

PRECIPITATION ZONES

Bernalillo County's four precipitation zones are indicated in TABLE A-1 and on FIGURE A-1.

ZONE	LOCATION
1	West of the Rio Grande
2	Between the Rio Grande and San Mateo
3	Between San Mateo and Interstate 40, and between San Mateo and the East boundary of Range 4 East, South of Interstate 40
4	East of Interstate 40, North of Interstate 40, and East of the East boundary of Range 4 East, South of Interstate 40

Zone	Intensity (in/hr)
1	4.70 (1.84, 2.14)
2	5.00 (2.04, 2.41)
3	5.88 (2.31, 2.85)
4	5.81 (2.34, 2.83)

DRAINAGE CERTIFICATION

I, LEVI J. VALDEZ, NMPE #5693 of the firm NEW MEXICO ENGINEERS & ARCHITECTS, P.C., hereby certify that this project has been graded and will drain in substantial compliance with and in accordance with the design intent of the approved plan dated 11-21-13.

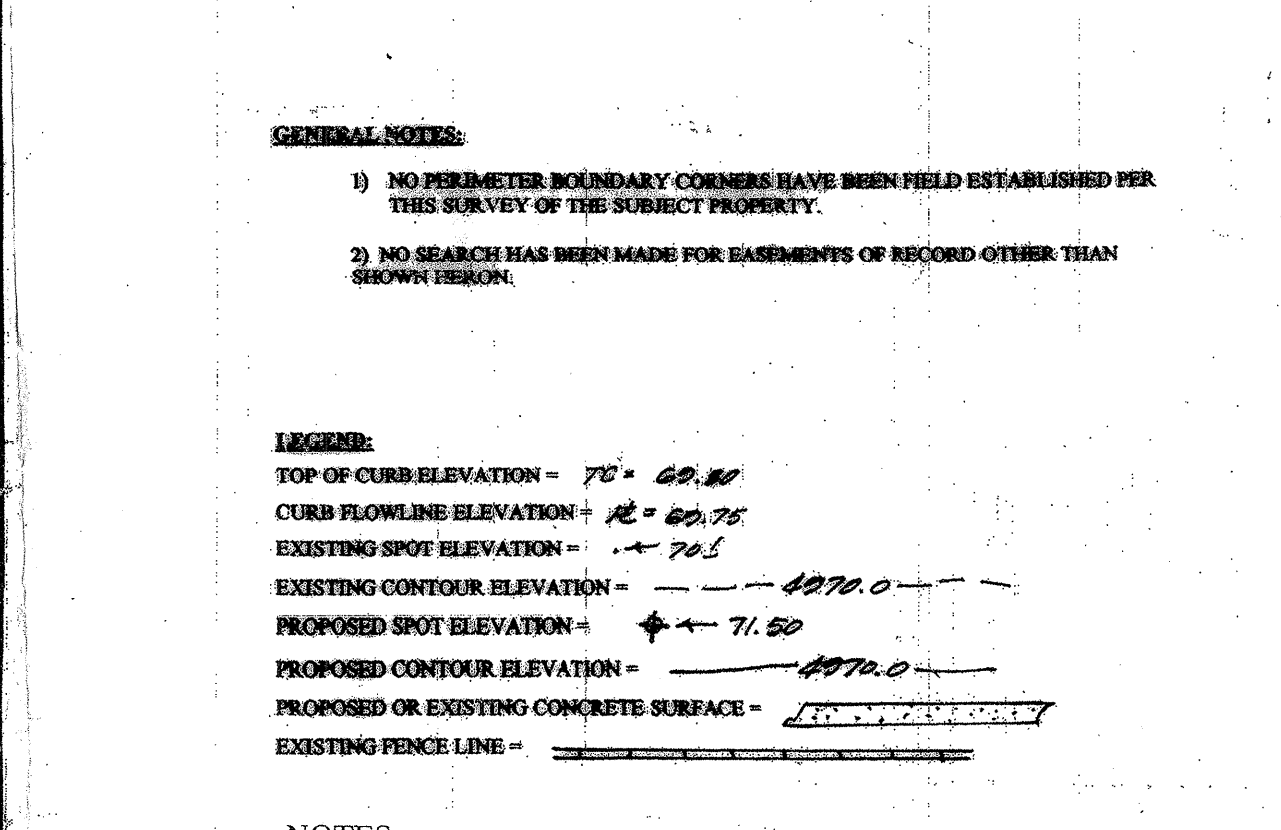
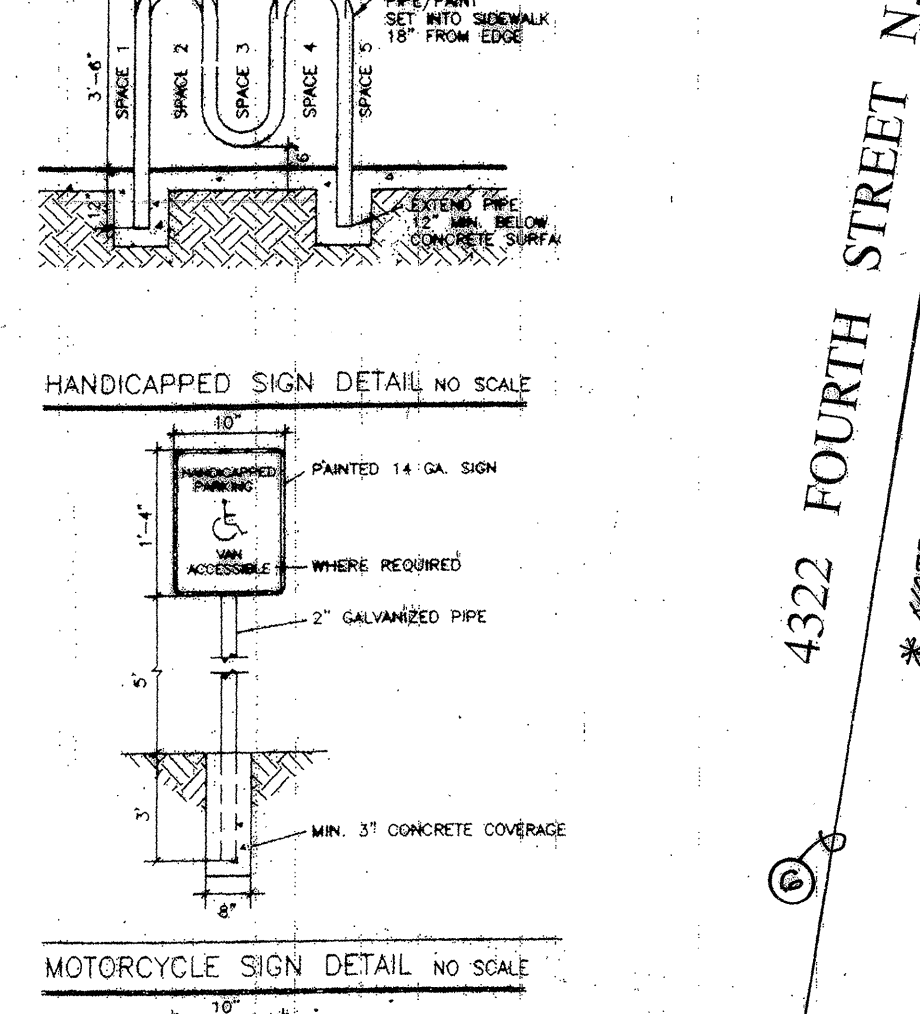
The record information edited onto the original design document has been obtained by LEVI J. VALDEZ, NMPE #5693, of the firm NEW MEXICO ENGINEERS & ARCHITECTS, P.C., and I have personally visited the project site on 11-21-13 and have determined by visual inspection that the survey data provided is representative of actual site conditions and is true and correct to the best of my knowledge and belief. This certification is submitted in support of a request for Certification of Occupancy.

The record information presented hereon is not necessarily complete and intended only to verify substantial compliance of the grading and drainage aspects of this project. Those relying on this record document are advised to obtain independent verification of its accuracy before using it for any other purpose.

Levi J. Valdez
#5693 NMPE

Date 11-21-13

- EROSION CONTROL MEASURES:**
- THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR MANAGEMENT OF STORM RUNOFF DURING CONSTRUCTION. HE SHALL ENSURE THAT THE FOLLOWING MEASURES ARE TAKEN:
- ADJACENT PROPERTY SHALL BE PROTECTED AT ALL TIMES BY CONSTRUCTION OF BERMS, DITCHES, SWALES, FENCES, AND OTHER TEMPORARY GRADING AS REQUIRED TO PREVENT STORM RUNOFF FROM LEAVING THE SUBJECT SITE AND ENTERING ADJACENT PROPERTIES.
 - ADJACENT PUBLIC RIGHT-OF-WAYS SHALL BE PROTECTED AT ALL TIMES FROM STORM WATER RUNOFF FROM THE SUBJECT SITE. NO SEDIMENT BEARING WATER SHALL BE PERMITTED TO ENTER PUBLIC STREET RIGHT-OF-WAYS.
 - THE CONTRACTOR SHALL IMMEDIATELY AND THOROUGHLY REMOVE ANY AND ALL SEDIMENT FROM PUBLIC STREETS THAT HAS BEEN BROOD FROM THE SUBJECT SITE AND DEPOSITED THEREON.
- CONSTRUCTION NOTES:**
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE AT 260-1990 FOR THE ACTUAL FIELD LOCATION OF THE EXISTING SURFACE OF SUB-SURFACE UTILITIES.
 - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION(S) 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.
 - ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE P.E.D., STATE, AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
 - ALL CONSTRUCTION WITHIN PUBLIC STREET RIGHT-OF-WAY(S) SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE GENERAL ORDINANCES AND PROCEDURES.
- GENERAL NOTES:**
- NO PERIMETER BOUNDARY CORNERS HAVE BEEN FIELD ESTABLISHED PER THIS SURVEY OF THE SUBJECT PROPERTY.
 - NO SEARCH HAS BEEN MADE FOR EASEMENTS OF RECORD OTHER THAN SHOWN HEREON.



ALLOWED: 2.75 CFS/ACRE

SITE: 0.41 ACRE (NET) = 1.13 CFS ALLOWED

'D' TREATMENT = 1.93 CFS - 1.13 CFS = 0.80 CFS OVER

0.41 X 2.75(D) = 1.93 CFS GENERATED

ORIFICE EQUATION:

$$Q = CA\sqrt{2gh}$$

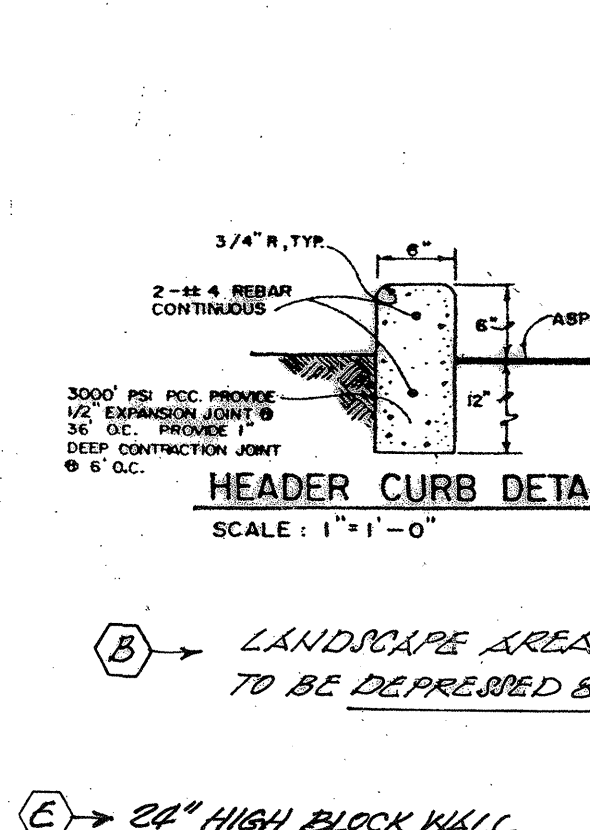
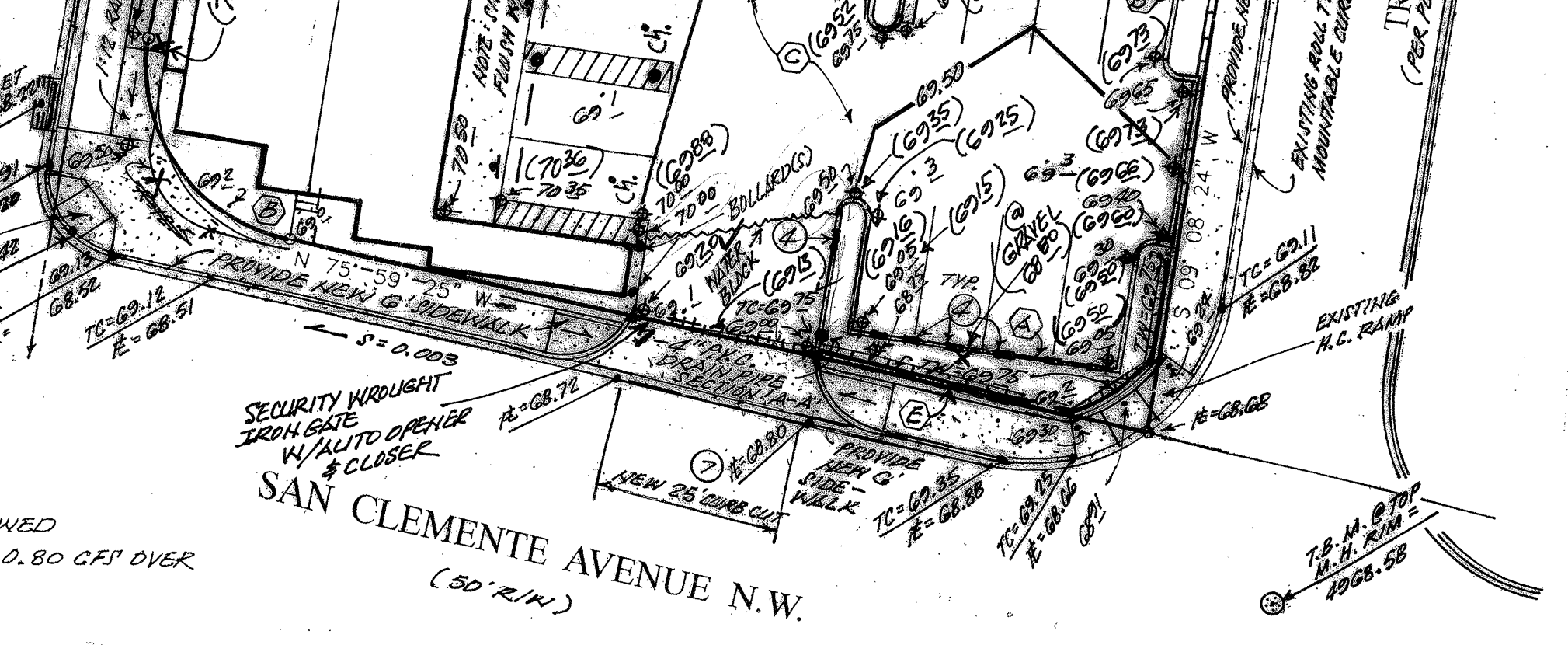
C = ORIFICE COEFFICIENT
A = AREA g = GRAVITY h = HEIGHT

$Q = 1.13 \text{ CFS}$
C = 0.70 (MESH)
g = 32.2 FT/SEC²
h = 0.50 FT

$1.13 \text{ CFS} = 0.70A\sqrt{2(32.2)(0.50)}$
 $1.13 \text{ CFS} = 3.97A$
 $0.28 \text{ FT}^2 = A$

CIRCULAR AREA = πr^2
 $0.28 \text{ FT}^2 = \pi r^2$
 $0.09 \text{ FT}^2 = r^2$
 $0.30 \text{ FT} = r$ 4" PIPE = 1

$A(4" \text{ PIPE}) = 0.0873 \text{ FT}^2$
 $Q = CA\sqrt{2gh}$
 $Q = 0.60(0.0873)\sqrt{2(32.2)(0.50)}$
 $Q = 0.30 \text{ CFS (EACH)} \times 3 = 0.90 \text{ CFS}$
 $Q = 0.90 \text{ CFS} < 0.96 \text{ CFS ALLOWED}$



DRAINAGE COMMENTS:

AS SHOWN ON THE VICINITY MAP HEREON, THE SUBJECT SITE IS LOCATED ON THE NORTHEAST CORNER OF THE INTERSECTION OF FOURTH STREET N.W. AND SAN CLEMENTE AVENUE N.W., IN THE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, (ZONE ATLAS MAP "G-14-Z").

THE SUBJECT SITE, 1.) IS AN VACANT PROPERTY WITH TWO OLD BUILDINGS THAT ARE TO BE DEMOLISHED AND REPLACED WITH A NEW MIXED-USE DEVELOPMENT AND ASSOCIATED IMPROVEMENTS, 2.) DOES NOT ACCEPT OFF-SITE FLOWS FROM ADJACENT PROPERTIES, 3.) DOES NOT AND WILL NOT CONTRIBUTE FLOWS TO ADJACENT PROPERTIES, 4.) DOES LIE ADJACENT TO A MAN MADE DRAINAGE CHANNEL, 5.) WILL FREE-DISCHARGE DEVELOPED FLOWS INTO THE ADJACENT STREET RIGHT-OF-WAY, SAID FLOWS WILL NOT HAVE AN ADVERSE IMPACT TO DOWNSTREAM PROPERTIES.

SITE AREA = 0.58 ACRE ZONE: TWO (2)

PRECIPITATION: 360 = 2.35 in.
1440 = 2.75 in.
10day = 3.95 in.

TREATMENT	AREA	PEAK DISCHARGE
TREATMENT A	0.53 in.	1.56 cfs/ac.
TREATMENT B	0.78 in.	2.28 cfs/ac.
TREATMENT C	1.13 in.	3.14 cfs/ac.
TREATMENT D	2.12 in.	4.70 cfs/ac.

EXISTING CONDITIONS:

TREATMENT	AREA
TREATMENT A	0.00 ac.
TREATMENT B	0.00 ac.
TREATMENT C	0.47 ac.
TREATMENT D	0.11 ac.

PROPOSED CONDITIONS:

TREATMENT	AREA
TREATMENT A	0.00 ac.
TREATMENT B	0.00 ac.
TREATMENT C	0.08 ac.
TREATMENT D	0.50 ac.

EXISTING EXCESS PRECIPITATION:

Weighted E = $(0.53)(0.00) + (0.78)(0.00) + (1.13)(0.47) + (2.12)(0.11) = 0.58$
= 1.31 in

V100-360 = $(1.31)(0.58) / 12 = 0.063317 \text{ ac-ft} = 2,758.1 \text{ cf}$

EXISTING PEAK DISCHARGE:

Q100 = $(1.56)(0.00) + (2.28)(0.00) + (3.14)(0.47) + (4.70)(0.11) = 2.00 \text{ cfs}$

PROPOSED EXCESS PRECIPITATION:

Weighted E = $(0.53)(0.00) + (0.78)(0.00) + (1.13)(0.08) + (2.12)(0.50) = 1.98$
= 1.98 in

V100-360 = $(1.98)(0.58) / 12.0 = 0.09570 \text{ ac-ft} = 4,168.7 \text{ cf}$

V100-1440 = $(0.28) + (1.91)(2.75 - 2.35) / 12 = 0.343667 \text{ ac-ft} = 14,970.0 \text{ cf}$

V100-10day = $(0.28) + (1.91)(3.95 - 2.35) / 12 = 0.534667 \text{ ac-ft} = 23,290.0 \text{ cf}$

PROPOSED PEAK DISCHARGE:

Q100 = $(1.56)(0.00) + (2.28)(0.00) + (3.14)(0.08) + (4.70)(0.50) = 2.60 \text{ cfs}$

INCREASE: V100-360 = 1,410.6 cf
Q100 = 0.60 cfs

LEGAL DESCRIPTION: TRACT LETTERED 'A' OF THE PLAT OF TRACTS 'A' AND 'B' OF DEL'S HIDE-A-WAY PARK, TO THE CITY OF ALBUQUERQUE, NEW MEXICO, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT THEREOF FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON MAY 11, 2004 IN PLAT BOOK 2004C, PAGE 149.

It is hereby certified that this property is NOT located within a 100 year flood hazard boundary in accordance with current HUD Federal Administration Flood Hazard Boundary Maps dated September 26, 2008. Zone X (500 year flood hazard) Panel 350002 0119 G.

LEGEND:

TOP OF CURB ELEVATION = 70'-00.00'

CURB FLOWLINE ELEVATION = 70'-00.75'

EXISTING SPOT ELEVATION = 70'-00.00'

EXISTING CONTOUR ELEVATION = 70'-00.00'

PROPOSED SPOT ELEVATION = 71'-00.00'

PROPOSED CONTOUR ELEVATION = 71'-00.00'

PROPOSED OR EXISTING CONCRETE SURFACE = 71'-00.00'

EXISTING FENCE LINE = 71'-00.00'

BENCHMARK REFERENCE:

ACS Station 'NM-47-10', Elevation = 4,967.50, (SLD-29); Project T.B.M. as shown on plan hereon.

Private Drainage Facilities within City Right-of-Way
Notice to Contractor
(Special Order 19 "50-19")

- An excavation permit will be required before beginning any work within City Right-Of-Way.
- 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.
- Two working days prior to any excavation, the contractor must contact New Mexico One Call, dial "811" or (505) 260-1990 for the location of existing utilities.
- Prior to construction, the contractor shall excavate and verify the locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.
- Backfill compaction shall be according to traffic/street use.
- Maintenance of the facility shall be the responsibility of the owner of the property being served.
- Work on arterial streets shall be performed on a 24-hour basis.

ENGINEER SEAL

LEVI J. VALDEZ
NEW MEXICO
5693
Professional Engineer
11-21-13
11-21-13

A PROPOSED PLAN FOR A MIXED-USE DEVELOPMENT (4322 FOURTH STREET N.W.) ALBUQUERQUE, NEW MEXICO JULY, 2013

"ENGINEER'S CERTIFICATION"

City of Albuquerque Building & Safety NOV 9 2013 I.B.C. Check Section

CITY OF ALBUQUERQUE



November 17, 2014

Levi J. Valdez, PE
George T Rodriguez-Development Consultant
12800 San Juan Rd. SE
Albuquerque, NM 87123

Re: 4322 4th St NW
Request Permanent C.O. - Accepted
Engineer's Stamp dated: 11-21-13 (G14D071)
Certification dated: 11-12-14

Dear Mr. Valdez,

Based on the Certification received 11/14/2014, the site is acceptable for release of Certificate of Occupancy by Hydrology.

If you have any questions, you can contact me at 924-3695 or Rudy Rael at 924-3977.

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Sincerely,

Curtis Cherne, P.E.
Principal Engineer, Planning Dept.
Development and Review Services

C: RR/CC
email