CITY OF ALBUQUERQUE

June 16, 2016

Richard J. Berry, Mayor

Mike Balaskovits, P.E.
Bohannan Huston, Inc.
7500 Jefferson St NE Courtyard 1
Albuquerque, NM, 87109

RE: Innovate ABQ
Grading and Drainage Plan
Foundation Only Permit
Stamp Date 5-26-16 (File: K14D108)

Dear Mr. Balaskovits:

Based upon the information provided in your submittal received 5-26-2016, the above referenced Grading and Drainage Plan is approved for Foundation Permit.

Please attach a copy of this approved plan in the construction sets if required when submitting for the foundation permit. Prior to Certificate of Occupancy release, Engineer Certification of the as-built elevations per the DPM checklist will be required.

Per discussions with the Planning Director and the Department of Municipal Development (6-15-2016), it is anticipated that further coordination will take place regarding the design of the drainage outfall and management of the first flush volume. However, it does not appear to affect the layout or vertical design of the foundation of this first phase. If issues do arise with the layout or elevation of the foundation, a solution will need to be proposed prior to approval for Building Permit.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Abiel Carrillo, P.E.
Principal Engineer, Planning Dept.
Development Review Services

Orig: Drainage file

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: INNOVATE ABQ Building Permit #: _____ City Drainage #: _____

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

Legal Description: Tract "A" Lands of the First Baptist Church

City Address: 101 Broadway Blvd. NE

Engineering Firm: Bohannan Huston, Inc Contact: Mike Balaskovits or Matt Satches

Address: 7500 Jefferson St. NE 87109

Phone#: 505-823-1000 Fax#: 505-798-7988 E-mail: mbalaskovits@bhinc.com

Owner: _____ Contact: _____

Address: _____

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

Architect: Dekker / Perich / Sabatini Contact: Miriam Hicks

Address: 7601 Jefferson St NE, Suite 100 87109

Phone#: 505-761-9700 Fax#: 505-761-4222 E-mail: miriamh@dpsdesign.org

Other Contact: _____ Contact: _____

Address: _____

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

Check all that Apply:

DEPARTMENT:

X HYDROLOGY/ DRAINAGE

_____ TRAFFIC/ TRANSPORTATION

_____ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

_____ ENGINEER/ ARCHITECT CERTIFICATION

_____ CONCEPTUAL G & D PLAN

X GRADING PLAN

_____ DRAINAGE MASTER PLAN

_____ DRAINAGE REPORT

_____ CLOMR/LOMR

_____ TRAFFIC CIRCULATION LAYOUT (TCL)

_____ TRAFFIC IMPACT STUDY (TIS)

_____ EROSION & SEDIMENT CONTROL PLAN (ESC)

X OTHER (SPECIFY) Drainage Management Plan

IS THIS A RESUBMITTAL?: _____ Yes X No

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

_____ 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

X FOUNDATION PERMIT APPROVAL

_____ GRADING PERMIT APPROVAL

_____ SO-19 APPROVAL

_____ PAVING PERMIT APPROVAL

_____ GRADING/ PAD CERTIFICATION

_____ WORK ORDER APPROVAL

_____ CLOMR/LOMR

_____ PRE-DESIGN MEETING

_____ OTHER (SPECIFY) _____

DATE SUBMITTED: 5-26-2016 By: Matt Satches

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___

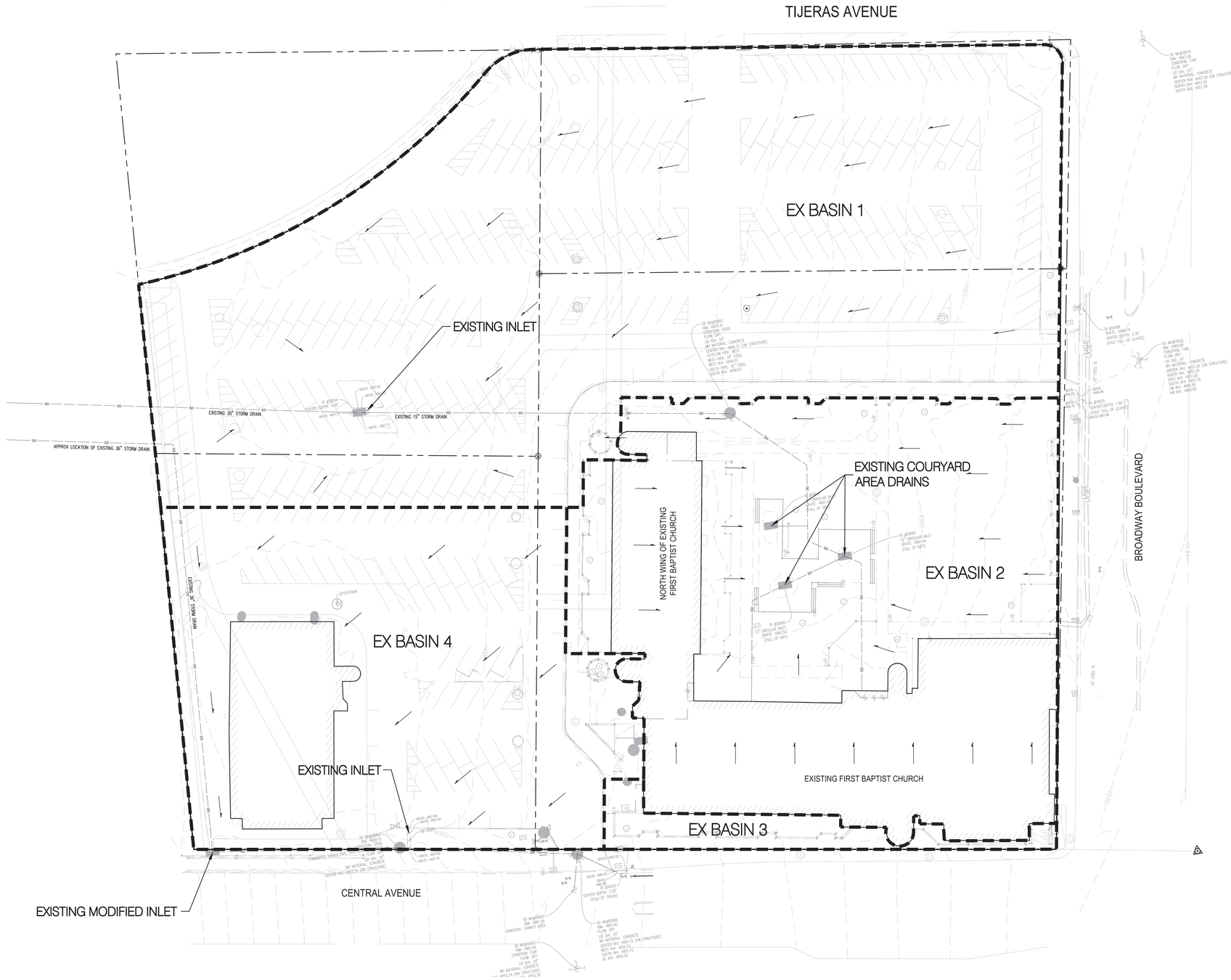
ZONE ATLAS PAGE K-14

INNOVATE ABQ

Existing Developed Conditions Basin Data Table

This table is based on the DPM Section 22.2, Zone: 2

Basin ID	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages A	B	C	D	Q(100yr) (cfs/ac.)	Q(100yr) (CFS)	V(100yr) (inches)	$V_{(100yr\text{-}6hr)}$ (CF)	$V_{(100yr\text{-}24hr)}$ (CF)
CURRENT ONSITE BASINS											
EX1	144017	3.31	0.0%	0.0%	5.0%	95.0%	4.62	*15.28*	*2.07*	*24849*	*29409*
EX2	87630	2.01	0.0%	0.0%	5.0%	95.0%	4.62	*9.30*	*2.07*	*15120*	*17895*
EX3	5956	0.14	0.0%	0.0%	5.0%	95.0%	4.62	*0.63*	*2.07*	*1028*	*1216*
EX4	65639	1.51	0.0%	0.0%	5.0%	95.0%	4.62	*6.96*	*2.07*	*11325*	*13404*
							TOTAL =	*32.18*			



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May 26, 2016 - 3:35pm
Plotted by: MSATCHES

EXISTING DRAINAGE NARRATIVE

EXISTING CONDITIONS:

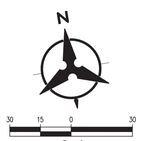
INNOVATE ABQ IS LOCATED ON THE EXISTING FIRST BAPTIST CHURCH PROPERTY ON THE NORTHWEST CORNER OF THE INTERSECTION OF CENTRAL AVENUE AND BROADWAY BOULEVARD. THE TOTAL SITE IS BROKEN INTO FOUR EXISTING TRACTS, TOTALING 7.23 ACRES. THE TRACT THAT THIS PROJECT SITS ON IS APPROXIMATELY 3.14 ACRES AND IS CURRENTLY FULLY DEVELOPED. THE EXISTING FIRST BAPTIST CHURCH COVERS THE MAJORITY OF THE SITE INCLUDING A COURTYARD WHILE THE REST OF THE SITE IS PAVED FOR PARKING. THE ADJACENT PARKING LOCATED ON THE OTHER TRACTS AND ACCESS ROADWAYS TO THE SITE HAVE RELATIVELY STEEP SLOPES OF 2.50% FROM EAST TO WEST AND SURFACE DRAIN TO AN EXISTING INLET IN THE PARKING LOT TO THE WEST, WHICH ULTIMATELY OUTFALL INTO AN EXISTING 30" STORM DRAIN THAT HEADS WEST INTO COPPER. THERE IS AN EXISTING 15" STORM DRAIN LINE WHICH SERVES THE COURTYARD AREA AND BUILDING WHICH DISCHARGES TO THIS EXISTING INLET IN THE WEST PARKING LOT. THE REMAINDER OF THE SITE (SOUTHWEST & SOUTHERN BASINS) DRAIN TO AN EXISTING STORM DRAIN THAT RUNS ALONG THE SOUTHERN SIDE OF THE SITE AND HEADS NORTH AT WITCH POINT THIS 36" STORM DRAIN HEADS WEST ACROSS THE RAILROAD TRACTS INTO COPPER, IT EVENTUALLY CONNECTS TO THE OTHER 30" STORM DRAIN MENTIONED ABOVE.

THE TOTAL EXISTING DISCHARGE FROM THE SITE IS APPROXIMATELY 32.20 CFS. FUTURE DEVELOPMENT WILL FOLLOW THESE HISTORIC PATHS AND CONTINUE TO DRAIN AS DESCRIBED. FIRST FLUSH REQUIREMENTS WILL BE ACCOUNTED FOR AS EACH PHASE COMES ONLINE.

METHODOLOGY:

THE SITE IS LOCATED IN THE CITY OF ALBUQUERQUE, THEREFORE, THE DEVELOPMENT PROCESS MANUAL SECTION 22.2 WAS USED TO ANALYZE THE SITE'S PROPOSED DRAINAGE. PRECIPITATION ZONE 2 WAS USED DUE TO THE SITE LYING EAST OF THE RIO GRANDE AND WEST OF SAN MATEO, PER SECTION 22.2.

SEE C002 FOR PROPOSED CONDITIONS DRAINAGE MANAGEMENT PLAN



GRADING LEGEND

- PROPERTY LINE
- PROJECT LIMITS OF GRADING
- 5025 — EXISTING INDEX CONTOUR
- 5024 — EXISTING INTERMEDIATE CONTOUR
- 5025.25 — EXISTING GROUND SPOT ELEVATION
- 5025 — PROPOSED INDEX CONTOUR
- 5024 — PROPOSED INTERMEDIATE CONTOUR
- PROPOSED FLOW LINE
- 26.75 — PROPOSED FINISHED GRADE SPOT ELEVATION TC=TOP OF CURB, FL=FLOW LINE, TS=TOP OF SIDEWALK TG=TOP OF GRATE, FGH=FINISH GROUND HIGH, FGL=FINISH GROUND LOW
- PROPOSED CURB & GUTTER
- 5%↓ — DIRECTION OF FLOW
- WATER BLOCK/GRADE BREAK
- SD — PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN INLETS
- PROPOSED RETAINING WALL
- EASEMENT
- PROPOSED WATER HARVESTING AREAS (FIRST FLUSH REQUIREMENT)

Bohannan Huston
www.bhinc.com 800.877.5332

ARCHITECTURE / DESIGN / INSPIRATION

DEKKER PERICH SABATINI

7601 JEFFERSON NE, SUITE 100
ALBUQUERQUE, NM 87109

505.761.9700 / DPSDESIGN.ORG

ARCHITECT

FOUNDATION PERMIT SET

ENGINEER

MICHAEL J. BOHANNAN NEW MEXICO 18187 LICENSED PROFESSIONAL ENGINEER 5-26-16

PROJECT

INNOVATE ABQ
101 Broadway Blvd. NE
ALBUQUERQUE, NM

REVISIONS

DRAWN BY	MHS
REVIEWED BY	MJB
DATE	05/20/2016
PROJECT NO.	16-0044

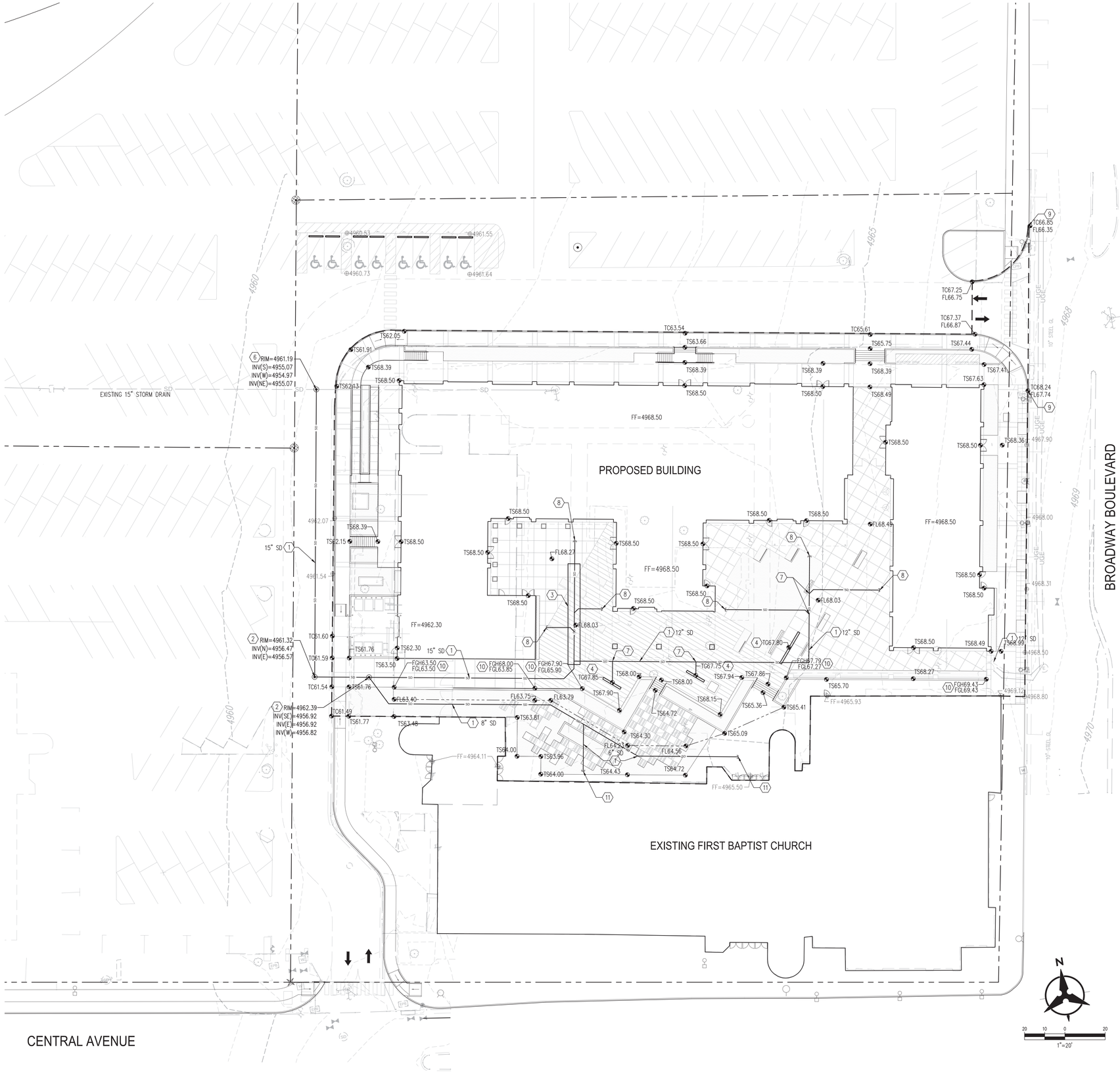
DRAWING NAME

EXISTING DRAINAGE MANAGEMENT PLAN

SHEET NO.

C001

OF



GRADING KEYNOTES

1. HDPE (N12 WT, OR APPROVED EQUAL) STORM DRAIN PIPE.
2. STORM DRAIN MANHOLE PER COA STD DWG 2102.
3. 10,000GAL CISTERN SIZED TO ACCEPT THE "FIRST FLUSH", SET AT AN ELEVATION OF 4958.00 - (TO BE CONSTRUCTED LATER IN THE PROJECT).
4. TRENCH DRAIN.
5. NOT USED.
6. CONSTRUCT NEW MANHOLE PER COA STANDARD DRAWING 2102.
7. STORM DRAIN FITTING PER MANUFACTURES RECOMMENDATIONS.
8. ROOF DRAIN, STUB TO WITHIN 5' OF BUILDING. SEE STRUCTURAL AND PLUMBING PLANS FOR INVERT AND SIZE.
9. MATCH EXISTING.
10. RETAINING WALL.
11. CONNECT TO EXISTING ROOF DRAIN.

GENERAL NOTES

1. ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE PROJECT GEOTECHNICAL REPORT. WHERE APPLICABLE, CITY OF ALBUQUERQUE PUBLIC WORKS STANDARDS SHALL APPLY.

2. THE CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA REQUIREMENTS WITH RESPECT TO STORM WATER DISCHARGE.

3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL POTENTIAL OBSTRUCTIONS INCLUDING ALL UNDERGROUND UTILITIES. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION OBSERVER OR ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.

4. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE FOR LOCATION OF EXISTING UTILITIES.

5. ALL ELECTRICAL, TELEPHONE, CABLE TV, GAS AND OTHER UTILITY LINES, CABLES, AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION THAT REQUIRE RELOCATION, SHALL BE COORDINATED WITH THAT UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL NECESSARY UTILITY ADJUSTMENTS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DELAYS OR INCONVENIENCES CAUSED BY UTILITY COMPANY WORK CREWS. THE CONTRACTOR MAY BE REQUIRED TO RESCHEDULE HIS ACTIVITIES TO ALLOW UTILITY CREWS TO PERFORM THEIR REQUIRED WORK.

6. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITY LINES WITHIN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AND APPROVED BY THE CONSTRUCTION OBSERVER.

7. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT PROPERTIES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

8. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS OR DESIGNATED TRAFFIC LANES. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY.

9. THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION (I.E., BARRICADING, TOPSOIL DISTURBANCE, EXCAVATION PERMITS, EPA STORM WATER PERMITS, ETC.).

10. ALL PROPERTY CORNERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL PROPERTY CORNERS MUST BE RESET BY A REGISTERED LAND SURVEYOR.

11. THE CONTRACTOR SHALL PREPARE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN AND OBTAIN APPROVAL OF SUCH PLAN FROM THE CITY OF ALBUQUERQUE, TRAFFIC ENGINEERING DEPARTMENT, PRIOR TO BEGINNING ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.

12. ALL BARRICADES AND CONSTRUCTION SIGNING SHALL CONFORM TO APPLICABLE SECTIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), US DEPARTMENT OF TRANSPORTATION, LATEST EDITION.

13. THE CONTRACTOR SHALL MAINTAIN ALL CONSTRUCTION BARRICADES AND SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.

14. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO CONFORM WITH EPA REQUIREMENTS, INCLUDING COMPLIANCE WITH NPDES PHASE 2 REQUIREMENTS.

GRADING NOTES

1. EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.

2. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST.

3. ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "GEOTECHNICAL INVESTIGATION". ALL OTHER WORK SHALL, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT, (FIRST PRIORITY) SPECIFICATIONS, AND/OR THE CITY OF ALBUQUERQUE (COA) STANDARD SPECIFICATIONS FOR PUBLIC WORKS (SECOND PRIORITY).

4. EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.

5. IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES EXCEPT AS REQUIRED BY THIS PLAN.

6. THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY.

7. A DISPOSAL SITE FOR ANY & ALL EXCESS EXCAVATION MATERIAL, AND UNSUITABLE MATERIAL AND/OR A BORROW SITE CONTAINING ACCEPTABLE FILL MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS AND APPROVED BY THE OBSERVER. ALL COSTS INCURRED IN OBTAINING A DISPOSAL OR BORROW SITE AND HAUL TO OR FROM SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.

8. PAVING AND ROADWAY GRADES SHALL BE +/- 0.1' FROM PLAN ELEVATIONS. PAD ELEVATION SHALL BE +/- 0.05' FROM BUILDING PLAN ELEVATION.

9. ALL PROPOSED CONTOURS REFLECT TOP OF PAVEMENT ELEVATIONS IN THE PARKING AREA AND MUST BE ADJUSTED FOR MEDIANS AND ISLANDS.

10. VERIFY ALL ELEVATIONS SHOWN ON PLAN FROM BASIS OF ELEVATION CONTROL STATION PRIOR TO BEGINNING CONSTRUCTION.

GRADING LEGEND

- PROPERTY LINE
- PROJECT LIMITS OF GRADING
- 5025 EXISTING INDEX CONTOUR
- 5024 EXISTING INTERMEDIATE CONTOUR
- 5025.25 EXISTING GROUND SPOT ELEVATION
- 5025 PROPOSED INDEX CONTOUR
- 5024 PROPOSED INTERMEDIATE CONTOUR
- PROPOSED FLOW LINE
- 26.75 PROPOSED FINISHED GRADE SPOT ELEVATION TC=TOP OF CURB, FL=FLOW LINE, TS=TOP OF SIDEWALK TG=TOP OF GRATE, FGH=FINISH GROUND HIGH, FGL=FINISH GROUND LOW
- PROPOSED CURB & GUTTER
- DIRECTION OF FLOW
- WATER BLOCK/GRADE BREAK
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN INLETS
- PROPOSED RETAINING WALL
- EASEMENT
- PROPOSED WATER HARVESTING AREAS (FIRST FLUSH REQUIREMENT)

Bohannan Huston
www.bhinc.com 800.877.5332

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May 26, 2016 – 11:05am
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ARCHITECTURE / DESIGN / INSPIRATION

DEKKER PERICH SABATINI

7601 JEFFERSON NE, SUITE 100
ALBUQUERQUE, NM 87109

505.761.9700 / DPSDESIGN.ORG

ARCHITECT

FOUNDATION PERMIT SET

ENGINEER

MICHAEL J. BOHANNAN
NEW MEXICO
18187
5-26-16
REGISTERED PROFESSIONAL ENGINEER

PROJECT

INNOVATE ABQ
101 Broadway Blvd. NE
ALBUQUERQUE, NM

REVISIONS

DRAWN BY	MHS
REVIEWED BY	MJB
DATE	05/20/2016
PROJECT NO.	16-0044

DRAWING NAME

GRADING PLAN

SHEET NO.

C100

OF

FEMA FIRM MAP #35001C0334G

INNOVATE ABQ

Proposed Developed Conditions Basin Data Table

This table is based on the DPM Section 22.2, Zone: 2

Basin ID	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages A	B	C	D	Q(100yr) (cfs/ac.)	Q(100yr) (CFS)	V(100yr) (inches)	$V_{(100yr\text{-}6hr)}$ (CF)	$V_{(100yr\text{-}24hr)}$ (CF)	FIRST FLUSH (CF)
CURRENT ONSITE BASINS												
B1	29167	0.67	0.0%	0.0%	0.0%	100.0%	4.70	*3.15*	*2.12*	*5153*	*6125*	*826*
B2	4897	0.11	0.0%	0.0%	6.4%	93.6%	4.60	*0.52*	*2.06*	*839*	*992*	*130*
B3	8774	0.20	0.0%	0.0%	21.9%	78.1%	4.36	*0.88*	*1.90*	*1391*	*1620*	*194*
B4	21425	0.49	0.0%	0.0%	23.5%	76.5%	4.33	*2.13*	*1.89*	*3369*	*3916*	*464*
B5	5471	0.13	0.0%	0.0%	16.6%	83.4%	4.44	*0.56*	*1.96*	*892*	*1044*	*129*
B6	28470	0.65	0.0%	0.0%	0.0%	100.0%	4.70	*3.07*	*2.12*	*5030*	*5979*	*NA*
							TOTAL =	*7.23*			TOTAL =	*1150*

STORM DRAIN PIPE TABLE

PIPE #	INLET/SD/BASIN	Size in.	Slope	Capacity* cfs	ACTUAL FLOW cfs
SD1	1/6 B1	6	1.50%	0.69	0.52
SD2	1/6 B1	6	1.50%	0.69	0.52
SD3	SD-1, SD-2	12	1.50%	4.36	1.05
SD4	1/6 B1	6	1.50%	0.69	0.52
SD5	SD-3, SD-4	12	1.50%	4.36	1.57
SD6	1/2 B3, SD-5	12	1.50%	4.36	2.01
SD7	1/2 B3	8	1.50%	1.48	1.07
SD8	SD-6, SD-7	15	1.50%	7.91	3.08
SD9	B2	8	1.50%	1.48	0.52
SD10	SD-8, SD-9	15	1.50%	7.91	3.60
SD11	1/6 B1	6	1.50%	0.69	0.52
SD12	1/6 B1	6	1.50%	0.69	0.52
SD13	1/6 B1	12	1.50%	4.36	0.52
SD14	B1, B2, B3	15	1.50%	7.91	4.54
SD15	SD-14, SD-17	15	1.50%	7.91	7.61
SD16	SD-15	15	1.50%	7.91	7.61
SD17	SD-18, SD-19	12	1.50%	4.36	3.07
SD18	1/2 B6	8	2.00%	1.71	1.54
SD19	1/2 B6	8	2.00%	1.71	1.54

Capacity Based on Manning's Eq w/ N=0.013

N

20 10 0 20

1"=20'

GRADING LEGEND

- PROPERTY LINE
- PROJECT LIMITS OF GRADING
- 5025 EXISTING INDEX CONTOUR
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- PROPOSED CURB & GUTTER
- S=2.0% DIRECTION OF FLOW
- WATER BLOCK/GRADE BREAK
- 50 PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN INLETS
- PROPOSED RETAINING WALL
- EASEMENT
- PROPOSED WATER HARVESTING AREAS (FIRST FLUSH REQUIREMENT)

Bohannan Huston
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May 26, 2016 - 3:42pm
Plotted by: MSATCHES

PROPOSED DRAINAGE NARRATIVE

SITE INTRODUCTION:

THE FIRST PHASE OF INNOVATE ABQ IS LOCATED ON THE EXISTING FIRST BAPTIST CHURCH PROPERTY ON THE NORTHWEST CORNER OF THE INTERSECTION OF CENTRAL AVENUE AND BROADWAY BOULEVARD. THE TRACT THAT THIS PROJECT SITS ON IS APPROXIMATELY 3.14 ACRES AND IS CURRENTLY FULLY DEVELOPED. THE PROPOSED DEVELOPMENT WILL CONTINUE TO DRAIN AT THE HISTORIC FLOW RATES TO THE WEST INTO THE EXISTING 30" STORM DRAIN.

PER FEMA MAP PANEL #35001C0334G (THIS SHEET), THE SITE IS NOT LOCATED WITHIN A KNOWN FLOOD ZONE.

METHODOLOGY:

THE SITE IS LOCATED IN THE CITY OF ALBUQUERQUE. THEREFORE, THE DEVELOPMENT PROCESS MANUAL SECTION 22.2 WAS USED TO ANALYZE THE SITE'S PROPOSED DRAINAGE. PRECIPITATION ZONE 2 WAS USED DUE TO THE SITE LYING EAST OF THE RIO GRANDE AND WEST OF SAN MATEO. PER SECTION 22.2, THE ONSITE STORM DRAINS WERE SIZED BASED OFF OF MANNING'S EQUATION.

PROPOSED CONDITIONS:

THE CONSTRUCTION OF THIS PROJECT WILL CONSIST OF A NEW MULTISTORY BUILDING AND COURTYARD IMPROVEMENTS BETWEEN THE EXISTING FIRST BAPTIST CHURCH AND THE NEW BUILDING. THE WORK WILL BE CONFINED ONLY TO THE AREA TO THE NORTH OF THE EXISTING CHURCH AND NOT IMPACT THE SURROUNDING PARKING. THE NORTHERN WING OF THE EXISTING CHURCH WILL BE DEMOLISHED TO MAKE ROOM FOR THE NEW BUILDING. RUNOFF GENERATED BY THE NEW DEVELOPMENT WILL DISCHARGE INTO A NEW ONSITE CISTERN SIZED TO ACCEPT THE "FIRST FLUSH" VOLUME WHICH WE'VE CALCULATED AS APPROXIMATELY 1,150 CF (OR 8,600 GALLONS).

BASED ON THE PROPOSED GRADING, THE SITE WILL BE DIVIDED INTO 6 ONSITE DRAINAGE BASINS. THE PROPOSED ONSITE BASINS OUTFALL INTO THE EXISTING 15" STORM DRAIN SYSTEM ONSITE. BASIN 5 MOSTLY CONSISTS OF LAND WITHIN THE RIGHT OF WAY, THEREFORE THE BASIN WAS DESIGNED TO DISCHARGE EAST INTO BROADWAY BLVD. THIS IS APPROXIMATELY 0.50 CFS. BASIN 6 IS THE REMAINDER OF THE EXISTING FIRST BAPTIST CHURCH. THIS BASIN'S RUNOFF IS ACCOUNTED FOR IN THE ONSITE STORM DRAIN ANALYSIS, BUT THE CONTRIBUTING FLOW IS NOT ACCOUNTED FOR IN THE FIRST FLUSH VOLUME OR THE TOTAL SITE PEAK DISCHARGE AS THE BUILDING IS TO REMAIN UNTOUCHED DURING THIS PHASE OF THE PROJECT. THEREFORE THE FLOW IS THE SAME AS EXISTING CONDITIONS. BASIN 4 CONSISTS OF THE LOWER COURTYARD, OF WHICH A PORTION DRAINS INTO THE ONSITE STORM DRAIN SYSTEM (INCLUDING ONSITE CISTERN), THE OTHER PORTION SURFACE FLOWS INTO THE PARKING LOT TO THE WEST BEFORE CONTINUING ON INTO THE EXISTING 15" STORM DRAIN. BASIN 1 IS THE PROPOSED BUILDING. THE BUILDING WILL BE PIPED INTO THE UNDERGROUND STORM DRAIN SYSTEM. BASINS 2 AND 3 ARE LOCATED IN THE NORTHERN COURTYARD. THESE BASINS WILL DISCHARGE INTO THE PROPOSED TRENCH DRAINS AND CONTINUE INTO THE ONSITE SYSTEM AND CISTERN AND SLOWLY DISCHARGE VIA A SMALL DIAMETER PIPE. THE TOTAL FIRST FLUSH VOLUME FROM THESE ONSITE BASINS WILL BE DETAINED WITHIN THE ONSITE CISTERN. DURING LARGER STORM EVENTS, THE CISTERN WILL HAVE AN OVERFLOW TIED DIRECTLY TO A NEW STORM DRAIN SYSTEM WHICH WILL EXTEND TO THE EXISTING 15" STORM DRAIN. SURROUNDING GRADES ADJACENT TO THE BUILDING ARE SET LOW ENOUGH TO ENSURE THAT IF THE ONSITE INLETS AND TRENCH DRAINS BECOME CLOGGED, DRAINAGE WILL DISCHARGE DIRECTLY TO THE STREET OR THE PARKING LOT PRIOR TO ENTERING THE BUILDINGS.

PEAK DISCHARGE OF DEVELOPED CONDITIONS WILL BE APPROXIMATELY 7.23 CFS. THIS IS AN INCREASE OF LESS THAN 1.0 CFS FROM EXISTING CONDITIONS. HOWEVER THIS DOES NOT TAKE INTO ACCOUNT THE DETENTION OF THE FIRST FLUSH VOLUME WITHIN THE CISTERN WHICH WILL BRING IT CLOSER TO EXISTING CONDITIONS. THE 0.5 CFS FROM BASIN 5 WILL ALSO CONTINUE ON IT'S HISTORIC PATH AND WILL NOT INCREASE FLOWS TO THE EXISTING STORM DRAIN SYSTEM. GIVEN THE SITE'S CONSTRAINTS, OFFSITE DETENTION PONDS (OR CISTERNS) ARE NOT AN OPTION.

GIVEN THE ABOVE INFORMATION, AND FUTURE DETAILS TO COME CONCERNING THE CISTERN, WE ARE REQUESTING CITY HYDROLOGY APPROVAL IN SUPPORT OF FOUNDATION PERMIT APPROVAL.

A SUBSEQUENT GRADING AND DRAINAGE PLAN AND ASSOCIATED DRAINAGE MANAGEMENT PLAN WILL BE SUBMITTED IN SUPPORT OF BUILDING PERMIT APPROVAL AND WILL INCLUDE ADDITIONAL GRADES AND INFORMATION AS NECESSARY.

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REVISIONS

DRAWN BY	MHS
REVIEWED BY	MJB
DATE	05/20/2016
PROJECT NO.	16-0044

DRAWING NAME

PROPOSED DRAINAGE MANAGEMENT PLAN

SHEET NO.

C002

OF