CITY OF ALBUQUERQUE

Planning Department Alan Varela, Director



May 18, 2022

Troy Kelts, P.E. Galloway & Company 6162 S Willow Drive, Suite 320 Greenwood Village, CO 80111

RE: 2121 Yale Boulevard SE

Grading and Drainage Plans Engineer's Stamp Date: 05/18/22

Hydrology File: M15D021

Dear Mr. Kelts:

Based upon the information provided in your submittal received 05/10/2022, the Grading & Drainage Plan is approved for Work Order. Please place this stamp approved Grading &

Drainage Plan into the Work Order set of construction drawings.

As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control

(ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the

Stormwater Quality Engineer (Doug Hughes, PE, jhughes@cabq.gov, 924-3420) 14 days prior to

NM 87103 any earth disturbance.

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

www.cabq.gov

PO Box 1293

Sincerely,

Renée C. Brissette, P.E. CFM Senior Engineer, Hydrology

Renée C. Brissette

Planning Department



City of Albuquerque

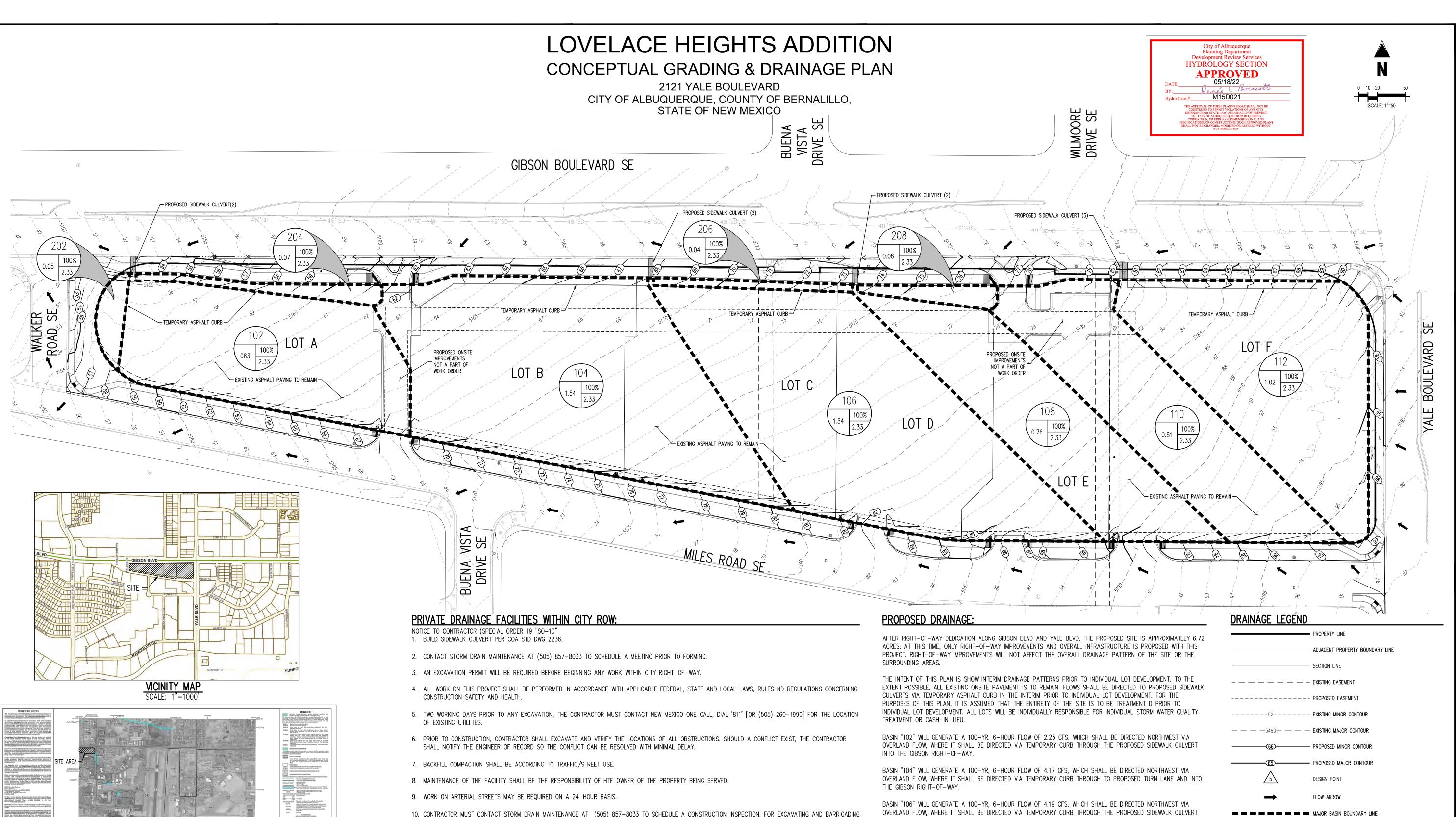
Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 10/2018)

Project Title:	Building	Permit #:	Hydrol	Hydrology File #:		
DRB#:	EPC#:		Work (Order#:		
Legal Description:						
City Address:						
Applicant:			Contact			
Address:Phone#:						
Other Contact:						
Address:				_		
Phone#:						
TYPE OF DEVELOPMENT:	PLAT (# of lots)	RESIDENCE _	DRB SITE	ADMIN SITE		
IS THIS A RESUBMITTAL? Y						
DEPARTMENT: TRAFFIC/TI		HYDROLOG	Y/DRAINAGE			
Check all that Apply:				PTANCE SOUGHT:		
TYPE OF SUBMITTAL: ENGINEER/ARCHITECT CER' PAD CERTIFICATION CONCEPTUAL G & D PLAN GRADING PLAN DRAINAGE MASTER PLAN DRAINAGE REPORT FLOODPLAIN DEVELOPMEN' ELEVATION CERTIFICATE CLOMR/LOMR TRAFFIC CIRCULATION LAY TRAFFIC IMPACT STUDY (TI OTHER (SPECIFY) PRE-DESIGN MEETING?	T PERMIT APPLIC OUT (TCL)	BUILDING PERMIT APPROVAL CERTIFICATE OF OCCUPANCY PRELIMINARY PLAT APPROVAL SITE PLAN FOR SUB'D APPROVAL SITE PLAN FOR BLDG. PERMIT APPROVAL FINAL PLAT APPROVAL SIA/ RELEASE OF FINANCIAL GUARANTE FOUNDATION PERMIT APPROVAL GRADING PERMIT APPROVAL SO-19 APPROVAL PAVING PERMIT APPROVAL GRADING/ PAD CERTIFICATION WORK ORDER APPROVAL CLOMR/LOMR FLOODPLAIN DEVELOPMENT PERMIT OTHER (SPECIFY)				
DATE SUBMITTED:	By:					

FEE PAID:___



	Weighted E Method (Developed)															
												100-Year			10-Year	
			Treatn	nent A	Treatr	nent B	Treatr	ment C	Treatn	nent D	Weighted E	Volume	Flow	Weighted E	Volume	Flow
Basin	Area (sf)	Area (ac)	%	acres	%	acres	%	acres	%	acres	(in)	(ac-ft)	(cfs)	(in)	(ac-ft)	(cfs)
102	36,184	0.83	0.00%	0	0.00%	0	0.00%	0	100.00%	0.83	2.330	1.935	3.61	1.510	1.254	2.25
104	67,078	1.54	0.00%	0	0.00%	0	0.00%	0	100.00%	1.54	2.330	3.588	6.68	1.510	2.325	4.17
106	67,285	1.54	0.00%	0	0.00%	0	0.00%	0	100.00%	1.54	2.330	3.599	6.70	1.510	2.332	4.19
108	33,211	0.76	0.00%	0	0.00%	0	0.00%	0	100.00%	0.76	2.330	1.776	3.31	1.510	1.151	2.07
110	35,154	0.81	0.00%	0	0.00%	0	0.00%	0	100.00%	0.81	2.330	1.880	3.50	1.510	1.219	2.19
112	44,256	1.02	0.00%	0	0.00%	0	0.00%	0	100.00%	1.02	2.330	2.367	4.41	1.510	1.534	2.75
202	2,359	0.05	0.00%	0	0.00%	0	0.00%	0	100.00%	0.05	2.330	0.126	0.24	1.510	0.082	0.15
204	3,111	0.07	0.00%	0	0.00%	0	0.00%	0	100.00%	0.07	2.330	0.166	0.31	1.510	0.108	0.19
206	1,727	0.04	0.00%	0	0.00%	0	0.00%	0	100.00%	0.04	2.330	0.092	0.17	1.510	0.060	0.11
208	2,518	0.06	0.00%	0	0.00%	0	0.00%	0	100.00%	0.06	2.330	0.135	0.25	1.510	0.087	0.16

Peak Discharge (cfs/acre)

Zone 2 | 100-Year | 10-Year

Qc 3.05 1.59

Qd 4.34 2.71

0.95

Qa 1.71

Qb 2.36

Excess Precipitation, E (in)

Zone 2 | 100-Year | 10-Year

Eb 0.80 0.30

Ec 1.03 0.48

Ed 2.33 1.51

0.62 0.15

INSPECTIONS, CONTACT CONSTRUCTION COORDINATION AT (505) 924-3416.

Total 292,881 6.72

Volume = Weighted E * Total Area

Flow = Qa*Aa + Qb**Ab + Qc*Ac + Qd*Ad

Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / Total Area

Equations:

Curb Chase Capacity

Weir Equation: $Q = CLH^{3/2}$

Q = FlowC = 2.95L = Length of weir H = Height of weir

2' Curb Chase Capacity (8" Curb) $Q = 2.95*2*0.583^{3/2}$ Q = 2.63 cfs

10-Year Flow Number of 2' | Equivalent Open Actual Flow 2.25 5.26 106 4.17 5.26 4.19 5.26 108 2.07

Required Equivalent Curb Opening

Note: Due to the temporary conditions shown in theis plan, sidewalk

note: Bue to the temporary conditions shown in the	icis pian, siactra
culverts were sized using 10-year flows.	

INTO THE GIBSON RIGHT-OF-WAY.

BASIN "108" WILL GENERATE A 100-YR, 6-HOUR FLOW OF 2.07 CFS, WHICH SHALL BE DIRECTED NORTHWEST VIA OVERLAND FLOW, WHERE IT SHALL BE DIRECTED VIA TEMPORARY CURB THROUGH THE PROPOSED SIDEWALK CULVERT INTO THE GIBSON RIGHT-OF-WAY.

BASIN "110" WILL GENERATE A 100-YR, 6-HOUR FLOW OF 2.19 CFS, WHICH SHALL BE DIRECTED NORTHWEST VIA OVERLAND FLOW, WHERE IT SHALL BE DIRECTED VIA TEMPORARY CURB THROUGH TO PROPOSED TURN LANE AND INTO THE GIBSON RIGHT-OF-WAY.

BASIN "112" WILL GENERATE A 100-YR, 6-HOUR FLOW OF 2.75 CFS, WHICH SHALL BE DIRECTED NORTHWEST VIA OVERLAND FLOW, WHERE IT SHALL BE DIRECTED VIA TEMPORARY CURB THROUGH THE PROPOSED SIDEWALK CULVERT INTO THE GIBSON RIGHT-OF-WAY.

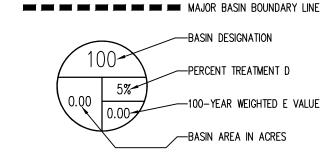
BASIN "202" WILL GENERATE A 100-YR, 6-HOUR FLOW OF 0.15 CFS, WHICH IS ASSUMED TO BE DIRECTED WEST, WHERE IT SHALL BE DIRECTED INTO THE WALKER RIGHT-OF-WAY. THIS BASIN REPRESENTS TEMPORARY LANDSCAPED AREA IN THE WESTERN PORTION OF LOT A BEHIND THE TEMPORARY CURB.

BASIN "204" WILL GENERATE A 100-YR, 6-HOUR FLOW OF 0.19 CFS, WHICH IS ASSUMED TO BE DIRECTED NORTHWEST, WHERE IT SHALL BE DIRECTED INTO THE GIBSON RIGHT-OF-WAY. THIS BASIN REPRESENTS TEMPORARY LANDSCAPED AREA IN THE NORTHERN PORTION OF LOT A BEHIND THE TEMPORARY CURB.

BASIN "204" WILL GENERATE A 100-YR, 6-HOUR FLOW OF 0.11 CFS, WHICH IS ASSUMED TO BE DIRECTED NORTHWEST, WHERE IT SHALL BE DIRECTED INTO THE GIBSON RIGHT-OF-WAY. THIS BASIN REPRESENTS TEMPORARY LANDSCAPED AREA IN THE NORTHERN PORTION OF LOT C BEHIND THE TEMPORARY CURB.

BASIN "206" WILL GENERATE A 100-YR, 6-HOUR FLOW OF 0.16 CFS, WHICH IS ASSUMED TO BE DIRECTED NORTHWEST, WHERE IT SHALL BE DIRECTED INTO THE GIBSON RIGHT-OF-WAY. THIS BASIN REPRESENTS TEMPORARY LANDSCAPED AREA IN THE NORTHERN PORTION OF LOT D BEHIND THE TEMPORARY CURB.

THE TOTAL DISCHARGE INTO THE GIBSON RIGHT-OF-WAY SHALL BE LESS THAN THE DISCHARGE IN THE EXISTING CONDITIONS DUE TO THE INCREASE IN LANDSCAPED AREA ONSITE.



EXISTING DRAINAGE:

THIS SITE IS CURRENTLY DEVELOPED AND USED AS AIRPORT PARKING, CONSISTING OF SEVERAL BUILDINGS, CARPORTS, AND ASPHALT DRIVES. ALMOST THE ENTIRETY OF THE LOT IS IMPERVIOUS AREA. THE SITE IS BOUNDED BY GIBSON BLVD TO THE NORTH, YALE BLVD TO THE EAST, MILES RD TO THE SOUTH, AND WALKER DR TO THE WEST. THE SITE IS APPROXIMATELY 7.18 ACRES AND DRAINS FROM SOUTHEAST TO NORTHWEST, FREE RELEASING INTO GIBSON BLVD THROUGH SEVERAL SIDEWALK CULVERTS. THE SITE IS NOT LOCATED IN A FLOODPLAIN AS SHOWN ON THE FIRM MAP (SEE THIS SHEET). THE PROJECT DOES NOT RECEIVE OFFSITE FLOWS.

INDIVIDUAL LOTS ARE NOT BEING DEVELOPED AT THIS TIME. LOTS SHALL BE INDIVIDUALLY RESPONSIBLE FOR STORM WATER QUALITY TREATMENT OR CASH=IN-LIEU. INDIVIDUAL LOTS SHALL NEED TO CONFORM TO RELEASE RATES SPECIFIED IN THE CONCEPTUAL MASTER GRADING & DRAINAGE PLAN FOR THIS SITE.

Project No: PRP000008 Checked By:

04/28/2022

GRADING & DRAINAGE PLAN

6162 S. Willow Drive, Suite 320

Greenwood Village, CO 80111

303.770.8884

COPYRIGH¹

DING & DRAI S ADDITION

PTUAL GRAI

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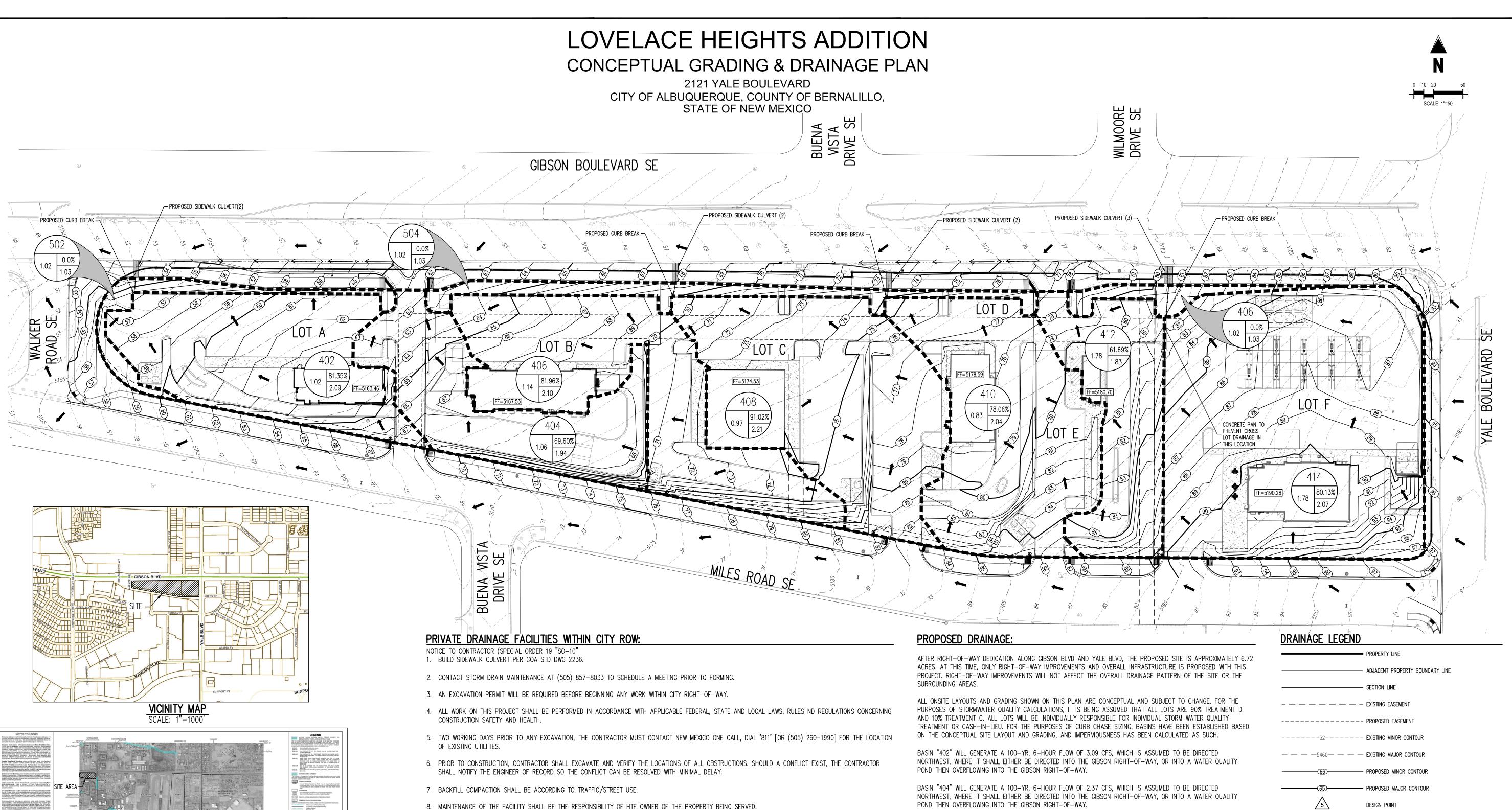
GIBSON,

Date Issue / Description

ENFORCED AND PROSECUTED.

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GallowayUS.com



Cardian sensor coffer Esocial Flood Hazard Assessmay See producibely Road committee . Fefer for Especies 734 "Flood Relations Measures" 29 flood produced Sealing regards Study regards beinforced from the Cardian Sealing Se NONE NEEDS 2 National Control County (SMC) #1200 1315 - Barb Mark Haylenin Swer Spring Maryland 2001013282 To other current revenue descriptor analysis opening represent to been marks others on the reap please contact the information persons through the information condens. Survey of 1981 733-2342, or sold the verticals of the forms only read size. Corporate limits shown on this map are based on the limit data available the time of publication. Secures changes due to annexation, or de annexation as, these occurred area than map was published, map users around con-Please refer to the separately printed Mapandex for an overview reported our by showing the lary but of map parely; community, map reportery subseques and as large pt. communities state contemps (storout house) and properly please and community are well as a linking of the parells on which ead recommunity is forwised. Contact the FEMA Map Service Center at 1,000,000 feet for from the particle expectations with this FFM. Available expects may be a forecast, asked between the Map Contact and Albed Persons South years of particle and the contact and albed persons and the contact and the

Curb Chase Capacity

Weir Equation:

Q = FlowC = 2.95L = Length of weir H = Height of weir

2' Curb Chase Capacity (8" Curb) $Q = 2.95*2*0.583^{3/2}$ Q = 2.63 cfs

					AND SU		
Required Equivalent Curb Opening							
Basin	100-Year Flow (cfs)	Number of 2' Curb Openings	Equivalent Open Length (ft)	Actual Flow Capacity (cfs)	FOR WA CALCUL PROPOS		
402	3.09	2	4	5.26			
404	2.37	1	2	2.63	ASSUME		
406	3.60	2	4	5.26	IMPERVI		
408	4.47	2	4	5.26	INDIVIDU		
410	3.68	2	4	5.26	FOR WA		
412	1.98	1	2	2.63	TREATM		
414	6.72	3	6	7.89	ACTUAL		
					AT THE		

NOTE: LOT LAYOUTS AND GRADING ARE CONCEPTUAL SUBJECT TO CHANGE. WATER QUALITY JLATION PURPOSES, OSED LOTS ARE MED TO BE 90% VIOUS AND SHALL BE DUALLY RESPONSIBLE WATER QUALITY MENT BASED ON AL LAND TREATMENT E TIME OF BUILDING

MAP NUMBER 35001C0381G

PERMIT SUBMITTAL.

Excess Precipitation, E (in) Zone 2 | 100-Year | 10-Year | Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / Total Area Ea 0.62 0.15 Eb 0.80 0.30 Volume = Weighted E * Total Area Ec 1.03 0.48 Ed 2.33 1.51

9. WORK ON ARTERIAL STREETS MAY BE REQUIRED ON A 24-HOUR BASIS.

404 | 26,095 | 0.60 | 0.00% | 0 | 0.00% | 0

408 | 46,056 | 1.06 | 0.00% | 0 | 0.00% |

412 | 22,403 | 0.51 | 0.00% | 0 | 0.00% |

INSPECTIONS, CONTACT CONSTRUCTION COORDINATION AT (505) 924-3416.

Treatment A Treatment B

406 38,194 0.88 0.00% 0 0.00% 0 18.04% 0.16 81.96% 0.72

10. CONTRACTOR MUST CONTACT STORM DRAIN MAINTENANCE AT (505) 857-8033 TO SCHEDULE A CONSTRUCTION INSPECTION. FOR EXCAVATING AND BARRICADING

Weighted E Method (Developed)

Basin | Area (sf) | Area (ac) | % | acres | % | acres | % | acres | % | acres | (in) | (ac-ft) | (cfs) | (in) | (ac-ft) | (cfs)

402 | 32,869 | 0.75 | 0.00% | 0 | 0.00% | 0 | 18.65% | 0.14 | 81.35% | 0.61 | 2.088 | 1.575 | 3.09 | 1.318 | 0.994 | 1.89

410 | 39,478 | 0.91 | 0.00% | 0 | 0.00% | 0 | 21.94% | 0.20 | 78.06% | 0.71 | 2.045 | 1.853 | 3.68 | 1.284 | 1.164 | 2.23

414 71,693 1.65 0.00% 0 0.00% 0 19.87% 0.33 80.13% 1.32 2.072 3.410 6.72 1.305 2.148 4.09 502 | 4,717 | 0.11 | 0.00% | 0 | 0.00% | 0 | 100.00% | 0.11 | 0.00% | 0.00 | 1.030 | 0.112 | 0.33 | 0.480 | 0.052 | 0.17

504 7,918 0.18 0.00% 0 0.00% 0 100.00% 0.18 0.00% 0.00 1.030 0.187 0.55 0.480 0.087 0.29

506 3,454 0.08 0.00% 0 0.00% 0 100.00% 0.08 0.00% 0.00 1.030 0.082 0.24 0.480 0.038 0.13

0 38.31% 0.20 61.69% 0.32

30.40% | 0.18 | 69.60% | 0.42

8.98% 0.09 91.02% 0.96 2.213 2.340 4.47

Treatment C Treatment D Weighted E Volume Flow Weighted E Volume Flow

Peak Discharge (cfs/acre)

Zone 2 100-Year 10-Year

Qa 1.71 0.41

Qb 2.36 0.95

Qd 4.34 2.71

3.05 1.59

1.935 | 1.159 | 2.37 | 1.197 | 0.717 | 1.42

2.095 | 1.837 | 3.60 | 1.324 | 1.161 | 2.20

1.832 | 0.942 | 1.98 | 1.115 | 0.574 | 1.17

Flow = Qa*Aa + Qb**Ab + Qc*Ac + Qd*Ad

er Quality Calculations Note: For redevelopment site, SWQV = 0.26 in								
	Impervious Area (sf)	swqv	Storm Water	Storm Water				
ot	(Assumed 90% of basin area)	(in)	Quality Vol (cf)	Quality Vol (ac-ft)				
A	39,428	0.26	854	0.020				
В	39,618	0.26	858	0.020				
С	46,248	0.26	1,002	0.023				
D	37,897	0.26	821	0.019				
E	32,034	0.26	694	0.016				
F	68.376	0.26	1.481	0.034				

BASIN "406" WILL GENERATE A 100-YR, 6-HOUR FLOW OF 3.60 CFS, WHICH IS ASSUMED TO BE DIRECTED NORTHWEST, WHERE IT SHALL EITHER BE DIRECTED INTO THE GIBSON RIGHT-OF-WAY, OR INTO A WATER QUALITY POND THEN OVERFLOWING INTO THE GIBSON RIGHT-OF-WAY.

BASIN "408" WILL GENERATE A 100-YR. 6-HOUR FLOW OF 4.47 CFS, WHICH IS ASSUMED TO BE DIRECTED NORTHWEST, WHERE IT SHALL EITHER BE DIRECTED INTO THE GIBSON RIGHT-OF-WAY, OR INTO A WATER QUALITY POND THEN OVERFLOWING INTO THE GIBSON RIGHT-OF-WAY.

BASIN "410" WILL GENERATE A 100-YR, 6-HOUR FLOW OF 3.68 CFS, WHICH IS ASSUMED TO BE DIRECTED NORTHWEST, WHERE IT SHALL EITHER BE DIRECTED INTO THE GIBSON RIGHT-OF-WAY, OR INTO A WATER QUALITY POND THEN OVERFLOWING INTO THE GIBSON RIGHT-OF-WAY.

BASIN "412" WILL GENERATE A 100-YR, 6-HOUR FLOW OF 1.98 CFS, WHICH IS ASSUMED TO BE DIRECTED NORTHWEST, WHERE IT SHALL EITHER BE DIRECTED INTO THE GIBSON RIGHT-OF-WAY, OR INTO A WATER QUALITY POND THEN OVERFLOWING INTO THE GIBSON RIGHT-OF-WAY.

BASIN "414" WILL GENERATE A 100-YR, 6-HOUR FLOW OF 6.72 CFS, WHICH IS ASSUMED TO BE DIRECTED NORTHWEST, WHERE IT SHALL EITHER BE DIRECTED INTO THE GIBSON RIGHT-OF-WAY, OR INTO A WATER QUALITY POND THEN OVERFLOWING INTO THE GIBSON RIGHT-OF-WAY.

BASIN "502" WILL GENERATE A 100-YR, 6-HOUR FLOW OF 0.33 CFS, WHICH IS ASSUMED TO BE DIRECTED NORTHWEST, WHERE IT SHALL EITHER BE DIRECTED INTO THE GIBSON RIGHT-OF-WAY, OR INTO A WATER QUALITY POND THEN OVERFLOWING INTO THE GIBSON RIGHT-OF-WAY. THIS BASIN REPRESENTS LANDSCAPED AREA AROUND THE PERIMETER OF LOT A.

BASIN "504" WILL GENERATE A 100-YR, 6-HOUR FLOW OF 0.55 CFS, WHICH IS ASSUMED TO BE DIRECTED NORTHWEST, WHERE IT SHALL EITHER BE DIRECTED INTO THE GIBSON RIGHT-OF-WAY, OR INTO A WATER QUALITY POND THEN OVERFLOWING INTO THE GIBSON RIGHT-OF-WAY. THIS BASIN REPRESENTS LANDSCAPED NORTH OF LOTS B.

BASIN "506" WILL GENERATE A 100-YR, 6-HOUR FLOW OF 0.24 CFS, WHICH IS ASSUMED TO BE DIRECTED NORTHWEST, WHERE IT SHALL EITHER BE DIRECTED INTO THE GIBSON RIGHT-OF-WAY, OR INTO A WATER QUALITY POND THEN OVERFLOWING INTO THE GIBSON RIGHT-OF-WAY. THIS BASIN REPRESENTS LANDSCAPED NORTH OF LOTS E

THE TOTAL DISCHARGE INTO THE GIBSON RIGHT-OF-WAY SHALL BE LESS THAN THE DISCHARGE IN THE EXISTING CONDITIONS DUE TO THE INCREASE IN LANDSCAPED AREA ONSITE.

FLOW ARROW

MAJOR BASIN BOUNDARY LINE -BASIN DESIGNATION -PERCENT TREATMENT D 5%

EXISTING DRAINAGE:

THIS SITE IS CURRENTLY DEVELOPED AND USED AS AIRPORT PARKING, CONSISTING OF SEVERAL BUILDINGS, CARPORTS, AND ASPHALT DRIVES. ALMOST THE ENTIRETY OF THE LOT IS IMPERVIOUS AREA. THE SITE IS BOUNDED BY GIBSON BLVD TO THE NORTH, YALE BLVD TO THE EAST, MILES RD TO THE SOUTH, AND WALKER DR TO THE WEST. THE SITE IS APPROXIMATELY 7.18 ACRES AND DRAINS FROM SOUTHEAST TO NORTHWEST, FREE RELEASING INTO GIBSON BLVD THROUGH SEVERAL SIDEWALK CULVERTS. THE SITE IS NOT LOCATED IN A FLOODPLAIN AS SHOWN ON THE FIRM MAP (SEE THIS SHEET). THE PROJECT DOES NOT RECEIVE OFFSITE FLOWS.

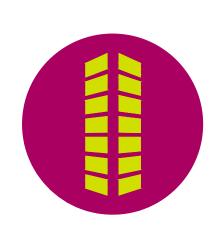
—BASIN AREA IN ACRES

INDIVIDUAL LOTS ARE NOT BEING DEVELOPED AT THIS TIME. LOTS SHALL BE INDIVIDUALLY RESPONSIBLE FOR STORM WATER QUALITY TREATMENT OR CASH=IN-LIEU. INDIVIDUAL LOTS SHALL NEED TO CONFORM TO RELEASE RATES SPECIFIED IN THIS PLAN. CURRENT SITE LAYOUT AND GRADING SHOWN ARE CONCEPTUAL AND SUBJECT TO CHANGE.

6162 S. Willow Drive, Suite 320 Greenwood Village, CO 80111 303.770.8884 GallowayUS.com



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CONCEP

Date Issue / Description

GIBSON,

PRP000008 Checked By: 04/28/2022

CONCEPTUAL MASTER GRADING & DRAINAGE PLAN