

PANEL # 354 H

CALCULATIONS

DESIGN CRITERIA

HYDROLOGIC METHODS PER SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL REVISED JANUARY 1993 FOR CITY OF ALBUQUERQUE 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 = 2.60 Inches, Zone 3 Time of Concentration, TC = 10 Minutes DESIGN STORM: 100-YEAR/6-HOUR, 10-YEAR/6-HOUR [] = 10 YEAR VALUES

EXISTING CONDITIONS

LOT AREA = 0.51 ACRES, WHERE EXCESS PRECIP. 'C' =1.29 In. [0.62] PEAK DISCHARGE, Q100 = 1.76 CFS [1], WHERE UNIT PEAK DISCHARGE 'C' = 3.45 CFS/AC. [2.0]
THEREFORE: VOLUME 100 = 2388 CF [1148]

DEVELOPED CONDITIONS

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

	<u>AREA LAND</u>	<u>TREATM'T</u>	<u> Q</u> Peak	E
UNDEVELOPED LANDSCAPING	Ac.	A	1.87[0.58]	0.66[0.19]
GRAVEL & COMPACTED SOIL ROOF - PAVEMENT	0.06 Ac.(12%) 0.04 Ac.(8%)	B C	2.60[1.19] 3.45[2.00]	0.92[0.36]
	<u>0.41 Ac.(80%)</u>	Ď	5.02[3.39]	1.29[0.62] 2.36[1.50]
	0.51 Ac.		• • • •	

THEREFORE: E_{Weiahted} = 2.10 In.[1.29] &

 $Q100^{\circ} = 2.36 \text{ CFS}$

VOLUME 100 = 3887 CF $Q10 = 1.53 \ CFS$ VOLUME 10 = 4141 CF

DETERMINE CAPACITY OF EAST BASIN TO HARVESTING AREA BASIN AREA = 0.20 AC. THEREFORE @ E100~2.1 IN = 1500 C.F.± THEN: 3887 CF-1500 CF = 2390± CF VOL. TO WEST. OK

BASIN A 0.17 0.71 CFS BASIN B 1.35 CFS BASIN C+ODB 0.32 1.28 CFS

CHANNEL CALCULATOR

2.4324 FT2

16.2273 FT

77.3333 %

GIVEN INPUT DATA: SOLVING FOR FI OWRATE SLOPE . 0.0100 FT/FT MANNING'S N 0.0400 0.2320 FT 0.3000 FT BOTTOM WIDTH . 0.0000 FT LEFT SLOPE 0.0370 FT/FT (V/H) RIGHT SLOPE 0.0370 FT/FT (V/H) COMPUTED RESULTS: FLOWRATE VELOCITY . 0.8832 FPS FULL FLOWRATE 2.5499 CFS FLOW AREA . 1.4547 FT2 FLOW PERIMETER HYDRAULIC RADIUS ... 0.1159 FT 12.5405 FT

PERIMETER

PERCENT FULL

GRADING & DRAINAGE PLAN

THE COMMERCIAL WAREHOUSE PROJECT IS LOCATED IN THE FAIR-GROUNDS ADDN. OF ALBUQUERQUE APPROXIMATELY 5 MILES EAST OF THE DOWNTOWN CORE OF ALBUQUERQUE, NM. THE GRADING & DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE BERN-ALILLO 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:

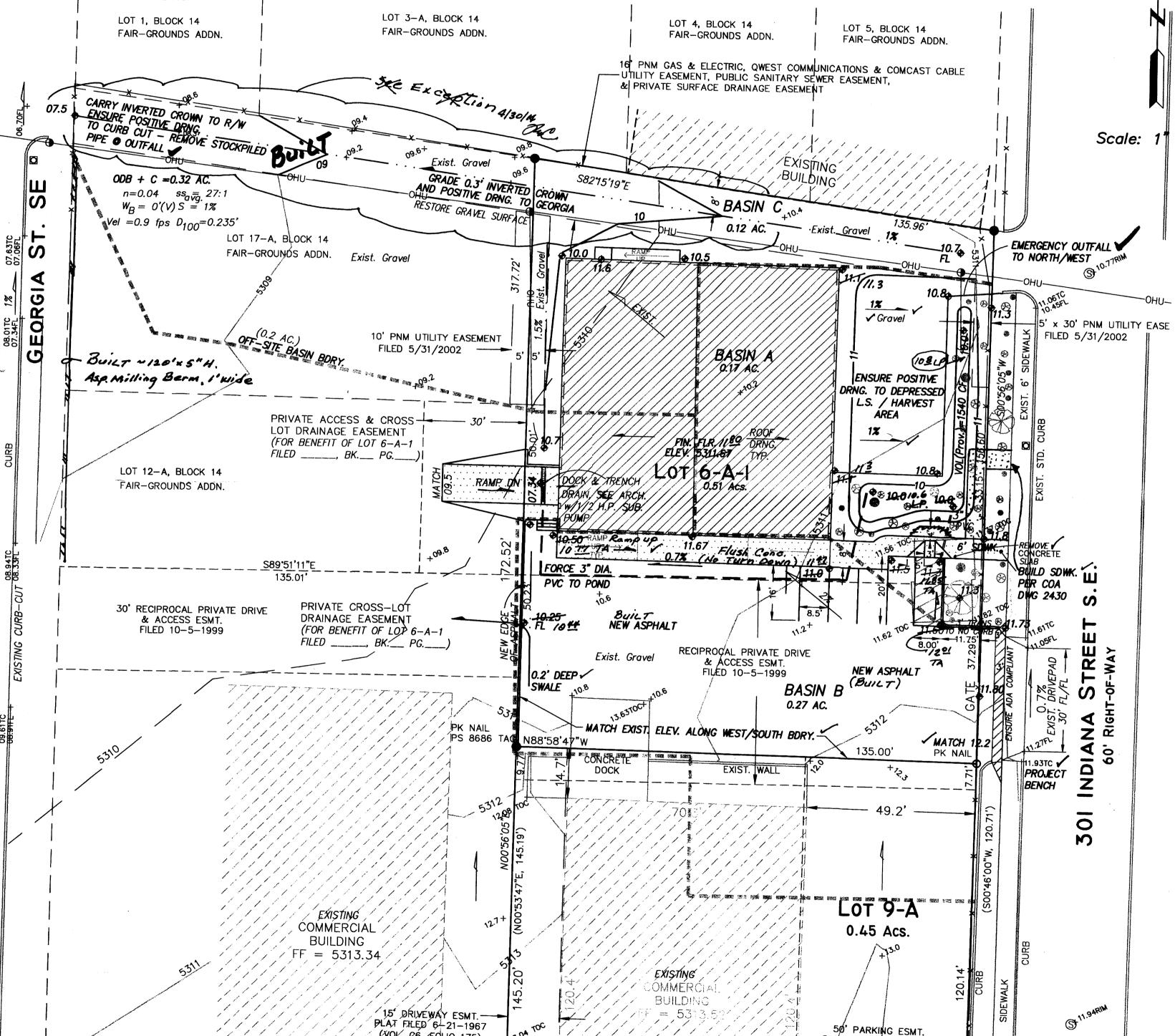
1. EXISTING CONTOURS, AND SPOT ELEVATIONS AND EXISTING

DRAINAGE PATTERNS AND IMPROVEMENTS. 2. PROPOSED IMPROVEMENTS: SINGLE 6400 SF STRUCTURE ASPHALT DRIVES AND PARKING, NEW GRADE ELEVATIONS

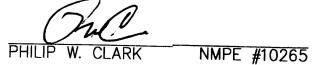
AND LANDSCAPING / WATER HARVESTING AREAS. 3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS. 4. QUANTIFICATION AND ACCEPTANCE OF UPSTREAM OFF-SITE FLOWS WHICH CONTRIBUTE TO THE DEVELOPED FLOWS GEN-ERATED BY, THE IMPROVEMENTS.

THE PURPOSE OF THE PLAN IS TO ESTABLISH CRITERIA FOR CON-TROLLING STORM RUNOFF AND EROSION, AND ESSENTIALLY ALLOWING HISTORIC FLOWS TO CONTINUE TO DRAIN THROUGH THE PROPERTY. PRESENTLY, THE SITE IS BOUNDED ON THE NORTH AND SOUTH BY DEVELOPED PROPERTY. INDIANA & GEORGIA STREETS ON THE EAST AND WEST ARE PAVED WITH CURB, GUTTER AND SIDEWALK, AND MAINTAINED BY THE CITY OF ALBUQUERQUE. THE SITE FALLS GENERALLY AT 2% FROM SOUTHEAST TO NORTHWEST.

HISTORICAL SITE RUNOFF OUTFALL LOCATIONS WILL REMAIN UNCHANGED. SINCE THE EXIST. DRIVEWAY WILL BE USED ONLY MINIMAL GRADING IS PROPOSED WITHIN THE CITY R.O.W. FREE DISCHARGE OF DEVELOPED FLOW IS ACCEPTABLE SINCE THE TOTAL GENERATED DEVELOPED FLOW IS MINIMAL. WATER HARVESTING IS PROPOSED IN ORDER TO MITIGATE STORM RUNOFF (DISCHARGE) FROM THE SITE DUE TO THE IMPROVEMENTS, MINIMIZE OUTFALL POLLUTANTS, AND TO INCORPORATE LEED-TYPE/"GREEN" SITE ELEMENTS.



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.



(VOL. 66, FOLIO 175)

LEGEND

EXIST. SPOT ELEVATION (As. Built) +24.0 /1.3 or /13 EXIST. CONTOUR NEW SPOT ELEVATION **24.0 NEW CONTOUR** NEW SWALE DRAINAGE DIRECTION, EXISTING BASIN BOUNDARY NEW CONCRETE CURB (0.5' HEIGHT) NEW P.C.C., CONCRETE TOP OF CURB, EXISTING FLOWLINE EXISTING POWER POLE

FACE OF CURB/FACE OF CURB

= 20'

VICINITY MAP

ZONE K−18

K-18-Z

SECTOR PLANS

Selected Symbols

Design Overlay Zones 2 Milo Airport Zone

<u>NOTES</u>

- 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 EDITION, W/ 8 UPDATES.
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- 4. ALL LANDSCAPING AREA SHALL BE SOFT-LINED WITH NATIVE VEGETATION AND/OR GRAVEL. ASPHALT PARKING AREA SHALL DRAIN DIRECTLY ALONG EXISTING HISTORIC LOCATION.
- 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.

DRAINAGE CERTIFICATION

I. Philip W. Clark NMPE/8765 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 8/8/13
THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY ME OR UNDER DIRECT SUPERVISION (+AS SUPPLEMENTAL DATA TO THE ORIGINAL TOPOGRAPHIC SURVEY PREPARED BY A SUPPLEMENTAL DATA TO THE ORIGINAL TOPOGRAPHIC SURVEY PREPARED BY A SUPPLEMENTAL DATA TO THE ORIGINAL TOPOGRAPHIC SURVEY PREPARED BY A SUPPLEMENTAL DATA TO THE ORIGINAL TOPOGRAPHIC SURVEY PREPARED BY A SUPPLEMENTAL DATA TO THE ORIGINAL TOPOGRAPHIC SURVEY PREPARED BY A SUPPLEMENTAL DATA TO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAIN BY ME ORIGINAL DESIGN DOCUMENT HAS BEEN DESIGN DOCUMENT HAS BEEN ORIGINAL DESIGN DOCUMENT HAS BEEN ORI

(DESCRIBE ANY EXCEPTIONS) Grading in Former Gravel Alley

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 SIT FOR ANY OTHER PURPOSE.



PROJECT DATA

LEGAL DESCRIPTION

LOT 6-A-1, BLOCK 14, FAIRGROUNDS ADDITION Albuquerque, Bernalillo County, New Mexico

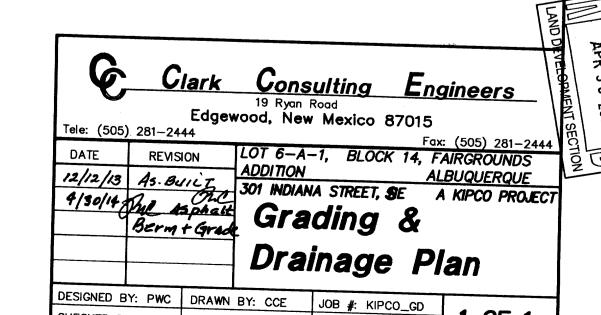
PROJECT BENCHMARK

Top of Curb at the Projection of the Project Southeast Corner MSL Elevation = 5311.93, As Tied From COA BRASS CAP, 7_K19, MSL 5325.99, NAVD88.

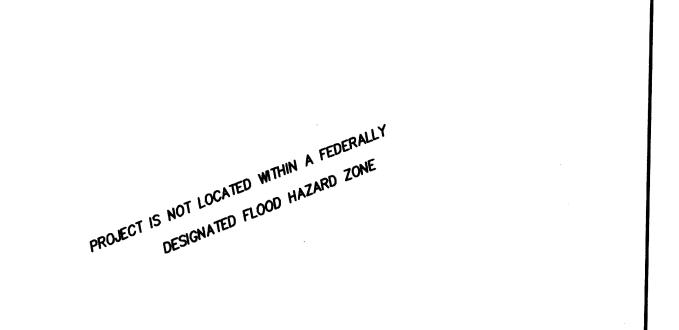
TOPOGRAPHIC DESIGN SURVEY

CHECKED BY: PWC DATE: 6/17/13

PERFORMED BY ALPHA PRO SURVEYING, LLC, Date DEC. 2012



PLAT FILED 6-21-1967 (VOL. C6, FOLIO 175)



PANEL # 354 H

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THEREFORE: VOLUME 100 = 2388 CF [1148]

DEVELOPED CONDITIONS

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

LINDEVELORED	<u>AREA LAND</u>) TREATM'T	Q Peak	E
UNDEVELOPED	Ac.	Α	1.87[0.58]	0.66[0.19]
LANDSCAPING	0.06 Ac.(12%)	В	2.60[1.19]	0.92[0.36]
GRAVEL & COMPACTED SOIL	0.04 Ac.(8%)	\boldsymbol{C}	3.45[2.00]	1.29[0.62]
ROOF - PAVEMENT	<u>0.41 Ac.(80%)</u>	D	5.02[3.39]	2.36[1.50]
	0.51 Ac.	•		2.00[1.00]
THEREFORE: F 24	2 / 54 007			

EWeiahted = 2.10 In.[1.29] & $Q100^{\circ} = 2.36 \text{ CFS}$

VOLUME 100 = 3887 CF Q10 = 1.53 CFS

VOLUME 10 = 4141 CFDETERMINE CAPACITY OF EAST BASIN TO HARVESTING AREA

BASIN AREA = 0.20 AC. THEREFORE @ E100~2.1 IN = 1500 C.F.± THEN: 3887 CF-1500 CF = 2390± CF VOL. TO WEST..OK

BASIN A 0.17 0.71 CFS BASIN B 0.27 1.35 CFS BASIN C+ODB 0.32 1.28 CFS

CHANNEL CALCULATOR

GIV	EN INPUT DATA:	
	SHAPE TRAPEZOIDAL	
	SOLVING FOR FLOWRATE	
	SLOPE CONTRACT	
	SLOPE 0.0100 FT/FT	
	MANNING'S N 0.0400	
	DEPTH 0.2320 FT	
	HEIGHT 0.3000 FT	
	BOTTOM WIDTH 0.0000 FT	
	LEFT SLOPE 0.0370 FT/F	Ť /
	RIGHT SLOPE 0.0370 FT/F	T (
COM	MPUTED RESULTS:	
	FLOWRATE 1.2848 CFS	
	VELOCITY 0.8832 FPS	
	FULL FLOWRATE 2.5499 CFS	
	FLOW AREA 1.4547 FT2	,
	FLOW PERIMETER 12.5491 FT	
	HYDRAULIC RADIUS 0.1159 FT	
	TOP WIDTH 12.5405 FT	
	APFA 2 4704 5TO	
	AREA 2.4324 FT2	
	PERIMETER 16.2273 FT	
	PERCENT FULL 77.3333 %	

GRADING & DRAINAGE PLAN

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AND LANDSCAPING / WATER HARVESTING AREAS. 3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS. 4. QUANTIFICATION AND ACCEPTANCE OF UPSTREAM OFF-SITE FLOWS WHICH CONTRIBUTE TO THE DEVELOPED FLOWS GEN-ERATED BY, THE IMPROVEMENTS.

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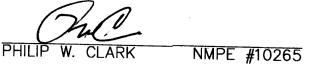
DRAINAGE DIRECTION, EXISTING BASIN BOUNDARY NEW CONCRETE CURB (0.5' HEIGHT) HISTORICAL SITE RUNOFF OUTFALL LOCATIONS WILL REMAIN UNCHANGED. NEW P.C.C. CONCRETE SINCE THE EXIST. DRIVEWAY WILL BE USED ONLY MINIMAL GRADING IS PROPOSED WITHIN THE CITY R.O.W. FREE DISCHARGE OF DEVELOPED TOP OF CURB, EXISTING FLOW IS ACCEPTABLE SINCE THE TOTAL GENERATED DEVELOPED FLOW IS FLOWLINE MINIMAL. WATER HARVESTING IS PROPOSED IN ORDER TO MITIGATE STORM RUNOFF (DISCHARGE) FROM THE SITE DUE TO THE IMPROVEMENTS, MINIMIZE OUTFALL EXISTING POWER POLE POLLUTANTS, AND TO INCORPORATE LEED-TYPE/"GREEN" SITE ELEMENTS. FACE OF CURB/FACE OF CURB LOT 3-A, BLOCK 14 LOT 1, BLOCK 14 LOT 4. BLOCK 14 LOT 5, BLOCK 14 FAIR-GROUNDS ADDN. FAIR-GROUNDS ADDN. FAIR-GROUNDS ADDN. FAIR-GROUNDS ADDN. PNM GAS & ELECTRIC, QWEST COMMUNICATIONS & COMCAST CABLE -UTILITY EASEMENT, PUBLIC SANITARY SEWER EASEMENT, · See Exception & PRIVATE SURFACE DRAINAGE EASEMENT CARRY INVERTED CROWN TO R/W

ENSURE POSITIVE DRNG.

O CURB CUT - REMOVE STOCKPILED Scale: Exist. Gravel GRADE 0.3' INVERTED CROWN S8275'19"E QDB + C = 0.32 ACAND POSITIVE DRNG. TO GEORGIA n = 0.04 $ss_0 = 27:1$ $W_B = 0'(V)S = 1\%$ BASIN C RESTORE GRAVEL SURFACE Vel = 0.9 fps $D_{100} = 0.235$ LOT 17-A, BLOCK 14 FAIR-GROUNDS ADDN. Exist. Gravel EMERGENCY OUTFALL TO NORTH/WEST 1% V Gravel 5' x 30' PNM UTILITY EASE OFF-SITE BASIN BORY FILED 5/31/2002 BASIN/ ENSURE POSITIVE DRNG. TO DEPRESSED L.S. / HARVEST PRIVATE ACCESS & CROSS LOT DRAINAGE EASEMENT (FOR BENEFIT OF LOT 6-A-1 FILED _____, BK.___ PG.____)| LOT 12-A, BLOCK 1 FAIR-GROUNDS ADDN. DW > 10.010.0 10.50 RAMP Ramp up 11.67 Flush Cons. O.7% (No Turn Down) 30' RECIPROCAL PRIVATE DRIVE PRIVATE CROSS-LOT DRAINAGE EASEMENT & ACCESS ESMT. NEW ASPHALT FILED 10-5-1999 (FOR BENEFIT OF LO≯ 6-A-1 RECIPROGAL PRIVATE DRIVE Ш≻ Exist. Gravel & ACCESS ESMT. FILED 10-5-1999 0.2' DEEP ~ SWALE - MATCH EXIST. ELEV. ALONG WEST/SOUTH BDRY. N88'58'47"W ✓ MATCH 1 135.00' PROJECT BENCH

BUILDING.

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EXISTING COMMERCIAL

BUILDING FF = 5313.34

15 DRIVEWAY ESMT. ---

PLAT FILED 6-21-1967

(VOL. 26, FOLIO 175)



EXIST. SPOT ELEVATION (As. BUILT) +24.0 /1.3 or /13 EXIST. CONTOUR NEW SPOT ELEVATION **4** 24.0 **NEW CONTOUR** NEW SWALE

<u>NOTES</u>

VICINITY MAP

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 EDITION, W/ 8 UPDATES.

Zone Atlas Page:

K-18-Z

SECTOR PLANS Escurpment

Selected Symbols

Design Overlay Zones 2 Milo Airport Zone

ZONE K−18

1" = 750'

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(DESCRIBE ANY EXCEPTIONS) Grading in Former Gravel Alley (DESCRIBE ANY DEFICIENCIES) Area, Not Built

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A Paris



PROJECT DATA

LEGAL DESCRIPTION

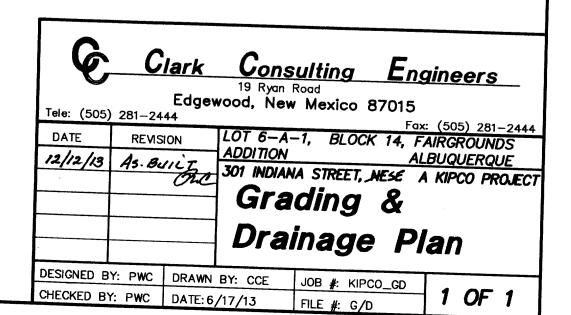
LOT 6-A-1, BLOCK 14, FAIRGROUNDS ADDITION Albuquerque, Bernalillo County, New Mexico

PROJECT BENCHMARK

Top of Curb at the Projection of the Project Southeast Corner MSL Elevation = 5311.93, As Tied From COA BRASS CAP, 7_K19, MSL 5325.99, NAVD88.

TOPOGRAPHIC DESIGN SURVEY

PERFORMED BY ALPHA PRO SURVEYING, LLC, Date DEC. 2012



LOT 9-A

0.45 Acs.

50' PARKING ESMT.

PLAT FILED 6-21-1967 (VOL. C6, FOLIO 175)



PANEL # 354 H

CALCULATIONS

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CHANNEL CALCULATOR

16.2273 FT

... 77.3333 %

GIVEN INPUT DATA: TRAPEZOIDAL SOLVING FOR FLOWRATE SLOPE ... 0.0100 FT/FT MANNING'S N . 0.0400 0.2320 FT HEIGHT 0.3000 FT BOTTOM WIDTH . . 0.0000 FT LEFT SLOPE .. 0.0370 FT/FT (V/H) RIGHT SLOPE .. 0.0370 FT/FT (V/H) COMPUTED RESULTS: FLOWRATE .. VELOCITY . 0.8832 FPS FULL FLOWRATE . 2.5499 CFS FLOW AREA ... 1.4547 FT2 FLOW PERIMETER . 12.5491 FT HYDRAULIC RADIUS TOP WIDTH 12.5405 FT 2.4324 FT2

PERIMETER ..

PERCENT FULL ..

GRADING & DRAINAGE PLAN

NOTES

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Zone Atlas Page:

K-18-Z

SECTOR PLANS Escurpment

Selected Symbols

Design Overlay Zones 2 Mile Airpart Zone

ZONE K-18

LAND DEVELOPMENT SE

AUG 0 9 201

LAND DEVELOPMENT

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PER CITY OF ALBUQ. SPEC. 1011, NATIVE SEED MIX. 7. MAXIMUM SITE GRADING WITHOUT EROSION PROTECTION:

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PROJECT DATA

LEGAL DESCRIPTION LOT 6-A-1, BLOCK 14, FAIRGROUNDS ADDITION

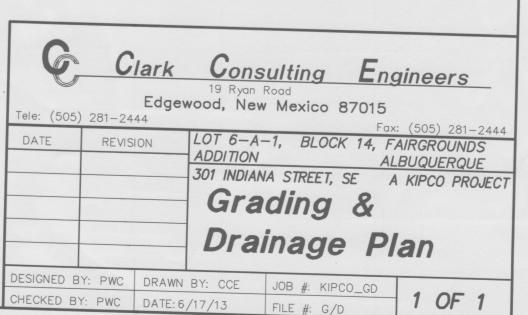
Albuquerque, Bernalillo County, New Mexico

PROJECT BENCHMARK

Top of Curb at the Projection of the Project Southeast Corner MSL Elevation = 5311.93, As Tied From COA BRASS CAP, 7_K19, MSL 5325.99, NAVD88.

TOPOGRAPHIC DESIGN SURVEY

PERFORMED BY ALPHA PRO SURVEYING, LLC, Date DEC. 2012



EXIST. SPOT ELEVATION THE COMMERCIAL WAREHOUSE PROJECT IS LOCATED IN THE FAIR-EXIST. CONTOUR THE PURPOSE OF THE PLAN IS TO ESTABLISH CRITERIA FOR CON--10-GROUNDS ADDN. OF ALBUQUERQUE APPROXIMATELY 5 MILES EAST OF TROLLING STORM RUNOFF AND EROSION, AND ESSENTIALLY THE DOWNTOWN CORE OF ALBUQUERQUE, NM. THE GRADING & NEW SPOT ELEVATION € 24.0 ALLOWING HISTORIC FLOWS TO CONTINUE TO DRAIN THROUGH THE DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE BERN-NEW CONTOUR PROPERTY. PRESENTLY, THE SITE IS BOUNDED ON THE NORTH AND ____12____ ALILLO COUNTY FLOOD HAZARD ORDINANCE, NO.88-46, AND THE SOUTH BY DEVELOPED PROPERTY. INDIANA & GEORGIA STREETS NEW SWALE CITY STORM DRAINAGE ORDINANCE. THE PLAN IS REQUIRED IN ON THE EAST AND WEST ARE PAVED WITH CURB, GUTTER AND SIDEWALK, AND ORDER TO FACILITATE THE OWNER'S REQUEST FOR BUILDING DRAINAGE DIRECTION, EXISTING MAINTAINED BY THE CITY OF ALBUQUERQUE. THE SITE FALLS GENERALLY PERMIT. THE PLAN SHOWS: BASIN BOUNDARY ----AT 2% FROM SOUTHEAST TO NORTHWEST. 1. EXISTING CONTOURS, AND SPOT ELEVATIONS AND EXISTING NEW CONCRETE CURB (0.5' HEIGHT) DRAINAGE PATTERNS AND IMPROVEMENTS. HISTORICAL SITE RUNOFF OUTFALL LOCATIONS WILL REMAIN UNCHANGED. NEW P.C.C., CONCRETE 2. PROPOSED IMPROVEMENTS: SINGLE 6400 SF STRUCTURE SINCE THE EXIST. DRIVEWAY WILL BE USED ONLY MINIMAL GRADING IS ASPHALT DRIVES AND PARKING, NEW GRADE ELEVATIONS PROPOSED WITHIN THE CITY R.O.W. FREE DISCHARGE OF DEVELOPED TOP OF CURB, EXISTING AND LANDSCAPING / WATER HARVESTING AREAS. FLOW IS ACCEPTABLE SINCE THE TOTAL GENERATED DEVELOPED FLOW IS 3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS. FLOWLINE MINIMAL. WATER HARVESTING IS PROPOSED IN ORDER TO MITIGATE STORM 4. QUANTIFICATION AND ACCEPTANCE OF UPSTREAM OFF-SITE RUNOFF (DISCHARGE) FROM THE SITE DUE TO THE IMPROVEMENTS, MINIMIZE OUTFALL EXISTING POWER POLE FLOWS WHICH CONTRIBUTE TO THE DEVELOPED FLOWS GEN-POLLUTANTS, AND TO INCORPORATE LEED-TYPE/"GREEN" SITE ELEMENTS. FACE OF CURB/FACE OF CURB ERATED BY, THE IMPROVEMENTS. LOT 3-A, BLOCK 14 LOT 1, BLOCK 14 LOT 4, BLOCK 14 LOT 5, BLOCK 14 FAIR-GROUNDS ADDN. FAIR-GROUNDS ADDN. FAIR-GROUNDS ADDN. FAIR-GROUNDS ADDN. PNM GAS & ELECTRIC, QWEST COMMUNICATIONS & COMCAST CABLE UTILITY EASEMENT, PUBLIC SANITARY SEWER EASEMENT, & PRIVATE SURFACE DRAINAGE EASEMENT PIPE @ OUTFALL Scale: " = 20"EXISITIN ODB + C = 0.32 AC.n=0.04 $ss_{ava} = 27:1$ S BASIN C NO.A $W_B = O'(V)S = 1\%$ Vel =0.9 fps D_{100} =0.235' - Exist. Gravel 1% 0.12 AC. LOT 17-A, BLOCK 14 EMERGENCY OUTFALL FAIR-GROUNDS ADDN. Exist. Gravel S TO NORTH/WEST TRIM OH 9 1% OR Gravel 5' x 30' PNM UTILITY EASE 10' PNM UTILITY EASEMENT ● | 当 | FILED 5/31/2002 FILED 5/31/2002 BASIN A 0.17 AC. ENSURE POSITIVE DRNG. TO DEPRESSED L.S. / HARVEST PRIVATE ACCESS & CROSS - 30' LOT DRAINAGE EASEMENT (FOR BENEFIT OF LOT 6-A-1 | FILED ____, BK.__ PG.___ LOT 12-A, BLOCK 14 FAIR-GROUNDS ADDN. 10.0 11.67 BUILD SDWK. PVC TO POND PER COA DWG 2430 PRIVATE CROSS-LOT 30' RECIPROCAL PRIVATE DRIVE DRAINAGE EASEMENT & ACCESS ESMT. NEW ASPHALT FILED 10-5-1999 (FOR BENEFIT OF LOT 6-A-1 FILED ____, BK.__ PG.___) RECIPROCAL PRIVATE DRIVE & ACCESS ESMT. NEW ASPHALT FILED 10-5-1999 0.2' DEEP SWALE BASIN B 0.27 AC. - MATCH EXIST. ELEV. ALONG WEST/SOUTH BDRY. PK NAIL PS 8686 TAG N88°58'47"W PK NAII PROJECT BENCH 0 M LOT 9-A EXISTING COMMERCIAL 0.45 Acs. BUILDING FF = 5313.34EXISTING

> 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.

50' PARKING ESMT.

PLAT FILED 6-21-1967 (NOL. C6, FOLIO 175)

15' DRIVEWAY ESMT.

PLAT FILED 6-21-1967

(VOL. 26, FOLIO 175)

PHILIP W. CLARK NMPE #10265



PANEL # 354 H

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=QPEAK x AREA.."Peak Discharge Rates For Small Watersheds" VOLUMETRIC DISCHARGE: VOLUME = EWeighted x AREA

P100 = 2.60 Inches, Zone 3 Time of Concentration, TC = 10 Minutes

DESIGN STORM: 100-YEAR/6-HOUR, 10-YEAR/6-HOUR [] = 10 YEAR VALUES

EXISTING CONDITIONS

LOT AREA = 0.51 ACRES, WHERE EXCESS PRECIP. 'C' =1.29 In. [0.62] PEAK DISCHARGE, Q100 = 1.76 CFS [1], WHERE UNIT PEAK DISCHARGE 'C' = 3.45 CFS/AC. [2.0] THEREFORE: VOLUME 100 = 2388 CF [1148]

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

	<u>AREA</u> <u>LANE</u>	TREATM'T	<u> </u>	<u>E</u>
UNDEVELOPED	Ac.	Α	1.87[0.58]	0.66[0.19
LANDSCAPING	0.06 Ac.(12%)	В	2.60[1.19 [†]]	0.92[0.36
GRAVEL & COMPACTED SOIL	0.04 Ac.(8%)	С	<i>3.45[2.00]</i>	1.29[0.62
ROOF — PAVEMENT	<u>0.41 Ac.(80%)</u>	D	5.02[3.39]	<i>2.36[1.50</i>]
	0.51.40			

THEREFORE: $E_{Weighted} = 2.10 \text{ In.}[1.29]$ & Q100 = 2.36 CFS

Q10 = 1.53 CFS

VOLUME 100 = 3887 CFVOLUME 10 = 4141 CF

THEN: 3887 CF-1500 CF = 2390± CF VOL. TO WEST..OK

DETERMINE CAPACITY OF EAST BASIN TO HARVESTING AREA BASIN AREA = 0.20 AC. THEREFORE @ E100~2.1 IN = 1500 C.F.±

GRADING & DRAINAGE PLAN

THE COMMERCIAL WAREHOUSE PROJECT IS LOCATED IN THE FAIR-GROUNDS ADDN. OF ALBUQUERQUE APPROXIMATELY 5 MILES EAST OF THE DOWNTOWN CORE OF ALBUQUERQUE, NM. THE GRADING & DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE BERN-ALILLO 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 IMPROVEMENTS. 2. PROPOSED IMPROVEMENTS: SINGLE 6400 SF STRUCTURE

ASPHALT DRIVES AND PARKING, NEW GRADE ELEVATIONS AND LANDSCAPING / WATER HARVESTING AREAS. 3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS. 4. QUANTIFICATION AND ACCEPTANCE OF UPSTREAM OFF-SITE FLOWS WHICH CONTRIBUTE TO THE DEVELOPED FLOWS GEN-

Trovido

LOT 17-A, BLOCK 14

FAIR-GROUNDS ADDN.

ERATED BY THE IMPROVEMENTS.

(J

THE PURPOSE OF THE PLAN IS TO ESTABLISH CRITERIA FOR CON-TROLLING STORM RUNOFF AND EROSION, AND ESSENTIALLY ALLOWING HISTORIC FLOWS TO CONTINUE TO DRAIN THROUGH THE PROPERTY. PRESENTLY, THE SITE IS BOUNDED ON THE NORTH AND SOUTH BY DEVELOPED PROPERTY. INDIANA & GEORGIA STREETS ON THE EAST AND WEST ARE PAVED WITH CURB, GUTTER AND SIDEWALK, AND MAINTAINED BY THE CITY OF ALBUQUERQUE. THE SITE FALLS GENERALLY AT 2% FROM SOUTHEAST TO NORTHWEST.

SINCE THE EXIST. DRIVEWAY WILL BE USED ONLY MINIMAL GRADING IS PROPOSED WITHIN THE CITY R.O.W. FREE DISCHARGE OF DEVELOPED

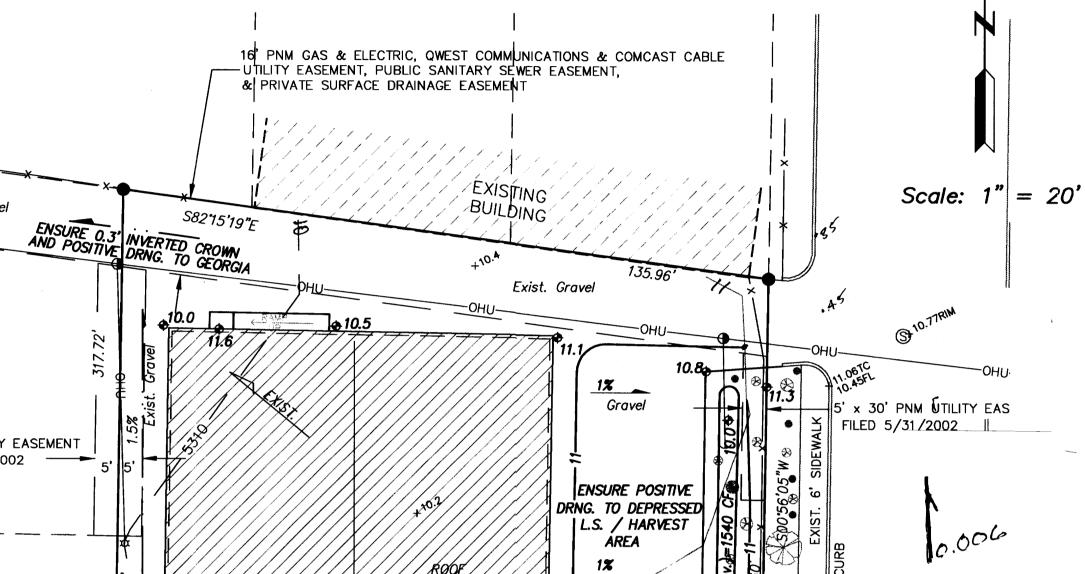
HISTORICAL SITE RUNOFF OUTFALL LOCATIONS WILL REMAIN UNCHANGED. FLOW IS ACCEPTABLE SINCE THE TOTAL GENERATED DEVELOPED FLOW IS MINIMAL. WATER HARVESTING IS PROPOSED IN ORDER TO MITIGATE STORM RUNOFF (DISCHARGE) FROM THE SITE DUE TO THE IMPROVEMENTS.

LEGEND

NEW SPOT ELEVATION **4** 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 FLOWLINE EXISTING POWER POLE

FACE OF CURB/FACE OF CURB

DWG 2430



50' PARKING ESMT.

PLAT FILED 6-21-1967

(VOL. C6, FOLIO 175)

LOT 12-A. BLOCK 14 FAIR-GROUNDS ADDN. **NEW ASPHALT** FILED 12-18-1984 VOL. C25, FOLIO 183 RECIPROÇAL PRIVATE DRIVE Exist. Gravel

10' PNM UTILITY EASEMENT

FILED 5/31/2002

& ACCESS ESMT. FILED 10-5-1999 0.2' DEEP SWALE MATCH EXIST, ELEV. ALONG WEST/\$OUTH BDRY PK NAIL N88**'**58'47"W 135.00' CONCRETE PROJECT BENCH 0 LOT 9-A 0.4469 Acs. COMMERCIAL

OMMERCI

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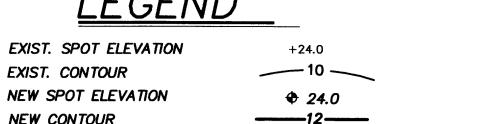
BUILDING

15 DŔIVÉWAY ESMT.—

PLAT FILED 6-21-1967

(YOL. 06, FOLIO 175)

/ FF = 5313.34



VICINITY MAP

ZONE K-18

K-18-Z

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, 1986 EDITION, W/ 8 UPDATES.
- 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 ALONG EXISTING HISTORIC LOCATION.
- 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.

PROJECT DATA

LEGAL DESCRIPTION

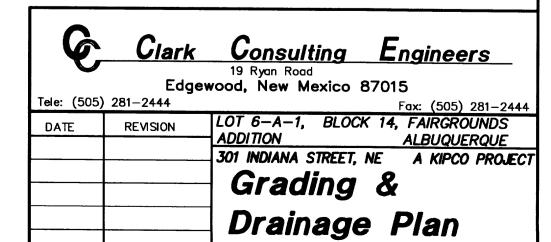
LOT 6-A-1, BLOCK 14, FAIRGROUNDS ADDITION Albuquerque, Bernalillo County, New Mexico

PROJECT BENCHMARK

Top of Curb at the Projection of the Project Southeast Corner MSL Elevation = 5311.93, As Tied From COA BRASS CAP, 7_K19, MSL 5325.99, NAVD88.

TOPOGRAPHIC DESIGN SURVEY

PERFORMED BY ALPHA PRO SURVEYING, LLC, Date DEC. 2012



DESIGNED BY: PWC | DRAWN BY: CCE | JOB #: KIPCO_GD