HYDROLOGY

L22/D30

WENONAH NORTH

L 22 - D 30

1 PLAN

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

HYDROLOGY SECTION PROJ. NO. L-22 DATE: 3/19/84

PLANNING DIVISION NO. _____

CONFERENCE RECAP

SUBJECT: Wanomah II

	WHO	REPRESENTING
ATTENDANCE:	Chris Weiss	
	Billy Goolsby	

FINDINGS: ① Drainage Plan per DPM required
② Lotlines to be removed for drainage purposes or drainage covenant required.
③ Ponding required due to flooding downstream.
④ Paved access required.

Please provide a copy of recap w/submittal

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

SIGNED: Billy G. Goolsby SIGNED: Chris Weiss

TITLE: CE/Hydrology TITLE: CTS

DATE: 3/19/84 DATE: 3/19/84

INFORMATION SHEET

PROJECT TITLE WENONAH NORTH TYPE OF SUBMITTAL Drainage and Grading

ZONE ATLAS PAGE NO. L-22 CITY ADDRESS

LEGAL DESCRIPTION Lot 3-A Blk 1, Fale Addition Albuq. N.M.

ENGINEERING FIRM C.T.S. Inc. CONTACT 266-3444

ADDRESS 1100 Alvarado N.E. PHONE Chris Weiss

OWNER Ken Tekin CONTACT Ken

ADDRESS Eubank N.E. PHONE 884-8797

ARCHITECT Schlegal & Lewis CONTACT Jim Lewis

ADDRESS 1320 Central S.E. PHONE 247-1529

SURVEYOR Ron Forstbauer Survey Co. CONTACT Ron

ADDRESS 520 Chama N.E. PHONE 268-0248

CONTRACTOR CONTACT

ADDRESS PHONE

PRE-DESIGN MEETING:

___ YES
___ NO
___ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

___ SKETCH PLAT APPROVAL
___ PRELIMINARY PLAT APPROVAL
___ SITE DEVELOPMENT PLAN APPROVAL
___ FINAL PLAT APPROVAL
___ BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY APPROVAL
___ ROUGH GRADING PERMIT APPROVAL
___ GRADING/PAVING PERMIT APPROVAL
X OTHER Drainag and Grading (SPECIFY)

HYDROLOGY SECTION
RECEIVED
MAY 03 1984

DATE SUBMITTED: May 3, 1984

BY: Christopher Weiss

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

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

June 4, 1984

Mr. Christopher Weiss
CTS, Inc.
1100 A Alvardo, NE
Albuquerque, New Mexico 87110

REF: GRADING & DRAINAGE PLAN FOR WENONAH NORTH (L22-D30) RECEIVED MAY 3, 1984.

Dear Chris,

I have reviewed the above referenced submittal and forward the following comments.

1. Per our telephone conversation this date, the Q_5 criteria will be acceptable for this site. However, please he advised that the Q_5 discharge rate criteria is not normally accepted unless it is established with the analysis of downstream capacity.

2. As stated in the pre-disign, paved access is required. You do not indicate that Wenonah Avenue is to be paved, nor do you indicate that City approved street grades have been established.

3. You need to provide a detail of the retaining wall showing weep-holes and siting the City standard for this and any other standards by number.

4. What is the finished floor elevation for the building on the west side? How will this site impact that building since a retaining wall on the west property line is specified?

Should you have any questions or comments, please contact me at 766-7644.

Sincerely,

Billy J. Goolsby

Billy J. Goolsby
City/County Flood Plain Admin

BJG/cl

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

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

June 20, 1984

Mr. Christopher Weiss
CTS, Inc.
1100 A Alvarado NE
Albuquerque, NM 87110

REF: REVISED GRADING AND DRIANAGE PLAN FOR WENONAH NORTH (L22-D30)
RECEIVED JUNE 6, 1984

Dear Chris:

The above referenced plan, dated June 6, 1984, is approved.

Please attach a copy of this approved report along with the appropriately approved "Drainage Facilities Within Public R/W" document to the construction set prior to issuance of the building permit.

Also, please attach an Erosion Control Plan per the DPM for the period of construction.

If I can be of further assistance, please contact me at 766-7644.

Sincerely yours,

Billy J. Goolsby

Billy J. Goolsby, PE
City/County Flood Plain Admin.

BJG:mrk

cc: Greg Olson

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Wenonah North ZONE ATLAS/DRNG. FILE #: L-22/D30

LEGAL DESCRIPTION: Lot 3-A, Blk. 1, Tale Addition, Alb. N.M.

CITY ADDRESS: 13101 Wenonah S.E.

ENGINEERING FIRM: Weiss-Hines Eng. CONTACT: Chris Weiss

ADDRESS: 1100 Alvarado N.E. PHONE: 266-3444

OWNER: Frank Hines CONTACT: Frank Hines

ADDRESS: PHONE: 298-4444

ARCHITECT: Schlegel-Lewis CONTACT: Jim Lewis

ADDRESS: PHONE: 247-1529

SURVEYOR: CONTACT:

ADDRESS: PHONE:

CONTRACTOR: CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

✓ YES

___ NO

___ COPY OF CONFERENCE RECORD SHEET PROVIDED

RECEIVED FEB 28 1985 HYDROLOGY SECTION

4/3/84 delegated

DRB NO. 84-221, SV-84-32 — 11/13/84

EPC NO. ~~Z-84-124~~ 10/18/84

PROJ. NO.

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

___ DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

___ GRADING PLAN

___ EROSION CONTROL PLAN

✓ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

___ BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

✓ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER _____ (SPECIFY)

DATE SUBMITTED: February 28, 1985

BY: Weiss-Hines Eng.

Submitted on _____ Received by _____

WEISS-HINES ENGINEERING, INC.

RECEIVED
FEB 28 1985
HYDROLOGY SECTION

February 27, 1985

Mr. Fred Aguirre, P.E.
City of Albuquerque, Engineering Division
P.O. Box 1293
Albuquerque, NM 87103

Re: Certification of Wenonah North Drainage Improvements for Issuance of C.O. to Frank Hines.

Dear Fred:

On Wednesday the 27th, I inspected the above referenced site for compliance with the approved plan. As-built elevations are reflected on the enclosed plan. Changes to structures, such as retaining walls and walks are noted on the plan.

In particular, the site was constructed in substantial compliance to the approved plan. Aside from minor elevation variances, the site drains as planned. The single 6' high concrete wall in the center of the site was changed to two - 3' high railroad tie retaining walls separated by a planter. The retaining wall at the north end of the west parking area, and the garden wall at the north end of the east parking area, were not constructed due to the following changes: the pavement was not extended as far north as the plan showed, thus allowing room for slope transition; the area to the north was graded down in preliminary construction, thus eliminating much of the grade difference. Finally, front walk extensions to the south from two units were not constructed, with the resultant elimination of the under-walk drains.

Off site, the only variation to the plan was the location of the 4' walk along Wenonah Avenue. The walk was moved to a mid point between the R/W and the back of curb.

I have signed the certification statement on the as-built plan. If you have any questions concerning the scope of these changes, please contact me. Thank you.

Sincerely

Chris Weiss

Christopher L. Weiss
Weiss-Hines Engineering

sj

CIVIL ENGINEERING / HYDROLOGY / ENVIRONMENTAL DESIGN
1100 ALVARADO N.E. SUITE B ALBUQUERQUE, NEW MEXICO 87110 (505) 266-3444

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

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

March 5, 1985

Chris Weiss
Weiss & Hines Engineering, Inc.
1100-A Alvarado, NE
Albuquerque, New Mexico 87110

RE: CERTIFICATION FOR WENONAH NORTH (L-22/D30)

Dear Mr. Weiss:

Based on the information provided on your February 28, 1985 submittal, certification for the referenced drainage plan is not acceptable at this time. Listed you will find certain items that will need to be addressed before final certification is acceptable.

1. New information sheet designating resubmittal for certification.
2. Certification statement dated with revision date.
3. Railroad retaining wall section along with bearing capacity calculations because of the 6' difference.
4. Update as-built to reflect the cut-off for the pavement on the parking areas along with the slope alterations. Also, if any grading was done outside the property line, we will need concurrence from the adjacent property owner.
5. Provide copies of construction approval from the appropriate government agencies for construction within their right-of-ways and/or easements.

If you have any questions or comments regarding the certification of this project, please call me at 766-7644.

Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj

Hines Corporation

RECEIVED
MAR 27 1985
HYDROLOGY SECTION

March 14, 1985

Weiss-Hines Engineering
1100-A Alvarado NE
Albuquerque, N.M. 87110

Attn: Mr. Chris Weiss

Re: Wenonah North Apartments

Dear Mr. Weiss,

The earth moving contractor for the Wenonah Apartments at 13101 Wenonah SE, during the clean-up of the site moved debris, extra earth, etc. and some materials were place on adjacent properties.

After the apartment site preparation was completed, the contractor cleaned up the off-site areas and restored them to their original condition. Some vertical drops were also dressed up during the clean-up operation to make the site more attractive.

If I can be of further assistance, please let me know.

Thank you.

Sincerely,

Frank L. Hines

Frank L. Hines

FLH/lv

cc: Ken Tekin, Inc.
Schlegel & Lewis Architects

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Wenonah North ZONE ATLAS/DRNG. FILE #: L-22/D30

LEGAL DESCRIPTION: Lot 3-A, Blk. 1, Tale Addition, Albuquerque, N.M.

CITY ADDRESS:

ENGINEERING FIRM: Weiss-Hines, Eng. CONTACT: Chris Weiss

ADDRESS: 1100 Alvarado N.E. PHONE: 266-3444

OWNER: Ken Tekin CONTACT:

ADDRESS: 3900 Eubank, N.E. PHONE: Ken

ARCHITECT: CONTACT: 298-7522

ADDRESS: PHONE:

SURVEYOR: Ron Gordhamer Survey Co. CONTACT: Ron

ADDRESS: PHONE: 268-0248

CONTRACTOR: Stewart / Wines Const. CONTACT:

ADDRESS: PHONE: 298-4444

RECEIVED
MAR 27 1985
HYDROLOGY SECTION

PRE-DESIGN MEETING:

✓ YES

___ NO

___ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. ___

EPC NO. ___

PROJ. NO. ___

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

___ DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

___ GRADING PLAN

___ EROSION CONTROL PLAN

✓ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

___ BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

✓ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER ___ (SPECIFY)

DATE SUBMITTED: 3-26-85

BY:

DATE RECEIVED: RECEIVED BY:

WEISS-HINES ENGINEERING, INC.

March 26, 1985

RECEIVED
MAR 27 1985
HYDROLOGY SECTION

Mr. Bernie J. Montoya, C.E.
City of Albuquerque
Design Hydrology Section
123 Central N.W.
Albuquerque, NM 87102

Re: Certification of Wenonah North (L-22/D30)

Dear Bernie:

This letter is in reply to your comments of March 15, 1985, copy enclosed. We have addressed, as follows:

1. New information sheet submitted.
2. Certification statement redated.
3. Retaining wall capacity calc's submitted.
4. 'As-built' up dated for pavement on parking areas. Letter from Frank Hines regarding adjacent grade changes enclosed.
5. Copies of S.O. #19 submitted with letter.

We feel this resubmittal addresses your comments, and as such, respectfully ask for City Hydrology approval of the Wenonah North site. Thank you.

Sincerely,

Chris Weiss

Christopher Weiss
President
Weiss-Hines Engineering

sj

CIVIL ENGINEERING / HYDROLOGY / ENVIRONMENTAL DESIGN
1100 ALVARADO N.E. SUITE B ALBUQUERQUE, NEW MEXICO 87110 (505) 266-3444

Bacchus Consulting Engineers
STRUCTURAL ENGINEERS

March 27, 1985

Weiss-Hines Engineering, Incorporated
Attention: Christopher L. Weiss, PE
1100 Alvarado Drive NE
Suite B
Albuquerque, New Mexico 87110

ALBUQUERQUE
CODE ADMIN.
APR - 1 1985
U.B.C.
PLAN CHECK
SECTION

Subject: Railroad Tie Retaining Wall
Wenonah Village Apartments
13101 Wenonah Drive SE
Albuquerque, New Mexico

Sir:

At your request, I have prepared structural calculations for the subject wall to determine if it is adequate. Copies of those calculations are enclosed.

I have determined that spacing of the vertical ties at 8'0" on center is adequate as long as the difference in elevation from one side of the wall to the other does not exceed 3'0". For most of the length of the east-west leg of the wall, the elevation difference is less than 3'0". Along the north-south leg, the difference in elevation is greater than 3'0". However, for most of the length of that leg, a two-tier retaining structure has been constructed. Since the maximum elevation of either tier does not exceed 3'0", this portion of the wall is also adequate as constructed.

The only problem is at the southwest corner where the difference in elevation is approximately 4'0". For that difference, I have determined that the spacing of the vertical ties should not exceed 3'0". Because of the configuration of the wall, there is usually already a vertical tie at each end of each set of horizontal ties and in some cases a third tie at midspan of the horizontal ties. In this case, the average center to center spacing of the vertical ties is 2'8" which is satisfactory. Where the middle vertical tie does not now exist, it should be added.

630 Manzano, NE Suite D • Albuquerque, New Mexico 87110 • 505-262-2471

Bacchus Consulting Engineering
STRUCTURAL ENGINEERS

March 27, 1985
Weiss-Hines Engineering, Incorporated
Attention: Christopher L. Weiss, PE
Subject: Wenonah Village Retaining Wall
page 2

Last Monday, I met with you, Frank Hines, the landscape architect, and the construction superintendent to discuss this matter. I requested that a total of four additional vertical ties be added. If this has been done, I believe that the wall is structurally sound.

Please contact me if you have any questions.

Sincerely,

Bacchus Consulting Engineering,

Charles Bacchus

Charles Bacchus, PE

enc.

REGISTERED PROFESSIONAL ENGINEER
STATE OF NEW MEXICO
NO. 4897
CHARLES BACCHUS

ALBUQUERQUE
CODE ADMIN.
APR - 1 1985

630 Manzano, NE Suite D • Albuquerque, New Mexico 87110 • 505-262-2471

Trammell Crow Company

P. O. Box 6602
Albuquerque, New Mexico 87197
40 First Plaza, Suite 65
Albuquerque, New Mexico 87102
(505) 843-7525

April 3, 1985

City of Albuquerque
Attention: Drainage Engineer
Albuquerque, New Mexico

To Whom It May Concern:

This letter is to acknowledge that the Trammel Crow Company, Paul L. Silverman, Partner, is aware of, and does not have any objection to the leveling of our property done by Frank Hines during the construction of the Wenonah Apts. This property is located in the area of Tramway and Central Avenues.

Sincerely,

TRAMMELL CROW COMPANY

Paul L. Silverman

Paul L. Silverman
Partner

PLS/mf

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

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

April 16, 1985

Chris Weiss
Weiss-Hines Engineering
1100-A Alvarado Drive, NE
Albuquerque, New Mexico 87110

RE: CERTIFICATION FOR WENONAH NORTH
(L-22/D30)

Dear Mr. Weiss:

Based on the information provided on your March 27, 1985 resubmittal, certification for the referenced drainage plan is acceptable.

If you have any questions or comments, please feel free to call me at 766-7644.

Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj

Railroad Tie Retaining Wall

Try $D = 4.0\,ft \Rightarrow$ $H = 4.0\,ft$
$h = 1.33\,ft$
$S_1 = 0.533\ ksf$
$P = 2.56\ k$
$A \doteq 11.24$
$D' \doteq 12.53\,ft$ ~ n.g.

Try $D = 5.0\,ft \Rightarrow$ $H = 3.0\,ft$
$h = 1.0\,ft$
$S_1 = 0.667\ ksf$
$P = 1.08\ k$
$A = 3.79$
$D' = 4.67\,ft$ ~ ok

For 8 ft spacing of vertical ties, maximum difference in grade is 3.0 ft

B) Determine maximum spacing of vertical ties for which difference in grade can be 4'0".

$H = D = 4.00\,ft$
$h = H/3 = 1.33\,ft$
$S_1 = 0.133\,D = 0.533\ ksf$
$P = (L)(1/6)(0.030)(4.0)^3 = 0.32L,\ k$
$b \doteq 1.0\ ft$

Try $L = 4.0\,ft \Rightarrow$ $P = 1.28\ k$
$A = 5.62$
$D' = 6.82\,ft$ ~ n.g.

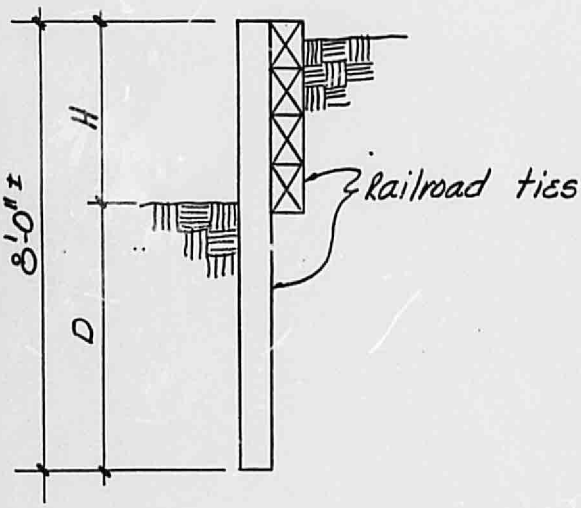
Try $L = 3.0\,ft \Rightarrow$ $P = 0.96\ k$
$A \doteq 4.21$
$D \doteq 5.3\,ft$ ~ ok

Maximum spacing $(L) = 3.0\,ft$ for $H = 4.0\,ft$

Project
Project No. Sheet No. 2
By Date Chk. Date

Railroad Tie Retaining Wall

Design in accordance with Section 2907(f)1 of UBC



A) Determine maximum height differential for which vertical ties spaced at 8 ft. ℄ are adequate

$Q_1 = (2)(.200) = 0.400$ ksf/ft ~ Table 29-B and footnote 4

$\gamma = .030$ kcf ~ unit weight of equivalent fluid (UBC section 2308(a))

$$D = \frac{A}{2}\left(1 + \sqrt{1 + \frac{4.86h}{A}}\right)$$

$$A = \frac{2.34P}{S_1 b}$$

$$P = (8)(1/2)(0.030)(H)^3 = 0.040H^3$$

$$S_1 = Q_1 D/3 = 0.133\,D$$

$$b \doteq \sqrt{10^2 + 8^2} \doteq 12.8 \text{ in} \doteq 1.0 \text{ ft}$$

$$h = H/3 = (8-D)/3$$

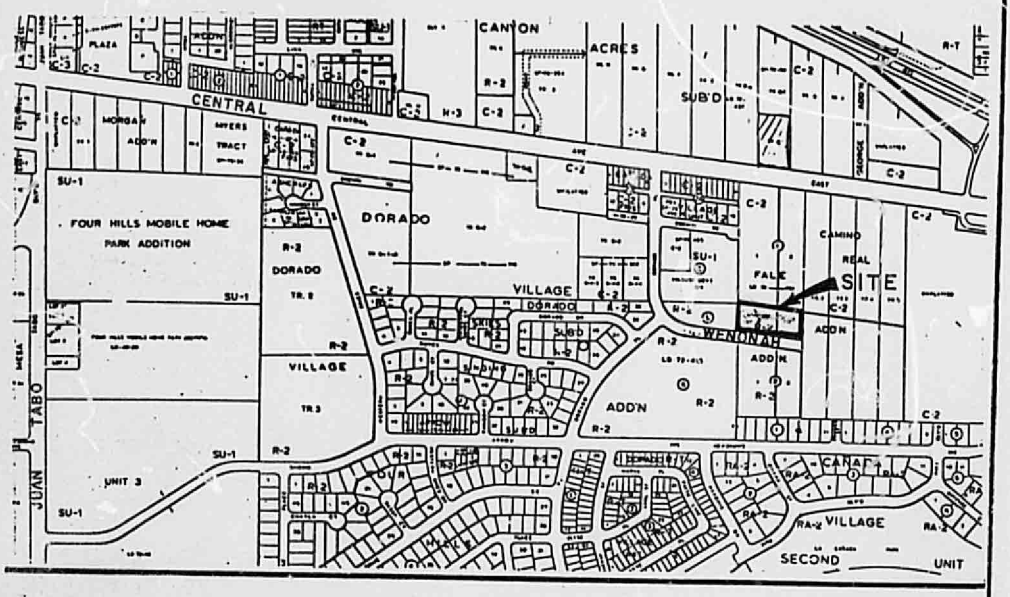
ALBUQUERQUE
CODE ADMIN.
APR - 1 1985
PLAN CHECK
SECTION

Project Wenowah Village
Project No. _____ Sheet No. 1
By CEB Date 3/20/85 Chk. _____ Date _____

CITY OF ALBUQUERQUE

L 02-P30

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



VICINITY MAP L-22

LEGAL: Lot 3-A, Block 1, Fale Addition, Albuquerque, N.M.

CHRISTOPHER J. [illegible]
NEW MEXICO
REGISTERED PROFESSIONAL ENGINEER

THIS SO #19 ONE IN CONJUNCTION WITH WORK ORDER # 249. ONE PERMIT FOR ALL [illegible] 3/12/85

NOTICE TO CONTRACTOR

1. An excavation/construction permit will be required before beginning any work within City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.

2. All work detailed on these plans to be performed, except as otherwise stated or provided hereon, shall be constructed in accordance with Public Works Contract No. 84-1.

3. Two working days prior to any excavation, contractor must contact Line Locating Service, 765-1234, for location of existing utilities.

4. Prior to construction, the contractor shall excavate and verify the horizontal and vertical locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.

5. Backfill compaction shall be according to residential street use.

SHEET 3 REVISED 8/21/84 RLC D-85

APPROVALS	NAME	DATE
A.C.E./DESIGN	[illegible]	6-5-84
INSPECTOR	[illegible]	3/11/85
A.C.E./FIELD	[illegible]	3/13/85

TITLE: WENONAH NORTH
13101 Wenonah Ave. S.E.
Albuquerque, New Mexico

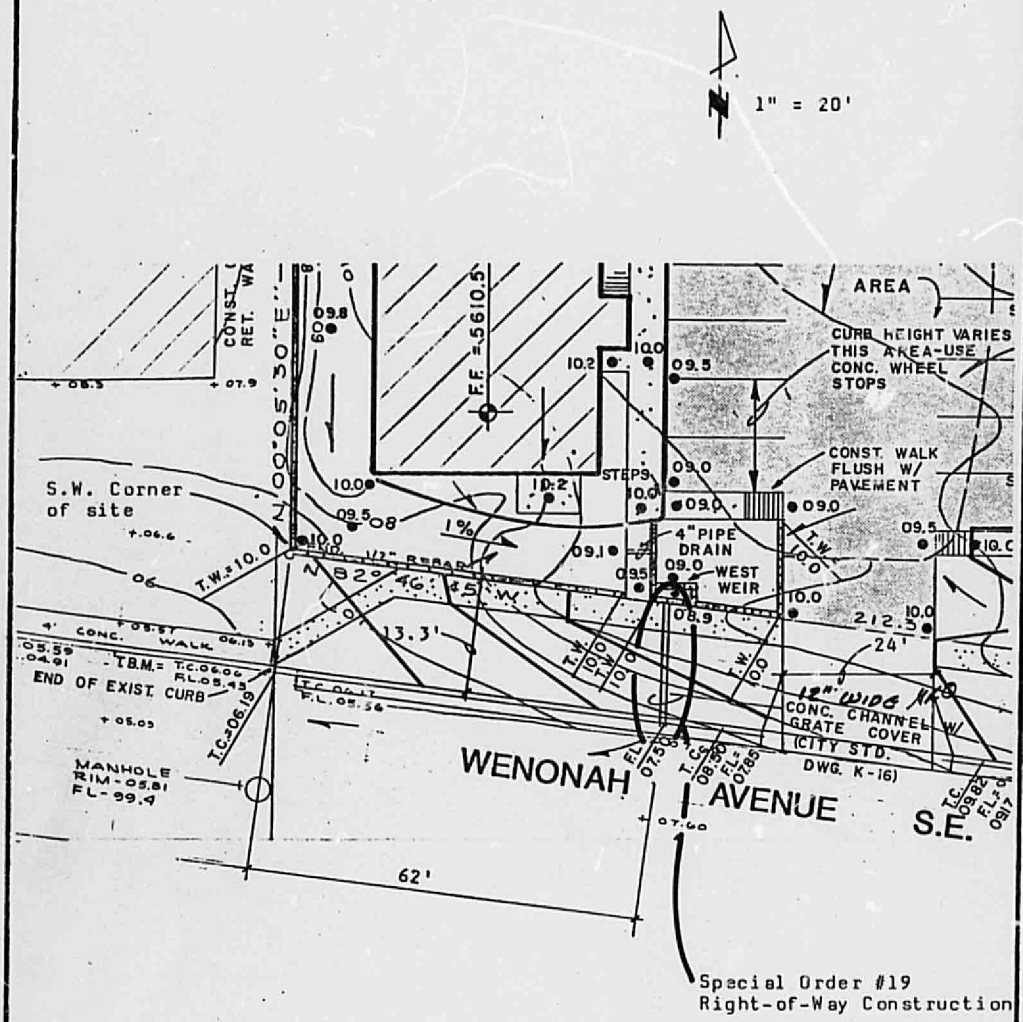
PERMIT NO. 16295
SHEET 1 OF 3

MAP NO. L-22

RECEIVED
MAR 13 1985
HYDROLOGY SECTION

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



Special Order #19
Right-of-Way Construction

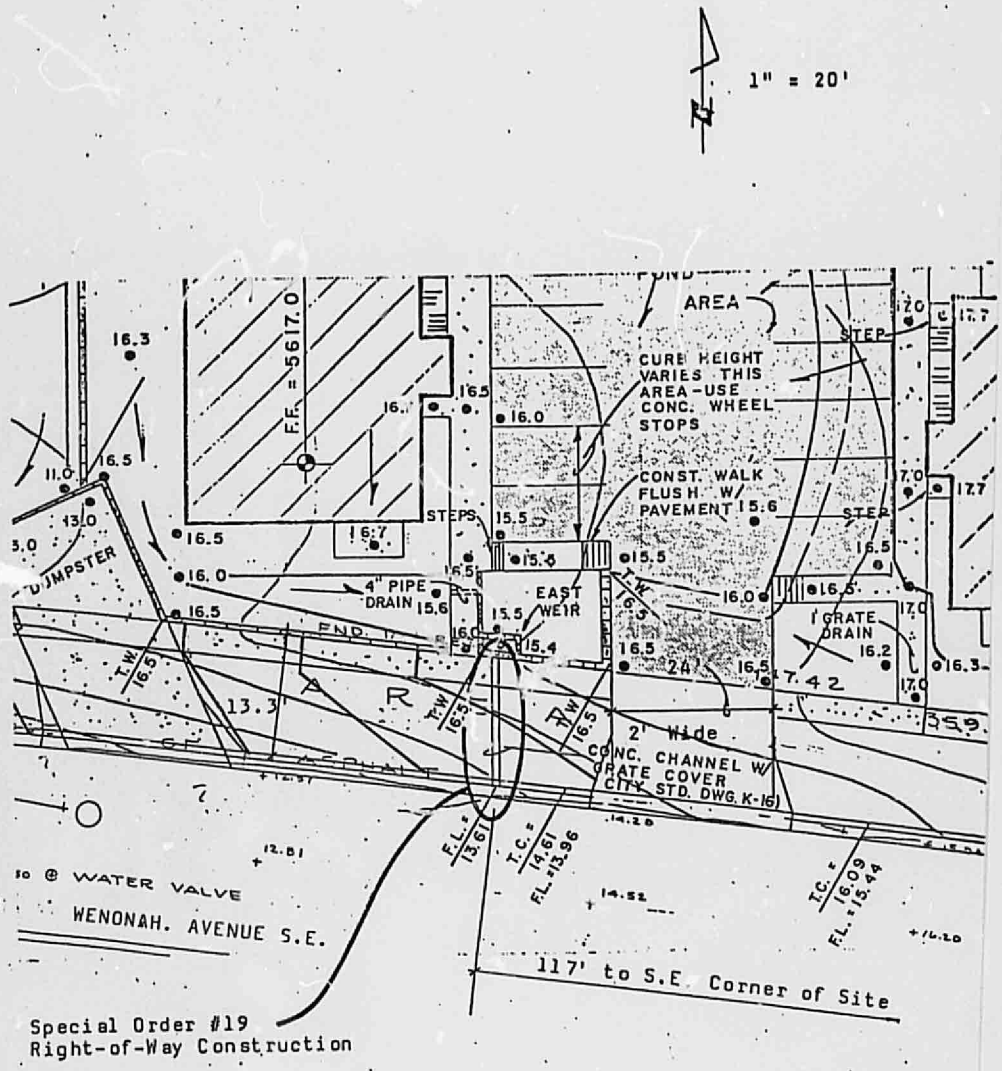
B.M. 2-L22 at Central
and Tramway
Elevation=5659.96

D-85

APPROVALS	NAME	DATE	TITLE: WENONAH NORTH 13101 Wenonah Ave. S.E. Albuquerque, New Mexico	
A.C.E./DESIGN		6-5-84		
INSPECTOR			PERMIT NO.	MAP NO. L-22
A.C.E./FIELD			SHEET 2 OF 3	

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



Special Order #19
Right-of-Way Construction

*REVISION 8-20-84
East Outlet Channel
changed to 2' Wide

*REVISION 8-20-84
East Outlet Channel
changed to 2' Wide

CHRISTOPHER R. LEWIS
NEW MEXICO
REGISTERED PROFESSIONAL ENGINEER

D-85
(Revised)

APPROVALS	NAME	DATE	TITLE: WENONAH NORTH 13101 Wenonah Ave. S.E. Albuquerque, New Mexico	
A.C.E./DESIGN	H.L. Olson	6/1/84		
INSPECTOR			PERMIT NO.	MAP
A.C.E./FIELD			SHEET 3 OF 3	NO. L-7