425-C N. TELSHOR, SUITE 203 LAS CRUCES, NEW MEXICO 88011 (505) 521-3757 FAX: (505) 521-3880

1-98

SPAIN GER KING ≈ H WYOMIN

REVISIONS

JOB NUMBER: 9705

JUNE 1998

SHEET NUMBER

C/MAINT FAC LOCATION VICINITY MAP LEGAL DESCRIPTION TRACT "B" IN BLOCK NUMBERED ONE (1) OF AMERICAN HERITAGE NORTH UNIT 3, A SUBDIVISION OF THE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT OF SAID SUBDIVISION, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON MAY 30, 1978, IN MAP BOOK D-8, FOLIO 138. BENCHMARK ACS 3-F19AB BRASS TABLET LOCATED ON TOP OF A CONCRETE POST AT THE INTERSECTION OF OSUNA RD. AND WYOMING BLVD. ELEV. = 5440.56'

TC=35.92 FL=35.49

TC = 35 50 FL = 35 11

TC=35.45 FL=34.9

MATCH EXIST.

HADBOLOGY SECTION

F-19-Z

ALBUQUERQUE, NEW MEXICO JANUARY 1996. LEGEND BUILDING EXISTING ASPHALT CONCRETE NEW ASPHALT CURB AND GUTTER EXISTING CURB AND GUTTER EXISTING SPOT ELEVATION FL28.55 PROPOSED SPOT ELEVATION EXISTING SANITARY SEWER EXISTING WATER LINE PROPERTY LINE CONTOURS ----- 5182-----BASIN BOUNDARY

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5639 JEFFERSON STREET N.E. . ALBUQUERQUE, NEW MEXICO 87109 PHONE (505) 344-4080 • FAX (505) 343-8759

SURVEY INFO.

TOPOGRAPHIC SURVEY PERFORMED BY HARRIS SURVEYING, INC.

KEYED NOTES

FL31.50

# GRADING AND DRAINAGE PLAN

FL25.70 25.96

TRACT "A-2"

B TINU

AMERICAN HERITAGE NORTH, BLOCK

## THE FOLLOWING NOTES ALSO APPLY WHEN CHECKED

ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.

TRACT "C-1" AMERICAN HERITAGE NORTH, BLOCK UNIT 3

TC30.66

DRIVE THRU LANE CONC WALK

PASS THRU LANE IPWE ?

TOW= 26.21

- BACKFILL COMPACTION SHALL BE ACCORDING TO ARTERIAL STREET USE.
- SIDEWALKS AND WHEELCHAIR RAMPS WITHIN THE CURB RETURNS SHALL BE CONSTRUCTED WHEREVER A NEW CURB RETURN IS
- ALL STORM DRAINAGE FACILITIES SHALL BE COMPLETED PRIOR TO FINAL ACCEPTANCE.

TC30.66

BURGER KING

FF=5430.70

EW=29.62

EXISTING RETAINING WALC

252.52

- TACK COAT REQUIREMENTS SHALL BE DETERMINED BY THE CITY
- IF CURB IS DEPRESSED FOR A DRIVEPAD OR A HANDICAP RAMP, THE DRIVEPAD OR RAMP SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF THE CURB AND GUTTER.

| ľ          | APPROVALS    | NAME                                     | DATE |
|------------|--------------|------------------------------------------|------|
| <i>ر</i> ا | HINDROLOGY   |                                          |      |
| 1          | INSPECTIOR   | la l |      |
| 1/1        | A.G.E. FIEDD | 1. Sun                                   |      |

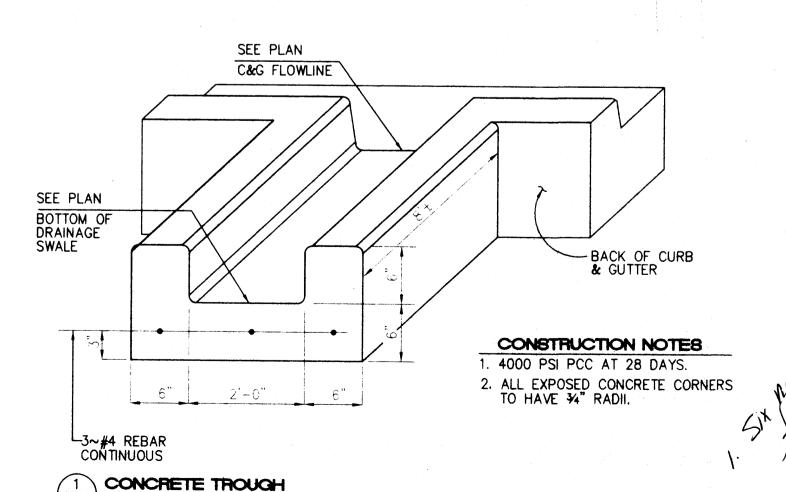
## 1 NEW ASPHALT TO MATCH EXISTING.

- 2 CURB AND GUTTER FLUSH THIS AREA.
- 3 2' WIDE CURB CUT.
- 4 CONCRETE RUNDOWN PER 1/C1.
- 5 INSTALL 24" SIDEWALK CULVERT PER COA STD. 2236.
- 6 ROOF DRAIN.

EW-29.53

TRACT "A-I"

AMERICAN HERITAGE NORTH, BLOCK



JOB NO: N02-148-5198 FILE: BKW-GD (5/26/98) ENG/TECH: CE/JM REV: 06-1-98 jm

N RM=24 75

POND

BOT OF POND

INV23.50

TC=22.28 FL=21.62

N.T.S.

EXIST.

Z

CONSULTING ENGINEERS,

WATER BLOCK

C1

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.

REFERENCE MADE TO COA STD DWGS. REFER TO CITY OF ALBUQUERQUE STANDARD DRAWINGS AS AMENDED THROUGH UPDATE #6.

REFERENCE MADE TO APWA REFERS TO AMERICAN PUBLIC WORKS ASSOCIATION.

THE CONTRACTOR SHALL NOT INSTALL ITEMS AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS THAT FIELD CONDITIONS ARE DIFFERENT THAN SHOWN IN THE DESIGN. SUCH CONDITIONS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER. IN THE EVENT THE CONTRACTOR DOES NOT NOTIFY THE ENGINEER, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY AND EXPENSE FOR ANY REVISIONS NECESSARY.

EXISTING SITE IMPROVEMENTS WHICH ARE DAMAGED OR DISPLACED BY THE CONTRACTOR SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT THE CONTRACTORS'S OWN EXPENSE. REPAIRS SHALL BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION OF THE REPAIRS. REPAIRS SHALL BE ACCEPTED BY THE OWNER PRIOR TO FINAL PAYMENT.

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ALL DIMENSIONS IN PARKING AREAS AND DRIVES ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

ALL STATIONING IS TO CENTERLINE OF RIGHT-OF-WAY UNLESS OTHERWISE

ALL SLOPES AND GRADES ARE IN FEET/FOOT UNLESS OTHERWISE NOTED. ELEVATIONS SHOWN FOR CURB AND GUTTER ARE FLOWLINE ELEVATIONS UNLESS

OTHERWISE NOTED. SEE DETAIL SHEET FOR CURB HEIGHT ABOVE FLOWLINE.

UNLESS OTHERWISE SPECIFIED SUBGRADE SOILS AND STRUCTURAL FILL MATERIALS SHALL BE COMPACTED TO THE FOLLOWING PERCENTAGES OF THE ASTM D 1557 MAXIMUM DENSITY.

| MATERIAL                                                                        | PERCENT                                 | COMP     | ACTION |
|---------------------------------------------------------------------------------|-----------------------------------------|----------|--------|
| STRUCTURAL FILL IN THE BUILDING AREA SUBASE FOR SLAB SUPPORT                    |                                         | 95<br>95 |        |
| MISCELLANEOUS BACKFILL BELOW STRUCTURAL FILL OR ROAD PAVEMENT                   | · 1 · 1 · 1 · 1 · 1 · 1 · 1 · 1 · 1 · 1 | 95       |        |
| MISCELLANEOUS BACKFILL BELOW UNPAVED, NON-BUILDING AREAS ROAD PAVEMENT SUBGRADE |                                         | 90<br>95 |        |
| SIDEWALK SUBGRADE<br>CURB AND GUTTER SUBGRADE                                   |                                         | 90<br>95 |        |

## PAVING

WHEN ABUTTING NEW PAVEMENT TO EXISTING, CUT BACK EXISTING PAVEMENT TO A NEAT, STRAIGHT LINE AS REQUIRED TO REMOVE ANY BROKEN OR CRACKED PAVEMENT AND MATCH NEW PAVING TO EXISTING.

ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED AND APPROVED PRIOR TO PAVING.

ALL WATER VALVE BOXES AND ELECTRICAL, TELEPHONE, TV & SEWER MANHOLES IN THE CONSTRUCTION AREA SHALL BE ADJUSTED TO FINISHED

## UTILITIES

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 TO THE ENGINEER BY OTHERS, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ANY UTILITY LINE, PIPELINE OR UNDERGROUND UTILITY LINE IN OR NEAT THE AREA OF THE WORK IN ACCORDANCE WITH CHAPTER 62, ARTICLE 14-1 THROUGH 14-8, NMSA 1978.

THE EXISTING UTILITIES DEPICTED ON THESE PLANS WERE DERIVED FROM INFORMATION PROVIDED TO THE ENGINEER BY OTHERS. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF PERTINENT UTILITIES. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. CONTRACTOR IS TO EXERCISE DUE CARE TO AVOID DISTURBING ANY EXISTING UNDERGROUND UTILITIES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ANY POTENTIAL DISRUPTIONS IN UTILITY SERVICE WITH THE UTILITY COMPANIES AFFECTED AT LEAST 24 HOURS PRIOR TO THE

#### EROSION CONTROL ENVIRONMENTAL PROTECTION, AND STORM WATER POLLUTION PREVENTION PLAN

THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE, AND FEDERAL DUST AND EROSION CONTROL REGULATIONS. THE CONTRACTOR SHALL PREPARE AND OBTAIN ANY NECESSARY DUST OR EROSION CONTROL PERMITS FROM REGULATORY AGENCIES.

THE CONTRACTOR SHALL SECURE A "TOP SOIL DISTURBANCE PERMIT" FROM THE CITY OF ALBUQUERQUE ENVIRONMENTAL HEALTH DIVISION PRIOR TO

THE CONTRACTOR SHALL PROMPTLY REMOVE ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY TO KEEP IT FROM WASHING OFF THE PROJECT

THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO OTHER PROPERTY BY CONSTRUCTING TEMPORARY EROSION CONTROL BERMS OR INSTALLING SILT FENCES AT THE PROPERTY LINES AND WETTING THE SOIL TO

WATERING, AS REQUIRED FOR CONSTRUCTION AND DUST CONTROL, SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO MEASUREMENT OR PAYMENT SHALL BE MADE THEREFOR. CONSTRUCTION AREAS SHALL BE WATERED FOR DUST CONTROL IN COMPLIANCE WITH GOVERNMENT ORDINANCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SUPPLYING WATER AS

ANY AREAS DISTURBED BY CONSTRUCTION AND NOT COVERED BY LANDSCAPING OR AN IMPERVIOUS SURFACE SHALL BE REVEGETATED WITH RECLAMATION

SEEDING OF DISTURBED AREAS SHALL BE DONE IN ACCORDANCE WITH C.O.A. STANDARD SPECIFICATION #1012, "NATIVE GRASS SEEDING".

THE CONTRACTOR SHALL PROPERLY HANDLE AND DISPOSE OF ALL ASPHALT REMOVED ON THE PROJECT BY HAULING TO AN APPROVED LANDFILL IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEW MEXICO SOLID WASTE ACT.

ALL WASTE PRODUCTS FROM THE CONSTRUCTION SITE, INCLUDING ITEMS ALL WASTE PRODUCTS FROM THE CONSTRUCTION SITE, INCLUDING TIEMS
DESIGNED FOR REMOVAL, CONSTRUCTION WASTE, CONSTRUCTION EQUIPMENT
WASTE PRODUCTS (OIL, GAS, TIRES, ETC.), GARBAGE, GRUBBING, EXCESS CUT
MATERIAL, VEGETATIVE DEBRIS, ETC. SHALL BE APPROPRIATELY DISPOSED
OF OFF-SITE AT NO ADDITIONAL COST TO THE OWNER. IT SHALL BE THE
CONTRACTORS RESPONSIBILITY TO OBTAIN ANY PERMITS REQUIRED FOR HAUL
OR DISPOSAL OF WASTE PRODUCTS. IT SHALL BE THE CONTRACTORS
RESPONSIBILITY TO ENSURE THAT THE WASTE DISPOSAL SITE COMPLIES WITH
GOVERNMENT REGULATIONS REGARDING THE ENVIRONMENT, ENDANGERED SPECIES, AND ARCHAEOLOGICAL RESOURCES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEAN-UP AND REPORTING OF SPILLS OF HAZARDOUS MATERIALS ASSOCIATED WITH THE CONSTRUCTION SITE. HAZARDOUS MATERIALS INCLUDES GASOLINE, DIESEL FUEL, MOTOR OIL, SOLVENTS, CHEMICALS, PAINT, ETC. WHICH MAY BE A THREAT TO THE ENVIRONMENT. THE CONTRACTOR SHALL REPORT THE DISCOVERY OF PAST OR PRESENT SPILLS TO THE NEW MEXICO ENVIRONMENT DEPARTMENT EMERGENCY RESPONSE AT 1-505-822-1558 OR 1-800-219-6157.

THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS CONCERNING SURFACE AND UNDERGROUND WATER. CONTACT WITH SURFACE WATER BY CONSTRUCTION EQUIPMENT AND PERSONNEL SHALL BE MINIMIZED EQUIPMENT MAINTENANCE AND REFUELING OPERATIONS SHALL BE PERFORMED IN AN ENVIRONMENTALLY SAFE MANNER IN COMPLIANCE WITH GOVERNMENT REGULATIONS.

THE AIR POLLUTION CONTROL REGULATIONS OF THE ALBUQUERQUE/BERNALILLO COUNTY AIR QUALITY CONTROL BOARD (505-768-2638) LIMIT THE EMISSION OF PARTICULATES AND THE USE OF CUTBACK ASPHALT. THE CONTRACTOR SHALL APPRISE HIMSELF OF THESE REGULATIONS PRIOR TO BIDDING AND PERFORMING THE WORK.

THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS CONCERNING CONSTRUCTION NOISE AND HOURS OF OPERATIONS.

#### PROJECT DESCRIPTION - RUN-OFF CALCULATIONS

#### 1. EXISTING CONDITIONS

THE SITE CURRENTLY HAS AN EXISTING 1200 SF BUILDING WITH ASPHALT PARKING AND LANDSCAPING. THERE IS A FIFTEEN FOOT ACCESS EASEMENT ALONG THE NORTHERN PROPERTY LINE FROM WYOMING BOULEVARD TO HERITAGE COURT. SURROUNDING DEVELOPMENT INCLUDES A GAS STATION ON THE SOUTH SIDE AND AN OFFICE BUILDING ON THE NORTH SIDE.

THE SITE IS NOT ACCEPTING ANY OFF-SITE FLOW.

ALL ON-SITE RUNOFF FROM BASIN A AND BASIN B DISCHARGES TO HERITAGE COURT BY OVERLAND FLOW AT A 3-4% SLOPES. IT IS THEN CONVEYED TO SPAIN ROAD BY STREET FLOW. FROM THE INTERSECTION OF HERITAGE COURT AND SPAIN ROAD THE RUNOFF FLOWS WEST ON IS COLLECTED BY A SERIES OF CATCH BASINS ON THE SOUTH SIDE OF SPAIN ROAD THAT LEADS TO BEAR TRIBUTARY ARROYO. AS SHOWN ON THE 1996 FIRM MAY, THE BEAR TRIBUTARY ARROYO HAS ENOUGH CAPACITY TO CONVEY THE 100 YEAR RUNOFF.

#### 2. PROPOSED CONDITIONS

THE DEVELOPED SITE WILL BE A BURGER KING RESTAURANT WITH ASPHALT PARKING AND LANDSCAPING. THE STORM WATER RUNOFF WILL BE DISCHARGED TO HERITAGE COURT. IN ORDER TO DECREASE THE RUNOFF RATE FROM THE PROPOSED SITE TO BE LESS THAN EXISTING, A DETENTION POND WILL BE CONSTRUCTED ON THE WEST SIDE OF THE SITE. THE ATTENUATED RUNOFF WILL BE RELEASED FROM THE POND THROUGH 2-8" PIPES, THESE PIPES WILL THEN DISCHARGE INTO A SIDEWALK CULVERT, RELEASING RUNOFF ONTO HERITAGE COURT. A TOTAL PROPOSED RUNOFF OF 3.30 CFS WAS COMPUTED FOR BASIN B, WHEREAS A RUNOFF 2.75 CFS WILL BE DISCHARGED FROM THE POND.

AS SHOWN BY PANEL 352 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS FOR THE CITY OF ALBUQUERQUE, NEW MEXICO DATED SEPTEMBER 20, 1986, THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE.

THIS PROCEDURE IS IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, VOLUME 2, SECTION 22.2, "HYDROLOGY", PEAK DISCHARGE RATE FOR SMALL WATERSHEDS LESS THAN FORTY ACRES IN SIZE.

PRECIPITATION ZONE FROM FIGURE A-1:\_\_\_3 LAND TREATMENT DESCRIPTIONS ARE IN TABLE A-4.

#### RUNOFF RATE COMPUTATION

USE EQUATION A-10: QP = QPA AA + QPB AB + QPC AC + QPD AD

VALUES OF QP ARE FROM TABLE A-9, AND ARE IN CFS/ACRE. AREA VALUES ARE IN ACRES.

| BASIN      | QPA     | AA     | QPB      | AB   | QPC  | AC   | QPD  | AD   | QP       |
|------------|---------|--------|----------|------|------|------|------|------|----------|
| EXISTING F | RATE OF | RUNOF  | F (CFS)  |      |      |      |      |      |          |
| BASIN A    | 1.87    | 0.00   | 2.60     | 0.00 | 3.45 | 0.00 | 5.02 | 0.09 | 0.45 CFS |
| BASIN B    | 1.87    | 0.00   | 2.60     | 0.14 | 3.45 | 0.30 | 5.02 | 0.29 | 2.85 CFS |
| TOTAL      |         |        |          |      |      |      |      |      | 3.30 CFS |
| DEVELOPE   | D RATE  | OF RUN | NOFF (CI | FS)  |      |      |      |      |          |
| BASIN A    | 1.87    | 0.00   | 2.60     | 0.00 | 3.45 | 0.00 | 5.02 | 0.09 | 0.45 CFS |
| BASIN B    | 1.87    | 0.00   | 2.60     | 0.15 | 3.45 | 0.00 | 5.02 | 0.58 | 3.30 CFS |
| TOTAL      |         |        |          |      |      |      |      |      | 3.75 CFS |

#### 2. RUNOFF VOLUME COMPUTATION

USE EQUATION A-5 TO COMPUTE WEIGHTED EXCESS PRECIPITATION: WEIGHTED E = "E" = (EA AA + EB AB + EC AC + ED AD)/(AA + AB + AC + AD)  $(AA + AB + AC + AD) = \Sigma AI$ 

USE EQUATION A-6 TO COMPUTE THE VOLUME:  $V360 = "E" \times (AA + AB + AC + AD) \times 3630 \text{ FEET}^3/ACRE-INCH$ 

VALUES OF "E" ARE FROM TABLE A-8, AND ARE IN INCHES. AREA VALUES ARE IN ACRES.

| BASIN                                   | EA                     | AA                      | EB                      | AB                      | EC                    | AC           | ED           | AD           | ΣΑ           | <u>"E"</u>   | V360                                  |
|-----------------------------------------|------------------------|-------------------------|-------------------------|-------------------------|-----------------------|--------------|--------------|--------------|--------------|--------------|---------------------------------------|
| EXISTING<br>BASIN A<br>BASIN B<br>TOTAL | VOLUME<br>0.66<br>0.66 | OF RUI<br>0.00<br>0.00  | NOFF (C<br>0.92<br>0.92 | UBIC FE<br>0.00<br>0.14 | ET)<br>1.29<br>1.29   | 0.00         | 2.36<br>2.36 | 0.09<br>0.29 | 0.09<br>0.73 | 2.36<br>1.64 | 771 CU-FT<br>4357 CU-FT<br>5128 CU-FT |
| DEVELOPE<br>BASIN A<br>BASIN B<br>TOTAL | 0.66<br>0.66           | ME OF 1<br>0.00<br>0.00 | RUNOFF<br>0.92<br>0.92  | (CUBIC<br>0.00<br>0.15  | FEET)<br>1.29<br>1.29 | 0.00<br>0.00 | 2.36<br>2.36 | 0.09<br>0.58 | 0.09<br>0.73 | 2.36<br>2.06 | 771 CU-FT<br>5470 CU-FT<br>6241 CU-FT |

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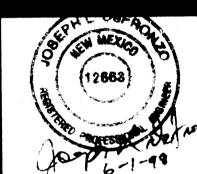
525 SAN PEDRO NE, SUITE 110

ALBUQUERQUE

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ALBUQUERQUE, NEW MEXICO 87108 (505) 255-6400 FAX: (505) 268-6954 LAS CRUCES

425-C N. TELSHOR, SUITE 203 LAS CRUCES, NEW MEXICO 88011 (505) 521-3757 FAX: (505) 521-3880



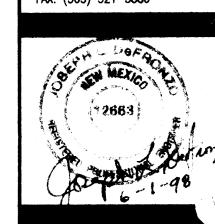
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| REVISIONS |          |  |  |  |  |  |  |  |  |  |  |
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JOB NUMBER: 9705

**JUNE 1989** SHEET NUMBER

425-C N. TELSHOR, SUITE 203 LAS CRUCES, NEW MEXICO 88011 (505) 521-3757 FAX: (505) 521-3880



SPAI GER YOMIN

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DRAINA

JOB NUMBER 9705

> JUNE 1998 EET NUMBER.

TRACT "C-I" AMERICAN HERITAGE NORTH, BLOCK I 15' ACCESSA SESTING 244.96 PA = 29.94 N RIM=14.75 TRACT "B" IN BLOCK NUMBERED ONE (1) OF AMERICAN HERITAGE NORTH UNIT 3, A SUBDIVISION OF THE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT OF SAID SUBDIVISION, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON MAY 30, 1978, IN MAP BOOK D-8, FOLIO 138. ACS 3-F19AB BRASS TABLET LOCATED ON TOP OF A CONCRETE POST AT THE INTERSECTION OF OSUNA RD. AND WYOMING BLVD. ELEV. = 5440.56'FL31.16 TOPOGRAPHIC SURVEY PERFORMED BY HARRIS SURVEYING, INC. ALBUQUERQUE, NEW MEXICO JANUARY 1996. TC30.66 ¥ EA= 31.24 EW=29 62 BURGER KING BUILDING TC=33.11 FL=32.67 BOT OF EXISTING ASPHALT INV23.50 CONCRETE TW=29.55 EW=29 39 EXIST NEW ASPHALT EW= 29 57 IP#=30.8c 29.10 PASS THRU LANE \* FL30.00 5 CURB AND GUTTER \10W=26.21 TOW= 31 05 EXISTING CURB AND GUTTER FL25.83 TPW=31.74 -EXISTING RETAINING WALL EXISTING SPOT ELEVATION FTRACT "A-2" TRACT "A-I" AMERICAN HERITAGE NORTH, BLOCK AMERICAN HERITAGE NORTH, BLOCK I PROPOSED SPOT ELEVATION UNIT 3  $\frac{70 = 22.28}{F_{L} = 21.62}$ UNIT 3 EXISTING SANITARY SEWER

# THE FOLLOWING NOTES ALSO APPLY WHEN CHECKED

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GRADING AND DRAINAGE PLAN

TO FINAL ACCEPTANCE.

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> DATE APPROVALS HYDROLOGY INSPECTOR A.C.E./FIELD

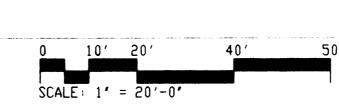
**KEYED NOTES** 

2 CURB AND GUTTER FLUSH THIS AREA.

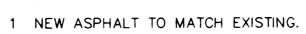
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6 ROOF DRAIN.

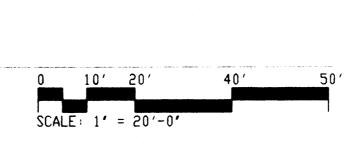






3 2' WIDE CURB CUT.

4 CONCRETE RUNDOWN PER 1/C1.







TC=35.92 FL=35.49

TC = 35 45 FL = 34.97

C/MAINT FAC

VICINITY MAP

EXISTING WATER LINE

PROPERTY LINE

BASIN BOUNDARY

WATER BLOCK

CONTOURS

SITE

LEGAL DESCRIPTION

BENCHMARK

SURVEY INFO.

2 Mar. 200 Mar. 201 Mar. 201 Mar. 201 Mar. 21 Mar. 21

SAS

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JUN 02 1998

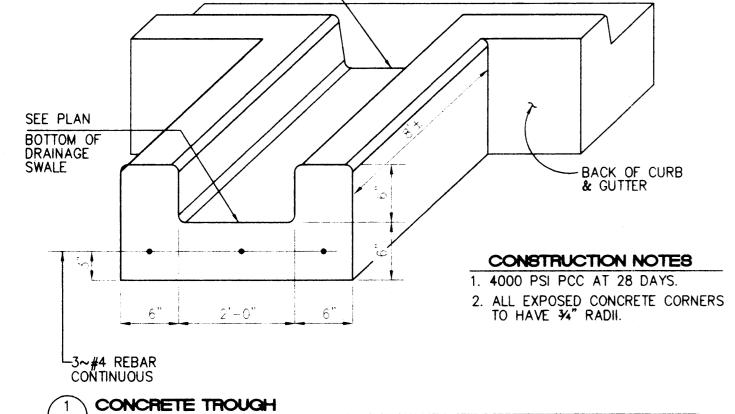
FL28.55

LEGEND

F-19-Z



5639 JEFFERSON STREET N.E. . ALBUQUERQUE, NEW MEXICO 87109 PHONE (505) 344-4080 • FAX (505) 343-8759



SEE PLAN C&G FLOWLINE

JOB NO.: N02-148-5198 FILE: BKW-GD (5/26/98) ENG/TECH: CE/JM REV: 06-1-98 jm

N.T.S.

CONSTRUCTION NOTES

GENERAL

CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED CONSTRUCTION PERMITS, INCLUDING A TOP SOIL DISTURBANCE PERMIT, PRIOR TO START OF CONSTRUCTION.

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.

REFERENCE MADE TO COA STD DWGS. REFER TO CITY OF ALBUQUERQUE STANDARD DRAWINGS AS AMENDED THROUGH UPDATE #6.

REFERENCE MADE TO APWA REFERS TO AMERICAN PUBLIC WORKS ASSOCIATION.

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EXISTING FENCING THAT IS NOT DESIGNATED FOR REMOVAL SHALL NOT BE DISTURBED. ANY FENCING THAT IS DISTURBED OR ALTERED BY THE CONTRACTOR SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE. IF THE CONTRACTOR WOULD LIKE TO REMOVE FENCING TO FACILITATE CONSTRUCTION OPERATIONS, THIS MAY BE DONE WITH THE OWNER'S PERMISSION, AND THE CONTRACTOR SHALL RESTORE THE FENCE TO ITS ORIGINAL CONDITION PRIOR TO THE CLOSE OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR SECURITY OF THE SITE UNTIL THE FENCE IS REPLACED.

DIMENSIONS

ALL DIMENSIONS IN PARKING AREAS AND DRIVES ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

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MATERIAL	PERCENT COMPACT
STRUCTURAL FILL IN THE BUILDING AREA SUBASE FOR SLAB SUPPORT MISCELLANEOUS BACKFILL BELOW STRUCTURAL FILL	95 95
OR ROAD PAVEMENT	95
MISCELLANEOUS BACKFILL BELOW UNPAVED, NON-BUILDING AREAS ROAD PAVEMENT SUBGRADE SIDEWALK SUBGRADE	90 95
CURB AND GUTTER SUBGRADE	90 95

PAVING

WHEN ABUTTING NEW PAVEMENT TO EXISTING, CUT BACK EXISTING PAVEMENT TO A NEAT, STRAIGHT LINE AS REQUIRED TO REMOVE ANY BROKEN OR CRACKED PAVEMENT AND MATCH NEW PAVING TO EXISTING.

ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED AND APPROVED PRIOR TO PAVING.

ALL WATER VALVE BOXES AND ELECTRICAL, TELEPHONE, TV & SEWER MANHOLES IN THE CONSTRUCTION AREA SHALL BE ADJUSTED TO FINISHED

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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 TO THE ENGINEER BY OTHERS, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ANY UTILITY LINE, PIPELINE OR UNDERGROUND UTILITY LINE IN OR NEAT THE AREA OF THE WORK IN ACCORDANCE WITH CHAPTER 62, ARTICLE 14-1 THROUGH 14-8, NMSA 1978.

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EROSION CONTROL. ENVIRONMENTAL PROTECTION. AND STORM WATER POLLUTION PREVENTION PLAN

THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE, AND FEDERAL DUST AND EROSION CONTROL REGULATIONS. THE CONTRACTOR SHALL PREPARE AND OBTAIN ANY NECESSARY DUST OR EROSION CONTROL PERMITS FROM REGULATORY AGENCIES.

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THE CONTRACTOR SHALL PROMPTLY REMOVE ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY TO KEEP IT FROM WASHING OFF THE PROJECT

THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO OTHER PROPERTY BY CONSTRUCTING TEMPORARY EROSION CONTROL BERMS OR INSTALLING SILT FENCES AT THE PROPERTY LINES AND WETTING THE SOIL TO KEEP IT FROM BLOWING.

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THE CONTRACTOR SHALL PROPERLY HANDLE AND DISPOSE OF ALL ASPHALT REMOVED ON THE PROJECT BY HAULING TO AN APPROVED LANDFILL IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEW MEXICO SOLID WASTE ACT.

ALL WASTE PRODUCTS FROM THE CONSTRUCTION SITE, INCLUDING ITEMS DESIGNED FOR REMOVAL, CONSTRUCTION WASTE, CONSTRUCTION EQUIPMENT WASTE PRODUCTS (OIL, GAS, TIRES, ETC.), GARBAGE, GRUBBING, EXCESS CUT MATERIAL, VEGETATIVE DEBRIS, ETC. SHALL BE APPROPRIATELY DISPOSED OF OFF-SITE AT NO ADDITIONAL COST TO THE OWNER. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO OBTAIN ANY PERMITS REQUIRED FOR HAUL OR DISPOSAL OF WASTE PRODUCTS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE WASTE DISPOSAL SITE COMPLIES WITH GOVERNMENT REGULATIONS REGARDING THE ENVIRONMENT, ENDANGERED SPECIES, AND ARCHAEOLOGICAL RESOURCES.

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THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS CONCERNING CONSTRUCTION NOISE AND HOURS OF OPERATIONS.

PROJECT DESCRIPTION - RUN-OFF CALCULATIONS

1. EXISTING CONDITIONS

THE SITE CURRENTLY HAS AN EXISTING 1200 SF BUILDING WITH ASPHALT PARKING AND LANDSCAPING. THERE IS A FIFTEEN FOOT ACCESS EASEMENT ALONG THE NORTHERN PROPERTY LINE FROM WYOMING BOULEVARD TO HERITAGE COURT. SURROUNDING DEVELOPMENT INCLUDES A GAS STATION ON THE SOUTH SIDE AND AN OFFICE BUILDING ON THE NORTH SIDE.

THE SITE IS NOT ACCEPTING ANY OFF-SITE FLOW.

ALL ON-SITE RUNOFF FROM BASIN A AND BASIN B DISCHARGES TO HERITAGE COURT BY OVERLAND FLOW AT A 3-4% SLOPES. IT IS THEN CONVEYED TO SPAIN ROAD BY STREET FLOW. FROM THE INTERSECTION OF HERITAGE COURT AND SPAIN ROAD THE RUNOFF FLOWS WEST ON IS COLLECTED BY A SERIES OF CATCH BASINS ON THE SOUTH SIDE OF SPAIN ROAD THAT LEADS TO BEAR TRIBUTARY ARROYO. AS SHOWN ON THE 1996 FIRM MAY, THE BEAR TRIBUTARY ARROYO HAS ENOUGH CAPACITY TO CONVEY THE 100 YEAR RUNOFF.

2. PROPOSED CONDITIONS

THE DEVELOPED SITE WILL BE A BURGER KING RESTAURANT WITH ASPHALT PARKING AND LANDSCAPING. THE STORM WATER RUNOFF WILL BE DISCHARGED TO HERITAGE COURT. IN ORDER TO DECREASE THE RUNOFF RATE FROM THE PROPOSED SITE TO BE LESS THAN EXISTING, A DETENTION POND WILL BE CONSTRUCTED ON THE WEST SIDE OF THE SITE. THE ATTENUATED RUNOFF WILL BE RELEASED FROM THE POND THROUGH 2-8" PIPES, THESE PIPES WILL THEN DISCHARGE INTO A SIDEWALK CULVERT, RELEASING RUNOFF ONTO HERITAGE COURT. A TOTAL PROPOSED RUNOFF OF 3.30 CFS WAS COMPUTED FOR BASIN B. WHEREAS A RUNOFF 2.75 CFS WILL BE DISCHARGED FROM THE POND.

AS SHOWN BY PANEL 352 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS FOR THE CITY OF ALBUQUERQUE, NEW MEXICO DATED SEPTEMBER 20, 1986, THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE.

THIS PROCEDURE IS IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, VOLUME 2, SECTION 22.2, "HYDROLOGY", PEAK DISCHARGE RATE FOR SMALL WATERSHEDS LESS THAN FORTY ACRES IN SIZE.

PRECIPITATION ZONE FROM FIGURE A-1: 3 LAND TREATMENT DESCRIPTIONS ARE IN TABLE A-4.

1. RUNOFF RATE COMPUTATION

USE EQUATION A-10: QP = QPA AA + QPB AB + QPC AC + QPD AD

VALUES OF QP ARE FROM TABLE A-9, AND ARE IN CFS/ACRE. AREA VALUES ARE IN ACRES.

BASIN	QPA	AA	QPB	AB	QPC	AC	QPD	AD	QP
EXISTING	RATE OF	RUNOF	F (CFS))					
BASIN A	1.87	0.00	2.60	0.00	3.45	0.00	5.02	0.09	0.45 CFS
BASIN B	1.87	0.00	2.60	0.14	3.45	0.30	5.02	0.29	2.85 CFS
TOTAL									3.30 CFS
DEVELOP	ED RATE	OF RUN	IOFF (CI	FS)					
BASIN A	1.87	0.00	2.60	0.00	3.45	0.00	5.02	0.09	0.45 CFS
BASIN B	1.87	0.00	2.60	0.15	3.45	0.00	5.02	0.58	3.30 CFS
TOTAL									3.75 CFS

2. RUNOFF VOLUME COMPUTATION

USE EQUATION A-5 TO COMPUTE WEIGHTED EXCESS PRECIPITATION: WEIGHTED E = "E" = (EA AA + EB AB + EC AC + ED AD)/(AA + AB + AC + AD) $(AA + AB + AC + AD) = \Sigma AI$

USE EQUATION A-6 TO COMPUTE THE VOLUME: $V360 = "E" \times (AA + AB + AC + AD) \times 3630 \text{ FEET}^3/ACRE-INCH$

VALUES OF "E" ARE FROM TABLE A-8, AND ARE IN INCHES. AREA VALUES ARE IN ACRES.

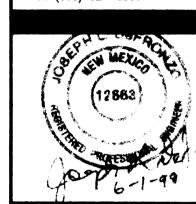
BASIN	EA	AA	EB	AB	EC	AC	ED	AD	ΣΑ	"E"	V360
EXISTING	VOLUME	OF RUI	NOFF (C	UBIC FE	ET)						
BASIN A	0.66	0.00	0.92	0.00	1.29	0.00	2.36	0.09	0.09	2.36	771 CU-FT
BASIN B	0.66	0.00	0.92	0.14	1.29	0.30	2.36	0.29	0.73	1.64	4357 CU-FT
TOTAL											5128 CU-FT
DEVELOPE	D VOLUI	ME OF F	RUNOFF	(CUBIC	FEET)						
BASIN A	0.66	0.00	0.92	0.00	1.29	0.00	2.36	0.09	0.09	2.36	771 CU-FT
BASIN B	0.66	0.00	0.92	0.15	1.29	0.00	2.36	0.58	0.73	2.06	5470 CU-FT
TOTAL											6241 CU-FT

0 lacksquare

525 SAN PEDRO NE, SUITE 110 ALBUQUERQUE, NEW MEXICO 87108 (505) 255-6400 FAX: (505) 268-6954

KEBUQUEROUE

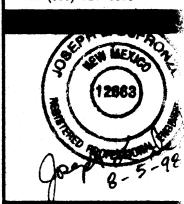
LAS CRUCES 425-C N. TELSHOR, SUITE 203 LAS CRUCES, NEW MEXICO 88011 (505) 521-3757 FAX: (505) 521-3880



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REVISIONS JOB NUMBER:

JUNE 1989 SHEET NUMBER.



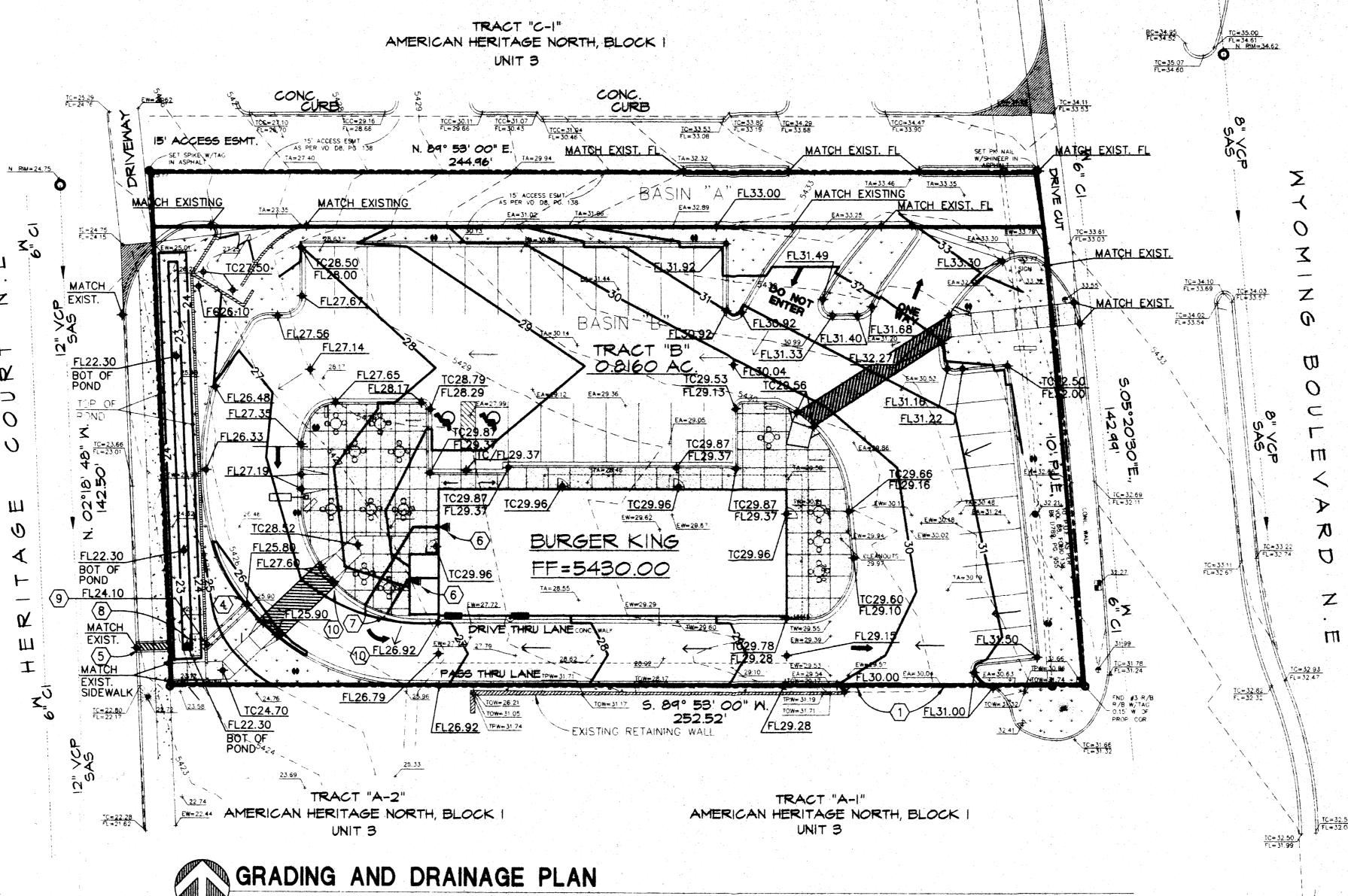
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REVISIONS

JOB NUMBER: 9705

AUGUST 1998 SHEET NUMBER:

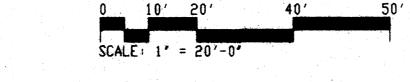




THE FOLLOWING NOTES ALSO APPLY WHEN CHECKED

- ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
- BACKFILL COMPACTION SHALL BE ACCORDING TO ARTERIAL STREET USE.
- TACK COAT REQUIREMENTS SHALL BE DETERMINED BY THE CITY. ENGINEER
- SIDEWALKS AND WHEELCHAIR RAMPS WITHIN THE CURB RETURNS SHALL BE CONSTRUCTED WHEREVER A NEW CURB RETURN IS CONSTRUCTED.
- IF CURB IS DEPRESSED FOR A DRIVEPAD OR A HANDICAP RAMP, THE DRIVEPAD OR RAMP SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF THE CURB AND GUTTER.
- ALL STORM DRAINAGE FACILITIES SHALL BE COMPLETED PRIOR TO FINAL ACCEPTANCE.

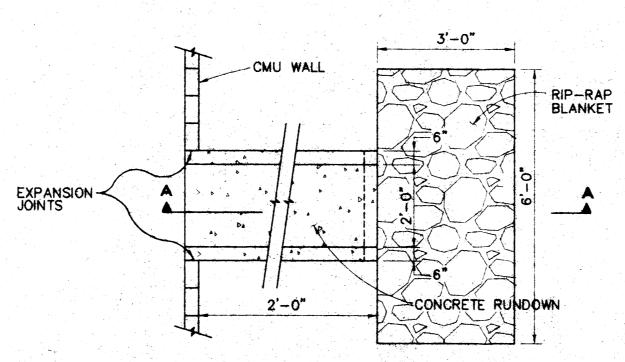
APPROVALS	NAME	DATE
HYDROLOGY		
INSPECTOR		
A.C.E./FIELD		

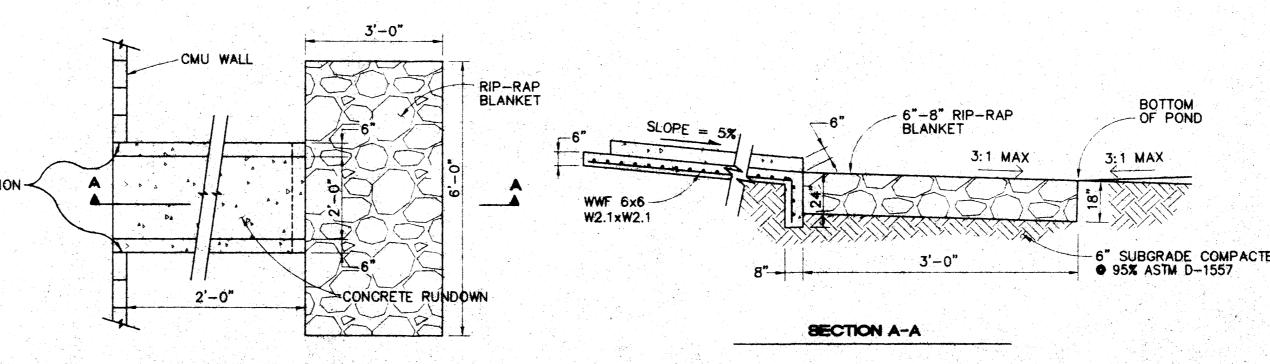


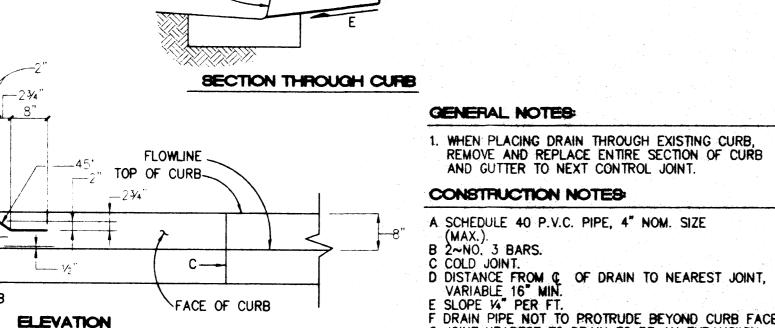
1 NEW ASPHALT TO MATCH EXISTING GRADE AT PROPERTY LINE.

KEYED NOTES

- 2 CURB AND GUTTER FLUSH THIS AREA.
- 3 2' WIDE CURB CUT.
- 4 CONSTRUCT CONCRETE RUNDOWN PER 1/C1.
- 5 CONSTRUCT 24" SIDEWALK CULVERT PER COA STD. 2236.
- 6 4" ROOF DRAIN.
- 7 CONSTRUCT ROOF DRAIN THROUGH CURB PER DETAIL 2/21.
- 8 CONSTRUCT CONCRETE DRAINAGE RUNDOWN W/RIPRAP PER DETAIL 3/C1.
- 9 PROVIDE 3' WIDE BY 16" HIGH OPENING IN CMU WALL.
- 10 BEGIN TRANSITION FROM 6" CURB HEIGHT TO 8" IN 5'.







CONSTRUCTION NOTES

2. ALL EXPOSED CONCRETE CORNERS TO HAVE 34" RADII.

N.T.S.

. 4000 PSI PCC AT 28 DAYS.

SEE PLAN C&G FLOWLINE

SEE PLAN

BOTTOM OF DRAINAGE

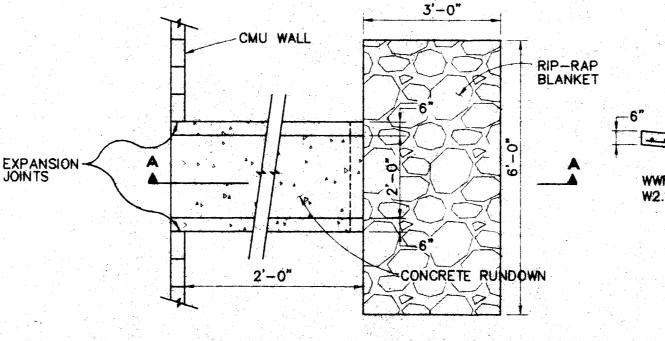
-3~#4 REBAR CONTINUOUS

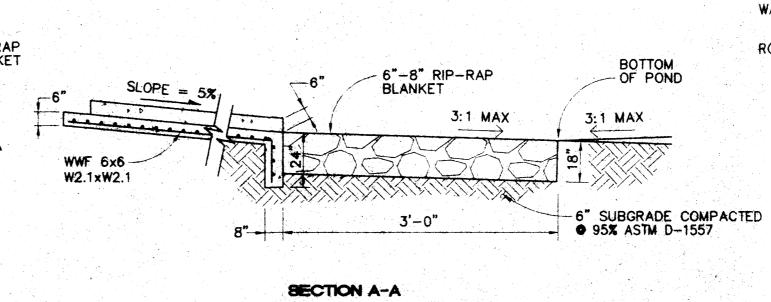
-TOP OF CURB

1 CONCRETE RUNDOWN

DRAIN LINE THROUGH CURB

F DRAIN PIPE NOT TO PROTRUDE BEYOND CURB FACE.
G JOINT NEAREST TO DRAIN TO BE AN EXPANSION N.T.S.





N.T.S.

3 CONCRETE DRAINAGE RUN DOWN W/RIPRAP

VICINITY MAP LEGAL DESCRIPTION TRACT "B" IN BLOCK NUMBERED ONE (1) OF AMERICAN HERITAGE

REC/MAINT FAC

NORTH UNIT 3, A SUBDIVISION OF THE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT OF SAID SUBDIVISION, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON MAY 30, 1978, IN MAP BOOK D-8, FOLIO 138.

LOCATION

F-19-Z

BENCHMARK

ACS 3-F19AB BRASS TABLET LOCATED ON TOP OF A CONCRETE POST AT THE INTERSECTION OF OSUNA RD. AND WYOMING BLVD. ELEV. = 5440.56'

SURVEY INFO.

TOPOGRAPHIC SURVEY PERFORMED BY HARRIS SURVEYING, INC. ALBUQUERQUE, NEW MEXICO JANUARY 1996.

LEGEND BUILDING יקהה ----EXISTING ASPHALT CONCRETE NEW ASPHALT CURB AND GUTTER EXISTING CURB AND GUTTER TA = 28.55EXISTING SPOT ELEVATION PROPOSED SPOT ELEVATION ---SAS -----EXISTING SANITARY SEWER EXISTING WATER LINE PROPERTY LINE CONTOURS 5182 BASIN BOUNDARY WATER BLOCK ~~~~ ROOF DRAIN

5639 JEFFERSON STREET N.E. . ALBUQUERQUE, NEW MEXICO 87109

PHONE (505) 344-4080 • FAX (505) 343-8759

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.

REFERENCE MADE TO COA STD DWGS. REFER TO CITY OF ALBUQUERQUE STANDARD DRAWINGS AS AMENDED THROUGH UPDATE #6.

REFERENCE MADE TO APWA REFERS TO AMERICAN PUBLIC WORKS ASSOCIATION.

THE CONTRACTOR SHALL NOT INSTALL ITEMS AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS THAT FIELD CONDITIONS ARE DIFFERENT THAN SHOWN IN THE DESIGN. SUCH CONDITIONS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER. IN THE EVENT THE CONTRACTOR DOES NOT NOTIFY THE ENGINEER, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY AND EXPENSE FOR ANY REVISIONS NECESSARY.

EXISTING SITE IMPROVEMENTS WHICH ARE DAMAGED OR DISPLACED BY THE CONTRACTOR SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT THE CONTRACTORS'S OWN EXPENSE. REPAIRS SHALL BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION OF THE REPAIRS. REPAIRS SHALL BE ACCEPTED BY THE OWNER PRIOR TO FINAL PAYMENT.

EXISTING FENCING THAT IS NOT DESIGNATED FOR REMOVAL SHALL NOT BE DISTURBED. ANY FENCING THAT IS DISTURBED OR ALTERED BY THE CONTRACTOR SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE. IF THE CONTRACTOR WOULD LIKE TO REMOVE FENCING TO FACILITATE CONSTRUCTION OPERATIONS, THIS MAY BE DONE WITH THE OWNER'S PERMISSION, AND THE CONTRACTOR SHALL RESTORE THE FENCE TO ITS ORIGINAL CONDITION PRIOR TO THE CLOSE OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR SECURITY OF THE SITE UNTIL THE FENCE IS REPLACED.

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ALL ON-SITE RUNOFF FROM BASIN A AND BASIN B DISCHARGES TO HERITAGE COURT BY OVERLAND FLOW AT A 3-4% SLOPES. IT IS THEN CONVEYED TO SPAIN ROAD BY STREET FLOW. FROM THE INTERSECTION OF HERITAGE COURT AND SPAIN ROAD THE RUNOFF FLOWS WEST ON SPAIN ROAD IS COLLECTED BY A SERIES OF CATCH BASINS ON THE SOUTH SIDE OF SPAIN ROAD THAT LEAD TO BEAR TRIBUTARY ARROYO. AS SHOWN ON THE 1996 FIRM MAP, THE BEAR TRIBUTARY ARROYO HAS ENOUGH CAPACITY TO CONVEY THE 100 YEAR RUNOFF.

2. PROPOSED CONDITIONS

THE DEVELOPED SITE WILL BE A BURGER KING RESTAURANT WITH ASPHALT PARKING AND LANDSCAPING. THE STORM WATER RUNOFF WILL BE DISCHARGED TO HERITAGE COURT. IN ORDER TO DECREASE THE RUNOFF RATE FROM THE PROPOSED SITE TO BE LESS THAN EXISTING, A DETENTION POND WILL BE CONSTRUCTED ON THE WEST SIDE OF THE SITE. THE ATTENUATED RUNOFF WILL BE RELEASED FROM THE POND THROUGH A 24" SIDEWALK CULVERT RELEASING RUNOFF ONTO HERITAGE COURT. A TOTAL PROPOSED RUNOFF OF 3.75 CFS WAS COMPUTED FOR BASIN A & B, WHEREAS THE EXISTING RATE OF RUNOFF WAS COMPUTED TO BE 3.30 CFS.

AS SHOWN BY PANEL 352 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS FOR THE CITY OF ALBUQUERQUE, NEW MEXICO DATED SEPTEMBER 20, 1986, THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE.

THIS PROCEDURE IS IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, VOLUME 2, SECTION 22.2, "HYDROLOGY", PEAK DISCHARGE RATE FOR SMALL WATERSHEDS LESS THAN FORTY ACRES IN SIZE.

PRECIPITATION ZONE FROM FIGURE A-1: 3
LAND TREATMENT DESCRIPTIONS ARE IN TABLE A-4.

1. RUNOFF RATE COMPUTATION

USE EQUATION A-10: QP = QPA AA + QPB AB + QPC AC + QPD AD

VALUES OF QP ARE FROM TABLE A-9, AND ARE IN CFS/ACRE. AREA VALUES ARE IN ACRES.

BASIN	QPA	AA	QPB	AB	QPC	AC	QPD	AD	QP	
EXISTING	RATE OF	RUNOF	F (CFS))						
BASIN A	1.87	0.00	2.60	0.00	3.45	0.00	5.02	0.09	0.45 CFS	
T1414	1.87	0.00	2.60	0.14	3.45	0.30	5.02	0.29	2.85 CFS	
TOTAL						<i>y</i> .:			3,30 CFS	
DEVELOPE	D RATE	OF RUN	NOFF (C	FS)						
BASIN A	1.87	0.00	2.60	0.00	3.45	0.00	5.02	0.09	0.45 CFS	
BASIN B	1.87	0.00	2.60	0.15	3.45	0.00	5.02	0.58	3.30 CFS	
TOTAL									3.75 CFS	

2. RUNOFF VOLUME COMPUTATION

USE EQUATION A-5 TO COMPUTE WEIGHTED EXCESS PRECIPITATION: WEIGHTED E = "E" = (EA AA + EB AB + EC AC + ED AD)/(AA + AB + AC + AD) (AA + AB + AC + AD) = Σ AI

USE EQUATION A-6 TO COMPUTE THE VOLUME: V360 = "E" X (AA + AB + AC + AD) X 3630 FEET 3/ACRE-INCH

VALUES OF "E" ARE FROM TABLE A-8, AND ARE IN INCHES. AREA VALUES ARE IN ACRES.

BASIN	EA	AA	EB	AB	EC	AC	ED	AD	ΣΑ	<u>"E"</u>	V360
EXISTING	VOLUME	OF RUI	NOFF (C	UBIC FE	ET)						
 BASIN A	0.66	0.00	0.92	0.00	1.29	0.00	2.36	0.09	0.09	2.36	771 CU-FT
BASIN B	0.66	0.00	0.92	0.14	1.29	0.30	2.36	0.29	0.73	1.64	4357 CU-FT
TOTAL	0.00	5.55									5128 CU-FT
DEVELOPE	n volu	MF OF F	RUNOFF	(CUBIC	FEET)						
BASIN A	0.66	0.00	0.92	0.00	1.29	0.00	2.36	0.09	0.09	2.36	771 CU-FT
BASIN B	0.66	0.00	0.92	0.15	1.29	0.00	2.36	0.58	0.73	2.06	5470 CU-FT
TOTAL											6241 CU-FT

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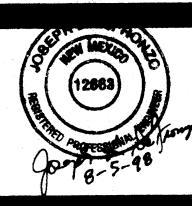
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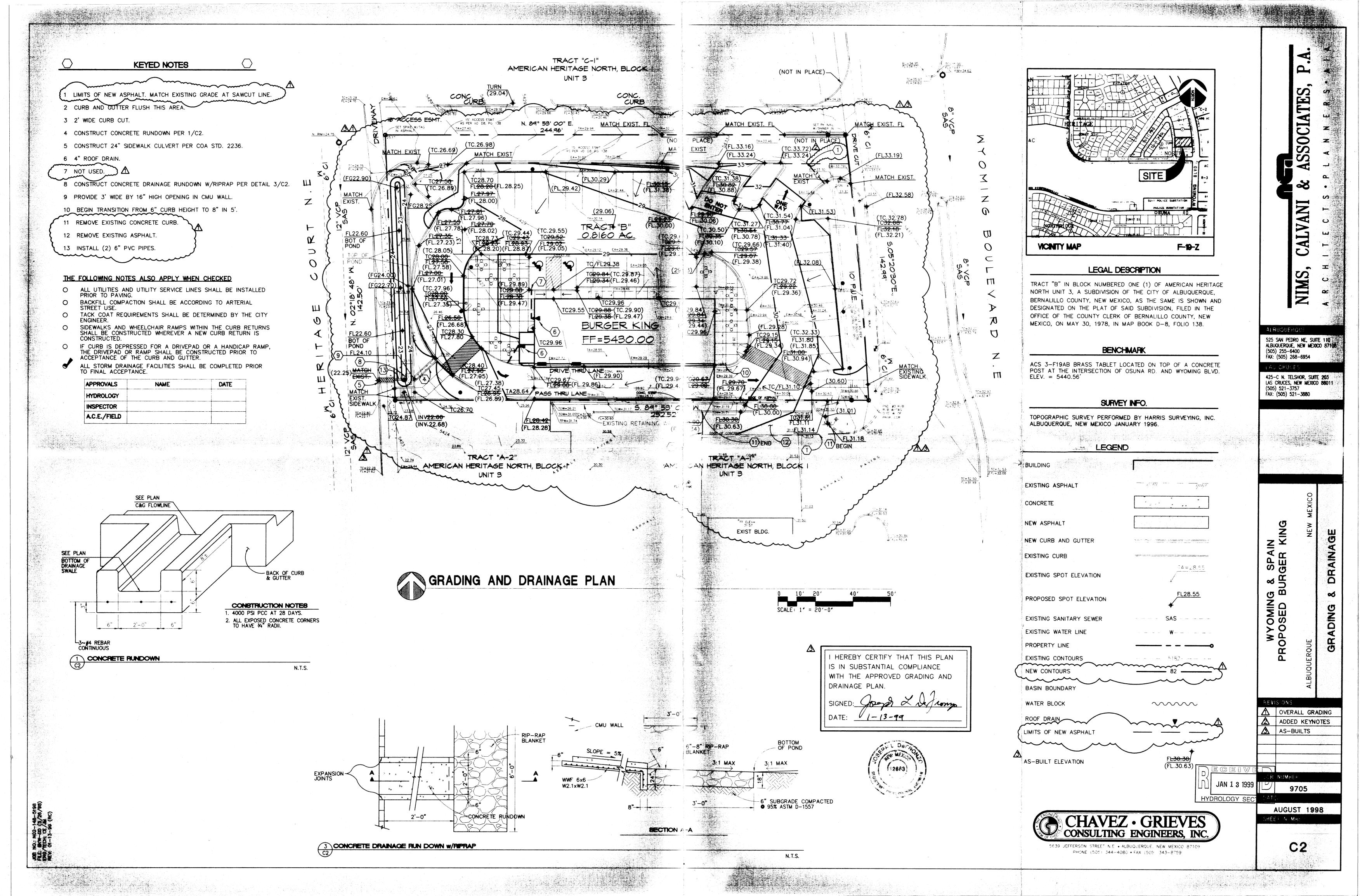
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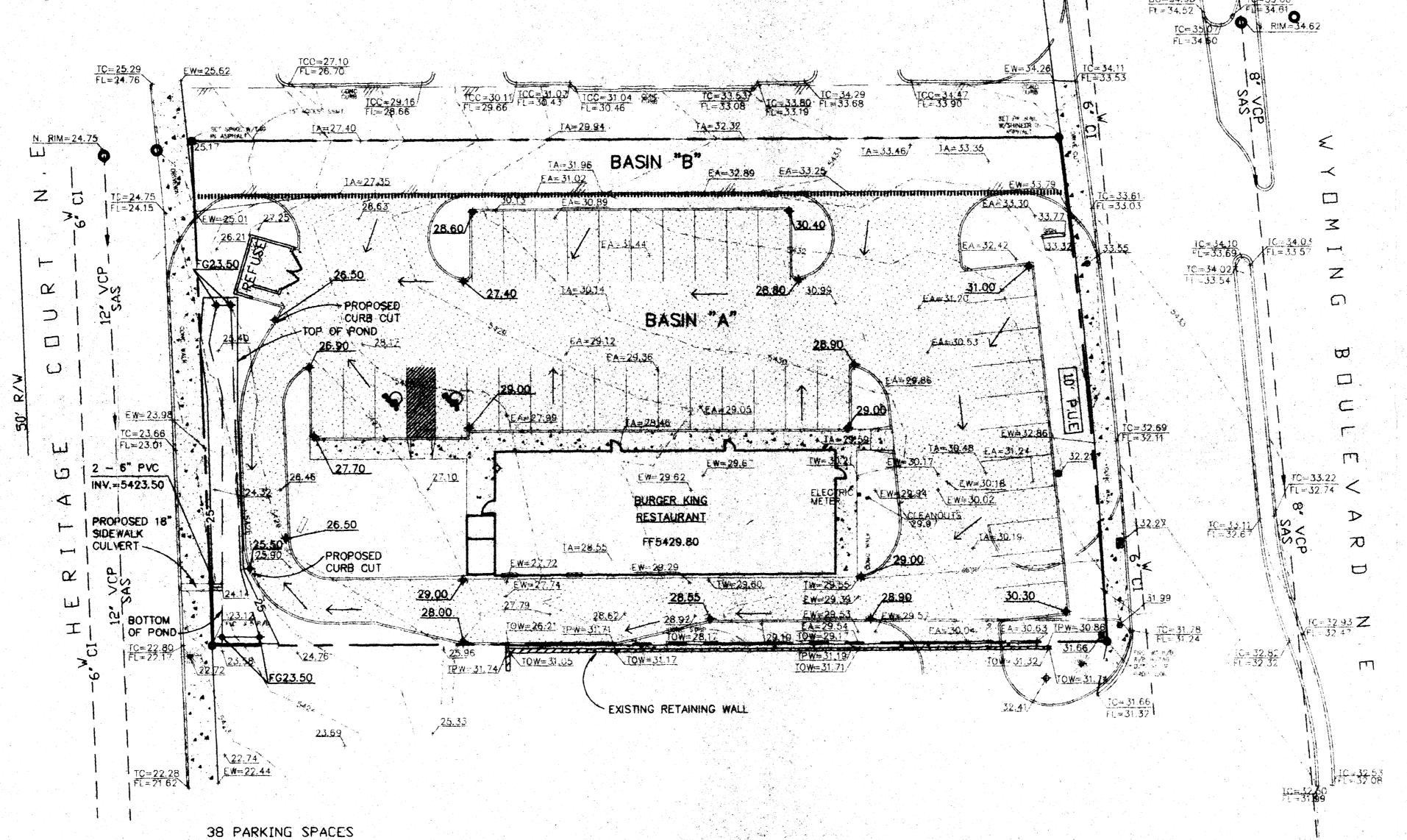
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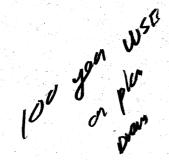


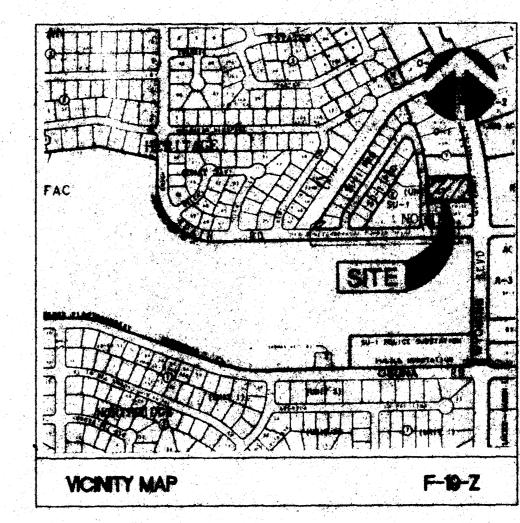
NOTE

ALL SPOT ELEVATIONS ARE TOP OF ASPHALT UNLESS OTHERWISE INDICATED.



CONCEPTUAL GRADING PLAN





FL=34.97

LEGAL DESCRIPTION

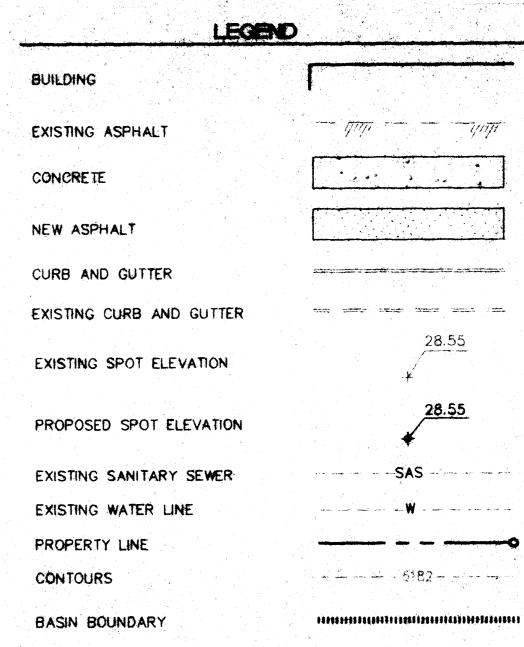
TRACT "B" IN BLOCK NUMBERED ONE (1) OF AMERICAN HERITAGE NORTH UNIT 3, A SUBDIVISION OF THE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT OF SAID SUBDIVISION, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON MAY 30, 1978, IN MAP BOOK D-8, FOLIO 138.

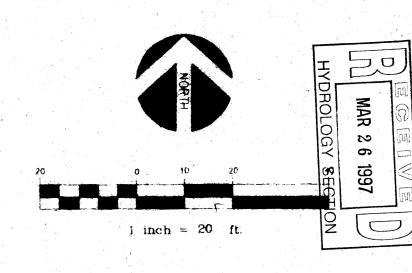
BENCHMARK

ACS 3-F19AB BRASS TABLET LOCATED ON TOP OF A CONCRETE POST AT THE INTERSECTION OF OSUNA RD. AND WYOMING BLVD. ELEV. = 5440.56"

SURVEY NFO.

TOPOGRAPHIC SURVEY PERFORMED BY HARRIS SURVEYING, INC. ALBUQUERQUE, NEW MEXICO JANUARY 1996.







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SOE NUMBER:

March 17, 1997

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