HYDROLOGY

G15/D28
ONE PLAN

G15-D28

1 PLAN

VICINITY MAP G·15

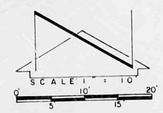
SCALE 1" = 800'

PROJECT BENCHMARK
A SQUARE CUT CHISELED ON TOP OF CONCRETE CURB AT THE NORTHWESTERN LOCATED @ THE INTERSECTION OF CANDELARIA RD. N.E. AND HIGH ST. N.E., IN THE NORTH-EAST QUADRANT OF THE INTERSECTION.
ELEVATION = 4996.38 ft. (MSLD) (S-115)

T.B.M.
TOP OF CONCRETE CURB ELEVATION - AN EXTENSION OF THE NORTHEAST PROPERTY CORNER AS SHOWN BELOW.
ELEVATION = 4996.07 ft. (MSLD)

LEGAL DESCRIPTION
LOTS G & H, SUNDT'S INDUSTRIAL AREA, HEUTON & SMITH SUBDIVISION

LEGEND
- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- 91 PROPOSED CONTOUR
- 5196 EXISTING CONTOUR
- SWALE
- PROPERTY LINE

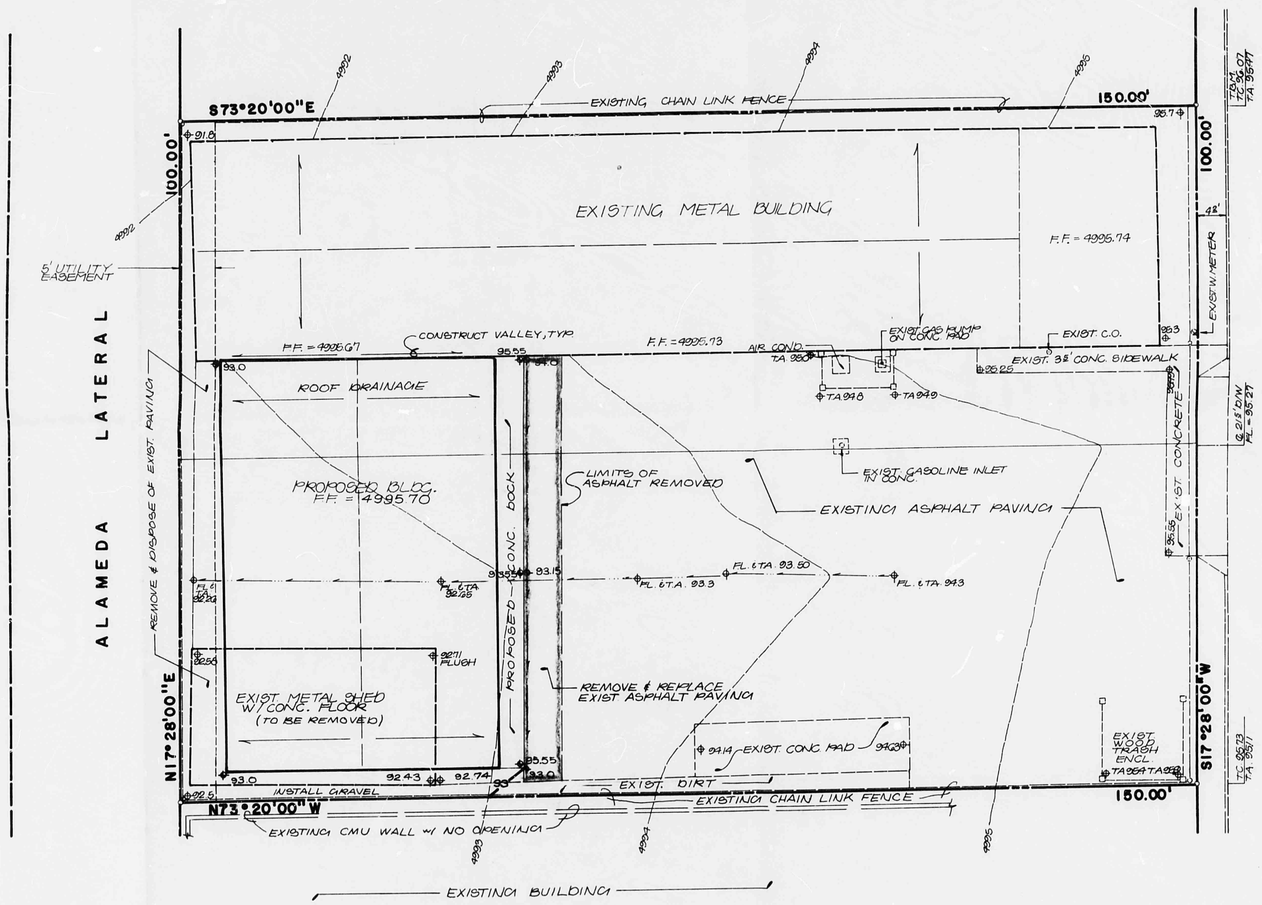


CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, FOR LOCATION OF EXISTING UTILITIES.
2. 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 SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
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 CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
5. 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, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. 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.

EROSION CONTROL MEASURES

1. 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.
2. 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.
3. THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.



DRAINAGE PLAN

The following items concerning the Sodeco, Inc. Drainage Plan are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

As shown by the Vicinity Map, this site is located on the west side of High Street N.E. just north of Candelaria Road N.E. At present, the site is developed as is much of the surrounding area. The proposed improvements will consist of the removal of an existing shed and existing asphalt paving and the construction of a warehouse addition and dock in that area.

As shown by Plate G-15 of the Albuquerque Master Drainage Study, this site is not located within a designated Flood Hazard Zone. Furthermore, this site does not contribute to a designated Flood Hazard Zone. At present, this site drains from east to west onto the right-of-way of the Alameda Lateral. At this point, it appears that the runoff which enters this right-of-way does not readily drain but does infiltrate into the soil. This is evidenced by lush native plant growth along the Alameda Lateral. This is an existing drainage pattern which will not be aggravated by the proposed development and which does not create any existing problems nor damage adjacent properties. Furthermore, directing the runoff from this site to the street would then contribute to an existing flood hazard area located at the intersection of Candelaria Road N.E. and Commercial N.E. In view of this information, it is appropriate to maintain the existing drainage pattern for this small site.

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 proposed improvements consist of the removal of existing impervious area and the construction of a warehouse addition. The net result of this proposed construction will be a minor decrease in the amount of runoff generated by this site. At present, runoff from the site flows onto the Alameda Lateral right-of-way as previously mentioned. The proposed construction will not alter this drainage pattern and will route the majority of the existing runoff around the building through a gravel area. Gravel was recommended for this area to control any erosion as well as to improve the appearance and maintenance of the area.

The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The SCS Method has been used for this analysis in accordance with the city of Albuquerque Development Process Manual, Volume II. As shown by these calculations, the proposed improvements will result in a minor decrease in the amount of runoff generated by this site.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey,
Plate: 21: GF, Gila Complex
Hydrologic Soil Group: B
Existing Pervious CN = 61 (DPM Plate 22.2 C-2
Pasture or Range Land: good condition)
Developed Pervious CN = 61 (DPM Plate 22.2 C-2; Pasture or Range Land: Good Condition)

Time of Concentration/Time to Peak

$T_c = 0.0078\ L^{0.77}/S^{0.385}$ (Kirpich Equation)

$T_p = T_c = 10$ min.

Point Rainfall

$P_6 = 2.2$ in. (DPM Plate 22.2 D-1)

Existing Condition

Atotal = 15,000 sf = 0.34 Ac
Aimp = 13,870 sf; % impervious = 92 %
Composite CN = 95 (DPM Plate 22.2 C-3)
DRO = 1.7 in (DPM Plate 22.2 C-4)
$q_p = 45.4\ A/T_p = 1.54$ cfs/in runoff

$Q_{100} = Q_{peak} = q_p$ (DRO) = 2.6 cfs
$V_{100} = 3630$ (DRO) A = 2100 cf

Developed Condition

Atotal = 15,000 sf = 0.34 Ac
Aimp = 13,540 sf; % impervious = 90 %
Composite CN = 94 (DPM Plate 22.2 C-3)
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$Q_{100} = Q_{peak} = q_p$ (DRO) = 2.6 cfs
$V_{100} = 3630$ (DRO) A = 1975 cf

Comparison

ΔQ_{100} = 2.6 - 2.5 = 0.1 cfs (decrease)
ΔV_{100} = 2100 - 1975 = 125 cf (decrease)

JEFFREY G. MORTENSEN NEW MEXICO 8547 REGISTERED PROFESSIONAL ENGINEER

RECEIVED MAY 21 1986 HYDROLOGY SECTION

NO.	DATE	BY	REVISIONS

DESIGNED BY J.G.M.
DRAWN BY J.M.C.
APPROVED J.G.M.
JOB NO. 60811
DATE 5·86

GRADING & DRAINAGE PLAN
SODECO INC.

G15/D28

FILE NO.
SHEET 1 OF 1

Mortensen Martinez Associates, Inc.
811 DALLAS N.E. · ALBUQUERQUE · NEW MEXICO · 87110
ENGINEERS

HYDROLOGY

G15/D28
ONE PLAN

G15-D28

1 PLAN

VICINITY MAP G·15

SCALE 1" = 800'

PROJECT BENCHMARK
A SQUARE, 12 INCH, CHISELED, ON TOP OF CONCRETE CURB @ THE NE, NW, SW, & SE CORNERS, LOCATED @ THE INTERSECTION OF CANDELARIA RD. N.E. AND HIGH ST. N.E., IN THE NORTH-EAST QUADRANT OF THE INTERSECTION.
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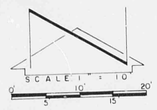

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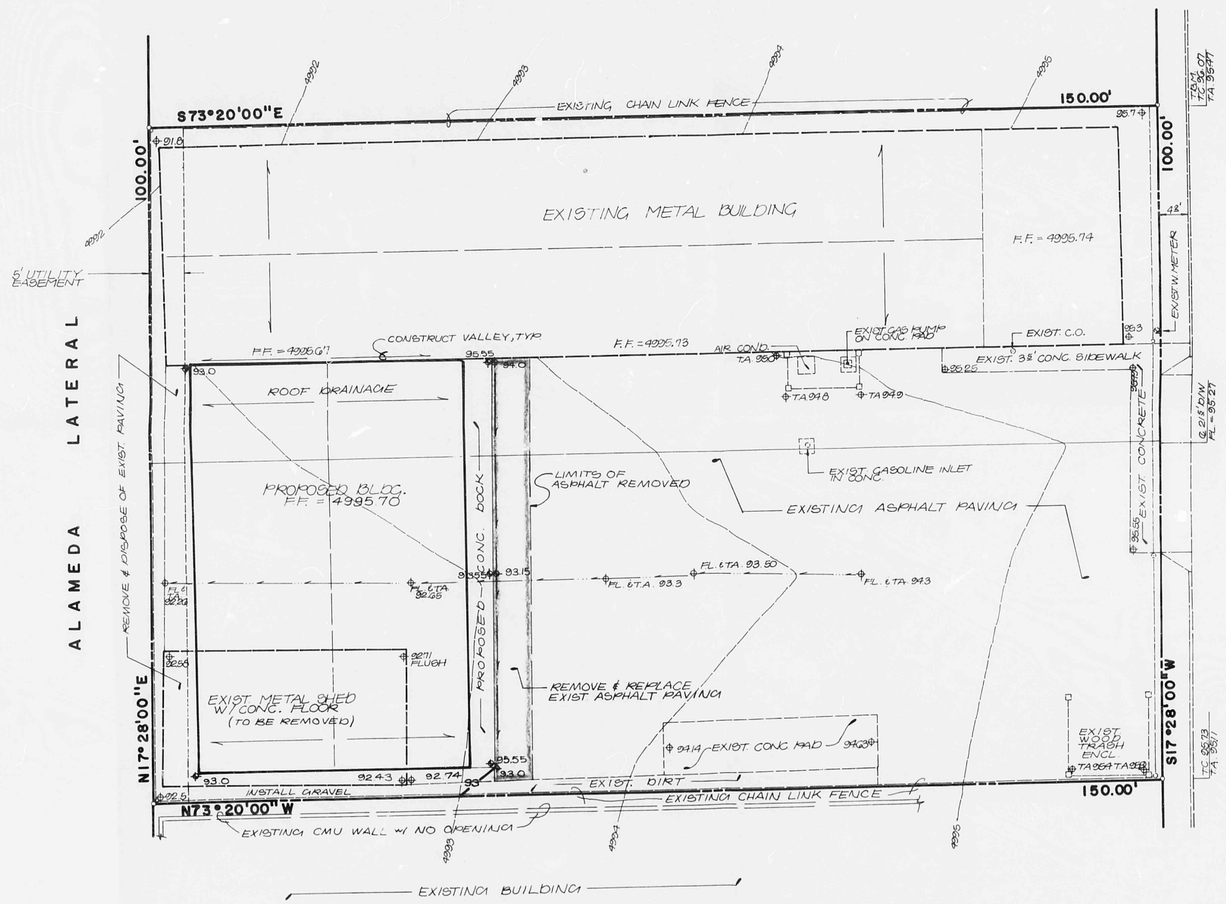

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Comparison

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ΔV_{100} = 2100 - 1975 = 125 cf (decrease)

JEFFREY G. MORTENSEN NEW MEXICO 8547 REGISTERED PROFESSIONAL ENGINEER

RECEIVED MAY 21 1986 HYDROLOGY SECTION

Bohannan-Huston Inc.
811 DALLAS, N.E. · ALBUQUERQUE · NEW MEXICO · 87110
ENGINEERS

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DESIGNED BY J.G.M.
DRAWN BY J.M.C.
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GRADING & DRAINAGE PLAN
SODECO INC.

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