

Weighted E Method

BLACK FARMS

Existing Developed Basins

Basin	Area (sf)	Area (acres)	Treatment A % (acres)	Treatment B % (acres)	Treatment C % (acres)	Treatment D % (acres)	100-Year 6-hr. Weighted E (in./hr.)	Volume (in.-ft.)	Flow (cfs)	24-hr. Volume (in.-ft.)
PROPOSED	47394.5	1.088	0%	34.0%	0.370 (50.0%)	0.543 (16%)	0.174	1.038	0.094	3.37
HISTORICAL	47394.5	1.088	0%	100.0%	1.088 (100.0%)	0	0.000	0.670	0.061	2.21

Equations:

Weighted E = E_A*A_A + E_B*A_B + E_C*A_C + E_D*A_D / (Total Area)

Volume = Weighted E * Total Area

Flow = Q_A*A_A + Q_B*A_B + Q_C*A_C + Q_D*A_D

Where for 100-year, 6-hour storm (zone 1)

E _A = 0.44	Q _A = 1.29
E _B = 0.67	Q _B = 2.03
E _C = 0.99	Q _C = 2.87
E _D = 1.97	Q _D = 4.37

EXISTING 24-HOUR VOLUME 2645.63

PROPOSED 24-HOUR VOLUME 4389.384

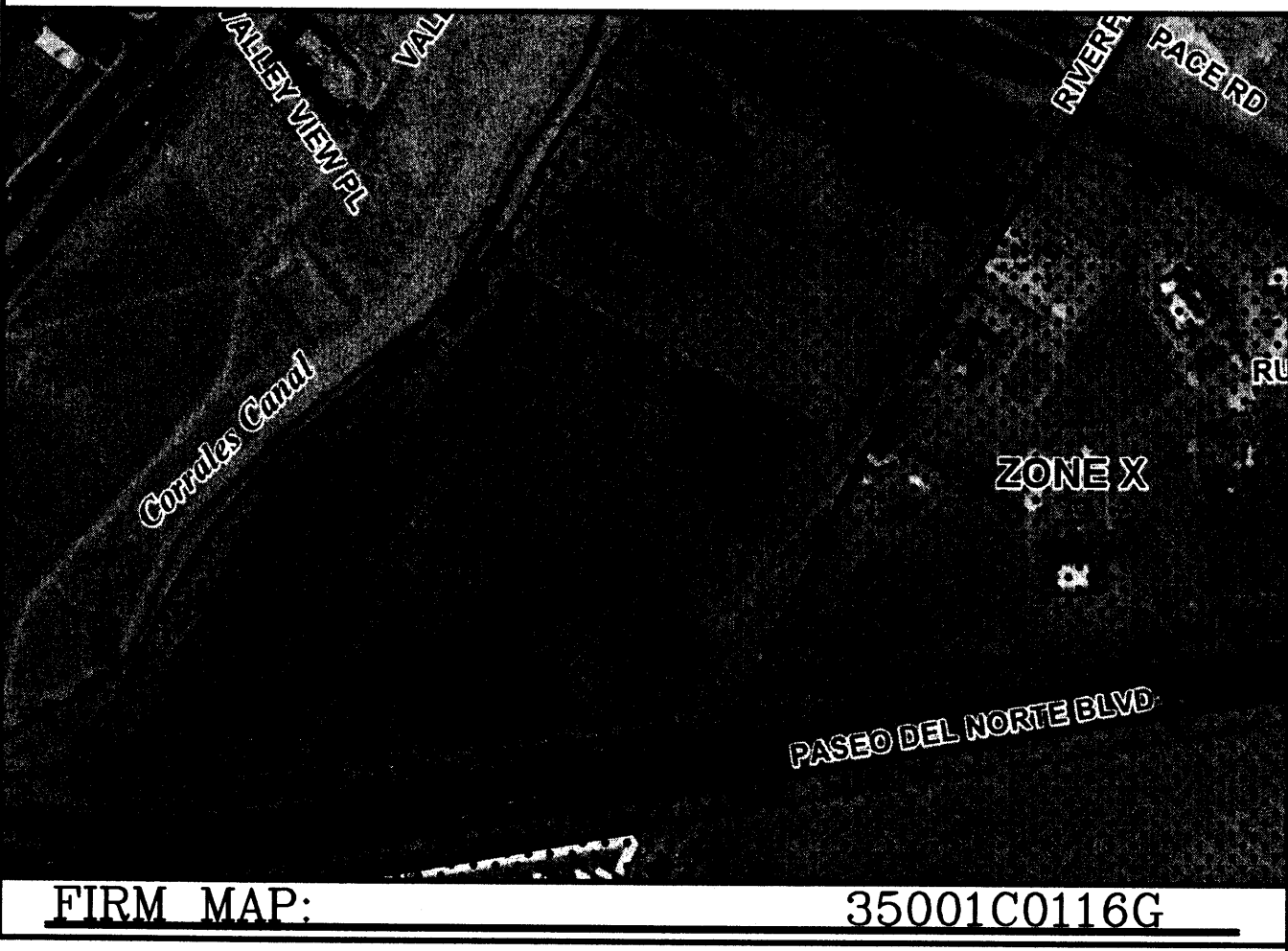
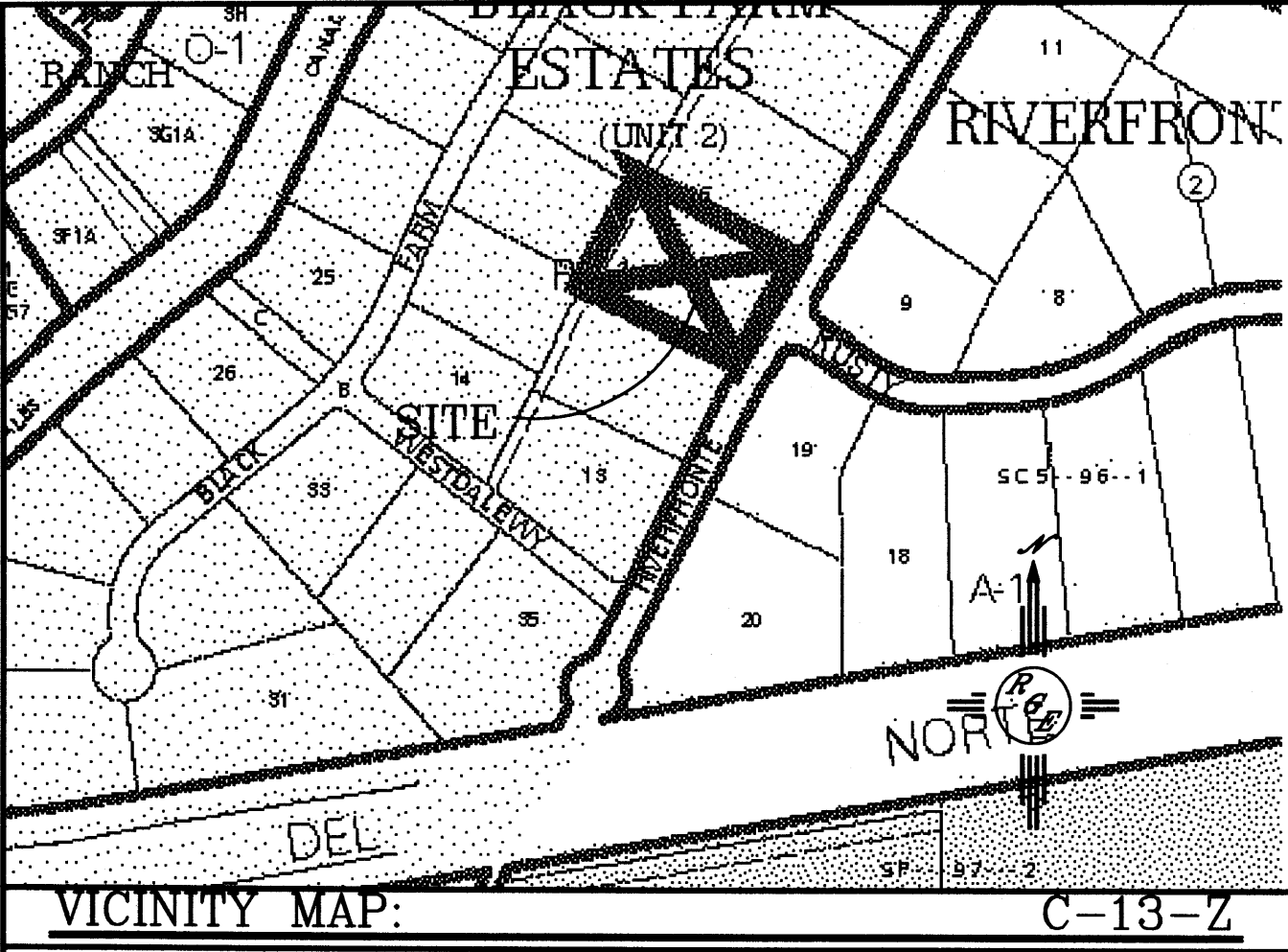
WATER QUALITY REQUIREMENT 1342.561

PONDING REQUIRED 1743.759

SITE IS LOCATED WITHIN A FULLY DEVELOPED SUBDIVISION. THE ADJACENT ROADWAY DOES NOT HAVE CURB AND GUTTER. THE DRAINAGE MANAGEMENT PLAN FOR THIS LOT CALLS FOR THE ONSITE RETENTION OF THE INCREASE IN FLOW GENERATED BY THIS DEVELOPMENT COMPARED TO EXISTING USING THE 24-HOUR EVENT.

EROSION CONTROL NOTES:

- CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
- REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.



LEGAL DESCRIPTION:
Lot numbered Eleven (11) of BLACK FARM ESTATES UNIT 2

- NOTES:
- ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
 - ALL RETAINING WALL DESIGN SHALL BE BY OTHERS.

LEGEND

- 5414--- EXISTING CONTOUR
- 5415--- EXISTING INDEX CONTOUR
- 5414--- PROPOSED CONTOUR
- 5415--- PROPOSED INDEX CONTOUR
- 5415--- SLOPE TIE
- 1-4048.25 EXISTING SPOT ELEVATION
- 1-4048.25 PROPOSED SPOT ELEVATION
- BOUNDARY
- CENTERLINE
- RIGHT-OF-WAY
- === PROPOSED CURB AND GUTTER
- === EXISTING CURB AND GUTTER
- === PROPOSED SCREEN WALL (6' TYP.)
- === PROPOSED RETAINING WALL (HEIGHT VARIES-DESIGN BY OTHERS)
- FLOODPLAIN

I DAVID SOULE HAVE PERSONALLY VISITED THIS SITE ON 11/17/14 AND CERTIFY THE TOPOGRAPHY SHOWN ACCURATELY DEPICTS CURRENT SITE GRADING.

ENGINEER'S SEAL 	LOT 11 BLACK FARM ESTATES GRADING AND DRAINAGE PLAN	DRAWN BY WCWJ DATE 11-17-14 21420-LAYOUT-11-17-14
11/17/14	 Rio Grande Engineering 1606 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (505) 872-0999	SHEET # —
DAVID SOULE P.E. #14522		JOB # 21420

CAUTION:
EXISTING UTILITIES ARE NOT SHOWN. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION TO DETERMINE THE ACTUAL LOCATION OF UTILITIES & OTHER IMPROVEMENTS.

