

PROJECT BENCHMARK
A SQUARE, CHISELED ON TOP OF CONCRETE CURB AT THE NW CORNER RETURN LOCATED AT THE INTERSECTION OF 4TH STREET AND CONSTITUTION NW IN THE NORTHWEST QUADRANT OF THE INTERSECTION.
ELEVATION = 4958.19 (M.S.L.D.)

TEMPORARY BENCHMARK
ACHIEVED ON TOP OF CONCRETE CURB AT THE INTERSECTION OF 3RD STREET NW AND ASPEN AVE NW AS SHOWN BELOW.
ELEVATION = 4958.84 (M.S.L.D.)

LEGAL DESCRIPTION
LOTS NUMBERED 1 THRU 12 IN BLOCK NUMBERED 4 OF THE MATTHEW ADDITION.

LEGEND

--- EXISTING CHAIN LINK FENCE
--- PROPERTY LINE
+ EXISTING SPOT ELEVATION

DRAINAGE PLAN
The following items concerning the Chaparral Building Materials Grading and Drainage Plan are contained herein:
1. Vicinity Map
2. Grading Plan
3. Calculations

As shown by the Vicinity Map, this site is bounded by Second Street N.W. on the east, Aspen Avenue N.W. on the south, Third Street N.W. on the west, and Bennett Avenue N.W. on the north. This site comprises the entire block and is a fully developed site within an already developed area. This infill site is a building materials yard. It is presently paved over the majority of the site. The area which is not paved is covered with buildings. The proposed improvements will consist of the construction of a storage building within an already paved area.

As shown by the Flood Insurance Program Floodway and Flood Boundary Maps for the City of Albuquerque, this site does not lie within a designated Flood Hazard Zone. These maps do identify flooding within Aspen Avenue N.W. adjacent to this site. The maps do identify flooding in the street is designated as an "AO 1-foot" zone and because the proposed building is not a habitable building, this potential flooding should not present a problem. Any materials stored within this storage shed should be elevated a minimum of one foot above the existing grade in order to protect it from the potential damage of flood waters which may leave the already developed street.

The Grading Plan shows 1) existing grades indicated by spot elevations 2) the limit and character of the existing improvements, 3) the limit and character of the proposed improvements. As shown by this Plan, the proposed improvements consist of the construction of a storage building within an already paved area. The construction of this building will involve the minor removal of existing pavement in order to construct the columns which support the roof of the structure. As shown by this Plan, the roof will drain to the east and to the west onto the existing paving on the site. The existing topography is extremely flat and a distinctive drainage pattern is not readily obvious. The trend in drainage on this site, if sufficient rainfall is experienced, is one in which the excess runoff would drain from north to south toward Aspen Avenue N.W. The roof runoff from the proposed storage building would fall on the existing paving and should follow that pattern mentioned above which is consistent with the existing drainage pattern of this site.

Due to the fact that this is an infill site, that no additional runoff is being created, and that no changes are being made to the existing drainage pattern, the free discharge of runoff from this site is appropriate. Furthermore, drainage easements or easements are not necessary to allow for the flow of runoff across lot lines because this is an existing condition and the large existing building and this proposed storage building both straddle lot lines, thereby preventing the sale of portions of storage building both straddle lot lines, thereby preventing the sale of portions of this overall site. Lastly, it is believed that offsite flows do not affect this site due to the fact that the Flood Insurance Maps indicate that the 100-year flows are confined to the surrounding streets.

The Calculations which appear herein analyze the existing condition for the 100-year, 6-hour rainfall event. The Rational Method has been used to quantify the peak rate of discharge from the site and the SCS Method has been used to quantify the total runoff volume generated by this site. Both Methods have been used in accordance with the City of Albuquerque Development Process Manual, Volume II and the Mayor's Emergency Rule dated January 14, 1986. These Calculations do not change from the existing to the developed condition because no additional service area is being created.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate 102, 25 Glendale Loan Hydrologic Soil Group: B

Time of Concentration/Time to Peak
 $T_c = 0.0078 (0.77/0.385) (Kipich Equation)$
 $T_p = T_c = 10 \text{ min.}$

Point Rainfall
 $P_2 = 2.2 \text{ in. (DPM Plate 22.2 D-1)}$

Rational Method

Discharge: $Q = CIA$
where C varies
 $P_2 = P_2 (6.84) T_c^{-0.51} = 4.65 \text{ in/hr}$
 $P_2 = 2.2 \text{ in (DPM Plate 22.2D-1)}$
 $T_c = 10 \text{ min (minimum)}$
 $A = \text{area, acres}$

SCS Method

Volume: $V = 3630(DRO) A$
where DRO = Direct runoff in inches
 $A = \text{area, acres}$

Existing Condition
Actual = 86,180 sf = 1.98 Ac
Roof area = 20,000 sf (0.23)
Paved area = 66,180 sf (0.77)
 $C = 0.34$ (Weighted average per Emergency Rule, 1/14/86)
 $Q_{100} = CIA = 0.94(4.65)(1.98) = 8.65 \text{ cfs}$
 $V_{100} = 3630(DRO) A = 10,220 \text{ cf}$

CONSTRUCTION NOTES:

- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL EXISTING UTILITIES. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH 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 UNDERTAKEN NO FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. 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 THE 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.

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 BARRIERS AT THE PROPERTY LINES AND WEEDING 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.

RECEIVED
AUG 13 1986
HYDROLOGY SECTION

NOTED & MODIFIED
NEW MEXICO
REGISTERED PROFESSIONAL ENGINEER
18947

GRADING & DRAINAGE PLAN
CHAPARRAL BUILDING MATERIALS

J14/D64

FILE NO.

SHEET 1



W. J. ANDERSON & ASSOCIATES, INC.
ENGINEERS
BIRMINGHAM, ALABAMA

NO.	DATE	BY	REVISIONS

DESIGNED BY J.G.M.
DRAWN BY C.J.W.
APPROVED J.G.M.

JOB NO.
61111
DATE
07-86