MASTER DRAINAGE REPORT

FOR THE

SCOTTSDALE WATERFRONT

SOUTHWEST CORNER OF CAMELBACK ROAD
AND SCOTTSDALE ROAD

Prepared for:

Scottsdale Waterfront Partners, L.L.C.
C/o Golub and Company
625 North Michigan Avenue, 20th Floor
Chicago, IL 60611
(312) 440-8763

Prepared by:

Brooks, Engineers & Surveyors, Inc.
4602 East Elwood Street #16
Phoenix, Arizona 85040
(602) 437-3733
Job No. 1149-01FF

September 29, 2003

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I. INTRODUCTION

The Scottsdale Waterfront is located between Camelback Road and the Arizona Canal, and extends from Goldwater Boulevard to Scottsdale Road.

The site is approximately 11.3 acres, divided into two triangular areas of roughly 7 and 4 acres each. Proposed development includes several buildings with underground parking. The parking garages will be two or three levels deep with the 7 and 4-acre areas functioning as separate garages. Approximately 891,000 SF of residential space and 99,000 SF of retail space are included in the current development plan.

The purpose of this report is to define drainage requirements for the entire 11-acre area. This project will be phased. The majority of the required drainage improvements will be constructed as part of phase 1. This report will be revised as each phase of the project proceeds through the plan development and permitting process. The design for each phase will comply with the overall drainage requirements outlined in this report.

Of particular importance is the requirement by the Flood Control District (FCD) to maintain the original design capacity of the inlets to the 84-inch side channel along the Arizona Canal. Before detailed site drainage designs can be undertaken, agreement must be reached with FCD as to the capacity of these inlets and a method of maintaining their function.

II. EXISTING SITE CONDITIONS

On-site

The site is vacant with the exception of two irrigation wells owned by Arcadia Water Company. Previous development included several buildings and parking areas, which were demolished in 1998. Historically, all stormwater was conveyed to the side channel (84-inch storm drain) in the north bank of the Arizona Canal via surface drainage inlets. No on-site stormwater retention is evident from historical aerial photographs of the site.

The site is generally flat, with some southerly slope to the Arizona Canal. The intersection of Marshall Way and Montecito Court is elevated several feet above existing grade in anticipation of a future bridge across the canal. Camelback Road is the north boundary and is fully developed. Marshall Way, Montecito Court, and Goldwater Boulevard bound the west and northwest portion of the site and are fully improved. The Arizona Canal bounds the southeast side of the property.

In 1999 fill was placed and a Letter of Map Revision (LOMR) was filed with the Federal Emergency Management Agency (FEMA) to remove the site from Flood Hazard Zone 'A'. Current Flood Insurance Rate Maps (FIRM) show that this site is classified as Flood Zone 'X' and Flood Zone 'X' shaded (FIRM panels 04013C1695G and 04013C2160E are included in the Appendix).

Off-site

The site is within the Camelback Road Watershed. The Camelback Road storm drain was designed to intercept the 25-year storm event. Runoff in excess of this is stored along the north side of the Arizona Canal near 64th Street. Eventually this drains to the side channel constructed along the canal and back into the Camelback Road storm drain, or west to the City of Phoenix at 64th Street and the Arizona Canal.

When the Nordstrom site was developed in 1997, a 42-inch storm drain was constructed to convey on-site flows for the site and those portions of Marshall Way south of Camelback Road, and Montecito Court east of Goldwater Boulevard, to the 84-inch diameter side channel along the Arizona Canal. This storm drain was sized to intercept the 100-year event. No on-site retention was provided.

There are four inlets in the side channel adjacent to the project site. Previous development allowed on-site runoff to sheet flow across paved areas into these inlets. Additionally, off-site flows could reach these inlets. When the property was raised out of the FEMA flood hazard zone in 1999, the likelihood of overland flows reaching some of these inlets was reduced.

The City of Scottsdale and the Flood Control District of Maricopa County have stipulated that the proposed development maintain the original capacity of these inlets. This is the basis of design for off-site flows. Additionally, the City of Scottsdale has stated that no on-site retention will be required and additional connections may be permitted to convey on-site runoff directly to the existing 84-inch side drain.

III. PROPOSED DEVELOPMENT

Drainage for Perimeter Streets

Marshall Way and Montecito Court will be partially reconstructed to provide vehicular turning movements and surface parking. The existing storm drain inlets will also be reconstructed, however, it is anticipated that drainage patterns and capacities will remain unchanged.

Camelback Road will be widened by one lane on the south side, and the median will be reconfigured. There is one existing storm drain inlet (MAG 535 type) approximately 150 feet east of Scottsdale Road. This is in line with the proposed south curb alignment and will be replaced with a curb opening inlet catch basin of similar capacity.

On-site Drainage

This project is not required to provide on-site retention. The open space areas, driveways, building roof drains, and loop road through the larger 7-acre site will be designed to convey stormwater directly to the existing side channel. This will be accomplished in a variety of ways including trench drains, area drains, sheet flow, and building roof drain connections.

Specific calculations and drainage component designs cannot be provided at this time as the site plan and underground garage configurations are still being developed.

Proposed finish floor elevations are shown on the conceptual grading plan included in this report. This grading scheme assumes the garage is all at one elevation, which forces the building floors to be at one elevation also. This creates some issues with pedestrian access along Camelback Road.

However, if the underground parking garage is stepped down or sloped, the finish floor elevations will be set as shown on the Elevation Exhibit (see Appendix). This provides a much better transition for pedestrians to the perimeter of the site. The lowest finish floor is shown at 1279.00, which is 1.5 feet above the high gutter of Scottsdale Road as it crosses the Arizona Canal.

IV. SPECIAL CONDITIONS

Inlets to the 84-inch Side Drain

The primary intent of this section of the report is to establish design parameters for the inlets to the 84-inch side drain. This project is required by FCD to maintain the original design intent of these inlets by providing equivalent inlet capacity.

There are four existing inlets to the side channel along the projects canal frontage. The southwesterly inlet will remain in place. Recent construction activity, including the placement of fill in conjunction with the LOMR application, has not impacted this inlet.

The as-built plans for the 84-inch side drain have been reviewed in order to calculate the capacity of the remaining inlets as they were originally intended to function. A design report for this facility is not available. The plans indicate a swale was graded along the north bank of the canal to a depth of approximately 1.5 feet, with a flow line sloping to the southwest varying from 0.0015 ft/ft to 0.0082 ft/ft. This swale was intended to capture overland flow before it entered the canal and direct it to the side drain inlets. Two sections through the swale near inlet #3 (see calculations in the Appendix) were evaluated to determine approximate flow capacity. Results of this analysis indicate the swale capacity varies from 25 to 92 cfs.

The existing inlet capacities are approximately 129 cfs each based on the depth of the swale and surface area of the grates. The orifice equation was used assuming a flow depth of 1.5 feet. This is based on the minimum dimensions shown on the original design plans. This figure neglects any clogging factor, which would have been applied in standard design practice. Actual design values would have been approximately 65 cfs per inlet, assuming a 50% clogging factor for the grates. Any reconfiguration of the inlets should duplicate this capacity. Please refer to the appendix for calculations and copies of selected portions of the referenced plan set.

It is likely that the design intent was for overland flows intercepted by the swale to be distributed between the inlets. A similar conveyance between proposed inlets should be provided.

There are three inlets affected by recent and proposed development. It is proposed that two of these be replaced by similar inlets behind the southerly curb of Camelback Road. A storm drain could be constructed connecting these to the 84-inch side drain near the intersection of Scottsdale Road and Camelback

Road. These inlets should provide a similar net surface area and water depth in order to duplicate the original capacity of the existing inlets. It may be necessary to construct several smaller inlets to achieve this within the landscape setback of the proposed development.

The inlets should be constructed with a grate elevation of 1276.00. This will provide the required 1.5 feet of water over the inlets as calculated in the Appendix, and is based on the existing high gutter of the Scottsdale Road bridge at 1277.50. Ponding in Camelback Road is unlikely to occur above this elevation. The hydraulic grade line for the existing side drain is unknown. However, the proposed inlet elevations are higher than the existing inlets.

If the proposed inlets are set higher, the grate area should be increased and the assumed water surface elevation should remain at 1277.50. A typical grading section through Camelback Road to the proposed finish floor is shown in the Appendix.

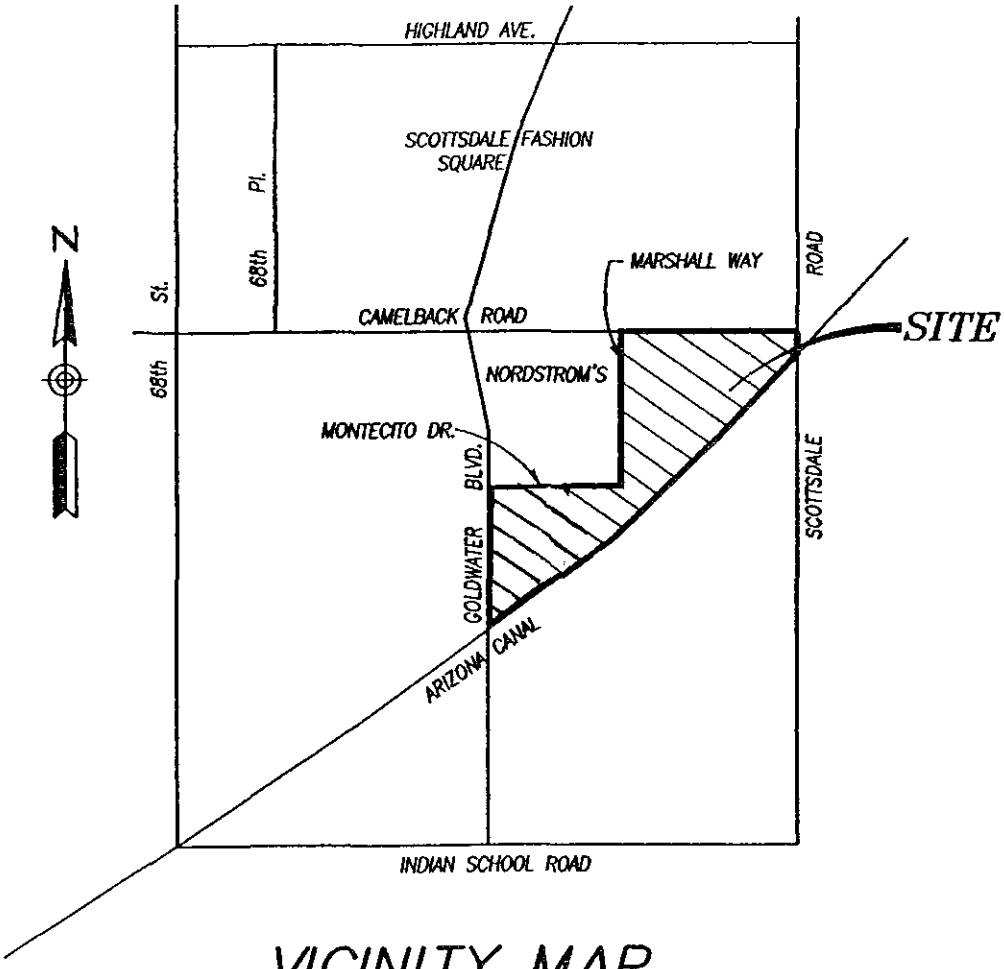
Finally, the northeasterly inlet will be relocated closer to Scottsdale Road. A swale will be constructed in the landscape area to convey stormwater overtopping the curb near the street intersection to this inlet.

This solution allows the existing storm drain systems in Camelback Road, Marshall Way, and Montecito Court to function essentially as they were originally designed, while preserving the original inlet capacity of the side drain.

V. CONCLUSIONS

The existing inlet capacities are approximately 129 cfs each. Therefore, the proposed inlets along the south side of Camelback Road will have a total capacity of 258 cfs (without clogging factor), with a storm drain line of 129 cfs capacity connecting them to the existing 84-inch side channel near Scottsdale Road. The northeast inlet will be relocated and will have a capacity of 134 cfs (without clogging factor).

VI. APPENDIX



VICINITY MAP

N.T.S.

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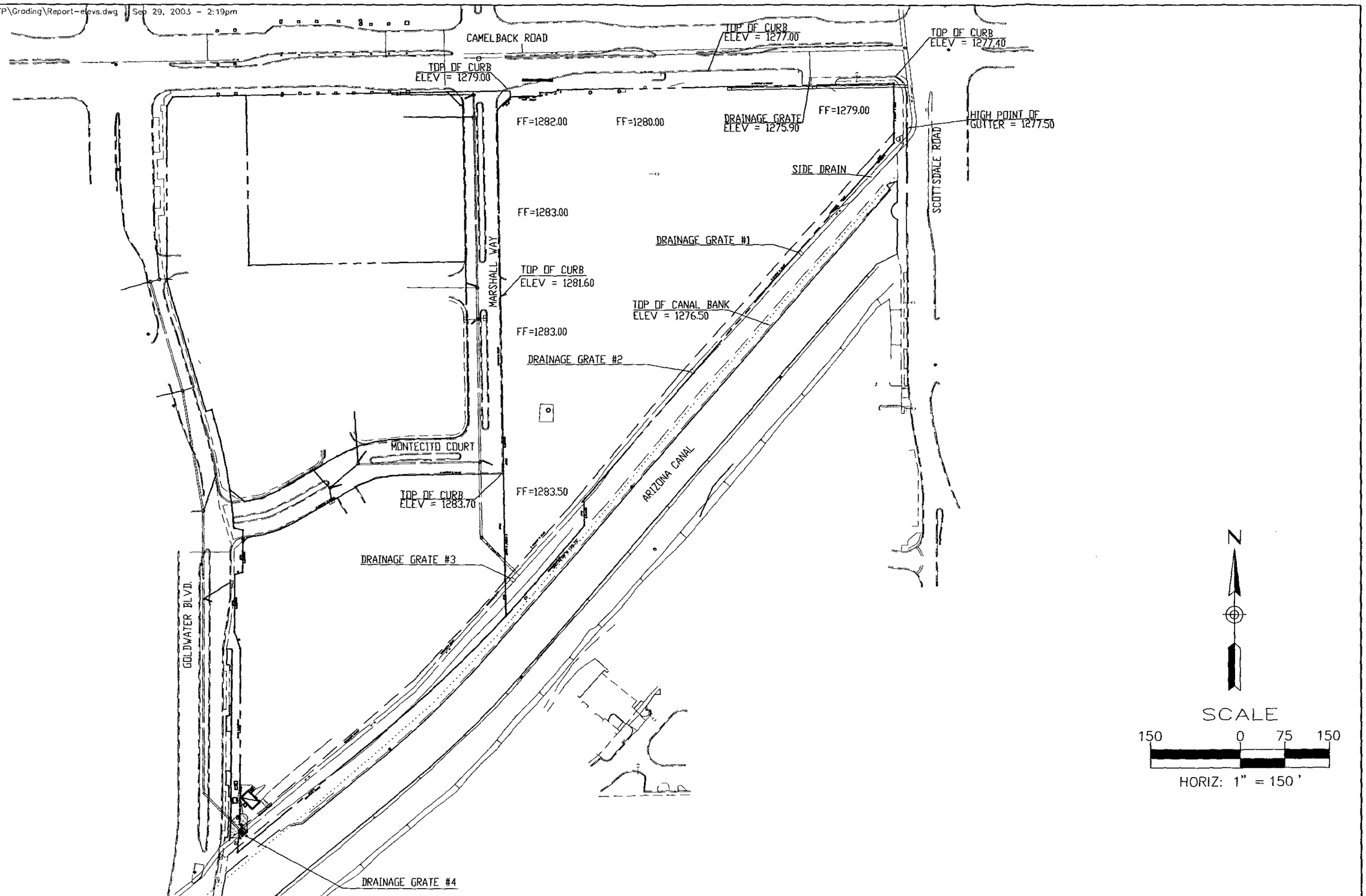


BROOKS ENGINEERS & SURVEYORS INC.
4602 E. ELWOOD STREET, #16
Phoenix, Arizona 85040
Phone (602) 437-3733
Fax (480) 968-0204

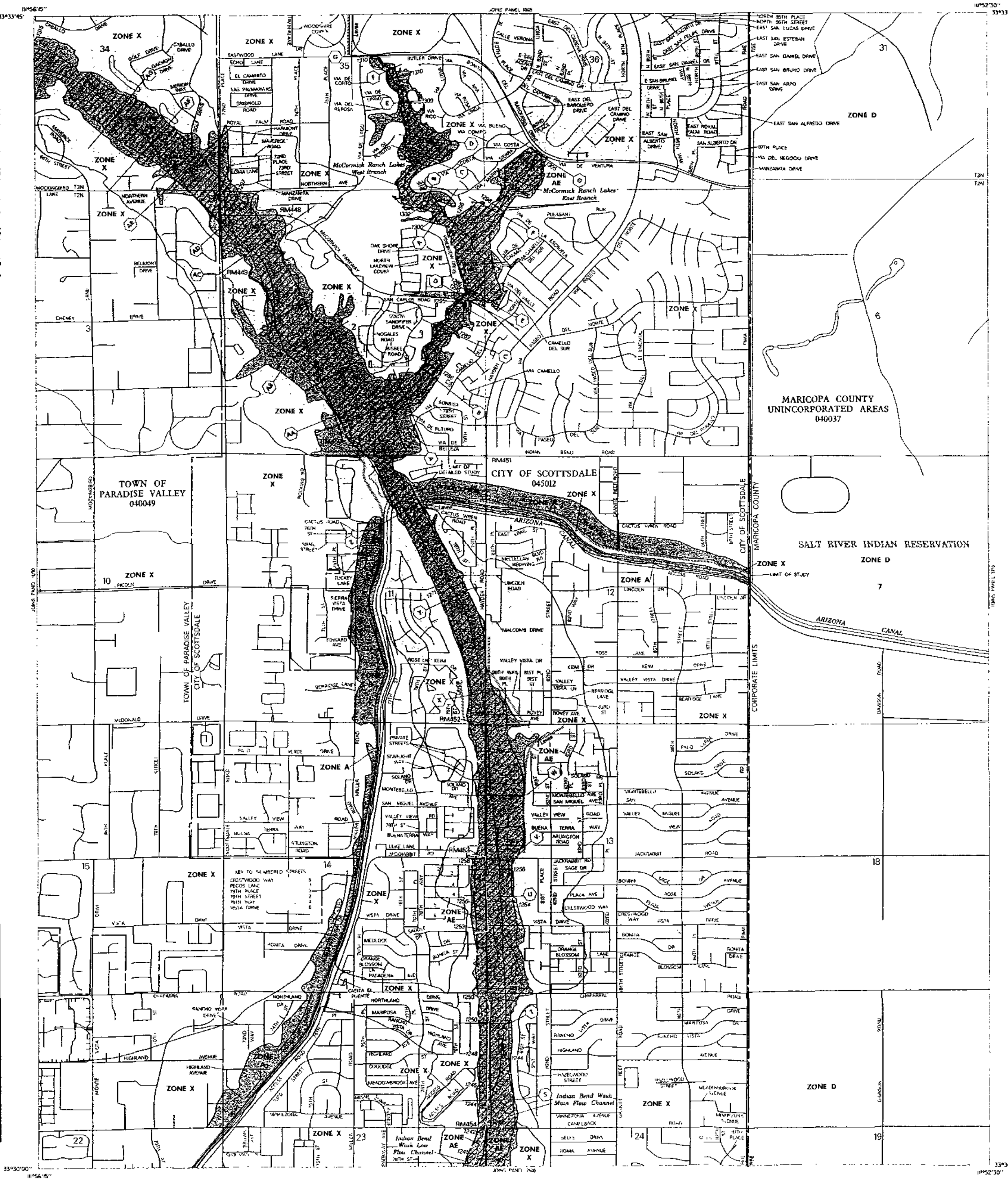
	BY	DATE
DESIGNED	BHF	9/26/03
DRAWN	SAH	9/26/03

SCOTTSDALE WATERFRONT
ELEVATION EXHIBIT

JOB NUMBER	1149-01FF
SHEET 1	OF 1

ELEVATION REFERENCE MARKS

REFERENCE MARK	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
RM447	1298.69	A brass cap set flush with pavement on centerline of point of curvature on Golf Drive south of Indian Bend Wash, established by Planning Research Corporation.
RM448	1295.87	A cotton spindle set flush with pavement on McCormick Parkway, east of Scottsdale Road, established by Planning Research Corporation.
RM449	1294.73	A cotton spindle set flush with pavement on east side of Scottsdale Road at entrance into "The Inn at McCormick Ranch". Established by Planning Research Corporation.
RM450	1286.34	A brass cap set flush with pavement on Indian Bend Road 0.5 mile east of Scottsdale Road, established by
RM451	1282.89	A brass cap in well at centerline of intersection of Hayden and Indian Bend Roads, established by Planning Research Corporation
RM452	1264.77	A brass cap set flush with pavement at centerline of intersection of Hayden Road and McDonald Drive, established by Planning Research Corporation.
RM453	1258.41	A brass cap in well at centerline at intersection of Hayden and Jackrabbit Roads, established by Planning Research Corporation.
RM454	1242.74	A brass cap set flush with pavement in southbound lane of Hayden Road at intersection of Camelback Road, established by Planning Research Corporation.



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

OTHER AREAS

UNDEVELOPED COASTAL BARRIERS

NOTES

MAP REPOSITORY

Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

APPROXIMATE SCALE IN FEET

1000 0 1000

LEGEND

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

MARICOPA COUNTY, ARIZONA AND INCORPORATED AREAS

PANEL 1695 OF 4350

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MARICOPA COUNTY UNINCORPORATED AREAS	[illegible]	[illegible]	G
PARADISE VALLEY, TOWN OF	[illegible]	[illegible]	[illegible]
SCOTTSDALE, CITY OF	[illegible]	[illegible]	G

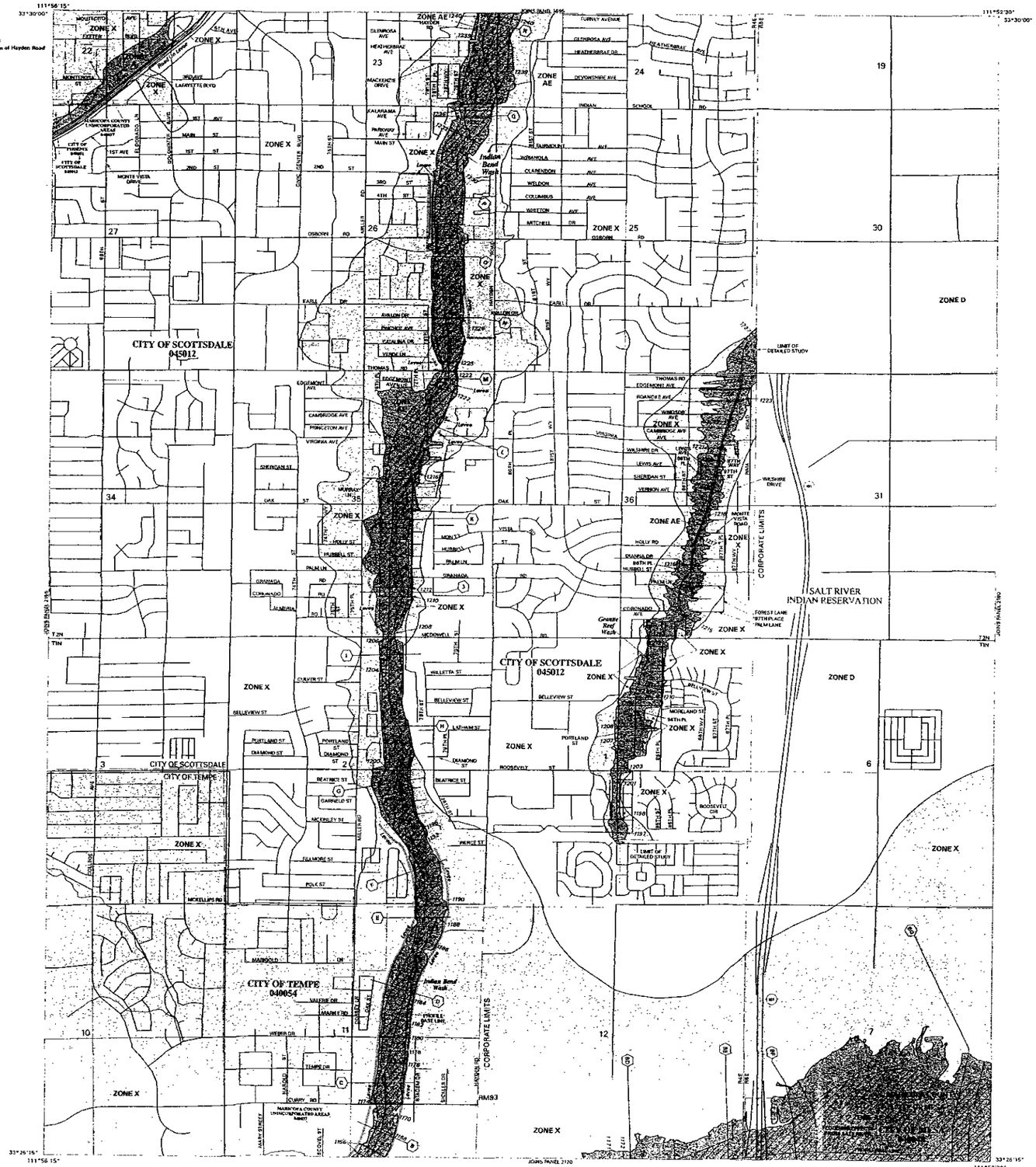
MAP NUMBER 04013C1695 G

MAP REVISED: JULY 19, 2001

Federal Emergency Management Agency

ELEVATION REFERENCE MARKS

REFERENCE MARK	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
RM63	1174.96	Top of pavement at centerline intersection of Hayden Road and Princess Drive West.



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- ZONE A — No base flood elevations determined.
- ZONE AE — Base flood elevations determined.
- ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99 — To be protected from 100-year flood by federal flood protection system under construction; no base flood elevations determined.
- ZONE V — Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE — Coastal flood with velocity hazard (wave action). Base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X — Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X — Areas determined to be outside 500-year floodplain.
- ZONE D — Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.
- 513 — Base Flood Elevation Line; Elevation in Feet. See Map Index for Elevation Datum.
- D — D — Cross Section Line
- (EL 96 n) RM 7 × — Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum. Elevation Reference Mark
- M2 — River Mile
- 87°30', 32°22'30" — Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection.

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas. The community map repository should be consulted for more detailed data on BFEs and for any information on floodway delineations, prior to use of this map for property purchase or construction purposes.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, A1-A30, AH, AO, A99, V, VE, and V1-V30.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross-sections and interpolated between cross-sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Refer to Floodway Data Table where floodway width is shown at 1/20 inch.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action. These elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-591).

For communities map revision history prior to countywide mapping, see Section 5.0 of the Flood Insurance Study Report.

For adjoining map panels, and base map source, see separately printed Map Index.

MAP REPOSITORY
Refer to Repository Listing on Index Map

EFFECTIVE DATE OF
COUNTYWIDE FLOOD INSURANCE RATE MAP
APRIL 15, 1998

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Map revised July 19, 2001 to update corporate limits, to change base flood elevations, to add base flood elevations, to add Special Flood Hazard Areas, to change Special Flood Hazard Areas, to change zone designations, to update map format, to add roads and road names, and to incorporate previously issued Letters of Map Revision.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

APPROXIMATE SCALE IN FEET
1000 0 1000

LEGEND

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the *Flood Profiles* and *Floodway Data* tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations and therefore may not exactly reflect the flood elevation data presented in the FIS. For construction and/or floodplain management purposes, users are encouraged to use the flood elevation data presented in this FIS in conjunction with the data shown on the FIRM.

Elevation Reference Marks (ERMs) shown on this map were obtained and/or developed to establish vertical control for determination of flood elevations and floodplain boundaries portrayed on this map. Users should be aware that these ERM elevations may have changed since the publication of this map. To obtain up-to-date elevation information on National Geodetic Survey (NGS) ERMs shown on this map, please contact the Information Services Branch at the NGS at (301) 713-3242, or visit their website at www.ngs.noaa.gov. Map users should seek verification of non-NGS ERM elevations whenever elevations from these elevations for construction or floodplain management purposes.

Coastal BFEs shown on this map apply only landward of 0.0' National Geodetic Vertical Datum (NGVD). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this community. Elevations shown in the Summary of Stillwater Elevations table should be used for construction, and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

MARICOPA COUNTY, ARIZONA AND INCORPORATED AREAS

PANEL 2160 OF 4350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

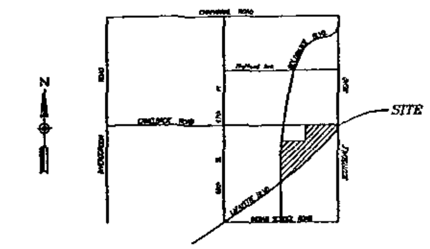
COMMUNITY	NUMBER	PANEL	SUFFIX
MARICOPA COUNTY, UNINCORPORATED AREAS	040037	2160	E
MESA, CITY OF	040048	2160	E
PHOENIX, CITY OF	040051	2160	E
SCOTTSDALE, CITY OF	045012	2160	E
TEMPE, CITY OF	040054	2160	E

MAP NUMBER
04013C2160 E

MAP REVISED:
JULY 19, 2001

Federal Emergency Management Agency

SCOTTSDALE WATERFRONT
S/W COR. CAMELBACK RD. & SCOTTSDALE RD
SCOTTSDALE, ARIZONA
CONCEPTUAL GRADING & DRAINAGE PLAN



VICINITY MAP
N.T.S.

CITY OF SCOTTSDALE GENERAL CONSTRUCTION NOTES FOR PUBLIC WORKS CONSTUCTION

1. ALL CONSTRUCTION IN THE PUBLIC RIGHTS-OF-WAY OR IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) UNIFORM STANDARD SPECIFICATIONS AND UNIFORM STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION AS AMENDED BY THE LATEST VERSION OF THE CITY OF SCOTTSDALE (COS) SUPPLEMENTAL STANDARD SPECIFICATIONS AND SUPPLEMENTAL STANDARD DETAILS. IF THERE IS A CONFLICT, THE LATTER SHALL GOVERN.
2. THE ENGINEERING DESIGNS ON THESE PLANS ARE ONLY APPROVED BY THE CITY IN SCOPE AND NOT IN DETAIL. IF CONSTRUCTION QUANTITIES ARE SHOWN ON THESE PLANS, THEY ARE NOT VERIFIED BY THE CITY.
3. APPROVAL OF PLANS IS VALID FOR SIX (6) MONTHS. IF AN ENCROACHMENT PERMIT FOR THE CONSTRUCTION HAS NOT BEEN ISSUED WITHIN SIX MONTHS, THE PLANS SHALL BE RESUBMITTED TO THE CITY FOR REAPPROVAL.
4. A PUBLIC WORKS INSPECTOR WILL INSPECT ALL WORK WITHIN THE CITY OF SCOTTSDALE RIGHTS-OF-WAY AND IN EASEMENTS. NOTIFY INSPECTION SERVICES 24 HOURS PRIOR TO STARTING OF CONSTRUCTION (TELEPHONE 480-312-5750).
5. WHENEVER EXCAVATION IS TO BE DONE, CALL "BLUE STAKE CENTER," 263-1100 TWO WORKING DAYS BEFORE EXCAVATION IS TO BEGIN. THE CENTER WILL SEE THAT THE LOCATION OF THE UNDERGROUND UTILITY LINES ARE IDENTIFIED FOR THE PROJECT. CALL "COLLECT" IF NECESSARY.
6. ENCROACHMENT PERMITS ARE REQUIRED FOR ALL WORK IN PUBLIC RIGHTS-OF-WAY AND EASEMENTS GRANTED FOR PUBLIC PURPOSES. AN ENCROACHMENT PERMIT WILL BE ISSUED BY THE CITY UPON RECEIPT OF PAYMENT OF A FEE FOR INSPECTION SERVICES TO BE PROVIDED BY THE CITY. COPIES OF ALL PAYMENTS SHALL BE RETAINED ON-SITE AND AVAILABLE FOR INSPECTION AT ALL TIMES. FAILURE TO PRODUCE THE REQUIRED PERMITS WILL RESULT IN IMMEDIATE WORK STOPPAGE UNTIL THE PROPER PERMIT DOCUMENTATION IS OBTAINED.
7. ALL EXCAVATION AND GRADING WHICH IS NOT IN THE PUBLIC RIGHTS-OF-WAY OR NOT IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO CHAPTER 70, EXCAVATION AND GRADING, OF THE LATEST EDITION OF THE UNIFORM BUILDING CODE PREPARED BY THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS. A PERMIT OF THIS GRADING MUST BE SECURED FROM THE CITY FOR A FEE ESTABLISHED BY THE UNIFORM BUILDING CODE.

GENERAL CONSTRUCTION NOTES

1. INSTALLATION OF INJECTION WELL(S) FOR THE DISPOSAL OF RAINFALL RUNOFF WATER REQUIRES APPROVAL OF THE CITY FLOOD PLAIN ADMINISTRATOR. IF APPROVED, THE INJECTION WELL(S) MUST BE REGISTERED WITH THE "ARIZONA DEPARTMENT FOR ENVIRONMENTAL QUALITY" AND MEET ALL THE CITY OF SCOTTSDALE'S REQUIREMENTS.
2. DURING CONSTRUCTION, MEASURES SUCH AS SEDIMENT TRAPS OR TERRACING SHALL BE USED AROUND GRADED AREAS TO MINIMIZE EROSION.
3. ALL AREAS THAT HAVE BEEN IDENTIFIED AS NATURAL AREA OPEN SPACE SHALL BE STAKED AND FLAGGED PRIOR TO ANY GRADING ACTIVITY. INADVERTENTLY DISTURBED AREAS SHALL BE REVEGETATED WITH INDIGENOUS MATERIAL IN NATURAL DENSITIES.
4. NATIVE PLANT MATERIAL PROTECTED BY ORDINANCE 7.500 SHALL NOT BE DISTURBED WITHOUT PROPER FLAGGING. SEPARATE PERMIT AND APPROVAL IS REQUIRED. MATERIAL MARKED FOR PROTECTION SHALL NOT BE DISTURBED.
5. PRIOR TO BEGINNING CONSTRUCTION OF NEW WATER, FIRELINE OR SEWER THE CONTRACTOR SHALL UNEARTH THE EXISTING UTILITY AND VERIFY THE EXACT DEPTH AND LOCATION.
6. ALL GRADING, EXCAVATION AND BACKFILL SHALL FOLLOW THE RECOMMENDATIONS OF "GEOTECHNICAL INVESTIGATION REPORT FOR AIRPARK AUTO PLAZA A REPORT PREPARED BY SPEEDIE & ASSOCIATES DATED 10/31/96 AND MAG STANDARD SPECIFICATIONS.
7. SIGNAGE TO BE OBTAINED UNDER SEPARATE PERMIT.
8. DUST CONTROL PERMIT MUST BE OBTAINED FROM MARICOPA COUNTY DIVISION OF AIR POLLUTION CONTROL (507-6727).

FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

COMMUNITY NUMBER	PANEL NO. PANEL DATE	SUFFIX	DATE OF FIRM (INDEX DATE)	FIRM ZONE	BASE FLOOD ELEVATION (IN AO ZONE USE DEPTH)
045013	1695F & 2160G JULY 1, 2001	C	JULY 1, 2001	X	N/A

BHA GENERAL NOTES

BROOKS HERSEY AND ASSOCIATES, INC., (BHA) STANDARD NOTES:

1. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO BEGINNING CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING PERMITS AND RENEWAL OF LAPSED PERMITS.
3. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ARRANGEMENTS FOR INSPECTION AND TESTING.
4. THE CONTRACTOR SHALL NOTIFY THE INSPECTING AGENCY(S) 24 HOURS PRIOR TO CONSTRUCTION. CONSTRUCTION CONCEALED WITHOUT THE REQUIRED INSPECTION SHALL BE SUBJECT TO EXPOSURE AT THE CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. CALL BLUE STAKE AT (602) 263-1100 AT LEAST 48 HOURS BEFORE ANY CONSTRUCTION BEGINS.
6. THE CONTRACTOR WILL FOLLOW GUIDELINES AND REGULATIONS SET FORTH BY O.S.H.A. BHA WILL NOT BE RESPONSIBLE FOR JOB-SITE SAFETY PROCEDURES OR CONDITIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR HIS OWN TAKEOFF QUANTITIES. QUANTITIES SHOWN HEREON ARE ESTIMATES ONLY AND AS SUCH ARE NOT TO BE USED FOR BID PURPOSES.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE NOTIFICATION OF THE PROPER AUTHORITY(S) IF THERE ARE OBSTRUCTIONS TO PROPOSED IMPROVEMENTS AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY EXISTING ITEM REMOVED TO FACILITATE CONSTRUCTION SHALL BE REPLACED IN THE SAME OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
9. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL ON AND AROUND THE CONSTRUCTION SITE.
10. IN THE EVENT BHA PROVIDES CONSTRUCTION STAKING, THE FOLLOWING NOTES SHALL APPLY:
    A) THE CONTRACTOR'S AUTHORIZED REPRESENTATIVE SHALL REQUEST STAKING SERVICES TWO WORKING DAYS IN ADVANCE. RESTAKING WILL BE PROVIDED ON A TIME & MATERIALS BASIS AT THE CURRENT CREW RATES.
    B) THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL CONSTRUCTION STAKES PRIOR TO START OF CONSTRUCTION.
    C) THE CONTRACTOR SHALL PROTECT AND PRESERVE THE ORIGINAL SURVEY STAKES. NO CLAIM AGAINST BHA WILL BE ALLOWED WHERE SUCH STAKES ARE NOT PRESENT AND VERIFIED AS TO THEIR ORIGIN.
11. RELEASE AND USE OF THESE PLANS CONFERS UPON THE USER A DUTY OF FURTHER, CONTINUED COOPERATION AMONG THE OWNER(S), CONTRACTOR(S) AND BHA. ALL CONSTRUCTION DOCUMENTS ARE INSTRUMENTS OF SERVICE AND MAY REQUIRE FURTHER DECISIONS, JUDGMENT AND CLARIFICATION BY BHA. ANY PROBLEMS ALLEGED WITH THESE PLANS SHOULD BE REPORTED IMMEDIATELY TO BHA SO THAT BHA CAN PARTICIPATE IN THE INVESTIGATION AND SOLUTION. WITHOUT SUCH INVOLVEMENT, BHA IS RELIEVED FROM RESPONSIBILITY FOR SUBSEQUENT DAMAGES.
12. ANY REESTABLISHMENT OF SURVEY STAKES OR MONUMENTS DESTROYED BY CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
13. BROOKS, HERSEY AND ASSOCIATES AND THE REGISTRANT SEALING THESE DOCUMENTS HAVE MADE REFERENCE TO MAG STANDARD DETAILS, SPECIFICATIONS, AND SUPPLEMENTS AS REQUIRED BY THE LOCAL AGENCY. SINCE THE DEVELOPMENT OF THE REFERENCED DETAILS AND SPECIFICATIONS WAS NOT UNDER THE DIRECT SUPERVISION OF BROOKS, HERSEY AND ASSOCIATES OR THE REGISTRANT, WE CANNOT ASSUME ANY LIABILITY FOR THE ACCURACY OR COMPLETENESS OF THE MAG STANDARD DETAILS, SPECIFICATIONS, AND SUPPLEMENTS.

SPECIFICATIONS

ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS UNIFORM STANDARD SPECIFICATIONS AND STANDARD DRAWINGS.

LEGAL DESCRIPTION

SCOTTSDALE WATERFRONT

A PORTION OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 2 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 22;

THENCE SOUTH 88°54'09" WEST, ALONG THE NORTH LINE OF SAID NORTHEAST QUARTER OF THE SOUTHEAST QUARTER, 93.04 FEET;
THENCE SOUTH 01°05'51" EAST, 55.00 FEET TO A POINT ON THE SOUTHERLY RIGHT-OF-WAY LINE OF CAMELBACK ROAD, SAID POINT ALSO BEING ON THE WESTERLY RIGHT-OF-WAY LINE OF SCOTTSDALE ROAD MARKING THE POINT OF BEGINNING;
THENCE SOUTH 00°01'51" EAST, ALONG SAID WESTERLY RIGHT-OF-WAY LINE OF SCOTTSDALE ROAD, 98.83 FEET TO A POINT ON THE NORTHERLY RIGHT-OF WAY LINE OF THE ARIZONA CANAL;
THENCE SOUTH 41°07'13" WEST, ALONG SAID NORTHERLY RIGHT-OF-WAY LINE, 788.90 FEET TO THE SOUTHWEST CORNER OF PARADISE PALMS, A SUBDIVISION RECORDED IN BOOK 54 OF MAPS, PAGE 13, MARICOPA COUNTY RECORDS;
THENCE CONTINUING ALONG SAID NORTHERLY RIGHT-OF-WAY LINE SOUTH 01°07'51" EAST, 42.31 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY LINE OF THE ARIZONA CANAL;
THENCE CONTINUING ALONG SAID NORTHERLY RIGHT-OF-LINE SOUTH 40°32'09" WEST, 125.75 FEET TO THE BEGINNING OF A CURVE CONCAVE NORTHWESTERLY AND HAVING A RADIUS OF 1941.86 FEET;
THENCE SOUTHWESTERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 02°07'26", AN ARC DISTANCE OF 71.99 FEET;
THENCE LEAVING SAID NORTH RIGHT-OF-WAY LINE, NORTH 01°05'51" WEST, 840.27 FEET;
THENCE NORTH 43°54'09" EAST, 31.11 FEET TO THE SOUTHERLY RIGHT-OF-WAY LINE OF CAMELBACK

THENCE NORTH 88°54'09" EAST, ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, 49.50 FEET;
THENCE NORTH 01°05'51" WEST, ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, 5.50 FEET;
THENCE NORTH 88°54'09" EAST, ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, 18.53 FEET;
THENCE NORTH 72°05'59" EAST, ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, 12.21 FEET;
THENCE NORTH 01°23'06" WEST, ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, 0.97 FEET;
THENCE NORTH 88°54'09", EAST, ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, 562.56 FEET TO THE TRUE POINT OF BEGINNING.

PARCEL CONTAINS 312,068 SQUARE FEET, 7.16 ACRES, MORE OR LESS.

ARCHITECT

SCOTTSDALE WATERFRONT PROPERTIES, L.L.C.
C/O GOLUB & COMPANY
625 N. MICHIGAN AVENUE
2nd FLOOR
CHICAGO, IL 60611
(312) 440-8763

ENGINEER

BROOKS, HERSEY AND ASSOCIATES, INC
4602 EAST ELWOOD STREET, STE. 16
PHOENIX, ARIZONA 85040
[illegible] 437-3733

UTILITIES

WATER	CITY OF SCOTTSDALE
SEWER	CITY OF SCOTTSDALE
ELECTRIC	SALT RIVER PROJECT
TELEPHONE	US WEST COMMUNICATIONS
GAS	SOUTHWEST GAS COMPANY
IRRIGATION	ARCADIA WATER COMPANY

AREA

492,228 SQUARE FEET OR
11.30 ACRES MORE OR LESS.

BENCH MARK

FOUND BRASS CAP IN HANDHOLE
EAST QUARTER CORNER OF SETION 22,
T2N, R4E.
CSO DATUM ELEV = 1277.62 NAVD '88
STATION 4223

SHEET INDEX

1 COVER SHEET
2 GRADING & DRAINAGE PLAN
3 GRADING & DRAINAGE PLAN

RETENTION

LOT AREA = 492,228 SQ. FT.
Vr = 0.95 (2.82/12) 492,228 = 109,890 CU.FT.
RETENTION PROVIDED = 110,000 CU. FT.

ENGINEER'S CERTIFICATION

THE LOWEST FLOOR ELEVATIONS(S) AND/OR FLOODPROOFING ELEVATION(S) ON THIS PLAN ARE SUFFICIENTLY HIGH TO PROVIDE PROTECTION FROM FLOODING CAUSED BY A ONE-HUNDRED YEAR STORM, AND ARE IN ACCORDANCE WITH CITY OF SCOTTSDALE REVISED CODE, CHAPTER 37 – FLOODWAYS & FLOODPLAINS ORDINANCE.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE "AS BUILT" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR/ENGINEER ____________ DATE ____________

REGISTRATION NUMBER ____________

NOTICE: THESE PLANS ARE
PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING

CALL TWO WORKING DAYS BEFORE YOU DIG
(602) 263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

SCOTTSDALE WATERFRONT
S/W COR CAMELBACK & SCOTTSDALE RD's
SCOTTSDALE, ARIZONA

31109
BAIRD HALL
FULLERTON

	BY	DATE
DESIGNED	RCJ	6/26/03
DRAWN	RCJ	6/26/03
CHECKED	BHF	

BROOKS, HERSEY & ASSOCIATES, INC.
ENGINEERS/SURVEYORS

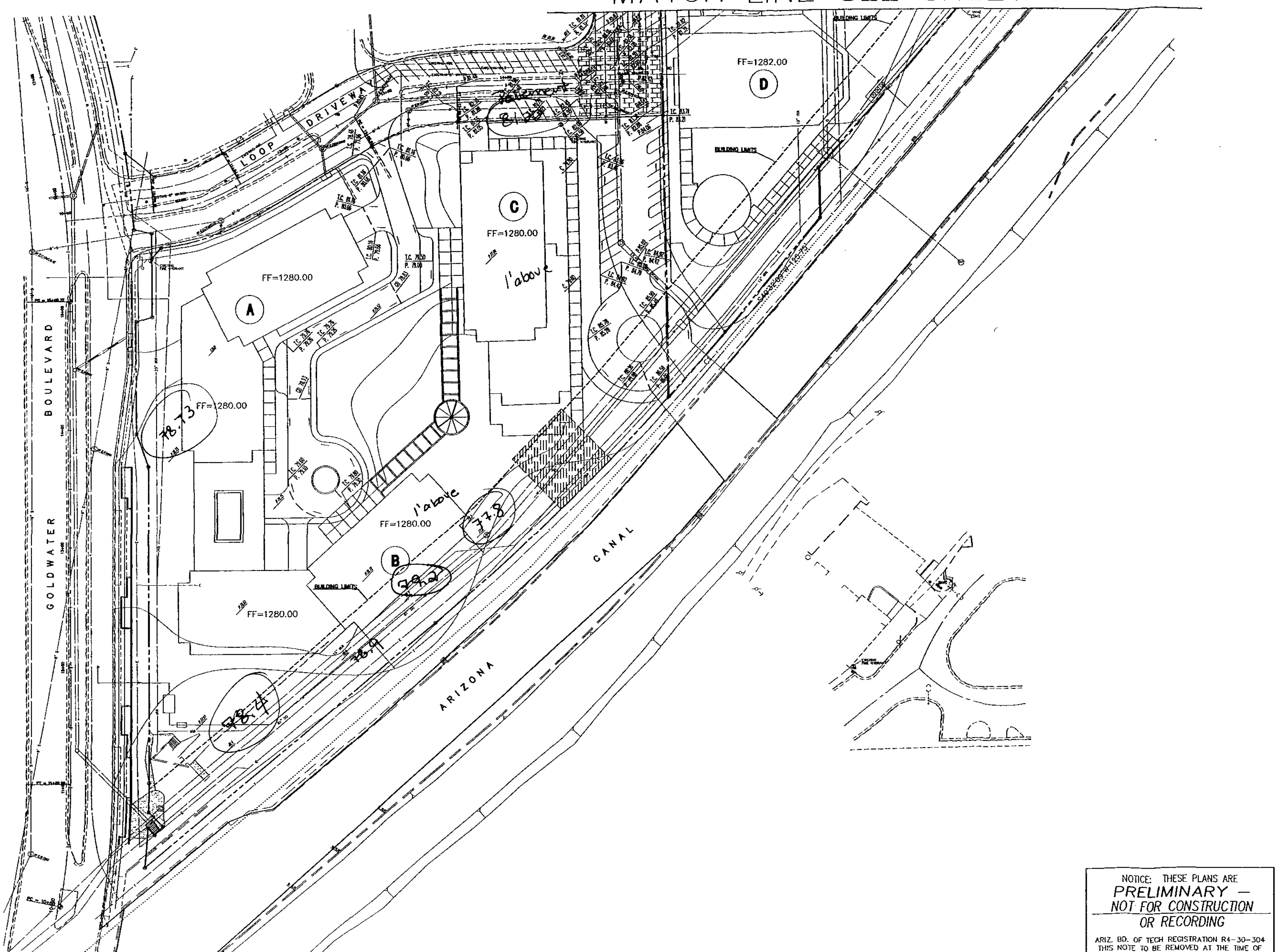
JOB NUMBER		SHEET
1137-01FP	GRADING & DRAINAGE PLAN	1 OF 3

QS 17-44

G:\projects2000\1137-01FP\Grading\113701FP-Gcov.dwg, 08/21/03 05:43:15 PM, 1:2.1892

G:\projects2000\1137-01FP\Grading\113701FP-G02.dwg, 08/21/03 05:43:51 PM, 1:2.00047

MATCH LINE SEE SHEET 3



NOTICE: THESE PLANS ARE
PRELIMINARY —
NOT FOR CONSTRUCTION
OR RECORDING

ARIZ. BD. OF TECH REGISTRATION R4-30-304
THIS NOTE TO BE REMOVED AT THE TIME OF
MUNICIPAL AGENCY APPROVAL

XREFS
113701FP-X-IM
6-19-03-SITE PLAN
Bhf-pe

SCOTTSDALE WATERFRONT
PLAN SHEET
GRADING PLAN

DATE	6-25-03
DESIGNED	RCJ
DRAWN	RCJ
CHECKED	BHF

31109 BAIRD HALL FULLERTON

BROOKS, HERSEY & ASSOCIATES INC.
ENGINEERS SURVEYORS CONSTRUCTION ADMINISTRATORS
4608 E. ELWOOD STREET PHOENIX, ARIZONA 85040
(PHONE) (602) 437-3733 (FAX) (480) 968-0264

JOB NUMBER	SHEET
1137-01FP	2 OF 3

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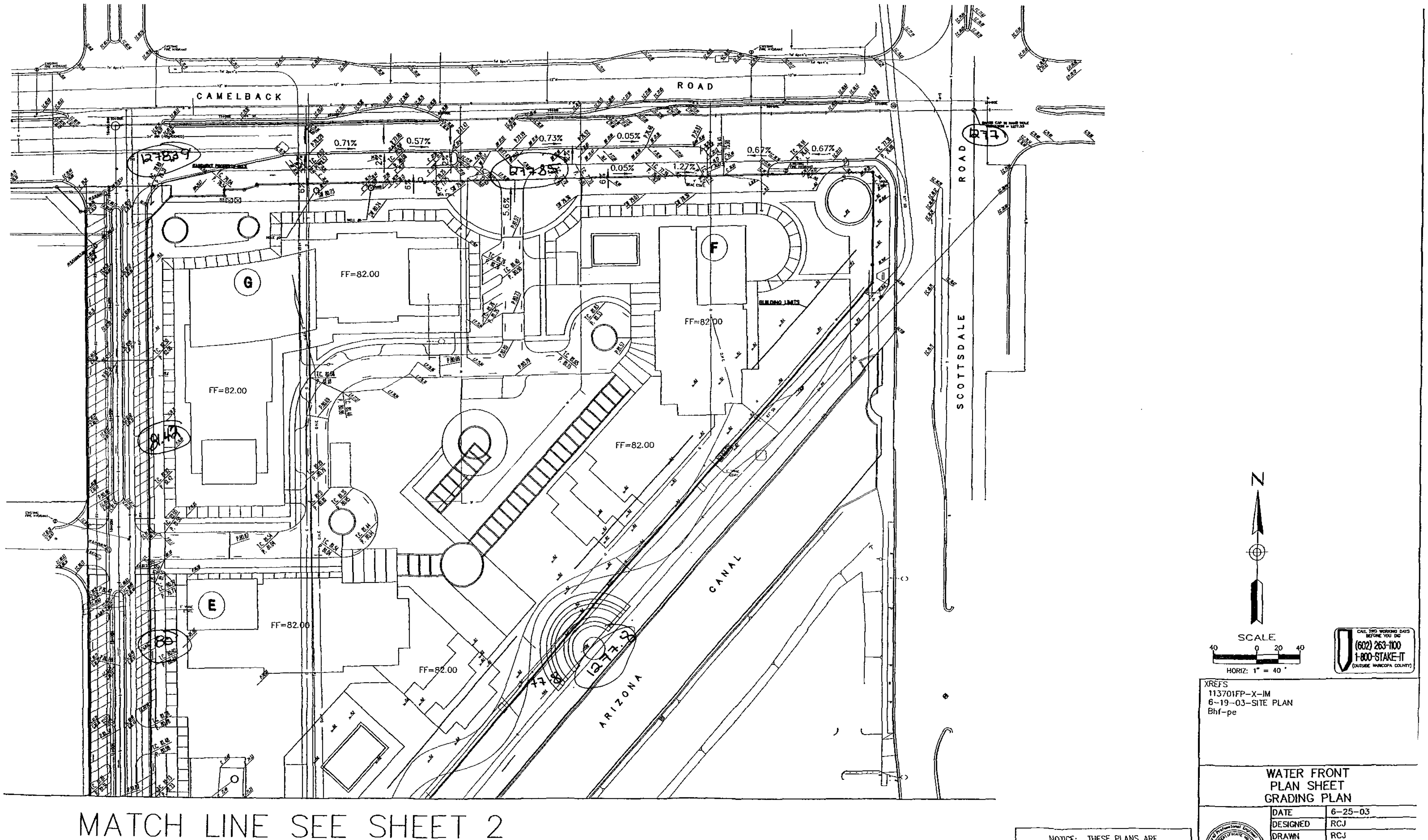

CALL TWO WORKING DAYS BEFORE YOU DIG
(602) 263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

XREFS
113701FP-X-IM
6-19-03-SITE PLAN
Bhf-pe

NOTICE: THESE PLANS ARE
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THIS NOTE TO BE REMOVED AT THE TIME OF
MUNICIPAL AGENCY APPROVAL

WATER FRONT
PLAN SHEET
GRADING PLAN

DATE	6-25-03
DESIGNED	RCJ
DRAWN	RCJ
CHECKED	BHF

Registered Professional Engineer (Civil) Certificate No. 31109 BAIRD HALL FULLERTON Arizona U.S.A.

BROOKS, HERSEY & ASSOCIATES INC.
ENGINEERS SURVEYORS CONSTRUCTION ADMINISTRATORS
4602 E. ELWOOD STREET #1 PHOENIX, ARIZONA 85040 (PHONE) (602) 437-3733 (FAX) (480) 865-0204

JOB NUMBER
1137-01FP

SHEET
3 OF 3

BROOKS ENGINEERS & SURVEYORS, INC.
4602 East Elwood Street #16
PHOENIX, AZ 85040-1960
(602) 437-3733
FAX (480) 858-0204

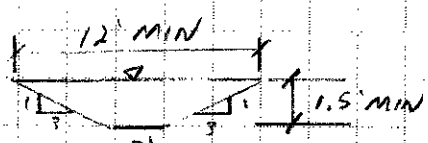
JOB SCOTTSDALE WATERFRONT
SHEET NO. 1 OF 2
CALCULATED BY DATE 4/26/05
CHECKED BY DATE
SCALE

FCD SIDE DRAIN INLETS:

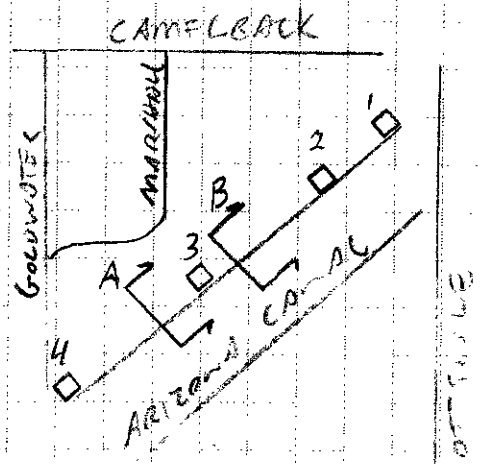
	STATION	GRATE	*ELEV.	INVERT	**WSEL	
1	431+25	87"x42"	1273.50	1252.40	-	
2	428+61	84"x42"	1272.84	1253.25	1274.34	(SEE SWALE 'A')
3	424+00	84"x42"	1270.50	1254.91	1272.00	(SEE SWALE 'B')
4	417+84	84"x72"	1270.00	1257.05	-	

*FCD DATUM.

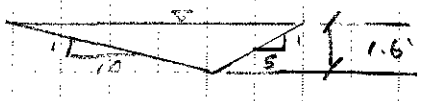
SWALE 'A'
STA 423+09



**THIS SECTION IS SHOWN TWICE ON DESIGN PLANS AND APPEARS TO INDICATE MINIMUM SWALE DEPTH.
FLOWLINE @ 0.005 FT/FT ∴ Q_{SWALE} = 25 CFS



SWALE 'B'
STA 426+43



FLOWLINE SLOPE VARIES
0.0028 FT/FT ∴ Q = 34 CFS
0.0098 FT/FT ∴ Q = 92 CFS

GRATE CAPACITIES

ORIFICE EQUATION — HEC 12, 1984

$$Q_{INLET} = C_o A (2gd)^{0.5}$$

$$Q_{[2][3]} = 0.67 (19.6)[2(32.16)\,1.5]^{0.5}$$

$$Q_{[2][3]} = 129 \text{ CFS.} \leftarrow$$

$$Q_{[1]} = 0.67 (20.3)[2(32.16)\,1.5]^{0.5}$$

$$Q_{[1]} = 134 \text{ CFS} \leftarrow$$

C_o = 0.67 ORIFICE COEFF.
A = CLEAR OPENING OF GRATE (FT^2)
g = 32.16 FT/S²
d = WATER DEPTH = 1.5'

$A = 0.8 A_{gross}$

BROOKS ENGINEERS & SURVEYORS, INC.
4602 East Elwood Street #16
PHOENIX, AZ 85040-1960
(602) 437-3733
FAX (480) 858-0204

JOB SCOTTSDALE WATERFRONT
SHEET NO. 2 OF 2
CALCULATED BY _____ DATE 9/26/03
CHECKED BY _____ DATE _____
SCALE _____

INLET CAPACITIES - CONTINUED.

STANDARD PRACTICE ASSUME 50% CLOGGING FACTOR, ∴ CAPACITY OF PIPE FROM INLETS = $0.5 \Sigma Q_{INLET}$

DESIGN

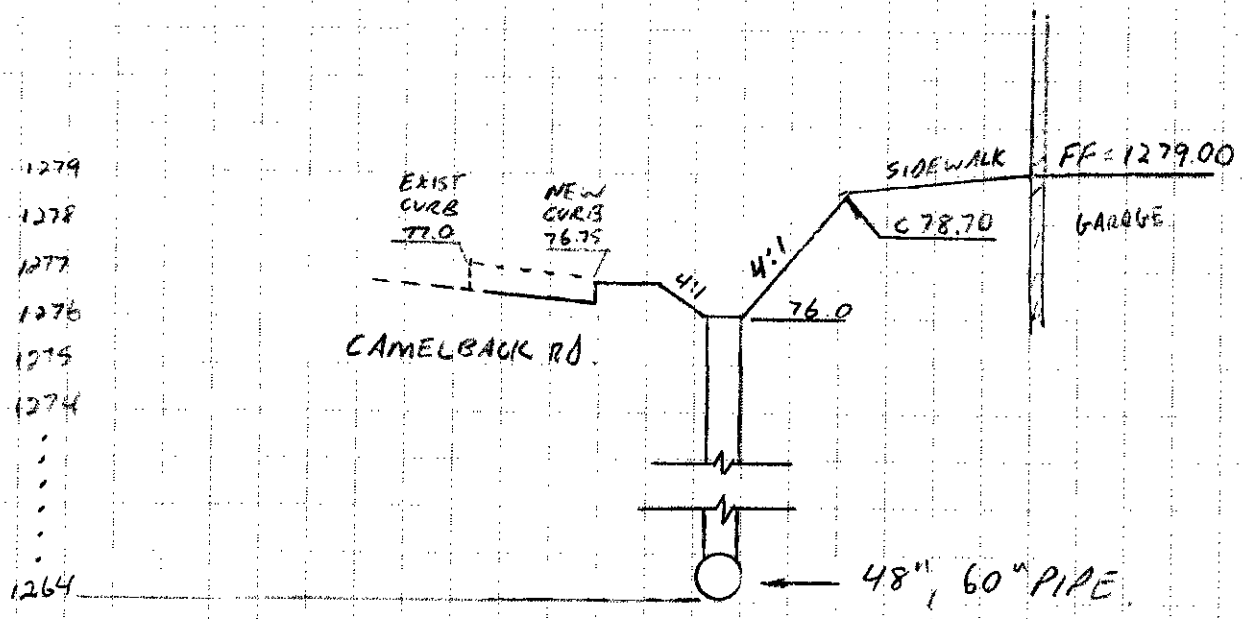
INLET [2] [3] = 134 CFS EACH ∴ Q_{PIPE} = 67 CFS & 134 CFS

AT 0.005 FT/FT 48" PIPE Q = 82 CFS ← ONE INLET

60" PIPE Q = 154 CFS ← TWO INLETS

INLET [1] RELOCATE TO THE NORTH EAST WITH SIMILAR DIMENSIONS TO PROVIDE 134 CFS CAPACITY (NO CLOGGING FACTOR).

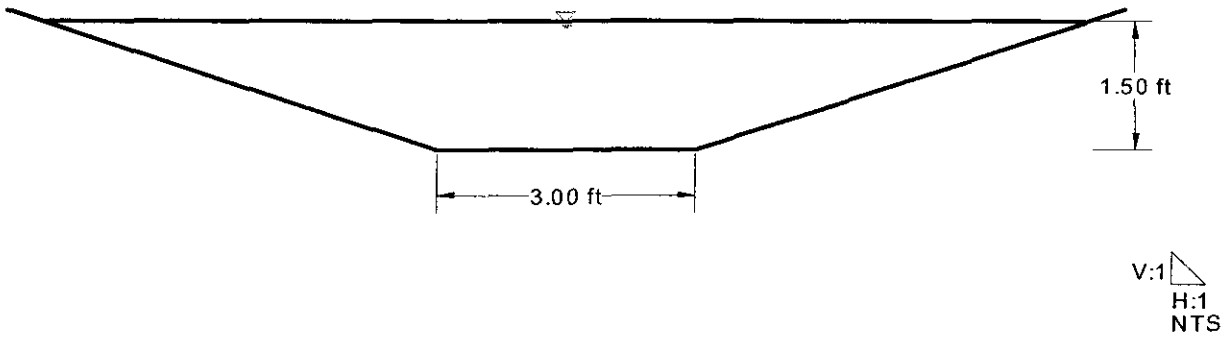
TYP. SECTION FOR INLET [2] [3]



Cross Section
Cross Section for Trapezoidal Channel

Project Description	
Worksheet	Trapezoidal Channel - 1
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Discharge

Section Data		
Mannings Coefficient	0.024	
Slope	0.001500	ft/ft
Depth	1.50	ft
Left Side Slope	0.33	V : H
Right Side Slope	0.33	V : H
Bottom Width	3.00	ft
Discharge	25.30	cfs

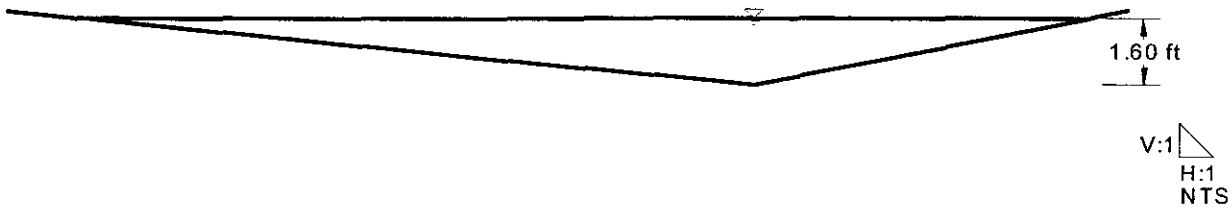


Brooks Hersey Associates
37 Brookside Road Waterbury, CT 06708 USA (203) 755-1666

Cross Section
Cross Section for Triangular Channel

Project Description	
Worksheet	Triangular Channel - 1
Flow Element	Triangular Channel
Method	Manning's Formula
Solve For	Discharge

Section Data		
Mannings Coefficient	0.024	
Slope	0.002800	ft/ft
Depth	1.60	ft
Left Side Slope	0.10	V : H
Right Side Slope	0.20	V : H
Discharge	53.85	cfs

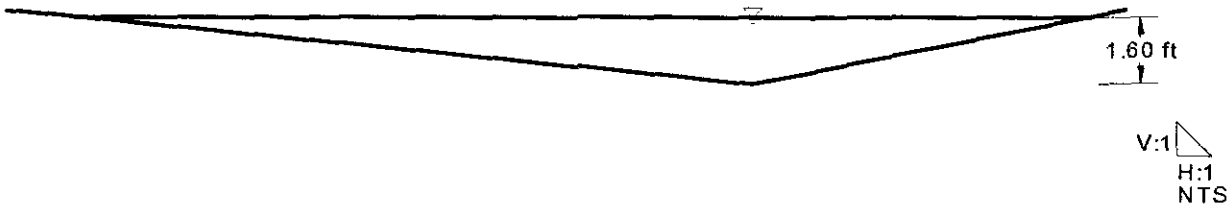


Brooks Hersey Associates
37 Brookside Road Waterbury, CT 06708 USA (203) 755-1666

Cross Section
Cross Section for Triangular Channel

Project Description	
Worksheet	Triangular Channel - 1
Flow Element	Triangular Channel
Method	Manning's Formula
Solve For	Discharge

Section Data		
Mannings Coefficient	0.024	
Slope	0.008200	ft/ft
Depth	1.60	ft
Left Side Slope	0.10	V : H
Right Side Slope	0.20	V : H
Discharge	92.16	cfs

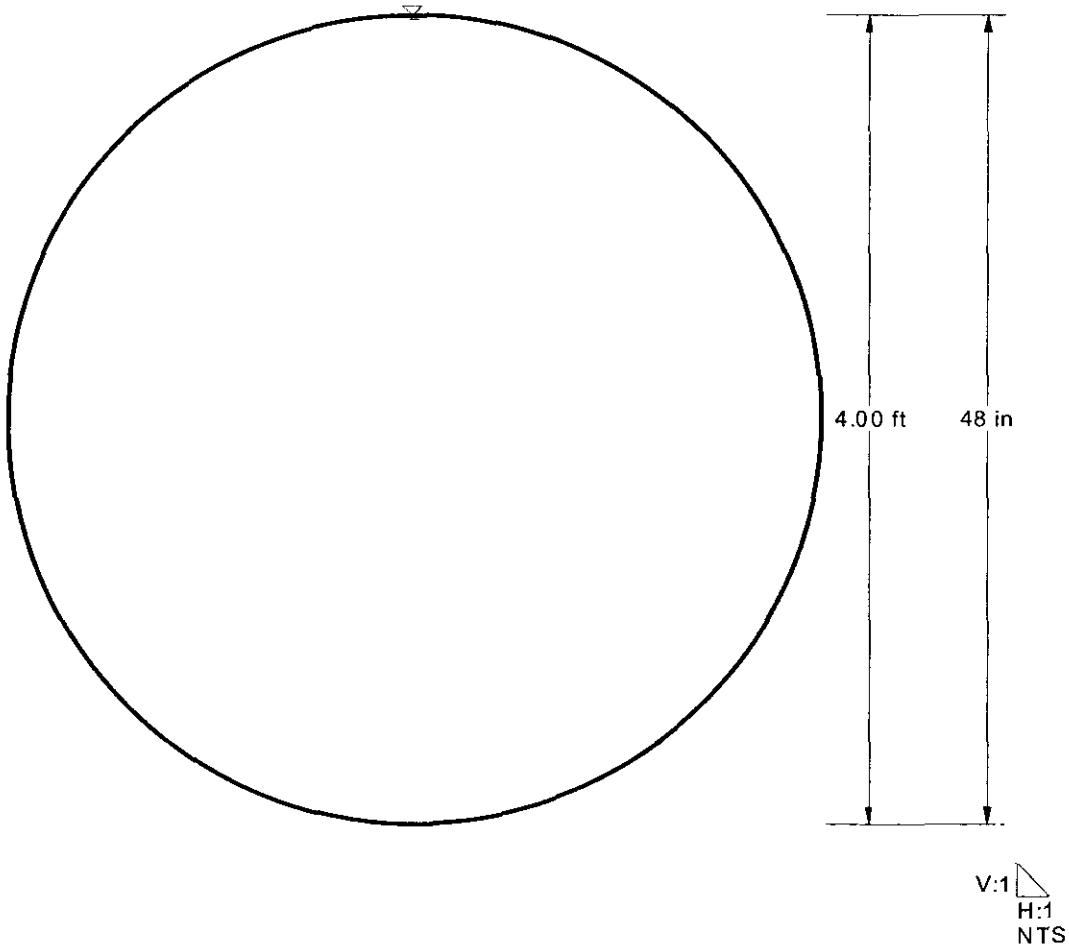


Brooks Hersey Associates
37 Brookside Road Waterbury, CT 06708 USA (203) 755-1666

Cross Section
Cross Section for Circular Channel

Project Description	
Worksheet	Circular Channel - 1
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Section Data		
Mannings Coefficient	0.016	
Slope	0.005000	ft/ft
Depth	4.00	ft
Diameter	48	in
Discharge	82.52	cfs

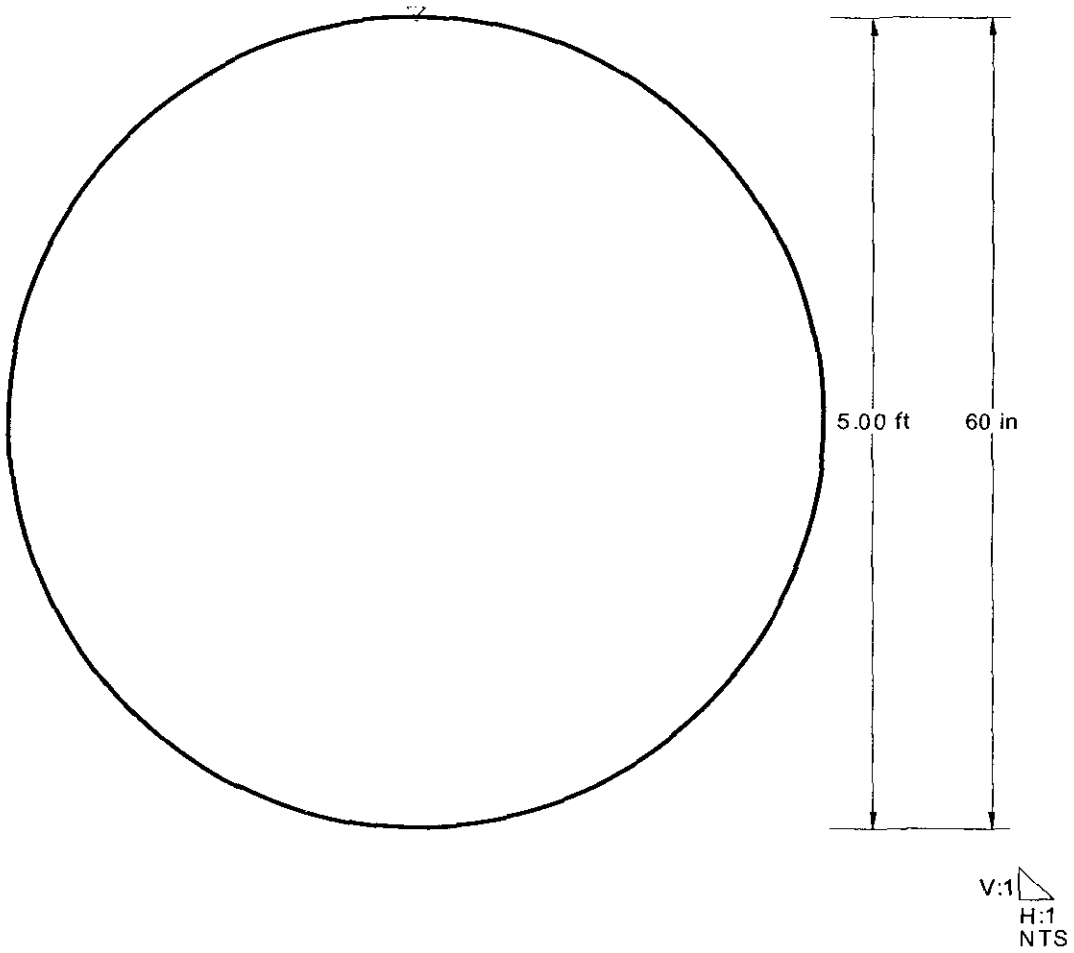


Brooks Hersey Associates
37 Brookside Road Waterbury, CT 06708 USA (203) 755-1666

Cross Section
Cross Section for Circular Channel

Project Description	
Worksheet	Circular Channel - 1
Flow Element	Circular Channel
Method	Manning's Formula
Solve For	Full Flow Capacity

Section Data		
Mannings Coefficient	0.016	
Slope	0.005000	ft/ft
Depth	5.00	ft
Diameter	60	in
Discharge	149.62	cfs



Brooks Hersey Associates
37 Brookside Road Waterbury, CT 06708 USA (203) 755-1666

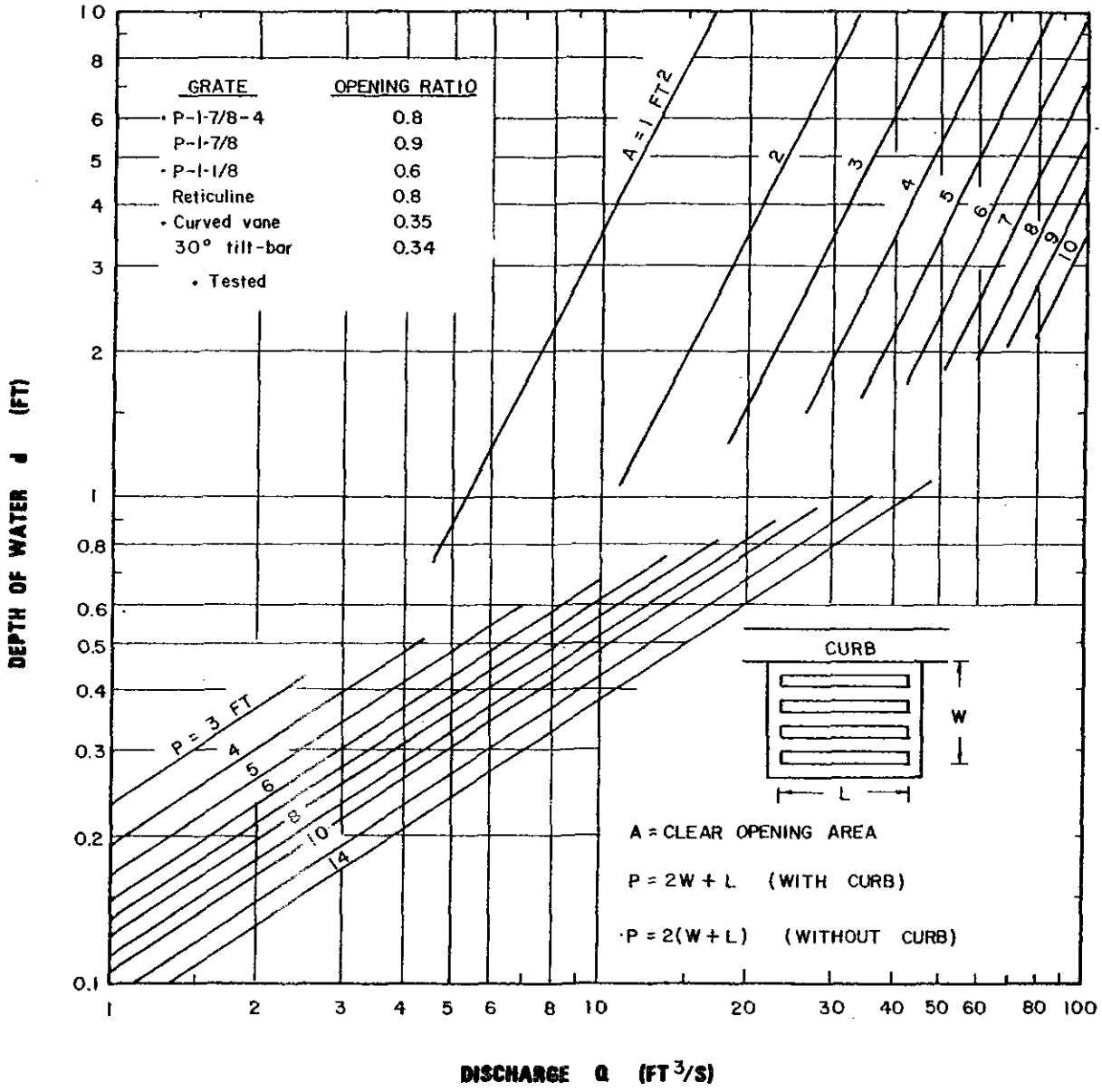
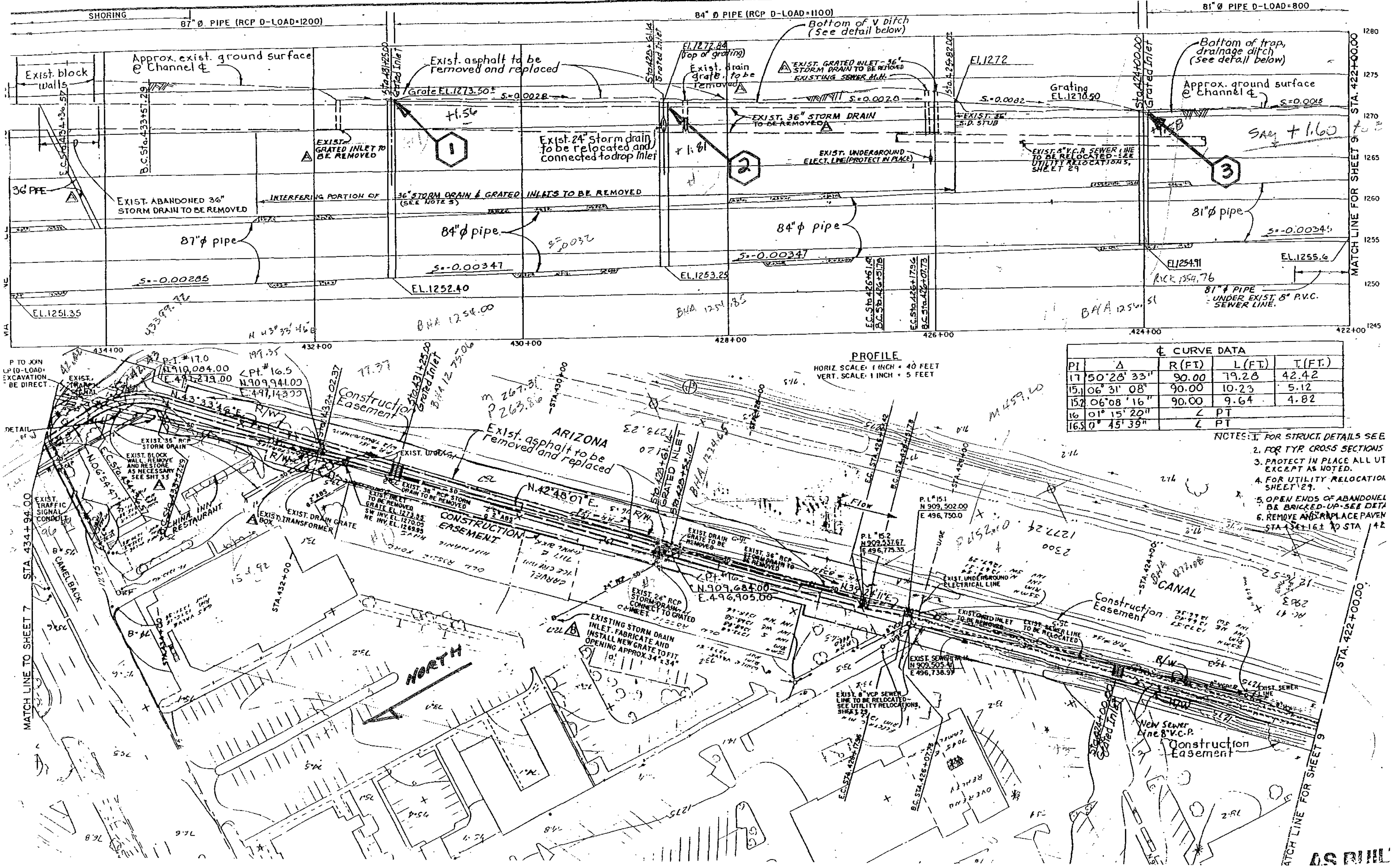


CHART 11. Grate inlet capacity in sump conditions.

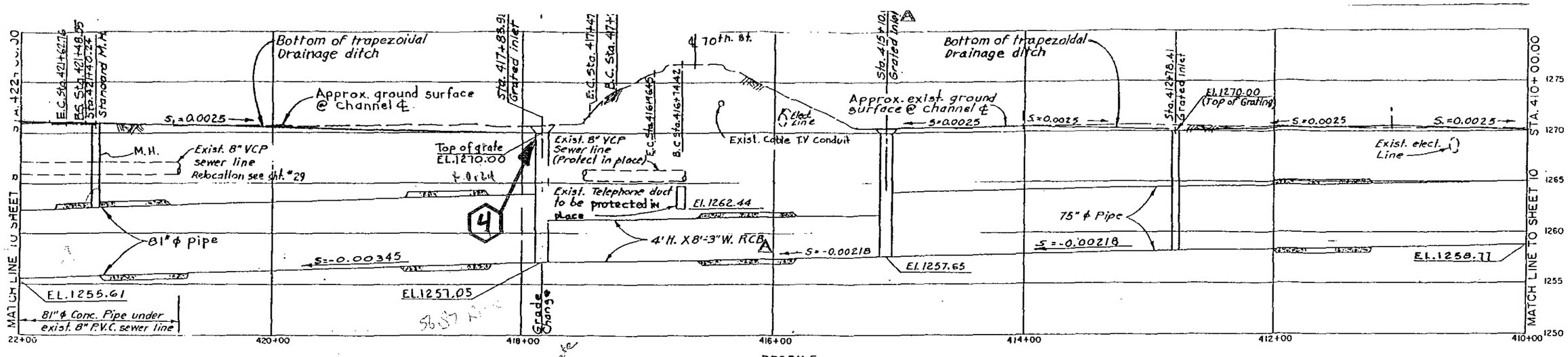
VALUE ENGINEERING PAYS



SHORING
87" Ø PIPE (RCP D-LOAD=1200)
84" Ø PIPE (RCP D-LOAD=1100)
81" Ø PIPE D-LOAD=800
Bottom of V ditch (See detail below)
Approx. exist. ground surface @ Channel ℄
Exist. block walls
Exist. asphalt to be removed and replaced
Grate EL.1273.50±
EL.1272.84 (top of grating)
Exist. drain grate to be removed
EXIST. GRATED INLET - 36" STORM DRAIN TO BE REMOVED EXISTING SEWER M.H.
EL.1272
Grating EL.1270.50
Bottom of trap, drainage ditch (See detail below)
Approx. ground surface @ Channel ℄
EXIST. GRATED INLET TO BE REMOVED
Exist. 24" Storm drain to be relocated and connected to drop inlet
EXIST. 36" STORM DRAIN TO BE REMOVED
EXIST. 36" S.D. STUB
EXIST. UNDERGROUND ELECT. LINE (PROTECT IN PLACE)
EXIST. 8" V.C.P. SEWER LINE TO BE RELOCATED - SEE UTILITY RELOCATIONS, SHEET 29
EXIST. ABANDONED 36" STORM DRAIN TO BE REMOVED
INTERFERING PORTION OF 36" STORM DRAIN & GRATED INLETS TO BE REMOVED (SEE NOTE 5)
36" PIPE
87"ϕ pipe
84"ϕ pipe
81"ϕ pipe
S=-0.00285
S=-0.00347
S=-0.00345
EL.1251.35
EL.1252.40
EL.1253.25
EL.1254.91
EL.1255.6
81"ϕ PIPE UNDER EXIST. 8" P.V.C. SEWER LINE.
MATCH LINE FOR SHEET 9 STA. 422+00.00
434+00
432+00
430+00
428+00
426+00
424+00
422+00
PROFILE
HORIZ. SCALE: 1 INCH = 40 FEET
VERT. SCALE: 1 INCH = 5 FEET
ARIZONA
CANAL
Construction Easement
CONSTRUCTION EASEMENT
N.42°48'01"E.
N.43°33'46"E.
P.I. #17.0 N.910,084.00 E.497,279.00
P.I. #16.5 N.909,941.00 E.497,143.00
P.I. #16 N.909,684.00 E.496,905.00
P.I. #15.1 N.909,502.00 E.496,750.0
P.I. #15.2 N.909,537.67 E.496,775.35
EXIST. BLOCK WALL, REMOVE AND RESTORE AS NECESSARY SEE SHT 33
EXIST. 35" RCP STORM DRAIN
EXIST. DRAIN GRATE BOX
EXIST. TRANSFORMER
CHINA INN RESTAURANT
EXIST. TRAFFIC SIGNAL CONDUIT
CAMELBACK
EXIST. 36" RCP STORM DRAIN TO BE REMOVED
EXIST. INLET TO BE REMOVED GRATE EL.1273.85 SW INV. EL.1270.05 NE INV. EL.1269.85
EXIST. 24" RCP STORM DRAIN CONNECT TO GRATED INLET
EXISTING STORM DRAIN INLET, FABRICATE AND INSTALL NEW GRATE TO FIT OPENING APPROX. 34" x 34"
EXIST. SEWER M.H. N 909,505.41 E 496,738.97
EXIST. 8" VCP SEWER LINE TO BE RELOCATED - SEE UTILITY RELOCATIONS, SHEET 29
New Sewer Line 8" V.C.P.
NORTH
Flow
MATCH LINE TO SHEET 7 STA. 434+94.00
MATCH LINE FOR SHEET 9
STA. 422+00.00
AS BUIL

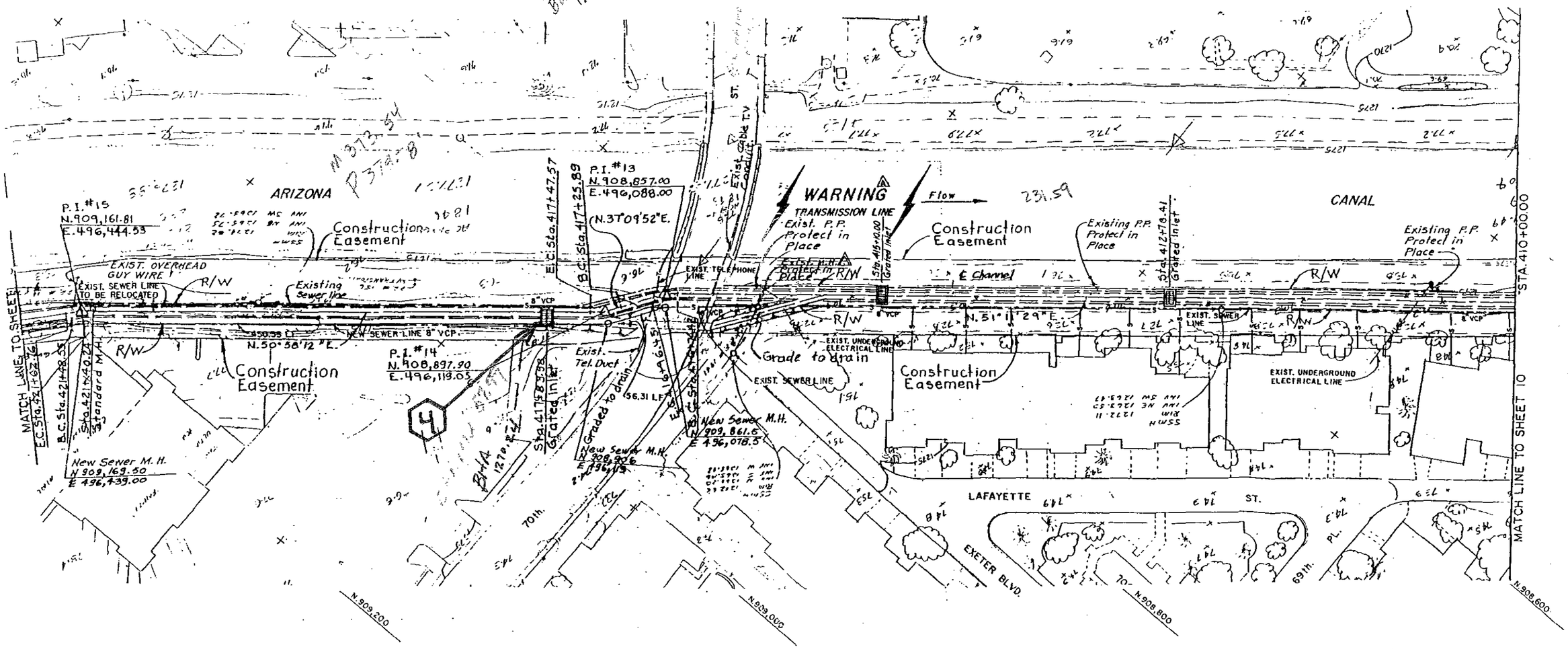
PI	℄ CURVE DATA Δ	R (FT.)	L (FT.)	T (FT.)
17	50°28'33"	90.00	79.28	42.42
15.1	06°31'08"	90.00	10.23	5.12
15.2	06°08'16"	90.00	9.64	4.82
16	01°15'20"	∠ PT		
16.5	0°45'39"	∠ PT		

NOTES: 1. FOR STRUCT. DETAILS SEE
2. FOR TYP. CROSS SECTIONS
3. PROTECT IN PLACE ALL UT EXCEPT AS NOTED.
4. FOR UTILITY RELOCATION SHEET 29.
5. OPEN ENDS OF ABANDONED BE BRICKED-UP-SEE DETA
6. REMOVE AND REPLACE PAVEM STA 434+16± TO STA 42



PROFILE

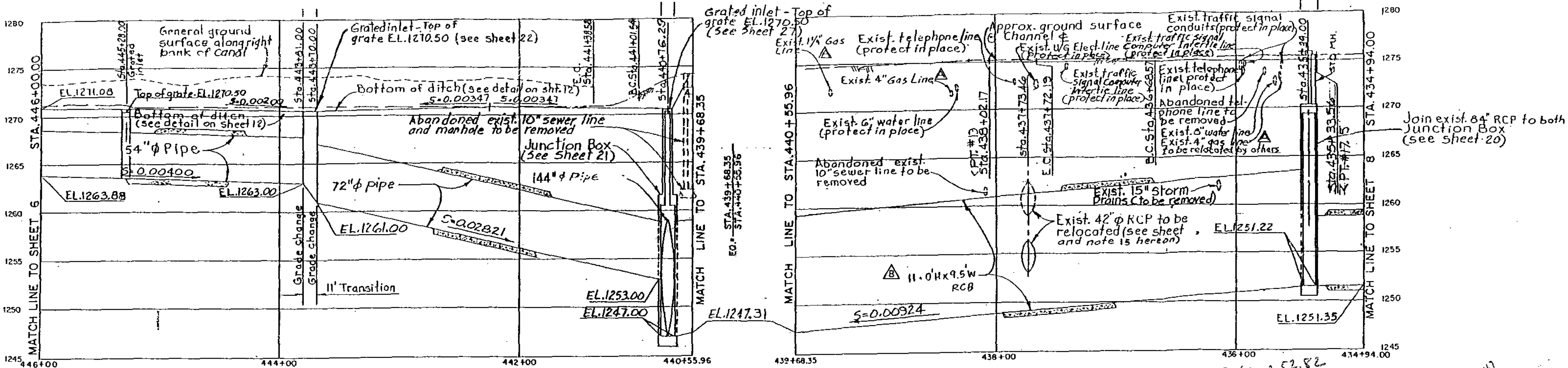
HORIZ. SCALE: 1 INCH = 40 FEET
VERT. SCALE: 1 INCH = 5 FEET



PLAN

DATUM IS MEAN SEA LEVEL

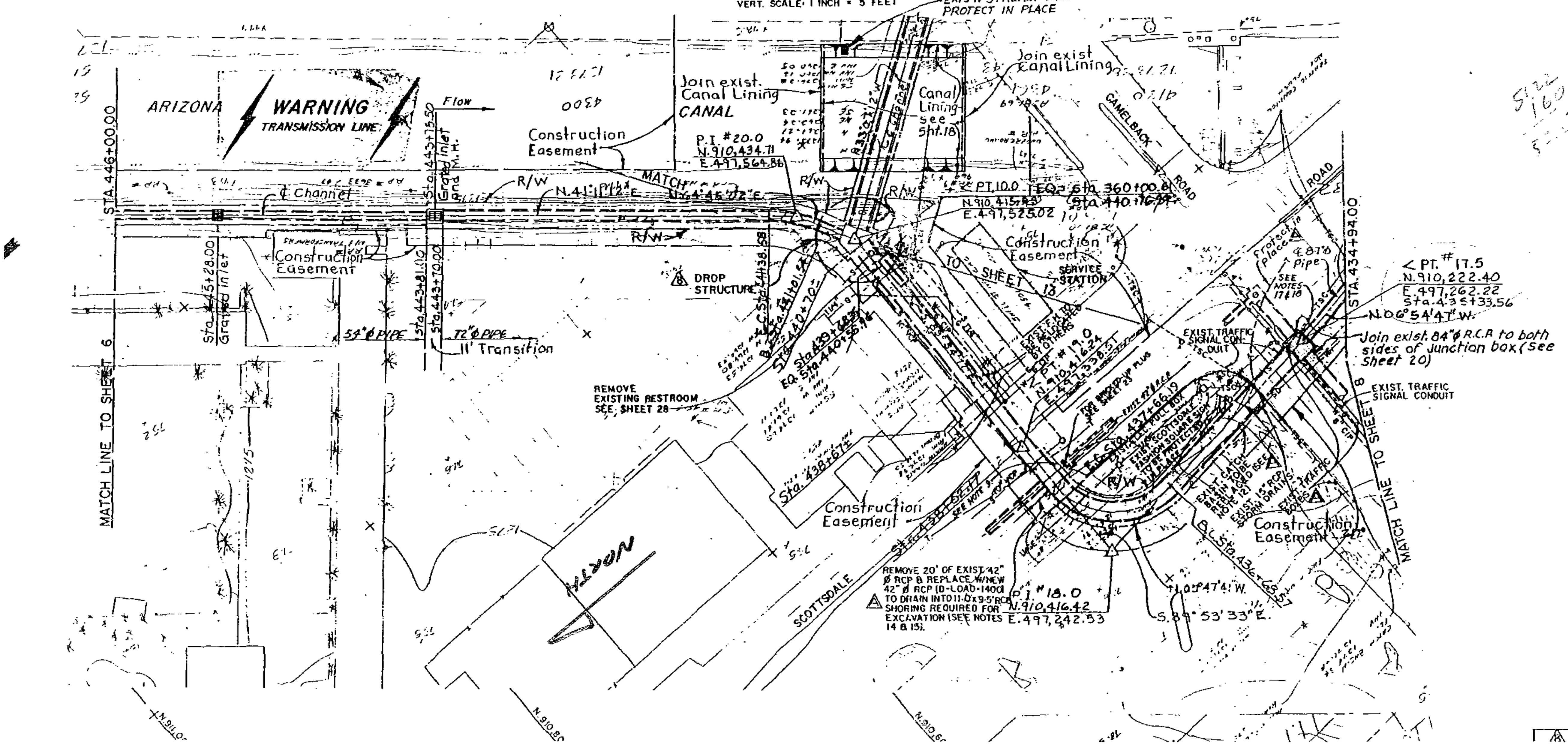
1	ADDED GRATED INLET STA. 415+10.00	2-9-83



PROFILE

HORIZ. SCALE: 1 INCH = 40 FEET
VERT. SCALE: 1 INCH = 5 FEET

BHA 1252.82



NOTES:

1. FOR STRUCTURAL DETAILS, SEE SHEETS 20, 21, 22, 23 & 2
2. FOR TYPICAL CROSS SECTIONS, SEE SHEETS 11 & 12.
3. FOR TYPICAL ROAD REPLACEMENT DETAILS, SEE SHEET
4. PROTECT IN PLACE ALL UTILITY LINES, EXCEPT AS NOT
5. MEDIAN STREET ISLANDS TO BE RESTORED.
6. REPLACE WITH 2" A.C. & 10" A.B.C. OVER 144" PIPE. BETWEEN STA. 440+70± & STA. 438+37±.
7. REMOVE AND RESTORE STORM DRAIN SYSTEMS WITHIN THE CONSTRUCTION AREA AS REQUIRED.
8. FOR LANDSCAPE, SEE SHEETS 33, 34, 35 AND 36.
9. PROTECT IN PLACE, TRAFFIC SIGNAL TIE LINE.
10. REMOVE RESTROOM.
11. REMOVE AND RESTORE SPRINKLER AND ELECTRICAL SYSTEMS WITHIN THE CONSTRUCTION AREA AS REQUIRED.
12. (B) REMOVE AND RESTORE CATCH BASINS AND CONNECT 11.0'x9.5' RCB.
13. FOR UTILITY RELOCATIONS SEE SHEET 28.
14. OPEN ENDS OF ABANDONED PIPE SHALL BE BRICKED UP. SEE DETAIL ON SHEET 23.
15. (A) CONNECTION TO BE DIRECT TAP INTO RCB.
16. REPLACE GUNITE IN KIND AS NEEDED BETWEEN STA.4 STA. 448+00.
17. TRAFFIC SIGNAL POLE TO BE REMOVED AND REPLACED TO PIPE INSTALLATION.
18. CITY OF SCOTTSDALE SHALL REWIRE & RESTORE OPERATION COMPLETION.

SCALE: 1 IN. = 5 FT.

5 0 5 10 15

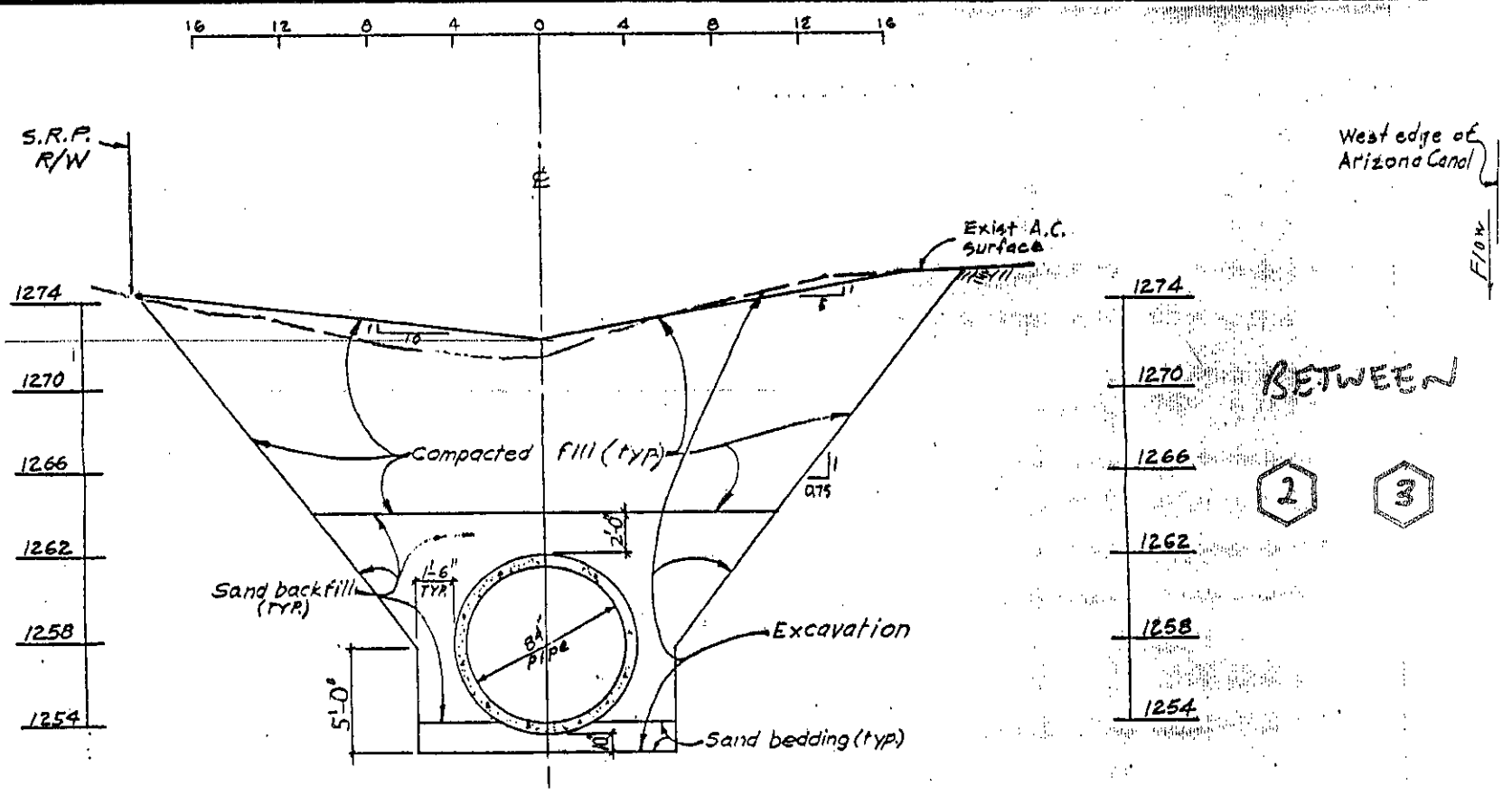
SCALE: 1 IN. = 40 FT.

50 0 50 100

AS BUILT

DATUM IS MEAN SEA LEVEL

| A | AS BUILT REVISIONS |



72"Ø (RCP D-LOAD=800)

grated inlet - Top of

SHORING

144"Ø PIPE (RCP D-LOAD=105

Approx. ground surfac

Channel &

ENVIRONMENTAL ENHANCEMENT THRU ENGINEERING

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