

CONSTRUCTION NOTES:

- 1.) TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE AT ~~260-1200~~ FOR LOCATION OF EXISTING UTILITIES.
- 2.) PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS; SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM OF DELAY.
- 3.) ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- 4.) ALL CONSTRUCTION WITHIN CITY RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.

RECTANGULAR CONCRETE CHANNEL:

FLOW RATE = 12.2 CFS
CHANNEL BOTTOM SLOPE = 0.006
MANNING'S ROUGHNESS COEFFICIENT = 0.014
CHANNEL SIDE SLOPE (LEFT SIDE) = 0.00'
CHANNEL SIDE SLOPE (RIGHT SIDE) = 0.00'
CHANNEL BOTTOM WIDTH = 4.00'

RESULTS:

NORMAL DEPTH = 0.61'
FLOW VELOCITY = 4.98'/SEC.
FROUDE NUMBER = 1.12
VELOCITY HEAD = 0.39'
ENERGY HEAD = 1.00'
CROSS-SECTIONAL AREA OF FLOW = 2.46 SQ. FT.
TOP WIDTH OF FLOW = 4.00'

TRIANGULAR ASPHALT CHANNEL:

FLOW RATE = 12.2 CFS
CHANNEL BOTTOM SLOPE = 0.006
MANNING'S ROUGHNESS COEFFICIENT = 0.013
CHANNEL SIDE SLOPE (EAST SIDE) = 9.71%
CHANNEL SIDE SLOPE (WEST SIDE) = 0.00'
CHANNEL BOTTOM WIDTH = 0.00'

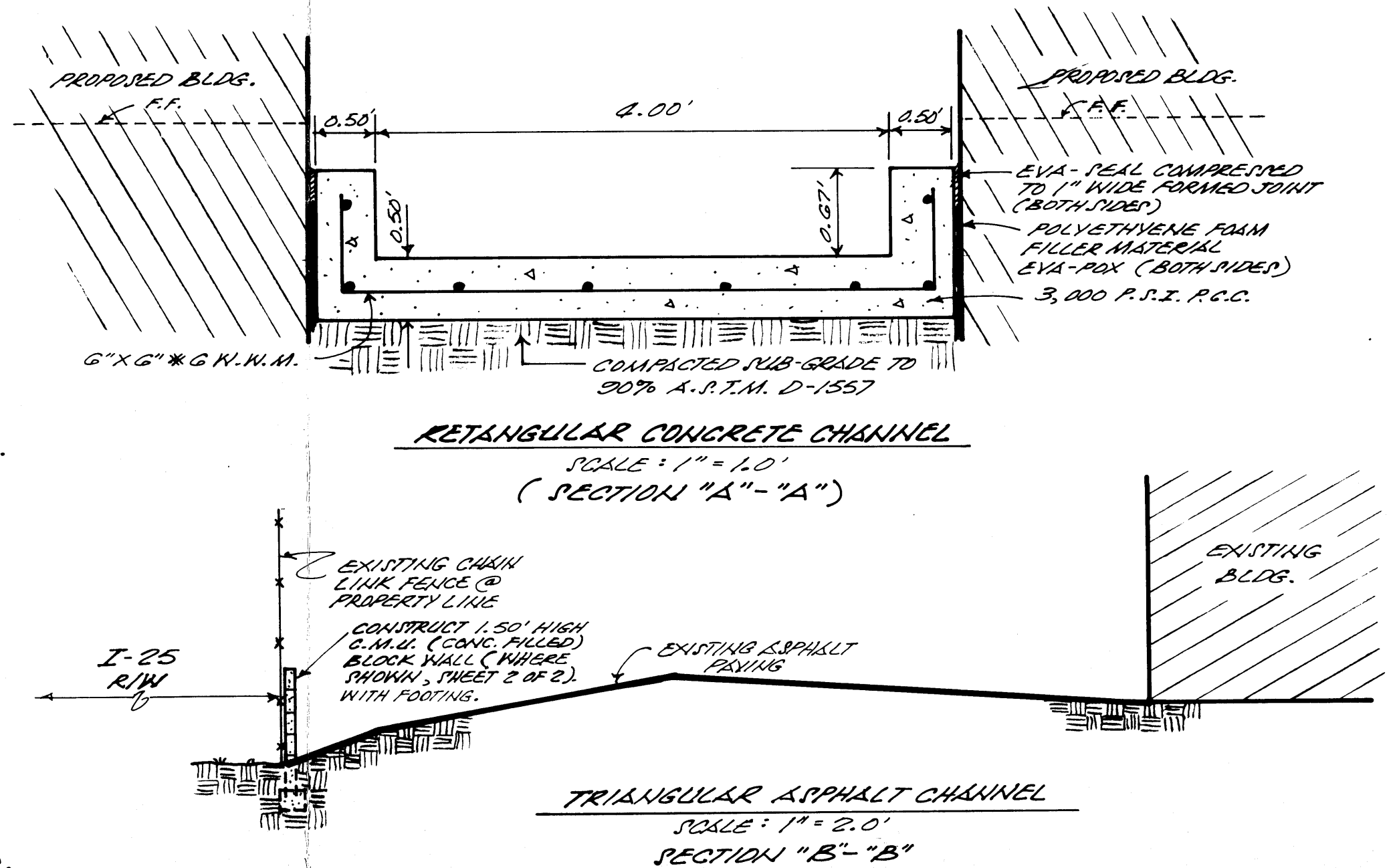
RESULTS:

NORMAL DEPTH = 0.75'
FLOW VELOCITY = 4.34'/SEC.
FROUDE NUMBER = 1.24
VELOCITY HEAD = 0.29'
ENERGY HEAD = 1.04'
CROSS-SECTIONAL AREA OF FLOW = 2.83 SQ. FT.
TOP WIDTH OF FLOW = 7.41'

EROSION CONTROL MEASURES:

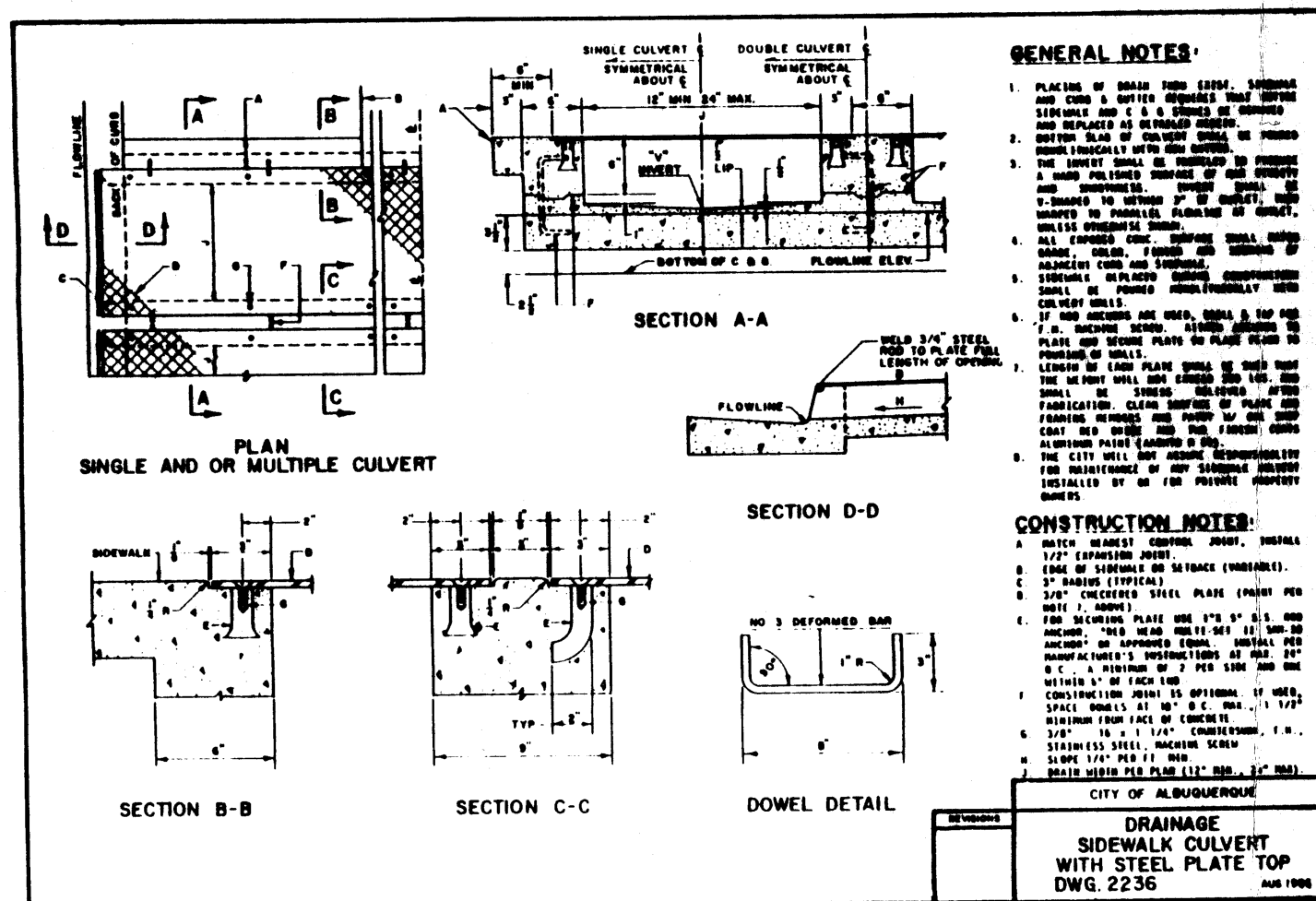
THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR MANAGEMENT FOR STORM RUN-OFF DURING CONSTRUCTION; HE SHALL INSURE THAT THE FOLLOWING MEASURES ARE TAKEN:

- 1.) ADJACENT PROPERTY SHALL BE PROTECTED AT ALL TIMES BY CONSTRUCTION OF BERMS, DIKES, SWALES, PONDS, AND OTHER TEMPORARY GRADING AS REQUIRED TO PREVENT STORM RUNOFF FROM LEAVING THE SITE AND ENTERING ADJACENT PROPERTIES.
- 2.) ADJACENT PUBLIC RIGHT-OF-WAYS SHALL BE PROTECTED AT ALL TIMES FROM STORM WATER RUNOFF FROM THE SITE. NO SEDIMENT BEARING WATER SHALL BE PERMITTED TO ENTER PUBLIC STREETS.
- 3.) THE CONTRACTOR SHALL IMMEDIATELY AND THOROUGHLY REMOVE ANY AND ALL SEDIMENT WITHIN PUBLIC STREETS THAT HAS BEEN ERODED FROM THE SITE AND DEPOSITED THERE.



NOTICE TO CONTRACTOR:

- 1.) AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THIS PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION OF THIS PERMIT.
- 2.) ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATION - PUBLIC WORKS CONSTRUCTION - 1985.
- 3.) TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, (~~260-1200~~) FOR LOCATION OF EXISTING UTILITIES.
- 4.) PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS, SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR SURVEYOR SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- 5.) BACKFILL COMPACTION SHALL BE ACCORDING TO ARTERIAL STREET USE.
- 6.) MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.



SIDEWALK CULVERT (24" WIDTH): (CULVERT FLOW FOR Q_{10} , Q_{100} -YR. WILL BE OVERFLOW)

$$Q = C \times A \times \sqrt{2gh} \quad h \text{ (Energy Head)} = 0.89' \quad \text{Depth} = 0.65'$$

$$C = 0.83' \quad \text{Area} = 1.0'$$

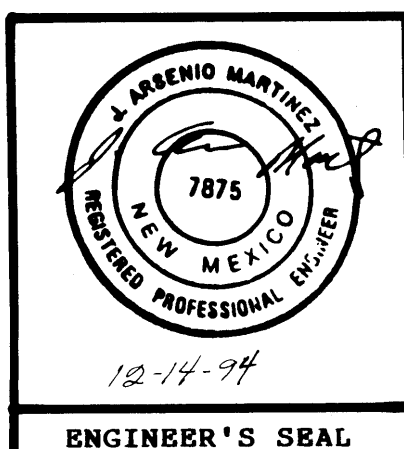
$$Q = 0.83 \times 1.0 \times \sqrt{2 \times 32.2 \times 0.89} = 6.28 \text{ CFS}$$

NOTE: 12' CULVERT EQUALS 1/2 OF 24" CULVERT = 3.14 CFS

$$\text{COMPUTED } Q_{10} = 8.30 \text{ CFS} \quad 6.28 \text{ CFS} + 3.14 \text{ CFS} = 9.42 \text{ CFS} > 8.30 \text{ CFS}$$

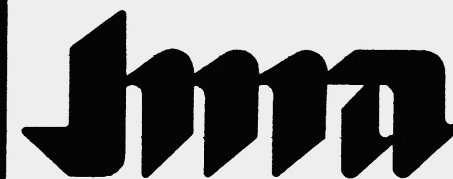
APPROVALS	NAME	DATE
A.C.E./DESIGN	<i>Benny Martinez</i>	12/2/94
INSPECTOR		
A.C.E./FIELD		

NOTE: ALL WORK WITHIN PUBLIC EASEMENT SHALL BE PERFORMED UNDER SEPARATE PERMIT.



A PROPOSED DRAINAGE PLAN
FOR
PROPOSED MINI-STORAGE UNITS
LOCATED AT I-25 & PINO AVE. N.E.
(TED GAROUTTE PROPERTY)
ALBUQUERQUE, NEW MEXICO
DECEMBER, 1994

DEC 20 1994



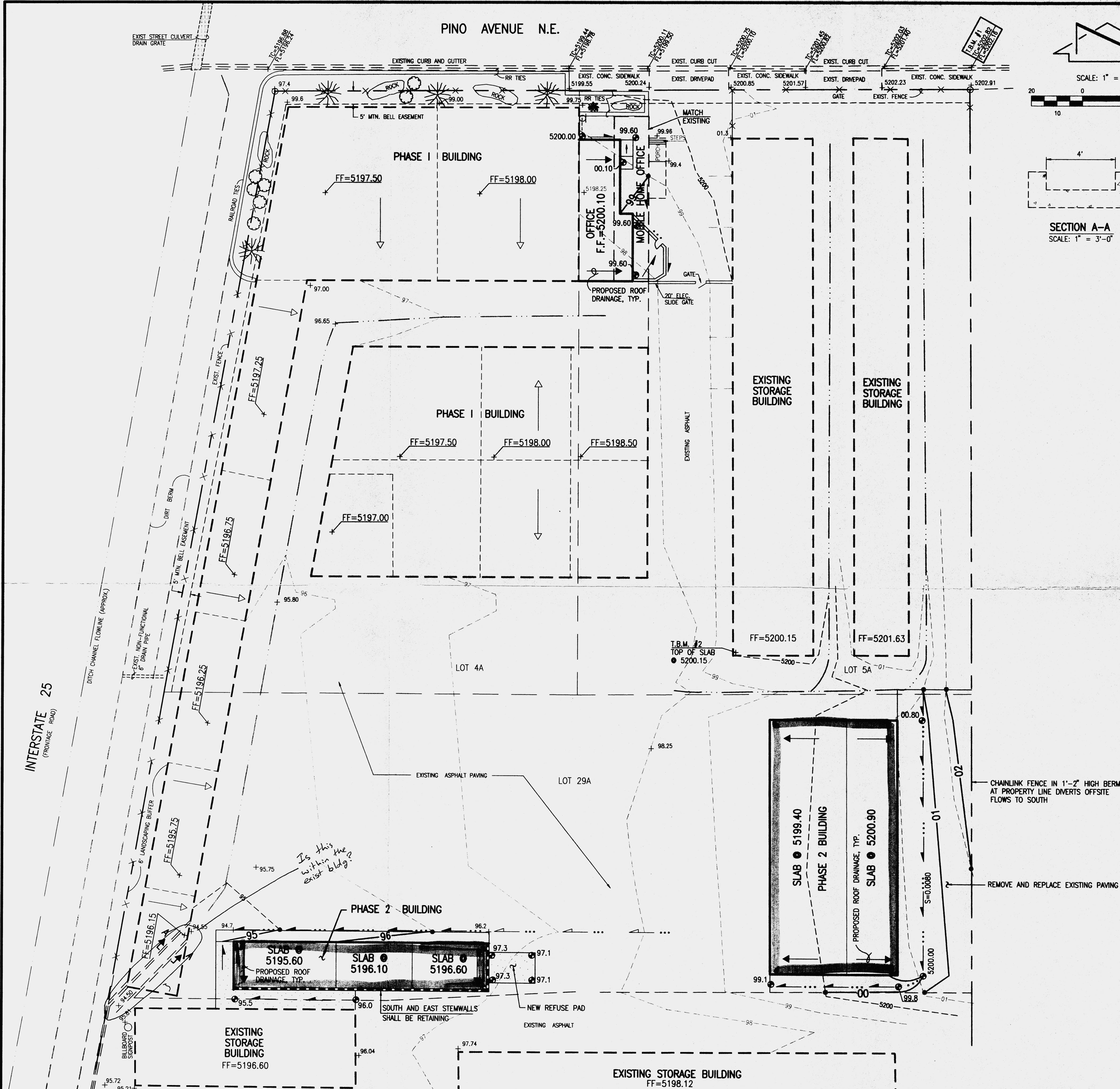
JEFF MORTENSEN & ASSOCIATES, INC.
600-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE, N.M. 87109
ENGINEERS & SURVEYORS (305) 345-4250
FAX: (505) 345-4254 E-mail: jma@jma-inc.com

GRADING PLAN GRIZZLY STORAGE - PHASE II

NOTE:
THIS IS NOT A BOUNDARY SURVEY. APPARENT PROPERTY CORNERS
ARE SHOWN FOR ORIENTATION ONLY. BOUNDARY INFORMATION IS
TAKEN FROM THE PLAT OF RECORD. TOPOGRAPHIC INFORMATION IS
TAKEN FROM "A PROPOSED DRAINAGE PLAN FOR PROPOSED
MINI-STORAGE UNITS LOCATED AT I-25 AND PINO AVE. N.E."
PREPARED BY J. ARSENIO MARTINEZ DATED 12-14-94.

DESIGNED BY J.G.M.
DRAWN BY S.G.H.
APPROVED BY J.G.M.

NO.	DATE	BY	REVISIONS	JOB NO.
				2003.094.1
				DATE
				01-2004
				SHEET
				2 OF 2



PROJECT BENCHMARK

ACS STATION "6-018"
ELEVATION = 5197.686 (NGVD 1929)

T.B.M.

T.B.M. #1

SLASH MARK AT TOP OF CURB NEAR THE NORTHEAST CORNER OF THE SITE AS SHOWN ON THE DRAWING.
ELEVATION = 5202.82 FEET.

T.B.M. #2

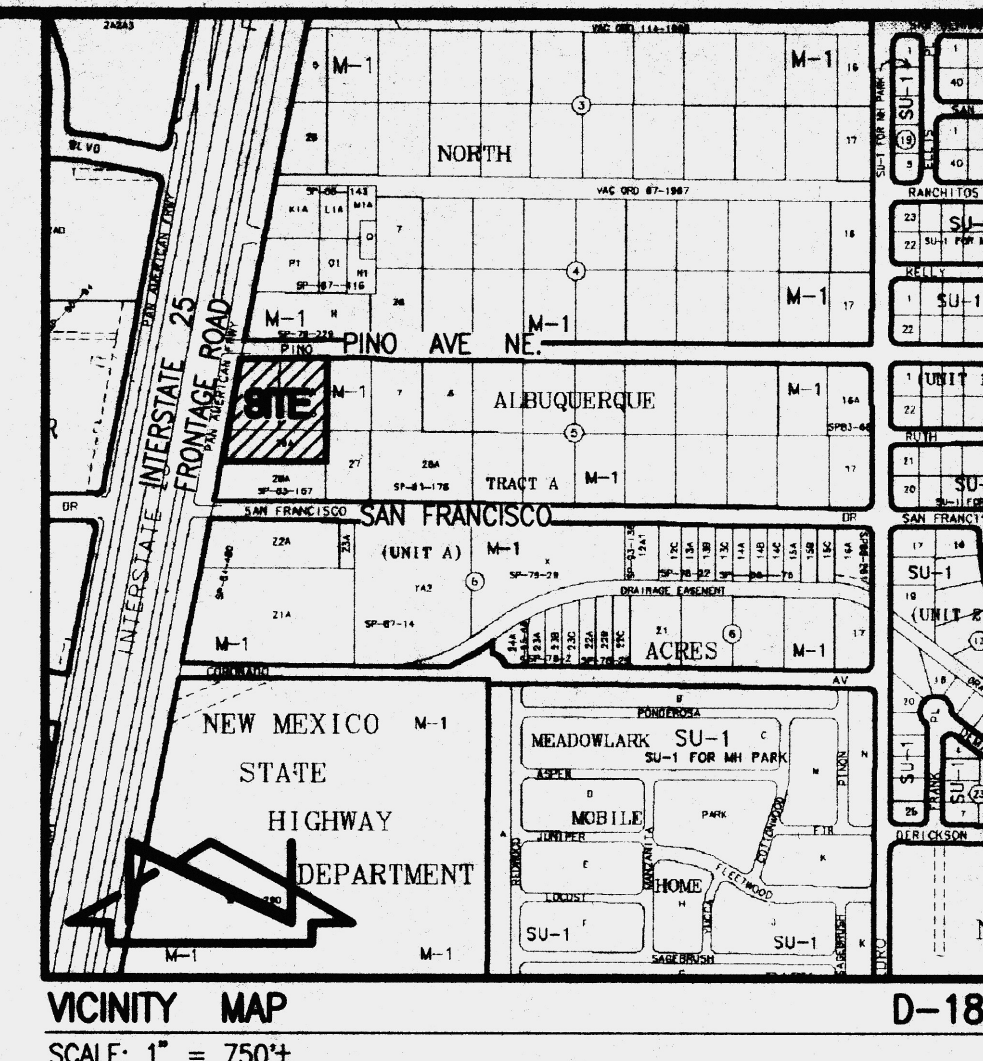
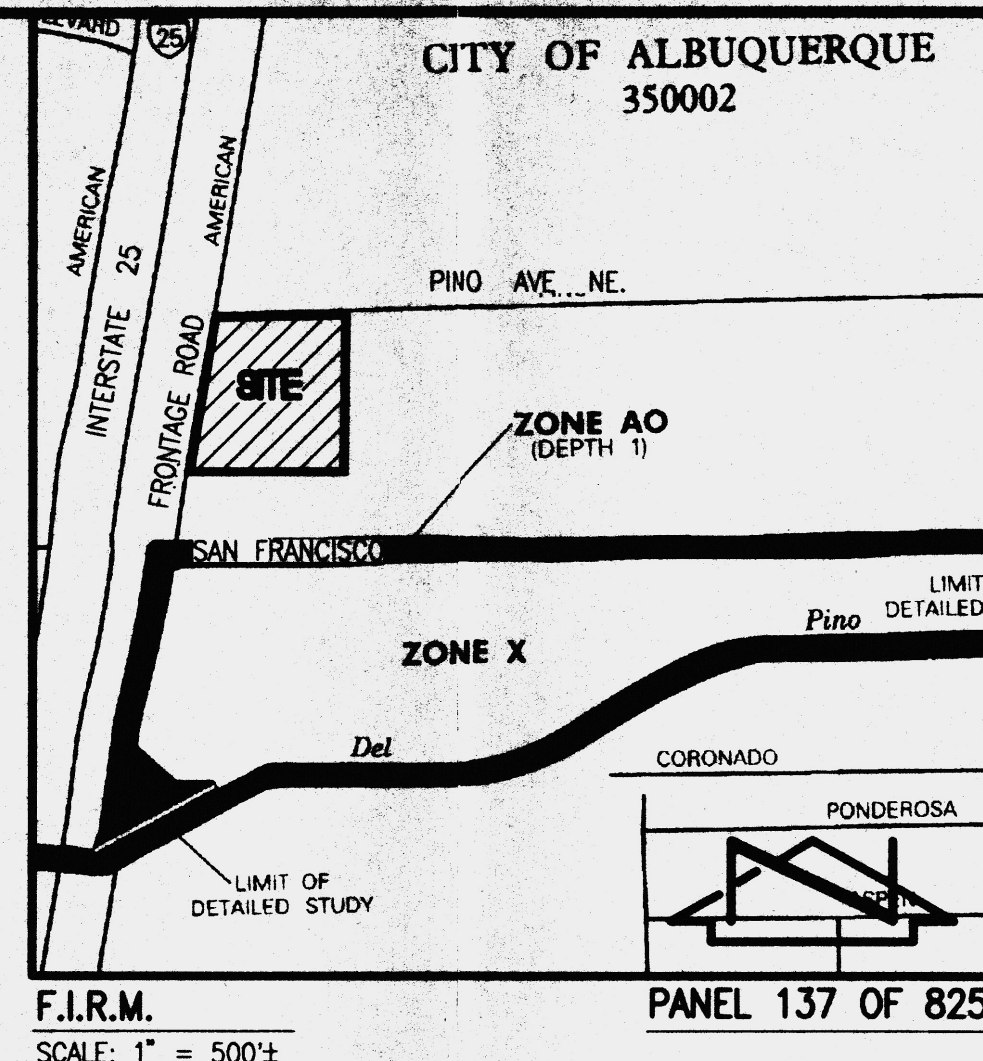
TOP OF SLAB AT CORNER OF EXISTING STORAGE BUILDING AS SHOWN ON THE DRAWING
ELEVATION = 5200.15 FEET

LEGAL DESCRIPTION

LOTS 4-A, 5-A AND A NORTHERLY PORTION OF LOT 29A, BLOCK FIVE, TRACT A, UNIT A, NORTH ALBUQUERQUE ACRES

LEGEND

+ 95.80	EXISTING SPOT ELEVATION
	EXISTING CONTOUR
	EXISTING DECIDUOUS TREE
	EXISTING SHRUB
	EXISTING DIRECTION OF FLOW
	PROPOSED DIRECTION OF FLOW
	PROPOSED SPOT ELEVATION
	PROPOSED CONTOUR
	PROPOSED ASPHALT PAVEMENT
	PROPOSED CONCRETE

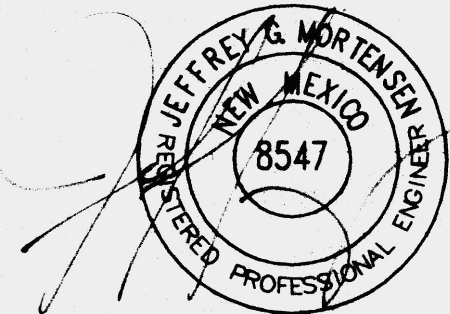


CONSTRUCTION NOTES:

- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 260-1990 (ALBUQUERQUE AREA), 1-800-321-ALERT(2537) (STATEWIDE), FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
- IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER, ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE, THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
- THE DESIGN OF PLANTERS AND LANDSCAPED AREAS IS NOT PART OF THIS PLAN. ALL PLANTERS AND LANDSCAPED AREAS ADJACENT TO THE BUILDING(S) SHALL BE PROVIDED WITH POSITIVE DRAINAGE TO AVOID ANY PONDING ADJACENT TO THE STRUCTURE. FOR CONSTRUCTION DETAILS, REFER TO LANDSCAPING PLAN.

EROSION CONTROL MEASURES:

- THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
- THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
- WHEN APPLICABLE, CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY AND/OR FILE A NOTICE OF INTENT (N.O.I.) WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.
- UNLESS FINAL STABILIZATION IS OTHERWISE PROVIDED FOR, ANY AREAS OF EXCESS DISTURBANCE (TRAFFIC ACCESS, STORAGE YARD, EXCAVATED MATERIAL, ETC.) SHALL BE RE-SEEDING ACCORDING TO C.O.A. SPECIFICATION 1012 "NATIVE GRASS SEEDING". THIS WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.



01-16-2004

I. INTRODUCTION AND EXECUTIVE SUMMARY

THIS SUBMITTAL IS MADE IN SUPPORT OF BUILDING PERMIT APPROVAL FOR THE SUBJECT PROPERTY.

AS SHOWN BY THE VICINITY MAP, THE SITE IS LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF THE I-25 EAST FRONTAGE ROAD AND PINO AVENUE NE. THE CURRENT LEGAL DESCRIPTION IS LOTS 4A, 5A AND 29A, BLOCKS, NORTH ALBUQUERQUE ACRES, TRACT A, UNIT A. AS SHOWN BY PANEL 137 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY FEMA FOR BERNALILLO COUNTY, NEW MEXICO, SEPTEMBER 20, 1996, THIS ~~SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE.~~ IT APPEARS, HOWEVER, THAT THE SITE DRAINS TO A DESIGNATED FLOOD HAZARD ZONE (AO DEPTH1) THAT COINCIDES WITH SAN FRANCISCO ROAD NE AND THE I-25 EAST FRONTAGE ROAD DRAINING TO THE NORTH ARROYO DEL PINO. THE NORTH ARROYO DEL PINO IS A DESIGNATED FLOOD HAZARD ZONE WITH THE 100-YEAR FLOOD CONFINED TO THE CONSTRUCTED CHANNEL. REVIEW OF THE FEMA MAPPING INDICATES THAT THE SITE IS LOCATED TOWARD TO THE BOTTOM OF THE WATERSHED. THE PROPOSED BUILDING CONSTRUCTION WILL NOT WORSEN OR AGGRAVATE THE EXISTING CONDITION.

III. BACKGROUND DOCUMENTS & RESEARCH

A. GRADING AND DRAINAGE PLAN FOR PROPOSED MINI-STORAGE UNITS PREPARED BY J. ARSENIO MARTINEZ, NMPE 7875, DATED 12-14-94 AND LATER CERTIFIED (PHASE 1 ONLY) BY J. ARSENIO MARTINEZ, 09-21-95. THAT ORIGINAL SUBMITTAL ESTABLISHED THE PRECEDENT OF FREE DISCHARGE FOR THIS SITE.

B. PANEL 137 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY FEMA FOR BERNALILLO COUNTY, NEW MEXICO, SEPTEMBER 20, 1996, THIS SITE DRAINS TO A DESIGNATED FLOOD HAZARD ZONE (AO DEPTH 1). THE DESIGNATED FLOOD HAZARD ZONE APPEARS TO BE ASSOCIATED WITH FLOODING WITHIN PUBLIC ROADWAYS AND DOES NOT APPEAR TO ENCRATCH UPON PRIVATE PROPERTY. THE PROPOSED BUILDING IMPROVEMENTS WILL NOT WORSEN OR AGGRAVATE THE EXISTING CONDITION.

AT PRESENT, THE SITE IS DEVELOPED AS A SELF-STORAGE COMPLEX DRAINING FROM EAST TO WEST AND DISCHARGING ITS DEVELOPED RUNOFF VIA A 4-FOOT WIDE PRIVATE DRAINAGE CHANNEL TO THE I-25 EAST FRONTAGE ROAD RIGHT-OF-WAY. FROM THAT POINT, THE RUNOFF FLOWS IN A SOUTHERLY DIRECTION WITHIN THE FRONTAGE ROAD BARDITCH TO ENTER THE NORTH ARROYO DEL PINO. THE SITE IS FULLY DEVELOPED, PREDOMINANTLY WITH BUILDINGS AND PAVING. A VERY SMALL PORTION OF THE SITE IS LANDSCAPED. THE SITES WHERE FREE-STANDING BUILDINGS ARE PROPOSED ARE CURRENTLY PAVED (100% IMPERVIOUS).

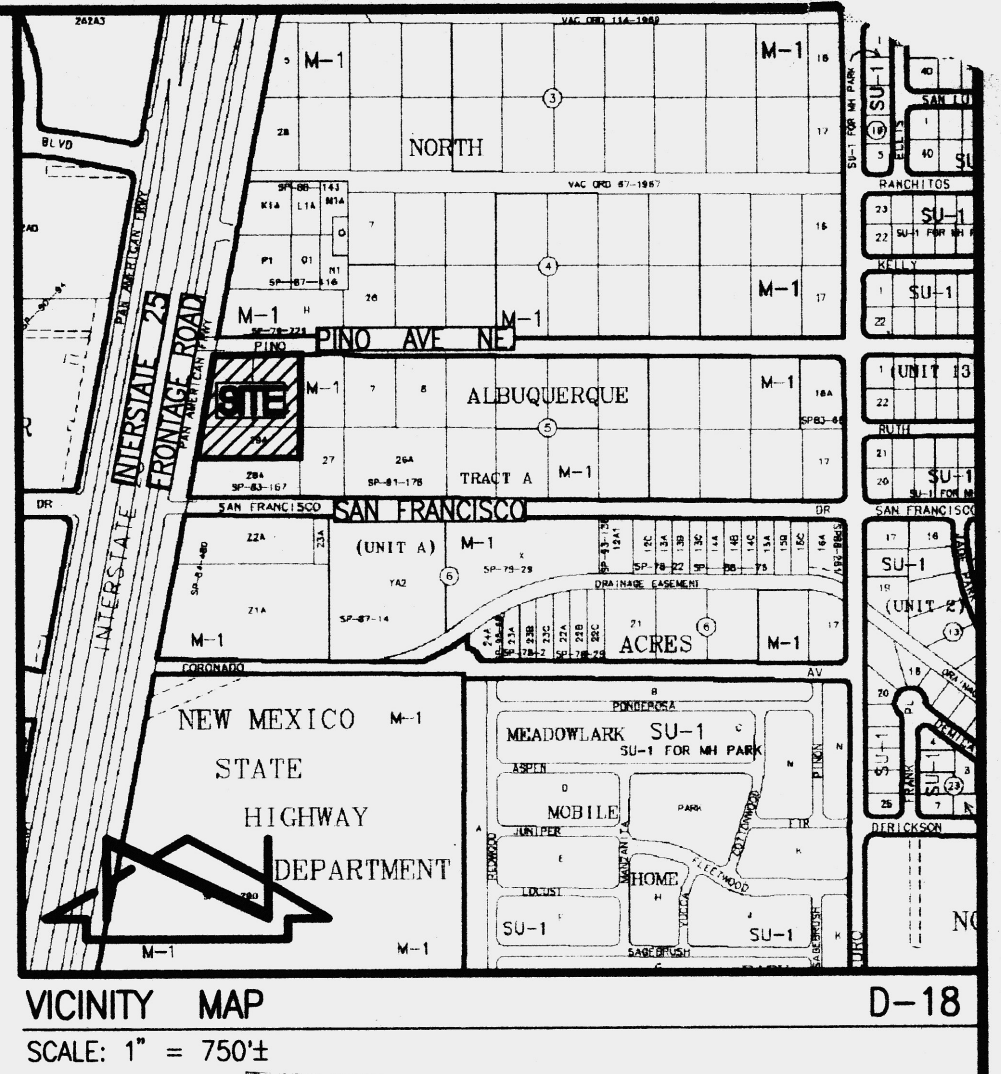
V. DEVELOPED CONDITIONS

VI. GRADING PLAN

VII. CALCULATIONS

VIII. CONCLUSION

1. THE EXISTING DRAINAGE PATTERN (STATUS QUO) WILL NOT BE ALTERED AND HENCE MAINTAINED
2. MODIFICATION TO AN EXISTING SITE WITHIN AN INFILL AREA
3. NO INCREASE IN IMPERVIOUS AREA AND HENCE NO INCREASE IN DEVELOPED RUNOFF

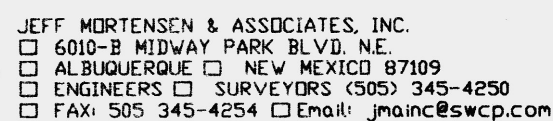


ACS STATION "6-D18"
ELEVATION = 5197.686 (NGVD 1929)

T.B.M. #1
SLASH MARK AT TOP OF CURB NEAR THE NORTHEAST CORNER OF THE
SITE AS SHOWN ON THE DRAWING.
ELEVATION = 5202.82 FEET.

T.B.M. #2
TOP OF SLAB AT CORNER OF EXISTING STORAGE BUILDING AS SHOWN
ON THE DRAWING
ELEVATION = 5200.15 FEET

LOTS 4-A, 5-A AND A NORTHERLY PORTION OF LOT 29A, BLOCK FIVE,
TRACT A, UNIT A, NORTH ALBUQUERQUE ACRES



DESIGNED BY J.G.M.

DRAWN BY S.G.H.

APPROVED BY J.G.M.

[illegible]

JOB NO. 2003.094.1

DATE 01-2004

SHEET 1 OF 2

