYD NO=AP-12 ID I=50 ID II=4

PRINT HYD

ID=51 CODE=1

HYDROGRAPH FROM AREA AP-12

RUNOFF VOLUME = 1.35145 INCHES = 1.1004 ACRE-FEET
PEAK DISCHARGE RATE = 16.90 CFS AT 1.533 HOURS BASIN AREA = .0153 SQ. MI.

*
ADD HYD ID=31 HYD NO=AP-5 ID I=30 ID II=21
*

*
PRINT HYD ID=31 CODE=1

HYDROGRAPH FROM AREA AP-5

RUNOFF VOLUME = 1.69041 INCHES = .5598 ACRE-FEET
PEAK DISCHARGE RATE = 15.57 CFS AT 1.667 HOURS BASIN AREA = .0062 SQ. MI.

*
*
*
FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 14:52:32

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
 INPUT FILE = belexist.IN

RUN DATE (MON/DAY/YR) = 06/03/1999
 USER NO. = C_ANDRSN.I01

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1 NOTATION
START										TIME= .00
RAINFALL	TYPE= 1									RAIN6= 2.400
COMPUTE NM HYD	DA-1	-	3	.00146	4.36	.161	2.06540	1.500	4.658	PER IMP= 90.00
COMPUTE NM HYD	DA-2	-	4	.00029	.73	.024	1.56726	1.500	3.953	PER IMP= 40.00
ADD HYD	AP-2	3& 4	10	.00175	5.09	.185	1.98264	1.500	4.541	
COMPUTE NM HYD	DA-3	-	3	.00049	.75	.021	.81295	1.500	2.380	PER IMP= .00
ADD HYD	AP-3	3&10	11	.00224	5.84	.206	1.72684	1.500	4.069	
COMPUTE NM HYD	DA-4	-	3	.00088	2.71	.102	2.16503	1.500	4.811	PER IMP= 100.00
ADD HYD	AP-4	3&11	10	.00312	8.54	.308	1.85030	1.500	4.278	
COMPUTE NM HYD	DA-5	-	3	.00127	2.63	.079	1.16874	1.500	3.237	PER IMP= .00
ADD HYD	AP-5A	3&10	11	.00439	11.18	.387	1.65314	1.500	3.977	
COMPUTE NM HYD	DA-9	-	3	.00012	.38	.014	2.16503	1.500	4.914	PER IMP= 100.00
ADD HYD	AP-5B	3&11	30	.00451	11.55	.401	1.66672	1.500	4.002	
COMPUTE NM HYD	DA-6	-	3	.00222	4.59	.138	1.16874	1.500	3.231	PER IMP= .00
COMPUTE NM HYD	DA-7	-	4	.00169	4.86	.177	1.96577	1.500	4.497	PER IMP= 80.00
ADD HYD	AP-7A	3& 4	11	.00391	9.45	.316	1.51313	1.500	3.778	
COMPUTE NM HYD	DA-11	-	3	.00122	3.75	.141	2.16503	1.500	4.807	PER IMP= 100.00
ADD HYD	AP-7	3&11	12	.00513	13.21	.456	1.66811	1.500	4.023	
COMPUTE NM HYD	DA-8	-	3	.00389	10.78	.387	1.86614	1.500	4.331	PER IMP= 70.00
ADD HYD	AP-8	3&12	11	.00902	23.99	.844	1.75348	1.500	4.156	
ROUTE RESERVOIR	AP-POND	11	12	.00902	12.96	.844	1.75348	1.667	2.244	AC-FT= .412
DIVIDE HYD	120.00	12	20	.00732	3.40	.685	1.75334	1.667	.726	
	121.00	AND	21	.00170	9.56	.159	1.75334	1.667	8.792	
COMPUTE NM HYD	DA-10	-	3	.00005	.15	.005	2.16503	1.500	5.105	PER IMP= 100.00
ADD HYD	AP-10	3&20	50	.00737	3.48	.690	1.75588	1.633	.738	
COMPUTE NM HYD	DA-12	-	4	.00790	14.01	.411	.97429	1.500	2.770	PER IMP= .00
ADD HYD	AP-12	50& 4	51	.01527	16.90	1.100	1.35145	1.533	1.730	
ADD HYD	AP-5	30&21	31	.00621	15.57	.560	1.69041	1.667	3.917	
FINISH										

APPENDIX E
Developed Conditions AHYMO Results

AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
RUN DATE (MON/DAY/YR) = 06/09/1999
START TIME (HR:MIN:SEC) = 11:22:57 USER NO.= C_ANDRSN.I01
INPUT FILE = belprop.IN

* THIS IS THE INPUT FILE FOR THE MASTER DRAINAGE STUDY FOR
* BEL AIR ELEMENTARY SCHOOL.
* PROPOSED CONDITIONS
* INPUT FILE NAME: belprop.in
* 100 YEAR 6 HOUR STORM.
*

***** Set time to start *****

*
START TIME = 0.0
*

***** COMPUTE RAINFALL DISTRIBUTION
*

RAINFALL TYPE=1
RAIN QUARTER=0.0 RAIN ONE = 2.05 IN
RAIN SIX=2.40 IN RAIN DAY = 2.75 IN
DT=0.033333

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.

DT = .033333 HOURS			END TIME = 5.999995 HOURS			
.0000	.0017	.0034	.0051	.0069	.0087	.0106
.0125	.0145	.0165	.0185	.0206	.0228	.0250
.0273	.0297	.0321	.0346	.0372	.0399	.0427
.0455	.0485	.0517	.0549	.0583	.0618	.0656
.0695	.0736	.0780	.0837	.0897	.0962	.1101
.1413	.1892	.2581	.3520	.4755	.6330	.8290
1.0682	1.2894	1.3819	1.4601	1.5297	1.5929	1.6512
1.7053	1.7558	1.8032	1.8478	1.8898	1.9296	1.9672
2.0028	2.0366	2.0687	2.0991	2.1280	2.1346	2.1408
2.1467	2.1523	2.1577	2.1628	2.1677	2.1725	2.1770
2.1814	2.1857	2.1898	2.1938	2.1977	2.2015	2.2052
2.2088	2.2123	2.2157	2.2190	2.2223	2.2254	2.2286
2.2316	2.2346	2.2375	2.2404	2.2432	2.2460	2.2487
2.2514	2.2540	2.2566	2.2591	2.2616	2.2641	2.2665
2.2689	2.2712	2.2736	2.2759	2.2781	2.2803	2.2825
2.2847	2.2868	2.2889	2.2910	2.2931	2.2951	2.2971
2.2991	2.3011	2.3030	2.3049	2.3068	2.3087	2.3106
2.3124	2.3142	2.3160	2.3178	2.3196	2.3214	2.3231
2.3248	2.3265	2.3282	2.3299	2.3315	2.3331	2.3348
2.3364	2.3380	2.3396	2.3411	2.3427	2.3442	2.3458
2.3473	2.3488	2.3503	2.3518	2.3532	2.3547	2.3561
2.3576	2.3590	2.3604	2.3618	2.3632	2.3646	2.3660
2.3674	2.3687	2.3701	2.3714	2.3727	2.3741	2.3754
2.3767	2.3780	2.3793	2.3806	2.3818	2.3831	2.3843
2.3856	2.3868	2.3881	2.3893	2.3905	2.3917	2.3929
2.3941	2.3953	2.3965	2.3977	2.3988	2.4000	

*
*
*
***** BASIN DA-1 *****
*

COMPUTE NM HYD ID=3 HYD NO=DA-1 DRAINAGE AREA=.000969 SQ MI
PERCENT A=0 PERCENT B=0 PERCENT C=5 PERCENT D=95
TP=0.1333 HRS
MASSRAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 3.6344 CFS UNIT VOLUME = .9961 B = 526.28 P60 = 2.0500
AREA = .000921 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

K = .107897HR TP = .133300HR K/TP RATIO = .809431 SHAPE CONSTANT, N = 4.419714
UNIT PEAK = .13893 CFS UNIT VOLUME = .9103 B = 382.25 P60 = 2.0500
AREA = .000048 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

*
PRINT HYD ID=3 CODE=1

HYDROGRAPH FROM AREA DA-1

RUNOFF VOLUME = 2.11522 INCHES = .1093 ACRE-FEET
PEAK DISCHARGE RATE = 2.94 CFS AT 1.500 HOURS BASIN AREA = .0010 SQ. MI.

*
***** BASIN DA-2
*

COMPUTE NM HYD ID=4 HYD NO=DA-2 DRAINAGE AREA=.000369 SQ MI
PERCENT A=0 PERCENT B=0 PERCENT C=40 PERCENT D=60
TP=0.1333 HRS
MASSRAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = .87410 CFS UNIT VOLUME = .9862 B = 526.28 P60 = 2.0500
AREA = .000221 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

K = .107897HR TP = .133300HR K/TP RATIO = .809431 SHAPE CONSTANT, N = 4.419714
UNIT PEAK = .42325 CFS UNIT VOLUME = .9682 B = 382.25 P60 = 2.0500
AREA = .000148 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

*
PRINT HYD ID=4 CODE=1

HYDROGRAPH FROM AREA DA-2

RUNOFF VOLUME = 1.76652 INCHES = .0348 ACRE-FEET
PEAK DISCHARGE RATE = 1.00 CFS AT 1.500 HOURS BASIN AREA = .0004 SQ. MI.

*
*
*
***** ADD HYDROGRAPHS DA-1 AND DA-2 AT AP-2 *****
*

ADD HYD ID=10 HYD NO=AP-2 ID I=3 ID II=4

*
*
*
PRINT HYD ID=10 CODE=1

HYDROGRAPH FROM AREA AP-2

RUNOFF VOLUME = 2.01864 INCHES = .1440 ACRE-FEET
PEAK DISCHARGE RATE = 3.95 CFS AT 1.500 HOURS BASIN AREA = .0013 SQ. MI.

*
*
*
***** BASIN DA-3 *****
*

COMPUTE NM HYD ID=3 HYD NO=DA-3 DRAINAGE AREA=.000400 SQ MI
PERCENT A=0 PERCENT B=100 PERCENT C=0 PERCENT D=0
TP=0.1333 HRS
MASSRAINFALL=-1

K = .132570HR TP = .133300HR K/TP RATIO = .994525 SHAPE CONSTANT, N = 3.549967
UNIT PEAK = .97212 CFS UNIT VOLUME = .9856 B = 323.96 P60 = 2.0500
AREA = .000400 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

*
PRINT HYD ID=3 CODE=1

HYDROGRAPH FROM AREA DA-3

RUNOFF VOLUME = .81295 INCHES = .0173 ACRE-FEET
PEAK DISCHARGE RATE = .61 CFS AT 1.500 HOURS BASIN AREA = .0004 SQ. MI.

*
*
*
***** ADD HYDROGRAPHS AP-2 AND DA-3 TO GET TOTAL FLOW AT AP-3 *****
*

ADD HYD ID=11 HYD NO=AP-3 ID I=3 ID II=10

RUNOFF VOLUME = 1.74109 INCHES = .1614 ACRE-FEET
PEAK DISCHARGE RATE = 4.56 CFS AT 1.500 HOURS BASIN AREA = .0017 SQ. MI.

***** BASIN DA-4 *****

COMPUTE NM HYD ID=3 HYD NO=DA-4 DRAINAGE AREA=.000578 SQ MI
PERCENT A=0 PERCENT B=0 PERCENT C=0 PERCENT D=100
TP=0.1333 HRS
MASSRAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 2.2820 CFS UNIT VOLUME = .9941 B = 526.28 P60 = 2.0500
AREA = .000578 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD ID=3 CODE=1

HYDROGRAPH FROM AREA DA-4

RUNOFF VOLUME = 2.16503 INCHES = .0667 ACRE-FEET
PEAK DISCHARGE RATE = 1.78 CFS AT 1.500 HOURS BASIN AREA = .0006 SQ. MI.

***** ADD HYDROGRAPHS AP-3 AND DA-4 TO GET TOTAL FLOW AT AP-4 *****

ADD HYD ID=10 HYD NO=AP-4 ID I=3 ID II=11

PRINT HYD ID=10 CODE=1

HYDROGRAPH FROM AREA AP-4

RUNOFF VOLUME = 1.84677 INCHES = .2281 ACRE-FEET
PEAK DISCHARGE RATE = 6.34 CFS AT 1.500 HOURS BASIN AREA = .0023 SQ. MI.

***** BASIN DA-5

COMPUTE NM HYD ID=3 HYD NO=DA-5 DRAINAGE AREA=.001406 SQ MI
PERCENT A=0 PERCENT B=95 PERCENT C=0 PERCENT D=5
TP=0.1333 HRS
MASSRAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = .27755 CFS UNIT VOLUME = .9610 B = 526.28 P60 = 2.0500
AREA = .000070 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

K = .132570HR TP = .133300HR K/TP RATIO = .994525 SHAPE CONSTANT, N = 3.549967
UNIT PEAK = 3.2461 CFS UNIT VOLUME = .9962 B = 323.96 P60 = 2.0500
AREA = .001336 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD ID=3 CODE=1

HYDROGRAPH FROM AREA DA-5

RUNOFF VOLUME = .88055 INCHES = .0660 ACRE-FEET

*
***** ADD HYDROGRAPHS AP-4 AND DA-5 TO GET PARTIAL FLOW AT AP-5 *****
*

ADD HYD ID=11 HYD NO=AP-5A ID I=3 ID II=10
*

PRINT HYD ID=11 CODE=1

HYDROGRAPH FROM AREA AP-5A

RUNOFF VOLUME = 1.48174 INCHES = .2941 ACRE-FEET
PEAK DISCHARGE RATE = 8.59 CFS AT 1.500 HOURS BASIN AREA = .0037 SQ. MI.

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*
***** BASIN DA-9 *****
*

COMPUTE NM HYD ID=3 HYD NO=DA-9 DRAINAGE AREA=.000121 SQ MI
PERCENT A=0 PERCENT B=0 PERCENT C=0 PERCENT D=100
TP=0.1333 HRS
MASSRAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = .47771 CFS UNIT VOLUME = .9751 B = 526.28 P60 = 2.0500
AREA = .000121 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

*
*
PRINT HYD ID=3 CODE=1

HYDROGRAPH FROM AREA DA-9

RUNOFF VOLUME = 2.16503 INCHES = .0140 ACRE-FEET
PEAK DISCHARGE RATE = .38 CFS AT 1.500 HOURS BASIN AREA = .0001 SQ. MI.

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*
*
***** ADD HYDROGRAPHS AP-5A AND DA-9 TO GET PARTIAL TOTAL FLOW AT AP-1 *****
*

ADD HYD ID=30 HYD NO=AP-5B ID I=3 ID II=11
*

PRINT HYD ID=30 CODE=1

HYDROGRAPH FROM AREA AP-5B

RUNOFF VOLUME = 1.50321 INCHES = .3081 ACRE-FEET
PEAK DISCHARGE RATE = 8.97 CFS AT 1.500 HOURS BASIN AREA = .0038 SQ. MI.

*
*
*
***** BASIN DA-6 *****
*

COMPUTE NM HYD ID=3 HYD NO=DA-6 DRAINAGE AREA=.004520 SQ MI
PERCENT A=0 PERCENT B=30 PERCENT C=0 PERCENT D=70
TP=0.1333 HRS
MASSRAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 12.492 CFS UNIT VOLUME = .9984 B = 526.28 P60 = 2.0500
AREA = .003164 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

K = .132570HR TP = .133300HR K/TP RATIO = .994525 SHAPE CONSTANT, N = 3.549967
UNIT PEAK = 3.2955 CFS UNIT VOLUME = .9962 B = 323.96 P60 = 2.0500
AREA = .001356 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR

HYDROGRAPH FROM AREA DA-6

RUNOFF VOLUME = 1.75941 INCHES = .4241 ACRE-FEET
 PEAK DISCHARGE RATE = 11.77 CFS AT 1.500 HOURS BASIN AREA = .0045 SQ. MI.

*
 *
 *
 ***** BASIN DA-8 *****
 *

COMPUTE NM HYD ID=4 HYD NO=DA-8 DRAINAGE AREA=.004398 SQ MI
 PERCENT A=0 PERCENT B=0 PERCENT C=10 PERCENT D=90
 TP=0.1333 HRS
 MASSRAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 15.627 CFS UNIT VOLUME = .9987 B = 526.28 P60 = 2.0500
 AREA = .003958 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

K = .107897HR TP = .133300HR K/TP RATIO = .809431 SHAPE CONSTANT, N = 4.419714
 UNIT PEAK = 1.2612 CFS UNIT VOLUME = .9901 B = 382.25 P60 = 2.0500
 AREA = .000440 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

*
 PRINT HYD ID=4 CODE=1

HYDROGRAPH FROM AREA DA-8

RUNOFF VOLUME = 2.06540 INCHES = .4845 ACRE-FEET
 PEAK DISCHARGE RATE = 13.07 CFS AT 1.500 HOURS BASIN AREA = .0044 SQ. MI.

*
 *
 *
 ***** ADD HYDROGRAPHS DA-6 AND DA-8 TO GET PARTIAL FLOW INTO POND *****
 *

ADD HYD ID=11 HYD NO=AP-8A ID I=3 ID II=4

PRINT HYD ID=11 CODE=1

HYDROGRAPH FROM AREA AP-8A

RUNOFF VOLUME = 1.91025 INCHES = .9086 ACRE-FEET
 PEAK DISCHARGE RATE = 24.84 CFS AT 1.500 HOURS BASIN AREA = .0089 SQ. MI.

*
 *
 *
 ***** BASIN DA-11 *****
 *

COMPUTE NM HYD ID=3 HYD NO=DA-11 DRAINAGE AREA=.001243 SQ MI
 PERCENT A=0 PERCENT B=0 PERCENT C=0 PERCENT D=100
 TP=0.1333 HRS
 MASSRAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 4.9074 CFS UNIT VOLUME = .9969 B = 526.28 P60 = 2.0500
 AREA = .001243 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

*
 PRINT HYD ID=3 CODE=1

HYDROGRAPH FROM AREA DA-11

***** ADD HYDROGRAPHS DA-11 AND AP-8A TO GET TOTAL FLOW INTO POND *****

ADD HYD ID=12 HYD NO=AP-8 ID I=3 ID II=11

PRINT HYD ID=12 CODE=1

HYDROGRAPH FROM AREA AP-8

RUNOFF VOLUME = 1.94138 INCHES = 1.0521 ACRE-FEET
PEAK DISCHARGE RATE = 28.67 CFS AT 1.500 HOURS BASIN AREA = .0102 SQ. MI.

***** ROUTE HYDROGRAPH THROUGH THE ON-SITE DETENTION POND *****
***** USING AN 18-INCH DIAMETER CULVERT TO CANDELARIA *****

ROUTE RESERVOIR ID=20 HYD NO=PIPE INFLOW ID=11 CODE=1
OUTFLOW (CFS) STORAGE (AC-FT) ELEVATION (FT)
0.00 0.000 71.0
2.82 0.268 72.0
8.82 0.572 73.0
10.83 0.915 74.0

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	71.00	.000	.00
.03	.00	71.00	.000	.00
.07	.00	71.00	.000	.00
.10	.00	71.00	.000	.00
.13	.00	71.00	.000	.00
.17	.00	71.00	.000	.00
.20	.00	71.00	.000	.00
.23	.00	71.00	.000	.00
.27	.00	71.00	.000	.00
.30	.00	71.00	.000	.00
.33	.00	71.00	.000	.00
.37	.00	71.00	.000	.00
.40	.00	71.00	.000	.00
.43	.00	71.00	.000	.00
.47	.00	71.00	.000	.00
.50	.00	71.00	.000	.00
.53	.00	71.00	.000	.00
.57	.00	71.00	.000	.00
.60	.00	71.00	.000	.00
.63	.00	71.00	.000	.00
.67	.00	71.00	.000	.00
.70	.00	71.00	.000	.00
.73	.00	71.00	.000	.00
.77	.00	71.00	.000	.00
.80	.00	71.00	.000	.00
.83	.00	71.00	.000	.00
.87	.00	71.00	.000	.00
.90	.00	71.00	.000	.00
.93	.00	71.00	.000	.00
.97	.00	71.00	.000	.00
1.00	.00	71.00	.000	.00
1.03	.00	71.00	.000	.00
1.07	.00	71.00	.000	.00
1.10	.00	71.00	.000	.00
1.13	.01	71.00	.000	.00
1.17	.10	71.00	.000	.00
1.20	.49	71.00	.001	.01
1.23	1.37	71.01	.003	.04
1.27	2.74	71.03	.009	.09
1.30	4.57	71.07	.019	.20
1.33	6.95	71.13	.034	.35
1.37	10.04	71.21	.056	.59
1.40	13.89	71.32	.087	.91
1.43	18.39	71.48	.128	1.35
1.47	22.71	71.67	.180	1.90
1.50	24.84	71.89	.240	2.52
1.53	23.72	72.10	.298	3.42
1.57	20.61	72.27	.349	4.41

1.67	12.72	72.56	.450	6.17
1.70	11.27	72.61	.453	6.48
1.73	10.20	72.65	.465	6.71
1.77	9.38	72.67	.473	6.87
1.80	8.67	72.69	.479	6.98
1.83	8.04	72.71	.483	7.06

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
---------------	-----------------	----------------	-------------------	------------------

1.87	7.49	72.71	.485	7.09
1.90	7.00	72.71	.485	7.10
1.93	6.56	72.71	.484	7.08
1.97	6.16	72.70	.482	7.05
2.00	5.79	72.69	.479	6.99
2.03	5.43	72.68	.476	6.92
2.07	4.93	72.67	.471	6.82
2.10	4.18	72.65	.465	6.70
2.13	3.35	72.62	.457	6.55
2.17	2.65	72.59	.447	6.36
2.20	2.16	72.56	.437	6.15
2.23	1.82	72.52	.426	5.93
2.27	1.57	72.48	.414	5.71
2.30	1.39	72.44	.403	5.48
2.33	1.26	72.41	.392	5.26
2.37	1.14	72.37	.381	5.05
2.40	1.03	72.34	.370	4.84
2.43	.94	72.30	.360	4.63
2.47	.86	72.27	.350	4.44
2.50	.78	72.24	.340	4.24
2.53	.72	72.21	.331	4.06
2.57	.66	72.18	.322	3.88
2.60	.61	72.15	.313	3.71
2.63	.56	72.12	.305	3.54
2.67	.52	72.09	.297	3.39
2.70	.48	72.07	.289	3.23
2.73	.44	72.04	.281	3.09
2.77	.41	72.02	.274	2.95
2.80	.38	72.00	.268	2.81
2.83	.36	71.97	.261	2.74
2.87	.34	71.95	.254	2.68
2.90	.32	71.93	.248	2.61
2.93	.30	71.90	.242	2.54
2.97	.28	71.88	.236	2.48
3.00	.27	71.86	.230	2.42
3.03	.26	71.84	.224	2.35
3.07	.24	71.81	.218	2.29
3.10	.23	71.79	.212	2.24
3.13	.22	71.77	.207	2.18
3.17	.22	71.75	.202	2.12
3.20	.21	71.73	.197	2.07
3.23	.20	71.71	.191	2.01
3.27	.19	71.70	.187	1.96
3.30	.18	71.68	.182	1.91
3.33	.18	71.66	.177	1.86
3.37	.17	71.64	.172	1.81
3.40	.17	71.63	.168	1.77
3.43	.17	71.61	.164	1.72
3.47	.16	71.59	.159	1.68
3.50	.16	71.58	.155	1.63
3.53	.16	71.56	.151	1.59
3.57	.15	71.55	.147	1.55
3.60	.15	71.54	.144	1.51
3.63	.15	71.52	.140	1.47
3.67	.15	71.51	.136	1.43
3.70	.15	71.50	.133	1.40

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
---------------	-----------------	----------------	-------------------	------------------

3.73	.14	71.48	.129	1.36
3.77	.14	71.47	.126	1.33
3.80	.14	71.46	.123	1.29
3.83	.14	71.45	.120	1.26
3.87	.14	71.44	.117	1.23
3.90	.14	71.42	.114	1.20
3.93	.13	71.41	.111	1.17
3.97	.13	71.40	.108	1.14
4.00	.13	71.39	.105	1.11
4.03	.13	71.38	.103	1.08
4.07	.13	71.37	.100	1.05
4.10	.13	71.36	.098	1.03
4.13	.13	71.36	.095	1.00
4.17	.13	71.35	.093	.98
4.20	.13	71.34	.090	.95
4.23	.13	71.33	.088	.93

4.50	.13	71.31	.084	.88
4.33	.13	71.31	.082	.86
4.37	.13	71.30	.080	.84
4.40	.13	71.29	.078	.82
4.43	.13	71.28	.076	.80
4.47	.13	71.28	.074	.78
4.50	.13	71.27	.072	.76
4.53	.13	71.26	.071	.74
4.57	.13	71.26	.069	.73
4.60	.13	71.25	.067	.71
4.63	.13	71.25	.066	.69
4.67	.13	71.24	.064	.68
4.70	.13	71.23	.063	.66
4.73	.13	71.23	.061	.65
4.77	.13	71.22	.060	.63
4.80	.13	71.22	.059	.62
4.83	.13	71.21	.057	.60
4.87	.13	71.21	.056	.59
4.90	.13	71.20	.055	.58
4.93	.13	71.20	.054	.56
4.97	.13	71.20	.052	.55
5.00	.13	71.19	.051	.54
5.03	.13	71.19	.050	.53
5.07	.13	71.18	.049	.52
5.10	.13	71.18	.048	.50
5.13	.13	71.18	.047	.49
5.17	.13	71.17	.046	.48
5.20	.13	71.17	.045	.47
5.23	.13	71.16	.044	.46
5.27	.14	71.16	.043	.45
5.30	.14	71.16	.042	.45
5.33	.14	71.15	.042	.44
5.37	.14	71.15	.041	.43
5.40	.14	71.15	.040	.42
5.43	.14	71.15	.039	.41
5.47	.14	71.14	.038	.40
5.50	.14	71.14	.038	.40
5.53	.14	71.14	.037	.39
5.57	.14	71.14	.036	.38

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
---------------	-----------------	----------------	-------------------	------------------

5.60	.14	71.13	.036	.38
5.63	.14	71.13	.035	.37
5.67	.14	71.13	.034	.36
5.70	.15	71.13	.034	.36
5.73	.15	71.12	.033	.35
5.77	.15	71.12	.033	.34
5.80	.15	71.12	.032	.34
5.83	.15	71.12	.032	.33
5.87	.15	71.12	.031	.33
5.90	.15	71.11	.031	.32
5.93	.15	71.11	.030	.32
5.97	.15	71.11	.030	.31
6.00	.16	71.11	.029	.31
6.03	.16	71.11	.029	.30
6.07	.15	71.11	.029	.30
6.10	.12	71.10	.028	.30
6.13	.09	71.10	.028	.29
6.17	.06	71.10	.027	.28
6.20	.04	71.10	.026	.28
6.23	.03	71.10	.026	.27
6.27	.02	71.09	.025	.26
6.30	.02	71.09	.024	.26
6.33	.02	71.09	.024	.25
6.37	.01	71.09	.023	.24
6.40	.01	71.08	.022	.24
6.43	.01	71.08	.022	.23
6.47	.01	71.08	.021	.22
6.50	.01	71.08	.021	.22
6.53	.01	71.08	.020	.21
6.57	.01	71.07	.020	.21
6.60	.00	71.07	.019	.20
6.63	.00	71.07	.018	.19
6.67	.00	71.07	.018	.19
6.70	.00	71.07	.017	.18
6.73	.00	71.06	.017	.18
6.77	.00	71.06	.016	.17
6.80	.00	71.06	.016	.17
6.83	.00	71.06	.016	.16
6.87	.00	71.06	.015	.16
6.90	.00	71.05	.015	.15
6.93	.00	71.05	.014	.15
6.97	.00	71.05	.014	.15
7.00	.00	71.05	.013	.14
7.03	.00	71.05	.013	.14

7.07	.00	71.05	.013	.13
7.10	.00	71.05	.012	.13
7.13	.00	71.04	.012	.13
7.17	.00	71.04	.012	.12
7.20	.00	71.04	.011	.12
7.23	.00	71.04	.011	.12
7.27	.00	71.04	.011	.11
7.30	.00	71.04	.010	.11
7.33	.00	71.04	.010	.11
7.37	.00	71.04	.010	.10
7.40	.00	71.04	.010	.10
7.43	.00	71.03	.009	.10

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
---------------	-----------------	----------------	-------------------	------------------

7.47	.00	71.03	.009	.09
7.50	.00	71.03	.009	.09
7.53	.00	71.03	.008	.09
7.57	.00	71.03	.008	.09
7.60	.00	71.03	.008	.08
7.63	.00	71.03	.008	.08
7.67	.00	71.03	.008	.08
7.70	.00	71.03	.007	.08
7.73	.00	71.03	.007	.07
7.77	.00	71.03	.007	.07
7.80	.00	71.03	.007	.07
7.83	.00	71.02	.007	.07
7.87	.00	71.02	.006	.07
7.90	.00	71.02	.006	.06
7.93	.00	71.02	.006	.06
7.97	.00	71.02	.006	.06
8.00	.00	71.02	.006	.06
8.03	.00	71.02	.005	.06
8.07	.00	71.02	.005	.06
8.10	.00	71.02	.005	.05
8.13	.00	71.02	.005	.05
8.17	.00	71.02	.005	.05
8.20	.00	71.02	.005	.05
8.23	.00	71.02	.005	.05
8.27	.00	71.02	.004	.05
8.30	.00	71.02	.004	.05
8.33	.00	71.02	.004	.04
8.37	.00	71.02	.004	.04
8.40	.00	71.01	.004	.04
8.43	.00	71.01	.004	.04
8.47	.00	71.01	.004	.04
8.50	.00	71.01	.004	.04
8.53	.00	71.01	.004	.04
8.57	.00	71.01	.003	.04
8.60	.00	71.01	.003	.04
8.63	.00	71.01	.003	.03
8.67	.00	71.01	.003	.03
8.70	.00	71.01	.003	.03
8.73	.00	71.01	.003	.03
8.77	.00	71.01	.003	.03
8.80	.00	71.01	.003	.03
8.83	.00	71.01	.003	.03
8.87	.00	71.01	.003	.03
8.90	.00	71.01	.003	.03
8.93	.00	71.01	.003	.03
8.97	.00	71.01	.002	.03
9.00	.00	71.01	.002	.02
9.03	.00	71.01	.002	.02
9.07	.00	71.01	.002	.02
9.10	.00	71.01	.002	.02
9.13	.00	71.01	.002	.02
9.17	.00	71.01	.002	.02
9.20	.00	71.01	.002	.02
9.23	.00	71.01	.002	.02
9.27	.00	71.01	.002	.02
9.30	.00	71.01	.002	.02

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
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9.33	.00	71.01	.002	.02
9.37	.00	71.01	.002	.02
9.40	.00	71.01	.002	.02
9.43	.00	71.01	.002	.02
9.47	.00	71.01	.002	.02
9.50	.00	71.01	.002	.02
9.53	.00	71.01	.001	.02
9.57	.00	71.01	.001	.02
9.60	.00	71.01	.001	.01
9.63	.00	71.01	.001	.01

9.70	.00	71.00	.001	.01
9.73	.00	71.00	.001	.01
9.77	.00	71.00	.001	.01
9.80	.00	71.00	.001	.01
9.83	.00	71.00	.001	.01
9.87	.00	71.00	.001	.01
9.90	.00	71.00	.001	.01
9.93	.00	71.00	.001	.01
9.97	.00	71.00	.001	.01
10.00	.00	71.00	.001	.01
10.03	.00	71.00	.001	.01
10.07	.00	71.00	.001	.01
10.10	.00	71.00	.001	.01
10.13	.00	71.00	.001	.01
10.17	.00	71.00	.001	.01
10.20	.00	71.00	.001	.01
10.23	.00	71.00	.001	.01
10.27	.00	71.00	.001	.01
10.30	.00	71.00	.001	.01
10.33	.00	71.00	.001	.01
10.37	.00	71.00	.001	.01
10.40	.00	71.00	.001	.01
10.43	.00	71.00	.001	.01
10.47	.00	71.00	.001	.01
10.50	.00	71.00	.001	.01
10.53	.00	71.00	.001	.01
10.57	.00	71.00	.001	.01
10.60	.00	71.00	.001	.01
10.63	.00	71.00	.001	.01
10.67	.00	71.00	.001	.01
10.70	.00	71.00	.001	.01
10.73	.00	71.00	.001	.01
10.77	.00	71.00	.001	.01
10.80	.00	71.00	.000	.01
10.83	.00	71.00	.000	.01
10.87	.00	71.00	.000	.00

PEAK DISCHARGE = 7.102 CFS - PEAK OCCURS AT HOUR 1.90
 MAXIMUM WATER SURFACE ELEVATION = 72.714
 MAXIMUM STORAGE = .4849 AC-FT INCREMENTAL TIME= .033333HRS

*
 *
 PRINT HYD ID=20 CODE=1

HYDROGRAPH FROM AREA PIPE

RUNOFF VOLUME = 1.91025 INCHES = .9086 ACRE-FEET
 PEAK DISCHARGE RATE = 7.10 CFS AT 1.900 HOURS BASIN AREA = .0089 SQ. MI.

*
 *
 ***** ADD POND OUTFLOW FROM CULVERT TO PARTIAL FLOW AT *****
 ***** AP-5B TO GET TOTAL FLOW AT AP-5 *****

*
 ADD HYD ID=31 HYD NO=AP-5 ID I=30 ID II=20

*
 *
 *
 PRINT HYD ID=31 CODE=1

HYDROGRAPH FROM AREA AP-5

RUNOFF VOLUME = 1.78753 INCHES = 1.2166 ACRE-FEET
 PEAK DISCHARGE RATE = 12.08 CFS AT 1.533 HOURS BASIN AREA = .0128 SQ. MI.

*
 *
 *
 *
 ***** BASIN DA-10 *****

*
 COMPUTE NM HYD ID=3 HYD NO=DA-10 DRAINAGE AREA=.000093 SQ MI
 PERCENT A=0 PERCENT B=0 PERCENT C=0 PERCENT D=100
 TP=0.1333 HRS
 MASSRAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = .36717 CFS UNIT VOLUME = .9664 B = 526.28 P60 = 2.0500

PRINT HYD

ID=3 CODE=1

HYDROGRAPH FROM AREA DA-10

RUNOFF VOLUME = 2.16503 INCHES = .0107 ACRE-FEET
PEAK DISCHARGE RATE = .30 CFS AT 1.500 HOURS BASIN AREA = .0001 SQ. MI.

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***** BASIN DA-7

* ~~***~~

COMPUTE NM HYD ID=4 HYD NO=DA-7 DRAINAGE AREA=.000550 SQ MI
PERCENT A=0 PERCENT B=50 PERCENT C=0 PERCENT D=50
TP=0.1333 HRS
MASSRAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 1.0857 CFS UNIT VOLUME = .9881 B = 526.28 P60 = 2.0500
AREA = .000275 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

K = .132570HR TP = .133300HR K/TP RATIO = .994525 SHAPE CONSTANT, N = 3.549967
UNIT PEAK = .66833 CFS UNIT VOLUME = .9798 B = 323.96 P60 = 2.0500
AREA = .000275 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

*

PRINT HYD

ID=4 CODE=1

HYDROGRAPH FROM AREA DA-7

RUNOFF VOLUME = 1.48899 INCHES = .0437 ACRE-FEET
PEAK DISCHARGE RATE = 1.28 CFS AT 1.500 HOURS BASIN AREA = .0006 SQ. MI.

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***** ADD HYDROGRAPHS DA-10 AND DA-7 TO GET PARTIAL FLOW AT AP-7 *****

*

ADD HYD ID=15 HYD NO=AP-7 ID I=3 ID II=4

*

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*

PRINT HYD

ID=15 CODE=1

HYDROGRAPH FROM AREA AP-7

RUNOFF VOLUME = 1.58615 INCHES = .0544 ACRE-FEET
PEAK DISCHARGE RATE = 1.57 CFS AT 1.500 HOURS BASIN AREA = .0006 SQ. MI.

*
*
*

***** BASIN DA-12A *****

*

COMPUTE NM HYD ID=3 HYD NO=DA-12A DRAINAGE AREA=.004204 SQ MI
PERCENT A=0 PERCENT B=85 PERCENT C=15 PERCENT D=0
TP=0.1333 HRS
MASSRAINFALL=-1

K = .128869HR TP = .133300HR K/TP RATIO = .966761 SHAPE CONSTANT, N = 3.654047
UNIT PEAK = 10.452 CFS UNIT VOLUME = .9990 B = 331.40 P60 = 2.0500
AREA = .004204 SQ MI IA = .47750 INCHES INF = 1.18700 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

*

PRINT HYD

ID=3 CODE=1

HYDROGRAPH FROM AREA DA-12A

***** BASIN DA-12B *****

COMPUTE NM HYD ID=4 HYD NO=DA-12B DRAINAGE AREA=.002634 SQ MI
PERCENT A=0 PERCENT B=15 PERCENT C=0 PERCENT D=85
TP=0.1333 HRS
MASSRAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 8.8393 CFS UNIT VOLUME = .9981 B = 526.28 P60 = 2.0500
AREA = .002239 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

K = .132570HR TP = .133300HR K/TP RATIO = .994525 SHAPE CONSTANT, N = 3.549967
UNIT PEAK = .96021 CFS UNIT VOLUME = .9856 B = 323.96 P60 = 2.0500
AREA = .000395 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD ID=4 CODE=1

HYDROGRAPH FROM AREA DA-12B

RUNOFF VOLUME = 1.96222 INCHES = .2757 ACRE-FEET
PEAK DISCHARGE RATE = 7.48 CFS AT 1.500 HOURS BASIN AREA = .0026 SQ. MI.

***** ADD HYDROGRAPHS DA-12A AND DA-12B TO GET PARTIAL FLOW AT AP-12 *****

ADD HYD ID=50 HYD NO=AP-12A ID I=3 ID II=4

PRINT HYD ID=50 CODE=1

HYDROGRAPH FROM AREA AP-12A

RUNOFF VOLUME = 1.28396 INCHES = .4682 ACRE-FEET
PEAK DISCHARGE RATE = 14.17 CFS AT 1.500 HOURS BASIN AREA = .0068 SQ. MI.

***** ADD HYDROGRAPHS AP-7 AND AP-12A TO GET TOTAL FLOW AT AP-12 *****

ADD HYD ID=51 HYD NO=AP-12 ID I=15 ID II=50

PRINT HYD ID=51 CODE=1

HYDROGRAPH FROM AREA AP-12

RUNOFF VOLUME = 1.30994 INCHES = .5226 ACRE-FEET
PEAK DISCHARGE RATE = 15.74 CFS AT 1.500 HOURS BASIN AREA = .0075 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 11:22:57

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
INPUT FILE = belprop.IN

RUN DATE (MON/DAY/YR) =06/09/1999
USER NO.= C_ANDRSN.I01

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1 NOTATION
START										TIME= .00
RAINFALL TYPE= 1										RAIN6= 2.400
COMPUTE NM HYD	DA-1	-	3	.00097	2.94	.109	2.11522	1.500	4.748	PER IMP= 95.00
COMPUTE NM HYD	DA-2	-	4	.00037	1.00	.035	1.76652	1.500	4.248	PER IMP= 60.00
ADD HYD	AP-2	3& 4	10	.00134	3.95	.144	2.01864	1.500	4.610	
COMPUTE NM HYD	DA-3	-	3	.00040	.61	.017	.81295	1.500	2.388	PER IMP= .00
ADD HYD	AP-3	3&10	11	.00174	4.56	.161	1.74109	1.500	4.099	
COMPUTE NM HYD	DA-4	-	3	.00058	1.78	.067	2.16503	1.500	4.820	PER IMP= 100.00
ADD HYD	AP-4	3&11	10	.00232	6.34	.228	1.84677	1.500	4.279	
COMPUTE NM HYD	DA-5	-	3	.00141	2.24	.066	.88055	1.500	2.494	PER IMP= 5.00
ADD HYD	AP-5A	3&10	11	.00372	8.59	.294	1.48174	1.500	3.605	
COMPUTE NM HYD	DA-9	-	3	.00012	.38	.014	2.16503	1.500	4.914	PER IMP= 100.00
ADD HYD	AP-5B	3&11	30	.00384	8.97	.308	1.50321	1.500	3.646	
COMPUTE NM HYD	DA-6	-	3	.00452	11.77	.424	1.75941	1.500	4.069	PER IMP= 70.00
COMPUTE NM HYD	DA-8	-	4	.00440	13.07	.484	2.06540	1.500	4.644	PER IMP= 90.00
ADD HYD	AP-8A	3& 4	11	.00892	24.84	.909	1.91025	1.500	4.353	
COMPUTE NM HYD	DA-11	-	3	.00124	3.82	.144	2.16503	1.500	4.807	PER IMP= 100.00
ADD HYD	AP-8	3&11	12	.01016	28.67	1.052	1.94138	1.500	4.408	
ROUTE RESERVOIR	PIPE	11	20	.00892	7.10	.909	1.91025	1.900	1.244	AC-FT= .485
ADD HYD	AP-5	30&20	31	.01276	12.08	1.217	1.78753	1.533	1.479	
COMPUTE NM HYD	DA-10	-	3	.00009	.30	.011	2.16503	1.500	4.958	PER IMP= 100.00
COMPUTE NM HYD	DA-7	-	4	.00055	1.28	.044	1.48899	1.500	3.626	PER IMP= 50.00
ADD HYD	AP-7	3& 4	15	.00064	1.57	.054	1.58615	1.500	3.819	
COMPUTE NM HYD	DA-12A	-	3	.00420	6.69	.193	.85910	1.500	2.485	PER IMP= .00
COMPUTE NM HYD	DA-12B	-	4	.00263	7.48	.276	1.96222	1.500	4.439	PER IMP= 85.00
ADD HYD	AP-12A	3& 4	50	.00684	14.17	.468	1.28396	1.500	3.238	
ADD HYD	AP-12	15&50	51	.00748	15.74	.523	1.30994	1.500	3.288	
FINISH										



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 30, 1999

Patrick J Conley, PE
Smith Engineering Co.
6400 Uptown Blvd. Ste 500E
Albuquerque, NM 87110

Re: Bel Air Elementary School Master Drainage Report
Engineer's Stamp dated 11-1-99, (G17/D39)

Dear Mr. Conley,

Based on your resubmittal dated 11-8-99, you have addressed all previous comments and therefore, the above referenced Master Drainage Report is approved. Each Phase of construction will require a separate submittal to City Hydrology and must be in compliance with this Master Plan.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham, PE
Hydrology Review Engineer

C: file

DRAINAGE INFORMATION SHEET

APPLICANT'S NAME: Smith Eng. Company ZONE ATLAS/DRNG. FILE #: G-17-10039
 DRB #: N/A EPC #: N/A WORK ORDER #: N/A

LEGAL DESCRIPTION: _____

Subdivision Name: _____
 CITY ADDRESS: Bel Air Elementary School Tract H & J

ENGINEERING FIRM: Smith Eng. Co. CONTACT: Pat Conley

ADDRESS: 6400 Uptown Blvd NE
Suite 500E, Alb, NM 87110 PHONE: 884-0700

OWNER: Alb Public Schools CONTACT: Andre Larroque

ADDRESS: _____ PHONE: _____

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 _____

- PRE-DESIGN MEETING:
- ☐ YES
 - ☒ NO
 - ☐ COPY PROVIDED

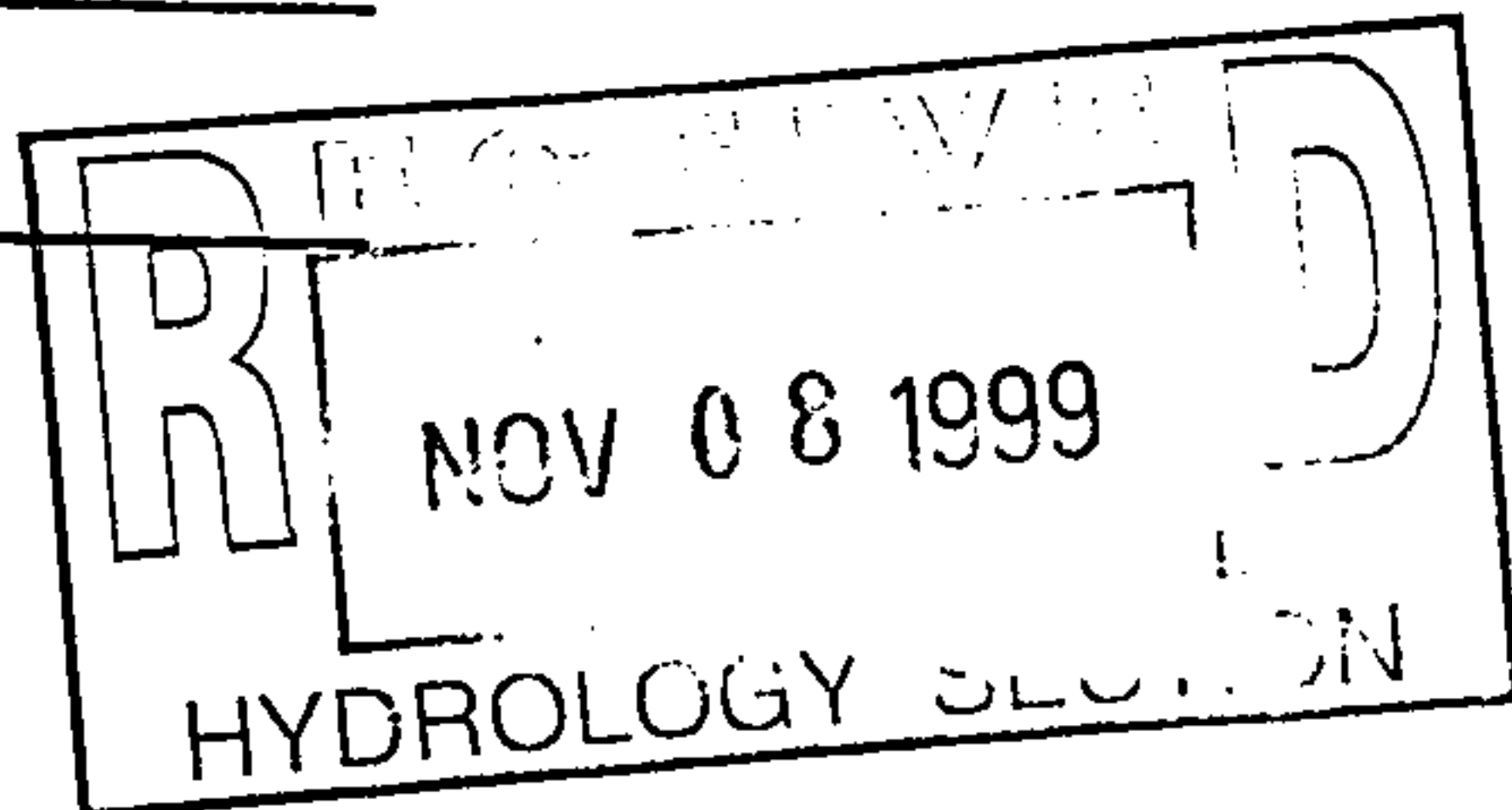
CHECK TYPE OF APPROVAL SOUGHT:

- ☐ 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
- ☐ SUBDIVISION CERTIFICATION
- ☒ OTHER APPROVAL OF _____ (SPECIFY)

MASTER GRADING AND
DRAINAGE REPORT

DATE SUBMITTED: 11-8-99

BY: Pat Conley PE





Smith Engineering Company

A Full Service Engineering Company

To: CITY ENGINEER, CITY OF ALBUQUERQUE Date: 11-8-99
DEVELOPMENT & BUDG SERVICE CENTER Project No.: 199601
PUBLIC WORKS DEPARTMENT
1000 2ND ST. NW. ABO. NM 87102 Reference: BEL AIR ELEMENTARY
Attn.: FRED AGUIRRE SCHOOL

We are sending you:

☐ Attached

☐ Under Separate Cover

☒ Delivered by Hand

The following:

☐ Originals

☐ Prints

☐ Reproducibles

☐ Shop Drawings

☒ Reports

☐ Correspondence

☐ Other _____

QUANTITY	DESCRIPTION
2	MASTER DRAINAGE REPORT (FINAL) - BEL
	AIR ELEMENTARY SCHOOL

These are transmitted as indicated below:

☐ As Requested

☒ For Final Approval

☐ For Field Use

☐ For Your Information

☐ For Distribution

☐ Return Approved Copies

☐ For Review and Comment

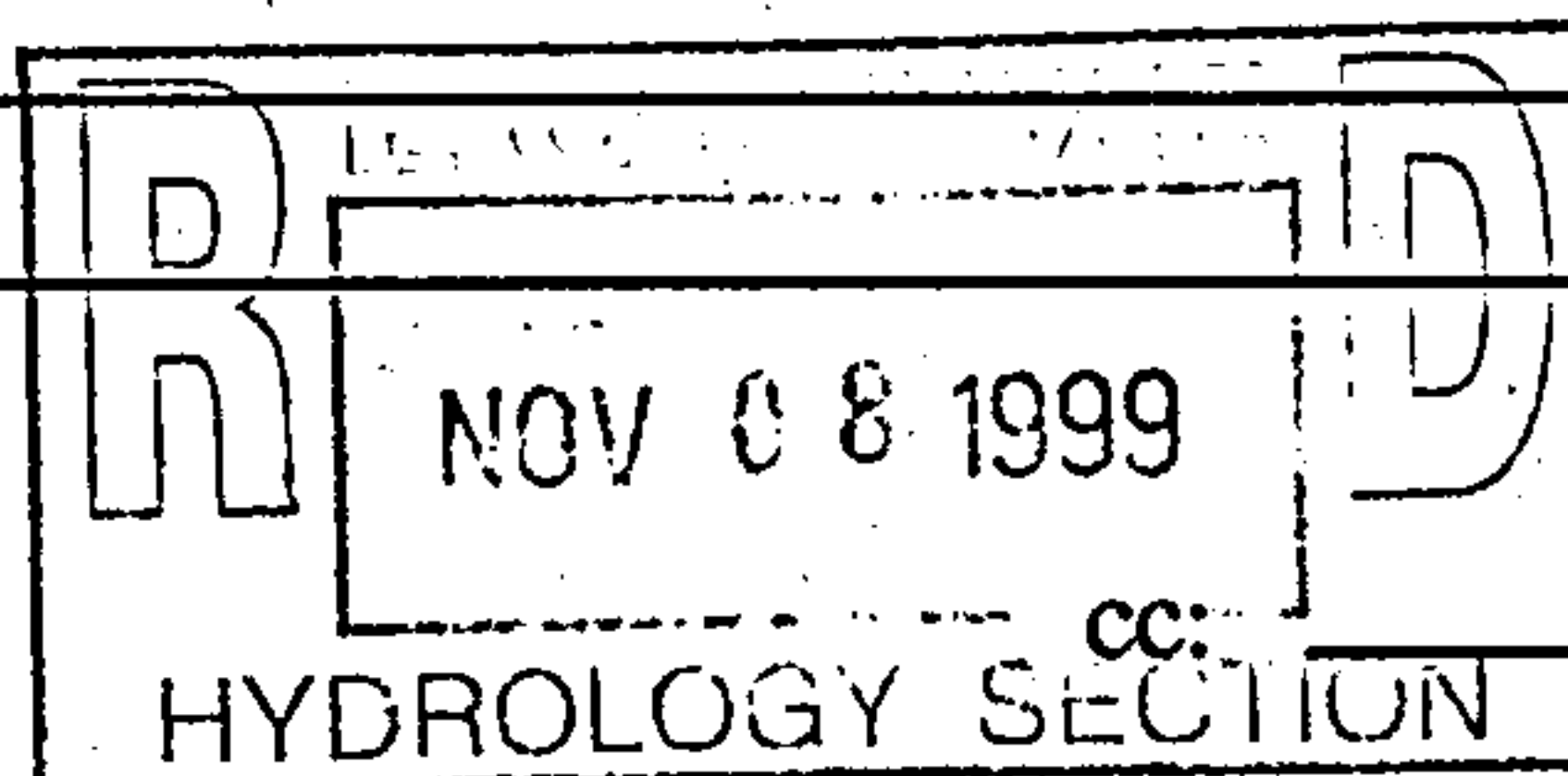
☐ Returned For Correction

☐ _____

Remarks: _____

Sincerely,

Smith Engineering Company





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 5, 2004

Scott McGee, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. NE
Albuquerque, NM 87108

Re: Bel Air Elementary School, 4725 Candelaria Rd. NE, Grading and Drainage Plan

Engineer's Stamp dated 4-22-04 (G17/D39)

Dear Mr. McGee,

Based upon the information provided in your submittal received 4-22-04, the above referenced plan is approved for Building Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology. Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If you have any questions, you can contact me at 924-3981.

Sincerely,

Kristal D. Metro
Engineering Associate, Planning Dept.
Development and Building Services

C: File

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: Bel-Air Elementary School

DRB #: _____ EPC #: _____

ZONE MAP / DRG. FILE #: G-17/D039

WORK ORDER #: _____

LEGAL DESCRIPTION: A portion of Tracts H and J, Board of Education Addition

CITY ADDRESS: 4725 Candelaria Rd NE

ENGINEERING FIRM: Isaacson & Arfman Engineering, Assoc.

ADDRESS: 128 Monroe St. NE

CITY, STATE: Albuquerque, NM

CONTACT: Bryan Bobrick

PHONE: 268-8828

ZIP CODE: 87108

OWNER: APS

ADDRESS: _____

CITY, STATE: _____

CONTACT: _____

PHONE: _____

ZIP CODE: _____

ARCHITECT: Garrett Smith Ltd.

ADDRESS: 514 Central SW

CITY, STATE: Albuquerque, New Mexico

CONTACT: Doug L.

PHONE: 766-6968

ZIP CODE: 87102

SURVEYOR: _____

ADDRESS: _____

CITY, STATE: _____

CONTACT: _____

PHONE: _____

ZIP CODE: _____

CONTRACTOR: _____

ADDRESS: _____

CITY, STATE: _____

CONTACT: _____

PHONE: _____

ZIP CODE: _____

Stamped by Scott McGee, 4/22/04

CHECK TYPE OF SUBMITTAL:

☐ DRAINAGE REPORT

RTL ☒ DRAINAGE PLAN 1ST *REQUIRES TCL or equal*

☒ DRAINAGE PLAN RESUBMITTAL

☐ CONCEPTUAL GRADING & DRAINAGE PLAN

☒ GRADING PLAN

☐ EROSION CONTROL PLAN

☐ ENGINEER'S CERTIFICATION (HYDROLOGY)

☐ CLOMR / LOMR

☐ TRAFFIC CIRCULATION LAYOUT (TCL)

☐ ENGINEER'S CERTIFICATION (TCL)

☐ ENGINEER'S CERTIFICATION (DRB APPR, SITE PLAN)

☐ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

☐ SIA / FINANCIAL GUARANTEE RELEASE

☐ PRELIMINARY PLAT APPROVAL

☐ S. DEV. PLAN FOR SUB'D APPROVAL

☐ S. DEV. PLAN FOR BLDG. PERMIT APPR.

☐ SECTOR PLAN APPROVAL

☐ FINAL PLAT APPROVAL

☐ FOUNDATION PERMIT APPROVAL

☒ BUILDING PERMIT APPROVAL

☐ CERTIFICATE OF OCCUPANCY (PERM)

☐ CERTIFICATE OF OCCUPANCY (TEMP)

☐ GRADING PERMIT APPROVAL

☐ PAVING PERMIT APPROVAL

☐ WORK ORDER APPROVAL

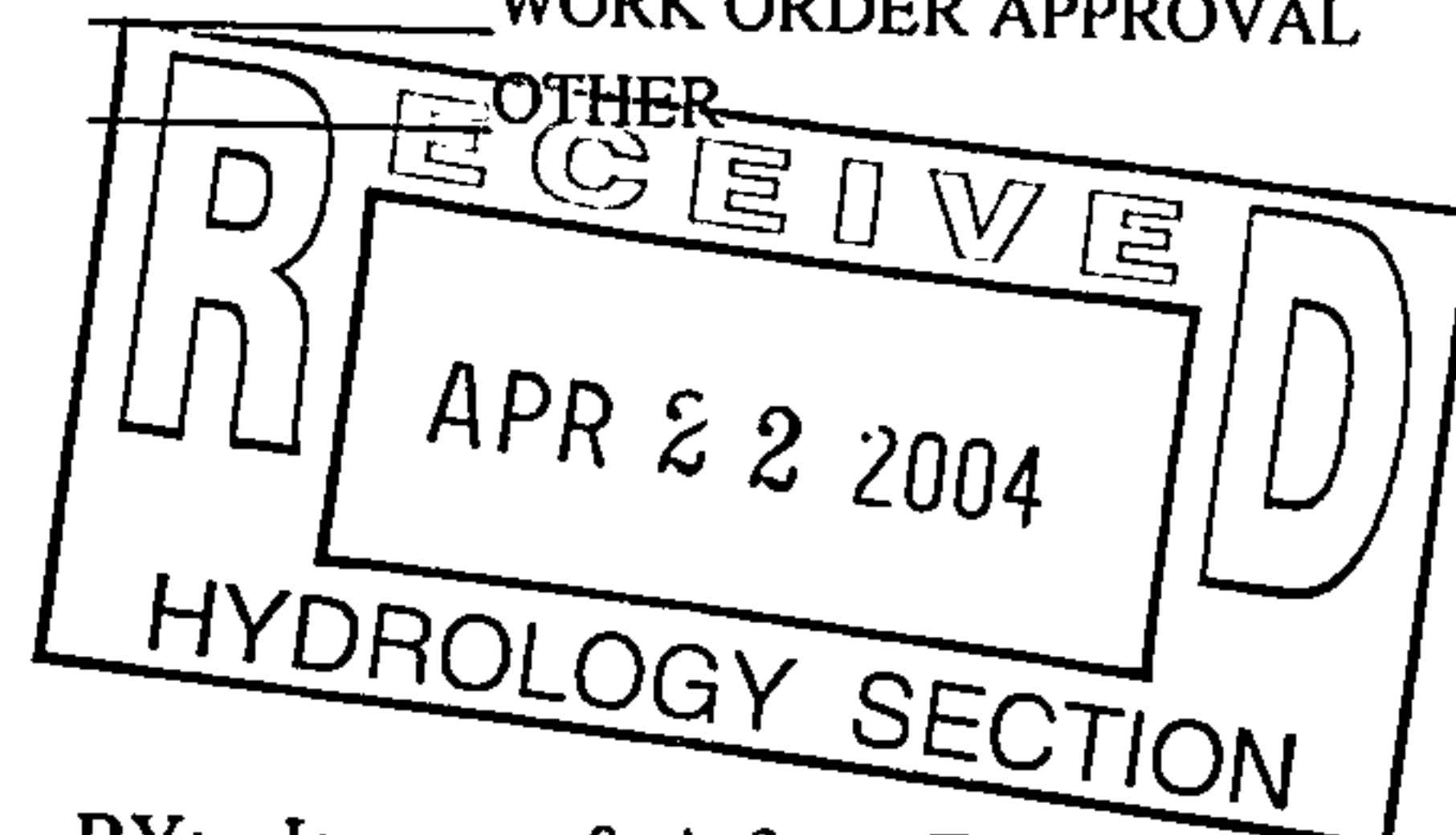
☐ OTHER

WAS A PRE-DESIGN CONFERENCE ATTENDED:

☐ YES

☐ NO

☐ COPY PROVIDED

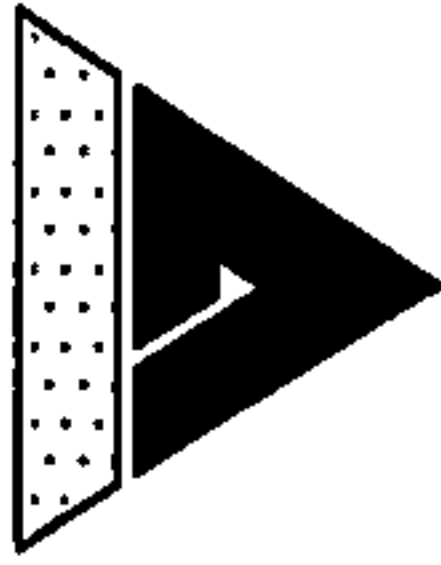


DATE SUBMITTED: Thursday, April 22, 2004 - REVISION

BY: Isaacson & Arfman Engr. Assoc.

Requests for approvals of Site Development Plans and / or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. Conceptual Grading and Drainage Plan: Required for approval of Site Development Plans greater than five acres and Sector Plans
2. Drainage Plans: Required for building permits, grading permits, paving permits and site plans less than five acres
3. Drainage Report: Required for subdivisions containing more than ten (10) lots or constituting five acres or more.



ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
 128 Monroe Street N.E.
 Albuquerque, New Mexico 87108

A Letter of Transmittal From: Bryan Bobrick

To	COA HYDROLOGY		
Address			
City			
Attention	Brad Bingham		
Date	22 Apr, 04	Job No.	1350
RE	Bel-Air Elementary		

PLEASE BE ADVISED THAT WE ARE SENDING YOU: ☒ Attached ☐ Under Separate Cover

1. Revised Drainage and Grading Plan.....
2.
3.
4.
5.
6.
7.
8.
9.
10.

COMMENTS:

Mr. Bradley Bingham
 Hydrology Division
 City of Albuquerque

RE: BEL AIR ELEMENTARY SCHOOL - DG REVISIONS

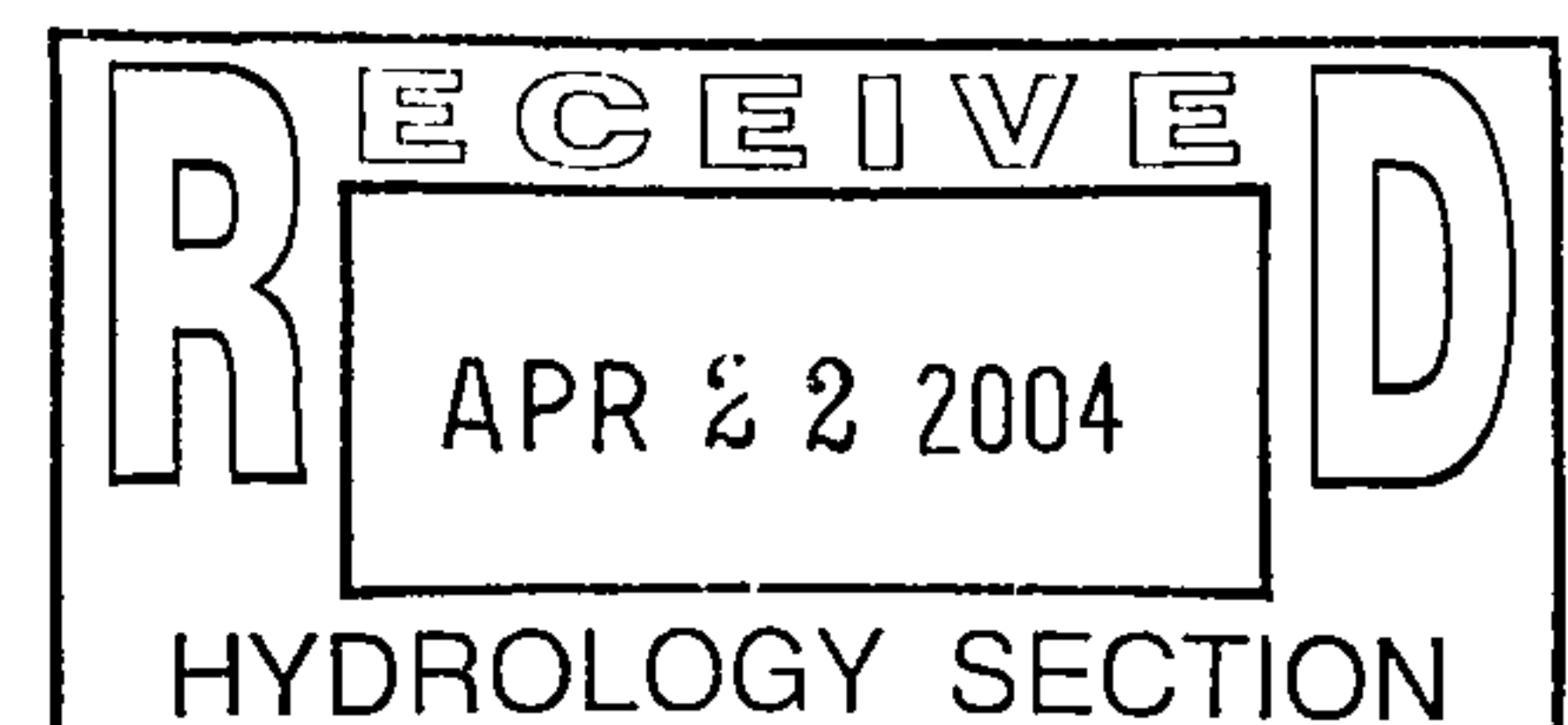
Brad,

This is a resubmittal for Bel Air Elementary School. This project was previously submitted (by C.L. Weiss Engineering, Inc.) and approved on March 23, 2004. Proposed changes to the DG plan address revisions to the Architectural site plan. Overall drainage concepts and flowpaths remain as originally proposed.

Please don't hesitate to call with any questions or comments.

Thanks

Bryan





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 23, 2004

Christopher Weiss, P.E.
c/o Bryan Bobrick
Isaacson & Arfman, P.A.
128 Monroe St. NE
Albuquerque, NM 87108

Re: Bel Air Elementary School, 4725 Candelaria Rd. NE, Grading and Drainage Plan

Engineer's Stamp dated 1-08-04 (G17/D39)

Dear Mr. Bobrick,

Based upon the information provided in your submittal received 2-26-04, the above referenced plan is approved for Building Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology. Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If you have any questions, you can contact me at 924-3981.

Sincerely,

Kristal D. Metro
Engineering Associate, Planning Dept.
Development and Building Services

C: File

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: Bel Air Elementary School

DRB #: _____ EPC #: _____

ZONE MAP / DRG. FILE #: G-17 / D39

WORK ORDER #: _____

LEGAL DESCRIPTION: A portion of Tracts H and J, Board of Education Addition

CITY ADDRESS: 4725 Candelaria Rd. NE - 87110

ENGINEERING FIRM: Isaacson & Arfman Engineering, Assoc.

ADDRESS: 128 Monroe St. NE

CITY, STATE: Albuquerque, NM

CONTACT: Bryan Bobrick

PHONE: 268-8828

ZIP CODE: 87108

OWNER: _____

ADDRESS: _____

CITY, STATE: _____

CONTACT: _____

PHONE: _____

ZIP CODE: _____

ARCHITECT: _____

ADDRESS: _____

CITY, STATE: _____

CONTACT: _____

PHONE: _____

ZIP CODE: _____

SURVEYOR: _____

ADDRESS: _____

CITY, STATE: _____

CONTACT: _____

PHONE: _____

ZIP CODE: _____

CONTRACTOR: _____

ADDRESS: _____

CITY, STATE: _____

CONTACT: _____

PHONE: _____

ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

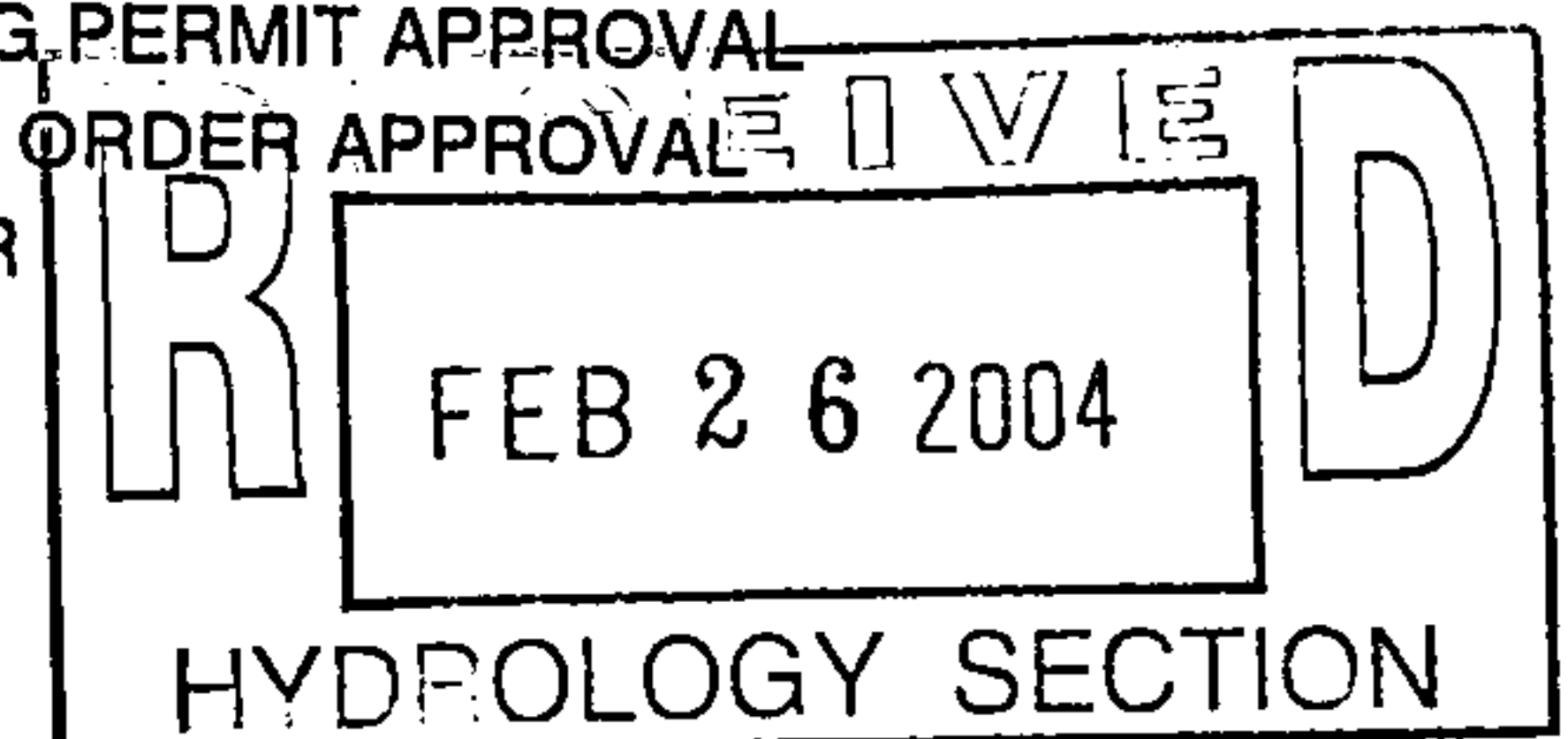
- ☐ DRAINAGE REPORT
☒ DRAINAGE PLAN 1ST *REQUIRES TCL or equal*
☐ DRAINAGE PLAN RESUBMITTAL
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☒ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION (HYDROLOGY)
☐ CLOMR / LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ ENGINEER'S CERTIFICATION (TCL)
☐ ENGINEER'S CERTIFICATION (DRB APPR, SITE PLAN)
☐ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SIA / FINANCIAL GUARANTEE RELEASE
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D APPROVAL
☐ S. DEV. PLAN FOR BLDG. PERMIT APPR.
☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☒ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY (PERM)
☐ CERTIFICATE OF OCCUPANCY (TEMP)
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ WORK ORDER APPROVAL
☐ OTHER

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☐ YES
☐ NO
☐ COPY PROVIDED



DATE SUBMITTED: Thursday, February 25, 2004 Wednesday, February 25, 2004 BY: Isaacson & Arfman Engr. Assoc.

Requests for approvals of Site Development Plans and / or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. Conceptual Grading and Drainage Plan: Required for approval of Site Development Plans greater than five acres and Sector Plans
2. Drainage Plans: Required for building permits, grading permits, paving permits and site plans less than five acres
3. Drainage Report: Required for subdivisions containing more than ten (10) lots or constituting five acres or more.



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

FEB 06 2004

February 5, 2004

Genevieve Donart, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. NE
Albuquerque, NM 87108

Re: Weinerschnitzel, 110 Juan Tabo Blvd. NE, Building Permit Fee (L22/D11C)

Dear Ms. Donart,

On February 4, 2004, your firm paid a \$50 application fee for the above referenced site. Since your original submittal was received before January 1, 2004, this fee should not have been charged. Therefore, your firm now has a \$50 credit to be applied to your next submittal. Please bring a copy of this letter to your next submittal to avoid confusion.

If you have any questions, you can contact me at 924-3981.

Sincerely,

Kristal D. Metro
Engineering Associate, Planning Dept.
Development and Building Services

C: file



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 13, 2001

Patrick J. Conley, P.E.
Smith Engineering Co.
6400 Uptown Blvd NE Suite 500E
Albuquerque, NM 87110

**RE: Grading and Drainage Certification-
Bel Air Elementary School Multipurpose Building (G-17/D039)
Engineer's Stamp dated 1/24/2000
Engineers Certification dated 3/9/2001**

Dear Mr. Conley:

Based upon the information provided in your Engineers Certification submittal dated 3/9/2001, the above referenced site is approved for Permanent Certificate of Occupancy for the Multipurpose Building.

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

Sincerely,

Bradley L. Bingham, PE
Senior Civil Engineer
Hydrology Section, PWD

C: Vickie Chavez, COA
Teresa Martin, COA

file

DRAINAGE INFORMATION SHEET

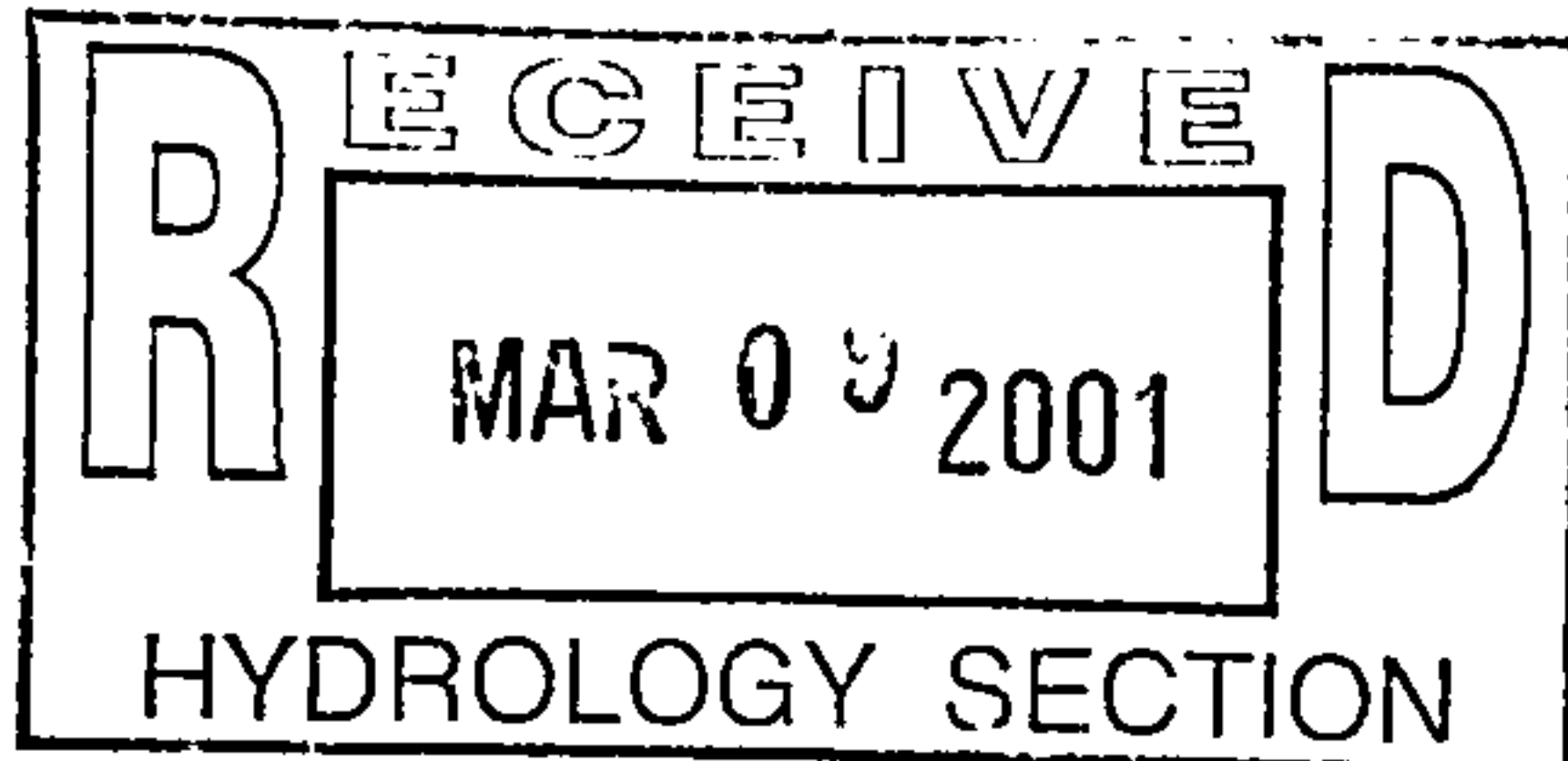
APPLICANT'S NAME: AIB Public Schools ZONE ATLAS/DRNG. FILE #: G17/D039
 DRB #: EPC #: WORK ORDER #:
 LEGAL DESCRIPTION: BEL AIR ELEMENTARY SCHOOL MULTIPURPOSE GYM
 CITY ADDRESS: BEL AIR ELEMENTARY SCHOOL SITE CANDELARIA/ADAMS NE
 ENGINEERING FIRM: SMITH ENG. CO. CONTACT: PAT CONLEY
6400 UPTOWN BLVD NE SUITE 500
 ADDRESS: ALB, NM 87110 PHONE: 884-0700
 OWNER: APS CONTACT:
 ADDRESS: PHONE:
 ARCHITECT: GRAN HICKS & ASSOC. CONTACT: JAY DAVIS
 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
- ☐ SUBDIVISION CERTIFICATION
- ☐ OTHER (SPECIFY)

DATE SUBMITTED: 3/9/01

BY: Pat Conley



Smith Engineering Company

A Full Service Engineering Company

To: CoA Development

Date: 3/9/01

Project No., 199601

Reference: Bel Air Gym

Attn.: Brad Bingham

We are sending you:

☒ Attached

☐ Under Separate Cover

☐ Delivered by Hand

The following:

☐ Originals

☐ Prints

☐ Reproducibles

☐ Shop Drawings

☐ Reports

☐ Correspondence

☒ Other _____

QUANTITY	DESCRIPTION
1	Drainage Info Sheet.
1	Certified Grading Plan

These are transmitted as indicated below:

☒ As Requested

☐ For Final Approval

☐ For Field Use

☐ For Your Information

☐ For Distribution

☐ Return Approved Copies

☐ For Review and Comment

☐ Returned For Correction

☐ _____

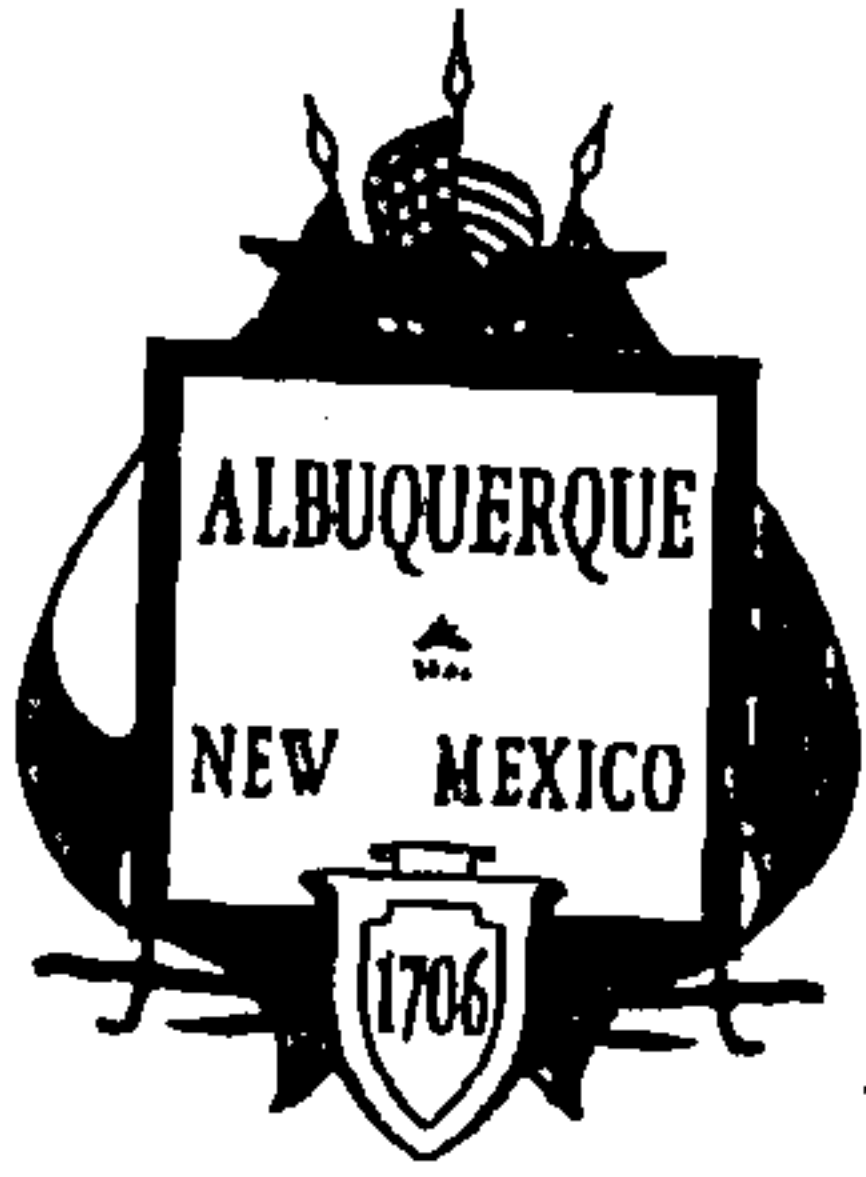
Remarks: _____

Sincerely,

Smith Engineering Company

Pat Corley

cc: File



City of Albuquerque

March 29, 2000

Patrick J Conley, PE
Smith Engineering Co.
6400 Uptown Blvd. Ste 500E
Albuquerque, NM 87110

RECEIVED

APR - 3 2000

SEC

Re: Bel Air Elementary School Multipurpose Building

Engineer's Stamp dated ~~3-24-00~~ (G17/D39)

1-24-00 PLM.

Dear Mr. Conley,

Based on your submittal dated 3-28-00, the above referenced plan 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 you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham
Bradley L. Bingham, PE
Hydrology Review Engineer

C: file



City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 30, 1999

Patrick J Conley, PE
Smith Engineering Co.
6400 Uptown Blvd. Ste 500E
Albuquerque, NM 87110

Re: **Bel Air Elementary School Master Drainage Report**
Engineer's Stamp dated 11-1-99, (G17/D39)

Dear Mr. Conley,

Based on your resubmittal dated 11-8-99, you have addressed all previous comments and therefore, the above referenced Master Drainage Report is approved. Each Phase of construction will require a separate submittal to City Hydrology and must be in compliance with this Master Plan.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham

Bradley L. Bingham, PE
Hydrology Review Engineer

C: file

RECEIVED

DEC 31 1999

SEC



Smith Engineering Company
6400 Uptown Blvd. Suite 500E
Albuquerque, NM 87110
Phone 505-884-0700
FAX 505-884-2376
abq@secnm.com
www.secnm.com

To Loren Mainz

Company COA Development

FAX number 924-3864

From Pat Conley

Pages (including cover) 3

Regarding Approval Letters

One for Master Damage Report
One for Multi-purpose Building.

Any questions, please call.

Sent by: _____

Date/Time: _____

If any pages are illegible
or missing, please call for
retransmission.



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 4, 2000

Daniel S. Aguirre, P. E.
Mr. Mario Juarez-Infante
Wilson & Company
4900 Lang Avenue, NE
Albuquerque, NM 87109

RE: GRADING & DRAINAGE PLAN FOR BEL AIR ELEMENTARY SCHOOL (G-17/D039) ENGINEER'S STAMP DATED 9-13-2000, SUBMITTED FOR BUILDING PERMIT APPROVAL

Dear Mr. Aguirre,

Based upon the information provided in your September 15, 2000, submittal, the project referred to above is approved for Building Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

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

If you have any questions, please call me at 924-3988.

Sincerely,

Stuart Reeder, P. E.

Stuart Reeder, P.E.
Hydrology Division

xc: Whitney Reiersen
✓ File



City of Albuquerque

March 29, 2000

Patrick J Conley, PE
Smith Engineering Co.
6400 Uptown Blvd. Ste 500E
Albuquerque, NM 87110

Re: Bel Air Elementary School Multipurpose Building
Engineer's Stamp dated 3-24-00, (G17/D39)

Dear Mr. Conley,

Based on your submittal dated 3-28-00, the above referenced plan is approved for Building Permit.

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

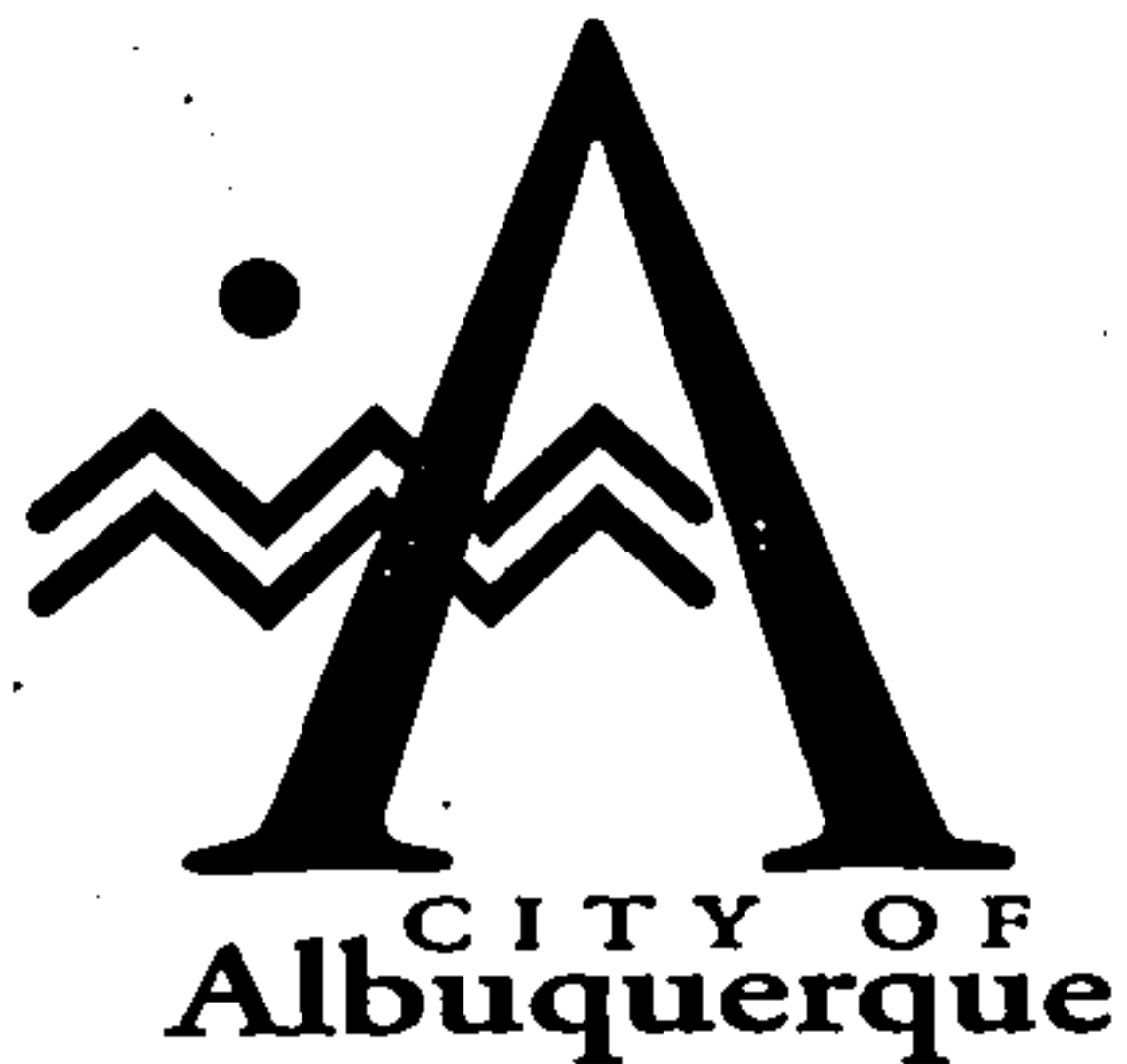
Also, prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham, PE
Hydrology Review Engineer

C: file



July 3, 1996

Martin J. Chávez, Mayor

Graeme Means
Jeff Mortensen & Assoc
6010-B Midway Park Blvd. NE
Albuquerque, NM 87109

**RE: BEL AIR ELEMENTARY (G17-D39). GRADING AND DRAINAGE PLAN FOR
GRADING, PAVING, AND SO #19 PERMIT APPROVALS. ENGINEER'S STAMP
DATED 6-12-96.**

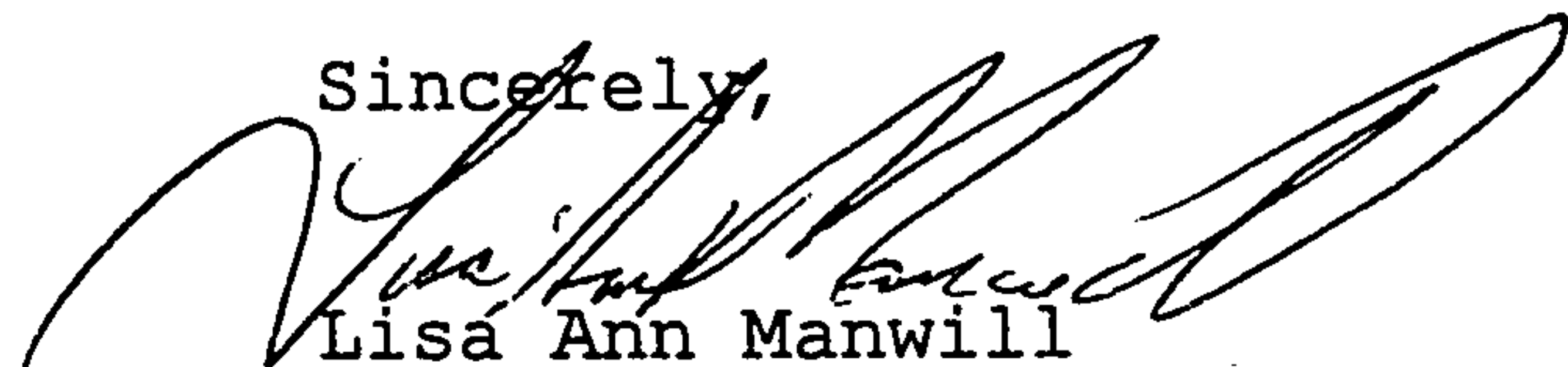
Dear Mr. Means:

Based on the information provided on your June 13, 1996
submittal, the above referenced project is approved for Grading,
Paving, and SO #19 permits.

Please provide this office with an Engineer's Certification upon
project completion.

If I can be of further assistance, please feel free to contact me
at 768-3622.

Sincerely,



Lisa Ann Manwill
Engineering Assoc./Hyd.

c: Arlene Portillo
Andrew Garcia
File

Good for You, Albuquerque!

