CITY OF ALBUQUERQUE

Hydrology Section Planning Department
David S. Campbell, Director

Timothy M. Keller, Mayor

June 27, 2018

Nicholas Nuccio
829 Ponderosa NW
Albuquerque, New Mexico 87107

RE: **1220 Iron St SW**
Grading and Drainage Plan
Engineers Stamp Date 4/3/2018 (K13D076)

Dear Mr. Nuccio,

Based upon the information provided in your submittal received 5/29/2018, this plan is approved for Grading Permit and Building Permit. Please attach a copy of this approved plan and letter into the construction sets in the building permitting process prior to sign-off by Hydrology.

A Private Drainage Easement will be required on the plat with the City's standard maintenance note for the pond.

Prior to **Certificate of Occupancy release**, Engineer Certification per the DPM checklist of this plan will be required.

If you have any questions, please contact me at 924-3986 or e-mail at jhughes@cabq.gov .

Sincerely,

James D. Hughes, P.E.
Principal Engineer, Hydrology
Planning Department

C: Data Base K13D076

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: Slot Yard House Subdivision Building Permit #: 2018-16128 City Drainage #: K13D076

DRB#: 1011511 EPC#: _____ Work Order#: _____

Legal Description: Lot 10-A and 10-B of Raynolds Addition

City Address: 1220 Iron SW, Abq, NM 87102

Engineering Firm: JCII Group, LLC Contact: _____

Address: 8105 Sand Springs Cr. NW, Abq, NM 87114

Phone#: 505-264-6918 Fax#: _____ E-mail: _____

Owner: Catherine Noble & Nicholas Nuccio Contact: _____

Address: 829 Ponderosa Nw Albuquerque, NM 87107

Phone#: 505 803 4939 Fax#: _____ E-mail: nick@scatterfarm.com

Architect: _____ Contact: _____

Address: _____

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

Surveyor: _____ Contact: _____

Address: _____

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

Contractor: Owner Contact: _____

Address: _____

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

TYPE OF SUBMITTAL:

- X DRAINAGE REPORT
- X DRAINAGE PLAN 1st SUBMITTAL
- ___ DRAINAGE PLAN RESUBMITTAL
- ___ CONCEPTUAL G & D PLAN
- X GRADING PLAN
- ___ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ___ ENGINEER'S CERT (HYDROLOGY)
- ___ CLOMR/LOMR
- ___ TRAFFIC CIRCULATION LAYOUT (TCL)
- ___ ENGINEER'S CERT (TCL)
- ___ ENGINEER'S CERT (DRB SITE PLAN)
- ___ ENGINEER'S CERT (ESC)
- ___ SO-19
- ___ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ___ SIA/FINANCIAL GUARANTEE RELEASE
- ___ PRELIMINARY PLAT APPROVAL
- ___ S. DEV. PLAN FOR SUB'D APPROVAL
- ___ S. DEV. FOR BLDG. PERMIT APPROVAL
- ___ SECTOR PLAN APPROVAL
- X FINAL PLAT APPROVAL
- ___ CERTIFICATE OF OCCUPANCY (PERM)
- ___ CERTIFICATE OF OCCUPANCY (TCL TEMP)
- ___ FOUNDATION PERMIT APPROVAL
- ___ BUILDING PERMIT APPROVAL
- X GRADING PERMIT APPROVAL
- ___ PAVING PERMIT APPROVAL
- ___ WORK ORDER APPROVAL
- ___ GRADING CERTIFICATION
- ___ SO-19 APPROVAL
- ___ ESC PERMIT APPROVAL
- ___ ESC CERT. ACCEPTANCE
- ___ OTHER (SPECIFY)

RECEIVED
MAY 29 2018
LAND DEVELOPMENT SECTION

$260.00

WAS A PRE-DESIGN CONFERENCE ATTENDED: ___ Yes ___ No ___ Copy Provided

DATE SUBMITTED: 5/29/2018 By: Nicholas Nuccio

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the followin

1. **Conceptual Grading and Drainage Plan**: Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5) acres
3. **Drainage Report**: Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

SLOT YARD HOUSE SUBDIVISION

GRADING AND DRAINAGE

LOT 10–A & 10–B, RAYNOLDS ADDITION
ALBUQUERQUE, NEW MECIXO

OWNER INFORMATION

NICK NUCCIO & CATHERINE NOBLE
1220 IRON SW
ALBUQUERQUE, NM 87102

PROPERTY INFORMATION

PLAT BK. D1, PG. 33.
RECORDED: NOV. 24, 1924
SEC. 19, T. 10N, R. 3E, N.M.P.M.
LOT SIZE: 0.122 ACRE UNDEVELOPED
(PREVIOUSLY DEVELOPED)

PROPERTY DESCRIPTION

LOT NUMBERED 10 AND THE EAST 1/2 OF LOT NUMBERED 11 IN THE BLOCK NUMBERED 53 OF THE RAYNOLDS ADDITION TO THE CITY OF ALBUQUERQUE, NEW MEXICO,

LOCATION MAP

SCALE: 1"=1000'±
ZONE ATLAS MAP K–13–Z

GRADING & DRAINAGE ANALYSIS

I. EXECUTIVE SUMMARY

THIS PLAN SERVES TO SUPPORT THE PROPOSED DEVELOPMENT FOR SLOT HOUSE SUBDIVISION. THE SITE IS LOCATED IN THE CITY OF ALBUQUERQUE AND IS KNOWN AS LOT 10 (AND HALF OF LOT 11) RAYNOLDS ADDITION. THIS SUBDIVISION IS LOCATED AT 1220 IRON SW. THE PROPOSED CONSTRUCTION CONSISTS OF NEW BUILDING, UTILITIES, GRADING & DRAINAGE IMPROVEMENTS, GRAVEL PARKING LOT, WALKWAYS, LANDSCAPE AND OTHER AMENITIES AS REQUIRED FOR A FULLY FUNCTIONAL SITE. OFF–SITE CONSTRUCTION WILL INCLUDE SIDEWALK, CURB, GUTTER, AND DRIVE PAD REMOVAL. MOST LOTS WITHIN THE RAYNOLDS ADDITION ARE FULLY DEVELOPED. ALSO, STREET PAVEMENT, CURB AND GUTTER, PUBLIC UTILITIES AND DRAINAGE STRUCTURES FOR RAYNOLDS ADDITION ARE IN PLACE. DUE TO THESE DEVELOPMENTS, OFF–SITE STORMWATER SHOULD NOT IMPACT THIS SITE. IT IS PROPOSED THAT STORMWATER GENERATED ON–SITE WILL BE CONTROLLED AND CONVEYED TO ON–SITE RETENTION BASINS. THE TOTAL RUN–OFF GENERATED ON–SITE DURING A 100 YEAR, 6–HOUR STORM EVENT IS DETERMINED TO BE 0 CFS. THIS RUN–OFF WILL BE RETAINED AND 0.07 CFS WILL OVERFLOW TO THE ROW DURING A 100YR–6HR EVENT.

II. PROJECT DESCRIPTION

AS SHOWN ON THE LOCATION MAP THE SITE (61,864 SF = APPROXIMATELY 1.4 ACRES) IS LOCATED IN THE CITY OF ALBUQUERQUE AT 1220 IRON SW. THE SITE IS PLATTED AS "LOT 10 AND HALF OF LOT 11 OF THE RAYNOLDS ADDITION, SECTION 19, TOWNSHIP 10N, RANGE 3E, NMPM, CITY OF ALBUQUERQUE, BERNALILLO COUNTY NEW MEXICO, NOVEMBER 24, 1924. WHICH IS RECORDED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO IN BOOK D1, PAGE 33, FURTHERMORE, THE SITE IS LOCATED IN FLOOD ZONE X AS INDICATED BY FIRM NUMBER 35001C0333H, RECORDED ON 08/16/2012 BY THE FEMA.

III. BACKGROUND DOCUMENTS

NO KNOWN DRAINAGE REPORT EXISTS FOR THIS LOT. THE PLAT, THE FIRM, THE COA DEVELOPMENT PROCESS MANUAL, THE SITE SURVEY, AND THE PROPOSED GRADING AND DRAINAGE PLAN WERE UTILIZED FOR THE EXECUTION OF THIS HYDROLOGY AND HYDRAULIC ANALYSIS.

IV. EXISTING CONDITIONS

CURRENTLY THE SITE IS UNDEVELOPED, BUT WAS PREVIOUSLY DEVELOPED WITH A SINGLE FAMILY HOME. THERE IS VERY LITTLE VEGETATION ON THE PROJECT SITE. THE SITE CURRENTLY PONDS WATER, BUT NATURALLY DRAINS SOUTHERLY.

V. DEVELOPED CONDITIONS

THE PROPOSED ON–SITE CONSTRUCTION CONSISTS OF A BUILDING, UTILITIES, GRADING & DRAINAGE IMPROVEMENTS, GRAVEL PARKING LOT, WALKWAYS, LANDSCAPE AND OTHER AMENITIES. OFF–SITE CONSTRUCTION WILL INCLUDE SIDEWALK, CURB, GUTTER AND DRIVE PAD REMOVAL. IT IS PROPOSED THAT STORMWATER GENERATED ON–SITE WILL BE CONTROLLED AND CONVEYED TO ON–SITE RETENTION BASIN. ALL LANDSCAPED AREAS WILL BE DEPRESSED 6–INCHES, THEREFORE STORMWATER THAT FALLS IN THESE AREAS WILL SLOWLY PERCOLATE INTO THE GROUND AND SURROUNDING VEGETATION. ROOF RUN–OFF WILL BE ROUTED TO AN UNDERGROUND CISTERN THAT WILL ALLOW PERCOLATION. PROPOSED DRAINAGE STRUCTURES ARE SIZED TO ACCOMMODATE THE 100–YR 6–HOUR EVENT.

VI. EROSION CONTROL

CURRENTLY NO HARD SURFACES EXIST AT THE SITE. HOWEVER, AFTER DEVELOPMENT APPROXIMATELY 35% OF THE SITE WILL BE MADE–UP OF ROOFTOP. THE PROPOSED CONSTRUCTION WILL INCREASE THE AMOUNT OF IMPERVIOUS AREA. PERMANENT EROSION CONTROL ROCK AND GRAVEL.

VII. WATER QUALITY ENHANCEMENTS

NO WATER QUALITY ENHANCEMENTS ARE PROPOSED.

VIII. GRADING & DRAINAGE PLAN

THE GRADING & DRAINAGE PLAN SHOWN ON THIS SHEET DEPICTS:
1. EXISTING GRADE SPOT ELEVATION AS TAKEN FROM RECENT TOPOGRAPHY
2. PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOUR LINES
3. THE LIMITS AND CHARACTER OF THE EXISTING FEATURES
4. THE LIMITS AND CHARACTER OF THE PROPOSED IMPROVEMENTS
5. CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES

IX. CALCULATIONS

THE CALCULATIONS HEREON ANALYZE THE HYDROLOGY FOR THE DEVELOPED CONDITIONS UPON A 100 YEAR, 6–HOUR RAINFALL EVENT. PROCEDURE FOR 40 ACRES AND SMALLER BASINS, AS SET FORTH IN CHAPTER 22 OF THE DEVELOPMENT PROCESS MANUAL (DPM), VOLUME 1, 1997 REVISIONS, ARE USED TO QUANTIFY THE PEAK RATE OF DISCHARGE (Q) AND VOLUME (V) OF ON–SITE STORMWATER. RESULTS OD THE HYDROLOGY AND HYDRAULIC CALCULATIONS ARE PRESENTED BELOW.

HYDROLOGY ANALYSIS FOR PEAK RATE OF DISCHARGE (Q) AND PEAK VOLUME (V):

SITE CHARACTERISTICS:
DRAINAGE AREA = (SEE DRAINAGE AREA MAP)
LAND TREATMENT (DPM CH. 22, TABLE A–4)
PRECIPITATION ZONE = 2 (DPM CH. 22, TABLE A–1)
FOR ADDITIONAL DATA USED, SEE TABLE 1 AND 2 ON THIS SHEET.

DRAINAGE AREA 1
TOTAL AREA = 0.102 ACRES
LAND TREATMENT
B = 15%
C = 45%
D = 40%
ANALYSIS RESULTS
Q = 0.11 CFS
V = 546 CF

EXISTING
TOTAL AREA = 0.122
LAND TREATMENT
C = 100%
ANALYSIS RESULTS
Q = 0.07 CFS
V = 501 CF

DRAINAGE AREA 2
TOTAL AREA = 0.020 ACRES
LAND TREATMENT
D = 100%
ANALYSIS RESULTS
Q = 0.04 CFS
V = 154 CF

HYDRAULIC ANALYSIS FOR CAPACITY (Q) OF SITE DRAINAGE AMENITIES:

ROOF DRAIN CAPACITY (Q):
PIPE ROUGHNESS (n) = 0.012
PIPE FLOW AREA (A) = 0.196 sf
HYDRAULIC RADIUS (R) = 0.125
PIPE SLOPE (S) = .0208 ft/ft

Q = (1.49/n)(A)(R^0.667)(S^0.5) = 0.88 cfs

RETENTION BASIN DESCRIPTION AND VOLUME (V) CALCULATIONS:
RETENTION BASIN IS DESIGNED WITH 4H:1V SIDE SLOPES AND INCLUDES 8" PIPE, AND GRAVEL FILLED PARKING LOT. THE TOTAL VOLUME IS CALCULATED AS FOLLOWS;

DRAINAGE AREA 1
RETENTION BASIN:
V = (1/2)[(208 SF + 1,584 SF)(0.5 FT)] = 448 CF
8–INCH STORM DRAIN PIPE:
LENGTH = 290 LF
V = [((3.14)(0.67)^2)/4] X 290 LF = 102 CF

DRAINAGE AREA 2
GRAVELED FILLED PARKING LOT:
V = (590 SF)(1.0 FT)(30%) = 177 CF

X. STORM WATER CONTROL MEASURES

TO MANAGE THE FIRST FLUSH IN ORDER TO PREVENT A HIGH CONCENTRATION OF POLLUTANTS FROM RUNNING OFF SITE AND TO COMPLY WITH THE CITY MS4, A RETENTION BASIN IS PROPOSED ON–SITE. THE VOLUME FOR SAID RETENTION BASIN IS AS FOLLOWS;

FIRST FLUSH VOL. = 0.122 ACRES X 0.44 INCHES = 195 CF
PROPOSED RETENTION BASIN = 448 CF => FIRST FLUSH MET

XI. CONCLUSION

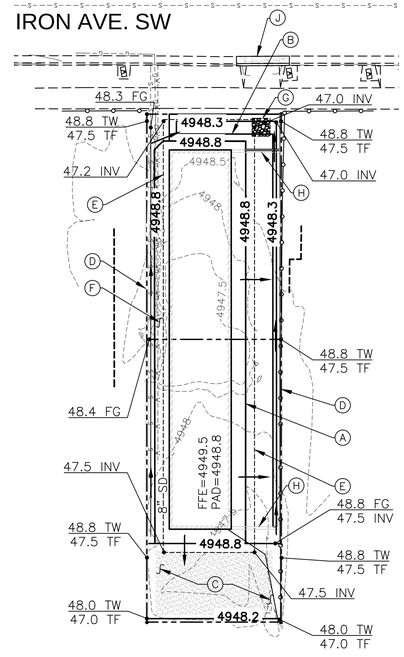
THIS PLAN SUPPORTS THE PROPOSED DEVELOPMENT. THE PROPOSED GRADING AND DRAINAGE PLAN IS DESIGNED TO CONVEY STORMWATER GENERATED ON–SITE BY A 100 YEAR, 6–HOUR STORM EVENT TOWARDS RETENTION BASINS. RETENTION BASINS ARE DESIGNED TO RETAIN THE TOTAL VOLUME. ALL ON–SITE STORM DRAINAGE FACILITIES WILL BE PRIVATELY OWNED, OPERATED AND MAINTAINED.

LEGEND

4948 EXISTING ELEVATION
48.3 FG PROPOSED ELEVATION
TC = TOP OF CURB/CONCRETE
TF = TOP OF FOOTER
FG = FINAL FINSHED GRADE
INV = PIPE INVERT
UNDERGROUND GAS LINE
SANITARY SEWER LINE
WATER LINE
PROPERTY LINE

N E S W
0 10' 20'
0 1/2" 1"

GRADING & DRAINAGE PLAN



GRADING & DRAINAGE KEYED NOTES

A. GRADE AREA PER CONTOUR ELEVATIONS SHOWN. 4H:1V MAX. CONTOUR LINES SHOWN ARE AT TOP OF FINISHED LANDSCAPE AND/OR GRAVEL SURFACE.

B. GRADE RETENTION BASIN AS SHOWN (4H:1V MAX. SIDE SLOPES) WITH BOTTOM ELEV. = 4948.3

C. INSTALL 1" TO 1/2" CRUSHED GRANITE AT 4" (MIN.) THICK, OVER 4" TO 6" ROCK AT 8" THICK.

D. CONSTRUCT 15" CONCRETE HEADER CURB PER ELEVATIONS SHOWN ON PLAN. INTEGRATE SITE FENCE ON TOP OF HEADER CURB. COORDINATE WITH OWNER.

E. INSTALL 8" DRAIN PIPE FOR ROOF WATER HARVESTING. PROVIDE WATERTIGHT JOINTS WHERE THE SYSTEM IS WITHIN 8' OF BUILDING (OR PER GEOTECHNICAL REPORT). PROVIDE ROOF STUBOUTS AND CLEANOUTS, COORDINATION WITH BUILDING PLANS.

F. CONSTRUCT 3" THICK CRUSHER FINES WALKWAY WITH LANDSCAPE BORDERING COORDINATE WITH OWNER.

G. INSTALL 6" ROCK IN 5'X5' EXCAVATION AT 2 FEET DEEP, PROVIDE GEOTECHNICAL FABRIC ALONG ALL SIDES AND BOTTOM.

H. CONSTRUCT SITE FENCE AND PROVIDE 12" x 4" UNOBSTRUCTED DRAINAGE OPENING ALONG NORTH FENCE AT INVERT ELEV. 4948.5.

I. NOTE NOT USED.

J. CONSTRUCT NEW STANDARD CURB AND GUTTER PER COA DETAIL 2415.

JCII Group, LLC.
DEVELOPMENT SOLUTIONS
ALBUQUERQUE, NEW MEXICO
505.264.6918 - JCIIGroup@gmail.com

JOSEPH J. CASARES JR. NEW MEXICO 19014 REGISTERED PROFESSIONAL ENGINEER

4/3/2018

SLOT HOUSE SUBDIVISION
1220 IRON AVE. SW, ALBUQUERQUE, NEW MEXICO
GRADING & DRAINAGE

REV:

PHASE: 75% CONSTRUCTION DOCUMENT
DATE: MARCH 25, 2018

C100