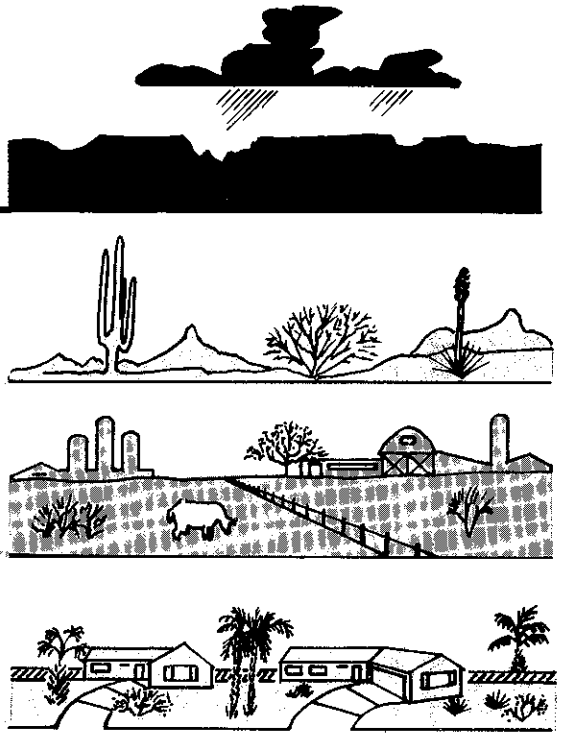


FLOOD CONTROL
DISTRICT OF
MARICOPA COUNTY

CONDITIONAL LETTER OF MAP REVISION (CLOMR) APPLICATION PACKAGE

for

Dysart Drain of White Tanks/Agua Fria ADMS

VOL. II

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

T 2 N, R 1 W
FIRM PANEL NO. 1600

WHITE TANKS/AGUA FRIA

AREA DRAINAGE MASTER STUDY

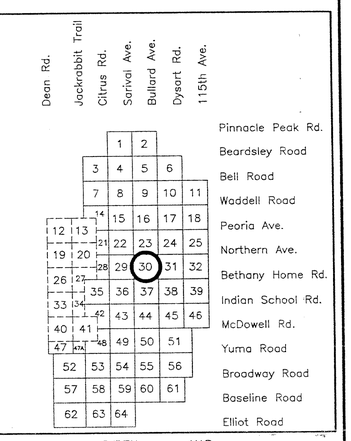
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

REVISION LEGEND AND NOTES

- Existing Floodplain Boundary to Remain
- Existing Floodplain Boundary to be Deleted
- New Floodplain Boundary to be Added

REFERENCE MARKS (RM'S)

NO.	ELEVATION	DESCRIPTION
107	1125.48	1/2" Iron Pipe in Pothole, Sarival Ave and Northern Ave
109	1103.31	Brass Cap in Hand Hole, Reems Rd. and Northern Ave.
110	1095.12	Brass Cap in Hand Hole, Bullard Ave. and Northern Ave.
121	1101.08	1/2" Iron Pin in Hand Hole, Sarival Ave. and Glendale Ave.
122	1083.96	Bolt on Top of Tee of Discharge Pipes 20'± North of Pump, at the Northeast Corner of Intersection of Reems Rd. and Glendale Ave.
135	1080.11	1/2" Iron Pin in Hand Hole, Sarival Ave. and Bethany Home Rd.



INDEX MAP

N

400 200 0 400 800 1200

BASE MAP: WHITE TANKS/AGUA FRIA A.D.M.S. TOPOGRAPHIC MAPS
CONTOUR INTERVAL = 2'

REGISTERED PROFESSIONAL ENGINEER (CIVIL) 15594 MARK T. GAVAN Date Signed 12-22-89 ARIZONA, U.S.A.

LEGEND

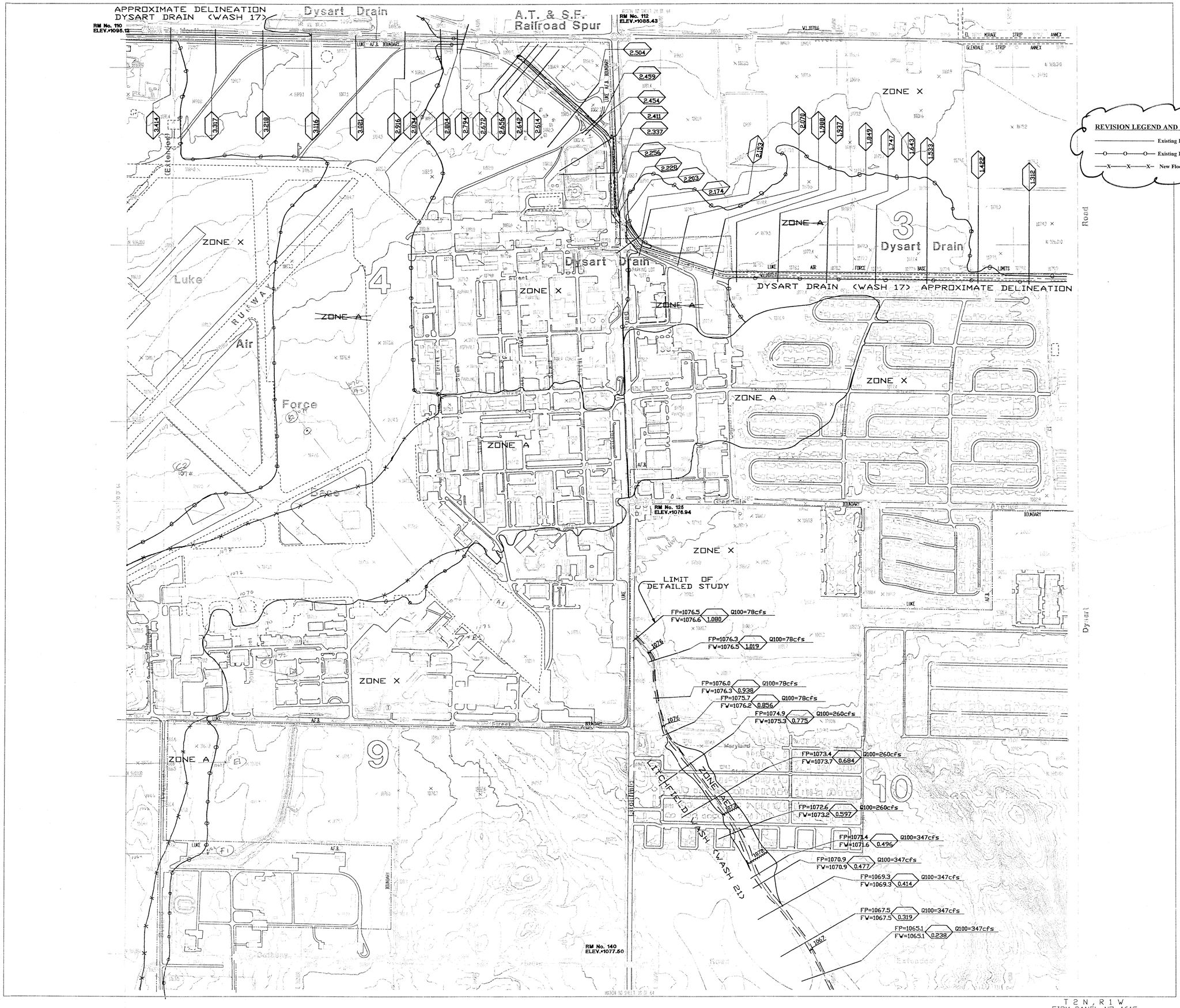
1.452	CROSS SECTION NUMBER
FP=1158.9	FLOODPLAIN WATER SURFACE ELEVATION = 1158.9
FW=1159.8	FLOODWAY WATER SURFACE ELEVATION = 1159.8
Q100=764cfs	100-YEAR PEAK DISCHARGE = 764 CUBIC FEET PER SEC.
1157	BASE FLOOD ELEVATION
	STREAM CENTERLINE
	FLOODWAY BOUNDARY
	FLOODPLAIN BOUNDARY
RM NO. 100	ELEVATION REFERENCE MARK
ZONE AE	FLOOD INSURANCE RATE ZONE

SHEET TITLE: **FLOODPLAIN MAP**

STUDY CONSULTANT: **The WLB Group** INC.

MAPPING COMPANY: Cooper Aerial of Phoenix, Inc.

SHEET 30 OF 64 | DATE FLOWN 12/22/89



T 2 N, R 1 W
FIRM PANEL NO. 1615

WHITE TANKS/AGUA FRIA

AREA DRAINAGE MASTER STUDY

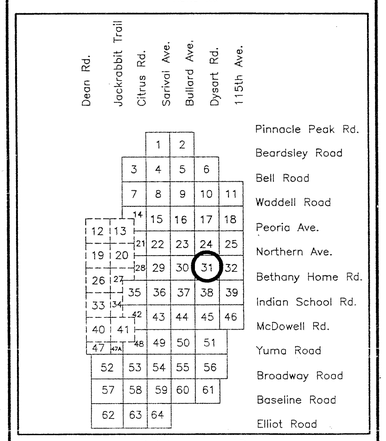
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

REVISION LEGEND AND NOTES

- Existing Floodplain Boundary to Remain
- Existing Floodplain Boundary to be Deleted
- New Floodplain Boundary to be Added

REFERENCE MARKS (RM'S)

NO.	ELEVATION	DESCRIPTION
110	1095.12	Brass Cap in Hand Hole, Bullard Ave. and Northern Ave.
112	1085.43	Maricopa County Highway Dept. Brass Cap in Hand Hole, Litchfield Rd. and Northern Ave.
125	1076.94	Maricopa County Highway Dept. Brass Cap in Hand Hole, Litchfield Rd. and Glendale Ave.
140	1077.50	Maricopa County Highway Dept. Brass Cap in Hand Hole, Litchfield Rd. and Bethany Home Rd.



INDEX MAP

N

400 200 0 400 800 1200

BASE MAP: WHITE TANKS/AGUA FRIA A.D.M.S. TOPOGRAPHIC MAPS
CONTOUR INTERVAL = 2'

Property of
Flood Control District of MC Library
Please Return to
2801 W. Durango
Phoenix, AZ 85009

REGISTERED PROFESSIONAL ENGINEER
15594
MARK T. GAVAN
ARIZONA, U.S.A.

LEGEND

1.452	CROSS SECTION NUMBER
FP=1158.9	FLOODPLAIN WATER SURFACE ELEVATION = 1158.9
FW=1159.8	FLOODWAY WATER SURFACE ELEVATION = 1159.8
Q100=764cfs	100-YEAR PEAK DISCHARGE = 764 CUBIC FEET PER SEC.
1157	BASE FLOOD ELEVATION
	STREAM CENTERLINE
	FLOODWAY BOUNDARY
	FLOODPLAIN BOUNDARY
RM NO. 100	ELEVATION REFERENCE MARK
ZONE AE	FLOOD INSURANCE RATE ZONE

SHEET TITLE:
FLOODPLAIN MAP

STUDY CONSULTANT: **The WLB Group** INC.

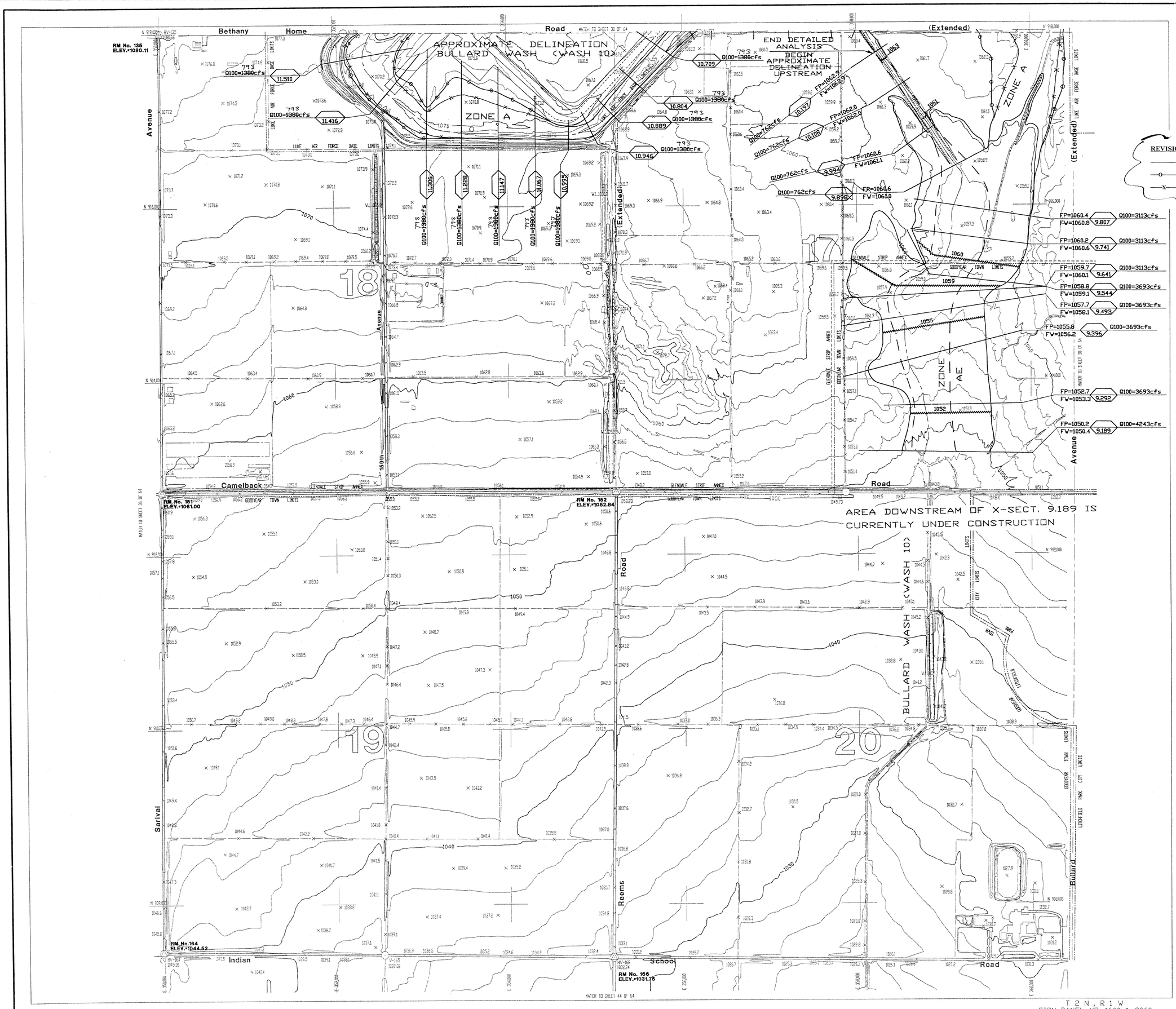
MAPPING COMPANY:
Cooper Aerial of Phoenix, Inc.

SHEET 31 OF 64 | DATE FLOWN 12/22/89

WHITE TANKS/AGUA FRIA

AREA DRAINAGE MASTER STUDY

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

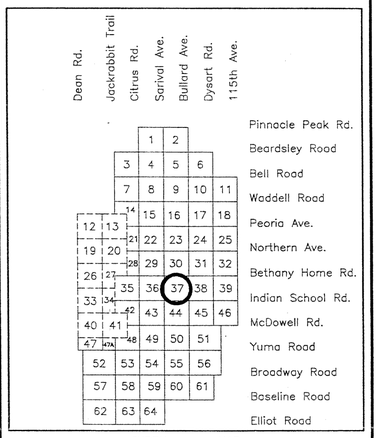


REVISION LEGEND AND NOTES

- Existing Floodplain Boundary to Remain
- Existing Floodplain Boundary to be Deleted
- New Floodplain Boundary to be Added

REFERENCE MARKS (RM'S)

NO.	ELEVATION	DESCRIPTION
135	1080.11	1/2" Iron Pin in Han Hole, Sarival Ave. and Bethany Home Rd.
151	1061.00	City of Phoenix Brass Cap in Hand Hole, Sarival Ave. and Camelback Rd.
152	1052.84	City of Phoenix Brass Cap in Hand Hole, Reems Rd. and Camelback Rd.
164	1044.52	Iron Pipe in Hand Hole, Sarival Ave. and Indian School Rd.
166	1031.75	Maricopa County Highway Dept. Brass Cap in Hand Hole, Reems Rd. and Indian School Rd.



INDEX MAP

N

400 200 0 400 800 1200

BASE MAP: WHITE TANKS/AGUA FRIA A.D.M.S. TOPOGRAPHIC MAPS
CONTOUR INTERVAL = 2'

LEGEND

1.452	CROSS SECTION NUMBER
FP=1158.9	FLOODPLAIN WATER SURFACE ELEVATION = 1158.9
FW=1159.8	FLOODWAY WATER SURFACE ELEVATION = 1159.8
Q100=764cfs	100-YEAR PEAK DISCHARGE = 764 CUBIC FEET PER SEC.
1157	BASE FLOOD ELEVATION
	STREAM CENTERLINE
	FLOODWAY BOUNDARY
	FLOODPLAIN BOUNDARY
RM NO. 100	ELEVATION REFERENCE MARK
ZONE AE	FLOOD INSURANCE RATE ZONE

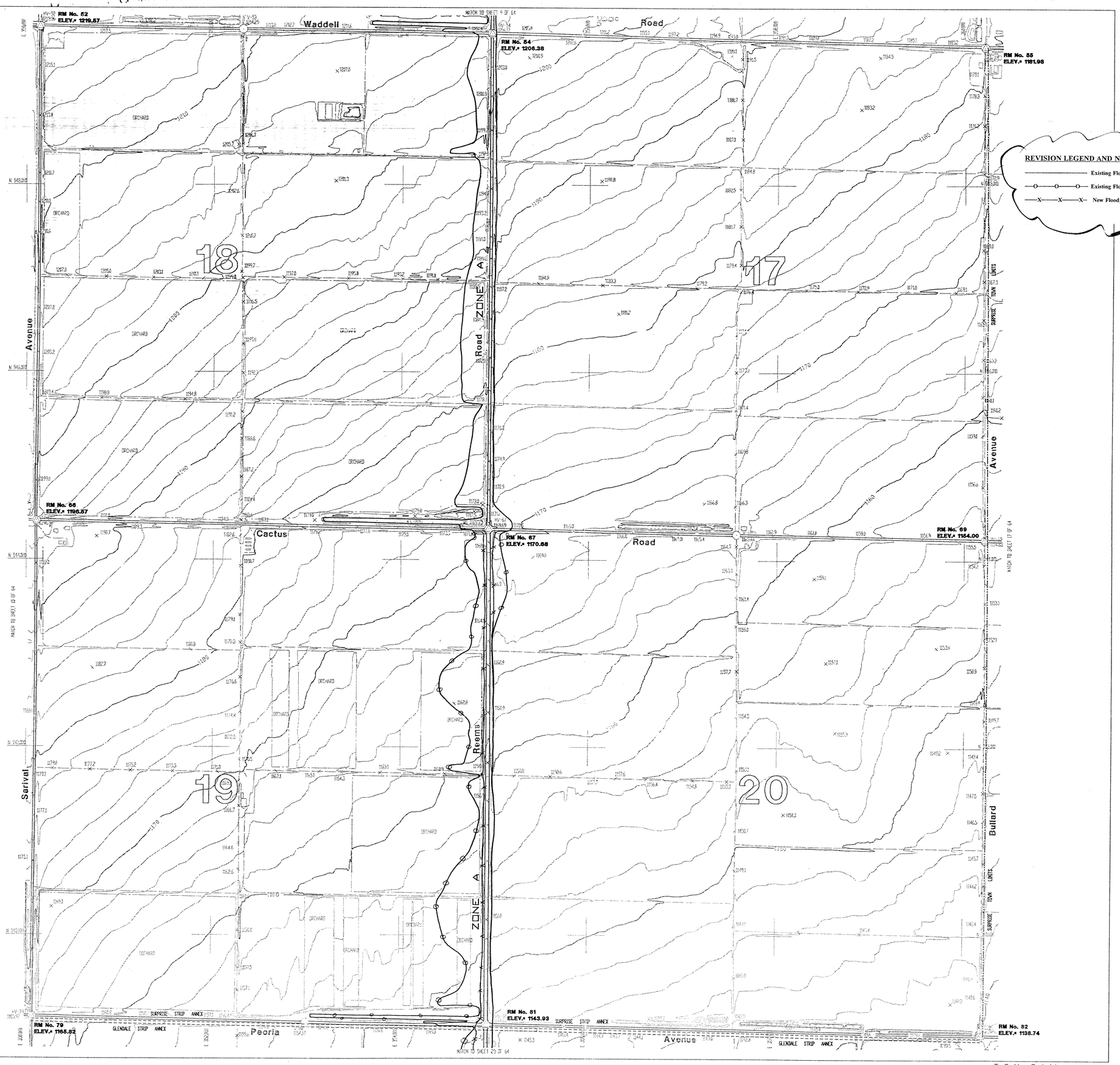
SHEET TITLE: **FLOODPLAIN MAP**

STUDY CONSULTANT: **The WLB Group** INC.

MAPPING COMPANY: Cooper Aerial of Phoenix, Inc.

SHEET 37 OF 64 | DATE FLOWN 12/22/89

T 2 N, R 1 W
FIRM PANEL NO. 1600 & 2060



WHITE TANKS/AGUA FRIA

AREA DRAINAGE MASTER STUDY

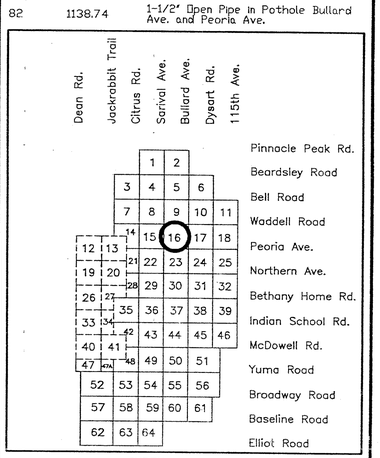
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

REVISION LEGEND AND NOTES

- Existing Floodplain Boundary to Remain
- —O—O—O— Existing Floodplain Boundary to be Deleted
- —X—X—X— New Floodplain Boundary to be Added

REFERENCE MARKS (RM'S)

NO.	ELEVATION	DESCRIPTION
52	1219.57	Brass Cap in Hand Hole, Centerline Intersection Sarival Ave. and Waddell Rd.
54	1206.38	"X" Chiseled in Top Concrete Headwall Southeast Corner Intersection of Reems Rd. and Waddell Rd.
55	1181.98	1/2" Rebar in Top Concrete Headwall Northwest Corner of Intersection of Bullard Ave. and Waddell Rd.
66	1196.57	Brass Cap in Hand Hole Centerline Intersection Sarival Ave. and Cactus Rd.
67	1170.68	Chiseled Square in Top Concrete Headwall Southwest Corner of Intersection of Reems Rd. and Cactus Rd.
69	1154.00	Iron Rod in Pothole, Bullard Ave. and Cactus Rd.
79	1165.82	Brass Cap in Hand Hole, Sarival Ave. and Peoria Ave.
81	1143.93	Brass Cap in Hand Hole, Reems Rd. and Peoria Ave.
82	1138.74	1-1/2" Open Pipe in Pothole Bullard Ave. and Peoria Ave.



INDEX MAP

N

400 200 0 400 800 1200

BASE MAP: WHITE TANKS/AGUA FRIA A.D.M.S. TOPOGRAPHIC MAPS
CONTOUR INTERVAL = 2'

LEGEND

1452	CROSS SECTION NUMBER
FP=1158.9	FLOODPLAIN WATER SURFACE ELEVATION = 1158.9
FW=1159.8	FLOODWAY WATER SURFACE ELEVATION = 1159.8
Q100=764cfs	100-YEAR PEAK DISCHARGE = 764 CUBIC FEET PER SEC.
1157	BASE FLOOD ELEVATION
	STREAM CENTERLINE
	FLOODWAY BOUNDARY
	FLOODPLAIN BOUNDARY
RM NO. 100	ELEVATION REFERENCE MARK
ZONE AE	FLOOD INSURANCE RATE ZONE

SHEET TITLE:
FLOODPLAIN MAP

STUDY CONSULTANT:
The WLB Group INC.

MAPPING COMPANY:
Cooper Aerial of Phoenix, Inc.

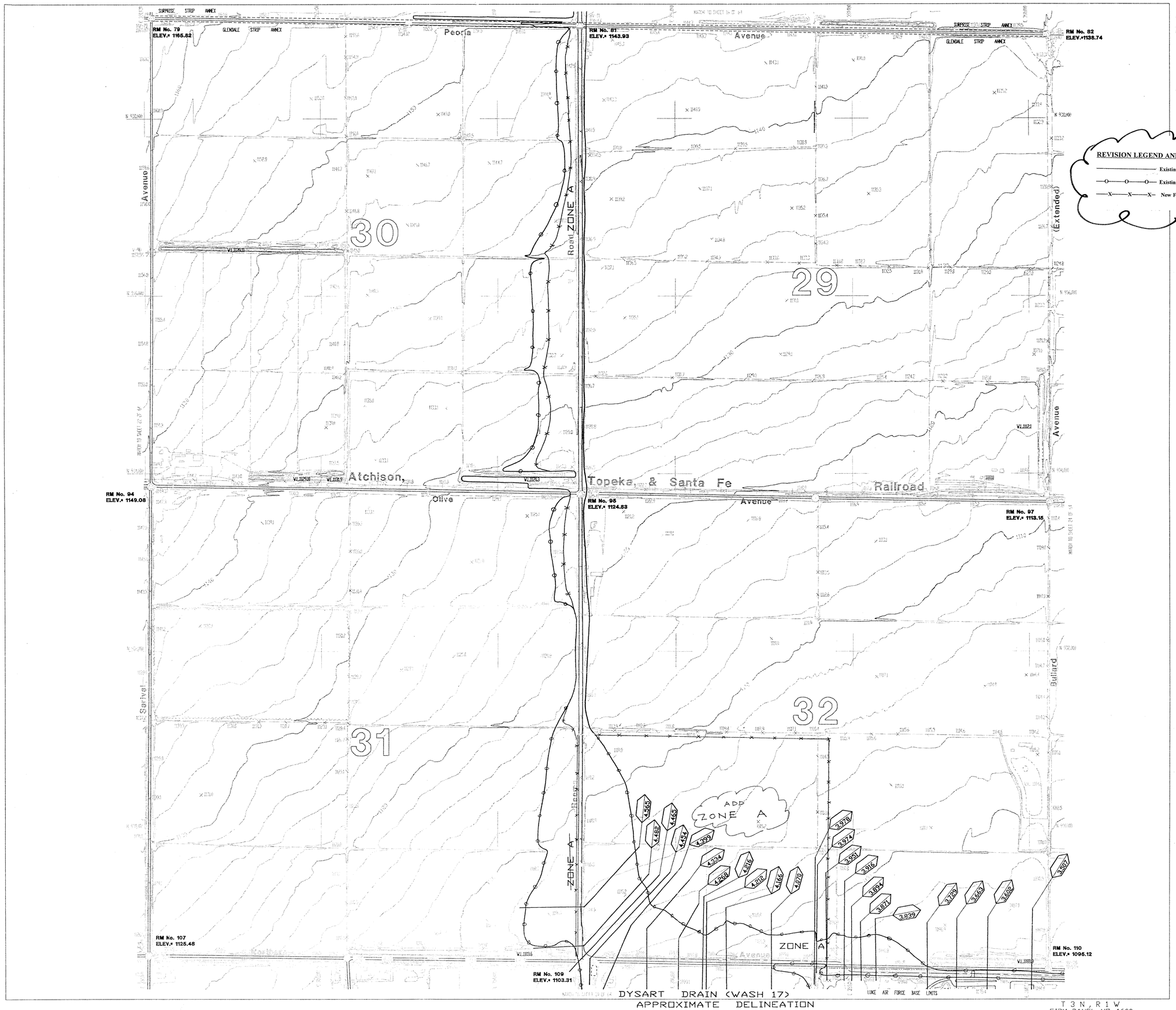
SHEET 16 OF 64 | DATE FLOWN 12/22/89

T 3 N, R 1 W
FIRM PANEL NO. 1600

WHITE TANKS/AGUA FRIA

AREA DRAINAGE MASTER STUDY

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

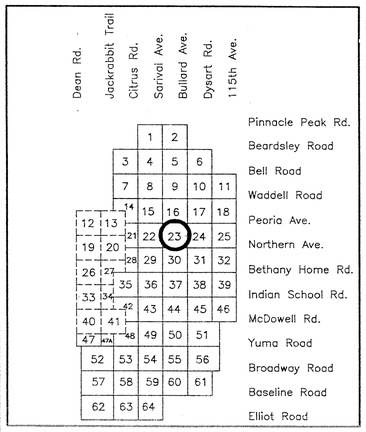


REVISION LEGEND AND NOTES

- Existing Floodplain Boundary to Remain
- Existing Floodplain Boundary to be Deleted
- New Floodplain Boundary to be Added

REFERENCE MARKS (RM'S)

NO.	ELEVATION	DESCRIPTION
79	1165.82	Brass Cap in Hand Hole, Sarival Ave. and Peoria Ave.
81	1143.93	Brass Cap in Hand Hole, Reems Rd. and Peoria Ave.
82	1138.74	1-1/2' Open Pipe in Pot Hole, Bullard Ave. and Peoria Ave.
94	1149.08	5/8' Iron Pipe in Pothole, Sarival Ave. and Olive Ave.
95	1124.83	Brass Cap in Hand Hole, Reems Rd. and Olive Ave.
97	1113.15	'X' Chiseled on Top Concrete Headwall Northeast Corner of Intersection of Bullard Ave. and Olive Ave.
107	1125.48	1/2' Iron Pipe in Pothole, Sarival Ave. and Northern Ave.
109	1103.31	Brass Cap in Hand Hole, Reems Rd. and Northern Ave.
110	1095.12	Brass Cap in Hand Hole, Bullard Ave. and Northern Ave.



INDEX MAP

N

400 200 0 400 800 1200

BASE MAP: WHITE TANKS/AGUA FRIA A.D.M.S. TOPOGRAPHIC MAPS
CONTOUR INTERVAL = 2'

LEGEND

1.452	CROSS SECTION NUMBER
FP=1158.9	FLOODPLAIN WATER SURFACE ELEVATION = 1158.9
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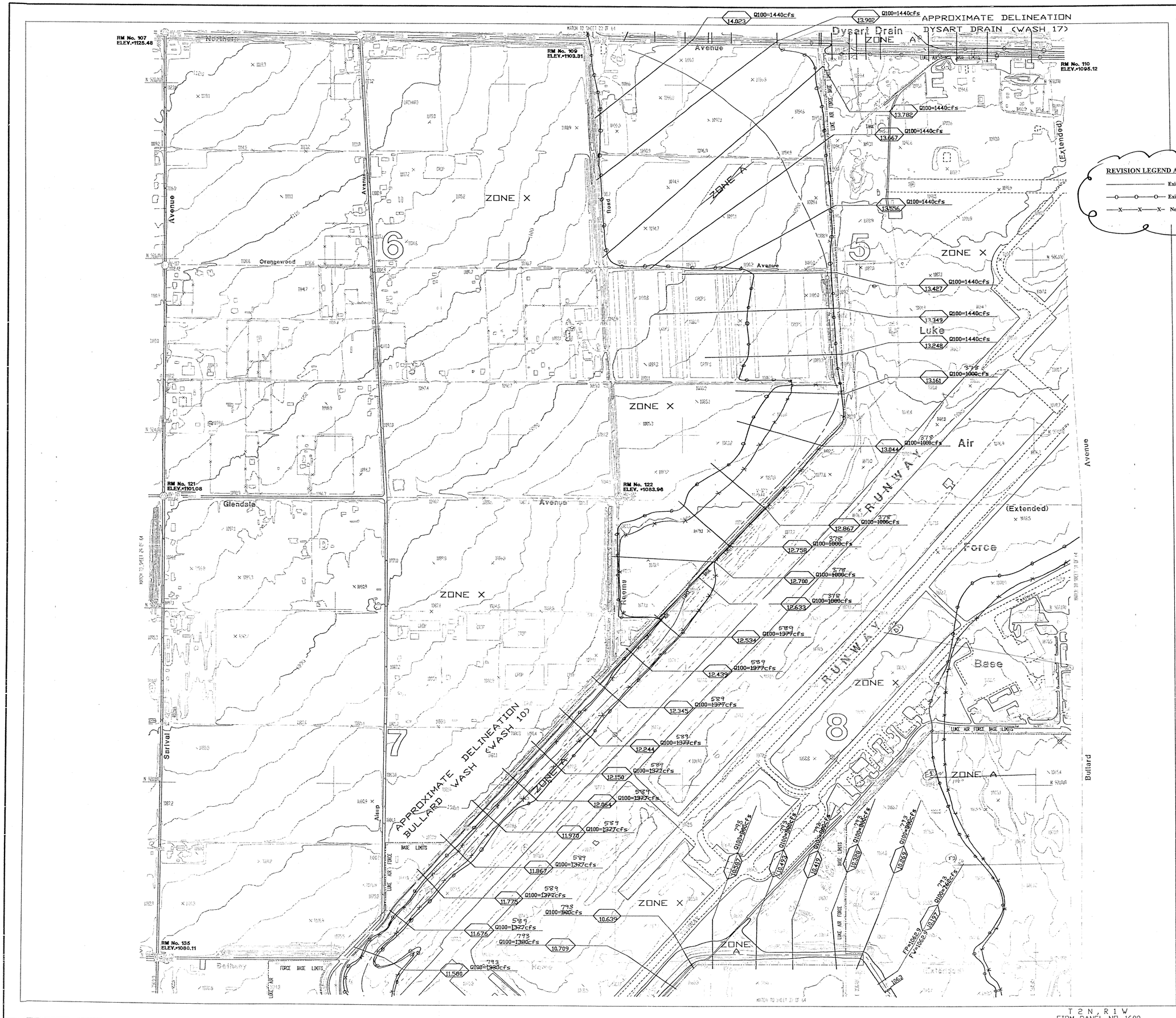
Q100=764cfs	100-YEAR PEAK DISCHARGE = 764 CUBIC FEET PER SEC.
1157	BASE FLOOD ELEVATION
	STREAM CENTERLINE
	FLOODWAY BOUNDARY
	FLOODPLAIN BOUNDARY
RM NO. 100	ELEVATION REFERENCE MARK
ZONE AE	FLOOD INSURANCE RATE ZONE

SHEET TITLE: **FLOODPLAIN MAP**

STUDY CONSULTANT: **The WLB Group** INC.

MAPPING COMPANY: Cooper Aerial of Phoenix, Inc.

SHEET 23 OF 64 | DATE FLOWN 12/22/89



T 2 N, R 1 W
FIRM PANEL NO. 1600

WHITE TANKS/AGUA FRIA

AREA DRAINAGE MASTER STUDY

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

REVISION LEGEND AND NOTES

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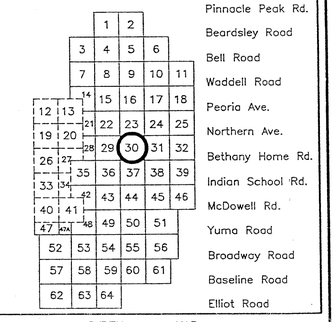

INDEX MAP

N

400 200 0 400 800 1200

BASE MAP: WHITE TANKS/AGUA FRIA A.D.M.S. TOPOGRAPHIC MAPS
CONTOUR INTERVAL = 2'

REGISTERED PROFESSIONAL PROJECT ENGINEER
CERTIFICATE NO. 15594
MARK T. GAVAN
ARIZONA, U.S.A.

LEGEND

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SHEET TITLE: **FLOODPLAIN MAP**

STUDY CONSULTANT: **The WLB Group** INC.

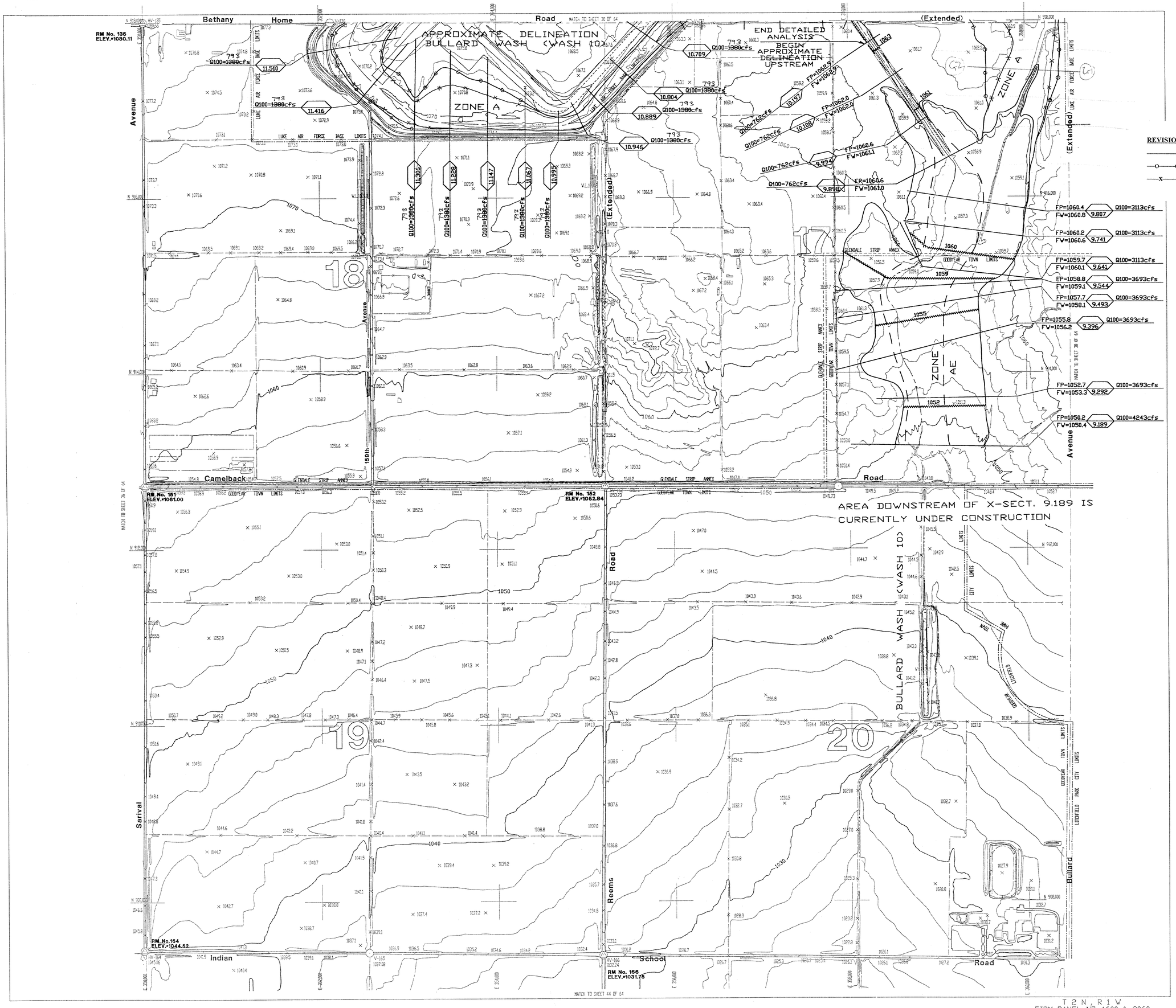
MAPPING COMPANY: Cooper Aerial of Phoenix, Inc.

SHEET 30 OF 64 | DATE FLOWN 12/22/89

WHITE TANKS/AGUA FRIA

AREA DRAINAGE MASTER STUDY

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY



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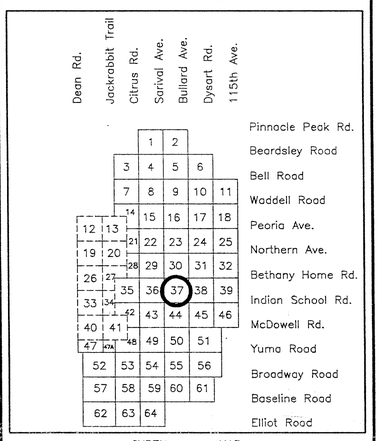

INDEX MAP

N

400 200 0 400 800 1200

BASE MAP: WHITE TANKS/AGUA FRIA A.D.M.S. TOPOGRAPHIC MAPS
CONTOUR INTERVAL = 2'

LEGEND

1.452	CROSS SECTION NUMBER
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SHEET TITLE: **FLOODPLAIN MAP**

STUDY CONSULTANT: **The WLB Group** INC.

MAPPING COMPANY: Cooper Aerial of Phoenix, Inc.

SHEET 37 OF 64 | DATE FLOWN 12/22/89

T 2 N, R 1 W
FIRM PANEL NO. 1600 & 2060

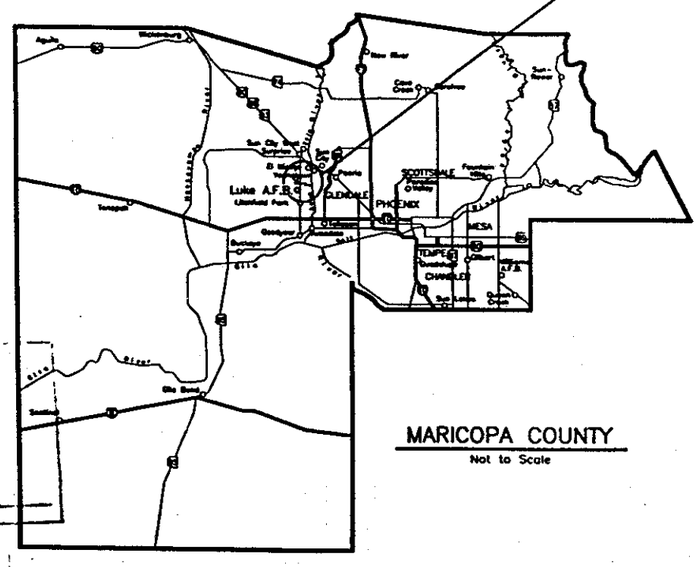
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

PLANS FOR THE CONSTRUCTION OF:

DYSART DRAIN IMPROVEMENTS PROJECT
REEMS ROAD TO AGUA FRIA RIVER
CHANNEL IMPROVEMENTS

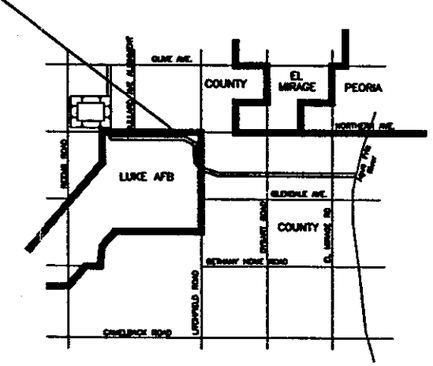
PROJECT NO. FCD 94-38
LAFB NO. 87-3002

PROJECT NO. FCD 94-38



MARICOPA COUNTY
Not to Scale

N



VICINITY MAP
Not to Scale

263-1100

NBS/LOWRY
ENGINEERS & PLANNERS
2600 North 44th Street, Ste. 100
Phoenix, Arizona 85008-1280
(602) 468-1600 FAX 956-4338

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

ISSUED FOR PUBLIC BIDDING BY:

CHIEF ENGINEER AND GENERAL MANAGER — DATE 9-5-95

BOARD OF DIRECTORS OF THE FLOOD CONTROL DISTRICT

TOM RAWLES – CHAIRMAN

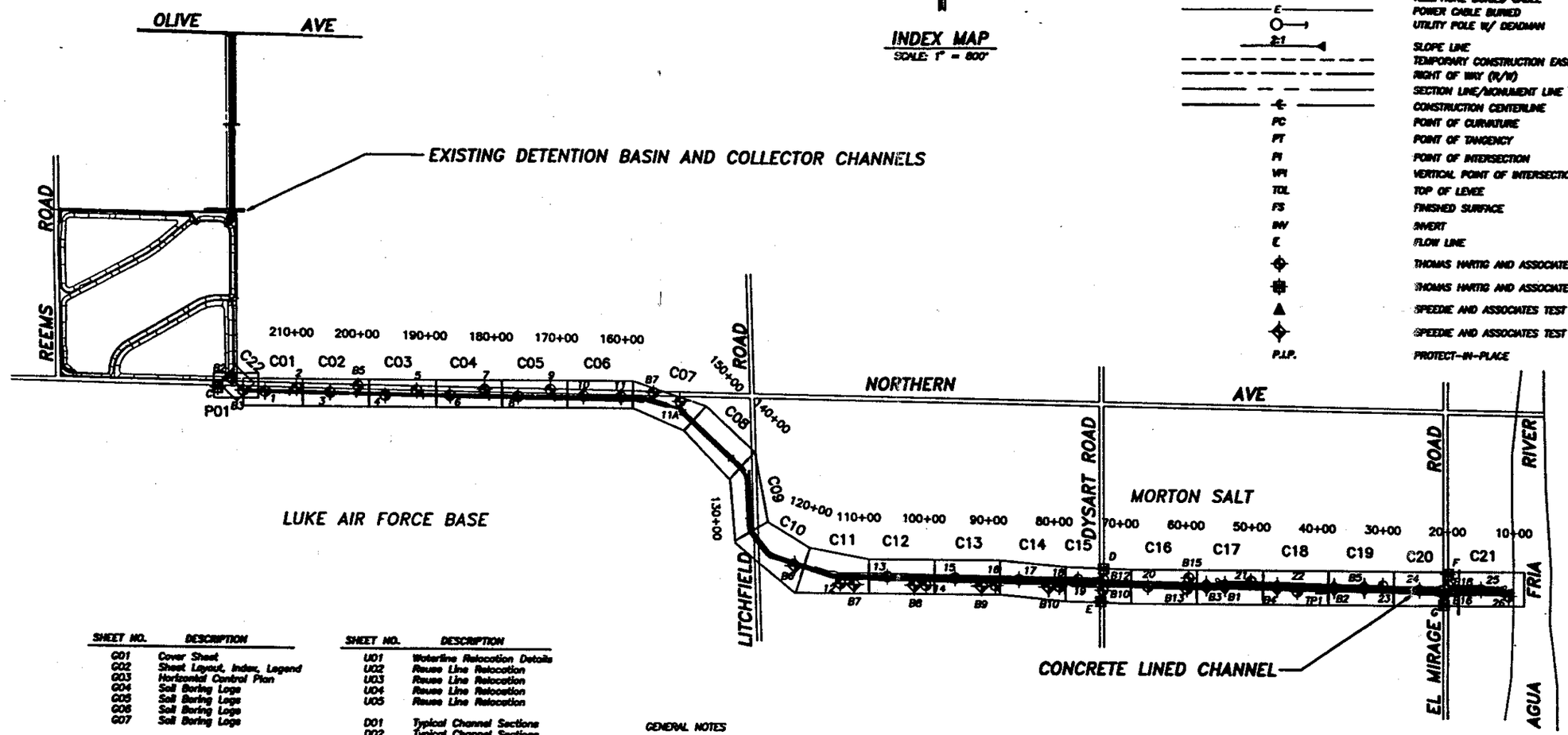
DISTRICT 1 TOM RAWLES
DISTRICT 2 DON STAPLEY
DISTRICT 3 BETSEY BAYLESS
DISTRICT 4 EDWARD KING
DISTRICT 5 MARY ROSE GARRIDO WILCOX

NBS/LOWRY PROJECT NO. F81-194.019 — SHEET 001/7

49

DYSART DRAIN IMPROVEMENTS
REEMS RD. TO AGUA FRIA
CHANNEL IMPROVEMENTS
CONSTRUCTION PLAN
FCD 94-38

\F81-194.019\DWGS\PH-01\DD-G01.DWG VIEW = SITE 1=40



LUKE AIR FORCE BASE

INDEX MAP

SCALE: 1" = 800'

LEGEND

	FENCE W/GATE
16" RWL	REUSE WATER LINE
	STORM DRAIN AND MANHOLE
8" W	WATERLINE WITH AIR/VAC ASSEMBLY
8" W	WATER LINE W/VALVE
4" GAS	GAS LINE
6" SFPL	SANTA FE PACIFIC PETROLEUM LINE
T	TELEPHONE BURIED CABLE
E	POWER CABLE BURIED
	UTILITY POLE W/ DEADMAN
2:1	SLOPE LINE
	TEMPORARY CONSTRUCTION EASEMENT (TCE)
	RIGHT OF WAY (R/W)
	SECTION LINE/MONUMENT LINE
℄	CONSTRUCTION CENTERLINE
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PI	POINT OF INTERSECTION
VPI	VERTICAL POINT OF INTERSECTION
TOL	TOP OF LEVEE
FS	FINISHED SURFACE
INV	INVERT
℄	FLOW LINE
	THOMAS HARTIG AND ASSOCIATES TEST BORING LOCATION
	THOMAS HARTIG AND ASSOCIATES SUBGRADE SAMPLE LOCATION
	SPEEDIE AND ASSOCIATES TEST PIT LOCATION
	SPEEDIE AND ASSOCIATES TEST BORING LOCATION
P.I.P.	PROTECT-IN-PLACE

SHEET NO.	DESCRIPTION
G01	Cover Sheet
G02	Sheet Layout, Index, Legend
G03	Horizontal Control Plan
G04	Soil Boring Logs
G05	Soil Boring Logs
G06	Soil Boring Logs
G07	Soil Boring Logs
C01	Channel Plan & Profile
C02	Channel Plan & Profile
C03	Channel Plan & Profile
C04	Channel Plan & Profile
C05	Channel Plan & Profile
C06	Channel Plan & Profile
C07	Channel Plan & Profile
C08	Channel Plan & Profile
C09	Channel Plan & Profile
C10	Channel Plan & Profile
C11	Channel Plan & Profile
C12	Channel Plan & Profile
C13	Channel Plan & Profile
C14	Channel Plan & Profile
C15	Channel Plan & Profile
C16	Channel Plan & Profile
C17	Channel Plan & Profile
C18	Channel Plan & Profile
C19	Channel Plan & Profile
C20	Channel Plan & Profile
C21	Channel Plan & Profile
C22	Outfall Channel Plan & Profile
P01	Northern Ave. Paving Plan

SHEET NO.	DESCRIPTION
U01	Waterline Relocation Details
U02	Reuse Line Relocation
U03	Reuse Line Relocation
U04	Reuse Line Relocation
U05	Reuse Line Relocation
D01	Typical Channel Sections
D02	Typical Channel Sections
D03	Typical Channel Sections
D04	Details
D05	Details
D06	Details
D07	Details
D08	Details
D09	Details
D10	Details
D11	Details
D12	Details
D13	Details
D14	Details
D15	Details
D16	Details
S01	Structural Details
S02	Structural Details
S03	Structural Details
S04	Structural Details
S05	Structural Details
S06	Structural Details
X01	Cross Sections
X02	Cross Sections
X03	Cross Sections
X04	Cross Sections
X05	Cross Sections

GENERAL NOTES

1. THIS PROJECT HAS BEEN DESIGNED USING THE HYDRAULIC DESIGN MANUAL (SEPTEMBER 1992) OF THE FLOOD CONTROL DISTRICT OF MARICOPA COUNTY.
2. THE INFORMATION ON THESE DRAWINGS CONCERNING THE TYPE, SIZE AND LOCATION OF UTILITIES HAS BEEN SHOWN BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES IN PLACE UNLESS OTHERWISE NOTED OR SPECIFIED. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
3. THE ENGINEER WILL NOT GUARANTEE ANY ELEVATIONS OR LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS.
4. THE CONTRACTOR SHALL CALL BLUE STAKE (263-1100) FOR THE LOCATION OF ALL UNDERGROUND UTILITIES TWO (2) WORKING DAYS BEFORE DIGGING.
5. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST MAG, MCDOT OR ADOT STANDARDS AND SPECIFICATIONS OR AS SPECIFIED ON THE PLANS AND IN THE PROJECT SUPPLEMENTARY GENERAL CONDITIONS AND SPECIAL PROVISIONS.
6. TRAFFIC CONTROL SHALL CONFORM TO SECTION 401 OF THE SPECIAL PROVISIONS
7. EXTREME CAUTION IS TO BE USED WHEN OPERATING EQUIPMENT AROUND LOCATIONS OF HIGH VOLTAGE LINES.
8. THE CONTRACTOR WILL OBTAIN NECESSARY MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION PERMITS PRIOR TO CONSTRUCTION WITHIN COUNTY RIGHT OF WAY.
9. THE CONTRACTOR SHALL NOTIFY THE MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION AT LEAST 24 HOURS IN ADVANCE OF ANY CONSTRUCTION WITHIN ROAD RIGHT OF WAY.

263-1100

NO.	REVISION	DATE
3		
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1		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS

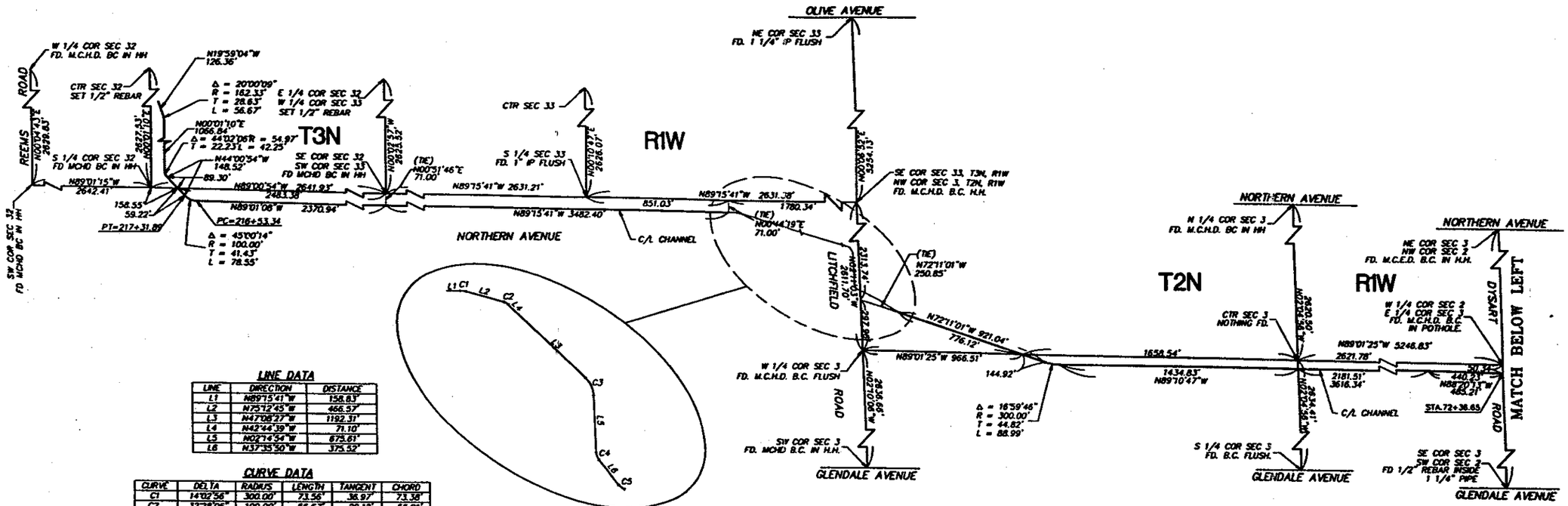
SHEET LAYOUT, INDEX, AND LEGEND

	BY	DATE
DESIGNED	C. COPPERTON	9/94
DRAWN	C. SWEATLAND	9/94
CHECKED	C. COPPERTON	1/95

HDR LOWRY

HDS/LOWRY PROJECT NO. P81-194-019

SHEET 002/7



LINE	DIRECTION	DISTANCE
L1	N89°15'41"W	158.83'
L2	N75°12'45"W	466.57'
L3	N41°08'27"W	1192.31'
L4	N42°44'39"W	71.10'
L5	N02°14'54"W	675.61'
L6	N37°35'50"W	375.52'

CURVE	DELTA	RADIUS	LENGTH	TANGENT	CHORD
C1	14°02'56"	300.00'	73.56'	36.97'	73.38'
C2	32°28'06"	100.00'	56.67'	29.12'	55.91'
C3	44°53'33"	300.00'	235.08'	123.93'	229.09'
C4	35°20'57"	150.00'	92.54'	47.80'	91.08'
C5	34°35'11"	150.00'	90.55'	46.70'	89.18'

NO.	REVISION	BY	DATE
3			
2			
1	ADD BENCH MARK ELEVATIONS AND 1 STATION.	HWH	8/1/94

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

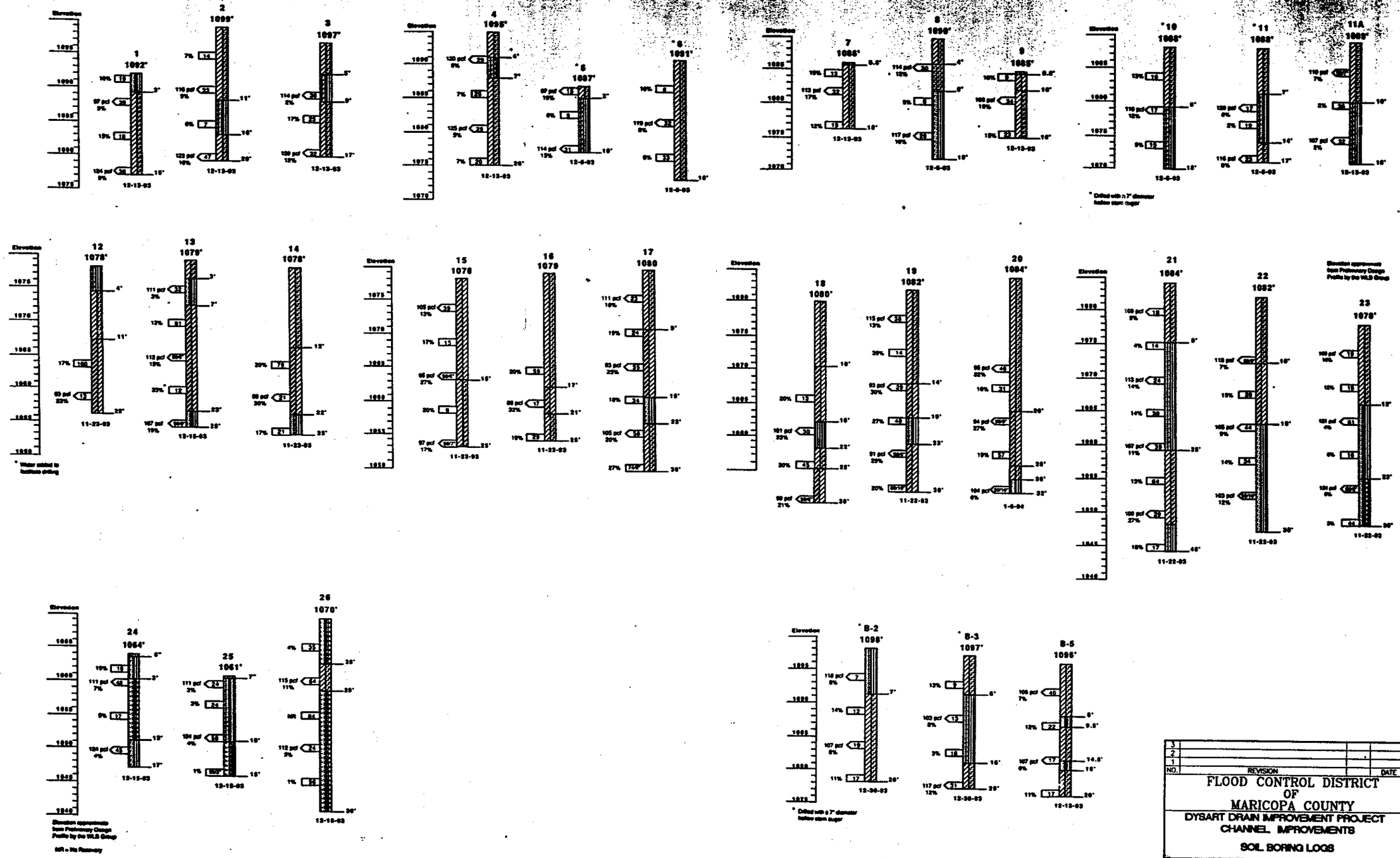
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL HORIZONTAL CONTROL PLAN

	BY	DATE
DESIGNED	–	–
DRAWN	HWH	4/95
CHECKED	JV	4/95

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

WOOD/PATEL PROJECT NO. 93030.00

SHEET 003/7



NO.	REVISION	DATE
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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT CHANNEL IMPROVEMENTS

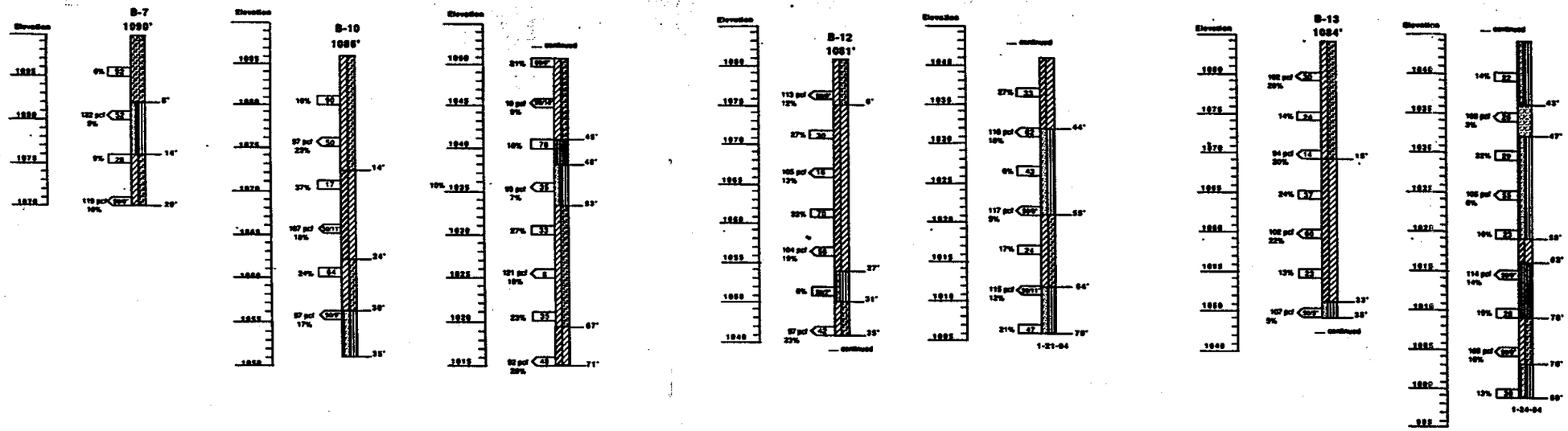
SOIL BORING LOGS

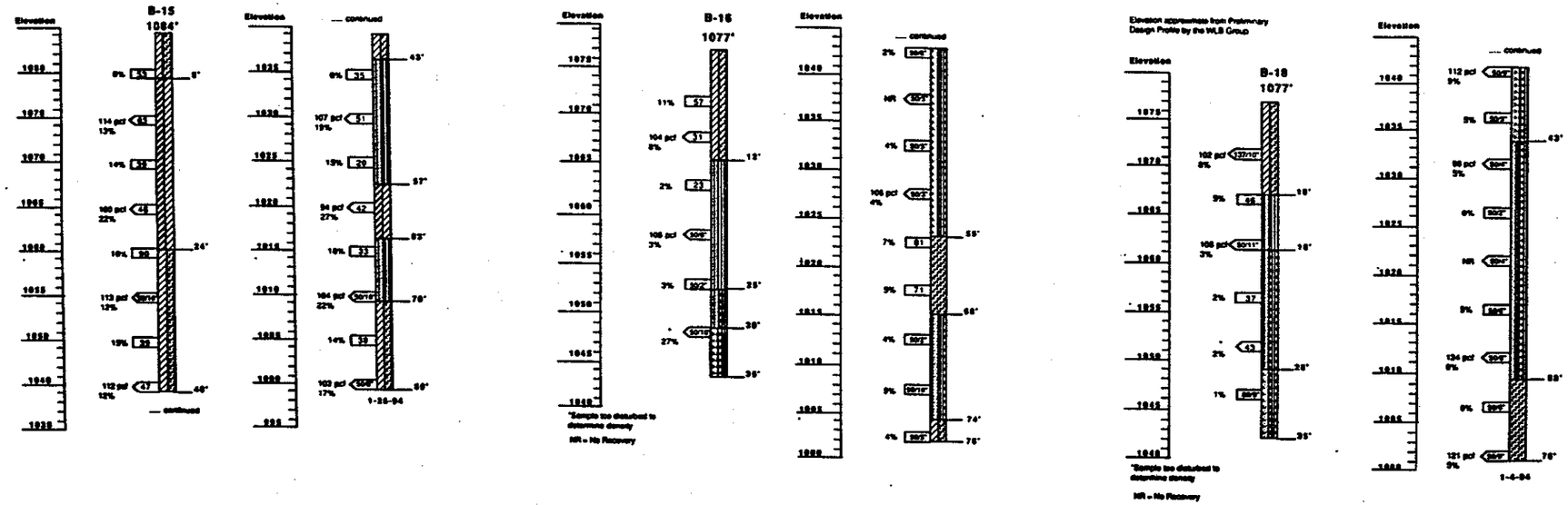
	BY	DATE
DESIGNED	C. GOPPERTON	7/15/94
DRAWN	J. KLEIN	7/15/94
CHECKED	C. GOPPERTON	9/9/94

NBS/LOWRY

NBS/LOWRY PROJECT NO. PSI-194-010

SHEET G04/7





NO.	REVISION		DATE
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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS

SOIL BORING LOGS

	BY	DATE
DESIGNED	C. GOPPERTON	7/15/94
DRAWN	J. KLEIN	7/15/94
CHECKED	C. GOPPERTON	9/19/94

NBS LOWRY

NBS/LOWRY PROJECT NO. P61-194-019

SHEET G0577

Rig Type: CME-55
Boring Type: Hollow Stem Auger
Surface Elevation: N/A
Sta. 186+20, CL

Visual Classification

Depth (feet)	Visual Classification	Sample Number	Depth of Sample	Natural Water Content (%)	Invsitu Dry Density (P.C.F.)	Penetration Resistance Blows per Foot
0	8" Concrete					
0.5	Very Dense Light Brown GRAVELLY SAND (SW-Dry)	RS-1	2.0	–	–	
2.5	Hard Brown SANDY CLAY (CL-Dry) With a Trace of Gravel	S-2	5.0	–	–	
7.5	Hard Brown SANDY SILT (ML-Dry)	S-3	10.0	–	–	57/12"
10.0	End of Boring					

Boring Date: 2-19-93
Field Engineer/Technician: C. Spencer
Driller: S. Belshy
Contractor: Heber Mining

Water Level

Depth	Hour	Date

SPEEDIE AND ASSOCIATES
Log of Test Boring Number: B-1
Dysart Drain
Dysart Road N/O Glendale Avenue
Maricopa County, Arizona
Project No.: 921135A1

Rig Type: CME-55
Boring Type: Hollow Stem Auger
Surface Elevation: N/A
Sta. 181+80, CL

Visual Classification

Depth (feet)	Visual Classification	Sample Number	Depth of Sample	Natural Water Content (%)	Invsitu Dry Density (P.C.F.)	Penetration Resistance Blows per Foot
0	8" Concrete					
0.5	Medium dense Brown SAND (SW-Dry)	S-1	2.5	–	–	
3.0	Dense Brown SILTY SAND (SM-Dry)	RS-2	4.5	5.4	133.2	
6.5	Very Stiff to Hard Brown CLAY (CL-Dry) With a Little Calcareous Cementation; Heavily Cemented at 9.5'	S-3	10.0	–	–	
10.0	End of Boring					

Boring Date: 2-19-93
Field Engineer/Technician: C. Spencer
Driller: S. Belshy
Contractor: Heber Mining

Water Level

Depth	Hour	Date

SPEEDIE AND ASSOCIATES
Log of Test Boring Number: B-2
Dysart Drain
Dysart Road N/O Glendale Avenue
Maricopa County, Arizona
Project No.: 921135A1

Rig Type: CME-55
Boring Type: Hollow Stem Auger
Surface Elevation: N/A
Sta. 182+35, CL

Visual Classification

Depth (feet)	Visual Classification	Sample Number	Depth of Sample	Natural Water Content (%)	Invsitu Dry Density (P.C.F.)	Penetration Resistance Blows per Foot
0	8" Concrete					
0.5	Very Stiff Light Brown SANDY CLAY (CH-Moist)	S-1	2.5	–	–	
3.0	Medium Dense Brown CLAYEY SAND (SC-Moist)	S-2	5.0	–	–	
5.0	Hard Slightly Mottled Brown and White SANDY CLAY (CH-Dry) With a Little Calcareous Cementation	S-3	9.5	–	–	71/12"
9.5	End of Boring					

Boring Date: 3-24-93
Field Engineer/Technician: C. Spencer
Driller: S. Belshy
Contractor: Heber Mining

Water Level

Depth	Hour	Date

SPEEDIE AND ASSOCIATES
Log of Test Boring Number: B-3
Dysart Drain
Dysart Road N/O Glendale Avenue
Maricopa County, Arizona
Project No.: 921135A1

Rig Type: CME-55
Boring Type: Hollow Stem Auger
Surface Elevation: N/A
Sta. 170+00, CL

Visual Classification

Depth (feet)	Visual Classification	Sample Number	Depth of Sample	Natural Water Content (%)	Invsitu Dry Density (P.C.F.)	Penetration Resistance Blows per Foot
0	8" Concrete					
0.5	Medium Dense Brown SILTY SAND (SM-Moist)	S-1	2.5	–	–	
3.0	Medium Dense Brown CLAYEY SAND (SC-Moist)	S-2	5.0	–	–	
4.5	Very Stiff Brown SANDY CLAY (CL-Moist)	S-3	10.0	–	–	
8.5	Hard Brown SILTY CLAY (CL-Moist) With a Trace of Sand and Some Mild Calcareous Cementation					
10.0	End of Boring					

Boring Date: 3-24-93
Field Engineer/Technician: C. Spencer
Driller: S. Belshy
Contractor: Heber Mining

Water Level

Depth	Hour	Date

SPEEDIE AND ASSOCIATES
Log of Test Boring Number: B-4
Dysart Drain
Dysart Road N/O Glendale Avenue
Maricopa County, Arizona
Project No.: 921135A1

Rig Type: CME-55
Boring Type: Hollow Stem Auger
Surface Elevation: N/A
Sta. 186+70, CL

Visual Classification

Depth (feet)	Visual Classification	Sample Number	Depth of Sample	Natural Water Content (%)	Invsitu Dry Density (P.C.F.)	Penetration Resistance Blows per Foot
0	8" Concrete					
0.5	Medium Dense Brown CLAYEY SAND (SC-Moist)	S-1	2.5	–	–	
2.5	Medium Dense Brown CLAYEY COARSE SAND (SC-Dry)	S-2	5.0	–	–	
5.0	Hard Brown SILTY CLAY (CL-Dry) With Small Veins of Calcareous Cementation	S-3	10.0	–	–	50/12"
10.0	End of Boring					

Boring Date: 3-24-93
Field Engineer/Technician: C. Spencer
Driller: S. Belshy
Contractor: Heber Mining

Water Level

Depth	Hour	Date

SPEEDIE AND ASSOCIATES
Log of Test Boring Number: B-5
Dysart Drain
Dysart Road N/O Glendale Avenue
Maricopa County, Arizona
Project No.: 921135A1

Rig Type: CME-55
Boring Type: Hollow Stem Auger
Surface Elevation: N/A
Sta. 118+80

Visual Classification

Depth (feet)	Visual Classification	Sample Number	Depth of Sample	Natural Water Content (%)	Invsitu Dry Density (P.C.F.)	Penetration Resistance Blows per Foot
0	Stiff Brown SANDY SILT (ML-Dry)	RS-1	2.5	6.2	117.8	
3.0	Interbedded Loose and Stiff SILTY SAND & SANDY CLAY (SM/CL-Dry)	S-2	6.0	–	–	
7.5	Hard Mottled Brown/Light Brown SANDY CLAY (CL-Dry to Moist) With Some Weak Calcareous Cementation	S-3	11.0	–	–	
11.0	End of Boring					

Boring Date: 4-2-93
Field Engineer/Technician: C. Spencer
Driller: S. Belshy
Contractor: Heber Mining

Water Level

Depth	Hour	Date

SPEEDIE AND ASSOCIATES
Log of Test Boring Number: B-6
Dysart Drain
Dysart Road N/O Glendale Avenue
Maricopa County, Arizona
Project No.: 921135A1

Rig Type: CME-55
Boring Type: Hollow Stem Auger
Surface Elevation: N/A
Sta. 110+00

Visual Classification

Depth (feet)	Visual Classification	Sample Number	Depth of Sample	Natural Water Content (%)	Invsitu Dry Density (P.C.F.)	Penetration Resistance Blows per Foot
0	Stiff Brown SANDY SILT (CL-Dry)	RS-1	2.5	11.3	109.8	
3.5	Medium Dense Light Brown CLAYEY SAND (SC-Dry) With a Trace of Cementation	S-2	6.0	–	–	
7.5	Hard Light Brown CLAY (CL-Dry) With a Little Calcareous Cementation	S-3	11.0	–	–	91/12"
11.0	End of Boring					

Boring Date: 4-2-93
Field Engineer/Technician: C. Spencer
Driller: S. Belshy
Contractor: Heber Mining

Water Level

Depth	Hour	Date

SPEEDIE AND ASSOCIATES
Log of Test Boring Number: B-7
Dysart Drain
Dysart Road N/O Glendale Avenue
Maricopa County, Arizona
Project No.: 921135A1

NO.	REVISION	DATE
3		
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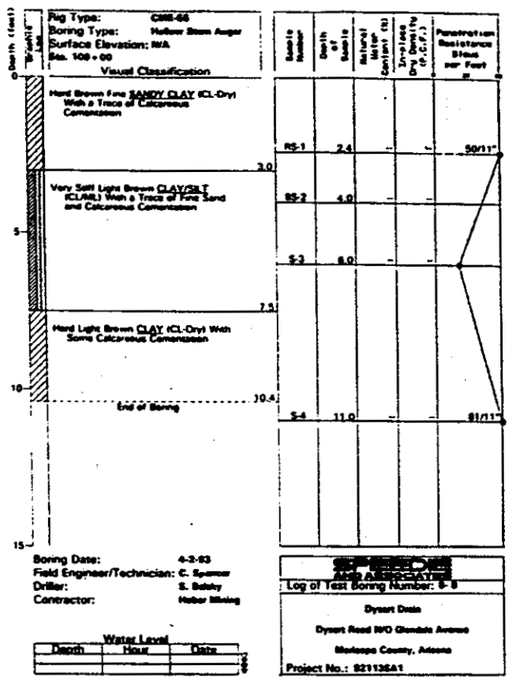
FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
SOIL BORING LOGS

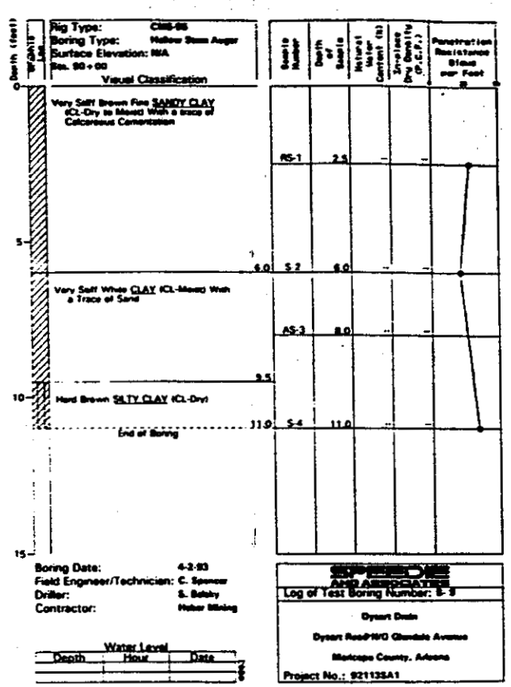
	BY	DATE
DESIGNED	C. COPPERTON	7/15/94
DRAWN	J. KLEIN	7/15/94
CHECKED	C. COPPERTON	7/19/94

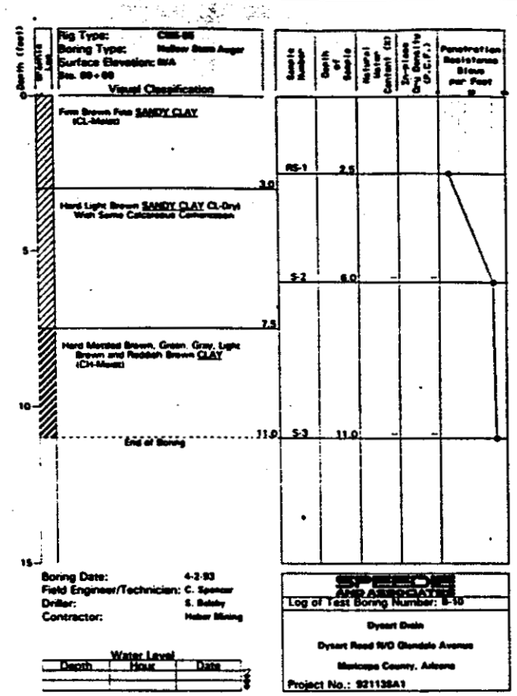
LOWRY

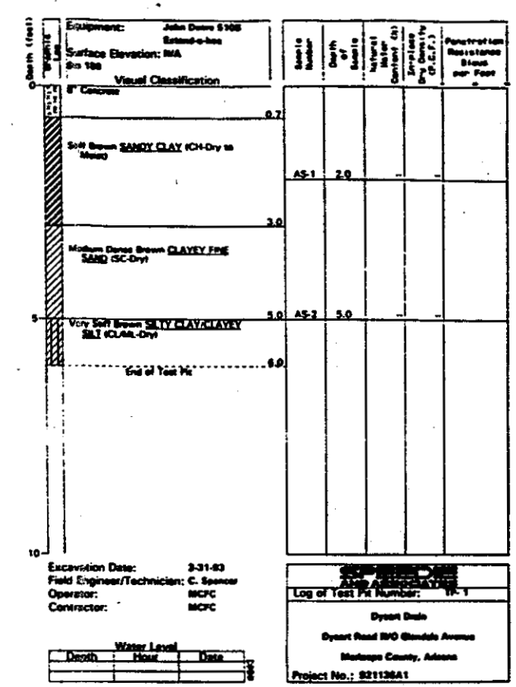
MBS/LOWRY PROJECT NO. P81-194-3

SHEET G06/7









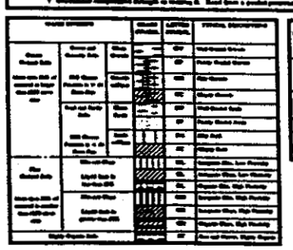
SPEEDIE AND ASSOCIATES SOIL LEGEND

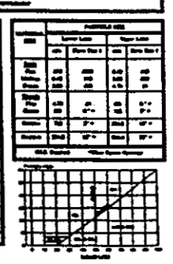
SAMPLE DESIGNATION	DESCRIPTION
AS	Auger Sample: A grab sample taken directly from auger flights
Bk	Large Bulk Sample: A grab sample taken directly from auger flights
S	Spoon Sample: Standard Penetration Test (ASTM D-1586) Driving a 2.0 inch outside diameter split spoon sampler into undisturbed soil for three successive 6-inch increments by means of a 140 lb. weight free falling through a distance of 30 inches. The summation number of blows for the final 12 inches of penetration is the Standard Penetration Resistance (N)
RS	Ring Sample: Driving a 3.0 inch outside diameter spoon equipped with a series of 2.42 inch inside diameter, 1 inch long brass rings, into undisturbed soil for one 12 inch increment by the same means of the Spoon Sample. The blows required for the 12 inches of penetration are recorded.
LS	Lexan Sample: Standard Penetration Test driving a 3.0 inch outside diameter split spoon equipped with two 3 inch long, 3" inch inside diameter lexan liners, expressed by a 1 inch long lipseal, into undisturbed soil by the same means of the spoon sample.
SV	Shelby Tube: A 3.0 inch outside diameter thin-walled tube mechanically pushed into undisturbed soil by a rapid static, hydraulic original or forcing (ASTM D-1587)
-	Continuous Penetration Resistance: Driving a 2.0 inch outside diameter "Dutch Penetrometer" continuously into undisturbed soil by the same means of the spoon sample. The blows for each successive 12 inch increment are recorded.

CONSISTENCY			RELATIVE DENSITY	
Clays & Silts	Blows/Foot *	Strength †	Sands and Gravels	Blows/Foot *
Very Soft	0-2	0-0.5	Very Loose	0-4
Soft	3-4	0.5-1	Loose	5-10
Firm	5-8	1-2	Medium Dense	11-30
Stiff	9-15	2-4	Dense	31-50
Very Stiff	16-30	4-8	Very Dense	> 50
Hard	> 30	> 8		

* Number of blows of a 140 lb hammer free falling 30 inches to drive a 2 inch O.D. split spoon sampler (ASTM D-1586)

† Unconfined compressive strength in tons/sq.ft. Read from a pocket penetrometer

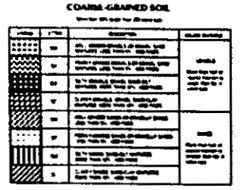




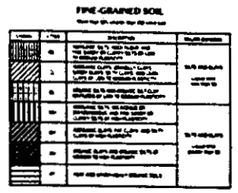
LEGEND

SOIL CLASSIFICATION

COARSE-GRAINED SOIL

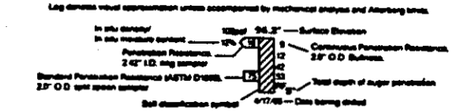


FINE-GRAINED SOIL



LEGEND FOR GRAPHICAL BORING LOGS:

Log denotes visual approximation unless accompanied by mechanical analysis and Atterberg limits.



PENETRATION RESISTANCE: Blows per foot using 140 lb. hammer with 30" free-fall unless otherwise noted.

GRAIN SIZES								
U.S. STANDARD SERIES SIEVE			200	40	10	4	CLEAR SQUARE SIEVE OPENINGS 3/4"	3"	12"
SILTS & CLAYS DISTINGUISHED ON BASIS OF PLASTICITY	SAND					GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE				

MOISTURE CONDITION (INCREASING MOISTURE ——>)					
DRY	SLIGHTLY DAMP	DAMP (Plastic Limit)	MOIST	VERY MOIST	WET (SATURATED) (Liquid Limit)

CONSISTENCY CORRELATION		RELATIVE DENSITY CORRELATION	
CLAYS & SILTS	BLOWS/FOOT*	SANDS & GRAVELS	BLOWS/FOOT*
VERY SOFT	0-2	VERY LOOSE	0-4
SOFT	3-4	LOOSE	4-10
FIRM	4-8	MEDIUM DENSE	10-30
STIFF	8-15	DENSE	30-50
VERY STIFF	15-30	VERY DENSE	OVER 50
HARD	OVER 30		

*Number of blows of 140 lb. hammer falling 30" to drive a 2" O.D. (1-3/8" I.D.) split-spoon sampler (ASTM D1586).

LEGEND OF SOIL TYPES

SANDY CLAY (CL, SC-CL); light brown to brown; firm to very stiff; low to medium plasticity, stratified; variable quantities primarily fine to medium sand; variable light to moderate calcareous cementation; damp to moist.

CLAY (CH, CL-CH); light brown to dark brown; stiff to hard; medium to high plasticity; stratified; traces to some fine sand; uncemented to moderate calcareous cementation; slightly damp to moist.

SILTY SAND (SM, SM-ML); light brown; medium dense to dense; subangular to subrounded primarily fine to coarse sand with low plasticity fines and occasional lenses with fine gravel; uncemented to light calcareous cementation; damp to moist.

SANDY SILT (MH); light greenish brown; stiff to very stiff; medium plasticity; light calcareous cementation, damp.

SILTY SAND AND GRAVEL (SM-GM); light brown; dense to very dense; angular to subrounded fine to coarse sand and fine to medium gravel; non-plastic to low plasticity fines; damp to moist.

CLAYEY SAND (SC); brown; medium dense to dense; fine to coarse subangular to subrounded fine to coarse sand and traces to some gravel with low plasticity fines; damp to moist.

SAND (SP); light brown; medium dense; fine to coarse subrounded to rounded fine to coarse sand with traces to some fine gravel; moist.

SAND AND GRAVEL (GW, GW-GM); light brown; medium dense to very dense; angular to subangular fine sand to medium gravel with subangular to subrounded medium gravel to cobbles; damp to moist.

SPRAY-ON SHOTCRETE CHANNEL LINING (see individual logs for thicknesses).

NO.	REVISION	DATE
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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS

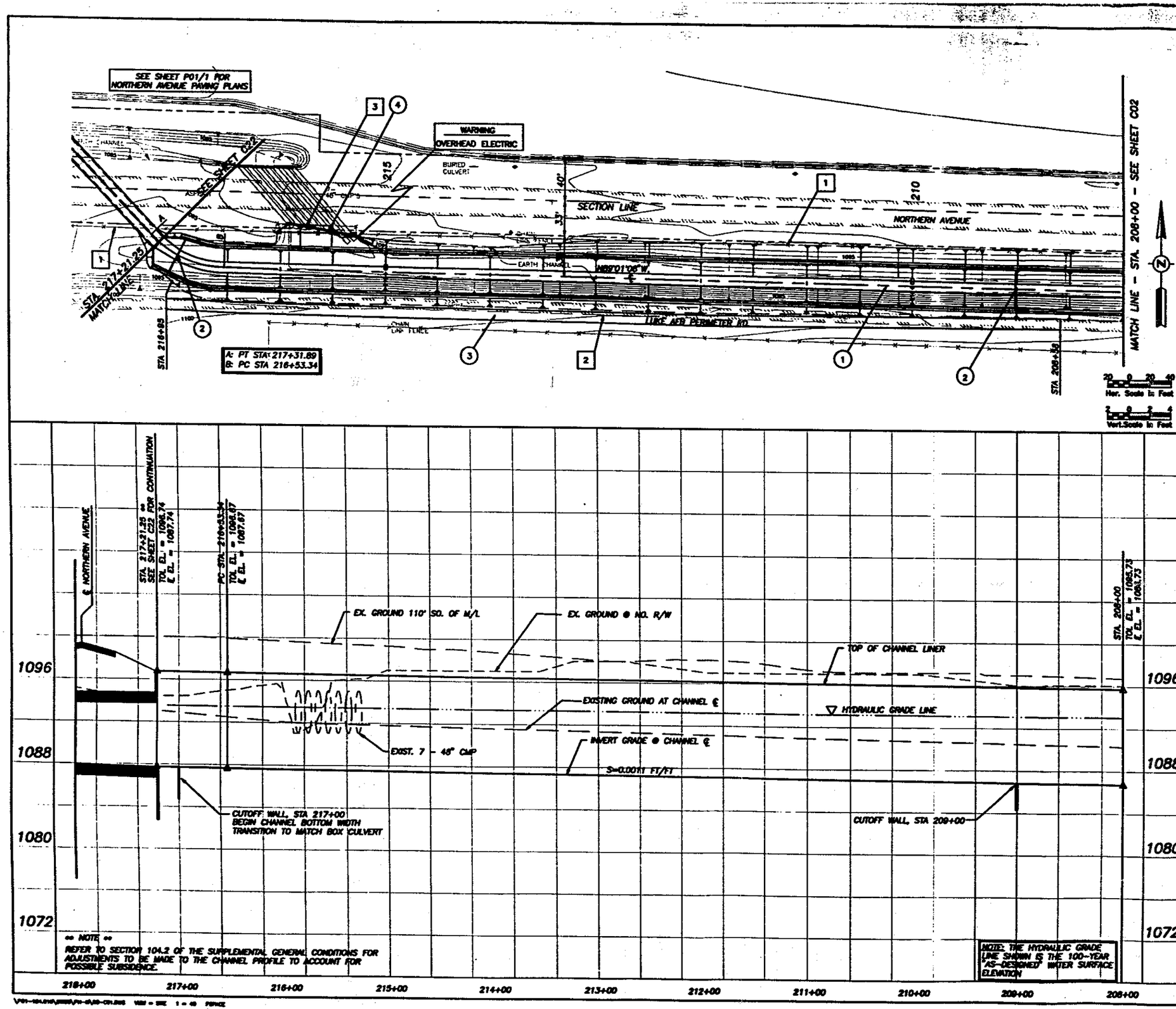
SOIL BORING LOGS

	BY	DATE
DESIGNED	C. COPPERTON	7/15/94
DRAWN	J. KLEIN	7/15/94
CHECKED	C. COPPERTON	9/13/96

HBS LOWRY

HBS/LOWRY PROJECT NO. P81-194-019

SHEET G07/7



REMOVE

1. REMOVE AND REINSTALL FENCE AS REQUIRED. MUST MAINTAIN SECURITY PER LAFB SECURITY REQUIREMENTS IF FENCE IS REMOVED.
2. REMOVE EXISTING AC PAVEMENT, STA 208+58 TO STA 216+95 LT.
3. REMOVE EXISTING CHAIN LINK FENCE ON HEADWALL.

CONSTRUCT

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL 6.
2. CONSTRUCT NEW CUTOFF WALL PER DETAIL 12.
3. CONSTRUCT NEW LUKE AFB NORTH PERIMETER ROAD PER DETAIL 31 STA. 208+58 TO STA. 216+95 LT.
4. CONSTRUCT NEW 6' CHAIN LINK FENCE PER ADOT STD. DETAIL NO. C-12.20, TYPE 2, MODIFIED - EXTEND FABRIC 6" BELOW GROUND.

263-100

NO.	REVISION	DATE
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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

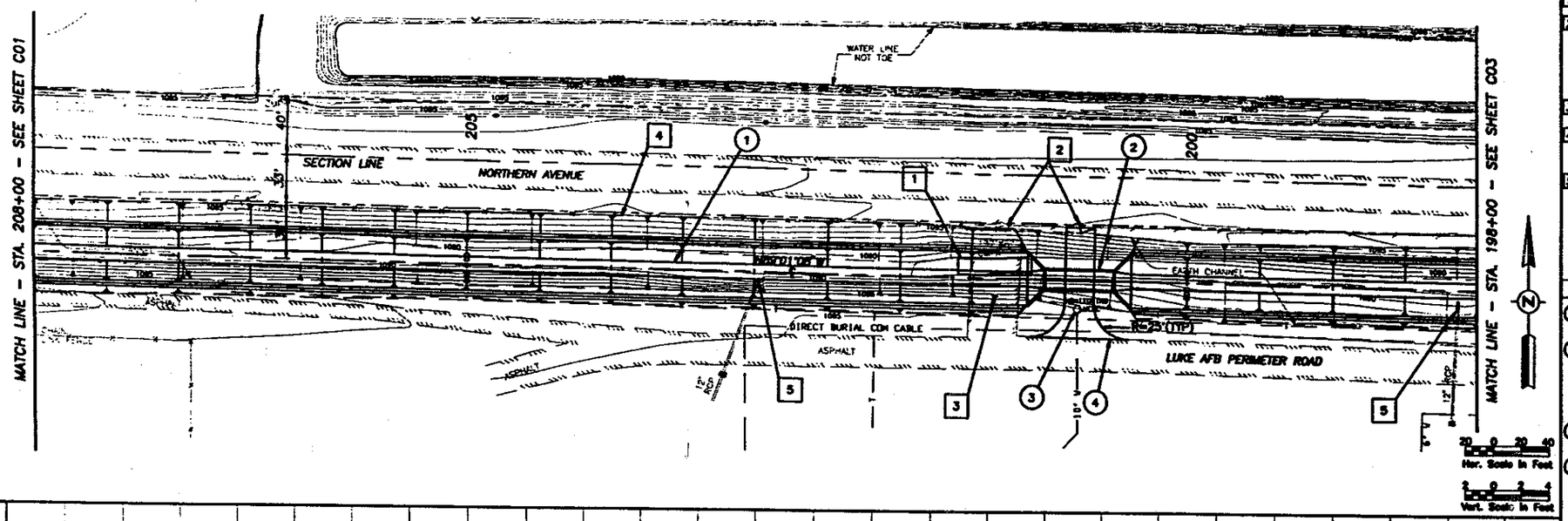
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 217+21.25 TO STATION 208+00

	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. GOPPERTON	12/94

HBS LOWRY

HBS/LOWRY PROJECT NO. F81-194-019

SHEET C01/22



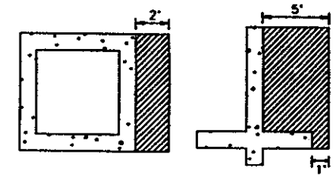
REMOVE

1. REMOVE EXISTING 137" X 87" CMPA CULVERT
2. REMOVE AND RELOCATE EXISTING 20 FT DOUBLE GATE, CUT EXISTING FENCE FOR RELOCATED GATE INSTALL NEW POST W/ MESH TO REPAIR FENCE AT OLD GATE LOCATION, PER ADOT STND. DETAIL NO. C-12.20, TYPE 2, MODIFIED – EXTEND FABRIC 6" BELOW GROUND.
3. REMOVE EXISTING ASPHALT CROSSING.
4. REMOVE AND REINSTALL FENCE AS REQUIRED. MUST MAINTAIN SECURITY PER LAFB SECURITY REQUIREMENTS IF FENCE IS REMOVED.
5. CUT AND REMOVE EXISTING 12" RCP TO MATCH NEW CHANNEL, MITER OUTLET PER DETAIL 16.

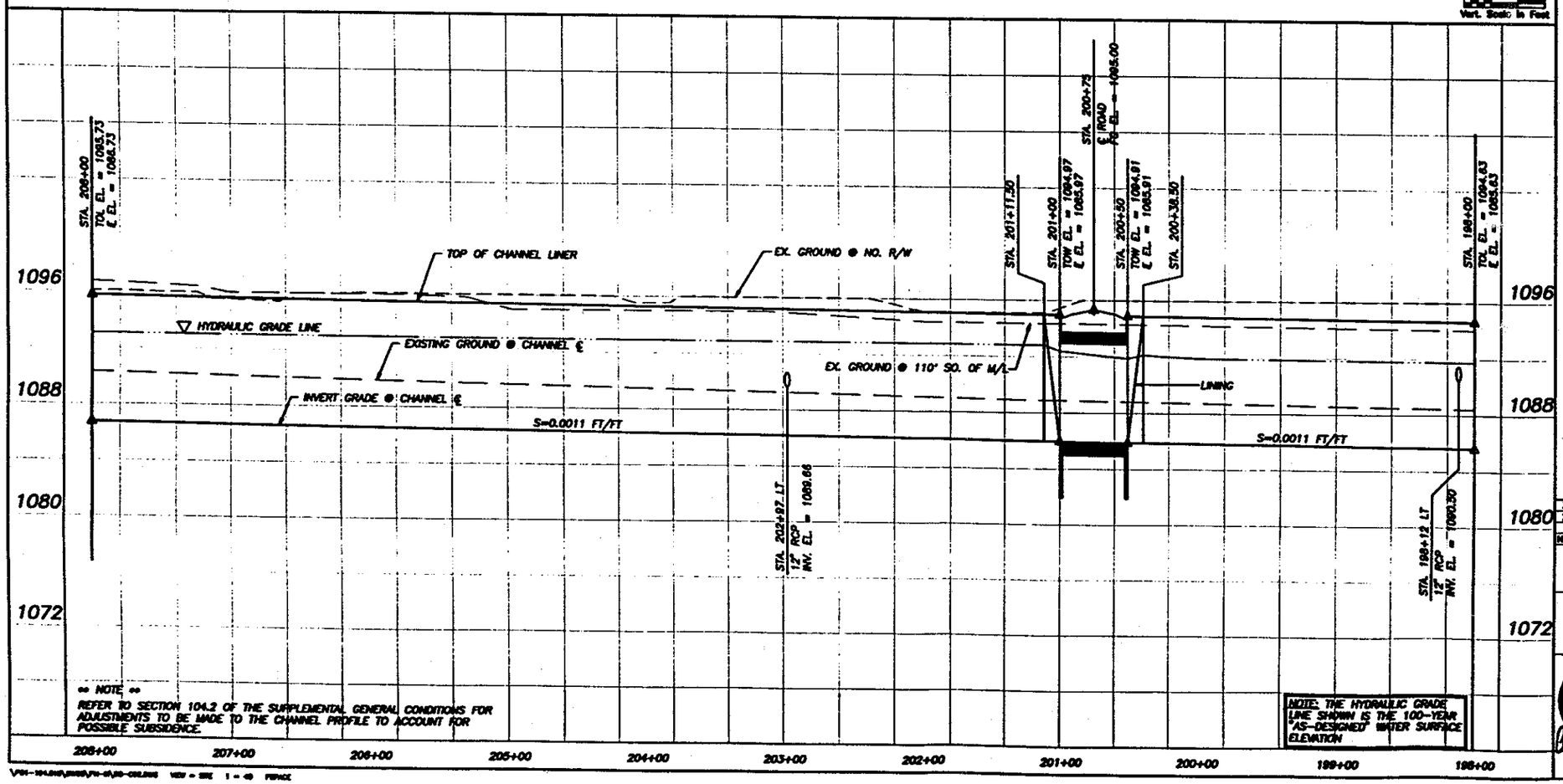
CONSTRUCT

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL 6.
2. CONSTRUCT NEW DOUBLE BARREL 6' x 7' x 50 LF REINFORCED CONCRETE BOX CULVERT PER ADOT STD B-02.20, CONSTRUCT NEW HEADWALLS PER ADOT STD B-08.20, TYPE A MODIFIED, H=9'-0", L = 15 FT. CONSTRUCT SPECIAL CURB & CUTOFF WALL PER DETAIL 30.
3. CONSTRUCT MODIFICATIONS TO MONITORING WELL PER DETAIL 23. PROTECT IN PLACE.
4. CONSTRUCT NEW NORTHERN AVENUE ACCESS ROAD PER DETAIL 32.

ITEM	CLASS "A" CONCRETE	REINFORCING STEEL	STRUCTURAL BACKFILL
BOX CULVERT	74 CY	11,225 LBS	49 CY
WINGWALLS	48 CY	3,412 LBS	107 CY



STRUCTURE BACKFILL LIMITS
N.T.S.



** NOTE **
REFER TO SECTION 104.2 OF THE SUPPLEMENTAL GENERAL CONDITIONS FOR ADJUSTMENTS TO BE MADE TO THE CHANNEL PROFILE TO ACCOUNT FOR POSSIBLE SUBSIDENCE.

NOTE: THE HYDRAULIC GRADE LINE SHOWN IS THE 100-YEAR "AS-DESIGNED" WATER SURFACE ELEVATION

263-1100

NO.	REVISION	DATE
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FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

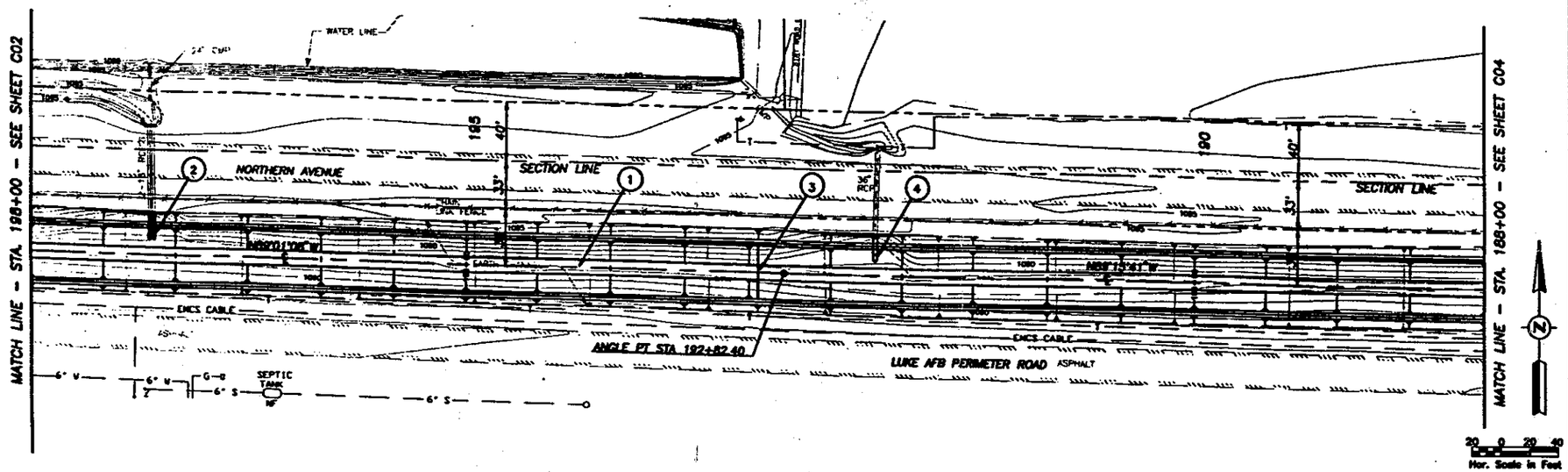
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 208+00 TO STATION 198+00

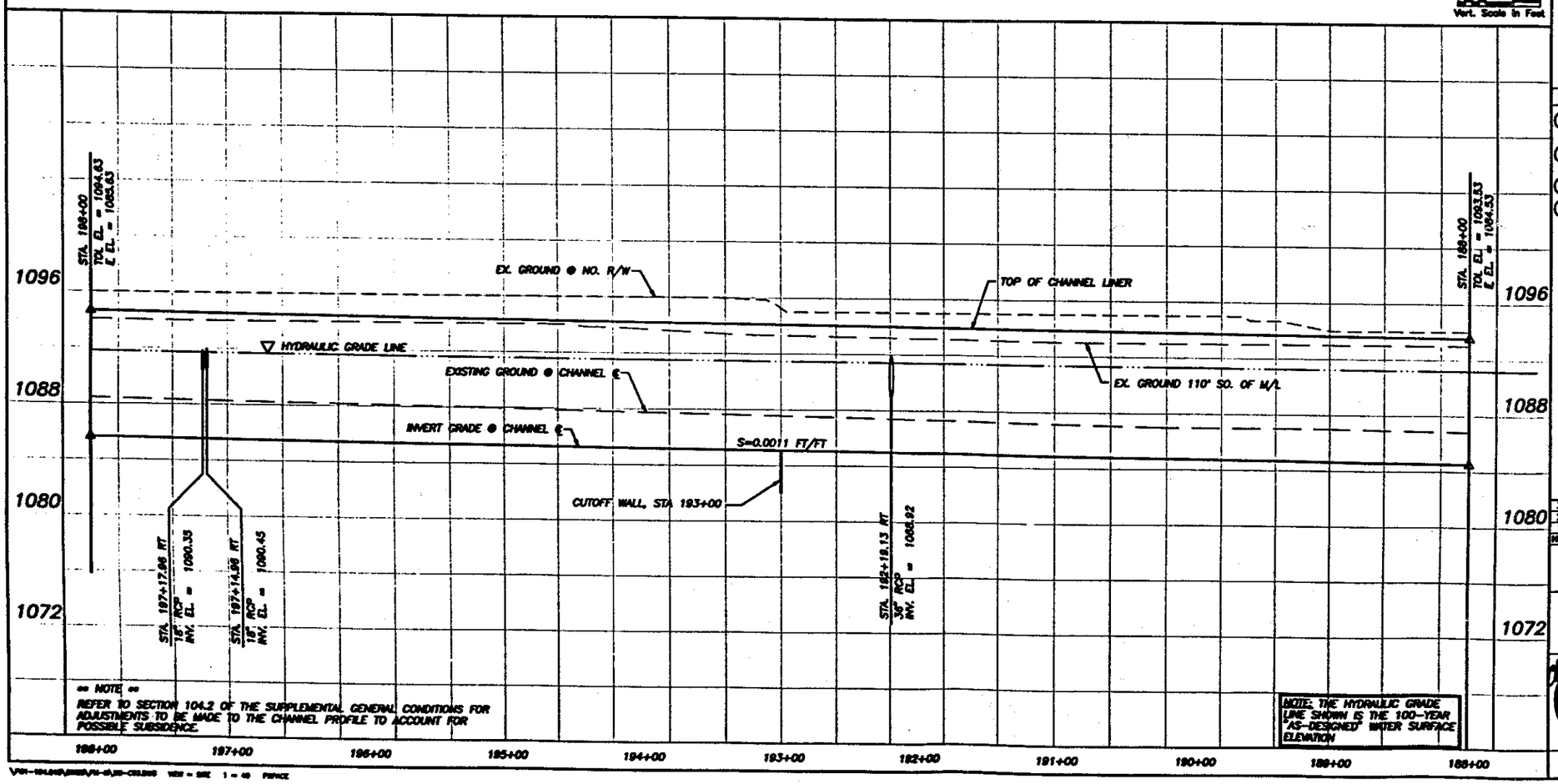
	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. GOPPERTON	12/94

LOWRY

NBS/LOWRY PROJECT NO. PS1-194-019

SHEET C02/22





** NOTE **

REFER TO SECTION 104.2 OF THE SUPPLEMENTAL GENERAL CONDITIONS FOR ADJUSTMENTS TO BE MADE TO THE CHANNEL PROFILE TO ACCOUNT FOR POSSIBLE SUBSIDENCE.

NOTE: THE HYDRAULIC GRADE LINE SHOWN IS THE 100-YEAR "AS-DESIGNED" WATER SURFACE ELEVATION

REMOVE

CONSTRUCT

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL 6.
2. EXTEND 18" RCP, MITER OUTLET END PER DETAIL 16 (2 EA.).
3. CONSTRUCT NEW CUTOFF WALL PER DETAIL 12.
4. EXTEND 36" RCP, MITER OUTLET END PER DETAIL 16.

NO.	REVISION	DATE
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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

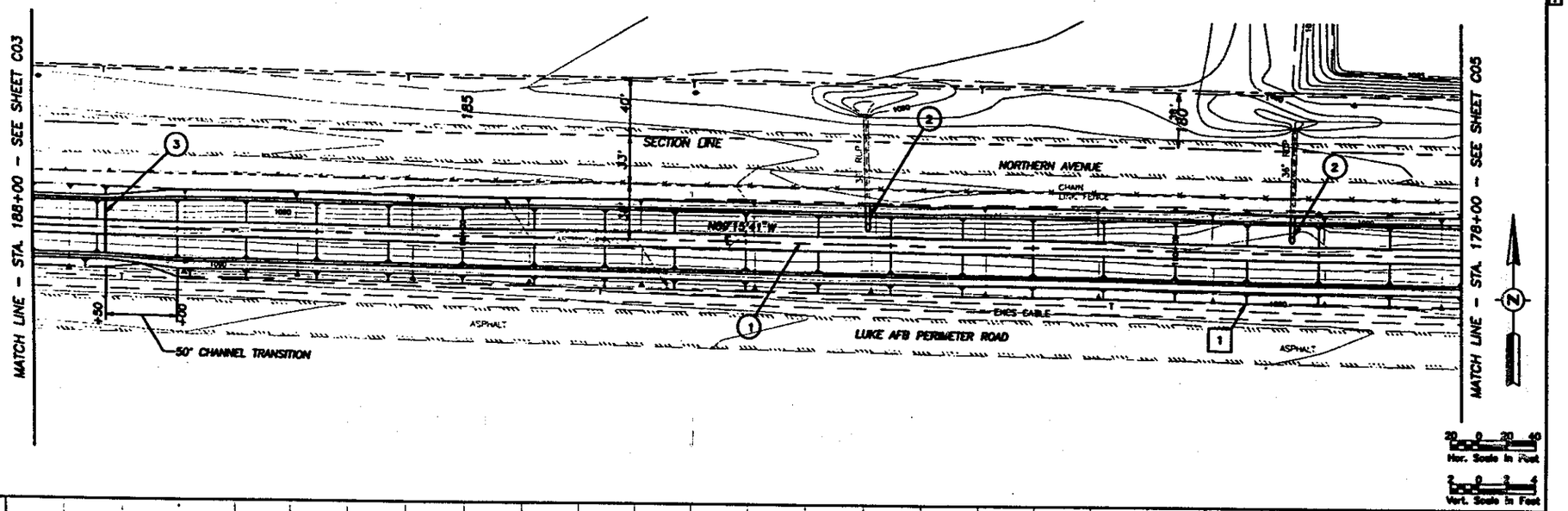
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 198+00 TO STATION 188+00

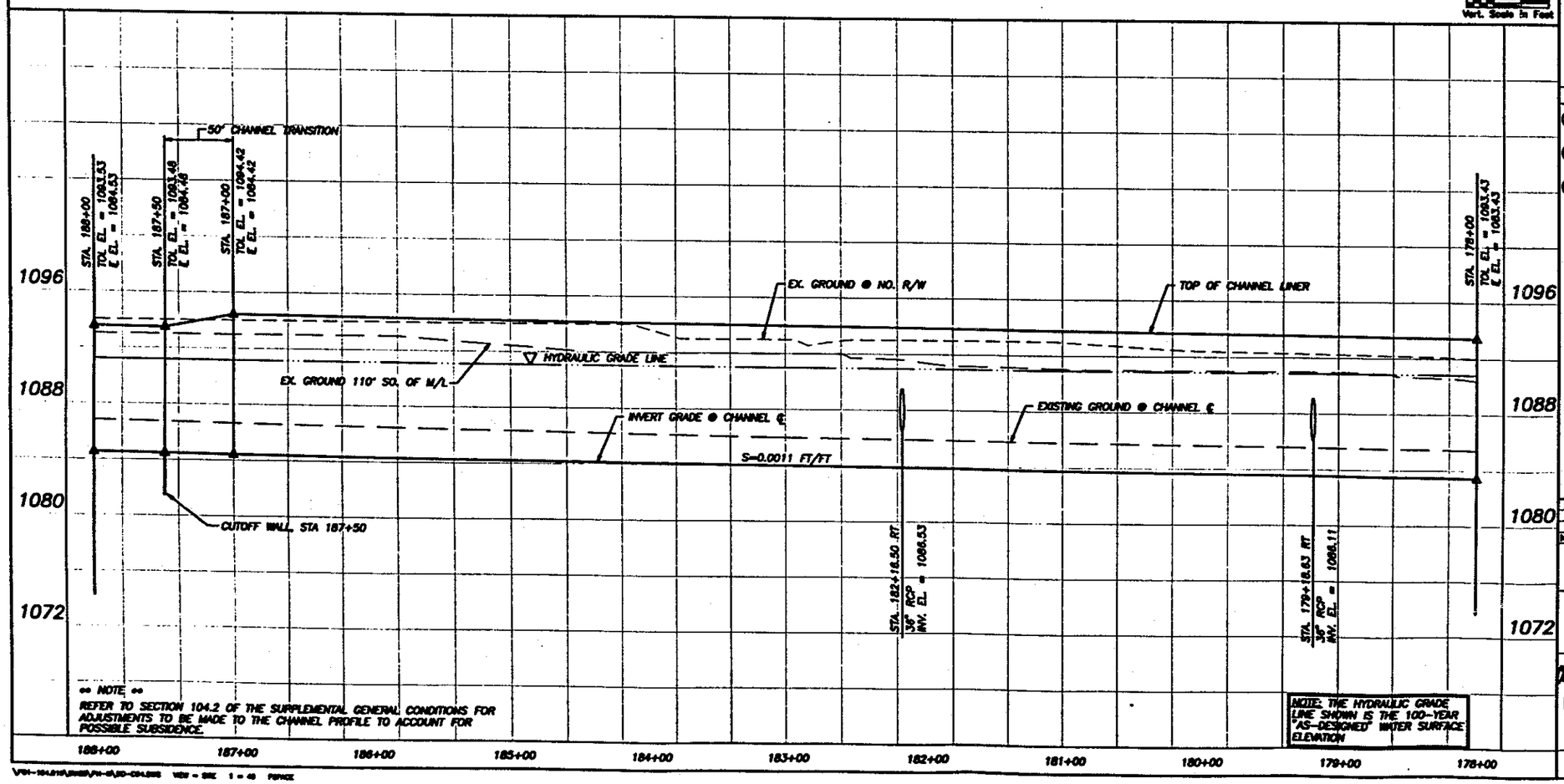
	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. GOPPERTON	12/94

NBS/LOWRY

NBS/LOWRY PROJECT NO. P81-194-019

SHEET C03/22





** NOTE **
REFER TO SECTION 104.2 OF THE SUPPLEMENTAL GENERAL CONDITIONS FOR ADJUSTMENTS TO BE MADE TO THE CHANNEL PROFILE TO ACCOUNT FOR POSSIBLE SUBSIDENCE.

NOTE: THE HYDRAULIC GRADE LINE SHOWN IS THE 100-YEAR "AS-DESIGNED" WATER SURFACE ELEVATION

REMOVE

1. REMOVE EXISTING RIP RAP.

CONSTRUCT

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL 6.
2. EXTEND 36" RCP, MITER OUTLET END PER DETAIL 16.
3. CONSTRUCT NEW CUTOFF WALL PER DETAIL 12.

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

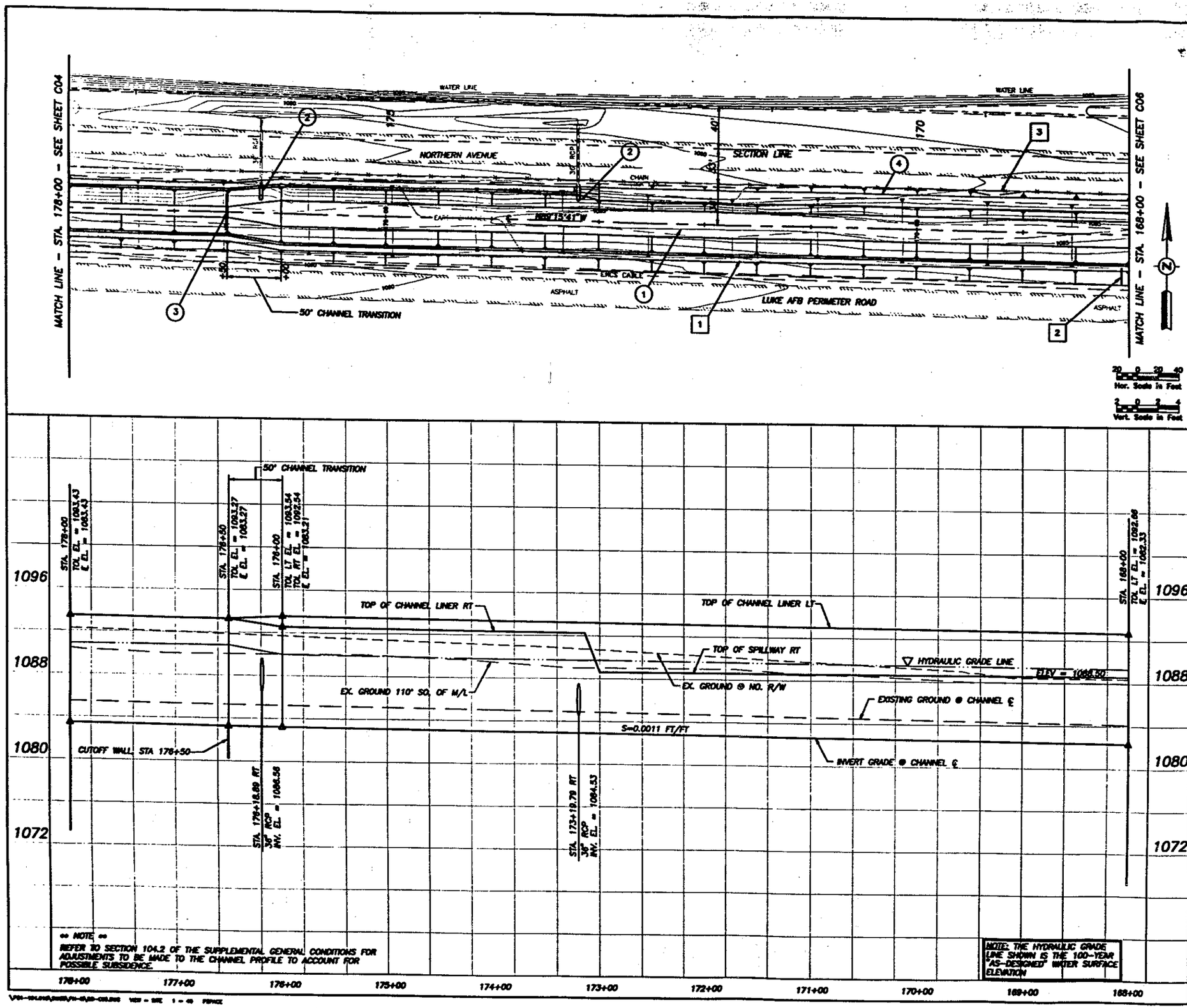
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 188+00 TO STATION 178+00

	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. COPPERTON	12/94

HBS LOWRY

HBS/LOWRY PROJECT NO. F61-194-019

SHEET C04/22



REMOVE

1. REMOVE EXISTING RIP RAP.
2. REMOVE EXISTING 12" CMP AND FLAPGATE
3. REMOVE AND REINSTALL FENCE AS REQUIRED. MUST MAINTAIN SECURITY PER LAFB SECURITY REQUIREMENTS IF FENCE IS REMOVED.

CONSTRUCT

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL 6.
2. EXTEND 36" RCP, MITER OUTLET END PER DETAIL 16.
3. CONSTRUCT NEW CUTOFF WALL PER DETAIL 12.
4. CONSTRUCT NEW DEPRESSED SPILLWAY PER DETAIL 9. SEE SHEET C06/22 FOR STATION AND DIMENSIONS.

263-1100

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

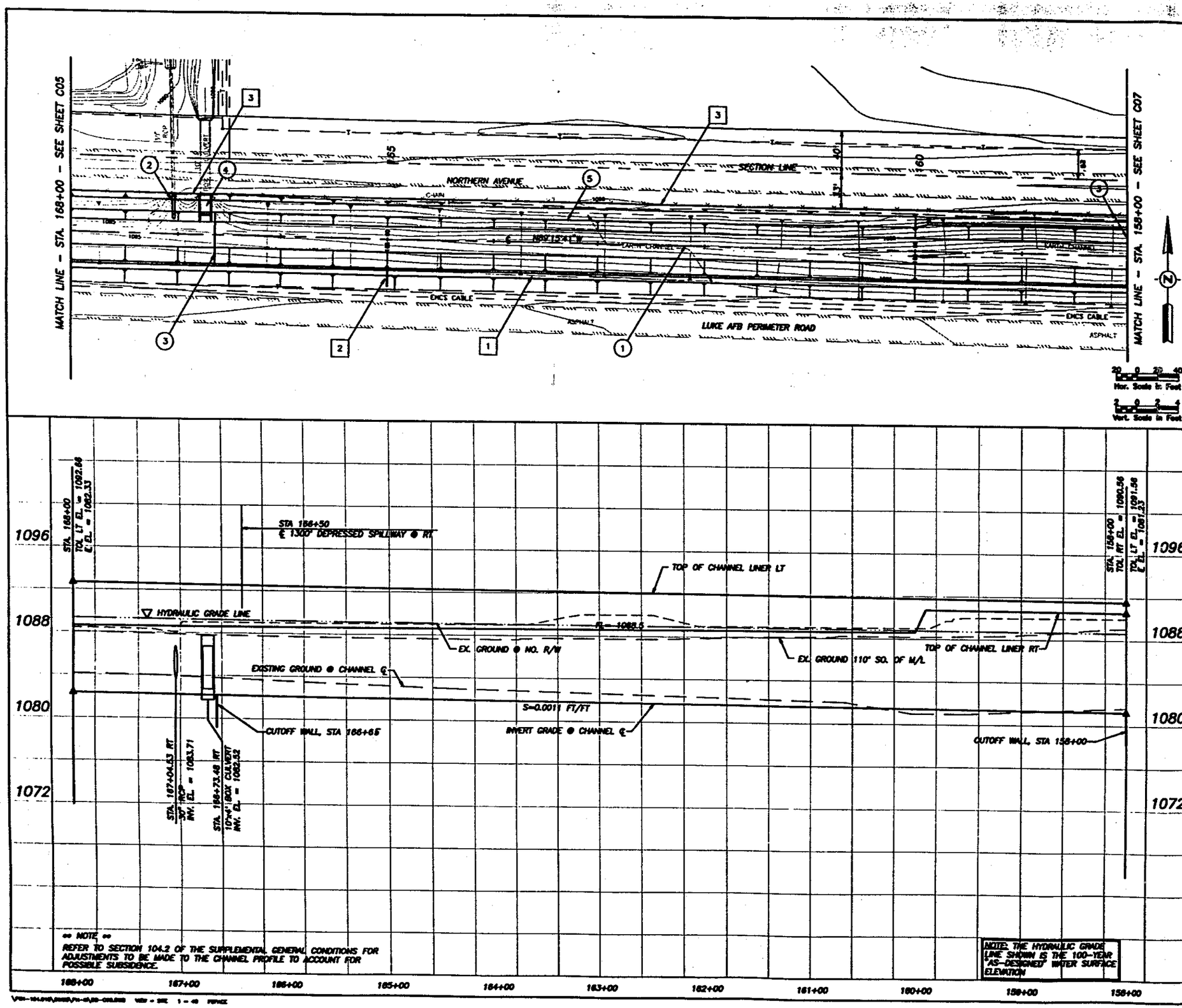
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 178+00 TO STATION 168+00

	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. COPPERTON	12/94

HDR LOWRY

HDR/LOWRY PROJECT NO. P81-194-019

SHEET C05/22



** NOTE **

REFER TO SECTION 104.2 OF THE SUPPLEMENTAL GENERAL CONDITIONS FOR ADJUSTMENTS TO BE MADE TO THE CHANNEL PROFILE TO ACCOUNT FOR POSSIBLE SUBSIDENCE.

REMOVE

1. REMOVE EXISTING RIP RAP.
2. REMOVE EXISTING 12" CMP AND FLAPGATE
3. REMOVE AND REINSTALL FENCE AS REQUIRED. MUST MAINTAIN SECURITY PER LAFB SECURITY REQUIREMENTS IF FENCE IS REMOVED.

CONSTRUCT

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL 6.
2. EXTEND 30" RCP, MITER OUTLET END PER DETAIL 16.
3. CONSTRUCT NEW CUTOFF WALL PER DETAIL 12.
4. CONSTRUCT BOX CULVERT EXTENSION PER DETAIL 11.
5. CONSTRUCT NEW DEPRESSED SPILLWAY PER DETAIL 9, STA 166+50, W=1300 FT, L=5 FT, D=2.66 FT

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

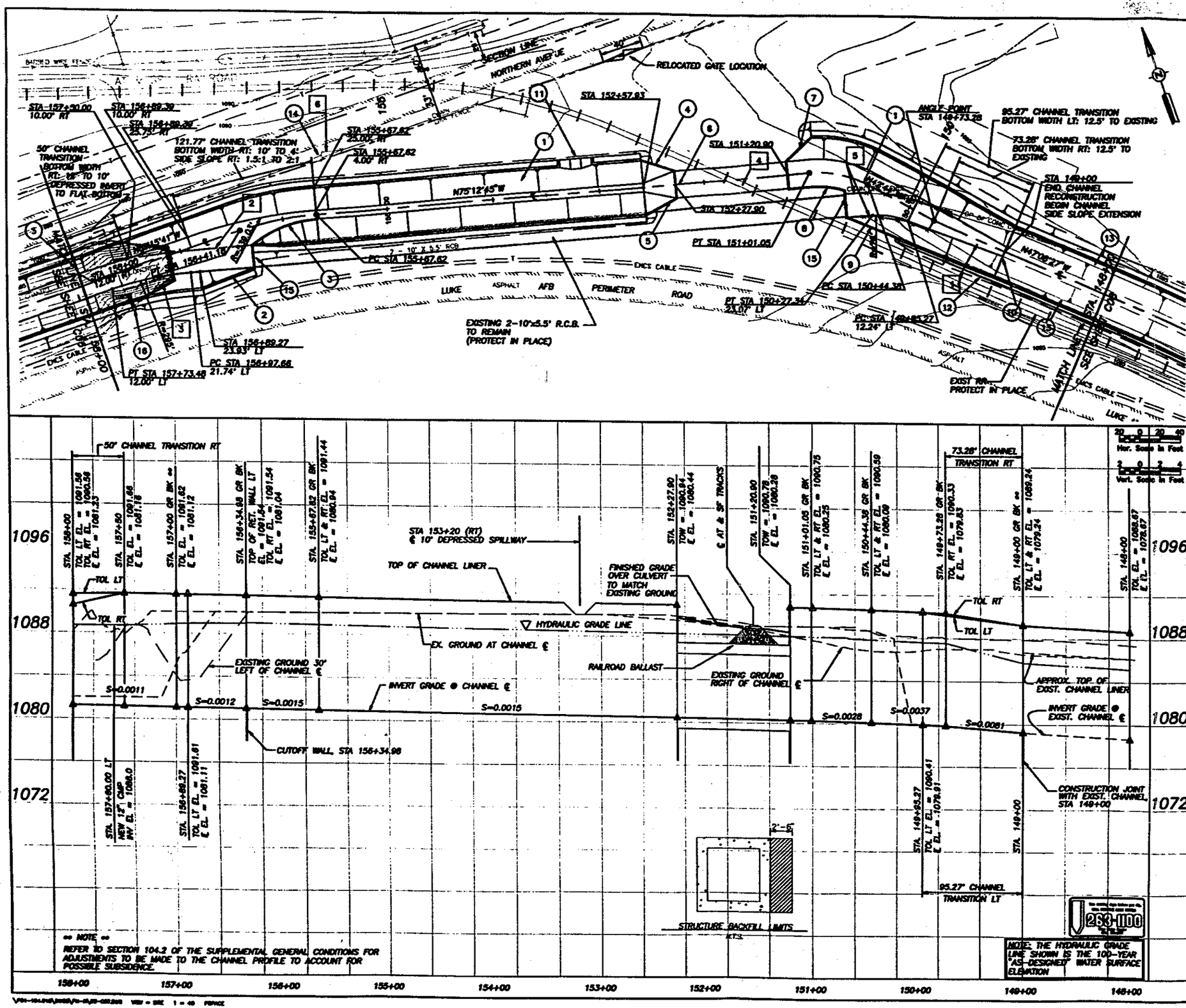
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 166+00 TO STATION 158+00

	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. GOPPERTON	12/94

NBS/LOWRY

NBS/LOWRY PROJECT NO. P61-194-019

SHEET C06/22



REMOVE

1. REMOVE EXISTING CONCRETE CHANNEL.
2. REMOVE 73' OF EXISTING CONCRETE BOX CULVERT SEE SHEET S01 FOR DETAILS.
3. REMOVE EXISTING CONCRETE HEADWALL, WINGWALLS, APRON AND FENCE.
4. REMOVE AND RECONSTRUCT EXISTING RAILROAD TRACKS AS REQUIRED AND AS SPECIFIED IN AIR FORCE MANUAL NO. 88-7, CHAPTER 2. (NOTE: CONTRACTOR TO AS-BUILT THE TRACKS FOR ALIGNMENT AND GRADE PRIOR TO REMOVAL.)
5. REMOVE EXISTING HEADWALL, RETAINING WALLS, APRON AND FENCE.
6. REMOVE AND RELOCATE EXISTING 20 FOOT DOUBLE GATE 300' EAST. CUT EXISTING FENCE TO INSTALL RELOCATED GATE.

CONSTRUCT

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL 6.
2. CONSTRUCT NEW RETAINING WALL, WALL #1, SEE SHEET S01.
3. CONSTRUCT NEW RETAINING WALL, WALL #2, SEE SHEET S01.
4. CONSTRUCT NEW RETAINING WALL, WALL #3, SEE SHEET S01.
5. CONSTRUCT NEW RETAINING WALL, WALL #4, SEE SHEET S01.
6. CONSTRUCT NEW DOUBLE BARREL 12' X 6' CONCRETE BOX CULVERT, ADOT STD B-02.20, (DOUBLE BARREL 12' X 6' CBC MODIFIED, "H"=6') (USE TABLE NO. V, ADOT STND. B-02.25 WITH FILLS OF 25-30' FOR DIMENSIONS AND REINFORCEMENT OF CULVERT TO ACCOMMODATE RAILROAD LOADING.) CONSTRUCT SPECIAL CURB AND CUT-OFF WALL PER DETAIL 30.
7. CONSTRUCT NEW RETAINING WALL, WALL #5, SEE SHEET S01.
8. CONSTRUCT NEW RETAINING WALL, WALL #6, SEE SHEET S01.
9. CONSTRUCT NEW RETAINING WALL, WALL #7, SEE SHEET S01.
10. SAW CUT AND TIE NEW CHANNEL LINING TO EXISTING CHANNEL, STA 149+00, DETAIL 2.
11. CONSTRUCT DEPRESSED SPILLWAY, PER DET. 9, STA. 153+20, W=10', L=5', D=1.00', ELEV "A"= 1090.
12. TAPER BERM WIDTH, 3' TO 2', STA 149+00 TO STA 149+97.27 (LT).
13. EXTEND REINFORCED CONCRETE CHANNEL LINING, PER DETAIL 1 AND TYPICAL SECTIONS.
14. INSTALL NEW POST WITH MESH TO REPAIR FENCE AT OLD GATE LOCATION PER ADOT STD. DETAIL NO. C-12.20, TYPE 2, EXTEND FABRIC 6" BELOW GROUND.
15. CONSTRUCT HEADWALL EXTENSION AND CUT-OFF WALL, SEE SHEET S04.
16. CONSTRUCT NEW 12"X10' CMP, NEW 12" FLARED END SECTION ON INLET, MAG STD 501-1; WITH SALVAGED FLAPGATE ON OUTLET PER DETAIL 20 INLET ELEV = 1089.0.

ITEM	CLASS "A" CONCRETE	REINFORCING STEEL	STRUCTURAL BACKFILL
BOX CULVERT	517 CY	52,997 LBS	119 CY
SPEC. CURB	3 CY	272 LBS	
CUTOFF WALL	8 CY	514 LBS	

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 158+00 TO STATION 148+00

	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. COPPERTON	12/94

LOWRY

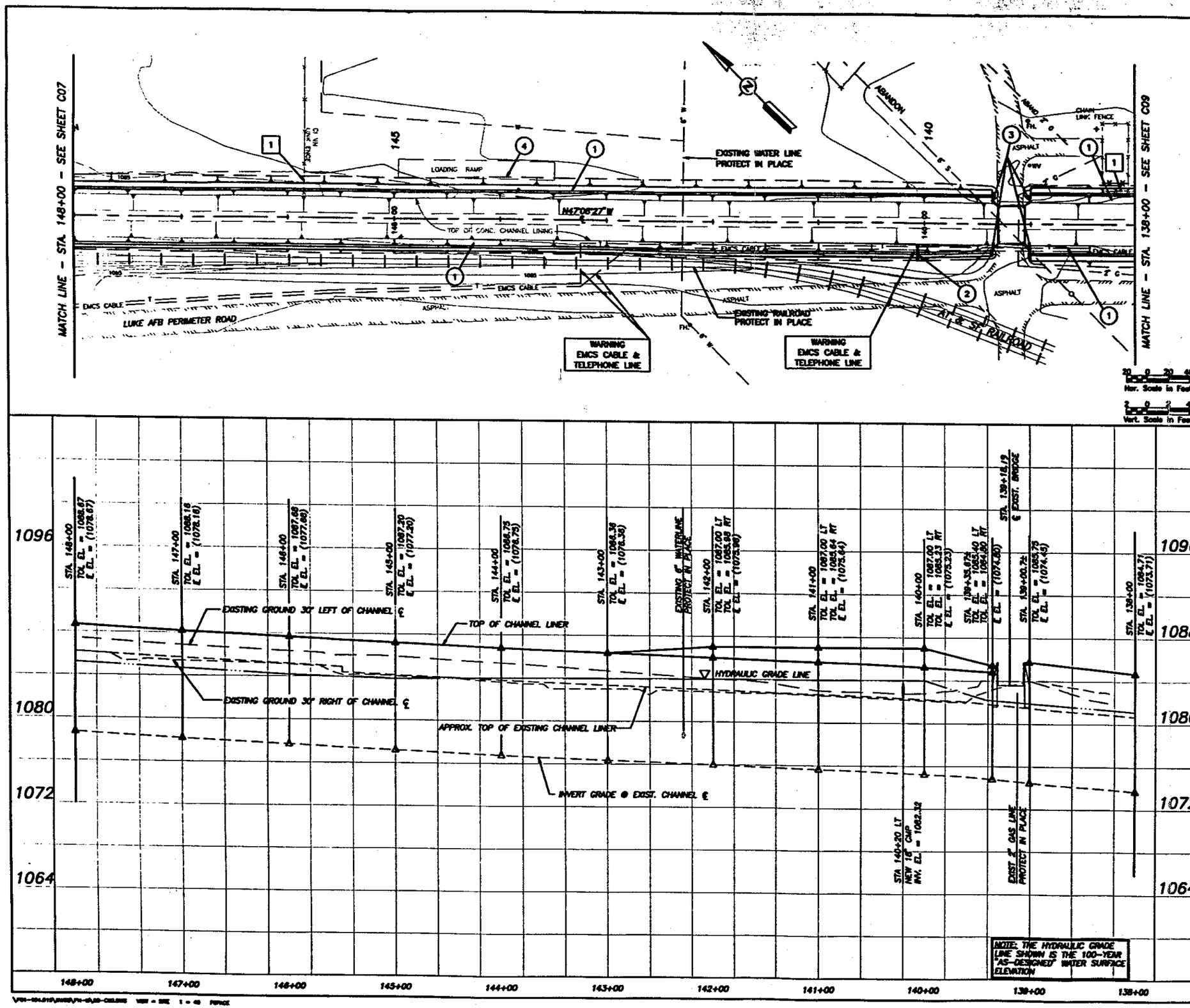
NBS/LOWRY PROJECT NO. F81-194-019

SHEET C07/22

293-100

** NOTE **
REFER TO SECTION 104.2 OF THE SUPPLEMENTAL GENERAL CONDITIONS FOR ADJUSTMENTS TO BE MADE TO THE CHANNEL PROFILE TO ACCOUNT FOR POSSIBLE SUBSIDENCE.

NOTE: THE HYDRAULIC GRADE LINE SHOWN IS THE 100-YEAR "AS-DESIGNED" WATER SURFACE ELEVATION



REMOVE

1. REMOVE INTERFERING PORTIONS OF EXISTING FENCE, AND REPLACE IN KIND BEHIND CHANNEL LINING.

CONSTRUCT

1. EXTEND REINFORCED CONCRETE CHANNEL LINING, PER TYPICAL SECTIONS AND DETAIL 1.
2. CONSTRUCT NEW 18" X 14" CMP; NEW 18" FLARED END SECTION ON INLET, MAG STD 501-1; NEW FLAP GATE ON OUTLET, PER DETAIL 20.
3. MATCH NEW CHANNEL LINING WITH EXISTING BRIDGE WINGWALLS, PER DETAIL 41.
4. GRADE TO MATCH EXISTING LOADING RAMP.

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

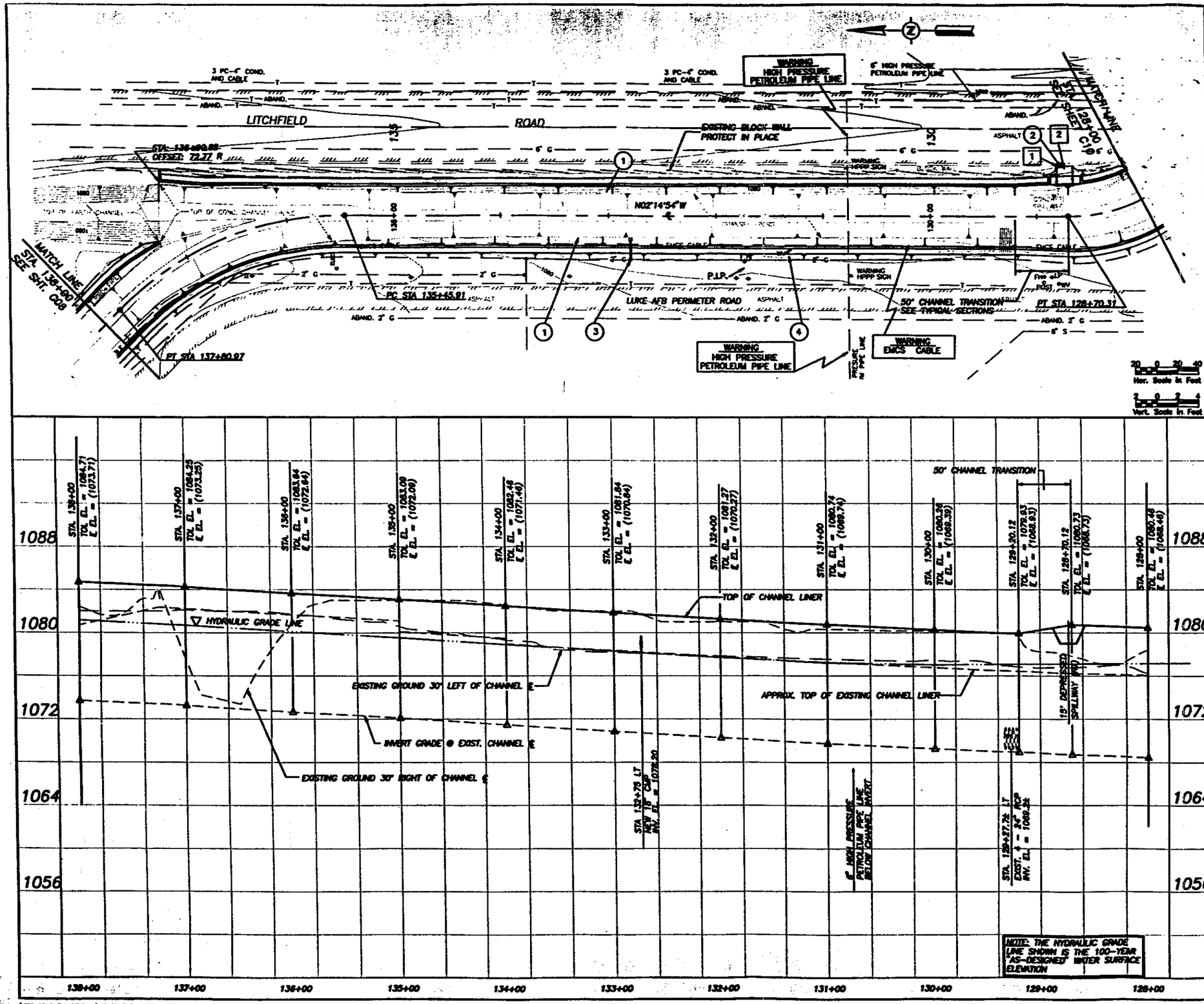
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 148+00 TO STATION 138+00

	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. GOPPERTON	12/94

NBS/LOWRY

NBS/LOWRY PROJECT NO. P81-194-019

SHEET C08/22



NOTE: THE HYDRAULIC GRADE LINE SHOWN IS THE 100-YEAR "AS-DESIGNED" WATER SURFACE ELEVATION

REMOVE

1. REMOVE EXISTING CONCRETE SPILLWAY
2. REMOVE AND REINSTALL FENCE AS REQUIRED. MUST MAINTAIN SECURITY PER LAFB SECURITY REQUIREMENTS IF FENCE IS REMOVED.

CONSTRUCT

1. EXTEND REINFORCED CONCRETE CHANNEL LINING, PER TYPICAL SECTIONS AND DETAIL 1.
2. CONSTRUCT NEW DEPRESSED SPILLWAY, PER DETAIL 8, STA 128+73.31 RT; L=15', W=15', D=1' (VARIES), ELEV "A" = 1079.00.
3. CONSTRUCT NEW 18" X 20' CMP; NEW 18" FLARED END SECTION ON INLET, MAG STD 501-1; NEW FLAP GATE ON OUTLET, DETAIL 20. (MIN. 2% SLOPE)
4. ADJUST EXISTING VALVES TO GRADE. PROTECT IN PLACE.

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

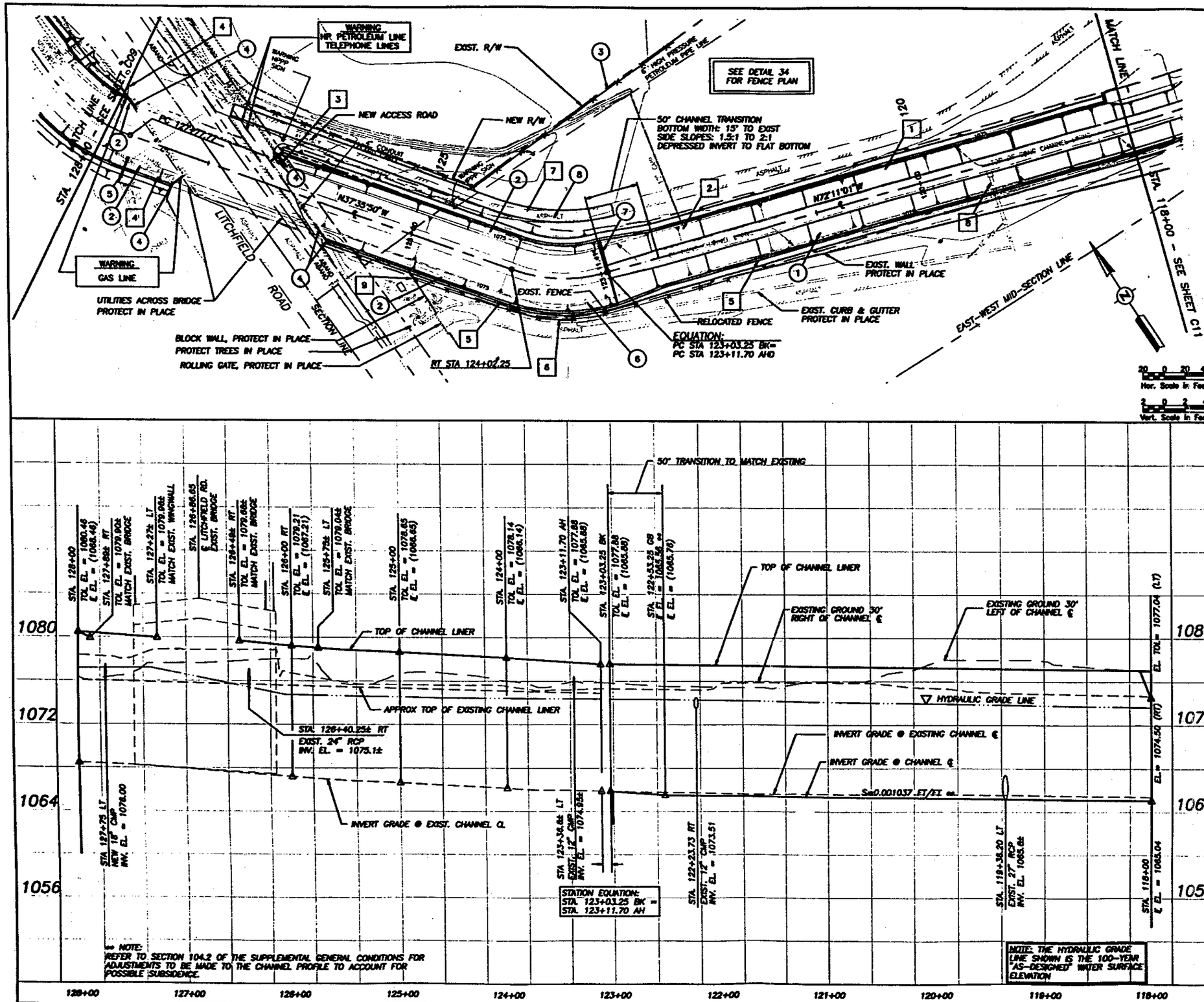
DYBART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 136+00 TO STATION 128+00

	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. GOPPERTON	12/94

HDR LOWRY

HDR/LOWRY PROJECT NO. F91-194-019

SHEET C09/22



REMOVE

1. REMOVE EXISTING CONCRETE CHANNEL.
2. CUT AND REMOVE EXISTING 12" CMP TO MATCH NEW CHANNEL. SALVAGE FLAPGATE. MITER END AND CONNECT TO NEW CHANNEL PER DETAIL 16.
3. EXTEND 24" RCP TO MATCH NEW CHANNEL LINING EXTENSION. MITER OUTLET END PER DETAIL 16.
4. REMOVE EXISTING CHAIN LINK FENCE.
5. REMOVE EXISTING RIP RAP.
6. REMOVE AND REINSTALL FENCE AT TOE OF SLOPE AS REQUIRED. CONTRACTOR MUST MAINTAIN SECURITY PER LAFB SECURITY REQUIREMENTS WHEN FENCE IS REMOVED.
7. REMOVE EXISTING AC PAVEMENT STA 122+83 TO LITCHFIELD ROAD.
8. REMOVE EXISTING 27" RCP. MITER OUTLET END PER DETAIL 16.
9. REMOVE BLOCK WALL TO FIRST PILLASTER AS REQUIRED. SEE SUPPLEMENTAL GENERAL CONDITIONS FOR FURTHER INSTRUCTIONS.

CONSTRUCT

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL 6.
2. EXTEND REINFORCED CONCRETE CHANNEL LINING, PER TYPICAL SECTIONS AND DETAIL 1.
3. CONSTRUCT CHAIN LINK FENCE, TYPE 2 PER ADOT STND. C-12.20, MODIFIED TO EXTEND FABRIC 6" BELOW GROUND; SEE SHEET D14 FOR DETAILED PLAN.
4. MATCH NEW CONCRETE LINING WITH EXISTING RETAINING WALL PER DETAIL 42.
5. CONSTRUCT NEW 18" X 20" CMP; NEW 18" FLARED END SECTION ON INLET, MAG STD 501-1; NEW FLAP GATE ON OUTLET, DETAIL 20. INLET TO MATCH INVERT OF EXIST. VALLEY GUTTER.
6. CUT AND REMOVE EXISTING 12" CMP. SALVAGE FLAPGATE AND CONNECT TO CHANNEL PER DETAIL NO. 20.
7. SAWCUT AND TIE NEW CHANNEL LINING INTO EXISTING CHANNEL, STA 123+11.70, DETAIL 2.
8. CONSTRUCT NEW ACCESS ROAD, STA 122+83 TO LITCHFIELD ROAD PER DETAIL 31.

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 128+00 TO STATION 118+00

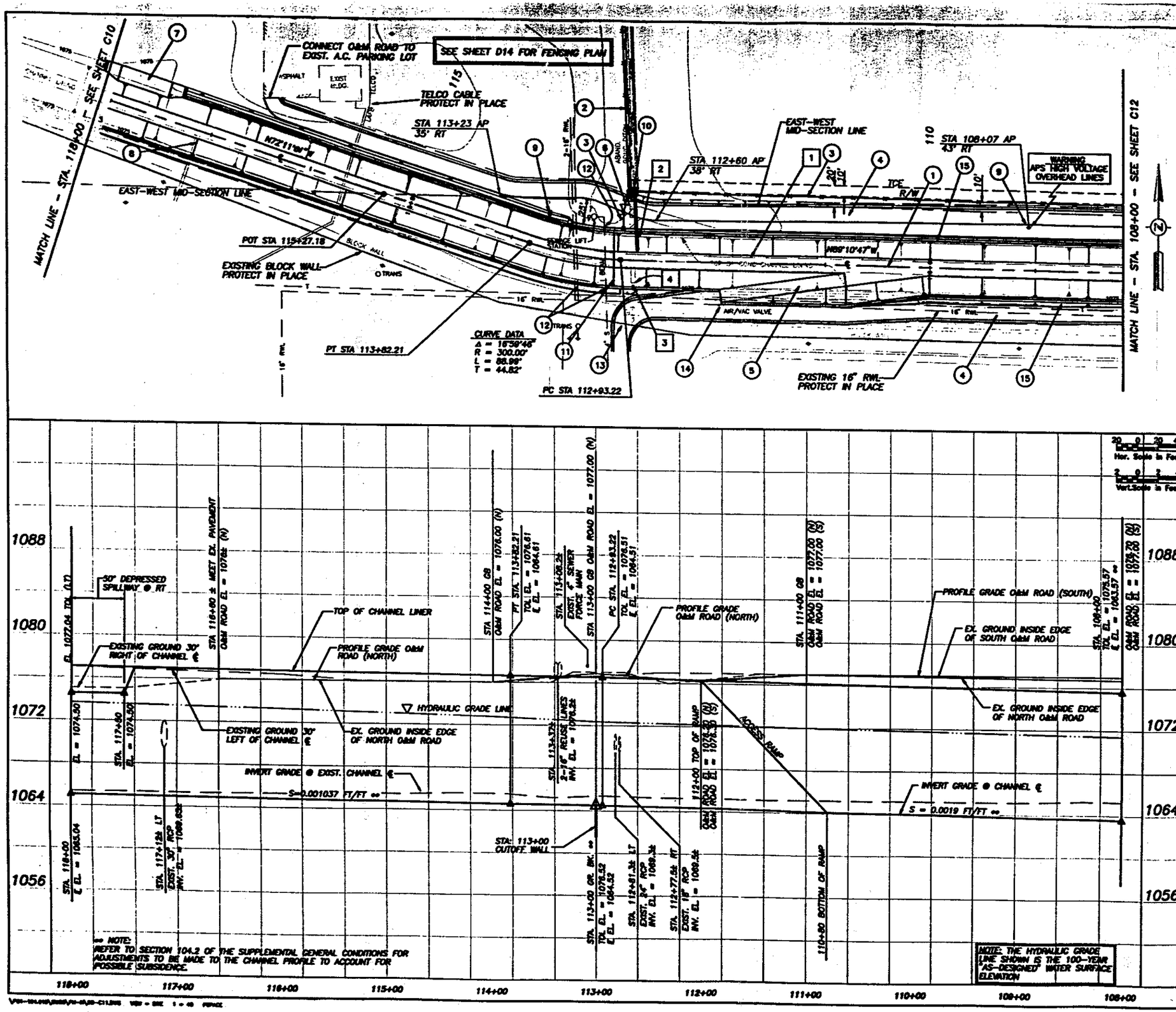
	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. GOPPERTON	5/95

NBS/LOWRY

NBS/LOWRY PROJECT NO. F81-194-019

SHEET C10/22

\F81-194.010\DWG\F4-4\20-C10.DWG PRINCE VIEW = SIZE PLOT SCALE 1 = 40



REMOVE

1. REMOVE EXISTING CONCRETE CHANNEL.
2. REMOVE EXISTING HEADWALL AND 18" RCP.
3. REMOVE AND SALVAGE EXISTING FLAPGATE.
4. REMOVE EXISTING 24" RCP AND CONNECT TO CHANNEL, PER DETAIL NO. 20.

CONSTRUCT

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL NO. 6.
2. CONSTRUCT CHAIN LINK FENCE, TYPE 2, PER ADOT STND. C-12.20, MODIFIED TO EXTEND FABRIC 6" BELOW GROUND; SEE SHEET D14 FOR DETAILED PLAN.
3. CONSTRUCT NEW BARBED WIRE FENCE PER DETAIL NO. 35.
4. CONSTRUCT NEW O&M ROAD PER TYPICAL SECTIONS AND DETAIL NO. 30.
5. CONSTRUCT NEW MAINTENANCE ACCESS RAMP PER DETAIL NO. 3.
6. CONSTRUCT NEW 14 FT BARBED WIRE DOUBLE GATE PER DETAIL NO. 36.
7. CONSTRUCT NEW DEPRESSED SPILLWAY, STA 117+75, L=10 FT, W=50 FT, D=2.54 FT, ELEV A = 1074.50 PER DETAIL NO. 9.
8. REMOVE EXIST. 30" RCP AND CONNECT TO CHANNEL WITH NEW 30" FLAPGATE PER DETAIL NO. 20.
9. PROTECT EXISTING POWER POLE.
10. CONSTRUCT NEW 18" X 80' CMP; NEW STRAIGHT TYPE HEADWALL PER MAG STD 501-1, STA 112+81, 67.8' RT. MITER OUTLET END PER DETAIL NO. 14. MATCH INVERT TO EXIST. CLD PER DTL 24.
11. CONSTRUCT NEW CUTOFF WALL PER DETAIL NO. 12.
12. PROTECT 2 - 16" REUSE WATER LINES AND 4" SEWER FORCE MAIN OVER CHANNEL. INSTALL PVC SLEEVE PER DETAIL NO. 22.
13. CUT EXISTING BLOCK WALL AND MODIFY FOR FUTURE GATE PER DETAIL NO. 28, STA 112+89, 60' LT.
14. ADJUST EXISTING AIR/VAC VAULT TO GRADE.
15. CONSTRUCT GRAVEL MULCH SLOPE PROTECTION PER DETAIL 5.

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

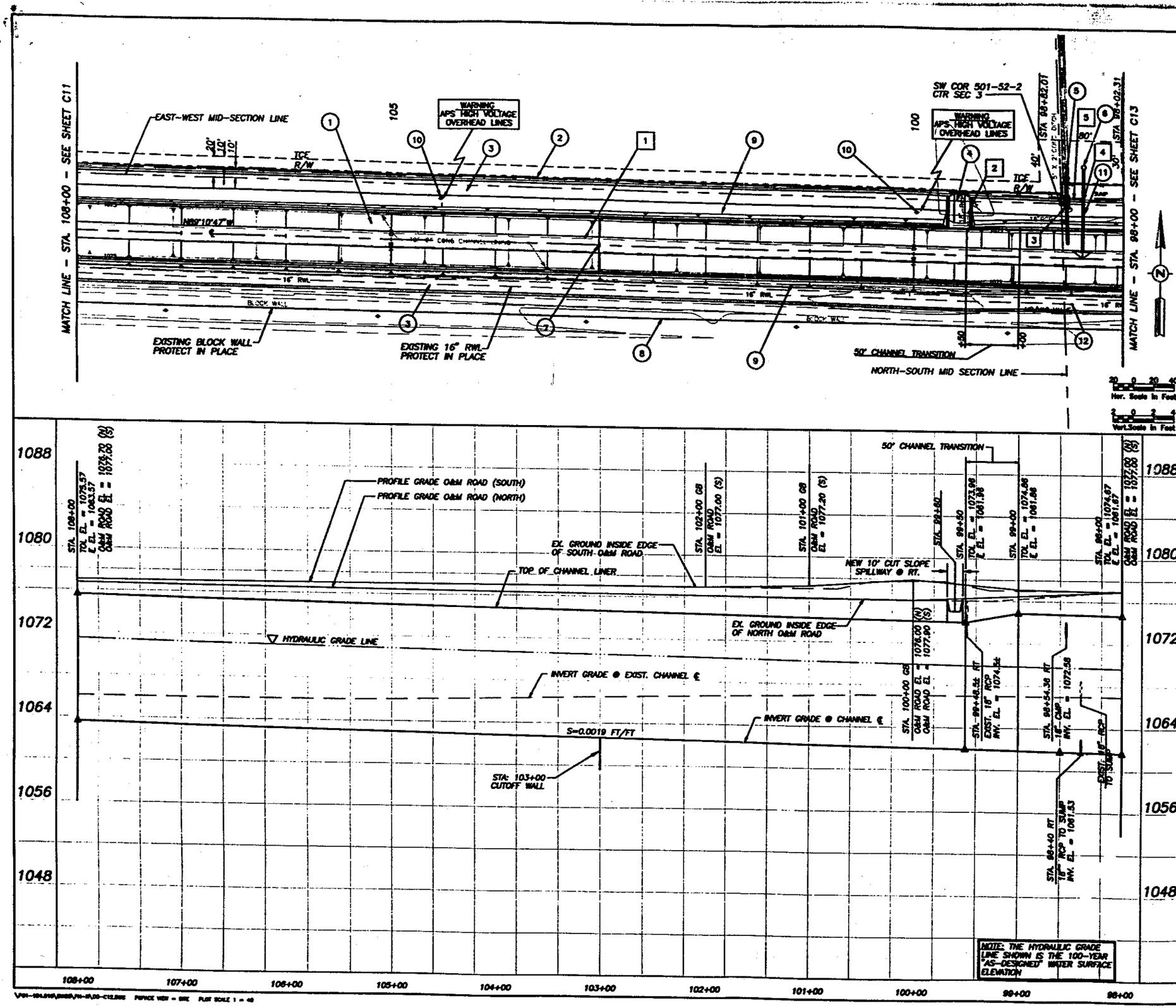
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 118+00 TO STATION 108+00

	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. GOPPERTON	9/95

NBS/LOWRY

NBS/LOWRY PROJECT NO. PB1-194-019

SHEET C11/22



REMOVE

1. REMOVE EXISTING CONCRETE CHANNEL
2. REMOVE EXISTING 18" RCP
3. REMOVE EXISTING 18" RCP AND HEADWALL
4. REMOVE EXISTING SUMP AND PIPE
5. PROTECT IN PLACE METER AND POLE (TO BE RELOCATED BY OTHERS)

CONSTRUCT

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL NO. 6.
2. CONSTRUCT NEW BARBED WIRE FENCE PER DETAIL NO. 35.
3. CONSTRUCT NEW O&M ROAD PER TYPICAL SECTIONS, AND DETAIL NO. 30.
4. CONSTRUCT NEW CUT SLOPE SPILLWAY, STA 99+80 L=32 FT, W=10 FT, D=1.2 FT, ELEV. A = 1075.00 PER DETAIL NO. 10.
5. CONSTRUCT NEW 18" X 60' CMP; NEW STRAIGHT HEADWALL, MAC STD 501-1, STA 98+57, 75' RT; MITER OUTLET END PER DETAIL NO. 16. MATCH INVERT TO EXIST. CLD.
6. CONSTRUCT NEW SUMP, STA 98+40, 85' RT. PER DETAIL NO. 28.
7. CONSTRUCT NEW CUTOFF WALL PER DETAIL NO. 12.
8. PROTECT EXISTING BLOCK WALL IN PLACE.
9. CONSTRUCT GRAVEL MULCH SLOPE PROTECTION PER DETAIL NO. 5 AND TYPICAL SECTIONS.
10. PROTECT EXISTING POWER POLE IN PLACE.
11. CONSTRUCT 18" RCP SUMP CONNECTOR PIPE PER DETAIL NO. 28.
12. ADJUST EXISTING AIR/VAC VAULT TO GRADE

263-1100

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

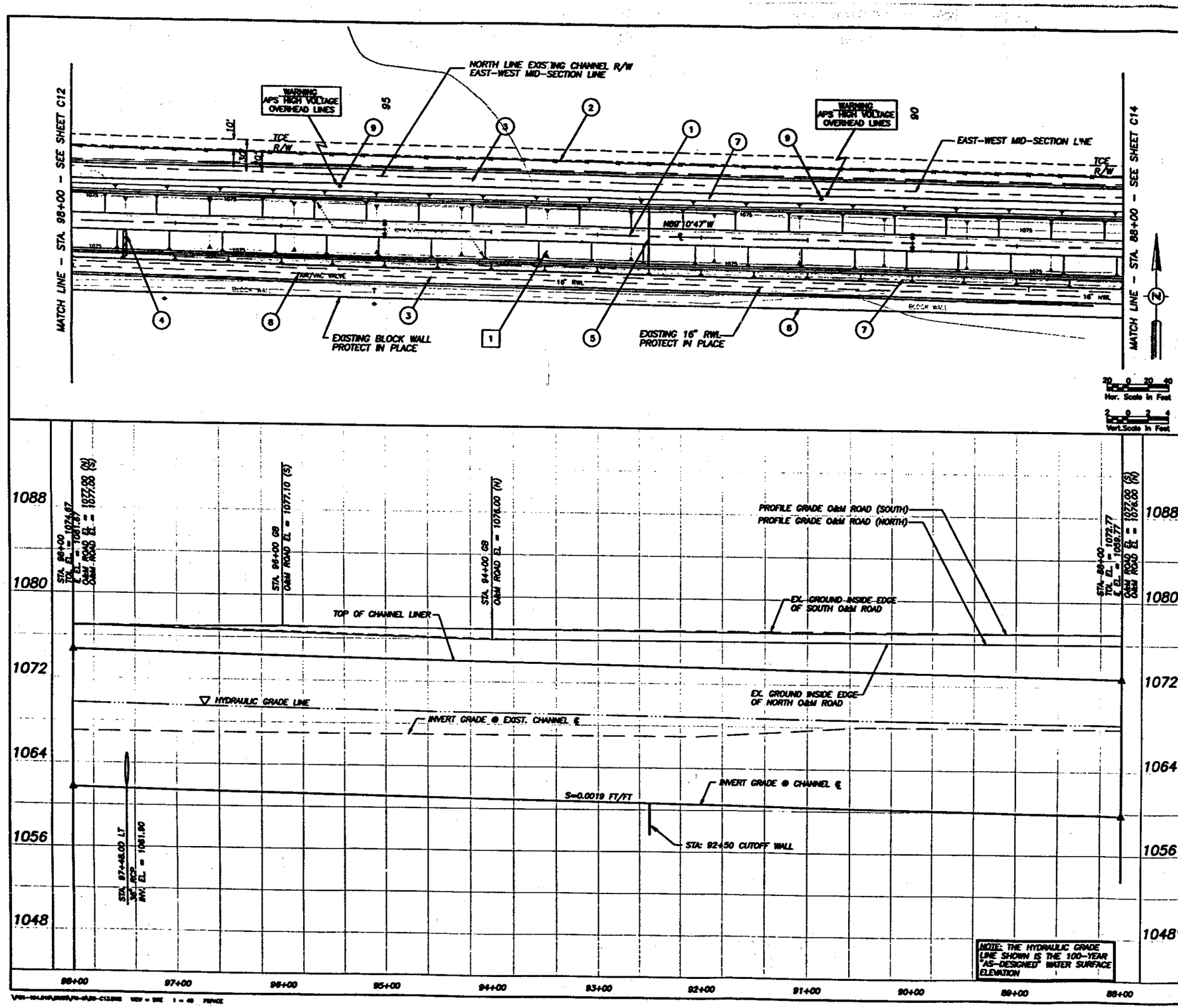
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 108+00 TO STATION 98+00

	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. GOPPERTON	9/95

LOWRY

NBS/LOWRY PROJECT NO. PB1-194-019

SHEET C12/22



☐ REMOVE ☐

1 REMOVE EXISTING CONCRETE CHANNEL

○ CONSTRUCT ○

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL NO. 6.
2. CONSTRUCT NEW BARBED WIRE FENCE PER DETAIL NO. 35.
3. CONSTRUCT NEW O&M ROAD PER TYPICAL SECTIONS AND DETAIL NO. 30.
4. CONSTRUCT NEW 36" RCP STUBOUT, STA 97+48, PER DETAIL NO. 19.
5. CONSTRUCT NEW CUTOFF WALL PER DETAIL NO. 12.
6. PROTECT EXISTING BLOCK WALL IN PLACE.
7. CONSTRUCT GRAVEL MULCH SLOPE PROTECTION PER TYPICAL SECTIONS AND DETAIL NO. 5.
8. ADJUST EXISTING AIR/VAC VALVE AND VAULT TO GRADE.
9. EXISTING POWER POLE, PROTECT IN PLACE.

263-1100

NO.	REVISION	DATE
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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

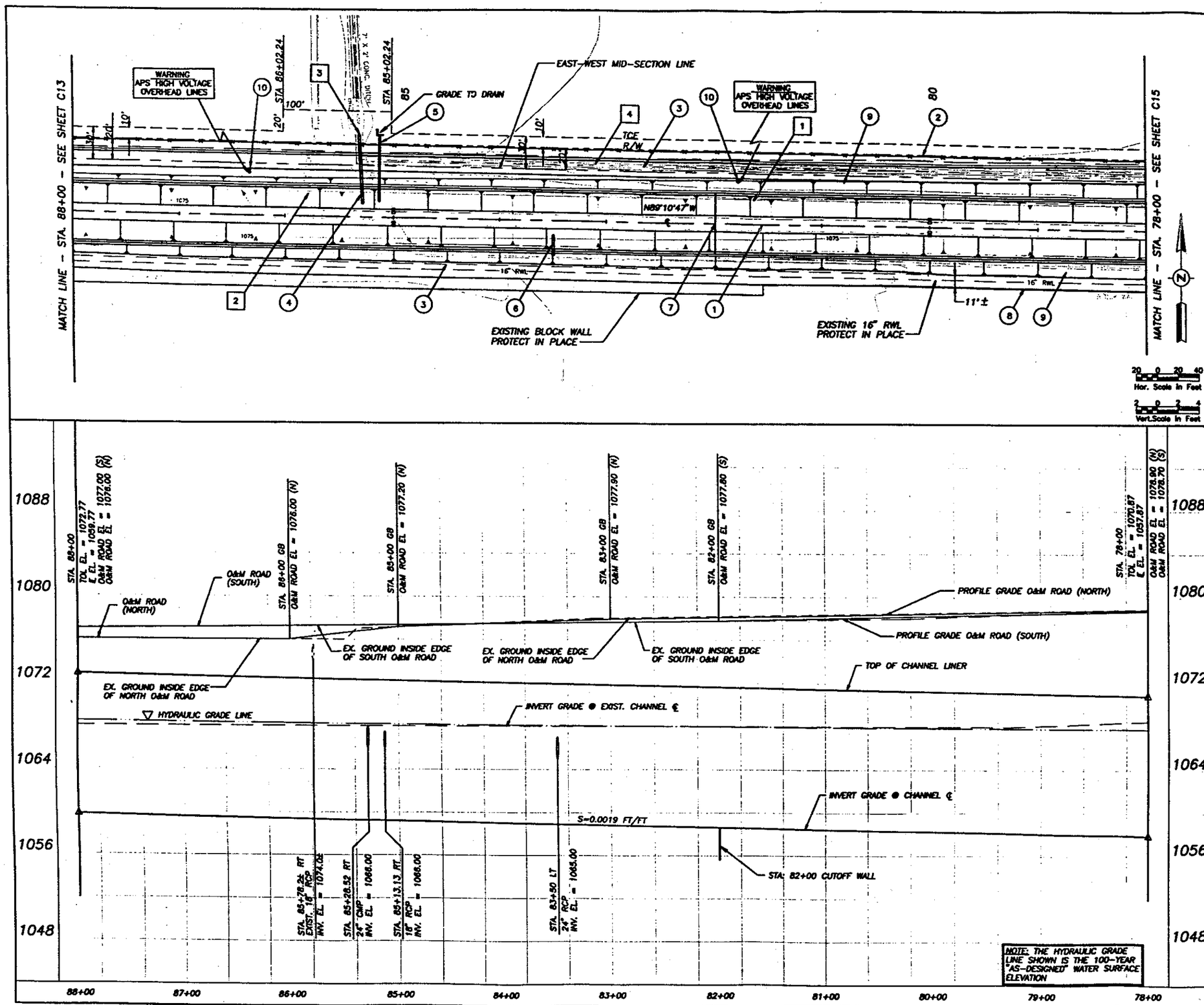
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 98+00 TO STATION 88+00

	BY	DATE
DESIGNED	S. YINGLING	5/94
DRAWN	S. YINGLING	5/94
CHECKED	C. GOPPERTON	5/95

NBS LOWRY

NBS/LOWRY PROJECT NO. F91-194-019

SHEET C13/22



☐ REMOVE ☐

1. REMOVE EXISTING CONCRETE CHANNEL
2. CUT AND REMOVE EXISTING 18" RCP TO MATCH NEW CHANNEL, MITER OUTLET END PER DETAIL 16. CONSTRUCT APRON PER DETAIL NO. 21.
3. REMOVE EXISTING HEADWALL
4. REMOVE EXISTING CONCRETE LINED DITCH

○ CONSTRUCT ○

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL NO. 6.
2. CONSTRUCT NEW BARBED WIRE FENCE PER DETAIL NO. 35.
3. CONSTRUCT NEW O&M ROAD PER TYPICAL SECTIONS AND DETAIL NO. 30.
4. CONSTRUCT NEW 24" X 64' CMP AND CONNECT TO EXISTING CMP AND MITER OUTLET SECTION PER DETAIL NO. 14.
5. CONSTRUCT NEW 18" X 60' RCP; NEW L-SHAPED HEADWALL, STA 85+13, 75' RT, MAG STD 501-1; MITER OUTLET PER DETAIL NO. 16, U.S. INVERT = 1075 ± (INVERT SET TO DRAIN FIELD).
6. CONSTRUCT NEW 24" RCP STUBOUT, STA 83+50, PER DETAIL NO. 19.
7. CONSTRUCT NEW CUTOFF WALL PER DETAIL NO. 12.
8. PROTECT EXISTING BLOCK WALL IN PLACE
9. CONSTRUCT GRAVEL MULCH SLOPE PROTECTION PER DETAIL NO. 5.
10. EXISTING POWER POLE, PROTECT IN PLACE

Call 263-1100 Before You Dig

NO.	REVISION	DATE
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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

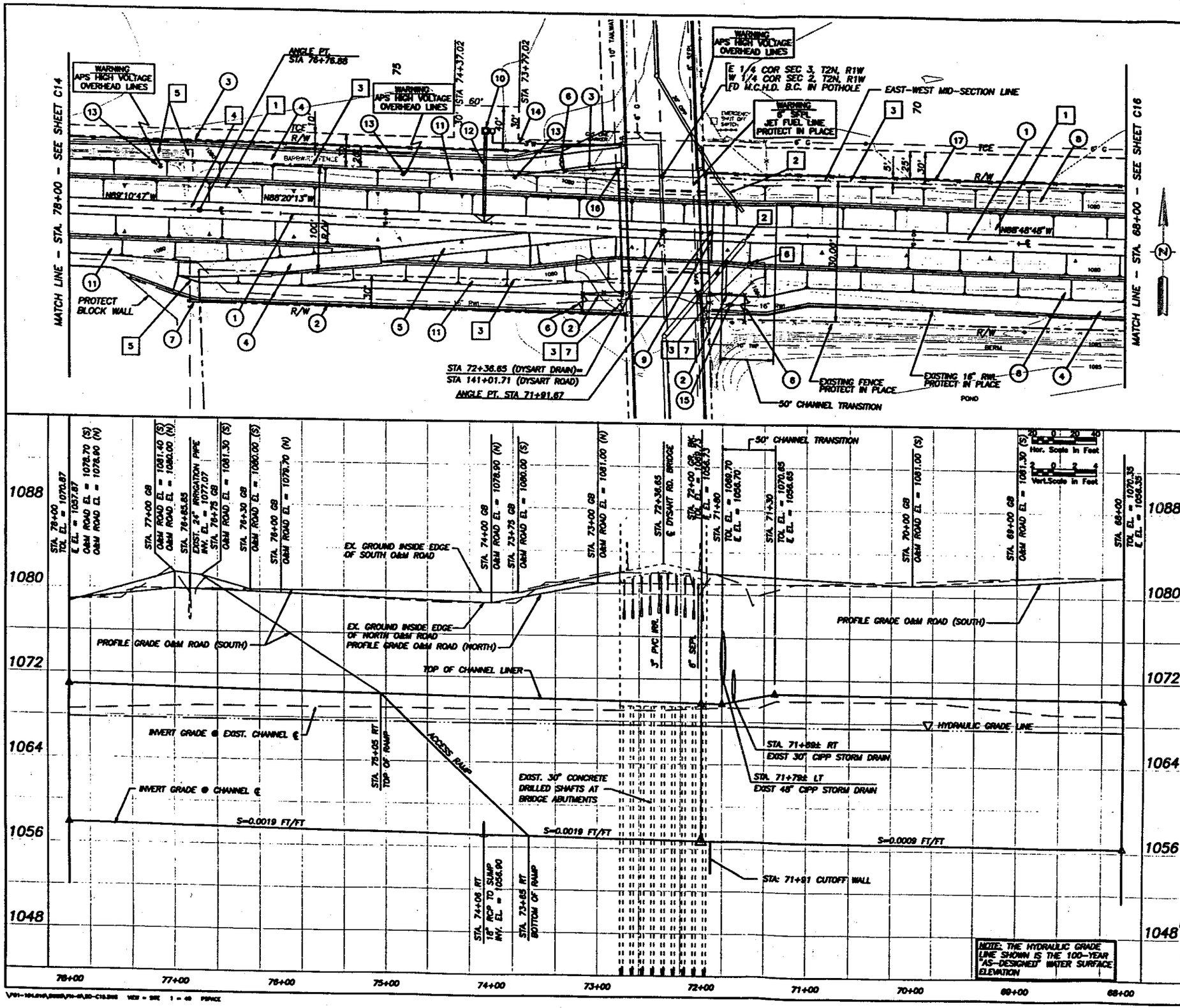
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 88+00 TO STATION 78+00

	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. GOPPERTON	5/95

NBS/LOWRY

NBS/LOWRY PROJECT NO. P81-194-019

SHEET C14/22



REMOVE

1. REMOVE EXISTING CONCRETE CHANNEL
2. CUT AND REMOVE EXISTING CIPP, CONNECT TO CHANNEL PER PER DETAIL 21 AND 17.
3. REMOVE EXISTING FENCE
4. REMOVE EXISTING 24" PIPE CROSSING
5. REMOVE EXISTING CONCRETE LINED DITCH AND CONCRETE JUNCTION STRUCTURE
6. REMOVE EXISTING 18" CMP
7. REMOVE EXISTING GATE.

CONSTRUCT

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL NO. 6. ADD CORROSION INHIBITING ADMIXTURE FROM STA 68+00 TO 72+00
2. CONSTRUCT NEW 6' CHAIN LINK FENCE ADOT STD. NO. C-12.20 TYPE 1.
3. CONSTRUCT NEW BARBED WIRE FENCE PER DETAIL NO. 35.
4. CONSTRUCT NEW O&M ROAD PER TYPICAL SECTIONS AND DETAIL NO. 30.
5. CONSTRUCT NEW MAINTENANCE ACCESS RAMP PER DETAIL NO. 3.
6. CONSTRUCT NEW 14 FT BARBED WIRE DOUBLE GATE AT 40' BACK FROM R/W LINE, PER DETAIL NO. 36.
7. CONSTRUCT NEW HEADWALL, STA 76+80, 83' LT, PER DETAIL NO. 24.
8. CONSTRUCT NEW SHOTCRETE SLOPE PROTECTION PER TYPICAL SECTIONS AND DETAIL NO. 4.
9. CONSTRUCT NEW CUTOFF WALL PER DETAIL NO. 12.
10. CONSTRUCT NEW SUMP PER DETAIL NO. 28.
11. CONSTRUCT GRAVEL MULCH SLOPE PROTECTION PER TYPICAL SECTIONS AND DETAIL NO. 5.
12. CONSTRUCT 18" RCP SUMP CONNECTOR PIPE PER DETAIL NO. 28.
13. EXISTING POWER POLE, PROTECT IN PLACE.
14. INSTALL 3" PVC IRRIGATION LINE AT 24" DEPTH. CONNECT TO 3" PVC AT EAST END, AND CAP AT WEST END NEAR SUMP. WRAP WITH LOCATOR TAPE. SEE DETAIL NO. 28.
15. ADJUST EXISTING AIR/VAC VAULT TO GRADE.
16. TIE NEW FENCE INTO EXISTING FENCE ON BOTH SIDES OF BRIDGE, AT ALL FOUR CORNERS (TYP.).
17. CONSTRUCT NEW 6' CHAIN LINK FENCE ADOT STD. NO. C-12.20 TYPE 1. STA. 71+97 TO 59+60.

263-1100

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

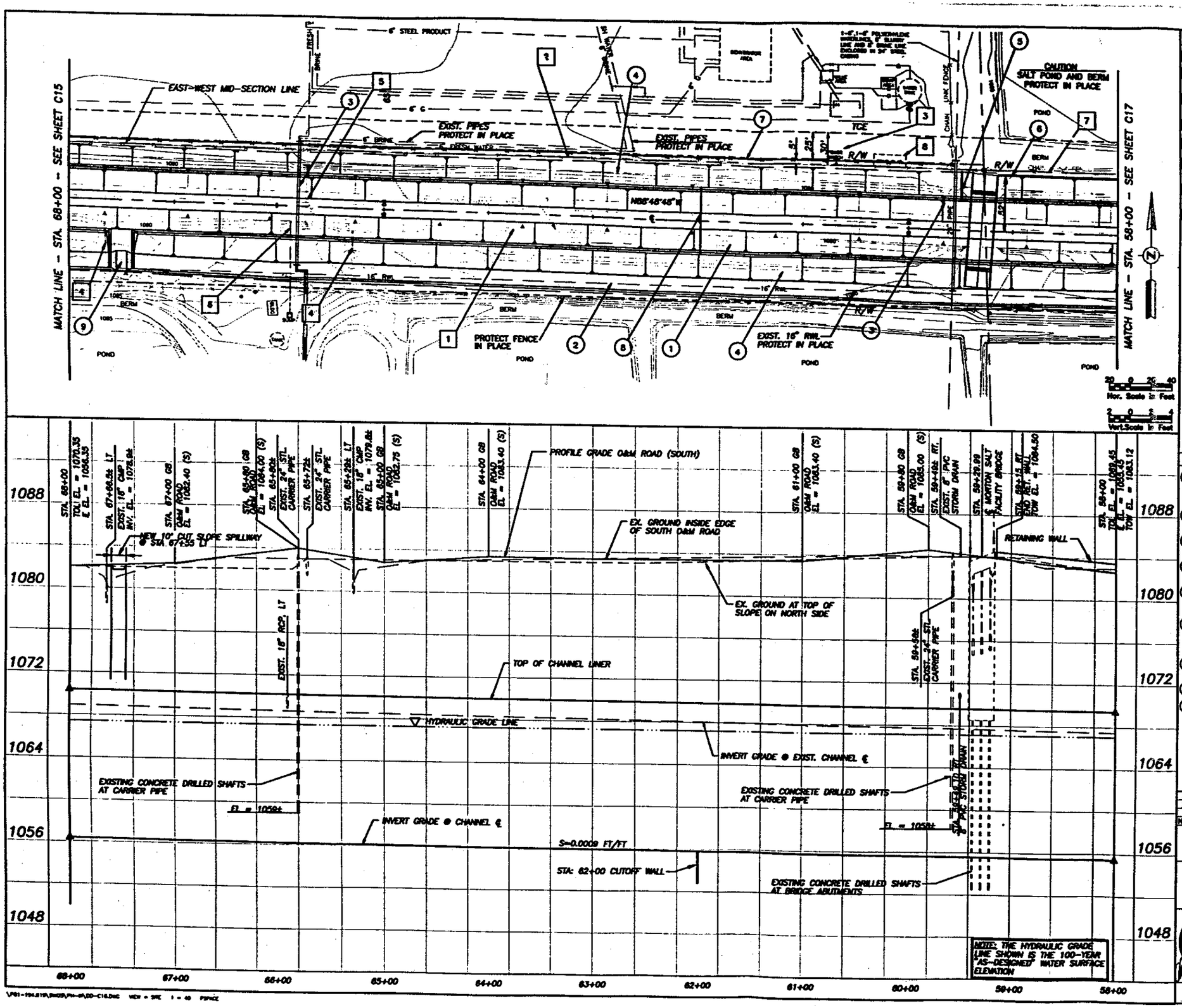
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 78+00 TO STATION 68+00

	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. COPPERTON	5/95

NBS/LOWRY

NBS/LOWRY PROJECT NO. P61-194-019

SHEET C15/22



REMOVE

1. REMOVE EXISTING CONCRETE CHANNEL.
2. REMOVE EXISTING CHAIN LINK FENCE, STA 59+60 TO 71+97.
3. RELOCATE ELECTRICAL FACILITIES (BY OTHERS).
4. REMOVE EXISTING 18" CMP.
5. REMOVE EXISTING ABANDONED CARRIER PIPE.
6. CUT AND PLUG EXIST. SUMP PIPE, PER MAG STD. DETAIL NO. 427.
7. REMOVE AND REINSTALL AS REQUIRED EXISTING CHAIN LINK FENCE AND GATE STA 59+60 TO 55+25.
8. REMOVE AND DISPOSE OF CONCRETE SLAB.

CONSTRUCT

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL NO. 6. ADD CORROSION INHIBITING ADMIXTURE FROM STA 58+00 TO STA 68+00
2. CONSTRUCT NEW O&M ROAD PER TYPICAL SECTIONS AND DETAIL NO. 30.
3. CARRIER PIPES WITH UTILITY PIPING, PROTECT IN PLACE, SEE DETAIL 43.
4. CONSTRUCT NEW SHOTCRETE SLOPE PROTECTION PER TYPICAL SECTIONS AND DETAIL NO. 4.
5. CONSTRUCT NEW 8" PVC STORM DRAIN EXTENSION. CONNECT TO EXISTING DRAIN AND CONNECT TO CHANNEL PER DETAIL 21.
6. CONSTRUCT NEW RETAINING WALL PER DETAIL NO. 13, STA. 58+00 TO 59+15. TOP OF WALL ELEV TO MATCH TOP OF BRIDGE RETAINING WALL.
7. CONSTRUCT NEW 6' CHAIN LINK FENCE, PER ADOT STD. NO. C-12.20, TYPE 1, STA 59+60 TO 71+97.
8. CONSTRUCT NEW CUTOFF WALL PER DETAIL 12.
9. CONSTRUCT NEW CUT SLOPE SPILLWAY WITH O&M ROAD CROSSING, STA 67+55, L=38 FT, W=10 FT, D= 0.5 FT, ELEV "A" = 1081.70 PER DETAIL NO. 10.

263-1100

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

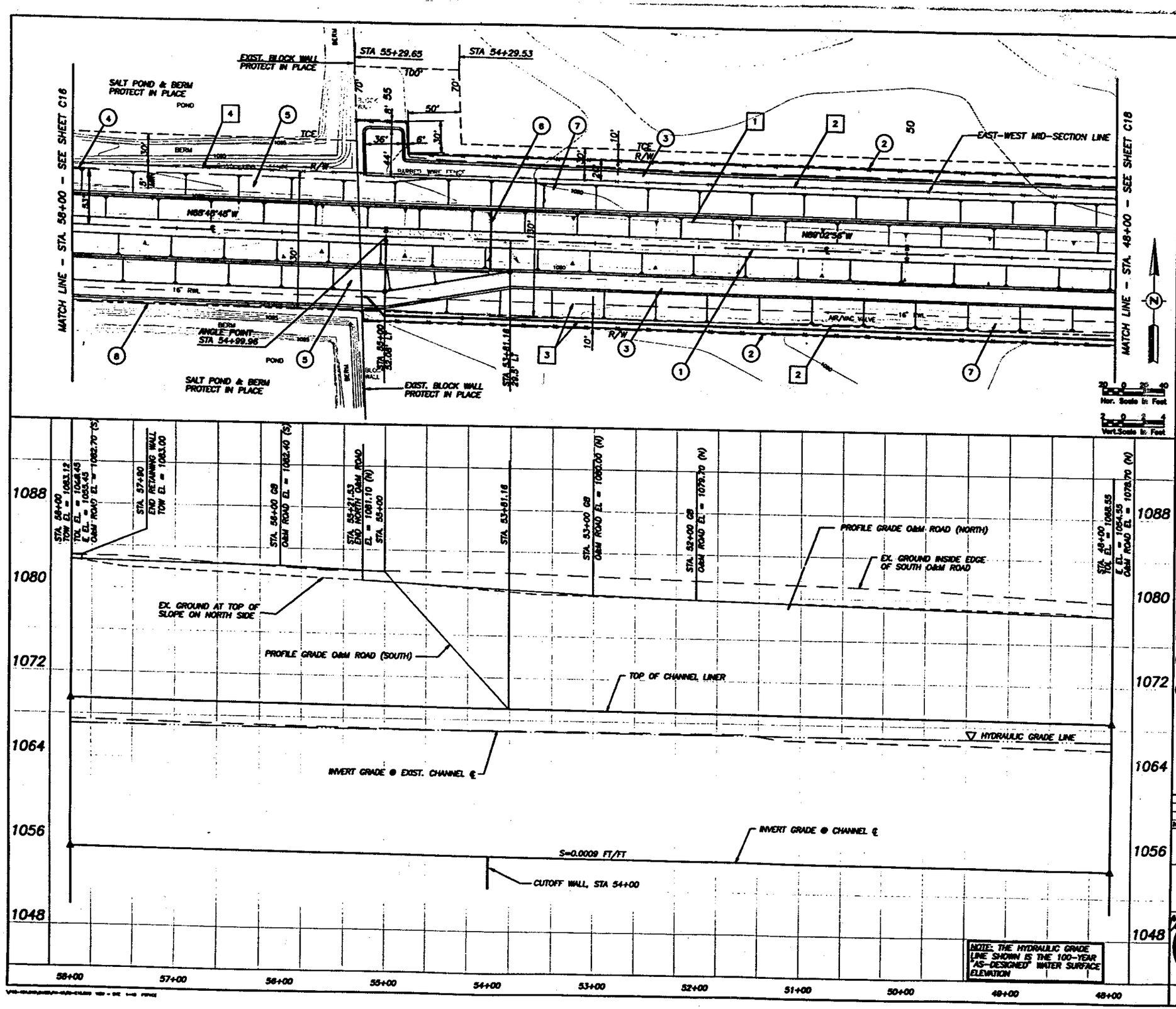
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 68+00 TO STATION 58+00

	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. GOPPERTON	5/95

LOWRY

NBS/LOWRY PROJECT NO. P61-194-019

SHEET C16/22



NOTE: THE HYDRAULIC GRADE LINE SHOWN IS THE 100-YEAR "AS-DESIGNED" WATER SURFACE ELEVATION

REMOVE

1. REMOVE EXISTING CONCRETE CHANNEL
2. REMOVE EXISTING FENCE, END AT BLOCK WALL STA 55+25±.
3. REMOVE AND RELOCATE EXISTING REUSE WATER LINE, SEE REUSE WATER LINE PLANS.
4. REMOVE AND REINSTALL AS REQUIRED EXISTING CHAIN LINK FENCE AND GATE, STA 56+80 TO 55+25.

CONSTRUCT

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL 6.
2. CONSTRUCT NEW BARBED WIRE FENCE PER DETAIL 35. END AT BLOCK WALL, STA 55+25±.
3. CONSTRUCT NEW O&M ROAD PER TYPICAL SECTIONS AND DETAIL 30.
4. CONSTRUCT NEW RETAINING WALL PER DETAIL 13 FROM STA 57+90 TO ST 58+00.
5. CONSTRUCT NEW SHOTCRETE SLOPE PROTECTION PER TYPICAL SECTIONS AND DETAIL 4.
6. CONSTRUCT NEW CUTOFF WALL PER DETAIL 12.
7. CONSTRUCT GRAVEL MULCH SLOPE PROTECTION, PER TYPICAL SECTIONS AND DETAIL 5.
8. EXISTING FENCE, PIP.

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

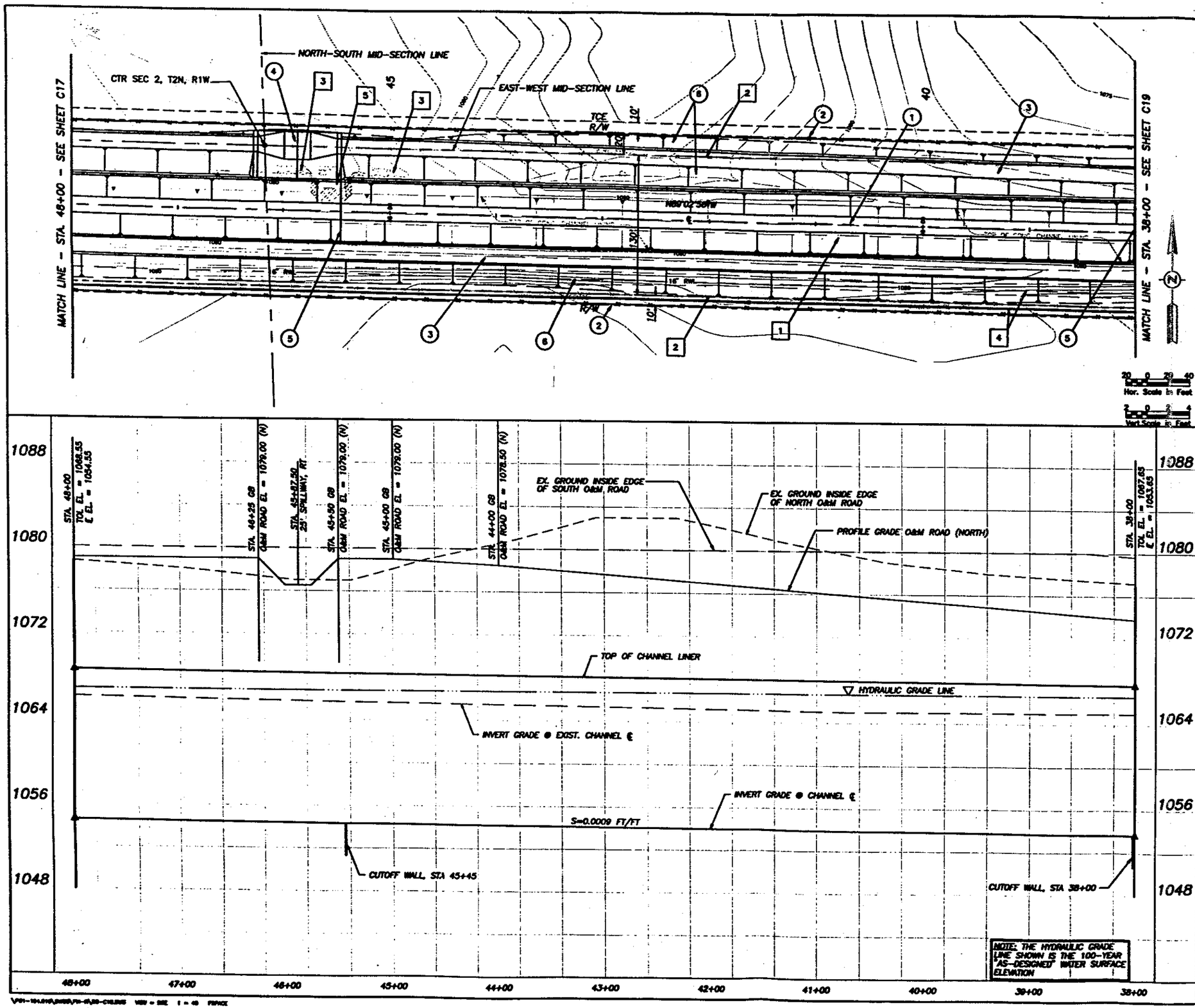
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 58+00 TO STATION 48+00

	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. COPPERTON	5/95

LOWRY

NBS/LOWRY PROJECT NO. P61-194-019

SHEET C17/22



NOTE: THE HYDRAULIC GRADE LINE SHOWN IS THE 100-YEAR "AS-DESIGNED" WATER SURFACE ELEVATION

REMOVE

1. REMOVE EXISTING CONCRETE CHANNEL
2. REMOVE EXISTING BARBED WIRE FENCE
3. REMOVE EXISTING RIP RAP
4. REMOVE AND RELOCATE EXISTING REUSE WATER LINE, SEE REUSE WATER LINE PLANS.
5. REMOVE EXISTING CONCRETE SPILLWAY.

CONSTRUCT

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL 6.
2. CONSTRUCT NEW BARBED WIRE FENCE PER DETAIL 35.
3. CONSTRUCT NEW O&M ROAD PER TYPICAL SECTIONS AND DETAIL 30.
4. CONSTRUCT NEW SPILLWAY, STA 45+87.50, DETAIL 8.
5. CONSTRUCT NEW CUTOFF WALL PER DETAIL 12.
6. CONSTRUCT GRAVEL MULCH SLOPE PROTECTION, PER TYPICAL SECTIONS AND DETAIL 5.

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

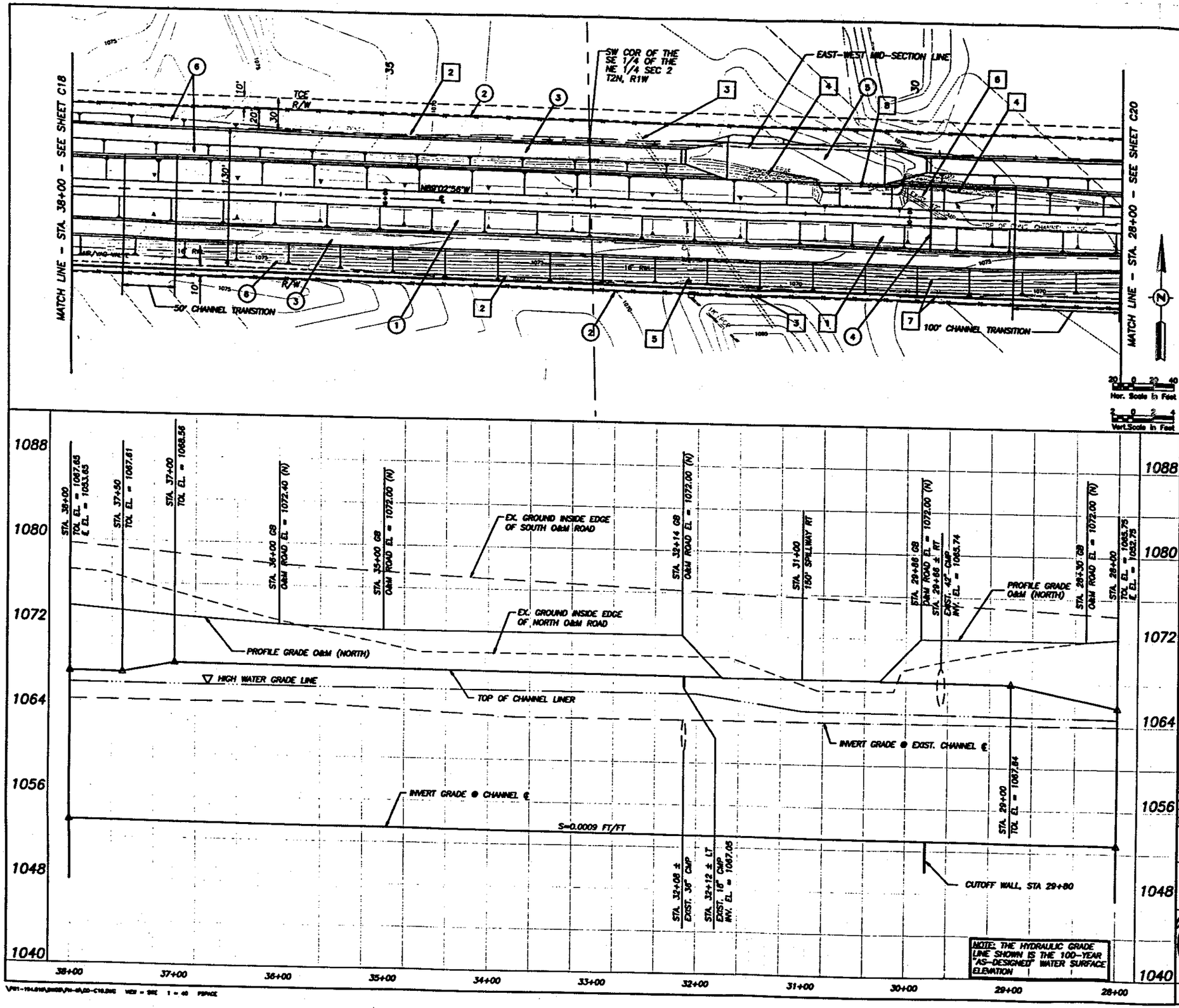
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 48+00 TO STATION 38+00

	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. COPPERTON	5/95

NBS/LOWRY

NBS/LOWRY PROJECT NO. P81-194-019

SHEET C18/22



REMOVE

1. REMOVE EXISTING CONCRETE CHANNEL
2. REMOVE EXISTING BARBED WIRE FENCE
3. CUT AND PLUG EXISTING 36" CMP 5' OUTSIDE EXCAVATION LIMITS PER MAG STD 427
4. REMOVE EXISTING RIP RAP
5. CUT AND PLUG EXISTING 18" CMP 5' OUTSIDE EXCAVATION LIMITS PER MAG STD 427
6. REMOVE EXISTING 42" CMP
7. REMOVE AND RELOCATE EXISTING REUSE WATER LINE, SEE REUSE WATER LINE PLANS
8. REMOVE EXISTING CONCRETE SPILLWAY.

CONSTRUCT

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL 6.
2. CONSTRUCT NEW BARBED WIRE FENCE PER DETAIL 35.
3. CONSTRUCT NEW O&M ROAD PER TYPICAL SECTIONS AND DETAIL 30.
4. CONSTRUCT NEW CUTOFF WALL PER DETAIL 12.
5. CONSTRUCT NEW SPILLWAY, STA 31+00, DETAIL 7.
6. CONSTRUCT GRAVEL MULCH SLOPE PROTECTION PER TYPICAL SECTIONS AND DETAIL 5.

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

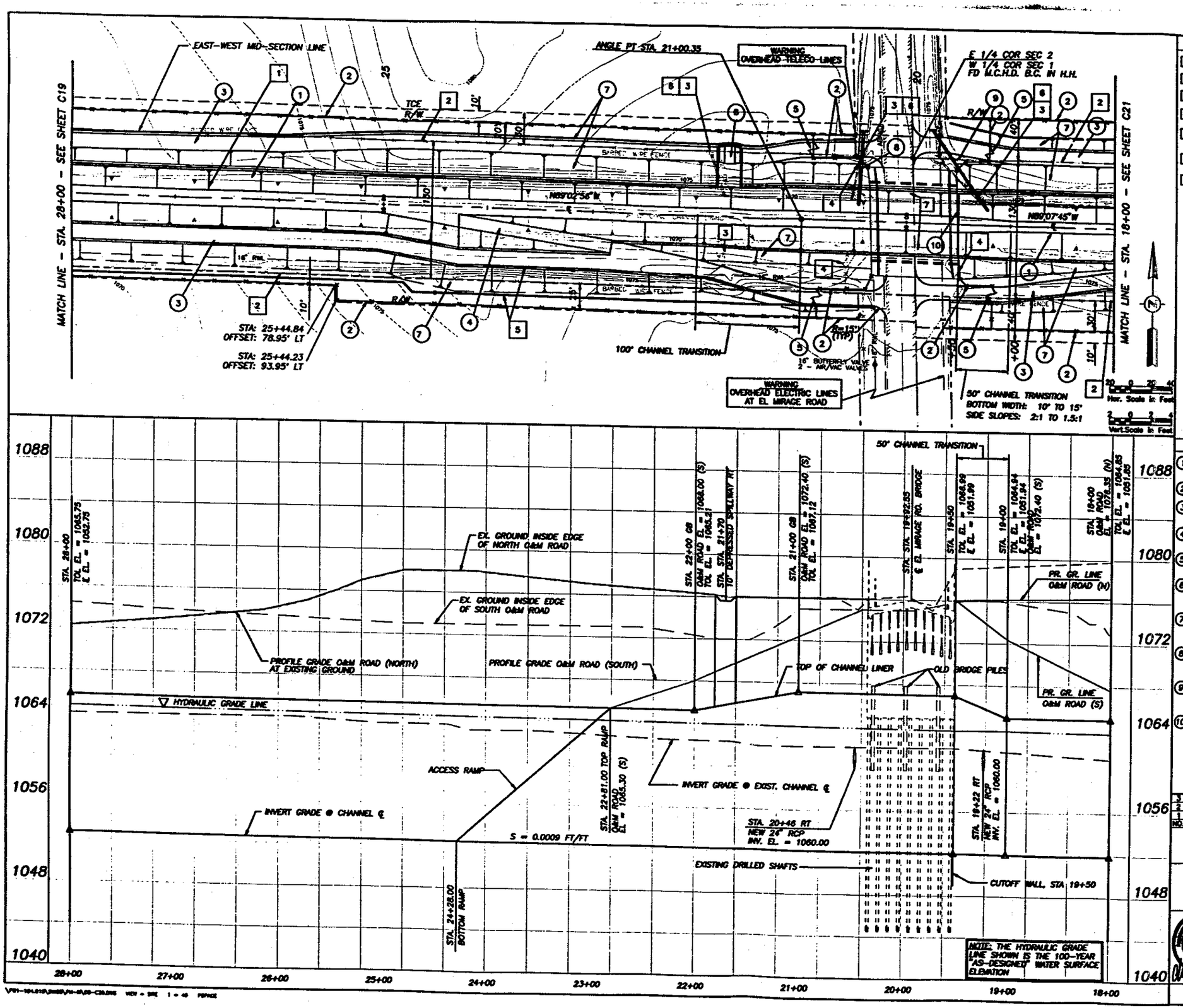
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 38+00 TO STATION 28+00

	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. GOPPERTON	12/94

HBS LOWRY

HBS/LOWRY PROJECT NO. P81-194-019

SHEET C19/22



REMOVE

1. REMOVE EXISTING CONCRETE CHANNEL.
2. REMOVE EXISTING BARBED WIRE FENCE
3. REMOVE EXISTING PIPES.
4. REMOVE EXISTING GATES.
5. REMOVE AND RELOCATE EXISTING REUSE WATER LINE. SEE REUSE WATER LINE PLANS.
6. REMOVE CONCRETE DRAINAGE BOX.
7. REMOVE FOUNDATION PILES OF OLD BRIDGE AS REQUIRED. EXISTING TOP OF PILES ARE AT ELEV 1068±.

CONSTRUCT

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL 6.
2. CONSTRUCT NEW BARBED WIRE FENCE PER DETAIL 35.
3. CONSTRUCT NEW O&M ROAD PER TYPICAL SECTIONS AND DETAIL 30.
4. CONSTRUCT NEW MAINTENANCE ACCESS RAMP PER DETAIL 3.
5. CONSTRUCT NEW 14 FT BARBED WIRE DOUBLE GATE AT 40' BACK FROM R/W LINE, PER DETAIL 36.
6. CONSTRUCT NEW CUT SLOPE SPILLWAY WITH O & M ROAD CROSSING, STA 21+70, EL. = 1075.70, W=10 FT, L=40 FT, D=0.5 FT, PER DETAIL 10.
7. CONSTRUCT GRAVEL MULCH SLOPE PROTECTION PER TYPICAL SECTIONS AND DETAIL 5.
8. CONSTRUCT NEW 24" X 68' RCP, MITER OUTLET END PER DETAIL 16; NEW STRAIGHT HEADWALL, MAG STD 501-1, STA 20+42.5, 85' RT INVERT = 1073.5
9. CONSTRUCT NEW 24" X 91' RCP, MITER OUTLET END DETAIL 16; NEW STRAIGHT HEADWALL, MAG STD 501-1, STA 19+78.1, 88.5' RT INVERT = 1074.5
10. CONSTRUCT NEW CUTOFF WALL PER DETAIL 12.

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

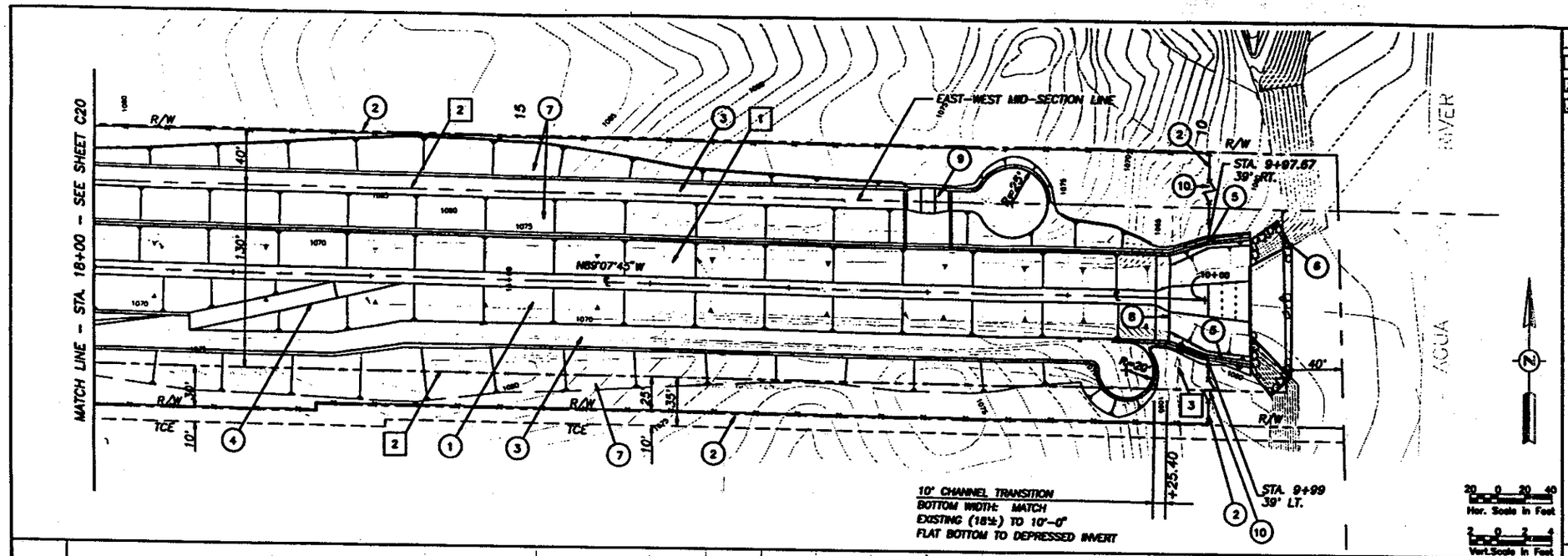
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 28+00 TO STATION 18+00

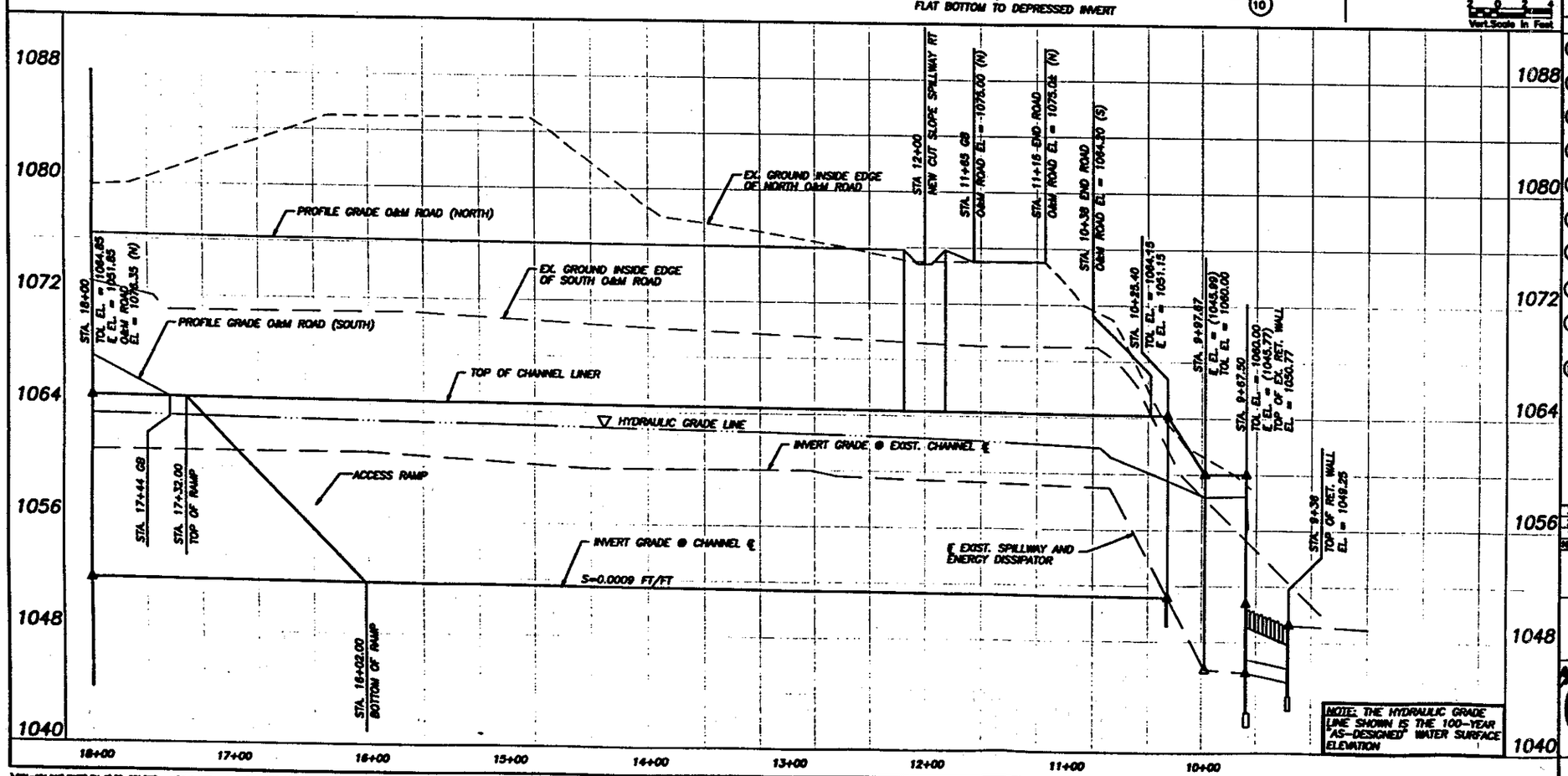
	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. COPPERTON	5/95

HDR LOWRY

HDR/LOWRY PROJECT NO. P81-194-019

SHEET C20/22





NOTE: THE HYDRAULIC GRADE LINE SHOWN IS THE 100–YEAR "AS–DESIGNED" WATER SURFACE ELEVATION

REMOVE

1. REMOVE EXISTING CONCRETE CHANNEL
2. REMOVE EXISTING BARBED WIRE FENCE
3. REMOVE EXISTING GATE

CONSTRUCT

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER TYPICAL SECTIONS AND DETAIL 6.
2. CONSTRUCT NEW BARBED WIRE FENCE PER DETAIL 35. TERMINATE AT STA. 10+00.
3. CONSTRUCT NEW O&M ROAD PER TYPICAL SECTIONS AND DETAIL 30.
4. CONSTRUCT NEW MAINTENANCE ACCESS RAMP PER DETAIL 3.
5. EXTEND CHANNEL LINING PER DETAIL 1 AND DETAIL 18, STA. 9+68 TO STA 10+25.40
6. CONSTRUCT NEW GROUTED RIP RAP TYPE II OUTLET PROTECTION PER DETAIL 18.
7. CONSTRUCT GRAVEL MULCH SLOPE PROTECTION PER TYPICAL SECTIONS AND DETAIL 5.
8. SAWCUT EXISTING CHANNEL, STA 10+25.40; TIE NEW LINING INTO EXISTING CHANNEL LINING PER DETAIL 2.
9. CONSTRUCT NEW CUT SLOPE SPILLWAY WITH O&M ROAD CROSSING, STA 12+00, L=44 FT, W=10 FT, D=1.0 FT, ELEV. "A" = 1074.80, DETAIL 10.
10. CONSTRUCT NEW 14' DOUBLE BARBED WIRE GATE ON BOTH SIDES AS SHOWN AND PER DETAIL 36.

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYBART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
CHANNEL PLAN AND PROFILE
STATION 16+00 TO STATION 9+36

	BY	DATE
DESIGNED	S. YINGLING	8/94
DRAWN	S. YINGLING	8/94
CHECKED	C. GOPPERTON	5/95

NBS/LOWRY

NBS/LOWRY PROJECT NO. P81–194–019

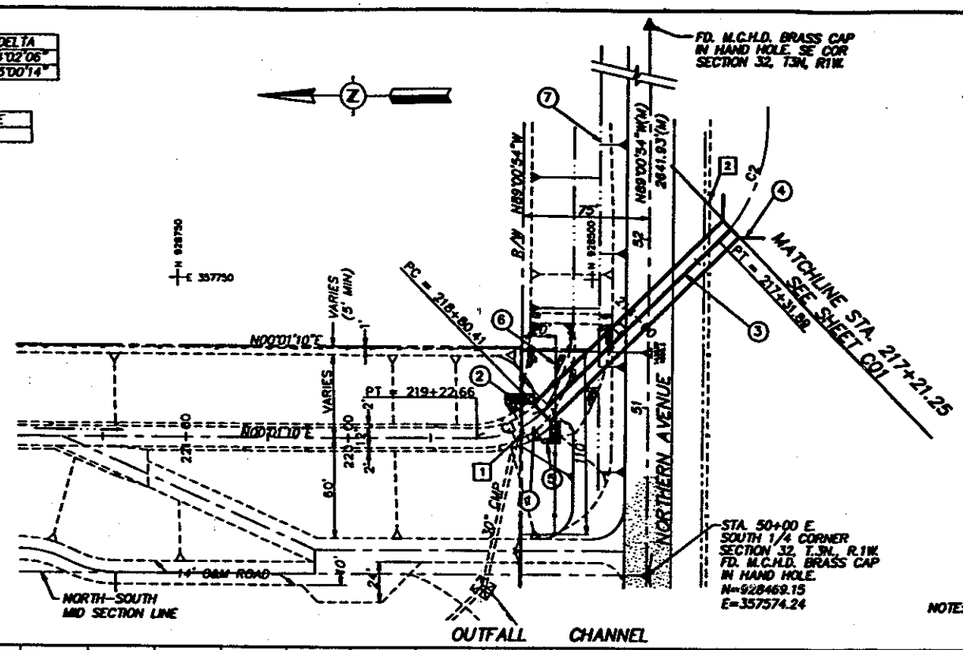
SHEET C21/22

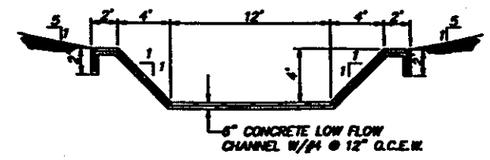
CURVE DATA

CURVE	RADIUS	LENGTH	TANGENT	CHORD	DELTA
C1	54.97'	42.25'	22.23'	41.22'	44°02'06"
C2	100.00'	78.55'	41.43'	76.54'	45°00'14"

LINE DATA

LINE	DIRECTION	DISTANCE
L1	N44°00'54"W	148.52'



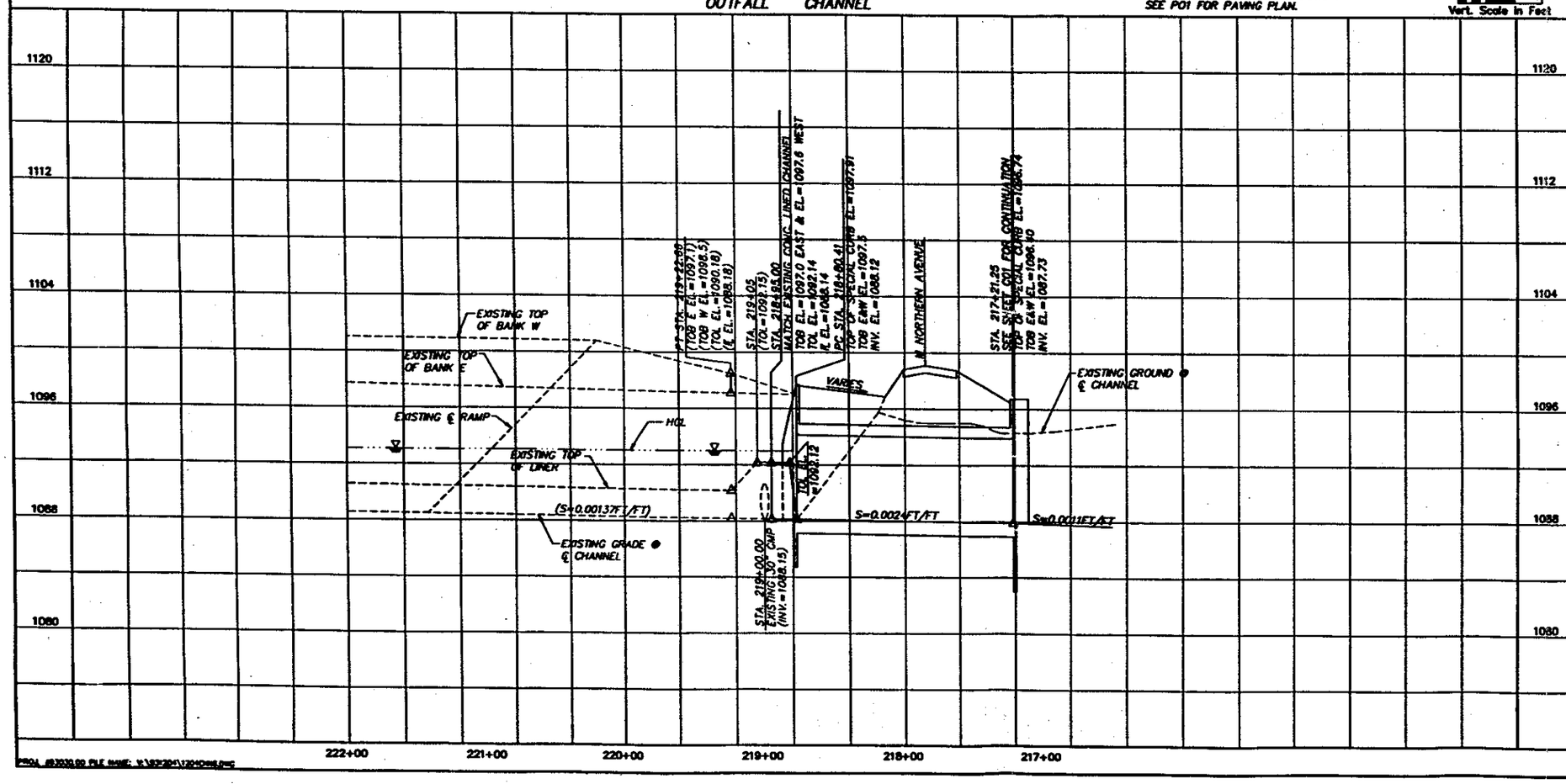


TYPICAL SECTION
STA. 218+80.41 TO STA. 218+95.00

ITEM	CLASS "A" CONCRETE	REINFORCING STEEL	STRUCTURAL BACKFILL
BOX CULVERT	222 CY	32,383 LBS	714 CY
INLET WINGS	14 CY	1250 LBS	66 CY
OUTLET WINGS	23 CY	1651 LBS	90 CY
SPEC CURB	3 CY	268 LBS	
CUTOFF WALL	5 CY	284 LBS	

NOTE: NORTHERN AVENUE TO BE CLOSED TO TRAFFIC DURING CONSTRUCTION. SEE P01 FOR PAVING PLAN.

20 0 20 40
Hor. Scale In Feet
2 0 2 4
Vert. Scale In Feet



☐ REMOVE ☐

1. STA. 218+95 SAWCUT EXISTING CHANNEL LINING AND REMOVE CHANNEL AND RIP-RAP OUTLET PROTECTION TO THE SOUTH.
2. REMOVE AND REINSTALL FENCE AS REQUIRED. MUST MAINTAIN SECURITY PER LAFB SECURITY REQUIREMENTS IF FENCE IS REMOVED.

○ CONSTRUCT ○

1. STA. 218+80.41 TO STA. 218+95.00 CONSTRUCT CONCRETE CHANNEL PER TYPICAL SECTION ON THIS SHEET AND MATCH EXISTING CHANNEL AT STA. 218+95.00 CONNECT TO EXISTING CHANNEL PER DETAIL 2.
2. STA. 218+80.41 CONSTRUCT MODIFIED RETAINING WALL PER A.D.O.T. STD. NO. B-18.10. FOR DIMENSIONS AND ELEVATIONS SEE DETAIL 38.
3. STA. 217+21.25 TO STA. 218+80.41 CONSTRUCT 6'X8'X159.16 LF DOUBLE BARREL BOX CULVERT PER A.D.O.T. STD. NO. B-02.20, MODIFIED PER SPECIAL CURB AND CUTOFF WALL IN DETAIL 39.
4. STA. 217+21.25 CONSTRUCT MODIFIED RETAINING WALL PER A.D.O.T. STD. NO. B-18.10. FOR DIMENSIONS AND ELEVATIONS SEE DETAIL 38.
5. CONSTRUCT GROUTED RIP-RAP INLET PROTECTION PER DETAIL 37 AND DETAIL 40.
6. REMOVE AND RELOCATE 20' SOUTH 4 STRAND PLAIN WIRE FENCE IN KIND TO ACCOMODATE RIP-RAP REMOVAL & BOX CONSTRUCTION.
7. FILL EXISTING DITCH AND CONSTRUCT NEW GRADER DITCH PER DETAIL 37.

263-1100

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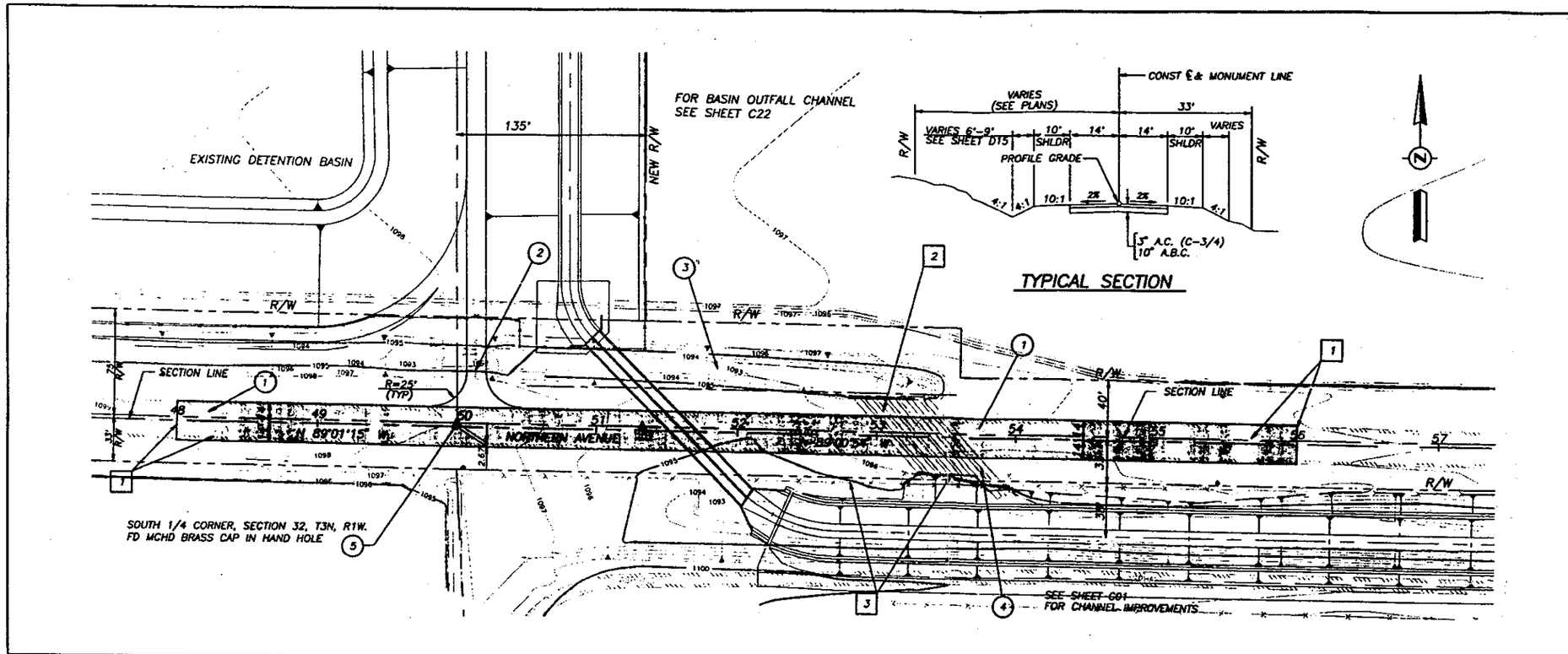
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
OUTFALL CHANNEL
STA. 217+21.25 TO STA. 222+00.00

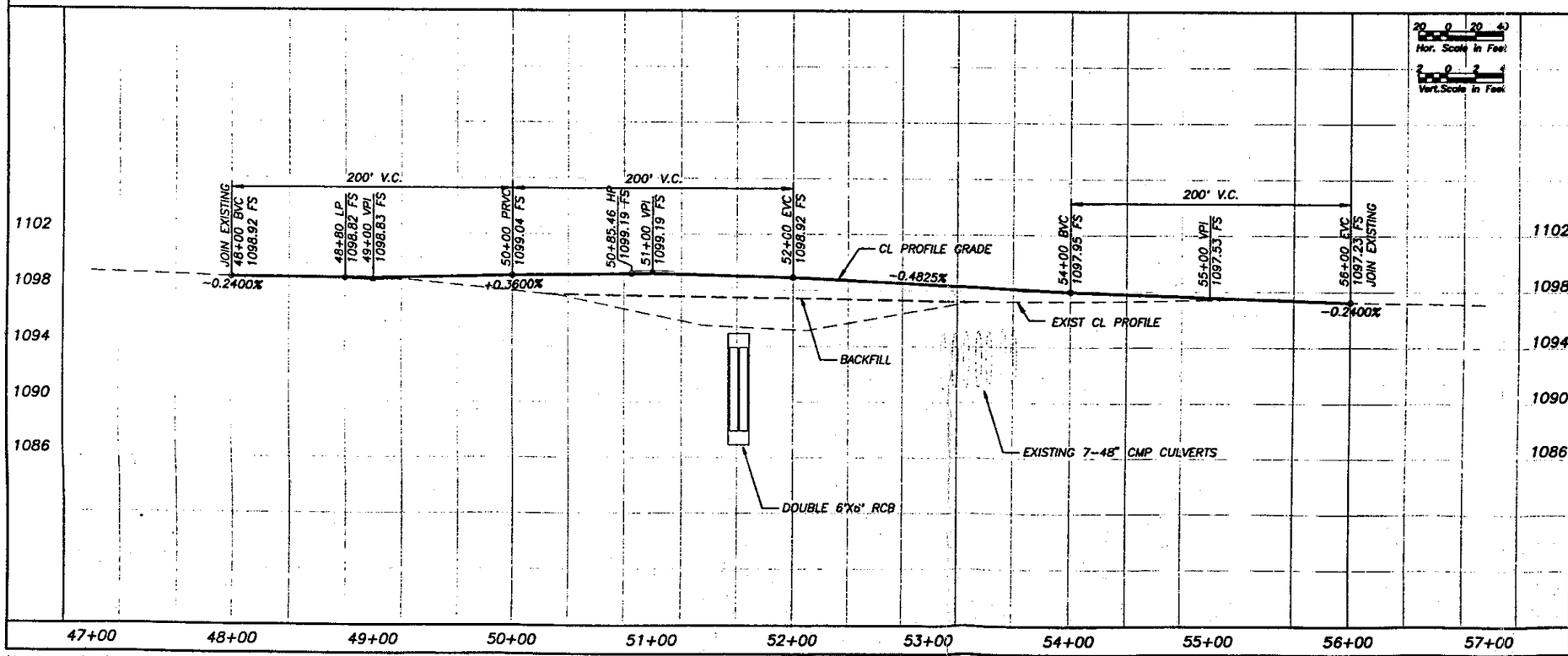
	BY	DATE
DESIGNED	JGT	4/95
DRAWN	VF	4/95
CHECKED	ACP	4/95

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

WOOD/PATEL PROJECT NO. 93030.00

SHEET C22/22





☐ REMOVE ☐

1. SAWCUT AND REMOVE EXISTING PAVEMENT.
2. REMOVE EXISTING 48" CMP CULVERTS AND HEADWALLLS.
3. REMOVE AND REINSTALL FENCE AS REQUIRED. MUST MAINTAIN SECURITY PER LAFB SECURITY REQUIREMENTS IF FENCE IS REMOVED.

○ CONSTRUCT ○

1. PLACE ASPHALT CONCRETE PAVING AND AGGREGATE BASE, STA 48+00 TO 56+00 SEE TYPICAL SECTION, THIS SHEET.
2. CONSTRUCT 20' WIDE x 22' LONG DRIVEWAY ACCESS, 3" AC (C-3/4) OVER 10" BASE AT STA. 50+14.
3. BACKFILL DITCH, SEE SHEET C22, AND DETAIL 37 ON SHEET D15.
4. BACKFILL CULVERTS
5. INSTALL NEW SURVEY MARKER MAG STD. DETAIL 120-2, TYPE E

2S3-1100

NO.	REVISION		DATE
3			
2			
1			

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
NORTHERN AVENUE PAVING PLAN AND PROFILE
STATION 47+00 TO STATION 56+00

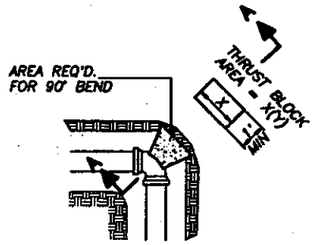
	BY	DATE
DESIGNED	S. Yamakawa	9/94
DRAWN	S. Yamakawa	9/94
CHECKED	C. GOPPERTON	9/94

NBS LOWRY

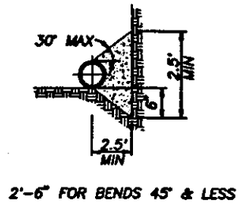
NBS/LOWRY PROJECT NO. P81-194-019

SHEET P01/1

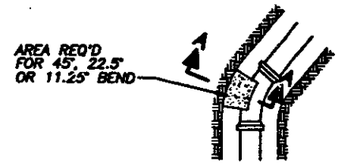
\P81-194.019\DWGS\PH-01\DD-P01.DWG VIEW = SITE 1 = 40 PSPACE



TYPICAL THRUST BLOCK



SECTION A-A



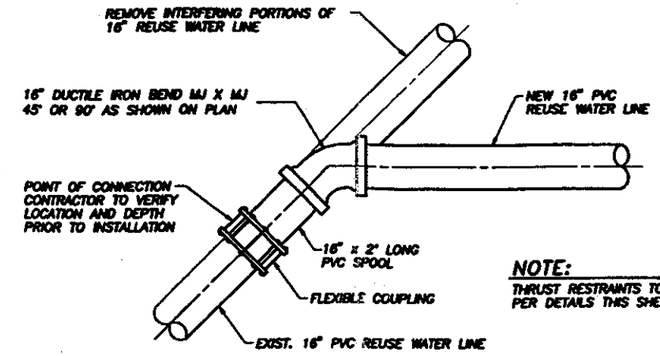
TYPICAL THRUST BLOCK

THRUST BLOCK AREA REQUIRED X(Y)				
PIPE SIZE	TEES & DEAD END	90° BEND	45° BEND	221/2° BEND
16"	18 SF	25 SF	14 SF	14 SF

NOTES:
1. THRUST BLOCKS TO BE EXTENDED TO UNDISTURBED GROUND
2. CONCRETE SHALL BE 2500 PSI MINIMUM
3. THRUST BLOCK AREA BASED ON 2000 LB/SF BEARING. CAPACITY SHALL BE ADJUSTED TO MEET ACTUAL CONDITIONS. NOMINAL PRESSURE 150 PSI.

THRUST BLOCK DETAILS

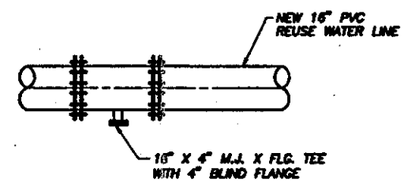
NOT TO SCALE



NOTE:
THRUST RESTRAINTS TO BE CONSTRUCTED PER DETAILS THIS SHEET.

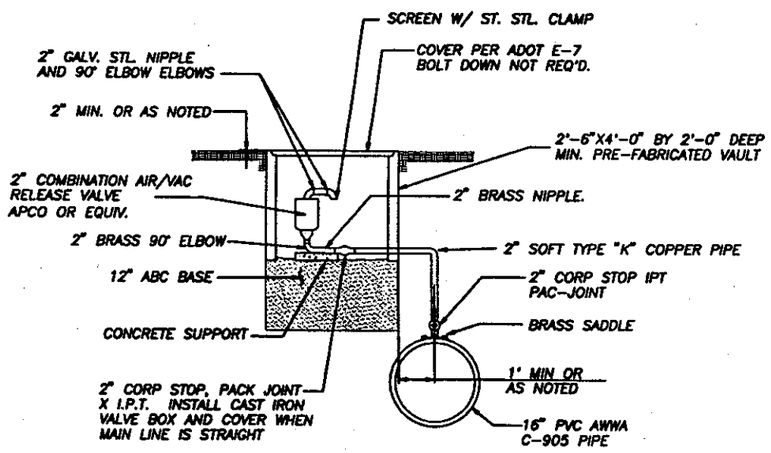
16" REUSE WATER LINE CONNECTION TO EXISTING

NOT TO SCALE



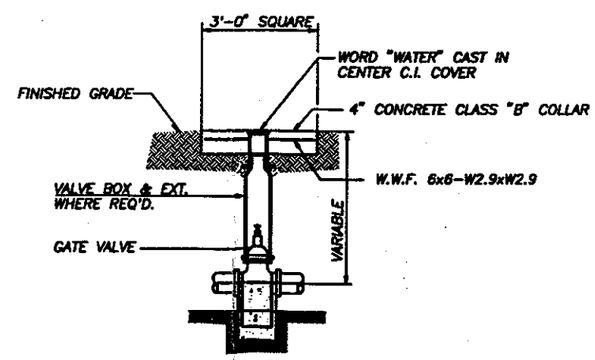
BLOWOFF ASSEMBLY

NOT TO SCALE



AIR/VACUUM RELEASE VALVE DETAIL

NOT TO SCALE



VALVE BOX DETAIL

NOT TO SCALE

NO.	REVISION		DATE
3			
2			
1			

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS

WATERLINE DETAILS

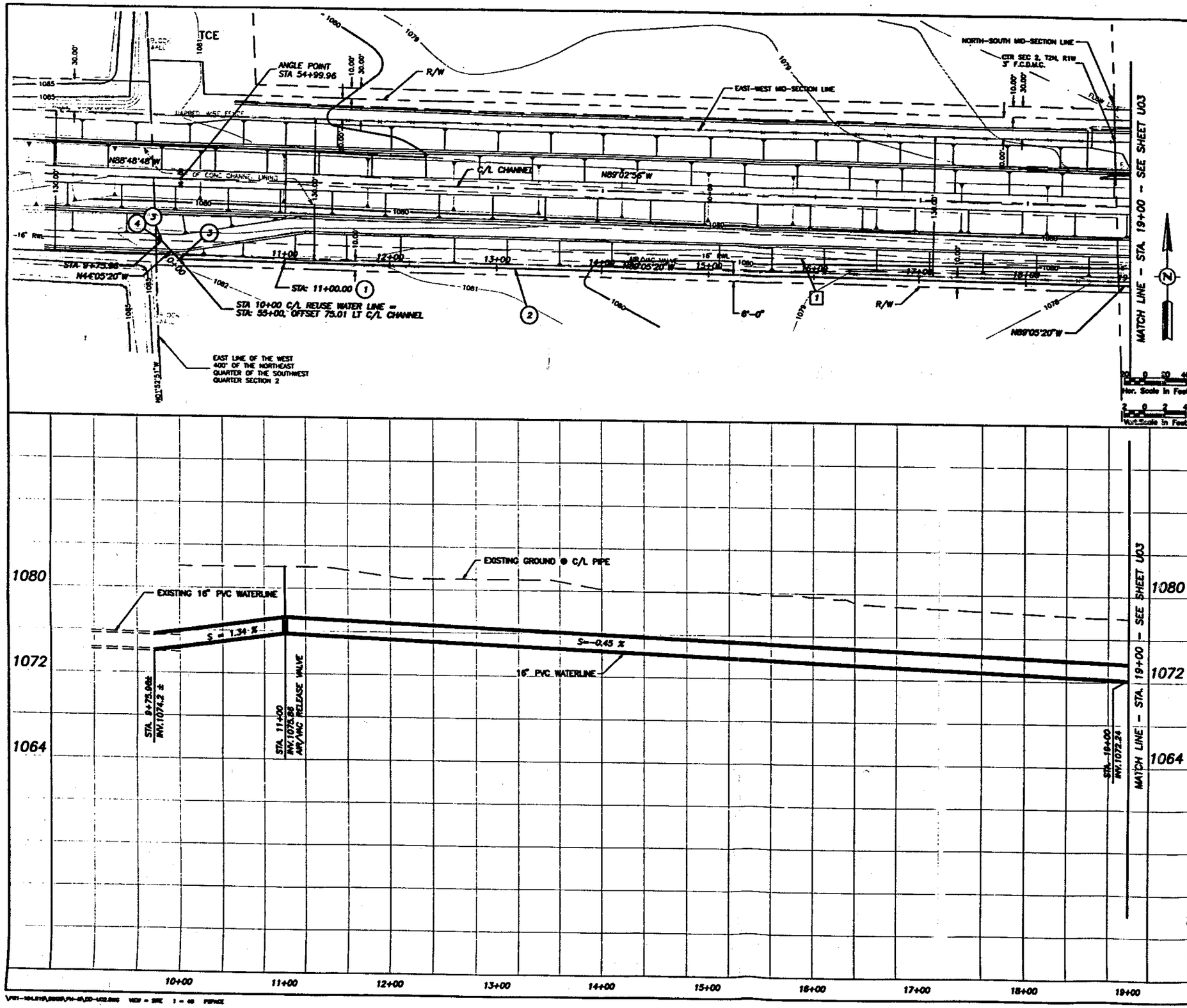
	BY	DATE
DESIGNED	C. GOPPERTON	9/1/94
DRAWN	B. PARROTT	9/1/94
CHECKED	C. GOPPERTON	1/4/95

MBS LOWRY

MBS/LOWRY PROJECT NO. F81-194-019

SHEET U01/5

\F81-194.019\DWGS\PH-III\DD-U01.DWG VIEW = SITE 1 = 20 MBPACE



REMOVE

1 REMOVE EXISTING 16" PVC WATERLINE

CONSTRUCT

1. INSTALL AIR/VAC RELEASE VALVE PER DETAILS SH. U01/5.
2. INSTALL 16" AWWA C905 PVC PIPE PER DETAILS SH. U01/5 AND DETAIL NO. 33.
3. INSTALL 16" DUCTILE IRON 45° BEND, MJ X MJ.
4. CONNECT TO EXISTING WATERLINE PER DETAILS SH. U01/5.

2S3-1100

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

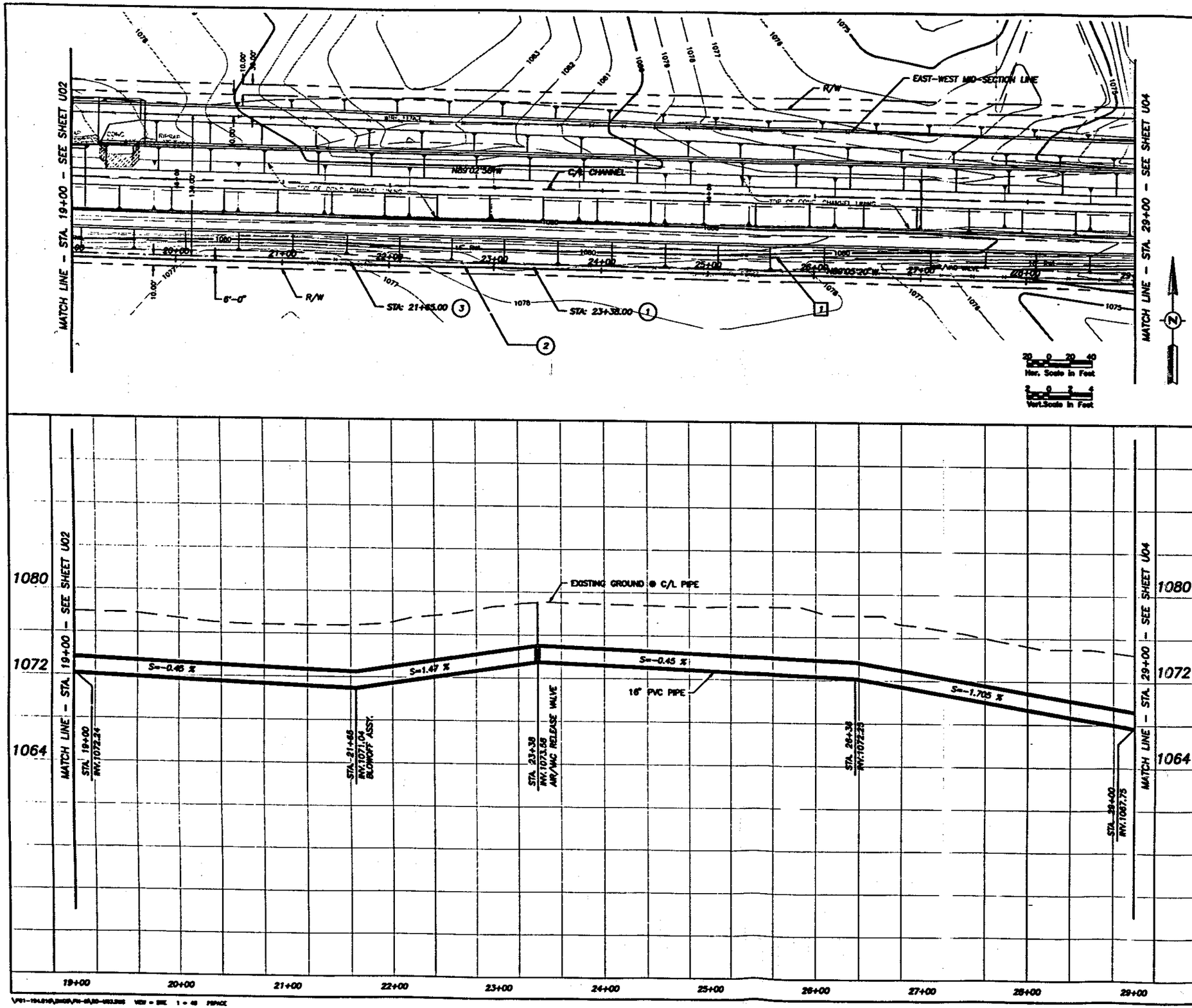
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
REUSE WATERLINE RELOCATION
STATION 9+75.96 TO STATION 19+00

	BY	DATE
DESIGNED	S. YINGLING	5/1/94
DRAWN	S. YINGLING	5/1/94
CHECKED	C. GOPPERTON	9/17/94

HBS LOWRY

HBS/LOWRY PROJECT NO. P81-194-019

SHEET U02/5



REMOVE

1. REMOVE EXISTING 16" PVC WATERLINE

CONSTRUCT

1. INSTALL AIR/VAC RELEASE VALVE PER DETAILS SH. U01/3.
2. INSTALL 16" AWWA C905 PVC PIPE PER DETAILS SH. U01/3 AND DETAIL NO. 33.
3. INSTALL 4" BLOWOFF ASSEMBLY PER DETAILS SH. U01/3.

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

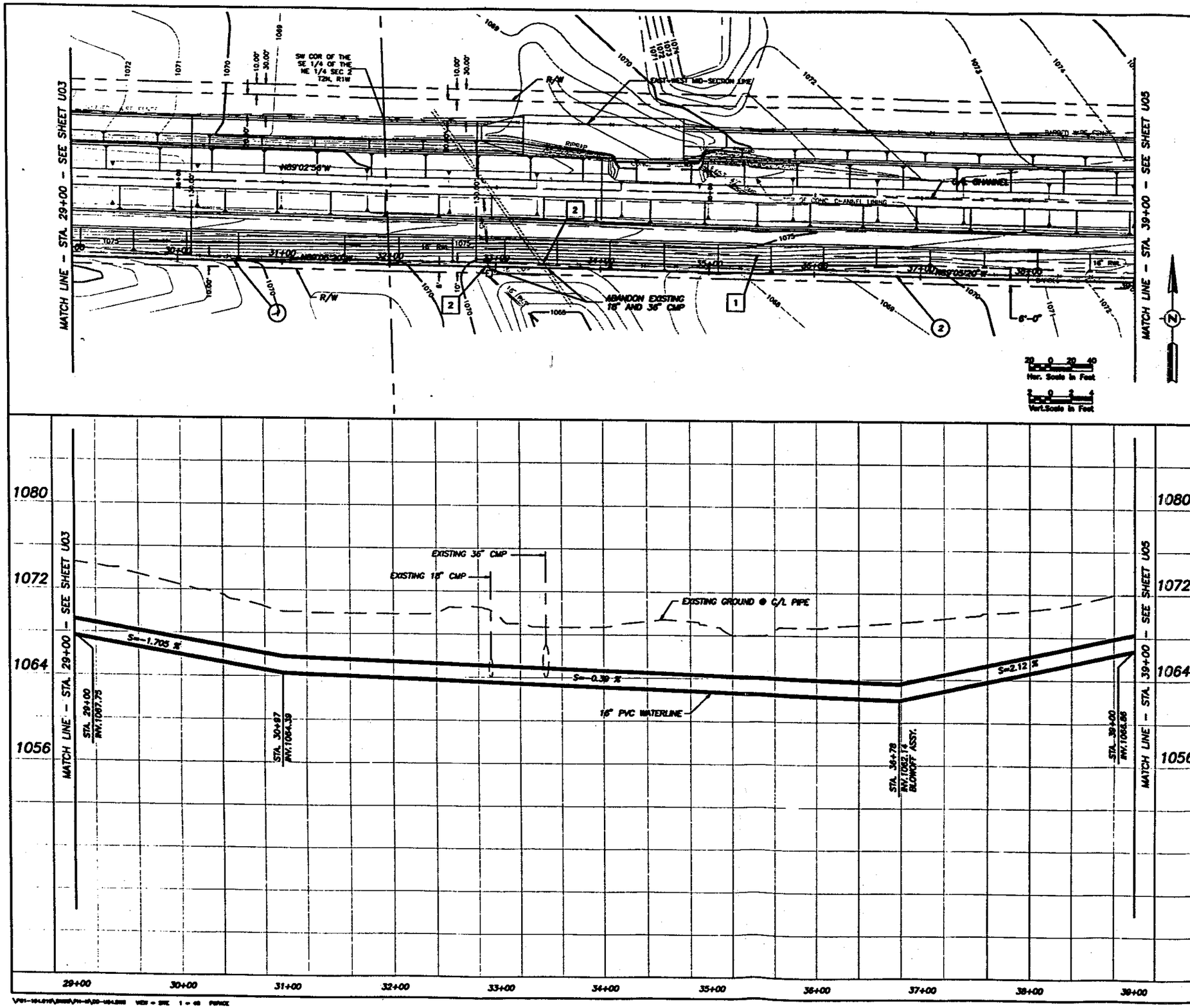
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
REUSE WATERLINE RELOCATION
STATION 19+00 TO STATION 29+00

	BY	DATE
DESIGNED	S. YINGLING	5/1/94
DRAWN	S. YINGLING	5/1/94
CHECKED	C. GOPPERTON	9/17/94

HDR LOWRY

HDS/LOWRY PROJECT NO. F91-194-019

SHEET U03/5



REMOVE

1. REMOVE EXISTING 16" PVC WATERLINE
2. CUT & PLUG STORM DRAIN PIPE.

CONSTRUCT

1. INSTALL 16" AWWA C905 PVC PIPE PER DETAILS SH. U01/5 AND DETAIL NO. 33.
2. INSTALL 4" BLOWOFF ASSEMBLY PER DETAILS SH. U01/5.

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

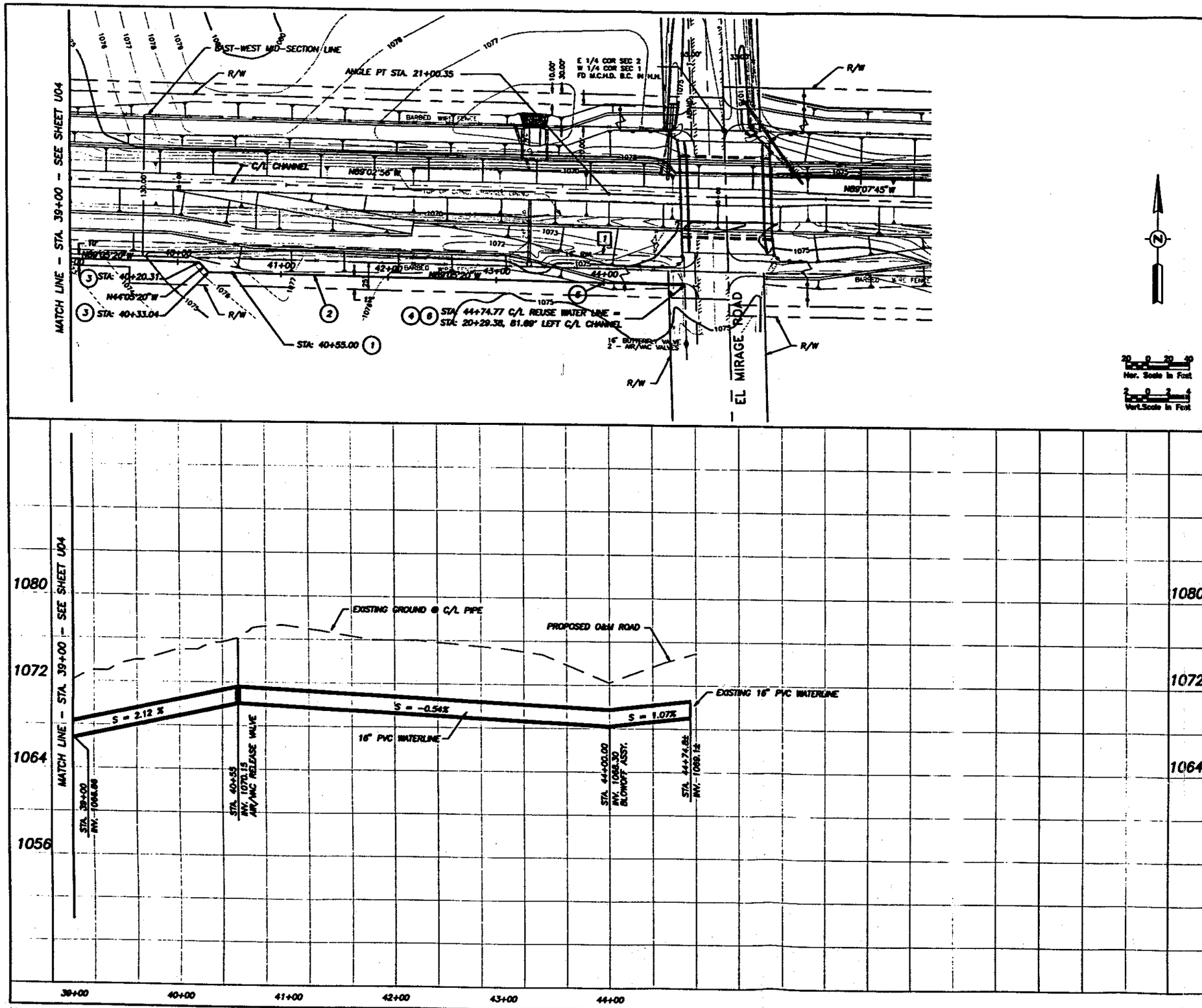
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
REUSE WATERLINE RELOCATION
STATION 29+00 TO STATION 39+00

	BY	DATE
DESIGNED	S. YINGLING	5/1/94
DRAWN	S. YINGLING	5/1/94
CHECKED	C. GOPPERTON	9/17/94

NBS/LOWRY

NBS/LOWRY PROJECT NO. P81-194-019

SHEET U04/5



☐ REMOVE ☐

7 REMOVE EXISTING 16" PVC WATERLINE

○ CONSTRUCT ○

1. INSTALL AIR/VAC RELEASE VALVE PER DETAILS SH. U01/5.
2. INSTALL 16" AWWA C905 PVC PIPE PER DETAILS SH. U01/5 AND DETAIL NO. 33.
3. INSTALL 45° BEND, MJ X MJ.
4. INSTALL 90° BEND, MJ X MJ.
5. INSTALL 4" BLOWOFF ASSY. PER DETAILS SH. U01/5
6. CONNECT TO EXISTING WATERLINE PER DETAILS SH. U01/5.

263-1100

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

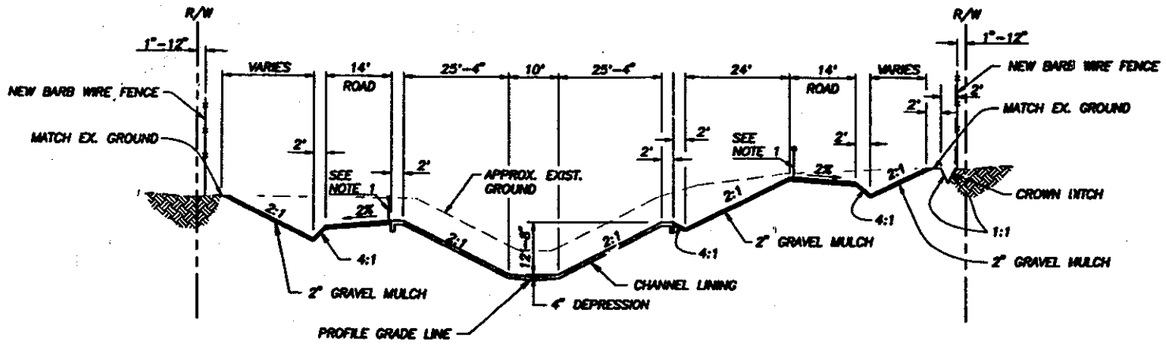
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
REUSE WATERLINE RELOCATION
STATION 39+00 TO STATION 44+74.77

	BY	DATE
DESIGNED	S. YINGLING	5/1/94
DRAWN	S. YINGLING	5/1/94
CHECKED	C. GOPPERTON	9/17/94

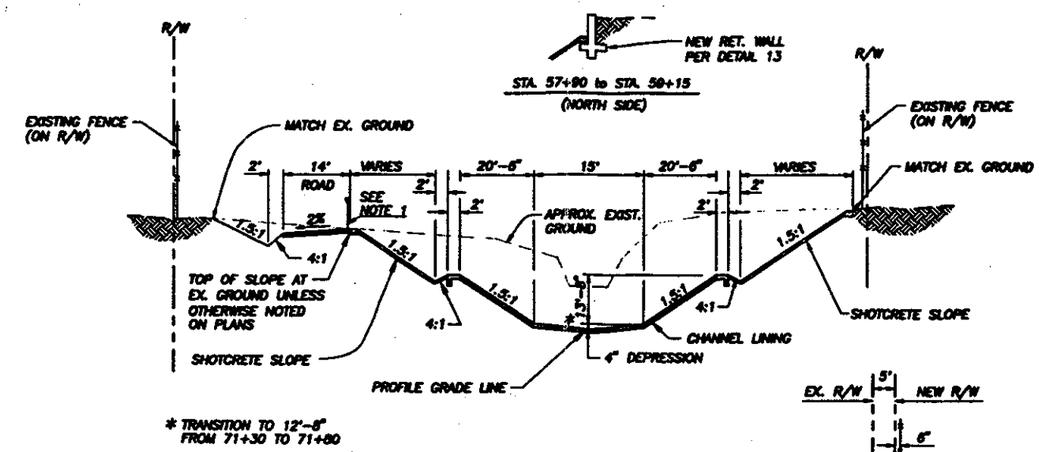
HBG LOWRY

HBG/LOWRY PROJECT NO. PS1-194-019

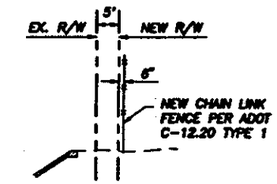
SHEET U05/5



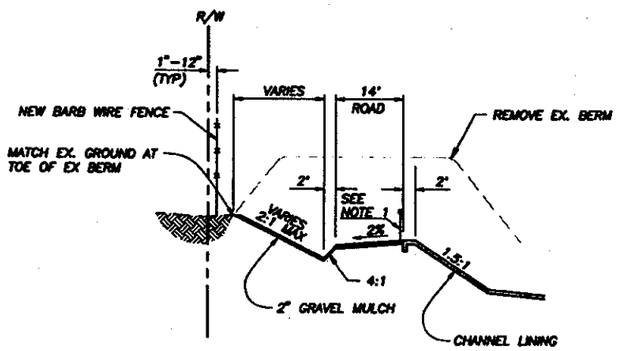
TYPICAL SECTION NO. 1
STA. 10+35.40 TO STA. 19+00
NO SCALE



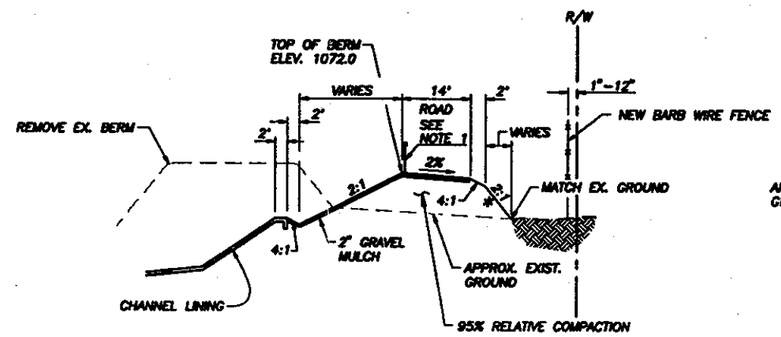
TYPICAL SECTION NO. 3
STA. 55+00 TO STA. 71+80
NO SCALE



STA. 59+60 to STA. 71+97
(NORTH SIDE)

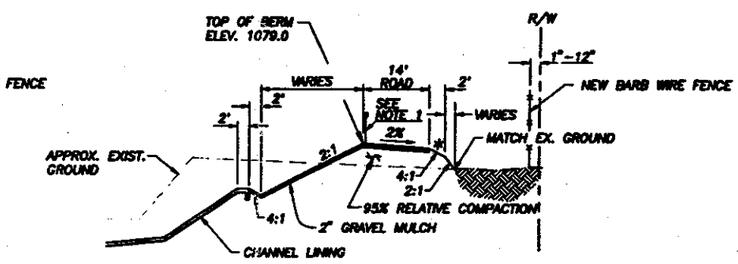


STA. 27+00 to STA. 37+00
(SOUTH SIDE)



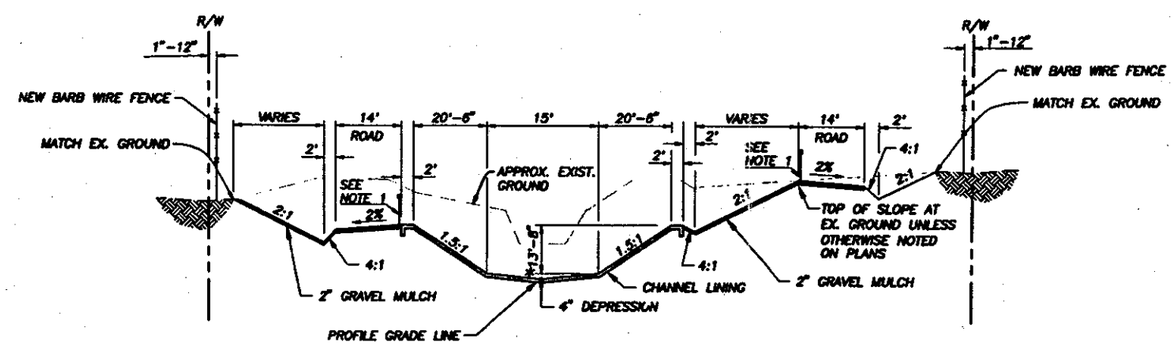
* SEE PLAN FOR RIPRAP PLACEMENT

STA. 28+30 to STA. 35+70
(NORTH SIDE)



* SEE PLAN FOR RIPRAP PLACEMENT

STA. 44+70 to STA. 48+70
(NORTH SIDE)



* 12'-8" - 22+00 TO 28+00
14'-8" - 19+50 TO 21+00
14'-8" - 29+00 TO 37+00

TYPICAL SECTION NO. 2
STA. 19+50 TO STA. 55+00
NO SCALE

NOTES:

1. NEW REFLECTOR PER DETAIL 25 PLACED AT 50 FOOT INTERVALS.

263-1100

NO.	REVISION		DATE
3			
2			
1			

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
TYPICAL SECTIONS
SECTIONS NO. 1 THROUGH NO. 3

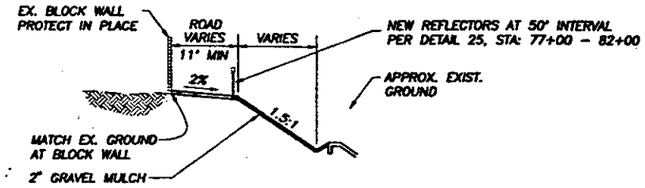
	BY	DATE
DESIGNED	S. YINGLING	4/94
DRAWN	S. YINGLING	4/94
CHECKED	C. GOPPERTON	5/95

NBS LOWRY

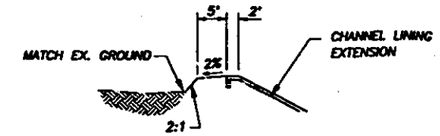
NBS/LOWRY PROJECT NO. P81-194-019

SHEET D01/16

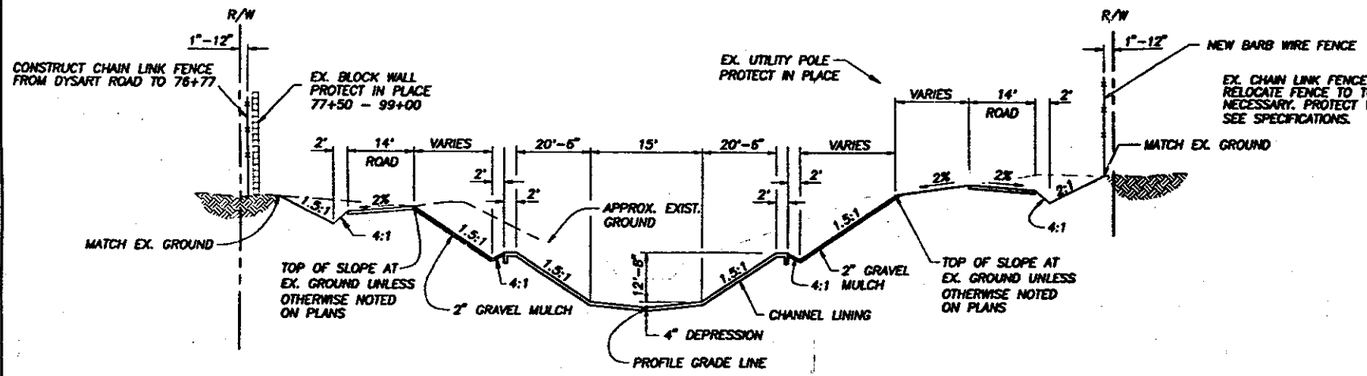
\P81-194.019\DWGS\PH-III\D0-001.DWG VIEW = SITE 1 = 20 MIPHCZ



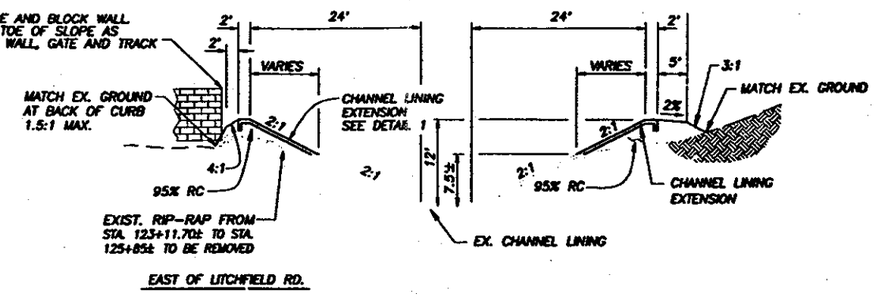
STA. 77+50 TO STA. 81+55
(SOUTH SIDE)



WEST OF LITCHFIELD RD.

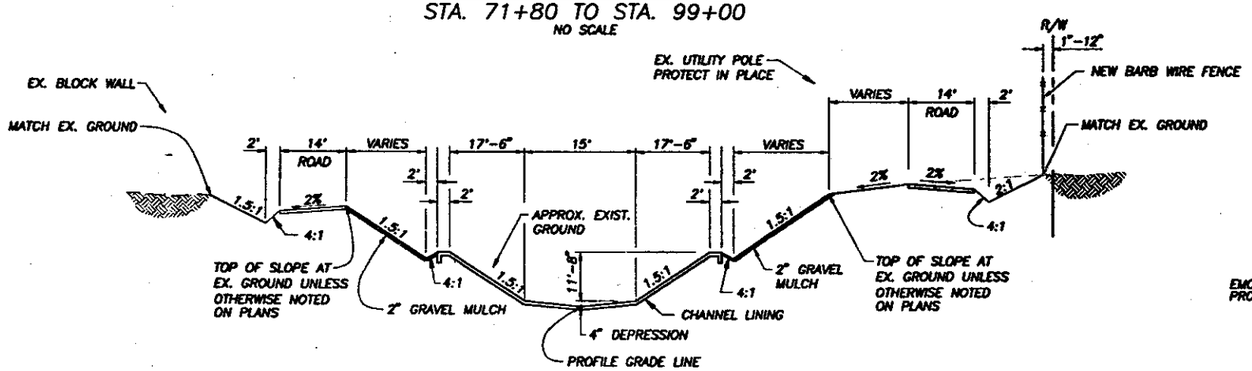


TYPICAL SECTION NO. 4
STA. 71+80 TO STA. 99+00
NO SCALE

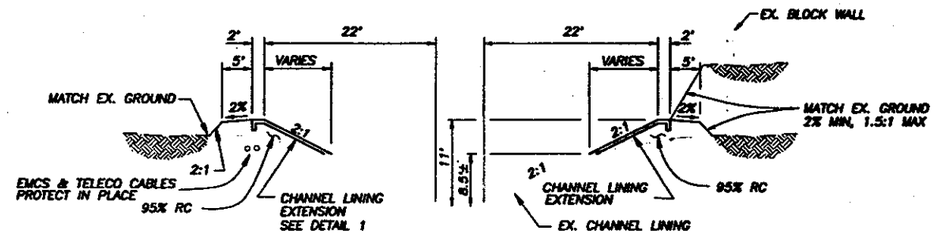


EAST OF LITCHFIELD RD.

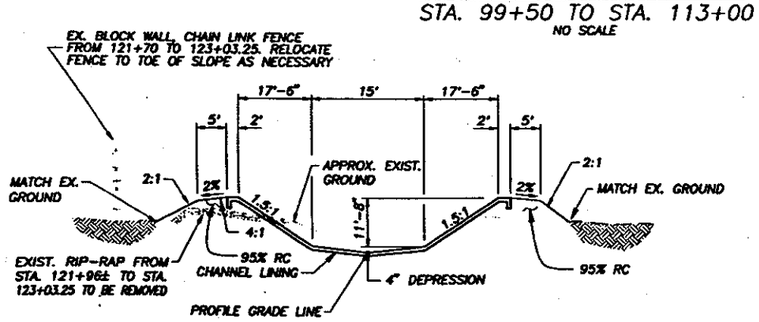
TYPICAL SECTION NO. 7
STA. 123+11.70 AH TO STA. 128+70.12
NO SCALE



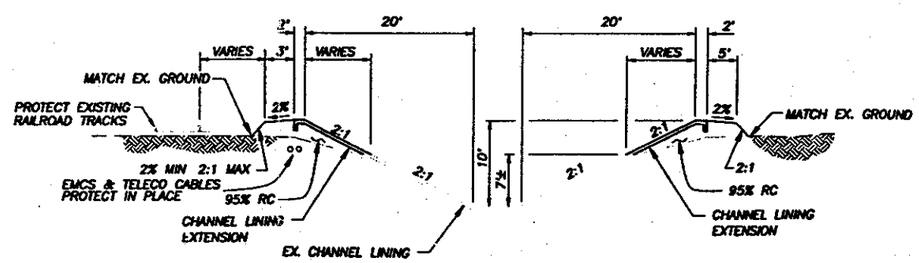
TYPICAL SECTION NO. 5
STA. 99+50 TO STA. 113+00
NO SCALE



TYPICAL SECTION NO. 8
STA. 129+20.12 TO STA. 139+18.19
NO SCALE



TYPICAL SECTION NO. 6
STA. 113+00 TO STA. 123+03.25 BK
NO SCALE



TYPICAL SECTION NO. 9
STA. 139+18.19 TO STA. 149+00
NO SCALE

2G3-1100

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
TYPICAL SECTIONS
SECTIONS NO. 4 THROUGH NO. 9

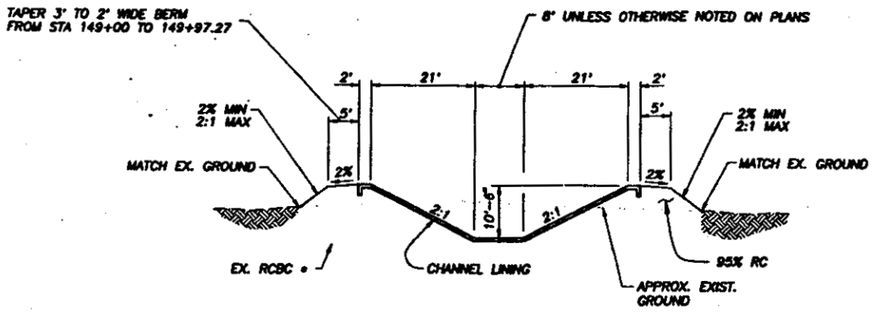
	BY	DATE
DESIGNED	S. YINGLING	5/94
DRAWN	S. YINGLING	5/94
CHECKED	C. GOPPERTON	5/95

NBS LOWRY

NBS/LOWRY PROJECT NO. P81-194-010

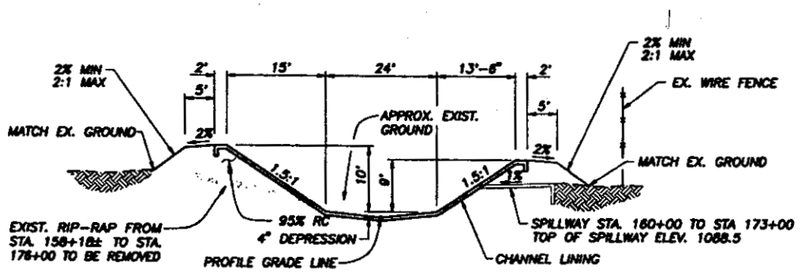
SHEET D02/15

\P81-194.010\DWGS\PH-III\DD-002.DWG VIEW = SITE 1 = 30 MSPACE

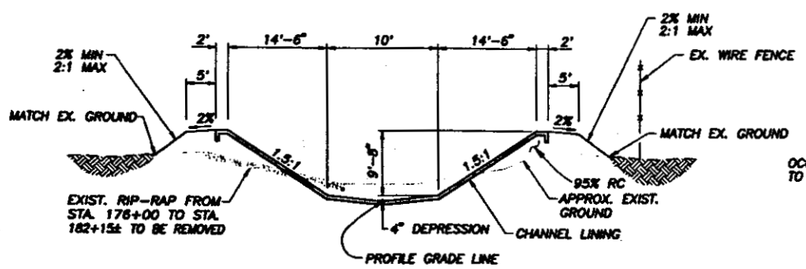


* SEE SHEET S05/6 FOR DETAILS

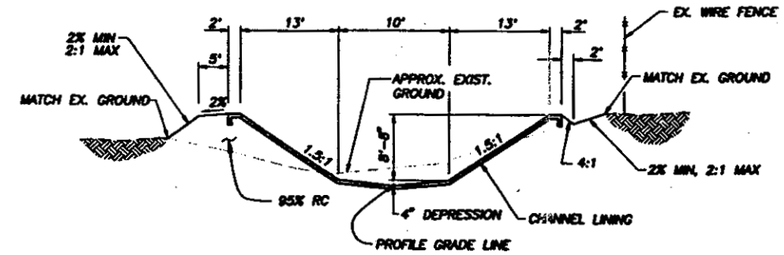
TYPICAL SECTION NO. 10
STA. 149+00 TO STA. 158+00
NO SCALE



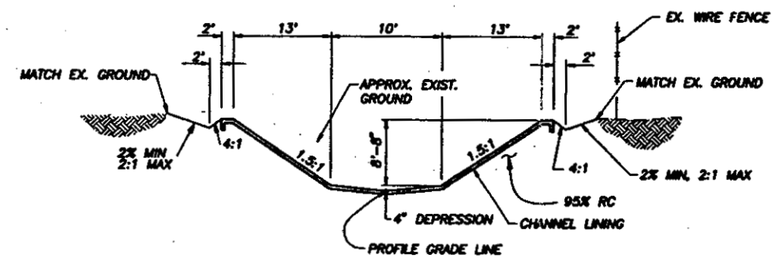
TYPICAL SECTION NO. 11
STA. 158+00 TO STA. 176+00
NO SCALE



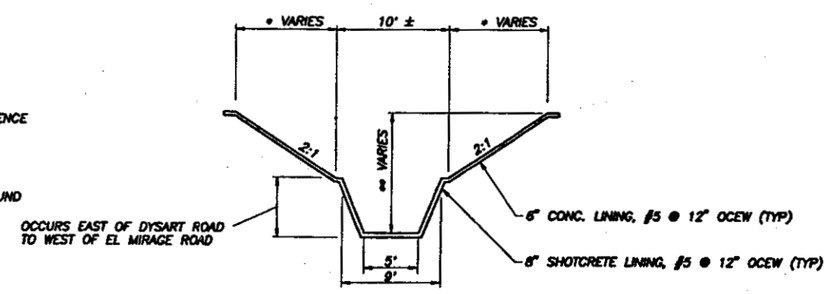
TYPICAL SECTION NO. 12
STA. 176+50 TO STA. 187+00
NO SCALE



TYPICAL SECTION NO. 13
STA. 187+50 TO STA. 205+00
NO SCALE



TYPICAL SECTION NO. 14
STA. 205+00 TO STA. 217+21.25
NO SCALE



TYPICAL SECTION NO. 15
(EXISTING CHANNEL TO BE REMOVED)
NO SCALE

* VARIES FROM 15± TO 19± FEET

** VARIES FROM 7.5± TO 15± FEET

NO.	REVISION		DATE
3			
2			
1			

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
TYPICAL SECTIONS
SECTIONS NO. 10 THROUGH NO. 13

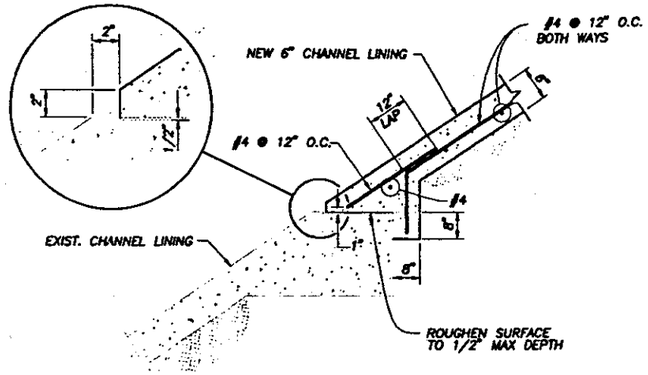
	BY	DATE
DESIGNED	S. YINGLING	5/94
DRAWN	S. YINGLING	5/94
CHECKED	C. GOPPERTON	5/95

NBS/LOWRY

NBS/LOWRY PROJECT NO. PS1-194-019

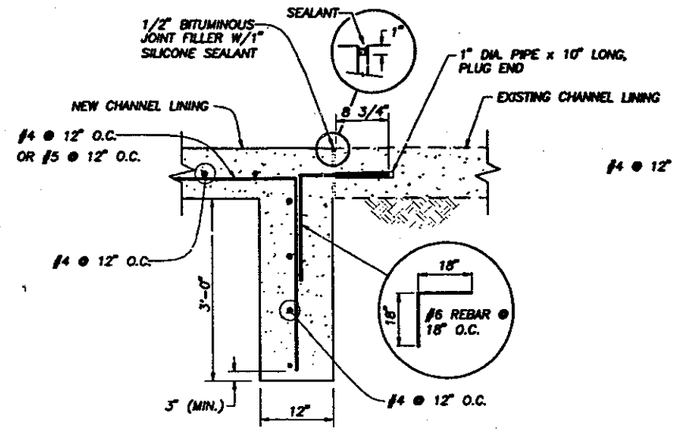
SHEET D03/16

\PS1-194.019\DWGS\PH-01\D0-003.DWG VIEW = SITE 1 = 20 MSPACE

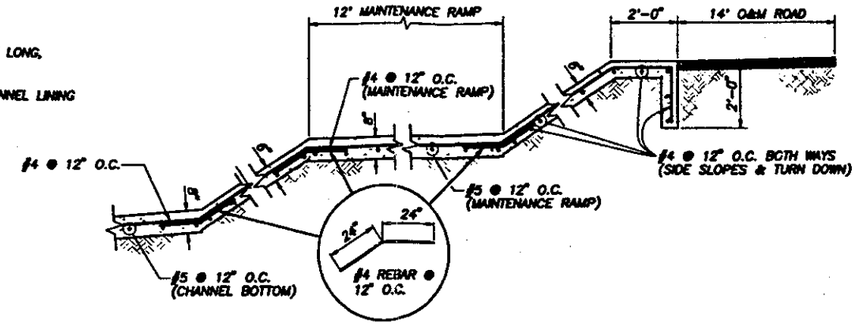


CHANNEL LINING EXTENSION (1)

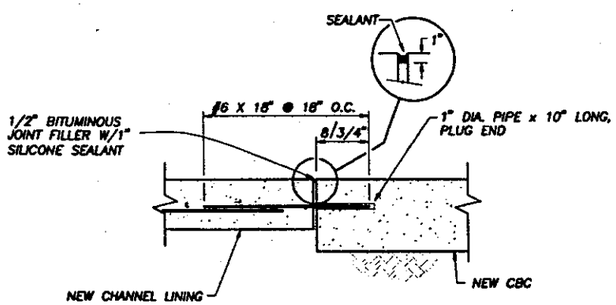
SCALE: 1" = 1'



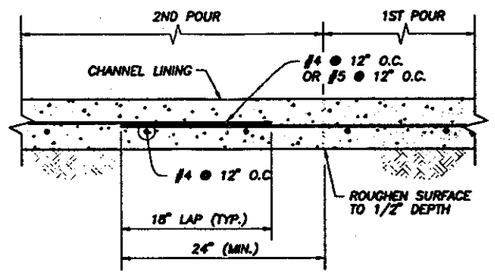
CONSTRUCTION JOINT WITH EXISTING CHANNEL



SECTION A-A



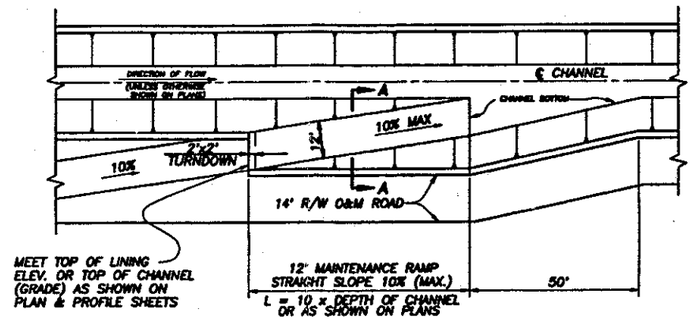
NEW CHANNEL TO NEW CBC CONSTRUCTION JOINT



NEW CHANNEL CONSTRUCTION JOINT

CONSTRUCTION JOINTS (2)

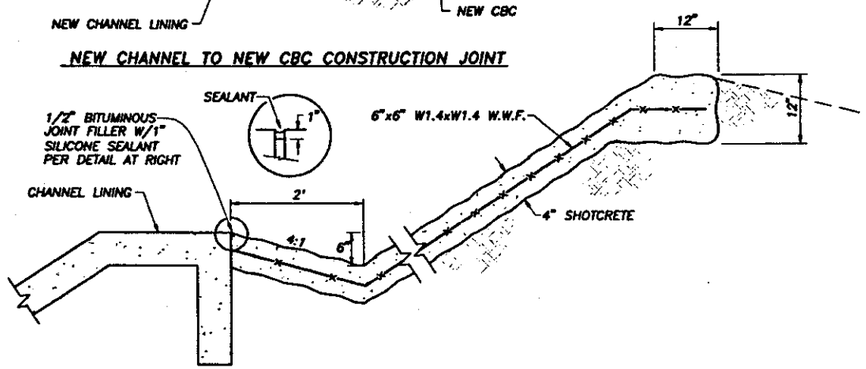
SCALE: 1 1/2" = 1'



PLAN

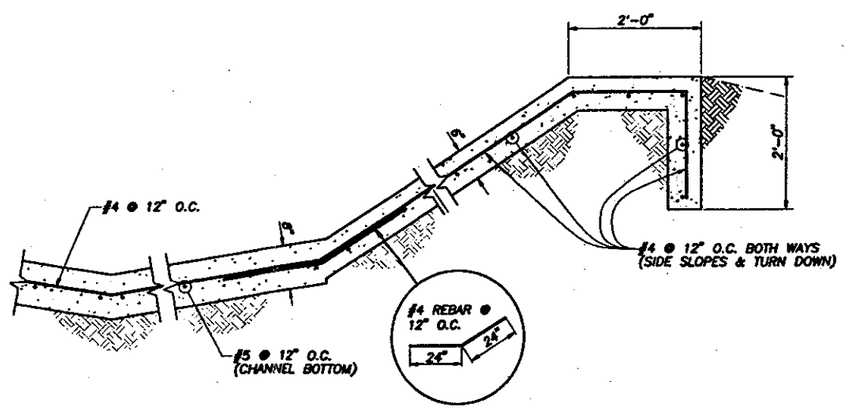
MAINTENANCE ACCESS RAMP (3)

NOT TO SCALE



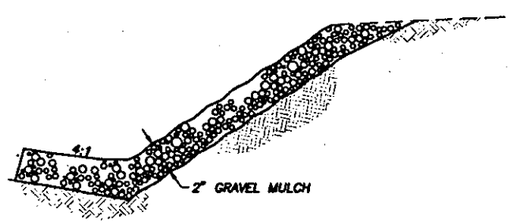
SHOTCRETE LINING W/ REINFORCEMENT (4)

NOT TO SCALE



CHANNEL LINING W/ REINFORCEMENT (6)

SCALE: 1" = 1'-0"



GRAVEL MULCH SLOPE PROTECTION (5)

NOT TO SCALE

263-1100

NO.	REVISION		DATE
3			
2			
1			

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
DETAILS
DETAILS 1 THROUGH 6

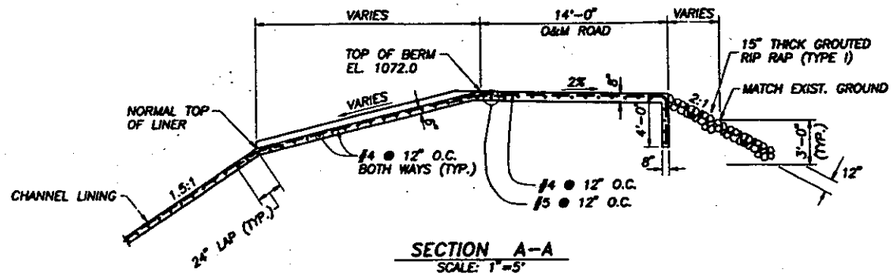
	BY	DATE
DESIGNED	S. YINGLING	5/94
DRAWN	C. SWEATLAND	5/94
CHECKED	C. GOPPERTON	5/95

NBS LOWRY

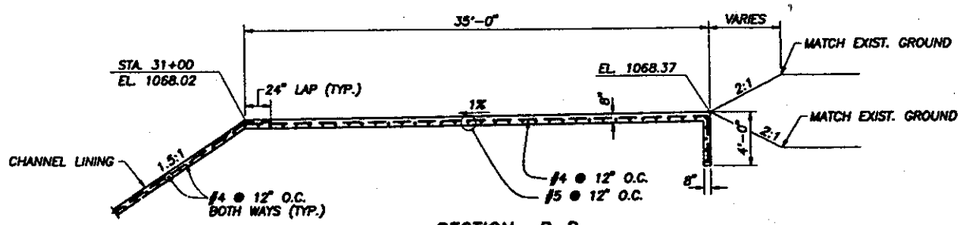
MBS/LOWRY PROJECT NO. PS1-194-019

SHEET D04/16

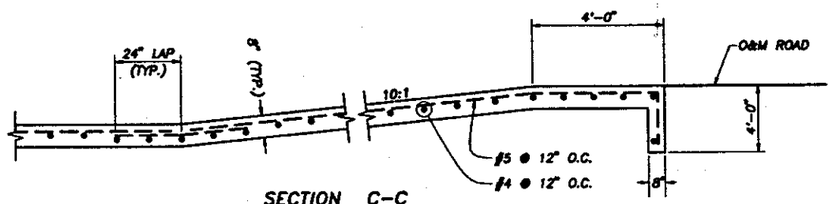
\PS1-194.019\DWGS\PH-III\DD-D04.DWG VIEW = SITE 1 = 20 MSPACE



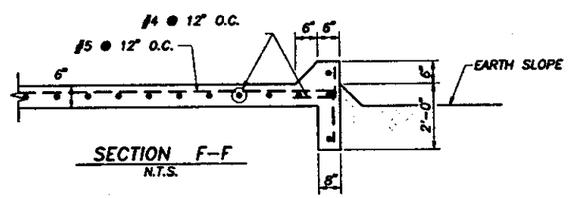
SECTION A-A
SCALE: 1"=5'



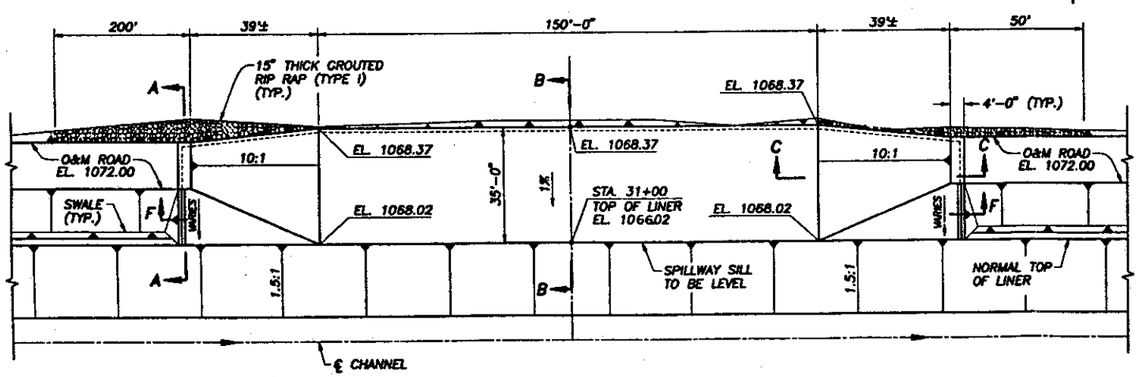
SECTION B-B
SCALE: 1"=5'



SECTION C-C
N.T.S.

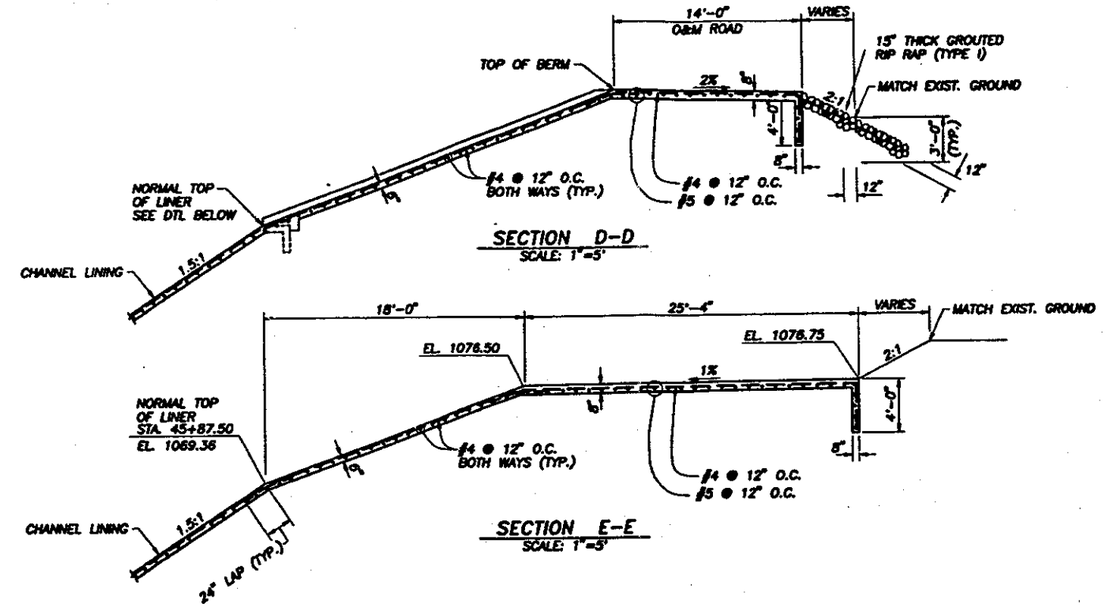


SECTION F-F
N.T.S.



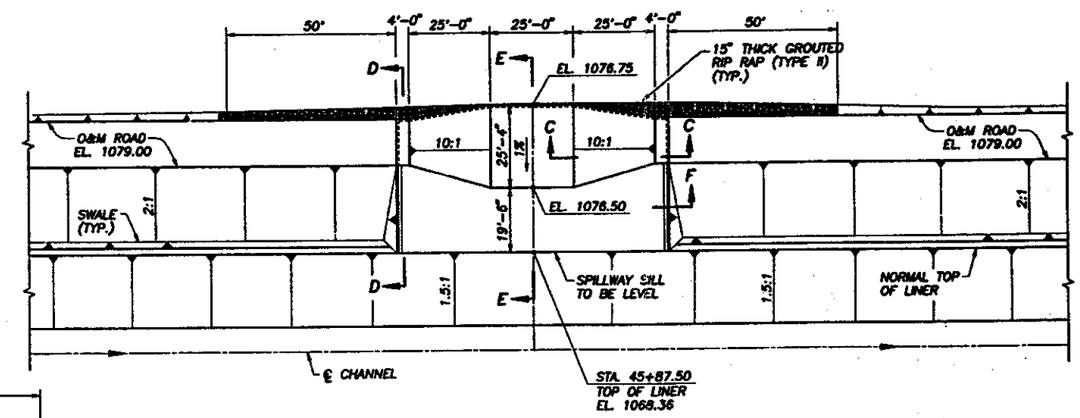
PLAN
SCALE: 1"=20'

SPILLWAY @ STA. 31+00 (7)



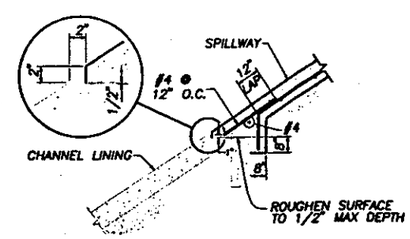
SECTION D-D
SCALE: 1"=5'

SECTION E-E
SCALE: 1"=5'



PLAN
SCALE: 1"=20'

SPILLWAY @ STA. 45+87.50 (8)



SPILLWAY CONNECTION DETAIL
N.T.S.

NO.	REVISION		DATE
3			
2			
1			

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
DETAILS
DETAIL 7 AND 8

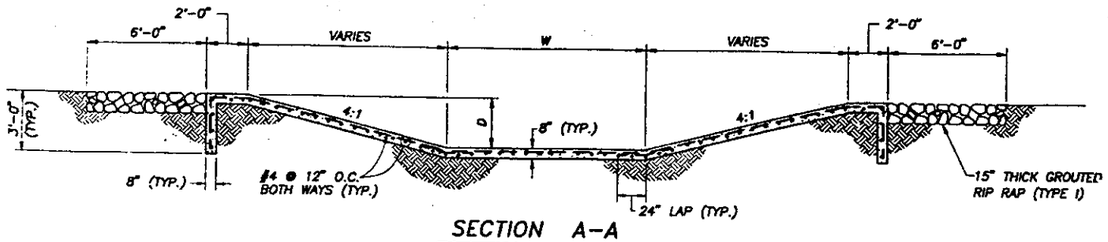
	BY	DATE
DESIGNED	S. YINGLING	5/94
DRAWN	C. SWEATLAND	5/94
CHECKED	C. GOPPERTON	5/95

NBS/LOWRY

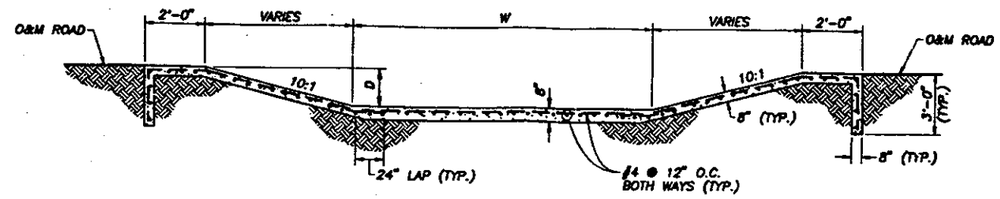
NBS/LOWRY PROJECT NO. PB1-194-019

SHEET 005/16

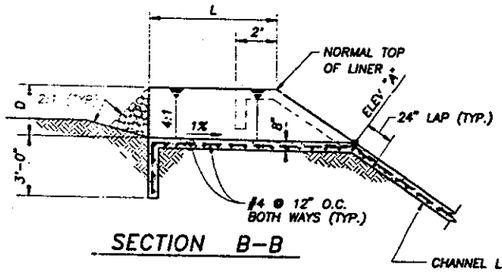
\PB1-194.019\DWGS\PH-III\DD-005.DWG VIEW = SITE 1 = 20 MSPACE



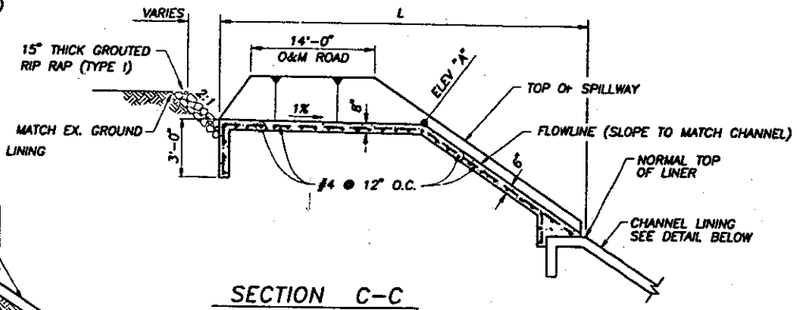
SECTION A-A



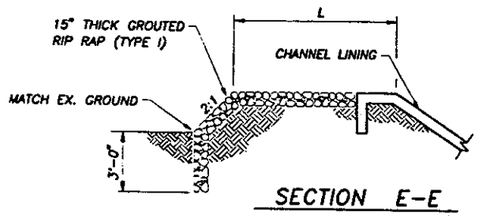
SECTION D-D



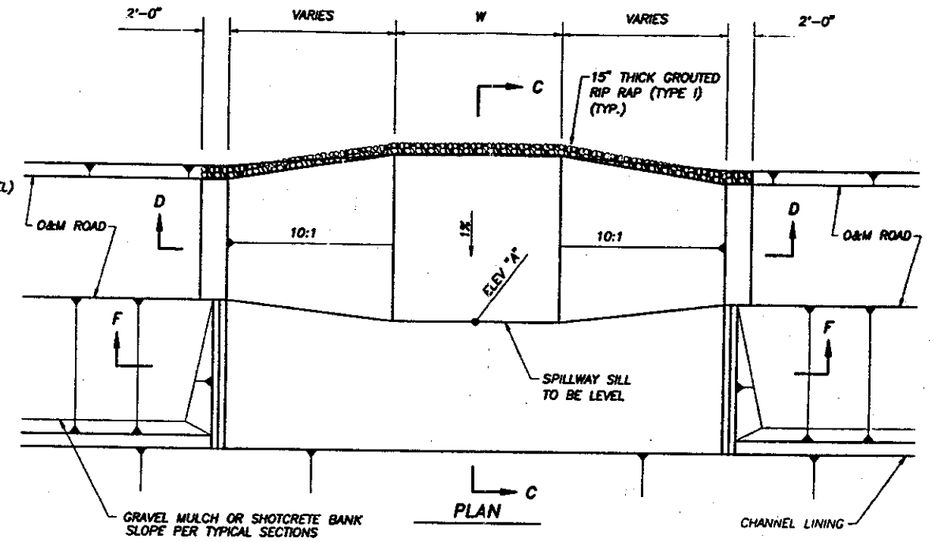
SECTION B-B



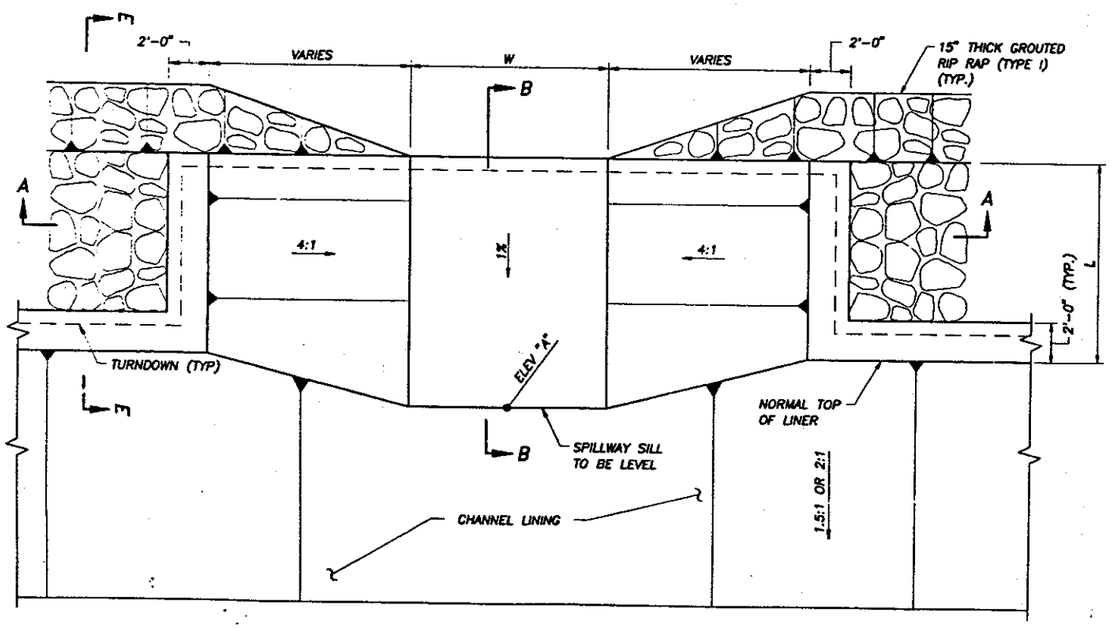
SECTION C-C



SECTION E-E



PLAN

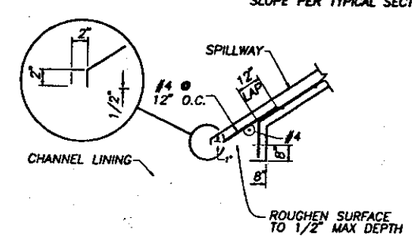


PLAN

TYPICAL DEPRESSED SPILLWAY

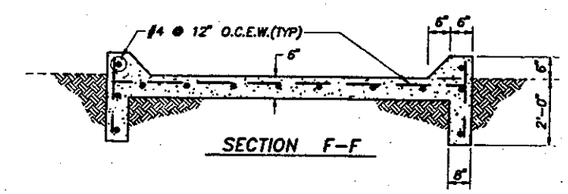
NOT TO SCALE

9



SPILLWAY CONNECTION DETAIL

N.T.S.



TYPICAL CUT SLOPE SPILLWAY

NOT TO SCALE

10

SPILLWAY TABLE

STATION	DETAIL	W	L	D	SPILLWAY ELEV. "X"
166+50	9	1300'	5'	2.66'	1088.50
153+20	9	10'	5'	1.00'	1090.08
128+73.31	9	15'	15'	1.00' **	1079.00
117+75	9	50'	10'	3.29'	1074.50
95+60	10	10'	32'	1.20'	1075.00
67+55 *	10	10'	37.5	0.50'	1081.70
21+70	10	10'	40'	0.50'	1075.50
12+00	10	10'	44'	1.00'	1074.80

* NOTE: ANTI-CORROSION ADMIXTURE TO BE USED WITH CONCRETE IN THIS SPILLWAY

** VARIES

263-1100

NO.	REVISION		DATE
3			
2			
1			

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
DETAILS
DETAILS 9 AND 10

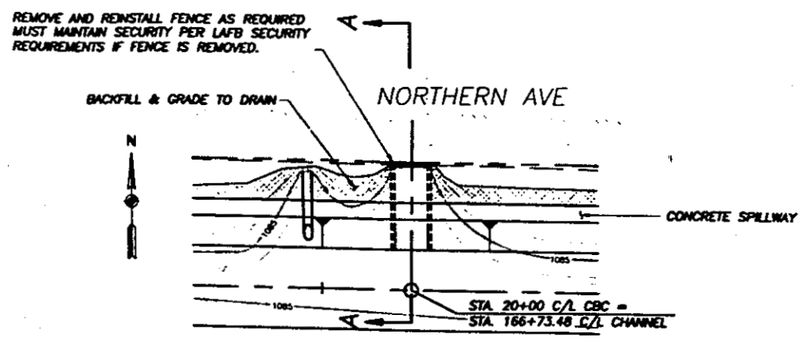
	BY	DATE
DESIGNED	S. YINGLING	5/94
DRAWN	C. SWEATLAND	5/94
CHECKED	C. GOPPERTON	5/95

NBS LOWRY

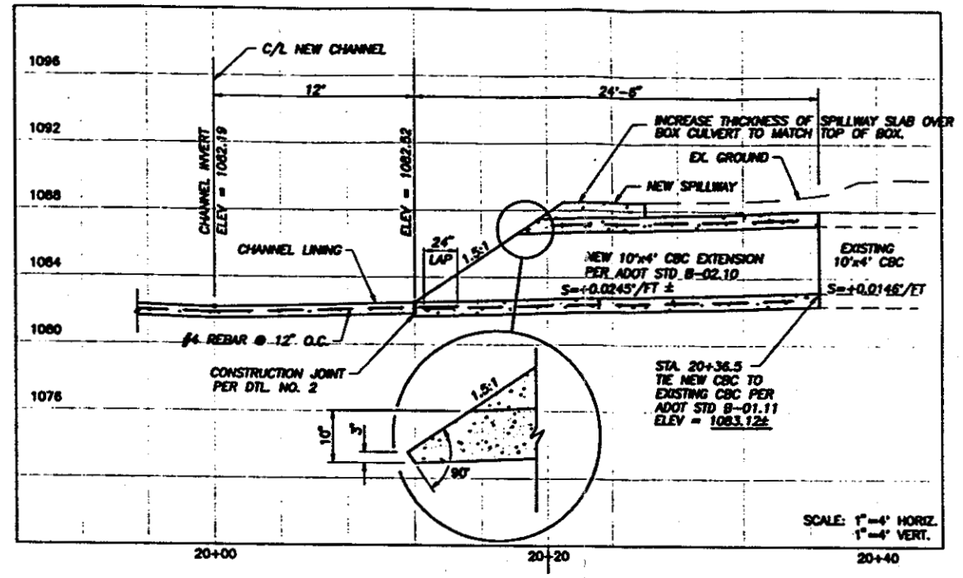
NBS/LOWRY PROJECT NO. P81-194-019

SHEET D06/16

\P81-194.01P\DWGS\PH-IV\DD-D06.DWG VIEW = SITE 1 = 20 MSPACE

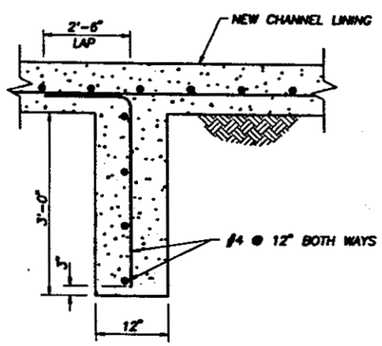


PLAN
SCALE 1"=20'

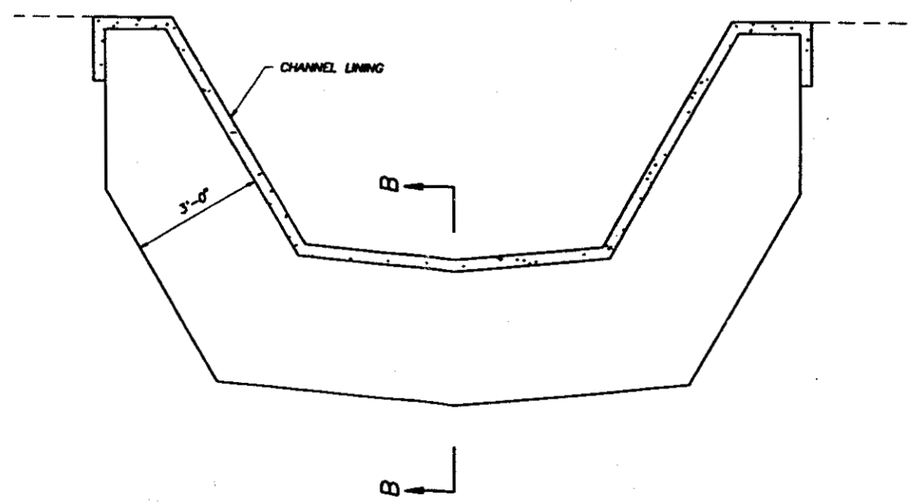


SECTION A-A

BOX CULVERT EXTENSION (11)



SECTION B-B



TRANSVERSE CUTOFF WALL (12)
NO SCALE

263-1100

NO.	REVISION		DATE
3			
2			
1			

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
DETAILS
DETAILS 11 AND 12

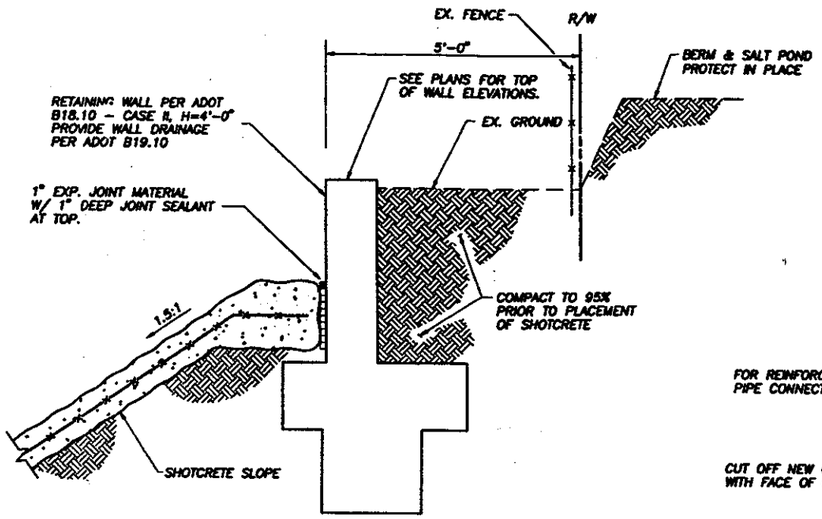
	BY	DATE
DESIGNED	S. YINGLING	5/94
DRAWN	S. YINGLING	5/94
CHECKED	C. GOPPERTON	5/95

MBS LOWRY

MBS/LOWRY PROJECT NO. P81-194-019

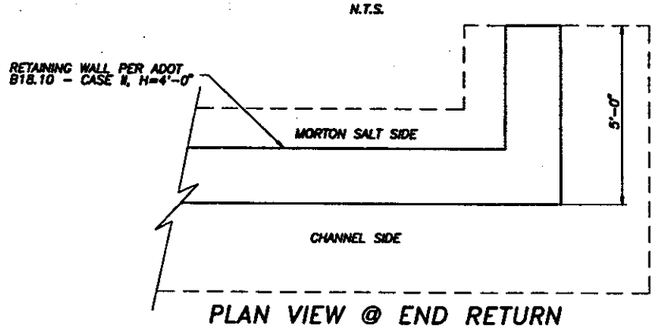
SHEET D07/16

\P81-194.019\DWGS\PH-05\D0-007.DWG VIEW = SITE 1 = 30 MSPACE



ELEVATION

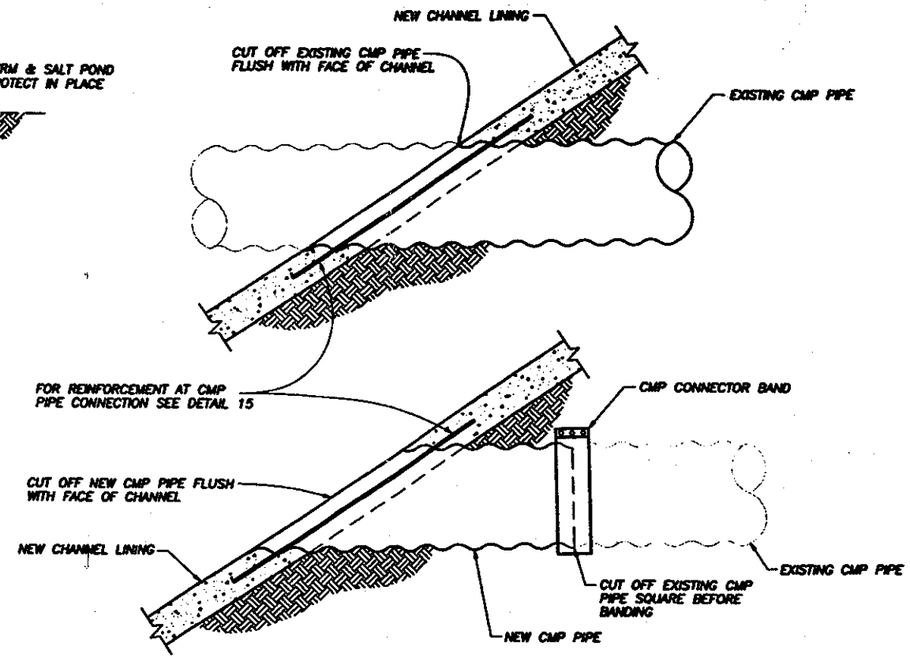
N.T.S.



PLAN VIEW @ END RETURN

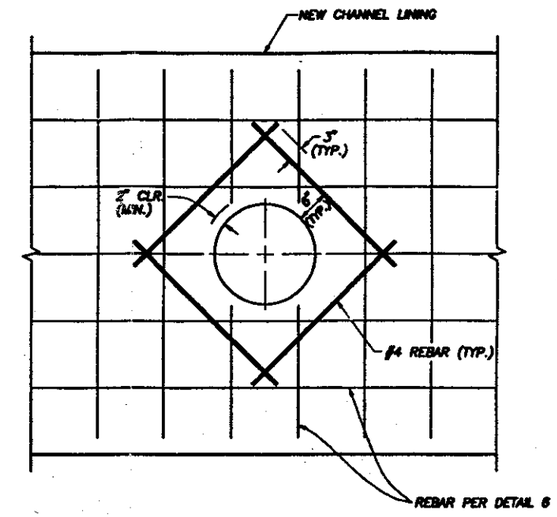
RETAINING WALL AT MORTON SALT FACILITY (13)

N.T.S.



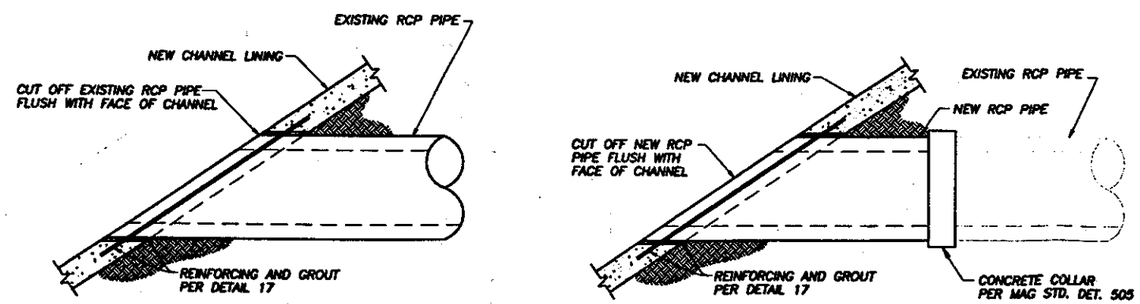
CMP PIPE CONNECTION TO CHANNEL (14)

NOT TO SCALE



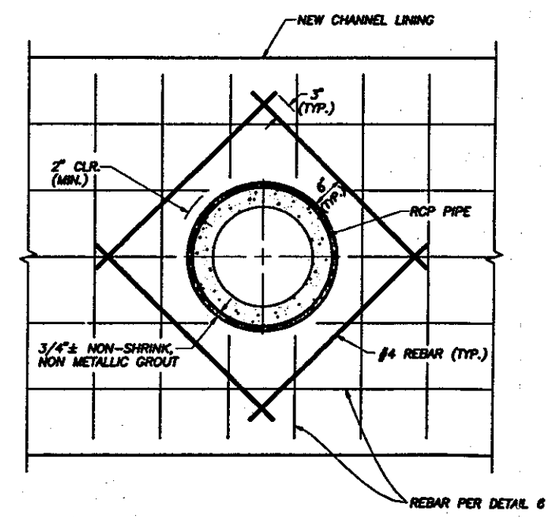
REINFORCING AT CMP PIPE CONNECTION (15)

NOT TO SCALE



RCP PIPE CONNECTION TO CHANNEL (16)

NOT TO SCALE



REINFORCING AT RCP PIPE CONNECTION (17)

NOT TO SCALE

263-100

NO.	REVISION		DATE
3			
2			
1			

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
DETAILS
DETAILS 13 THROUGH 17

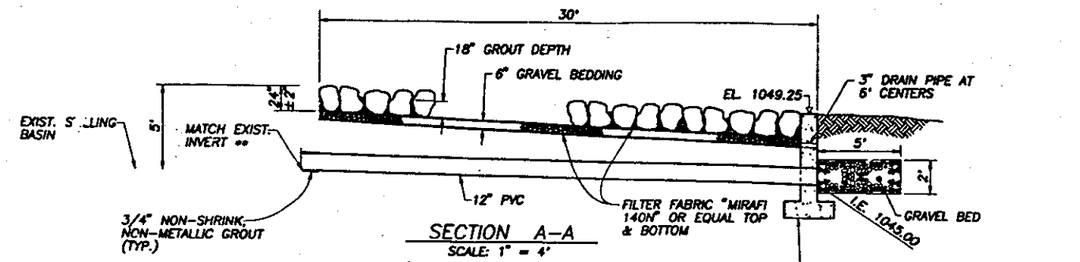
	BY	DATE
DESIGNED	S. YINGLING	5/94
DRAWN	C. SWEATLAND	5/94
CHECKED	C. GOPPERTON	5/95

NBS/LOWRY

NBS/LOWRY PROJECT NO. P81-194-019

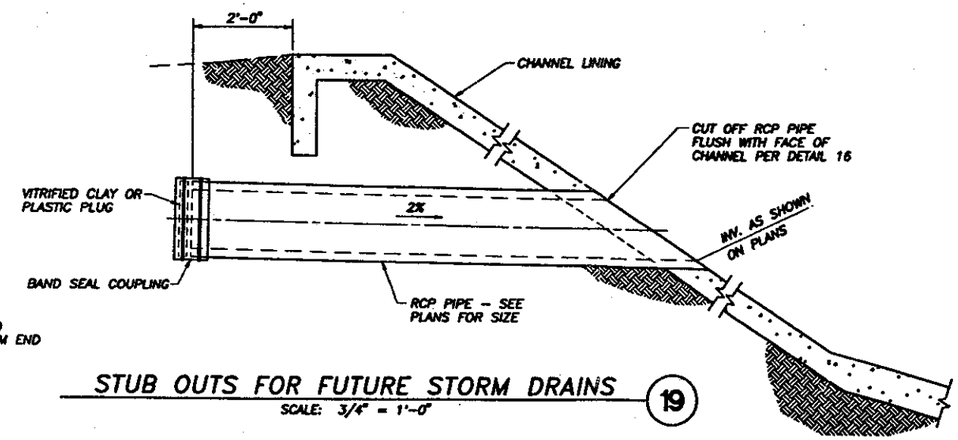
SHEET D08/16

\P81-194.019\DWGS\PH-III\DD-D08.DWG VIEW = SITE 1 = 20 MSPACE

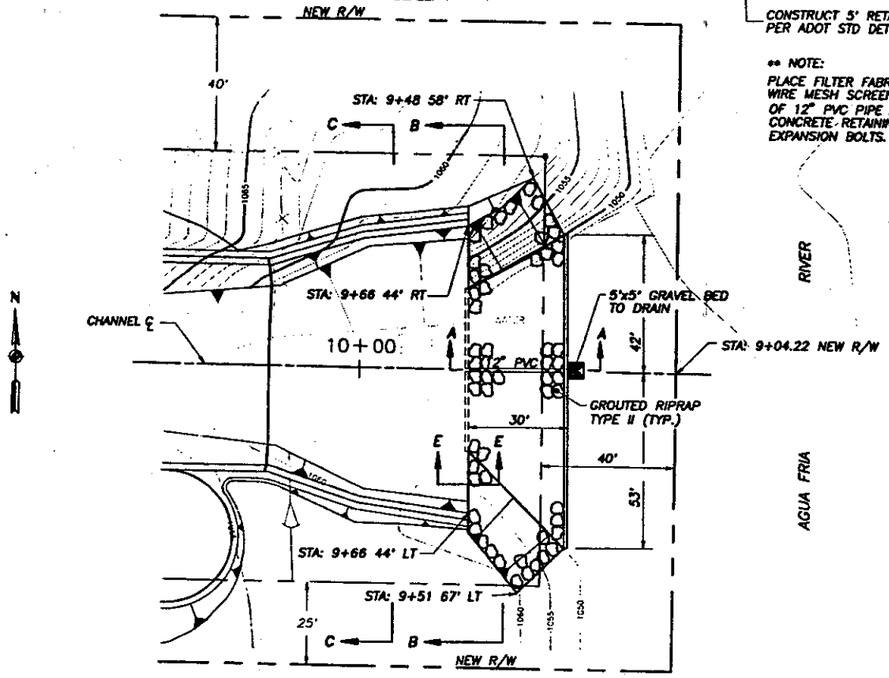


SECTION A-A
SCALE: 1" = 4'

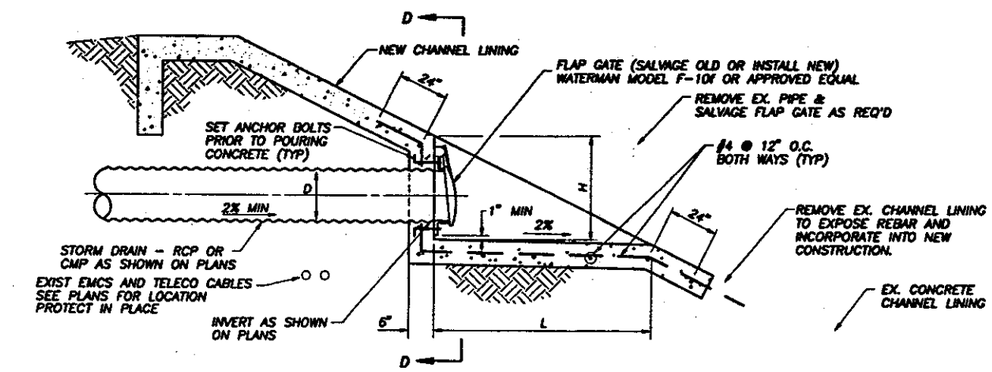
** NOTE:
PLACE FILTER FABRIC WITH 1/4" GALVANIZED WIRE MESH SCREEN ON TOP OVER UPSTREAM END OF 12" PVC PIPE AND ATTACH TO FACE OF CONCRETE RETAINING WALL W/GALVANIZED EXPANSION BOLTS.

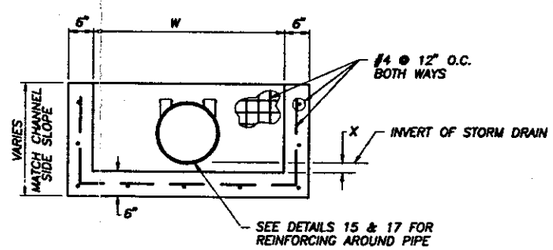


STUB OUTS FOR FUTURE STORM DRAINS (19)
SCALE: 3/4" = 1'-0"



PLAN
SCALE: 1" = 20'





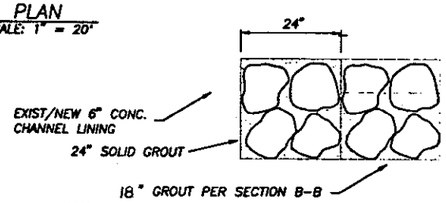
SECTION D-D
NO SCALE

STATION	D	SIDESLOPE	H	L	W	X	INVERT ELEV.	PIPE LENGTH
140+20	18" CMP	2:1	32"	64"	32"	5"	1082.32	15 LF ±
132+75	18" CMP	2:1	32"	64"	32"	5"	1078.20	20 LF ±
127+75 **	18" CMP	2:1	32"	64"	32"	5"	1076.00	16 LF ±
123+36± *	12" CMP	2:1	24"	48"	24"	4"	1074.95±	-4 LF ±
117+12±	30" RCP	1.5:1	48"	72"	48"	7"	1069.65±	-9 LF ±
112+81± *	24" RCP	1.5:1	40"	60"	40"	6"	1069.30±	-6 LF ±

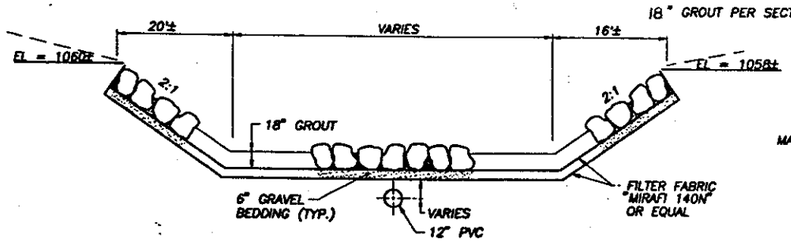
* SALVAGED FLAP GATE
** INLET TO MATCH INVERT OF EXISTING VALLEY GUTTER AT TOE OF BACKSLOPE

NOTES:

1. CLEAN ALL DIRT FROM VOIDS BEFORE GROUTING.
2. PLACE BOULDERS WITH FLATTEST SURFACE ON TOP AND HORIZONTAL. PLACE BOULDERS IN INTERLOCKING FASHION, TOUCHING ADJACENT BOULDERS AND MINIMIZING VOIDS.
3. GROUT TO PENETRATE FULL DEPTH OF ROCK AND FILL ALL VOIDS.
4. CLEAN ALL GROUT FROM EXPOSED SURFACES.



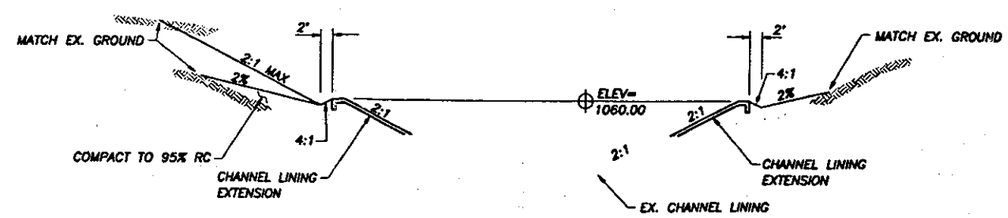
SECTION E-E
NO SCALE



SECTION B-B
NO SCALE

GROUTED ROCK @ SPILLWAY (AGUA FRIA RIVER) (18)

RECESSED CULVERT - CHANNEL CONNECTION (20)
SCALE: 3/4" = 1'-0"



SECTION C-C
NO SCALE

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
DETAILS
DETAILS 18 THROUGH 20

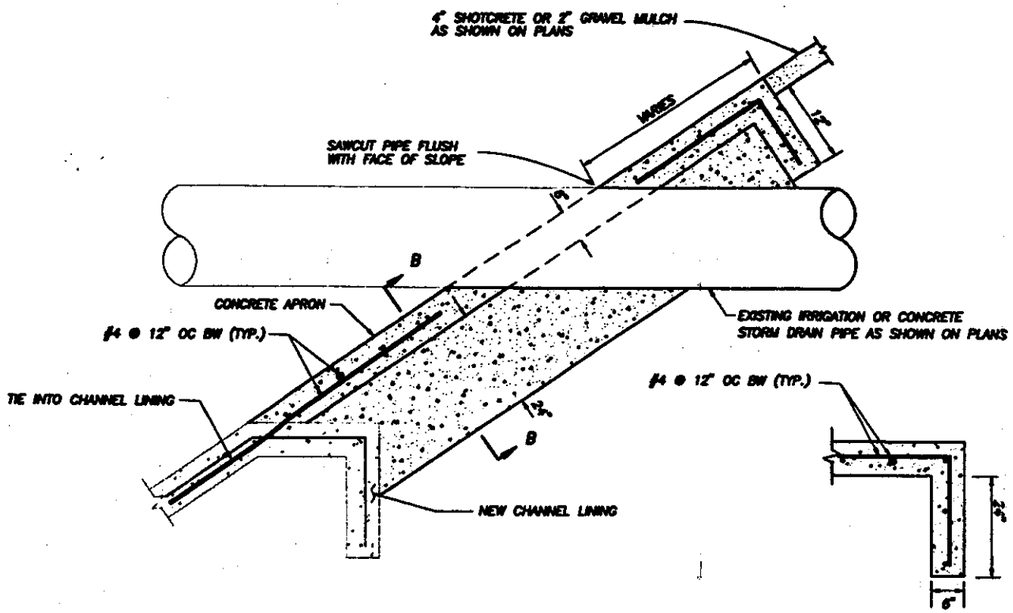
	BY	DATE
DESIGNED	S. YINGLING	5/94
DRAWN	C. SWEATLAND	5/94
CHECKED	C. GOPPERTON	5/95

NBS/LOWRY

NBS/LOWRY PROJECT NO. PS1-194-019

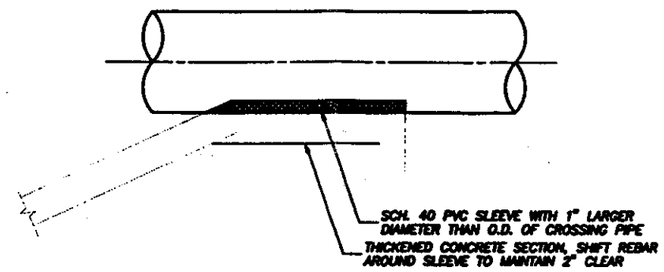
SHEET D09/16

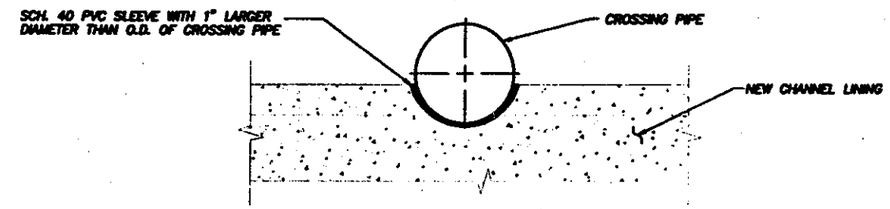
\PS1-194.019\DWGS\PH-III\DD-D09.DWG VIEW = SITE 1 = 20 MSPACE



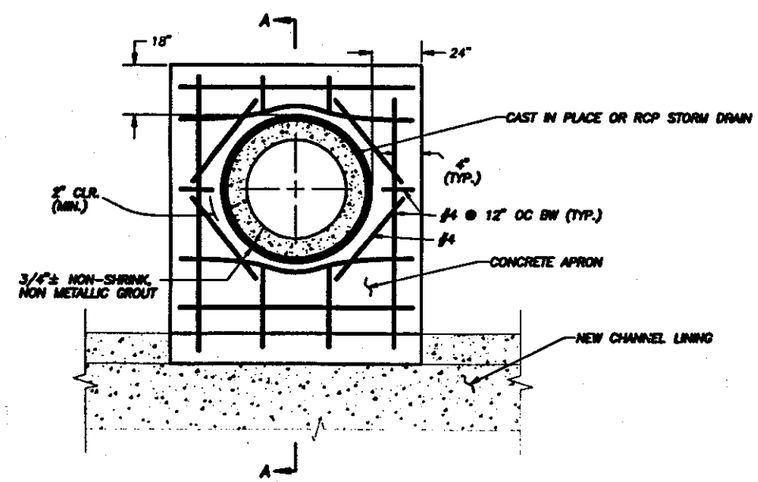
SECTION A–A
NOT TO SCALE

SECTION B–B
NOT TO SCALE





PVC SLEEVE
NOT TO SCALE
22



CONCRETE APRON AT CIP PIPE CONNECTION
NOT TO SCALE
21

263-100

NO.	REVISION		DATE
3			
2			
1			

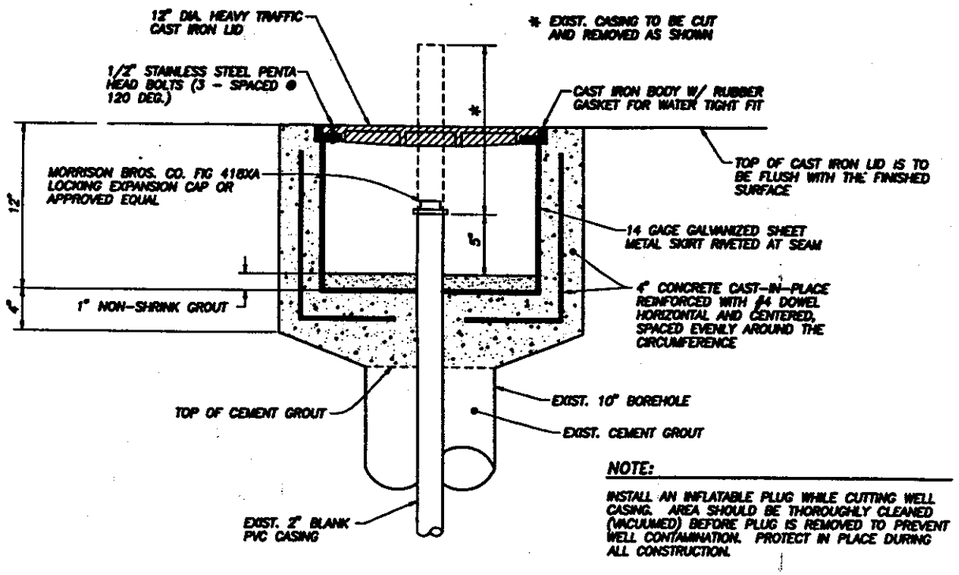
FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
DETAILS
DETAILS 21 AND 22

	BY	DATE
DESIGNED	C. COPPERTON	9/94
DRAWN	C. COPPERTON	9/94
CHECKED	B. FRY	5/95

HDR LOWRY

HDR/LOWRY PROJECT NO. F81-194-019

SHEET D10/16

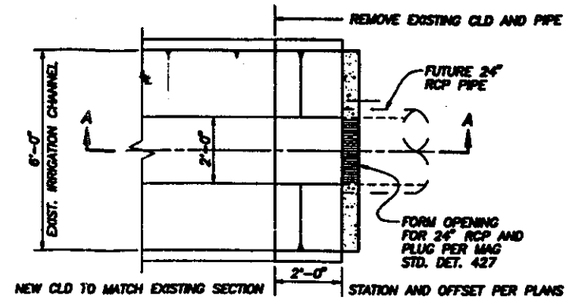


NOTE:

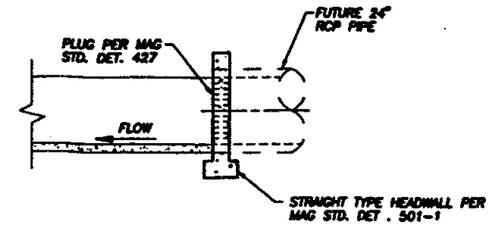
INSTALL AN INFLATABLE PLUG WHILE CUTTING WELL CASING. AREA SHOULD BE THOROUGHLY CLEANED (VACUUMED) BEFORE PLUG IS REMOVED TO PREVENT WELL CONTAMINATION. PROTECT IN PLACE DURING ALL CONSTRUCTION.

MONITORING WELL VAULT (23)

NOT TO SCALE



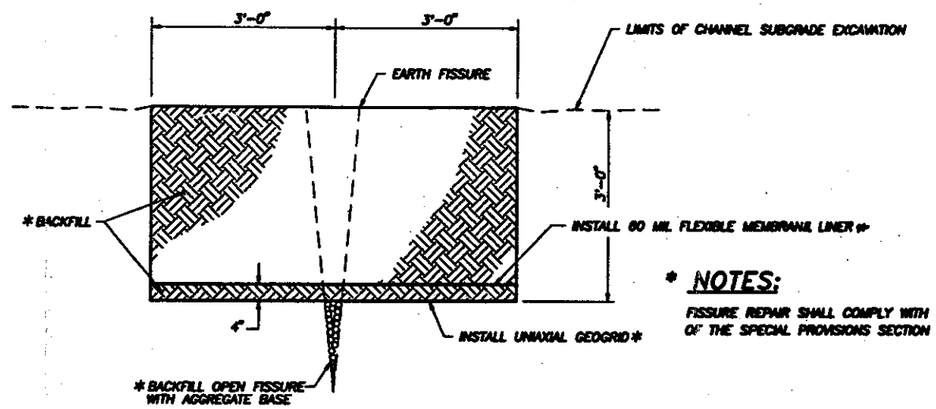
PLAN



SECTION A-A

HEADWALL DETAIL (24)

SCALE: 1/2" = 1'-0"

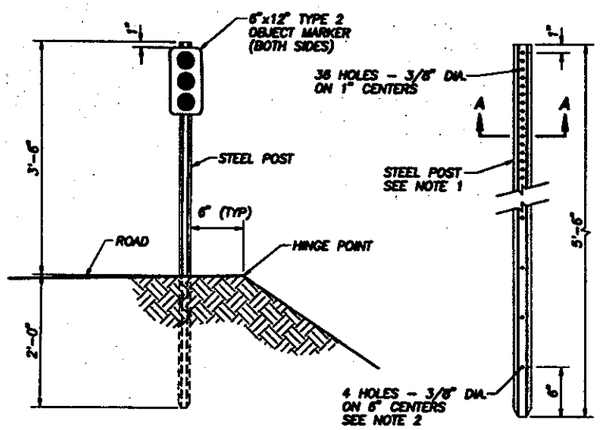


*** NOTES:**

FISSURE REPAIR SHALL COMPLY WITH THE REQUIREMENTS OF THE SPECIAL PROVISIONS SECTION 215.3.

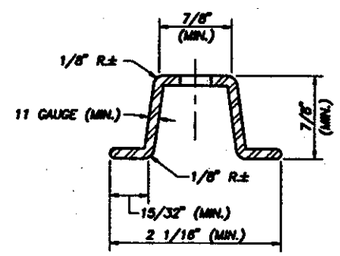
FISSURE REPAIR (26)

NOT TO SCALE

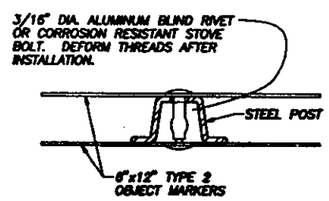


FRONT ELEVATION

GALVANIZED STEEL POST



SECTION A-A



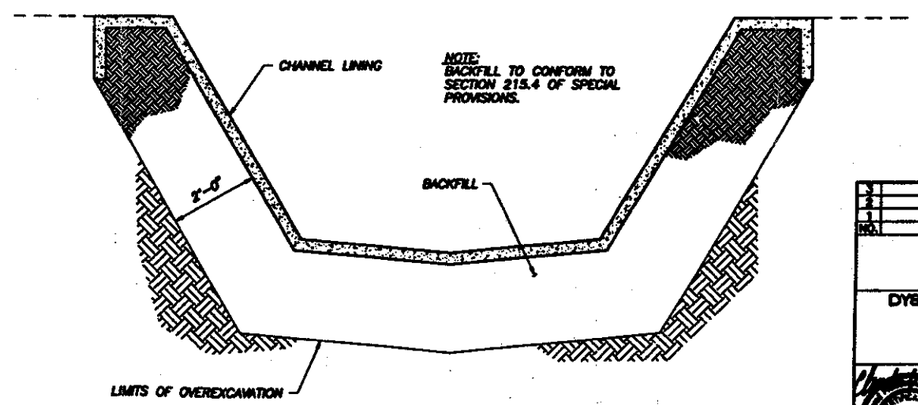
MOUNTING DETAIL

NOTES:

1. STEEL POSTS SHALL CONFORM TO ASTM A499-81, GRADE 60, OR ASTM-A576, GRADE 1080 OR A570-A570, GRADE 60, AND SHALL WEIGH 2.00 LBS./FT. WITH A WEIGHT TOLERANCE OF ± 5%. POSTS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM-A123.
2. POSTS MAY BE PUNCHED THE FULL LENGTH WITH 3/8" DIAMETER HOLES AT 1" CENTERS AS AN ACCEPTABLE ALTERNATE TO HOLE SPACING SHOWN.

REFLECTOR DETAIL (25)

NOT TO SCALE



OVEREXCAVATION OF CLAY SOILS (27)

NOT TO SCALE

263-1100

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
DETAILS
DETAILS 23 THROUGH 27

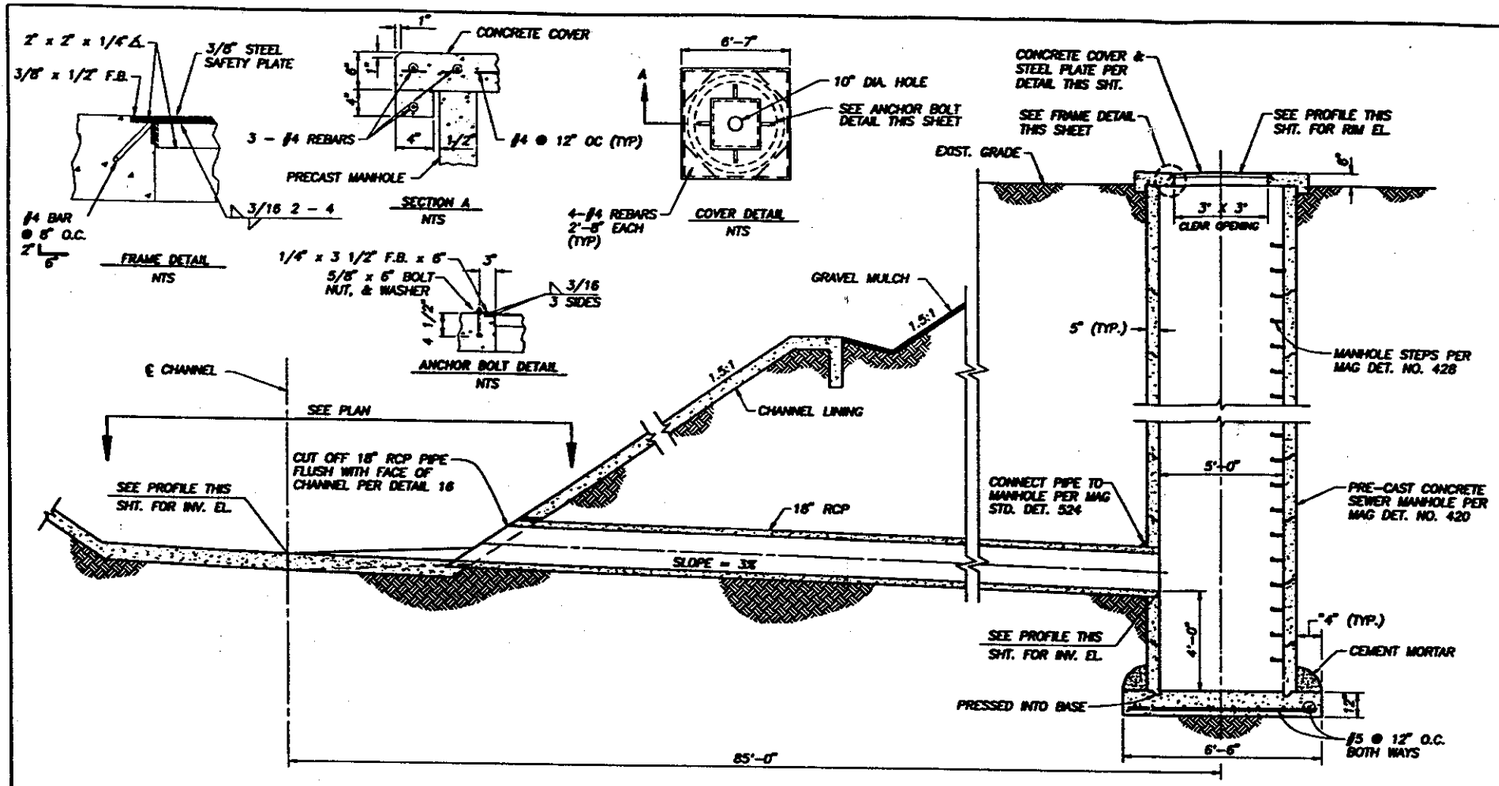
	BY	DATE
DESIGNED	S. YINGLING	5/94
DRAWN	S. YINGLING	5/94
CHECKED	C. GOPPERTON	5/95

NBS/LOWRY

NBS/LOWRY PROJECT NO. P91-194-019

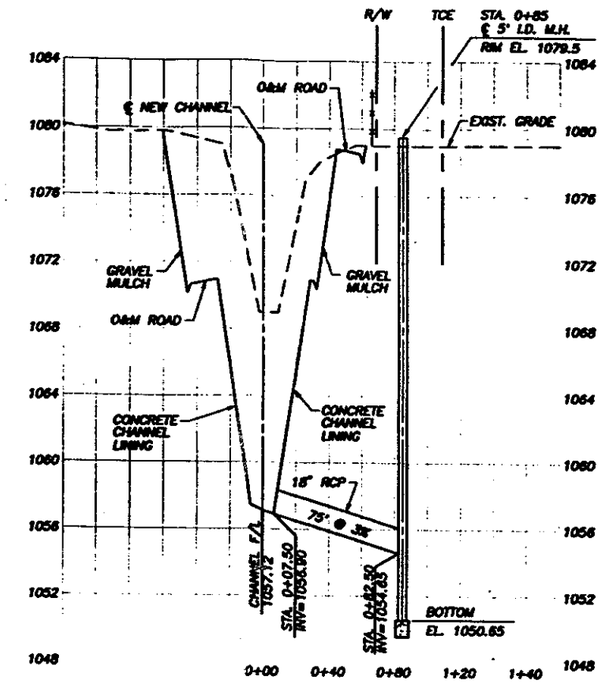
SHEET D11/16

\P91-194.010\DWGS\PH-01\DD-011.DWG VIEW = SHE 1 = 20 MEPACE



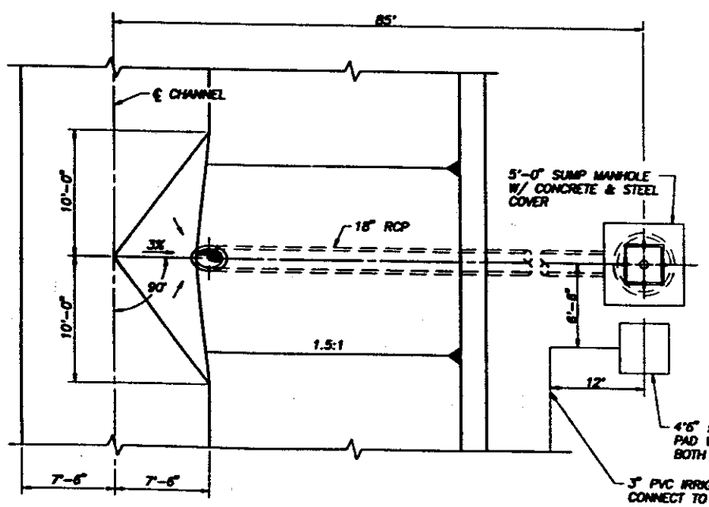
SECTION – SUMP AND CONNECTION TO CHANNEL (28)

SCALE: 3/8" = 1'-0"



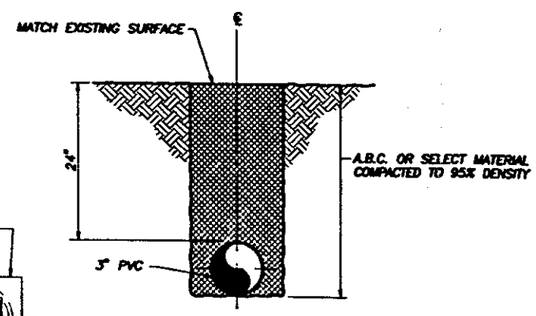
PROFILE – SUMP AND CONNECTION TO CHANNEL @ STA. 74+06

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'



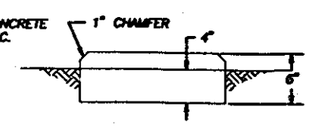
PLAN @ STA. 74+06

SCALE: 3/16" = 1'-0"



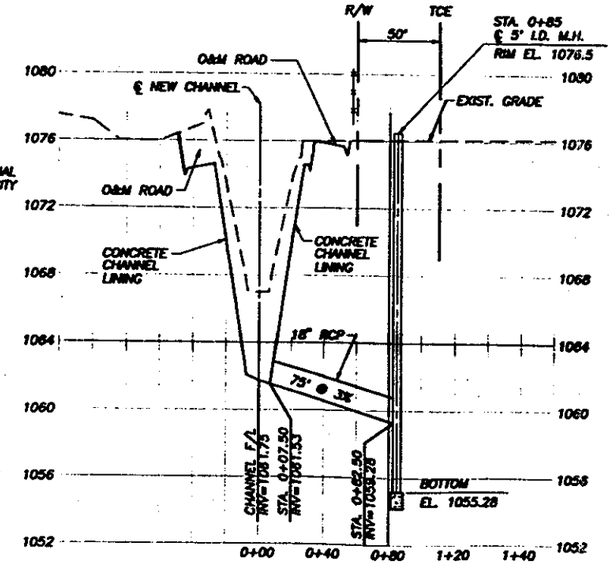
TRENCH BACKFILL

NTS



CONCRETE PAD

NTS



PROFILE – SUMP AND CONNECTION TO CHANNEL @ STA. 98+40

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'

263-1100

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
DETAIL 28 AND SUMP PROFILES
AT STATION 74+06 AND STATION 98+40

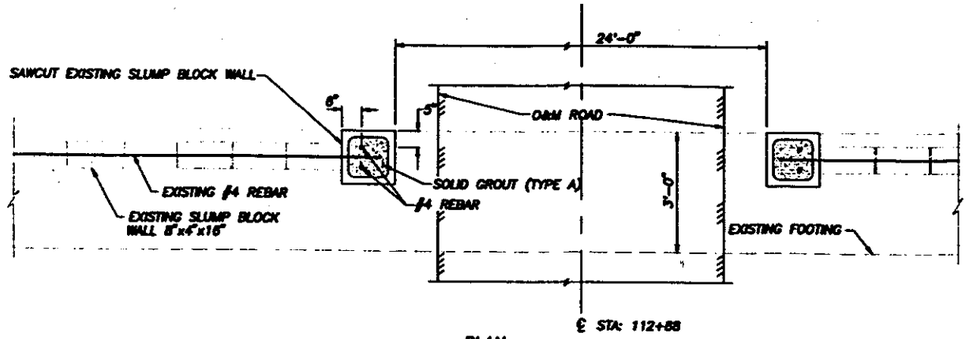
	BY	DATE
DESIGNED	S. YINGLING	5/94
DRAWN	C. SWEATLAND	5/94
CHECKED	C. COPPERTON	5/95

NBS LOWRY

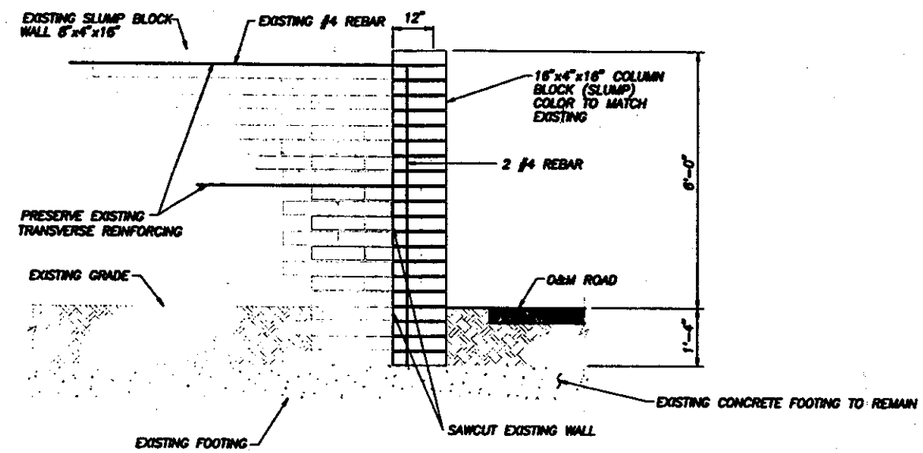
NBS/LOWRY PROJECT NO. P81-194-019

SHEET D12/16

\P81-194.019\DWGS\Fd-01\DD-012.DWG VIEW = SITE 1 = 20 MSPACE



PLAN

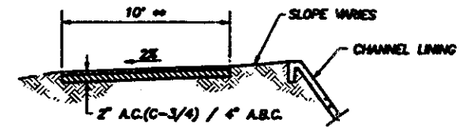


PROFILE

NOTE:
WALL CANNOT BE REMOVED WITHOUT PRIOR APPROVAL BY THE ENGINEER AND NOT BEFORE CHANNEL IMPROVEMENTS ARE COMPLETED FROM STA: 127+00 TO STA: 110+00

CUT BLOCK WALL FOR GATE (29)

NO SCALE

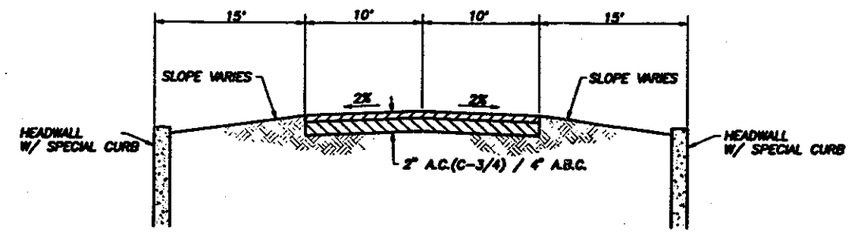


** NOTE: 11' FOR DOG KENNEL ACCESS ROAD EAST OF LITCHFIELD ROAD

TYPICAL SECTION (31)

LUKE AIR FORCE BASE NORTH PERIMETER ROAD AND DOG KENNEL ACCESS ROAD

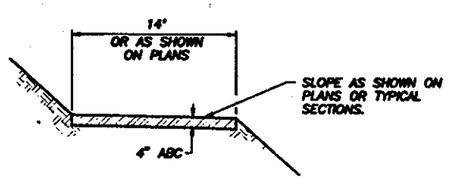
NO SCALE



TYPICAL SECTION (32)

NORTHERN AVENUE ACCESS ROAD

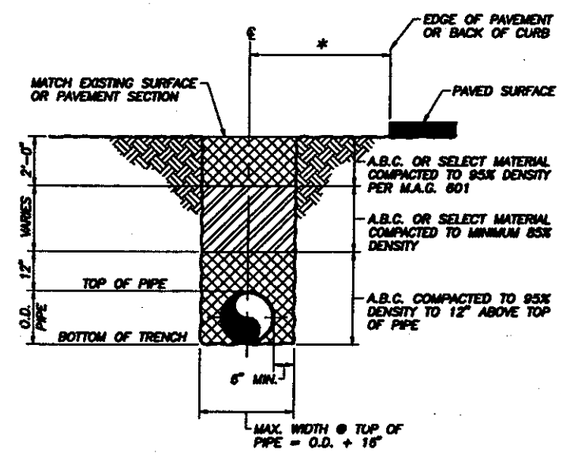
NO SCALE



TYPICAL SECTION (30)

OPERATION & MAINTAINANCE ROAD (O&M ROAD)

NO SCALE



* FOR TRENCH UNDER EXISTING OR PROPOSED PAVEMENT, CURB OR GUTTER, OR WHEN THE DISTANCE FROM EDGE OF PAVEMENT OR BACK OF CURB TO CENTERLINE OF TRENCH IS ONE-HALF THE DEPTH OF THE TRENCH OR LESS. BACKFILL WITH A.B.C. OR SELECT MATERIAL.

TRENCH BACKFILL (33)

NOT TO SCALE

263-1100

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT

CHANNEL IMPROVEMENTS

DETAILS

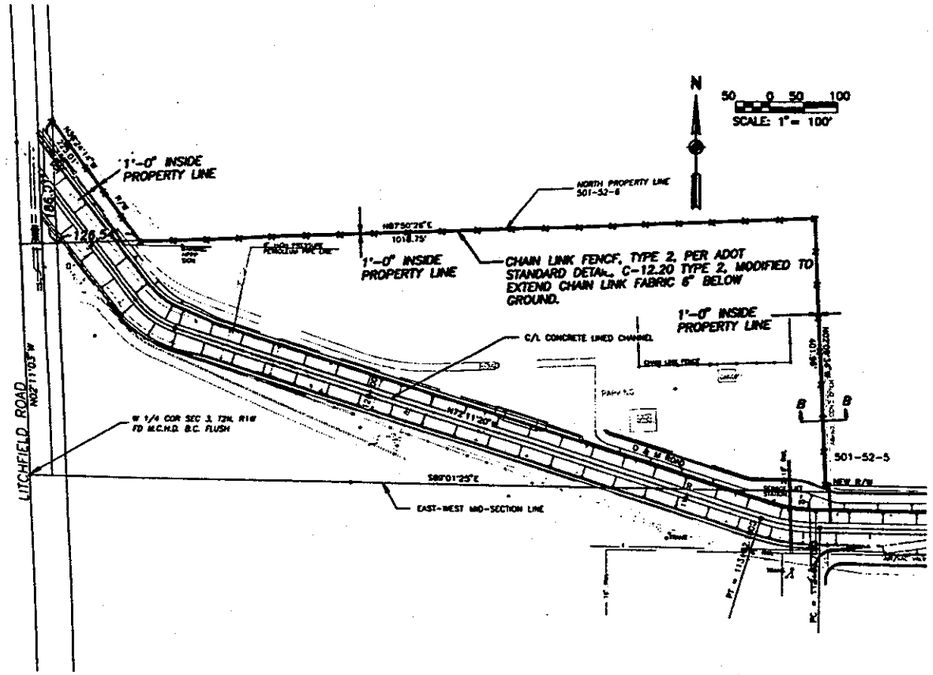
DETAILS 29 THROUGH 33

	BY	DATE
DESIGNED	S. YINGLING	5/94
DRAWN	S. YINGLING	5/94
CHECKED	C. GOPPERTON	5/95

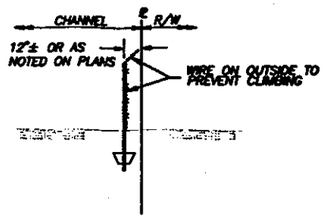
NBS/LOWRY

NBS/LOWRY PROJECT NO. PS1-194-019

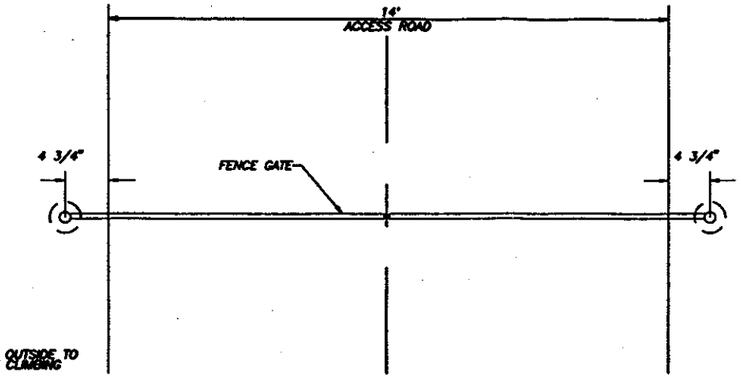
SHEET 013/16



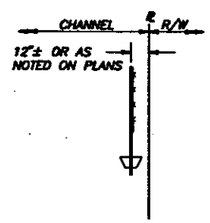
FENCING PLAN AT DOG KENNEL (34)



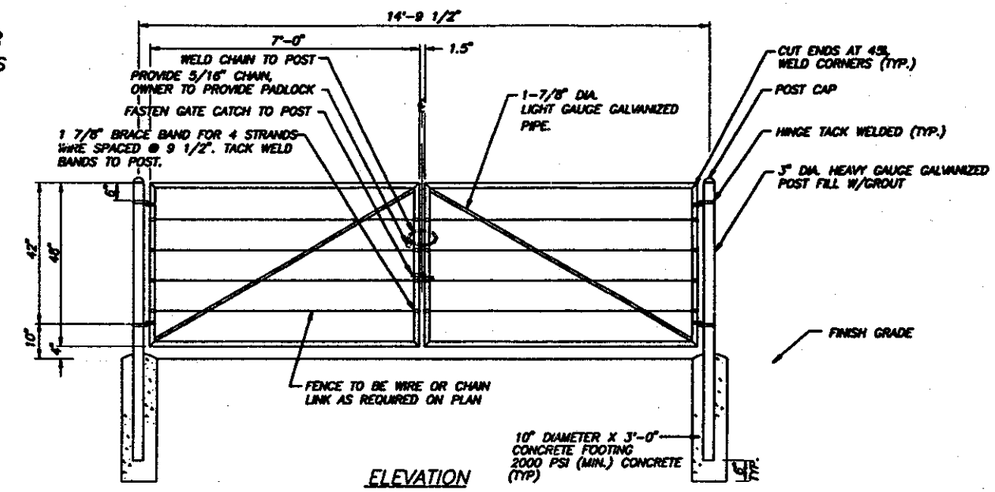
SECTION B-B
NTS



PLAN

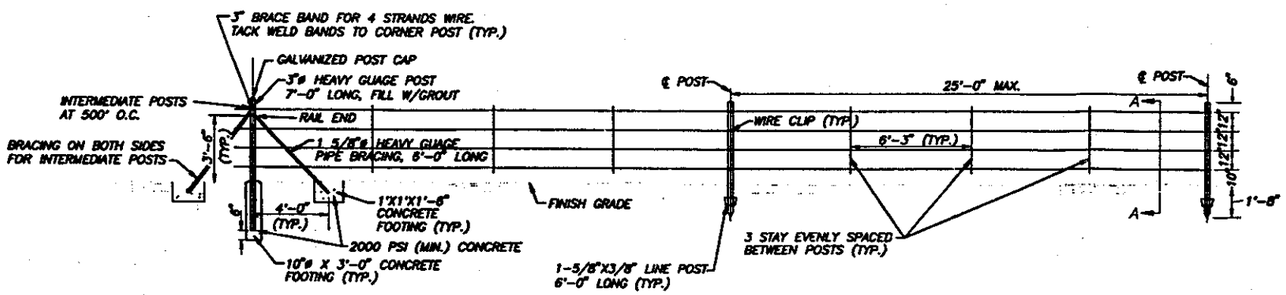


SECTION A-A
NTS



ELEVATION

FENCE GATE (36)
BARBED WIRE AT MAIN CHANNEL
CHAIN LINK (AS REQUIRED ON PLANS)
NTS



FOUR STRAND BARBED WIRE AT MAIN CHANNEL WITH CORNER/INTERMEDIATE POST ASSEMBLY (35)
NTS

NOTES:

1. PUT SLIGHT SLOPE ON TOP OF FOOTINGS.
2. ALL PIPES ARE 1.875" DIAMETER LIGHT GAUGE GALVANIZED PIPES UNLESS OTHERWISE NOTED
2. PADLOCK FURNISHED BY OTHERS.
4. ALL STEEL POSTS AND BRACING SHALL BE GALVANIZED (HOT DIP). FIELD WELDS SHALL BE TREATED WITH TWO COATS OF "GALVANIZED" PAINT OR APPROVED EQUAL.

283-1100

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
FENCE PLAN AT DOG KENNEL
FENCE AND GATE DETAILS 34-36

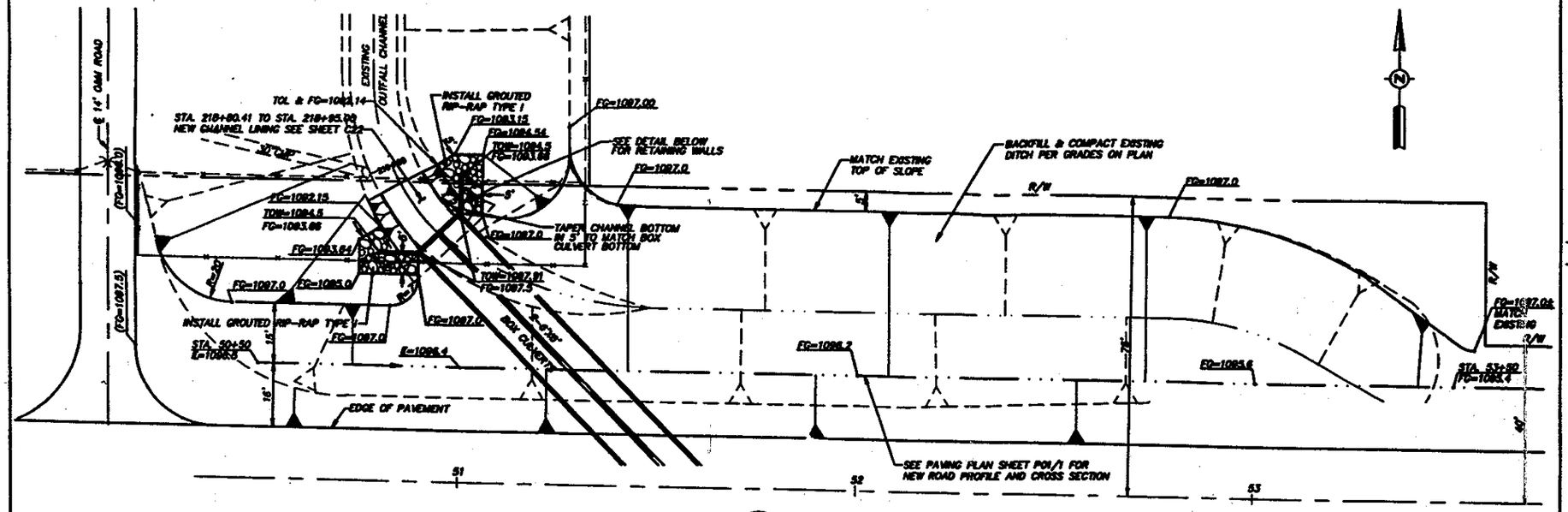
	BY	DATE
DESIGNED	C. GOPPERTON	8/94
DRAWN	W. J. PARROTT	8/94
CHECKED	C. GOPPERTON	5/95

NBS LOWRY

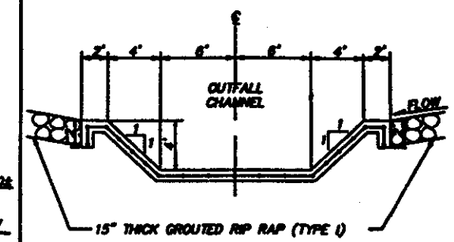
NBS/LOWRY PROJECT NO. PB1-194-019

SHEET D14/16

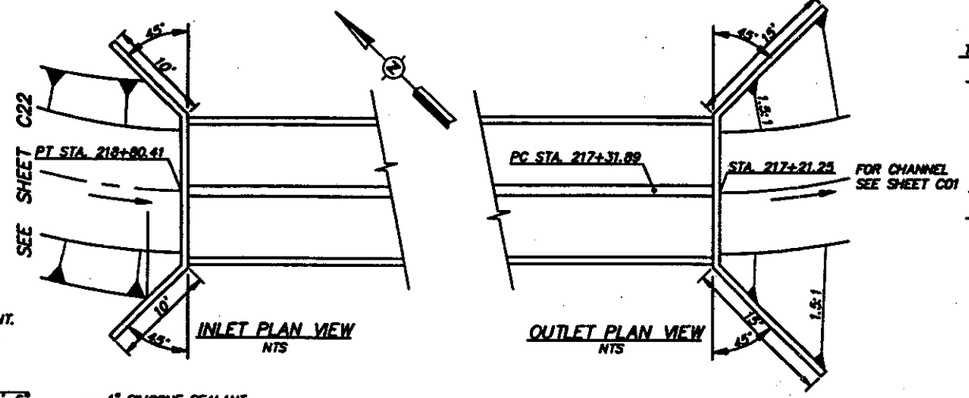
\PB1-194.019\DWGS\PH-A\DD-D14.DWG VIEW = SITE 1 = 40 PSPACE



NORTHERN AVENUE BOX CULVERT INLET DETAIL (37)
NTS

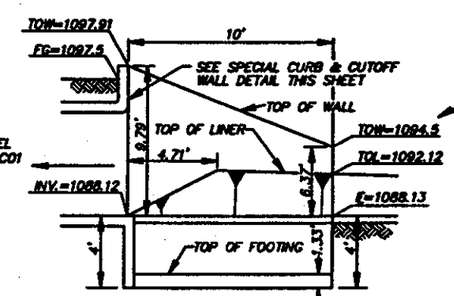


GROUTED RIPRAP (TYPE I) TYPICAL DETAIL (40)
NTS

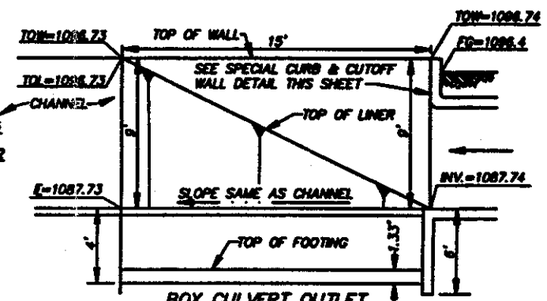


INLET PLAN VIEW
NTS

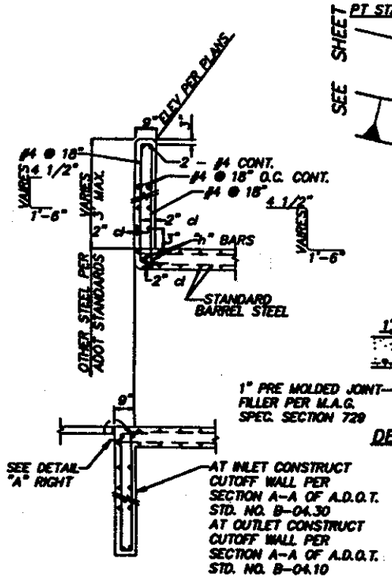
OUTLET PLAN VIEW
NTS



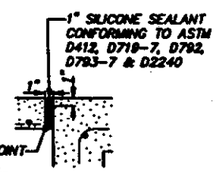
BOX CULVERT INLET WEST RETAINING WALL (LOOKING SOUTH)



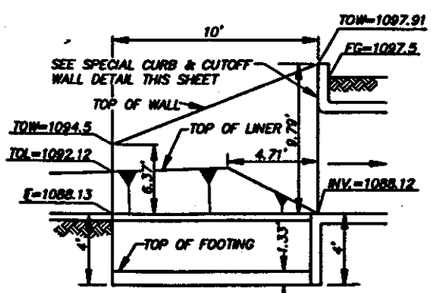
BOX CULVERT OUTLET WEST RETAINING WALL (LOOKING WEST)



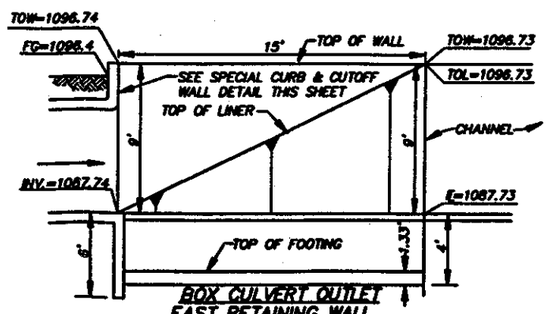
SPECIAL CURB & CUTOFF WALL FOR ADOT C.B.C. (39)
NTS



DETAIL "A"



BOX CULVERT INLET EAST RETAINING WALL (LOOKING EAST)



BOX CULVERT OUTLET EAST RETAINING WALL (LOOKING NORTH)

INLET & OUTLET RETAINING WALLS NORTHERN AVENUE BOX CULVERT (38)
A.D.O.T. STANDARD NO. B-18.10
NTS

263-1100

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

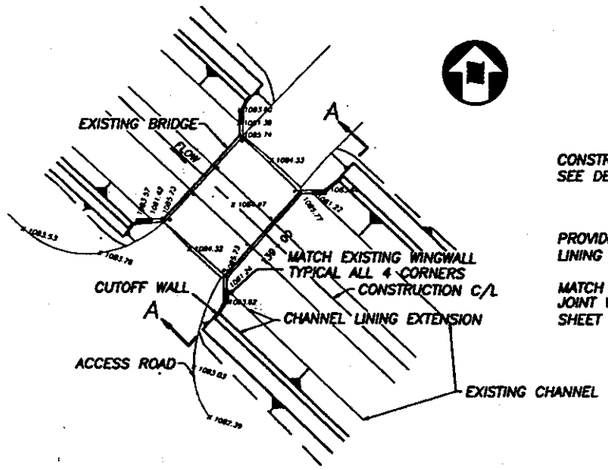
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
DETAILS 37 THROUGH 40

	BY	DATE
DESIGNED	JGT	4/95
DRAWN	VF	4/95
CHECKED	ACP	4/95

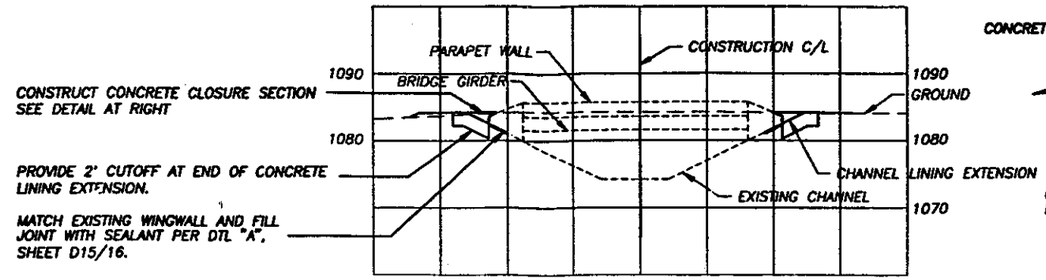
WOOD, PATEL & ASSOCIATES, INC.
1960 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

WOOD/PATEL PROJECT NO. 93030.00

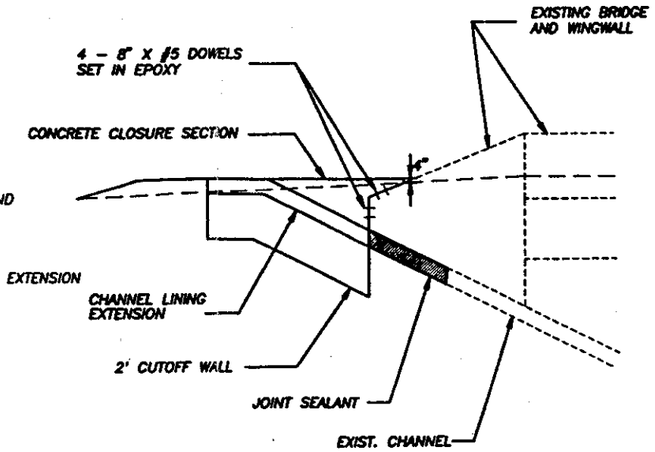
SHEET D15/16



PLAN
1" = 20'

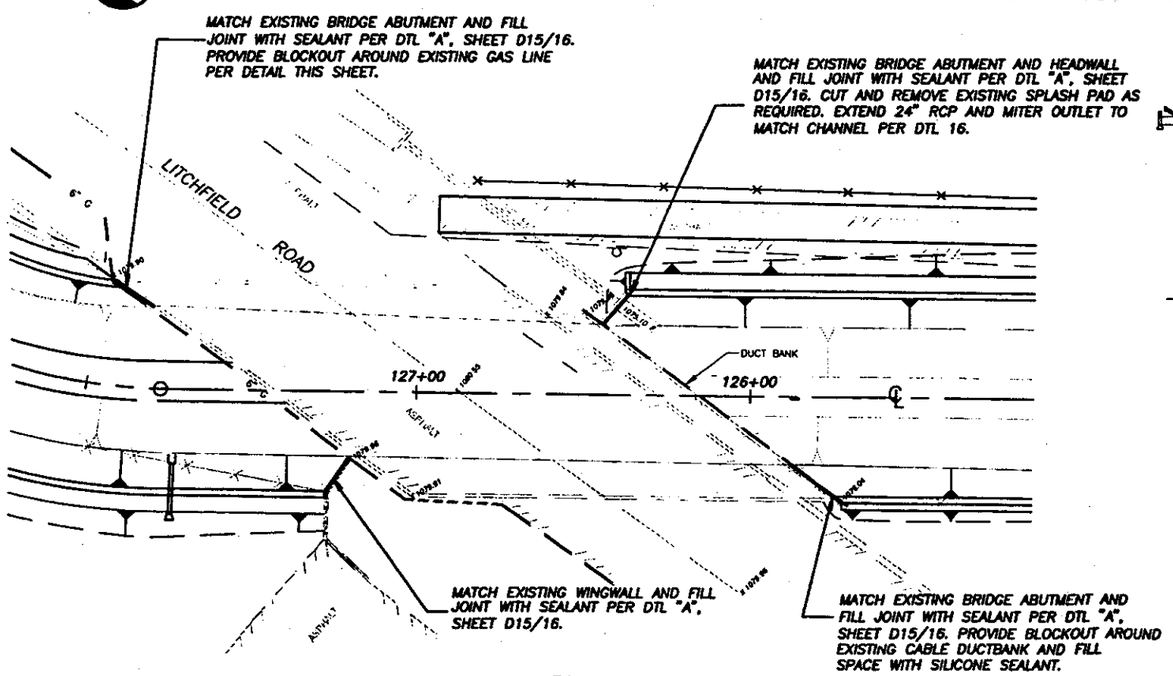


SECTION A–A
1" = 10'



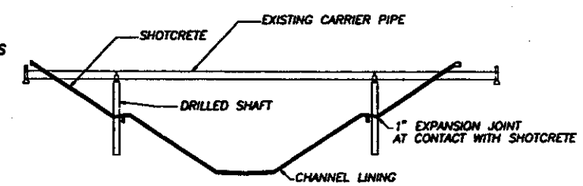
WINGWALL CONNECTION DETAIL
N.T.S.

CHANNEL CONNECTION DETAIL AT LAFB BRIDGE (41)
STA: 139+18.33

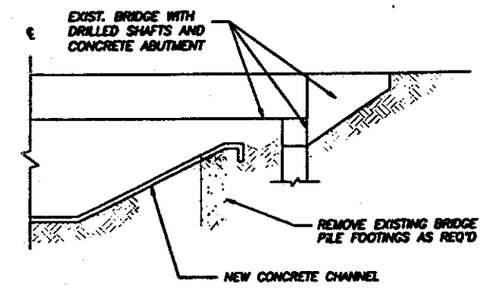


PLAN
1" = 20'

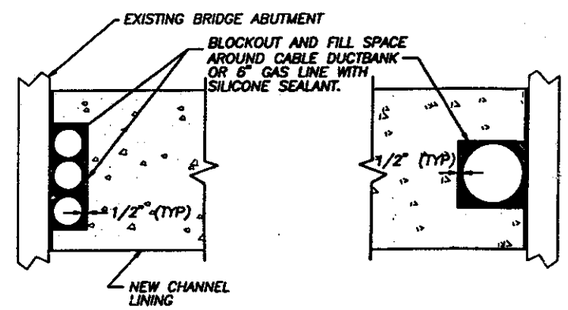
CHANNEL LINING EXTENSION DETAILS AT LITCHFIELD ROAD BRIDGE (42)



TYPICAL CARRIER PIPE SECTION (43)
NOT TO SCALE



TYPICAL SECTION AT BRIDGE (44)
NO SCALE



UTILITY PENETRATION DETAIL
N.T.S.

263-1100

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
BRIDGE CONNECTION DETAILS
DETAILS 41 – 44

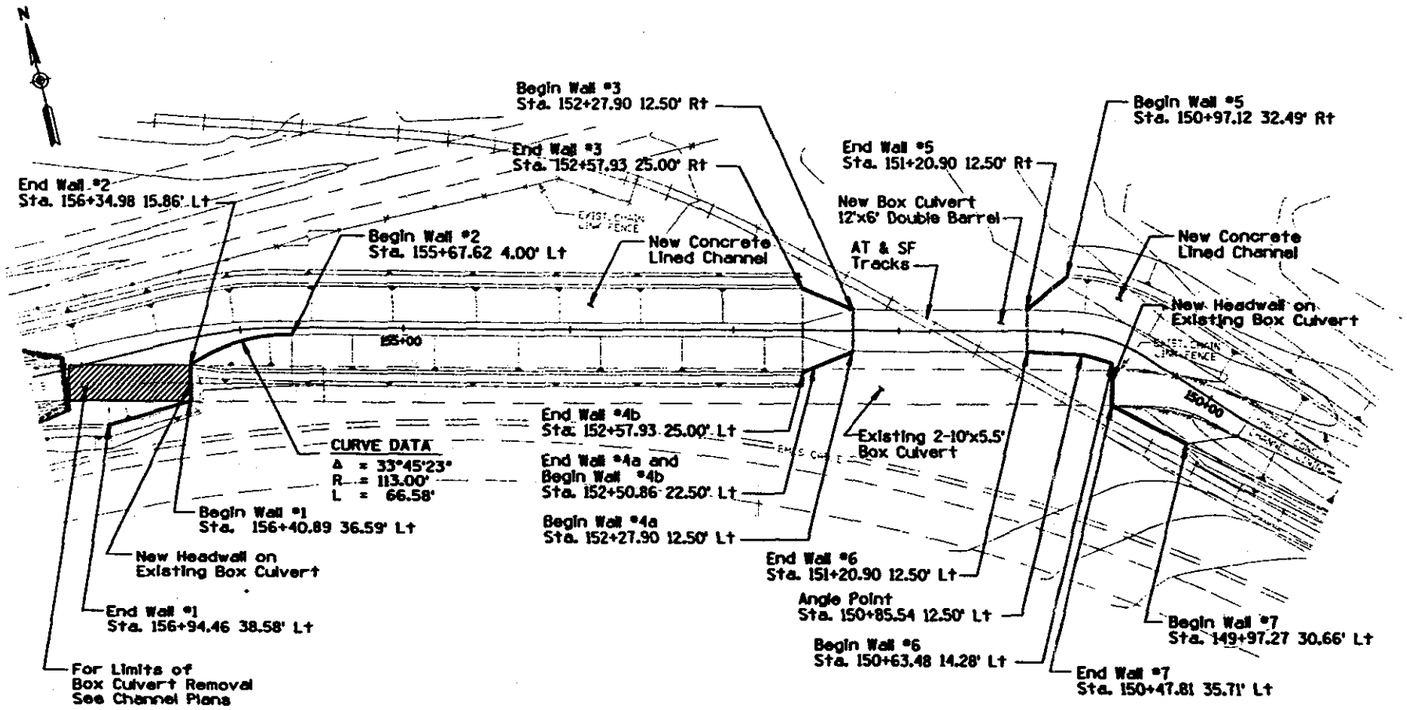
	BY	DATE
DESIGNED	C. GOPPERTON	1/95
DRAWN	C. GOPPERTON	1/95
CHECKED	T. BECK	5/95

NBS LOWRY

NBS/LOWRY PROJECT NO. P81-194-018

SHEET D16/16

\P81-194.018\DWGS\PH-III\DD-018.DWG VIEW = SITE 1 = 20 MSPACE



RETAINING WALLS PLAN

Scale: 1" = 40'

NOTE:
Stations and Offsets
Refer to Front Face of Wall

SUMMARY OF ESTIMATED QUANTITIES

ITEM	STRUCTURE EXCAVATION*	STRUCTURE BACKFILL	CLASS A CONCRETE 3000 psi	REINFORCING STEEL	WALL SURFACE	4' CHAIN LINK FENCE
WALL	CY	CY	CY	LBS	S.F.	L.F.
WALL #1	42	124	40	3583	563	54
WALL #2	44	38	55	7056	1142	67
WALL #3	51	88	49	7885	341	33
WALL #4a & 4b	20	39	15	1337	291	33
WALL #5	26	75	25	2172	341	30
WALL #6	34	155	39	6912	551	53
WALL #7	79	137	77	12098	533	51
HEADWALLS	-	-	6	529	180	48
TOTAL	296	656	306	41572	3942	369

*Not a Pay Item

GENERAL NOTES

Construction Specifications - Maricopa Association of Governments (M.A.G.), "Uniform Standard Specifications for Public Works Construction", 1992 Edition, and Revisions. Maricopa County Department of Transportation Supplements, and the Special Provisions.

Design Specifications -
AASHTO Standard Specifications for Highway Bridges, Fifteenth Edition - 1992, with 1993 Interim Specifications

Dead Load - Weight of Backfill = 120 pcf
- Equivalent Fluid Pressure = 35 pcf

Reinforcing steel shall conform to ASTM Specification A615, Grade 60.

All bend dimensions for reinforcing steel shall be out-to-out of bars unless noted otherwise. All placement dimensions for reinforcing steel shall be center to center of bars unless noted otherwise.

All reinforcing steel shall have 2 inch clear cover unless noted otherwise.

Dowels in Hardened Concrete:
Dowels installed in hardened concrete shall be anchored with Dayton Superior Sure-Grip high performance grout or approved equal in accordance with the manufactures recommendations. The grout shall have a minimum compressive strength of 4000 psi at 7 days. The hole for placing dowels shall be 1" greater in diameter than the nominal diameter of the dowel. The hole shall be formed with a percussion rotary drill, or if core drilled, the interior surface of the hole shall be intentionally roughened by abrasive blasting or other means.

Stresses:

Walls and Footings. . . . . f'c = 3000 psi Class A
Grade 60 Reinforcing Steel . . . . . fs = 24000 psi

Joint Notes:
All retaining walls shall have construction joints spaced at not more than 30'-0" apart or as shown. Reinforcing Steel shall project through the joints.

Footings may be continuous with no joints.

For expansion joint detail see ADOT Std. B-18.10.

For Construction Joint detail see ADOT Std. B-18.10.

Chamfer all exposed corners ¾" as per Std. B-19.10 unless noted otherwise.

Refer to ADOT Standard Plans for Details not Specifically Called Out in these Plans. Specifically, ADOT Structures Section Standards, 1992 Edition, B-18.10, B-18.20, B-18.30, B19.30, B-19.40 and C12.20

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
S01	PLAN, QUANTITIES & NOTES
S02	WALL ELEVATIONS #1, #2, #3 AND #4
S03	WALL ELEVATIONS #5, #6 AND #7
S04	WALL SECTIONS AND DETAILS
S05	WALLS #1 AND #2 PLAN AND SECTIONS
S06	WALLS #3 TO #7 PLAN AND SECTIONS

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
RETAINING WALLS
PLAN, QUANTITIES AND NOTES

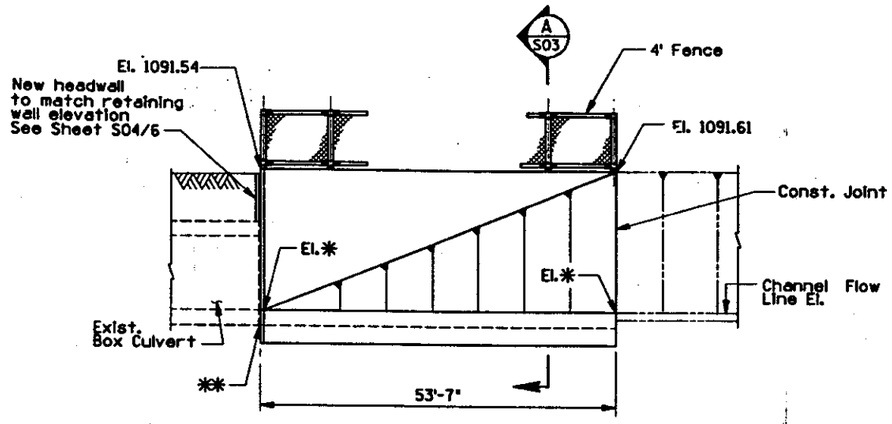
	BY	DATE
DESIGNED	S. SENAPATHI	4/94
DRAWN	E. FAFITIS	4/94
CHECKED	O. OLIDEN	8/94

ALPHA Engineering Group, Inc.

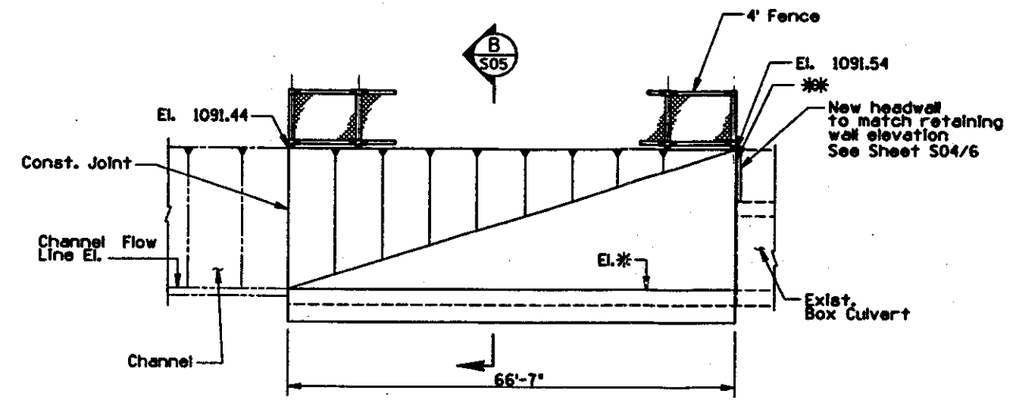
ALPHA PROJECT NO. 46-5551-02

SHEET S01/6

RTWIONLDGN



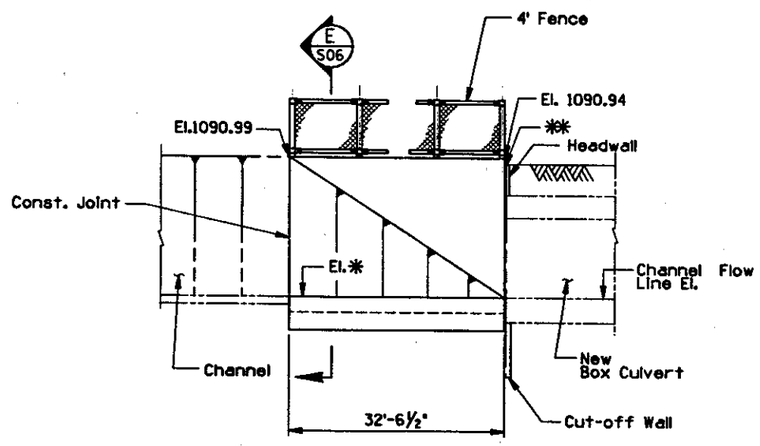
WALL #1 - ELEVATION
Scale: Vert. 1"=5'
Hor. 1"=10'



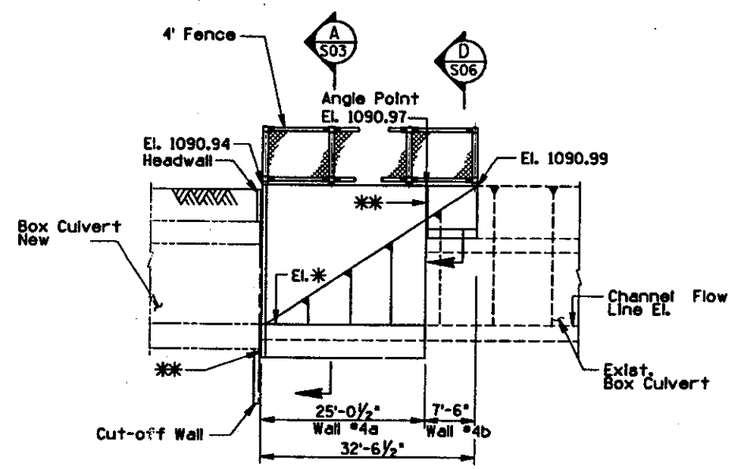
WALL #2 - ELEVATION
Scale: Vert. 1"=5'
Hor. 1"=10'

✱ Top of footing Elevation to Match Channel Flow Line Elevation

✱✱ Expansion Joint = 1" Bituminuous Joint Filler



WALL #3 - ELEVATION
Scale: Vert. 1"=5'
Hor. 1"=10'



WALL #4a and #4b - ELEVATION
Scale: Vert. 1"=5'
Hor. 1"=10'

NO.	REVISION	DATE
3		
2		
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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
RETAINING WALLS
WALL ELEVATIONS #1, #2, #3 AND #4

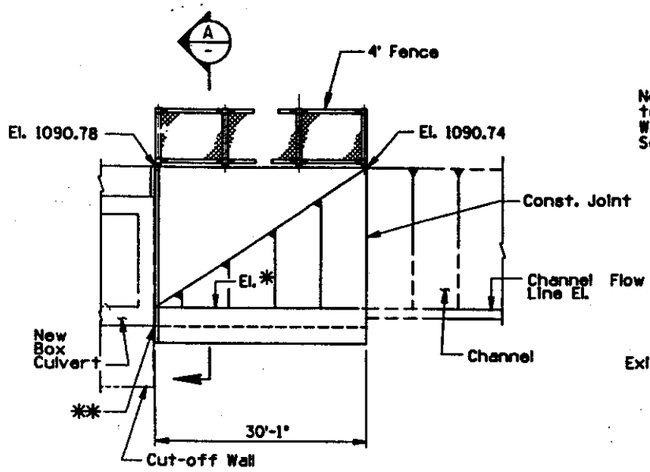
	BY	DATE
DESIGNED	S. SENAPATHI	4/94
DRAWN	E. FAFITIS	4/94
CHECKED	O. OLIDEN	8/94

ALPHA Engineering Group, Inc.

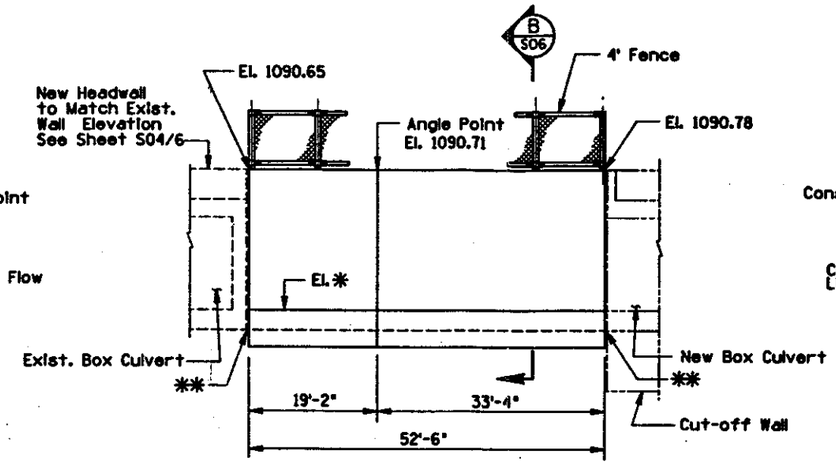
ALPHA PROJECT NO. 46-5551-02

SHEET S02/6

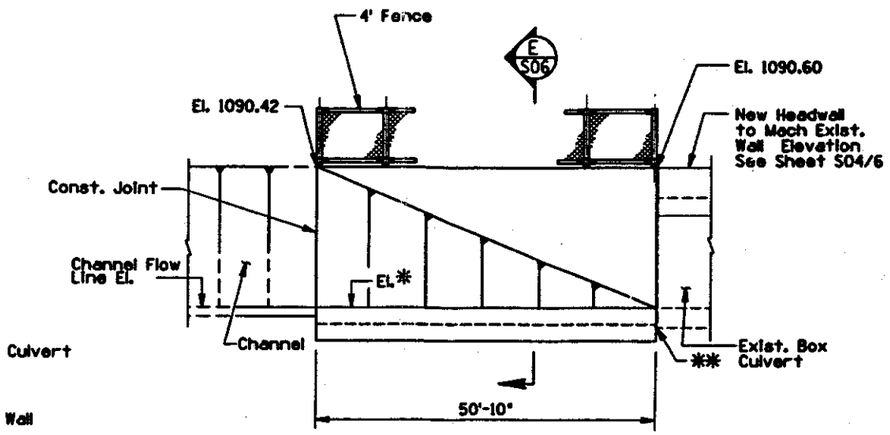
RTWAL1.DGN



WALL #5 - ELEVATION
Scale: Vert. 1"=5'
Hor. 1"=10'



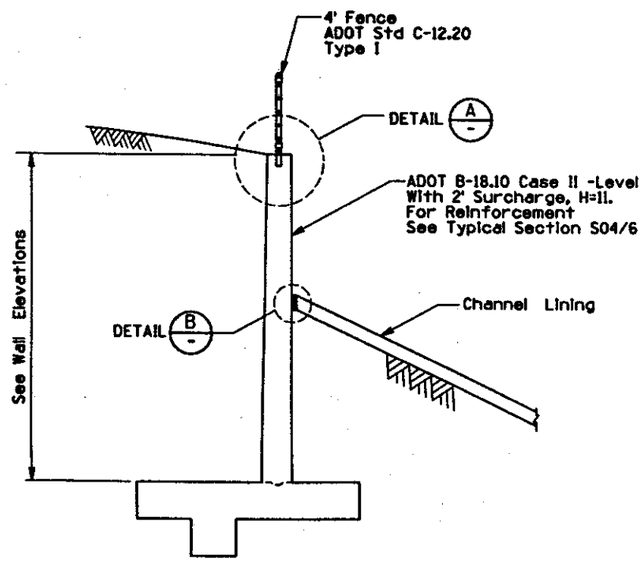
WALL #6 - ELEVATION
Scale: Vert. 1"=5'
Hor. 1"=10'



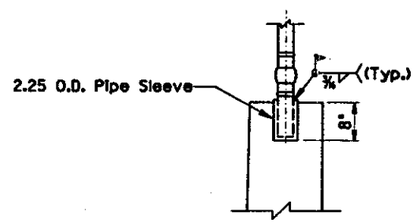
WALL #7 - ELEVATION
Scale: Vert. 1"=5'
Hor. 1"=10'

* Top of Footing Elevation to Match Channel Flow Line Elevation

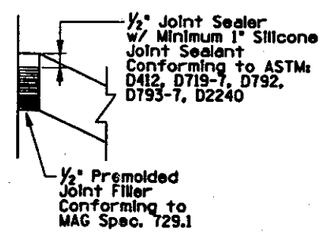
** Expansion Joint = 1" Bituminuous Joint Filler



TYPICAL SECTION (A/-) (A/S02) (A/S05) (A/S06)
N.T.S.



DETAIL (A/-) (A/S04) (A/S06)
N.T.S.



DETAIL (B/-) (B/S05) (B/S06)
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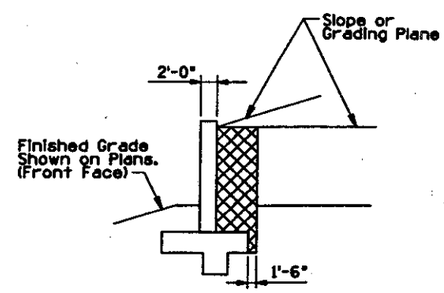


PAYMENT LIMITS
N.T.S.

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
RETAINING WALLS
WALL ELEVATIONS #5, #6 AND #7

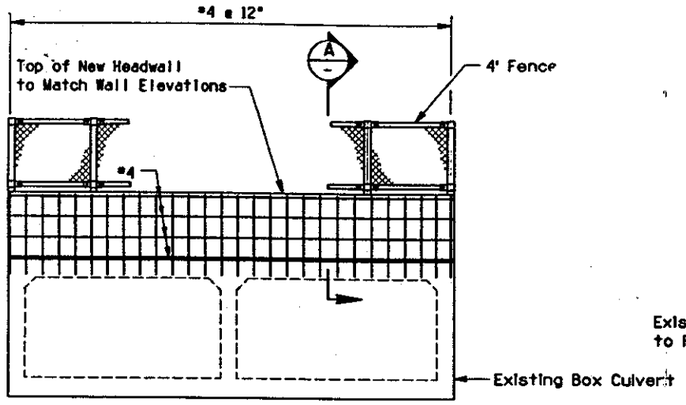
	BY	DATE
DESIGNED	S. SENAPATHI	4/94
DRAWN	E. FAFITIS	4/94
CHECKED	O. OLIDEN	8/94

ALPHA Engineering Group, Inc.

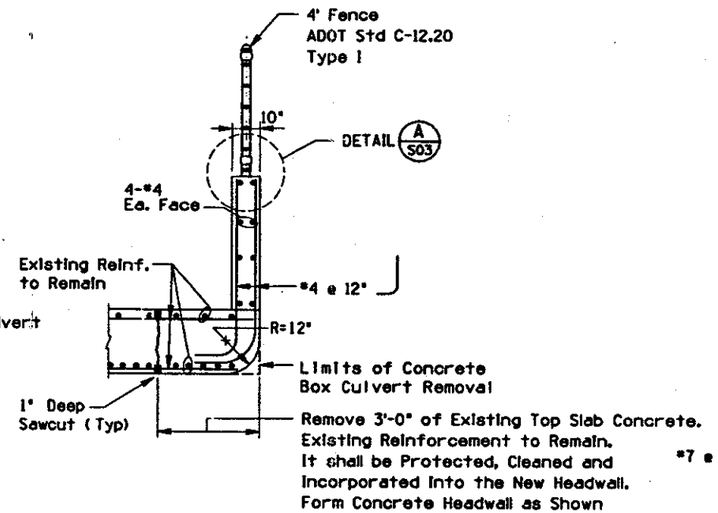
ALPHA PROJECT NO. 46-5551-02

SHEET S03/6

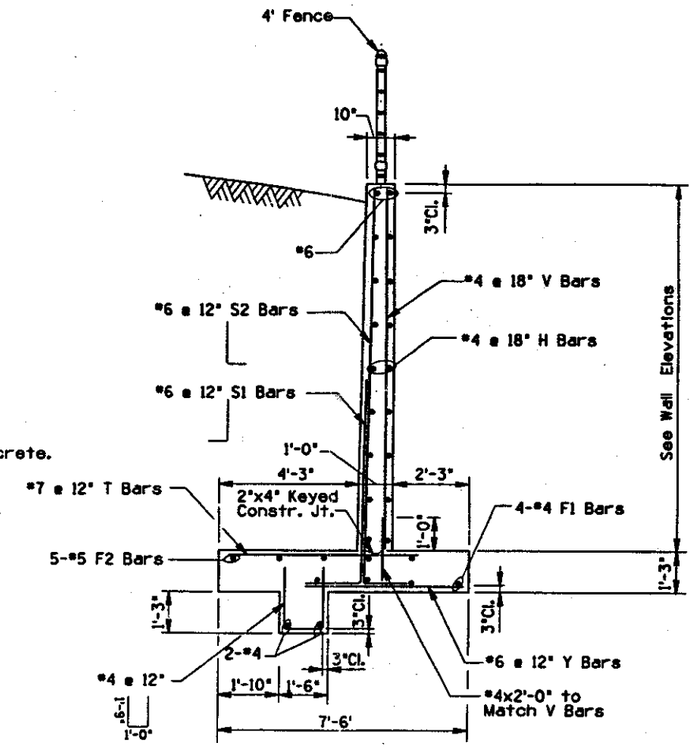
RETWAL2.DGN



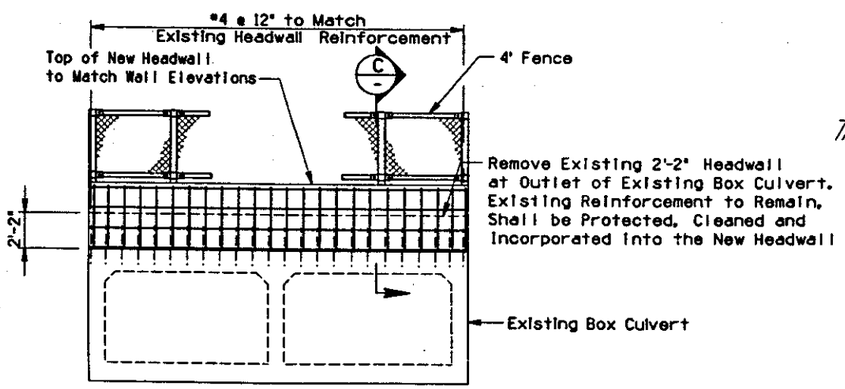
NEW HEADWALL ELEVATION
AT INLET OF EXISTING BOX CULVERT
Scale: 1/4" = 1'-0"



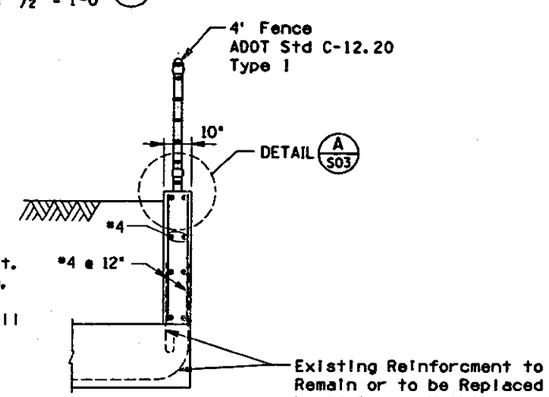
SECTION A
Scale: 1/2" = 1'-0"



TYPICAL SECTION
Scale: 1/2" = 1'-0"



NEW HEADWALL ELEVATION
AT OUTLET OF EXISTING BOX CULVERT
Scale: 1/4" = 1'-0"



SECTION C
Scale: 1/2" = 1'-0"

Note:
For Bar Dimensions
See ADOT Std B-18.10 Case II
With 2' Surcharge, H=11

NO.	REVISION	DATE
3		
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1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
RETAINING WALLS
WALL SECTIONS AND DETAILS

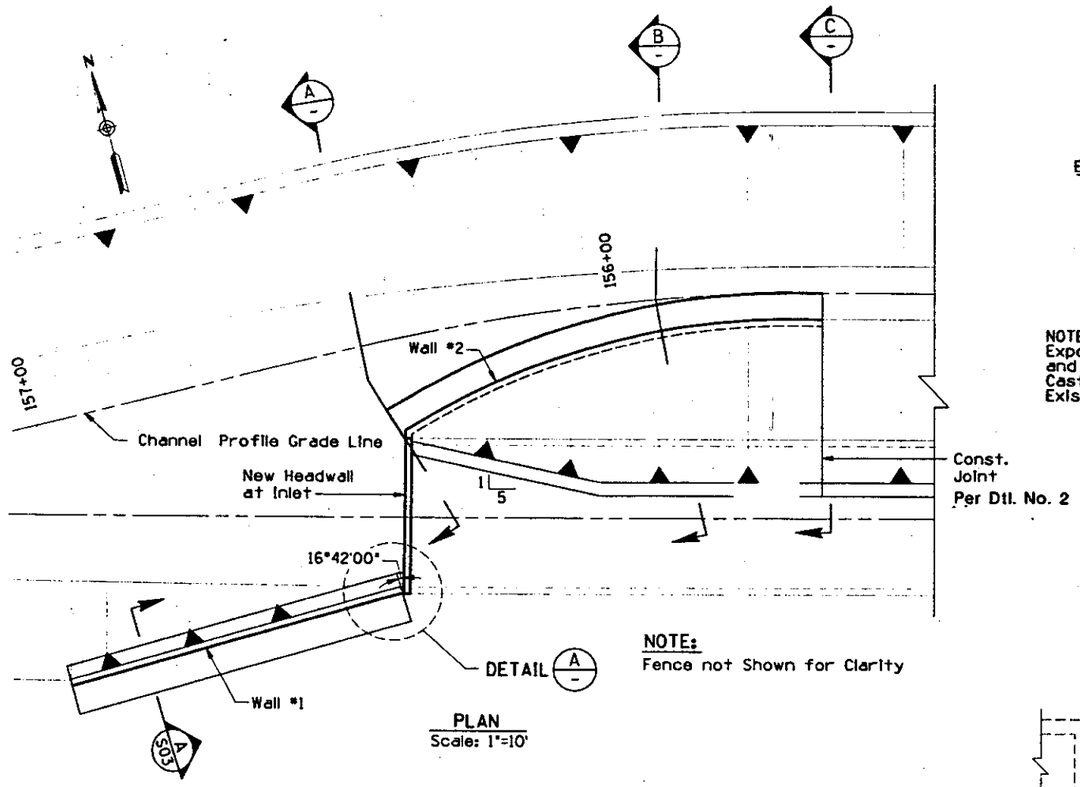
	BY	DATE
DESIGNED	S. SENAPATHI	4/94
DRAWN	E. FAFITIS	4/94
CHECKED	O. OLIDEN	8/94

ALPHA Engineering Group, Inc.

ALPHA PROJECT NO. 46-5551-02

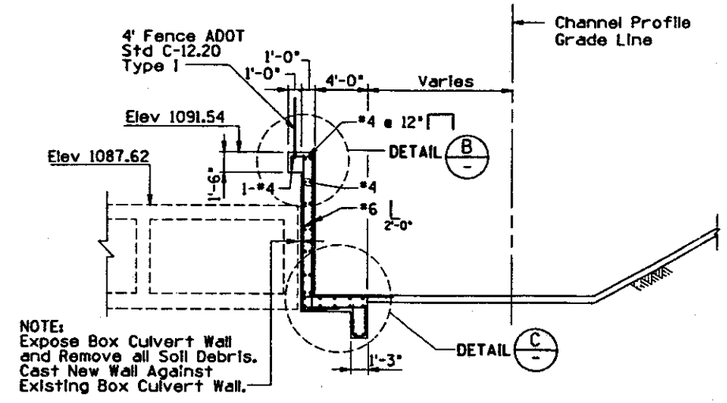
SHEET S04/6

RWALDET.DGN



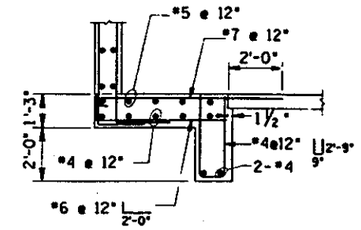
NOTE:
Fence not Shown for Clarity

PLAN
Scale: 1"=10'

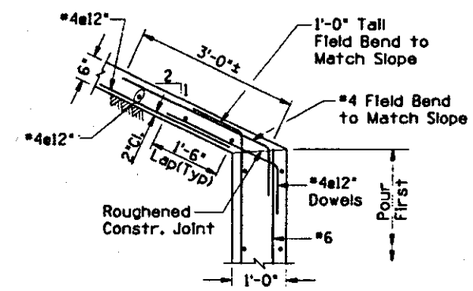


NOTE:
Expose Box Culvert Wall and Remove all Soil Debris. Cast New Wall Against Existing Box Culvert Wall.

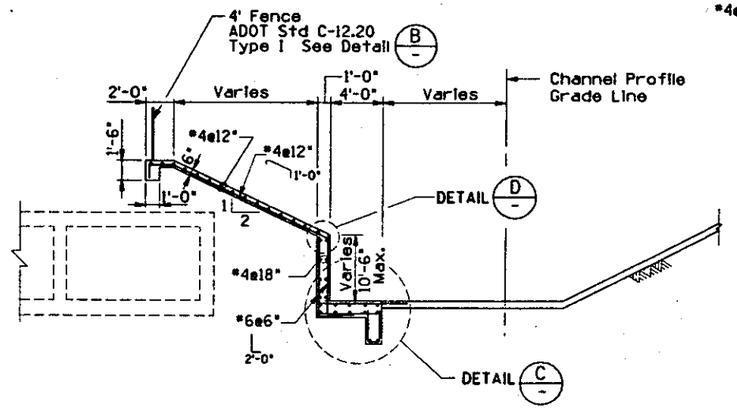
SECTION A
Scale: 1"=5'



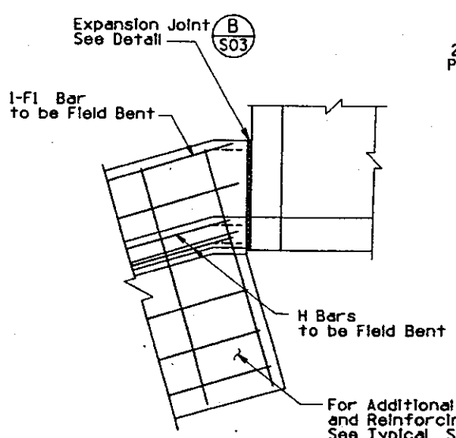
DETAIL C
Scale: 1"=2.5'



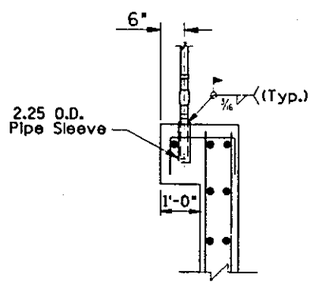
DETAIL D
N.T.S.



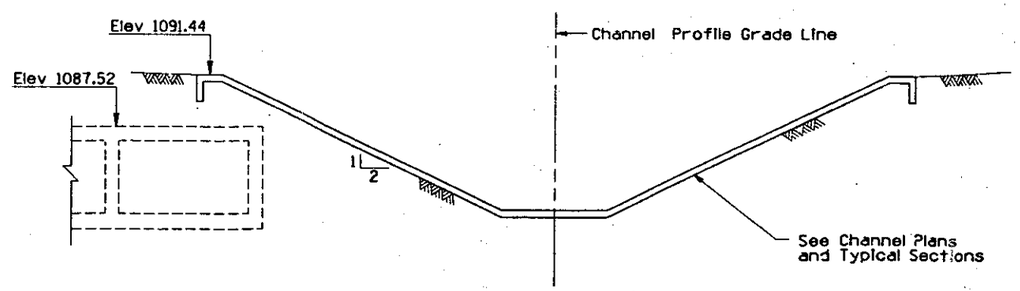
SECTION B B
Scale: 1"=5'



DETAIL A A
Scale: ½"=1'-0"



DETAIL B
N.T.S.



SECTION C
Scale: 1"=5'

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

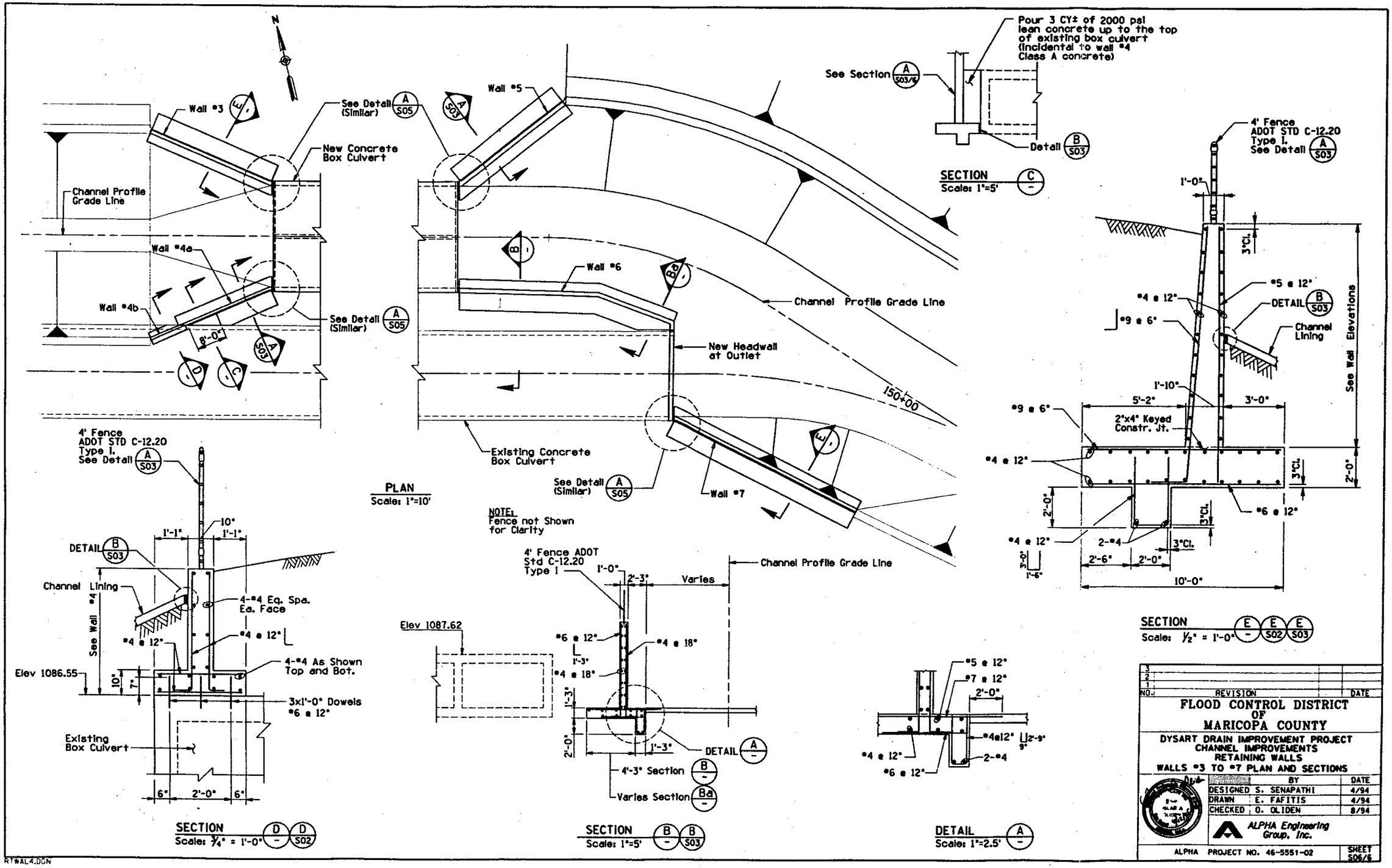
DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
RETAINING WALLS
WALLS #1 AND #2 PLAN AND SECTIONS

	BY	DATE
DESIGNED	S. SENAPATHI	4/94
DRAWN	E. FAFITIS	4/94
CHECKED	O. OLIDEN	8/94

ALPHA Engineering Group, Inc.

ALPHA PROJECT NO. 46-5551-02

SHEET S05/6



NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
CHANNEL IMPROVEMENTS
RETAINING WALLS
WALLS #3 TO #7 PLAN AND SECTIONS

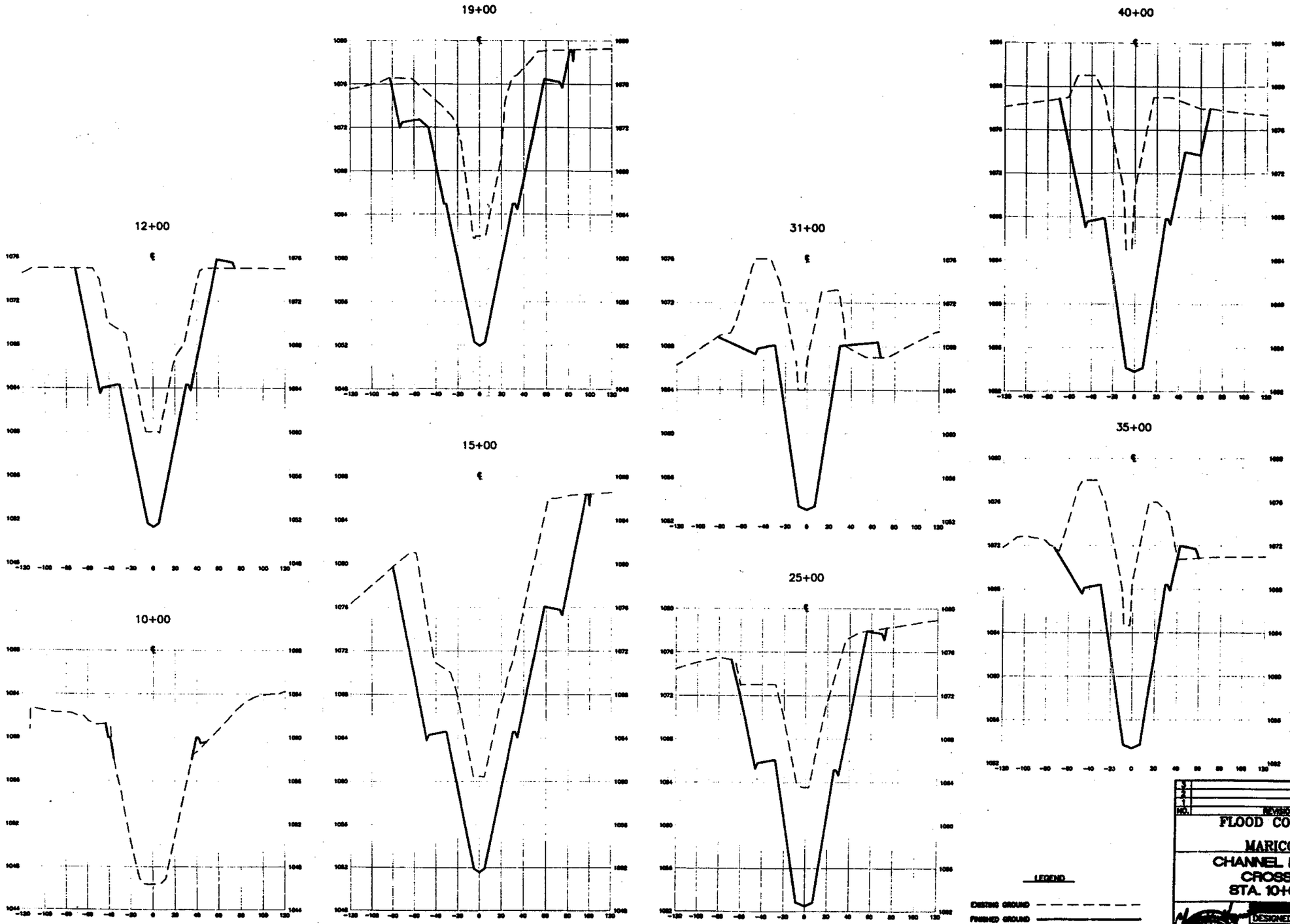
	BY	DATE
DESIGNED	S. SENAPATHI	4/94
DRAWN	E. FAFITIS	4/94
CHECKED	O. OLIDEN	8/94

ALPHA Engineering Group, Inc.

ALPHA PROJECT NO. 46-5551-02

SHEET S06/6

RTWAL4.DGN



LEGEND

EXISTING GROUND

FINISHED GROUND

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

CHANNEL IMPROVEMENTS
CROSS SECTIONS
STA. 10+00 TO 40+00

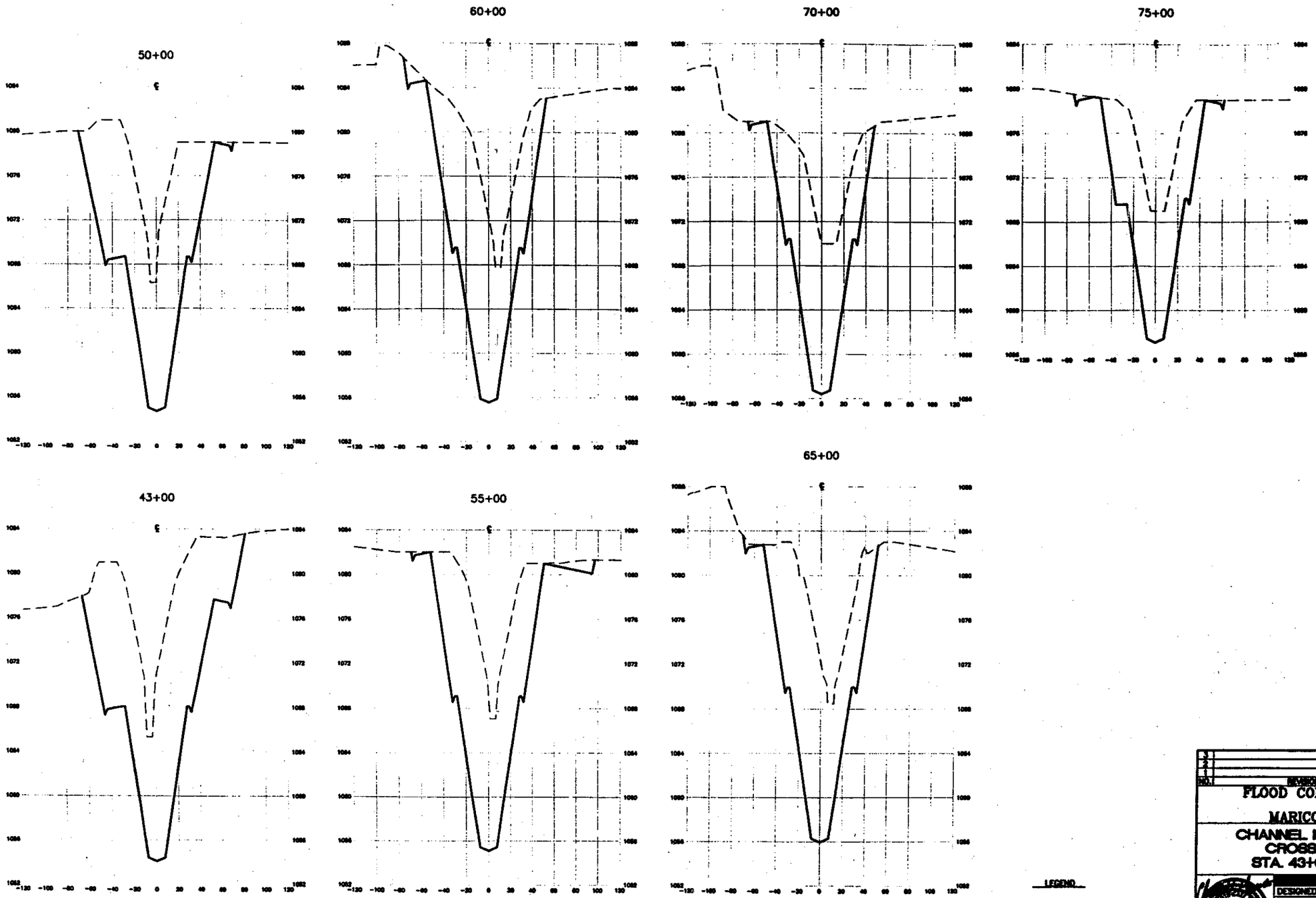
	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. GOPPERTON	5/95

NBS/LOWRY

NBS/LOWRY PROJECT NO. P61-194-019

SHEET XD1/5

263-1100



NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

CHANNEL IMPROVEMENTS
CROSS SECTIONS
STA. 43+00 TO 75+00

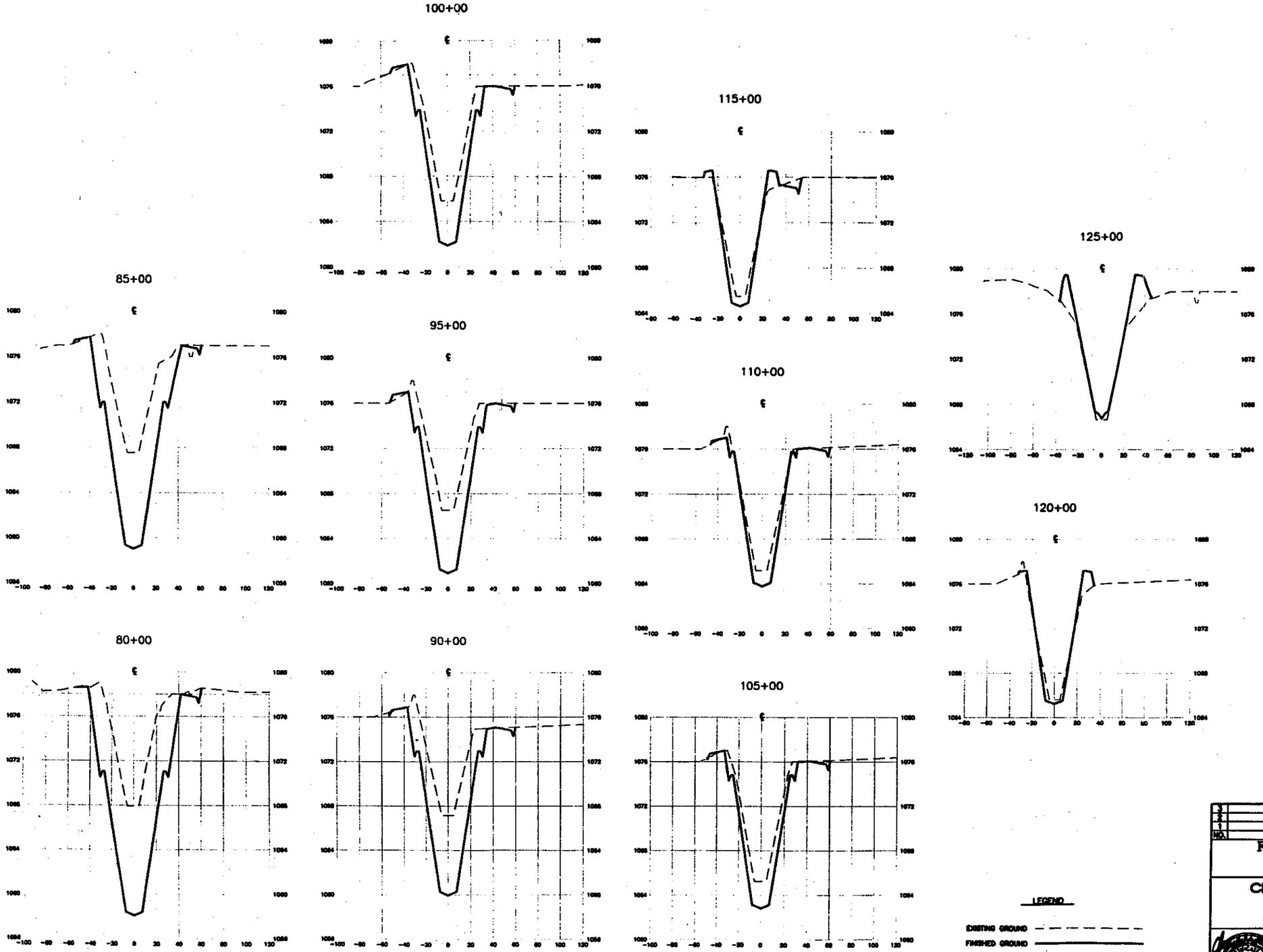
	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. GOPPERTON	5/95

HDR/LOWRY

HDR/LOWRY PROJECT NO. F81-194-019

SHEET
X02/5

VIEW = SIZE 1 = 40 MIPHCE



NO.	REVISION	BY	DATE
3			
2			
1			

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

CHANNEL IMPROVEMENTS
CROSS SECTIONS
STA. 80+00 TO 120+00

	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. GOPPERTON	5/95

HBS/LOWRY

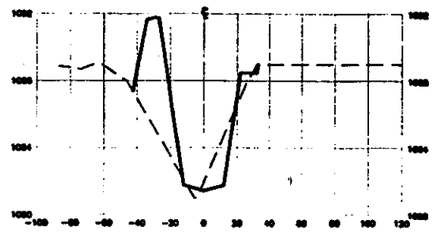
HBS/LOWRY PROJECT NO. PS1-194-019

SHEET X03/5

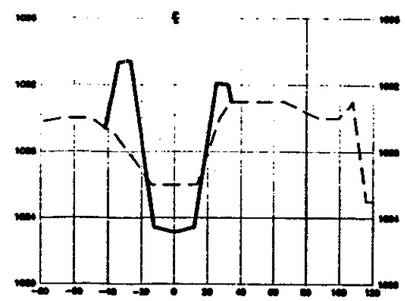
263-100

\PS1-194.019\SHEET\PH-01\CD-X03.DWG VIEW = SYE 1 = 40 MIPACE

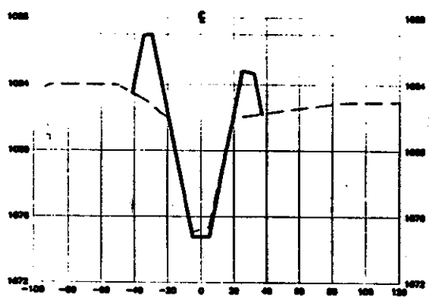
160+00



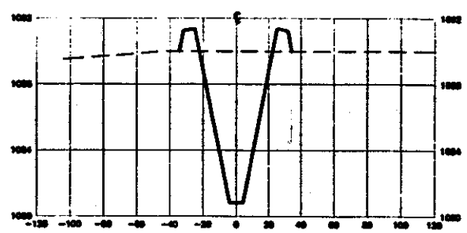
175+00



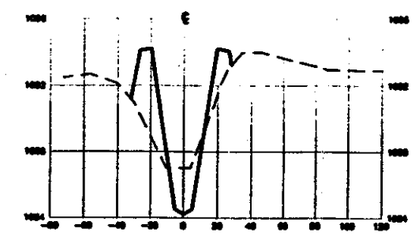
140+00



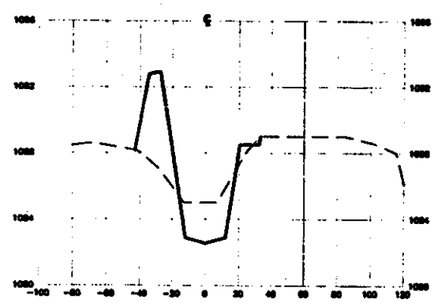
155+00



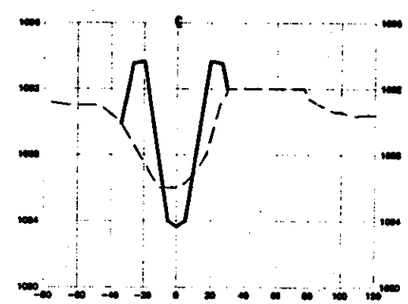
185+00



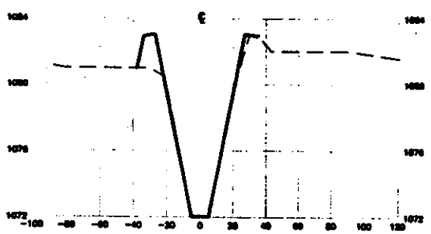
170+00



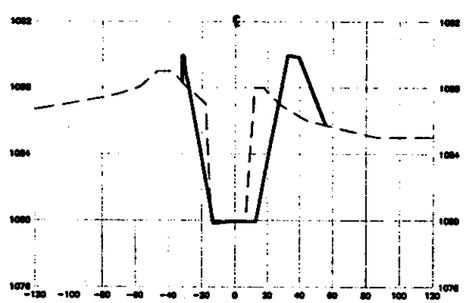
180+00



135+00



150+00



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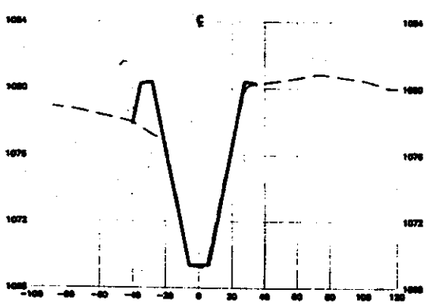
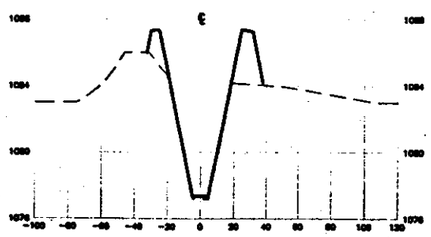
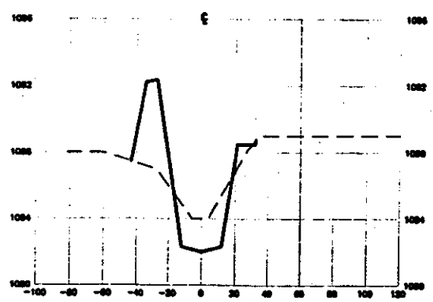


145+00



165+00



LEGEND

EXISTING GROUND

FINISHED GROUND

NO.	REVISION	DATE

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

CHANNEL IMPROVEMENTS
CROSS SECTIONS
STA. 130+00 TO 165+00

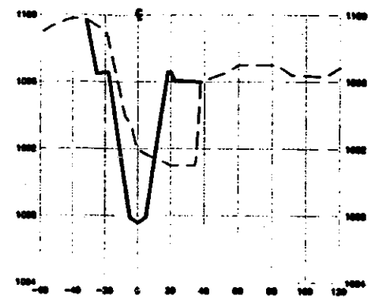
	BY	DATE
DESIGNED	S. YINGLING	6/94
DRAWN	S. YINGLING	6/94
CHECKED	C. GOPPERTON	5/95

HDR LOWRY

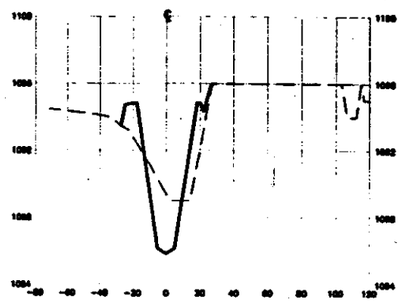
HDR/LOWRY PROJECT NO. P61-194-019

SHEET X04/5

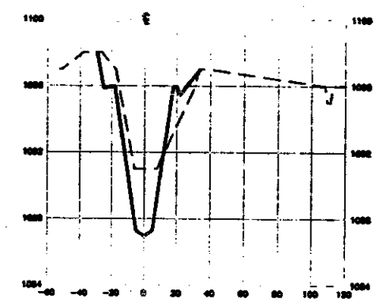
215+50



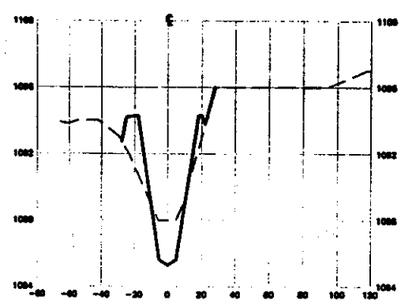
200+00



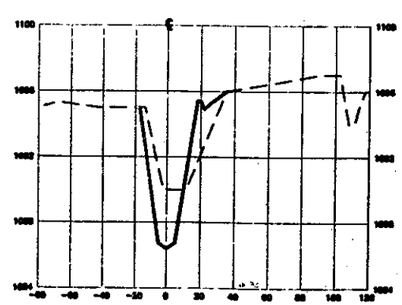
210+00



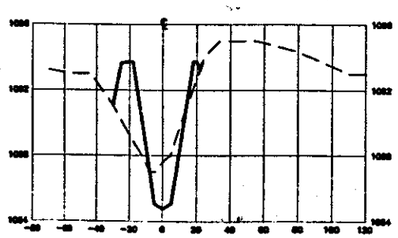
195+00



205+00



190+00



LEGEND

EXISTING GROUND — — — — — — —

FINISHED GROUND ————————

263-1100

NO.	REVISION	DATE

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

CHANNEL IMPROVEMENTS
CROSS SECTIONS
STA. 190+00 TO 215+50

	BY	DATE
DESIGNED	S. YINGLING	9/94
DRAWN	S. YINGLING	9/94
CHECKED	C. GOPPERTON	5/95

HDR LOWRY

HDR/LOWRY PROJECT NO. F91-194-019

SHEET
X05/5

VIEW = SITE 1 = 40 MSPACE

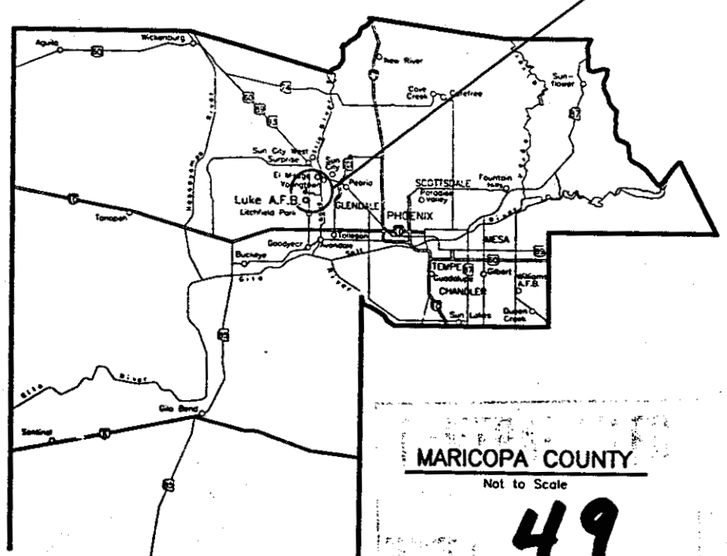
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

PLANS FOR THE CONSTRUCTION OF:

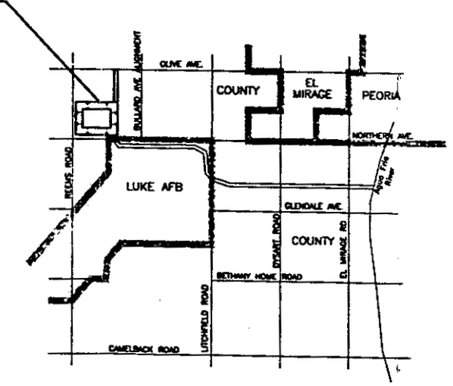
DYSART DRAIN IMPROVEMENTS PROJECT
REEMS ROAD TO AGUA FRIA RIVER
DETENTION BASIN AND COLLECTOR CHANNELS

PROJECT NO. FCD 94-36
LAFB NO. 87-3002

PROJECT NO. FCD 94-36



MARICOPA COUNTY
Not to Scale



VICINITY MAP
Not to Scale

DYSART DRAIN IMPROVEMENTS
REEMS RD TO AGUA FRIA
CONSTRUCTION PLANS DETENTION
BASIN & COLLECTOR CHANNEL
FCD 94-36
470

49

3 NOV 94
DEPARTMENT OF THE AIR FORCE
LUKE AIR FORCE BASE

NBS/LOWRY
ENGINEERS & PLANNERS
2600 North 44th Street, Ste. 100
Phoenix, Arizona 85008-1589
(602) 468-1688 FAX 956-4538

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

ISSUED FOR PUBLIC BIDDING BY:

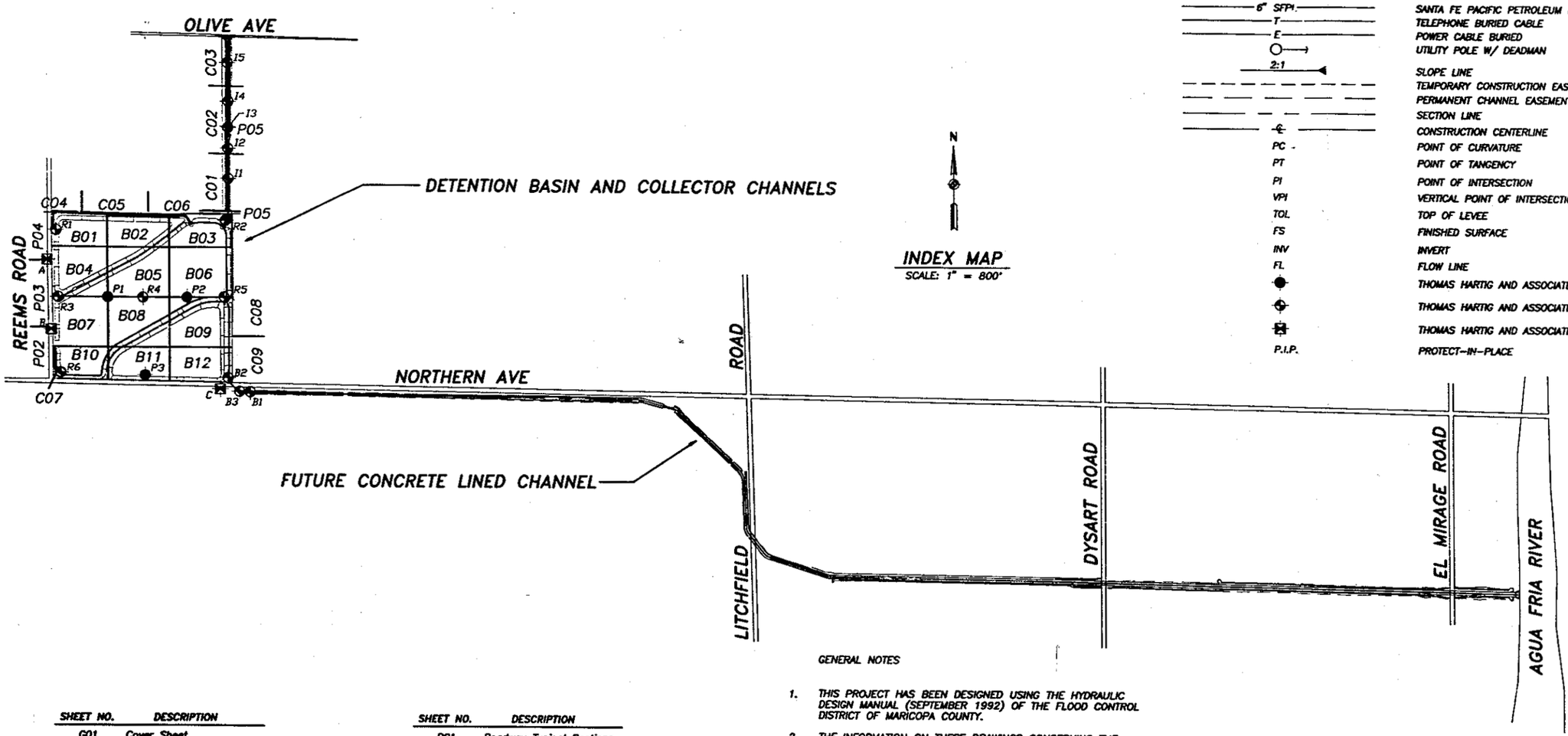
11-3-94
CHIEF ENGINEER AND GENERAL MANAGER — DATE

BOARD OF DIRECTORS OF THE FLOOD CONTROL DISTRICT

BETSEY BAYLESS – CHAIRMAN

DISTRICT 1 TOM RAWLES
DISTRICT 2 JOHN T. KATSENES
DISTRICT 3 BETSEY BAYLESS
DISTRICT 4 EDWARD KING
DISTRICT 5 MARY ROSE GARRIDO WILCOX

NBS/LOWRY PROJECT NO. PR1-194.019 | SHEET



LEGEND

	FENCE W/GATE
16" RWL	REUSE WATER LINE
	STORM DRAIN AND MANHOLE
8" W	WATERLINE WITH AIR/VAC ASSEMBLY
8" W	WATER LINE W/VALVE
4" GAS	GAS LINE
6" SFPI	SANTA FE PACIFIC PETROLEUM LINE
T	TELEPHONE BURIED CABLE
E	POWER CABLE BURIED
	UTILITY POLE W/ DEADMAN
2:1	SLOPE LINE
	TEMPORARY CONSTRUCTION EASEMENT (TCE)
	PERMANENT CHANNEL EASEMENT (PCE)
	SECTION LINE
℄	CONSTRUCTION CENTERLINE
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PI	POINT OF INTERSECTION
VPI	VERTICAL POINT OF INTERSECTION
TOL	TOP OF LEVEE
FS	FINISHED SURFACE
INV	INVERT
FL	FLOW LINE
	THOMAS HARTIG AND ASSOCIATES PERCOLATION TEST LOCATION
	THOMAS HARTIG AND ASSOCIATES TEST BORING LOCATION
	THOMAS HARTIG AND ASSOCIATES SUBGRADE SAMPLE LOCATION
P.I.P.	PROTECT-IN-PLACE

SHEET NO.	DESCRIPTION
G01	Cover Sheet
G02	Sheet Layout, Index, Legend, General Notes
G03	Channel Horizontal Control Plan
G04	Detention Basin Horizontal Control Plan
G05	Soil Boring Logs
C01	East Collector Channel
C02	East Collector Channel
C03	East Collector Channel
C04	North Collector Channel
C05	North Collector Channel
C06	North Collector Channel
C07	Reems Road Collector Channel
C08	Basin Outfall Channel
C09	Basin Outfall Channel
B01	Detention Basin Grading
B02	Detention Basin Grading
B03	Detention Basin Grading
B04	Detention Basin Grading
B05	Detention Basin Grading
B06	Detention Basin Grading
B07	Detention Basin Grading
B08	Detention Basin Grading
B09	Detention Basin Grading
B10	Detention Basin Grading
B11	Detention Basin Grading
B12	Detention Basin Grading

SHEET NO.	DESCRIPTION
P01	Roadway Typical Sections
P02	Reems Rd. Paving
P03	Reems Rd. Paving
P04	Reems Rd. Paving
P05	Farm Road Crossings
U01	12" Waterline Relocation
U02	Farm Road Irrigation Relocation Plan
U03	Farm Road Irrigation Details
U04	Farm Road Irrigation Details
U05	Olive Ave. Siphon Profile and Details
D01	Typical Sections 1 Through 4, Details 1 – 2
D02	Typical Sections A Through K
D03	Typical Sections, L Through R
D04	Details 3 – 5
D05	Details 6 – 7
D06	Irrigation and Waterline Details 8 – 13
D07	Fence and Gate Details 14 – 15
D08	Channel, Road and Waterline Details 16 – 22
D09	East Collector Channel Details at Olive Avenue

GENERAL NOTES

1. THIS PROJECT HAS BEEN DESIGNED USING THE HYDRAULIC DESIGN MANUAL (SEPTEMBER 1992) OF THE FLOOD CONTROL DISTRICT OF MARICOPA COUNTY.
2. THE INFORMATION ON THESE DRAWINGS CONCERNING THE TYPE, SIZE AND LOCATION OF UTILITIES HAS BEEN SHOWN BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES IN PLACE UNLESS OTHERWISE NOTED OR SPECIFIED. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
3. THE ENGINEER WILL NOT GUARANTEE ANY ELEVATIONS OR LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS.
4. THE CONTRACTOR SHALL CALL BLUE STAKE (263-1100) FOR THE LOCATION OF ALL UNDERGROUND UTILITIES TWO (2) WORKING DAYS BEFORE DIGGING.
5. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST MAG, MCDOT OR ADOT STANDARDS AND SPECIFICATIONS OR AS SPECIFIED ON THE PLANS AND IN THE PROJECT SUPPLEMENTAL GENERAL CONDITIONS AND SPECIAL PROVISIONS.
6. TRAFFIC CONTROL SHALL USE THE LATEST VERSION OF THE CITY OF PHOENIX TRAFFIC BARRICADE MANUAL.
7. EXTREME CAUTION IS TO BE USED WHEN OPERATING EQUIPMENT AROUND LOCATIONS OF HIGH VOLTAGE LINES.

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN AND COLLECTOR CHANNELS

SHEET LAYOUT, INDEX, AND LEGEND

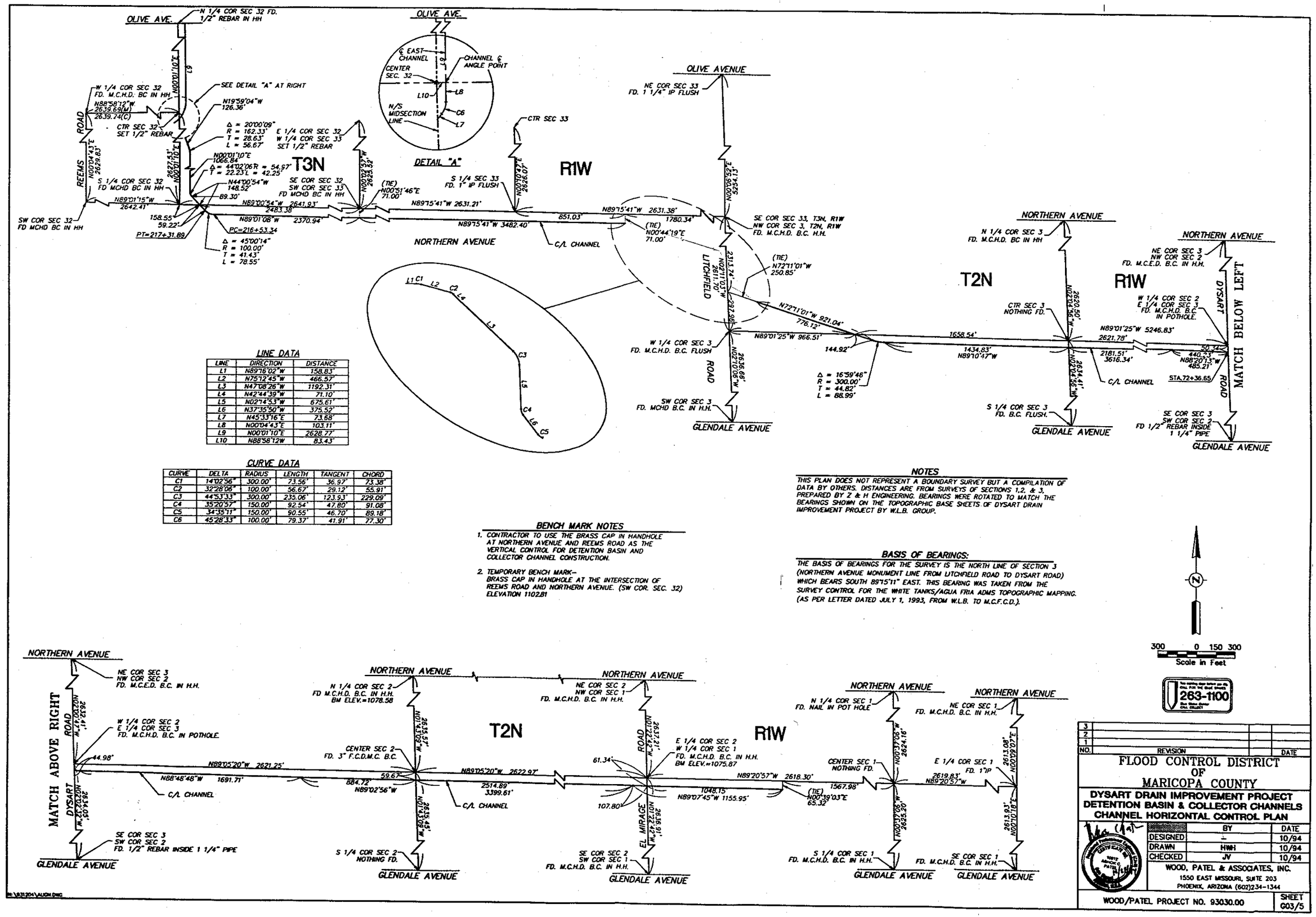
	BY	DATE
DESIGNED	S. YINGLING	5/1/94
DRAWN	S. YINGLING	5/1/94
CHECKED	C. GOPPERTON	8/18/94

NBS LOWRY
ENGINEERS & PLANNERS

263-1100

NBS/LOWRY PROJECT NO. PB1-194-019

SHEET



LINE DATA

LINE	DIRECTION	DISTANCE
L1	N89°16'02"W	158.83'
L2	N75°12'45"W	466.57'
L3	N47°08'26"W	1192.31'
L4	N42°44'39"W	71.10'
L5	N02°14'53"W	675.61'
L6	N37°35'50"W	375.52'
L7	N45°33'16"E	73.68'
L8	N00°04'43"E	103.11'
L9	N00°01'10"E	2628.77'
L10	N88°58'12W	83.43'

CURVE DATA

CURVE	DELTA	RADIUS	LENGTH	TANGENT	CHORD
C1	14°02'56"	300.00'	73.56'	36.97'	73.38'
C2	32°28'06"	100.00'	56.67'	29.12'	55.91'
C3	44°53'33"	300.00'	235.06'	123.93'	229.09'
C4	35°20'57"	150.00'	92.54'	47.80'	91.08'
C5	34°35'11"	150.00'	90.55'	46.70'	89.18'
C6	45°28'33"	100.00'	79.37'	41.91'	77.30'

BENCH MARK NOTES

1. CONTRACTOR TO USE THE BRASS CAP IN HANDHOLE AT NORTHERN AVENUE AND REEMS ROAD AS THE VERTICAL CONTROL FOR DETENTION BASIN AND COLLECTOR CHANNEL CONSTRUCTION.
2. TEMPORARY BENCH MARK– BRASS CAP IN HANDHOLE AT THE INTERSECTION OF REEMS ROAD AND NORTHERN AVENUE. (SW COR. SEC. 32) ELEVATION 1102.81

NOTES

THIS PLAN DOES NOT REPRESENT A BOUNDARY SURVEY BUT A COMPILATION OF DATA BY OTHERS. DISTANCES ARE FROM SURVEYS OF SECTIONS 1,2, & 3, PREPARED BY Z & H ENGINEERING. BEARINGS WERE ROTATED TO MATCH THE BEARINGS SHOWN ON THE TOPOGRAPHIC BASE SHEETS OF DYSART DRAIN IMPROVEMENT PROJECT BY W.L.B. GROUP.

BASIS OF BEARINGS:

THE BASIS OF BEARINGS FOR THE SURVEY IS THE NORTH LINE OF SECTION 3 (NORTHERN AVENUE MONUMENT LINE FROM LITCHFIELD ROAD TO DYSART ROAD) WHICH BEARS SOUTH 89°15'11" EAST. THIS BEARING WAS TAKEN FROM THE SURVEY CONTROL FOR THE WHITE TANKS/AGUA FRIA ADMS TOPOGRAPHIC MAPPING. (AS PER LETTER DATED JULY 1, 1993, FROM W.L.B. TO M.C.F.C.D.).

300 0 150 300
Scale in Feet

263-1100

NO.	REVISION		DATE
3			
2			
1			

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

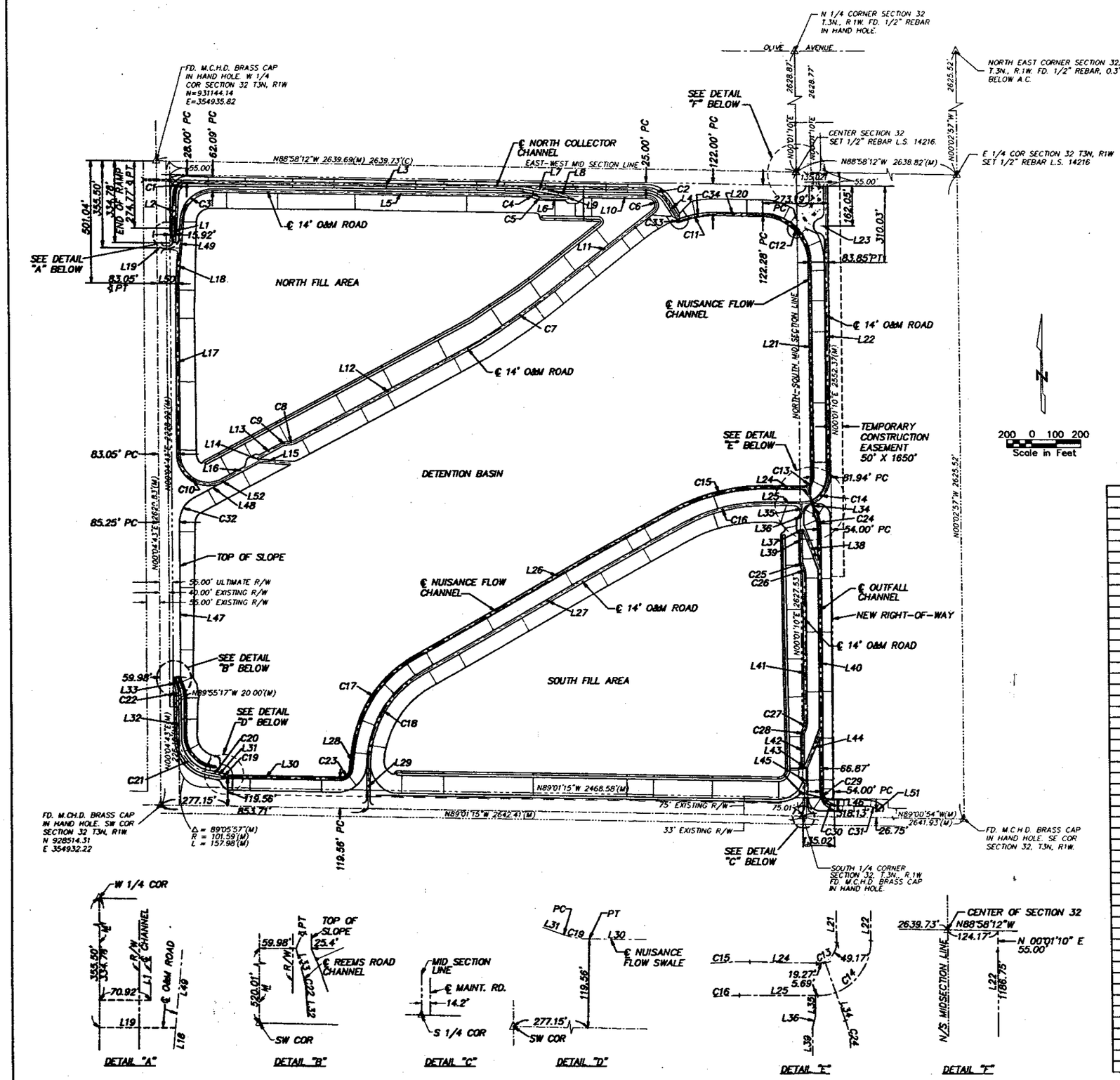
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
CHANNEL HORIZONTAL CONTROL PLAN

	BY	DATE
DESIGNED	–	10/94
DRAWN	HWH	10/94
CHECKED	JV	10/94

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

WOOD/PATEL PROJECT NO. 93030.00

SHEET G03/5



CURVE DATA

CURVE	RADIUS	LENGTH	TANGENT	CHORD	DELTA
C1	50.00'	77.92'	49.39'	70.27'	89°17'28"
C2	100.00'	101.88'	55.86'	97.53'	58°22'21"
C3	129.00'	193.47'	120.15'	175.84'	85°55'57"
C4	60.00'	29.27'	14.93'	28.98'	27°57'10"
C5	60.00'	29.27'	14.93'	28.98'	27°57'10"
C6	33.00'	81.53'	94.64'	62.32'	141°33'12"
C7	3000.00'	507.37'	254.29'	506.76'	09°41'24"
C8	60.00'	29.27'	14.93'	28.98'	27°57'10"
C9	60.00'	29.27'	14.93'	28.98'	27°57'10"
C10	123.00'	253.18'	204.44'	210.79'	117°56'04"
C11	450.98'	175.14'	88.69'	174.04'	22°15'05"
C12	193.01'	299.09'	188.96'	270.05'	88°47'06"
C13	43.03'	68.45'	43.90'	61.46'	91°08'27"
C14	111.63'	175.18'	111.46'	157.75'	89°54'51"
C15	784.00'	411.44'	210.57'	406.73'	30°04'06"
C16	674.03'	341.01'	174.24'	337.39'	28°59'16"
C17	507.00'	475.90'	257.11'	458.62'	53°46'52"
C18	433.00'	453.18'	249.82'	432.78'	59°57'59"
C19	120.00'	35.99'	18.13'	35.85'	17°10'54"
C20	120.00'	24.65'	12.37'	24.61'	11°46'15"
C21	150.00'	219.10'	134.32'	200.13'	83°41'18"
C22	120.00'	31.69'	15.94'	31.60'	15°07'59"
C23	43.42'	63.50'	38.95'	57.99'	83°47'36"
C24	162.33'	56.66'	28.62'	56.38'	20°00'00"
C25	60.00'	29.27'	14.93'	28.98'	27°57'10"
C26	60.00'	29.24'	14.92'	28.95'	27°55'19"
C27	60.00'	29.26'	14.93'	28.97'	27°56'24"
C28	60.00'	29.26'	14.93'	28.97'	27°56'42"
C29	54.97'	42.25'	22.23'	41.21'	44°02'04"
C30	59.25'	46.54'	24.55'	45.36'	45°00'21"
C31	70.00'	35.79'	18.30'	35.40'	29°17'48"
C32	115.22'	124.84'	69.34'	118.83'	62°04'48"
C33	450.98'	11.18'	5.59'	11.18'	01°25'15"
C34	450.98'	163.96'	82.89'	163.06'	20°49'49"

LINE DATA

LINE	DIRECTION	DISTANCE
L1	N 00°04'43" E	60.01'
L2	S 01°38'57" W	141.11'
L3	S 89°03'35" E	1905.49'
L4	S 30°41'14" E	92.71'
L5	S 89°05'58" E	1322.00'
L6	S 89°05'58" E	96.87'
L7	N 80°23'13" W	153.99'
L8	N 70°31'24" W	31.53'
L9	N 00°54'02" E	14.00'
L10	S 89°05'58" E	328.50'
L11	N 52°27'14" E	521.00'
L12	S 62°08'39" W	742.42'
L13	S 62°08'39" W	112.05'
L14	N 27°51'21" W	14.00'
L15	S 86°19'16" E	131.04'
L16	N 62°08'39" E	172.00'
L17	N 00°04'43" E	695.96'
L18	N 04°58'05" E	146.07'
L19	S 89°55'17" E	95.50'
L20	N 88°53'26" W	177.88'
L21	N 00°06'19" W	880.04'
L22	N 00°01'10" E	1186.75'
L23	S 89°58'50" E	23.89'
L24	S 88°57'52" E	136.13'
L25	N 89°56'01" E	159.68'
L26	N 60°58'02" E	1224.23'
L27	S 60°56'45" W	1246.43'
L28	N 07°11'10" E	77.56'
L29	N 00°58'45" E	179.98'
L30	N 89°01'15" W	461.02'
L31	N 71°50'21" W	9.55'
L32	N 00°04'43" E	162.77'
L33	S 15°03'16" E	49.26'
L34	S 19°58'50" E	126.40'
L35	S 00°01'10" W	41.35'
L36	S 16°17'43" W	25.00'
L37	N 89°58'50" W	14.60'
L38	S 22°52'32" E	170.74'
L39	N 00°02'11" E	166.00'
L40	N 00°01'10" E	1066.83'
L41	N 00°00'20" E	607.49'
L42	N 00°00'01" E	121.74'
L43	N 90°00'00" W	13.99'
L44	N 23°38'31" E	166.88'
L45	N 00°00'01" E	199.16'
L46	N 89°01'15" W	136.18'
L47	N 00°03'51" E	633.58'
L48	S 62°08'39" W	136.35'
L49	N 04°58'05" E	116.92'
L50	S 89°55'17" E	83.05'
L51	N 53°43'27" W	20.67'
L52	S 27°51'21" E	7.00'

CALL FOR THE BLUE STAKE
263-1100
Blue Stake Center
CALL COLLECT

NO.	REVISION	DATE
3		
2		
1	SUBSTITUTE FOR SHEET G04 OF IMP. PLANS	2/20/95

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
HORIZONTAL CONTROL PLAN

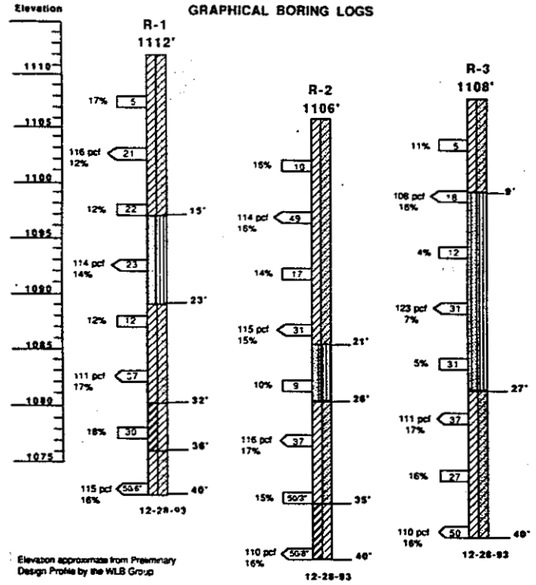
	BY	DATE
DESIGNED	JGT	2/20/95
DRAWN	VF	2/20/95
CHECKED	ACP	2/20/95

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

WOOD/PATEL PROJECT NO. 93030.00

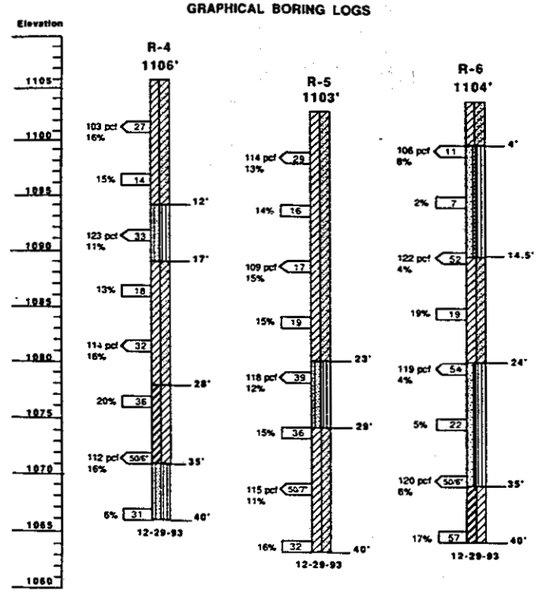
SHEET G04/5

GRAPHICAL BORING LOGS

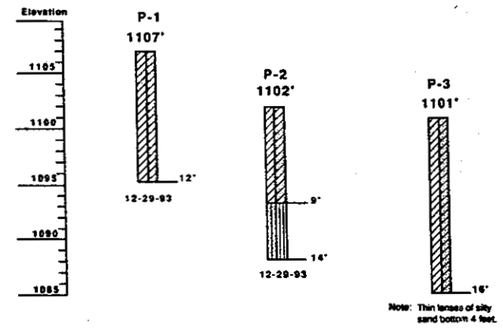


Elevation approximate from Preliminary Design Profile by the WLB Group

GRAPHICAL BORING LOGS



GRAPHICAL BORING LOGS



LEGEND OF SOIL TYPES

SANDY CLAY (CL, SC-CL); light brown to brown; firm to very stiff; low to medium plasticity; stratified; variable quantities primarily fine to medium sand; variable light to moderate calcareous cementation; damp to moist.

CLAY (CH, CL-CH); light brown to dark brown; stiff to hard; medium to high plasticity; stratified; traces to some fine sand; uncemented to moderate calcareous cementation; slightly damp to moist.

SILTY SAND (SM, SM-ML); light brown; medium dense to dense; subangular to subrounded primarily fine to coarse sand with low plasticity fines and occasional lenses with fine gravel; uncemented to light calcareous cementation; damp to moist.

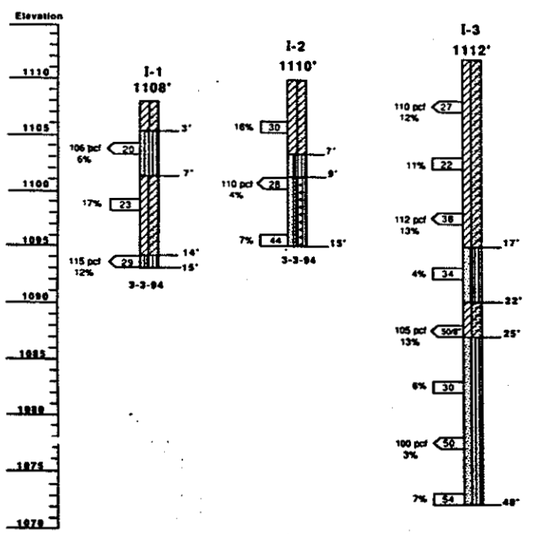
SANDY SILT (MH); light greenish brown; stiff to very stiff; medium plasticity; light calcareous cementation; damp.

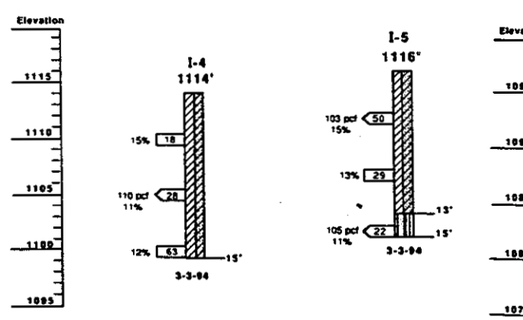
SILTY SAND AND GRAVEL (SM-GM); light brown; dense to very dense; angular to subrounded fine to coarse sand and fine to medium gravel; non-plastic to low plasticity fines; damp to moist.

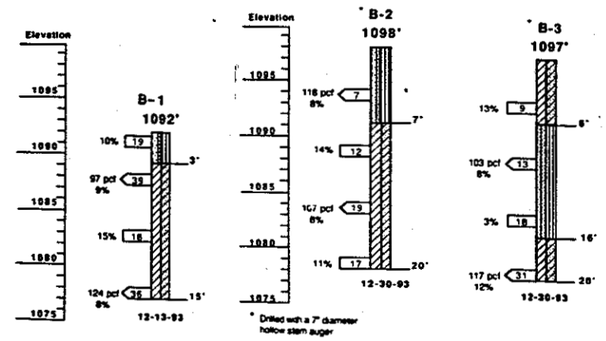
CLAYEY SAND (SC); brown; medium dense to dense; fine to coarse subangular to subrounded fine to coarse sand and traces to some gravel with low plasticity fines; damp to moist.

SAND (SP); light brown; medium dense; fine to coarse subrounded to rounded fine to coarse sand with traces to some fine gravel; moist.

SAND AND GRAVEL (GW, GW-GM); light brown; medium dense to very dense; angular to subangular fine sand to medium gravel with subangular to subrounded medium gravel to cobbles; damp to moist.



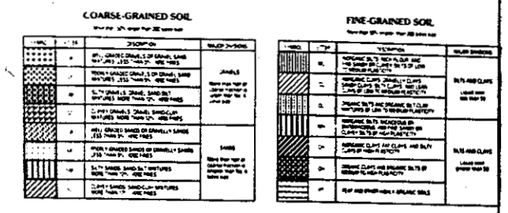




* Drilled with a 7" diameter hollow stem auger

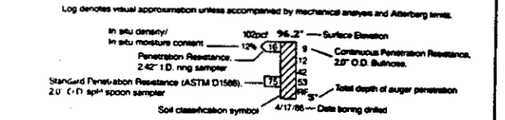
LEGEND

SOIL CLASSIFICATION



LEGEND FOR GRAPHICAL BORING LOGS:

Log denotes visual approximation unless accompanied by mechanical analyses and Atterberg limits.



PENETRATION RESISTANCE: Blows per foot using 140 lb. hammer with 30" free-fall unless otherwise noted.

	GRAIN SIZES							
	U.S. STANDARD SERIES SIEVE				CLEAR SQUARE SIEVE OPENINGS			
	200 40 10 4				3/4" 3" 12"			
SILTS & CLAYS DISTINGUISHED ON BASIS OF PLASTICITY	SAND			GRAVEL			COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE			
MOISTURE CONDITION (INCREASING MOISTURE ==>)								
DRY	SLIGHTLY DAMP	DAMP (Plastic Limit)	MOIST	VERY MOIST	WET (SATURATED) (Liquid Limit)			

CONSISTENCY CORRELATION		RELATIVE DENSITY CORRELATION	
CLAYS & SILTS	BLOWS/FOOT*	SANDS & GRAVELS	BLOWS/FOOT*
VERY SOFT	0-2	VERY LOOSE	0-4
SOFT	2-4	LOOSE	4-10
FIRM	4-8	MEDIUM DENSE	10-30
STIFF	8-16	DENSE	30-60
VERY STIFF	16-32	VERY DENSE	OVER 50
HARD	OVER 32		

*Number of blows of 140 lb. hammer falling 30" to drive a 2" O.D. (1-3/8" I.D.) split-spoon sampler (ASTM D1586).

NO.	REVISION	DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN AND COLLECTOR CHANNELS

SOIL BORING LOGS

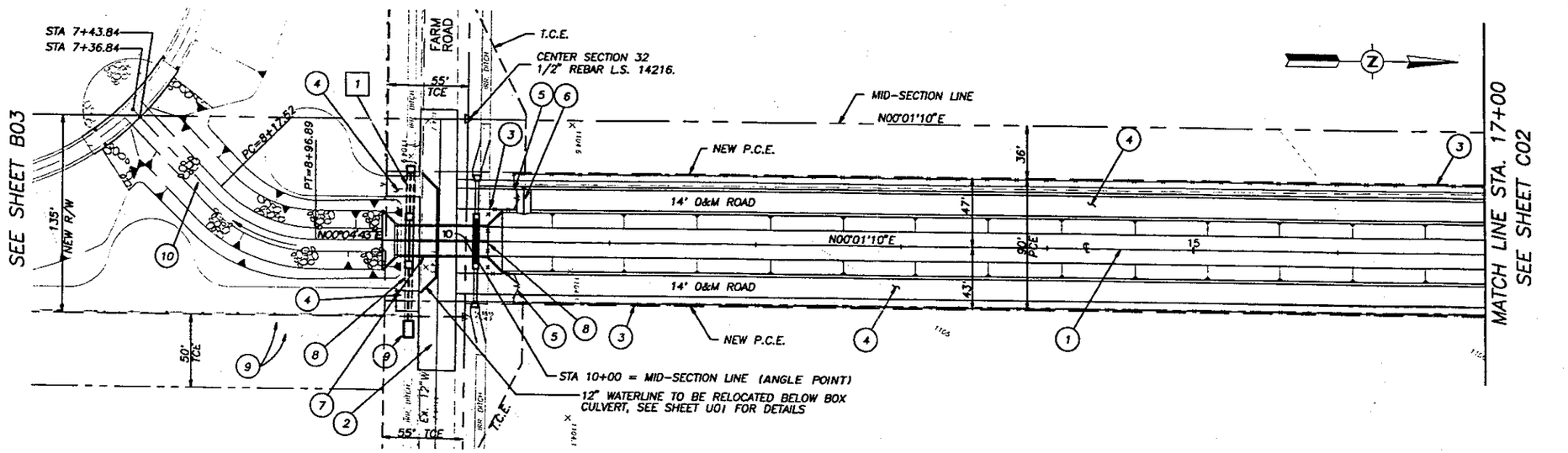
	BY	DATE
DESIGNED	C. GOPPERTON	7/15/94
DRAWN	J. KLEIN	7/15/94
CHECKED	C. GOPPERTON	7/15/94

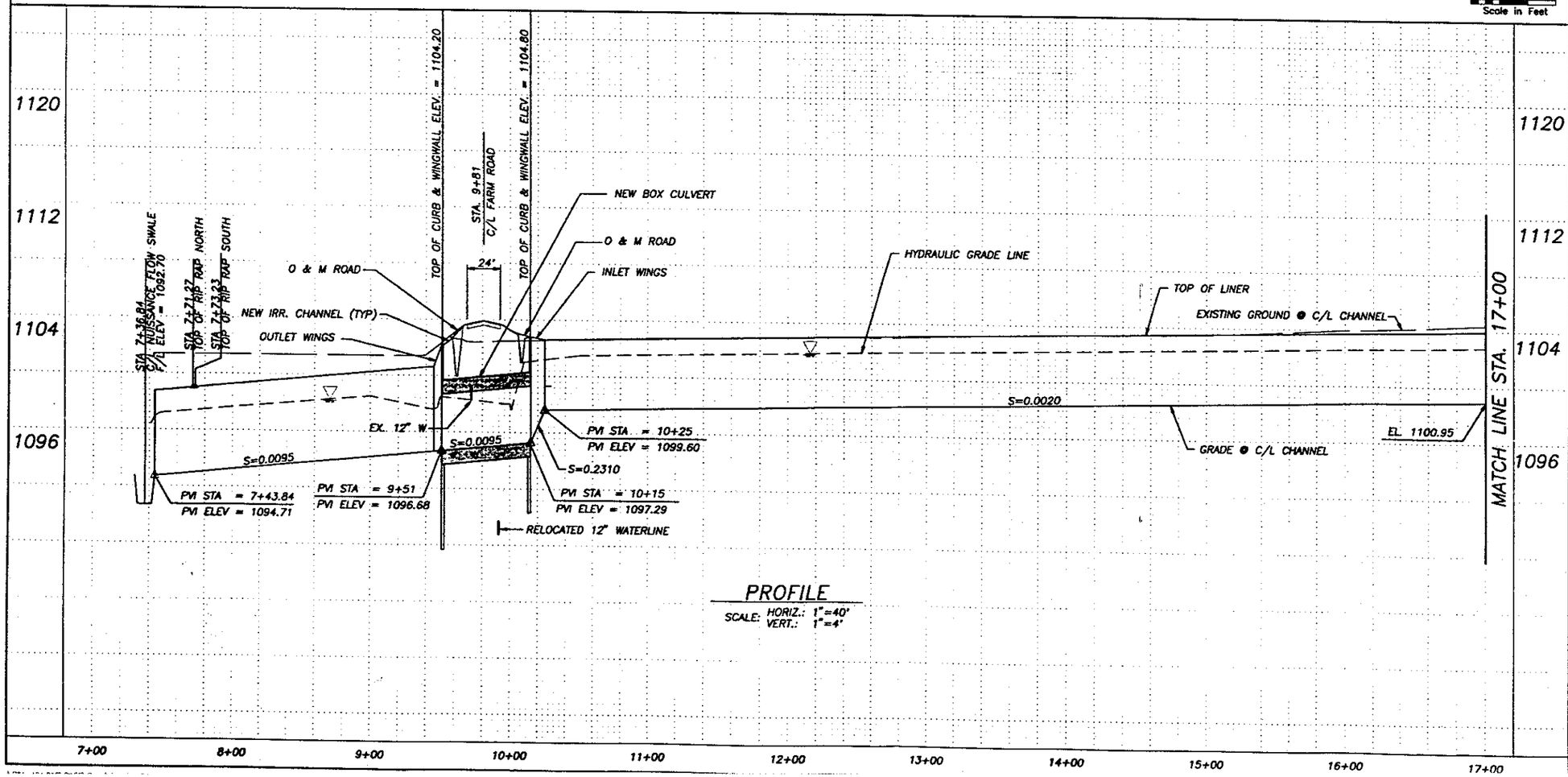
NBS LOWRY — ENGINEERS & PLANNERS

NBS/LOWRY PROJECT NO. P81-194-019

SHEET

CALL TWO WORKING DAYS BEFORE YOU DIG. 263-1100 INSIDE MARICOPA COUNTY



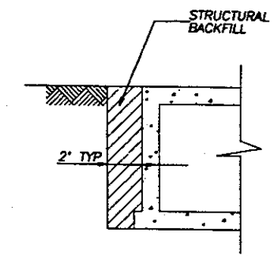


PROFILE

SCALE: HORIZ.: 1"=40'
VERT.: 1"=4'

☐ REMOVE ☐

1 REMOVE INTERFERING PORTIONS OF EXISTING CONCRETE LINED DITCH.



LIMITS OF STRUCTURAL BACKFILL

293-1100

○ CONSTRUCT ○

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER DETAIL 19 AND TYPICAL SECTIONS
2. CONSTRUCT SOUTH FARM ROAD CROSSING PER SHEET P05
3. CONSTRUCT NEW PLAIN WIRE FENCE PER DETAIL 15
4. CONSTRUCT NEW O&M ROAD PER DETAIL 16.
5. INSTALL NEW 14 FT DOUBLE GATE PER DETAIL 14
6. CONSTRUCT NEW 10' CONCRETE APRON STA 10+40 PER DETAIL 18.
7. CONSTRUCT NEW DOUBLE BARREL 10' X 4' X 64 LF REINFORCED CONCRETE BOX CULVERT, ADOT STD B-02.20; CONSTRUCT INLET WINGWALLS, ADOT STD B-04.30 – MODIFIED, θ = 59°, L & M = 5'-0", E & G = 13'-6"; CONSTRUCT OUTLET WINGWALLS, ADOT STD B-04.10 – MODIFIED, L & M = 6'-0" CONSTRUCT SPECIAL CURB PER DETAIL 22.
8. CONSTRUCT NEW IRRIGATION CROSSING PER SHEETS U02 – U04
9. CONSTRUCT NEW 16" WATERLINE PER DETAIL 12 CONSTRUCT NEW IRRIGATION JUNCTION BOX AND PIPEWORKS PER DETAIL 8; CONSTRUCT NEW CONCRETE LINED IRRIGATION DITCH PER DETAIL 12
10. CONSTRUCT NEW GROUTED RIPRAP CHANNEL PER TYPICAL SECTION J-J.

NO.	REVISION		DATE
3			
2			
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FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

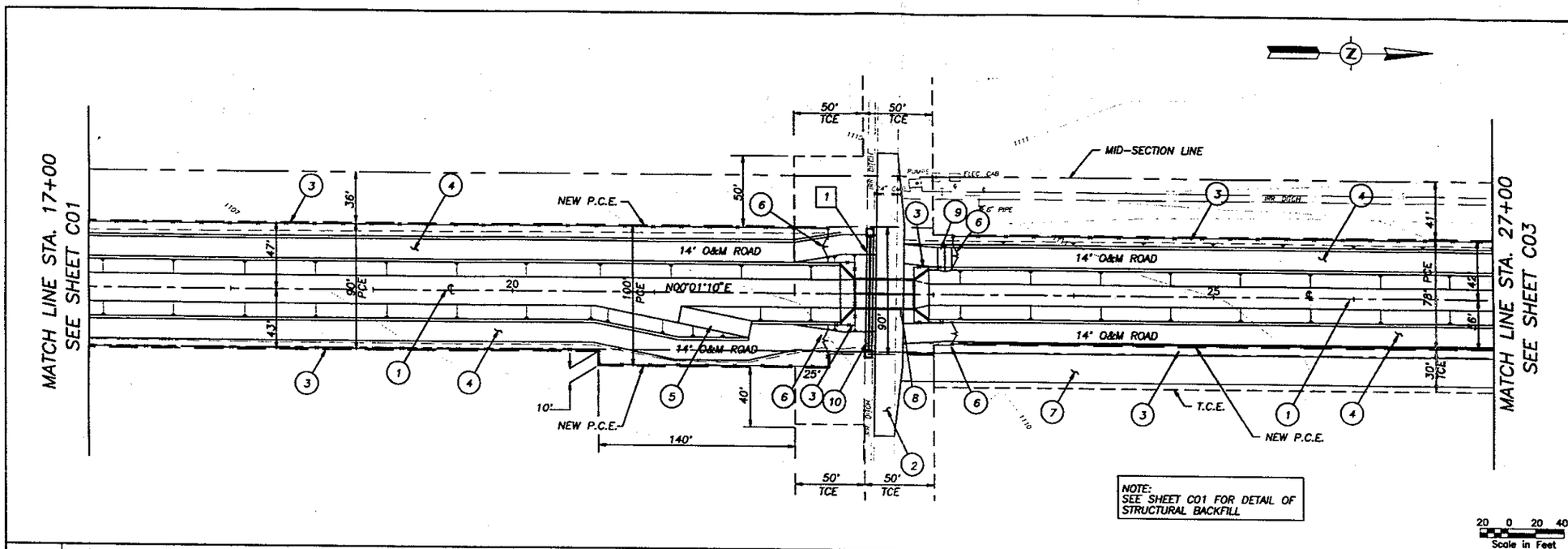
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN AND COLLECTOR CHANNELS
EAST COLLECTOR CHANNEL
STATION 7+41.84 TO STATION 17+00

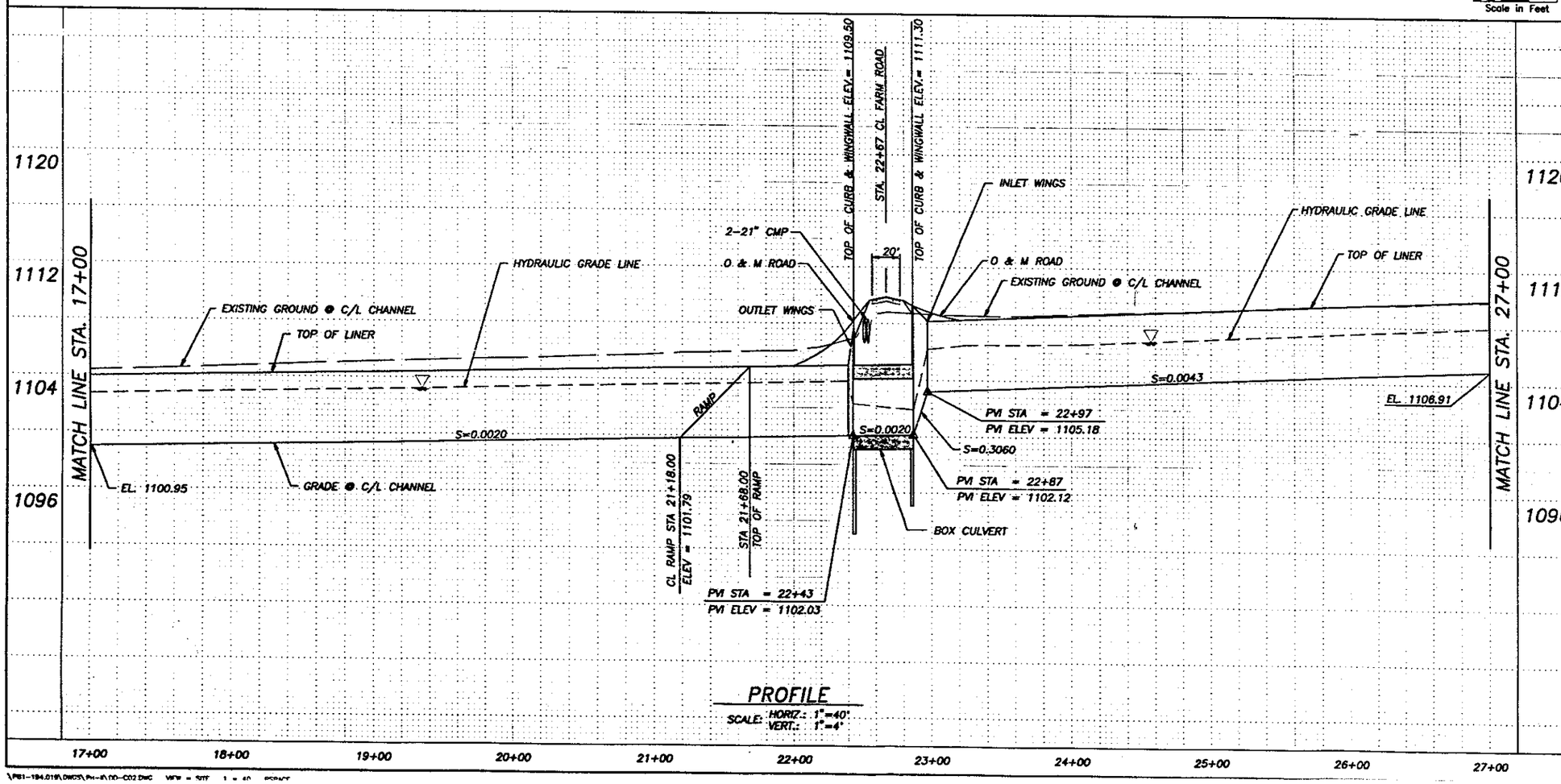
	BY	DATE
DESIGNED	S. YINGLING	5/1/94
DRAWN	S. YINGLING	5/1/94
CHECKED	C. GOPPERTON	8/18/94

NBS LOWRY

NBS/LOWRY PROJECT NO. P91-104-010

SHEET





☐ REMOVE ☐

7 REMOVE INTERFERING PORTION OF EXISTING CONCRETE LINED IRRIGATION DITCH

263-1100

○ CONSTRUCT ○

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER DETAIL 19 AND TYPICAL SECTIONS
2. CONSTRUCT NORTH FARM ROAD CROSSING PER SHEET P05
3. CONSTRUCT NEW PLAIN WIRE FENCE PER DETAIL 15,
4. CONSTRUCT NEW O&M ROAD PER DETAIL 16,
5. CONSTRUCT RAMP, PER DETAIL 20
6. CONSTRUCT NEW 14 FT DOUBLE GATE PER DETAIL 14
7. CONSTRUCT NEW FARM ROAD PER DETAIL 17
8. CONSTRUCT NEW DOUBLE BARREL 10' X 4' X 44' REINFORCED CONCRETE BOX CULVERT, ADOT STD. B-02.20; CONSTRUCT INLET WINGWALLS, ADOT STD. B-04.30 MODIFIED, Φ = 49°, L & M =5'-0", E & G = 14'-6"; CONSTRUCT OUTLET WINGWALLS ADOT STD B-04.10 MODIFIED, L & M = 5'-0" CONSTRUCT SPECIAL CURB PER DETAIL NO. 22.
9. CONSTRUCT NEW 10' CONCRETE APRON STA 23+10 , PER DETAIL 18
10. CONSTRUCT NEW IRRIGATION CROSSING PER SHEETS U02- U04

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

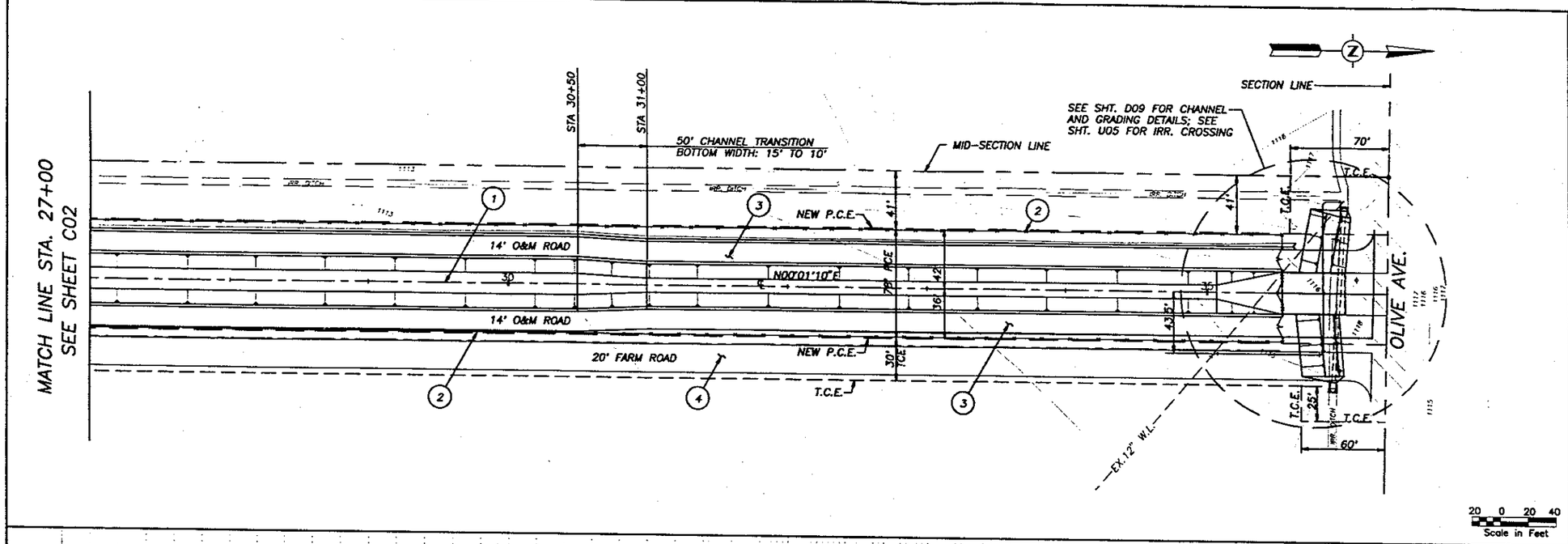
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN AND COLLECTOR CHANNELS
EAST COLLECTOR CHANNEL
STATION 17+00 TO STATION 27+00

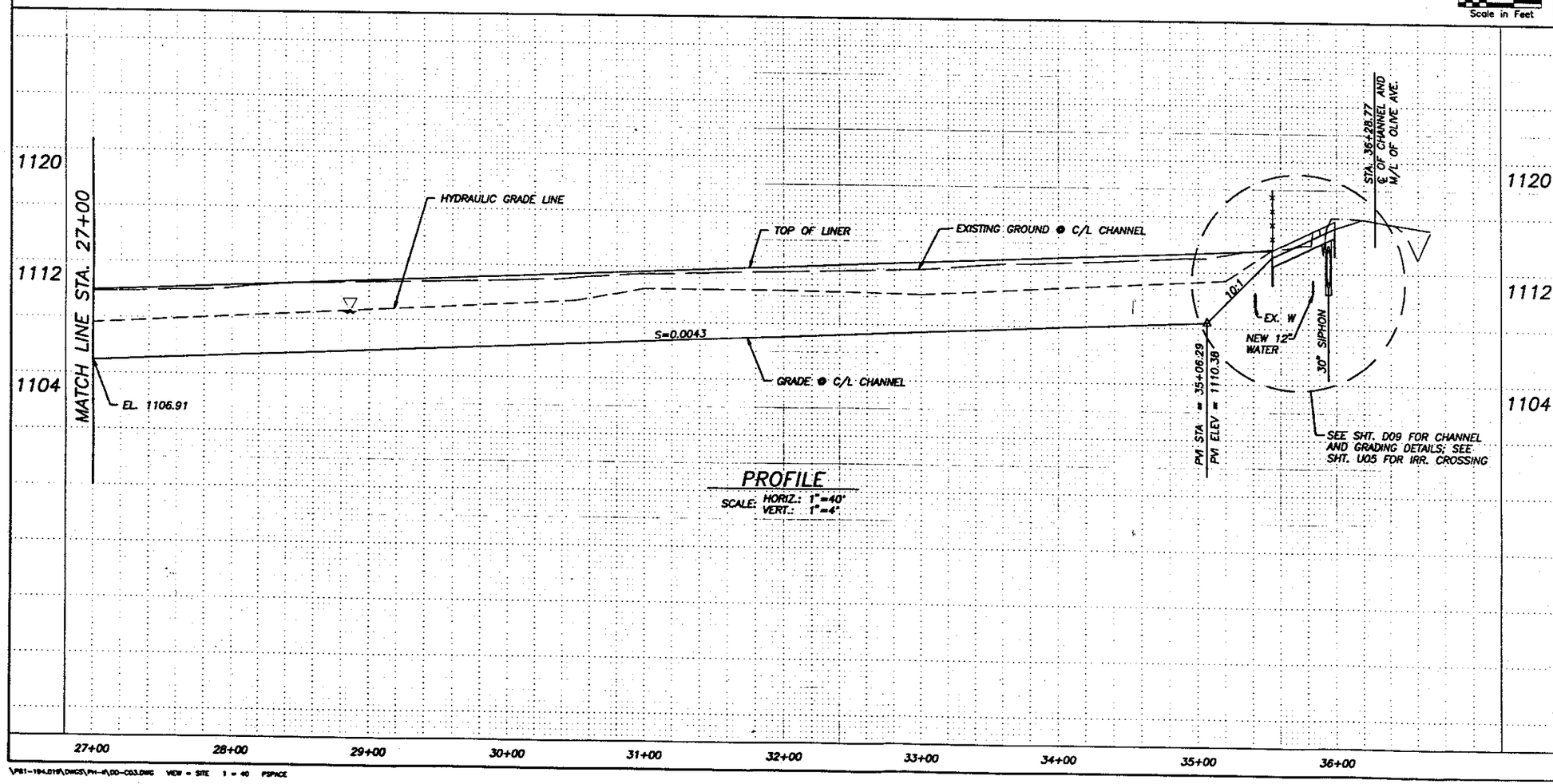
	BY	DATE
DESIGNED	S. YINGLING	5/1/94
DRAWN	S. YINGLING	5/1/94
CHECKED	C. GOPPERTON	8/18/94

NBS LOWRY

NBS/LOWRY PROJECT NO. P81-194-019

SHEET 002/6





☐ REMOVE ☐

263-1100

○ CONSTRUCT ○

1. CONSTRUCT NEW REINFORCED CONCRETE CHANNEL PER DETAIL 19 AND TYPICAL SECTIONS
2. CONSTRUCT NEW PLAIN WIRE FENCE PER DET. 15,
3. CONSTRUCT NEW O&M ROAD PER DET. 16
4. CONSTRUCT NEW FARM ROAD PER DET. 17

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN AND COLLECTOR CHANNELS
EAST COLLECTOR CHANNEL
STATION 27+00 TO STATION 35+33

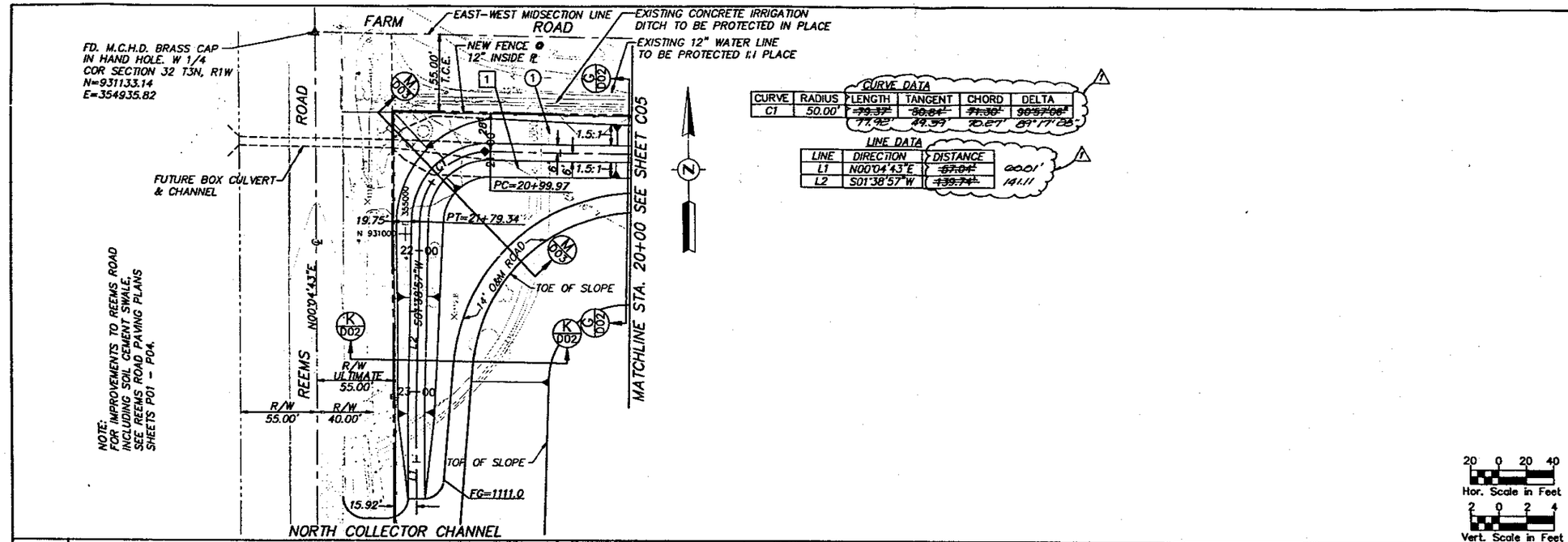
	BY	DATE
DESIGNED	C. GOPPERTON	8/18/94
DRAWN	C. SWEATLAND	8/18/94
CHECKED	C. GOPPERTON	8/18/94

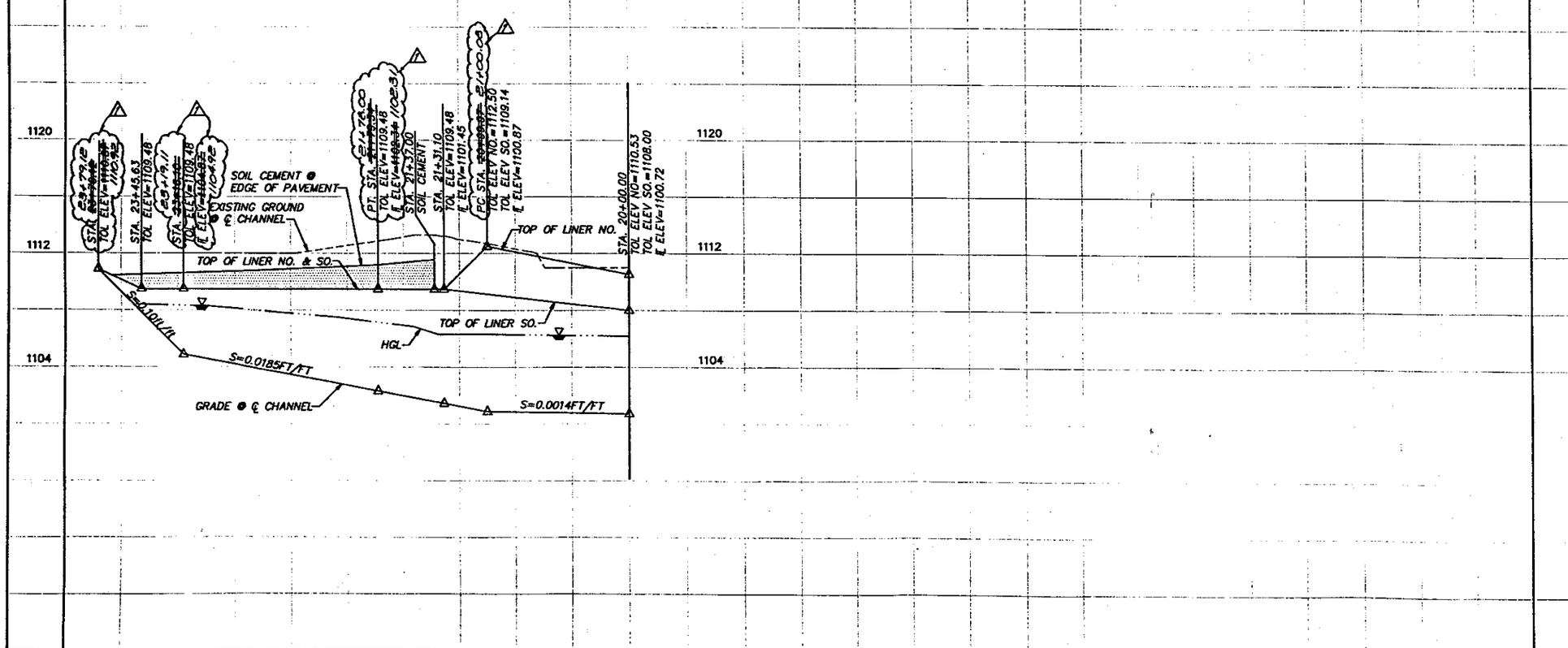
NBS LOWRY
ENGINEERS & PLANNERS

NBS/LOWRY PROJECT NO. P81-194-019

SHEET C03/9

\P81-194.019\DWGS\PH-II\DD-C03.DWG VIEW = SITE 1 = 40 PSPACE





20 0 20 40
Hor. Scale in Feet
2 0 2 4
Vert. Scale in Feet

☐ REMOVE ☐

1 SEE SHEET B01 FOR IRRIGATION PIPE REMOVAL.

○ CONSTRUCT ○

1 STA. 20+00 TO STA. 23+76.1 CONSTRUCT CONCRETE CHANNEL PER SECTION G-G AND SECTION K-K ON SHEET D02 & SECTION M-M ON SHEET D03.

263-1100

NO.	REVISION	DATE
3		
2		
1	REV CHANNEL STA TO MATCH SHT. C04	2/23/95

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

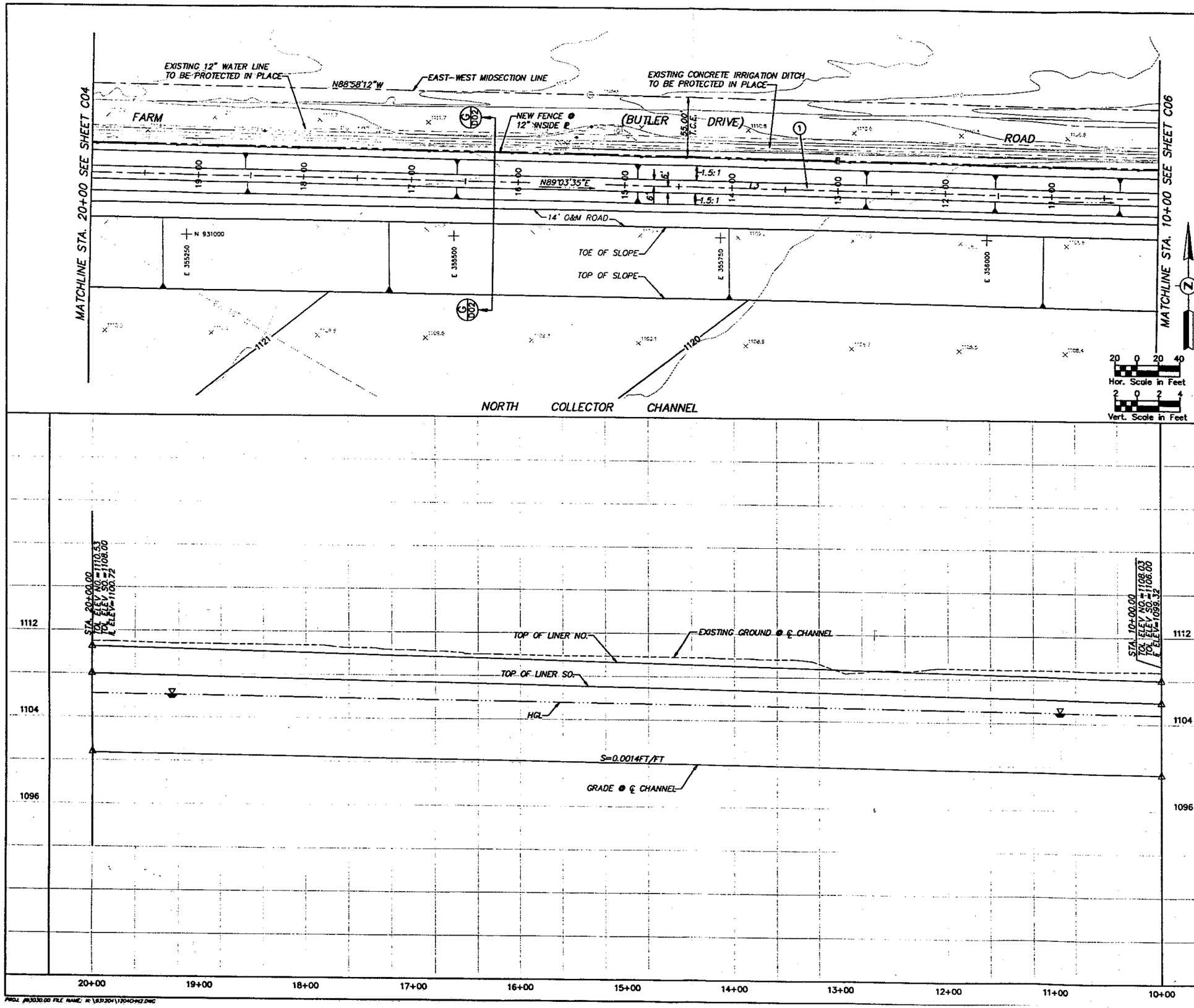
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
NORTH COLLECTOR CHANNEL
STA. 20+00 TO STA. 23+76.12

	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

WOOD/PATEL PROJECT NO. 93030.00

SHEET C04/9



☐ REMOVE ☐

○ CONSTRUCT ○

(1) STA. 10+00 TO STA. 20+00 CONSTRUCT CONCRETE CHANNEL PER SECTION G-G ON SHEET D02.

263-1100

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
NORTH COLLECTOR CHANNEL
STA 10+00 TO STA. 20+00

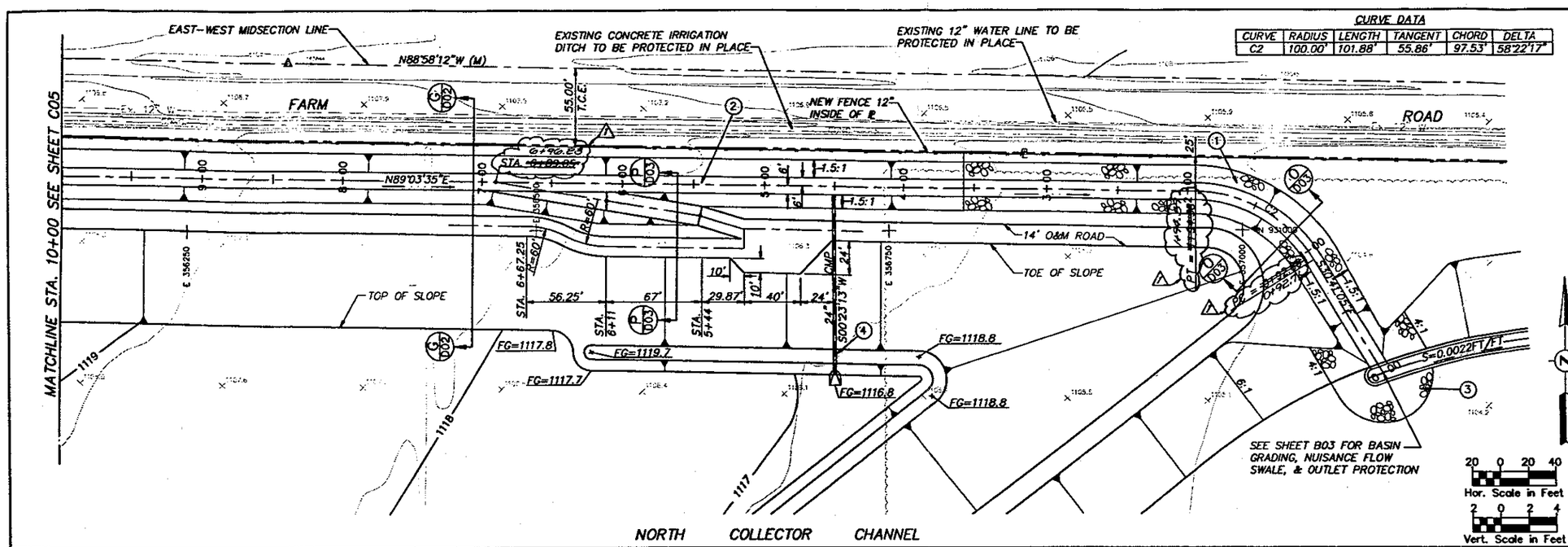
	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

WOOD/PATEL PROJECT NO. 93030.00

SHEET C05/9

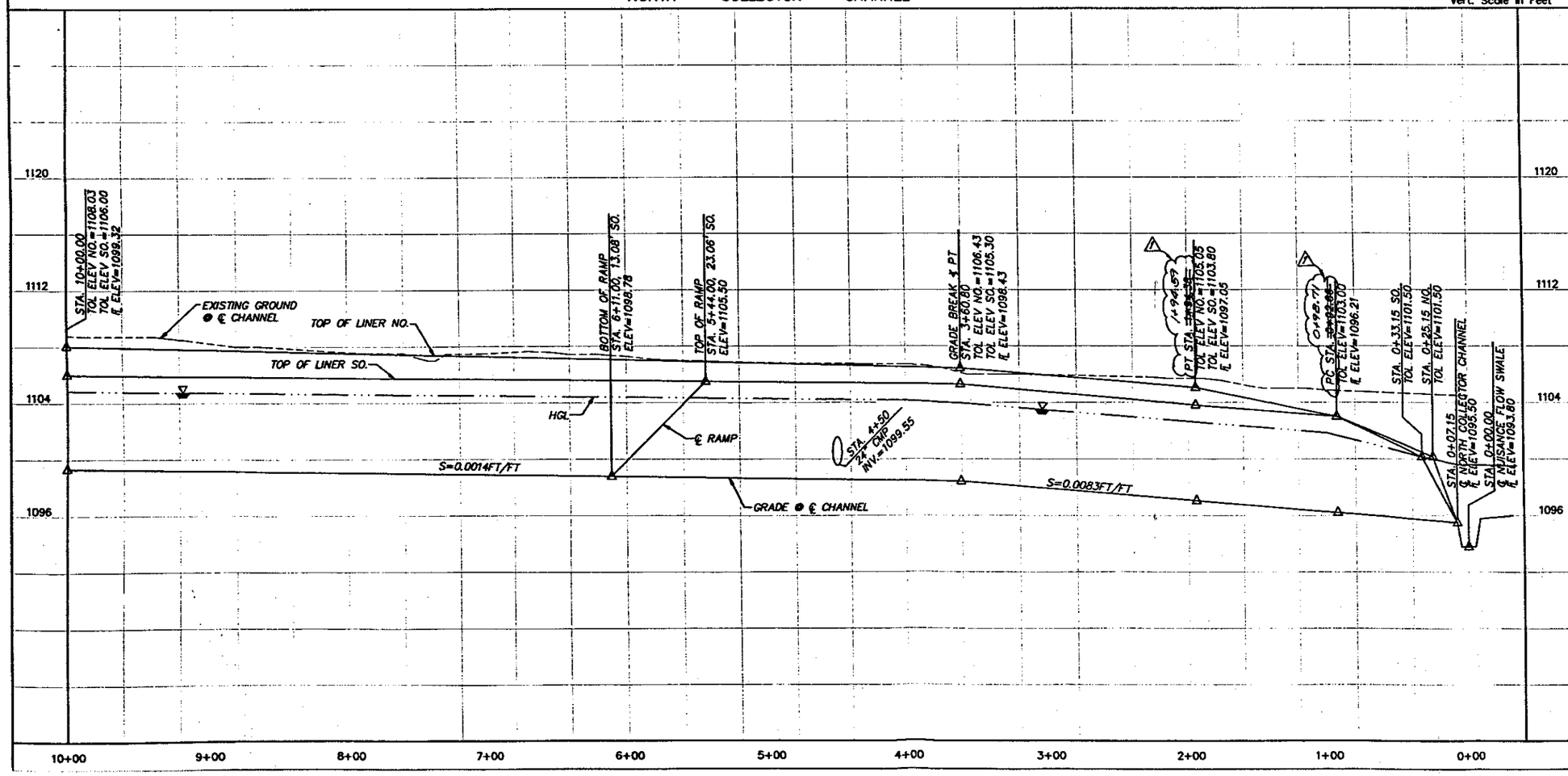
PROJ. #93030.00 FILE NAME: K:\93\204\1204CH12.DWG



CURVE DATA

CURVE	RADIUS	LENGTH	TANGENT	CHORD	DELTA
C2	100.00'	101.88'	55.86'	97.53'	58°22'17"

☐ REMOVE ☐



○ CONSTRUCT ○

1. STA. 0+07.15 TO STA. 3+60.80 CONSTRUCT GROUTED RIP-RAP CHANNEL PER SECTION G-G ON SHEET D02.
2. STA. 3+60.80 TO STA. 10+00.00 CONSTRUCT CONCRETE CHANNEL PER SECTION G-G ON SHEET D02.
3. CONSTRUCT GROUTED RIP-RAP TYPE II CHANNEL OUTLET PROTECTION PER DETAIL ON SHEET D03.
4. STA. 4+50.00 CONSTRUCT DRAINAGE SYSTEM FOR NORTH FILL AREA PER DETAIL 6 ON SHEET D05.

263-1100

NO.	REVISION	DATE
3		
2		
1	REV. CHANNEL STA TO MATCH SHT. C04	2/23/95

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

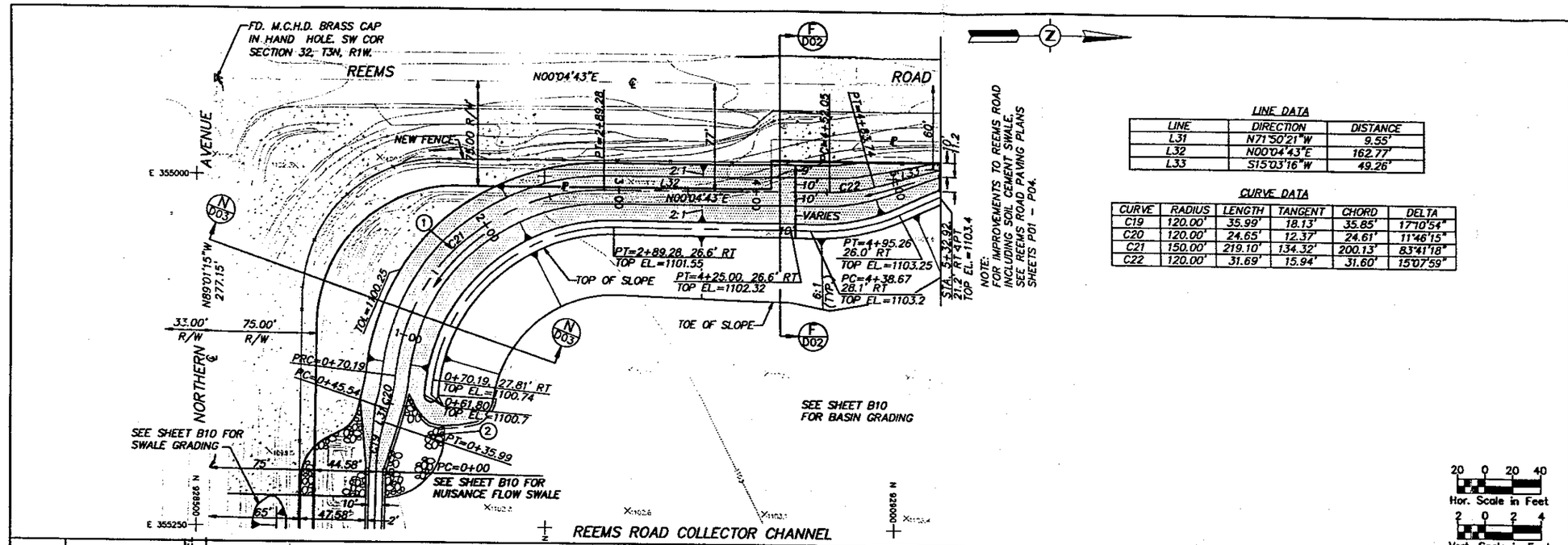
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
NORTH COLLECTOR CHANNEL
STA. 0+00 TO STA. 10+00

	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

WOOD/PATEL PROJECT NO. 93030.00

SHEET C06/9



LINE DATA

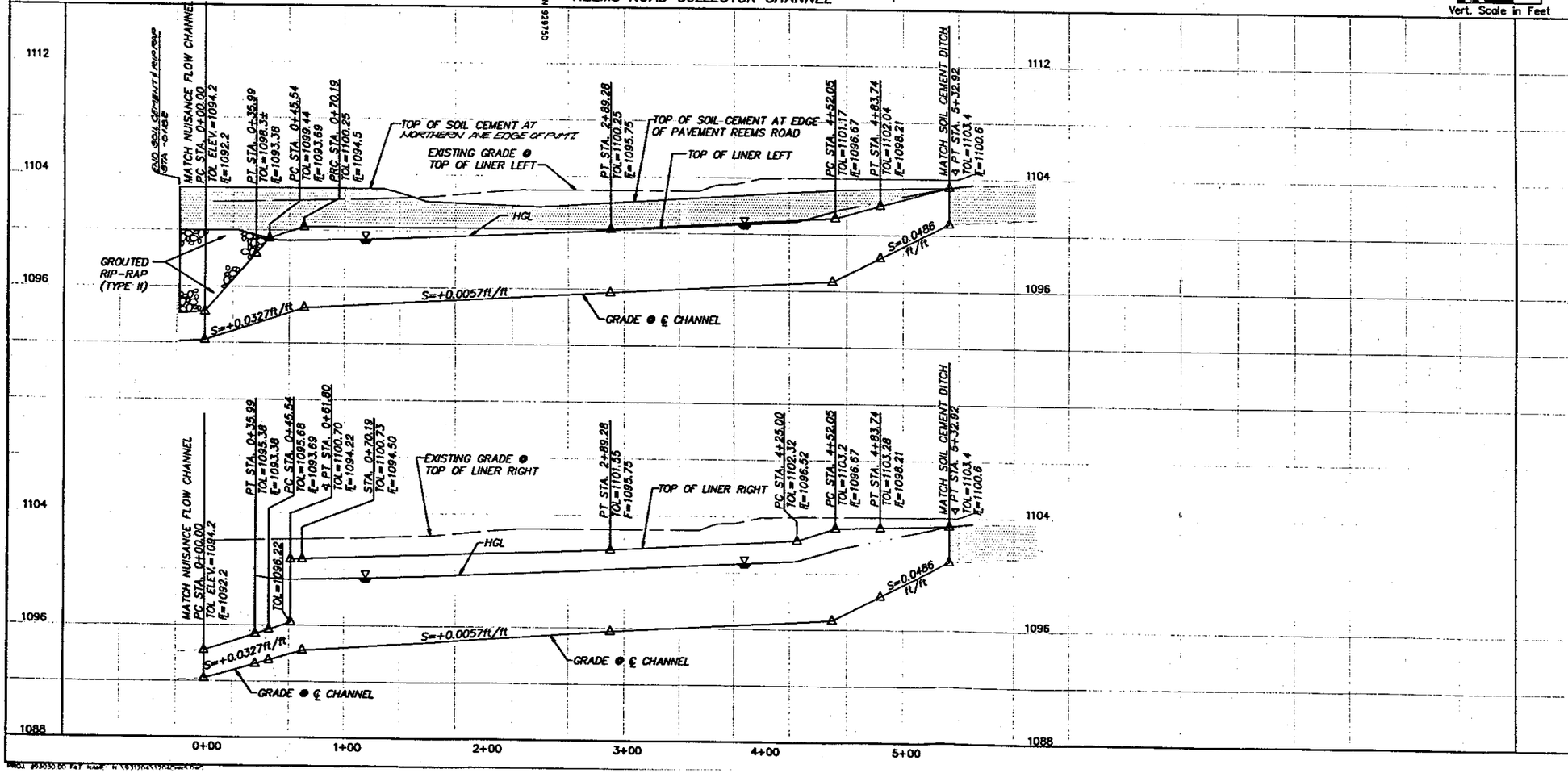
LINE	DIRECTION	DISTANCE
L31	N71°50'21"W	9.55'
L32	N00°04'43"E	162.77'
L33	S15°03'16"W	49.26'

CURVE DATA

CURVE	RADIUS	LENGTH	TANGENT	CHORD	DELTA
C19	120.00'	35.99'	18.13'	35.85'	17°10'54"
C20	120.00'	24.65'	12.37'	24.61'	11°46'15"
C21	150.00'	219.10'	134.32'	200.13'	83°41'18"
C22	120.00'	31.69'	15.94'	31.60'	15°07'59"

Hor. Scale in Feet: 20 0 20 40

Vert. Scale in Feet: 2 0 2 4



☐ REMOVE ☐

○ CONSTRUCT ○

1. STA. 0+00.00 TO STA. 5+32.92 CONSTRUCT GROUTED RIP-RAP CHANNEL (TYPE I) PER SECTION F-F ON SHEET D02 AND SECTION N-N ON SHEET D03.
2. CONSTRUCT RIP-RAP PROTECTION (TYPE II) AT CHANNEL OUTLET PER DETAIL ON SHEET D03 AND DETAIL 5a ON SHEET D04.

CALL FOR THE BLUE STAKES 263-1100 Blue Stake Center CALL COLLECT

NO.	REVISION	DATE
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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
REEMS ROAD COLLECTOR CHANNEL
STA. 0+00 TO STA. 5+32.92

	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

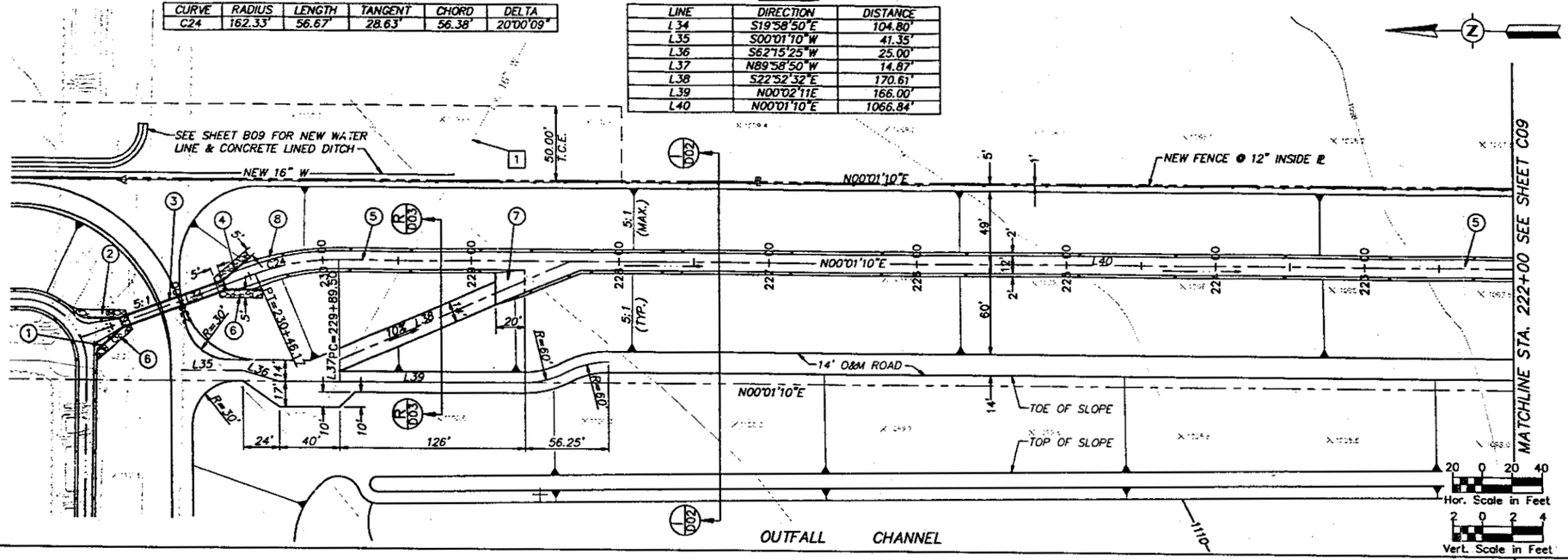
SHEET

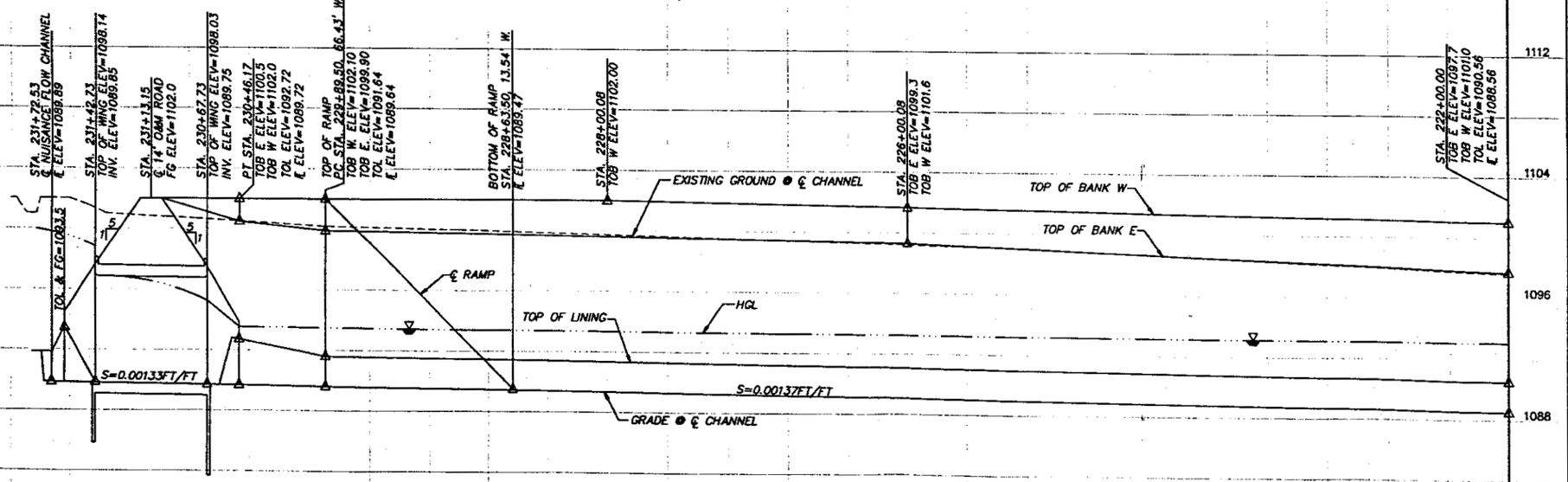
CURVE DATA

CURVE	RADIUS	LENGTH	TANGENT	CHORD	DELTA
C24	162.33'	56.67'	28.63'	56.38'	20°00'09"

LINE DATA

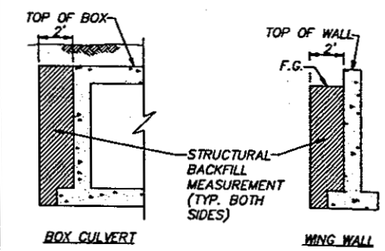
LINE	DIRECTION	DISTANCE
L34	S19°58'50"E	104.80'
L35	S00°01'10"W	41.35'
L36	S62°15'25"W	25.00'
L37	N89°58'50"W	14.87'
L38	S22°52'32"E	170.61'
L39	N00°02'11E	166.00'
L40	N00°01'10"E	1066.84'





☐ REMOVE ☐

1 SEE SHEET B09 FOR IRRIGATION LINE REMOVAL/ABANDONMENT.



LIMITS OF STRUCTURAL BACKFILL
NTS

○ CONSTRUCT ○

1. STA. 231+42.65 TO STA. 231+72.45 CONSTRUCT BOX CULVERT INLET PROTECTION PER DETAIL 4 ON SHEET D04.
2. STA. 231+42.65 CONSTRUCT INLET WINGS & CUT OFF WALL PER A.D.O.T. STD. NO. B-04.30, 0° SKEW, 6:1 SLOPE, MODIFIED Θ=70° (BOTH WINGS), L & M=4'-7 1/2" G & E=21'-6". PLACE STRUCTURAL BACKFILL PER DETAIL THIS SHEET AND PER SPECIAL PROVISIONS SECTION 206.
3. STA. 230+67.65 TO STA. 231+42.65 CONSTRUCT 6'X7'X75 LF SINGLE BARREL BOX CULVERT PER A.D.O.T. STD. NO. B-02.10. PLACE STRUCTURAL BACKFILL PER DETAIL THIS SHEET AND PER SPECIAL PROVISIONS SECTION 206.
4. STA. 230+67.65 CONSTRUCT OUTLET WINGS & CUT OFF WALL PER A.D.O.T. STD. NO. B-04.10, 6:1 SLOPE AND PER DETAIL 4 ON SHEET D04. PLACE STRUCTURAL BACKFILL PER DETAIL THIS SHEET AND PER SPECIAL PROVISIONS SECTION 206.
5. STA. 222+00 TO STA 229+89.42 CONSTRUCT CONCRETE CHANNEL PER SECTION 1-1 ON SHEET D02.
6. CONSTRUCT 5' GROUTED RIP-RAP APRON (TYPE II) AROUND HEADWALL PER DETAIL 4 ON SHEET D04.
7. CONSTRUCT CONCRETE APRON AT ACCESS RAMP INTO OUTLET CHANNEL PER DETAIL 5 ON SHEET D04.
8. STA. 229+89.42 TO STA. 230+46.09, TRANSITION FROM 2' HIGH CHANNEL LINING TO 3' HIGH CHANNEL LINING.

CALL FOR THE BLUE STAKES 263-1100 Blue Stake Center CALL COLLECT

NO.	REVISION		DATE
3			
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FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
BASIN OUTFALL CHANNEL
STA. 222+00 TO STA. 231+72.53

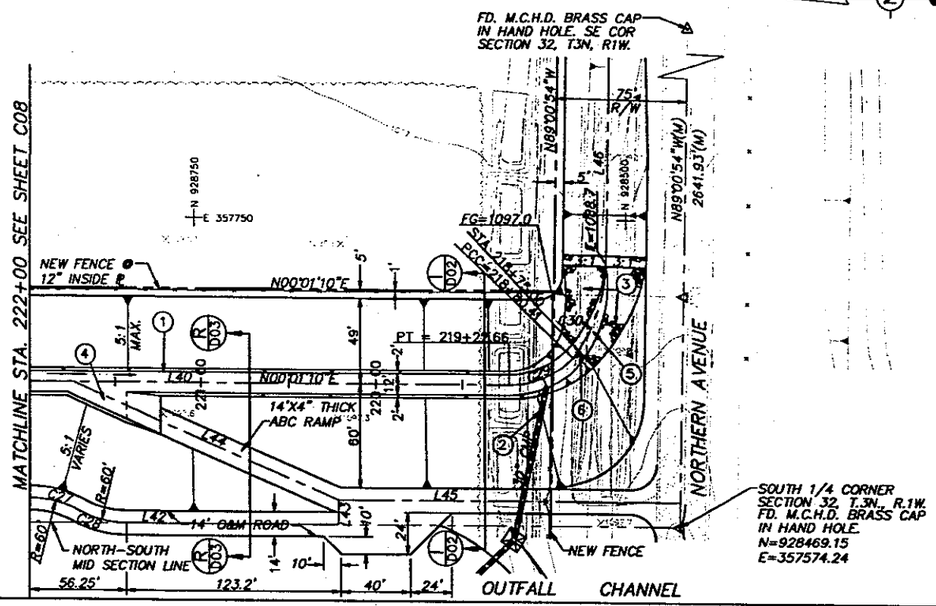
	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

WOOD/PATEL PROJECT NO. 93030.00

SHEET

PROJ #93030.00 FILE NAME: N:\931204\12040IN4.DWG

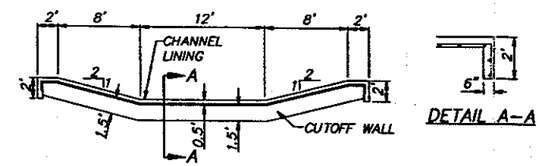


LINE DATA

LINE	DIRECTION	DISTANCE
L40	N00°01'10"E	1066.84'
L42	N00°00'01"E	121.74'
L43	N90°00'00"W	13.99'
L44	N21°47'46"E	166.88'
L45	N00°00'01"E	198.86'
L46	N89°01'15"W	130.02'

CURVE DATA

CURVE	RADIUS	LENGTH	TANGENT	CHORD	DELTA
C27	60.00'	29.25'	14.92'	28.96'	27°57'10"
C28	60.00'	29.27'	14.93'	28.98'	27°57'02"
C29	54.97'	42.25'	22.23'	41.22'	44°02'06"
C30	95.53'	57.70'	29.76'	56.83'	34°36'34"



DETAIL A–A

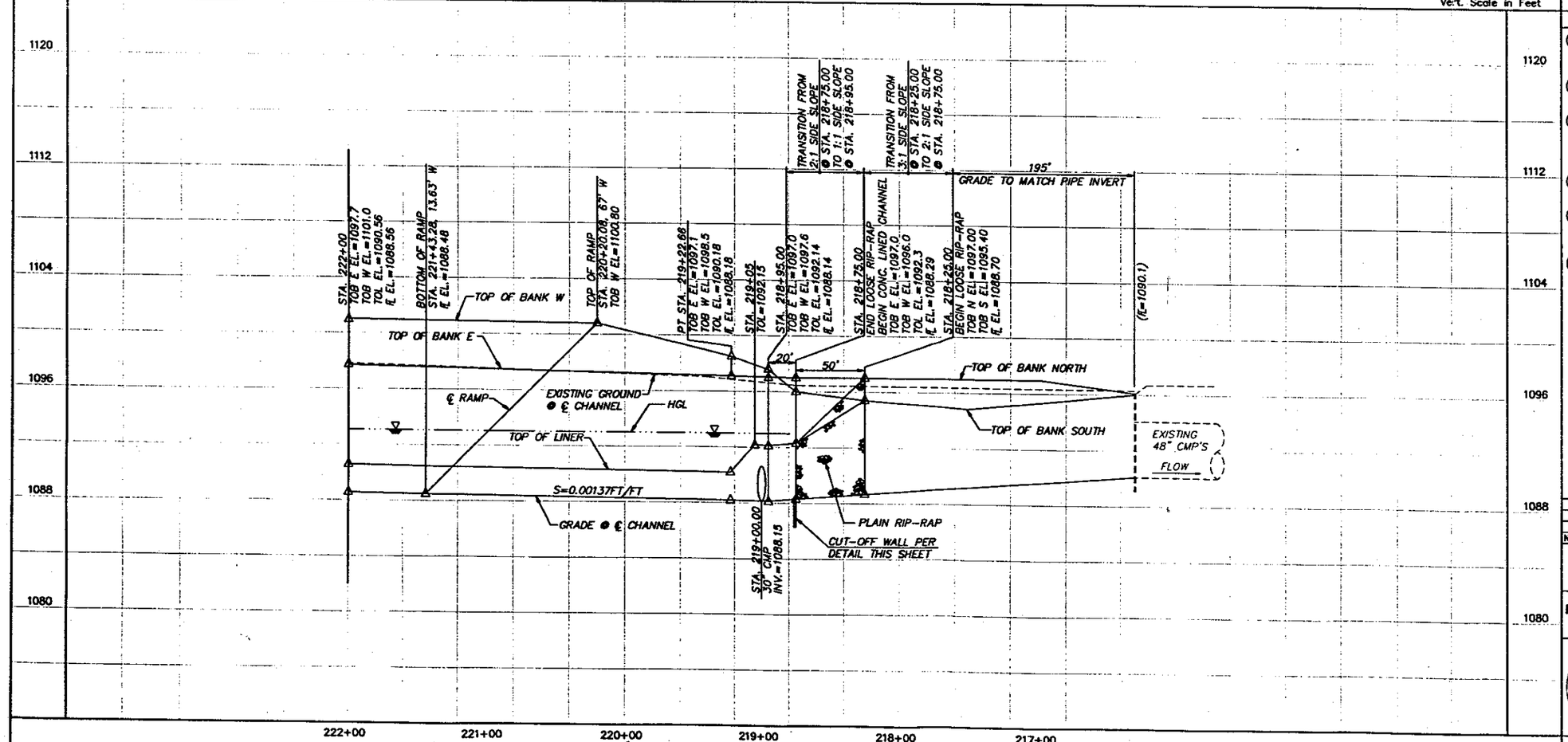
OUTFALL CHANNEL CUTOFF WALL DETAIL
NTS

Hor. Scale in Feet 20 0 20 40
Vert. Scale in Feet 2 0 2 4

☐ REMOVE ☐

○ CONSTRUCT ○

1. STA. 218+75.00 TO STA. 222+00.00 CONSTRUCT CONCRETE CHANNEL PER SECTION I–I ON SHEET D02.
2. STA. 219+00.00 CONSTRUCT DRAINAGE SYSTEM FOR SOUTH FILL AREA PER DETAIL 7 ON SHEET D05.
3. STA. 218+25.00 TO STA. 218+75.00 CONSTRUCT PLAIN RIP–RAP OUTLET PROTECTION PER DETAIL 3 ON SHEET D04 AND DETAIL ON SHEET D03.
4. CONSTRUCT CONCRETE APRON AT ACCESS RAMP INTO OUTFALL CHANNEL PER DETAIL 5 ON SHEET D04.
5. STA. 218+25.00 TO STA. 218+75.00 TRANSITION FROM "V" DITCH TO 12' BOTTOM PER DETAIL 3 ON SHEET D04.
6. STA. 218+25.00 CONSTRUCT CUT–OFF WALL PER DETAIL THIS SHEET.



PROJ. #93030.00 FILE NAME: H:\931204\1204CH6A.DWG

CALL FOR THE BLUE STAKES 263-1100 Blue Stake, Inc. CALL COLLECT

NO.	REVISION		DATE
3			
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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

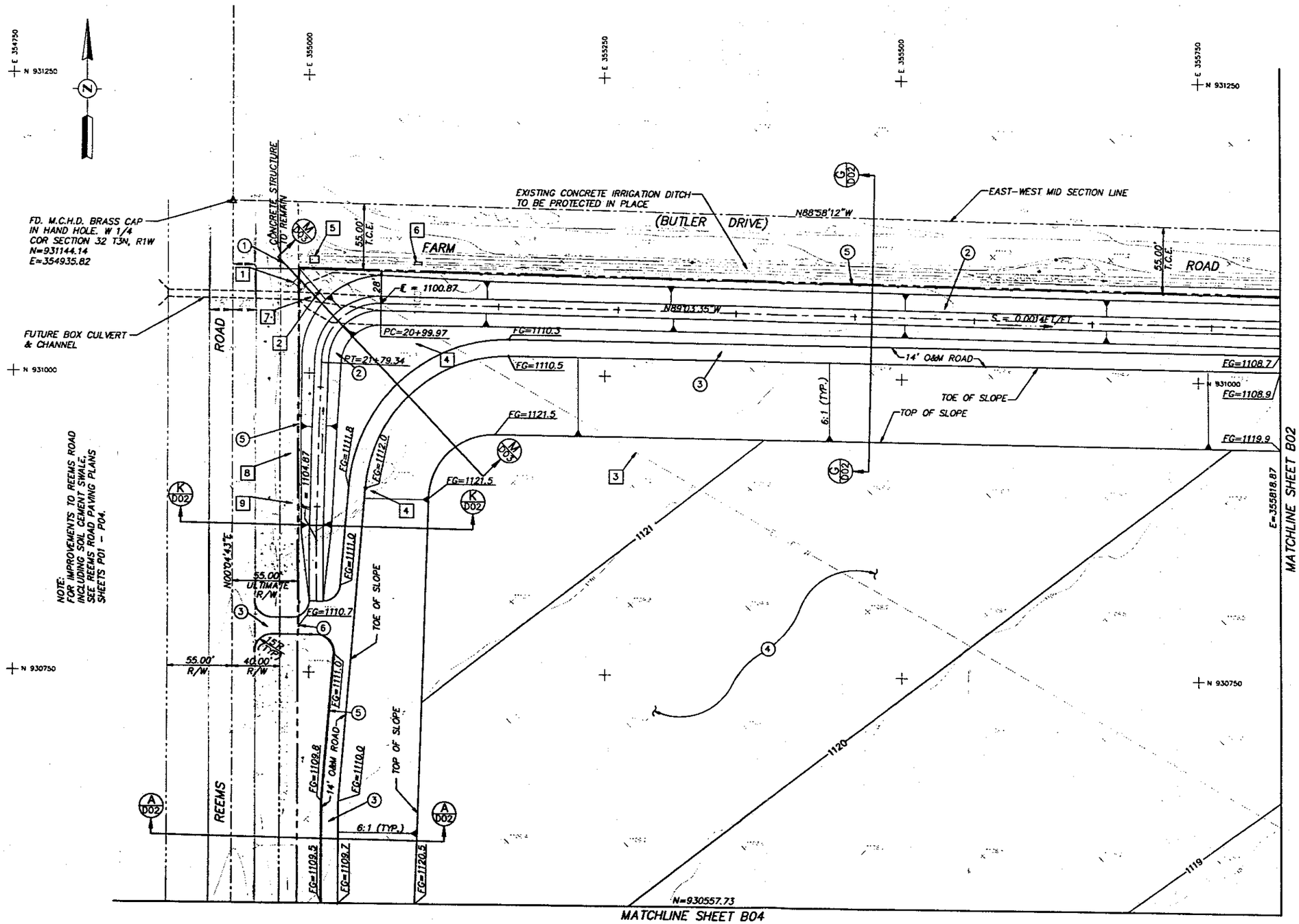
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
BASIN OUTFALL CHANNEL
STA. 217+21.25 TO STA. 222+00.00

	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

WOOD/PATEL PROJECT NO. 93030.00

SHEET C09/9



REMOVE

1. REMOVE IRRIGATION JUNCTION BOX.
2. EXISTING WATER TANK TO BE REMOVED BY OTHERS PRIOR TO BASIN CONSTRUCTION.
3. REMOVE IRRIGATION PIPE AS NECESSARY TO CONSTRUCT CHANNEL. EXISTING PIPE UNDER FILL TO BE ABANDONED IN PLACE. (70 LF±)
4. REMOVE IRRIGATION DITCH. (300 LF ±)
5. REMOVE IRRIGATION STRUCTURE & REPAIR IRRIGATION CHANNEL WALLS AND MODIFY IRRIGATION PIPE PER DETAIL 11.
6. REPAIR IRRIGATION CHANNEL WALLS.
7. WELL TO BE SEALED IN PLACE PER SPECIAL PROVISIONS.
8. MOBILE HOME TO BE REMOVED BY OTHERS.
9. EXISTING SEPTIC TANK TO BE LOCATED BY CONTRACTOR AND BACKFILLED OR REMOVED AS REQUIRED.

CONSTRUCT

1. REMOVE IRRIGATION GRATE & CONSTRUCT PLUG ON OUTLET PIPE TO THE SOUTH PER M.A.G. DET. 427.
2. SEE SHEETS C04 THRU C06 FOR NORTH COLLECTOR CHANNEL IMPROVEMENTS.
3. CONSTRUCT 14'x4" THICK ABC OPERATION & MAINTENANCE (O&M) ROAD.
4. CONSTRUCT FILL AREA TO GRADE SHOWN ON PLAN WITH MATERIAL EXCAVATED FROM BASIN AND CHANNELS. FILL TO BE WHEEL ROLLER COMPACTED TO 85% OF MAXIMUM DENSITY.
5. CONSTRUCT 4 STRAND PLAIN WIRE FENCE. PER DETAIL 15 ON SHEET D07.
6. CONSTRUCT FENCE GATE AT ACCESS/O&M ROAD PER DETAIL 14 ON SHEET D07.

20 0 20 40
Scale in Feet

263-1100

NO.	REVISION	DATE
3		
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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
DETENTION BASIN GRADING PLANS

	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

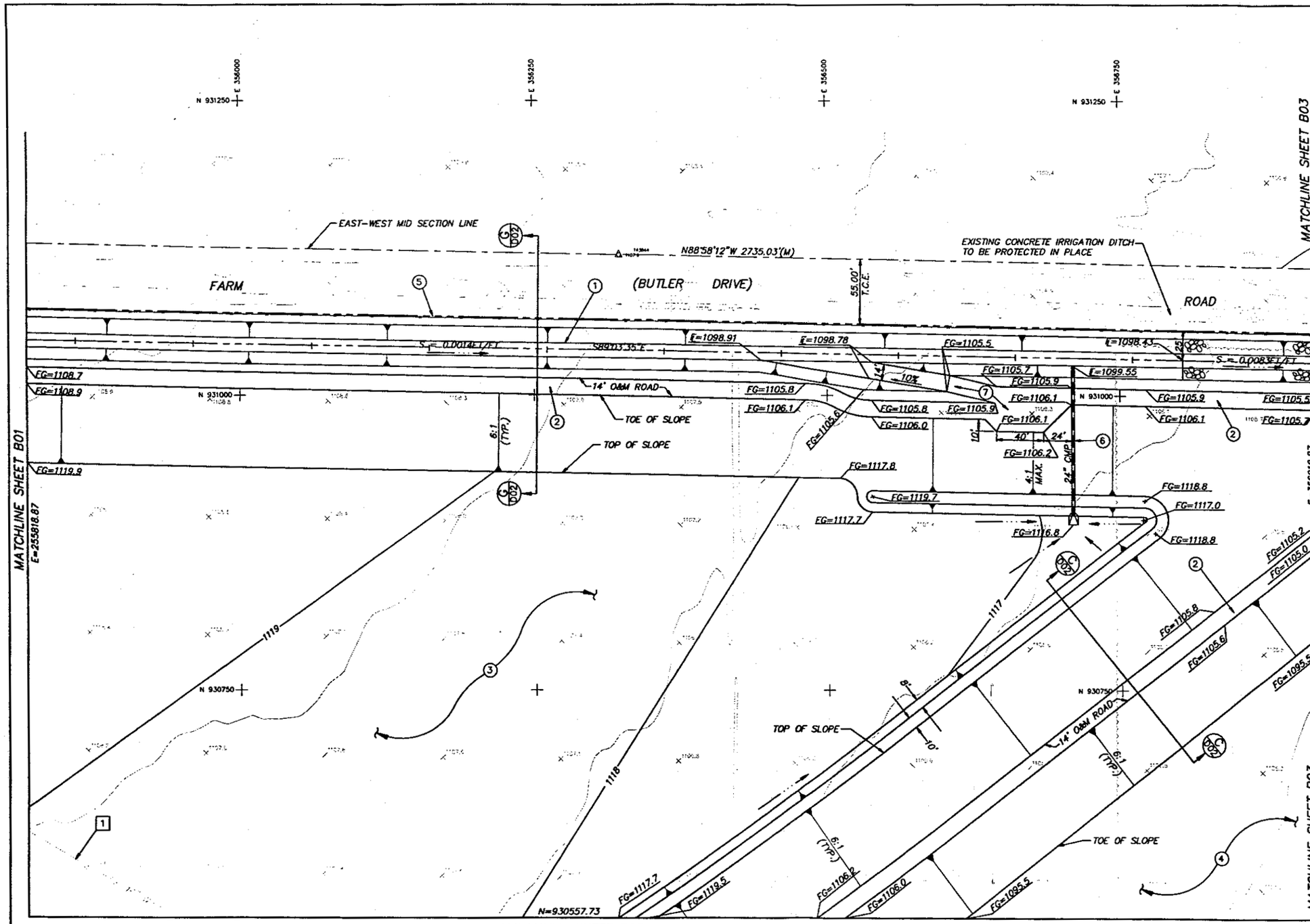
WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

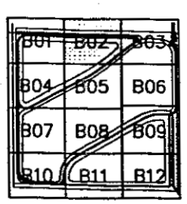
WOOD/PATEL PROJECT NO. 93030.00

SHEET

~~B01~~	~~B02~~	~~B03~~
B04	B05	B06
B07	B08	B09
B10	B11	B12

KEY MAP





KEY MAP

☐ REMOVE ☐

1 EXISTING PIPE IN FILL TO BE ABANDINED IN PLACE.

○ CONSTRUCT ○

1. SEE SHEETS C04 THRU C06 FOR NORTH COLLECTOR CHANNEL IMPROVEMENTS.
2. CONSTRUCT 14'x4" THICK ABC OPERATION & MAINTENANCE (O&M) ROAD.
3. CONSTRUCT FILL AREA TO GRADE SHOWN ON PLAN WITH MATERIAL EXCAVATED FROM BASIN AND CHANNELS. FILL TO BE WHEEL ROLLER COMPACTED TO 85% OF MAXIMUM DENSITY.
4. CONSTRUCT BASIN BY EXCAVATING TO GRADE SHOWN ON PLAN.
5. CONSTRUCT 4 STRAND PLAIN WIRE FENCE PER DETAIL 15 ON SHEET D07.
6. CONSTRUCT DRAINAGE SYSTEM FOR NORTH FILL AREA PER DETAIL 6 ON SHEET D05.
7. CONSTRUCT CHANNEL ACCESS RAMP PER SHEET C06.

20 0 20 40
Scale in Feet

263-1100

NO.	REVISION	DATE
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FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
DETENTION BASIN GRADING PLANS

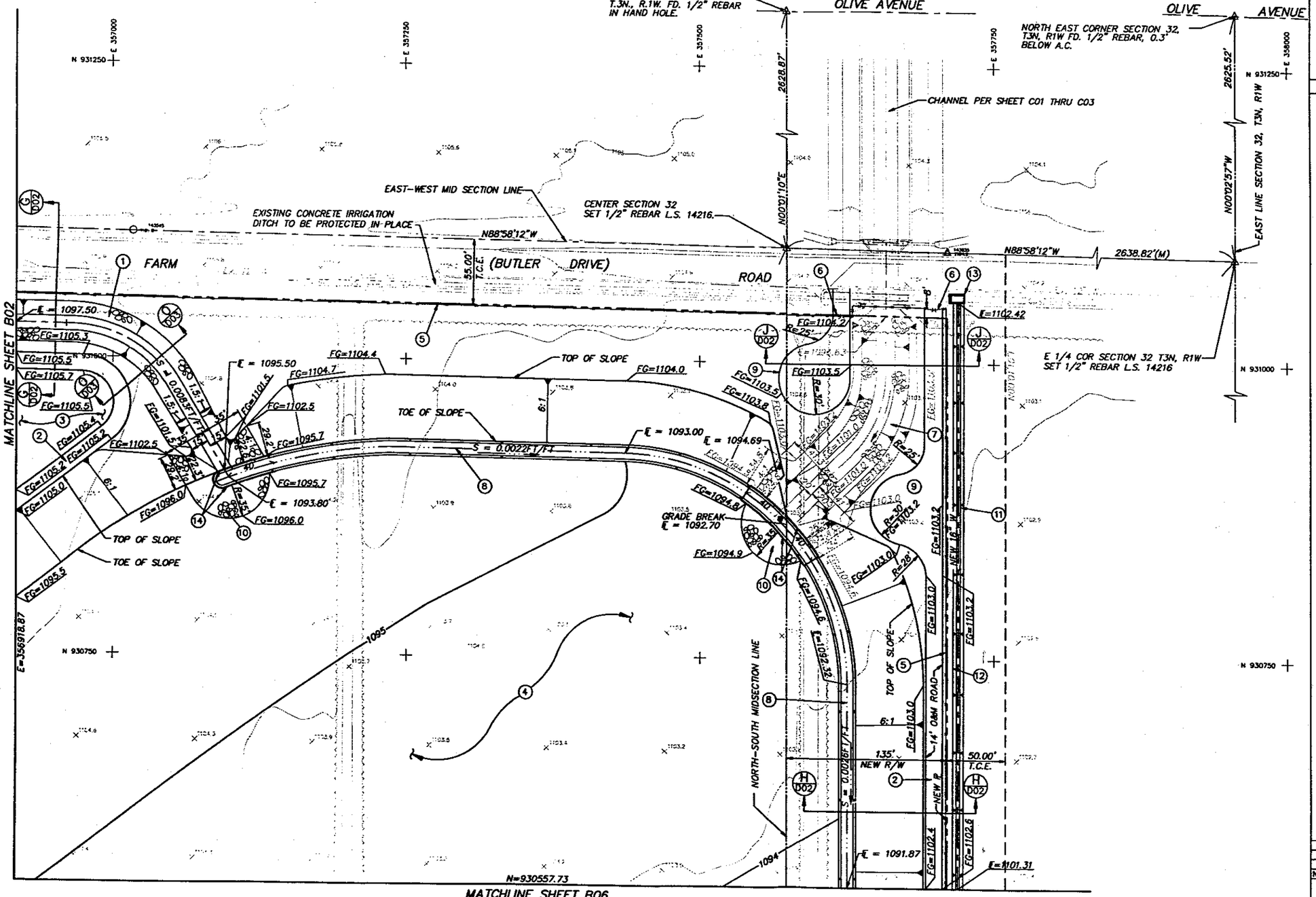
	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

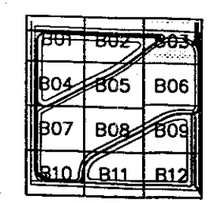
WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

WOOD/PATEL PROJECT NO. 93030.00

SHEET B02 of 12

PROJ. #93083.02 FILE NAME: V:\931204\204B02.DWG





KEY MAP

☐ REMOVE ☐

○ CONSTRUCT ○

1. SEE SHEETS C04 THRU C06 FOR NORTH COLLECTOR CHANNEL IMPROVEMENTS.
2. CONSTRUCT 14'x4" THICK ABC OPERATION & MAINTENANCE (O&M) ROAD.
3. CONSTRUCT FILL AREA TO GRADE SHOWN ON PLAN WITH MATERIAL EXCAVATED FROM BASIN AND CHANNELS. FILL TO BE WHEEL ROLLER COMPACTED TO 85% OF MAXIMUM DENSITY.
4. CONSTRUCT PROPOSED BASIN BY EXCAVATING TO GRADE SHOWN ON PLAN.
5. CONSTRUCT 4 STRAND PLAIN WIRE FENCE. PER DETAIL 15 ON SHEET D07.
6. CONSTRUCT FENCE GATE AT ACCESS/O&M ROAD. PER DETAIL 14 ON SHEET D07.
7. SEE SHEETS C01 THRU C03 FOR EAST COLLECTOR CHANNEL IMPROVEMENTS.
8. CONSTRUCT SHOTCRETE NUISANCE FLOW SWALE PER SECTION H-H ON SHEET D02.
9. CONSTRUCT O&M ROAD TURNAROUND.
10. CONSTRUCT GROUTED RIP-RAP TYPE II CHANNEL OUTLET PROTECTION. PER DETAIL ON SHEET D03.
11. CONSTRUCT CONCRETE LINED DITCH PER DETAIL 12 ON SHEET D06.
12. CONSTRUCT 16" PVC WATER LINE PER DETAIL 12 ON SHEET D06 AND DETAIL 21 TYPE 2 ON SHEET D08.
13. FOR IRRIGATION JUNCTION BOX SEE DETAIL 8 ON SHEET D06.
14. INCREASE TOE DOWN ON NUISANCE FLOW CHANNEL FROM 1' TO 2' PER GROUTED RIP-RAP (TYPE II) DETAIL ON SHEET D03.

20 0 20 40
Scale in Feet

263-1100

NO.	REVISION	DATE
3		
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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

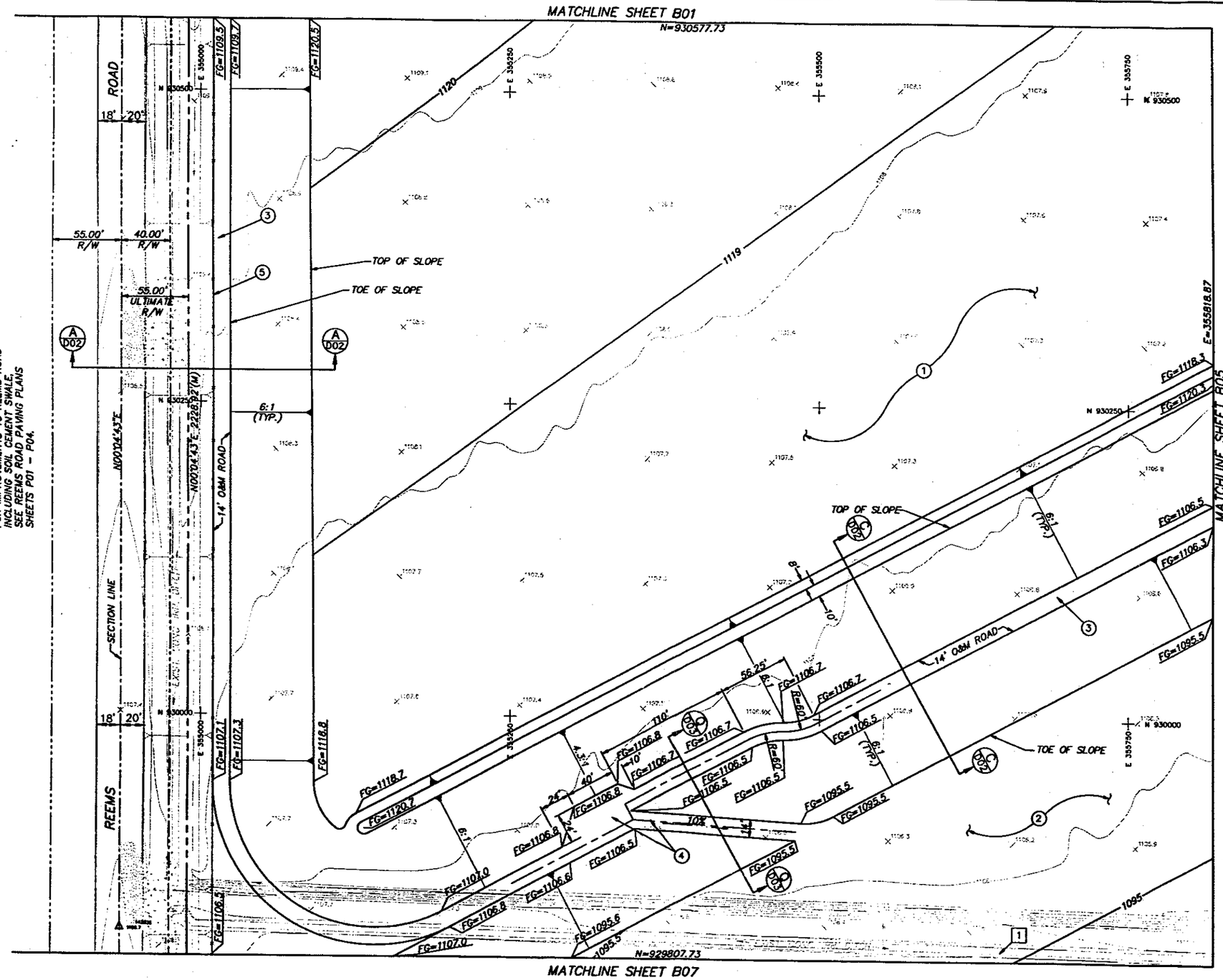
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
DETENTION BASIN GRADING PLANS

	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

WOOD/PATEL PROJECT NO. 93030.00

SHEET B03/12



NOTE:
FOR IMPROVEMENTS TO REEMS ROAD INCLUDING SOIL CEMENT SWALE, SEE REEMS ROAD PAVING PLANS SHEETS P01 – P04.

☐ REMOVE ☐

1. REMOVE IRRIGATION DITCH. (845 LF±)

○ CONSTRUCT ○

1. CONSTRUCT FILL AREA TO GRADE SHOWN ON PLAN WITH MATERIAL EXCAVATED FROM BASIN AND CHANNELS. FILL TO BE WHEEL ROLLER COMPACTED TO 85% OF MAXIMUM DENSITY.
2. CONSTRUCT BASIN BY EXCAVATING TO GRADE SHOWN ON PLAN.
3. CONSTRUCT 14'x4" THICK ABC OPERATION & MAINTENANCE (O&M) ROAD.
4. CONSTRUCT BASIN ACCESS RAMP.
5. CONSTRUCT 4 STRAND PLAIN WIRE FENCE. PER DETAIL 15 ON SHEET D07.

20 0 20 40
Scale in Feet

CALL FOR THE BLUE STAKE
263-1100
Blue Stake Center
CALL BEFORE YOU DIG

NO.	REVISION	DATE
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FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
DETENTION BASIN GRADING PLANS

	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

WOOD/PATEL PROJECT NO. 93030.00

SHEET B04 of 12

B01	B02	B03
B04	B05	B06
B07	B08	B09
B10	B11	B12

KEY MAP

MATCHLINE SHEET B02

N=930557.73

FG=1117.7

FG=1119.5

FG=1106.2

FG=1106.0

FG=1095.5

1118

N 930500

E 356000

E 356250

E 356500

E 356750

ABANDON PIPE IN PLACE

TOP OF SLOPE

8'

10'

6:1 (TYP.)

FG=1106.2

FG=1106.0

FG=1118.3

FG=1120.5

14' O&M ROAD

TOE OF SLOPE

N 930250

FG=1106.5

FG=1106.3

FG=1095.5

REMOVE PIPE

1095

FG=1095.5

E=355818.87

N 930000

1094

N=929807.73

MATCHLINE SHEET B08

MATCHLINE SHEET B04

MATCHLINE SHEET B06

E=358918.87

REMOVE

1. REMOVE IRRIGATION PIPE AS NECESSARY TO CONSTRUCT/EXCAVATE BASIN. EXISTING PIPE UNDER FILL TO BE ABANDONED IN PLACE. (735 LF±)
2. REMOVE IRRIGATION DITCH. (100 LF±)

CONSTRUCT

1. CONSTRUCT FILL AREA TO GRADE SHOWN ON PLAN WITH MATERIAL EXCAVATED FROM BASIN AND CHANNELS. FILL TO BE WHEEL ROLLER COMPACTED TO 85% OF MAXIMUM DENSITY.
2. CONSTRUCT BASIN BY EXCAVATING TO GRADE SHOWN ON PLAN.
3. CONSTRUCT 14'X4" THICK ABC OPERATION & MAINTENANCE (O&M) ROAD.

20 0 20 40
Scale in Feet

263-1100

NO.	REVISION	DATE
3		
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FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
DETENTION BASIN GRADING PLANS

	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

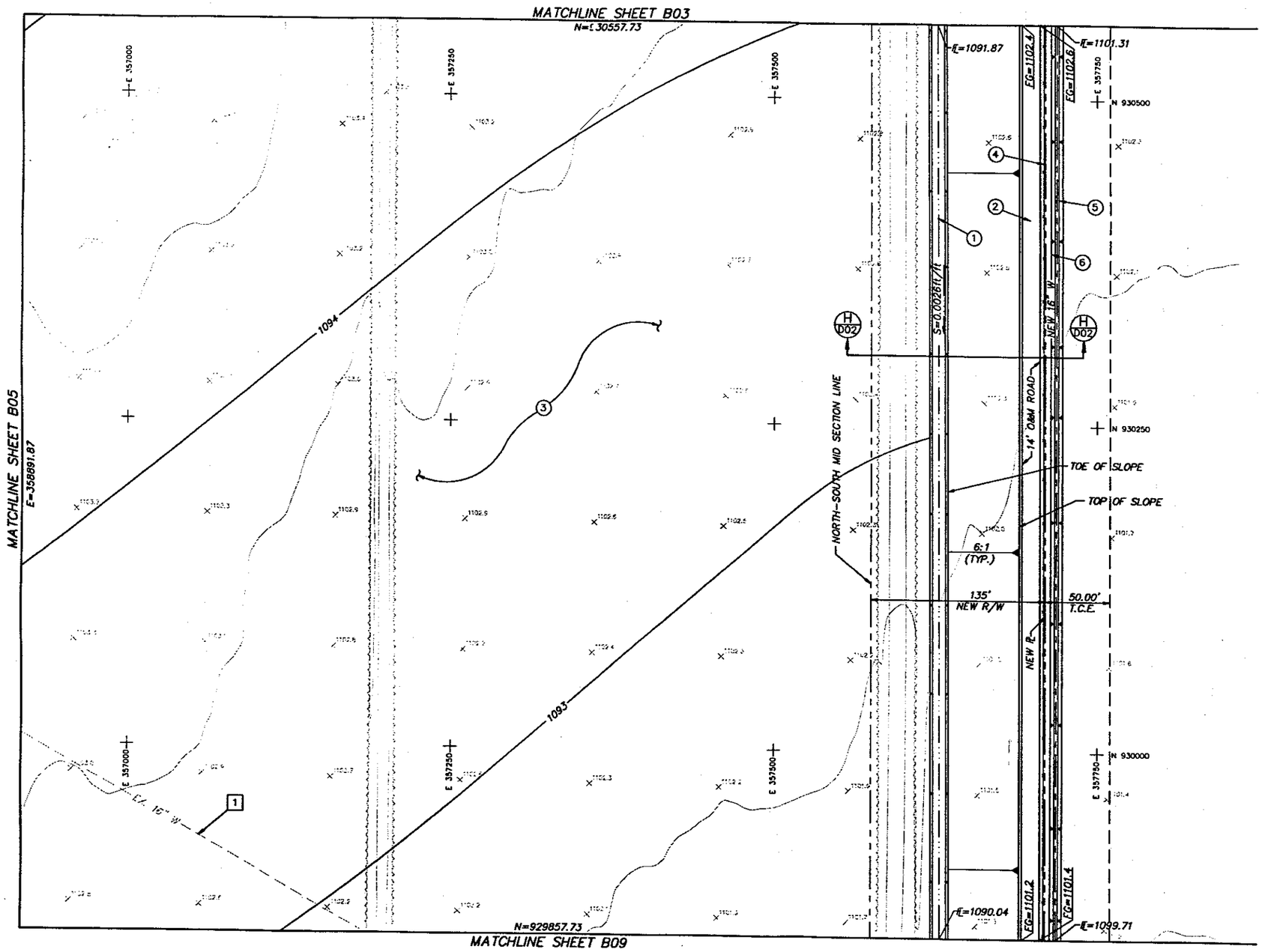
WOOD/PATEL PROJECT NO. 93030.00

SHEET B05 /12

B01	B02	B03
B04	B05	B06
B07	B08	B09
B10	B11	B12

KEY MAP

PROJ. #93083.02 FILE NAME: Y:\931204\1204B05.DWG



REMOVE

1 REMOVE IRRIGATION PIPE. (300 LF±)

CONSTRUCT

1. CONSTRUCT SHOTCRETE NUISANCE FLOW SWALE PER SECTION H-H ON SHEET D02.
2. CONSTRUCT 14'x4" THICK ABC OPERATION & MAINTENANCE (O&M) ROAD.
3. CONSTRUCT BASIN BY EXCAVATING TO GRADE SHOWN ON PLAN.
4. CONSTRUCT 4 STRAND PLAIN WIRE FENCE. PER DETAIL 15 ON SHEET D07.
5. CONSTRUCT CONCRETE LINED DITCH PER DETAIL 12 ON SHEET D06.
6. CONSTRUCT 16" PVC WATER LINE PER DETAIL 12 ON SHEET D06 AND DETAIL 21 TYPE 2 ON SHEET D08.

20 0 20 40
Scale in Feet

263-1100

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

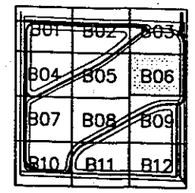
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
DETENTION BASIN GRADING PLANS

	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

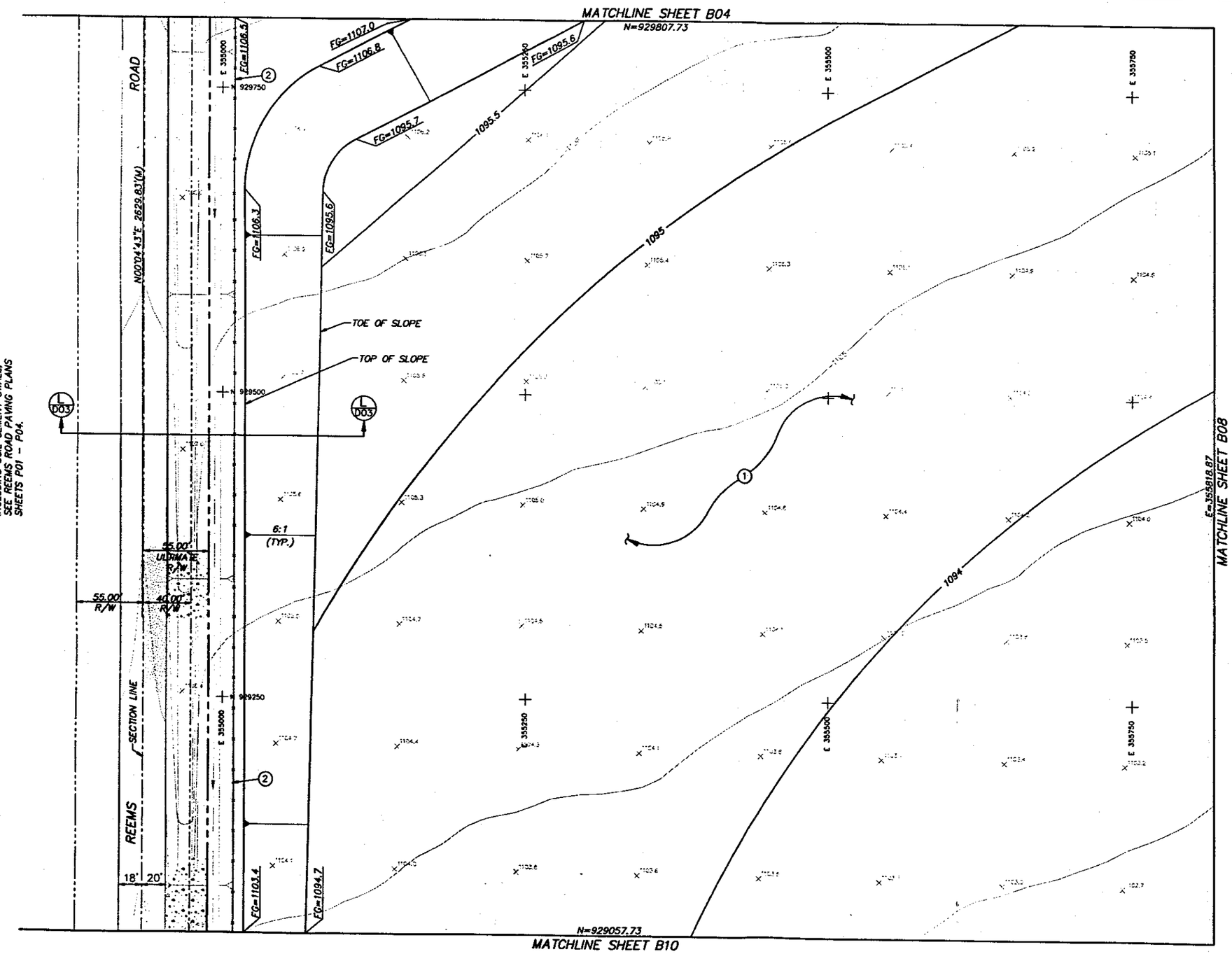
WOOD/PATEL PROJECT NO. 93030.00

SHEET



KEY MAP

PROJ. #93083.02 FILE NAME: V:\931204\1204B08.DWG



NOTE:
FOR IMPROVEMENTS TO REEMS ROAD INCLUDING SOIL CEMENT SWALE, SEE REEMS ROAD PAVING PLANS SHEETS P01 – P04.

☐ REMOVE ☐

○ CONSTRUCT ○

1. CONSTRUCT BASIN BY EXCAVATING TO GRADE SHOWN ON PLAN.
2. CONSTRUCT 4 STRAND PLAIN WIRE FENCE. PER DETAIL 15 ON SHEET D07.

20 0 20 40
Scale in Feet

263-1100

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
DETENTION BASIN GRADING PLANS

	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

WOOD/PATEL PROJECT NO. 93030.00

SHEET B07/12

B01	B02	B03
B04	B05	B06
B07	B08	B09
B10	B11	B12

KEY MAP

PROJ. #93083.02 FILE NAME: V:\93304\120B07.DWG

MATCHLINE SHEET B05
N=929807.73

MATCHLINE SHEET B07
E=355818.87

MATCHLINE SHEET B09
E=356918.87

N=929057.73
MATCHLINE SHEET B11

N 929750
N 929500
N 929250
E 356000
E 356250
E 356500
E 356750

1094
1093
1112

TOE OF SLOPE
TOP OF SLOPE
14' O&M ROAD
S = 0.0008 FT/FT
6:1 (TYP.)
7:1 (TYP.)

E=1090.46
E=1091.00
E=1091.32
E=1091.40
FG=1102.0
FG=1102.2
FG=1112.5
FG=1102.7
FG=1102.9
FG=1103.0
FG=1103.2
FG=1112.5

B 302
B 303

EXIST. IRR. DITCH

REMOVE

1. REMOVE IRRIGATION DITCH. (1000 LF±)

CONSTRUCT

1. CONSTRUCT SHOTCRETE NUISANCE FLOW SWALE PER SECTION B-B ON SHEET D02.
2. CONSTRUCT 14'X4" THICK ABC OPERATION & MAINTENANCE (O&M) ROAD.
3. CONSTRUCT FILL AREA TO GRADE SHOWN ON PLAN WITH MATERIAL EXCAVATED FROM BASIN AND CHANNELS. FILL TO BE WHEEL ROLLER COMPACTED TO 85% OF MAXIMUM DENSITY.
4. CONSTRUCT BASIN BY EXCAVATING TO GRADE SHOWN ON PLAN.

20 0 20 40
Scale in Feet

263-1100

NO.	REVISION		DATE
3			
2			
1			

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
DETENTION BASIN GRADING PLANS

	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

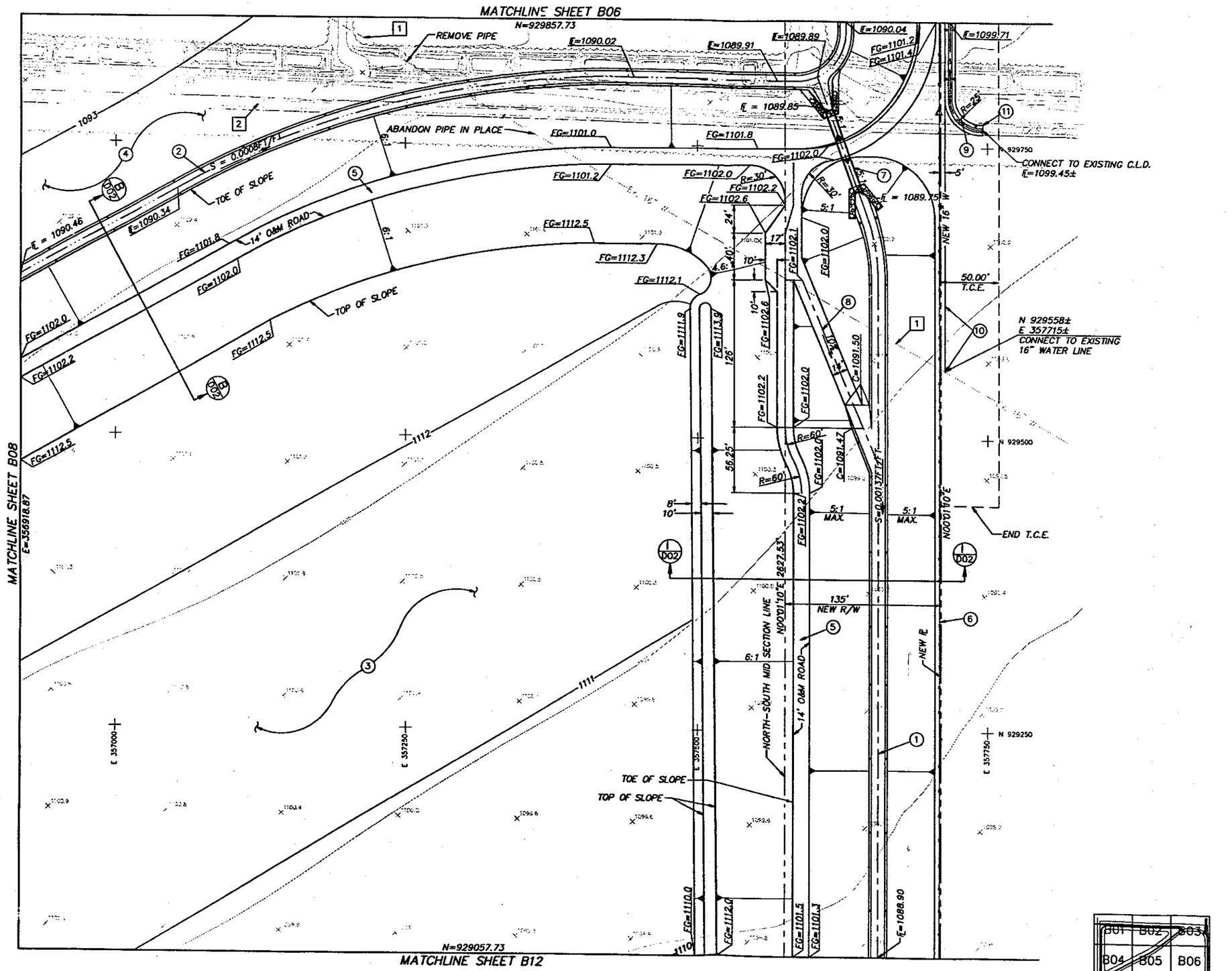
WOOD/PATEL PROJECT NO. 93030.00

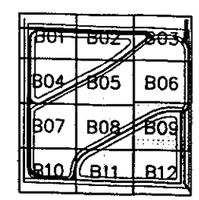
SHEET B08/12

B01	B02	B03
B04	B05	B06
B07	B08	B09
B10	B11	B12

KEY MAP

PROJ. #93030.02 FILE NAME: I:\931204\120480B.DWG





KEY MAP

REMOVE

1. REMOVE IRRIGATION PIPE AS NECESSARY TO CONSTRUCT BASIN/CHANNEL. EXISTING PIPE UNDER FILL TO BE ABANDONED IN PLACE. (REMOVE 180 LF± IN BASIN, 70 LF± IN CHANNEL)
2. REMOVE IRRIGATION DITCH. (830 LF±)

CONSTRUCT

1. SEE SHEETS C08 THRU C09 FOR OUTFALL CHANNEL IMPROVEMENTS.
2. CONSTRUCT SHOTCRETE NUISANCE FLOW SWALE PER SECTION B-B ON SHEET D02.
3. CONSTRUCT FILL AREA TO GRADE SHOWN ON PLAN WITH MATERIAL EXCAVATED FROM BASIN AND CHANNELS. FILL TO BE WHEEL ROLLER COMPACTED TO 85% OF MAXIMUM DENSITY.
4. CONSTRUCT BASIN BY EXCAVATING TO GRADES SHOWN ON PLAN.
5. CONSTRUCT 14'x4" THICK ABC OPERATION & MAINTENANCE (O&M) ROAD.
6. CONSTRUCT 4 STRAND PLAIN WIRE FENCE. PER DETAIL 15 ON SHEET D07.
7. SEE SHEET C08 FOR BOX CULVERT DETAILS.
8. CONSTRUCT 4" ABC CHANNEL ACCESS RAMP PER SHEET C08.
9. CONSTRUCT CONCRETE LINED DITCH PER DETAIL 12 ON SHEET D06.
10. CONNECT TO EXISTING 16" PVC WATER LINE AND CONSTRUCT NEW 16" PVC WATER LINE PER DETAIL 12 ON SHEET D06 AND DETAIL 21 TYPE 2 ON SHEET D08.
11. NEW CONCRETE LINED DITCH TO MATCH EXISTING CHANNEL SECTION AND INVERT.

20 0 20 40
Scale in Feet

263-1100

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

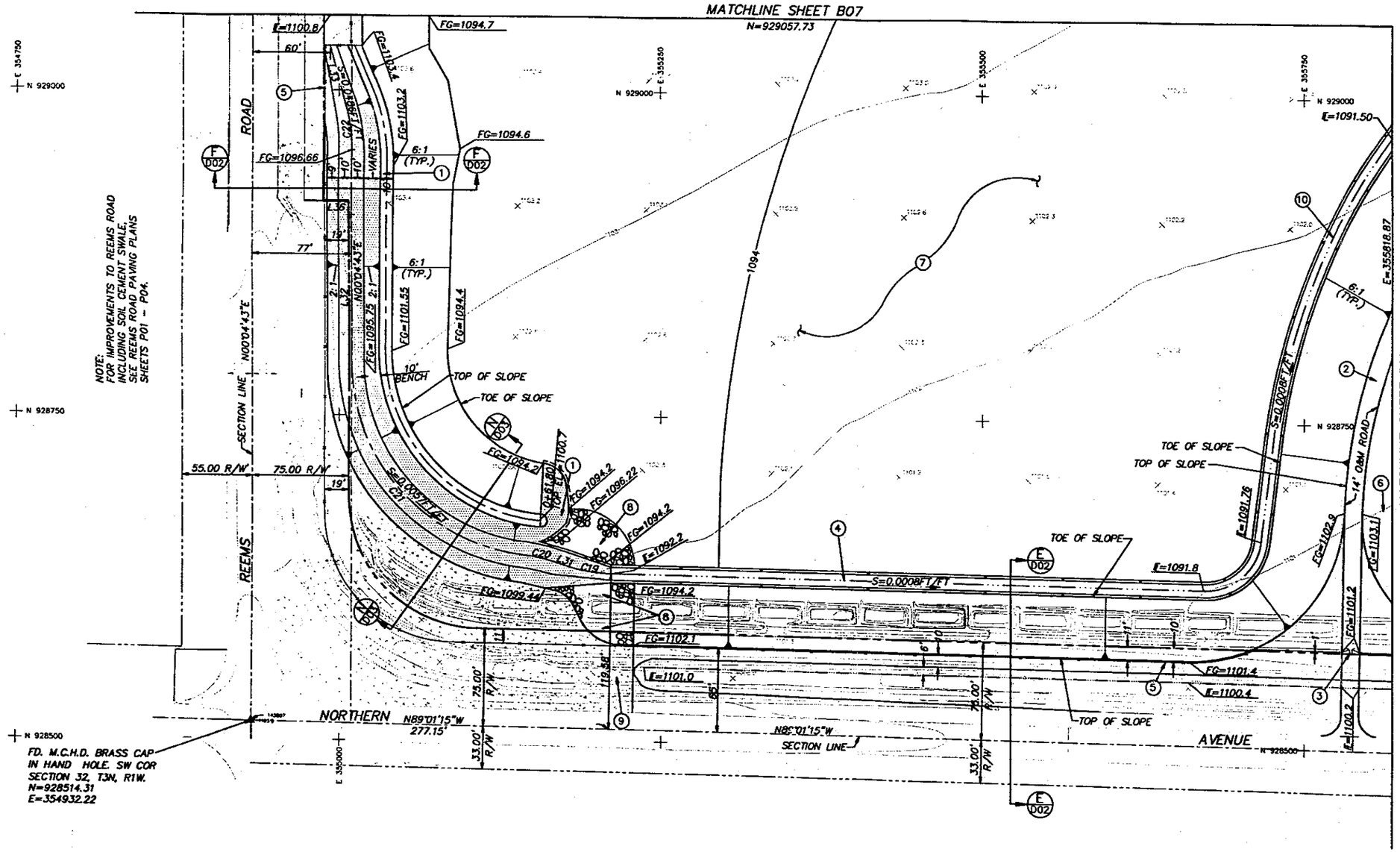
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
DETENTION BASIN GRADING PLANS

	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

WOOD/PATEL PROJECT NO. 93030.00

SHEET B09 of 12

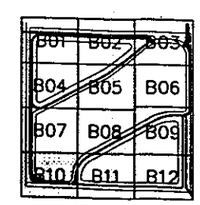


LINE TABLE

LINE	DIRECTION	DISTANCE
L31	N71°50'21"W	9.55'
L32	N00°04'43"E	162.77'
L33	S15°03'16"E	49.26'

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	CHORD	DELTA
C19	120.00'	35.99'	18.13'	35.85'	17°10'54"
C20	120.00'	24.65'	12.37'	24.61'	11°46'15"
C21	150.00'	219.10'	134.32'	200.13'	83°41'18"
C22	120.00'	31.69'	15.94'	31.60'	15°07'59"



KEY MAP

☐ REMOVE ☐

○ CONSTRUCT ○

1. SEE SHEET C07 FOR REEMS ROAD COLLECTOR CHANNEL IMPROVEMENTS.
2. CONSTRUCT 14'x4" THICK ABC OPERATION & MAINTENANCE (O&M) ROAD.
3. CONSTRUCT FENCE GATE AT O&M ACCESS ROAD PER DETAIL 14 ON SHEET D07.
4. CONSTRUCT SHOTCRETE NUISANCE FLOW SWALE PER SECTION E-E ON SHEET D02.
5. CONSTRUCT 4 STRAND PLAIN WIRE FENCE PER DETAIL 15 ON SHEET D07.
6. CONSTRUCT FILL AREA TO GRADE SHOWN ON PLAN WITH MATERIAL EXCAVATED FROM BASIN AND CHANNELS. FILL TO BE WHEEL ROLLER COMPACTED TO 85% OF MAXIMUM DENSITY.
7. CONSTRUCT BASIN BY EXCAVATING TO GRADE SHOWN ON PLAN.
8. CONSTRUCT GROUTED RIP-RAP TYPE II CHANNEL OUTLET PROTECTION PER DETAIL ON SHEET D03 AND PER DETAIL 5a ON SHEET D04.
9. FILL EXISTING DITCH NORTH OF NORTHERN AVENUE PER GRADES SHOWN ON PLAN & PER SECTION E-E ON SHEET D02.
10. CONSTRUCT SHOTCRETE NUISANCE FLOW SWALE PER SECTION B-B ON SHEET D02.

20 0 20 40
Scale in Feet

263-1100

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

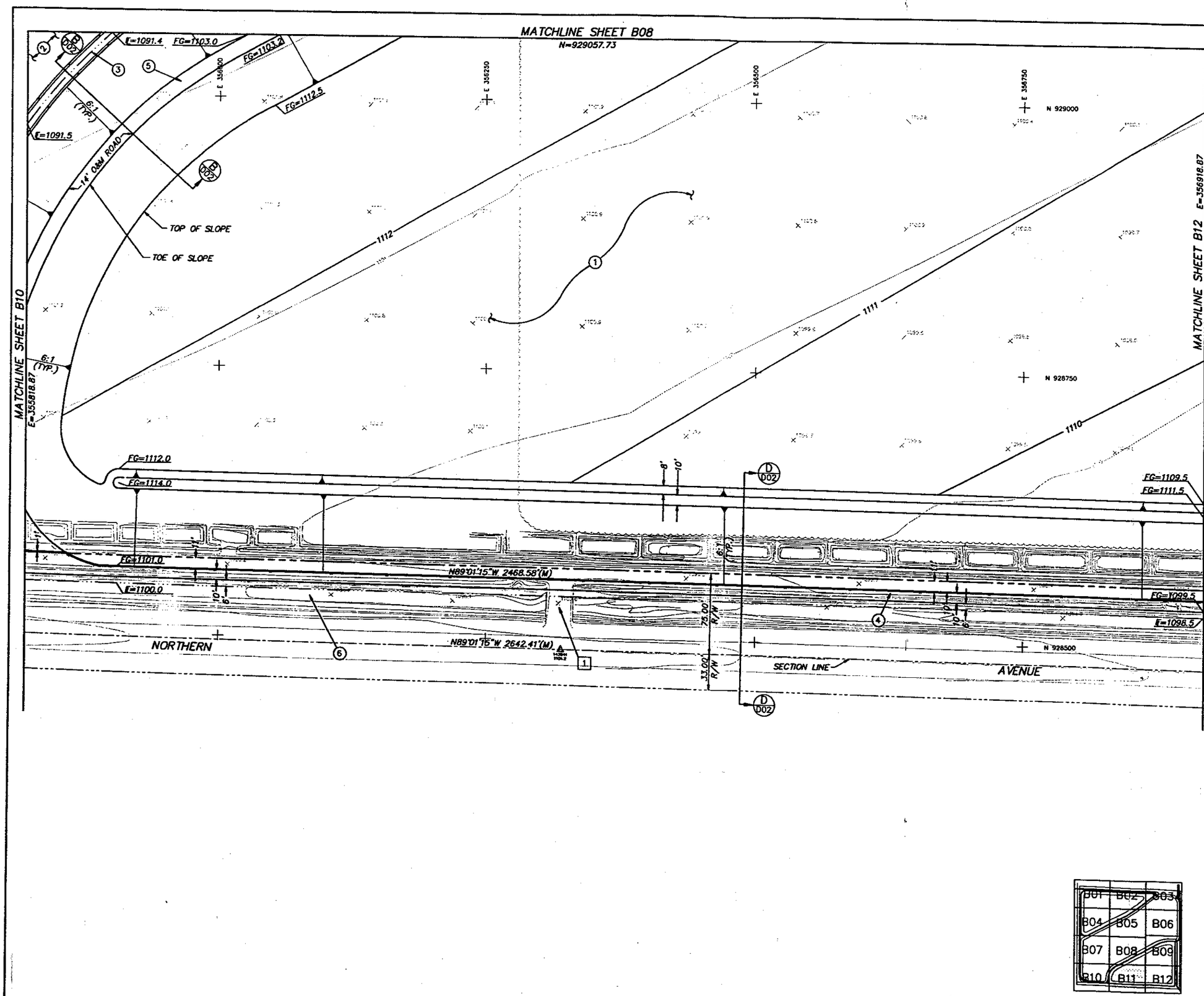
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
DETENTION BASIN GRADING PLANS

	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

WOOD/PATEL PROJECT NO. 93030.00

SHEET B10/12



REMOVE

1. REMOVE EXISTING 25' WIDE x 36' LONG CONCRETE DRAINAGE STRUCTURE AND CULVERTS

CONSTRUCT

1. CONSTRUCT FILL AREA TO GRADE SHOWN ON PLAN WITH MATERIAL EXCAVATED FROM BASIN AND CHANNELS. FILL TO BE WHEEL ROLLER COMPACTED TO 85% OF MAXIMUM DENSITY.
2. CONSTRUCT BASIN BY EXCAVATING TO GRADE SHOWN ON PLAN.
3. CONSTRUCT SHOTCRETE NUISANCE FLOW SWALE PER SECTION B-B ON SHEET D02.
4. CONSTRUCT 4 STRAND PLAIN WIRE FENCE. PER DETAIL 15 ON SHEET D07.
5. CONSTRUCT 14'x4" THICK ABC OPERATION & MAINTENANCE (O&M) ROAD.
6. FILL EXISTING DITCH NORTH OF NORTHERN AVENUE PER GRADES SHOWN ON PLAN & PER SECTION D-D ON SHEET D02.

N

20 0 20 40
Scale in Feet

263-1100

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
DETENTION BASIN GRADING PLANS

	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

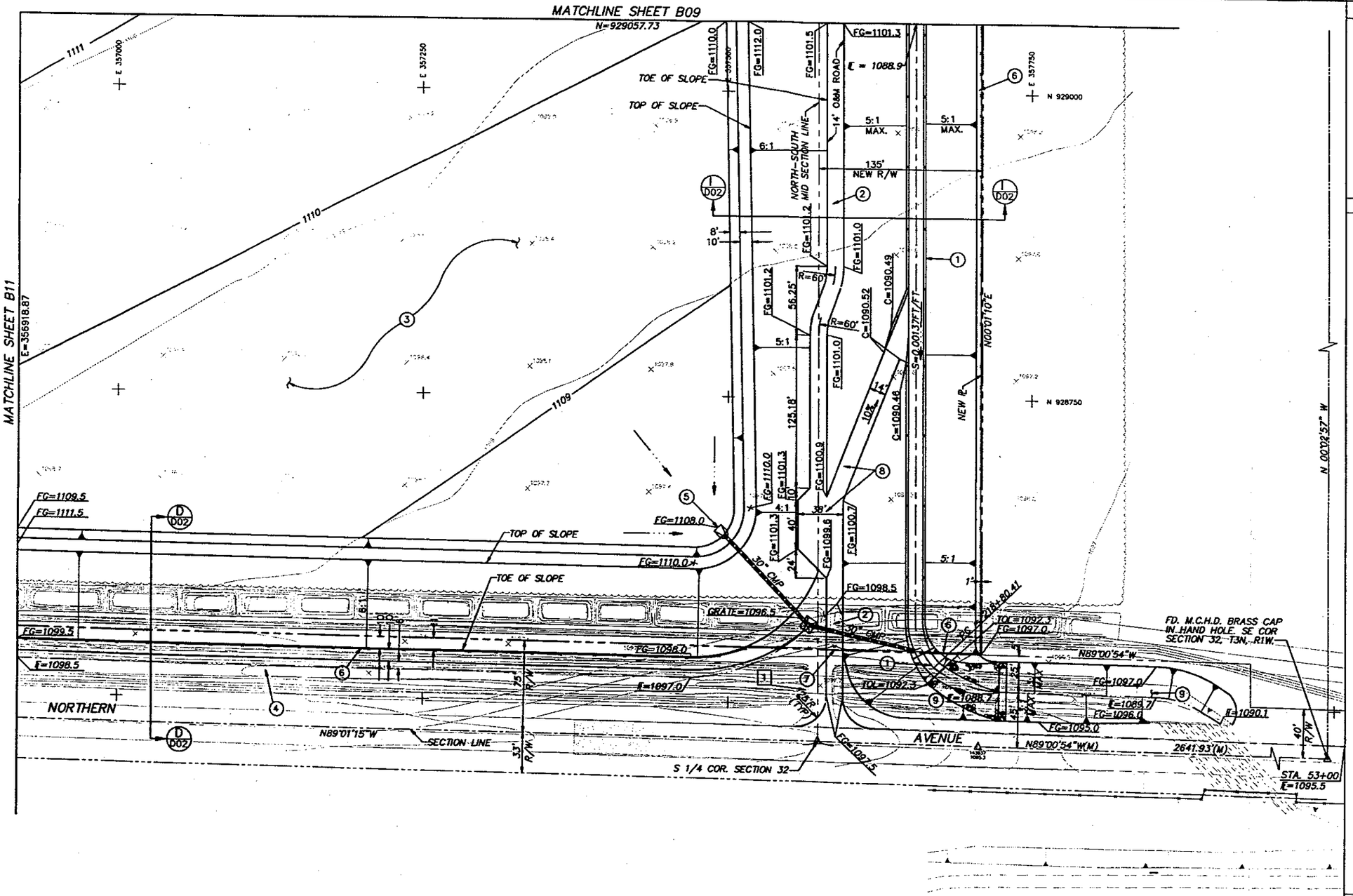
WOOD/PATEL PROJECT NO. 93030.00

SHEET

B01	B02	B03
B04	B05	B06
B07	B08	B09
B10	B11	B12

KEY MAP

PROJ. #93030.02 FILE NAME: W:\93204\1204B11.DWG



☐ REMOVE ☐

1. REMOVE EXISTING 24' WIDE x 30' LONG DRAINAGE STRUCTURE AND CULVERTS.

○ CONSTRUCT ○

1. SEE SHEETS C08 & C09 FOR OUTFALL CHANNEL.
2. CONSTRUCT 14'X4" THICK ABC OPERATION & MAINTENANCE (O&M) ROAD.
3. CONSTRUCT FILL AREA TO GRADE SHOWN ON PLAN WITH MATERIAL EXCAVATED FROM BASIN AND CHANNELS. FILL TO BE WHEEL ROLLER COMPACTED TO 85% OF MAXIMUM DENSITY.
4. FILL EXISTING DITCH NORTH OF NORTHERN AVENUE PER GRADES SHOWN ON PLAN & PER SECTION D-D ON SHEET D02.
5. CONSTRUCT DRAINAGE SYSTEM FOR SOUTH FILL AREA PER DETAIL 7 ON SHEET D05.
6. CONSTRUCT 4 STRAND PLAIN WIRE FENCE. PER DETAIL 15 ON SHEET D07.
7. CONSTRUCT FENCE GATE AT O&M ROAD PER DETAIL 14 ON SHEET D07.
8. CONSTRUCT CHANNEL ACCESS RAMP PER SHEET C09.
9. CONSTRUCT NORTHERN AVENUE SWALE FROM OUTFALL CHANNEL RIP-RAP TO EXISTING PIPES PER DETAIL 3 ON SHEET D04.

20 0 20 40
Scale in Feet

CALL FOR THE BLUE STAKES
263-1100
Blue Stake Center
CALL COLLECT

NO.	REVISION		DATE
3			
2			
1			

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
DETENTION BASIN GRADING PLANS

	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

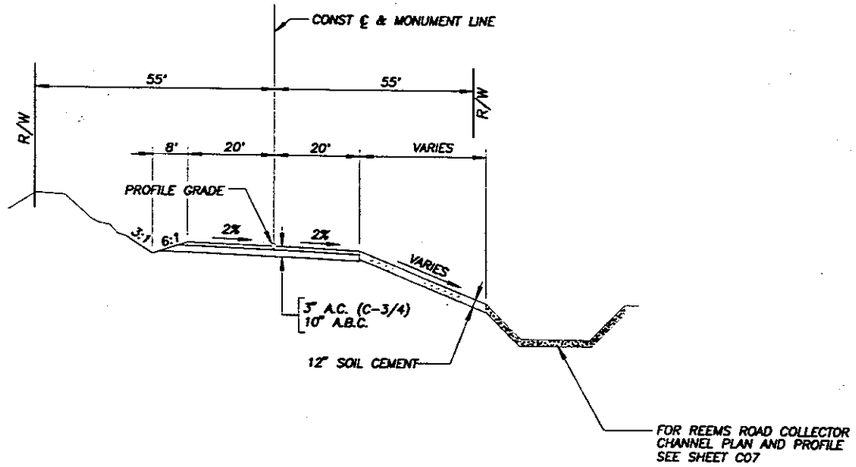
WOOD/PATEL PROJECT NO. 93030.00

SHEET

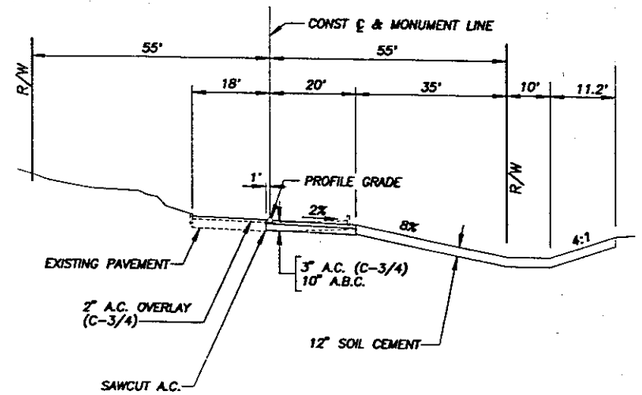
B01	B02	B03
B04	B05	B06
B07	B08	B09
B10	B11	B12

KEY MAP

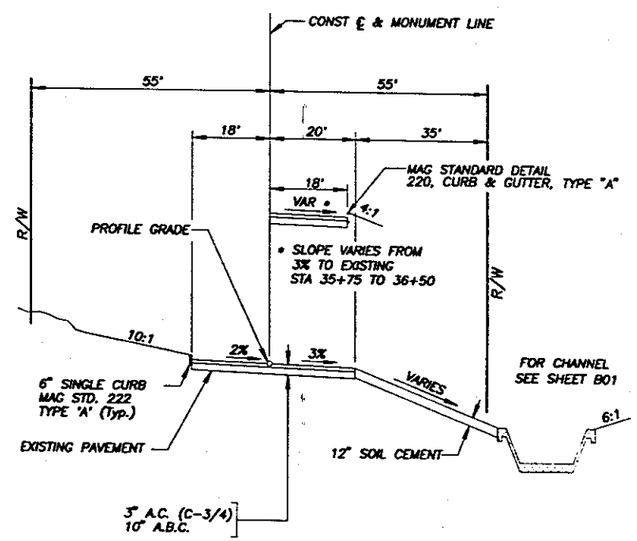
☐ REMOVE ☐



REEMS ROAD
STA. 10+60 to STA. 14+60



REEMS ROAD
STA. 14+60 to STA. 33+00



REEMS ROAD
STA. 33+00 to STA. 36+50

NO.	REVISION		DATE
3			
2			
1			

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN AND COLLECTOR CHANNELS
TYPICAL SECTIONS
ROADWAY

	BY	DATE
DESIGNED	A. J. SPEAR	8/94
DRAWN	W. J. PARROTT	8/94
CHECKED	C. GOPPERTON	8/94

NBS LOWRY

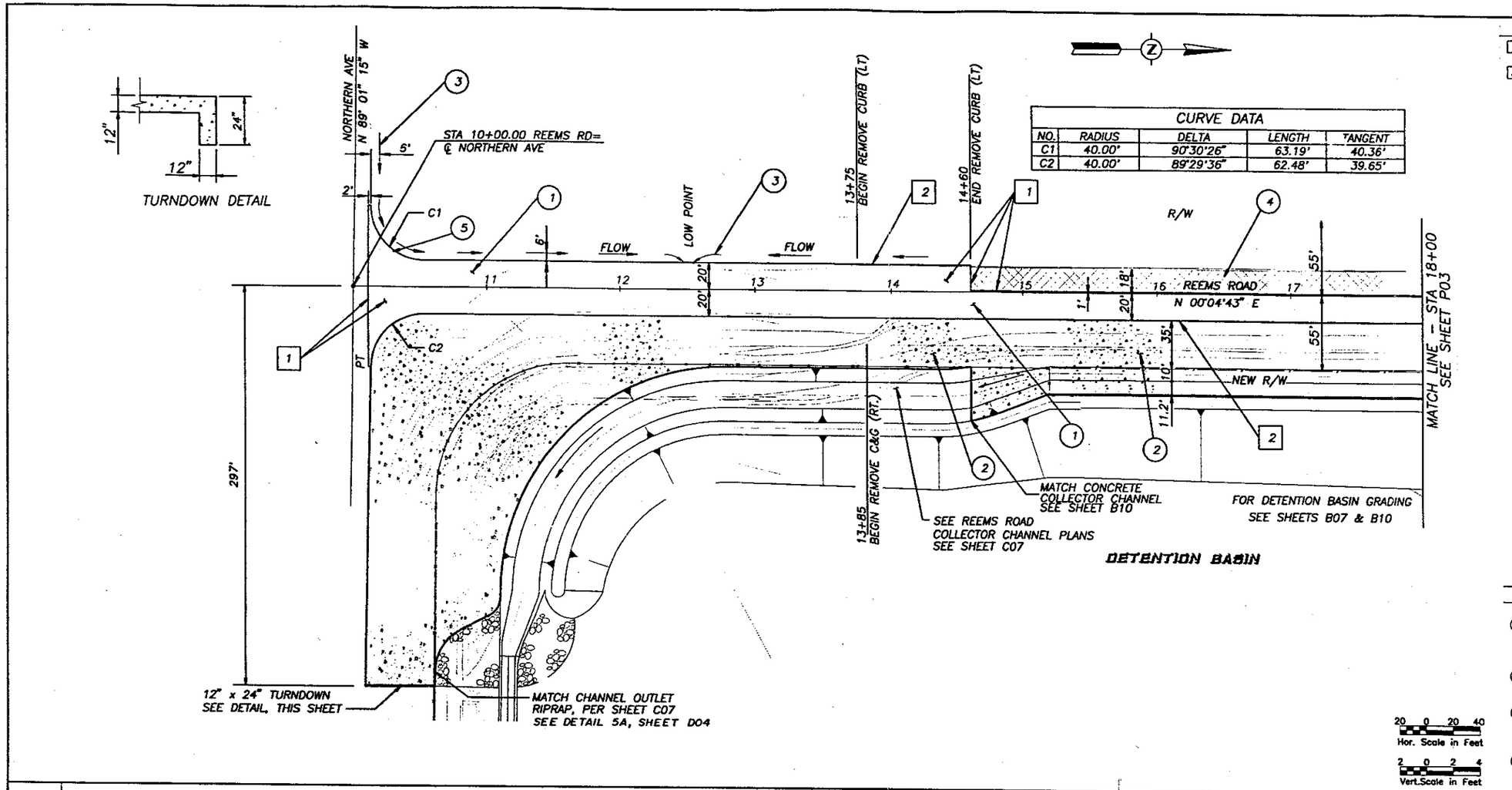
ENGINEERS & PLANNERS

NBS/LOWRY PROJECT NO. P81-194-019

SHEET

263-1100

\P81-194.019\DWGS\PH-II\DD-PD1.DWG VIEW = SITE 1 = 40 UPDATE



CURVE DATA				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	40.00'	90°30'26"	63.19'	40.36'
C2	40.00'	89°29'36"	62.48'	39.65'

☐ REMOVE ☐

1 SAWCUT AND REMOVE EXISTING PAVEMENT.

2 REMOVE EXISTING CURB.
FROM STA 13+75 TO 14+60 LEFT.
FROM STA 13+85 TO 18+00 RIGHT.

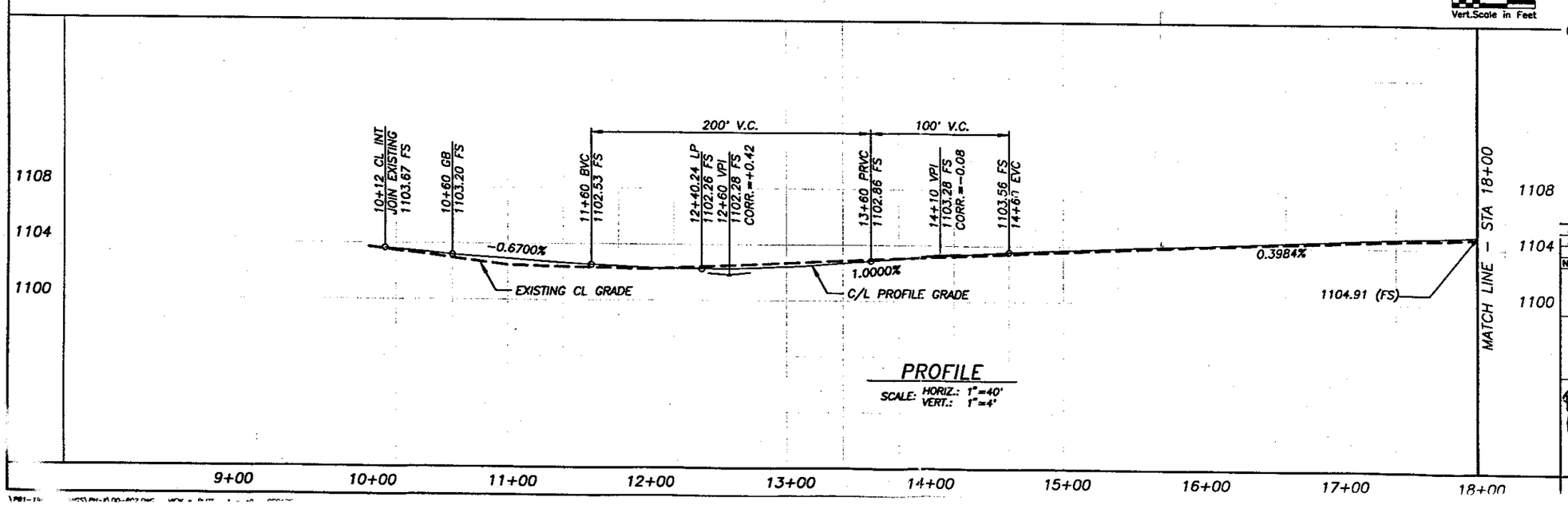
263-1100

○ CONSTRUCT ○

1. PLACE ASPHALT CONCRETE PAVING AND AGGREGATE BASE; (SEE TYPICAL SECTIONS)
2. PLACE SOIL CEMENT SLOPE PROTECTION. (SEE TYPICAL SECTIONS)
3. GRADE ROADSIDE SWALE TO DRAIN, SEE TYPICAL SECTIONS.
4. PLACE 2" AC OVERLAY OVER EXISTING, (SEE TYPICAL SECTIONS)
5. RELOCATE STOP SIGN, BY MCDOT.

20 0 20 40
Hor. Scale in Feet

2 0 2 4
Vert.Scale in Feet



PROFILE
SCALE: HORIZ.: 1"=40'
VERT.: 1"=4'

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

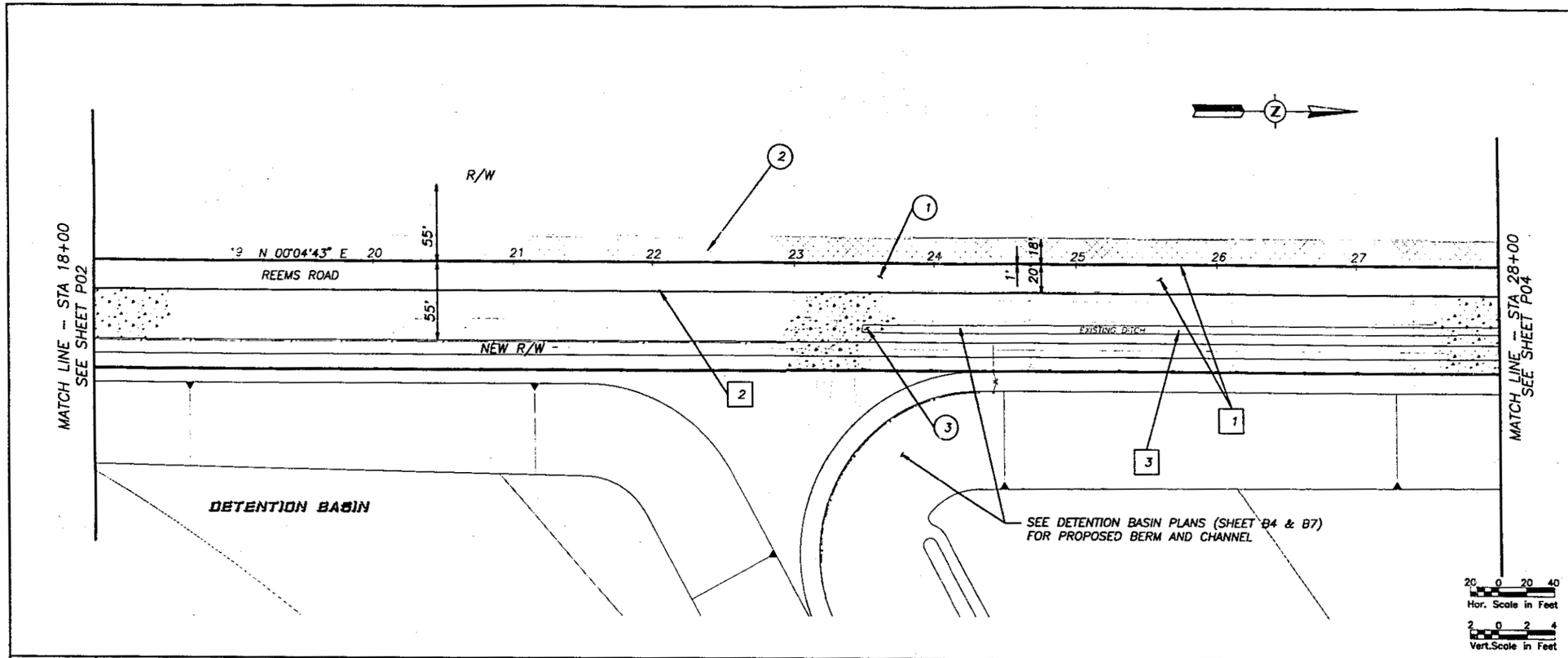
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN AND COLLECTOR CHANNELS
REEMS ROAD PAVING PLAN AND PROFILE
STATION 10+00 TO STATION 18+00

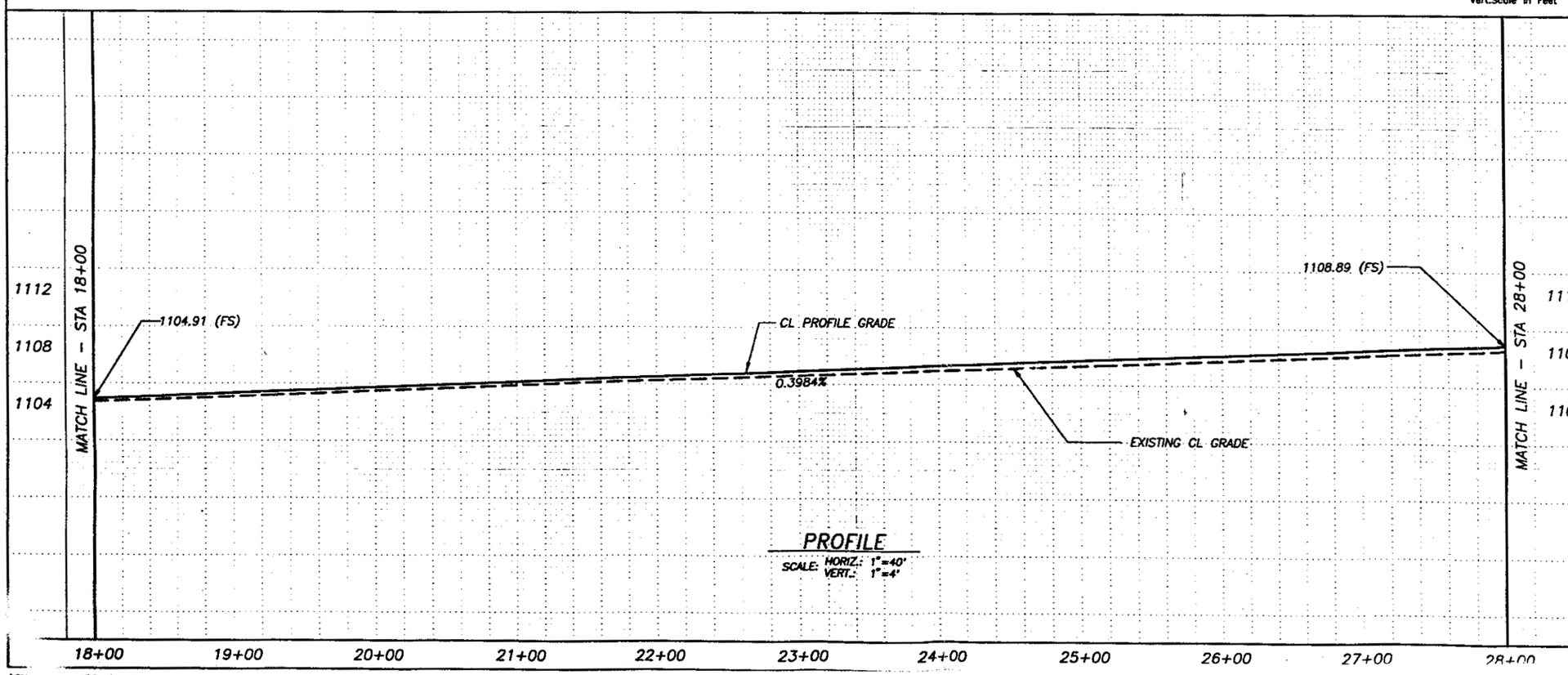
	BY	DATE
DESIGNED	A.J. SPEAR	8/94
DRAWN	W.J. PARROTT	8/94
CHECKED	C. GOPPERTON	8/94

NBS LOWRY

NBS/LOWRY PROJECT NO. P81-124-012

SHEET





☐ REMOVE ☐

1. SAWCUT AND REMOVE EXISTING PAVEMENT.
2. REMOVE EXISTING CURB. STA 18+00 TO 28+00.
3. REMOVE EXISTING CONCRETE IRRIGATION DITCH AND CROSSINGS.

263-1100

○ CONSTRUCT ○

1. PLACE ASPHALT CONCRETE PAVING AND AGGREGATE BASE; (SEE TYPICAL SECTIONS.)
2. PLACE 2" AC OVERLAY OVER EXISTING,
3. PLACE SOIL CEMENT SLOPE PROTECTION SEE TYPICAL SECTIONS.

NO.	REVISION	DATE
3		
2		
1		

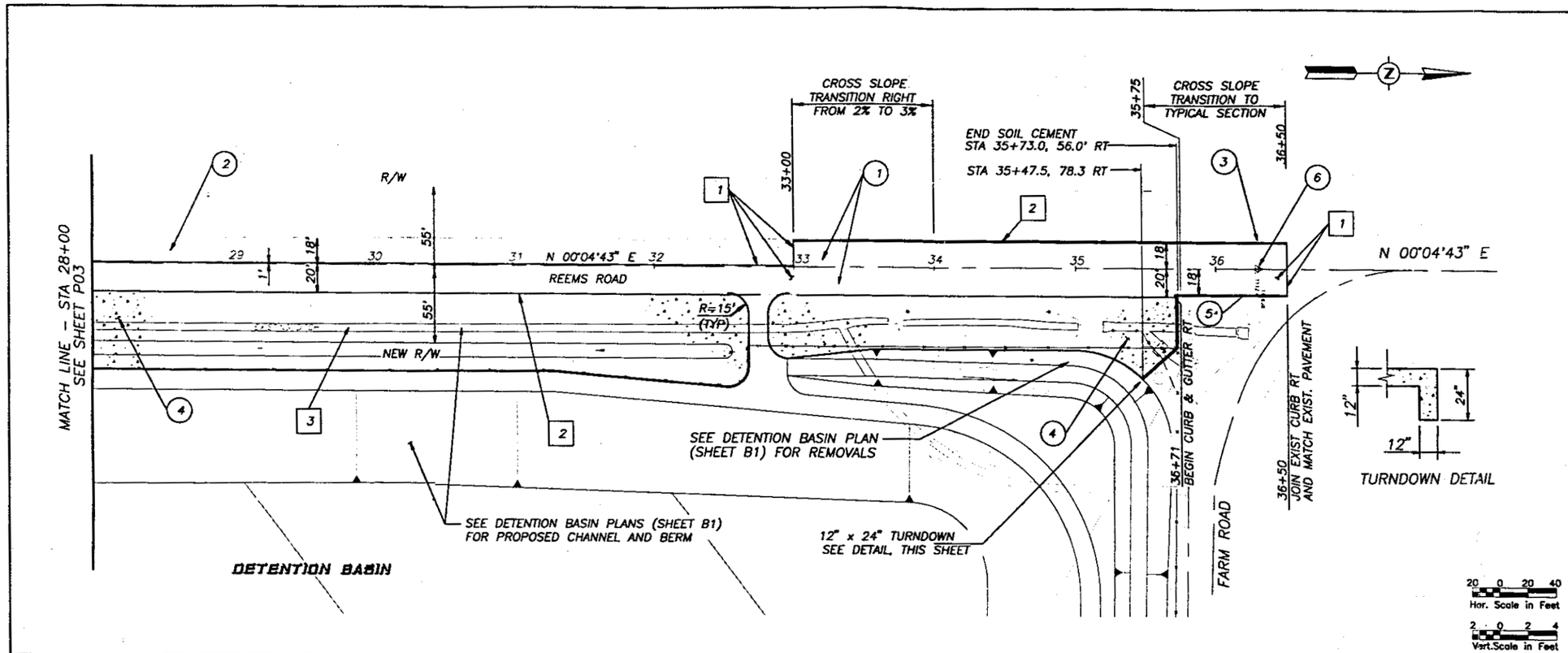
FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

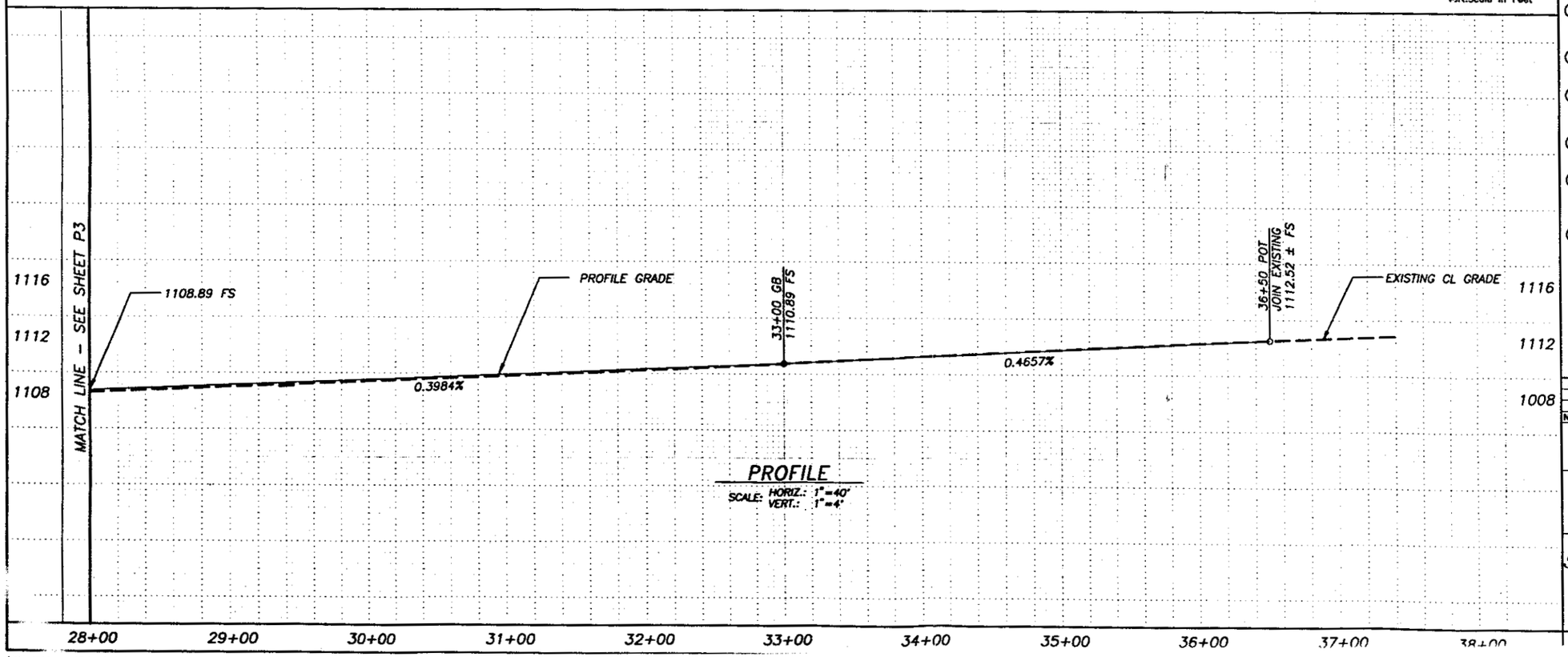
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN AND COLLECTOR CHANNELS
REEMS ROAD PAVING PLAN AND PROFILE
STATION 18+00 TO STATION 28+00

	BY	DATE
DESIGNED	A.J. SPEAR	8/94
DRAWN	W.J. PARROTT	8/94
CHECKED	C. GOPPERTON	8/94

NBS LOWRY
ENGINEERS & PLANNERS

SHEET





PROFILE

SCALE: HORIZ.: 1"=40' VERT.: 1"=4'

☐ REMOVE ☐

1. SAWCUT AND REMOVE EXISTING PAVEMENT.
2. REMOVE EXISTING CURB, STA 33+00 TO STA 36+50
3. REMOVE EXISTING CONCRETE IRRIGATION DITCH AND CROSSINGS.

263-100

○ CONSTRUCT ○

1. PLACE ASPHALT CONCRETE PAVING AND AGGREGATE BASE, SEE TYPICAL SECTIONS.
2. PLACE 2" AC OVERLAY OVER EXISTING.
3. CONSTRUCT 6" SINGLE CURB PER MAG STD. DETAIL 222 TYPE 'A', FROM STA 33+00 TO 36+50.
4. PLACE SOIL CEMENT SLOPE PROTECTION, PER TYPICAL SECTIONS.
5. CONSTRUCT 6" SINGLE CURB & GUTTER PER MAG STD. DETAIL 220, TYPE A, STA 35+71 TO STA 36+50.
6. INSTALL NEW SURVEY MARKER AT 1/4 CORNER SECTION 32, T3N, R1W, MAG. STD DETAIL 120-2, TYPE E

NO.	REVISION		DATE
3			
2			
1			

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

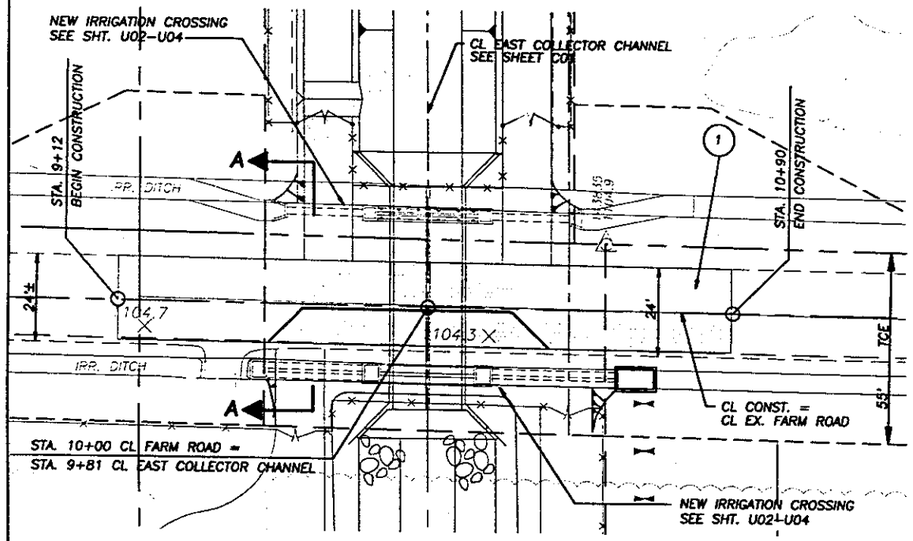
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN AND COLLECTOR CHANNELS
REEMS ROAD PAVING PLAN AND PROFILE
STATION 28+00 TO STATION 38+00

	BY	DATE
DESIGNED	A.J. SPRAR	8/94
DRAWN	W.J. PARROTT	8/94
CHECKED	C. GOPPERTON	8/94

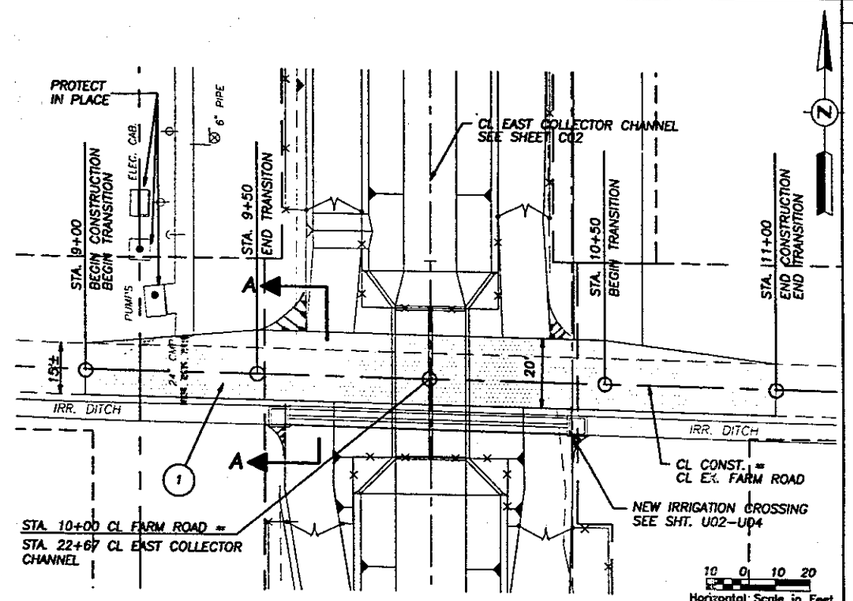
NBS LOWRY

ENGINEERS & PLANNERS

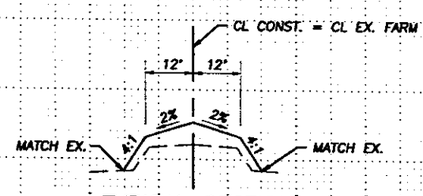
SHEET



SOUTH FARM ROAD

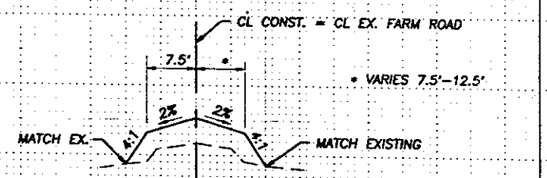


NORTH FARM ROAD



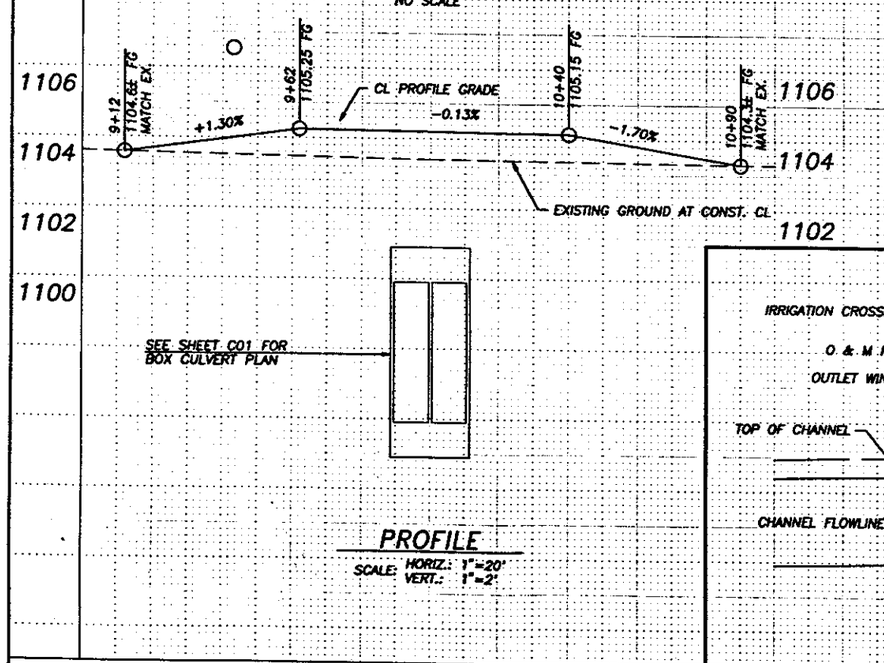
TYPICAL SECTION

NO SCALE



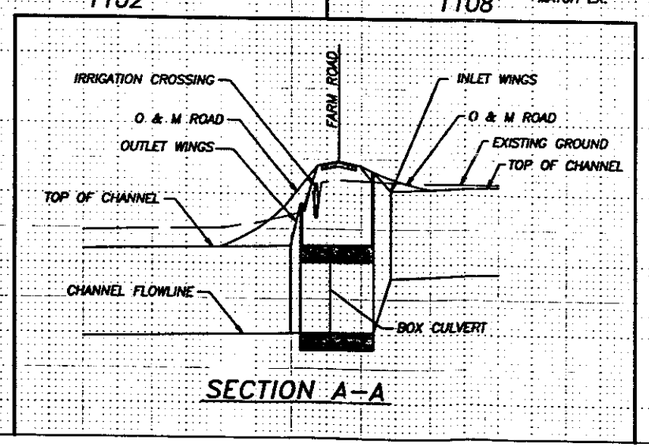
TYPICAL SECTION

NO SCALE

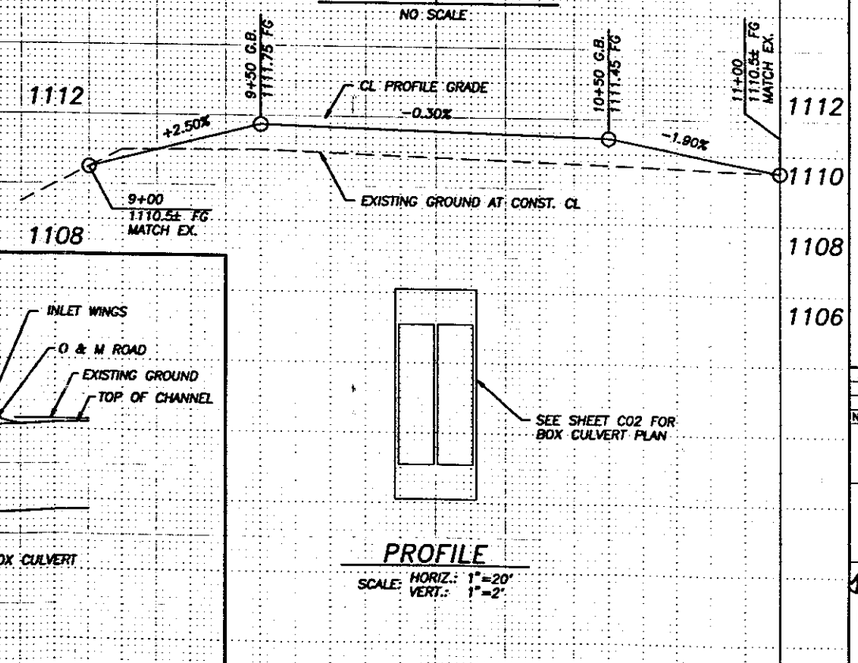


PROFILE

SCALE: HORIZ.: 1"=20'
VERT.: 1"=2'



SECTION A-A



PROFILE

SCALE: HORIZ.: 1"=20'
VERT.: 1"=2'

☐ REMOVE ☐

263-1100

○ CONSTRUCT ○

(1) SELECT BACKFILL COMPACTED TO 90% RC, SCARIFY AND RECOMPACT TOP 6" TO 95% RC, (TYP).

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

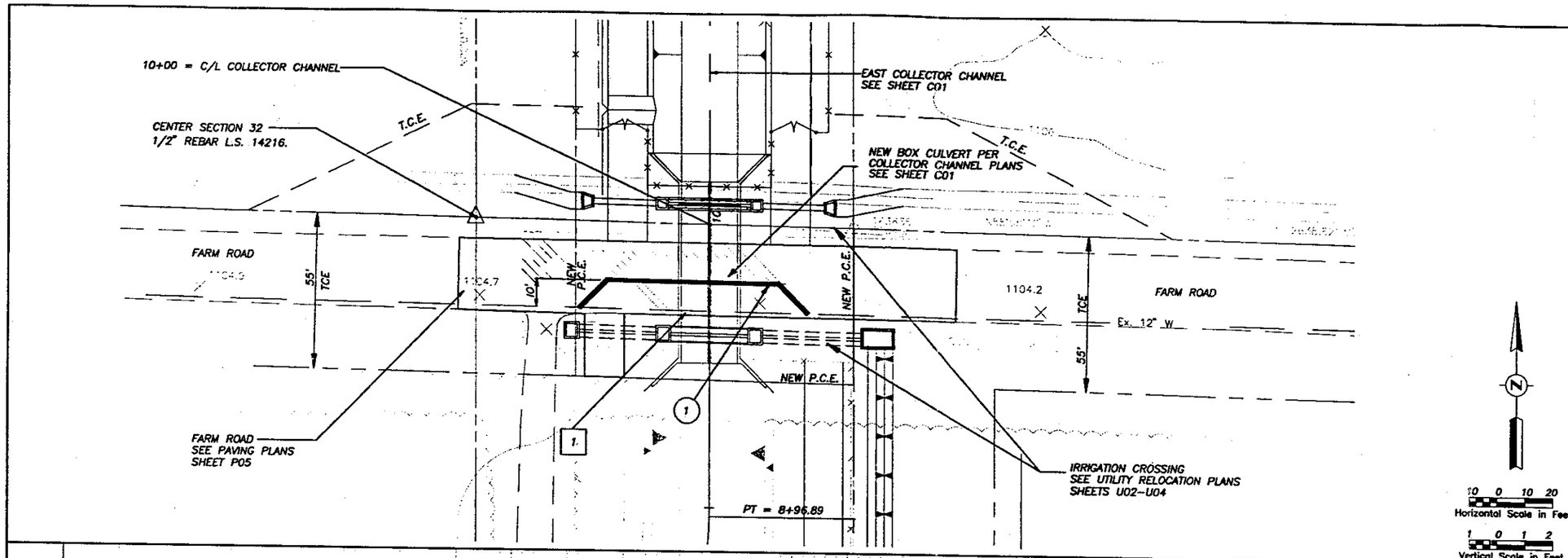
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN AND COLLECTOR CHANNELS
EAST COLLECTOR CHANNEL
FARM ROAD CROSSINGS

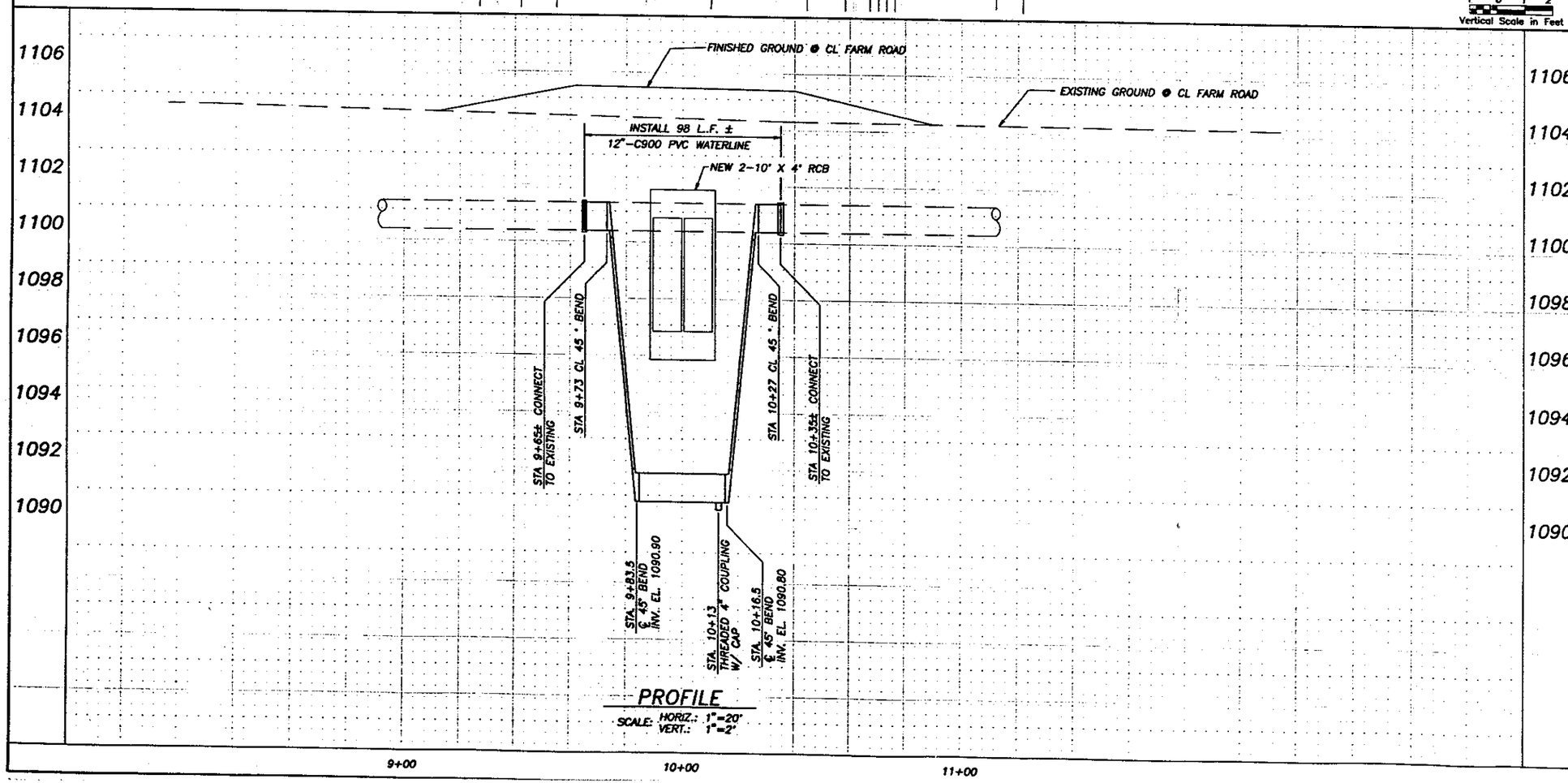
	BY	DATE
DESIGNED	S. YINGLING	5/1/94
DRAWN	S. YINGLING	5/1/94
CHECKED	C. GOPPERTON	8/94

NBS LOWRY

ENGINEERS & PLANNERS

SHEET





☐ REMOVE ☐

1 REMOVE EXISTING 12" WATERLINE

263-1100

○ CONSTRUCT ○

1 INSTALL 12" PVC PIPE, C-900, WITH 4 - 12" X 45° DUCTILE IRON BENDS, 1 - 4" THREADED COUPLING W/ CAP AND SLIP FIT CONNECTIONS TO EXISTING PIPE PROVIDE THRUST BLOCKS AND ANCHOR BLOCKS PER MAG STANDARD DWGS. 380 AND 381. SEE TRENCH DETAIL NO. 21, TYPE 1.

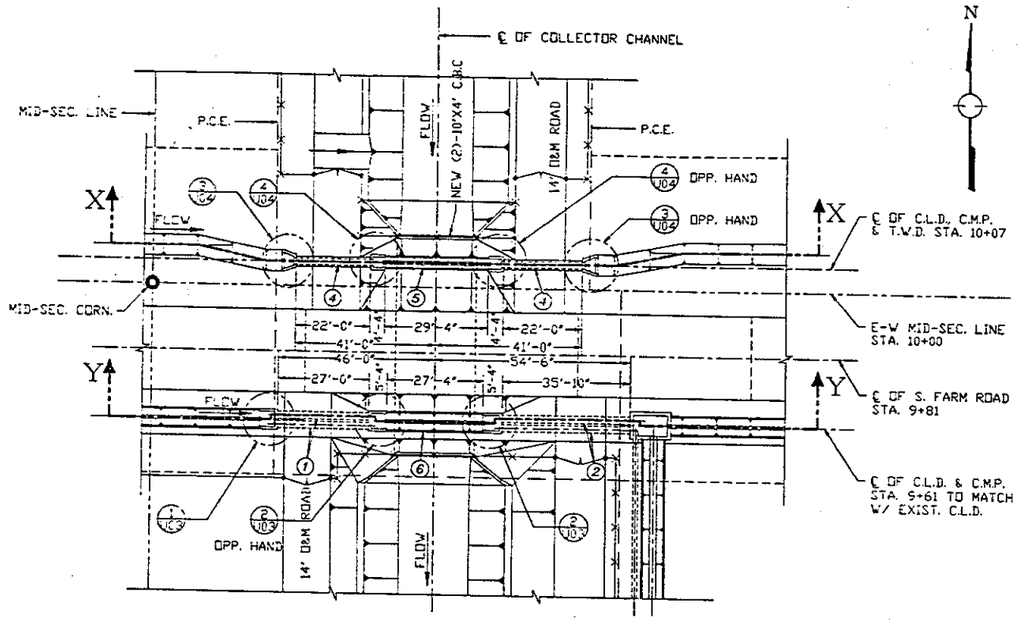
NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

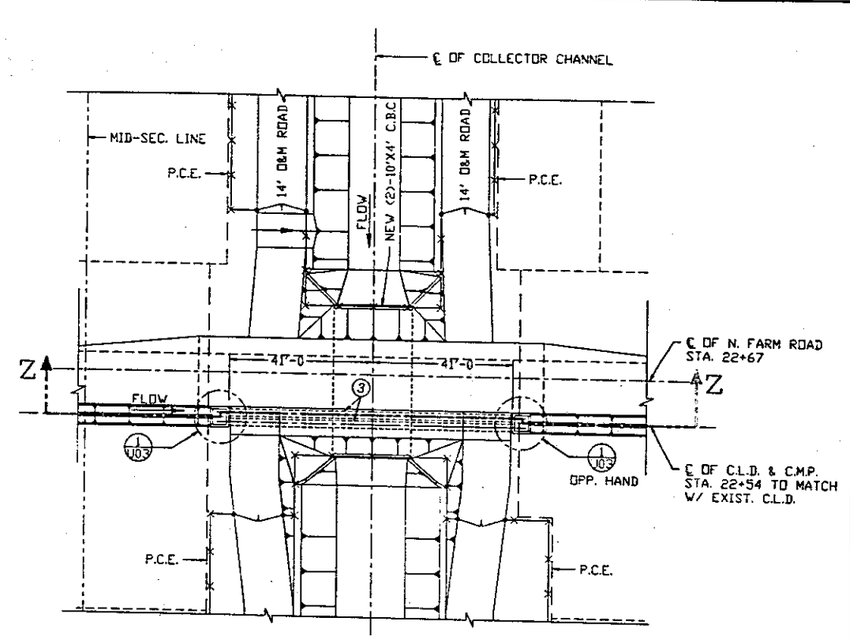
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN AND COLLECTOR CHANNELS
12" WATERLINE RELOCATION
SOUTH FARM ROAD

	BY	DATE
DESIGNED	S. YINGLING	5/1/94
DRAWN	S. YINGLING	5/1/94
CHECKED	C. GOPPERTON	8/18/94

NBS LOWRY



PLAN – SOUTH FARM ROAD



PLAN – NORTH FARM ROAD

SCALE : 1" = 20'

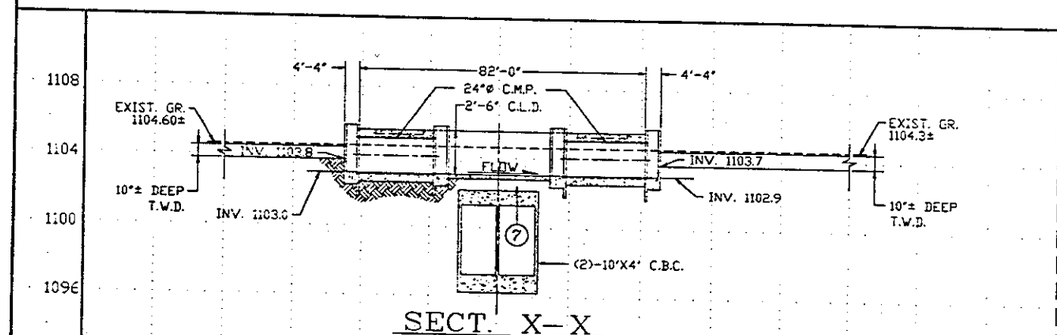
GENERAL NOTES

1. ALL CONCRETE SHALL BE CLASS "A", F'c = 3000 psi, UNLESS OTHERWISE NOTED. CLASS "B" CONCRETE MAY BE USED BETWEEN PIPES INSTEAD OF SELECT MATERIAL.
2. REINFORCING STEEL SHALL CONFORM TO ASTM SPEC. A615 AND SHALL BE GRADE 60, F'c = 24,000 psi, #5 @ 12" MAX. SPACING, 3 1/2" CLEAR, AND ALL LAPS TO BE 12" MIN., UNLESS OTHERWISE NOTED.
3. CORRUGATED METAL PIPES SHALL BE 2 2/3" X 1/2" X 0.079 THICK, PLAIN GALVANIZED, BITUMINOUS COATED AND AS PER MAG. SPEC.
4. ELEVATIONS SHOWN ARE ONLY APPROXIMATE, FIELD VERIFICATION IS REQUIRED AT THE TIME OF CONSTRUCTION TO MATCH EXISTING INVERT ELEVATIONS OF CONCRETE LINED DITCHES.

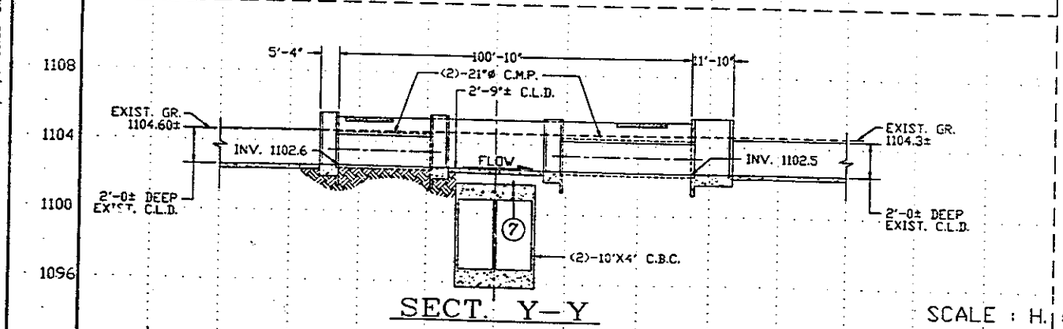
SECTION LOCATION	SOUTH FARM ROAD				NORTH FARM ROAD	
	X–X		Y–Y		Z–Z	
	WEST	EAST	WEST	EAST	WEST	EAST
FIN. GR.	*	*	*	*	*	*
EXIST. GR.	1104.6±	1104.3±	1104.6±	1104.3±	1111.0±	1110.5±
EXIST. T.W.D.	1103.8	1103.7	–	–	–	–
EXIST. C.L.D.	–	–	1102.6	1102.5	1108.7	1108.6
C.M.P. INV. EL.	1103.0	1102.9	1102.6	1102.5	1108.7	1108.6

* FOR ELEV. SEE SHT P05

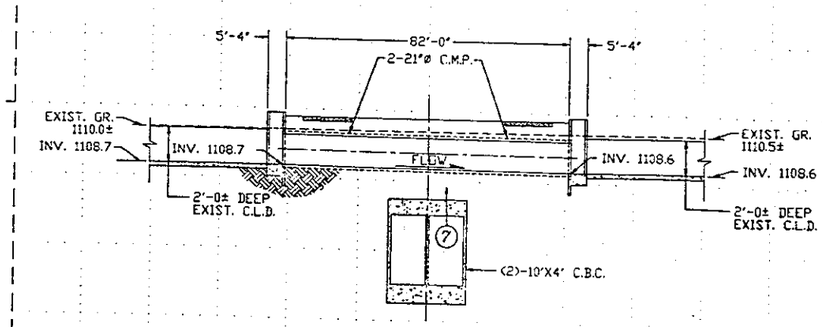
ITEM	DESCRIPTION	UNIT	QUANTITY
1	Excavation	C.Y.	143
2	Select Material	C.Y.	112
3	24" Dia. Corrug. Metal Pipe	L.F.	47
4	21" Dia. Corrug. Metal Pipe	L.F.	299
5	Conc. Lined Ditch 2'-6 Deep	L.F.	30
6	Conc. Lined Ditch 2'-9 Deep	L.F.	28
7	Class "A" Concrete	C.Y.	35
8	Reinf. Steel	Lb	4500



SECT. X–X



SECT. Y–Y



SECT. Z–Z

SCALE : H. : 1" = 20'
V. : 1" = 4'

9+00 10+00 (9+81) 11+00 9+00 10+00(22+67) 11+00

1116 1112 1108 1104 1100 1096

CONSTRUCT

1. Corrugated Metal Pipe (C.M.P.) (2) 21"ø x28'-4" long. See sheet-U03 for details.
2. Corrugated Metal Pipe (C.M.P.) (2) 21"ø x37'-6" long. See sheet-U03 for details.
3. Corrugated Metal Pipe (C.M.P.) (2) 21"ø x83'-4" long. See sheet-U03 for details.
4. Corrugated Metal Pipe (C.M.P.) (1) 24"ø X23'-4" long. See sheet-U04 for details.
5. Conc. Lined Ditch (C.L.D.) 29'-4" long. See sheet-U04 for details.
6. Conc. Lined Ditch (C.L.D.) 27'-4" long. See sheet-U03 for details.
7. Fill Material to be placed between Conc. Box Culvert (C.B.C.) and C.L.D. shall be compacted to a uniform density of not less than 95 percent.

NO.	REVISION	BY	DATE
3			
2			
1			

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVMENTS
COLLECTOR CHANNEL
IRRIGATION CROSSINGS

	BY	DATE
DESIGNED	K. V. H.	9/15/94
DRAWN	S. W.	9/22/94
CHECKED	C. G. W.	9/15/94

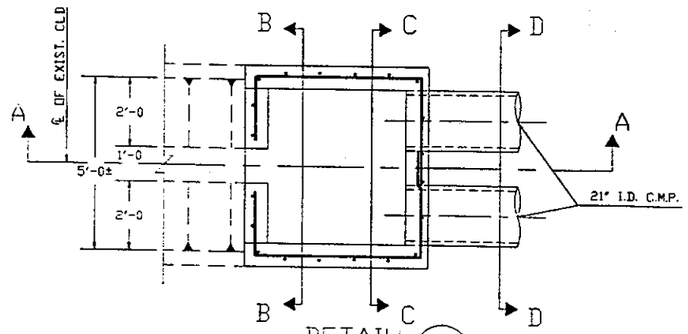
FCDMC ENGINEERING DIVISION

PLAN & PROFILE
NORTH & SOUTH FARM ROAD CROSSING

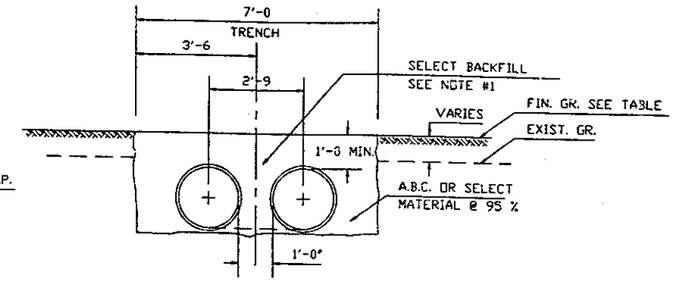
SHEET NO. U02/5

TRACE NO.

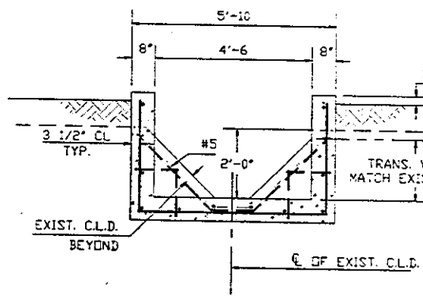
G:\DRAFTING\KUMAR\DYSART\PLANPROF.DWG 10/06/94 09:38 SW



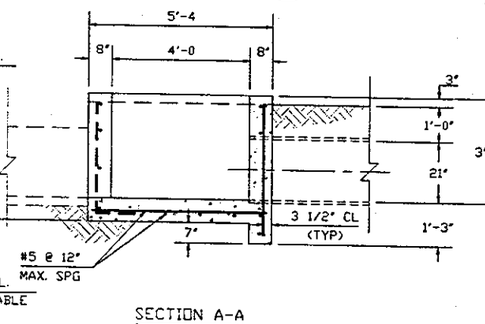
DETAIL 1 / U02
SCALE 1/2"=1'-0



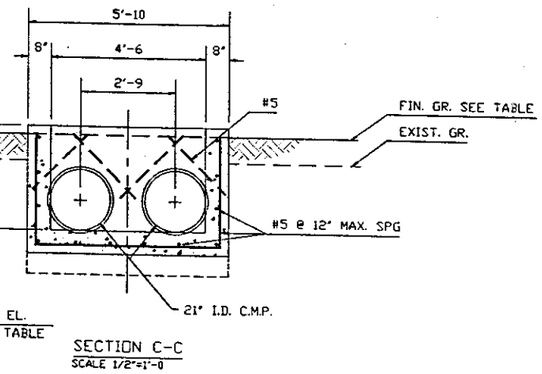
SECTION D-D
SCALE 1/2"=1'-0



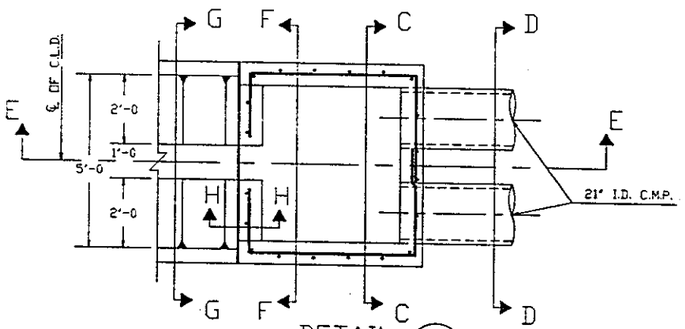
SECTION B-B
SCALE 1/2"=1'-0



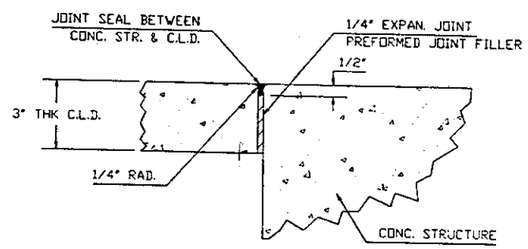
SECTION A-A
SCALE 1/2"=1'-0



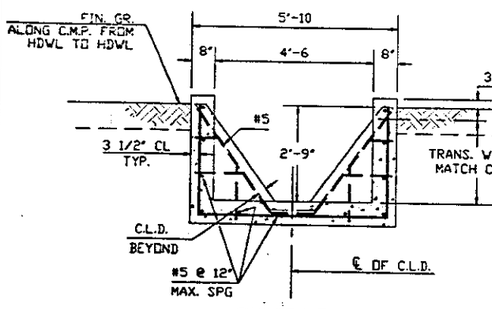
SECTION C-C
SCALE 1/2"=1'-0



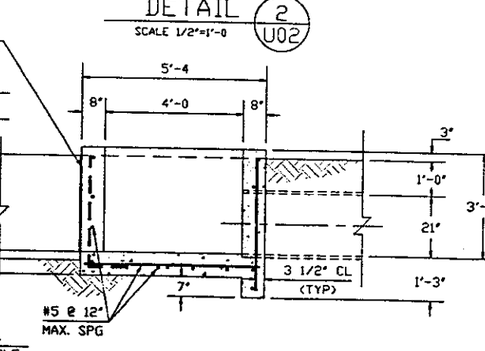
DETAIL 2 / U02
SCALE 1/2"=1'-0



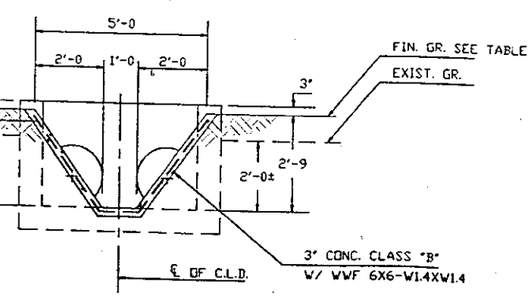
SECTION H-H
N.T.S.



SECTION F-F
SCALE 1/2"=1'-0



SECTION E-E
SCALE 1/2"=1'-0



SECTION G-G
SCALE 1/2"=1'-0

GENERAL NOTES

1. ALL CONCRETE SHALL BE CLASS "A", F'c = 3000 psi, UNLESS OTHERWISE NOTED. CLASS "B" CONCRETE MAY BE USED BETWEEN PIPES INSTEAD OF SELECT MATERIAL.
2. REINFORCING STEEL SHALL CONFORM TO ASTM SPEC. A615 AND SHALL BE GRADE 60, F'c = 24,000 psi, #5 @ 12" MAX. SPACING, 3 1/2" CLEAR, AND ALL LAPS TO BE 12" MIN. UNLESS OTHERWISE NOTED.
3. CORRUGATED METAL PIPES SHALL BE 2 2/3" X 1/2" X 0.079 THICK, PLAIN GALVANIZED, BITUMINOUS COATED AND AS PER MAG. SPEC.
4. ELEVATIONS SHOWN ARE ONLY APPROXIMATE, FIELD VERIFICATION IS REQUIRED AT THE TIME OF CONSTRUCTION TO MATCH EXISTING INVERT ELEVATIONS OF CONCRETE LINED DITCHES.

SECTION LOCATION	SOUTH FARM ROAD				NORTH FARM ROAD	
	X-X		Y-Y		Z-Z	
	WEST	EAST	WEST	EAST	WEST	EAST
FIN. GR.	*	*	*	*	*	*
EXIST. GR.	1104.6±	1104.3±	1104.6±	1104.3±	1111.0±	1110.5±
EXIST. T.W.D.	1103.8	1103.7	-	-	-	-
EXIST. C.L.D.	-	-	1102.6	1102.5	1108.7	1108.6
C.M.P. INV. EL.	1103.0	1102.9	1102.6	1102.5	1108.7	1108.6

* FOR ELEV. SEE SHT P05

NO.	REVISION	BY	DATE
3			
2			
1			

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVMENTS
COLLECTOR CHANNEL
IRRIGATION CROSSINGS

	BY	DATE
DESIGNED	K. V. H.	9/15/94
DRAWN	L. D. W.	9/29/94
CHECKED	C. G. W.	9/15/94

FCDMC ENGINEERING DIVISION

SECTIONS AND DETAILS

SHEET NO. U03/5

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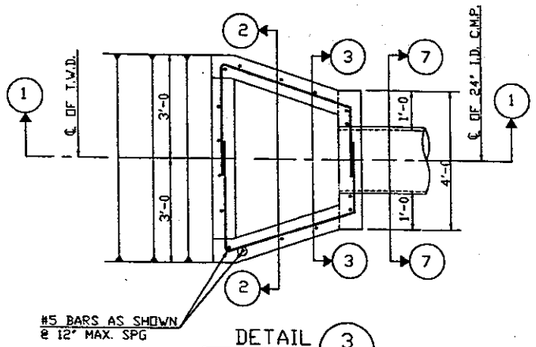
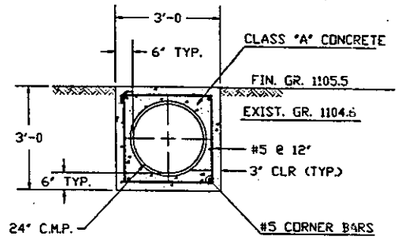
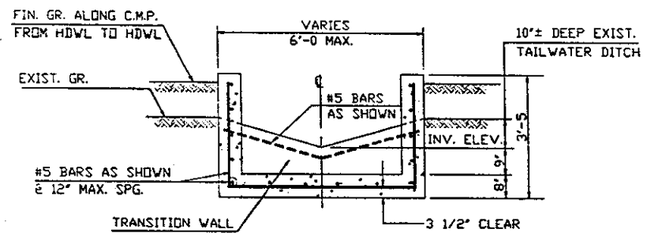


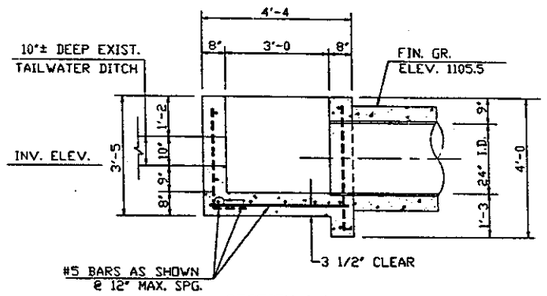
DETAIL 3 / U02
SCALE 1/2" = 1'-0



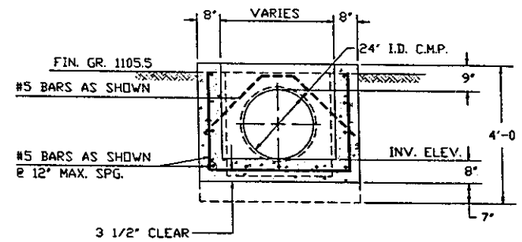
SECTION 7-7
SCALE 1/2" = 1'-0



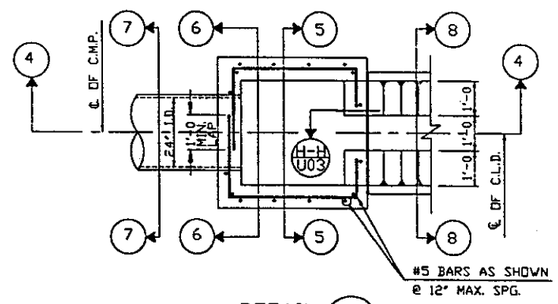
SECTION 2-2
SCALE 1/2" = 1'-0



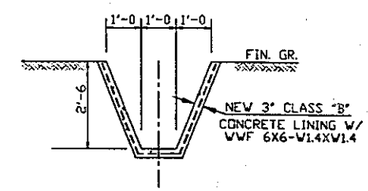
SECTION 1-1
SCALE 1/2" = 1'-0



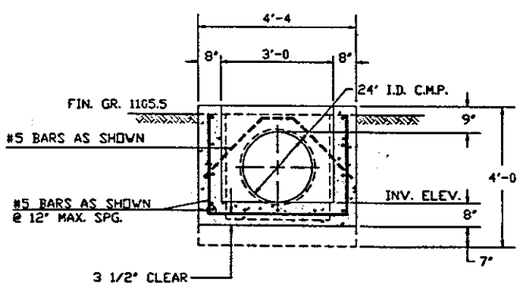
SECTION 3-3
SCALE 1/2" = 1'-0



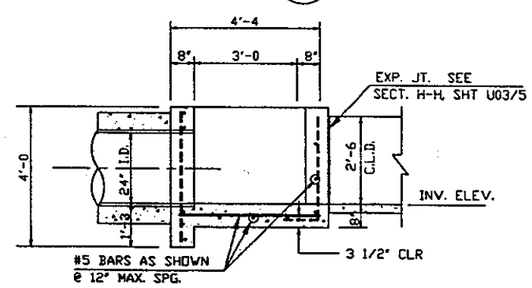
DETAIL 4 / U02
SCALE 1/2" = 1'-0



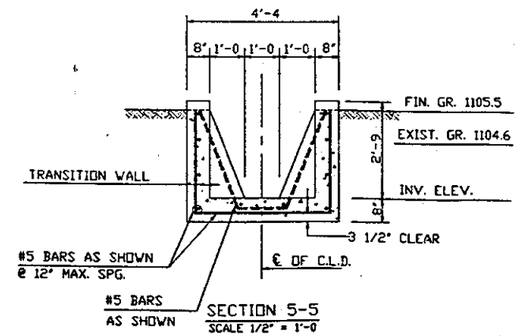
SECTION 8-8
SCALE 1/2" = 1'-0



SECTION 6-6
SCALE 1/2" = 1'-0



SECTION 4-4
SCALE 1/2" = 1'-0



SECTION 5-5
SCALE 1/2" = 1'-0

GENERAL NOTES

1. ALL CONCRETE SHALL BE CLASS "A", F'c = 3000 psi UNLESS OTHERWISE NOTED.
   CLASS "B" CONCRETE MAY BE USED BETWEEN PIPES INSTEAD OF SELECT MATERIAL.
2. REINFORCING STEEL SHALL CONFORM TO ASTM SPEC. A615 AND SHALL BE GRADE 60, F'c = 24,000 psi, #5 @ 12" MAX. SPACING, 3 1/2" CLEAR, AND ALL LAPS TO BE 12" MIN, UNLESS OTHERWISE NOTED.
3. CORRUGATED METAL PIPES SHALL BE 2 2/3" X 1/2" X 0.079 THICK, PLAIN GALVANIZED, BITUMINOUS COATED AND AS PER MAG. SPEC.
4. ELEVATIONS SHOWN ARE ONLY APPROXIMATE, FIELD VERIFICATION IS REQUIRED AT THE TIME OF CONSTRUCTION TO MATCH EXISTING INVERT ELEVATIONS OF CONCRETE LINED DITCHES.

SECTION LOCATION	SOUTH FARM ROAD				NORTH FARM ROAD	
	X-X		Y-Y		Z-Z	
	WEST	EAST	WEST	EAST	WEST	EAST
FIN. GR.	*	*	*	*	*	*
EXIST. GR.	1104.6±	1104.3±	1104.6±	1104.3±	1111.0±	1110.5±
EXIST. T.W.D.	1103.8	1103.7	-	-	-	-
EXIST. C.L.D.	-	-	1102.6	1102.5	1108.7	1108.6
C.M.P. INV. EL.	1103.0	1102.9	1102.6	1102.5	1108.7	1108.6

* FOR ELEV. SEE SHT P05

NO.	REVISION	BY	DATE
3			
2			
1			

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVMENTS
COLLECTOR CHANNEL
IRRIGATION CROSSINGS

	BY	DATE
DESIGNED	K. V. H.	6/20/94
DRAWN	L. D. W.	9/29/94
CHECKED	C. G. W.	6/20/94

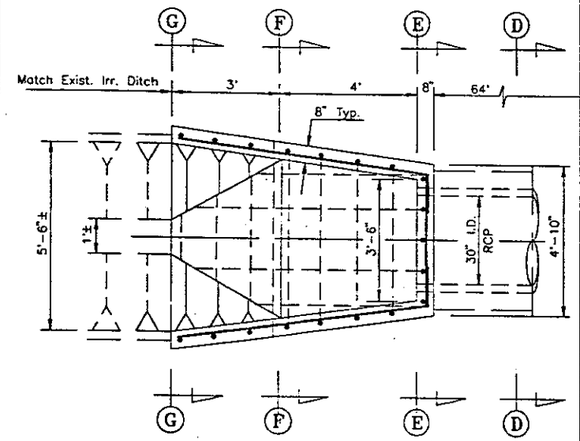
FCDMC ENGINEERING DIVISION

SECTIONS AND DETAILS
TAILWATER CROSSING

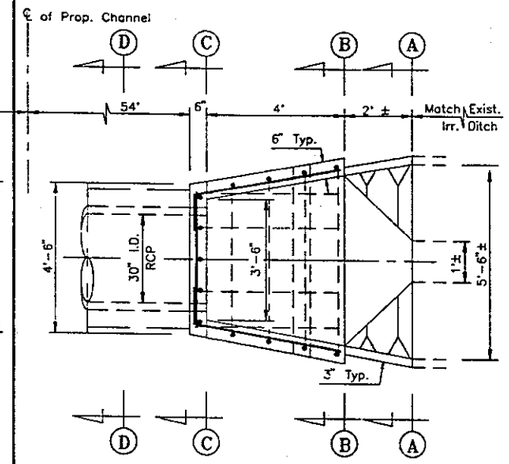
SHEET NO. U04/5

TRACS NO.

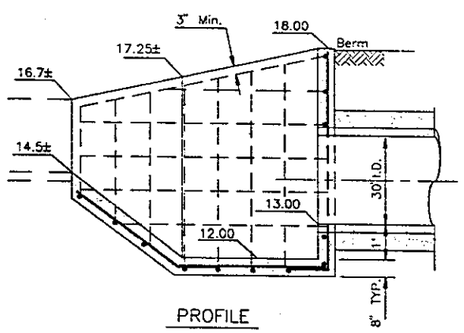
C:\DRAFTING\KUNAR\DYSART\DET3-4A.DWG 10/06/94 09:51 SW



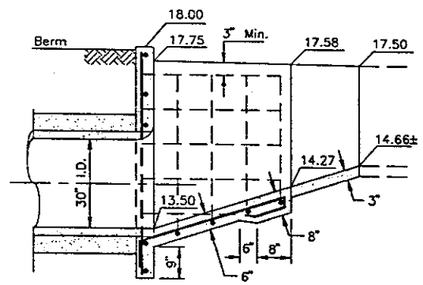
PLAN–OUTLET



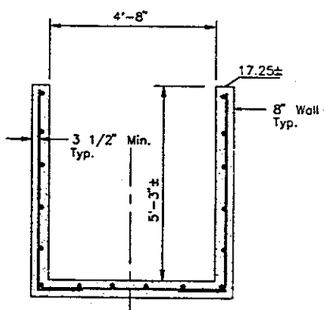
PLAN–INLET



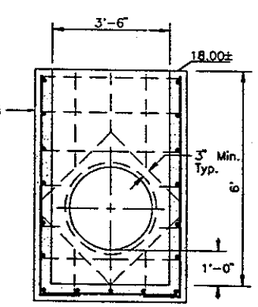
PROFILE



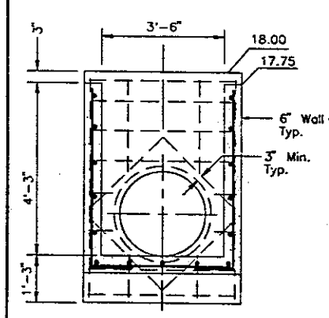
PROFILE



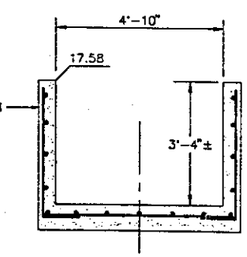
SECTION F–F



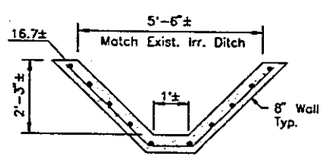
SECTION E–E



SECTION C–C



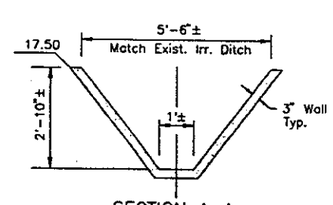
SECTION B–B



SECTION G–G

OUTLET DETAIL

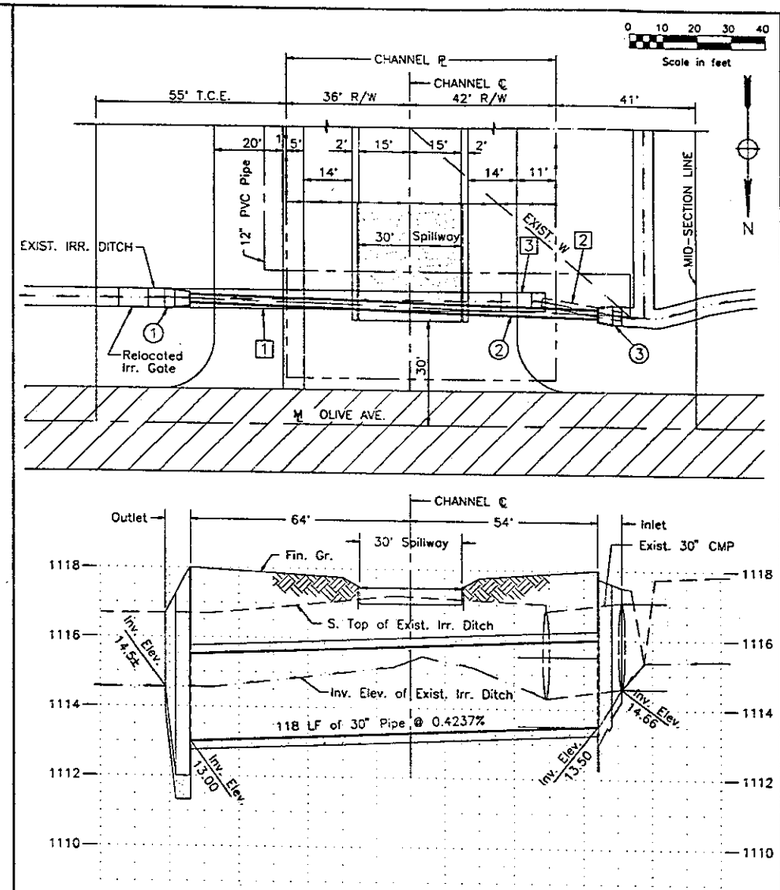
No Scale



SECTION A–A

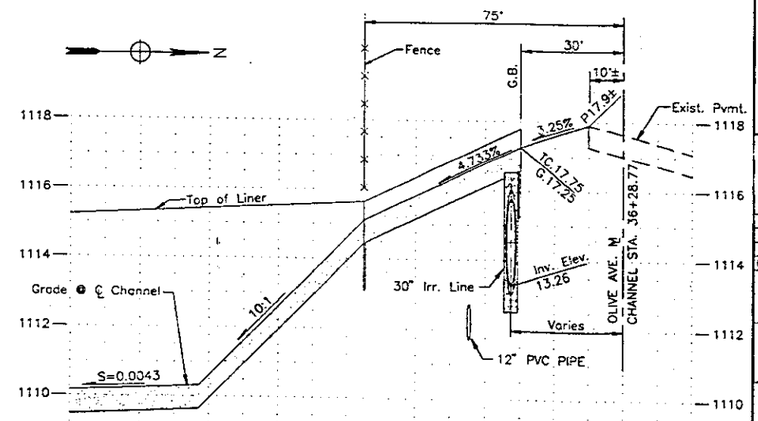
INLET DETAIL

No Scale



SIPHON PLAN & PROFILE DETAIL

1"=2' Vert.
1"=20' Hrz.



OLIVE AVE. X–SECT @ CHANNEL ℄

1"=2' Vert.
1"=20' Hrz.

CONSTRUCTION NOTES

1. Outlet, See Det.
2. 30" Conc. Pipe, See Plan and Profile Det.
3. Inlet, See Det.

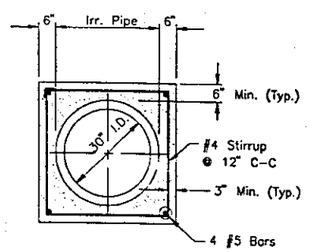
[1] Remove Exist. Irr. Ditch.
[2] Remove Exist. 30" CMP
[3] Relocate Exist. Irr. Gate to 75' East of Channel ℄

QUANTITY TABLE

Descript.	Unit	Quant.
Concrete Class "A"	CY	43
Steel	lb	2000
30" RCP–Class III	LF	120
Irr. Gate Relocation	Ea	1
Exist. Irr. Ditch Removal	LF	110
Exist. 30" CMP Removal	LF	23

NOTES

1. All Concrete Shall be Class A per MAG Sect. 725
2. All Reinforcing Bars Shall be No. 5, 12" C–C (Max.), 2" Min. Clear Cover, and All Laps to be 12" Min., Unless Otherwise Noted.



SECTION D–D

ENCASED 30" IRR. PIPE

No Scale

NO	REVISION	BY	DATE
3			
2			
1			

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
EAST COLLECTOR CHANNEL DETAILS
AT OLIVE AVENUE

	BY	DATE
DESIGNED	BKH	8/11/94
DRAWN	SRN & SW	9/15/94
CHECKED	KA	8/11/94

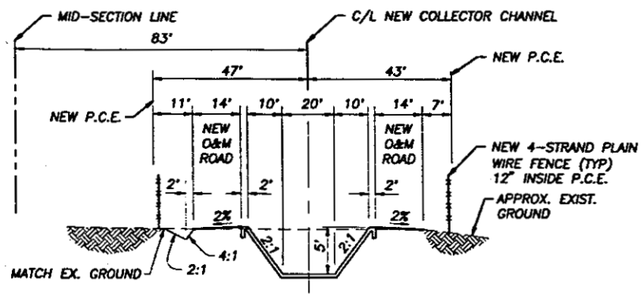
Registered Professional Engineer (Civil) — Certificate No. 24083 — GEAYE KHATIBLOU — Arizona U.S.A. — 8/11/94

FCDMC ENGINEERING DIVISION

NBS/LOWRY PROJECT NO. P81–194–019

SHEET U05/5

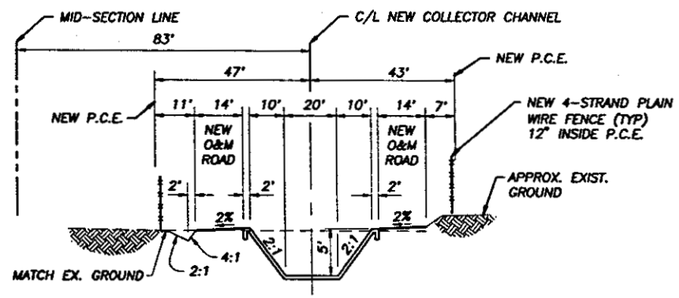
C:\DRAWINGS\DMAR\DYSART\DESIGN.DWG 10/03/94 16:08 SW PLOT: 1=100



TYPICAL SECTION NO. 1

STA. 10+15 TO STA. 15+50 (EAST COLLECTOR CHANNEL)

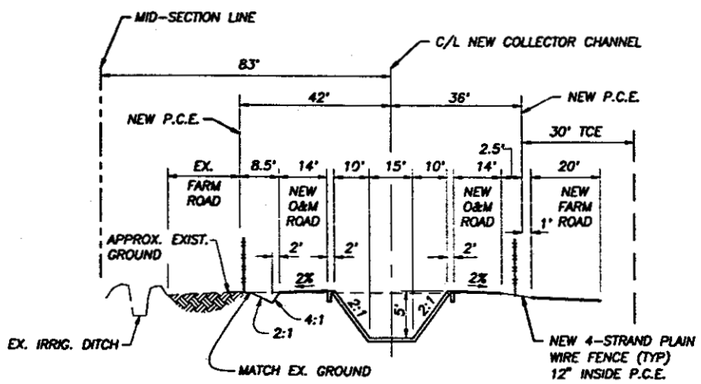
NO SCALE



TYPICAL SECTION NO. 2

STA. 15+50 TO STA. 22+43 (EAST COLLECTOR CHANNEL)

NO SCALE



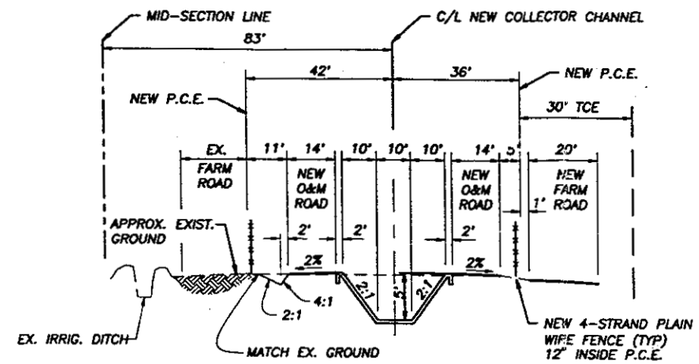
TYPICAL SECTION NO. 3

STA. 22+87 TO STA. 30+50 (EAST COLLECTOR CHANNEL)

NO SCALE

NOTE:

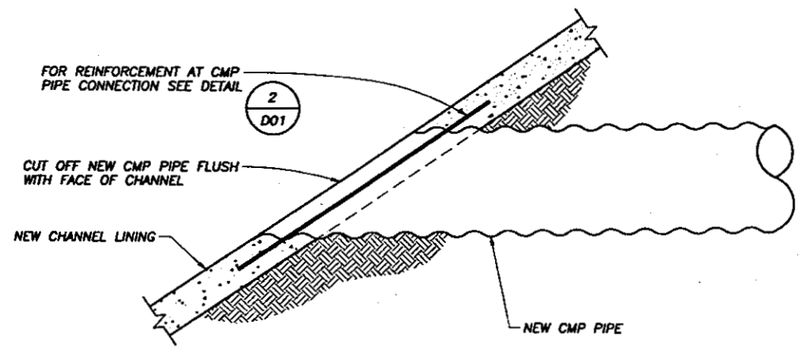
CROSS SECTIONS FACING UPSTREAM



TYPICAL SECTION NO. 4

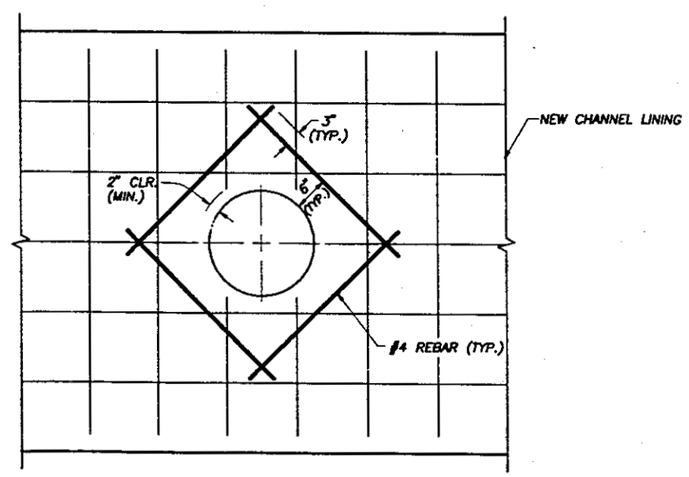
STA. 31+00 TO STA. 35+06.29 (EAST COLLECTOR CHANNEL)

NO SCALE



CMP PIPE CONNECTION TO CHANNEL (1)

NOT TO SCALE



REINFORCING AT CMP PIPE CONNECTION (2)

NOT TO SCALE

NOTE:

SEE DETAIL 19, SHEET D08 FOR LINING DETAILS.

NO.	REVISION		DATE
3			
2			
1			

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

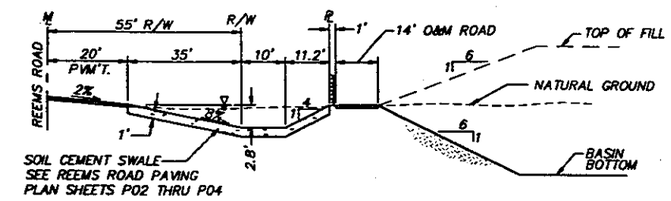
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN AND COLLECTOR CHANNELS
TYPICAL SECTIONS NO. 1 THROUGH NO. 4
DETAILS 1 THROUGH 2

	BY	DATE
DESIGNED	S. YINGLING	5/1/94
DRAWN	C. SWEATLAND	8/18/94
CHECKED	C. GOPPERTON	8/18/94

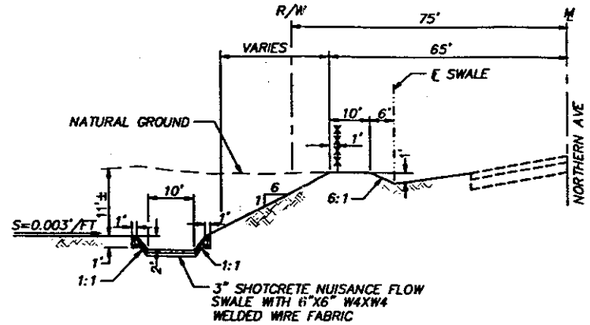
NBS LOWRY

263-1100

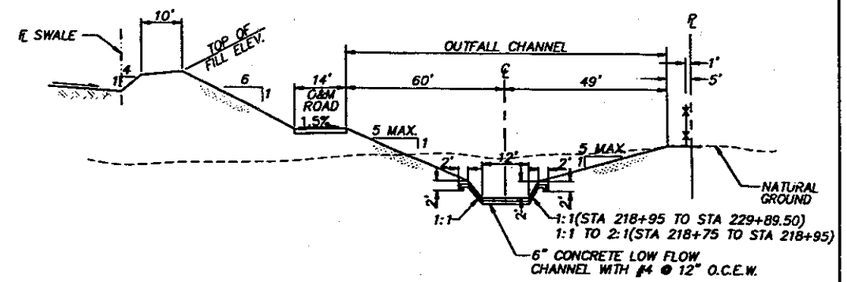
SHEET



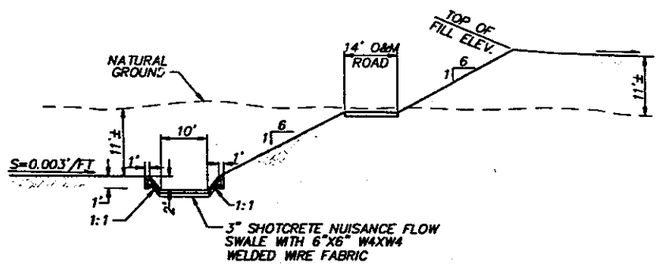
SECTION A – A
REEMS ROAD
(N.T.S.)



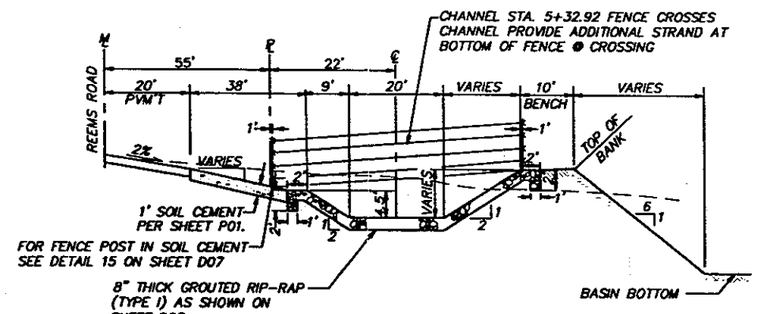
SECTION E – E
NORTHERN AVENUE
(N.T.S.)



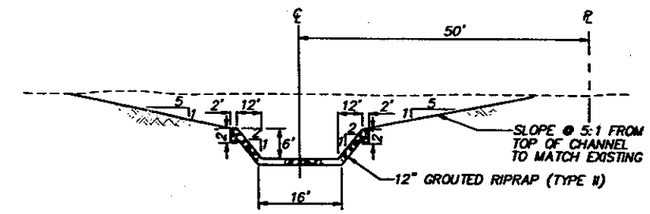
SECTION I – I
OUTFALL CHANNEL
(N.T.S.)



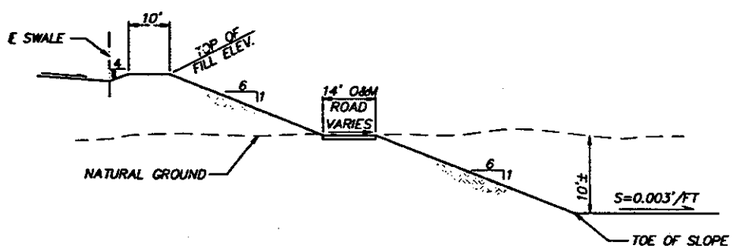
SECTION B – B
NUISANCE FLOW SWALE
(N.T.S.)



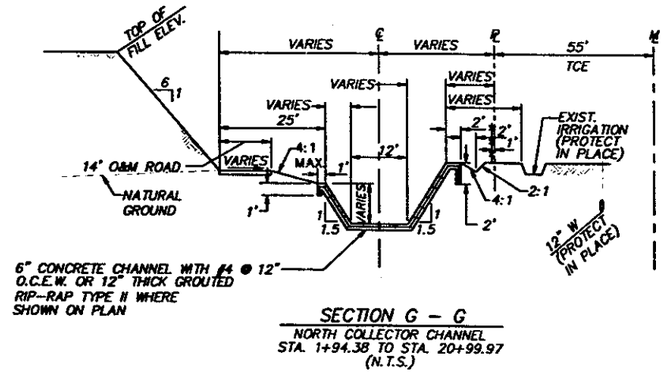
SECTION F – F
REEMS ROAD
(N.T.S.)



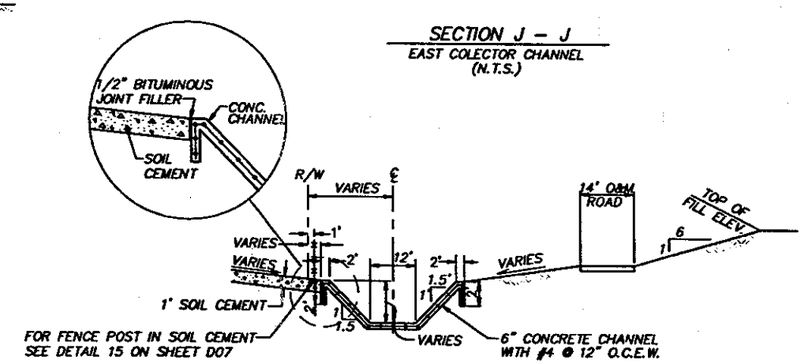
SECTION J – J
EAST COLECTOR CHANNEL
(N.T.S.)



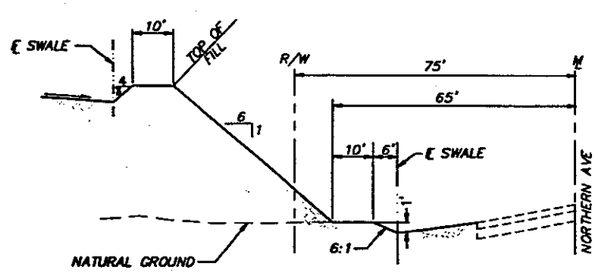
SECTION C – C
NORTH FILL AREA
(N.T.S.)



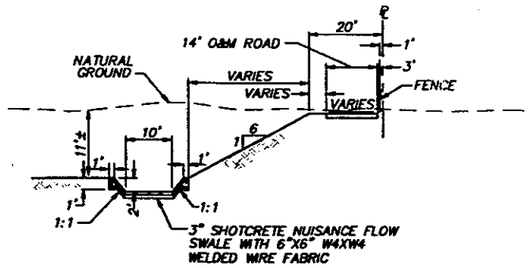
SECTION G – G
NORTH COLLECTOR CHANNEL
STA. 1+94.38 TO STA. 20+99.97
(N.T.S.)



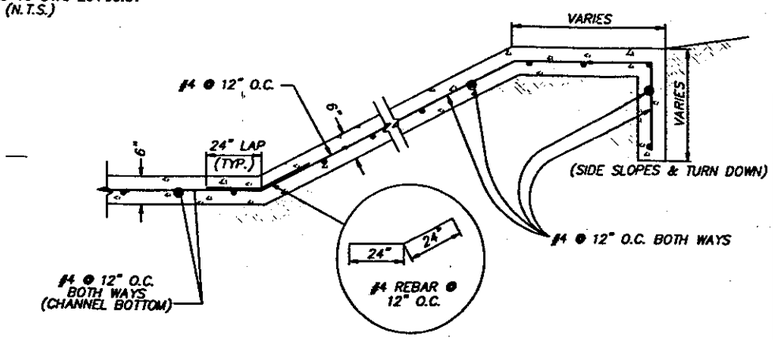
SECTION K – K
REEMS ROAD
STA. 21+31.10 TO STA. 23+76.10
(N.T.S.)



SECTION D – D
NORTHERN AVENUE
(N.T.S.)



SECTION H – H
NUISANCE FLOW SWALE
(N.T.S.)



CHANNEL LINING W/ REINFORCEMENT
(N.T.S.)

263-1100

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

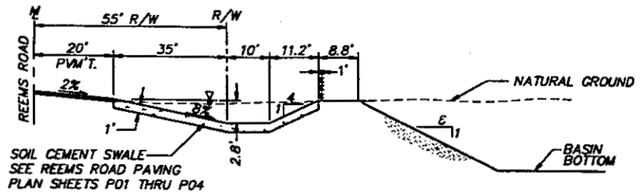
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
TYPICAL SECTIONS A THROUGH K

	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

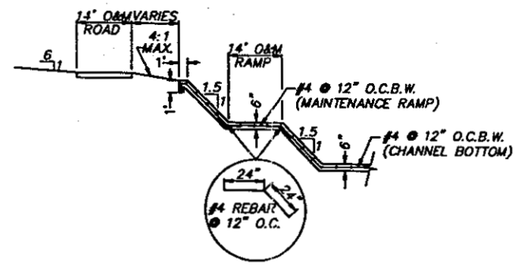
WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

WOOD/PATEL PROJECT NO. 87070.00

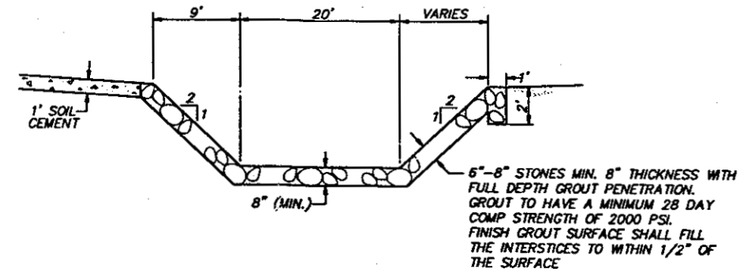
SHEET



SECTION L – L
REEMS ROAD
NTS

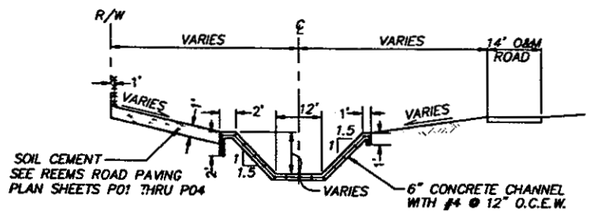


SECTION P – P
O&M ACCESS RAMP AT
NORTH COLLECTOR CHANNEL
NTS

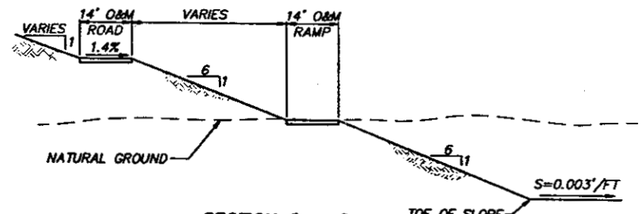


(DETAIL SHOWN IS FOR REEMS ROAD COLLECTOR CHANNEL)

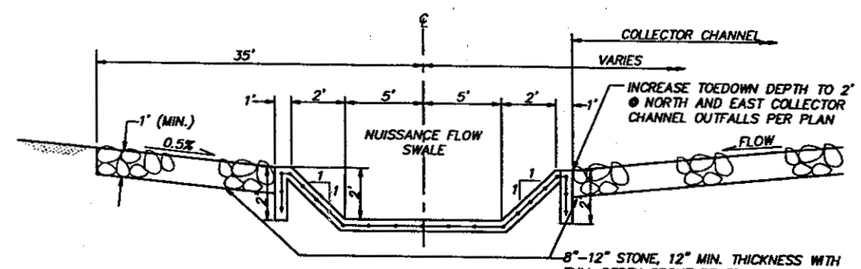
GROUTED RIPRAP (TYPE I)
TYPICAL DETAIL
NTS



SECTION M – M
NORTH COLLECTOR CHANNEL
STA. 20+99.97 TO STA. 21+31.10
NTS

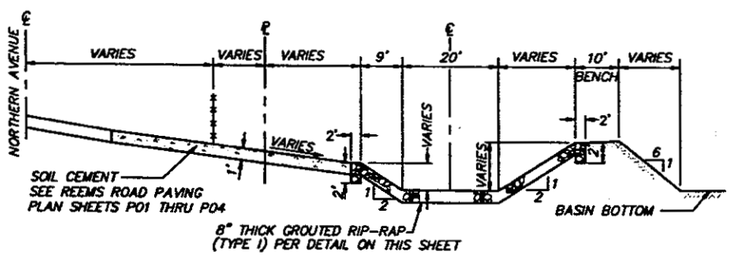


SECTION Q – Q
O&M ACCESS RAMP INTO BASIN BOTTOM
NTS

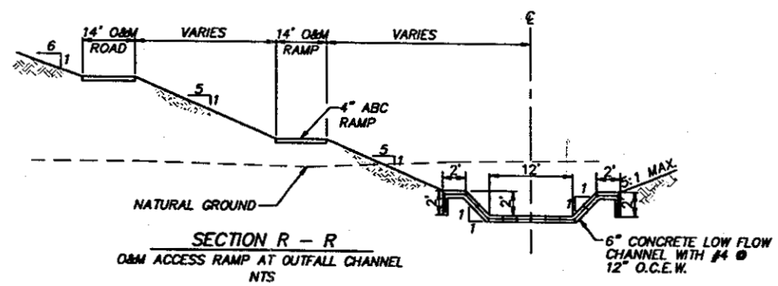


(DETAIL IS FOR NORTH AND EAST
COLLECTOR CHANNEL INFLOWS INTO BASIN)

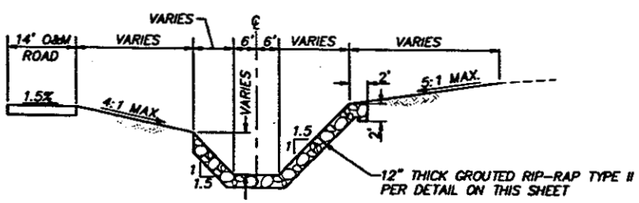
GROUTED RIPRAP (TYPE II)
TYPICAL DETAIL
NTS



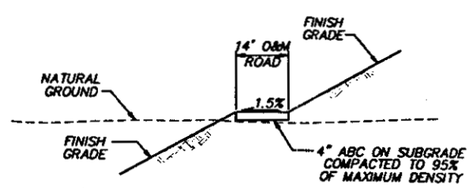
SECTION N – N
REEMS ROAD COLLECTOR CHANNEL
STA. 0+70.19 TO STA. 1+40.00
NTS



SECTION R – R
O&M ACCESS RAMP AT OUTFALL CHANNEL
NTS

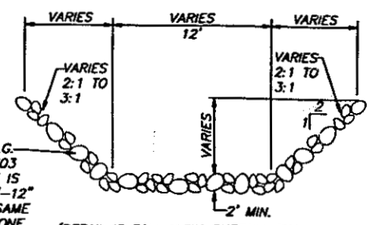


SECTION O – O
NORTH COLLECTOR CHANNEL
STA. 0+33.15 TO STA. 1+94.38
NTS



OPERATION & MAINTENANCE ROAD
TYPICAL DETAIL
NTS

RIP-RAP PER M.A.G. SPECS. SECTION 703 (WASTE CONCRETE IS NOT ALLOWED). 8"–12" ANGULAR STONE SAME GRADATION AS STONE USED FOR TYPE II RIP-RAP



(DETAIL IS FOR BASIN OUTFALL CHANNEL
AT NORTHERN AVENUE)

PLAIN RIP-RAP
TYPICAL DETAIL
NTS

263-1100

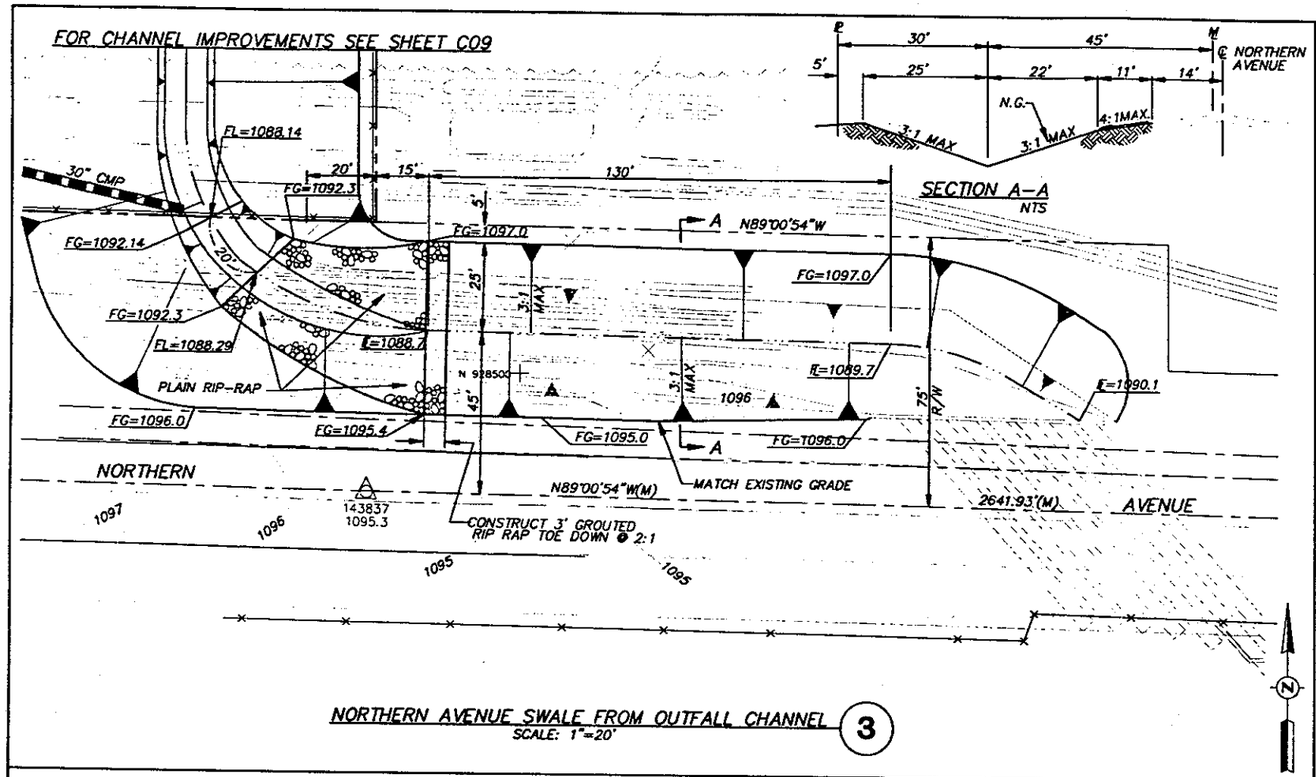
NO.	REVISION	DATE
3		
2		
1		

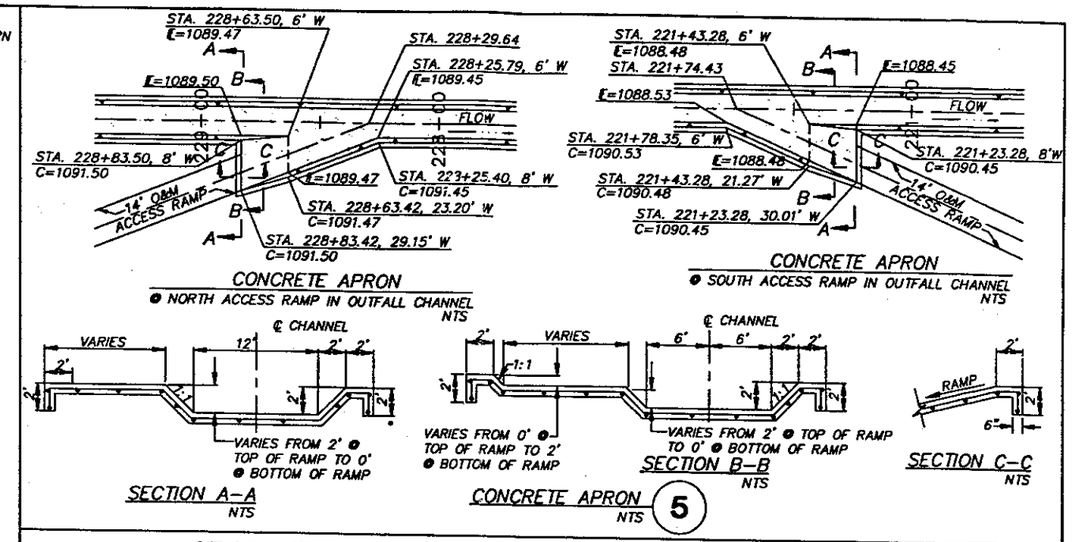
FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

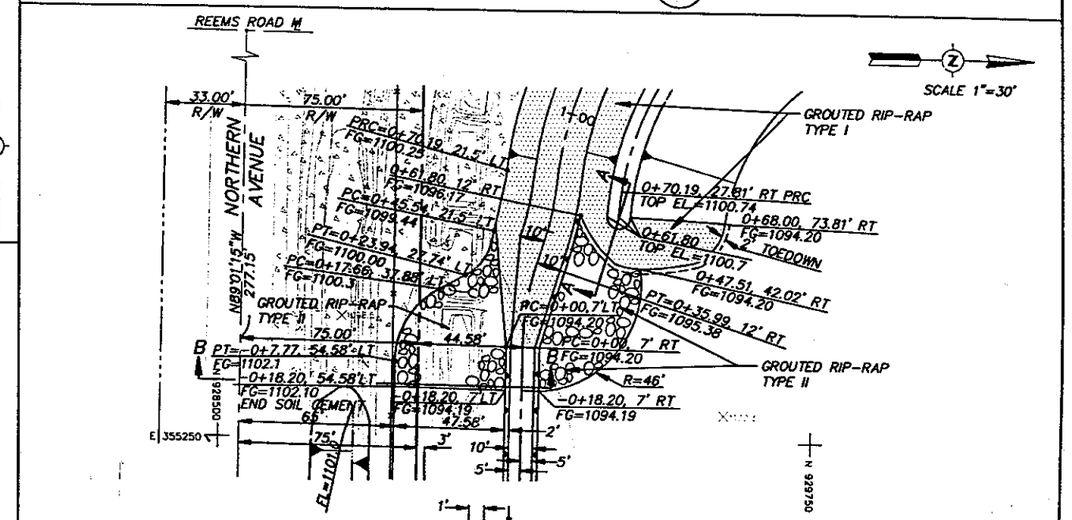
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
TYP. SECTIONS L - R/MISC. BASIN DETAILS

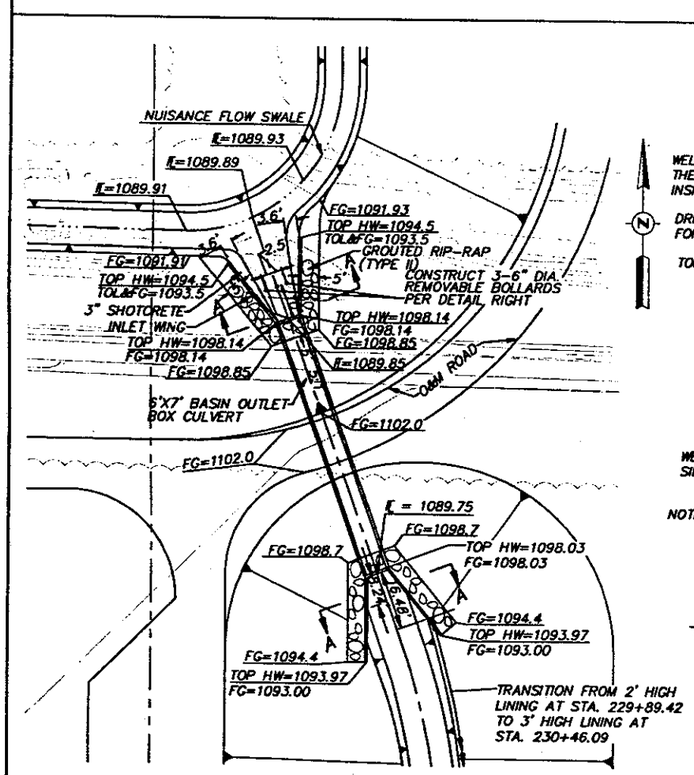
	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

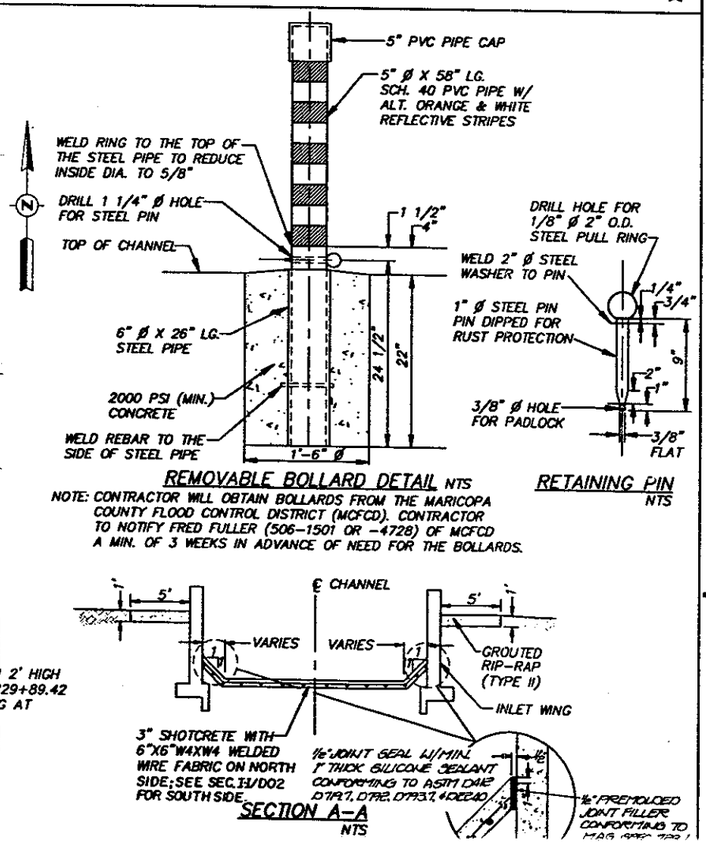
WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

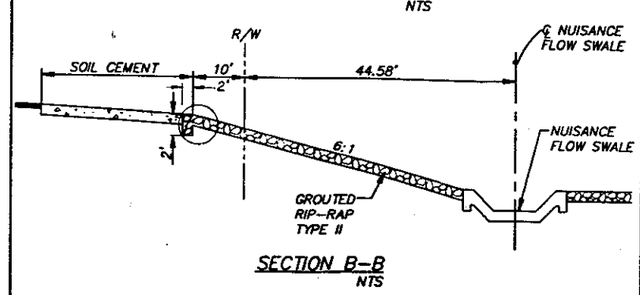












263-1100

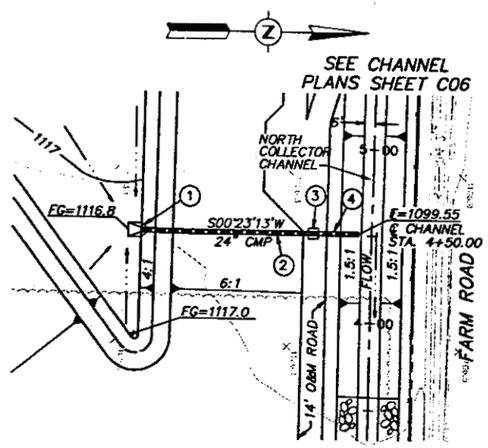
NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

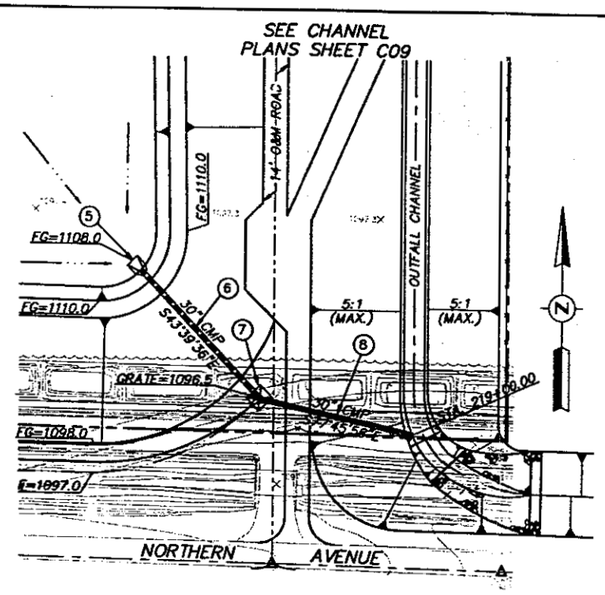
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
DETAILS 3 THROUGH 5a

	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

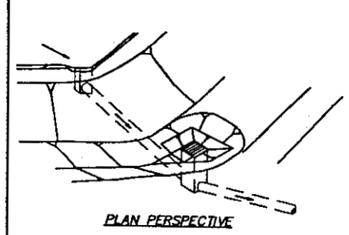
WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344



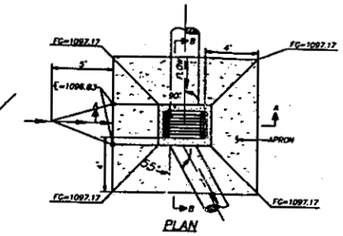
NORTH FILL AREA STORM DRAIN (6) SCALE: 1"=40' HORIZ 1"=4' VERT



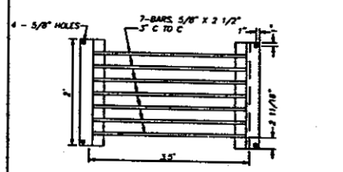
SOUTH FILL AREA STORM DRAIN (7) SCALE: 1"=40' HORIZ 1"=4' VERT



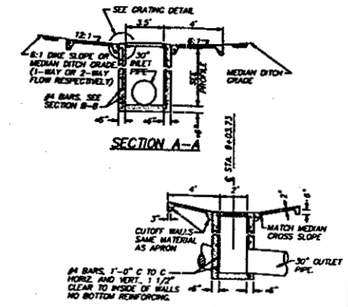
PLAN PERSPECTIVE

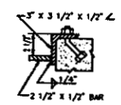


PLAN



GRATING DETAIL





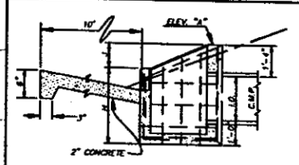
DETAIL NO. 1

GENERAL NOTES

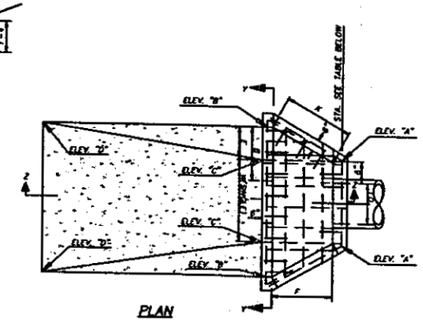
ALL CONCRETE SHALL BE CLASS "B".
GRATING SHALL BE FABRICATED OF STRUCTURAL STEEL.
STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH ASTM A 36.
WELDING SHALL BE IN ACCORDANCE WITH STANDARD WELDING SPECIFICATIONS.
ALL STEEL SHALL BE GALVANIZED.

CATCH BASIN

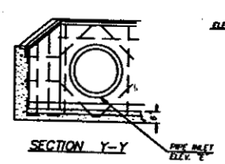
A.D.O.T. STD. DET. C-15.80, MODIFIED
NTS



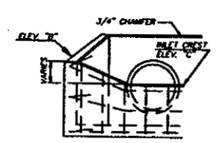
SECTION Z-Z



PLAN



SECTION Y-Y



ELEVATION

NOTES:

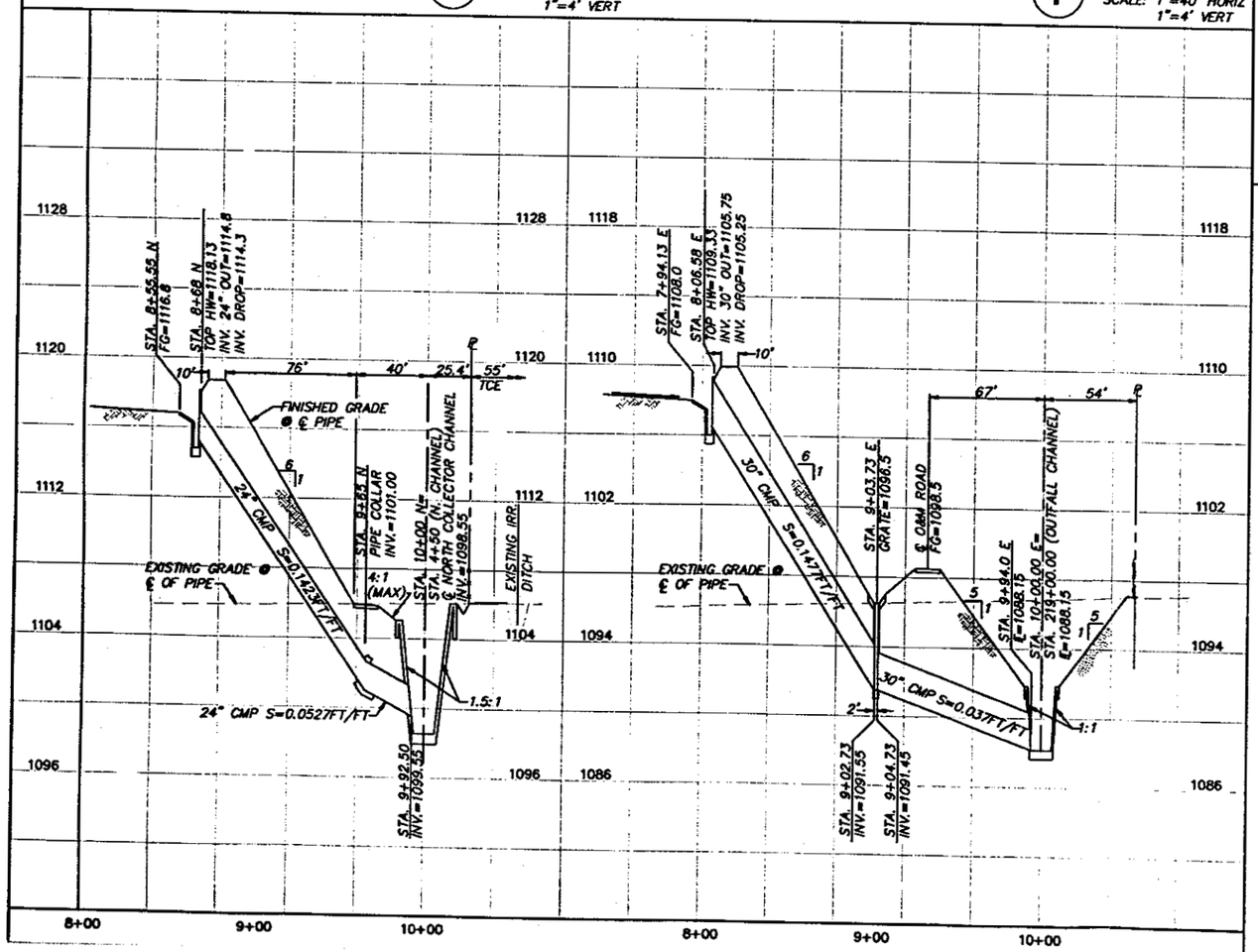
1. HIGH POINT OF HEADWALL SHALL NOT PROJECT MORE THAN 3" ABOVE SLOPE.
2. ALL CONCRETE SHALL BE CLASS B PER M.A.G. SECT. 725.
3. ALL REINFORCING BARS SHALL BE NO. 4, 1'-0" C TO C AND 3" CLEAR TO INSIDE OF WALLS AND FLOOR.
4. REFER TO PLANS FOR EXACT LOCATIONS.

TABLE OF DIMENSIONS
501-5 MODIFIED

LOCATION	PIPE I.D.	DIMENSIONS W SINGLE	B	E	F	H	J	K	ELEVATIONS "A"	"B"	"C"	"D"	"E"
North Fill Area STA. 8+86.00 N.	24"	3'-0"	1'-7 1/2"	1'-1 1/2"	1'-11 3/8"	3'-0"	1'-4"	2'-3"	1118.13	1116.8	1115.8	1116.6	1114.8
South Fill Area STA. 8+06.58 E.	30"	3'-0"	1'-7 1/2"	1'-1 1/2"	1'-11 3/8"	3'-3"	1'-7"	2'-3"	1109.58	1108.0	1107.0	1106.0	1105.75

DROP INLET HEADWALL

M.A.G. STD. DET. 501-5, MODIFIED
NTS



☐ REMOVE ☐

○ CONSTRUCT ○

1. STA. 8+68 CONSTRUCT MODIFIED DROP INLET HEADWALL WITH INLET APRON PER MAG STD. DET. 501. MODIFIED PER DETAIL ON THIS SHEET.
2. STA. 8+68 TO STA. 9+65 INSTALL 97 LF 24" CMP.
3. STA. 9+65 CONSTRUCT CONCRETE PIPE COLLAR PER MAG STD. DET. 505.
4. STA. 9+65 TO STA. 9+92.5 INSTALL 27.5 LF 24" CMP. CUT OUTLET OF CMP TO MATCH CHANNEL SIDEWALL SLOPE PER DETAILS 1 & 2 ON SHEET D01.
5. STA. 8+06.58 CONSTRUCT MODIFIED INLET HEADWALL WITH INLET APRON PER MAG STD. DET. 501. MODIFIED PER DETAIL ON THIS SHEET.
6. STA. 8+06.58 TO STA. 9+02.73 INSTALL 96.15 LF 30" CMP.
7. STA. 9+03.73 CONSTRUCT MODIFIED CATCH BASIN WITH INLET APRON PER A.D.O.T. DRAWING NO. C-15.80 MODIFIED PER DETAIL ON THIS SHEET.
8. STA. 9+04.73 TO STA. 9+94.0 INSTALL 83.27 LF 30" CMP. CUT OUTLET OF CMP TO MATCH CHANNEL SIDEWALL SLOPE PER DETAILS 1 & 2 ON SHEET D01.

263-1100

NO.	REVISION	DATE
3		
2		
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FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

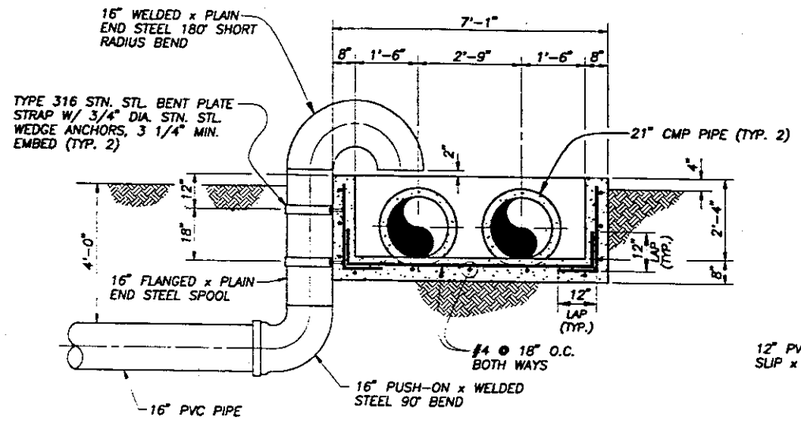
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
DETAILS 6 THROUGH 7

	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

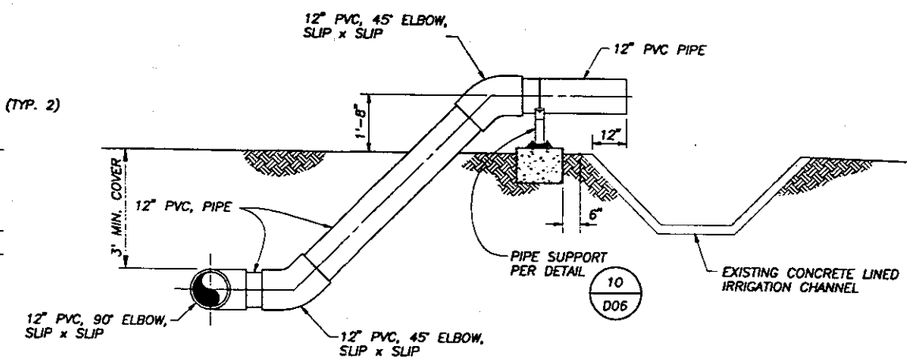
WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

WOOD/PATEL PROJECT NO. 97070.00

SHEET

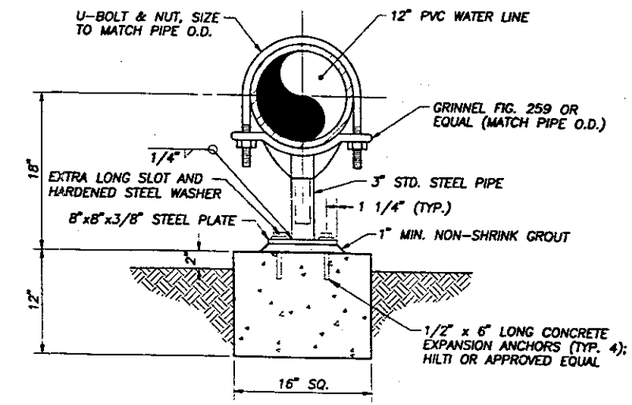


SECTION A-A



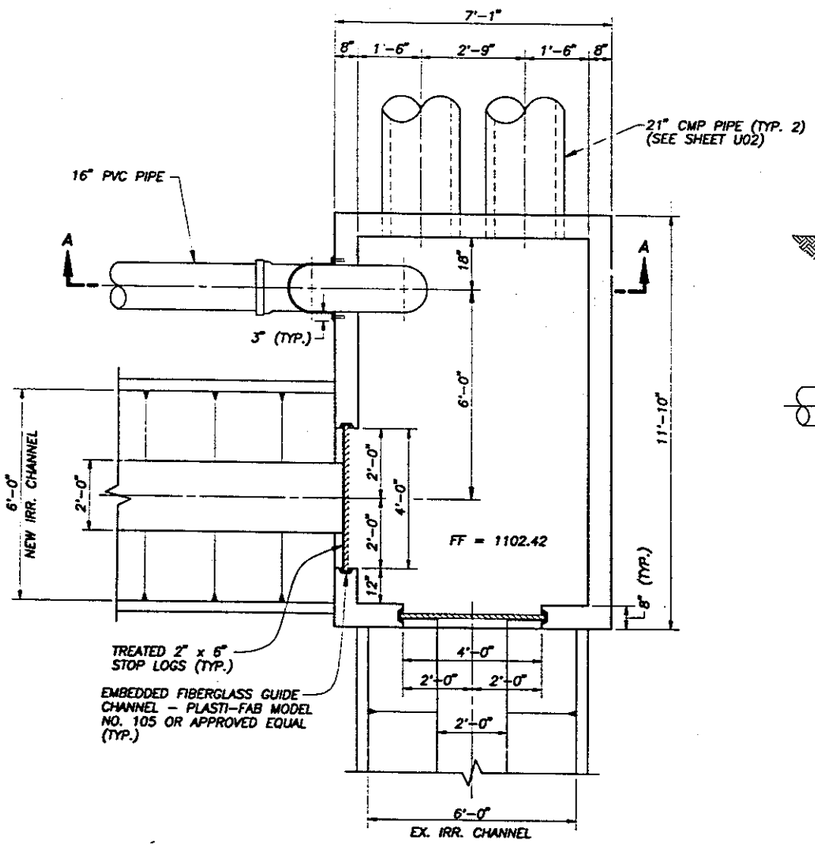
12" WATER LINE OUTLET INTO EXISTING IRRIGATION CHANNEL AT OLIVE AVE. (9)

NOT TO SCALE



12" WATER LINE PIPE SUPPORT (10)

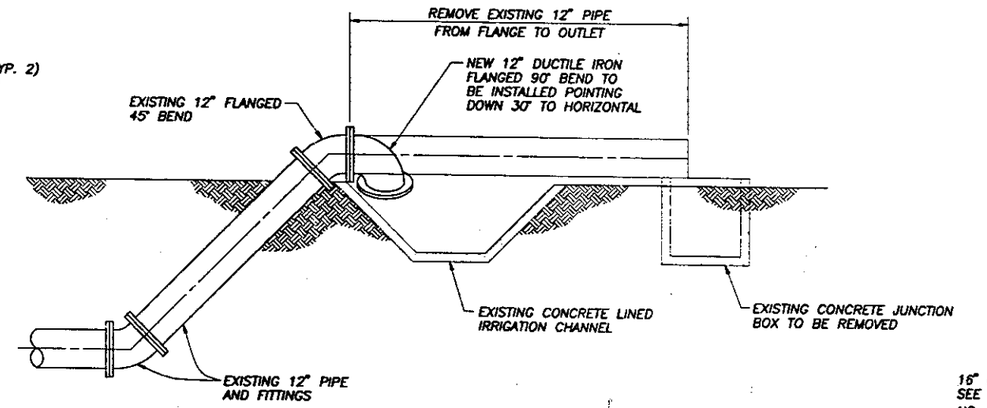
SCALE: 2" = 1'-0"



PLAN

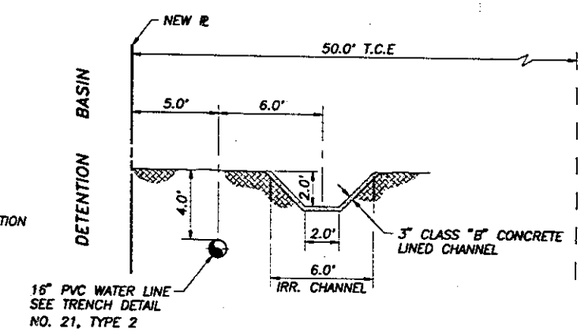
IRRIGATION JUNCTION BOX AT FARM ROAD 1/2 SECTION (8)

SCALE: 1/2" = 1'-0"



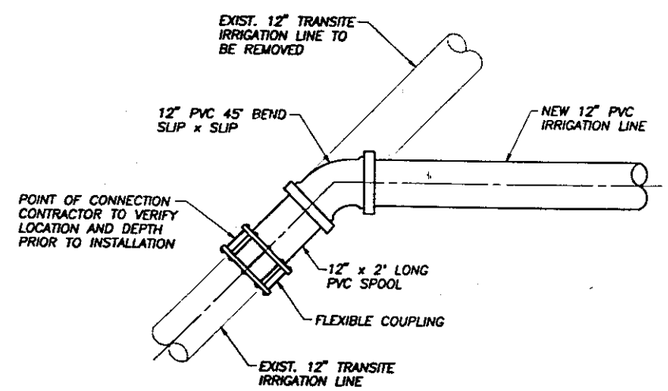
12" WATER LINE OUTLET INTO EXISTING IRRIGATION CHANNEL AT REEMS & BUTLER DR. (11)

NOT TO SCALE



TYPICAL SECTION (12)

SCALE: 1" = 5'



12" IRRIGATION LINE CONNECTION TO EXISTING (13)

NOT TO SCALE

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN AND COLLECTOR CHANNELS

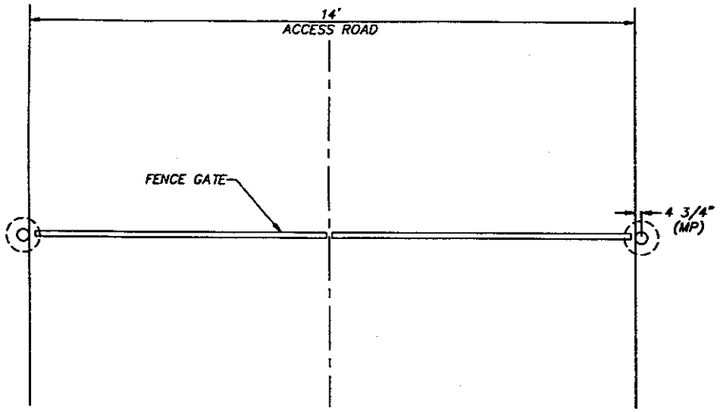
IRRIGATION AND WATERLINE DETAILS 8 - 13

	BY	DATE
DESIGNED	S. YINGLING	5/25/94
DRAWN	C. SWEATLAND	5/25/94
CHECKED	C. GOPPERTON	8/18/94

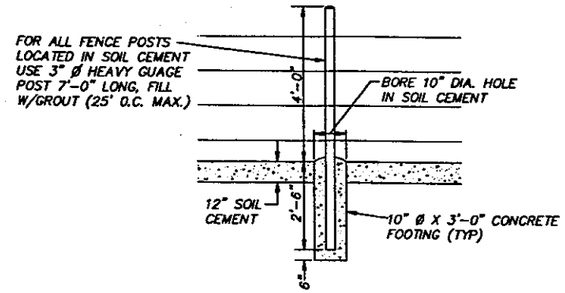
NBS LOWRY

263-1100

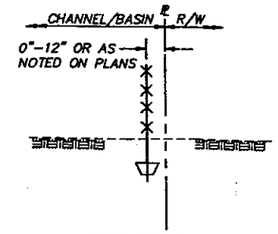
SHEET



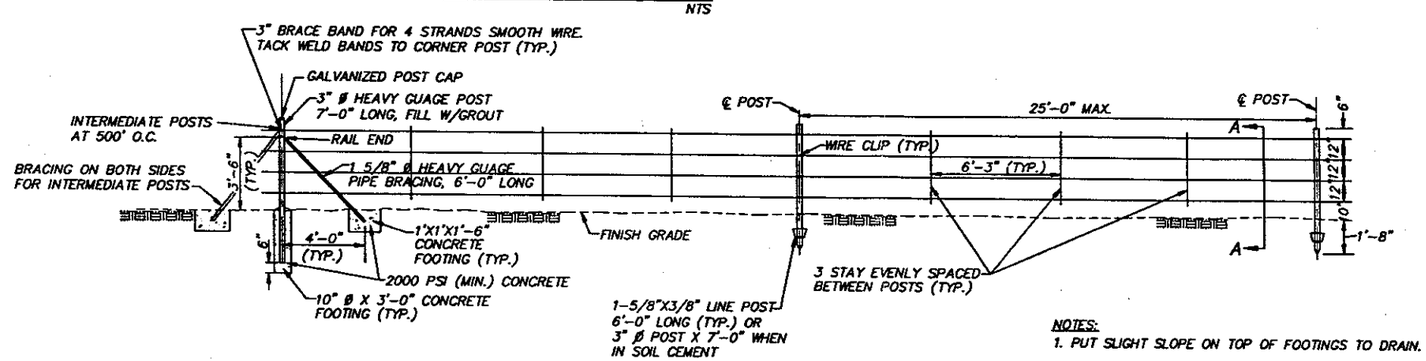
PLAN



FENCE POST IN SOIL CEMENT
NTS

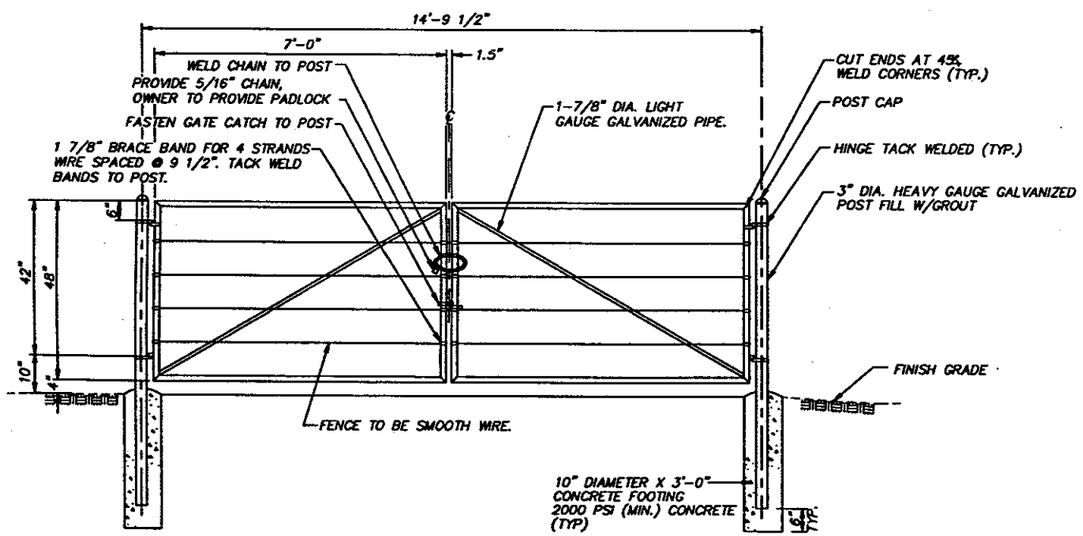


SECTION A-A
NTS



FOUR STRAND SMOOTH WIRE FENCE
WITH CORNER/INTERMEDIATE POST ASSEMBLY
NTS
15

NOTES:
1. PUT SLIGHT SLOPE ON TOP OF FOOTINGS TO DRAIN.
2. FENCING WIRE SHALL BE ON THE OUTSIDE OF THE POSTS.
3. ALL STEEL POSTS AND BRACING SHALL BE GALVANIZED (HOT DIP). FIELD WELDS SHALL BE TREATED WITH TWO COATS OF "GALVANIZED" PAINT OR APPROVED EQUAL.



ELEVATION

FENCE GATE
SMOOTH WIRE AT BASIN
NTS
14

NOTES:
1. PUT SLIGHT SLOPE ON TOP OF FOOTINGS TO DRAIN.
2. GATE DIAGONAL BAR. MUST BE FIELD CUT TO FIT.
3. ALL PIPES ARE 1.875" DIAMETER LIGHT GAUGE GALVANIZED PIPES UNLESS OTHERWISE NOTED
4. PADLOCK FURNISHED BY OTHERS.
5. ALL STEEL PIPE SHALL BE GALVANIZED. (HOT DIP) FIELD WELDS SHALL BE TREATED WITH TWO COATS OF "GALVANOX" PAINT OR APPROVED EQUAL.

263-1100

NO.	REVISION		DATE
3			
2			
1			

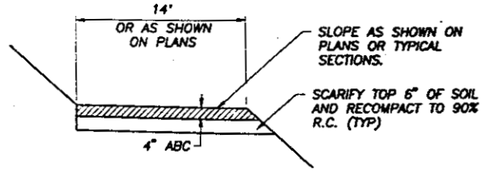
FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN & COLLECTOR CHANNELS
FENCE & GATE DETAILS 14 THROUGH 15

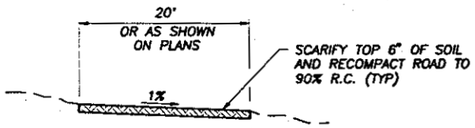
	BY	DATE
DESIGNED	JGT	10/94
DRAWN	VF	10/94
CHECKED	ACP	10/94

WOOD, PATEL & ASSOCIATES, INC.
1550 EAST MISSOURI, SUITE 203
PHOENIX, ARIZONA (602)234-1344

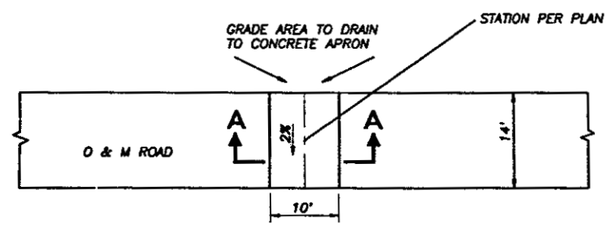
SHEET



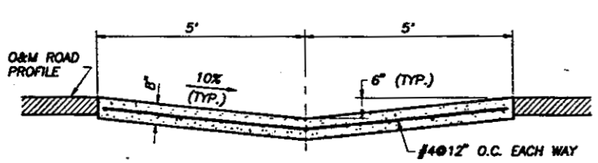
TYPICAL SECTION
OPERATION & MAINTENANCE ROAD (O&M ROAD) (16)
NO SCALE



TYPICAL SECTION
FARM ROAD (17)
NO SCALE

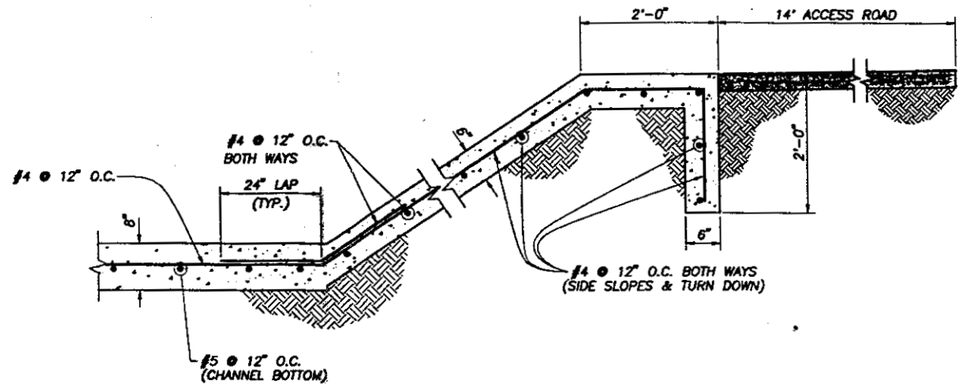


PLAN



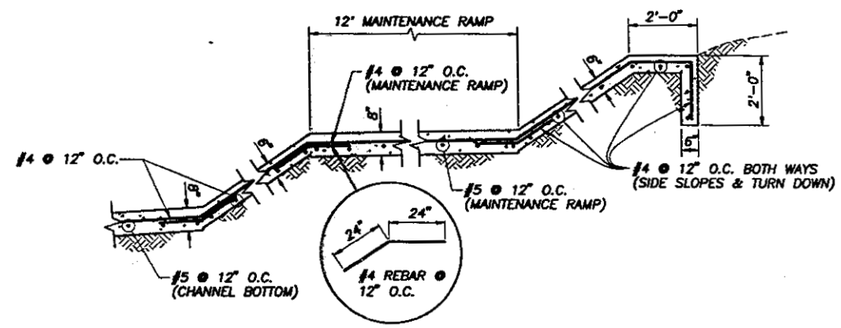
SECTION A-A

CONCRETE APRON (18)
NO SCALE

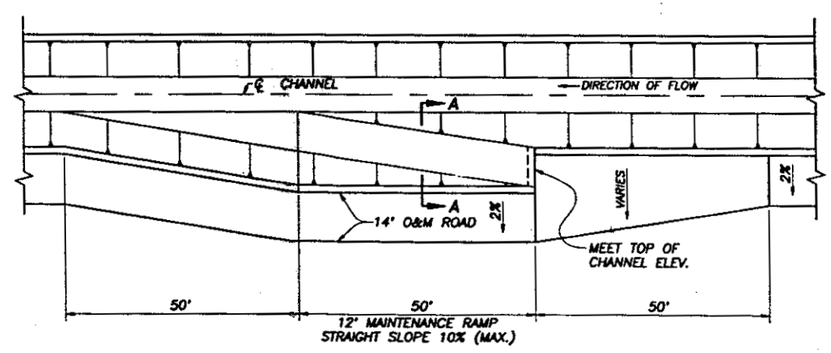


"EAST COLLECTOR CHANNEL"

CHANNEL LINING W/ REINFORCEMENT (19)
SCALE: 1" = 1'-0"

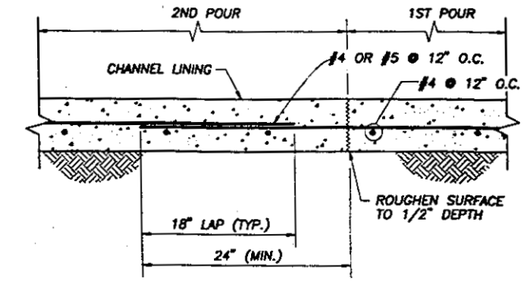


SECTION A-A

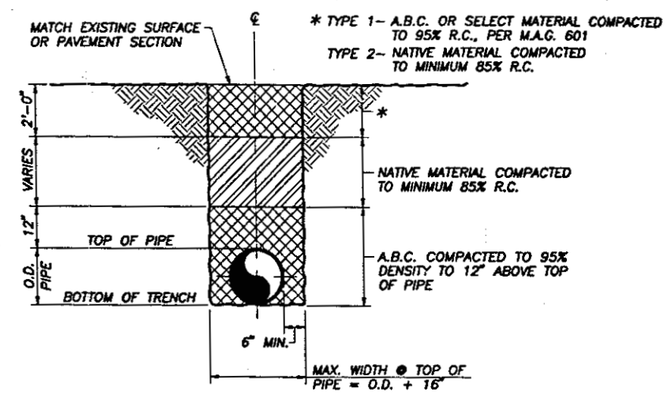


PLAN

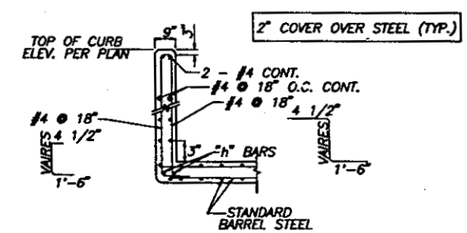
MAINTENANCE ACCESS RAMP (20)
NOT TO SCALE



CONSTRUCTION JOINTS
SCALE: 1 1/2" = 1'



TRENCH BACKFILL (21)
NOT TO SCALE



SPECIAL CURB (22)
NOT TO SCALE

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT
OF
MARICOPA COUNTY

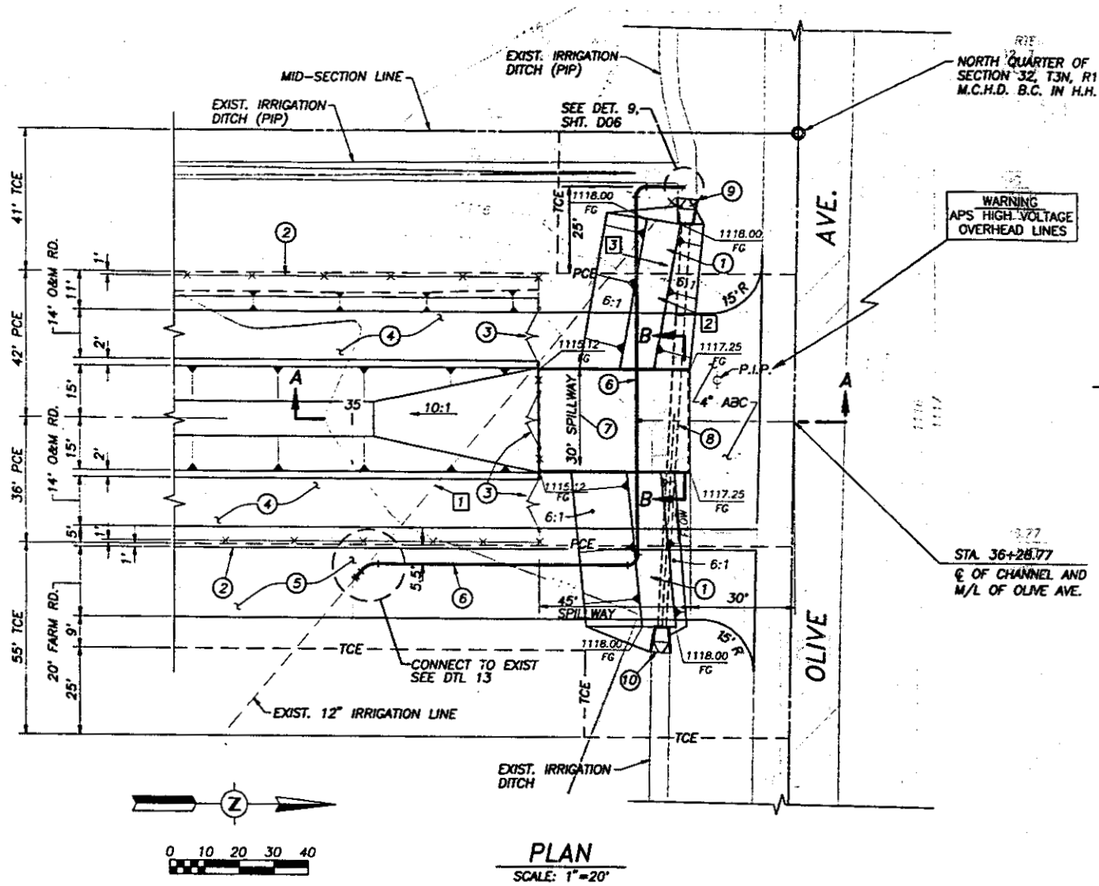
DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN AND COLLECTOR CHANNELS
CHANNEL, ROAD AND WATERLINE
DETAILS 16 - 21

	BY	DATE
DESIGNED	S. YINGLING	5/25/94
DRAWN	C. SWEATLAND	8/18/94
CHECKED	C. GOPPERTON	9/27/94

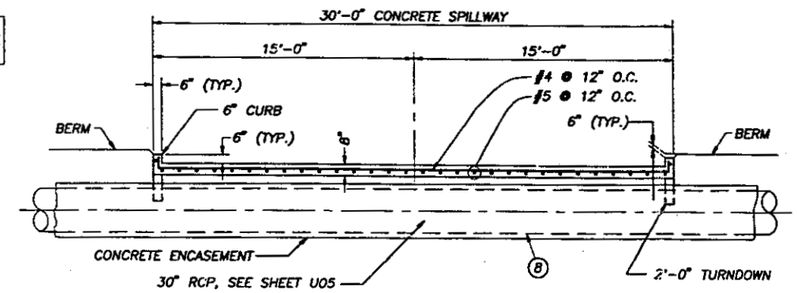
NBS LOWRY

263-1100

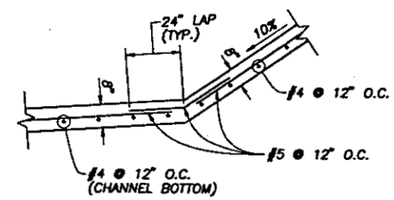
SHEET



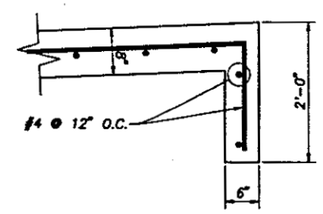
PLAN
SCALE: 1"=20'



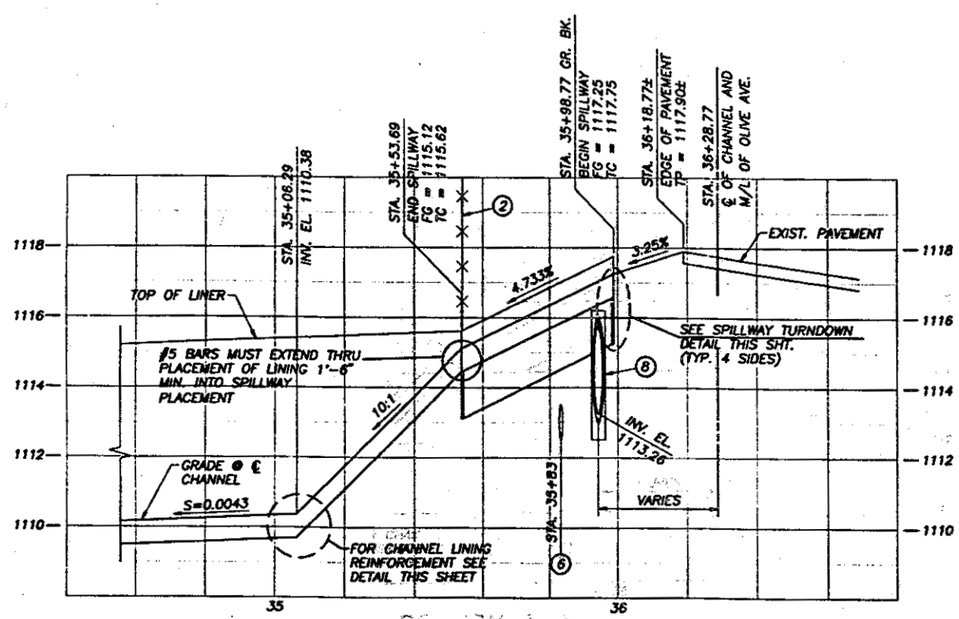
SECTION B-B
NOT TO SCALE



CHANNEL LINING W/ REINFORCEMENT
NOT TO SCALE



SPILLWAY TURNDOWN
NOT TO SCALE



SECTION A-A
SCALE: HORIZ.: 1"=20'
VERT.: 1"=2'

REMOVE

1. REMOVE EXISTING 12" WATERLINE
2. REMOVE EXISTING CONCRETE LINED IRRIGATION DITCH
3. REMOVE EXISTING 30" CMP

CONSTRUCT

1. CONSTRUCT 10' WIDE EARTH BERM, COMPACT TO 95%.
2. CONSTRUCT NEW PLAIN WIRE FENCE PER DET. 15
3. CONSTRUCT NEW 16 FOOT DOUBLE GATE PER DET. 14
4. CONSTRUCT NEW O&M ROAD PER DETAIL 16
5. CONSTRUCT NEW FARM ROAD PER DET. 17
6. CONSTRUCT NEW 12" PVC IRRIGATION LINE SEE TRENCH DETAIL NO. 21, TYPE 1.
7. CONSTRUCT CONCRETE SPILLWAY
8. CONSTRUCT 30" SIPHON LINE, SEE SHT U05 FOR PROFILE
9. CONSTRUCT INLET PER DETAILS ON SHT. U05
10. CONSTRUCT OUTLET PER DETAILS ON SHT. U05

NO.	REVISION	DATE
3		
2		
1		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DYSART DRAIN IMPROVEMENT PROJECT
DETENTION BASIN AND COLLECTOR CHANNELS
EAST COLLECTOR CHANNEL DETAILS
AT OLIVE AVENUE

	BY	DATE
DESIGNED	C. GOPPERTON	5/1/94
DRAWN	C. SWEATLAND	5/1/94
CHECKED	C. GOPPERTON	10/29/94

NBS LOWRY

263-1100

SHEET