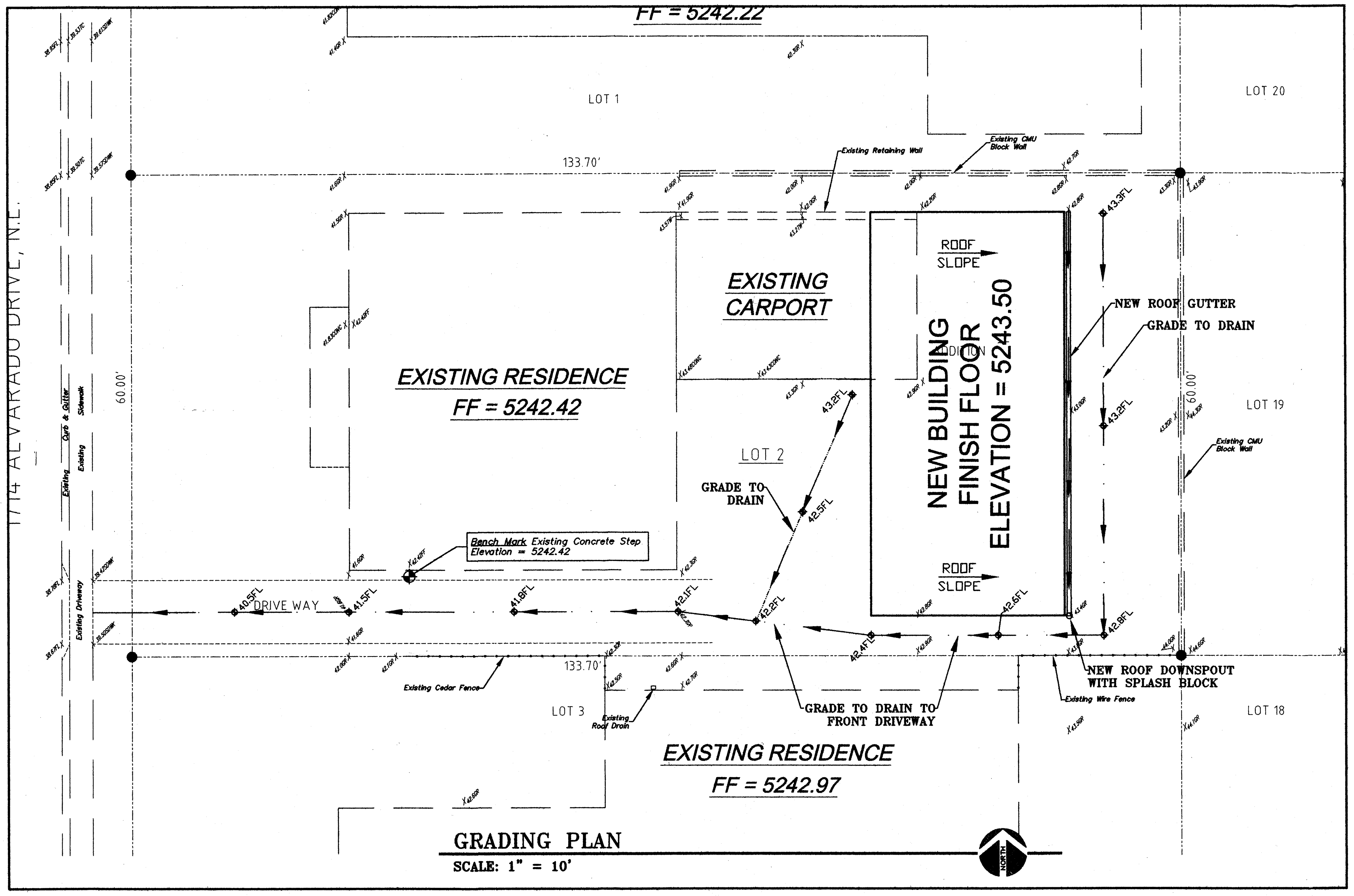
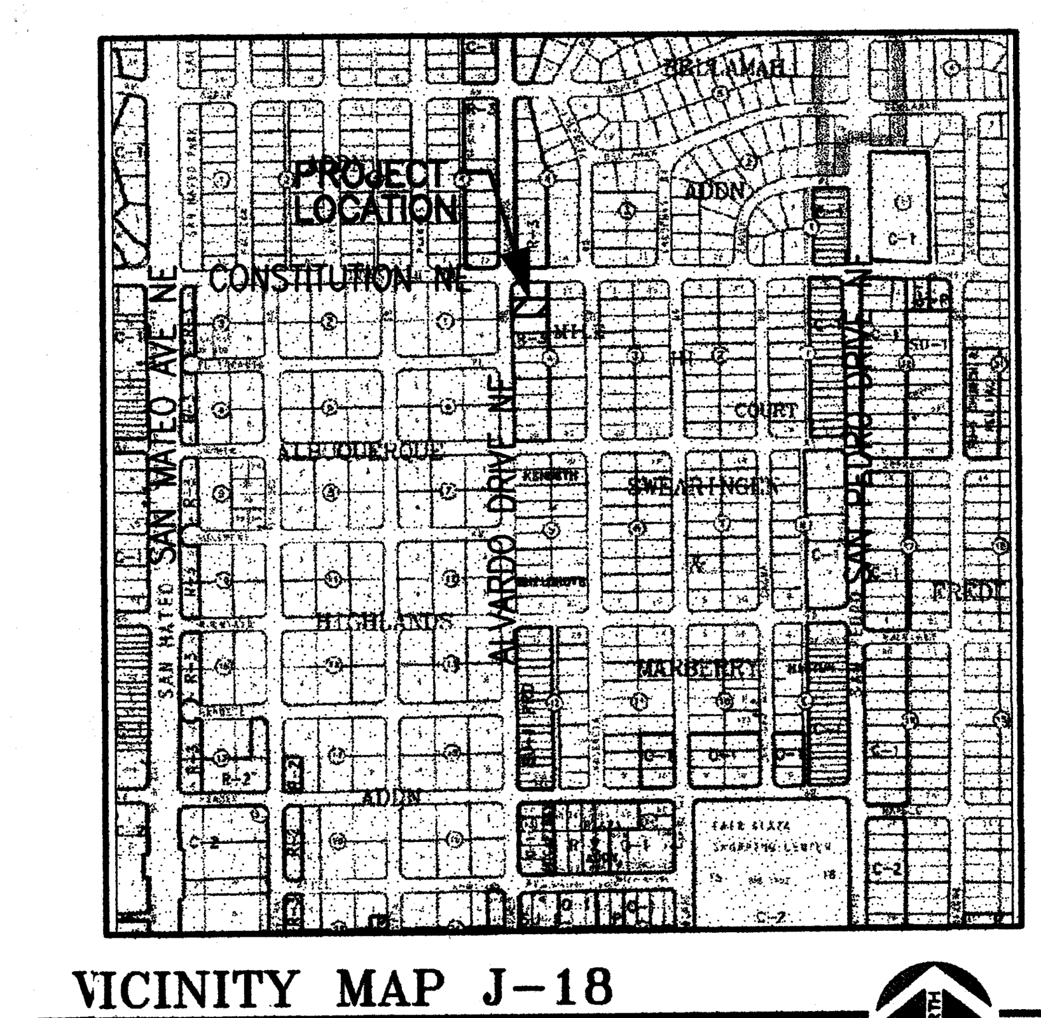


FIRM
LEGAL DESCRIP
Benchmark Designation
BM to prop. line



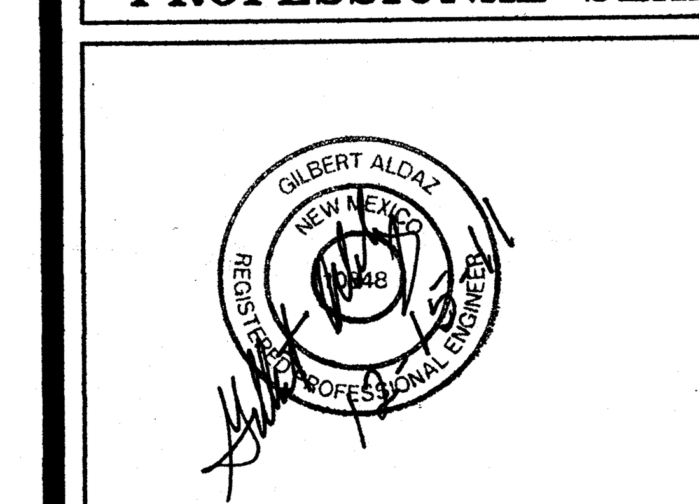
VICINITY MAP J-18
SCALE: N.T.S.

APPLIED ENGINEERING AND SURVEYING, INC.
CIVIL ENGINEERING, LAND PLANNING AND SURVEYING

1605 Blair Drive NE Albuquerque, New Mexico 87112
Office: (505) 480-8125 Facsimile: (505) 237-8164
email: galdaz47@yahoo.com

CONSULTANTS

PROFESSIONAL SEAL



DRAINAGE PLAN
THE FOLLOWING ITEMS CONCERNING AN ADDITION TO AN EXISTING RESIDENCE LOCATED AT 1714 ALVARADO DRIVE NE, LOT 2, BLOCK 4, MILE HI COURT, SWEARINGEN AND MARBERRY, ALBUQUERQUE, NEW MEXICO, GRADING AND DRAINAGE PLAN ARE CONTAINED HEREON:

1. DRAINAGE CALCULATIONS
2. VICINITY MAP (H-17)
3. GRADING PLAN

EXISTING CONDITIONS
AS SHOWN BY THE VICINITY MAP, THE SITE CONTAINS APPROXIMATELY 0.18 ACRES AND IS LOCATED ON ONE EXISTING LOT NEAR THE SOUTHEAST CORNER OF CONSTITUTION STREET NE AND ALVARADO DRIVE NE (SEE ATTACHED VICINITY MAP H-17). THIS DEVELOPMENT IS CLASSIFIED AS AN INFILL SITE, PER CITY CRITERIA, SINCE THE SURROUNDING AREA IS COMPLETELY DEVELOPED.

THE SITE'S EXISTING TOPOGRAPHY SLOPES FROM AN EAST TO WEST DIRECTION AT A SLOPE OF APPROXIMATELY 2.2% TOWARDS ALVARADO DRIVE NE. THE SITE CURRENTLY HAS AN EXISTING RESIDENCE AND EXISTING CARPORT WITH THE REMAINDER OF THE SITE CONSISTING OF COMPACTED EARTH AND BASECOURSE.

THE SITE IS LOCATED ON FIRM MAP 35001C0352G DATED SEPTEMBER 26, 2008 AND IS NOT LOCATED WITHIN A 100-YEAR FLOODPLAIN.

PROPOSED CONDITIONS
AS SHOWN BY THE GRADING PLAN PREPARED FOR THIS SITE, THE INTENT IS TO INCORPORATE AN ADDITION TO THE RESIDENCE.

THE PROPOSED DRAINAGE MANAGEMENT PLAN FOR THIS SITE IS TO TAKE THE NEW ADDITION ROOF FLOWS TO THE SOUTH SIDE OF THE SITE SO THEY CAN DRAIN OUT TO THE WEST ALONG THE EXISTING DRIVEWAY AND ONTO ALVARADO DRIVE NE WITH FREE DISCHARGE.

THE CALCULATIONS WHICH APPEAR HEREON, ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6 HOUR RAINFALL RUNOFF FOR PEAK FLOWS AND STORM DURATION FOR VOLUME REQUIREMENTS. THE PROCEDURE FOR 40 ACRE AND SMALLER BASINS AS SET FORTH IN THE REVISION OF SECTION 22.7 HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY 1993. THIS D.P.M. PROCEDURE IS USED FOR ANALYZING ONSITE FLOWS.

DOWNSTREAM CAPACITY
THERE ARE NO DOWNSTREAM CAPACITY ISSUES SINCE THIS SITE IS AN INFILL SITE WHERE ALL THE SURROUNDING AREA DRAINS ONTO THE EXISTING STREETS AND THERE IS NO ADJACENT FLOODPLAIN SO THERE SHOULD BE MINIMAL IMPACT WITH THIS ADDITION.

OFFSITE FLOWS
BASED ON A FIELD VISIT AND TOPOGRAPHIC CONTOUR INFORMATION THERE ARE NO OFFSITE FLOWS FROM THE EAST AND NORTH SIDE OF THE PROPERTY SINCE THERE IS A CMU BLOCK WALL THAT BLOCKS ANY OF THESE FLOWS FROM ENTERING OR LEAVING THIS SITE. ON THE SOUTH SIDE WE HAVE AN EXISTING ROOF FROM THE RESIDENCE TO THE SOUTH SIDE THAT DOES DRAIN SOME MINOR FLOWS ONTO THE EXISTING DRIVEWAY.

DRAINAGE CALCULATIONS
1. PRECIPITATION ZONE = 3

2. DESIGN STORM = DEPTH (INCHES) AT 100-YEAR STORM
6-HOUR = 2.60 INCHES
24-HOUR = 3.10 INCHES
10 DAY = 4.90 INCHES

3. PEAK DISCHARGE (CFS/ACRE) FOR 100-YEAR, ZONE 2, TABLE A-9:
Q = 1.87 CFS/ACRE SOIL UNCOMPACTED "A"
Q = 2.60 CFS/ACRE LANDSCAPED "B"
Q = 3.45 CFS/AC COMPACTED SOIL "C"
Q = 5.02 CFS/ACRE IMPERVIOUS AREA "D"
FOR WATERSHEDS LESS THAN OR EQUAL TO 40 ACRES

4. EXCESS PRECIPITATION, E (INCHES), FOR 100-YEAR, 6 HOUR STORM, ZONE 2, TABLE A-8:
E = 0.66 INCHES SOIL UNCOMPACTED "A"
E = 0.92 INCHES LANDSCAPED "B"
E = 1.29 INCHES COMPACTED SOIL "C"
E = 2.36 INCHES IMPERVIOUS AREA 'D"

5. EXISTING CONDITIONS ONSITE FLOWS TO ALVARADO DRIVE NE
TOTAL AREA OF SITE = 8,022SF = 0.18ACRES
TYPE "D" TREATMENT = EXISTING ROOF AREAS (2,037SF) + EXISTING CARPORT (666SF) + EXISTING SIDEWALK (336SF) = 3,039SF = 0.07AC
TYPE "B" TREATMENT = LANDSCAPED AREAS (1,184SF) = 0.03AC
TYPE "C" TREATMENT = REMAINING AREA GRAVEL AND DISTURBED AREAS COMPACTED BY HUMAN ACTIVITY = (8,022SF - 3,039SF - 1,184SF) = 3,799SF = 0.08AC

TREATMENT	AREA(ACRES)
A	0
B	0.03
C	0.08
D	0.07

Q(EXISTING-6HR) = (2.60 X 0.03) + (3.45 X 0.08) + (5.02 X 0.07)
= 0.71CFS (6HR) EXISTING ONSITE FLOW INTO ALVARADO DRIVE NE
V(EXISTING-6HR) = ((0.92 X 0.03) + (1.29 X 0.08) + (2.36 X 0.07))/ 12)
= 0.02AC-FT = 1,074CF EXISTING VOLUME INTO ALVARADO DRIVE NE

6. PROPOSED CONDITIONS ONSITE FLOWS ONTO ALVARADO DRIVE NE
TOTAL AREA OF SITE = 8,022SF = 0.18ACRES
TYPE "D" TREATMENT = EXISTING ROOF AREA (2,037SF) + PROPOSED ROOF AREA (1,168SF) + EXISTING CARPORT (666SF) + EXISTING SIDEWALK (336SF) = 4,207SF = 0.09AC
TYPE "B" TREATMENT = LANDSCAPED AREAS (1,184SF) = 0.03AC
TYPE "C" TREATMENT = REMAINING AREA GRAVEL AND DISTURBED AREAS COMPACTED BY HUMAN ACTIVITY = (8,022SF - 4,207SF - 1,184SF) = 2,631SF = 0.06AC

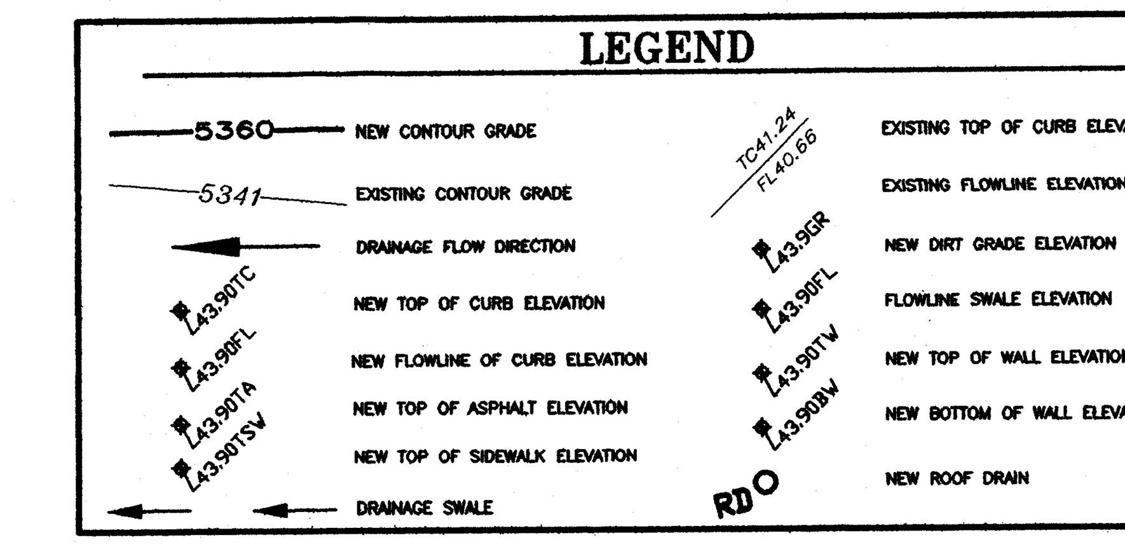
TREATMENT	AREA(ACRES)
A	0
B	0.03
C	0.06
D	0.09

Q(PROPOSED-6HR) = (2.60 X 0.03) + (3.45 X 0.06) + (5.02 X 0.09)
= 0.74CFS (6HR) EXISTING ONSITE FLOW INTO ALVARADO DRIVE NE
V(PROPOSED-6HR) = ((0.92 X 0.03) + (1.29 X 0.06) + (2.36 X 0.09))/ 12)
= 0.03AC-FT = 1,152CF EXISTING VOLUME INTO ALVARADO DRIVE NE

7. IMPACT OF THIS DEVELOPMENT ON DOWNSTREAM CAPACITY (100-YEAR, 6 HOUR STORM)
Q (EXISTING-6HR) RELEASE RATE FOR SITE = 0.71CFS
Q (PROPOSED-6HR) RELEASE RATE FOR SITE = 0.74CFS
Q(DIFFERENCE-6HR) = 0.74CFS - 0.71CFS = **0.03CFS MINIMAL IMPACT TO DOWNSTREAM CAPACITY**

V (EXISTING-6HR) RUNOFF VOLUME FOR SITE = 1,074CF
V (PROPOSED-6HR) RUNOFF VOLUME FOR SITE = 1,152CF
V(DIFFERENCE-6HR) = 1,152CF - 1,074CF = **78CF MINIMAL IMPACT TO DOWNSTREAM CAPACITY**

LEGEND

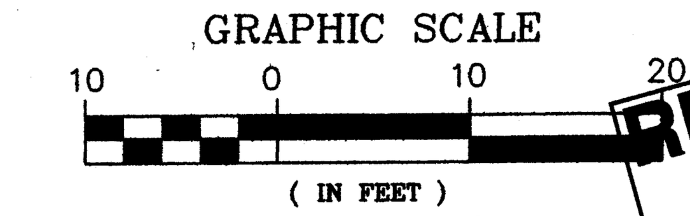


UTILITY NOTE

IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THE DRAWING, THEY ARE SHOWN IN APPROXIMATE MANNER ONLY. UTILITY LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE UTILITY OR PIPELINE COMPANY, THE OWNER, OR BY OTHERS. THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES.

THE ENGINEER HAS UNDERTAKEN NO FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE OR TYPE OF EXISTING ABOVE AN UNDERGROUND UTILITIES, OR EXISTING PIPELINES. THE ENGINEER MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM HIMSELF OF THE LOCATION OF ANY EXISTING ABOVE AND UNDERGROUND UTILITIES, AND EXISTING PIPELINES, IN AND 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 HIS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING ABOVE AND UNDERGROUND UTILITIES, AND EXISTING PIPELINES. THE CONTRACT SHALL COMPLY WITH STATE STATUES PERTAINING TO THE LOCATION OF THESE LINES IN PLANNING AND CONDUCTING EXCAVATION WORK.

GRAPHIC SCALE



(IN FEET)
1 inch = 10ft.

ADDITION TO EXISTING RESIDENCE 1714 ALVARADO DRIVE NE
ALBUQUERQUE, NEW MEXICO

MARK	DATE	DESCRIPTION
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

PROJECT NUMBER:	090800
DRAWING FILE:	
DRAWN BY:	
CHECK BY:	
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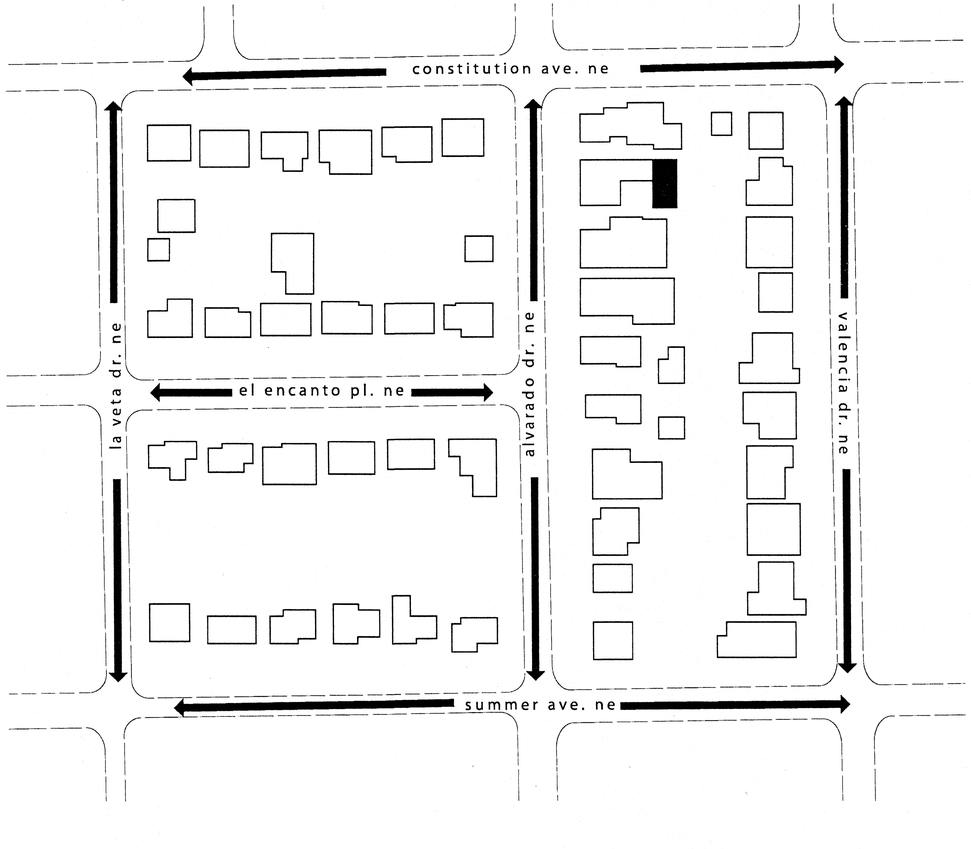
DATE:	JULY 24, 2009

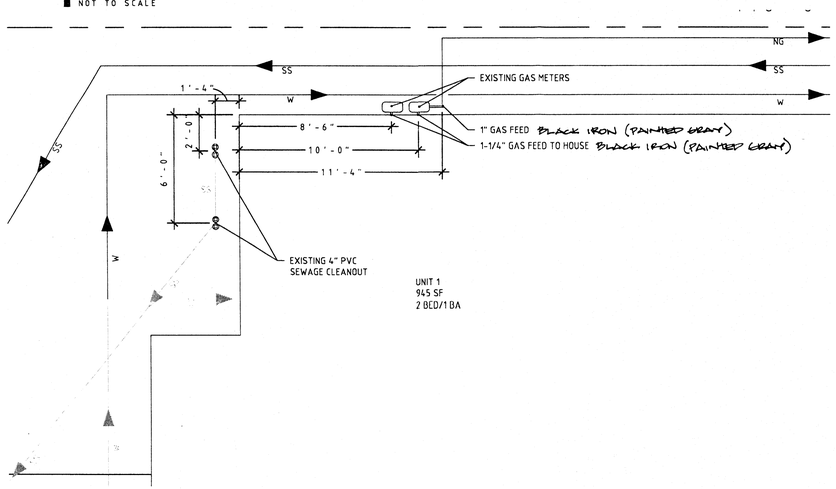
SHEET TITLE
GRADING AND DRAINAGE PLAN

SHEET NUMBER
C101



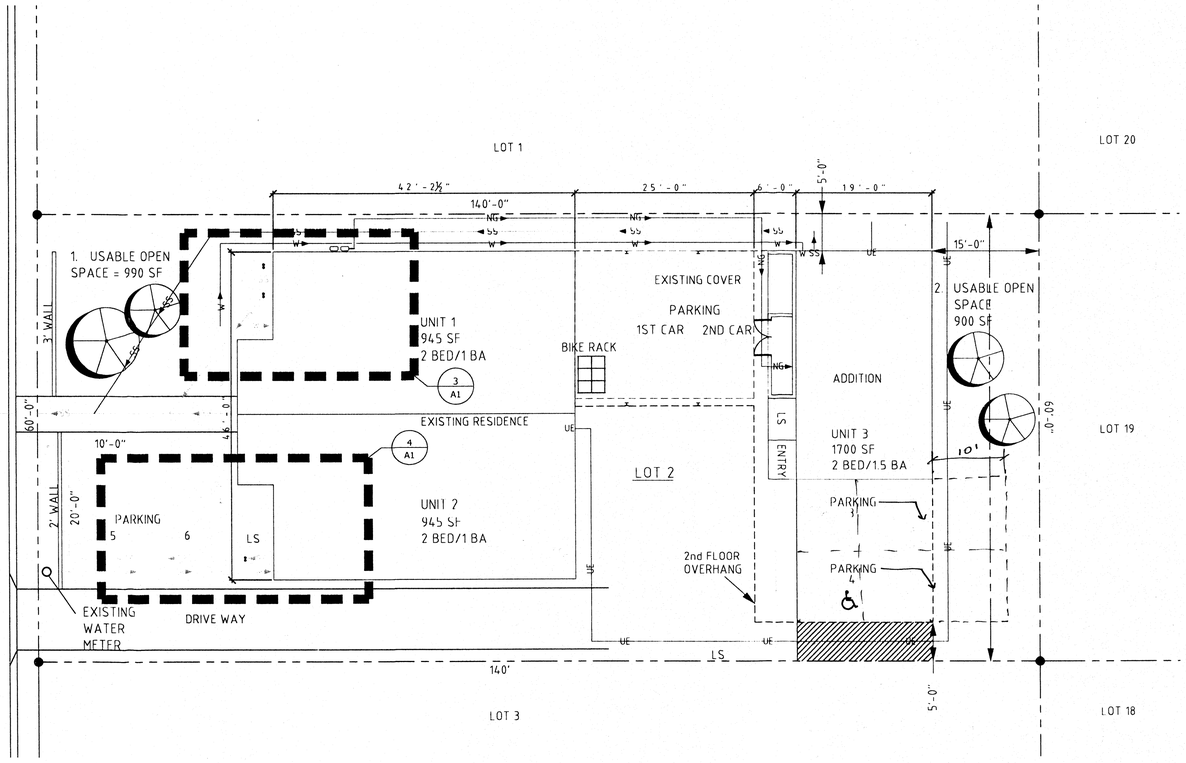
NORTH

1 SITE MAP
NOT TO SCALE



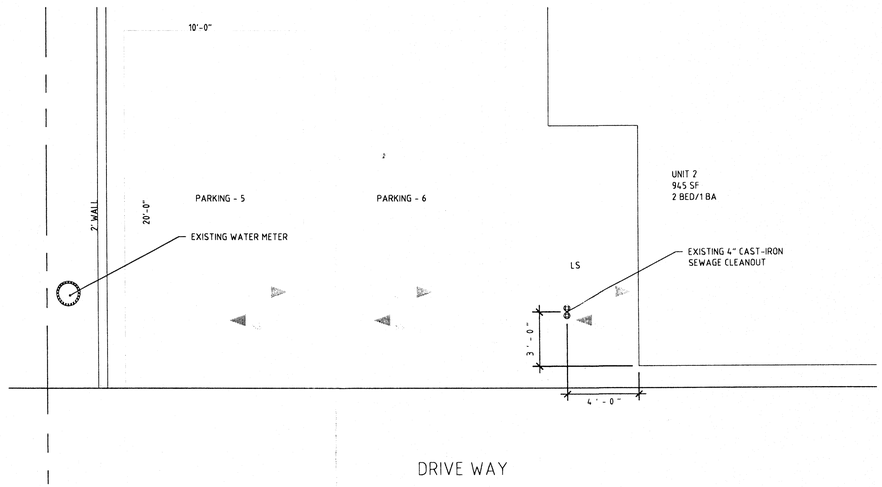
3 SITE PLAN DETAIL
SCALE 1/4"=1'-0"

1714 ALVARADO DRIVE, N.E.



NORTH

2 SITE PLAN
SCALE 1\10
01 5 10



4 SITE PLAN DETAIL
SCALE 1/4"=1'-0"

NOTE: USABLE OPEN SPACE
1. 990 SF
2. 900 SF
TOTAL 1890 SF
TREES: ENGLISH PLANE
SHRUBS: RUSSIAN SAGE + OCOTILLO + CHOLLO

LEGEND:

NG	NEW NATURAL GAS
SS	NEW SANITARY SEWER
W	NEW WATER
UE	NEW UNDERGROUND ELECTRIC
	EXISTING NATURAL GAS
	EXISTING SANITARY SEWER
	EXISTING WATER
	EXISTING UNDERGROUND ELECTRIC

City of Albuquerque
Building & Safety
JUN 29 2012
I.B.C.
Plan Check Section

TRAFFIC CIRCULATION LAYOUT
APPROVED
7-6-12
Signed

STATE OF NEW MEXICO
CONSUELA OSBORNE
No. 002790
REGISTERED ARCHITECT

RECEIVED
JUL 06 2012
HYDROLOGY SECTION

MOD+HAB
architecture\design\build\fabrication

TORRES ADDITION
1714 ALVARADO DRIVE, N.E.
BERNALILLO COUNTY
ALBUQUERQUE NEW MEXICO

MASTER PLAN

DATE	05/11/11
DRAWN BY	LA
CHECKED	AG
TORRES-01.DWG	
INITIAL	
APPROVED	

A1