

FIRM MAP PANEL # 119 G

GRADING & DRAINAGE PLAN

THE 8-UNIT DUPLEX APARTMENT PROJECT IS LOCATED IN LOS GRIEGOS SECTION OF ALBUQUERQUE'S NORTH VALLEY APPROXIMATELY 3 MILES NORTH OF THE DOWNTOWN CORE OF ALBUQUERQUE, NM. THE GRADING & 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 IMPROVEMENTS, INCLUDING EXISTING FLATWORK.
2. PROPOSED IMPROVEMENTS: 5080 SF TOTAL BUILDING STRUCTURE(S), NEW ASPHALT DRIVEWAY AND PARKING, NEW GRADE ELEVATIONS, WALLS, FLATWORK AND LANDSCAPING.
3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS.
4. QUANTIFICATION AND ACCEPTANCE OF UPSTREAM OFF-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 SOUTH BY RESIDENTIAL USE TO THE WEST BY A RESIDENT. 12TH STREET CLASSIFIED BY THE CITY AS MINOR ARTERIAL IS ON THE EAST - PAVED WITH CURB, GUTTER AND 4' SIDEWALK, AND MAINTAINED BY THE CITY OF ALBUQUERQUE. THE SITE CURRENTLY HAS SLOPES AT 0 TO 1% BUT IS GENERALLY FLAT.

HISTORICAL SITE RUNOFF OUTFALL LOCATIONS WILL REMAIN UNCHANGED. SINCE 12TH STREET IS IMPROVED ONLY MINIMAL GRADING (ACCESS RECONSTRUCTION) IS PROPOSED WITHIN THE CITY R.O.W. FREE DISCHARGE OF DEVELOPED FLOW IS ACCEPTABLE SINCE THE TOTAL INCREASE OF DEVELOPED FLOW IS MINIMAL, AND CAPACITY EXISTS DOWNSTREAM. THIS PLAN ROUTES DEVELOPED RUNOFF THROUGH/TO THE PROPOSED LANDSCAPE AREAS. THE SITE IS NOT IMPACTED ADVERSELY BY ANY OFF-SITE DRAINAGE FLOWS.

CALCULATIONS

DESIGN CRITERIA

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

EXISTING CONDITIONS

TOTAL AREA = 0.36 ACRES, WHERE EXCESS PRECIP. "W" = 1.13 In. [0.52]
PEAK DISCHARGE, Q100 = 1.13 CFS [0.6] WHERE UNIT PEAK DISCHARGE "W" = 3.10 CFS/AC [1.7]
THEREFORE: VOLUME 100 = 1476 CF [679]

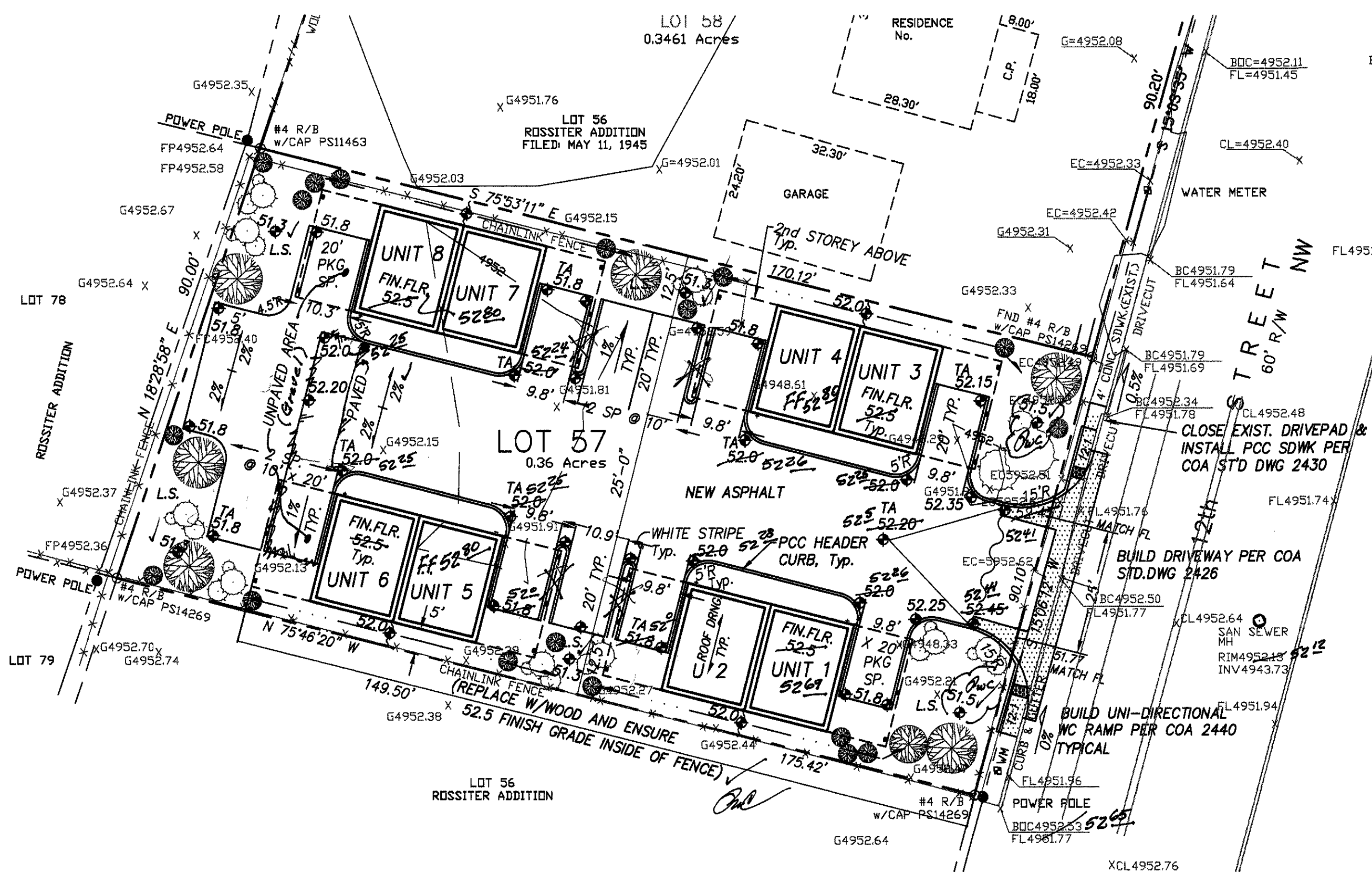
DEVELOPED CONDITIONS

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

	AREA	LAND TREATMENT	Q_{PEAK}	E
UNDEVELOPED	0.08 Ac. (22%)	A	1.56 [0.38]	0.53 [0.13]
LANDSCAPING	0.08 Ac. (22%)	B	2.28 [0.95]	0.78 [0.28]
GRAVEL & COMPACTED SOIL	0.05 Ac. (14%)	C	3.14 [1.71]	1.13 [0.52]
ROOF - PAVEMENT	0.23 Ac. (64%)	D	4.70 [3.14]	2.12 [1.34]
	0.36 Ac.			

THEREFORE: $E_{WEIGHTED} = 1.67$ In. [1] &
 $Q100 = 1.4$ CFS
 $Q10 = 0.8$ CFS

RECOMMEND: ROUTE DEVELOPED RUNOFF THROUGH UPGRADED SOFT LANDSCAPING INCLUDING DEPRESSED LANDSCAPING IN THE NEW COURTYARDS AS SHOWN.
ESTIMATE DEPRESSED LS VOLUME: $(.07 AC \times 43560) / 2 \times 0.5' = 762$ C.F.

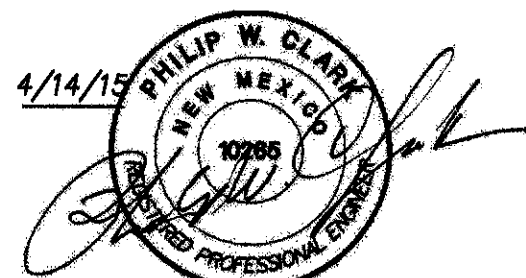


DRAINAGE CERTIFICATION

I, PHILIP W. CLARK, NMPE 10265, OF THE FIRM CLARK CONSULTING ENGINEERS, HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 7-8-14. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY ME OR UNDER MY DIRECT SUPERVISION AS SUPPLEMENTAL DATA TO THE ORIGINAL TOPOGRAPHIC SURVEY PREPARED BY TONY HARRIS, NMPS 11483, OF THE FIRM HARRIS SURVEYING 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.

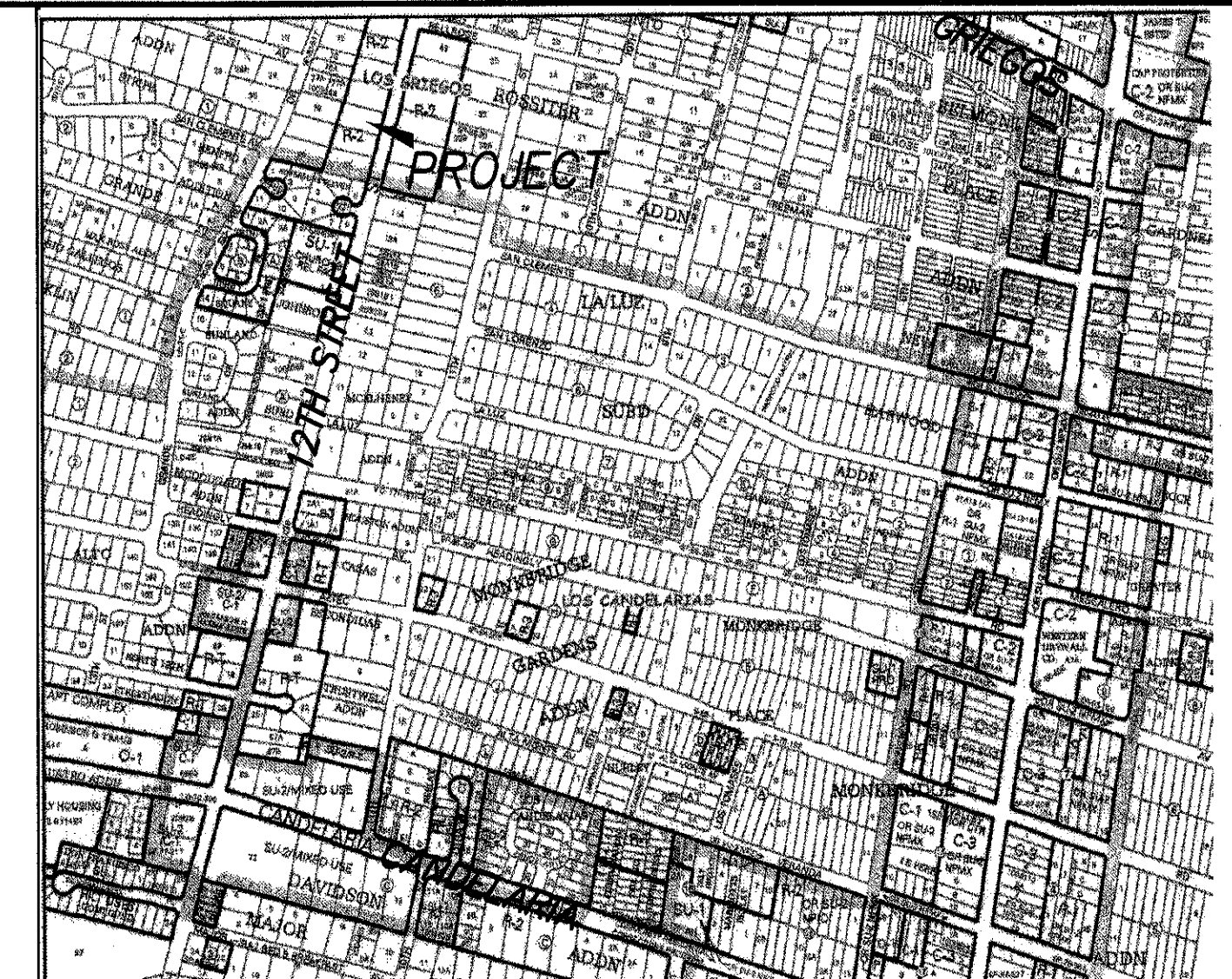
THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER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

Philip W. Clark, NMPE 10265



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.

PHILIP W. CLARK NMPE #10265



VICINITY MAP ZONE G-14

NOTES

1. ALL WORK WITHIN THE RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, 8TH UPDATE W/ AMENDS.
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. ASPHALT PARKING AREA SHALL DRAIN DIRECTLY TO NEW DEPRESSED LANDSCAPE AREAS.
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. ALL DIMENSIONS TO FACE OF CURB, UNLESS NOTED OTHERWISE.

LEGEND

EXIST. SPOT ELEVATION	+24.0
EXIST. CONTOUR	10
NEW SPOT ELEVATION (FINISH)	+24.0
NEW CONTOUR	12
NEW SWALE	
DRAINAGE DIRECTION, EXISTING	
NEW CONCRETE CURB (0.5' HEIGHT)	
NEW P.C.C., CONCRETE	
TOP OF CURB, EXISTING	TC
TOP OF ASPHALT	TA
FLOWLINE	FL
EXISTING POWER POLE	o P.P.
FACE OF CURB/FACE OF CURB	F-F
WATER BLOCK	

PROJECT DATA

LEGAL DESCRIPTION

LOT 57, ROSSITER ADDITION
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

PROJECT BENCHMARK

AS-BUILT
TOP OF EXISTING NORTH RIM OF SANITARY SEWER RING LOCATED IN 12TH STREET MSL ELEVATION = 4952.13; AS TIED FROM COA 3-1/4" DIAMETER ALUM DISK SET IN TOP OF CURB, 17-F13, MSL, NAVD 88, 4973.33

TOPOGRAPHIC DESIGN SURVEY

PROVIDED BY HARRIS SURVEYING INC, DATED SEPTEMBER 2007, UPDATED AND FIELD SUPPLEMENTED BY CLARK CONSULTING ENGINEERS, MAY 2014.

Clark Consulting Engineers	
19 Ryan Road Edgewood, New Mexico 87015	
Tel: (505) 281-2444 Fax: (505) 281-2444	
DATE	REVISION
7/8/14	ADDR. COA
4/14/15	AS-BUILT
10/7/14	Check
DESIGNED BY: PWC DRAWN BY: CCE JOB #: BBACA	
CHECKED BY: PWC DATE: JUNE 2014 FILE #: G/D	
1 OF 1	



VICINITY MAP G-14

NOTES

1. ALL WORK WITHIN THE RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, 8TH UPDATE W/ AMENDMENTS.
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 DIMENSIONS TO FACE OF CURB, UNLESS NOTED OTHERWISE.
5. ALL TRAFFIC ELEMENTS SHOWN SHALL BE CONSTRUCTED FROM THIS SHEET, AND REQUIRED FOR CERTIFICATE OF OCCUPANCY. A TEMPORARY C.O. SHALL NOT BE ISSUED.
6. A DESIGN VARIANCE TO ALLOW THE 4' WIDE SIDEWALK ALONG 12TH ST. HAS BEEN REQUESTED.
7. TYPICAL FULL LENGTH 18"W X 4'-0"L TACTILE PATTERN RAISED TRUNCATED DOMES PER ANSI-A117.1 2006. & ADDAG.
8. TYPICAL RAMP SLOPE 12:1 WITH BROOM FINISH CONCRETE.

LEGEND

- EXIST. SPOT ELEVATION +24.0
EXIST. CONTOUR 10
NEW SPOT ELEVATION 24.0
TOP OF ASPHALT TA
NEW SWALE
NEW CONCRETE CURB (0.5' HEIGHT)
NEW P.C.C., CONCRETE
TOP OF CURB, EXISTING TC
FLOWLINE FL
FACE OF CURB/FACE OF CURB F-F
WATER BLOCK

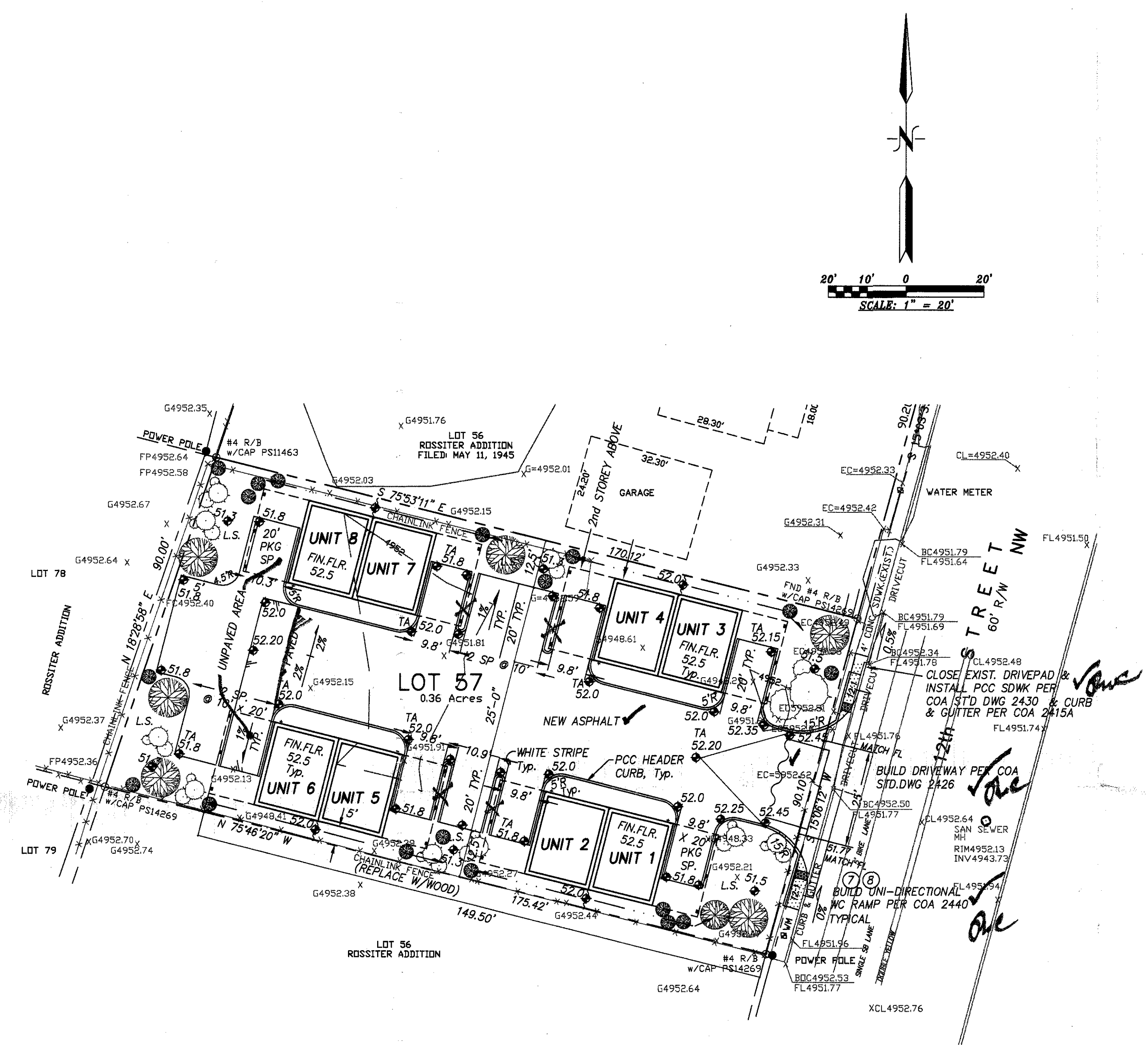
PROJECT DATA

LEGAL DESCRIPTION
LOT 57, ROSSITER ADDITION
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

PARKING CALCULATIONS - R2 ZONING
8 UNITS X 1.5 = 12..... < 1000 SF EACH UNIT
LESS 10% BUS RTE. <1 UNIT> = 11 SPACES REQUIRED
PARKING SPACES PROVIDED: 12

TOPOGRAPHIC DESIGN SURVEY
PROVIDED BY HARRIS SURVEYING, INC AND SUPPLEMENTED BY CLARK CONSULTING ENGINEERS, MAY 2014.

Clark Consulting Engineers	
19 Ryan Road Edgewood, New Mexico 87015	
Tel: (505) 281-2444 Fax: (505) 281-2444	
DATE	REVISION
	LOT 57 ROSSITER ADDITION ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO 4421 12TH STREET NW THE BACA DUPLEXES (4) TRAFFIC CIRCULATION LAYOUT
DESIGNED BY: PWC	DRAWN BY: CCE
CHECKED BY: PWC	DATE: JUNE 2014
JOB #: BBACA	FILE #: TCL
1 OF 1	



I, Philip W. Clark, NMPE 12265, OF THE FIRM
Clark Consulting Engineers HEREBY CERTIFY THAT THIS PROJECT IS IN
SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE
DESIGN INTENT OF THE DRB, AA OR TCL APPROVED PLAN DATED
6/10/14

As-BUILT
10/18/15

6/10/14 PHILIP W. CLARK
NMPE 12265
Professional Engineer

TRAFFIC CIRCULATION LAYOUT APPROVED	
Signed	Date
<u>CKE</u>	<u>30 June 14</u>

Public Infrastructure shown on these plans for information only and not part of approval. Separate DRC/Permit approval and Work Order required.

ALL WHEELCHAIR RAMPS LOCATED WITHIN THE PUBLIC RIGHT OF WAY MUST HAVE TRUNCATED DOMES. *one*

CITY OF ALBUQUERQUE

Planning Department
Suzanne Lubar, Director



Mayor Richard J. Berry

October 21, 2015

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

**Re: Baca Duplexes
4421 12th St. NW
Request 30 Day Temp. CO - Accepted
Engineer's Stamp dated: 7-18-14 (G14D080)
Certification dated: 10-7-15**

Dear Mr. Clark,

PO Box 1293

Based on the Certification received 10/20/2015, the site is acceptable for release of Temporary Certificate of Occupancy by Hydrology.

Albuquerque

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

New Mexico 87103

Sincerely,

www.cabq.gov


Shahab Biazar, P.E.
City Engineer, COA
Planning Department

RR/CC
C: email

CITY OF ALBUQUERQUE

Planning Department
Suzanne Lubar, Director



Mayor Richard J. Berry

November 17, 2015

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

**Re: Baca Duplexes
4421 12th St. NW
Request Prmanent CO - Accepted
Engineer's Stamp dated: 7-18-14 (G14D080)
Certification dated: 10-7-15**

Dear Mr. Clark,

PO Box 1293

Based on the Certification received 10/20/2015, the site is acceptable for release of permanent Certificate of Occupancy by Hydrology.

Albuquerque

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

New Mexico 87103

Sincerely,

www.cabq.gov

Shahab Biazar, P.E.
City Engineer, COA
Planning Department

RR/CC
C: email