



F.H.W.A. Region No. 6NEW MEXICO

SHEET NO. TOTAL SHEETS

AS-BUILT INFORMATION

CONTRACTOR WORK STAMPED BY DATE

INSPECTOR'S SIGNATURE DATE

VERIFICATION BY DATE

MICRO-FILM INFORMATION

RECORDED BY DATE

BENCH MARKS

A.C.S. B.M. "8-E17" CHISELED "IN TOP OF CURB AT THE SOUTH AND SOUTHEAST CORNERS AT THE INTERSECTION OF OFFICE AND JEFFERSON BLVD. ELEVATION 5140.05"

SURVEY INFORMATION

FIELD NOTES

DATE

BY

NO.

ENGINEER'S SEAL

UTAH REGISTERED PROFESSIONAL ENGINEER

524.96

12/14/90

8-13-90

REVISIONS

NO.

DATE

REMARKS

DESIGN

BY

DATE

DRAWN BY

CHECKED BY

CITY OF ALBUQUERQUE

TITLE: A BRANCH WAREHOUSE FOR NABISCO, INC. GRADING - DRAINAGE AND UTILITY PLAN

APPROVALS

ENGINEER

DATE

APPROVALS

ENGINEER

DATE

City Engineer

Liquid Waste

A.C.E - Design

Traffic

A.C.E - Hydrology

Water

DRAWING NO.

MAP NO. E-17-Z

DATE 12/14/90

OF

**DRAINAGE MANAGEMENT PLAN - PHASE I SITE**

**EXISTING CONDITIONS AND SITE DESCRIPTION:** This 2.4 acre site is located at the northeast corner of Office Blvd. and Midway Place. The legal description is Lot 8-1, Albuquerque Industrial Park (a portion thereof). It is undeveloped although it is located within an area of moderately dense industrial and commercial development.

As stated above, this 2.4 acre site is part of a larger 20 acre lot (Lot 8-1). A drainage plan has been prepared which addresses in more detail the drainage characteristics of the entire 20-acre parcel, including this Phase I, 2.4 acre tract. This plan is referenced for additional drainage information and is enclosed with this submittal.

The 2.4 acre site currently drains in a sheet flow manner in a northerly direction. Eventually, it reaches the Bear Arroyo at the site's northerly boundary. Although there is six feet of fall across the site, much of this site is a flat terrace with elevation taken up in "benches" of sudden drops.

The site is not located within any FEMA floodplain zones.

**PROPOSED DRAINAGE CONDITIONS:** A warehouse/office development is proposed for the site. Site drainage will be directed by swale to a proposed public inlet to be built over the existing 36" storm drain located along the site's west boundary. Controlled discharge of 2.11 cfs per acre of this Phase I site will be provided for by the use of detention pond with controlled depths. The pond will provide a minimum volume of 2100 cubic feet.

Offsite flows will be handled in two separate ways. Drainage from east of the site will be collected by a swale on the site's east boundary, diverted to a swale along the north boundary and then discharged to the proposed public inlet. A private drainage easement is provided for the swale and detention pond crossing the site at its north boundary.

**Calculations:** by DPM procedures, using the Rational Method of Analysis, 100-year storm event

**Undeveloped Condition:**  
 $Q = CIA = (0.40)(4.65)(2.40) = 4.56 \text{ cfs}$   
using  $T_c = 10 \text{ min.}$ ,  $R = 2.2"$

**Developed Condition:** Total Site  
 $Q = 9.30 \text{ cfs}$

**Basin 1A:**  
 $Q = CIA = (0.81)(4.65)(2.40) = 9.0 \text{ cfs}$   
0.73 ac. Buildings  
0.56 ac. Pavement and Sidewalks  
0.10 ac. Landscape  
1.0 ac. Stabilized Earth (ca.0.7)  
Using  $T_c = 10 \text{ min.}$ ,  $R = 2.2"$

**Basin 1B:**  
 $Q = CIA = 1.1 \text{ cfs}$   
 $C = 0.7$  (stabilized earth)  
 $A = 0.33 \text{ ac.}$   
 $I = 4.65 \text{ in/hr}$   
 $Q = CIA = 1.1 \text{ cfs}$

**Controlled Discharge per Master Plan:** (Site)  
2.4 ac (2.11 cfs/acre) = 5.06 cfs

**Check Swale on North Boundary:**  
 $reg'd Q_{100} = 9.0 + 17.43 = 26.5 \text{ cfs}$  (fully developed flows)  
by Manning's, swale capacity = 86 cfs ( $n = 0.03$ ), OK

**Check Manhole Capacity to Collect Flow:**  
R-2580-A grate (Neenah)  
Open Area = 1.9 sq.ft., 30% plugged, remaining area = 1.33 sq.ft.  
by orifice equation,  $Q = C_d A \sqrt{2gh}$   
 $Q = 0.6 (1.33) \sqrt{2(32.2)(2.3)} = 9.7 \text{ cfs}$  (grate capacity)  
Therefore 5.9 cfs ( $10.6 + 5.0 - 9.7$ ) will overflow in the developed condition. This value is significantly less than the historical flow discharging at this point (13.8)

**HYDROGRAPH**

**UTILITIES NOTES**

- THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE INSTALLATION OF ALL WORK RELATED TO MECHANICAL UTILITIES, AS SHOWN ON THIS PLAN INCLUDING: TRENCHING, BACKFILL, SUPPORTS, CLEAN-OUT PADS, SERVICE STOPS AND BOXES, SERVICE LINES, TESTING, CLEANING, AND STERILIZING. ANY WORK NOT ACCEPTED BY THE ARCHITECT OR ENGINEER DUE TO IMPROPER WORKMANSHIP OR LACK OF PROPER COORDINATION SHALL BE REMOVED AND CORRECTLY INSTALLED AT THE CONTRACTOR'S EXPENSE, AS DIRECTED.
- MINIMUM DEPTHS BELOW GRADE (COVER): WATER - 36", SEWER - 48" (EXCEPT AT BUILDING CONNECTION).
- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, AND THE IAPMO UNIFORM PLUMBING CODE, LATEST EDITION.
- UTILITY LINES SHALL BE INSTALLED PRIOR TO PAVEMENT AND/OR SIDEWALK, AS APPLICABLE.
- FITTINGS SPECIFIED ARE PER CERTAIN TEE'S OR EQUIVALENT.
- ROUGH GRADING OF SITE ( $\pm 0.5'$ ) TO BE COMPLETED PRIOR TO INSTALLATION OF UTILITY LINES.
- CONTRACTOR WILL BE RESPONSIBLE FOR CONNECTING TO BUILDING DRAIN LINES AND ALL NECESSARY FITTINGS.

**GRADING NOTES**

- EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE TYPICAL SECTIONS SHOWN ON THIS PLAN.
- CONTRACTOR SHALL OBTAIN AND ABIDE BY A TOPSOIL DISTURBANCE PERMIT FROM THE CITY OF ALBUQUERQUE. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST.
- ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION, AS PROVIDED BY THE ARCHITECT OR OWNER. AS OTHER WORK SHALL, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION - LATEST EDITION.
- TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE (765-1264) FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO GRADING, ALL VEGETATION, DEBRIS, AND NEAR SURFACE ORGANICALLY CONTAMINATED SOIL SHALL BE STRIPPED FROM ALL AREAS TO BE GRADED. VEGETATION AND DEBRIS SHALL BE DISPOSED OF OFF-SITE. TOPSOIL STRIPPINGS SHALL BE DISPOSED OF OFF-SITE OR STOCKPILED FOR USE IN PLANTERS AND NON-STRUCTURAL FILL.
- EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL, EXCLUDING LANDSCAPE BUILDING APRON.
- A 6" CURB AND GUTTER SHALL BE USED THROUGHOUT THE SITE. SEE DETAIL ON PROJECT SITE PLAN DRAWING.
- IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES. THE EXCEPTIONS SHALL BE THE EROSION CONTROL BERM AND SWALE ALONG EAST BOUNDARY. SINCE JOHN KELLEY TALKED TO LARRY TRUJILLO @ AMAFCA 12/14/90 IF THEY ARE SATISFIED W/ AS-BUILTS, HE SAID THEY HAD NO PROBLEM, SO I WILL RELEASE O.D.

CDP/01/2015104 SITE 30, HANKE