

DRAINAGE REPORT
TCR/ALB 200 UNIT APARTMENT COMPLEX

SITE LOCATION

The site is located at the northeast corner of Eubank Boulevard and Rolling Hills Drive. The site is currently vacant and has no existing structures. The site generally slopes from east to west at 5% or less to Eubank Boulevard.

METHODOLOGY

For this site the Development Process Manual, Volume 2, Design Criteria for the City of Albuquerque was followed to calculate the peak runoff. The method designated Part A in the January 1991 version of Section 22.2 was used to determine the runoff for each basin. The charts and formulas in Part A were followed using the 100 year frequency 6 hour rainfall as the design storm. The site is located in Zone 4 as determined from Figure A. The approved Master Grading and Drainage Plan for the Meadows was followed for developed conditions.

EXISTING LOCATIONS

Basin A-1, A-2, and A-4, currently drains to Eubank Boulevard, through an existing driveway, and then travels north to Academy Boulevard. Approximately 4.3 CFS is discharged to Basin A-1 from the Retirement Center east of the property. Basins A-3, B-1 and B-2 drain to Eubank Boulevard and flow south to the Bear Canyon Tributary Arroyo. Basins C-1 and C-2 drain to the Eubank/Rolling Hills intersection and is collected by 4 existing storm inlets which also drain south to the Bear Canyon Tributary Arroyo.

PROPOSED CONDITIONS

The site will be developed following the Meadows Master Grading and Drainage Plan. Basins A-1, A-2, and A-4 all drain to Eubank Boulevard which drains to Academy Boulevard. The off-site flows (4.3 CFS) from the retirement center to the east is accepted and conveyed through a 4-foot concrete rundown to Basin A-1. The off-site flows and runoff from Basin A-1 is collected in a Type "C" storm inlet and conveyed in an 18 inch storm sewer through Basin A-2 discharging just south of the existing driveway at the northwest corner of the site. A profile of the private storm sewer with hydraulic gradeline is enclosed for your review. Using the Mannings Equation, the 18" storm sewer has a capacity of 16 CFS which is much greater than the 100 year flows of 7.5 CFS from Basin A-1 and the retirement center.

Runoff from Basin A-2 is collected in the driveways and parking lot and drains to the existing driveway located at the northeast corner of the site which discharges to Eubank Boulevard. To be conservative, Treatment D was used to determine the runoff for Basin A-2. The total discharge from the existing driveway to Eubank Boulevard is 24.2 CFS. Basin A-4 Sheet flows directly to Eubank Boulevard, totaling 0.7 CFS.

Runoff from Basin A-3 discharges through the main entrance to the apartment complex to Eubank Boulevard and then to the Bear Tributary Arroyo. Basin A-3 has a total runoff of 1.6 CFS. Basin B-1 drains to the parking area on the west side of the property and then through a 6.7-foot wide concrete rundown to Eubank Boulevard. These flows eventually drain to the Bear Tributary Arroyo. Three 2-foot wide sidewalk culverts are located at the sidewalk along Eubank. The width of the rundown was calculated using the Weir Equation. The peak discharge from Basin B-1 to Eubank is 10.9 CFS. Again, to be conservative, Treatment D was used to calculate runoff for the entire basin.

In Basin B-1, two 3-foot high timber retaining walls are located within the existing 20 foot wide sanitary sewer easement, therefore, an Encroachment Agreement with the City of Albuquerque will be required. Basin B-2 Sheet flows to Eubank with a discharge of 1.0 CFS.

Basin C-1 runoff flows to a 6.7 foot concrete rundown located along Rolling Hills Drive just east of the existing inlets in the north curb line. Sidewalk culverts are located at the proposed sidewalk location for Rolling Hills.

There are retaining walls throughout the site at the locations shown on the plans. Retaining walls less than 3 feet in height will be constructed with landscape timber as shown on the wall section attached to this report. Retaining walls greater than 3 feet in height will be constructed with concrete masonry units as shown on the attached wall section sheet.

The following tables show the runoff and rundown width calculations for the site.

BASIN RUNOFF CALCULATIONS

BASIN	AREA	ZONE	TREATMENT	100-YEAR PEAK DISCHARGE/ACRE	PEAK DISCHARGE
A-1	0.61 AC	4	D	5.23 CFS/ACRE	3.2 CFS
A-2	3.19	4	D	5.23	16.7
A-3	0.31	4	D	5.23	1.6
A-4	0.21	4	C	3.48	0.7
B-1	2.08	4	D	5.23	10.9
B-2	0.29	4	C	3.48	1.0
C-1	3.09	4	D	5.23	16.2
C-2	0.74	4	C	3.48	2.6

SIZE RUNDOWNS

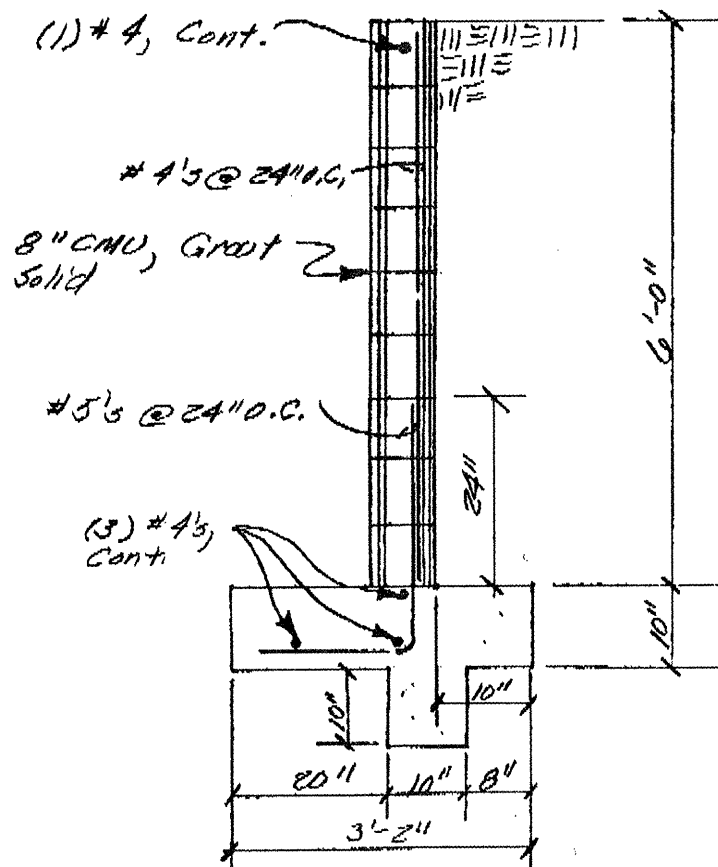
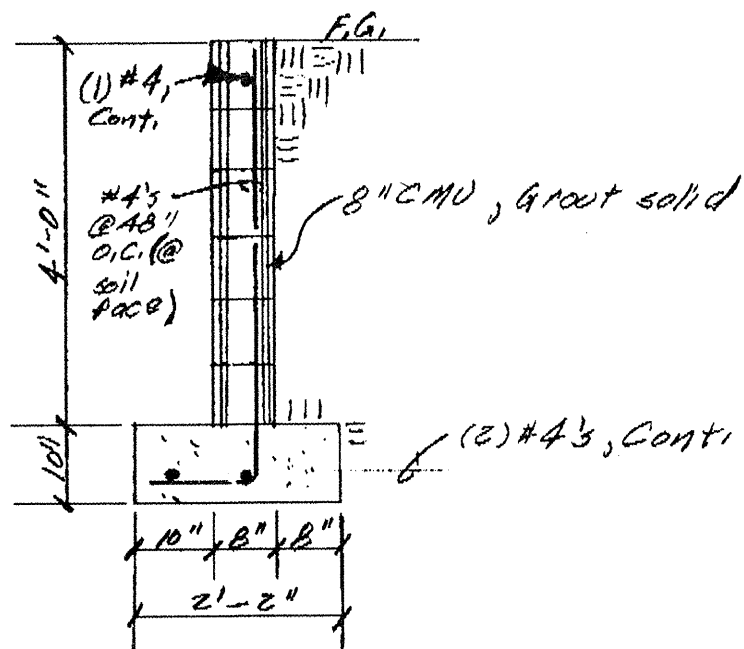
WEIR EQUATION

$$Q = CLH^{3/2}$$

C=3.0 H=0.5

BASIN	PEAK DISCHARGE	RUNDOWN WIDTH
Off-site	4.3 CFS	4' - 6" Height
B-1	10.9 CFS	6' - 8" Height
C-1	16.2 CFS	6' - 12" Height

4' WALL DETAIL



CONCRETE MASONRY WALL DETAIL

HYDRAULIC ANALYSIS

Run date: 07-25-1991

File: a:tcx.ST3

Return Period = 100 Yrs
Rainfall file: NOT SPECIFIED

LINE 1 / Q = 7.5 / HT = 18 / WID = 18 / N = .013 / L = 15 / JLC = .5

OUTFALL

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	13.45	13.15	12.35	5.42	13.90	15.97	1.65	1.38
UPSTRM	13.80	13.19	12.70	5.40	14.25	15.93	1.30	1.39

Drainage area (ac)	= 0	Slope of invert (%)	= 2.333
Runoff coefficient	= 0	Slope energy grade line (%)	= 2.336
Time of conc (min)	= 1	Critical depth (in)	= 13
Inlet time (min)	= 0	Req'd length curb inlet (ft)	= 0.0
Intensity (in/hr)	= 0.00	Req'd grate area (sf)	= 0.0
Cumulative C*A	= 0.0	Natural ground elev (ft)	= 15.5
Runoff contr (cfs)	= 7.5	Minimum cover (ft)	= 1
Default Q (cfs)	= 7.5	Depth at inlet opening (in)	= 0
Line capac. (cfs)	= 16.0		

LINE 2 / Q = 7.5 / HT = 18 / WID = 18 / N = .013 / L = 62 / JLC = .5

DNLN = 1

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	14.03	13.91	12.70	4.53	14.35	11.48	1.30	1.65
UPSTRM	15.26	13.19	11.16	3.40	15.71	15.93	1.69	1.39

Drainage area (ac)	= 0	Slope of invert (%)	= 2.355
Runoff coefficient	= 0	Slope energy grade line (%)	= 2.206
Time of conc (min)	= 0	Critical depth (in)	= 13
Inlet time (min)	= 0	Req'd length curb inlet (ft)	= 0.0
Intensity (in/hr)	= 0.00	Req'd grate area (sf)	= 0.0
Cumulative C*A	= 0.0	Natural ground elev (ft)	= 17.35
Runoff contr (cfs)	= 7.5	Minimum cover (ft)	= 1
Default Q (cfs)	= 7.5	Depth at inlet opening (in)	= 0
Line capac. (cfs)	= 16.1		

LINE 3 / Q = 7.5 / HT = 18 / WID = 18 / N = .013 / L = 146 / JLC = .5

DNLN = 2

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	15.49	15.91	14.16	4.53	15.81	11.48	1.69	1.65
UPSTRM	18.71	13.19	17.61	5.40	19.16	15.93	1.89	1.39

Drainage area (ac)	= 0	Slope of invert (%)	= 2.363
Runoff coefficient	= 0	Slope energy grade line (%)	= 2.300
Time of conc (min)	= 0	Critical depth (in)	= 13
Inlet time (min)	= 0	Req'd length curb inlet (ft)	= 0.0
Intensity (in/hr)	= 0.00	Req'd grate area (sf)	= 0.0
Cumulative C*A	= 0.0	Natural ground elev (ft)	= 21
Runoff contr (cfs)	= 7.5	Minimum cover (ft)	= 1
Default Q (cfs)	= 7.5	Depth at inlet opening (in)	= 0
Line capac. (cfs)	= 16.1		

LINE 4 / Q = 7.5 / HT = 18 / WID = 18 / N = .013 / L = 25 / JLC = .5

DNLN = 3

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	18.94	15.91	17.61	4.53	19.26	11.48	1.89	1.65
UPSTRM	19.30	13.19	18.20	5.40	19.75	15.93	1.80	1.39

Drainage area (ac)	= 0	Slope of invert (%)	= 2.360
Runoff coefficient	= 0	Slope energy grade line (%)	= 1.991
Time of conc (min)	= 0	Critical depth (in)	= 13
Inlet time (min)	= 0	Req'd length curb inlet (ft)	= 0.0
Intensity (in/hr)	= 0.00	Req'd grate area (sf)	= 0.0
Cumulative C*A	= 0.0	Natural ground elev (ft)	= 21.5
Runoff contr (cfs)	= 7.5	Minimum cover (ft)	= 1
Default Q (cfs)	= 7.5	Depth at inlet opening (in)	= 0
Line capac. (cfs)	= 16.1		

LINE 5 / Q = 7.5 / HT = 18 / WID = 18 / N = .013 / L = 68 / JLC = .5

DNLN = 4

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	19.53	13.91	18.20	4.53	19.85	11.48	1.80	1.65
UPSTRM	21.13	13.19	19.80	5.40	21.58	15.93	2.50	1.39

Drainage area (ac)	=	0	Slope of invert (%)	=	2.353
Runoff coefficient	=	0	Slope energy grade line (%)	=	2.551
Time of conc (min)	=	0	Critical depth (in)	=	13
Inlet time (min)	=	0	Req'd length curb inlet (ft)	=	0.0
Intensity (in/hr)	=	0.00	Req'd grate area (sf)	=	0.0
Cumulative C*A	=	0.0	Natural ground elev (ft)	=	23.8
Runoff contr (cfs)	=	7.5	Minimum cover (ft)	=	1
Default Q (cfs)	=	7.5	Depth at inlet opening (in)	=	0
Line capac. (cfs)	=	16.1			



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 17, 1992

Dave Thompson
Wilson & Company
6611 Gulton Court NE
Albuquerque, NM 87109

RE: ENGINEER'S CERTIFICATION FOR CERTIFICATE OF OCCUPANCY FOR BUILDING
1 THRU 16 FOR TCR/AL13 200 UNIT COMPLEX (E21-D28D) ENGINEER'S
CERTIFICATION STATEMENT DATED 9/9/92.

Dear Mr. Thompson:

Based on the information provided on your September 9, 1992 submittal, Engineer
Certification for the above referenced site is acceptable.

If I can be of further assistance, please feel free to contact me at 768-2667.

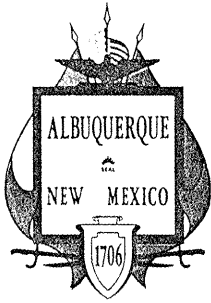
Sincerely,

Bernie J. Montoya, CE
Engineering Assistant

BJM/dl/WPHYD/3615

xc: Alan Martinez
File

PUBLIC WORKS DEPARTMENT



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 16, 1992

Dave Thompson
Wilson & Company
Post Office Box 3548
Albuquerque, New Mexico 87190

RE: ENGINEER'S CERTIFICATION FOR TEMPORARY CERTIFICATE OF OCCUPANCY
FOR BUILDINGS 10, 11, 12, 13, and 14 of TCR/ALB 220 UNIT APARTMENT
PHASE II (E-21/D28D) CERTIFICATION STATEMENT DATED JULY 2, 1992

Dear Mr. Thompson

Based on the information provided on your submittal of July 2, 1992,
Certification for the referenced site is acceptable for Temporary Certificate of
Occupancy.

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

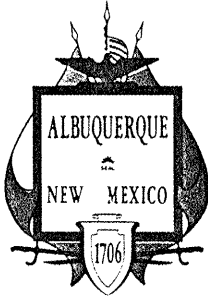
Cordially,

Bernie J. Montoya
Bernie J. Montoya, C.E.
Engineering Assistant

xc: Alan Martinez

BJM/bsj
(WP+2264)

PUBLIC WORKS DEPARTMENT



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 29, 1992

Dave Thompson
Wilson & Company
Post Office Box 3548
Albuquerque, New Mexico 87190

RE: REVISED DRAINAGE PLAN FOR TCR/ALB 220 UNIT APARTMENT COMPLEX
(E-21/D28D) REVISION DATED JUNE 9, 1992

Dear Mr. Thompson

Based on the information provided on your submittal of June 9, 1992, the above referenced plan is approved for Building Permit (canopies).

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

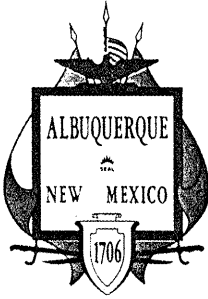
Cordially,

Bernie J. Montoya, C.E.
Engineering Assistant

xc: Alan Martinez

BJM/bsj
(WP+2264)

PUBLIC WORKS DEPARTMENT



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 8, 1992

Dave Thompson
Wilson & Company
Post Office Box 3548
Albuquerque, New Mexico 87190

RE: ENGINEERS CERTIFICATION FOR TEMPORARY CERTIFICATE OF
OCCUPANCY ON BUILDINGS 1, 2, 8, 9, 15, & 16 OF TCR/ALB
220 UNIT APARTMENT COMPLEX PHASE I (E-21/D28D)
ENGINEER'S STAMP DATED MAY 21, 1992

Dear Mr. Thompson:

Based on the information provided on your submittal of May 21, 1992, Engineer's Certification for Temporary Certificate of Occupancy release on the referenced site is acceptable.

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

Cordially,

Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bjf
(WP+2264)

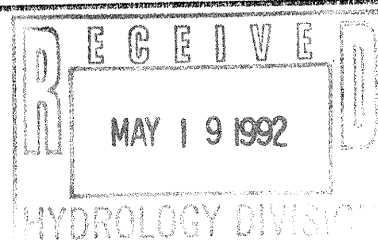
PUBLIC WORKS DEPARTMENT



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 14, 1992



CERTIFICATE OF COMPLETION AND ACCEPTANCE

Mr. Rocky Brown
Trammell Crow Residential
2 North Central Avenue, Suite 400
Phoenix, AZ 85004

RE: PROJECT NO. 4317.90, THE MEADOWS APARTMENT COMPLEX, (MAP NO. E-21)

Dear Mr. Brown:

This is to certify that the City of Albuquerque accepts Project No. 4317.90 as being completed according to approved plans and construction specifications. The City of Albuquerque will accept for continuous maintenance all public infrastructure improvements constructed as part of Project No. 4317.90.

The project is described as follows:

- Installed four (4) 2" water services on Rolling Hills Road, two (2) 6" gate valves for fire hydrant legs and three (3) 8" gate valves for future private fire hydrants.

Relocated the existing fire hydrant in median on Eubank Boulevard and set back the existing 2" water meter box to the back of the new deceleration lane curbing on Eubank Boulevard.

Installed new 4' diameter manhole in parking lot off Eubank with two (2) stub-outs for future extensions.

- The contractor's correction period began March 3, 1992 and will be effective for a period of one (1) year.

Sincerely,

Brian L. Speicher, P.E.
Chief Construction Engineer
Public Works Department

BLS:kj



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 6, 1992

Dave Thompson
Wilson & Company
Post Office Box 3548
Albuquerque, New Mexico 87190

RE: PHASING PLAN FOR TCR/ALB 200 UNIT APARTMENT COMPLEX
(E-21/D28D) ENGINEER'S STAMP DATED APRIL 22, 1992

Dear Mr. Thompson:

Based on the information provided on your submittal of April 29, 1992, the above referenced plan is approved for Phasing Plan.

Please be advised that once Phase One is completed and can stand by itself drainage wise, Engineer's Certification may be submitted for permanent Certificate of Occupancy release.

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

Cordially,

Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj
(WP+2264)

PUBLIC WORKS DEPARTMENT



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 14, 1991

Dave Thompson
Wilson & Company
6611 Gulton Court, NE
Albuquerque, New Mexico 87106

RE: REVISED GRADING/DRAINAGE PLAN FOR TCR/ALB 200 UNIT APARTMENT
COMPLEX (E-21/D28D) REVISION DATED OCTOBER 8, 1991 (1 OF 2)
AND JULY 24, 1991 (2 OF 2)

Dear Mr. Thompson:

Based on the information provided on your resubmittal of October 1991, the referenced site is approved for Rough Grading and 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's Certification per the DPM Checklist must be submitted for review.

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

Cordially,

Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj
(WP+2684)

PUBLIC WORKS DEPARTMENT

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

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 24, 1991

Dave Thompson, P.E.
Wilson & Company
6611 Gulton Court, NE
Albuquerque, New Mexico 87109

RE: GRADING & DRAINAGE PLAN FOR TCR/ALB 220 UNIT APARTMENT COMPLEX
RECEIVED SEPTEMBER 16, 1991 FOR GRADING & BUILDING PERMIT APPROVAL
(E-21/D28D)

Dear Mr. Thompson:

Based on the information provided on the referenced submittal, the following comments should be addressed prior to approval of Rough Grading:

1. Your note states that the contractor is required to secure the top soil disturbance permit from Bernalillo County Environmental Health Department; is this site in the County?
2. You need to provide a temporary bench mark on site, show the location and elevation?

Prior to release of Building Permit, the following items need to be addressed because we continue to be concerned with the drainage between the buildings:

1. You should consider increasing the scale to 1" = 20', this will help the surveyor stake the site and the contractor to grade it in order to assure positive drainage between buildings.
2. Show flow arrows to designate swales between buildings
3. Show invert elevations for swales

PUBLIC WORKS DEPARTMENT

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

ENGINEERING GROUP

Telephone (505) 768-2500

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Dave Thompson, P.E.
September 24, 1991
Page 2

4. Show sidewalks between all buildings.
5. Show all roof drains for buildings.

Please be advised that prior to Certificate of Occupancy release, an Engineer's Certification must be approved by this office.

If you should have any questions, please do not hesitate to call me at 768-2650.

Cordially,



Gilbert Aldaz, P.E. & P.S.
Civil Engineer/Hydrology

xc: Roger Green, DRC Chairman
Larry Caudill, Env. Health

GA
wp+2684



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

August 19, 1991

Dave Thompson, P.E.
Wilson & Company
6611 Gulton Court, NE
Albuquerque, New Mexico 87109

RE: GRADING & DRAINAGE PLAN FOR TCR/ALB 220 UNIT APARTMENT COMPLEX
(E-21/D28D) ENGINEER'S STAMP DATED JULY 24, 1991

Dear Mr. Thompson:

Based on the information provided on the referenced submittal received July 25, 1991, the plan is approved for Preliminary and Final Plat for lot line removals only.

Please add a note requiring the contractor to secure a top soil disturbance permit from Environmental Health prior to rough grading approval. Add a signature block for Hydrology sign-off for rough grading also.

As for Building Permit approval, I am concerned that there is not enough detail showing grading requirements, particularly between buildings. I really think you should consider increasing the scale to 1" = 20', this may even help the surveyors and contractors to set the grades better. How do you propose to address the roof drainage for each of the buildings? It appears the grading has cross slope from one building to another, how are you proposing to divert these flows from the buildings? Provide additional spot elevations at the eastern drivepad in order to assure you have a sufficient drivepad per the D.P.M. requirements.

As for the work order, Project No. 4317.90 all sidewalk culverts should be included.

If you should have any questions, please do not hesitate to call me at 768-2650.

Cordially,

Gilbert Aldaz, P.E. & P.S.
Civil Engineer/Hydrology

xc: Roger Green, DRC Chairman
Larry Caudill, Env. Health

GA

PUBLIC WORKS DEPARTMENT

wp+2684

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

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 23, 1991

Dave Thompson, P.E.
Wilson & Company
6611 Gulton Court, NE
Albuquerque, New Mexico 87109

RE: REVISED CONCEPTUAL GRADING & DRAINAGE PLAN
FOR TCR/ALB 220 UNIT APARTMENT COMPLEX (E-21/D28D)
ENGINEER'S STAMP DATED MAY 20, 1991


Dear Mr. Thompson:

Based on the information provided on the referenced submittal received May 20, 1991, the plan is approved for Site Development Plan.

Please be advised that a detailed drainage and grading plan per the D.P.M. checklist will be required for Building Permit Approval.

If you should have any questions, please do not hesitate to call me at 768-2650.

Cordially,


Gilbert Aldaz, P.E. & P.S.
Civil Engineer/Hydrology

GA
wp+2684

PUBLIC WORKS DEPARTMENT

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

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER

FILE COPY



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

November 1, 1990

Dave Thompson
Wilson & Company
6611 Gulton Court, NE
Albuquerque, New Mexico 87109

RE: CONCEPTUAL GRADING & DRAINAGE PLAN FOR TCR/ALB 220 UNIT
APARTMENT COMPLEX, (E-21/D28D)
ENGINEER'S STAMP DATED OCTOBER 11, 1990

Dear Mr. Thompson:

Based on the information provided on the referenced submittal received October 22, 1990, the plan is approved for Site Development Plan.

Please be advised that a detailed drainage plan per the D.P.M. checklist will be required for Building Permit Approval.

If you should have any questions, please do not hesitate to call me at 768-2650.

Cordially,

Gilbert Aldaz, P.E. & P.S.
Civil Engineer/Hydrology

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wp+2264

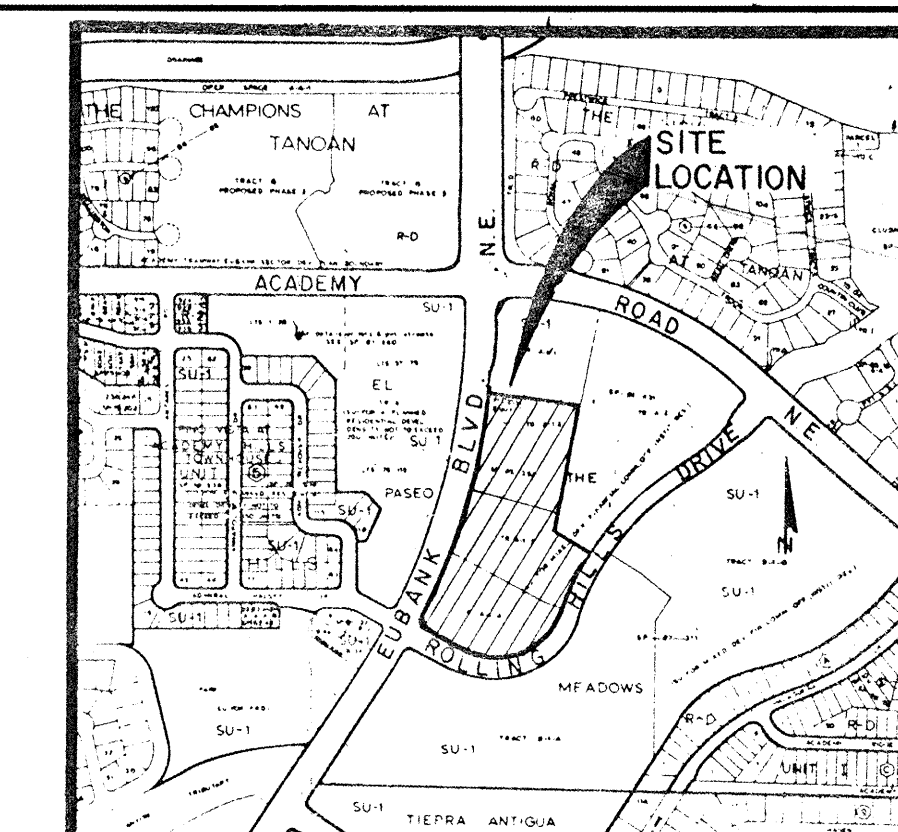
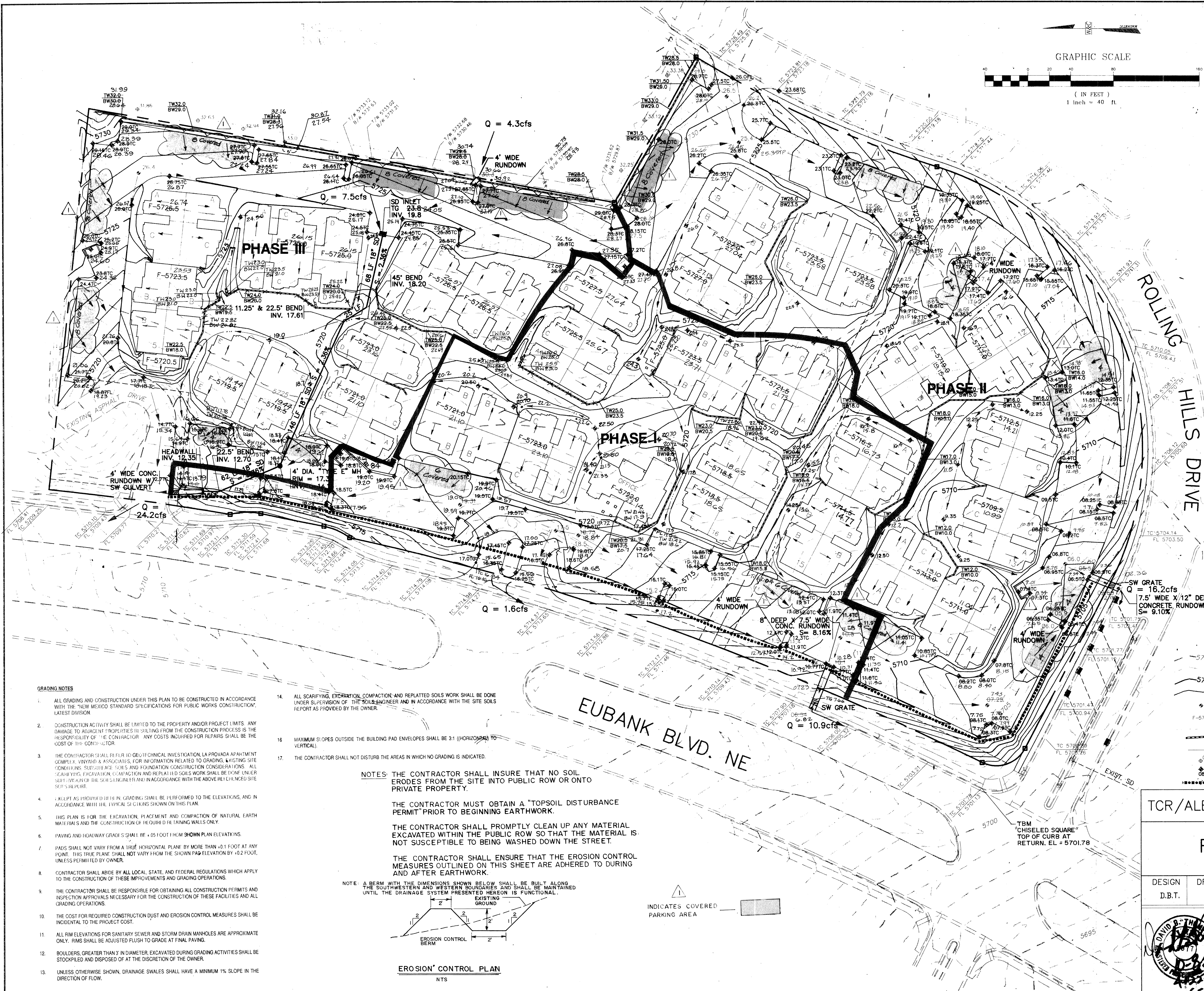
PUBLIC WORKS DEPARTMENT

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

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER



LOCATION MAP
ZONE ATLAS MAP NO. E-21

ENGINEER'S CERTIFICATION - PHASE I
I, DAVID THOMPSON, DO HEREBY CERTIFY THAT THE AS-BUILT INFORMATION HEREON IS IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED GRADING PLAN.

ENGINEER'S CERTIFICATION - PHASE II
I, STEVEN J. METRO, DO HEREBY CERTIFY THAT THE AS-BUILT INFORMATION HEREON IS IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED GRADING PLAN.

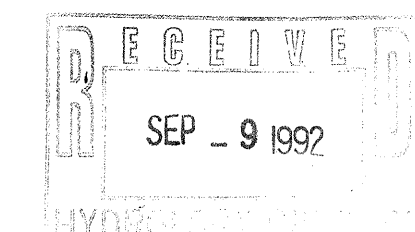
ENGINEER'S CERTIFICATION - PHASE III
I, DAVID THOMPSON, DO HEREBY CERTIFY THAT THE AS-BUILT INFORMATION HEREON IS IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED GRADING PLAN.

LEGAL DESCRIPTION
TRACTS A-1-2, A-1-3, A-1-4 OF THE MEADOWS

BENCH MARK
STANDARD ACS 3-1/4" ALUMINUM CAP STAMPED "8-E21 1985" LOCATED 36 MILES EAST OF THE INTERSECTION OF SAN MATEO AND ACADEMY RD. ON THE LEFT SIDE OF ACADEMY RD. N.E. ELEVATION = 5702.26

LEGEND

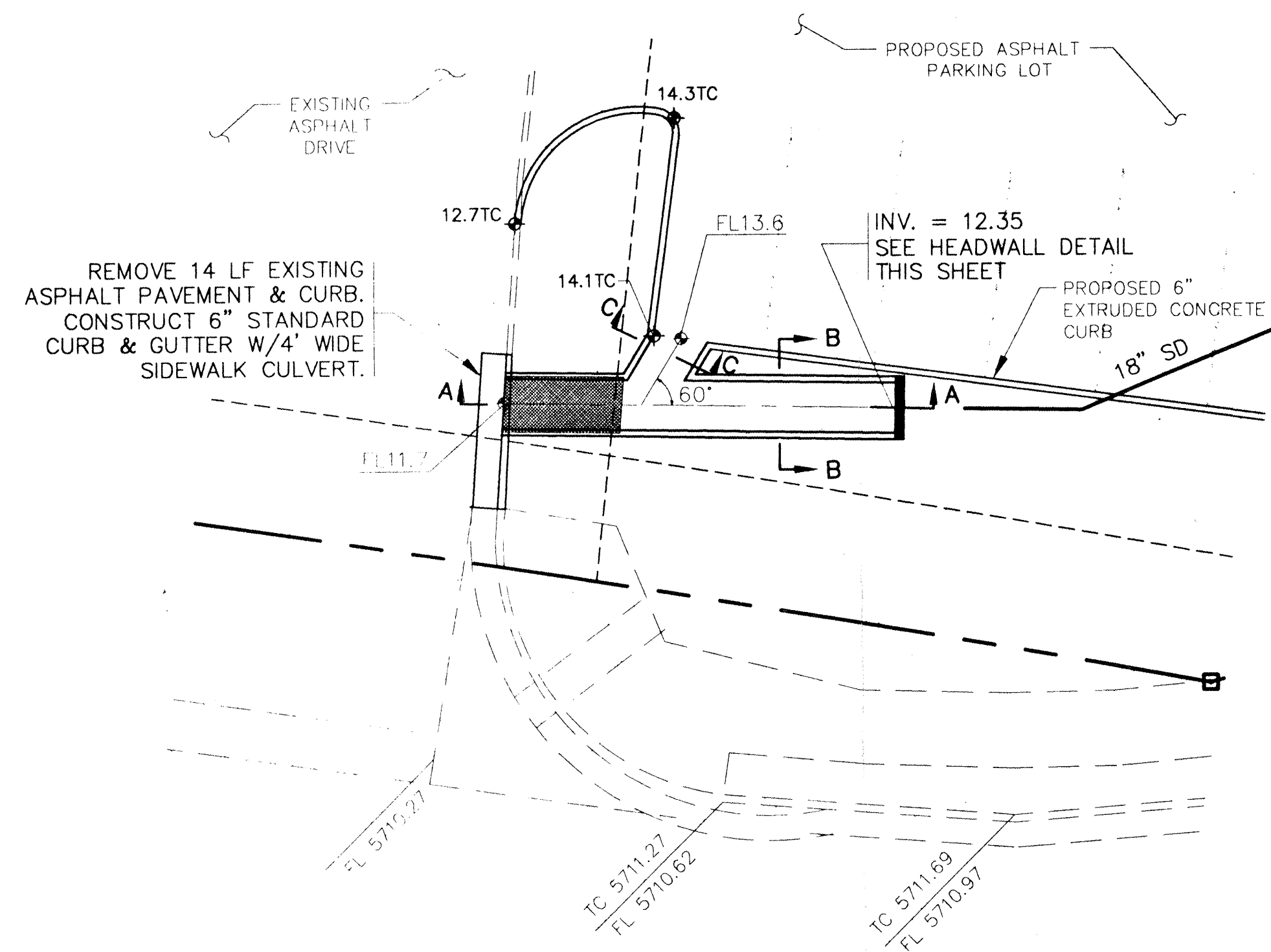
- 5705 - EXISTING INDEX CONTOUR
- 5705 - EXISTING INTERMEDIATE CONTOUR
- 5705 - PROPOSED INDEX CONTOUR
- 5705 - PROPOSED INTERMEDIATE CONTOUR
- 5705 - PROPOSED FL SPOT ELEVATION
- 5705 - FINISH FLOOR ELEVATION
- 5705 - PROPOSED CURB & GUTTER
- 5705 - PROPOSED RETAINING WALL
- 5705 - ROOF FLOW DIRECTION
- 5705 - FLOW LINE ARROW
- 5705 - EXISTING SPOT ELEVATION
- 5705 - PROPOSED TOP OF CURVE ELEVATION
- 5705 - EROSION CONTROL BERM



TCR/ALB. 200 UNIT APARTMENT COMPLEX

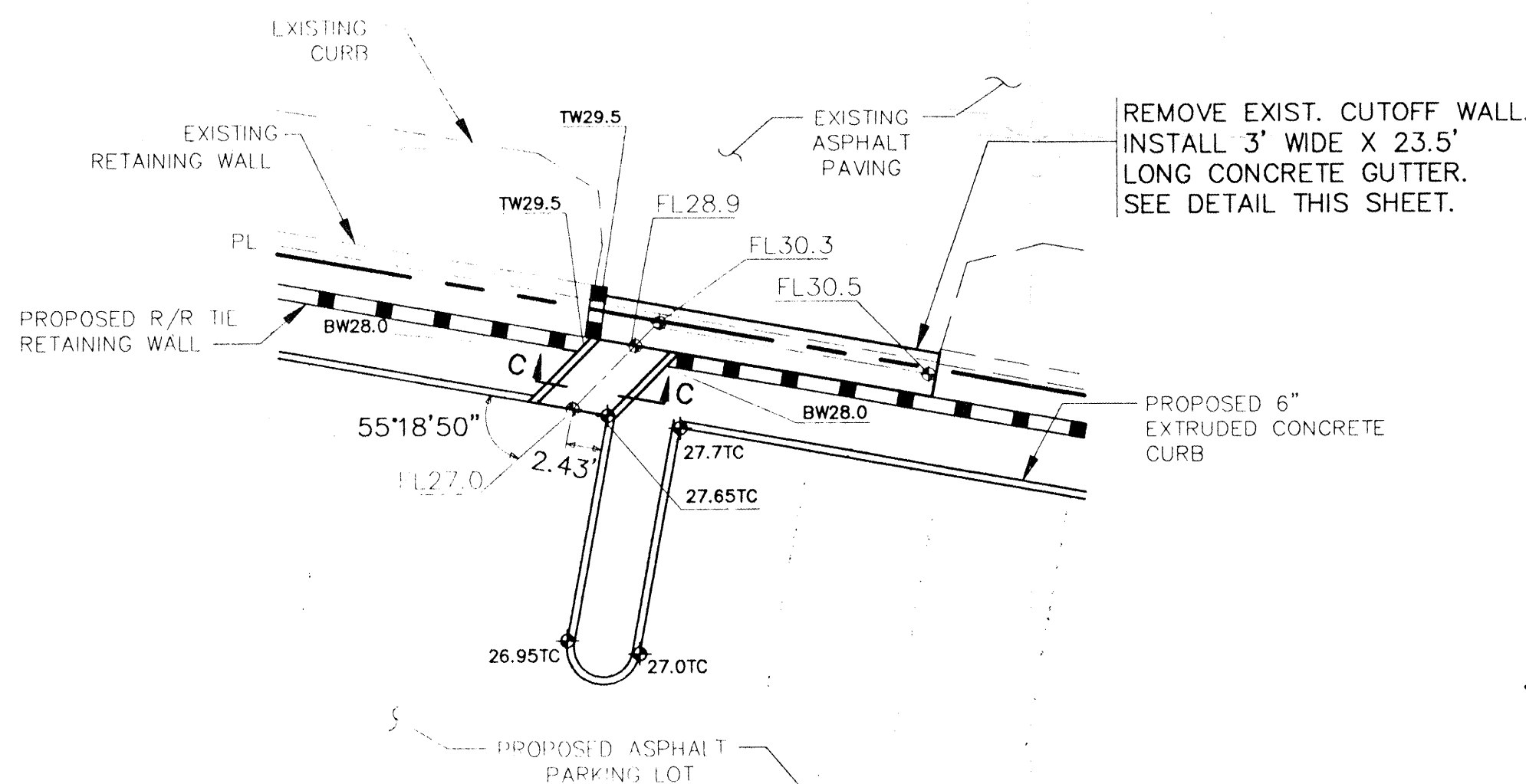
FINAL GRADING PLAN PHASING PLAN

DESIGN D.B.T.	DRAWN K.I.S.	DATE JULY 1991
FILE NO. 90-551D		SHEET NO. 1 OF 2
WILSON & COMPANY 6611 GULTON CT ALBUQUERQUE, NEW MEXICO 87109 (505) 345-5345		



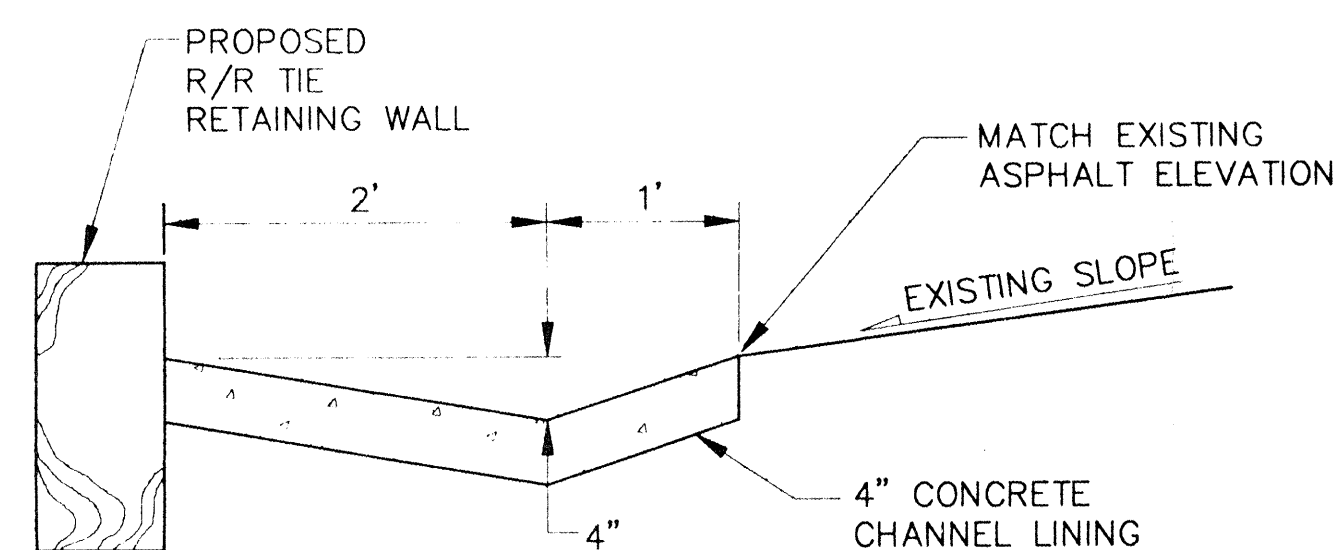
BLOW-UP DETAIL A

SCALE: 1" = 10'



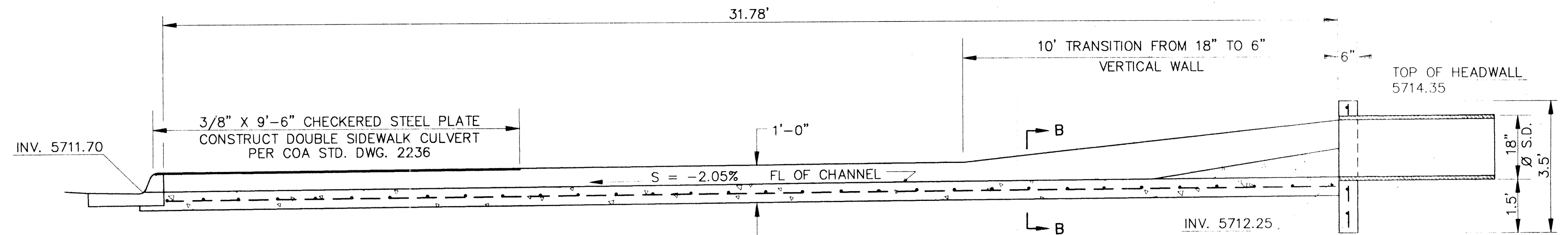
BLOW-UP DETAIL B

SCALE: 1" = 10'



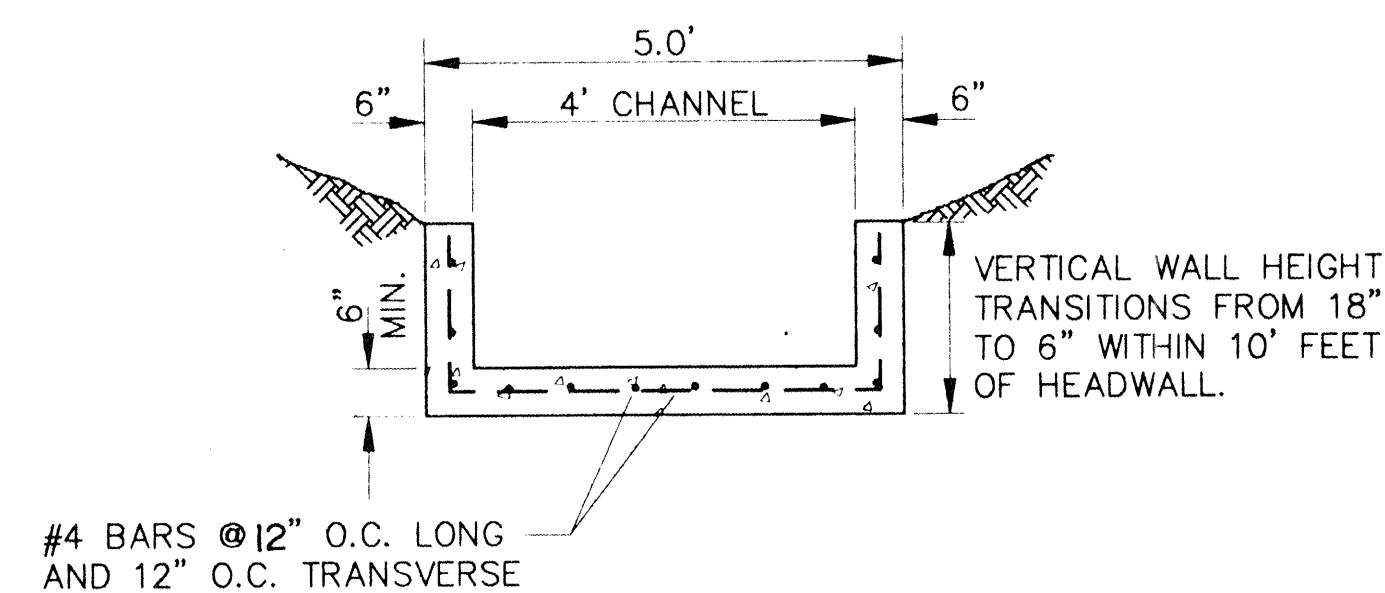
CONCRETE GUTTER DETAIL

SCALE: 1" = 1'



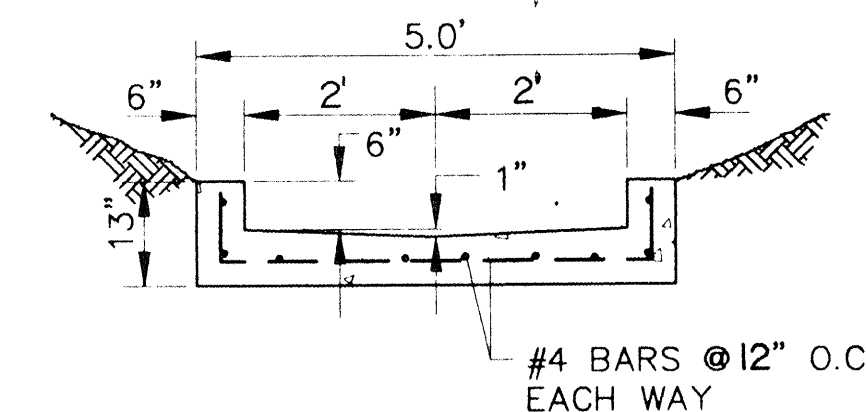
SECTION A-A

SCALE: 1" = 2'



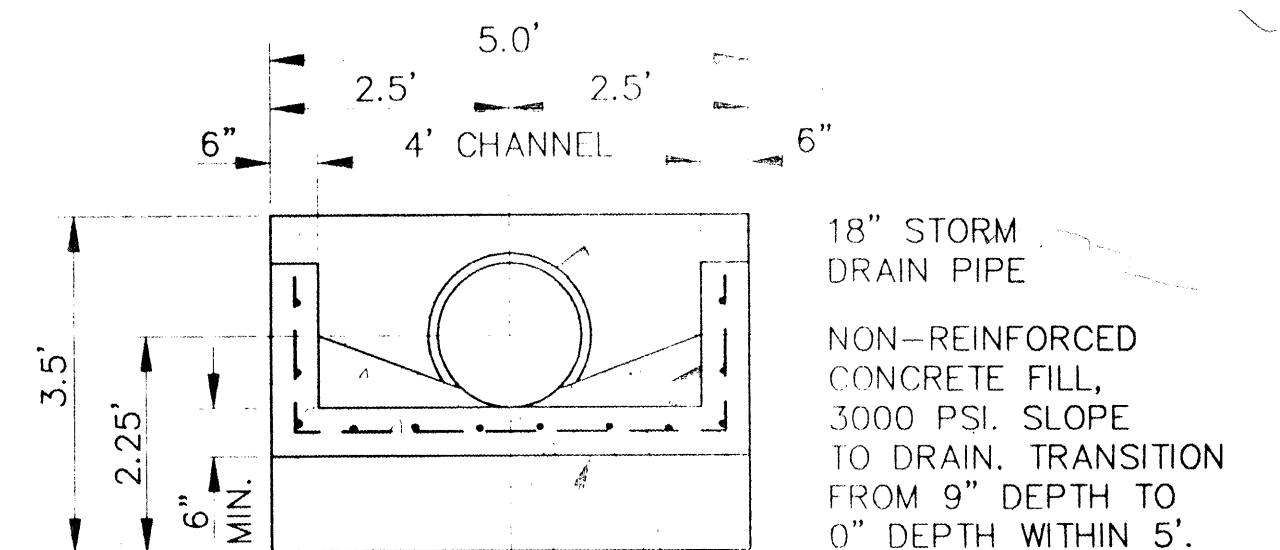
SECTION B-B

SCALE: 1" = 2'



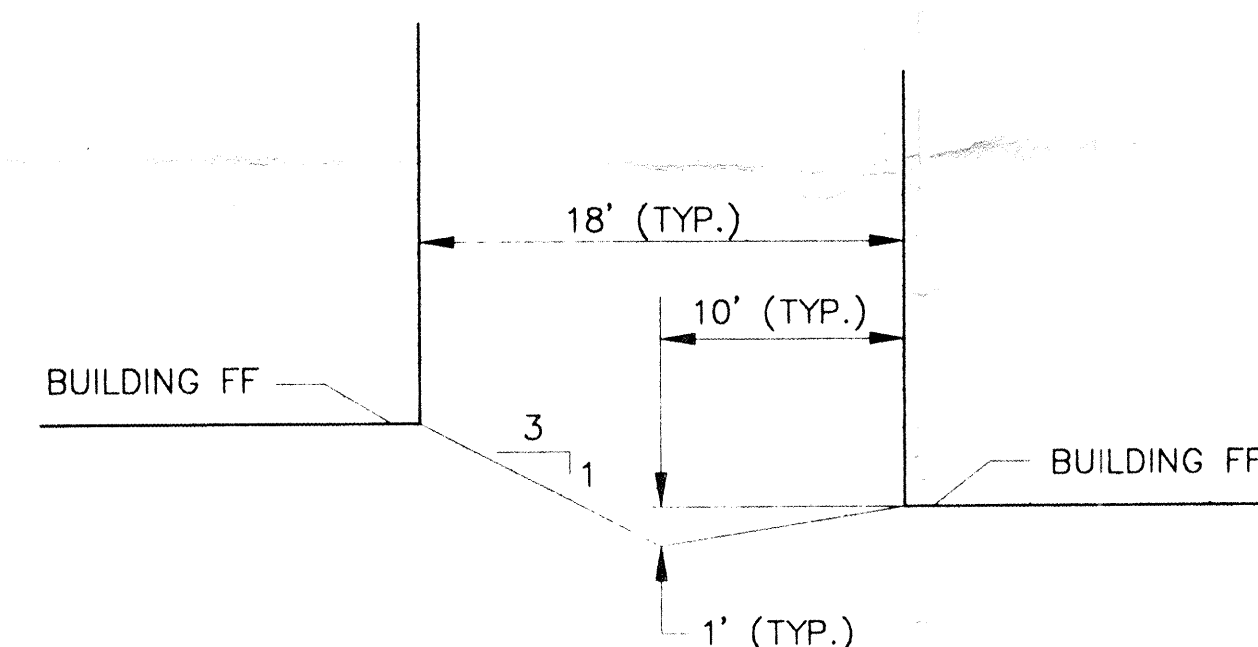
SECTION C-C

SCALE: 1" = 2'



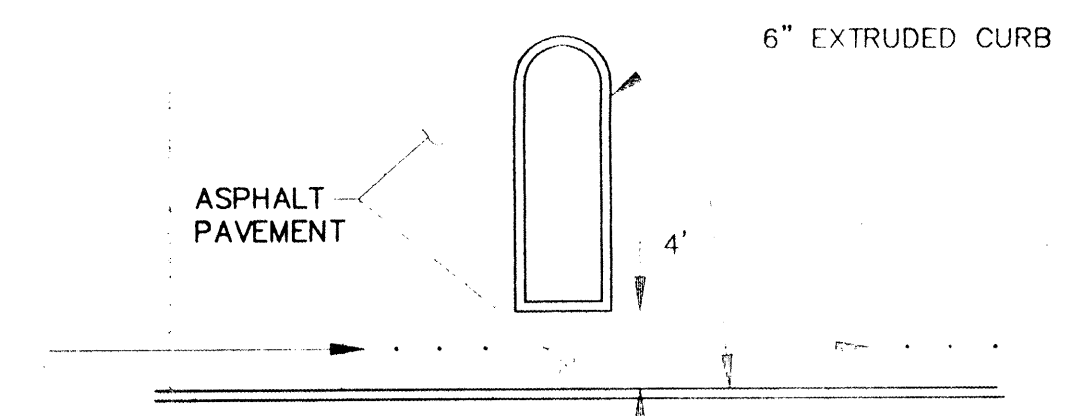
HEADWALL DETAIL

SCALE: 1" = 2'



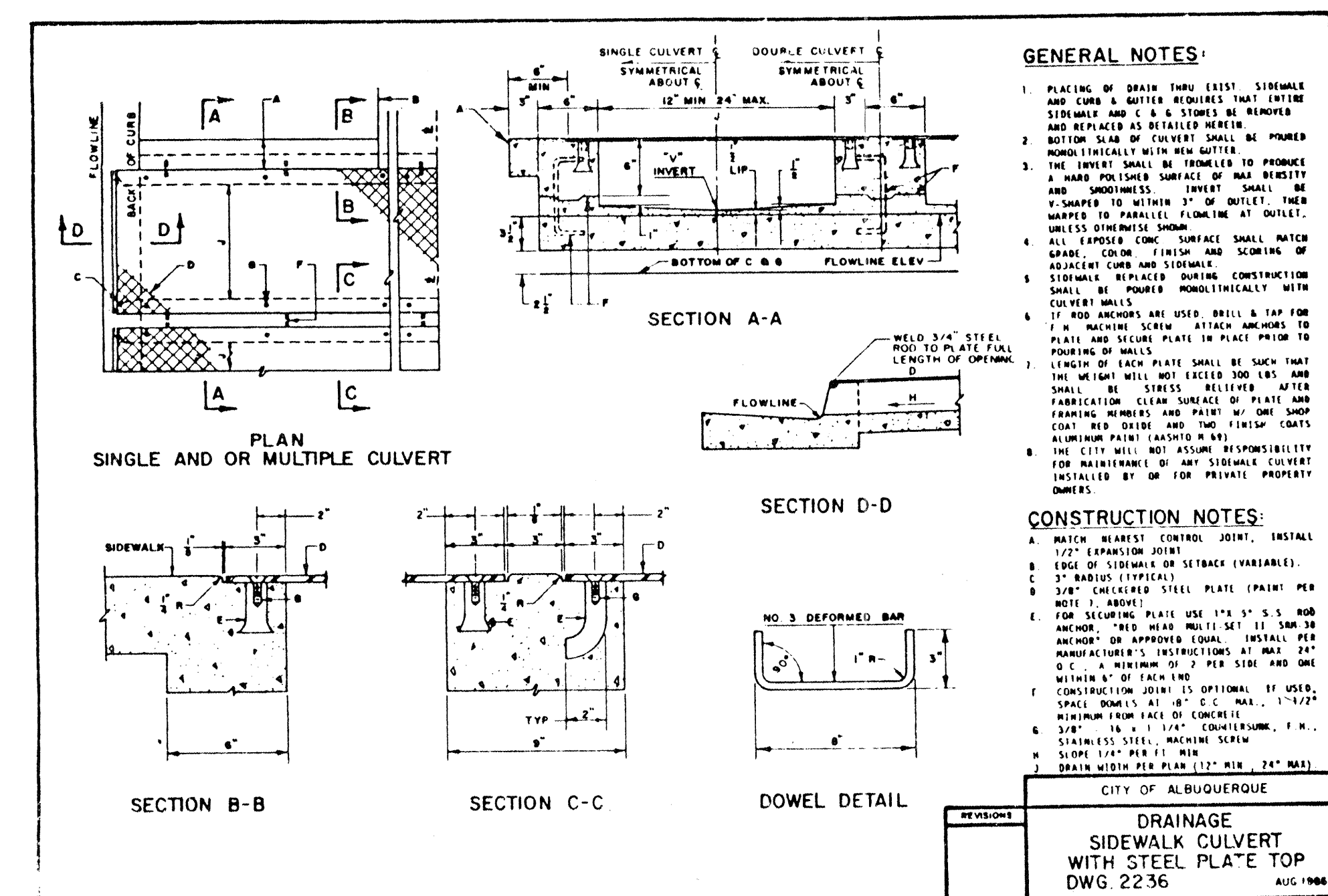
TYPICAL SWALE BETWEEN BUILDINGS

NTS



TYPICAL ASPHALT RUNDOWN BETWEEN PARKING AREAS

SCALE: 1" = 10'

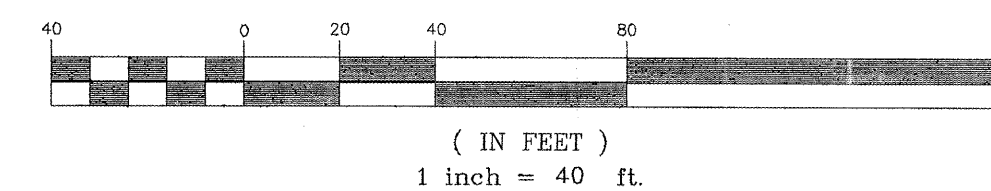


Hydrology
Inspector
ACE/Field

TCR/ALB. 200 UNIT APARTMENT COMPLEX			
DRAINAGE DETAILS			
DESIGN D.B.T.	DRAWN K.I.S.	DATE JULY 1991	FILE NO. 90-551D
SHEET NO. 2		OF 2	

THE MEADOWS TRACT A - 2

GRAPHIC SCALE



THE MEADOWS TRACT B - 1

TRACT
A-1-1

ROLLING
HILLS DRIVE

EUBANK BLVD. NE

LEGAL DESCRIPTION

TRACTS A-1-2, A-1-3, A-1-4 OF
THE MEADOWS

BENCH MARK

STANDARD ACS 3-1/4" ALUMINUM CAP
STAMPED "8-E21 1985" LOCATED 3.6
MILES EAST OF THE INTERSECTION OF
SAN MATEO AND ACADEMY RD. ON
THE LEFT SIDE OF ACADEMY RD. NE.
ELEVATION = 5702.26

LEGEND

- 5705— EXISTING INDEX CONTOUR
- 5705— EXISTING INTERMEDIATE CONTOUR
- 5705— PROPOSED INDEX CONTOUR
- 5705— PROPOSED INTERMEDIATE CONTOUR
- 07.25 PROPOSED FL SPOT ELEVATION
- F-5720.0 FINISH FLOOR ELEVATION
- PROPOSED CURB & GUTTER
- PROPOSED RETAINING WALL
- PROPOSED ROOF DRAIN
- PROPOSED TOP OF CURVE ELEVATION
- EXISTING SPOT ELEVATION
- PROPOSED TOP OF CURVE ELEVATION
- EROSION CONTROL BERM

TCR/ALB. 200 UNIT APARTMENT COMPLEX

FINAL GRADING PLAN

OCT 8 1991

**WILSON
& COMPANY**

6611 GULTON CT
ALBUQUERQUE, NEW MEXICO
87109
(505) 345-5345

DESIGN
D.B.T.

DRAWN
K.I.S.

DATE
JULY 1991

FILE NO.
90-551D

SHEET NO. 1
OF 2

GRADING NOTES

1. ALL GRADING AND CONSTRUCTION UNDER THIS PLAN TO BE CONSTRUCTED IN ACCORDANCE WITH THE NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
2. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT PROPERTIES RESULTING FROM THE CONSTRUCTION PROCESS IS THE RESPONSIBILITY OF THE CONTRACTOR. ANY COSTS INCURRED FOR REPAIRS SHALL BE THE BURDEN OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL FURNISH TO GEOLOGICAL INVESTIGATION, LA PROVADA APARTMENT COMPLEX, UNIFORM 3-1/4" ALUMINUM CAP, FOR INFORMATION RELATED TO GRADING, EXISTING SITE CONDITIONS, SOILS, PLANT, AND FOUNDATION CONSTRUCTION CONSIDERATIONS. ALL GRADING SHALL BE IN ACCORDANCE WITH THE ABOVE REFERENCED SITE SPECIFICATIONS.
4. EXCEPT AS PROVIDED OTHERWISE, GRADING SHALL BE PERFORMED TO THE ELEVATIONS, AND IN ACCORDANCE WITH THE TYPICAL SECTIONS SHOWN ON THIS PLAN.
5. THIS PLAN IS FOR THE EXCAVATION, PLACEMENT AND COMPACTION OF NATURAL EARTH MATERIALS AND THE CONSTRUCTION OF REQUIRED RETAINING WALLS ONLY.
6. PAVING AND ROADWAY GRADES SHALL BE +25 FEET FROM SHOWN PLAN ELEVATIONS.
7. PADS SHALL NOT VARY FROM A TRUE HORIZONTAL PLANE BY MORE THAN +0.1 FOOT AT ANY POINT. THIS TRUE PLANE SHALL NOT VARY FROM THE SHOWN PAD ELEVATION BY +0.2 FOOT, UNLESS PERMITTED BY OWNER.
8. CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS AND GRADING OPERATIONS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL CONSTRUCTION PERMITS AND INSPECTION APPROVALS NECESSARY FOR THE CONSTRUCTION OF THESE FACILITIES AND ALL GRADING OPERATIONS.
10. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST.
11. ALL RIM ELEVATIONS FOR SANITARY SEWER AND STORM DRAIN MANHOLES ARE APPROXIMATE ONLY. RIMS SHALL BE ADJUSTED TO GRADE AT FINAL PAVING.
12. BOULDERS, GREATER THAN 3" IN DIAMETER, EXCAVATED DURING GRADING ACTIVITIES SHALL BE STOCKPILED AND DISPOSED OF AT THE DISCRETION OF THE OWNER.
13. UNLESS OTHERWISE SHOWN, DRAINAGE SWALES SHALL HAVE A MINIMUM 1% SLOPE IN THE DIRECTION OF FLOW.

14. ALL SCARPING, EXCAVATION, COMPACTION AND REPLACED SOILS WORK SHALL BE DONE UNDER SUPERVISION OF THE SUBCONTRACTOR AND IN ACCORDANCE WITH THE SITE SPECIFICATIONS AS PROVIDED BY THE OWNER.
15. MAXIMUM SLOPES OUTSIDE THE BUILDING PAD ENVELOPES SHALL BE 3:1 (HORIZONTAL TO VERTICAL).
17. THE CONTRACTOR SHALL NOT DISTURB THE AREAS IN WHICH NO GRADING IS INDICATED.

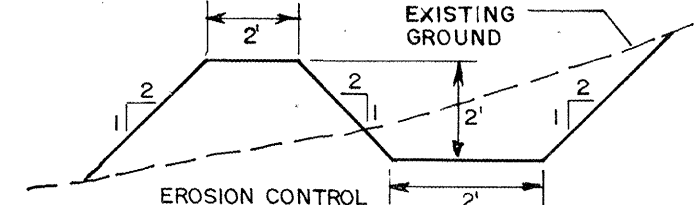
NOTES: THE CONTRACTOR SHALL INSURE THAT NO SOIL
ERODES FROM THE SITE INTO PUBLIC ROW OR ONTO
PRIVATE PROPERTY.

THE CONTRACTOR MUST OBTAIN A "TOPSOIL DISTURBANCE
PERMIT" PRIOR TO BEGINNING EARTHWORK.

THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL
EXCAVATED WITHIN THE PUBLIC ROW SO THAT THE MATERIAL IS
NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.

THE CONTRACTOR SHALL ENSURE THAT THE EROSION CONTROL
MEASURES OUTLINED ON THIS SHEET ARE ADHERED TO DURING
AND AFTER EARTHWORK.

NOTE: A BERM WITH THE DIMENSIONS SHOWN BELOW SHALL BE BUILT ALONG
THE SOUTHWESTERN AND WESTERN BOUNDARIES AND SHALL BE MAINTAINED
UNTIL THE DRAINAGE SYSTEM PRESENTED HEREON IS FUNCTIONAL.



EROSION CONTROL PLAN
NTS