CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director

Mayor Timothy M. Keller

May 28, 2019

Phillip W. Clark, PE
Clark Consulting Engineers
19 Ryan Rd
Edgewood, NM 87015

RE: Crossroads Church
5200 Marble Ave. NE
Grading and Drainage Plan
Engineer's Stamp Date: 05/24/19
Hydrology File: J17D035

Dear Mr. Clark:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Based upon the information provided in your submittal received 05/24/2019, the Grading and Drainage Plan is approved for Building Permit and SO-19 Permit.

Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter. Prior to approval in support of Permanent Release of Occupancy by Hydrology, Engineer Certification per the DPM checklist will be required.

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 (Curtis Cherne, PE, ccherne@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

Also as a reminder, please provide Drainage Covenant for the retention pond per Chapter 17 of the DPM prior to Permanent Release of Occupancy. Please submit this on the 4th floor of Plaza de Sol. A $25 fee will be required.

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

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: CROSSROADS CHURCH Building Permit #: _____ Hydrology File #: J17

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

Legal Description: PORTION OF TR. 1, PUEBLO ALTO ADDN

City Address: 5200 MARBLE NE

Applicant: CLARK CONSULTING ENGINEERS Contact: PHIL

Address: _____

Phone#: 281-2444 Fax#: xxxxx cell / txt 264.6042 E-mail: CCEalbq@aol.com

Other Contact: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF DEVELOPMENT: ___ PLAT ___ RESIDENCE ___ DRB SITE X ADMIN SITE

Check all that Apply:

DEPARTMENT:

X ___ HYDROLOGY/ DRAINAGE

___ TRAFFIC/ TRANSPORTATION

TYPE OF SUBMITTAL:

___ ENGINEER/ARCHITECT CERTIFICATION

___ PAD CERTIFICATION

___ CONCEPTUAL G & D PLAN

X ___ 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?

IS THIS A RESUBMITTAL?: ___ Yes X ___ No

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

X ___ 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 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: 5/24/19 By: PWC

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

GRADING & DRAINAGE PLAN

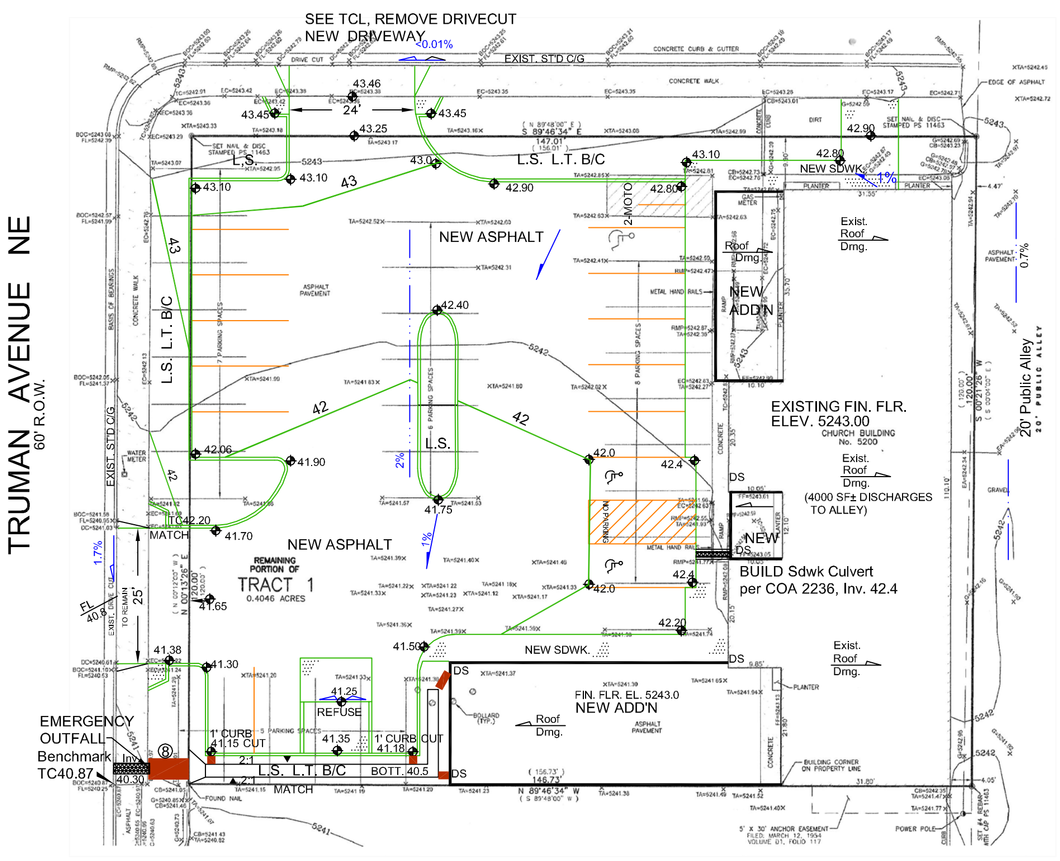
THE PLACE OF WORSHIP BUILDING ADDITION PROJECT IS LOCATED IN THE LOWER NE HEIGHTS AREA OF ALBUQUERQUE APPROXIMATELY 3 MILES EAST OF THE DOWNTOWN CORE. THE GRADING & DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE CITY FLOOD HAZARD ORDINANCE, AND THE CITY STORM DRAINAGE ORDINANCE. THE PLAN IS REQUIRED IN ORDER TO FACILITATE THE OWNER'S REQUEST FOR BUILDING PERMIT. THE PLAN SHOWS:

1. EXISTING CONTOURS, AND SPOT ELEVATIONS AND EXISTING DRAINAGE PATTERNS AND EXISTING IMPROVEMENTS: INCLUDING EXISTING SIDEWALK, EXISTING STRUCTURE AND PARKING LOT.
2. PROPOSED IMPROVEMENTS: APPROX. 2000 SQUARE FOOT BUILDING FOOTPRINT, PARKING, ASPHALT REPLACEMENT, NEW GRADE ELEVATIONS, ADA ACCESS AND LANDSCAPING.
3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS.
4. QUANTIFICATION AND ACCEPTANCE OF ALL ON-SITE FLOWS WHICH CONTRIBUTE TO THE DEVELOPED FLOWS GENERATED BY THE IMPROVEMENTS.

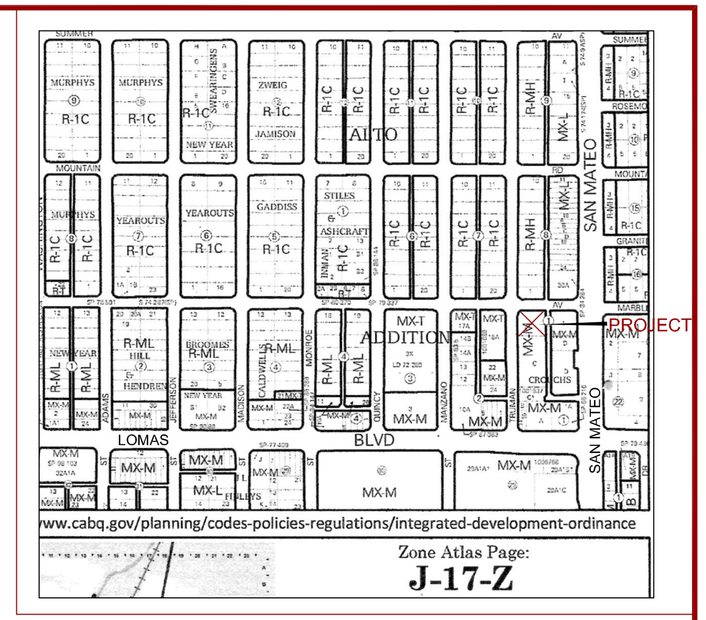
THE PURPOSE OF THE PLAN IS TO ESTABLISH CRITERIA FOR CONTROLLING STORM RUNOFF AND EROSION, AND ESSENTIALLY ALLOWING HISTORIC FLOWS TO CONTINUE TO DRAIN THROUGH THE PROPERTY. PRESENTLY, THE SITE IS BOUNDED ON THE EAST AND SOUTH BY DEVELOPED PROPERTY. PERIMETER TRUMAN AND MARBLE AVE ARE PAVED WITH CURB AND SIDEWALK, AND MAINTAINED BY THE CITY OF ALBUQUERQUE. THE SITE CURRENTLY DRAINS AT 2% FROM NORTHEAST TO SOUTHWEST. HISTORICAL SITE RUNOFF OUTFALL LOCATIONS WILL REMAIN UNCHANGED. ONLY MINIMAL GRADING (DRIVEWAY RECONSTRUCTION) IS PROPOSED WITHIN THE CITY R.O.W. THE SITE IS NOT IMPACTED ADVERSELY BY ANY OFF-SITE DRAINAGE FLOWS.

60' R.O.W.

5200 MARBLE AVENUE NE



Scale: 1" = 20'



VICINITY MAP ZONE J-17

NOTES

○ KEYED

1. ALL WORK WITHIN THE RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, 1986, 9TH UPDATE.
2. AN EXCAVATION/CONSTRUCTION PERMIT IS REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY R.O.W. AN APPROVED COPY OF THIS PLAN MUST BE SUBMITTED AT THE TIME OF APPLICATION.
3. 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.
4. ALL LANDSCAPING AREA SHALL BE SOFT-LINED WITH NATIVE VEGETATION AND/OR GRAVEL /GRAVEL CRUSHER FINES.
5. CONTRACTOR SHALL ENSURE THAT NO SITE SOILS/SEDIMENT OR SILT ENTER THE RIGHT-OF-WAYS DURING CONSTRUCTION.
6. REVEGETATE ALL AREAS DISTURBED DUE TO CONSTRUCTION PER CITY OF ALBUQ. SPEC. 1012, NATIVE SEED MIX.
7. MAXIMUM SITE GRADING WITHOUT EROSION PROTECTION: 3 HORIZONTAL TO 1 VERTICAL, 3:1. ALL DIMENSIONS TO FACE OF CURB, UNLESS NOTED OTHERWISE.

(8) BUILD 4'W x 8' x 6" BURY RIPRAP V-SWALE, 4" DEPTH, AND 2' W. SIDEWALK CULVERT PER COA 2236, See SO 19 PERMIT.

LEGEND

EXIST. SPOT ELEVATION	+5242.0
EXIST. CONTOUR	5242
NEW SPOT ELEVATION	24.0
NEW CONTOUR	12
NEW SWALE	
DRAINAGE DIRECTION, EXISTING	
NEW CONCRETE CURB (0.5' HEIGHT)	
NEW P.C.C., CONCRETE	
FLOWLINE	FL
EXISTING POWER POLE	○ P.P.
EDGE OF ASPHALT	EA
TYPE 'VVL' RIPRAP, 6" BURY (AVG. DIA. 4",)	
STORM WATER QUALITY	SWQ
DOWNSPOUT / SCUPPER	DS

PROJECT DATA

LEGAL DESCRIPTION

PORTION OF TRACT 1, PUEBLO ALTO ADDITION ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

PROJECT BENCHMARK

TOP OF CURB, PROJECTED SW CORNER: ELEVATION = 5240.87, SEE PLAN. NAVD88. TIED FROM ACS "19-K17" (5228.15).

TOPOGRAPHIC DESIGN SURVEY

PROVIDED BY THE SURVEY OFFICE. DATED MARCH 2019, TONY HARRIS, PLS 11463.

NOTICE TO CONTRACTORS - "SO-19 PERMIT"

Private Drainage Facilities within City R.O.W.

1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NM ONE CALL 260-1990 (OR DIAL 811), FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL 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.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY BEING SERVED.
7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HR. BASIS.
8. CONTRACTOR MUST CONTACT DAVID S. HARRISON @ 857-8053 AND CONSTRUCTION COORDINATION AT 924-3416 TO SCHEDULE AN INSPECTION.

APPROVAL	NAME (STREET MAINTENANCE)	DATE

CALCULATIONS

DESIGN CRITERIA

HYDROLOGIC METHODS PER SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL (DPM)
REVISED JANUARY 1993 FOR CITY OF ALBUQUERUQUE ADOPTED BY THE COUNTY OF BERNALILLO
DISCHARGE RATE: Q=QPEAK x AREA.."Peak Discharge Rates For Small Watersheds"
VOLUMETRIC DISCHARGE: VOLUME = EWeighted x AREA
P100 = 2.35 Inches, Zone 2 Time of Concentration, TC = 12 Minutes
DESIGN STORM: 100-YEAR/6-HOUR, 10-YEAR/6-HOUR [ ] = 10 YEAR VALUES

EXISTING CONDITIONS

LOT AREA = 0.40 ACRES, WHERE EXCESS PRECIP. 'D' = 2.12 In. [1.34]
PEAK DISCHARGE, Q100 = 1.9 CFS [1.2], WHERE UNIT PEAK DISCHARGE 'C' = 4.7 CFS/AC. [3.14]
THEREFORE: VOLUME 100 = 3049 CF [1946]

DEVELOPED CONDITIONS

DETERMINE LAND TREATMENTS, PEAK DISCHARGE AND VOLUMETRIC DISCHARGE

FOR STUDY AREA	AREA	LAND TREATM'T	Q Peak	E
UNDEVELOPED	0.00 Ac.(0%)	A	1.56[0.38]	0.53[0.13]
LANDSCAPING/POND	0.03 Ac.(8%)	B	2.28[0.95]	0.78[0.28]
GRAVEL & COMPACTED SOIL	0.02 Ac.(4%)	C	3.14[1.71]	1.13[0.52]
ROOF - PAVEMENT	0.35 Ac.(88%)	D	4.70[3.14]	2.12[1.34]
	0.40 Ac.			

THEREFORE: $E_{Weighted}$ = 1.97 In.[0.xx] THEN: VOLUME 100 = 2860 CF
Q100 = 1.78 CFS VOLUME 10= xx.x
Q10 = xx CFS

DECREASE IN DISCHARGE Q = 0.12 CFS
DEVELOPMENT DECREASE IN VOLUME - 188 CF

SIZE REQUIRED STORM WATER QUALITY POND

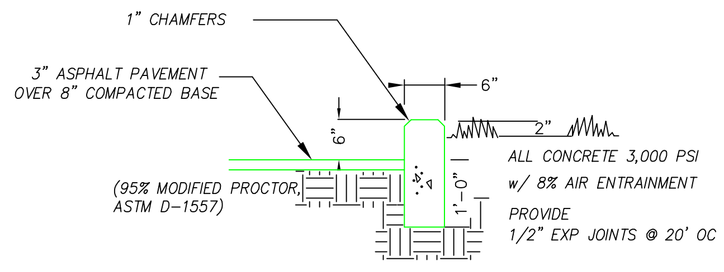
1.) HARVEST DEVELOPED POINT RAINFALL, THROUGH SOFT, DEPRESSED LANDSCAPING 3- MAIN AREAS.

2.) CHECK REQUIRED "FIRST FLUSH" VOLUME OF...
0.34 INCHES X 0.26 AC.(43560 SF)/12 = 321 CF
Depressed LS, 1696 x 2/12 = 283 CF
Pond, 327+137/2 X 0.7 = 160 CF

SIZE EMERGENCY OUTFALL, REF: Brater-King, Handbook of Hydraulics

SIZE OUTLET: $Q = CA\sqrt{2gH}$ Where: C = 0.7, g = 32 f/s^2
SDWK CULVERT Q = 2.6 CFS 1' W. SDWK. CULV. = 1'x7"
A = 0.58 SF, H=0.625' (Orifices w/ Low Head Per Fig. 4.4)
USE 2' WIDE FOR Q100 2X

CHECK W/ $Q = CLH^{3/2}$ where: C = 2.7, L = 2', H = 0.67"
THEN: Q = 2.96 CFS...OK



CONCRETE HEADER CURB

NTS

I, PHILIP W. CLARK, A PROFESSIONAL ENGINEER LICENSED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT I HAVE VISITED THE SITE SHOWN HEREON, AND THAT THE CONTOURS SHOWN REPRESENT THE EXISTING GROUND CONDITIONS, AND DO FURTHER CERTIFY THAT NO EARTHWORK OF ANY KIND, NOR ANY DISTURBANCE OF THE EXISTING GROUND HAS OCCURRED ON THIS SITE SINCE THE CONTOURS WERE DETERMINED.

5/24/19

PHILIP W. CLARK NEW MEXICO 10285 REGISTERED PROFESSIONAL ENGINEER

Clark Consulting Engineers
Edgewood, New Mexico 87015
Tele: (505) 281-2444 Cell: (505) 264-6042

DATE	REVISION

PORTION OF TRACT 1, PUEBLO ALTO ADDITION ALBUQUERQUE, BERNALILLO COUNTY, NM

5200 MARBLE AVE NE
CROSSROADS OF ALBUQUERQUE

GRADING & DRAINAGE PLAN

DESIGNED BY: PWC	DRAWN BY: CCE	JOB #: Crossroads	C-1 OF 1
CHECKED BY: PWC	DATE: MAY 2019	FILE #: G/D	