CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director

Mayor Timothy M. Keller

June 11, 2021

David Aube, P.E.
Hartman & Majewski Design Group
120 Vassar Dr SE, Suite 100
Albuquerque, NM 87106

RE: Hiland Plaza
500 Central Ave. SE
Conceptual Grading and Drainage Plan
Engineer's Stamp Date: 06/01/21
Hydrology File: K17D120

Dear Mr. Aube:

Based upon the information provided in your submittal received 06/01/2021, the Conceptual Grading & Drainage Plan is approved for action by the DRB on Site Plan for Building Permit.

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 any earth disturbance.

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

Sincerely,

Renée C. Brissette

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

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: Hiland Plaza Building Permit #: _____ Hydrology File #: _____

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: Hiland Plaza

City Address: 500 Central Avenue SE

Applicant: Greater Albuquerque Housing Partnership Contact: Miriam hicks

Address: 320 Gold Avenue SW, Suite 918, Albuquerque, NM 87102

Phone#: 505.705.3703 Fax#: _____ E-mail: miriam@abqgahp.org

Other Contact: Design Group Contact: Dave Aube

Address: 120 Vassar Drive SE

Phone#: 505-463-4503 Fax#: 505-242-6881 E-mail: daube@designgroupnm.com

TYPE OF DEVELOPMENT: ____ PLAT (# of lots) ____ RESIDENCE __X__ DRB SITE ___ ADMIN SITE

IS THIS A RESUBMITTAL? ____ Yes __X__ No

DEPARTMENT ____ TRANSPORTATION __X__ HYDROLOGY/DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

____ ENGINEER/ARCHITECT CERTIFICATION
____ PAD CERTIFICATION
__X__ CONCEPTUAL G & D PLAN
____ GRADING PLAN
____ DRAINAGE REPORT
____ DRAINAGE MASTER PLAN
____ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
____ ELEVATION CERTIFICATE
____ CLOMR/LOMR
____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ STREET LIGHT LAYOUT
____ OTHER (SPECIFY) _____
____ PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY

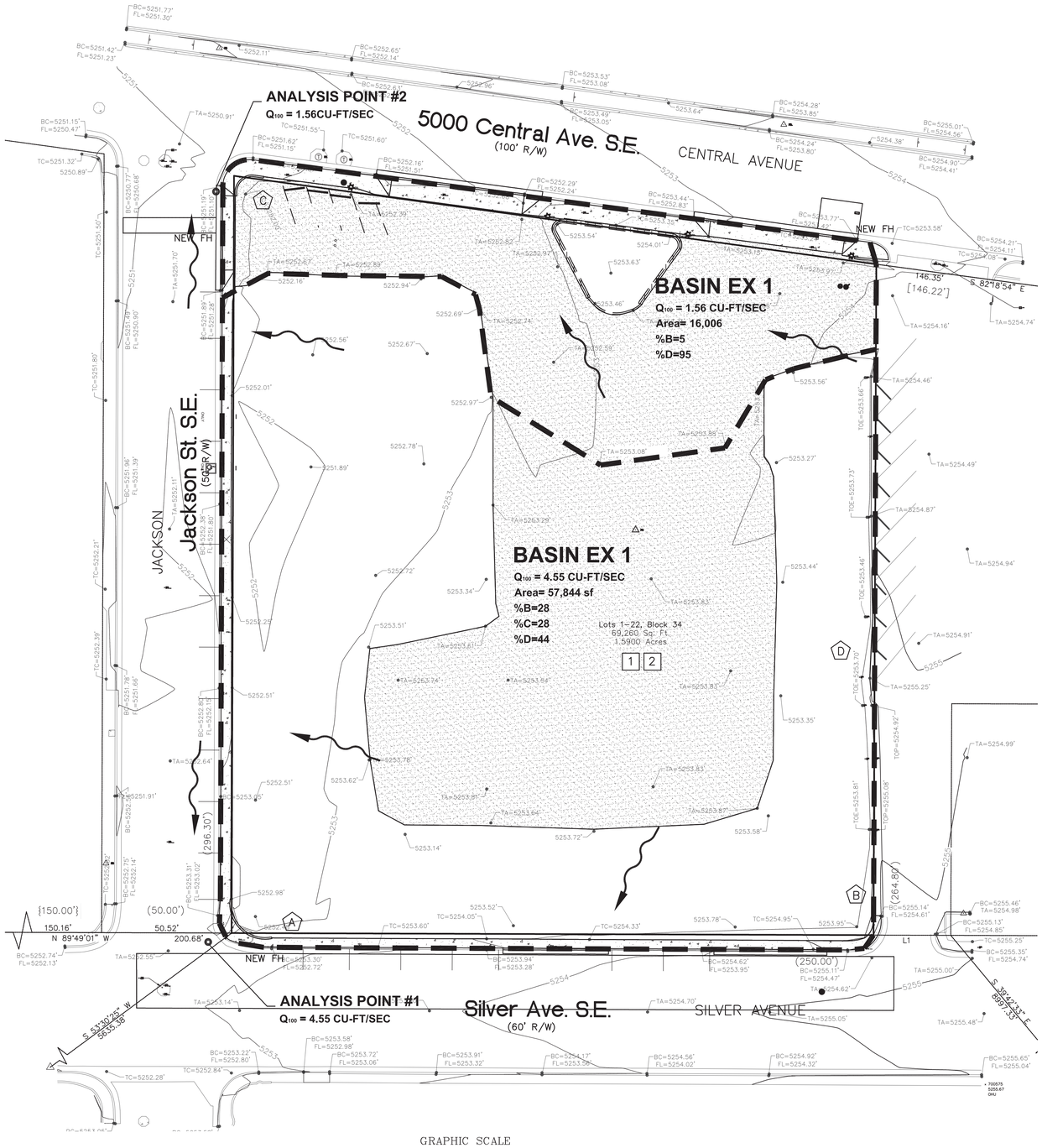
____ PRELIMINARY PLAT APPROVAL
____ SITE PLAN FOR SUB'D APPROVAL
__X__ SITE PLAN FOR BLDG. PERMIT APPROVAL
____ FINAL PLAT APPROVAL

____ SIA/ RELEASE OF FINANCIAL GUARANTEE
____ 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: 06-01-2021 By: Dave Aube

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

1 inch = 20 ft.

A1 EXISTING DRAINAGE PLAN

SCALE: 1" = 20'-0"

A5 ZONE ATLAS PAGE K-17

NOT TO SCALE

I. PURPOSE AND SCOPE

THE PURPOSE OF THIS DRAINAGE PLAN IS TO PRESENT THE EXISTING AND PROPOSED DRAINAGE MANAGEMENT PLANS FOR THE HILAND PLAZA APARTMENTS.

II. SITE DESCRIPTION AND HISTORY

THE PROJECT SITE IS LOCATED AT SOUTHEAST CORNER OF CENTRAL AVENUE SE, AND JACKSON STREET, SE.

THE SITE WAS PREVIOUSLY DEVELOPED AS A HOTEL THAT WAS DEMOLISHED AND CURRENTLY ONLY THE ASPHALT PAVEMENT REMAINS.

III. COMPUTATIONAL PROCEDURES

HYDROLOGIC ANALYSIS WAS PERFORMED UTILIZING THE DESIGN CRITERIA BASED ON SECTION 6 HYDROLOGY, OF THE DEVELOPMENT PROCESS MANUAL.

IV. PRECIPITATION

THE STORM EVENT USED FOR THE FOLLOWING CALCULATIONS IS THE 100YR-6HR STORM. THE PROJECT SITE IS LOCATED IN ZONE 2.

V. EXISTING DRAINAGE CONDITIONS

THE SITE PREVIOUSLY CONTAINED A MOTOR LODGE AND PARKING. THE MOTOR LODE HAS BEEN DEMOLISHED.

TO THE EAST A TWISTERS FACILITY HAS A ALLEY THAT DRAINS EXCESS RUNOFF TO CENTRAL AVENUE ON THE NORTH AND TO SILVER ON THE SOUTH. SILVER AVENUE HAS A STANDARD CURB AND GUTTER TO CONTAIN STORM RUNOFF. JACKSON STREET ALSO HAS STANDARD CURB AND GUTTER AND GENERALLY DRAINS NORTH AND SOUTH. THE CENTRAL AVENUE SIDE HAS A COUPLE OF DRIVEWAYS THAT WILL BE ELIMINATED AS PART OF THIS PROJECT, THIS WILL COMPLETE THE STORM WATER BARRIER ALONG CENTRAL.

NO STORM WATER DISCHARGE FROM THE PROJECT BOUNDARIES ARE ANTICIPATED TO ENTER THE PROPERTY.

BASIN #1 OF THE SITE DRAINS FROM EAST TO WEST, EVENTUALLY THE EXCESS RUNOFF WILL OVERTOP THE SIDEWALK AND CURB AND FLOW INTO JACKSON STREET SE. RUNOFF ENTERING JACKSON STREET SE WILL GENERALLY FLOW NORTH TO CENTRAL AVENUE SE. THE FINAL OUTFALL FOR A MAJORITY OF THE SITE RUNOFF WILL BE INTO THE INTERSECTION OF JACKSON STREET/CENTRAL AVENUE.

BASIN #1 HAS A PEAK DISCHARGE RATE OF 4.55 CFS.

BASIN #2 IS THE PORTION OF THE EXISTING ASPHALT PARKING THAT STILL DRAINS OUT INTO CENTRAL AVENUE THROUGH THE DRIVEWAYS. THIS BASIN GENERATES A PEAK RUNOFF OF 1.56 CFS.

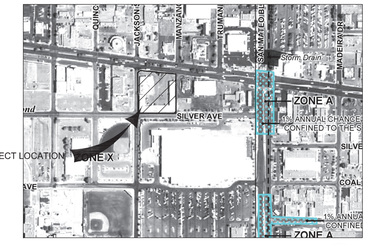
THE COMBINED PEAK DISCHARGE FROM THE SITE IN THE EXISTING CONDITIONS IS 6.11 CFS.

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
PRELIMINARY APPROVED
DATE: 06/11/21
BY:
HydroTrans #: K17D120

THESE PLANS AND/OR REPORT ARE CONCEPTUAL-ONLY. MORE INFORMATION MAY BE NEEDED IN THEM AND SUBMITTED TO HYDROLOGY FOR BUILDING PERMIT APPROVAL.

FLOOD ZONE DETERMINATION

The surveyed area, as shown hereon, appears to lie within "ZONE X" (areas determined to be outside the 0.2% annual chance floodplain), shown on National Flood Insurance Program Flood Insurance Rate Map 35001C0354H REVISED 08/16/2012.



C5 FEMA FLOOD ZONE

NOT TO SCALE

Drainage Summary

Project:	Hiland Plaza
Project Numbe:	2574
Date:	05/28/21
By:	Dave A

Site Location

Precipitaion Zone 2 Per COA DPM Chapter 6

Existing summary

Basin Name	Ex Basin 1	Ex Basin 2	
Area (sf)	57844	16006	
Area (acres)	1.33	0.37	
%A Land treatment	0	0	
%B Land treatment	28	5	
%C Land treatment	28	0	
%D Land treatment	44	95	
Soil Treatment (acres)			
Area "A"	0.00	0.00	
Area "B"	0.37	0.02	
Area "C"	0.37	0.00	
Area "D"	0.58	0.35	
Excess Runoff (acre-feet)			
100yr. 6hr.	0.1702	0.0690	acre-ft.
10yr. 6hr.	0.0977	0.0444	acre-ft.
2yr. 6hr.	0.0537	0.0288	acre-ft.
100yr. 24hr.	0.1848	0.0777	acre-ft.
Peak Discharge (cfs)			
100 yr.	4.55	1.56	cfs
10yr.	2.53	0.96	cfs
2yr.	1.23	0.58	cfs

A5 EXISTING DRAINAGE CALCULATIONS

NOT TO SCALE

THE HARTMAN • MAJEWSKI
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Architects • Engineers • Interior Design
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120 Vassar Dr SE Suite 100
Albuquerque New Mexico 87106
T 505 242 6880 • F 505 242 6881

CONSULTANT

STAMP

NEW MEXICO REGISTERED PROFESSIONAL ENGINEER DAVID A. AUBE STATE OF 14221

Digitally signed by David A Aube
Date: 2021.06.01 12:29:46 -06'00'

David A Aube

DESIGN DEVELOPMENT DOCUMENT SUMBITTAL

PROJECT NAME

HILAND PLAZA

5000 CENTRAL AVENUE NE
ALBUQUERQUE, NM 87108

REVISIONS

NO.	DATE	DESCRIPTION

Drawn by	DAA
Checked by	DAA
Date	MAY 24, 2021
Project number	2574

SHEET TITLE

DRAINAGE
MANAGEMENT
PLAN

SHEET NUMBER

CD1

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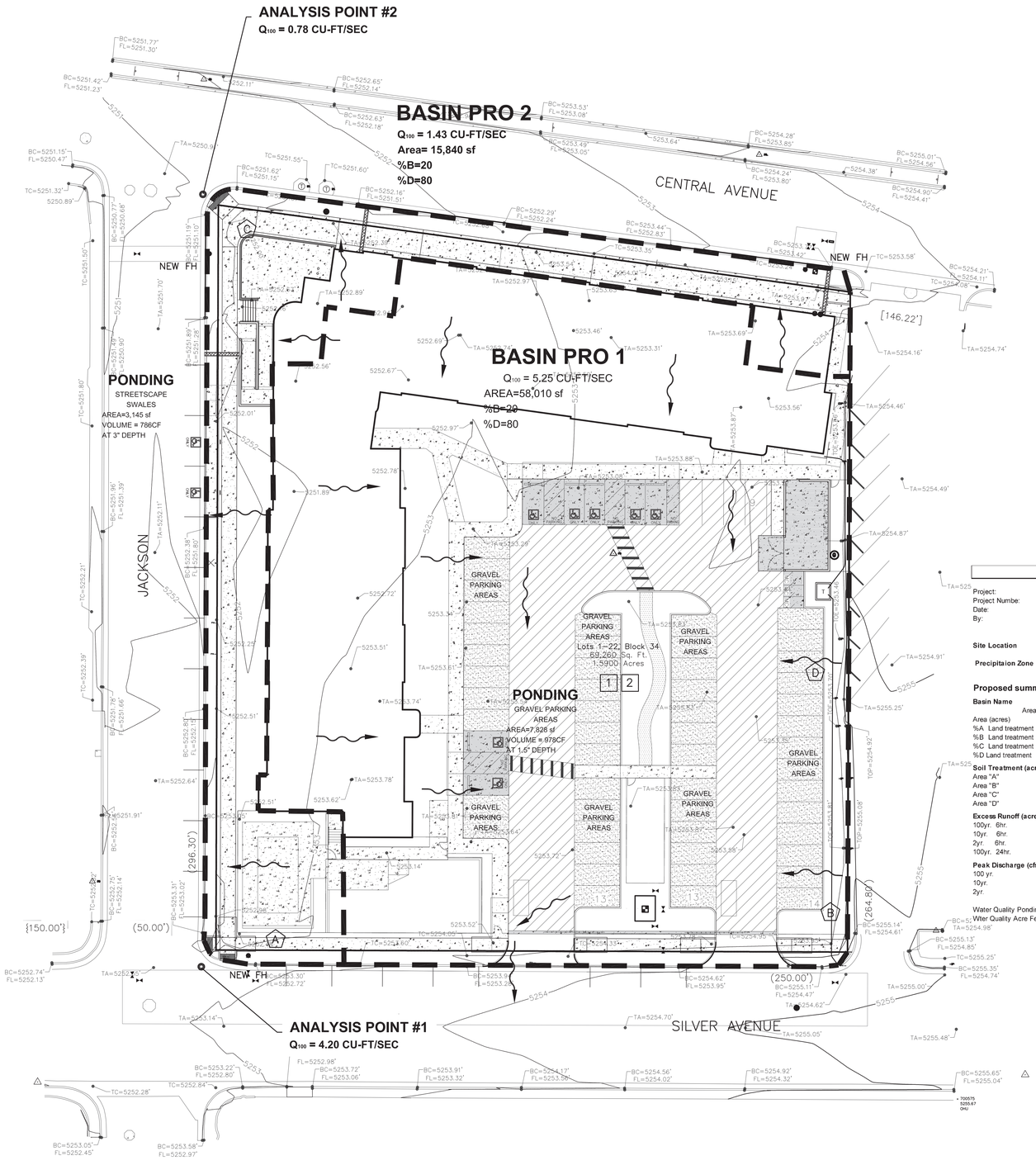

Sidewalk Culvert Calculation

Q=k/n*A*R^(2/3)*S^(1/2)	
Depth of Curb (ft)	0.5
Width of Culvert (ft)	0.5
Conversion Coefficient (k)=	1.486
Manning's Roughness Coefficient (n)=	0.013
Cross Sectional Area of Fluid Flow (A)=	0.25
Wetted Perimeter (P)=	1.5
Hydraulic Radius (R)=	0.17
Slope (S)=	0.02
Max Flow Rate (Q)=	1.09
Number of Culverts (#c)	1.00
Max with # of Culverts	1.09

Drainage Summary

Project:	Hiland Plaza
Project Numbe:	2574
Date:	05/28/21
By:	Dave A
Site Location	
Precipitation Zone	2 Per COA DPM Chapter 6

Proposed summary

Basin Name	Pro Basin 1	Pro Basin 2	
Area (sf)	58010	15840	
Area (acres)	1.332	0.364	
%A Land treatment			
%B Land treatment	20	20	
%C Land treatment			
%D Land treatment	80	80	
Soil Treatment (acres)			
Area "A"	0.00	0.00	
Area "B"	0.27	0.07	
Area "C"	0.00	0.00	
Area "D"	1.07	0.29	
Excess Runoff (acre-feet)			
100yr. 6hr.	0.2246	0.0613	acre-ft.
10yr. 6hr.	0.1407	0.0384	acre-ft.
2yr. 6hr.	0.0882	0.0241	acre-ft.
100yr. 24hr.	0.2513	0.0686	acre-ft.
Peak Discharge (cfs)			
100 yr.	5.25	1.43	cfs
10yr.	3.14	0.86	cfs
2yr.	1.79	0.49	cfs
Water Quality Ponding Voulme (cf)	928.2	253.4 cf	
Wter Quality Acre Feet	0.0213	0.0058	acre-ft

VI. PROPOSED DRAINAGE CONDITIONS

PROPOSED IMPROVEMENTS INCLUDE A NEW FOUR STORY APARTMENT COMPLEX WITH ASSOCIATED PARKING AND PEDESTRIAN SIDEWALKS. THE SITE ALSO INCLUDES PLAYGROUND SPACES FOR THE CHILDREN AND YOUNG ADULTS.

THE ROOF SURFACE WILL GENERALLY FLOW INWARD TOWARD THE PARKING AREA WHERE RUNOFF CAN BE DETAINED AND RELEASED AT A CONTROLLED RATE BACK INTO THE STREET NETWORK. THERE ARE THREE SMALL SECTIONS OF ROOF THAT WILL BE DISCHARGED DIRECTLY INTO CENTRAL AVENUE, OR JACKSON STREET, STREETSCAPE SWALES TO FILTER RUNOFF PRIOR TO RELEASE INTO THE PUBLIC STREET.

STREETSCAPE SWALES WILL BE UTILIZED WHERE POSSIBLE ALONG ALL STREET FRONTAGES TO HARVEST AVAILABLE RUNOFF AND TO COMPLY WITH THE STORM WATER QUALITY REQUIREMENTS.

THE SITE HAS BEEN DIVIDED INTO TWO (2) BASINS.

PRO. BASIN #1 ACCOUNTS FOR THE PARKING AREAS, AS WELL AS THE MAIN ROOF AREA. THIS BASIN IS 58,010 SF AND GENERATES A PEAK RUNOFF RATE OF 5.25 CFS. RUNOFF WILL DRAIN TOWARD A PONDING AREA IN THE MIDDLE OF THE PARKING AREA. GRAVEL PAVE 2 WILL BE UTILIZED IN THE PARKING STALLS TO ALLOW FOR STORAGE OF RUNOFF FOR STORMWATER QUALITY AS WELL AS TO RESTRICT RUNOFF BACK TO HISTORIC RATES. GRAVEL PAVE WILL BE SET WITH AN OVERALL DEPTH OF GRAVEL OF 6". CITY ALLOWS FOR A POROSITY OF 25% THIS GIVES A TOTAL WATER STORAGE DEPTH OF 1.5" (.125') WITHIN THE GRAVEL ITSELF WITHOUT HAVING PONDING WATER ABOVE THE SURFACE. THE REQUIRED PONDING VOLUME FOR STORMWATER QUALITY IS 928 CUBIC FEET. AVAILABLE PONDING WITHIN THE GRAVEL PAVE 2 ASSEMBLY IS 978CF. THEREFORE NECESSARY WATER QUALITY IS CONTAINED. AFTER RETENTION OF THE STORMWATER QUALITY VOLUME, THE EXCESS RUNOFF RATE WILL BE REDUCED TO 4.20 CFS. THIS WILL FLOW OUT OF THE WESTERN DRIVEWAY INTO THE SILVER AVENUE RIGHT OF WAY.

PRO. BASIN #2 IS FOR RUNOFF THAT WILL DRAIN DIRECTLY TOWARD THE STREETSCAPE SWALES AND INTO THE PUBLIC RIGHT OF WAY. BASIN #2 CONTAINS 15,840 SQUARE FEET AND GENERATES A PEAK RUNOFF RATE OF 1.43CFS. STREETSCAPE SWALES WILL BE 6' WIDE AND DEPRESSED 2" FROM THE SIDEWALK AND CURB AND GUTTER. THE CENTER OF THE STREETSCAPE SWALE WILL BE SET PER CITY OF ALBUQUERQUE STANDARD STREETSCAPE SWALE DETAIL. VOLUME OF WATER RETAINED IN THE STREETSCAPE SWALES WILL BE 786CF. AFTER ROUTING THROUGH THE STREETSCAPE SWALE RUNOFF WILL BE REDUCED TO A PEAK DISCHARGE RATE OF 0.78CFS. THIS DISCHARGE RATE CAN EASILY BE HANDLED BY A 6" WIDE SIDEWALK CULVERT (12" WIDE METAL COVER PLATE).

ROOF RUNOFF WILL BE DIRECTED TOWARD STANDARD SIDEWALK CULVERTS FROM THE THREE ROOF AREAS. THE LARGEST OF THE THREE ROOF AREAS IS 750 SF AND WILL GENERATE A PEAK DISCHARGE RATE OF 0.07 CFS DURING THE 100 YR, 6 HOUR STORM EVENT. SIDEWALK CULVERTS WILL ALL BE SIZED FOR THE PEAK RUNOFF FROM THIS ROOF.

VII. CONCLUSIONS

THE SITE HAS BEEN DESIGNED TO UTILIZED SHALLOW RETENTION BASINS AS CLOSE TO THE SOURCE TO THE STORM WATER AS PRACTICAL. THESE SHALLOW PONDS ARE COMPRISED OF GRAVEL PARKING SURFACES AND STREETSCAPE SWALES. THE EXISTING PEAK RUNOFF FOR THE SITE IS 6.11 CFS. THE REDEVELOPED RUNOFF RATE WILL BE REDUCED TO 4.98 CFS AFTER ROUTING STORM RUNOFF THROUGH THE PONDING AREAS REQUIRED FOR STORMWATER QUALITY COMPLIANCE.

THE PEAK RUNOFF RATE IS LESS THAN THE CURRENT CONDITIONS. THEREFORE THE DEVELOPMENT SHOULD NOT HAVE ANY ADVERSE AFFECTS ON DOWNSTREAM PROPERTIES.

THE SITE HAS BEEN DESIGNED TO RETAIN THE REQUIRED STORMWATER QUALITY VOLUME FOR A RE-DEVELOPED SITE.

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
PRELIMINARY APPROVED
DATE: 06/11/21
BY: Randy T. Bricaud
HydroTrans # K17D120
THESE PLANS AND/OR REPORT ARE CONCEPTUAL ONLY. MORE INFORMATION MAY BE NEEDED IN THEM AND SUBMITTED TO HYDROLOGY FOR BUILDING PERMIT APPROVAL.

A1 CONCEPTUAL DRAINAGE MANAGEMENT PLAN
SCALE: 1" = 20'-0"

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

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CONSULTANT

STAMP

David A Aube
Digitally signed by David A Aube
DN: cn=David A Aube, o=The Hartman + Design Group, ou=Civil Engineer, email=daa@dgroupnm.com, c=US
Date: 2021.06.01 12:29:35-06'00'

DESIGN DEVELOPMENT DOCUMENT SUMBITTAL

PROJECT NAME
HILAND PLAZA

5000 CENTRAL AVENUE NE
ALBUQUERQUE, NM 87108

REVISIONS

NO.	DATE	DESCRIPTION

Drawn by	DAA
Checked by	DAA
Date	MAY 24, 2021
Project number	2574

SHEET TITLE
CONCEPTUAL DRAINAGE MANAGEMENT PLAN

SHEET NUMBER
CD2