



FIRM MAP

GRADING & DRAINAGE PLAN

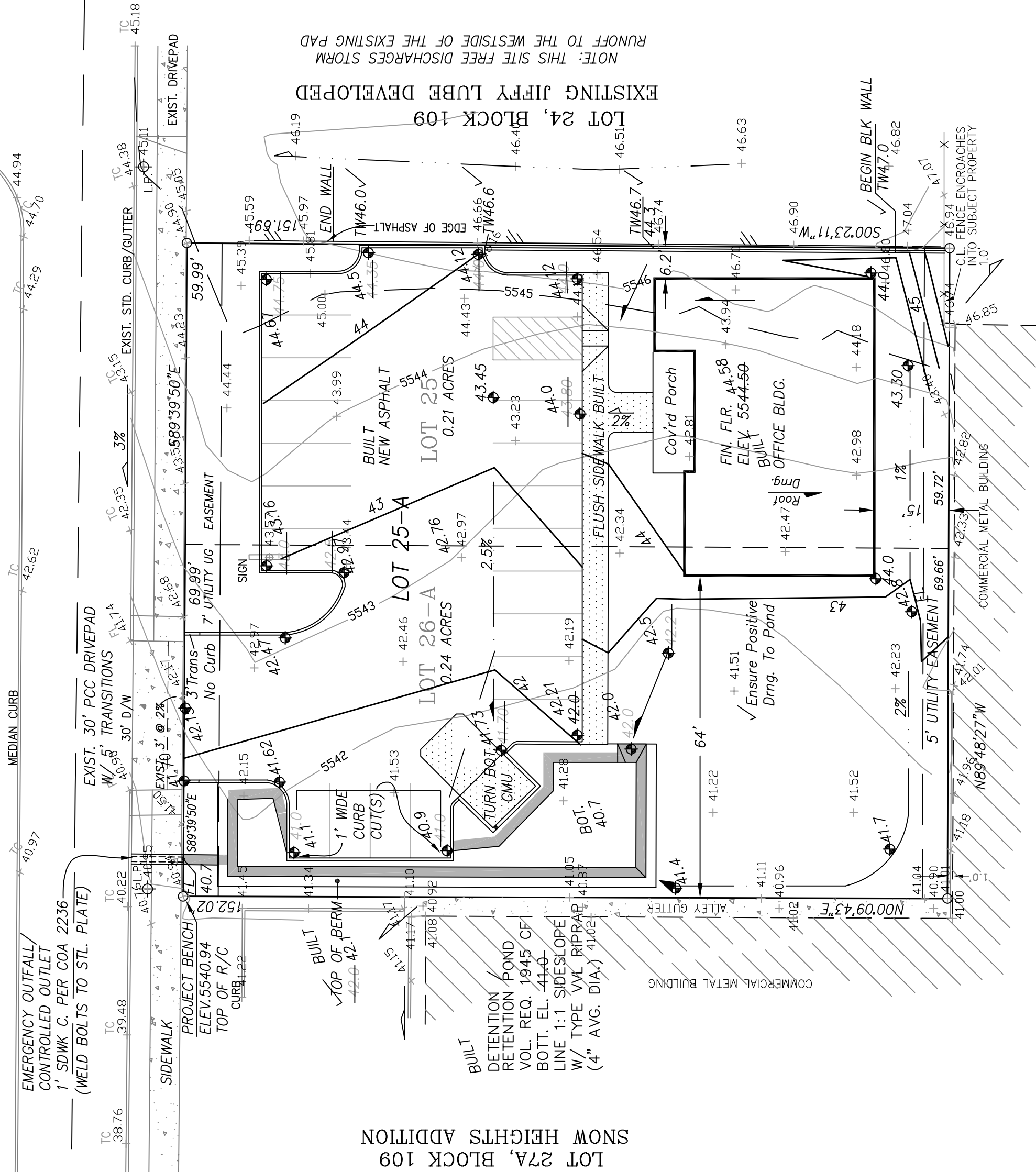
THE PROPOSED COMMERCIAL PROJECT IS LOCATED IN THE NORTHEAST HEIGHTS AREA IN THE CITY OF BIRMINGHAM, ALABAMA. THE GRADING AND DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE BERNALILLO COUNTY FLOOD HAZARD ORDINANCE, NO.88-46, AND THE CITY STORM DRAINAGE ORDINANCE. THE PLAN IS REQUIRED IN ORDER TO FACILITATE THE OWNER'S REQUEST FOR BUILDING PERMIT. THE PLAN SHOWS:

1. EXISTING CONTOURS, AND SPOT ELEVATIONS AND EXISTING DRAINAGE PATTERNS AND EXISTING ADJACENT STRUCTURES
2. PROPOSED IMPROVEMENTS: A 2300 SF OFFICE BUILDING, PRIVATE ASPHALT DRIVEWAY AND PARKING, NEW GRADE ELEVATIONS, AND LANDSCAPING IMPROVEMENTS.
3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS.
4. QUANTIFICATION OF DEVELOPED FLOWS GENERATED BY THE IMPROVEMENTS WHICH CONTRIBUTE TO THE EXISTING FLOWS, including NEW PONDING RECOMMENDATIONS.

PRESENTLY, THE SITE IS NOT DEVELOPED AND SURROUNDED BY DEVELOPED COMMERCIAL PROPERTY. MENAUL BLVD. ON THE NORTH IS A 4-LANE PAVED, CURB/GUTTER CITY MAINTAINED MINOR ARTERIAL STREET WITH 6' WIDE SIDEWALKS. THE SITE TERRAIN SLOPES FROM EAST TO WEST AT MINIMUM SLOPES.

THE SITE IS NOT WITHIN OR ADJACENT TO A DESIGNATED FEMA FLOOD HAZARD ZONE. DEVELOPED LOT RUNOFF WILL BE PERMITTED TO DRAIN TO THE WESTERN POND. HISTORICAL OUTFALL LOCATIONS WILL REMAIN UNCHANGED WITH DEVELOPMENT. FREE DISCHARGE OF PROJECT RUNOFF IS ACCEPTABLE SINCE DOWNSTREAM DRAINAGE FACILITIES DO EXIST. A PORTION OF SITE RUNOFF IS ROUTED THROUGH PROPOSED LANDSCAPING AS POINT RAINFALL. NO OFF-SITE FLOWS ENTER THE SITE AS IDENTIFIED.

MENAUL BOULEVARD N.E.



LOTS 4 & 5, BLOCK 109
SNOW HEIGHTS ADDITION

**PRIVATE DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY
NOTICE TO CONTRACTOR
(SPECIAL ORDER 19 "SO-19")**

1. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL, DIAL "811" FOR (505) 260-1990 FOR THE LOCATION OF EXISTING UTILITIES.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE LOCATIONS OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES.
3. BACKFILL COMPACT SHALL BE ACCORDING TO TRAFFIC/STREET USE.
4. MAINTENANCE OF THE FACILITY SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY BEING SERVED.
5. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON 24-HOUR

I, PHILIP W CLARK, NPE# 10265, OF THE FIRM, CLARK CONSULTING ENGINEERS, HEREBY CERTIFY THAT THIS DESIGN HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE PROJECT INTENT OF THE APPROVED PLAN DATED Nov 23, 2013. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY ME OR UNDER MY DIRECT SUPERVISION I+AS SUPPLEMENTAL DATA TO THE ORIGINAL TOPOGRAPHIC SURVEY PREPARED BY TM SURVEYING, NPE# _____ OF THE FIRM, J AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR CERTIFICATE OF OCCUPANCY.

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

Philip W. Clark, NMPE 10265

$$2950 + 700/2 \times 1 = 1825 \text{ CF PROVIDED}$$

$$(VOLUME REQUIRED = 0)$$

POND CALCS:
2950 SF, AREA OF TOP TO ELEV. 42.0
700 SF, AREA OF BOTT, @ 41.0
 $2950 + 700 / 2 \times 1 = 1825$ CF P

1825 CF PROVIDED
(VOLUME REQUIRED = 0)

CALCULATIONS

DESIGN CRITERIA

HYDROLOGIC METHODS PER SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL (DPW), REVISED JANUARY 1983 FOR CITY OF ALBUQUERQUE, ADOPTED BY THE COUNTY OF BERNALILLO

EXISTING CONDITIONS

DEVELOPED CONDITIONS (Includes Paved Parking)

DETERMINE LAND TREATMENTS, PEAK DISCHARGE AND VOLUMETRIC DISCHARGE FOR STUDY AREA

Soil type	σ_{Peak}	$\frac{\sigma_{\text{Peak}}}{\sigma_{\text{AAC}}}$
UNDEVELOPED		
G66 AC (10%)	A	2.20[0.87]
ANDSCAPING / POND	B	2.92[1.45]
TRAVEL & COMPACTED SOIL	C	3.73[2.26]
TOOF - PAVEMENT	D	5.25[3.57]
		0.45 AC.

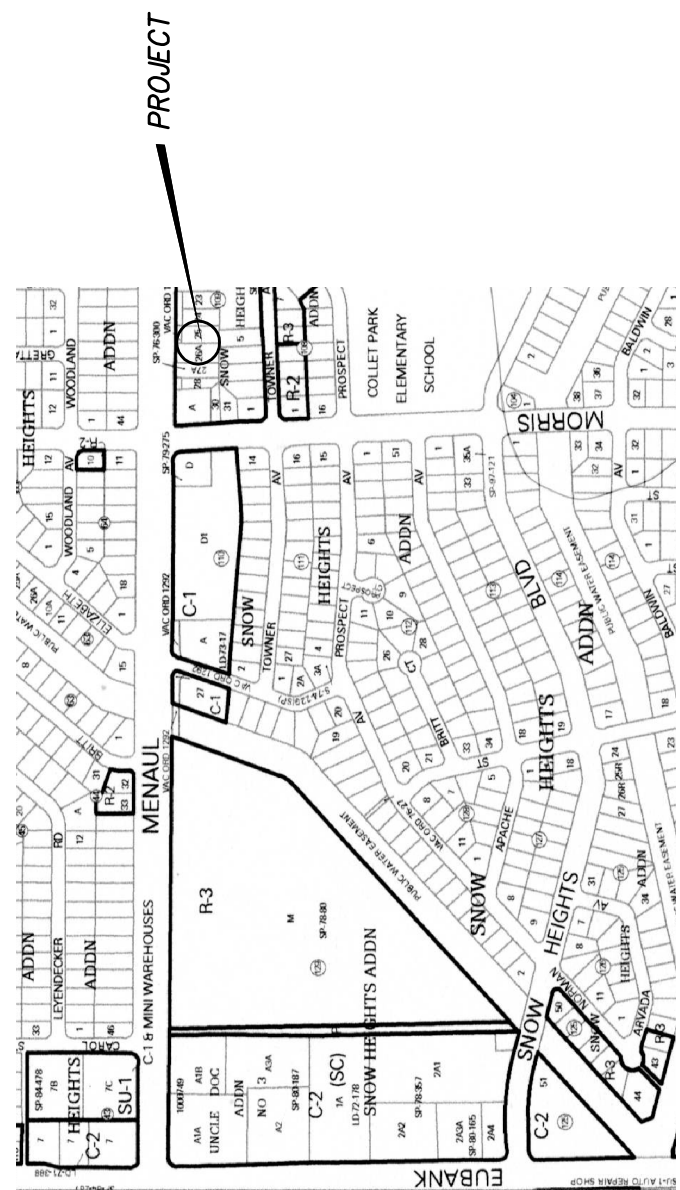
HEREFORE: $E_{Weighted} = 1.97 \ln.[1.16]$ &

$Q100 = 1.94 \text{ CFS}$	$VOLUME \ 100 = 3218 \text{ CF}$
$Q10 = 1.23 \text{ CFS}$	$VOLUME \ 10 = 1895 \text{ CF}$

POND CALCS.

2950 SF, AREA OF TOP TO ELEV. 42.0
700 SF, AREA OF BOTT, @ 41.0
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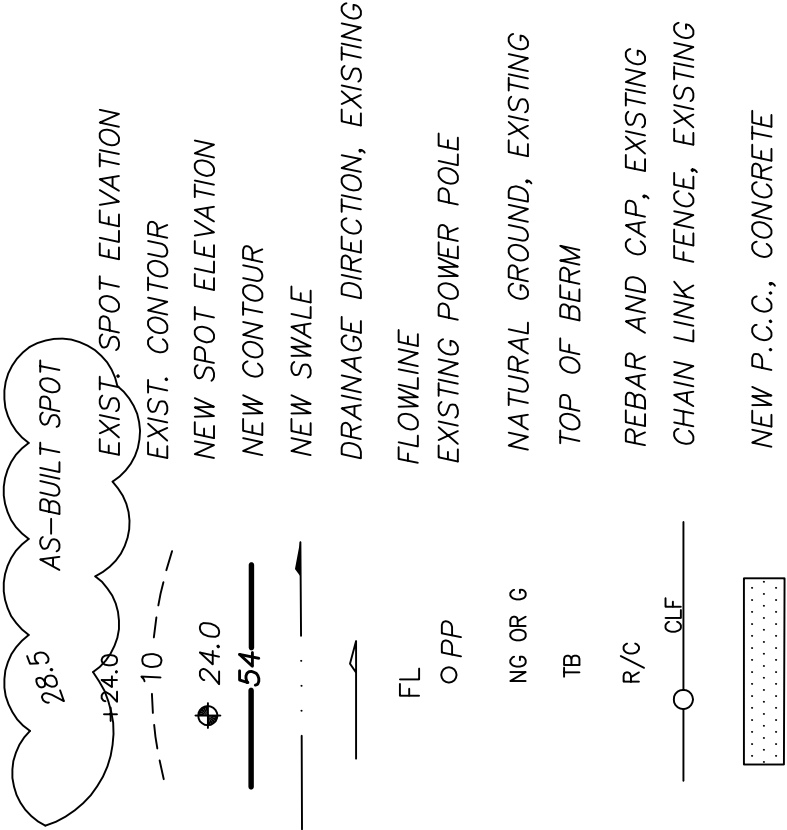
$$(\text{VOLUME REQUIRED} = 0)$$


VICINITY MAP

NOTES

1. ALL WORK WITHIN THE RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986, W/ 8 UPDATES.
2. AN EROSION/CONTROL 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 THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986, W/ 8 UPDATES, AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.~~
4. ALL LANDSCAPING AREA SHALL BE SOFT-LINED WITH NATIVE VEGETATION AND/OR GRAVEL.
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. 1011, NATIVE SEED MIX.
7. MAXIMUM SITE GRADING WITHOUT EROSION PROTECTION:
3 HORIZONTAL TO 1 VERTICAL, 3:1.
8. NEW ASPHALT PAVEMENT SHALL CONSIST OF 2" ASPHALT CONCRETE OVER 6" AGGREGATE BASE COURSE ON 8" COMPACTED SUBGRADE, 95% PROCTOR, ASTM D-1557

LEGEND



PROJECT DATA

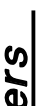
LEGAL DESCRIPTION (EXISTING)

LOTS 26A & 25, BLOCK 109
SNOW HEIGHTS ADDITION, ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO

PROJECT BENCHMARK

NORTHWEST PROPERTY CORNER, TOP REBAR/CAP
SEE PLAN, ELEVATION = 5540.94, AS TIED FROM ACS CONTROL MONUMENT
5+H21 (ELEV. 5534.71) NAVD88

TOPOGRAPHIC DESIGN SURVEY

 Clark Consulting Engineers		19 Ryan Road Edgewood, New Mexico 87015		Tel: (505) 281-2444	Fax: (505) 281-2444
DATE 11/27/13		REVISION LOT 25-A, BLOCK 109, SNOW HEIGHTS ADD'N ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO 10412 MENAUL BLVD, NE		JOB # GILLIAN_OFF FILE # G/D 1 OF 1	
DESIGNED BY: PWC		DRAWN BY: OCE		DATE: 10/15/13	
CHECKED BY: PWC		DATE: 10/15/13		1 OF 1	

CITY OF ALBUQUERQUE



October 15, 2014

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

**Re: Gillani Office
10412 Menaul NE
Request Permanent C.O. - Accepted
Engineer's Stamp dated: 11-27-13 (H21D049)
Certification dated: 9-27-14**

Dear Mr. Clark,

Based on the Certification received 8/13/2014, the site is acceptable for release of Certificate of Occupancy by Hydrology.

If you have any questions, you can contact me at 924-3695 or Rudy Rael at 924-3977.

PO Box 1293

Albuquerque

New Mexico 87103

Sincerely,

Curtis Cherne, P.E.
Principal Engineer, Planning Dept.
Development and Review Services

www.cabq.gov

C: RR/CC
email

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



November 27, 2013

Philip W. Clark, P.E.
Clark Consulting Engineers
19 Ryan Road
Edgewood, NM 87015

Richard J. Berry, Mayor

RE: **Gillani Office Building** - 10,412 Menaul Blvd. NE
Lot 25-A, Block 109, Snow Heights Addition
Grading & Drainage Plan for Building Permit

H21-D049

PE Stamp: **11/27/2013**

Dear Mr. Clark:

Based upon the information provided in your submittal received November 27, 2013, the above referenced plan is approved for Building Permit.

Please attach a copy of this approved plan to the Building Permit construction sets prior to sign-off by Hydrology.

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

A separate Excavation/Barricading Permit is required for SO-19 construction within City ROW. A copy of this approval letter must be on hand when applying for the permit. To obtain a C.O., the storm drain work in the City ROW must be inspected and accepted. Please contact Jason Rodriguez, 857-8074, to schedule an inspection.

Prior to Certificate of Occupancy release, an Engineer's Certification of Grading on this site, will be required per the DPM checklist.

If you have questions, please email me at grolson@cabq.gov or phone 505-924-3994.

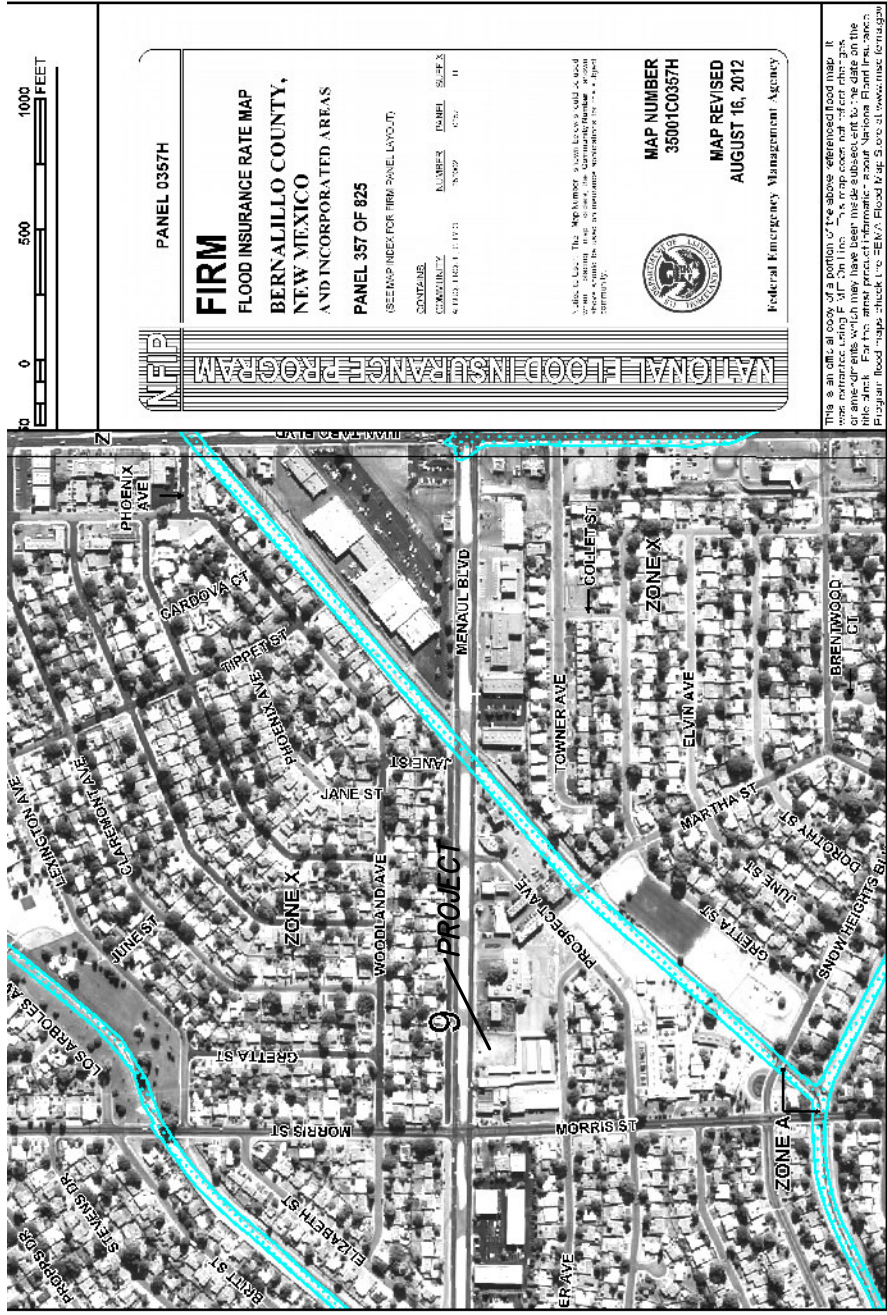
Sincerely,

Gregory R. Olson, P.E.
Senior Engineer

Orig: Drainage file **H21/D049**

c.pdf Addressee via Email Phil Clark (ccealbq@aol.com)

eCopy: Antoinette Baldonado, Excavation and Barricading, ABaldonado@cabq.gov
Jason Rodriguez, Street/Storm Drain Maintenance, JTRodriguez@cabq.gov



FIRM MAP

GRADING & DRAINAGE PLAN

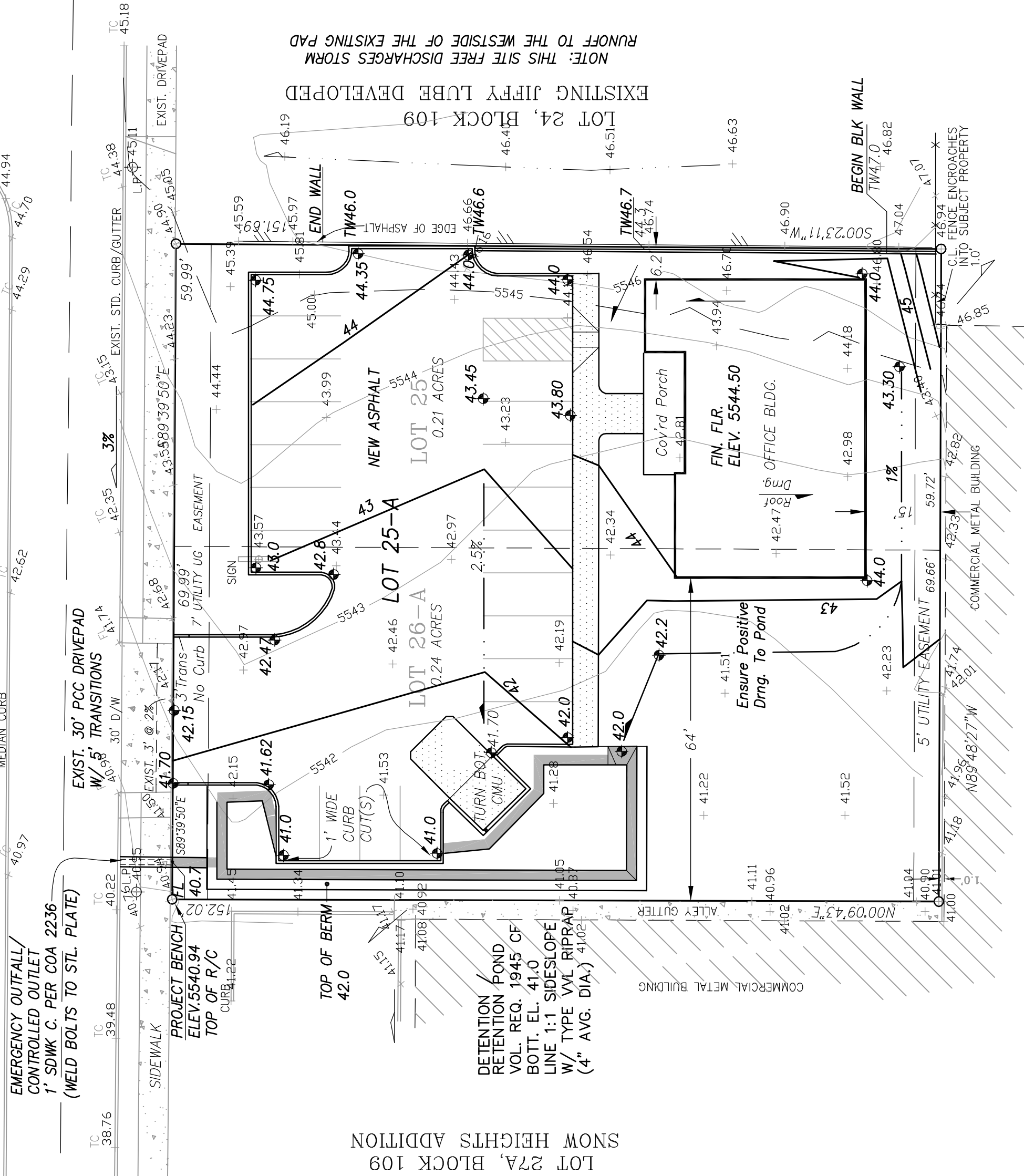
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MENAU BOULEVARD N.E.



LOTS 4 & 5, BLOCK 109
SNOW HEIGHTS ADDITION

PRIVATE DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

NOTICE TO CONTRACTOR

(SPECIAL ORDER 19 "SO-19")

1. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL, DIAL "811" (OR 505-260-1990) FOR THE LOCATION OF EXISTING UTILITIES.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE 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.
3. BACKFILL COMPACTATION SHALL BE ACCORDING TO TRAFFIC/STREET U
4. MAINTENANCE OF THE FACILITY SHALL BE THE RESPONSIBILITY OF T
5. OWNER OF THE PROPERTY BEING SERVED.
6. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR
7. BASIS.

CALCULATIONS

DESIGN CRITERIA

HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL (DPM)
REVISED JANUARY 1993 FOR CITY OF ALBUQUERQUE, ADOPTED BY THE COUNTY OF BERNALILLO
DISCHARGE RATE: $Q = OPEAK \times AREA$, "Peak Discharge Rates For Small Watersheds"
VOLUMETRIC DISCHARGE: $VOLUME = AWEIGHTED \times AREA$
 $P100 = 2.90$ inches, Zone 4
DESIGN STORM: 10-YEAR/6-HOUR, 10-YEAR/6-HOUR, 10-YEAR/6-HOUR, 10-YEAR/6-HOUR
TC = 10 Minutes
Time of Concentration, TC = 10 Minutes

EXISTING CONDITIONS

LOT AREA = 0.45 ACRES, WHERE EXCESS PRECIP. $W' = 0.8$ in. [0.28]
PEAK DISCHARGE, $Q_{100} = 0.9$ CFS [0.4], WHERE UNIT PEAK DISCHARGE = 2.2 CFS/AC. [0.9]
THEREFORE: VOLUME $100 = 1306$ CF [457]

DEVELOPED CONDITIONS (Includes Paved Parking)

DETERMINE LAND TREATMENTS, PEAK DISCHARGE AND VOLUMETRIC DISCHARGE FOR STUDY AREA

AREA	LAND TREATMENT	Q_{Peak}	E
0.00 Ac. (0%)	A	2.20[0.87]	0.80[0.28]
0.11 Ac. (25%)	B	2.92[1.45]	1.08[0.46]
0.11 Ac. (25%)	C	3.73[2.26]	1.46[0.73]
0.23 Ac. (51%)	D	5.25[3.57]	2.64[1.69]

THEREFORE: $E_{Weighted} = 1.97 \ln.[116]$ &

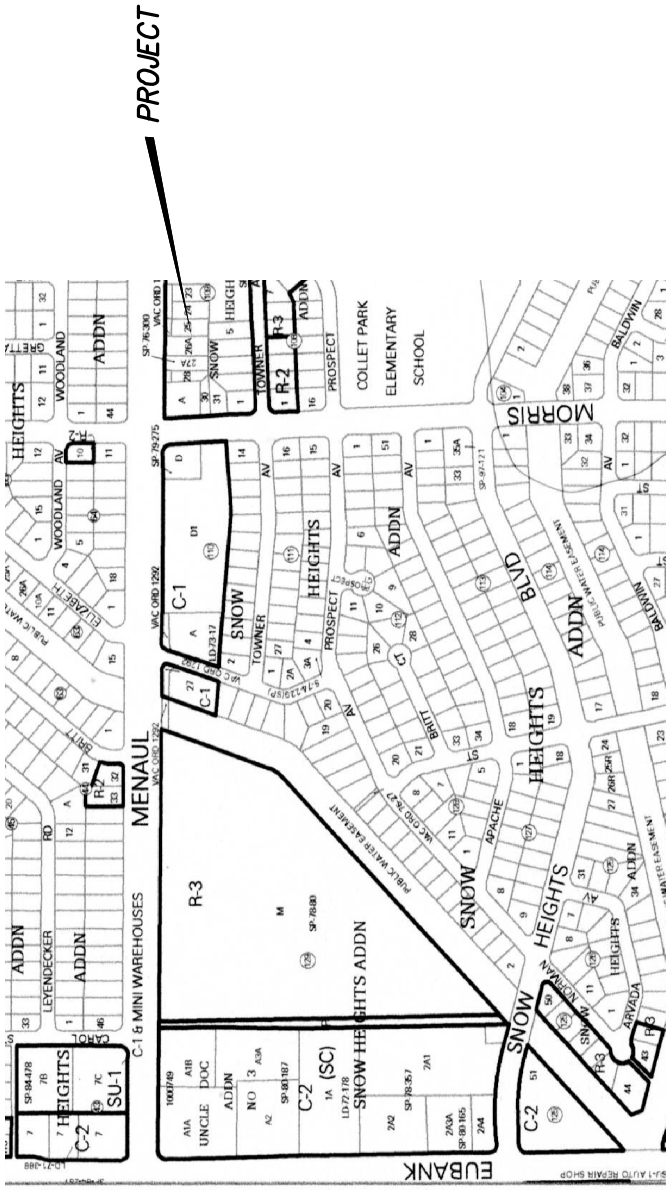
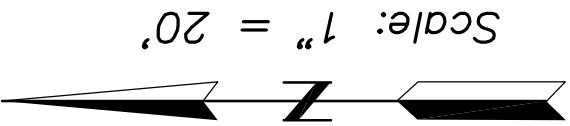
weighted

$Q100 = 1.94 \text{ CFS}$
 $Q10 = 1.23 \text{ CFS}$

$VOLUME\ 100 = 3218 \text{ CF}$
 $VOLUME\ 10 = 1895 \text{ CF}$

POND CALCS.

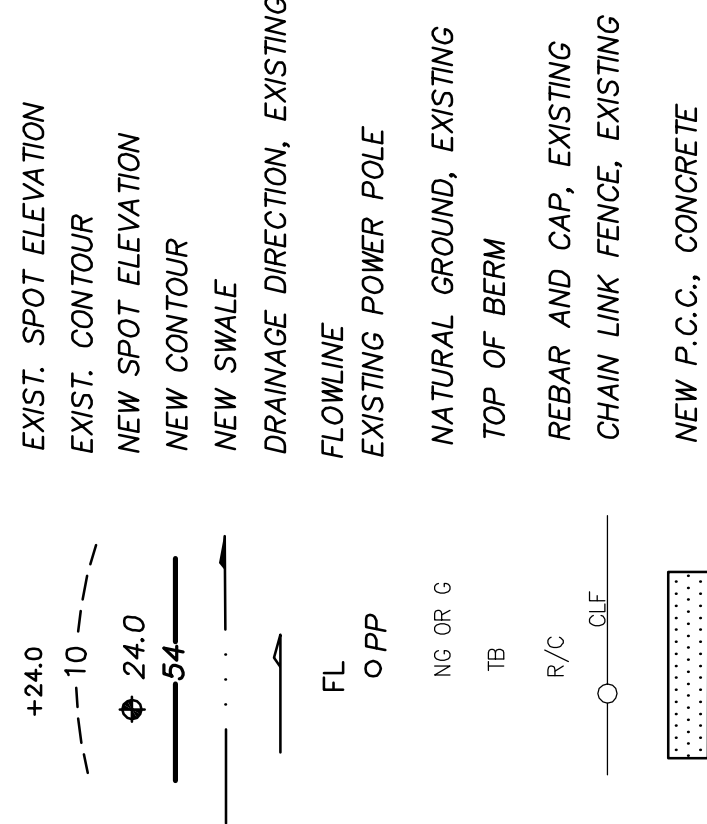
2950 SF, AREA OF TOP TO ELEV. 42.0
700 SF, AREA OF BOTT, @ 41.0
2950+700/2 X 1 = 1825 CF PROVIDED
(VOLUME REQUIRED = 0)

VICINITY MAP
ZONE H-21

NOTES

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2. AN EXCAVATION/CONSTRUCTION PERMIT IS REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY P.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 THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS, LATEST EDITION, REGARDING CONSTRUCTION SAFETY AND HEALTH.
4. ALL LANDSCAPING AREA SHALL BE SOFT-LINED WITH NATIVE VEGETATION AND/OR GRAVEL.
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 1001, NATIVE SEED MIX.
7. MAXIMUM SITE GRADING WITHOUT EROSION PROTECTION: 3:1 HORIZONTAL TO 1 VERTICAL.
8. NEW ASPHALT PAVEMENT SHALL CONSIST OF 2" ASPHALT CONCRETE OVER 6" AGGREGATE BASE COURSE ON 8" COMPACTED SUBGRADE, 95% PROCTOR, ASTM D-1557.

LEGEND



PROJECT DATA

LEGAL DESCRIPTION (EXISTING)

LOTS 26A & 25, BLOCK 109
SNOW HEIGHTS ADDITION, ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO

PROJECT BENCHMARK

NORTHWEST PROPERTY CORNER, TOP REBAR/CAP
SEE PLAN, ELEVATION = 5540.94, AS TIED FROM ACS CONTROL MONUMENT
15-H21 (ELEV. 5534.71) NAVD88
TOPOGRAPHIC DESIGN SURVEY
PERFORMED AUGUST 22, 2013 BY TM SURVEYING



 Clark Consulting Engineers	19 Ryan Road Edgewood, New Mexico 87015		Fax: (505) 281-2444
	Tel: (505) 281-2444	LOT 25-A, BLOCK 109, SNOW HEIGHTS ADD'N ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO 11,271.3 ACRES-GRO CHMTS.	10412 MENAUL BLVD., NE 1 OF 1
DATE: 11/27/13	REVISION:	DRAWN BY: OCE	JOB #/GILLIAN_OFF
11/27/13	ADDRESS: GRO CHMTS.	DATE: 10/15/13	FILE # G/D/
11/27/13	11/27/13	CHECKED BY: PWC	1 OF 1