

DRAINAGE CONCEPT

THE MASTER DRAINAGE REPORT (DMR) BY ISAACSON & ARFMAN, P.A., DATED FEBRUARY 21, 2012, OUTLINED DRAINAGE REQUIREMENTS FOR EACH TRACT WITHIN SANTA MONICA PLACE (TRACTS 1 & 2). THIS PROPERTY IS A PORTION OF TRACT 3 (15.5781 ACRES) WITH LAND TREATMENTS ESTIMATED AT 20%B, 20%C AND 60% D.

PER THE DMR, "TRACT 3 SHALL BE ALLOWED TO SURFACE DISCHARGE MAX. 10 CFS TO DERICKSON AVE. AND THE REMAINDER OF 69.2 CFS INTO THE STORM DRAIN SYSTEM CONNECTION TO THE DERICKSON AVE. STORM DRAIN."

THE PROPOSED CONSTRUCTION SITE CONSISTS OF APPROXIMATELY 30% OF THE OVERALL AREA OF TRACT 3. THUS, THIS PORTION OF TRACT 3 SHOULD RELEASE APPROXIMATELY 30% X (10+69.2) = 23.8 CFS.

THE SITE HAS BEEN DIVIDED INTO TWO BASINS: DISCHARGE TO DERICKSON (SUB-BASIN 1) AND DISCHARGE WEST TO ENTER THE STORM DRAIN STANDPIPE (SUB-BASINS 2 AND 3).

BASIN 1: CONSISTS OF THE NORTHERN 40% OF THE PROPERTY WHICH WILL DISCHARGE APPROXIMATELY 8 CFS TO DERICKSON AVE. VIA SIDEWALK CULVERTS

WITH AN ALLOWABLE OF 10 CFS FROM THE TOTAL TRACT, THIS WILL LEAVE APPROXIMATELY 2 CFS FOR THE REMAINDER OF TRACT 3 WHICH IS PLANNED FOR SINGLE FAMILY RESIDENTIAL AND IS EXPECTED TO DRAIN ALMOST ENTIRELY TO THE INTERNAL FUTURE PUBLIC STORM DRAIN EXTENSION. NOTE THAT PER THE APPROVED DRAINAGE REPORT FOR TRACT 1, ONLY 7.8 OF THE ALLOWABLE 10 CFS FROM THAT TRACT WILL BE DISCHARGED TO DERICKSON AVE. LEAVING AN ADDITIONAL 2.2 CFS AVAILABLE.

BASINS 2 AND 3: CONSISTS OF THE SOUTHERN 60% OF THE PROPERTY WHICH WILL DISCHARGE APPROXIMATELY 10.9 CFS TO THE UNDEVELOPED PORTION OF TRACT 3 EITHER VIA STORM DRAIN (BASIN 2) OR AS SURFACE DISCHARGE TO THE PROPOSED SOUTH PUBLIC STREET (BASIN 3). TEMPORARY PONDS AND EARTH SWALES WITH EROSION PROTECTION AS NEEDED WILL BE CONSTRUCTED TO PASS THE CONCENTRATED FLOW TO THE EXISTING POND TO ENTER THE PUBLIC STORM DRAIN SYSTEM AT THE PROVIDED STANDPIPE (TO BE CONSTRUCTED AS PART OF CPN 689984).

THESE BASIN CALCULATIONS DO NOT ACCOUNT FOR ANY WATER HARVESTING OR DETENTION BASINS WHICH MAY REDUCE THE TOTAL DISCHARGE RATES.

ALL LANDSCAPE AREAS, OTHER THAN ADJACENT TO THE BUILDING, WILL BE DEPRESSED FOR WATER HARVESTING.

18" DEEP DETENTION PONDS WITHIN EACH OF THE BASIN AREAS WILL BE UTILIZED TO DETAIN DISCHARGE, UTILIZE FOR LANDSCAPING / INFILTRATION AND RELEASE EXCESS.

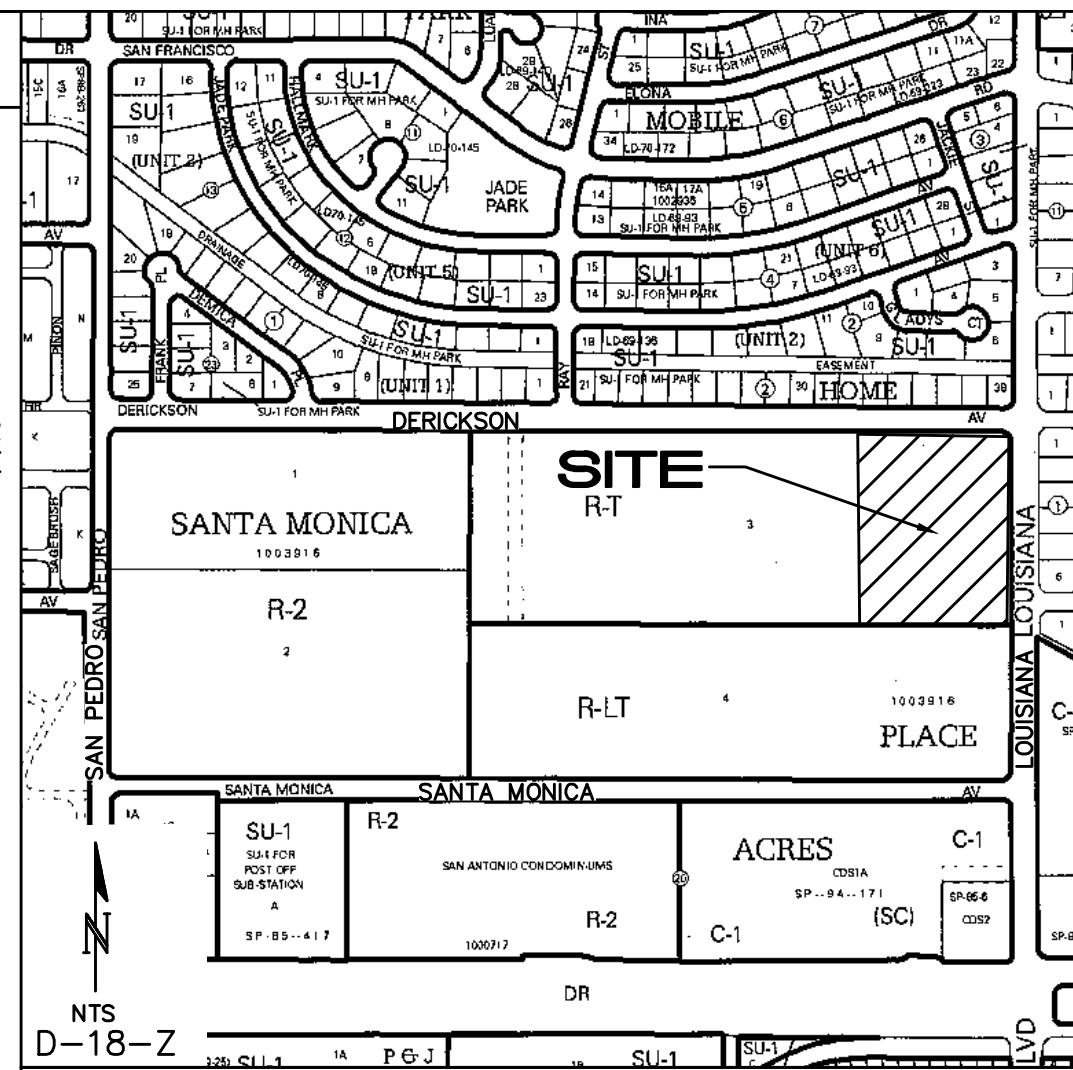
STORMWATER CONTROL MEASURES ARE REQUIRED TO PROVIDE MANAGEMENT OF 'FIRST FLUSH' (DEFINED AS THE 90TH PERCENTILE STORM EVENT OR 0.44" OF STORMWATER WHICH DISCHARGES DIRECTLY TO A PUBLIC STORM DRAINAGE SYSTEM).

CALCULATIONS: Elan Senior Living Facility : May 23, 2014

Based on Drainage Design Criteria for City of Albuquerque Section 22.2, DPM, Vol 2, dated Jan., 1993

ON-SITE				
AREA OF SITE:	198332	SF	=	4.6
100-year, 6-hour				
DEVELOPED FLOWS:			EXCESS PRECIP:	
		Treatment SF	%	Precip. Zone 3
Area A	=	0	0%	E _A = 0.66
Area B	=	35700	18%	E _B = 0.92
Area C	=	59500	30%	E _C = 1.29
Area D	=	103133	52%	E _D = 2.36
Total Area	=	198332	100%	
On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)				
Weighted E =	$\frac{E_A A_A + E_B A_B + E_C A_C + E_D A_D}{A_A + A_B + A_C + A_D}$			
	$\text{Developed E} = 1.78 \text{ in.}$			
On-Site Volume of Runoff: V360 =				
	$\text{Developed V}_{360} = 29416 \text{ CF}$			
On-Site Peak Discharge Rate: Qp = Q _{pA} A + Q _{pB} A _B + Q _{pC} A _C + Q _{pD} A _D / 43,560				
For Precipitation Zone 3				
Q _{pA}	=	1.87	Q _{pC}	= 3.45
Q _{pB}	=	2.60	Q _{pD}	= 5.02
	$\text{Developed Q}_p = 18.7 \text{ CFS}$			

BASIN NO.	1	DESCRIPTION	DRAINING TO DERICKSON AVE
Area of basin flows =	82379	SF	1.9 Ac.
The following calculations are based on Treatment areas as shown in table to the right			
Sub-basin Weighted Excess Precipitation (see formula above)			
Weighted E = 1.78 in.			
Sub-basin Volume of Runoff (see formula above)			
V360 = 12218 CF			
Sub-basin Peak Discharge Rate (see formula above)			
Qp = 7.8 cfs			
BASIN NO.	2	DESCRIPTION	DRAINING WEST TO PUBLIC STORM DRAIN STANDPIPE
Area of basin flows =	98526	SF	2.3 Ac.
The following calculations are based on Treatment areas as shown in table to the right			
Sub-basin Weighted Excess Precipitation (see formula above)			
Weighted E = 1.78 in.			
Sub-basin Volume of Runoff (see formula above)			
V360 = 14613 CF			
Sub-basin Peak Discharge Rate (see formula above)			
Qp = 9.3 cfs			
BASIN NO.	3	DESCRIPTION	DRAINING SOUTH TO PUBLIC STORM DRAIN STANDPIPE
Area of basin flows =	17426	SF	0.4 Ac.
The following calculations are based on Treatment areas as shown in table to the right			
Sub-basin Weighted Excess Precipitation (see formula above)			
Weighted E = 1.78 in.			
Sub-basin Volume of Runoff (see formula above)			
V360 = 2585 CF			
Sub-basin Peak Discharge Rate (see formula above)			
Qp = 1.6 cfs			



PROJECT DATA

PROPERTY: THE SITE IS A PREVIOUSLY DEVELOPED (MOBILE HOME) PROPERTY LOCATED WITHIN C.O.A. VICINITY MAP D-18. THE SITE IS BOUND TO THE SOUTH BY UNDEVELOPED PROPERTY, TO THE WEST BY APARTMENTS, TO THE EAST BY LOUISIANA BLVD. AND TO THE NORTH BY DERICKSON AVE.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE AN APPROXIMATELY 59,500 SF SENIOR LIVING FACILITY WITH ASSOCIATED ASPHALT PAVED DRIVES, PARKING, PEDESTRIAN WALKS AND LANDSCAPING.

LEGAL: THE EASTERN PORTION OF TRACT 3, SANTA MONICA PLACE, ALBUQUERQUE. NM

AREA: 4.6 ACRES

BENCHMARK: VERTICAL DATUM IS BASED UPON THE ALBUQUERQUE CONTROL SURVEY BENCHMARK "18-E18", ELEVATION = 5269.166 (NGVD88)

OFF-SITE: NO OFF-SITE DRAINAGE IMPACTS THIS PROPERTY.

FLOOD HAZARD: THE SUBJECT PROPERTY LIES WITHIN ZONE "X" (AREAS DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE FLOOD PLAIN) IN ACCORDANCE WITH THE NATIONAL FLOOD INSURANCE PROGRAM RATE MAP NO. 35001C0137 F, EFFECTIVE DATE 11-19-03.

SURVEYOR: RUSS P. HUGG, SURV-TEK, INC., (505)897-3366, ALBUQUERQUE, NEW MEXICO.

LEGEND

- DRAINAGE BASIN
- CONCEPTUAL STORM DRAIN
- PROPOSED DETENTION POND / STORM DRAIN INLET LOCATION (18" DEEP)
- PROPOSED FLOW DIRECTION
- PROPOSED FINISH FLOOR ELEVATION
- PROPOSED WATER HARVESTING BASIN (6" DEPRESSED)

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
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Albuquerque, New Mexico 87108
Ph. 505-268-8828 www.iacarl.com

2047 CG-101 - Conceptual.dwg Aug 01, 2014

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ELAN - Santa Monica Place
(Senior Assisted Living/Memory Care)

CONCEPTUAL GRADING & DRAINAGE PLAN

Date:	7/31/14	No.:	Revision:	Date:	Job No.
Drawn By:	BUB				2047
Chk By:	FCA				CG:101
					SH OF

CITY OF ALBUQUERQUE



June 24, 2015

Fred C. Arfman, P.E.
Isaacson & Arfman, P.A.
128 Monroe St NE
Albuquerque, New Mexico 87108

**RE: Elan-Santa Monica Place (Senior Assisted Living/Memory Care)
6901 San Vicente NE
Grading and Drainage Plan
Engineers Stamp Date 6/10/15 (D18D054B)**

Dear Mr. Arfman,

Based upon the information provided in your submittal received 6/10/15 for the above mentioned plan dated 6/10/15 cannot be approved for Grading Permit or building permit until the following comments have been addressed.

- Roof flows must go through a pond before entering the storm sewer system.
- The pond on the west side of the building contains three different points of accepting flows which are not identified. The pad to the west of this pond, is this the emergency overflow? Provide a profile.
- Plan CG-502 shows a percolation pit, is this being used and where is it located?
- Provide a profile for the 24" RCP penetrating the retaining wall/s headed toward the temporary bubble up outlet.
- Provide the work order number and a detail for the three sidewalk culverts in Derickson Ave. Call out COA specification.

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

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

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Hydrology
Planning Department

RR/CC
C: File