PARTIAL POND RECOVERY
RMCI CONSTRUCTION YARD

LOT 11, BLOCK 29

UNIT B, NAA

GRADING AND DRAINAGE

DRAINAGE INFORMATION

LOCATION & DESCRIPTION

THE PROPOSED SITE IS 0.89 ACRE PARCEL LOCATED ON THE SOUTH SIDE OF ALAMEDA BOULEVARD NE AND WEST OF LOUISIANA BOULEVARD NE AS SEEN ON THE ATTACHED VICINITY MAP. THE SITE IS CURRENTLY A STORMWATER RETENTION POND SERVING THE DEVELOPED KINGDOM HALL CHURCH ON LOTS 12 AND 21, PORTIONS OF THE UNDEVELOPED LOTS 13 THROUGH 20, PORTIONS OF LOUISIANA BLVD. AND ALAMEDA BLVD. AS SHOWN ON THE DRAINAGE BASIN MAP SHEET 2 OF 3.

FLOODPLAIN STATUS

THIS PROJECT, AS SHOWN ON FEMA'S FLOOD INSURANCE RATE MAP 35001C0137 H, DATED AUGUST 16, 2012 IS NOT WITHIN A DESIGNATED 100-YEAR FLOODPLAIN. AN EXHIBIT WITH THE SITE SHOWN ON THE FIRM PANEL IS INCLUDED ON THIS SHEET.

METHODOLOGY

THE HYDROLOGY FOR THIS PROJECT WAS ANALYZED USING THE QUICK CALCULATIONS OF THE JUNE 1997 RELEASE OF THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, SECTION 22.2.

PRECIPITATION

THE 100-YR 10-DAY DURATION STORM WAS USED AS THE DESIGN STORM FOR THIS ANALYSIS. THIS SITE IS WITHIN ZONE 3 AS IDENTIFIED IN THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, SECTION 22.2. TABLES WITHIN THIS SECTION WERE USED TO ESTABLISH THE 6-HOUR AND 10-DAY PRECIPITATION, EXCESS PRECIPITATION, AND PEAK DISCHARGE.

EXISTING DRAINAGE

AS DESCRIBED ABOVE, THIS PARCEL IS CURRENTLY USED AS A 103,000 CUBIC FOOT STORMWATER RETENTION POND. AS SHOWN ON THE DRAINAGE BASIN MAP, SHEET 2 OF 3, IT COLLECTS DEVELOPED STORMWATER FROM THE CHURCH TO THE EAST AND SEVERAL UNDEVELOPED LOTS TO THE EAST. THE POND WAS ORIGINALLY SIZED TO CONTAIN THE RUNOFF FROM THE CHURCH AS WELL AS ABOUT 8 ACRES ON LOTS 12 AND 21 THAT ARE THE SITE OF A PROPOSED RESIDENTIAL SUBDIVISION.

DEVELOPED CONDITION

THE OWNER OF THIS PARCEL IS PROPOSING TO REDUCE THE SIZE OF THE POND AND ALLOW THE BALANCE OF THE PARCEL TO BE USED AS A CONSTRUCTION YARD FOR THE ALAMEDA BLVD. CONSTRUCTION.

SINCE THE MAJORITY OF THE STORMWATER RUNOFF THAT WAS PLANNED TO BE CONTAINED IN THIS POND WAS FROM A RESIDENTIAL DEVELOPMENT ON LOTS 13 THROUGH 20 THAT HAS NOT DEVELOPED AT THIS TIME, THE POND IS OVERSIZED FOR THE CURRENT CONTRIBUTION. WE ARE PROPOSING TO REDUCE THE POND TO CONTAIN RUNOFF FROM THE DEVELOPED CHURCH SITE TO THE EAST OF THIS LOT, THE EXISTING PORTIONS OF LOTS 13 THROUGH 20 IN THEIR EXISTING CONDITION AS WELL AS PORTIONS OF LOUISIANA BLVD. AND ALAMEDA BLVD. THAT CURRENTLY CONTRIBUTE TO THE POND. ONCE THE STORM DRAIN IN ALAMEDA IS COMPLETED (CURRENTLY PLANNED FOR 4 TO 7-MONTH FROM NOW) THE CONTRIBUTION TO THE POND WILL BE INTERCEPTED BY THE STORM DRAIN.

TABLE 1

100-YEAR HYDROLOGIC CALCULATIONS

BASIN #	AREA (acre)	LAND TREATMENT A (%)	B (%)	C (%)	D (%)	WEIGHTED E (in)	V (6-hr) (acre-ft)	V (6-hr) (cu-ft)	V(10 day) (acre-ft)	V(10 day) (cu-ft)	Q (cfs)
EXISTING CONDITIONS											
BASIN A	6.0400	0.00	89.00	0.00	11.00	1.08	0.54	23,644	0.67	29,191	17.31
BASIN B	1.5900	0.00	13.00	13.00	74.00	2.03	0.27	11,738	0.49	21,561	7.16
BASIN C	0.1100	0.00	0.00	100.00	0.00	1.29	0.01	515	0.01	515	0.38
BASIN D	0.8300	0.00	0.00	100.00	0.00	1.29	0.09	3,887	0.09	3,887	2.86
BASIN E	0.1100	0.00	22.00	78.00	0.00	1.21	0.01	483	0.01	483	0.36
TOTAL RUNOFF TO POND BASINS A, B, C, and D							0.91	39,784	1.27	55,154	27.71
RUNOFF TO ALAMEDA BASIN E							0.01	483	0.01	483	0.36

EXCESS PRECIP.	0.66	0.92	1.29	2.36	E_i (in)
PEAK DISCHARGE	1.87	2.6	3.45	5.02	Q_{Pi} (cfs)

WEIGHTED E (in) = $(E_A)(\%A) + (E_B)(\%B) + (E_C)(\%C) + (E_D)(\%D)$

$V_{6\text{-HR}}$ (acre-ft) = (WEIGHTED E)(AREA)/12

V_{10DAY} (acre-ft) = $V_{6\text{-HR}} + (A_D)(P_{10DAY} - P_{6\text{-HR}})/12$

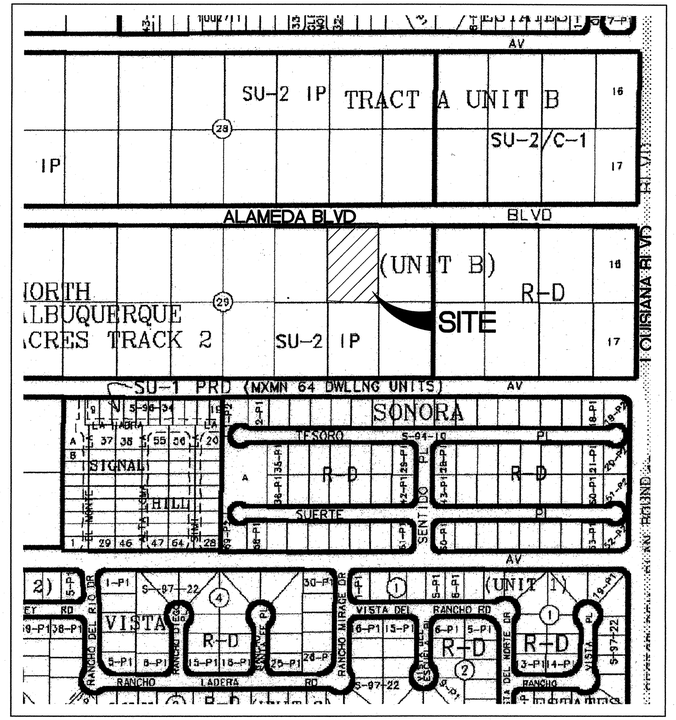
Q (cfs) = $(Q_{PA})(A_A) + (Q_{PB})(A_B) + (Q_{PC})(A_C) + (Q_{PD})(A_D)$

ZONE = 3

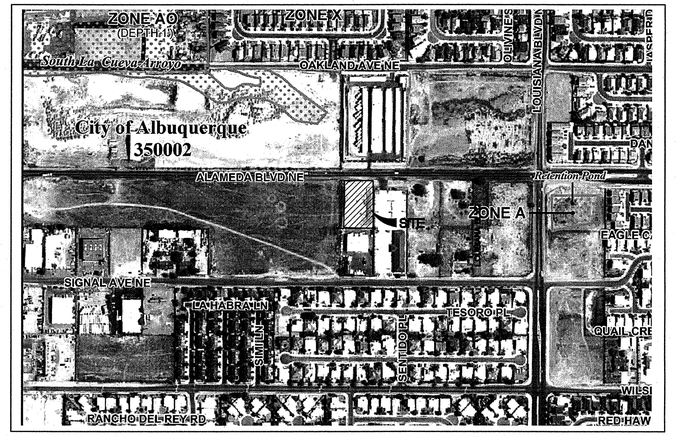
$P_{6\text{-HR}}$ (in.) = 2.60

$P_{24\text{-HR}}$ (in.) = 3.10

P_{10DAY} (in.) = 4.90



VICINITY MAP C-18-Z



FLOODPLAIN PANEL 137-H

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RMCI CONSTRUCTION YARD and PARTIAL POND RECOVERY

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4/25/2013

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