

## PROJECT BENCHMARK

ACS 1-G16, A SQUARE CHISELED ON TOP OF CONCRETE CURB, LOCATED APPROX. 1000 FT. EAST OF THE INTERSECTION OF CANDELARIA RD. NE & RICHMOND DR. NE, ON THE SOUTH SIDE OF CANDELARIA, IN FRONT OF HOUSE NUMBER 3210 CANDELARIA NE.  
ELEVATION: 5119.15 FT. (M.S.L.D.)

## T.B.M.

TOP OF NO. 5 REBAR LOCATED AT THE N.E. PROPERTY CORNER  
ELEVATION: 5121.21 FT. (M.S.L.D.)

## LEGEND

- ♦ EXIST. SPOT ELEVATION  
 ♦ PROPOSED SPOT ELEVATION  
 --- 22 --- EXIST. CONTOUR LINE  
 --- 22 --- PROPOSED CONTOUR LINE  
 --- PROPOSED FLOWLINE  
 --- PROPOSED ASPHALT  
 TC TOP OF CURB  
 FL FLOWLINE

## LEGAL DESCRIPTION

UNPLATTED.  
STREET ADDRESS:  
3230 MATTHEW AVENUE N.E.

## CALCULATIONS

## Site Characteristics

- Precipitation Zone: 2
- $P_{6,100} = P_{360} = 2.35$
- Total Area ( $A_T$ ) 24,000 cf/0.55 ac
- Existing Land Treatment

Treatment	Area (sf/ac)	%
C	17,840/0.41	75
D	6,160/0.14	25

## 5. Developed Land Treatment

Treatment	Area (sf/ac)	%
D	24,000/0.55	100

## Existing Condition

## 1. Volume

$$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$$

$$E_W = [(1.13)(0.41) + (2.12)(0.14)] / 0.55 = 1.38 \text{ in}$$

$$V_{100} = (E_W / 12) A_T$$

$$V_{100} = (1.38 / 12)(0.55) = 0.063 \text{ ac-ft} = 2,745 \text{ cf}$$

## 2. Peak Discharge

$$Q_P = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$$

$$Q_P = Q_{100} = (3.14)(0.41) + (4.70)(0.14) = 1.9 \text{ cfs}$$

## Developed Condition

## 1. Volume

$$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$$

$$E_W = (2.12)(0.55) / (0.55) = 2.12 \text{ in}$$

$$V_{100} = (E_W / 12) A_T$$

$$V_{100} = (2.12 / 12)(0.55) = 0.097 \text{ ac-ft} = 4225 \text{ cf}$$

## 2. Peak Discharge

$$Q_P = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$$

$$Q_P = Q_{100} = (4.70)(0.55) = 2.6 \text{ cfs}$$

## Comparison

- $\Delta V_{100} = 4225 - 2745 = 1480 \text{ cf (increase)}$
- $\Delta Q_{100} = 2.6 - 1.9 = 0.7 \text{ cfs (increase)}$

## DRAINAGE PLAN

The following items concerning the Condeck Drainage Plan are contained hereon:

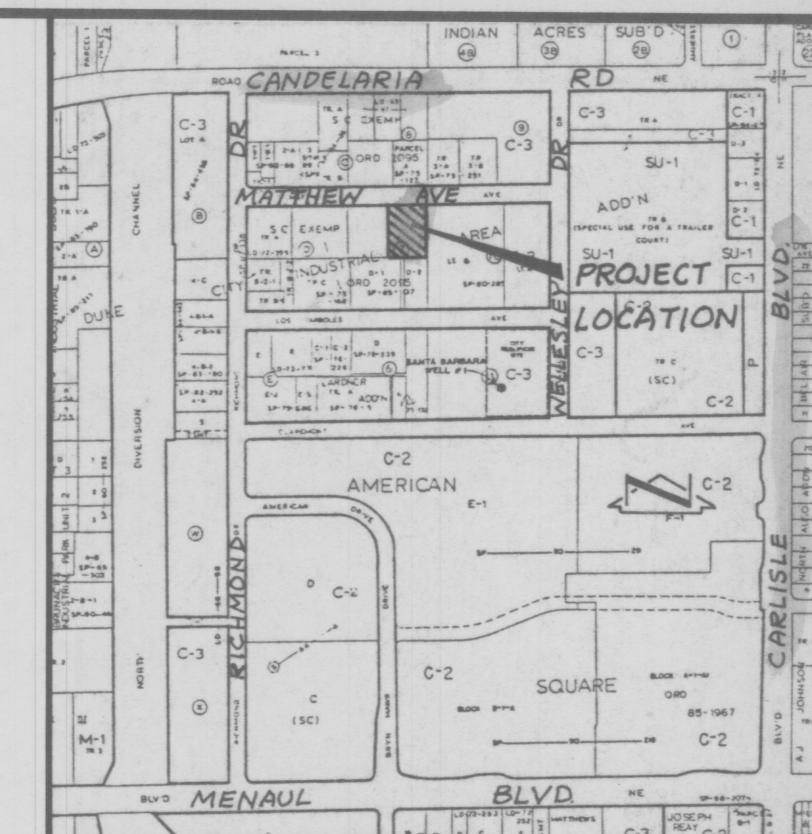
- Vicinity Map
- Grading Plan
- Calculations

As shown by the Vicinity Map, the site is located on the south side of Matthew Avenue N.E., between Wellesley Drive N.E. and Richmond Drive N.E. This site is currently developed with an existing building and a small amount of asphalt paving. The remainder of the site is a gravel/compacted earth storage yard. Much of the surrounding area is developed commercially, making this a modification to an existing site within an infill area.

As shown by Panel 23 of the National Flood Insurance Program Flood Insurance Rate Maps for the City of Albuquerque, New Mexico, this site does not lie within a designated flood hazard zone. Furthermore, these maps indicate that this site does not contribute runoff to a designated flood hazard zone. The site generally slopes from southeast to northwest to discharge its runoff to Matthew Avenue N.E. A small amount of runoff may exit the site across the westerly property line onto the existing site which lies to the west. Matthew Avenue N.E. is a developed street which drains from east to west to Richmond Drive N.E. Richmond Drive N.E. drains to the south to an existing surface channel inlet which discharges to the AMAFCA North Diversion Channel. Due to the fact that this is a modification to an existing site within an infill area, a minor increase anticipated due to the proposed development, and the proximity of the site to the AMAFCA North Diversion Channel, the free discharge of runoff is appropriate. Furthermore, the free discharge of runoff is consistent with the drainage pattern already established for the surrounding developed properties. The surrounding developed properties also directly discharge developed runoff into the existing improved streets.

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1'0" intervals, 2) the limit and character of the existing improvements, 3) the limit and character of the proposed improvements, and 4) continuity between existing and proposed grades. As shown by this plan, the improvements consist of the removal and replacement of existing asphalt paving, the overlay of existing asphalt paving, and the construction of asphalt paving above the existing gravel/compacted earth storage yard. All developed runoff will be directed to Matthew Avenue N.E. where it will be discharged via existing drivepads. The proposed drainage scheme will also eliminate the potential for draining developed runoff onto the adjacent property to the west.

The calculations which appear hereon analyze both the existing and developed conditions for the 10-year, 6-hour rainfall event. The Procedure for 40 Acre and Smaller Basins as set forth in Section 22.2, Hydrology of the Development Process Manual Volume 2, Design Criteria, August 1991, has been used to calculate the peak discharge and the volume of runoff generated. As shown by these calculations, a relatively minor increase in runoff is anticipated due to the proposed development of this existing site.



## VICINITY MAP

SCALE: 1" = 800' (APPROX)

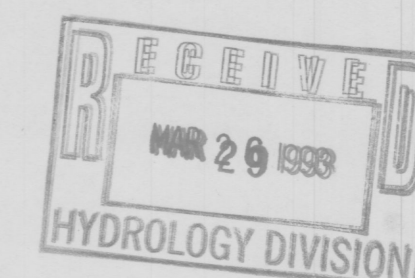
H-16

## CONSTRUCTION NOTES:

- Two (2) working days prior to any excavation, contractor must contact New Mexico One Call Service 266-1990, for location of existing utilities.
- Prior to construction, the contractor shall excavate and verify the horizontal and vertical location of all potential obstructions. Should a conflict exist, the contractor shall notify the engineer in writing so that the conflict can be resolved with a minimum amount of delay.
- 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.
- All construction within public right-of-way shall be performed in accordance with applicable City of Albuquerque Standards and Procedures.
- If any utility lines, pipelines, or underground utility lines are shown on these drawings, they are shown in an approximate manner only, and such lines may exist where none are shown. If any such existing lines are shown, the location is based upon information provided by the owner of said utility, and the information may be incomplete, or may be obsolete by the time construction commences. The engineer has conducted only preliminary investigation of the location, depth, size, or type of existing utility lines, pipelines, or underground utility lines. This investigation is not conclusive, and may not be complete, therefore, makes no representation pertaining thereto, and assumes no responsibility or liability therefore. The contractor shall inform itself of the location of any utility line, pipeline, or underground utility line in or near the area of the work in advance of and during excavation work. The contractor is fully responsible for any and all damage caused by its failure to locate, identify and preserve any and all existing utilities, pipelines, and underground utility lines. In planning and conducting excavation, the contractor shall comply with state statutes, municipal and local ordinances, rules and regulations, if any, pertaining to the location of these lines and facilities.
- The design of planters and landscaped areas is not part of this plan. All planters and landscaped areas adjacent to the building(s) shall be provided with positive drainage to avoid any ponding adjacent to the structure. For construction details, refer to landscaping plan.

## Erosion Control Measures

- The contractor shall ensure that no soil erodes from the site into public right-of-way or onto private property. This can be achieved by constructing temporary berms at the property lines and wetting the soil to keep it from blowing.
- The contractor shall promptly clean up any material excavated within the public right-of-way so that the excavated material is not susceptible to being washed down the street.
- The contractor shall secure "Topsoil Disturbance Permit" prior to beginning construction.



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## GRADING &amp; DRAINAGE PLAN

## CONDECK

DESIGNED BY	NO.	DATE	BY	REVISIONS	JOB NO.
JGM					930221
DRAWN BY					DATE
CEN					03/93
APPROVED BY					SHEET
JGM					1 OF 1