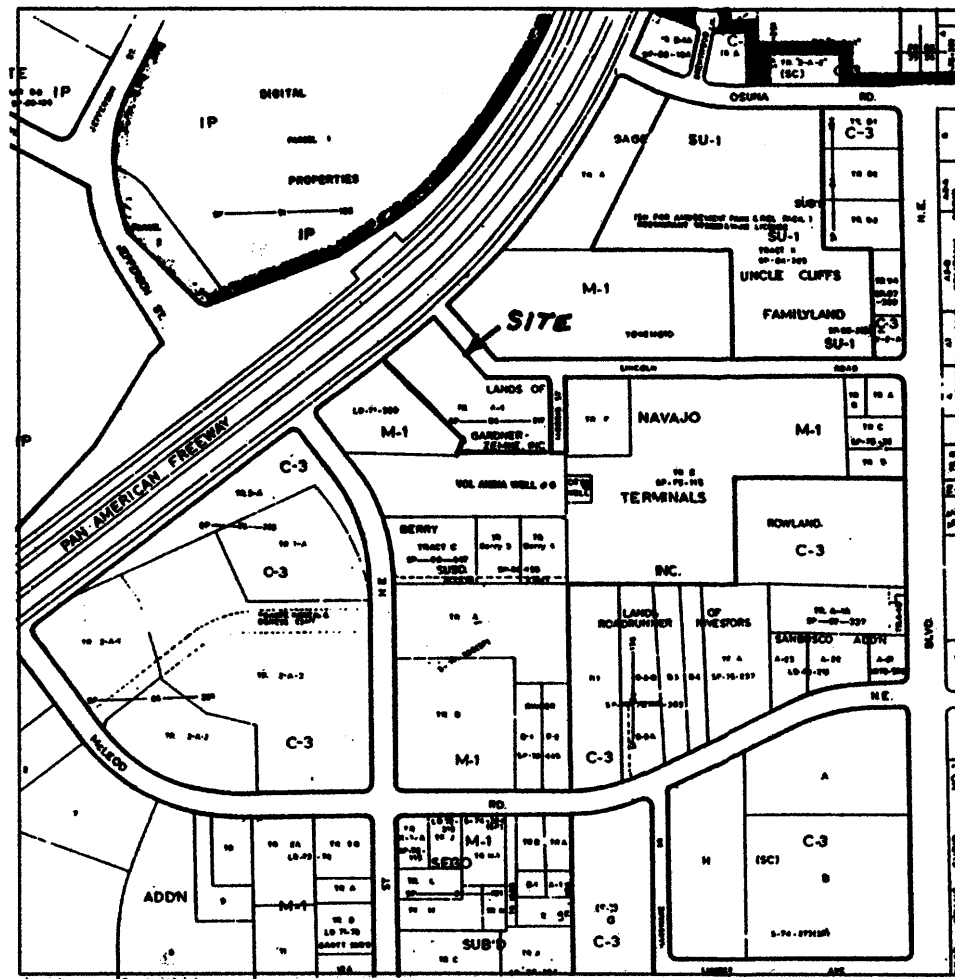


# LEGEND

- 5000 EXISTING CONTOURS
- 5000 PROPOSED CONTOURS
- EXISTING
- RUNOFF BOUNDARIES
- FLOW DIRECTION
- PROPOSED SPOT ELEVATIONS
- EXIST. BLDG. (REMODEL)
- EXIST. BLDG. (DEMOLISH)
- COBBLES
- CONCRETE
- EARTH
- COBBLE AND PERMEABLE MEMBRANE AREA



LOCATION MAP F-17-Z  
LEGAL DESCRIPTION: TRACT A-1, LANDS OF  
GARDNER-ZEMKE, INC.  
ADDRESS: 4600 LINCOLN AVE., N.E.



FLOOD BOUNDARY AND FLOODWAY MAP  
PANEL NO. 350002 0016

## DISCUSSION:

### EXISTING ON-SITE FLOWS:

THIS TRACT OF LAND, ZONED M-1, IS CURRENTLY USED AS A CONTRACTOR'S YARD AND VEHICLE MAINTENANCE FACILITY. IT IS BOUNDED ON THE WEST BY THE I-25 EAST FRONTAGE ROAD, ON THE NORTH BY LINCOLN AVE., N.E., AND ON THE EAST BY MONROE AVE., N.E. THE TRACT IS IN PRECIPITATION ZONE 2.

THE EXISTING TREATMENT AREAS ARE BUILDINGS, SHEDS, ASPHALT, AND CONCRETE WALKWAYS, 2.72 ACRES (TREATMENT D); HARD PACKED PARKING AND STORAGE AREAS, 1.23 ACRES (TREATMENT C); AND NATIVE VEGETATION, 0.10 ACRES (TREATMENT A). THE FOLLOWING TABLE (FROM TABLE A-9) SUMMARIZES THE EXISTING MAX. Q<sub>100</sub> FLOWS FROM THIS SITE TO THE EAST DITCH OF THE I-25 EAST FRONTAGE ROAD AND APPROX. 1.5 CFS TO LINCOLN AVE.

TREATMENT	AREA (ACRES)	MAX. Q (CFS/AC)	MAX Q (CFS)
A	0.10	1.56	0.16
C	1.23	3.14	3.86
D	2.72	4.70	12.78
AREA	4.05 ACRES		Q <sub>100</sub> = 16.80 CFS

### PROPOSED SITE FLOWS:

THE OWNERS OF THIS EXISTING FACILITY ARE IN THE PROCESS OF CONSTRUCTING A NEW STORAGE YARD AND VEHICLE MAINTENANCE FACILITY WEST OF BROADWAY, NEAR THE LIVESTOCK AUCTION PENS. THE EXISTING SHEDS AND TRAILERS WILL BE REMOVED AND A RENTAL MINI-STORAGE FACILITY CONSTRUCTED. THE EXISTING PERMANENT OFFICE STRUCTURE WILL REMAIN AND BE UTILIZED AS AN OFFICE BUILDING.

THE PERIMETER OF THE LOT, AS INDICATED, HAS A LANDSCAPED AREA. THE LANDSCAPE PLAN IS TO PLANT THIS AREA WITH NATIVE GRASSES AND FLOWERS, WITH A TEMPORARY IRRIGATION SYSTEM TO BE OPERATED FOR ONE YEAR IN ORDER TO ALLOW THE NATIVE VEGETATION TO ESTABLISH. THE LANDSCAPE AREA AT THE NORTH WEST OF THE OFFICE WILL CONTAIN GRASS, TREES, AND SHRUBS.

THE PROPOSED TREATMENT AREAS ARE BUILDING, ASPHALT DRIVES AND PARKING, AND CONCRETE SIDEWALKS, 3.5 ACRES (TREATMENT D); NATIVE GRASSES AND FLOWERS, 0.26 ACRES (TREATMENT A); AND GRASS, 0.04 ACRES (TREATMENT B). THE FOLLOWING TABLE SUMMARIZES THE PROPOSED MAX Q<sub>100</sub> FLOWS FROM THIS SITE TO THE EAST DITCH OF THE I-25 EAST FRONTAGE ROAD AND TO LINCOLN AVE.

THE MAX Q<sub>100</sub> FLOWS FROM THIS SITE WERE COMPUTED USING THE PEAK DISCHARGE TABLE A-9 FOR ZONE 2 RAINFALL, WHERE TREATMENT A= 1.56, B= 2.28, C= 3.14, AND D= 4.7

THE AREAS AND Q<sub>100</sub>'S FOR EACH ZONE AND STATION INDICATED ARE AS FOLLOWS:

TREATMENT	I	II	III	IV (ACRES)	V	VI	TOTALS
A	0.00	0.16	0.00	0.11	0.02	0.05	
B	0.03	0.00	0.03	0.00	0.00	0.00	
C	0.00	0.00	0.00	0.00	0.00	0.00	
D	0.33	1.51	1.81	0.00	0.00	0.00	
	0.36	1.67	1.84	0.11	0.02	0.05	4.05 AC.
Q <sub>100</sub> PEAK	1.62	7.30	8.58	0.17	0.03	0.08	17.78 CFS

SOME FUGITIVE FLOW HAS OCCURRED MIDWAY OF THE SOUTH PROPERTY LINE. THIS IS CORRECTED BY DESIGNING A HEADER CURB AND A RUNDOWN TO CHANNEL THE RUNOFF FROM THE EASTERN PORTION OF THIS SITE TO THE WESTERN PORTION. THE AREAS IN WHICH THE FLOW VELOCITY IS LIKELY TO CAUSE EROSION ARE TREATED WITH A PERMEABLE LANDSCAPE MEMBRANE AND COBBLE STONES. THIS BOTH GIVES EROSION PROTECTION AND ALLOWS FOR INFILTRATION. THE MAINTAINING N'S USED ARE 0.035 FOR THE COBBLESTONE AREAS AND 0.013 FOR THE CONCRETE RUNDOWN. BASED UPON THESE N'S, THE CHANNEL GEOMETRY, AND THE INDICATED Q'S, THE DEPTH OF FLOW AND VELOCITIES ARE 0.1 FT. AND 16 FPS FOR THE RUNDOWN AND 0.5 FT. AND 3.1 FPS FOR THE SOUTH COBBLED CHANNEL.

### WATERSHED CHARACTERISTICS

THE MOST RECENT DEFINITIVE HYDROLOGIC STUDY OF THIS AREA IS A STUDY FOR THE VINEYARD CHANNEL BY GREINER, INC., FEB., 1993. THIS SITE IS WITHIN BASIN 600 OF THIS STUDY, WHICH ENCOMPASSES 42.52 AC. AND IS DRAINED BY A 36 INCH RCP UNDER THE EAST I-25 FRONTAGE ROAD, APPROXIMATELY 320' SOUTH OF THIS TRACT. THE REFERENCED STUDY SHOWS A MAXIMUM Q OF 196.1 CFS AND A MAXIMUM WATER SURFACE ELEVATION OF 5158.02 FT. THE MAXIMUM DISCHARGE THROUGH THE RCP IS 70.2 CFS. THIS STUDY CALCULATES AN AVERAGE YIELD OF 4.61 CFS PER ACRE. THIS DEVELOPMENT WILL YIELD 4.39 CFS PER ACRE.

THE RUNDOWN FROM THE EAST I-25 FRONTAGE ROAD TRAVERSES THE WESTERN EDGE OF THIS PROPERTY. THE EXISTING FLOW PATTERN IS NOT CHANGED BY THIS DESIGN.

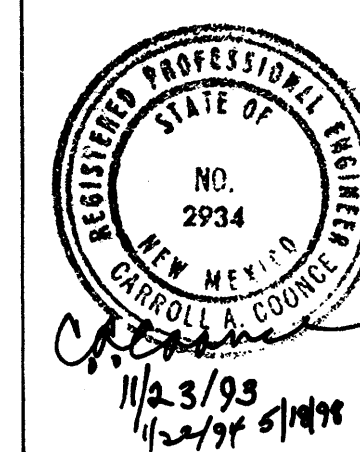
### FLOODPLAIN STATUS

THE FLOODPLAIN HAS CHANGED FROM THE 1983 MAPS. THE NMH&TD HAS ADDED THE JEFFERSON AVE. OVERPASS AND IMPROVED THE DRAINAGE WITHIN THE LINCOLN AVE. R-O-W. THE VINEYARD CHANNEL HAS BEEN COMPLETED BY AMAFCA. THE CURRENT 100 YEAR FLOOD PLAIN ELEVATION IS 5158.02 FT.

T.B.M. - 5169.97, EXISTING OFFICE BUILDING

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPT. 11/24/94  
DATE

F17/D39



C.A. COONCE & ASSOC.

ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS  
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH (505) 290-1080

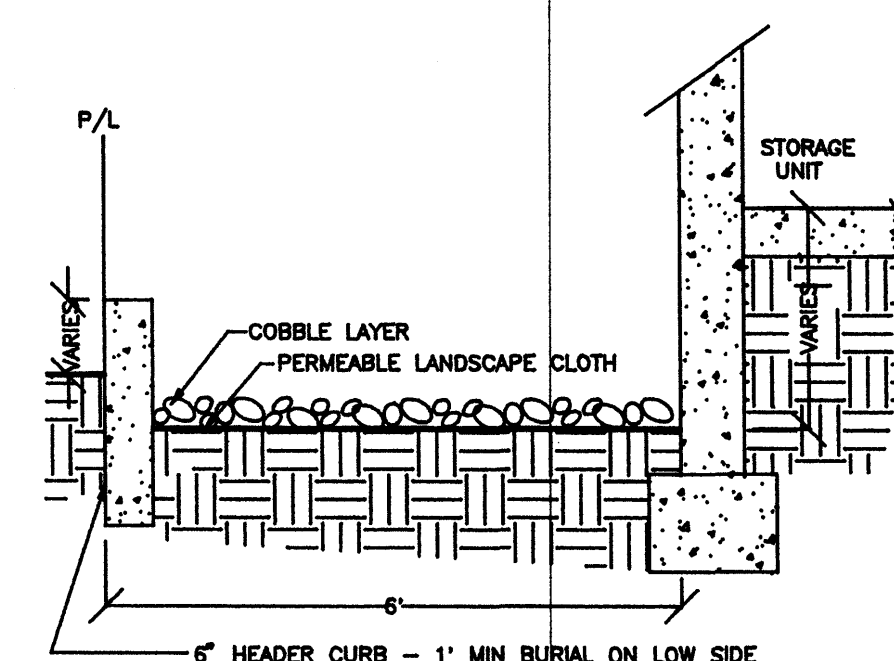
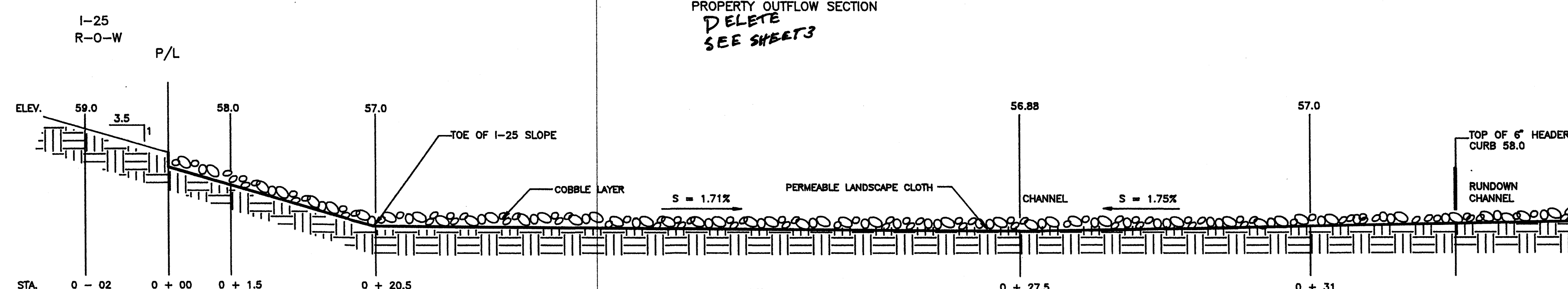
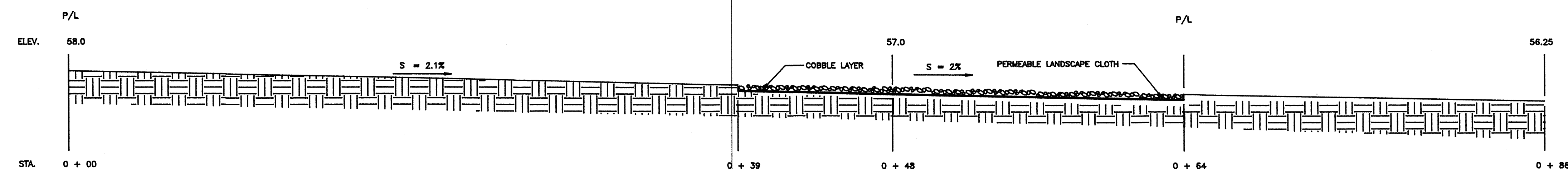
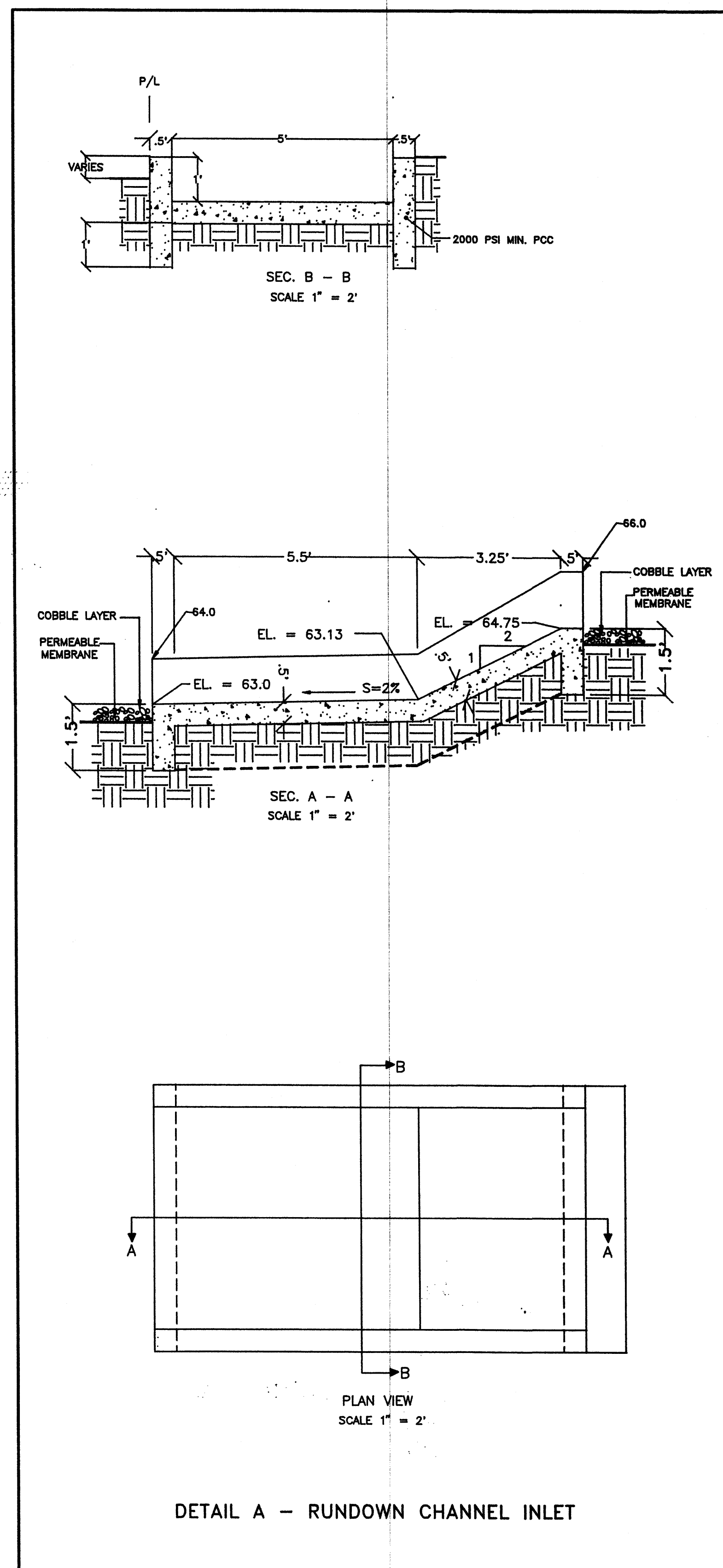
TITLE SITE, DRAINAGE AND GRADING PLAN

PROJECT MINI-WAREHOUSES, 4600 LINCOLN AVE., N.E.

DATE	11/23/93	REVISION	
DRAWN	LSC	11/24/94	
CHECKED	CAC	5/18/98	

SHEET 1 OF 3

C No.	ARC	RADIUS	DELTA	TANGENT	CHORD BEARING	CHORD
C1	39.27	25.00	90°00'00"	25.00	S44°40'33"E	35.36



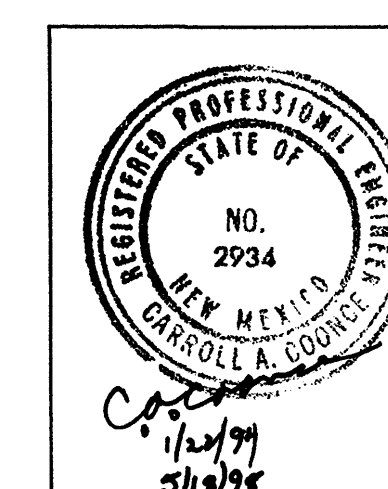
#### PHASE I ENGINEER'S CERTIFICATION

ON JUNE 30, 1994, I PERSONALLY INSPECTED PHASE I OF THIS DEVELOPMENT, AND IT IS IN ESSENTIAL COMPLIANCE WITH THESE APPROVED PLANS.

*C. A. Coonce*  
C. A. COONCE

1/6/94  
DATE

NOTE: PHASE I INCLUDED THE RUNDOWN CHANNEL. A TEMPORARY EARTHEN BERM WAS PLACED AT THE SOUTH PROPERTY LINE FROM THE RUNDOWN TO THE SOUTHWEST CORNER TO CONVEY THE PHASE I WATERS TO THE PROPOSED RELEASE POINT.



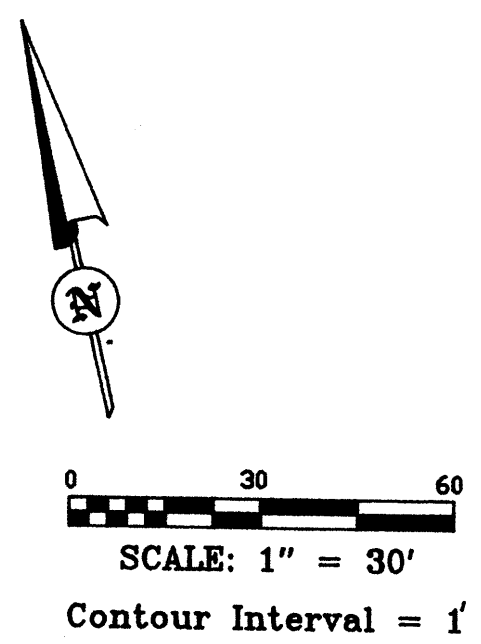
**C.A. COONCE & ASSOC.**

ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS  
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH (505) 296-1089

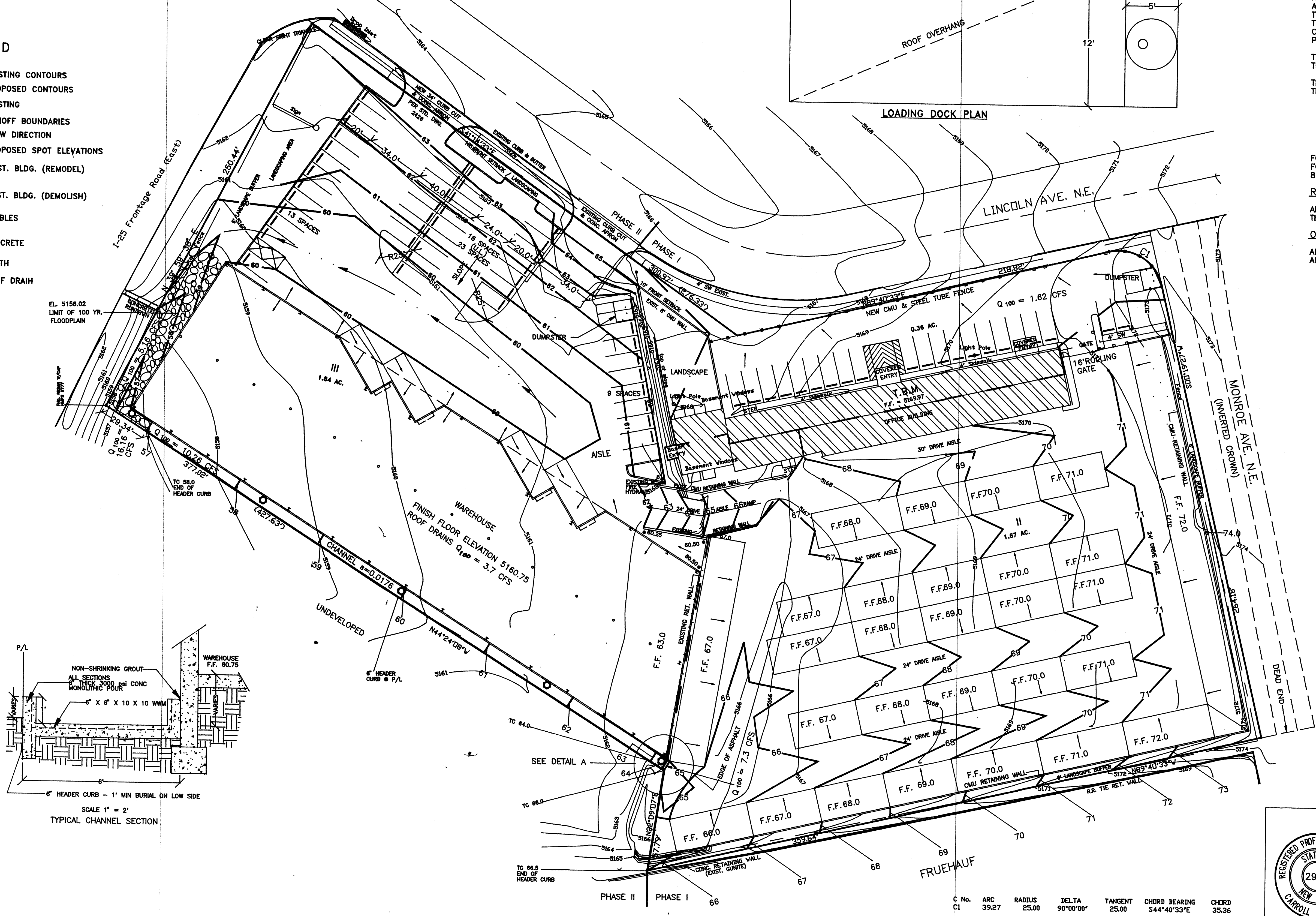
TITLE		DETAILS			
PROJECT		MINI-WAREHOUSES, 4600 LINCOLN AVE., N.E.			
DATE	BY	DATE	BY	DATE	BY
01/20/94	LSC	01/20/94	LSC		
	CAC		CAC		

SHEET 2 of 3





- LEGEND**
- 5000 — EXISTING CONTOURS
  - 5000 — PROPOSED CONTOURS
  - - - - - EXISTING
  - - - - - RUNOFF BOUNDARIES
  - FLOW DIRECTION
  - ⊕ PROPOSED SPOT ELEVATIONS
  - ▨ EXIST. BLDG. (REMODEL)
  - ▤ EXIST. BLDG. (DEMOLISH)
  - ▩ COBBLES
  - ▧ CONCRETE
  - ▦ EARTH
  - ROOF DRAIN



**PHASE II RE-DESIGN DISCUSSION:**

THE DEVELOPER COMPLETED THE PHASE I MINI-WAREHOUSES IN 1994. IT IS NOW BELIEVED THAT A BETTER DEVELOPMENT IN CONCORDANCE WITH THE EXISTING OFFICE BUILDING AND MINI-WAREHOUSE COMPLEX WILL BE A WAREHOUSE - OFFICE COMPLEX FOR PHASE II, RATHER THAN THE ORIGINALLY APPROVED ADDITIONAL MINI-WAREHOUSES.

THIS DRAINAGE AND GRADING PLAN IS SUBMITTED TO UPGRADE AND DOCUMENT THE CONSTRUCTION GRADING AND SITE PLAN, AS WELL AS THE ON-SITE AND OFF-SITE HYDROLOGIC EFFECTS.

**PROPOSED HYDROLOGY:**

THE SITE TO BE USED FOR PHASE II AS ORIGINALLY APPROVED CONTAINS 2.02 ACRES OF WHICH 1.81 ACRES WERE TO BE IMPERVIOUS, I.E., MINI-WAREHOUSES, ACCESS, AND PARKING. THE REMAINING 0.21 ACRES WAS PERVIOUS LANDSCAPED AREA. THE NEW SITE PLAN CONTAINS THE SAME 0.21 ACRES PERVIOUS LANDSCAPING AND 1.81 ACRES OF IMPERVIOUS AREA. HOWEVER, SINCE THE ARCHITECT AND OWNER WANT ONE FLOOR ELEVATION, THE GRADING PLAN HAD TO CHANGE TO ALLOW FOR ACCESS AND BUILDING OCCUPANT PARKING.

SINCE THE NEW BUILDING IS TO BE A WAREHOUSE, IT HAS FOUR LOADING DOCKS FOR LARGE TRUCKS. THE BUILDING DESIGN UTILIZES A RECESSED DOCK TO AVOID ELEVATING THE BUILDING FINISH FLOOR ELEVATION THREE FEET ABOVE THE PARKING AREA. EACH DEPRESSURED LOADING DOCK HAS AN AREA OF 183 S.F. NOT COVERED BY THE BUILDING ROOF. THE PRECIPITATION FALLING ON THIS 183 S.F. WILL DRAIN TO THE BOTTOM PORTION OF THE DOCK AND INTO A FOUR FOOT DIAMETER PRECAST CONCRETE MANHOLE WHICH HAS A ROCK AND EARTHEN BOTTOM TO ALLOW FOR THE PERCOLATION OF THE ACCUMULATED RAINFALL.

THE EXCESS PRECIPITATION (E) FOR RAINFALL ZONE 2 AND SOIL TREATMENT D FOR THE 6 HOUR 100 YEAR STORM IS 2.12 INCHES.

THE VOLUME ACCUMULATED IS (183) (2.12/ 12) = 32.33 C.F. FOR VOLUME STORAGE THE 10 DAY ACCUMULATED VOLUME IS USED.

$$V_{10 \text{ DAYS}} = V_{360} + A_D(P_{10 \text{ DAYS}} - P_{360})/12$$
$$P_{360} \text{ AND } P_{10 \text{ DAYS}} \text{ FOR PRECIPITATION ZONE 2 ARE 2.35 AND 3.95 INCHES RESPECTIVELY.}$$
$$V_{10 \text{ DAYS}} = 22.33 + 183 (3.95 - 2.35)/12$$
$$V_{10 \text{ DAYS}} = 56.73 \text{ C.F.}$$

FOR A STANDARD PRECAST CONCRETE FOUR FOOT DIAMETER MANHOLE, THE VOLUME PER FOOT IS 12.56 C.F.; THEREFORE, A CLEARWELL OF 56.73/12.56 = 4.51 FT. AN 8 FT. DEEP MANHOLE WITH A 2 FOOT DEPTH OF 3 INCH SMOOTH ROCK IS DESIGNED.

**ROOF DRAINS:**

ALL OF THE DRAINAGE FROM THE WAREHOUSE ROOF WILL BE DRAINED BY DOWNSPOUTS TO THE FIVE FOOT WIDE CONCRETE LINED CHANNEL AT THE SOUTH PROPERTY LINE.

**OFF-SITE FLOWS:**

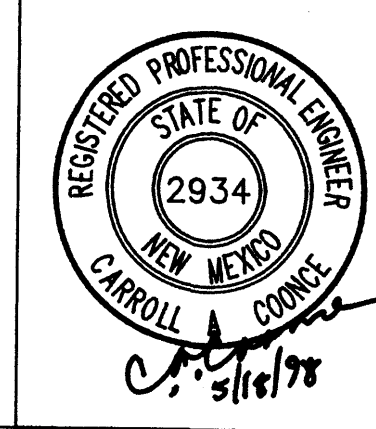
ALL OF THE FLOWS FROM THIS PHASE II RE-DESIGN ARE IN THE SAME QUANTITIES AND THE SAME LOCATIONS AS THE PREVIOUSLY APPROVED PHASE II PLAN.

**CHANNEL MANNING SOLUTION**

FLOW DEPTH =	0.318 FT.
FLOWRATE =	10.260 CFS
CHANNEL BOTTOM WIDTH =	5.0 FT
CHANNEL SIDE SLOPE =	0.000 FT/FT
CHANNEL SLOPE =	0.0178 FT/FT
CHANNEL ROUGHNESS =	0.013
WETTED AREA =	1.58 SF
WETTED PERIMETER =	5.83 FT
VELOCITY =	4.50 FPS
FROUDE NO. =	2.04
FLOW =	SUPER-CRITICAL
VELOCITY HEAD =	0.86 FT

PHASE I CONSTRUCTION IS COMPLETED, INCLUDING RUNDOWN (DETAIL A), AND OCCUPANCY PERMIT HAS BEEN ISSUED.

T.B.M. - 5169.97, EXISTING OFFICE BUILDING  
F17/D39

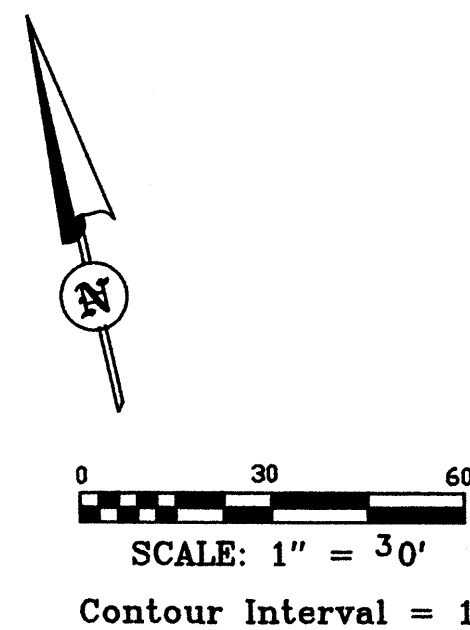


<b>C.A. COONCE &amp; ASSOC.</b>	
ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS	
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH (505) 298-1088	
TITLE SITE, DRAINAGE AND GRADING PLAN	
PROJECT PHASE II WAREHOUSE, 4600 LINCOLN AVE., N.E.	
DATE 05/18/98	REVISED
DRAWN LSC	
CHECKED CAC	

SHEET 3 of 3

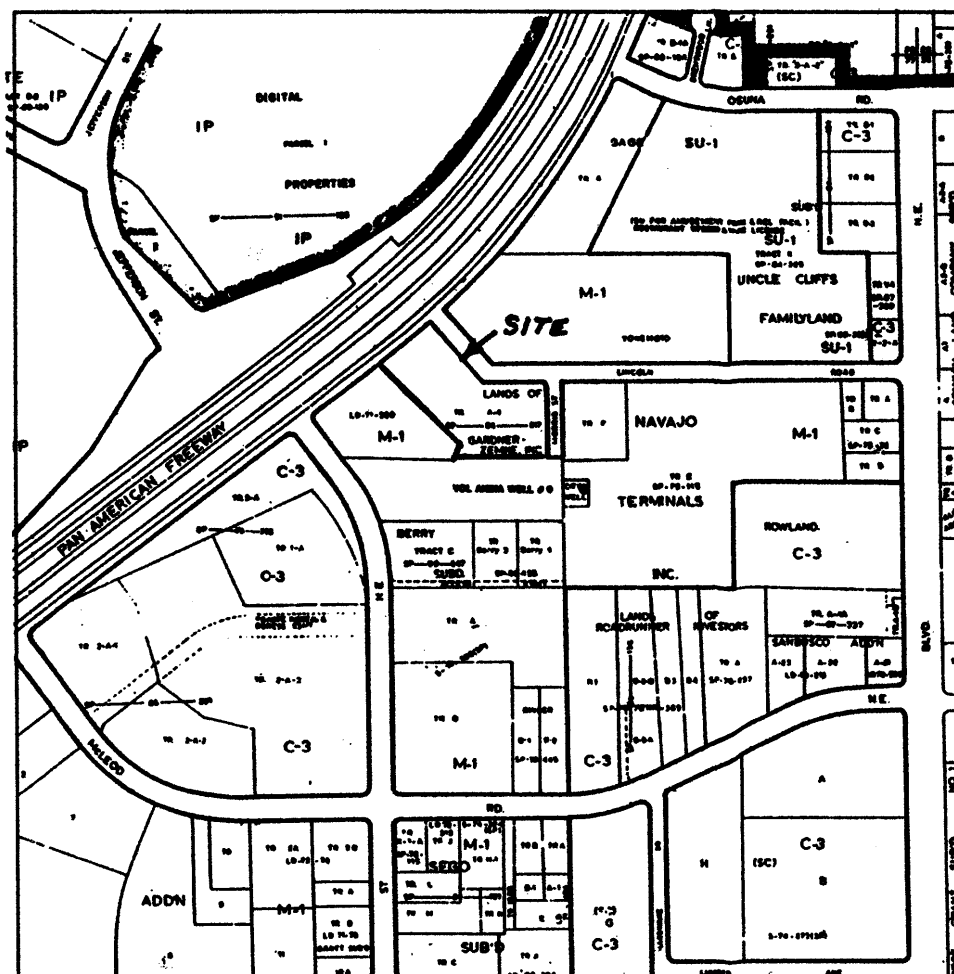
C No.	ARC	RADIUS	DELTA	TANGENT	CHORD BEARING	CHORD
C1	39.27	25.00	90°00'00"	25.00	S44°40'33"E	35.36





LEGEND

- 5000 EXISTING CONTOURS
- 5000 PROPOSED CONTOURS
- EXISTING
- RUNOFF BOUNDARIES
- FLOW DIRECTION
- PROPOSED SPOT ELEVATIONS
- EXIST. BLDG. (REMODEL)
- EXIST. BLDG. (DEMOLISH)
- COBBLES
- CONCRETE
- EARTH
- COBBLE AND PERMEABLE MEMBRANE AREA



LEGAL DESCRIPTION: TRACT A-1, LANDS OF GARDNER-ZENKE, INC.  
ADDRESS: 4600 LINCOLN AVE., N.E.



FLOOD BOUNDARY AND FLOODWAY MAP  
PANEL NO. 350002 0016

DISCUSSION:

EXISTING ON-SITE FLOWS:

THIS TRACT OF LAND, ZONED M-1, IS CURRENTLY USED AS A CONTRACTOR'S YARD AND VEHICLE MAINTENANCE FACILITY. IT IS BOUNDED ON THE WEST BY THE I-25 EAST FRONTAGE ROAD, ON THE NORTH BY LINCOLN AVE., N.E., AND ON THE EAST BY MONROE AVE., N.E. THE TRACT IS IN PRECIPITATION ZONE 2.

THE EXISTING TREATMENT AREAS ARE BUILDINGS, SHEDS, ASPHALT, AND CONCRETE WALKWAYS, 2.72 ACRES (TREATMENT D); HARD PACKED PARKING AND STORAGE AREAS, 1.23 ACRES (TREATMENT C); AND NATIVE VEGETATION, 0.10 ACRES (TREATMENT A). THE FOLLOWING TABLE (FROM TABLE A-9) SUMMARIZES THE EXISTING MAX. Q<sub>100</sub> FLOWS FROM THIS SITE TO THE EAST DITCH OF THE I-25 EAST FRONTAGE ROAD AND APPROX. 1.5 CFS TO LINCOLN AVE.

TREATMENT	AREA (ACRES)	MAX. Q (CFS/AC)	MAX Q (CFS)
A	0.10	1.56	0.16
C	1.23	3.14	3.86
D	2.72	4.70	12.78
AREA	4.05 ACRES		Q <sub>100</sub> = 16.80 CFS

PROPOSED SITE FLOWS:

THE OWNERS OF THIS EXISTING FACILITY ARE IN THE PROCESS OF CONSTRUCTING A NEW STORAGE YARD AND VEHICLE MAINTENANCE FACILITY WEST OF BROADWAY, NEAR THE LIVESTOCK AUCTION PENS. THE EXISTING SHEDS AND TRAILERS WILL BE REMOVED AND A RENTAL MINI-STORAGE FACILITY CONSTRUCTED. THE EXISTING PERMANENT OFFICE STRUCTURE WILL REMAIN AND BE UTILIZED AS AN OFFICE BUILDING.

THE PERIMETER OF THE LOT, AS INDICATED, HAS A LANDSCAPED AREA. THE LANDSCAPE PLAN IS TO PLANT THIS AREA WITH NATIVE GRASSES AND FLOWERS, WITH A TEMPORARY IRRIGATION SYSTEM TO BE OPERATED FOR ONE YEAR IN ORDER TO ALLOW THE NATIVE VEGETATION TO ESTABLISH. THE LANDSCAPE AREA AT THE NORTH WEST OF THE OFFICE WILL CONTAIN GRASS, TREES, AND SHRUBS.

THE PROPOSED TREATMENT AREAS ARE BUILDING, ASPHALT DRIVES AND PARKING, AND CONCRETE SIDEWALKS, 3.5 ACRES (TREATMENT D); NATIVE GRASSES AND FLOWERS, 0.26 ACRES (TREATMENT A); AND GRASS, 0.04 ACRES (TREATMENT B). THE FOLLOWING TABLE SUMMARIZES THE PROPOSED MAX. Q<sub>100</sub> FLOWS FROM THIS SITE TO THE EAST DITCH OF THE I-25 EAST FRONTAGE ROAD AND TO LINCOLN AVE.

THE MAX Q<sub>100</sub> FLOWS FROM THIS SITE WERE COMPUTED USING THE PEAK DISCHARGE TABLE A-9 FOR ZONE 2 RAINFALL, WHERE TREATMENT A = 1.56, B = 2.28, C = 3.14, AND D = 4.7

THE AREAS AND Q<sub>100</sub>'S FOR EACH ZONE AND STATION INDICATED ARE AS FOLLOWS:

TREATMENT	I	II	III	IV	V	VI	TOTALS
A	0.00	0.16	0.00	0.11	0.02	0.05	
B	0.03	0.00	0.03	0.00	0.00	0.00	
C	0.00	0.00	0.00	0.00	0.00	0.00	
D	0.33	1.51	1.81	0.00	0.00	0.00	
	0.36	1.67	1.84	0.11	0.02	0.05	= 4.05 AC.
Q <sub>100</sub> PEAK	1.62	7.30	8.58	0.17	0.03	0.08	= 17.78 CFS

SOME FUGITIVE FLOW HAS OCCURRED MIDWAY OF THE SOUTH PROPERTY LINE. THIS IS CORRECTED BY DESIGNING A HEADER CURB AND A RUNDOWN TO CHANNEL THE RUNOFF FROM THE EASTERN PORTION OF THIS SITE TO THE WESTERN PORTION. THE AREAS IN WHICH THE FLOW VELOCITY IS LIKELY TO CAUSE EROSION ARE TREATED WITH A PERMEABLE LANDSCAPE MEMBRANE AND COBBLE STONES. THIS BOTH GIVES EROSION PROTECTION AND ALLOWS FOR INFILTRATION. THE MANNING N'S USED ARE 0.035 FOR THE COBBLESTONE AREAS AND 0.013 FOR THE CONCRETE RUNDOWN. BASED UPON THESE N'S, THE CHANNEL GEOMETRY, AND THE INDICATED Q'S, THE DEPTH OF FLOW AND VELOCITIES ARE 0.1 FT. AND 16 FPS FOR THE RUNDOWN AND 0.5 FT. AND 3.1 FPS FOR THE SOUTH COBBLED CHANNEL.

WATERSHED CHARACTERISTICS

THE MOST RECENT DEFINITIVE HYDROLOGIC STUDY OF THIS AREA IS A STUDY FOR THE VINEYARD CHANNEL BY GREINER, INC., FEB., 1993. THIS SITE IS WITHIN BASIN 600 OF THIS STUDY, WHICH ENCOMPASSES 42.52 AC. AND IS DRAINED BY A 36 INCH RCP UNDER THE EAST I-25 FRONTAGE ROAD, APPROXIMATELY 320' SOUTH OF THIS TRACT. THE STUDY SHOWS A MAXIMUM Q OF 196.1 CFS AND A MAXIMUM WATER SURFACE ELEVATION OF 5158.02 FT. THE MAXIMUM DISCHARGE THROUGH THE RCP IS 70.2 CFS. THIS STUDY CALCULATES AN AVERAGE YIELD OF 4.61 CFS PER ACRE. THIS DEVELOPMENT WILL YIELD 4.39 CFS PER ACRE.

THE RUNDOWN FROM THE EAST I-25 FRONTAGE ROAD TRAVERSES THE WESTERN EDGE OF THIS PROPERTY. THE EXISTING FLOW PATTERN IS NOT CHANGED BY THIS DESIGN.

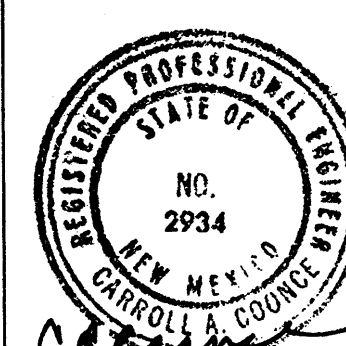
FLOODPLAIN STATUS

THE FLOODPLAIN HAS CHANGED FROM THE 1983 MAPS. THE NMH&TD HAS ADDED THE JEFFERSON AVE. OVERPASS AND IMPROVED THE DRAINAGE WITHIN THE LINCOLN AVE. R-0-W. THE VINEYARD CHANNEL HAS BEEN COMPLETED BY AMAFA. THE CURRENT 100 YEAR FLOOD PLAIN ELEVATION IS 5158.02 FT.

T.B.M. - 5169.97, EXISTING OFFICE BUILDING

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPT.  
DATE 11/24/94

F17/D39



C.A. COONCE & ASSOC.

ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS  
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH (505) 298-1089

TITLE SITE, DRAINAGE AND GRADING PLAN

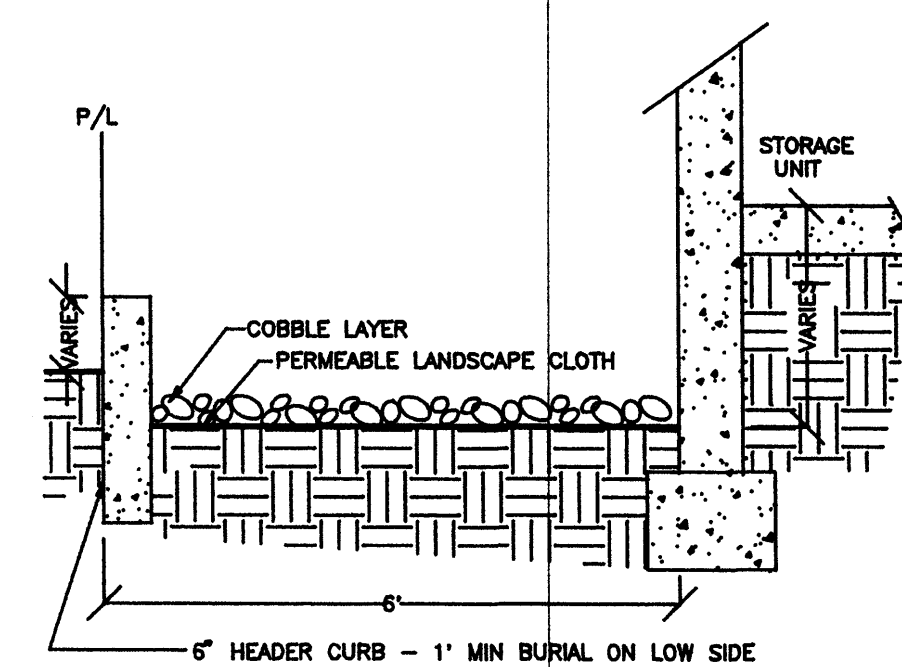
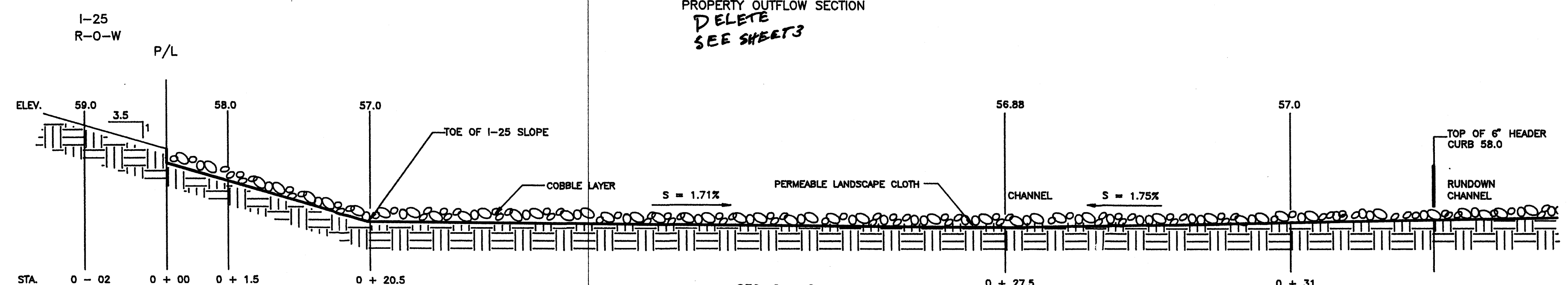
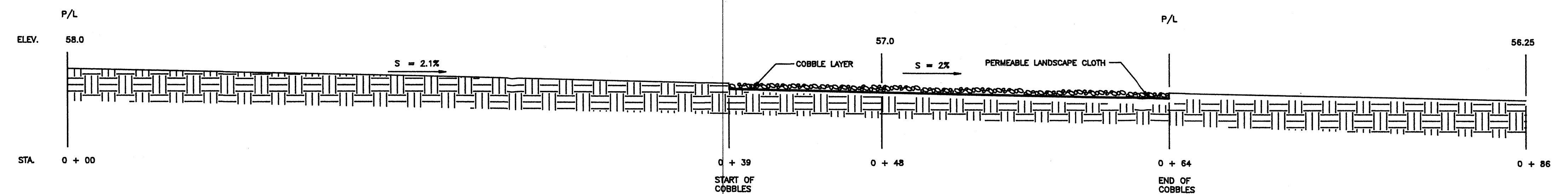
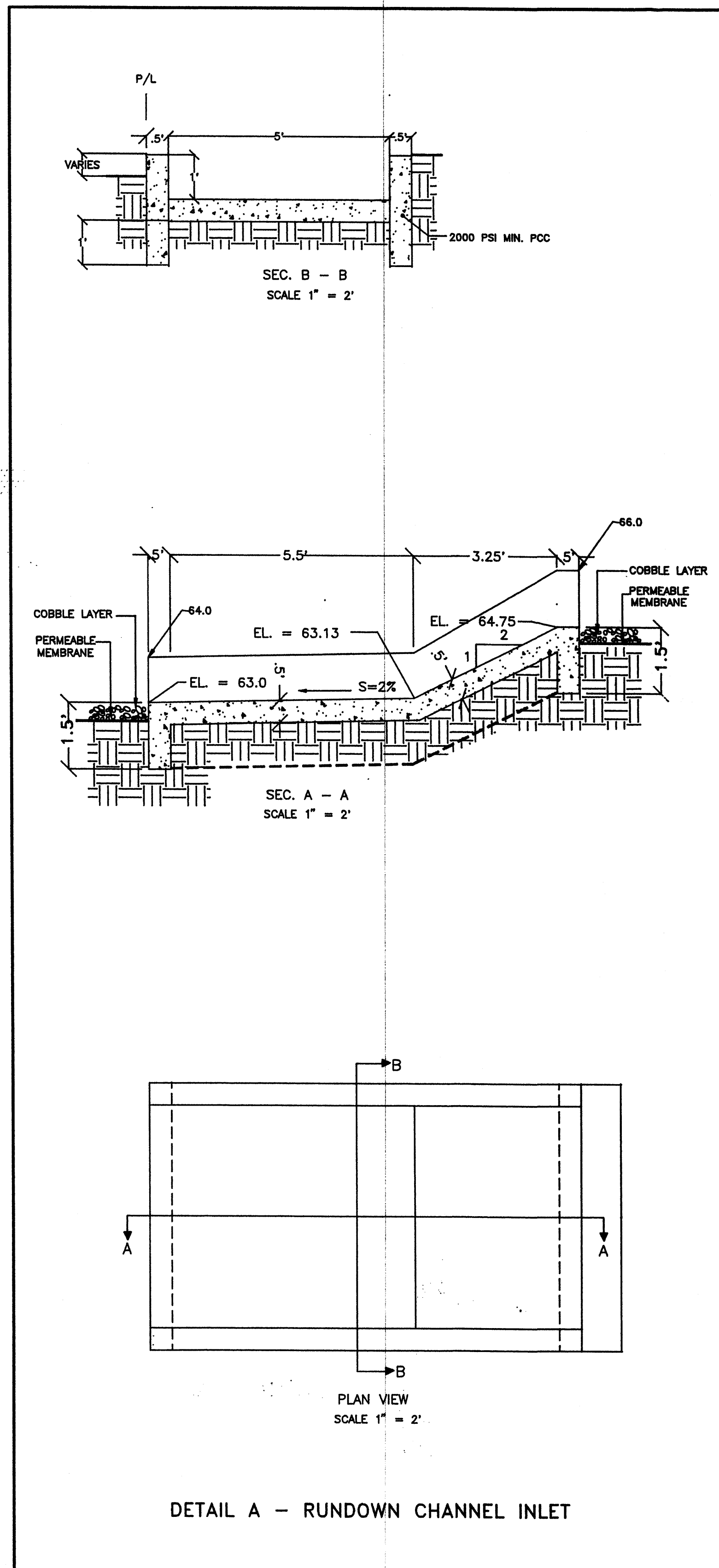
PROJECT MINI-WAREHOUSES, 4600 LINCOLN AVE., N.E.

DATE	11/23/93	REVISED			
DRAWN	CSH	11/24/94			
CHECKED	CAC	11/24/94			

SHEET 1 OF 3

C No.	ARC	RADIUS	DELTA	TANGENT	CHORD BEARING	CHORD
C1	39.27	25.00	90°00'00"	25.00	S44°40'33"E	35.36





#### PHASE I ENGINEER'S CERTIFICATION

ON JUNE 30, 1994, I PERSONALLY INSPECTED PHASE I OF THIS DEVELOPMENT, AND IT IS IN ESSENTIAL COMPLIANCE WITH THESE APPROVED PLANS.

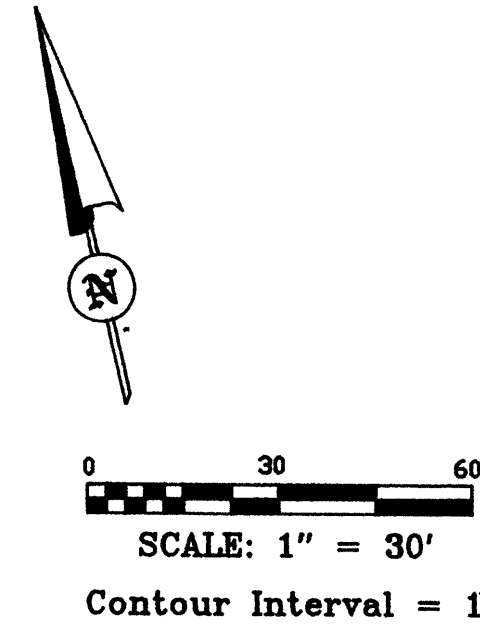
*C. A. Coonce*  
C. A. COONCE

1/6/94  
DATE

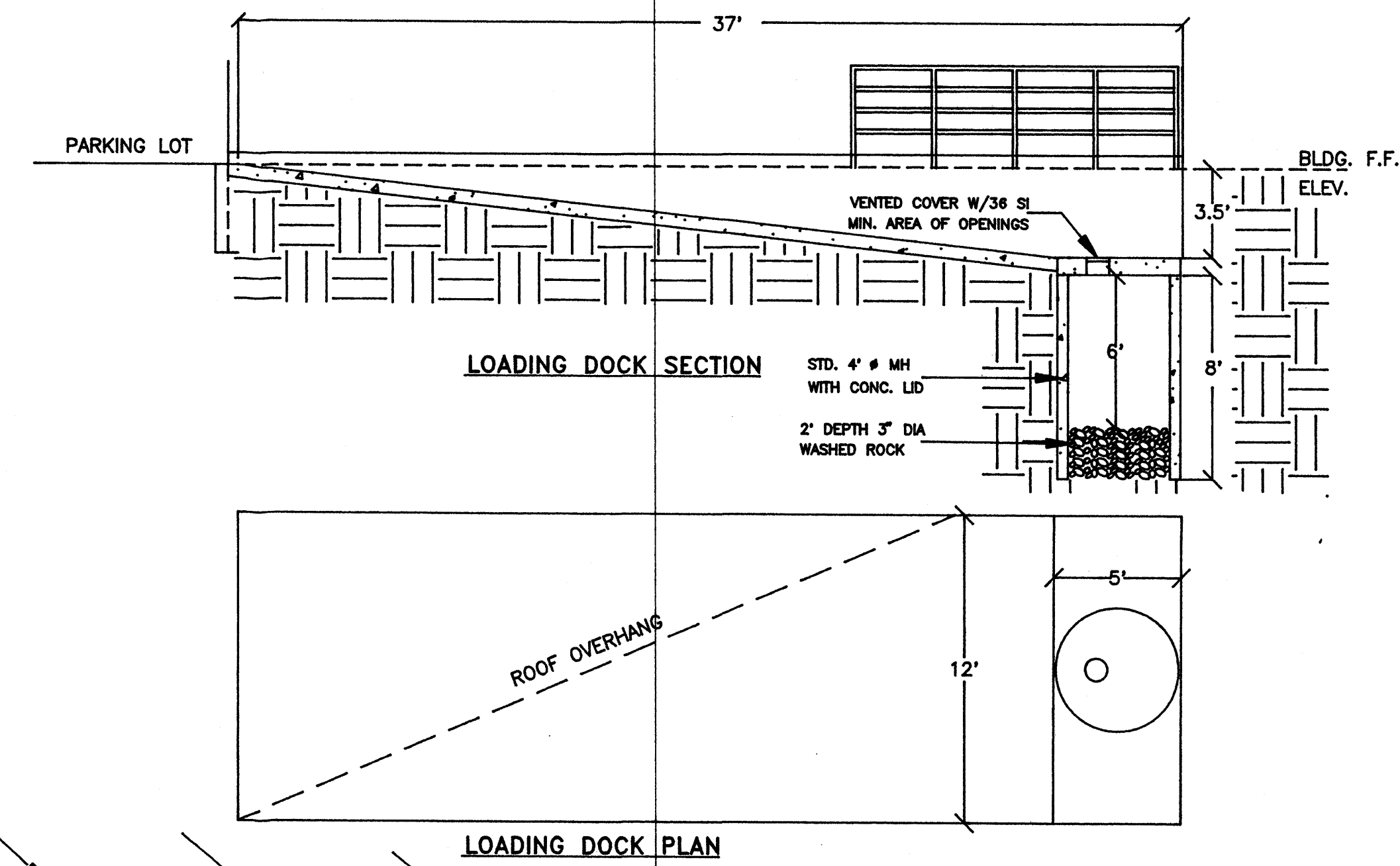
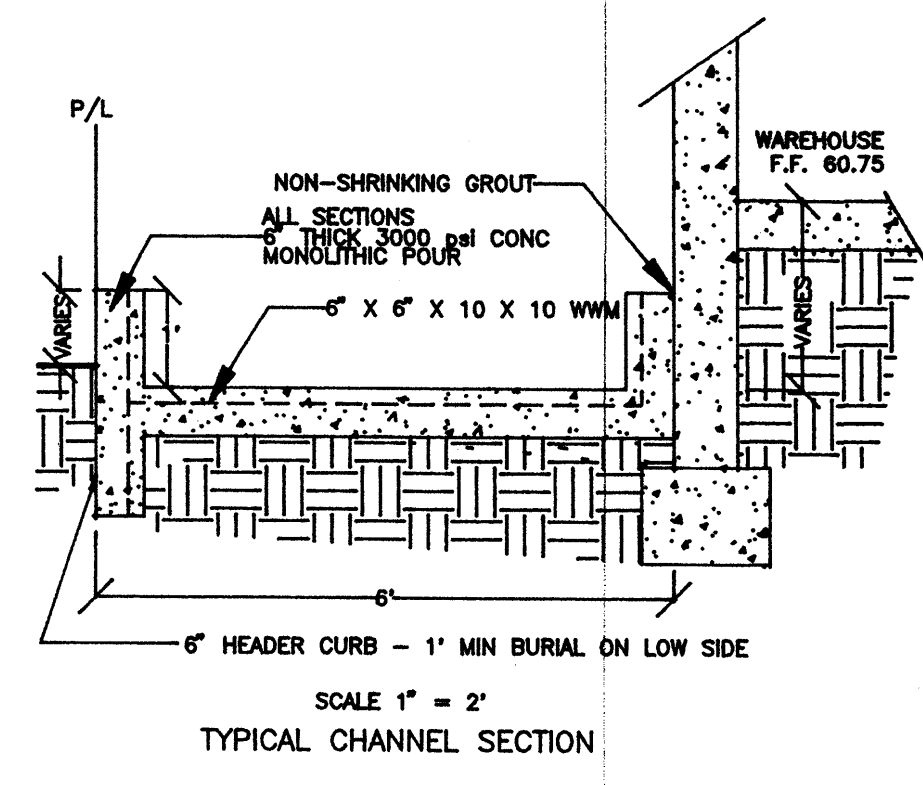
NOTE: PHASE I INCLUDED THE RUNDOWN CHANNEL. A TEMPORARY EARTHEN BERM WAS PLACED AT THE SOUTH PROPERTY LINE FROM THE RUNDOWN TO THE SOUTHWEST CORNER TO CONVEY THE PHASE I WATERS TO THE PROPOSED RELEASE POINT.

		<b>C.A. COONCE &amp; ASSOC.</b> ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS 12824 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH (505) 298-1088	
TITLE			
DETAILS			
PROJECT MINI-WAREHOUSES, 4600 LINCOLN AVE., N.E.			
DATE	01/20/94	REVISED	
DRAWN	LSC	5/1/94	
CHECKED	CAC		





- LEGEND**
- 5000 — EXISTING CONTOURS
  - 5000 — PROPOSED CONTOURS
  - — — EXISTING
  - — — RUNOFF BOUNDARIES
  - — — FLOW DIRECTION
  - ⊕ PROPOSED SPOT ELEVATIONS
  - ▨ EXIST. BLDG. (REMODEL)
  - ▤ EXIST. BLDG. (DEMOLISH)
  - ▧ COBBLES
  - ▩ CONCRETE
  - EARTH
  - ROOF DRAIN



**PHASE II RE-DESIGN DISCUSSION:**

THE DEVELOPER COMPLETED THE PHASE I MINI-WAREHOUSES IN 1994. IT IS NOW BELIEVED THAT A BETTER DEVELOPMENT IN CONJUNCTION WITH THE EXISTING OFFICE BUILDING AND MINI-WAREHOUSE COMPLEX WILL BE A WAREHOUSE - OFFICE COMPLEX FOR PHASE II, RATHER THAN THE ORIGINALLY APPROVED ADDITIONAL MINI-WAREHOUSES.

THIS DRAINAGE AND GRADING PLAN IS SUBMITTED TO UPGRADE AND DOCUMENT THE CONSTRUCTION GRADING AND SITE PLAN, AS WELL AS THE ON-SITE AND OFF-SITE HYDROLOGIC EFFECTS.

**PROPOSED HYDROLOGY:**

THE SITE TO BE USED FOR PHASE II AS ORIGINALLY APPROVED CONTAINS 2.02 ACRES OF WHICH 1.81 ACRES WERE TO BE IMPERVIOUS, I.E., MINI-WAREHOUSES, ACCESS, AND PARKING. THE REMAINING 0.21 ACRES WAS PERVIOUS LANDSCAPED AREA. THE NEW SITE PLAN CONTAINS THE SAME 0.21 ACRES PERVIOUS LANDSCAPING AND 1.81 ACRES OF IMPERVIOUS AREA. HOWEVER, SINCE THE ARCHITECT AND OWNER WANT ONE FLOOR ELEVATION, THE GRADING PLAN HAD TO CHANGE TO ALLOW FOR ACCESS AND BUILDING OCCUPANT PARKING.

SINCE THE NEW BUILDING IS TO BE A WAREHOUSE, IT HAS FOUR LOADING DOCKS FOR LARGE TRUCKS. THE BUILDING DESIGN UTILIZES A RECESSED DOCK TO AVOID ELEVATING THE BUILDING FINISH FLOOR ELEVATION THREE FEET ABOVE THE PARKING AREA. EACH DEPRESSED LOADING DOCK HAS AN AREA OF 183 S.F. NOT COVERED BY THE BUILDING ROOF. THE PRECIPITATION FALLING ON THIS 183 S.F. WILL DRAIN TO THE BOTTOM PORTION OF THE DOCK AND INTO A FOUR FOOT DIAMETER PRECAST CONCRETE MANHOLE WHICH HAS A ROCK AND EARTHEN BOTTOM TO ALLOW FOR THE PERCOLATION OF THE ACCUMULATED RAINFALL.

THE EXCESS PRECIPITATION (E) FOR RAINFALL ZONE 2 AND SOIL TREATMENT D FOR THE 6 HOUR 100 YEAR STORM IS 2.12 INCHES.

THE VOLUME ACCUMULATED IS  $(183) (2.12 / 12) = 32.33$  C.F. FOR VOLUME STORAGE THE 10 DAY ACCUMULATED VOLUME IS USED.

$V_{10 \text{ DAYS}} = V_{360} + A_D (P_{10 \text{ DAYS}} - P_{360}) / 12$   
P<sub>360</sub> AND P<sub>10 DAYS</sub> FOR PRECIPITATION ZONE 2 ARE 2.35 AND 3.95 INCHES RESPECTIVELY.

$V_{10 \text{ DAYS}} = 22.33 + 183 (3.95 - 2.35) / 12$   
 $V_{10 \text{ DAYS}} = 56.73$  C.F.

FOR A STANDARD PRECAST CONCRETE FOUR FOOT DIAMETER MANHOLE, THE VOLUME PER FOOT IS 12.56 C.F.; THEREFORE, A CLEARWELL OF  $56.73 / 12.56 = 4.51$  FT. AN 8 FT. DEEP MANHOLE WITH A 2 FOOT DEPTH OF 3 INCH SMOOTH ROCK IS DESIGNED.

**ROOF DRAINS:**

ALL OF THE DRAINAGE FROM THE WAREHOUSE ROOF WILL BE DRAINED BY DOWNSPOUTS TO THE FIVE FOOT WIDE CONCRETE LINED CHANNEL AT THE SOUTH PROPERTY LINE.

**OFF-SITE FLOWS:**

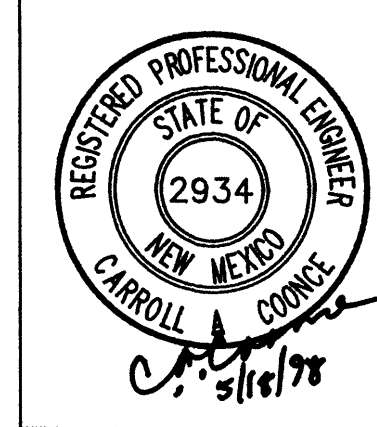
ALL OF THE FLOWS FROM THIS PHASE II RE-DESIGN ARE IN THE SAME QUANTITIES AND THE SAME LOCATIONS AS THE PREVIOUSLY APPROVED PHASE II PLAN.

**CHANNEL MANNING SOLUTION**

FLOW DEPTH = 0.318 FT.  
FLOWRATE = 10.260 CFS  
CHANNEL BOTTOM WIDTH = 5.0 FT  
CHANNEL SIDE SLOPE = 0.000 FT/FT  
CHANNEL SLOPE = 0.0176 FT/FT  
CHANNEL ROUGHNESS = 0.013  
WETTED AREA = 1.58 SF  
WETTED PERIMETER = 5.63 FT  
VELOCITY = 6.50 FPS  
FROUDE NO. = 2.04  
FLOW = SUPER-CRITICAL  
VELOCITY HEAD = 0.68 FT

PHASE I CONSTRUCTION IS COMPLETED, INCLUDING RUNDOWN (DETAIL A), AND OCCUPANCY PERMIT HAS BEEN ISSUED.

T.B.M. - 5169.97, EXISTING OFFICE BUILDING  
F17/D39

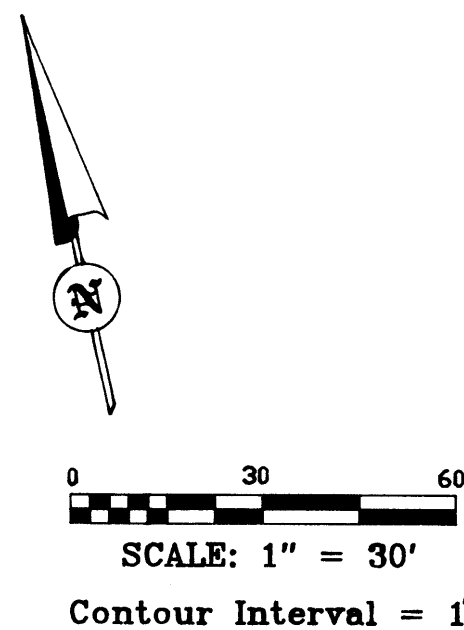


<b>C.A. COONCE &amp; ASSOC.</b>	
ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS	
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH (505) 296-1089	
TITLE SITE, DRAINAGE AND GRADING PLAN	
PROJECT PHASE II WAREHOUSE, 4600 LINCOLN AVE., N.E.	
DATE 06/15/98	REVISED
DRAWN LSC	
CHECKED CAC	

SHEET 3 of 3

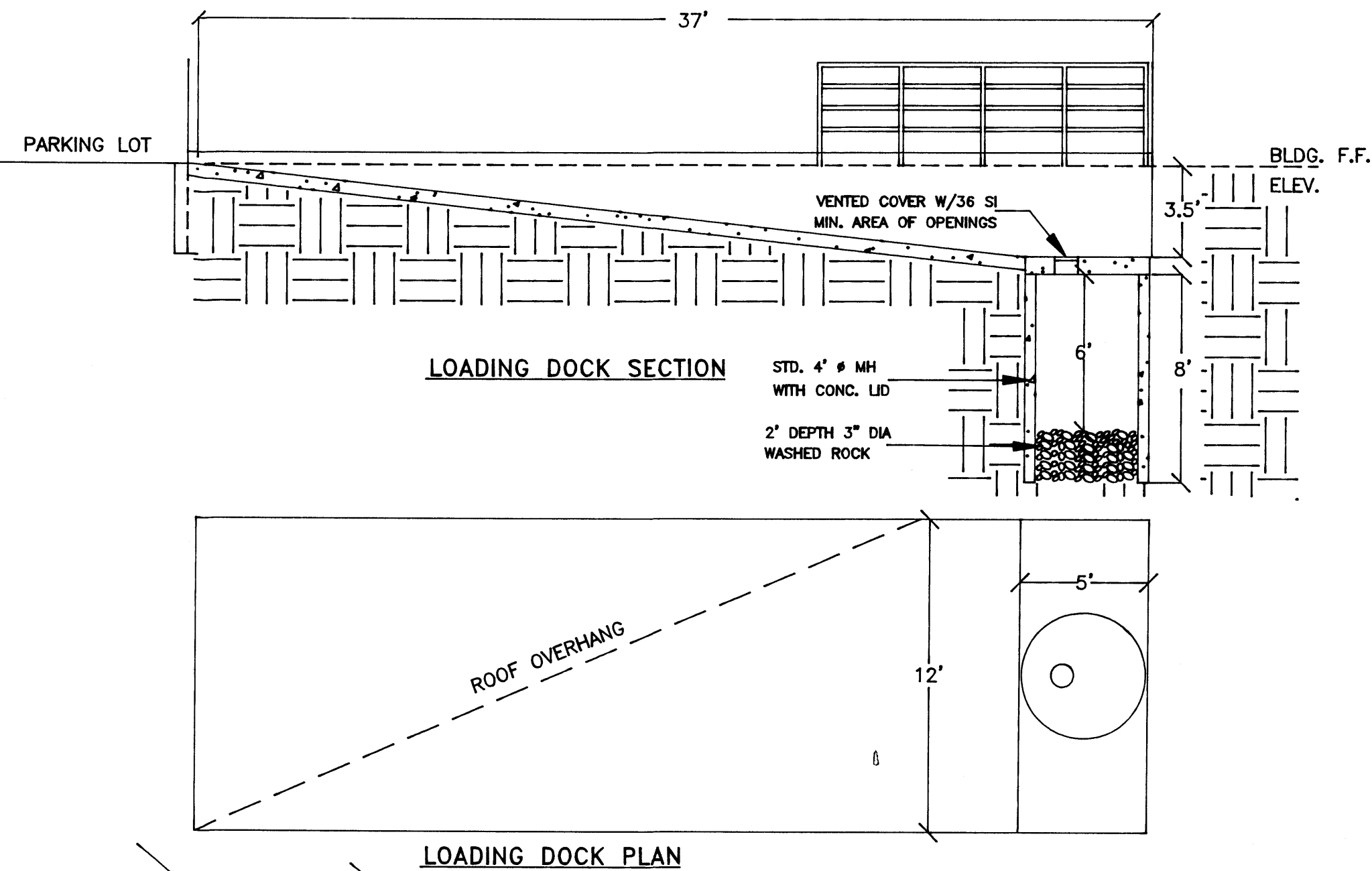
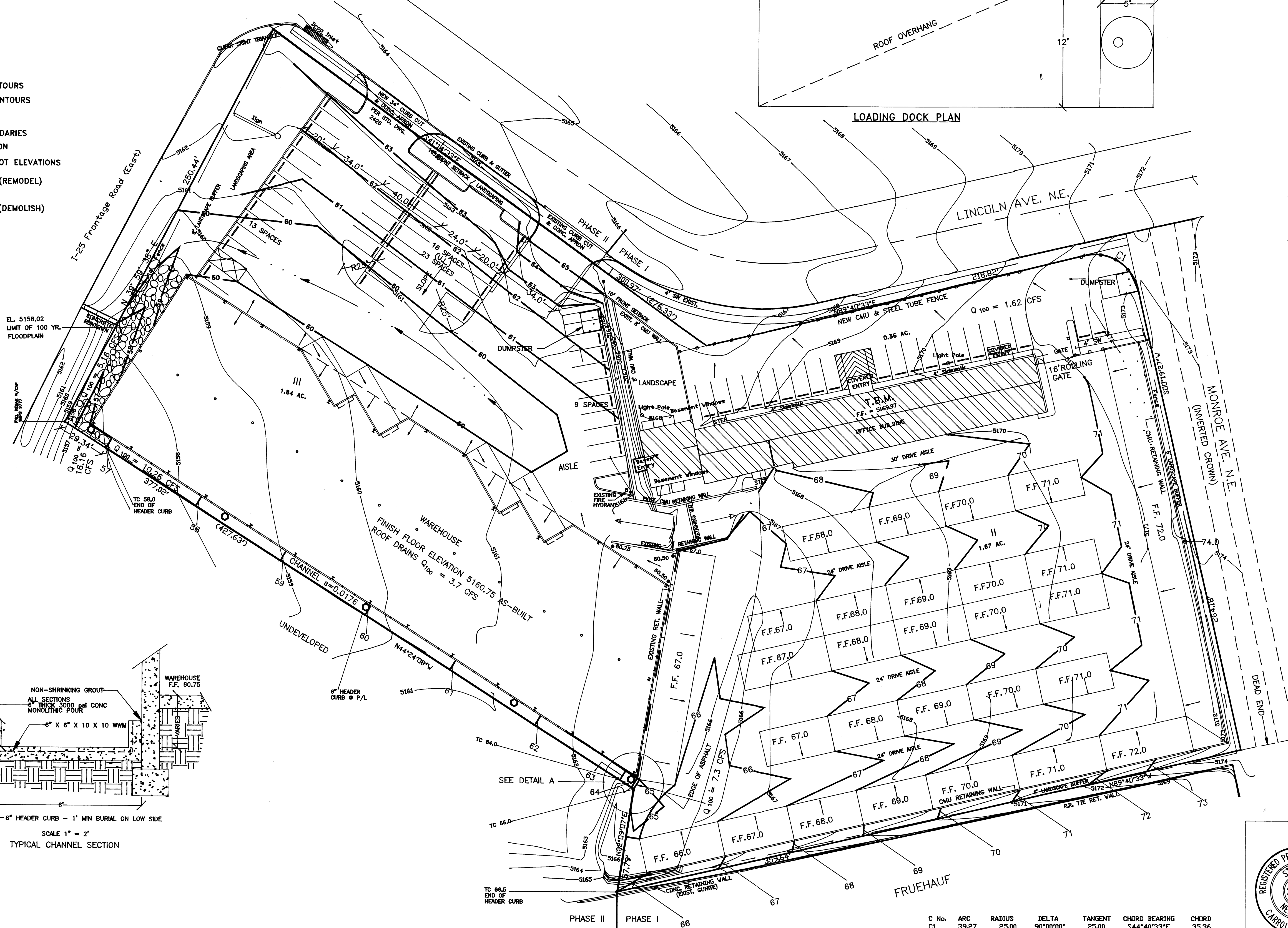
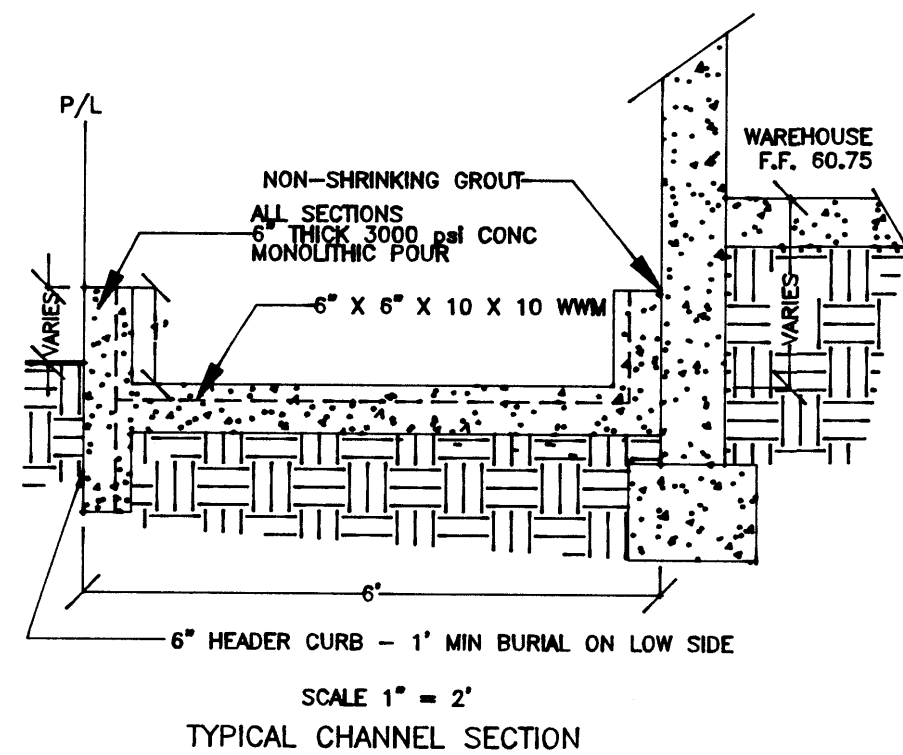
C No.	ARC	RADIUS	DELTA	TANGENT	CHORD	BEARING	CHORD
C1	39.27	25.00	90°00'00"	25.00	S44°40'33"E		35.36





# LEGEND

- 5000 — EXISTING CONTOURS
- 5000 — PROPOSED CONTOURS
- — — EXISTING
- — — RUNOFF BOUNDARIES
- — — FLOW DIRECTION
- ⊕ PROPOSED SPOT ELEVATIONS
- ▨ EXIST. BLDG. (REMODEL)
- ▤ EXIST. BLDG. (DEMOLISH)
- ▧ COBBLES
- ▩ CONCRETE
- EARTH
- ROOF DRAIN



## PHASE II RE-DESIGN DISCUSSION:

THE DEVELOPER COMPLETED THE PHASE I MINI-WAREHOUSES IN 1994. IT IS NOW BELIEVED THAT A BETTER DEVELOPMENT IN CONCURRENCE WITH THE EXISTING OFFICE BUILDING AND MINI-WAREHOUSE COMPLEX WILL BE A WAREHOUSE - OFFICE COMPLEX FOR PHASE II, RATHER THAN THE ORIGINALLY APPROVED ADDITIONAL MINI-WAREHOUSES.

THIS DRAINAGE AND GRADING PLAN IS SUBMITTED TO UPGRADE AND DOCUMENT THE CONSTRUCTION GRADING AND SITE PLAN, AS WELL AS THE ON-SITE AND OFF-SITE HYDROLOGIC EFFECTS.

## PROPOSED HYDROLOGY:

THE SITE TO BE USED FOR PHASE II AS ORIGINALLY APPROVED CONTAINS 2.02 ACRES OF WHICH 1.81 ACRES WERE TO BE IMPERVIOUS, I.E., MINI-WAREHOUSES, ACCESS, AND PARKING. THE REMAINING 0.21 ACRES WAS PERVIOUS LANDSCAPED AREA. THE NEW SITE PLAN CONTAINS THE SAME 0.21 ACRES PERVIOUS LANDSCAPED AND 1.81 ACRES OF IMPERVIOUS AREA. HOWEVER, SINCE THE ARCHITECT AND OWNER WANT ONE FLOOR ELEVATION, THE GRADING PLAN HAD TO CHANGE TO ALLOW FOR ACCESS AND BUILDING OCCUPANT PARKING.

SINCE THE NEW BUILDING IS TO BE A WAREHOUSE, IT HAS FOUR LOADING DOCKS FOR LARGE TRUCKS. THE BUILDING DESIGN UTILIZES A RECESSED DOCK TO AVOID ELEVATING THE BUILDING FINISH FLOOR ELEVATION THREE FEET ABOVE THE PARKING AREA. EACH DEPRESSED LOADING DOCK HAS AN AREA OF 183 S.F. NOT COVERED BY THE BUILDING ROOF. THE PRECIPITATION FALLING ON THIS 183 S.F. WILL DRAIN TO THE BOTTOM PORTION OF THE DOCK AND INTO A FOUR FOOT DIAMETER PRECAST CONCRETE MANHOLE WHICH HAS A ROCK AND EARTHEN BOTTOM TO ALLOW FOR THE PERCOLATION OF THE ACCUMULATED RAINFALL.

THE EXCESS PRECIPITATION (E) FOR RAINFALL ZONE 2 AND SOIL TREATMENT D FOR THE 6 HOUR 100 YEAR STORM IS 2.12 INCHES.

THE VOLUME ACCUMULATED IS  $(183) (2.12 / 12) = 32.33$  C.F. FOR VOLUME STORAGE THE 10 DAY ACCUMULATED VOLUME IS USED.

$V_{10 \text{ DAYS}} = V_{360} + A_0 (P_{10 \text{ DAYS}} - P_{360}) / 12$   
 $P_{360}$  AND  $P_{10 \text{ DAYS}}$  FOR PRECIPITATION ZONE 2 ARE 2.35 AND 3.95 INCHES RESPECTIVELY.

$V_{10 \text{ DAYS}} = 22.33 + 183 (3.95 - 2.35) / 12$   
 $V_{10 \text{ DAYS}} = 56.73$  C.F.

FOR A STANDARD PRECAST CONCRETE FOUR FOOT DIAMETER MANHOLE, THE VOLUME PER FOOT IS 12.56 C.F.; THEREFORE, A CLEARWELL OF  $56.78 / 12.56 = 4.51$  FT. AN 8 FT. DEEP MANHOLE WITH A 2 FOOT DEPTH OF 3 INCH SMOOTH ROCK IS DESIGNED.

## ROOF DRAINS:

ALL OF THE DRAINAGE FROM THE WAREHOUSE ROOF WILL BE DRAINED BY DOWNSPOUTS TO THE FIVE FOOT WIDE CONCRETE LINED CHANNEL AT THE SOUTH PROPERTY LINE.

## OFF-SITE FLOWS:

ALL OF THE FLOWS FROM THIS PHASE II RE-DESIGN ARE IN THE SAME QUANTITIES AND THE SAME LOCATIONS AS THE PREVIOUSLY APPROVED PHASE II PLAN.

## CHANNEL MANNING SOLUTION

FLOW DEPTH = 0.316 FT.  
FLOWRATE = 10.260 CFS  
CHANNEL BOTTOM WIDTH = 5.0 FT  
CHANNEL SIDE SLOPE = 0.000 FT/FT  
CHANNEL SLOPE = 0.0176 FT/FT  
CHANNEL ROUGHNESS = 0.013  
WETTED AREA = 1.58 SF  
WETTED PERIMETER = 5.63 FT  
VELOCITY = 6.50 FPS  
FROUDE NO. = 2.04  
FLOW = SUPER-CRITICAL  
VELOCITY HEAD = 0.66 FT

PHASE I CONSTRUCTION IS COMPLETED, INCLUDING RUNDOWN (DETAIL A), AND OCCUPANCY PERMIT HAS BEEN ISSUED.

ON JANUARY 6, 1999 THIS SITE WAS INSPECTED AND FOUND TO BE IN SUBSTANTIAL COMPLIANCE WITH THIS APPROVED DRAINAGE AND GRADING PLAN.

C.A. COONCE N.M.P.E. # 2934 01/07/99 DATE

T.B.M. - 5169.97, EXISTING OFFICE BUILDING F17/D39



## C.A. COONCE & ASSOC.

ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS  
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH (505) 296-1089

TITLE AS-BUILT SITE, DRAINAGE AND GRADING PLAN

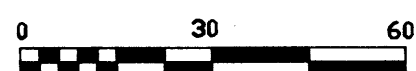
PROJECT PHASE II WAREHOUSE, 4600 LINCOLN AVE., N.E.

DATE 05/15/98 REVISED  
DRAWN LSC 01/07/99  
CHECKED CAC

SHEET 3 of 3

C No. ARC RADIUS DELTA TANGENT CHORD BEARING CHORD  
C1 39.27 25.00 90°00'00" 25.00 S44°40'33"E 35.36



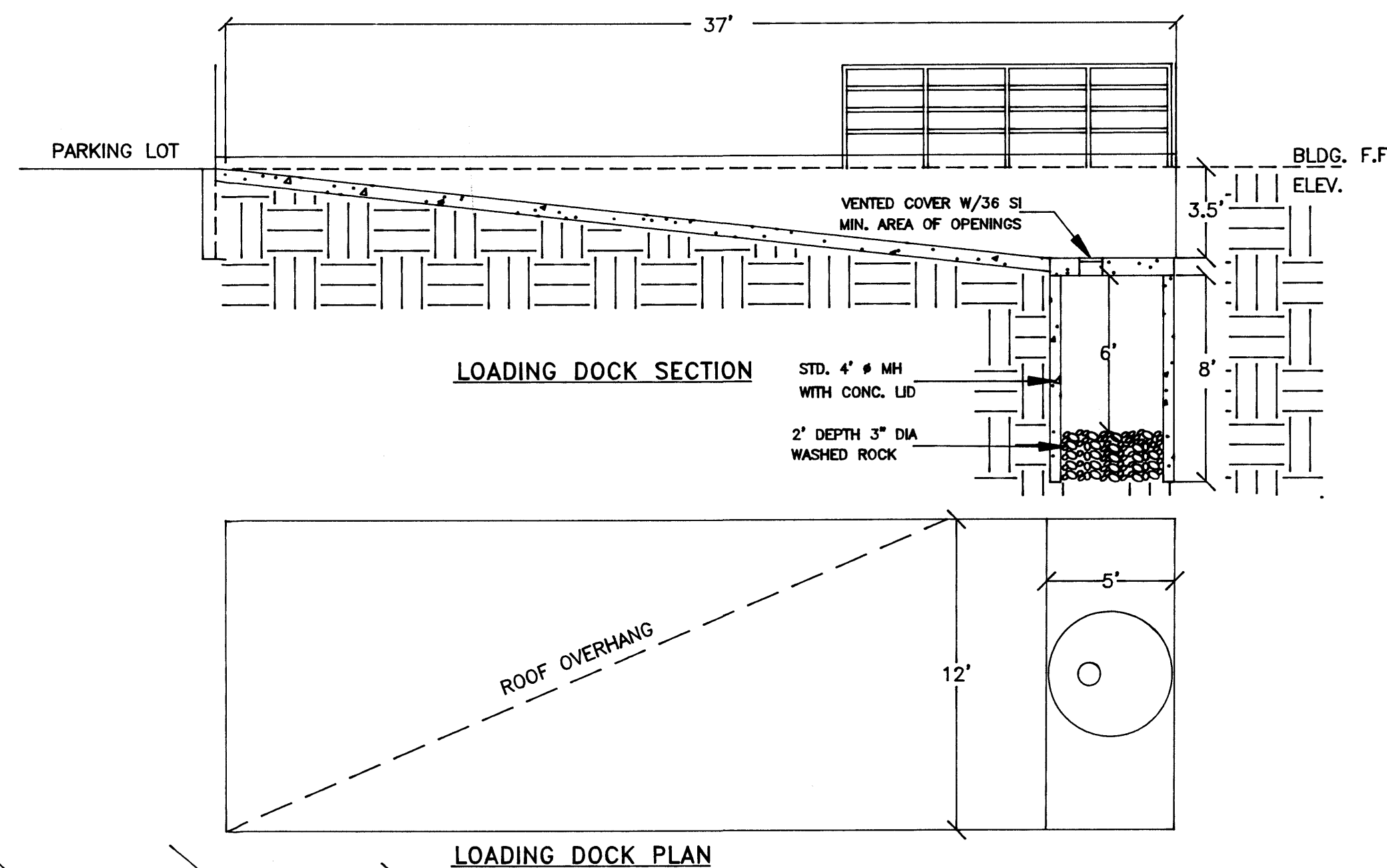
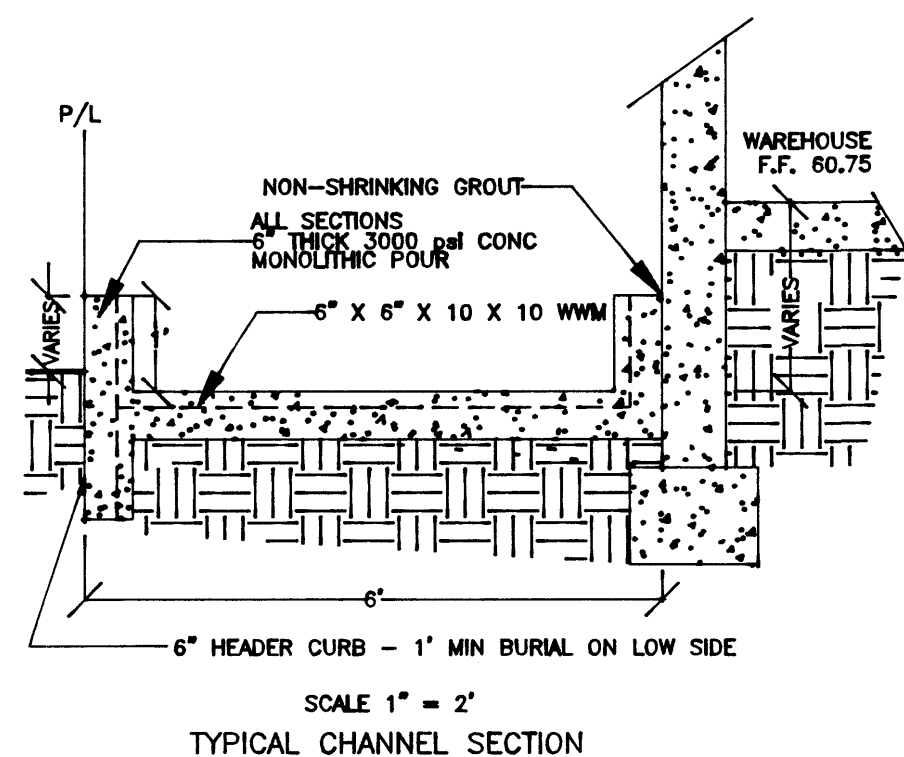


SCALE: 1" = 30'

Contour Interval = 1'

### LEGEND

- 5000 — EXISTING CONTOURS
- 5000 — PROPOSED CONTOURS
- - - EXISTING
- - - RUNOFF BOUNDARIES
- - - FLOW DIRECTION
- ⊕ PROPOSED SPOT ELEVATIONS
- ▨ EXIST. BLDG. (REMODEL)
- ▤ EXIST. BLDG. (DEMOLISH)
- ▧ COBBLES
- ▩ CONCRETE
- EARTH
- ROOF DRAIN



### PHASE II RE-DESIGN DISCUSSION:

THE DEVELOPER COMPLETED THE PHASE I MINI-WAREHOUSES IN 1994. IT IS NOW BELIEVED THAT A BETTER DEVELOPMENT IN CONFORMANCE WITH THE EXISTING OFFICE BUILDING AND MINI-WAREHOUSE COMPLEX WILL BE A WAREHOUSE - OFFICE COMPLEX FOR PHASE II, RATHER THAN THE ORIGINALLY APPROVED ADDITIONAL MINI-WAREHOUSES.

THIS DRAINAGE AND GRADING PLAN IS SUBMITTED TO UPGRADE AND DOCUMENT THE CONSTRUCTION GRADING AND SITE PLAN, AS WELL AS THE ON-SITE AND OFF-SITE HYDROLOGIC EFFECTS.

### PROPOSED HYDROLOGY:

THE SITE TO BE USED FOR PHASE II AS ORIGINALLY APPROVED CONTAINS 2.02 ACRES OF WHICH 1.81 ACRES WERE TO BE IMPERVIOUS, I.E., MINI-WAREHOUSES, ACCESS, AND PARKING. THE REMAINING 0.21 ACRES WAS PERVIOUS LANDSCAPING AREA. THE NEW SITE PLAN CONTAINS THE SAME 0.21 ACRES PERVIOUS LANDSCAPING AND 1.81 ACRES OF IMPERVIOUS AREA. HOWEVER, SINCE THE ARCHITECT AND OWNER WANT ONE FLOOR ELEVATION, THE GRADING PLAN HAD TO CHANGE TO ALLOW FOR ACCESS AND BUILDING OCCUPANT PARKING.

SINCE THE NEW BUILDING IS TO BE A WAREHOUSE, IT HAS FOUR LOADING DOCKS FOR LARGE TRUCKS. THE BUILDING DESIGN UTILIZES A RECESSED DOCK TO AVOID ELEVATING THE BUILDING FINISH FLOOR ELEVATION THREE FEET ABOVE THE PARKING AREA. EACH DEPRESSSED LOADING DOCK HAS AN AREA OF 183 S.F. NOT COVERED BY THE BUILDING ROOF. THE PRECIPITATION FALLING ON THIS 183 S.F. WILL DRAIN TO THE BOTTOM PORTION OF THE DOCK AND INTO A FOUR FOOT DIAMETER PRECAST CONCRETE MANHOLE WHICH HAS A ROCK AND EARTHEN BOTTOM TO ALLOW FOR THE PERCOLATION OF THE ACCUMULATED RAINFALL.

THE EXCESS PRECIPITATION (E) FOR RAINFALL ZONE 2 AND SOIL TREATMENT D FOR THE 6 HOUR 100 YEAR STORM IS 2.12 INCHES.

THE VOLUME ACCUMULATED IS  $(183) (2.12 / 12) = 32.33$  C.F. FOR VOLUME STORAGE THE 10 DAY ACCUMULATED VOLUME IS USED.

$$V_{10 \text{ DAYS}} = V_{360} + A_0 (P_{10 \text{ DAYS}} - P_{360}) / 12$$

$P_{360}$  AND  $P_{10 \text{ DAYS}}$  FOR PRECIPITATION ZONE 2 ARE 2.35 AND 3.95 INCHES RESPECTIVELY.

$$V_{10 \text{ DAYS}} = 22.33 + 183 (3.95 - 2.35) / 12$$

$$V_{10 \text{ DAYS}} = 56.73 \text{ C.F.}$$

FOR A STANDARD PRECAST CONCRETE FOUR FOOT DIAMETER MANHOLE, THE VOLUME PER FOOT IS 12.56 C.F.; THEREFORE, A CLEARWELL OF  $56.73 / 12.56 = 4.51$  FT. AN 8 FT. DEEP MANHOLE WITH A 2 FOOT DEPTH OF 3 INCH SMOOTH ROCK IS DESIGNED.

### ROOF DRAINS:

ALL OF THE DRAINAGE FROM THE WAREHOUSE ROOF WILL BE DRAINED BY DOWNSPOUTS TO THE FIVE FOOT WIDE CONCRETE LINED CHANNEL AT THE SOUTH PROPERTY LINE.

### OFF-SITE FLOWS:

ALL OF THE FLOWS FROM THIS PHASE II RE-DESIGN ARE IN THE SAME QUANTITIES AND THE SAME LOCATIONS AS THE PREVIOUSLY APPROVED PHASE II PLAN.

### CHANNEL MANNING SOLUTION

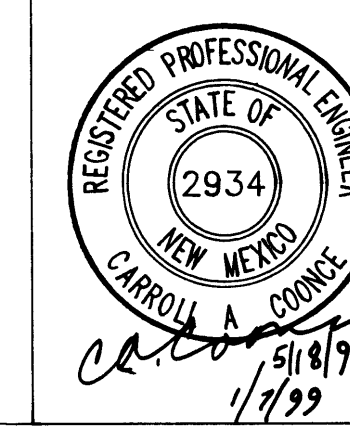
FLOW DEPTH =	0.316 FT.
FLOWRATE =	10.260 CFS
CHANNEL BOTTOM WIDTH =	5.0 FT
CHANNEL SIDE SLOPE =	0.000 FT/FT
CHANNEL SLOPE =	0.0176 FT/FT
CHANNEL ROUGHNESS =	0.013
WETTED AREA =	1.58 SF
WETTED PERIMETER =	5.83 FT
VELOCITY =	6.50 FPS
FROUDE NO. =	2.04
FLOW =	SUPER-CRITICAL
VELOCITY HEAD =	0.66 FT

PHASE I CONSTRUCTION IS COMPLETED, INCLUDING RUNDOWN (DETAIL A), AND OCCUPANCY PERMIT HAS BEEN ISSUED.

ON JANUARY 6, 1999 THIS SITE WAS INSPECTED AND FOUND TO BE IN SUBSTANTIAL COMPLIANCE WITH THIS APPROVED DRAINAGE AND GRADING PLAN.

C.A. COONCE  
C. A. COONCE N.M.P.E. # 2934 01/07/99 DATE

T.B.M. - 5169.97, EXISTING OFFICE BUILDING  
F17/D39



## C.A. COONCE & ASSOC.

ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS  
12324 PINERIDGE N.E., ALBUQUERQUE, N.M. 87112 PH (505) 298-1089

TITLE AS-BUILT SITE, DRAINAGE AND GRADING PLAN

PROJECT PHASE II WAREHOUSE, 4600 LINCOLN AVE., N.E.

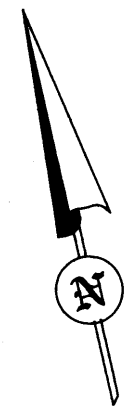
DATE	05/15/98	REVISED	
DRAWN	LSC	01/07/99	
CHECKED	CAC		

SHEET 3 OF 3

RECEIVED  
JAN 11 1999  
HYDROLOGY SECTION

C No.	ARC	RADIUS	DELTA	TANGENT	CHORD BEARING	CHORD
C1	39.27	25.00	90°00'00"	25.00	S44°40'33"E	35.36



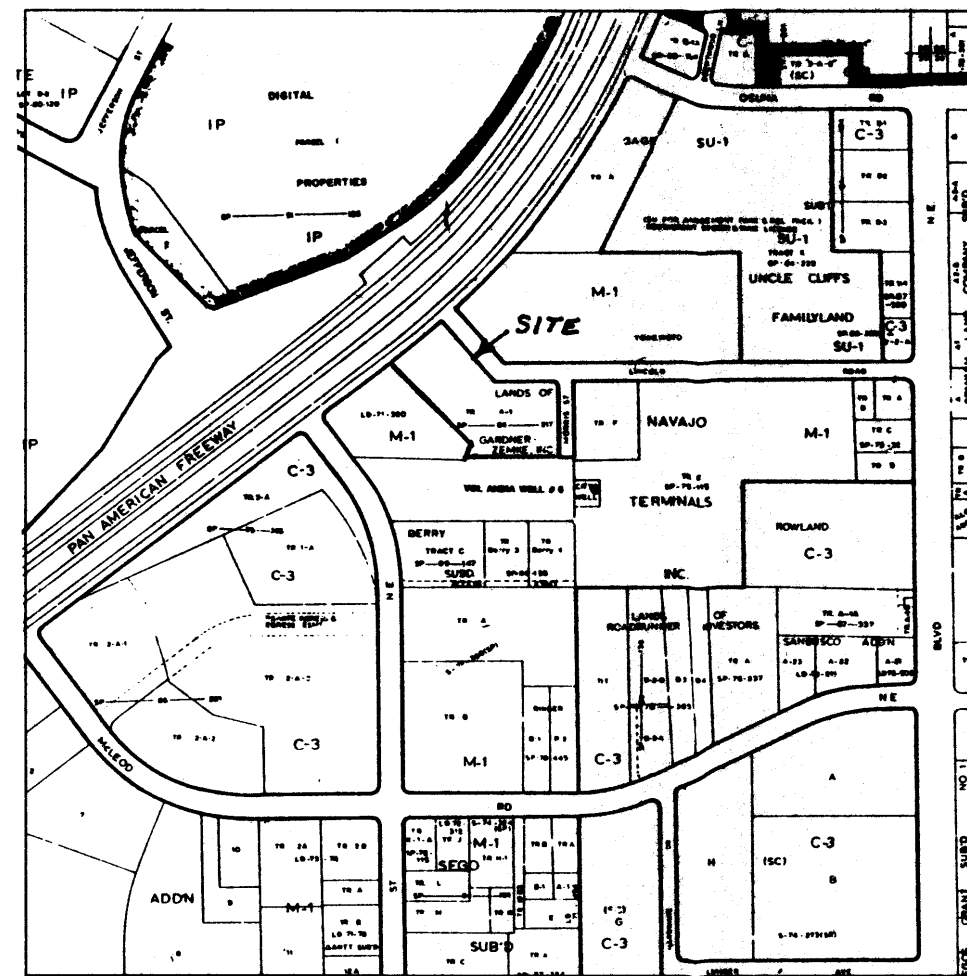


0 30 60  
SCALE: 1" = 30'

Contour Interval = 1'

## LEGEND

- 5000 EXISTING CONTOURS
- 5000 PROPOSED CONTOURS
- EXISTING
- RUNOFF BOUNDARIES
- FLOW DIRECTION
- PROPOSED SPOT ELEVATIONS
- EXIST. BLDG. (REMODEL)
- EXIST. BLDG. (DEMOLISH)
- COBBLES
- CONCRETE
- EARTH
- COBBLE AND PERMEABLE MEMBRANE AREA



LOCATION MAP F-17-Z

LEGAL DESCRIPTION: TRACT A-1, LANDS OF  
GARDNER-ZEMKE, INC.  
ADDRESS: 4600 LINCOLN AVE., N.E.



FLOOD BOUNDARY AND FLOODWAY MAP  
PANEL NO. 350002 0016

## DISCUSSION:

### EXISTING ON-SITE FLOWS:

THIS TRACT OF LAND, ZONED M-1, IS CURRENTLY USED AS A CONTRACTOR'S YARD AND VEHICLE MAINTENANCE FACILITY. IT IS BOUNDED ON THE WEST BY THE I-25 EAST FRONTAGE ROAD, ON THE NORTH BY LINCOLN AVE., N.E., AND ON THE EAST BY MONROE AVE., N.E. THE TRACT IS IN PRECIPITATION ZONE 2.

THE EXISTING TREATMENT AREAS ARE BUILDINGS, SHEDS, ASPHALT, AND CONCRETE WALKWAYS, 2.72 ACRES (TREATMENT D); HARD PACKED PARKING AND STORAGE AREAS, 1.23 ACRES (TREATMENT C); AND NATIVE VEGETATION, 0.10 ACRES (TREATMENT A). THE FOLLOWING TABLE (FROM TABLE A-9) SUMMARIZES THE EXISTING MAX. Q<sub>100</sub> FLOWS FROM THIS SITE TO THE EAST DITCH OF THE I-25 EAST FRONTAGE ROAD AND APPROX. 1.5 CFS TO LINCOLN AVE.

TREATMENT	AREA (ACRES)	MAX. Q (CFS/AC)	MAX Q(CFS)
A	0.10	1.56	0.16
C	1.23	3.14	3.86
D	2.72	4.70	12.78
AREA	4.05 ACRES		Q <sub>100</sub> = 16.80 CFS

### PROPOSED SITE FLOWS:

THE OWNERS OF THIS EXISTING FACILITY ARE IN THE PROCESS OF CONSTRUCTING A NEW STORAGE YARD AND VEHICLE MAINTENANCE FACILITY WEST OF BROADWAY, NEAR THE LIVESTOCK AUCTION PENS. THE EXISTING SHEDS AND TRAILERS WILL BE REMOVED AND A RENTAL MINI-STORAGE FACILITY CONSTRUCTED. THE EXISTING PERMANENT OFFICE STRUCTURE WILL REMAIN AND BE UTILIZED AS AN OFFICE BUILDING.

THE PERIMETER OF THE LOT, AS INDICATED, HAS A LANDSCAPED AREA. THE LANDSCAPE PLAN IS TO PLANT THIS AREA WITH NATIVE GRASSES AND FLOWERS, WITH A TEMPORARY IRRIGATION SYSTEM TO BE OPERATED FOR ONE YEAR IN ORDER TO ALLOW THE NATIVE VEGETATION TO ESTABLISH. THE LANDSCAPE AREA AT THE NORTH WEST OF THE OFFICE WILL CONTAIN GRASS, TREES, AND SHRUBS.

THE PROPOSED TREATMENT AREAS ARE BUILDING, ASPHALT DRIVES AND PARKING, AND CONCRETE SIDEWALKS, 3.5 ACRES (TREATMENT D); NATIVE GRASSES AND FLOWERS, 0.26 ACRES (TREATMENT A); AND GRASS, 0.04 ACRES (TREATMENT B). THE FOLLOWING TABLE SUMMARIZES THE PROPOSED MAX. Q<sub>100</sub> FLOWS FROM THIS SITE TO THE EAST DITCH OF THE I-25 EAST FRONTAGE ROAD AND TO LINCOLN AVE.

THE MAX. Q<sub>100</sub> FLOWS FROM THIS SITE WERE COMPUTED USING THE PEAK DISCHARGE TABLE A-9 FOR ZONE 2 RAINFALL, WHERE TREATMENT A = 1.56, B = 2.28, C = 3.14, AND D = 4.7

THE AREAS AND Q<sub>100</sub>'S FOR EACH ZONE AND STATION INDICATED ARE AS FOLLOWS:

TREATMENT	I	II	III	IV	V	VI	TOTALS
A	0.00	0.16	0.00	0.11	0.02	0.05	
B	0.03	0.00	0.03	0.00	0.00	0.00	
C	0.00	0.00	0.00	0.00	0.00	0.00	
D	0.33	1.51	1.81	0.00	0.00	0.00	
	0.36	1.67	1.84	0.11	0.02	0.05	= 4.05 AC.
Q <sub>100</sub> PEAK	1.62	7.30	8.58	0.17	0.03	0.08	= 17.78 CFS

SOME FUGITIVE FLOW HAS OCCURRED MIDWAY OF THE SOUTH PROPERTY LINE. THIS IS CORRECTED BY DESIGNING A HEADER CURB AND A RUNDOWN TO CHANNEL THE RUNOFF FROM THE EASTERN PORTION OF THIS SITE TO THE WESTERN PORTION. THE AREAS IN WHICH THE FLOW VELOCITY IS LIKELY TO CAUSE EROSION ARE TREATED WITH A PERMEABLE LANDSCAPE MEMBRANE AND COBBLE STONES. THIS BOTH GIVES EROSION PROTECTION AND ALLOWS FOR INFILTRATION. THE MANNING n'S USED ARE 0.035 FOR THE COBBLESTONE AREAS AND 0.013 FOR THE CONCRETE RUNDOWN. BASED UPON THESE n'S, THE CHANNEL GEOMETRY, AND THE INDICATED Q'S, THE DEPTH OF FLOW AND VELOCITIES ARE 0.1 FT. AND 16 FPS FOR THE RUNDOWN AND 0.5 FT. AND 3.1 FPS FOR THE SOUTH COBBLED CHANNEL.

### WATERSHED CHARACTERISTICS

THE MOST RECENT DEFINITIVE HYDROLOGIC STUDY OF THIS AREA IS A STUDY FOR THE VINEYARD CHANNEL BY GREINER, INC., FEB., 1993. THIS SITE IS WITHIN BASIN 600 OF THIS STUDY, WHICH ENCOMPASSES 42.52 AC. AND IS DRAINED BY A 36 INCH RCP UNDER THE EAST I-25 FRONTAGE ROAD, APPROXIMATELY 320' SOUTH OF THIS TRACT. THE REFERENCED STUDY SHOWS A MAXIMUM Q OF 196.1 CFS AND A MAXIMUM WATER SURFACE ELEVATION OF 5158.02 FT. THE MAXIMUM DISCHARGE THROUGH THE RCP IS 70.2 CFS. THIS STUDY CALCULATES AN AVERAGE YIELD OF 4.61 CFS PER ACRE. THIS DEVELOPMENT WILL YIELD 4.39 CFS PER ACRE.

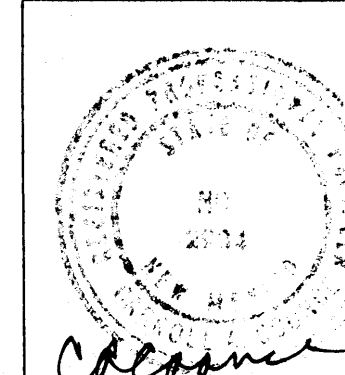
THE RUNDOWN FROM THE EAST I-25 FRONTAGE ROAD TRAVERSES THE WESTERN EDGE OF THIS PROPERTY. THE EXISTING FLOW PATTERN IS NOT CHANGED BY THIS DESIGN.

### FLOODPLAIN STATUS

THE FLOODPLAIN HAS CHANGED FROM THE 1983 MAPS. THE NMH&TD HAS ADDED THE JEFFERSON AVE. OVERPASS AND IMPROVED THE DRAINAGE WITHIN THE LINCOLN AVE. R-O-W. THE VINEYARD CHANNEL HAS BEEN COMPLETED BY AMAFCA. THE CURRENT 100 YEAR FLOOD PLAIN ELEVATION IS 5158.02 FT.

T.B.M. - 5169.97, EXISTING OFFICE BUILDING

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPT. 1/23/94



## C.A. COONCE & ASSOC.

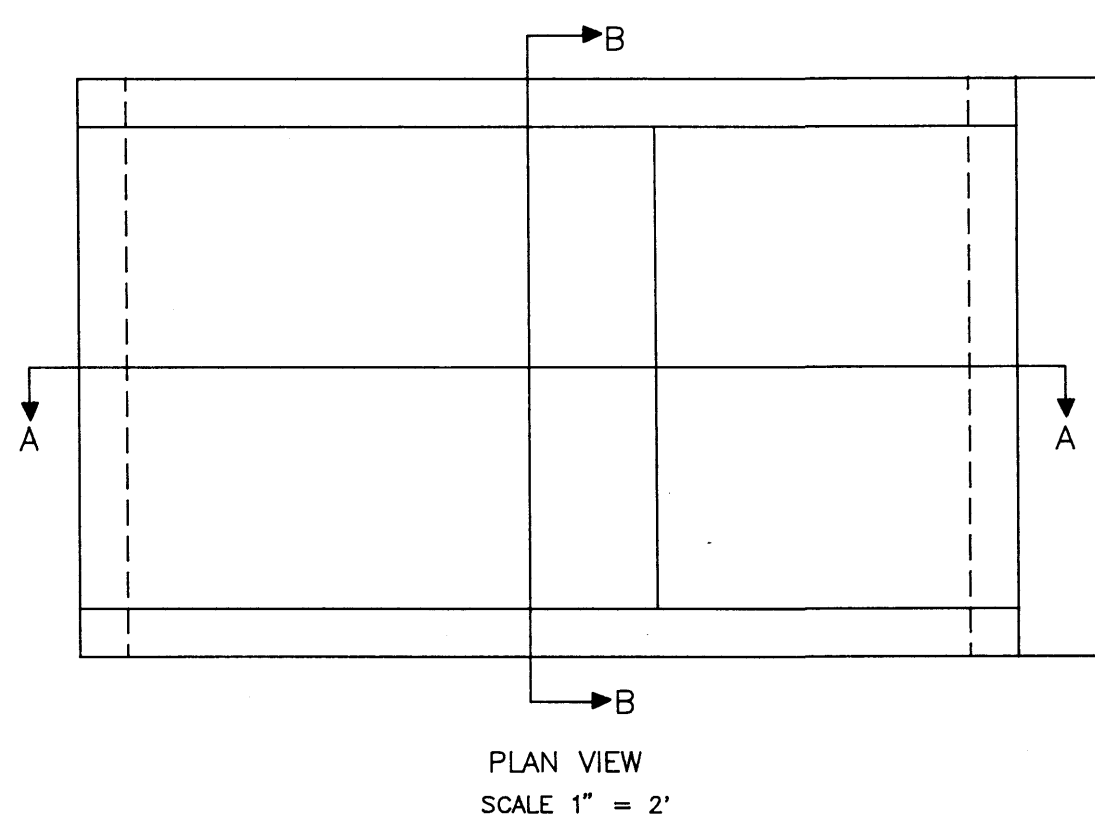
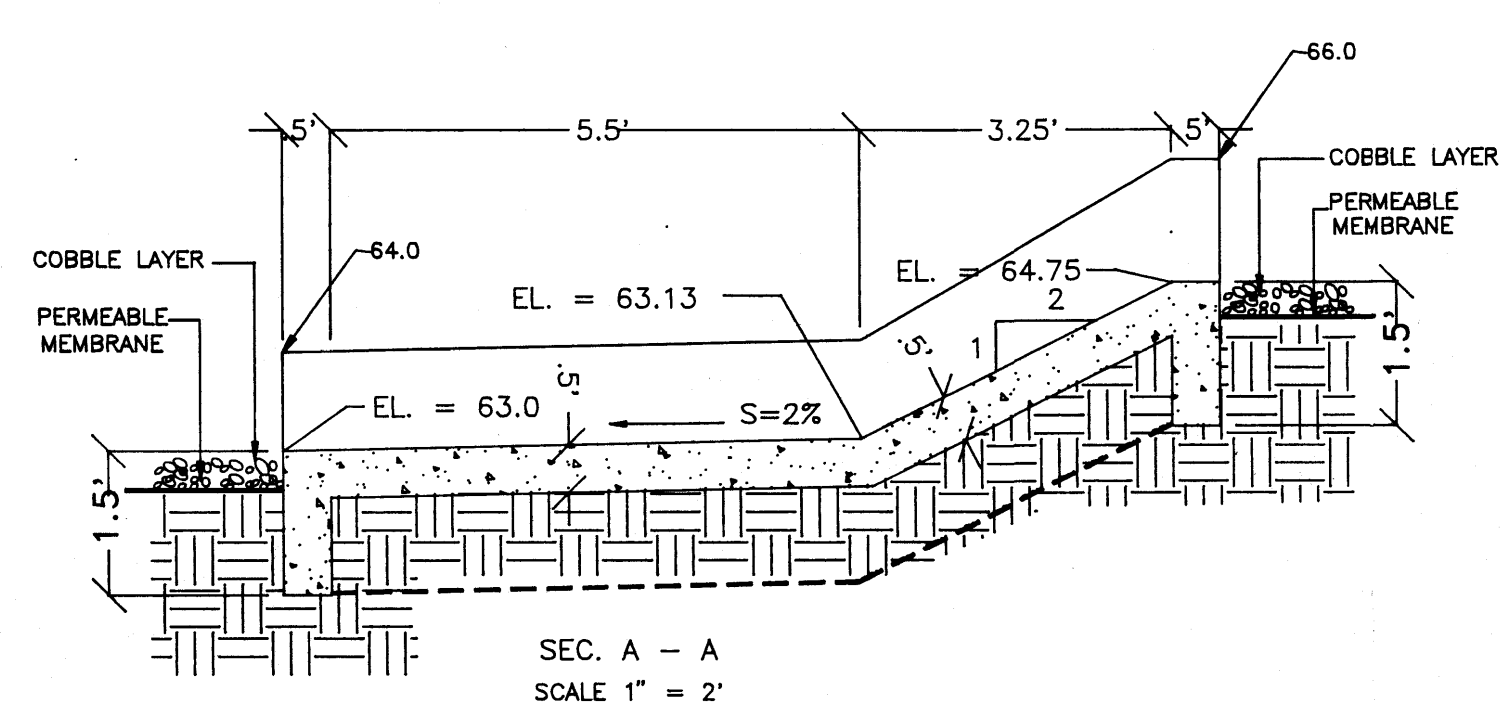
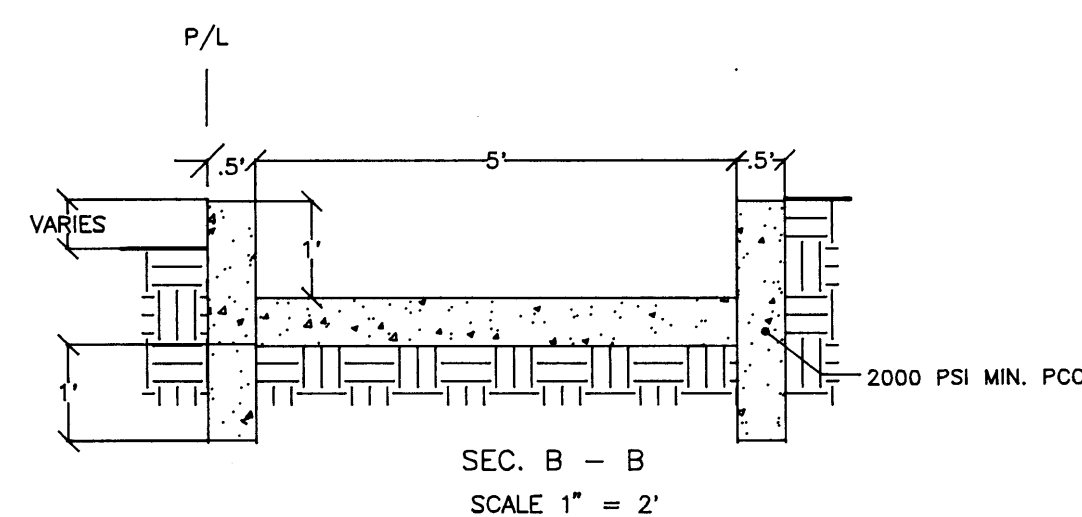
ENVIRONMENTAL WATER RESOURCES, & SANITARY CONSULTING ENGINEERS  
12324 PINEIDGE N.E. ALBUQUERQUE, N.M. 87112 PH (505) 296-1089

TITLE	SITE, DRAINAGE AND GRADING PLAN
PROJECT	MINI-WAREHOUSES, 4600 LINCOLN AVE., N.E.
DATE	11/23/93
DRAWN	LSU
CHECKED	CAC
REVISION	1/24/94

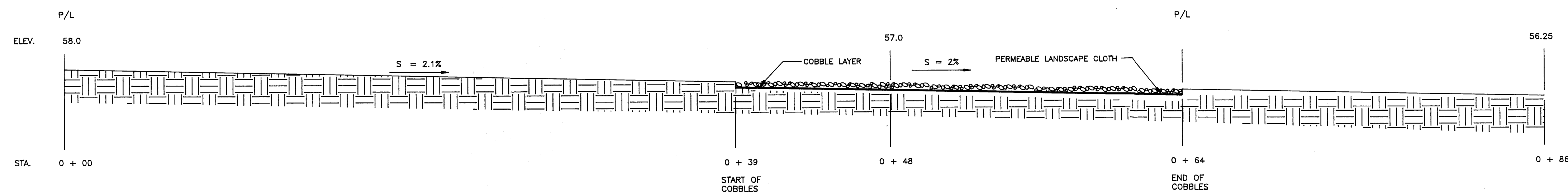
SHEET 1 OF 2

C No. ARC RADIUS DELTA TANGENT CHORD BEARING CHORD  
C1 39.27 25.00 90°00'00" 25.00 S44°40'33"E 35.36

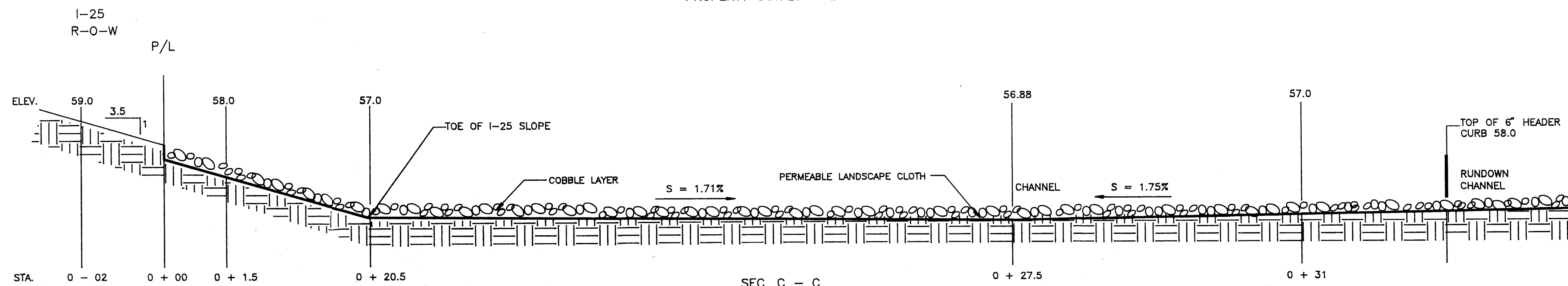




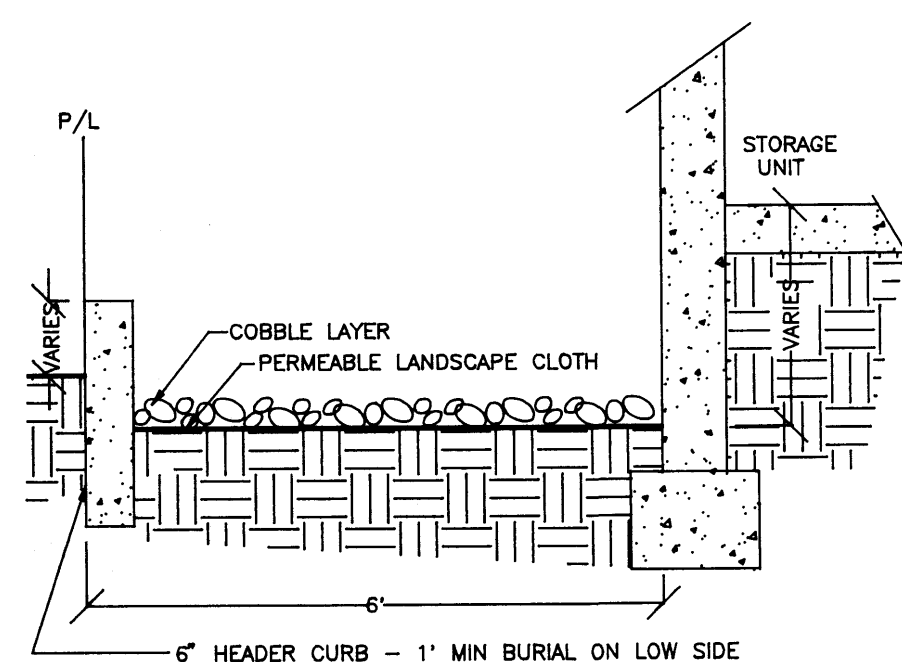
DETAIL A - RUNDOWN CHANNEL INLET



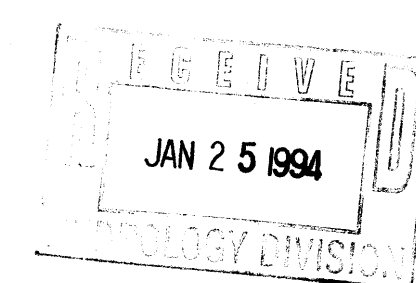
PROPERTY OUTFLOW SECTION



RUNDOWN CHANNEL OUTLET SECTION



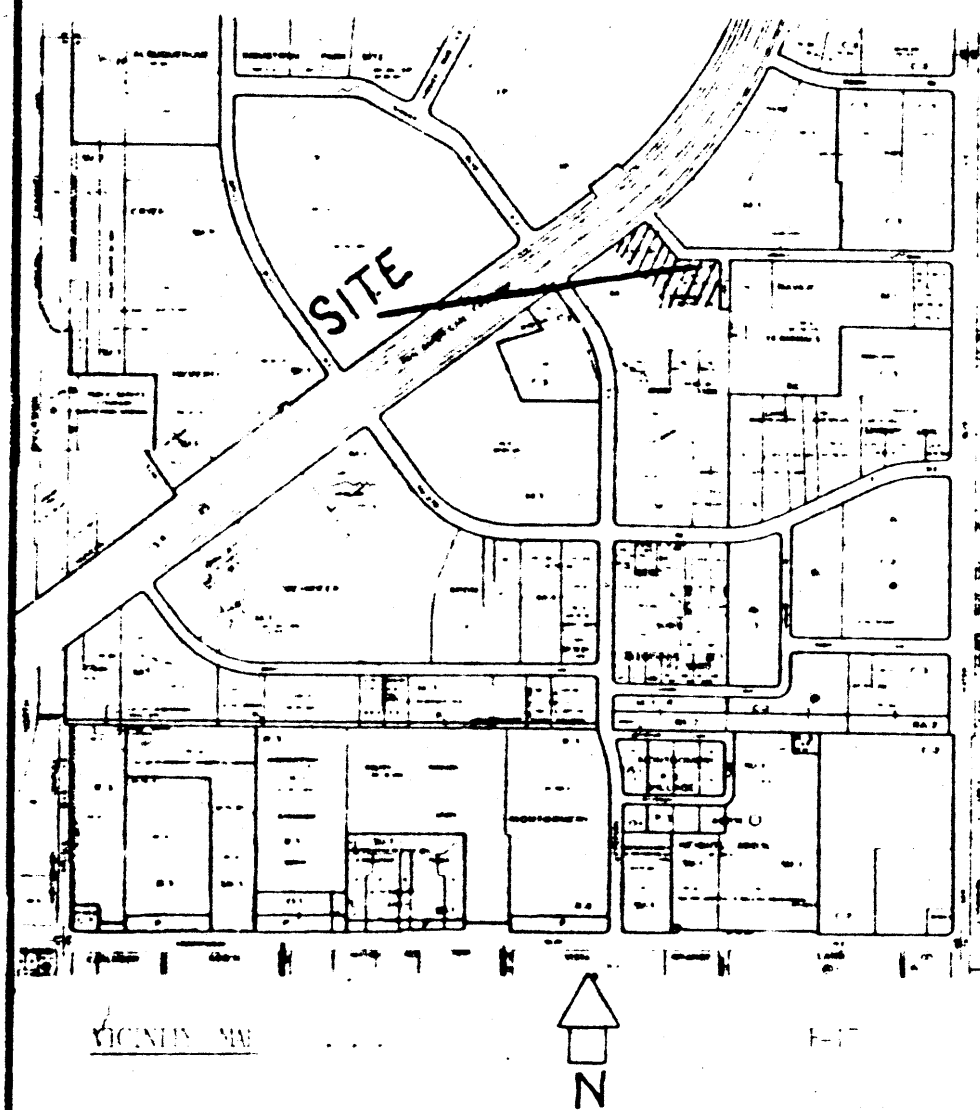
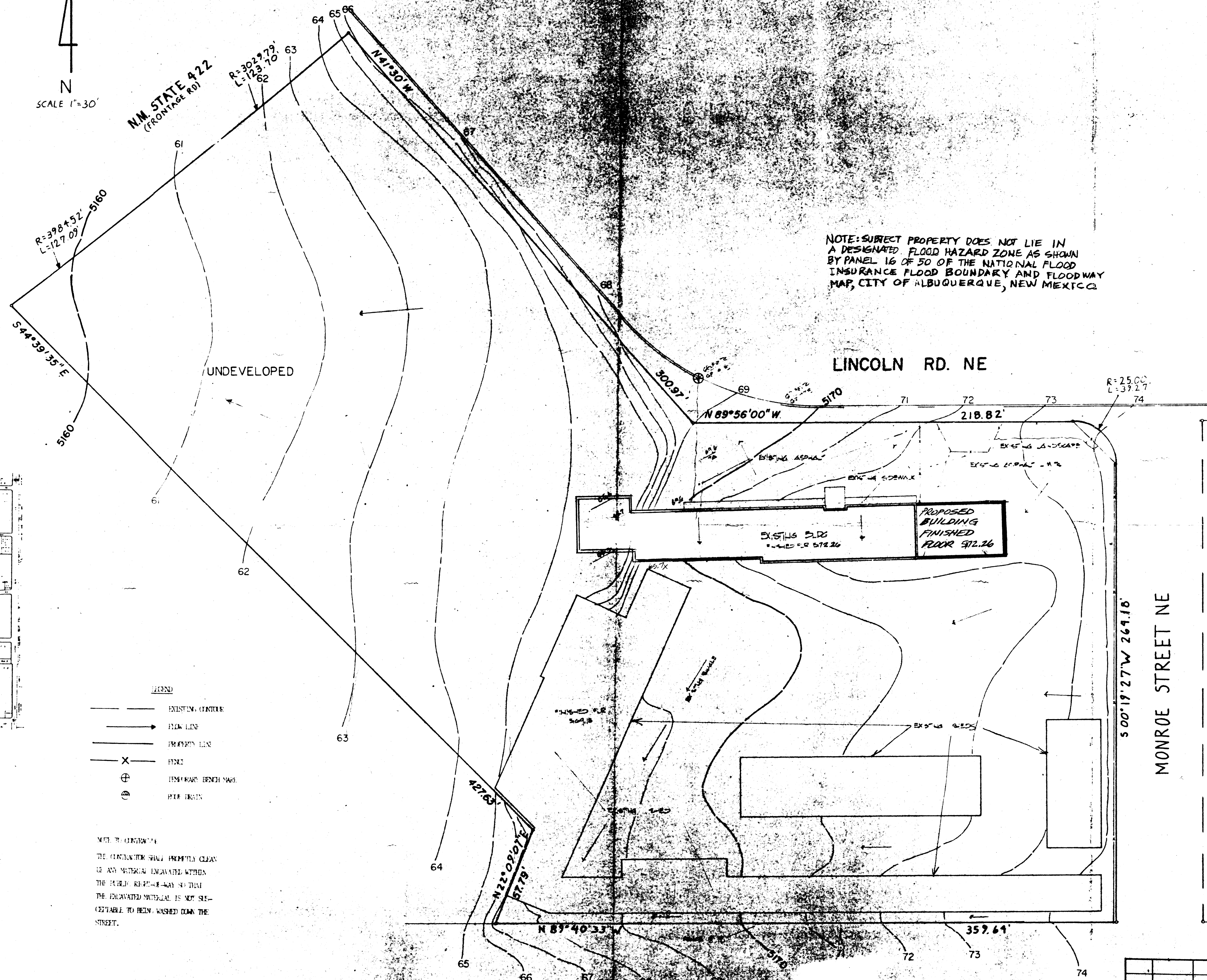
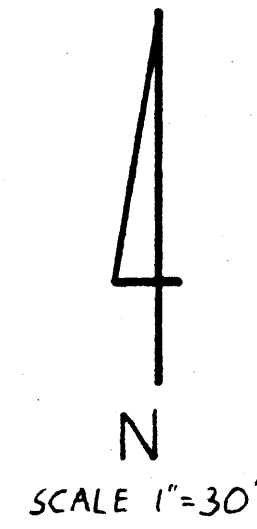
TYPICAL RUNDOWN SECTION



		<b>C.A. COONCE &amp; ASSOC.</b> ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS 12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH (505) 296-1089	
TITLE		DETAILS	
PROJECT		MINI-WAREHOUSES, 4600 LINCOLN AVE., N.E.	
DATE	01/20/94	REVISED	
DRAWN	LSC		
CHECKED	CAC		
			SHEET 2 of 2



# GRADING AND DRAINAGE PLAN



- LEGEND
- EXISTING CENTERLINE
  - PROPOSED CENTERLINE
  - PROPERTY LINE
  - X BENCHMARK
  - ⊕ TEMPORARY BENCHMARK
  - ⊙ PERMITS

## PROJECT BENCHMARK

A STANDARD N.M.S.H.C. BRASS TABLET, STAMPED "NM-367-1" SET ON TOP OF CONCRETE POST SET FLUSH W/GROUND, LOCATED 4.1' FROM THE NOSE OF THE MEDIAN IN SAN MATEO NE. 55' NORTH OF THE INTERSECTION OF OSUNA RD. NE & SAN MATEO NE. ELEVATION: 5198.32 FEET (M.S.L.D.)

## TEMPORARY BENCHMARK

TOP OF CURB, WEST END OF EXISTING DRIVE PAD ON LINCOLN RD. ELEVATION: 5168.82 (M.S.L.D.)

## LEGAL DESCRIPTION

TRACT "A-1" OF LANDS OF GARDNER-ZEMKE CO., INC. ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

## STREET ADDRESS

4600 LINCOLN ROAD NE

## NOTE TO CONTRACTOR

THE CONTRACTOR SHALL MAINTAIN CLEAN GRASS AND MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.

## CALCULATIONS FOR EAST TWO ACRES:

### GROUND COVER INFORMATION:

FROM SCS BERNALILLO COUNTY SOIL SURVEY, PLATE 21 EMIB EMIBUDO GRAVELLY FINE SANDY LOAM HYDROLOGIC SOIL GROUP "B"

### EXISTING CONDITION:

$A_{total} = 87,120 \text{ FT}^2$

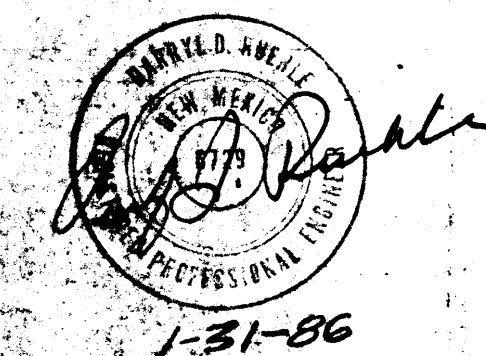
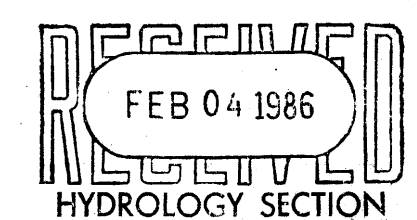
% IMPERVIOUS = 97.3

### RATIONAL METHOD:

DISCHARGE:  $Q = CIA$   
 $C = .95$  (DPM PLATE 22.1 C-1)  
 $T_c = 10$  MINUTE  
 $P_2 = 2.2$  IN.  
 $i = 4.65$  in/hr.  
 $Q_{10} = 8.8 \text{ cfs}$

### DEVELOPED CONDITIONS:

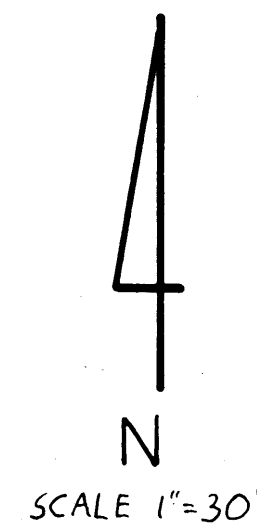
$Q = CIA$   
 $C = 1.0$   
 $BUILDING = A = 1643 \text{ ft}^2$   
 $Q = 0.07 \text{ cfs}$   
 $Q = \text{NEGLECTABLE}$



REV.	DATE	BY	DESCRIPTION	REFERENCE
1	1-31-86	LFE	THE GARDNER-ZEMKE CO. OFFICE BUILDING ADDI.	4600 LINCOLN ROAD N.E. ALBUQUERQUE, NEW MEXICO 87109 PH. (505) 881-0555
2	1-31-86	LFE	GRADING & DRAINAGE PLAN	JOB NO. 1614
3	1-31-86	LFE		DRAWING NO. 1614-1A
4	1-31-86	LFE		SHT. NO. 1A OF 10
5	1-31-86	LFE		REV. 0



# GRADING AND DRAINAGE PLAN



NM STATE 422  
(FRONTAGE RD.)

R=302.79'  
L=123.70'

N41°30'W

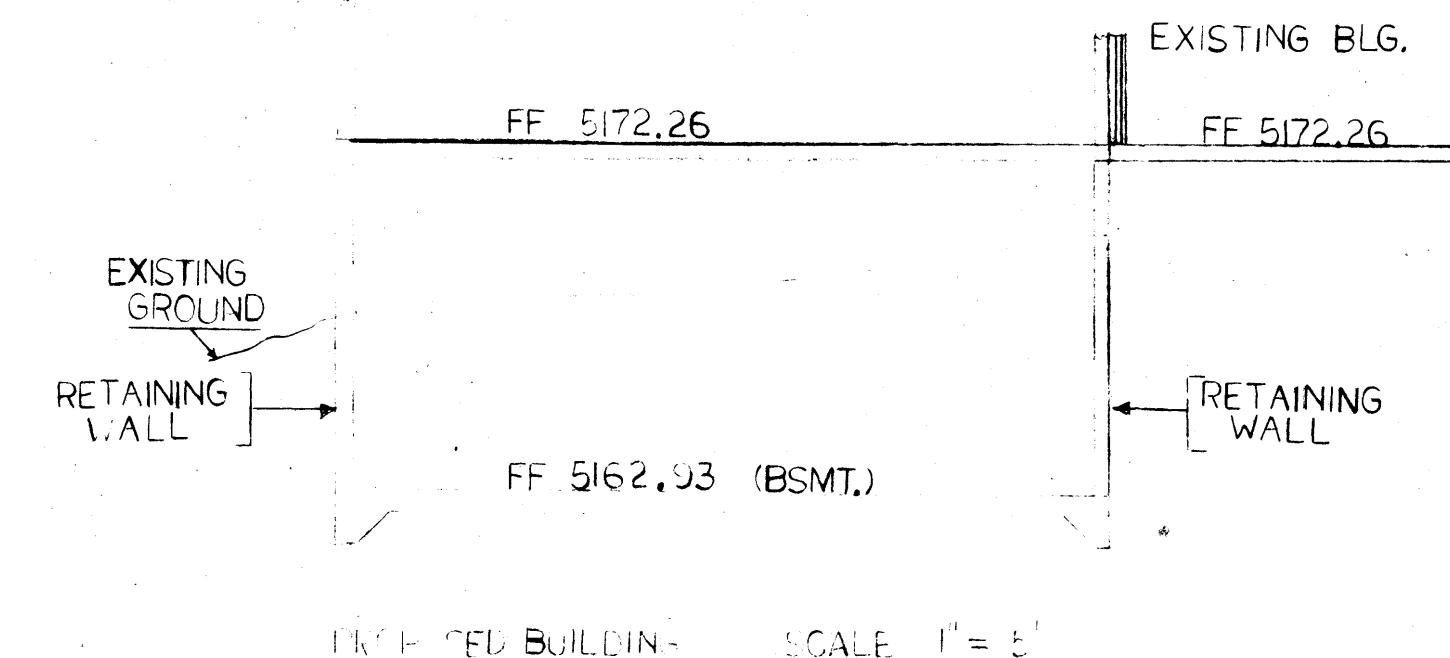
R=398.52'  
L=127.09'

S44°39'35"E

UNDEVELOPED

THIS SITE IS LOCATED WITHIN  
A FLOOD HAZARD ZONE AS SHOWN  
BY FIGURE 16 OF 50 OF THE NATIONAL FLOOD  
INSURANCE FLOOD BOUNDARY AND FLOODWAY  
MAP, CITY OF ALBUQUERQUE, NEW MEXICO.

SECTION A-A

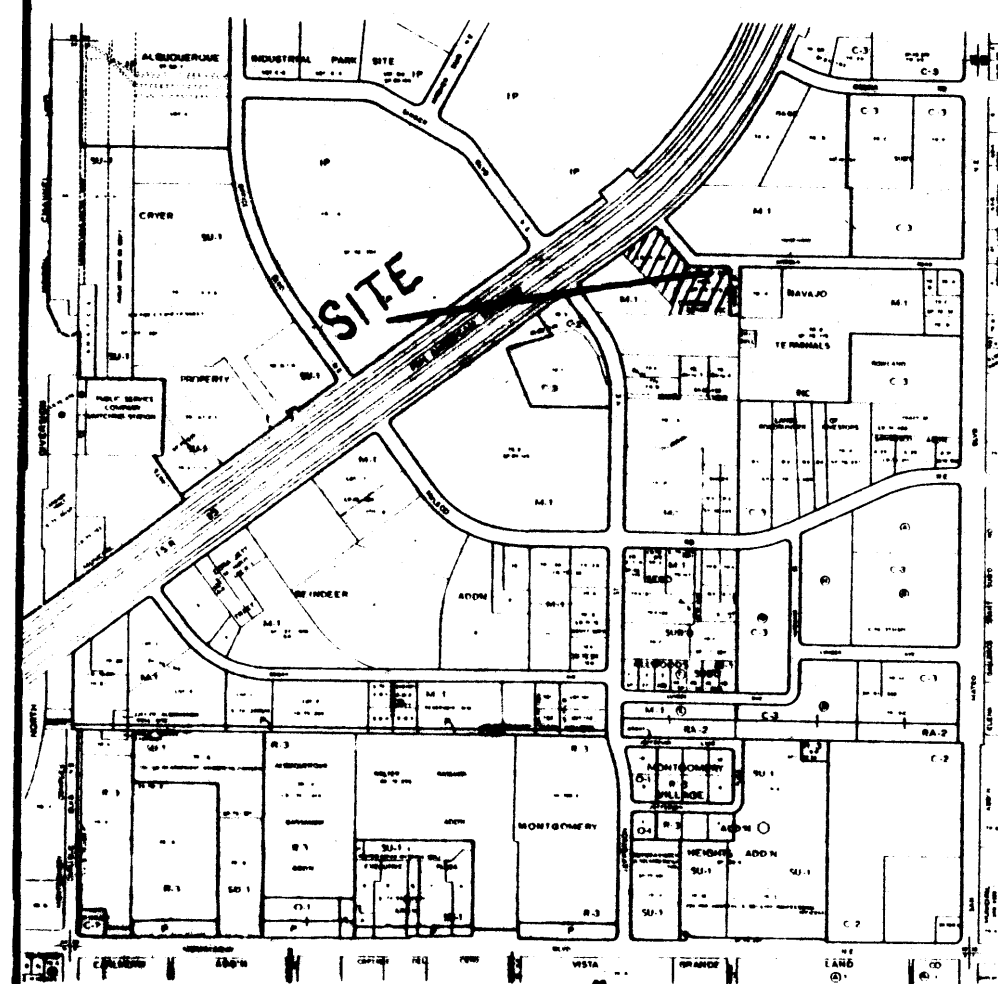


LINCOLN RD. NE

R=25.00'  
L=39.27'

N 89°56'00"W

MONROE STREET NE



VICINITY MAP  
F-17

- LEGEND
- EXISTING CONTOUR
  - FLOW LINE
  - PROPERTY LINE
  - FENCE
  - TEMPORARY BENCH MARK
  - ROOF DRAIN

**PROJECT BENCHMARK**  
A STANDARD N.M.S.H.C. BRASS TABLET, STAMPED  
"NM-367-1" SET ON TOP OF CONCRETE POST SET  
FLUSH W/GROUND. LOCATED 4.1' FROM THE NOSE OF  
THE MEDIAN IN SAN MATEO NE. 55' NORTH OF THE  
INTERSECTION OF OSUNA RD. NE & SAN MATEO NE.  
ELEVATION: 5198.32 FEET (M.S.L.D.)

**TEMPORARY BENCHMARK**  
TOP OF CURB, WEST END OF EXISTING DRIVE PAD  
ON LINCOLN RD. ELEVATION: 5168.82 (M.S.L.D.)

**LEGAL DESCRIPTION**  
TRACT "A-1" OF LANDS OF GARDNER-ZEMKE CO., INC.  
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

**STREET ADDRESS**  
4600 LINCOLN ROAD NE

**NOTE TO CONTRACTOR**  
THE CONTRACTOR SHALL PROMPTLY CLEAN  
UP ANY MATERIAL EXCAVATED WITHIN  
THE PUBLIC RIGHT-OF-WAY SO THAT  
THE EXCAVATED MATERIAL IS NOT SUS-  
CEPTIBLE TO BEING WASHED DOWN THE  
STREET.

PROPOSED BLDG  
FINISHED FLR 5172.26  
BSMT FINISHED FLR 5164.11

EXISTING FLR  
FINISHED FLR 5172.26

FINISHED FLR  
5169.18

N 89°40'33"W

RECEIVED  
MAY 25 1984  
HYDROLOGIC SECTION

CALCULATIONS FOR EAST 2 ACRES

**Ground Cover Information**  
From SCS Bernalillo County Soil Survey, Plate 21  
BMB Embudo gravelly fine sandy loam  
Hydrologic Soil Group B

**Existing Condition**

A<sub>total</sub> = 87,120 ft<sup>2</sup>  
% Impervious = 97.3

**Rational Method**

Discharge: Q = CIA  
C = .95 (DPM Plate 22.2 C-1)  
T<sub>p</sub> = 10 min.  
P<sub>g</sub> = 2.2 in.  
i = 4.65 in/hr.  
Q<sub>100</sub> = 8.8 cfs

**Developed Conditions**

Q = CIA  
C = 1.0  
Building A = 600 ft<sup>2</sup>  
Q = 0.07 cfs  
Q = Negligible Increase

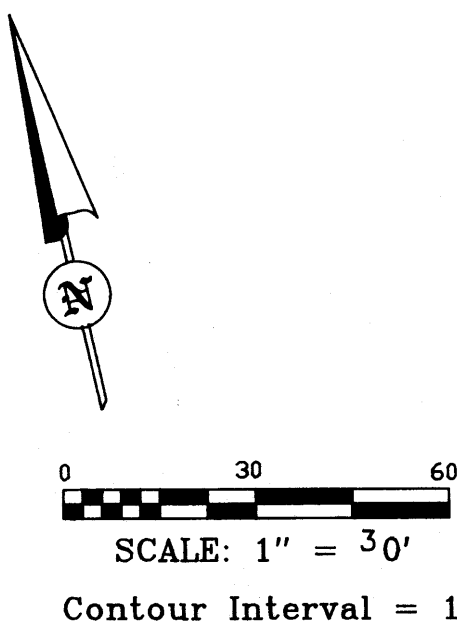
*Richard Hall*

MAY 25, 1984

APPROVED FOR DRAINAGE  
7/6/84  
*Billy J. Goodrich*  
SIGNATURE TITLE  
ADVISE DRAINAGE INSPECTOR  
WHEN GRADING EXECUTED

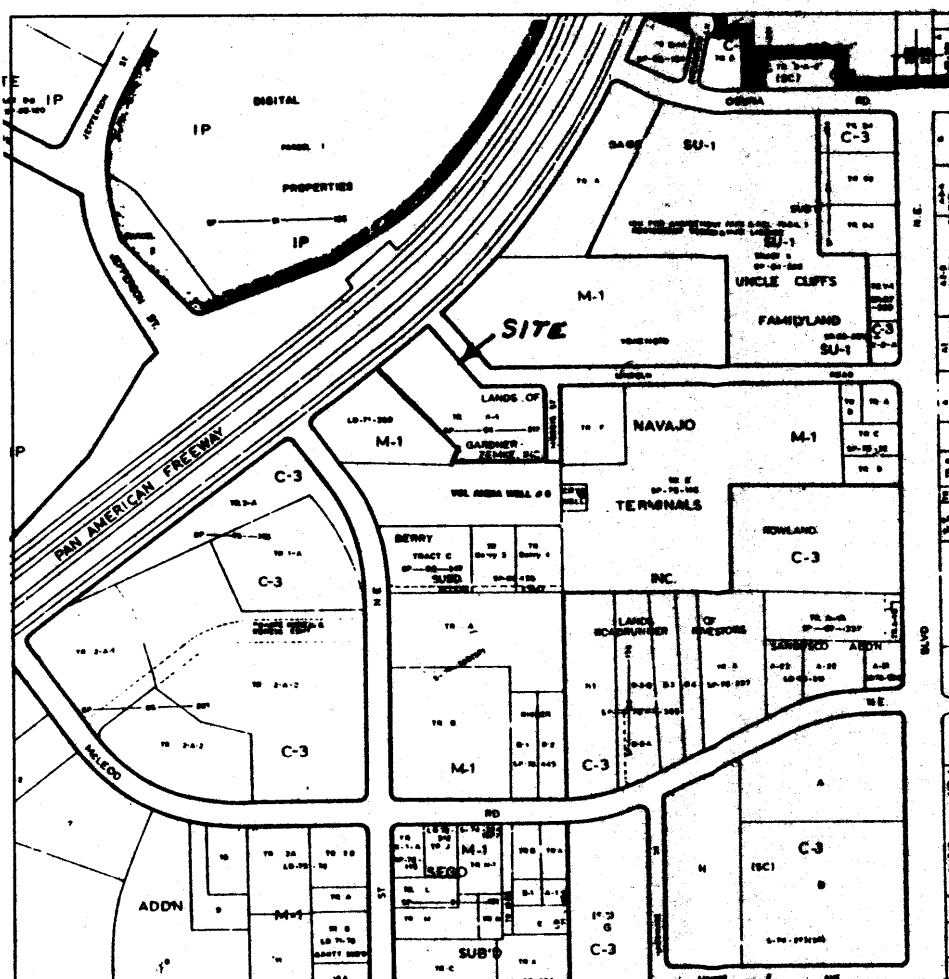
**HALL ENGINEERING 8**  
2825 Pennsylvania Ave., N.E.  
Suite 350  
Albuquerque, New Mexico 87110





# LEGEND

- 5000 — EXISTING CONTOURS
- 5000 — PROPOSED CONTOURS
- — — EXISTING
- — — RUNOFF BOUNDARIES
- — — FLOW DIRECTION
- ⊕ PROPOSED SPOT ELEVATIONS
- ▨ EXIST. BLDG. (REMODEL)
- ▨ EXIST. BLDG. (DEMOLISH)
- ▨ COBBLES
- ▨ CONCRETE
- ▨ EARTH
- Ⓟ COBBLE AND PERMEABLE MEMBRANE AREA



LOCATION MAP F-17-Z  
LEGAL DESCRIPTION: TRACT A-1, LANDS OF  
GARDNER-ZEMKE, INC.  
ADDRESS: 4600 LINCOLN AVE., N.E.



FLOOD BOUNDARY AND FLOODWAY MAP  
PANEL NO. 350002 0016

## DISCUSSION:

### EXISTING ON-SITE FLOWS:

THIS TRACT OF LAND, ZONED M-1, IS CURRENTLY USED AS A CONTRACTOR'S YARD AND VEHICLE MAINTENANCE FACILITY. IT IS BOUNDED ON THE WEST BY THE I-25 EAST FRONTAGE ROAD, ON THE NORTH BY LINCOLN AVE., N.E., AND ON THE EAST BY MONROE AVE., N.E. THE TRACT IS IN PRECIPITATION ZONE 2.

THE EXISTING TREATMENT AREAS ARE BUILDINGS, SHEDS, ASPHALT, AND CONCRETE WALKWAYS, 2.72 ACRES (TREATMENT D); HARD PACKED PARKING AND STORAGE AREAS, 1.23 ACRES (TREATMENT C); AND NATIVE VEGETATION, 0.10 ACRES (TREATMENT A). THE FOLLOWING TABLE (FROM TABLE A-9) SUMMARIZES THE EXISTING MAX. Q<sub>100</sub> FLOWS FROM THIS SITE TO THE EAST DITCH OF THE I-25 EAST FRONTAGE ROAD AND APPROX. 1.5 CFS TO LINCOLN AVE.

TREATMENT	AREA (ACRES)	MAX. Q (CFS/AC)	MAX Q (CFS)
A	0.10	1.56	0.16
C	1.23	3.14	3.86
D	2.72	4.70	12.78

AREA 4.05 ACRES Q<sub>100</sub> = 16.80 CFS

### PROPOSED SITE FLOWS:

THE OWNERS OF THIS EXISTING FACILITY ARE IN THE PROCESS OF CONSTRUCTING A NEW STORAGE YARD AND VEHICLE MAINTENANCE FACILITY WEST OF BROADWAY, NEAR THE LIVESTOCK AUCTION PENS. THE EXISTING SHEDS AND TRAILERS WILL BE REMOVED AND A RENTAL MINI-STORAGE FACILITY CONSTRUCTED. THE EXISTING PERMANENT OFFICE STRUCTURE WILL REMAIN AND BE UTILIZED AS AN OFFICE BUILDING.

THE PERIMETER OF THE LOT, AS INDICATED, HAS A LANDSCAPED AREA. THE LANDSCAPE PLAN IS TO PLANT THIS AREA WITH NATIVE GRASSES AND FLOWERS, WITH A TEMPORARY IRRIGATION SYSTEM TO BE OPERATED FOR ONE YEAR IN ORDER TO ALLOW THE NATIVE VEGETATION TO ESTABLISH. THE LANDSCAPE AREA AT THE NORTH WEST OF THE OFFICE WILL CONTAIN GRASS, TREES, AND SHRUBS.

THE PROPOSED TREATMENT AREAS ARE BUILDING, ASPHALT DRIVES AND PARKING, AND CONCRETE SIDEWALKS, 3.5 ACRES (TREATMENT D); NATIVE GRASSES AND FLOWERS, 0.26 ACRES (TREATMENT A); AND GRASS, 0.04 ACRES (TREATMENT B). THE FOLLOWING TABLE SUMMARIZES THE PROPOSED MAX. Q<sub>100</sub> FLOWS FROM THIS SITE TO THE EAST DITCH OF THE I-25 EAST FRONTAGE ROAD AND TO LINCOLN AVE.

THE MAX Q<sub>100</sub> FLOWS FROM THIS SITE WERE COMPUTED USING THE PEAK DISCHARGE TABLE A-9 FOR ZONE 2 RAINFALL, WHERE TREATMENT A= 1.56, B= 2.28, C= 3.14, AND D= 4.7

THE AREAS AND Q<sub>100</sub>'S FOR EACH ZONE AND STATION INDICATED ARE AS FOLLOWS:

TREATMENT	I	II	III	IV	V	TOTALS
A	0.00	0.16	0.00	0.11	0.02	0.05
B	0.03	0.00	0.03	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00
D	0.33	1.51	1.81	0.00	0.00	0.00
	0.36	1.67	1.84	0.11	0.02	0.05 = 4.05 AC.
Q <sub>100</sub> PEAK	1.62	7.30	8.58	0.17	0.03	0.08 = 17.78 CFS

SOME FUGITIVE FLOW HAS OCCURRED MIDWAY OF THE SOUTH PROPERTY LINE. THIS IS CORRECTED BY DESIGNING A HEADER CURB AND A RUNDOWN TO CHANNEL THE RUNOFF FROM THE EASTERN PORTION OF THIS SITE TO THE WESTERN PORTION. THE AREAS IN WHICH THE FLOW VELOCITY IS LIKELY TO CAUSE EROSION ARE TREATED WITH A PERMEABLE LANDSCAPE MEMBRANE AND COBBLE STONES. THIS BOTH GIVES EROSION PROTECTION AND ALLOWS FOR INFILTRATION. THE MANNING N'S USED ARE 0.035 FOR THE COBBLESTONE AREAS AND 0.013 FOR THE CONCRETE RUNDOWN. BASED UPON THESE N'S, THE CHANNEL GEOMETRY, AND THE INDICATED Q'S, THE DEPTH OF FLOW AND VELOCITIES ARE 0.1 FT. AND 16 FPS FOR THE RUNDOWN AND 0.5 FT. AND 3.1 FPS FOR THE SOUTH COBBLED CHANNEL.

### WATERSHED CHARACTERISTICS

THE MOST RECENT DEFINITIVE HYDROLOGIC STUDY OF THIS AREA IS A STUDY FOR THE VINEYARD CHANNEL BY GREINER, INC., FEB. 1993. THIS SITE IS WITHIN BASIN 600 OF THIS STUDY, WHICH ENCOMPASSES 42.52 AC. AND IS DRAINED BY A 36 INCH RCP UNDER THE EAST I-25 FRONTAGE ROAD, APPROXIMATELY 320' SOUTH OF THIS TRACT. THE REFERENCED STUDY SHOWS A MAXIMUM Q OF 196.1 CFS AND A MAXIMUM WATER SURFACE ELEVATION OF 5158.02 FT. THE MAXIMUM DISCHARGE THROUGH THE RCP IS 70.2 CFS. THIS STUDY CALCULATES AN AVERAGE YIELD OF 4.61 CFS PER ACRE. THIS DEVELOPMENT WILL YIELD 4.39 CFS PER ACRE.

THE RUNDOWN FROM THE EAST I-25 FRONTAGE ROAD TRAVERSES THE WESTERN EDGE OF THIS PROPERTY. THE EXISTING FLOW PATTERN IS NOT CHANGED BY THIS DESIGN.

### FLOODPLAIN STATUS

THE FLOODPLAIN HAS CHANGED FROM THE 1983 MAPS. THE NM&TD HAS ADDED THE JEFFERSON AVE. OVERPASS AND IMPROVED THE DRAINAGE WITHIN THE LINCOLN AVE. R-O-W. THE VINEYARD CHANNEL HAS BEEN COMPLETED BY AMAFCA. THE CURRENT 100 YEAR FLOOD PLAIN ELEVATION IS 5158.02 FT.

T.B.M. - 5169.97, EXISTING OFFICE BUILDING

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPT.  
JAN 25 1994  
1/24/94

## C.A. COONCE & ASSOC.

ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS  
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH (505) 298-1089

TITLE SITE, DRAINAGE AND GRADING PLAN  
PROJECT MINI-WAREHOUSES, 4600 LINCOLN AVE., N.E.

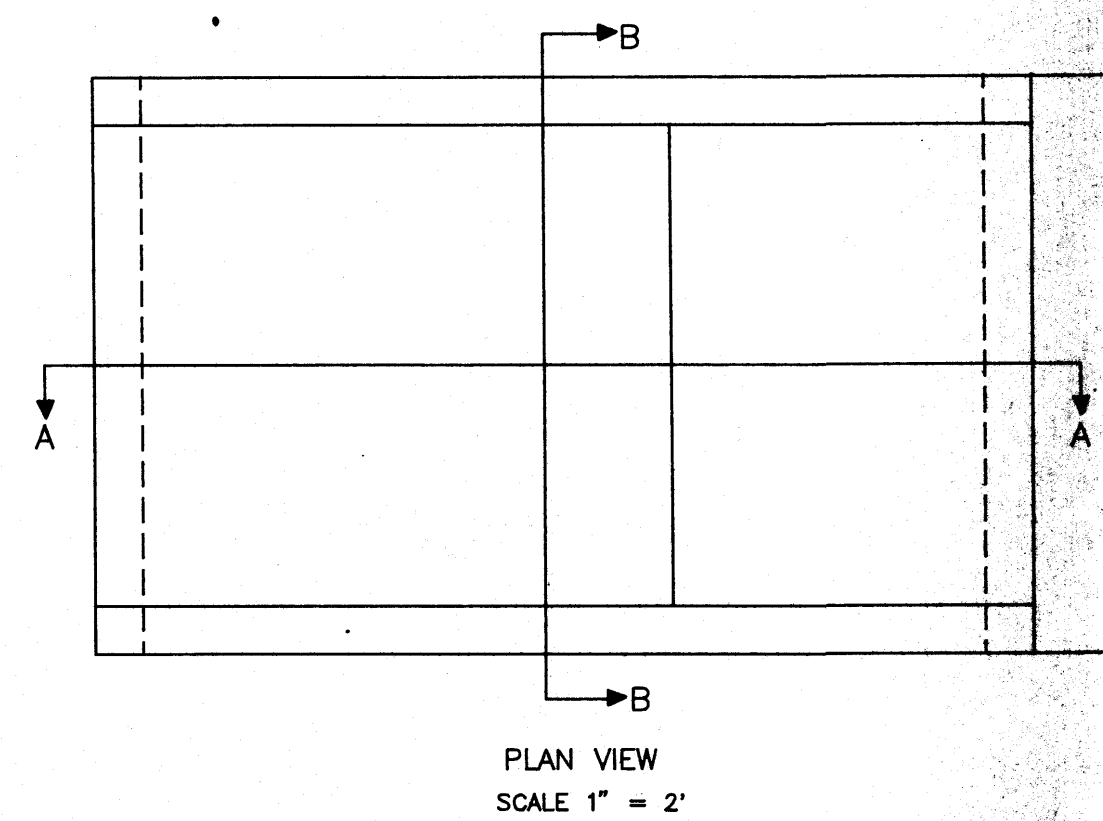
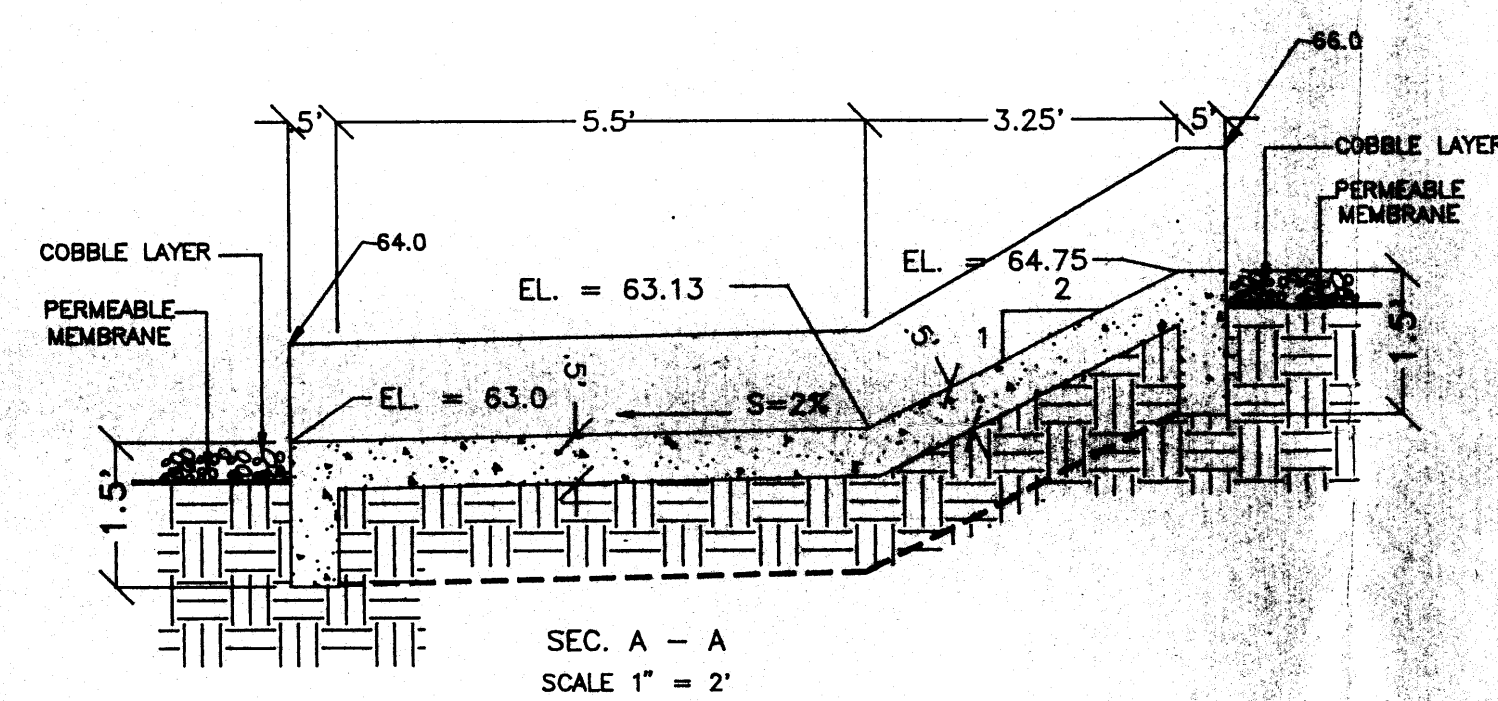
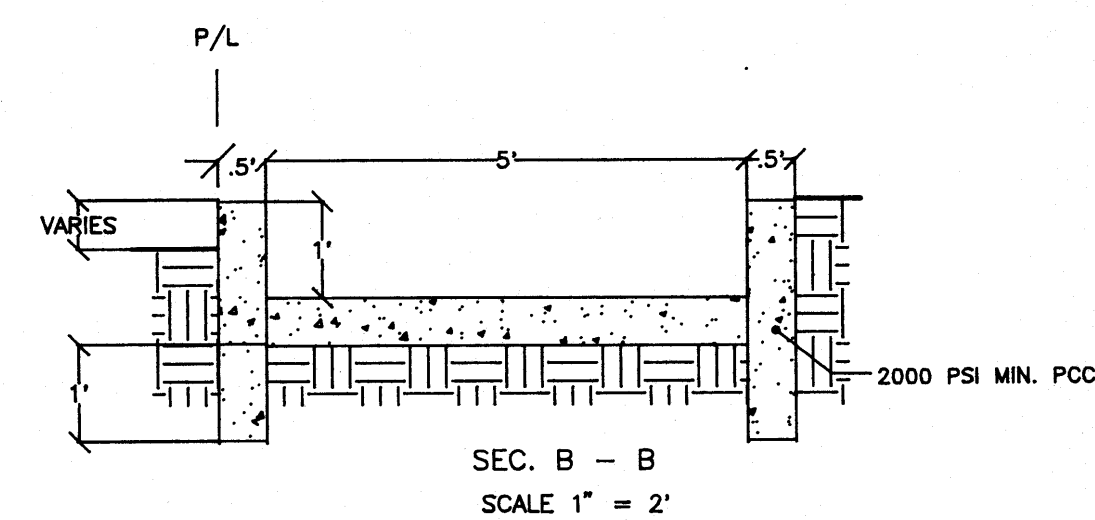
DATE	11/23/93	REVISED	
DRAWN	LSC	1/24/94	
CHECKED	CNC		

1/23/93  
1/24/94

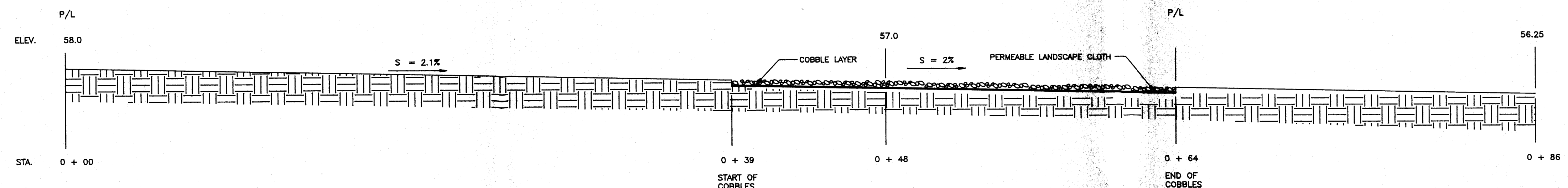
SHEET 1 of 2

C No. ARC RADIUS DELTA TANGENT CHORD BEARING CHORD  
C1 39.27 25.00 90°00'00" 25.00 S44°40'33"E 35.36

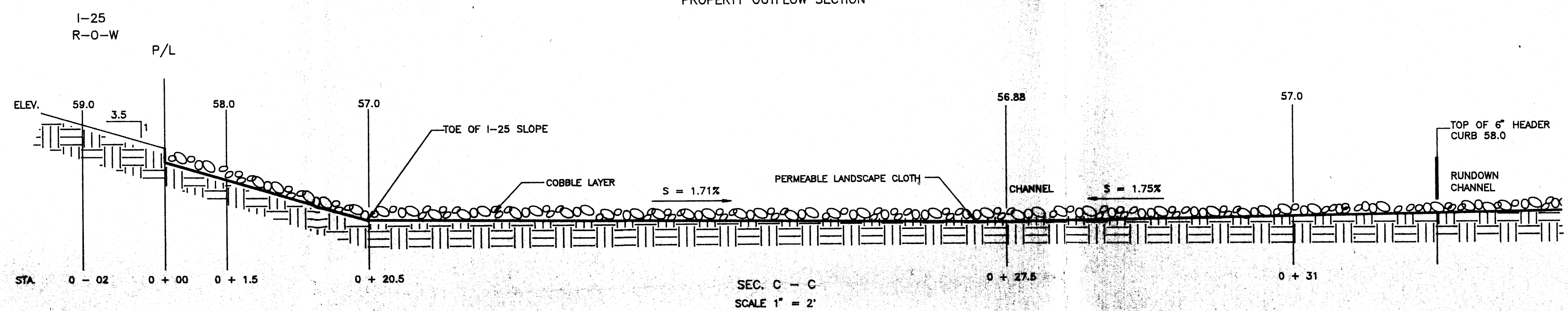




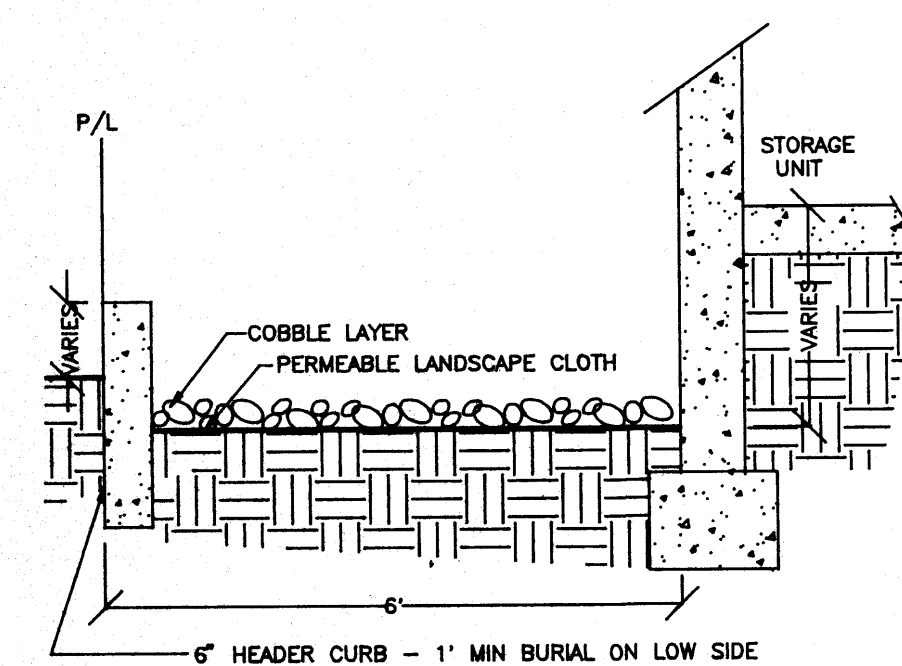
DETAIL A - RUNDOWN CHANNEL INLET



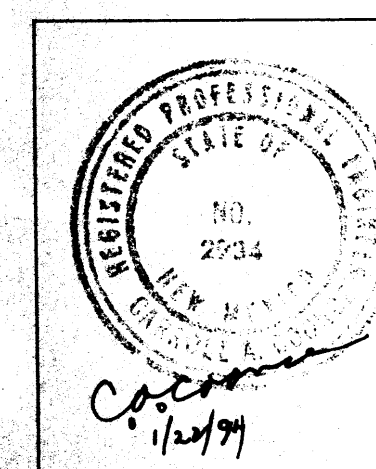
PROPERTY OUTFLOW SECTION



RUNDOWN CHANNEL OUTLET SECTION



TYPICAL RUNDOWN SECTION



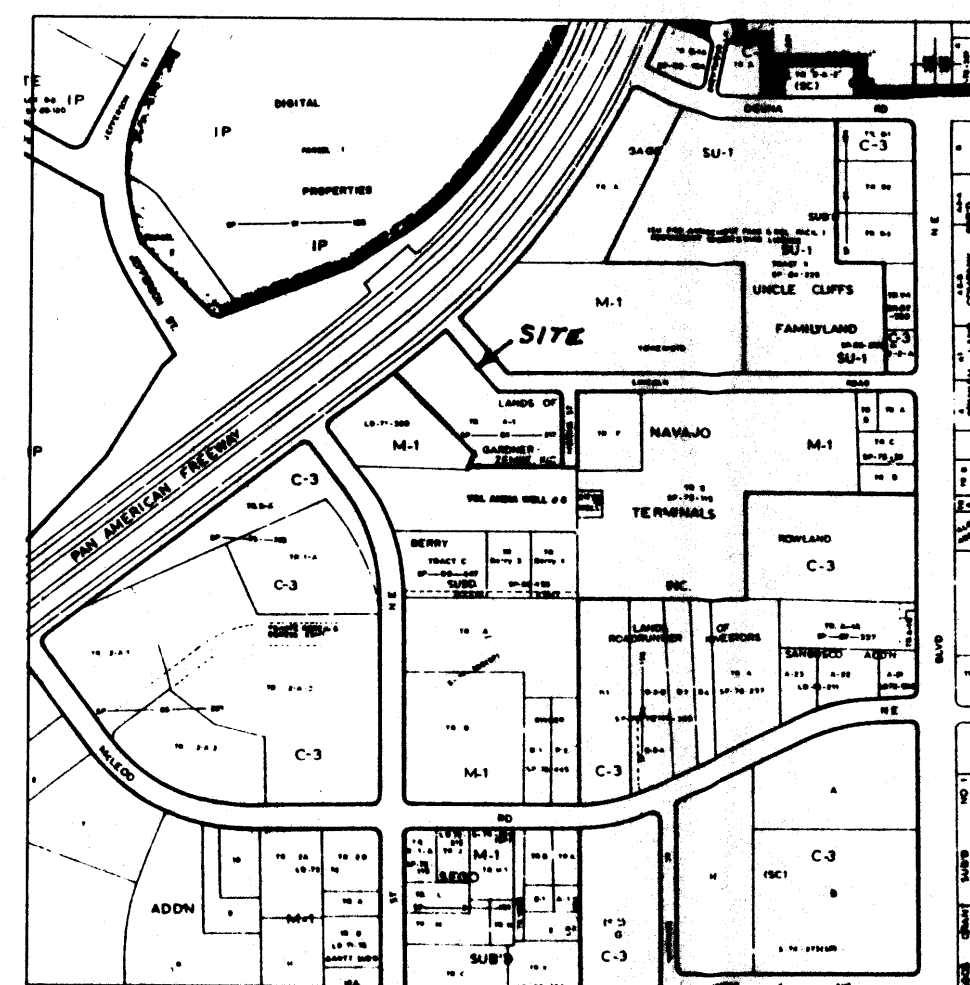
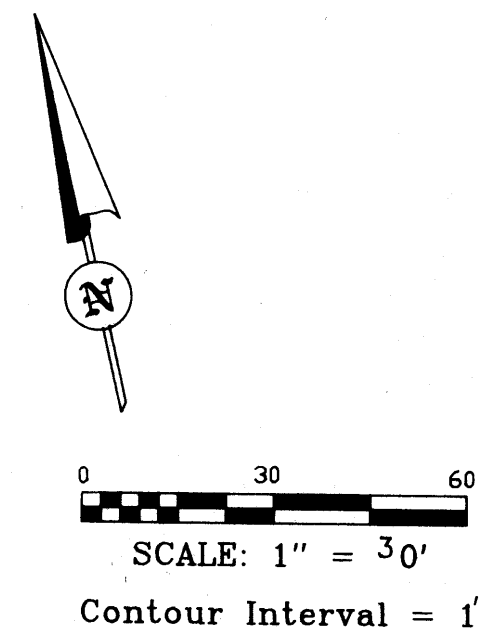
**C.A. COONCE & ASSOC.**

ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS  
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH (505) 296-1089

TITLE				
DETAILS				
PROJECT MINI-WAREHOUSES, 4600 LINCOLN AVE., N.E.				
DATE	01/20/94	REVISED		
DRAWN	LSC			
CHECKED	CAC			

SHEET 2 of 2





DISCUSSION:

EXISTING ON-SITE FLOWS:

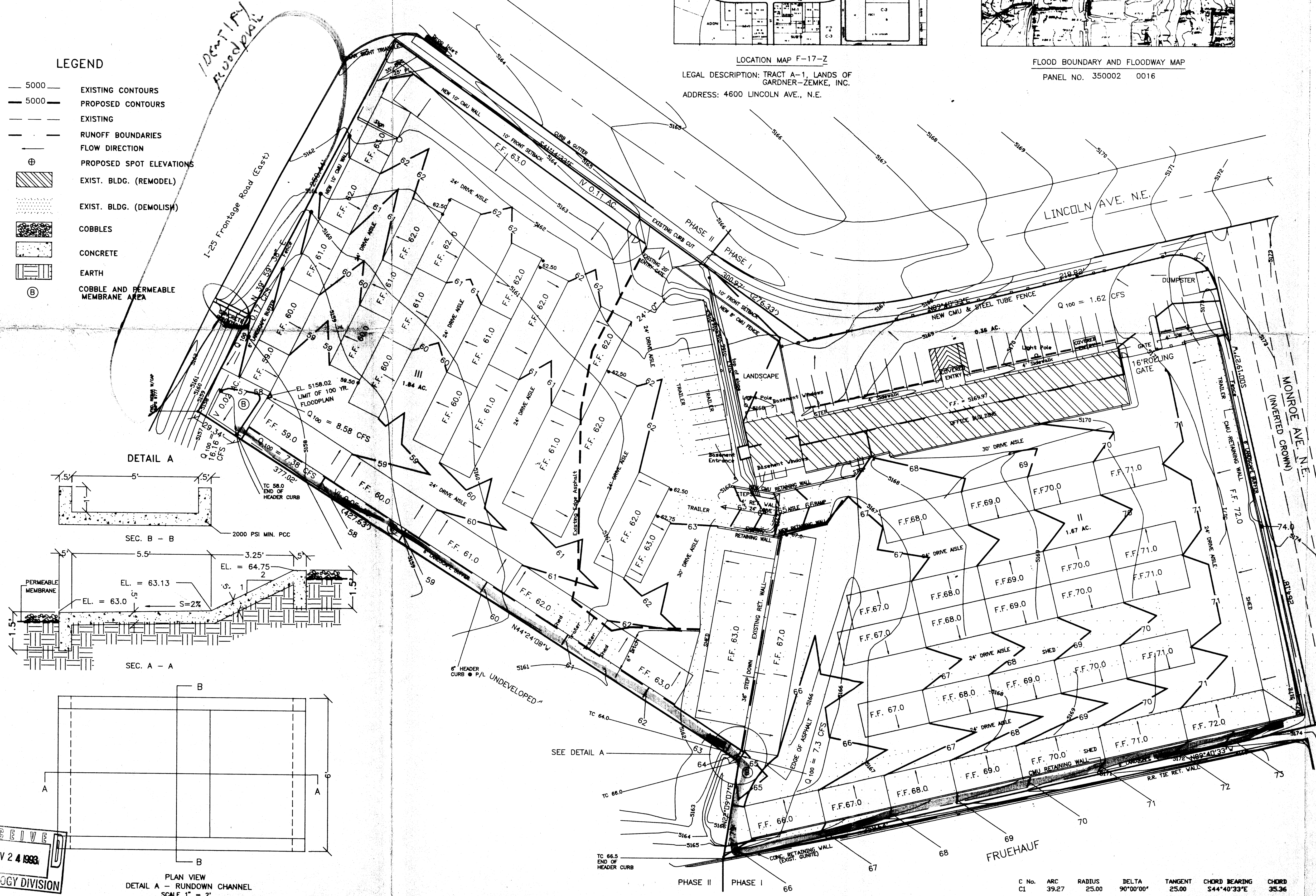
THIS TRACT OF LAND, ZONED M-1, IS CURRENTLY USED AS A CONTRACTOR'S YARD AND VEHICLE MAINTENANCE FACILITY. IT IS BOUNDED ON THE WEST BY THE I-25 EAST FRONTAGE ROAD, ON THE NORTH BY LINCOLN AVE., N.E., AND ON THE EAST BY MONROE AVE., N.E. THE TRACT IS IN PRECIPITATION ZONE 2.

THE EXISTING TREATMENT AREAS ARE BUILDINGS, SHEDS, ASPHALT, AND CONCRETE WALKWAYS, 2.72 ACRES (TREATMENT D); HARD PACKED PARKING AND STORAGE AREAS, 1.23 ACRES (TREATMENT C); AND NATIVE VEGETATION, 0.10 ACRES (TREATMENT A). THE FOLLOWING TABLE (FROM TABLE A-9) SUMMARIZES THE EXISTING MAX. Q<sub>100</sub> FLOWS FROM THIS SITE TO THE EAST DITCH OF THE I-25 EAST FRONTAGE ROAD AND APPROX. 1.5 CFS TO LINCOLN AVE.

TREATMENT	AREA (ACRES)	MAX. Q (CFS/AC)	MAX Q(CFS)
A	0.10	1.56	0.16
C	1.23	3.14	3.86
D	2.72	4.70	12.78

AREA 4.05 ACRES Q<sub>100</sub> = 16.80 CFS

- LEGEND
- 5000 — EXISTING CONTOURS
  - 5000 — PROPOSED CONTOURS
  - - - EXISTING
  - - - RUNOFF BOUNDARIES
  - FLOW DIRECTION
  - ⊕ PROPOSED SPOT ELEVATIONS
  - ▨ EXIST. BLDG. (REMODEL)
  - ▨ EXIST. BLDG. (DEMOLISH)
  - ▨ COBBLES
  - ▨ CONCRETE
  - ▨ EARTH
  - Ⓟ COBBLE AND PERMEABLE MEMBRANE AREA



THE MAX Q<sub>100</sub> FLOWS FROM THIS SITE WERE COMPUTED USING THE PEAK DISCHARGE TABLE A-9 FOR ZONE 2 RAINFALL, WHERE TREATMENT A= 1.56, B= 2.28, C= 3.14, AND D= 4.7

THE AREAS AND Q<sub>100</sub>'s FOR EACH ZONE AND STATION INDICATED ARE AS FOLLOWS:

TREATMENT	I	II	III	IV	V	TOTALS
A	0.00	0.16	0.00	0.11	0.02	0.05
B	0.03	0.00	0.03	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00	0.00	0.00
D	0.33	1.51	1.81	0.00	0.00	0.00
	0.36	1.67	1.84	0.11	0.02	0.05 = 4.05 AC.

Q<sub>100</sub> PEAK 1.62 7.30 8.58 0.17 0.03 0.08 = 17.78 CFS

SOME FUGITIVE FLOW HAS OCCURRED MIDWAY OF THE SOUTH PROPERTY LINE. THIS IS CORRECTED BY DESIGNING A HEADER CURB AND RUNDOWN TO CHANNEL THE RUNOFF FROM THE EASTERN PORTION OF THIS SITE TO THE WESTERN PORTION. THE AREAS IN WHICH THE FLOW VELOCITY IS LIKELY TO CAUSE EROSION ARE TREATED WITH A PERMEABLE LANDSCAPE MEMBRANE AND COBBLE STONES. THIS BOTH GIVES EROSION PROTECTION AND ALLOWS FOR INFILTRATION. THE MANNING n'S USED ARE 0.035 FOR THE COBBLESTONE AREAS AND 0.013 FOR THE CONCRETE RUNDOWN. BASED UPON THESE n'S, THE CHANNEL GEOMETRY, AND THE INDICATED Q's, THE DEPTH OF FLOW AND VELOCITIES ARE 0.1 FT. AND 16 FPS FOR THE RUNDOWN AND 0.5 FT. AND 3.1 FPS FOR THE SOUTH COBBLED CHANNEL.

WATERSHED CHARACTERISTICS

THE MOST RECENT DEFINITIVE HYDROLOGIC STUDY OF THIS AREA IS A STUDY FOR THE VINEYARD CHANNEL BY GREINER, INC., FEB. 1993. THIS SITE IS WITHIN BASIN 600 OF THIS STUDY, WHICH ENCOMPASSES 42.52 AC. AND IS DRAINED BY A 36 INCH RCP UNDER THE EAST I-25 FRONTAGE ROAD, APPROXIMATELY 320' SOUTH OF THIS TRACT. THE REFERENCED STUDY A MAXIMUM Q OF 196.1 CFS AND A MAXIMUM WATER SURFACE ELEVATION OF 5158.02 FT. THE MAXIMUM DISCHARGE THROUGH THE RCP IS 70.2 CFS. THIS STUDY CALCULATES AN AVERAGE YIELD OF 4.61 CFS PER ACRE. THIS DEVELOPMENT WILL YIELD 4.39 CFS PER ACRE.

THE RUNDOWN FROM THE EAST I-25 FRONTAGE ROAD TRAVERSES THE WESTERN EDGE OF THIS PROPERTY. THE EXISTING FLOW PATTERN IS NOT CHANGED BY THIS DESIGN.

FLOODPLAIN STATUS

THE FLOODPLAIN HAS CHANGED FROM THE 1983 MAPS. THE NM&TD HAS ADDED THE JEFFERSON AVE. OVERPASS AND IMPROVED THE DRAINAGE WITHIN THE LINCOLN AVE. R-O-W. THE VINEYARD CHANNEL HAS BEEN COMPLETED BY AMAFCA. THE CURRENT 100 YEAR FLOOD PLAIN ELEVATION IS 5158.02 FT.

**C.A. COONCE & ASSOC.**  
ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS  
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH (505) 296-1090

TITLE **SITE, DRAINAGE AND GRADING PLAN**

PROJECT **MINI-WAREHOUSES, 4600 LINCOLN AVE., N.E.**

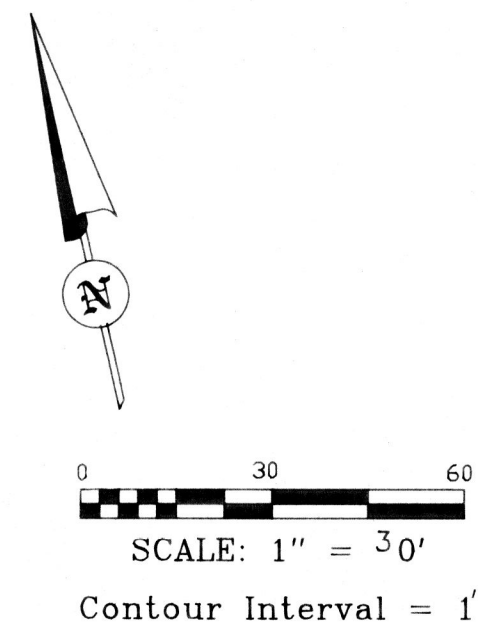
DATE 11/23/93  
DRAWN LSC  
CHECKED CAC

11/23/93

SHEET 1 of 1

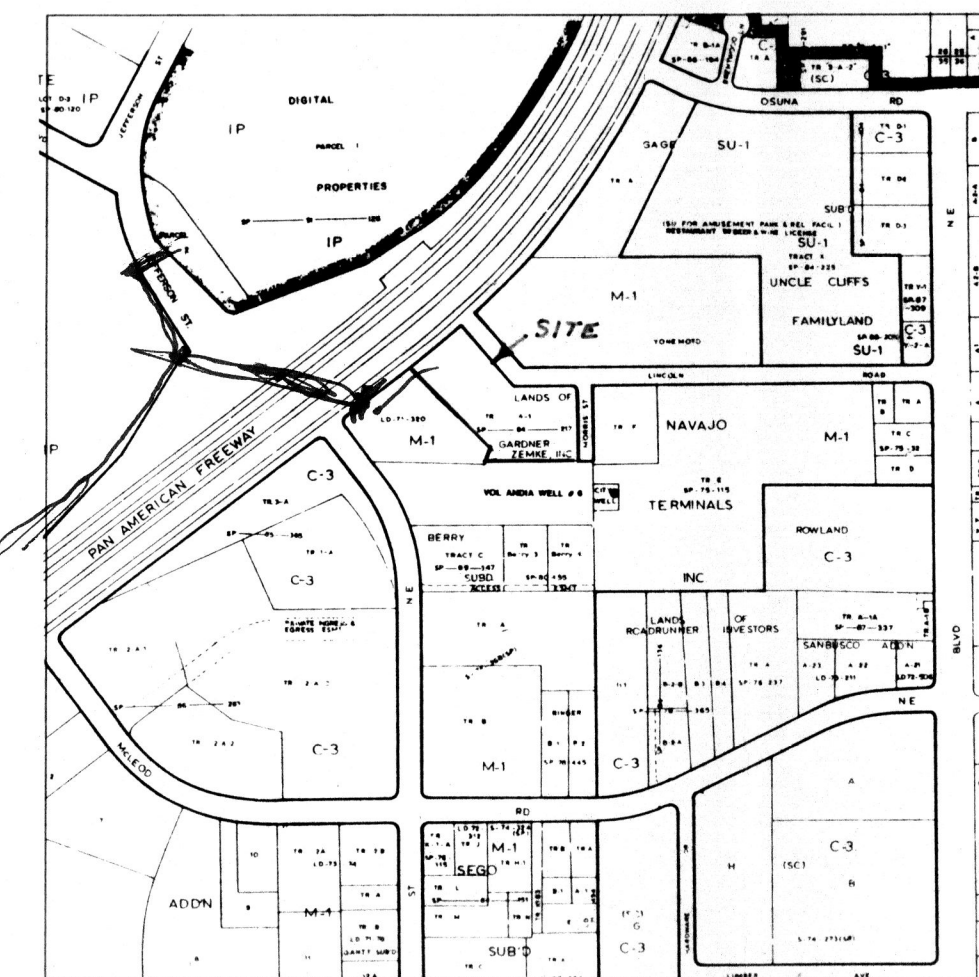
C No.	ARC	RADIUS	DELTA	TANGENT	CHORD BEARING	CHORD
CI	39.27	25.00	90°00'00"	25.00	344°40'33"E	35.36





LEGEND

- 5000 EXISTING CONTOURS
- 5000 PROPOSED CONTOURS
- EXISTING
- RUNOFF BOUNDARIES
- FLOW DIRECTION
- PROPOSED SPOT ELEVATIONS
- EXIST. BLDG. (REMODEL)
- EXIST. BLDG. (DEMOLISH)
- COBBLES
- CONCRETE
- EARTH
- COBBLE AND PERMEABLE MEMBRANE AREA



LEGAL DESCRIPTION: TRACT A-1, LANDS OF GARDNER-ZEMKE, INC.  
ADDRESS: 4600 LINCOLN AVE., N.E.



DISCUSSION:

EXISTING ON-SITE FLOWS:

THIS TRACT OF LAND, ZONED M-1, IS CURRENTLY USED AS A CONTRACTOR'S YARD AND VEHICLE MAINTENANCE FACILITY. IT IS BOUNDED ON THE WEST BY THE I-25 EAST FRONTAGE ROAD, ON THE NORTH BY LINCOLN AVE., N.E., AND ON THE EAST BY MONROE AVE., N.E. THE TRACT IS IN PRECIPITATION ZONE 2.

THE EXISTING TREATMENT AREAS ARE BUILDINGS, SHEDS, ASPHALT, AND CONCRETE WALKWAYS, 2.72 ACRES (TREATMENT D); HARD PACKED PARKING AND STORAGE AREAS, 1.23 ACRES (TREATMENT C); AND NATIVE VEGETATION, 0.10 ACRES (TREATMENT A). THE FOLLOWING TABLE (FROM TABLE A-9) SUMMARIZES THE EXISTING MAX. Q<sub>100</sub> FLOWS FROM THIS SITE TO THE EAST DITCH OF THE I-25 EAST FRONTAGE ROAD AND APPROX. 1.5 CFS TO LINCOLN AVE.

TREATMENT	AREA (ACRES)	MAX. Q (CFS/AC)	MAX Q (CFS)
A	0.10	1.56	0.16
C	1.23	3.14	3.86
D	2.72	4.70	12.78
AREA	4.05 ACRES		Q <sub>100</sub> = 16.80 CFS

PROPOSED SITE FLOWS:

THE OWNERS OF THIS EXISTING FACILITY ARE IN THE PROCESS OF CONSTRUCTING A NEW STORAGE YARD AND VEHICLE MAINTENANCE FACILITY WEST OF BROADWAY, NEAR THE LIVESTOCK AUCTION PENS. THE EXISTING SHEDS AND TRAILERS WILL BE REMOVED AND A RENTAL MINI-STORAGE FACILITY CONSTRUCTED. THE EXISTING PERMANENT OFFICE STRUCTURE WILL REMAIN AND BE UTILIZED AS AN OFFICE BUILDING.

THE PERIMETER OF THE LOT, AS INDICATED, HAS A LANDSCAPED AREA. THE LANDSCAPE PLAN IS TO PLANT THIS AREA WITH NATIVE GRASSES AND FLOWERS, WITH A TEMPORARY IRRIGATION SYSTEM TO BE OPERATED FOR ONE YEAR IN ORDER TO ALLOW THE NATIVE VEGETATION TO ESTABLISH. THE LANDSCAPE AREA AT THE NORTH WEST OF THE OFFICE WILL CONTAIN GRASS, TREES, AND SHRUBS.

THE PROPOSED TREATMENT AREAS ARE BUILDING, ASPHALT DRIVES AND PARKING, AND CONCRETE SIDEWALKS, 3.5 ACRES (TREATMENT D); NATIVE GRASSES AND FLOWERS, 0.26 ACRES (TREATMENT A); AND GRASS, 0.04 ACRES (TREATMENT B). THE FOLLOWING TABLE SUMMARIZES THE PROPOSED MAX. Q<sub>100</sub> FLOWS FROM THIS SITE TO THE EAST DITCH OF THE I-25 EAST FRONTAGE ROAD AND TO LINCOLN AVE.

THE MAX. Q<sub>100</sub> FLOWS FROM THIS SITE WERE COMPUTED USING THE PEAK DISCHARGE TABLE A-9 FOR ZONE 2 RAINFALL, WHERE TREATMENT A = 1.56, B = 2.28, C = 3.14, AND D = 4.7

THE AREAS AND Q<sub>100</sub>'S FOR EACH ZONE AND STATION INDICATED ARE AS FOLLOWS:

TREATMENT	I	II	III	IV (ACRES)	V	VI	TOTALS
A	0.00	0.16	0.00	0.11	0.02	0.05	
B	0.03	0.00	0.03	0.00	0.00	0.00	
C	0.00	0.00	0.00	0.00	0.00	0.00	
D	0.33	1.51	1.81	0.00	0.00	0.00	
	0.36	1.67	1.84	0.11	0.02	0.05	= 4.05 AC.
Q <sub>100</sub> PEAK	1.62	7.30	8.58	0.17	0.03	0.08	= 17.78 CFS

SOME FUGITIVE FLOW HAS OCCURRED MIDWAY OF THE SOUTH PROPERTY LINE. THIS IS CORRECTED BY DESIGNING A HEADER CURB AND A RUNDOWN TO CHANNEL THE RUNOFF FROM THE EASTERN PORTION OF THIS SITE TO THE WESTERN PORTION. THE AREAS IN WHICH THE FLOW VELOCITY IS LIKELY TO CAUSE EROSION ARE TREATED WITH A PERMEABLE LANDSCAPE MEMBRANE AND COBBLE STONES. THIS BOTH GIVES EROSION PROTECTION AND ALLOWS FOR INFILTRATION. THE MANNING N'S USED ARE 0.035 FOR THE COBBLESTONE AREAS AND 0.013 FOR THE CONCRETE RUNDOWN. BASED UPON THESE N'S, THE CHANNEL GEOMETRY, AND THE INDICATED Q'S, THE DEPTH OF FLOW AND VELOCITIES ARE 0.1 FT. AND 16 FPS FOR THE RUNDOWN AND 0.5 FT. AND 3.1 FPS FOR THE SOUTH COBBLED CHANNEL.

WATERSHED CHARACTERISTICS

THE MOST RECENT DEFINITIVE HYDROLOGIC STUDY OF THIS AREA IS A STUDY FOR THE VINEYARD CHANNEL BY GREINER, INC., FEB. 1993. THIS SITE IS WITHIN BASIN 600 OF THIS STUDY, WHICH ENCOMPASSES 42.52 AC AND IS BOUNDED BY THE I-25 EAST FRONTAGE ROAD TO THE NORTH, MONROE AVE. TO THE EAST, AND THE I-25 FRONTAGE ROAD TO THE SOUTH. THE REFERENCED STUDY SHOWS A MAXIMUM Q OF 196.1 CFS AND A MAXIMUM WATER SURFACE ELEVATION OF 5158.02 FT. THE MAXIMUM DISCHARGE THROUGH THE RCP IS 70.2 CFS. THIS STUDY CALCULATES AN AVERAGE YIELD OF 4.61 CFS PER ACRE. THIS DEVELOPMENT WILL YIELD 4.39 CFS PER ACRE.

THE RUNDOWN FROM THE EAST I-25 FRONTAGE ROAD TRAVERSES THE WESTERN EDGE OF THIS PROPERTY. THE EXISTING FLOW PATTERN IS NOT CHANGED BY THIS DESIGN.

FLOODPLAIN STATUS

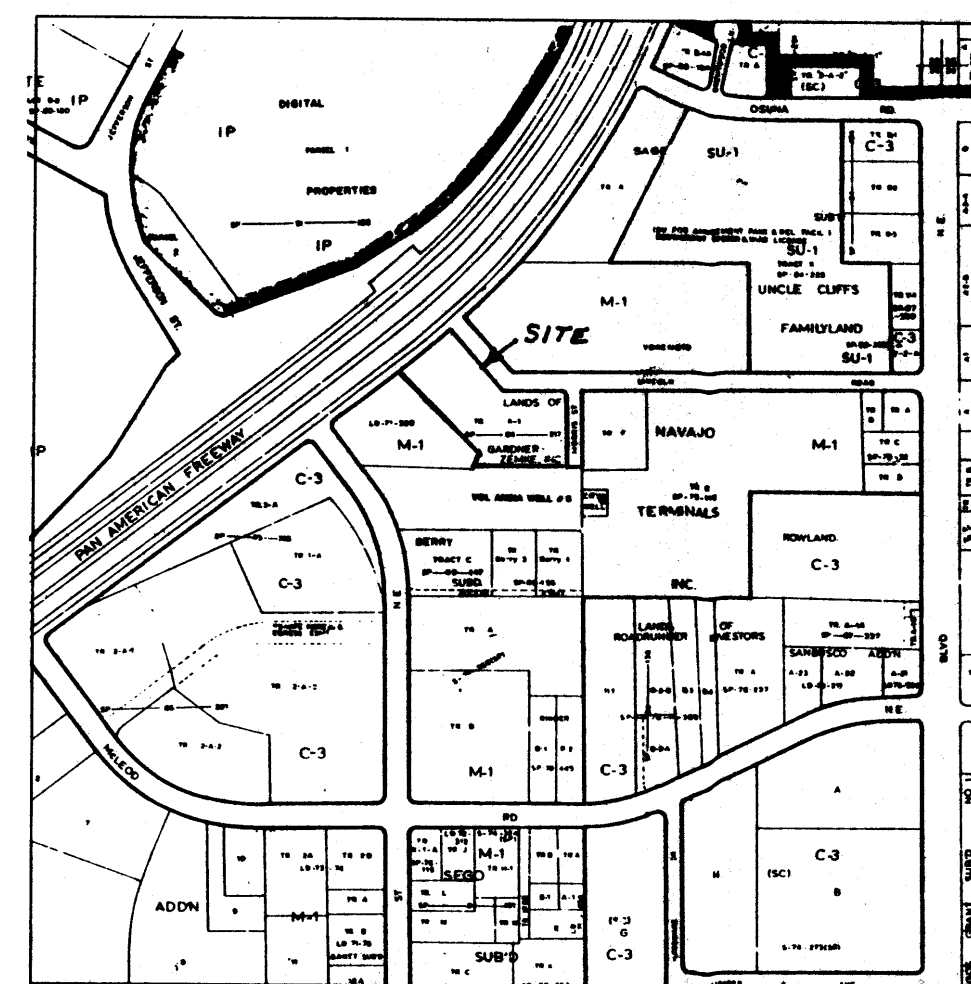
THE FLOODPLAIN HAS CHANGED FROM THE 1983 MAPS. THE NM&TD HAS ADDED THE JEFFERSON AVE. OVERPASS AND IMPROVED THE DRAINAGE WITHIN THE LINCOLN AVE. R-O-W. THE VINEYARD CHANNEL HAS BEEN COMPLETED BY AMAFCA. THE CURRENT 100 YEAR FLOOD PLAIN ELEVATION IS 5158.02 FT.

C.A. COONCE & ASSOC.

ENVIRONMENTAL, WATER RESOURCES, & SANTARY CONSULTING ENGINEERS  
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH (505) 298-1089

TITLE	SITE, DRAINAGE AND GRADING PLAN
PROJECT	MINI-WAREHOUSES, 4600 LINCOLN AVE., N.E.
DATE	11/23/93
DRAWN	LSC
CHECKED	CAC





EXISTING ON-SITE FLOWS:

THIS TRACT OF LAND, ZONED M-1, IS CURRENTLY USED AS A CONTRACTOR'S YARD AND VEHICLE MAINTENANCE FACILITY. IT IS BOUNDED ON THE WEST BY THE I-25 EAST FRONTAGE ROAD, ON THE NORTH BY LINCOLN AVE., N.E., AND ON THE EAST BY MONROE AVE., N.E. THE TRACT IS IN PRECIPITATION ZONE 2.

THE EXISTING TREATMENT AREAS ARE BUILDINGS, SHEDS, ASPHALT, AND CONCRETE WALKWAYS, 2.72 ACRES (TREATMENT D) ; HARD PACKED PARKING AND STORAGE AREAS, 1.23 ACRES (TREATMENT C); AND NATIVE VEGETATION, 0.10 ACRES (TREATMENT A). THE FOLLOWING TABLE (FROM TABLE A-9) SUMMARIZES THE EXISTING MAX. Q.100 FLOWS FROM THIS SITE TO THE EAST DITCH OF THE I-25 EAST FRONTAGE ROAD AND APPROX. 1.5 CFS TO LINCOLN AVE.

TREATMENT	AREA (ACRES)	MAX. Q (CFS/AC)	MAX Q(CFS)
A	0.10	1.56	0.16
C	1.23	3.14	3.86
D	2.72	4.70	12.78

AREA 4.05 ACRES

$$Q_{100} = 16.80 \text{ CF}$$

PROPOSED SITE FLOWS:

THE OWNERS OF THIS EXISTING FACILITY ARE IN THE PROCESS OF CONSTRUCTING A NEW STORAGE YARD AND VEHICLE MAINTENANCE FACILITY WEST OF BROADWAY, NEAR THE LIVESTOCK AUCTION PENS. THE EXISTING SHEDS AND TRAILERS WILL BE REMOVED AND A RENTAL MINI-STORAGE FACILITY CONSTRUCTED. THE EXISTING PERMANENT OFFICE STRUCTURE WILL REMAIN AND BE UTILIZED AS AN OFFICE BUILDING.

THE PERIMETER OF THE LOT, AS INDICATED, HAS A LANDSCAPED AREA. THE LANDSCAPE PLAN IS TO PLANT THIS AREA WITH NATIVE GRASSES AND FLOWERS, WITH A TEMPORARY IRRIGATION SYSTEM TO BE OPERATED FOR ONE YEAR IN ORDER TO ALLOW THE NATIVE VEGETATION TO ESTABLISH. THE LANDSCAPE AREA AT THE NORTH WEST OF THE OFFICE WILL CONTAIN GRASS, TREES, AND SHRUBS.

THE PROPOSED TREATMENT AREAS ARE BUILDING, ASPHALT DRIVES AND PARKING, AND CONCRETE SIDEWALKS, 3.5 ACRES (TREATMENT D); NATIVE GRASSES AND FLOWERS, 0.26 ACRES (TREATMENT A); AND GRASS, 0.04 ACRES (TREATMENT B). THE FOLLOWING TABLE SUMMARIZES THE PROPOSED MAX FLOWS FROM THIS SITE TO THE EAST DITCH OF THE I-25 EAST FRONTAGE ROAD AND TO LINCOLN AVE

THE MAX Q<sub>100</sub> FLOWS FROM THIS SITE WERE COMPUTED USING THE PEAK DISCHARGE TABLE A-9 FOR ZONE 2 RAINFALL, WHERE TREATMENT A= 1.56, B= 2.28, C= 3.14, AND D= 4.7

THE AREAS AND  $Q_{100}$ 's FOR EACH ZONE AND STATION INDICATED ARE AS FOLLOWS:

TREATMENT	I	II	III	AREAS (ACRES)		VI	TOTALS
				IV	V		
A	0.00	0.16	0.00	0.11	0.02	0.05	
B	0.03	0.00	0.03	0.00	0.00	0.00	
C	0.00	0.00	0.00	0.00	0.00	0.00	
D	<u>0.33</u>	<u>1.51</u>	<u>1.81</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	
	0.36	1.67	1.84	0.11	0.02	0.05	= 4.05 AC.
Q <sub>max</sub> PEAK	1.62	7.30	8.58	0.17	0.03	0.08	= 17.78 CFS

SOME FUGITIVE FLOW HAS OCCURRED MIDWAY OF THE SOUTH PROPERTY LINE. THIS IS CORRECTED BY DESIGNING A HEADWALL CURB AND A RUNDOWN TO CHANNEL THE RUNOFF FROM THE EASTERN PORTION OF THIS SITE TO THE WESTERN PORTION. THE AREAS IN WHICH THE FLOW VELOCITY IS LIKELY TO CAUSE EROSION ARE TREATED WITH A PERMEABLE EROSION CONTROL MAT AND MOUNDING AND COBBLESTONES. THIS BOTH GIVES EROSION PROTECTION AND ALLOWS FOR INFILTRATION. THE SLOPING SIDEWALK AREAS ARE 0.035 FOR THE COBBLESTONE AREAS AND 0.013 FOR THE CONCRETE RUNDOWN. BASED UPON THESE  $n$ 's, THE CHANNEL GEOMETRY, AND THE INDICATED  $q$ 's, THE DEPTH OF FLOW AND VELOCITIES ARE 0.1 FT. AND 1.2 FPS FOR THE RUNDOWN AND 0.5 FT. AND 3.1 FPS FOR THE SOUTH COBBLED CHANNEL.

### WATERSHED CHARACTERISTICS

THE MOST RECENT DEFINITIVE HYDROLOGIC STUDY FOR THIS AREA IS A STUDY FOR THE VINEYARD CHANNEL BY GREINER, INC., FEB. 1993. THIS SITE IS WITHIN BASIN 600 OF THIS STUDY, WHICH ENCOMPASSES 42.52 AC. AND IS DRAINED BY A 36 INCH RCP UNDER THE EAST 1-25 FROM THE ROAD. APPROXIMATELY 3.32 AC. SOUTH OF THIS TRACT, THE REFERENCED STUDY SHOWS A MAXIMUM DISCHARGE OF 11.0 CFS AT MAXIMUM WATER SURFACE ELEVATION OF 5158.02 FT. THE MAXIMUM DISCHARGE THROUGH THE RCP IS 70.2 CFS. THIS STUDY CALCULATES AN AVERAGE YIELD OF 4.61 CFS PER ACRE. THIS DEVELOPMENT WILL YIELD 4.39 CFS PER ACRE.

THE RUNDOWN FROM THE EAST I-25 FRONTAGE ROAD TRAVERSES THE WESTERN EDGE OF THIS PROPERTY. THE EXISTING FLOW PATTERN IS NOT CHANGED BY THIS DESIGN.

## FLOODPLAIN STATUS

THE FLOODPLAIN HAS CHANGED FROM THE 1983 MAPS. THE NMH&TD HAS ADDED THE JEFFERSON AVE. OVERPASS AND IMPROVED THE DRAINAGE WITHIN THE LINCOLN AVE. R-O-W. THE VINEYARD CHANNEL HAS BEEN COMPLETED BY AMAFCA. THE CURRENT 100 YEAR FLOOD PLAIN ELEVATION IS 5158.02 FT.

T.B.M. - 5169.97. EXISTING OFFICE BUILDING

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPT

**C.A. COONCE & ASSOC.**

**ENVIRONMENTAL WATER RESOURCES & SANITARY CONSULTING ENGINEERS**

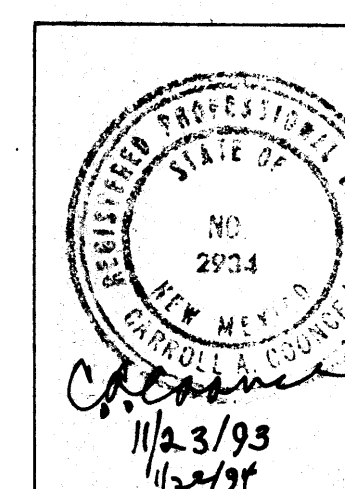
TITLE SITE, DRAINAGE AND GRADING PLAN

PROJECT MINI-WAREHOUSES 4600 LINCOLN AVE N E

DATE	11/23/93	REVISED			
DRAWN	LSC	11/24/94			
CHECKED	CAC				

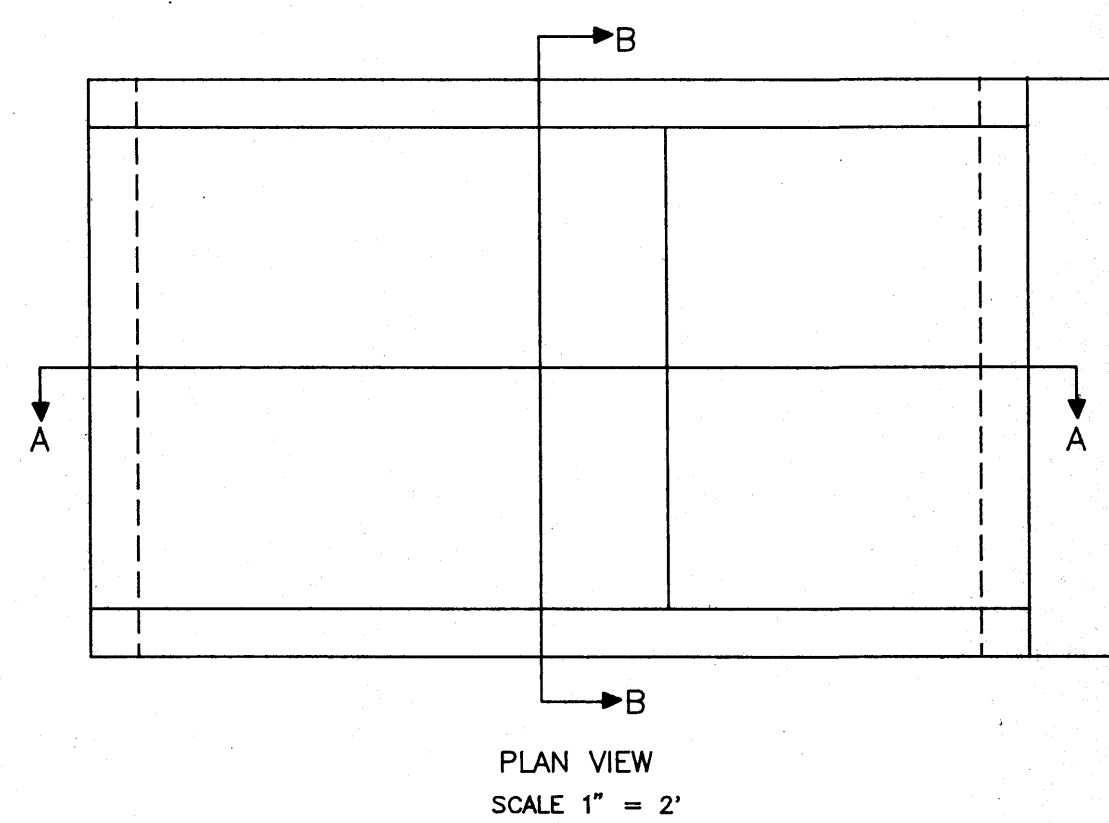
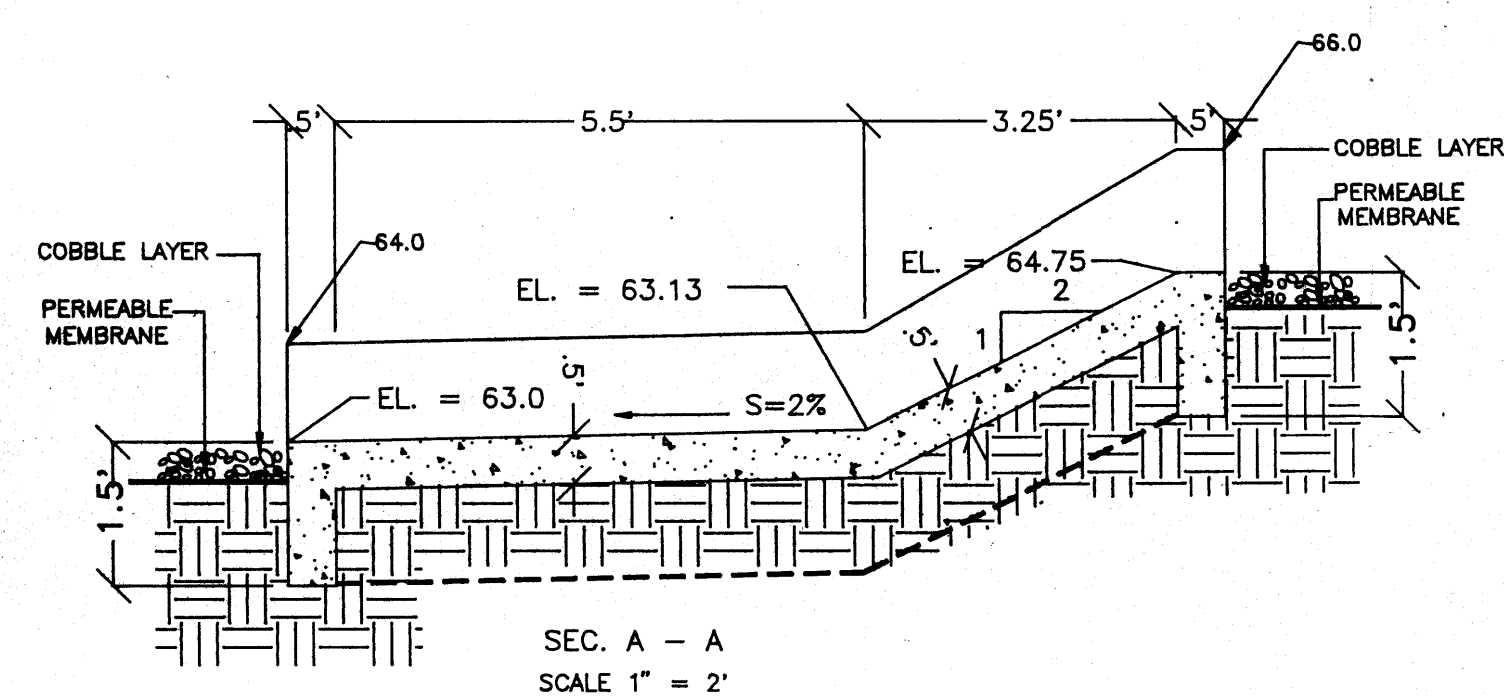
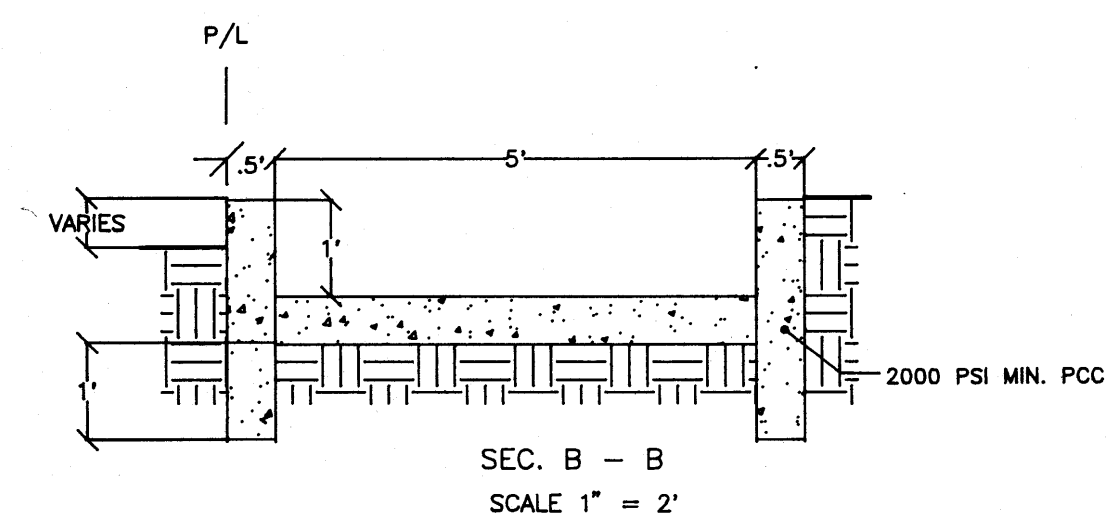
SHEET 1 of 2

SLUGG1 OF 2

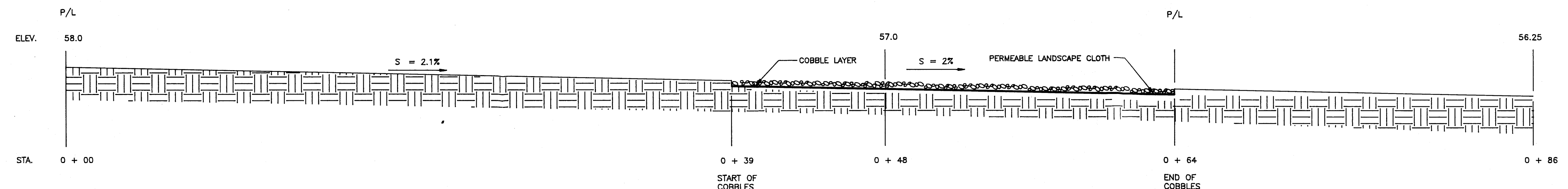


C No.	ARC	RADIUS	DELTA	TANGENT	CHORD BEARING	CHORD
C1	39.27	25.00	90°00'00"	25.00	S44°40'33"E	35.36

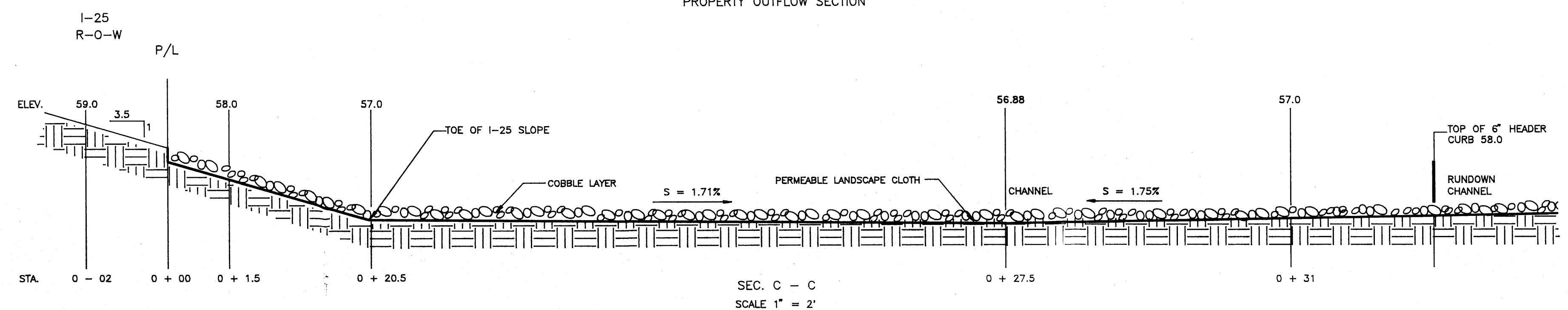




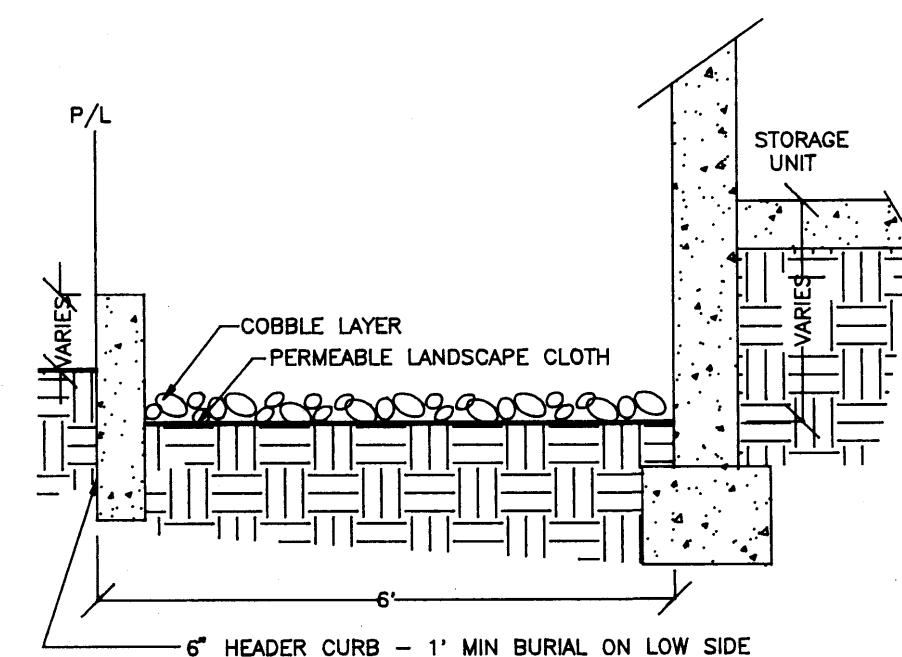
DETAIL A - RUNDOWN CHANNEL INLET



PROPERTY OUTFLOW SECTION



RUNDOWN CHANNEL OUTLET SECTION



TYPICAL RUNDOWN SECTION

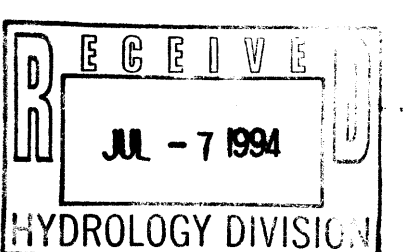
PHASE I ENGINEER'S CERTIFICATION

ON JUNE 30, 1994, I PERSONALLY INSPECTED PHASE I OF THIS DEVELOPMENT, AND IT IS IN ESSENTIAL COMPLIANCE WITH THESE APPROVED PLANS.

C. A. COONCE  
C. A. COONCE

1/6/94  
DATE

NOTE: PHASE I INCLUDED THE RUNDOWN CHANNEL. A TEMPORARY EARTHEN BERM WAS PLACED AT THE SOUTH PROPERTY LINE FROM THE RUNDOWN TO THE SOUTHWEST CORNER TO CONVEY THE PHASE I WATERS TO THE PROPOSED RELEASE POINT.



		<b>C.A. COONCE &amp; ASSOC.</b> ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS 12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH (505) 298-1089	
TITLE		DETAILS	
PROJECT		MINI-WAREHOUSES, 4600 LINCOLN AVE., N.E.	
DATE	01/20/94	REVISED	
DRAWN	LSC		
CHECKED	CAC		





DISCUSSION:

EXISTING ON-SITE FLOWS:

THIS TRACT OF LAND, ZONED M-1, IS CURRENTLY USED AS A CONTRACTOR'S YARD AND VEHICLE MAINTENANCE FACILITY. IT IS BOUNDED ON THE WEST BY THE 1-25 EAST FRONTAGE ROAD, ON THE NORTH BY LINCOLN AVE., N.E., AND ON THE EAST BY MONROE AVE., N.E. THE TRACT IS IN PRECIPITATION ZONE 2.

THE EXISTING TREATMENT AREAS ARE BUILDINGS, SHEDS, ASPHALT, AND CONCRETE WALKWAYS, 2.72 ACRES (TREATMENT D) ; HARD PAVED PARKING AND STORAGE AREAS, 1.23 ACRES (TREATMENT C) ; AND NATIVE VEGETATION, 0.10 ACRES (TREATMENT A). THE FOLLOWING TABLE (FROM TABLE A-9) SUMMARIZES THE EXISTING MAX. Q<sub>100</sub> FLOWS FROM THIS SITE TO THE EAST DITCH OF THE I-25 EAST FRONTAGE ROAD AND APPROX. 1.5 CFS TO LINCOLN AVE.

TREATMENT	AREA (ACRES)	MAX. Q (CFS/AC)	MAX Q(CFS)
A	0.10	1.56	0.16
C	1.23	3.14	3.86
D	2.72	4.70	12.78
	AREA 4.05 ACRES		Q <sub>100</sub> = 16.80 CFS

PROPOSED SITE FLOWS:

THE OWNERS OF THIS EXISTING FACILITY ARE IN THE PROCESS OF CONSTRUCTING A NEW STORAGE YARD AND VEHICLE MAINTENANCE FACILITY WEST OF BROADWAY, NEAR THE LIVESTOCK AUCTION PENS. THE EXISTING SHEDS AND TRAILERS WILL BE REMOVED AND A RENTAL MINI-STORAGE FACILITY CONSTRUCTED. THE EXISTING PERMANENT OFFICE STRUCTURE WILL REMAIN AND BE UTILIZED AS AN OFFICE BUILDING.

THE PERIMETER OF THE LOT, AS INDICATED, HAS A LANDSCAPED AREA. THE LANDSCAPE PLAN IS TO PLANT THIS AREA WITH NATIVE GRASSES AND FLOWERS, WITH A TEMPORARY IRRIGATION SYSTEM TO BE OPERATED FOR ONE YEAR IN ORDER TO ALLOW THE NATIVE VEGETATION TO ESTABLISH. THE LANDSCAPE AREA AT THE NORTH WEST OF THE OFFICE WILL CONTAIN GRASS, TREES, AND SHRUBS.

THE PROPOSED TREATMENT AREAS ARE BUILDING, ASPHALT DRIVES AND PARKING, AND CONCRETE SIDEWALKS, 3.5 ACRES (TREATMENT D); NATIVE GRASSES AND FLOWERS, 0.26 ACRES (TREATMENT A); AND GRASS, 0.04 ACRES (TREATMENT B). THE FOLLOWING TABLE SUMMARIZES THE PROPOSED MAX ~~30~~ FLOWS FROM THIS SITE TO THE EAST DITCH OF THE I-25 EAST FRONTAGE ROAD AND TO LINCOLN AVE.

THE MAX Q<sub>100</sub> FLOWS FROM THIS SITE WERE COMPUTED USING THE PEAK DISCHARGE TABLE A-9 FOR ZONE 2 RAINFALL, WHERE TREATMENT A= 1.56, B= 2.28, C= 3.14, AND D= 4.7

THE AREAS AND  $Q_{100}$  'S FOR EACH ZONE AND STATION INDICATED ARE AS FOLLOWS:

TREAT -	AREAS (ACRES)						TOTALS
MENT	I	II	III	IV	V	VI	
A	0.00	0.16	0.00	0.11	0.02	0.05	
B	0.03	0.00	0.03	0.00	0.00	0.00	
C	0.00	0.00	0.00	0.00	0.00	0.00	
D	<u>0.33</u>	<u>1.51</u>	<u>1.81</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	
	0.36	1.67	1.84	0.11	0.02	0.05	= 4.05 AC.
Q <sub>max</sub> PEAK	1.62	7.30	8.58	0.17	0.03	0.08	= 17.78 CFS

SOME FUGITIVE FLOW HAS OCCURRED MIDWAY OF THE SOUTH PROPERTY LINE. THIS IS CORRECTED BY DESIGNING A HEADER CURB AND A RUNDOWN TO CHANNEL THE RUNOFF FROM THE EASTERN PORTION OF THIS SITE TO THE WESTERN PORTION. THE AREAS IN WHICH THE FLOW VELOCITY IS LIKELY TO CAUSE EROSION ARE TREATED WITH A PERMEABLE CURB, A LIKELY MEMBER, AND COBBLESTONE. THE CURB IS GIVEN A PROTECTION AND ALLOWS FOR INFILTRATION. THE MANNING N'S USED ARE 0.035 FOR THE COBBLESTONE AREAS AND 0.013 FOR THE CONCRETE RUNDOWN. BASED UPON THESE N'S, THE CHANNEL GEOMETRY, AND THE INDICATED Q'S, THE DEPTH OF FLOW AND VELOCITIES ARE 0.1 FT. AND 1.1 FPS FOR THE RUNDOWN AND 0.5 FT. AND 3.1 FPS FOR THE SOUTH COBBLED CHANNEL.

## WATERSHED CHARACTERISTICS

THE MOST RECENT DEFINITIVE HYDROLOGIC STUDY OF THIS AREA IS A STUDY FOR THE VINEYARD CHANNEL BY GREINER, INC., FEB., 1993. THIS SITE IS WITHIN BASIN 600 OF THIS STUDY, WHICH ENCOMPASSES 42.52 AC. AND IS DRAINED BY A 36 INCH RCP UNDER THE EAST 1-25 ROAD. ROBERTSON, 1987, HAS REPORTED A MAXIMUM FLOW OF 1.0 CFS. REFERENCED STUDY SHOWS A MAXIMUM Q OF 196.1 CFS AND A MAXIMUM WATER SURFACE ELEVATION OF 5158.02 FT. THE MAXIMUM DISCHARGE THROUGH THE RCP IS 70.2 CFS. THIS STUDY CALCULATES AN AVERAGE YIELD OF 0.67 CFS PER ACRE. THIS DEVELOPMENT WILL YIELD 4.39 CFS PER ACRE.

THE RUNDOWN FROM THE EAST I-25 FRONTAGE ROAD TRAVERSES THE WESTERN EDGE OF THIS PROPERTY. THE EXISTING FLOW PATTERN IS NOT CHANGED BY THIS DESIGN.

## FLOODPLAIN STATUS

THE FLOODPLAIN HAS CHANGED FROM THE 1983 MAPS. THE NMH&TD HAS ADDED THE JEFFERSON AVE. OVERPASS AND IMPROVED THE DRAINAGE WITHIN THE LINCOLN AVE. R-O-W. THE VINEYARD CHANNEL HAS BEEN COMPLETED BY AMAFCA. THE CURRENT 100 YEAR FLOOD PLAIN ELEVATION IS 5158.02 FT.

T.B.M. - 5169.97. EXISTING OFFICE BUILDING

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPT.

**C.A. COONCE & ASSOC.**

ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS  
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH (505) 298-1089

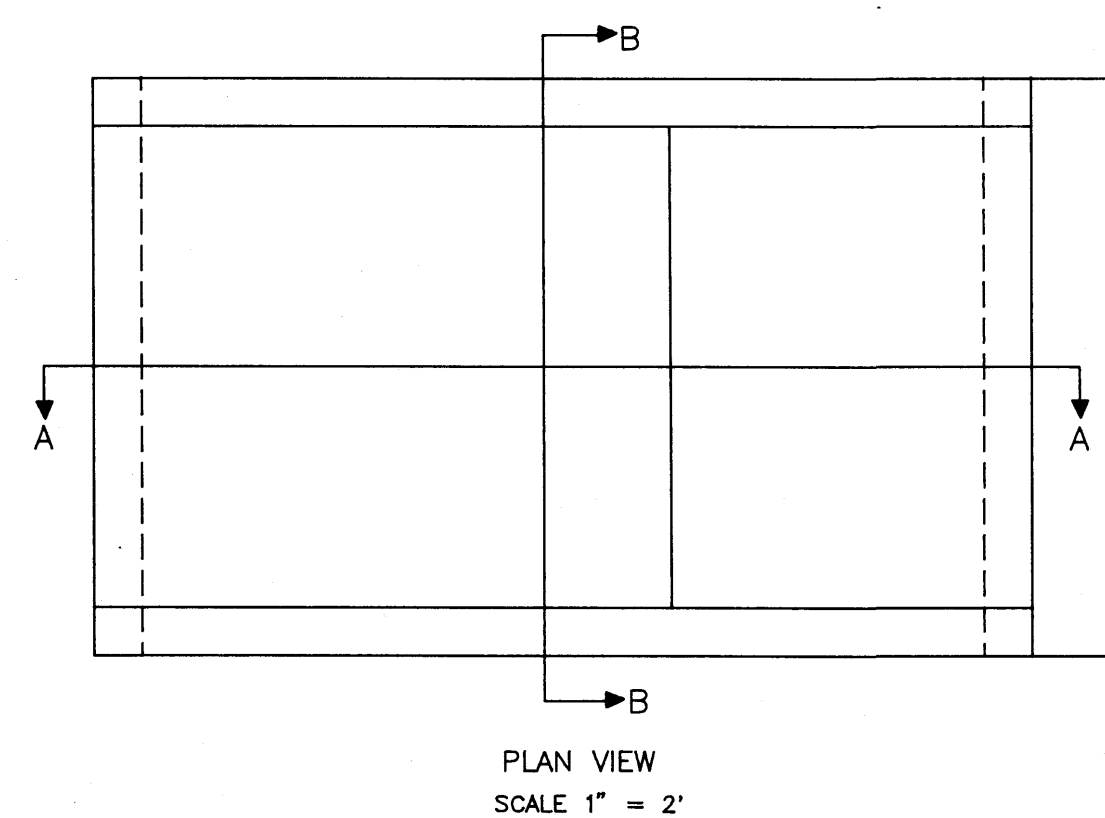
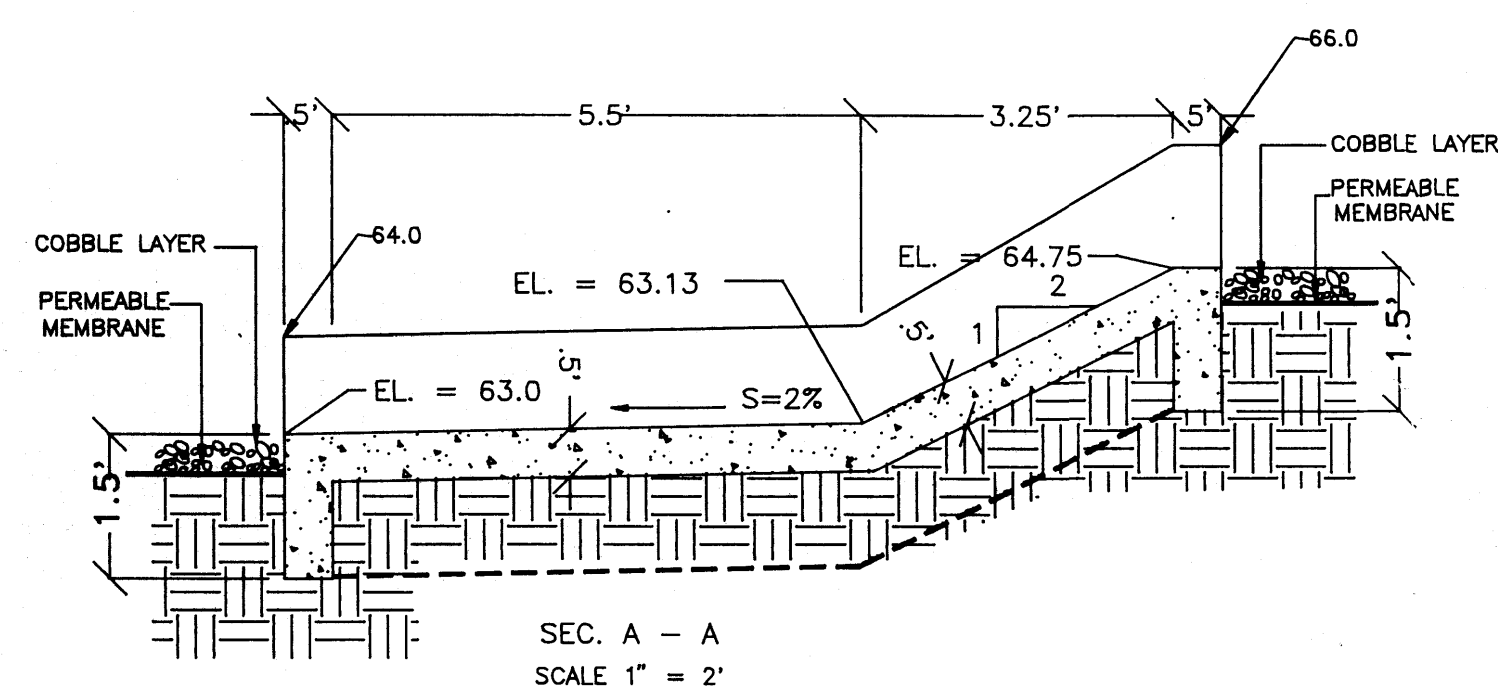
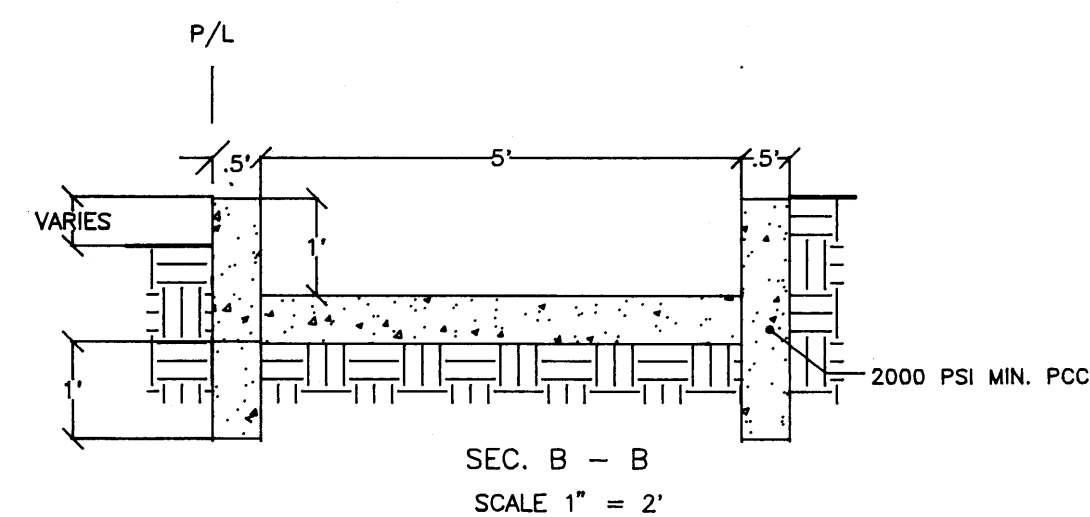
TITLE	SITE, DRAINAGE AND GRADING PLAN
-------	---------------------------------

PROJECT MINI-WAREHOUSES, 4600 LINCOLN AVE., N.E.

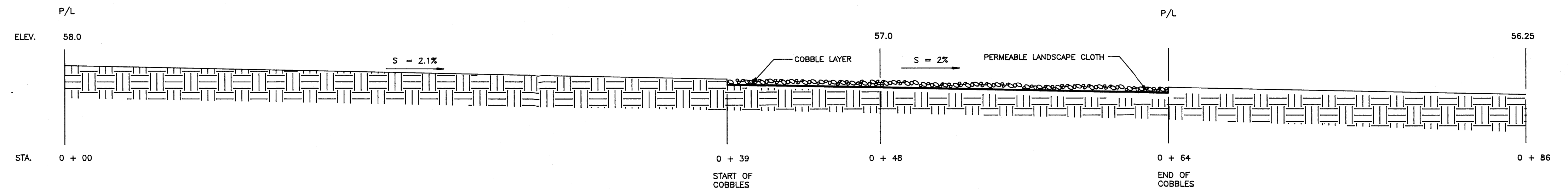
DATE	11/23/83	REVISED				SHEET 1 OF 2
DRAWN	LSC	1/24/94				
CHECKED	CAC					

SHIFT 1 OF 2

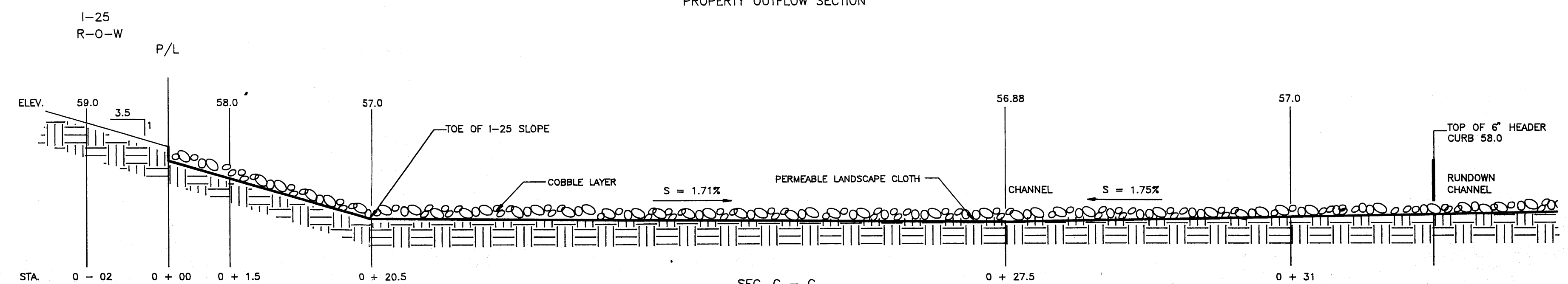




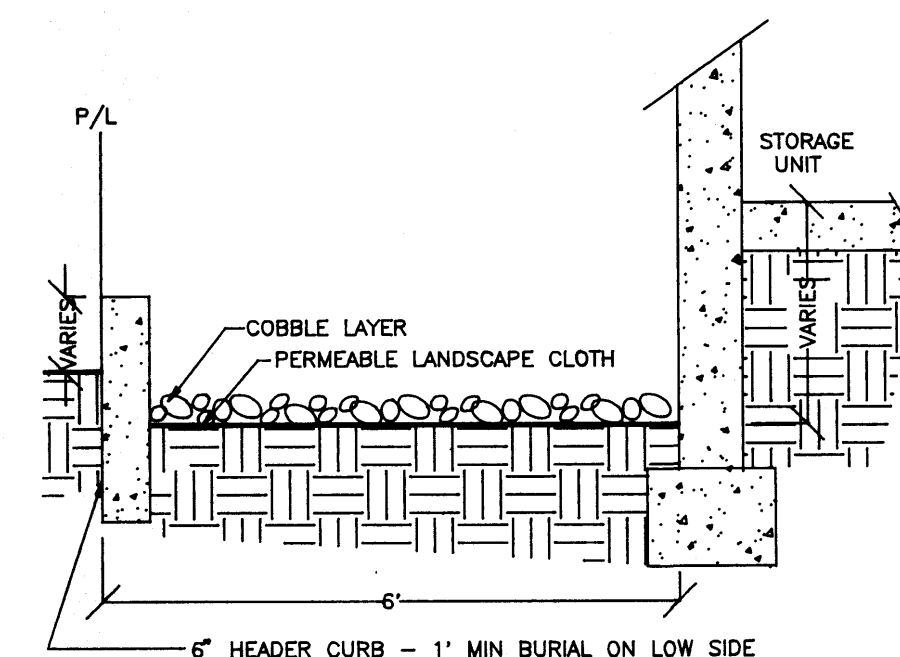
DETAIL A - RUNDOWN CHANNEL INLET



PROPERTY OUTFLOW SECTION



RUNDOWN CHANNEL OUTLET SECTION



TYPICAL RUNDOWN SECTION

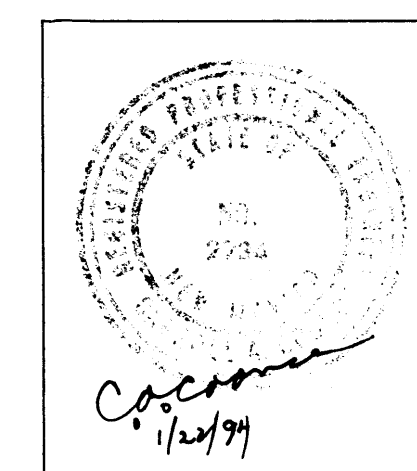
PHASE I ENGINEER'S CERTIFICATION

ON JUNE 30, 1994, I PERSONALLY INSPECTED PHASE I OF THIS DEVELOPMENT, AND IT IS IN ESSENTIAL COMPLIANCE WITH THESE APPROVED PLANS.

C. A. COONCE

1/6/94  
DATE

NOTE: PHASE I INCLUDED THE RUNDOWN CHANNEL. A TEMPORARY EARTHEN BERM WAS PLACED AT THE SOUTH PROPERTY LINE FROM THE RUNDOWN TO THE SOUTHWEST CORNER TO CONVEY THE PHASE I WATERS TO THE PROPOSED RELEASE POINT.



<b>C.A. COONCE &amp; ASSOC.</b>	
ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS	
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH (505) 298-1089	
TITLE: DETAILS	
PROJECT: MINI-WAREHOUSES, 4600 LINCOLN AVE., N.E.	
DATE: 01/20/94	REVISED:
DRAWN: LSC	
CHECKED: CAC	