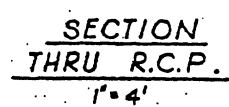
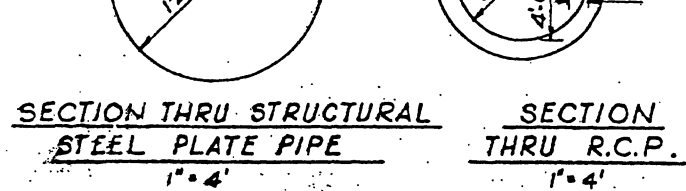
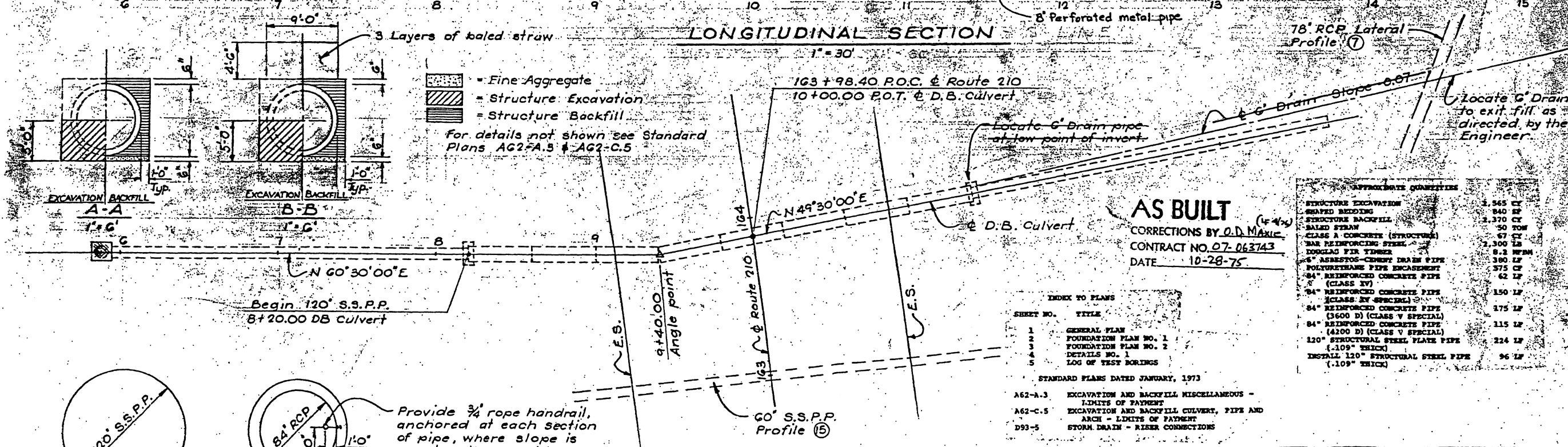
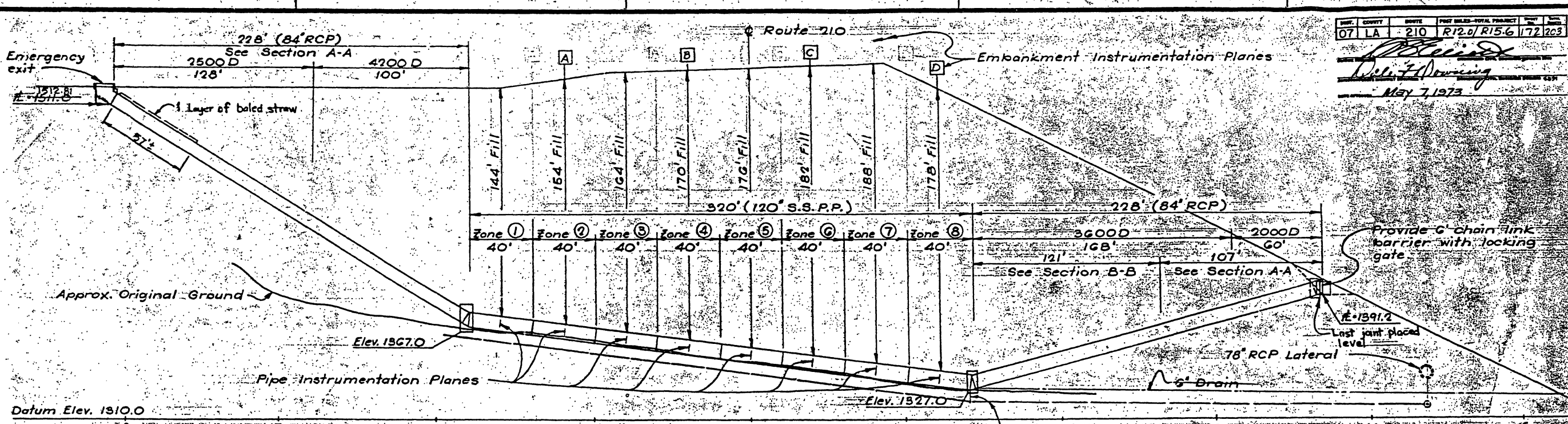


NO.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	SHEET NO.
07	LA	210	R12.0/R15.6	172

Date: May 7, 1973
 Designer: [Signature]
 Checker: [Signature]



■ Fine Aggregate
 ▨ Structure Excavation
 ▩ Structure Backfill
 For details not shown see Standard Plans AG2-A.5 & AG2-C.5

AS BUILT
 CORRECTIONS BY O.D. Moxie
 CONTRACT NO. 07-063743
 DATE 10-28-75

APPROXIMATE QUANTITIES	
STRUCTURE EXCAVATION	2,565 CY
SHAPED BEDDING	840 SF
STRUCTURE BACKFILL	2,370 CY
BALED STRAW	50 TON
CLASS A CONCRETE (STRUCTURE)	67 CY
BAR REINFORCING STEEL	2,300 LB
WOODLUM PICK FIBER	9.2 WPM
6\"/>	

SHEET NO.	TITLE
1	GENERAL PLAN
2	FOUNDATION PLAN NO. 1
3	FOUNDATION PLAN NO. 2
4	DETAILS NO. 1
5	LOG OF TEST BORINGS

STANDARD PLANS DATED JANUARY, 1973
 AG2-A.3 EXCAVATION AND BACKFILL MISCELLANEOUS - LIMITS OF PAYMENT
 AG2-C.5 EXCAVATION AND BACKFILL CULVERT, PIPE AND ARCH - LIMITS OF PAYMENT
 D93-5 STORM DRAIN - RISER CONNECTIONS

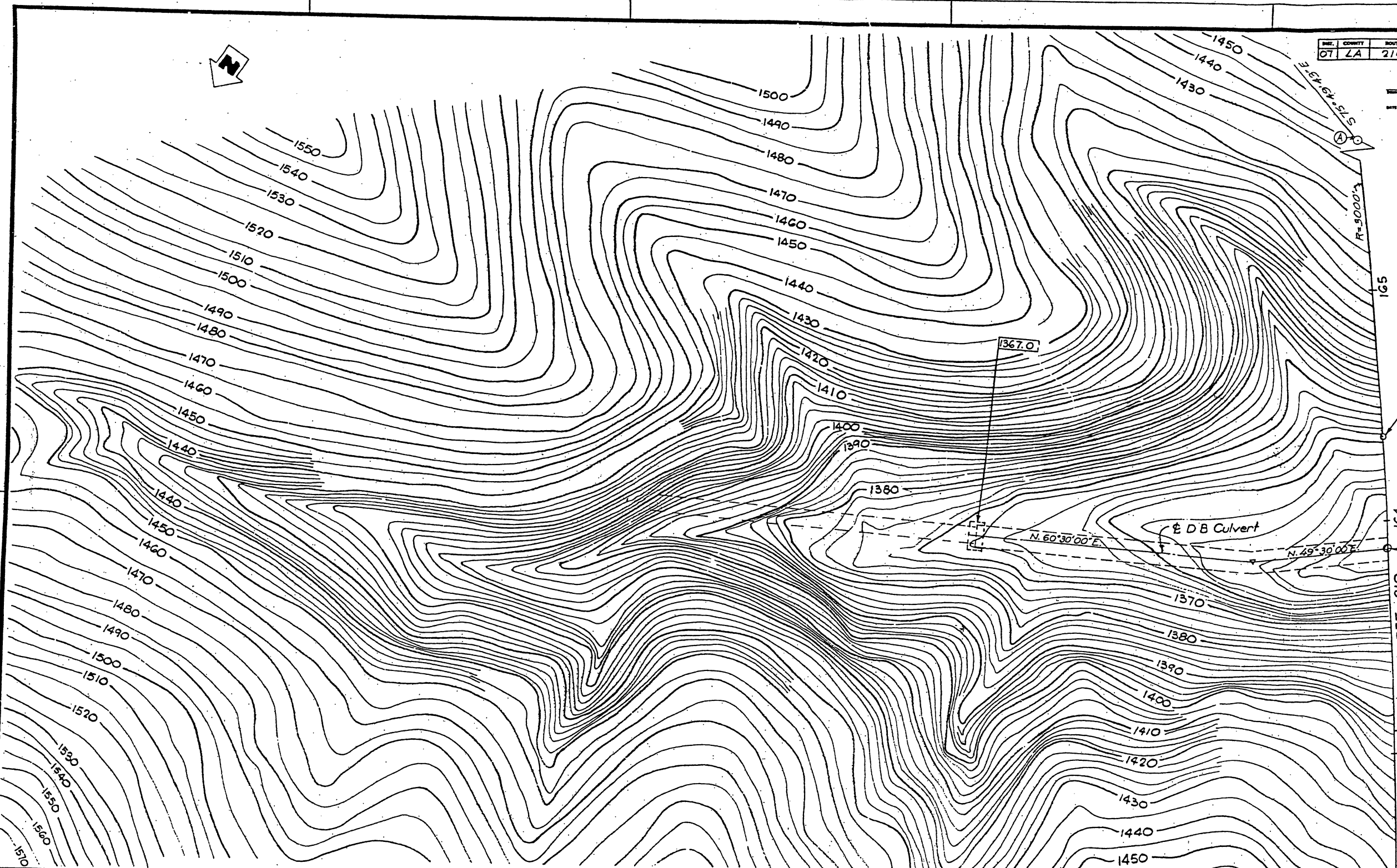
DESIGN	By Alex J. Burke	Checked a.f. Bachu
DETAILS	By J. Ikami	Checked a.f. Bachu
LAYOUT	By O'Leary	Checked a.f. Bachu
QUANTITIES	By O'Leary	Checked J. Ikami
SPECIFICATIONS	By [Signature]	Checked [Signature]

BRIDGE DEPARTMENT	DESIGN SECTION	9
Section Supervisor:	A. E. Bachu	
Project Designer:	Nichols	
DB CULVERT		
GENERAL PLAN		
BRIDGE NO. 53-2613	POST MILE 10.6	DRAWING NO. 15

AS BUILT PLANS
 Contract No. 07-063744
 Date Completed

WO 063741
 CU 07203

SHEET 15 OF 15
 (PRELIMINARY STAGE ONLY)



DIST.	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	210	R20/R16.6	173	203

A. E. Baker
 STATE DESIGN SUPERVISOR
 DATE APPROVED: May 7, 1973

AS BUILT None
 CORRECTIONS BY O.D. MAINE
 CONTRACT NO. 07-063743
 DATE 10-28-75

SCALE: 1" = 20' DATUM
 FOR ALIGNMENT TIES SEE
 PHOTOGRAMMETRY AS OF
 SURVEYED BY: DATE:
 FIELD CRO. BY: R. Farnsworth DATE 4-6-73
 DRAWN BY: P. Peterson DATE 4-6-73
 TRACED BY: J. KAMI DATE 4-6-73
 CHECKED BY: R. Farnsworth DATE 4-6-73

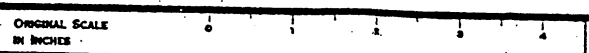
NOTE:
 Refer to Foundation Plan No. 2 for Bench Mark,
 Curve Data and Horizontal Control.

NOTES:
 (Elev.) Indicates Elev. at bottom Footing.
 For details not shown see detail sheets.

BRIDGE DEPARTMENT	
DESIGN SECTION 9	
Project Engineer:	P. Nichols
DESIGN:	by <u>A. E. Baker</u>
DETAILS:	by <u>J. Kami</u>
QUANTITIES:	by <u>A. E. Baker</u>
	by <u>J. Kami</u>

STATE OF CALIFORNIA			
DB CULVERT			
FOUNDATION PLAN NO. 1			
BRIDGE NO.	POST MILE	CU	SHEET
53-2613	10.6	063741	2
		WO 07203	5

AS BUILT PLANS
 Contract No. 07-063744



Disregard prices bearing earlier revision dates
 DIVISION DATES: 6/21/73, 11/17/73 (PRELIMINARY STAGE ONLY)

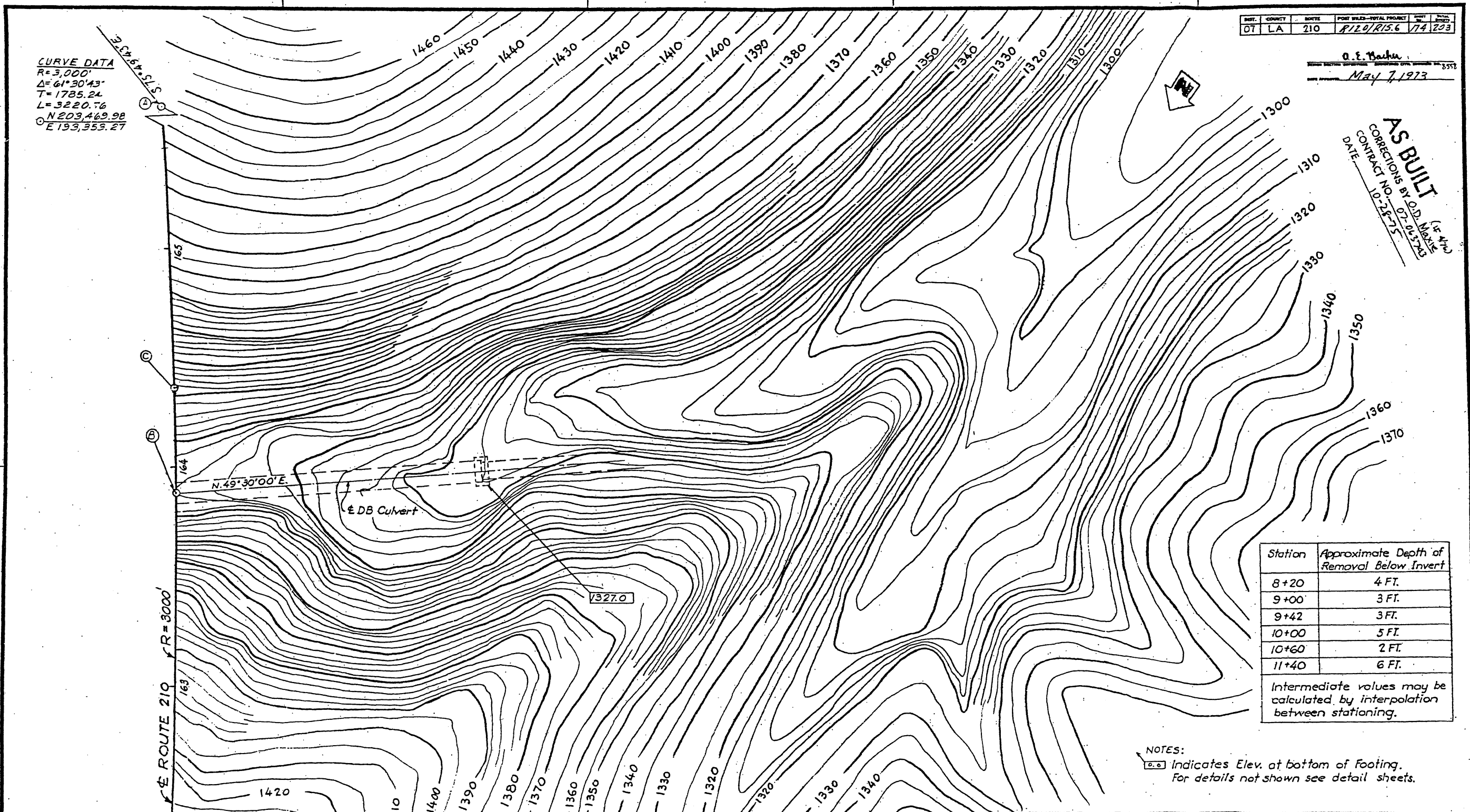
73

DEPT.	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	SHEET	TOTAL SHEETS
07	LA	210	R120/R15.6	74	203

A. E. Bachu
 May 7, 1973

AS BUILT
 CORRECTIONS BY O.D. NICHOLS
 CONTRACT NO. 07-063744
 DATE 10-25-75

CURVE DATA
 R=3,000'
 $\Delta=61^{\circ}30'43''$
 T=1785.24
 L=3220.76
 N 203,469.98
 E 193,353.27



Station	Approximate Depth of Removal Below Invert
8+20	4 FT.
9+00	3 FT.
9+42	3 FT.
10+00	5 FT.
10+60	2 FT.
11+40	6 FT.

Intermediate values may be calculated by interpolation between stationing.

NOTES:
 (e.g.) Indicates Elev. at bottom of Footing.
 For details not shown see detail sheets.

SCALE 1"=20' DATUM
 FOR ALIGNMENT TIES SEE
 PHOTOGRAMMETRY AS OF
 SURVEYED BY
 FIELD CTD. BY Z. F. FORD DATE 4-26-73
 DRAWN BY R. A. PETERSON DATE 4-6-73
 TRACED BY
 CHECKED BY Z. F. FORD DATE 4-6-73

BENCH MARK
 BM# L-11A Elev. 1364.96
 Fd 2x2 in 2" IP
 N 201,576.65 E 190,755.56

		NORTH	EAST
A	E. Rte. 210	1844 19.30 E.C.	200 561.28 192,618.50
B	E. Rte. 210	1637 08.00 P.O.C.	201,663.75 190,964.70
	E. DB Culvert	10+00.00 P.O.T.	201,654.84 190,958.42
C	E. Rte. 210	164+36.00 P.O.C.	201,625.04
	"C" Line	0+40.00 P.O.T.	190,987.64

BRIDGE DEPARTMENT
DESIGN SECTION 9
 Project Engineer P. Nichols
 DESIGN BY A. E. Bachu
 CHECKED O'Leary
 DETAILS BY A. E. Bachu
 CHECKED O'Leary
 QUANTITIES BY O'Leary
 CHECKED Ikami

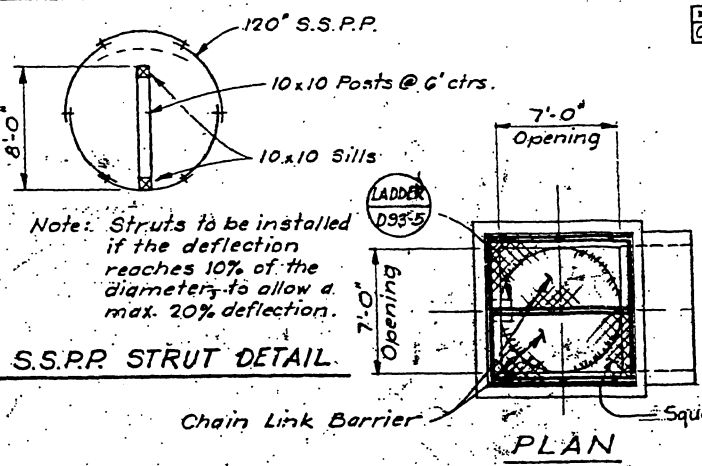
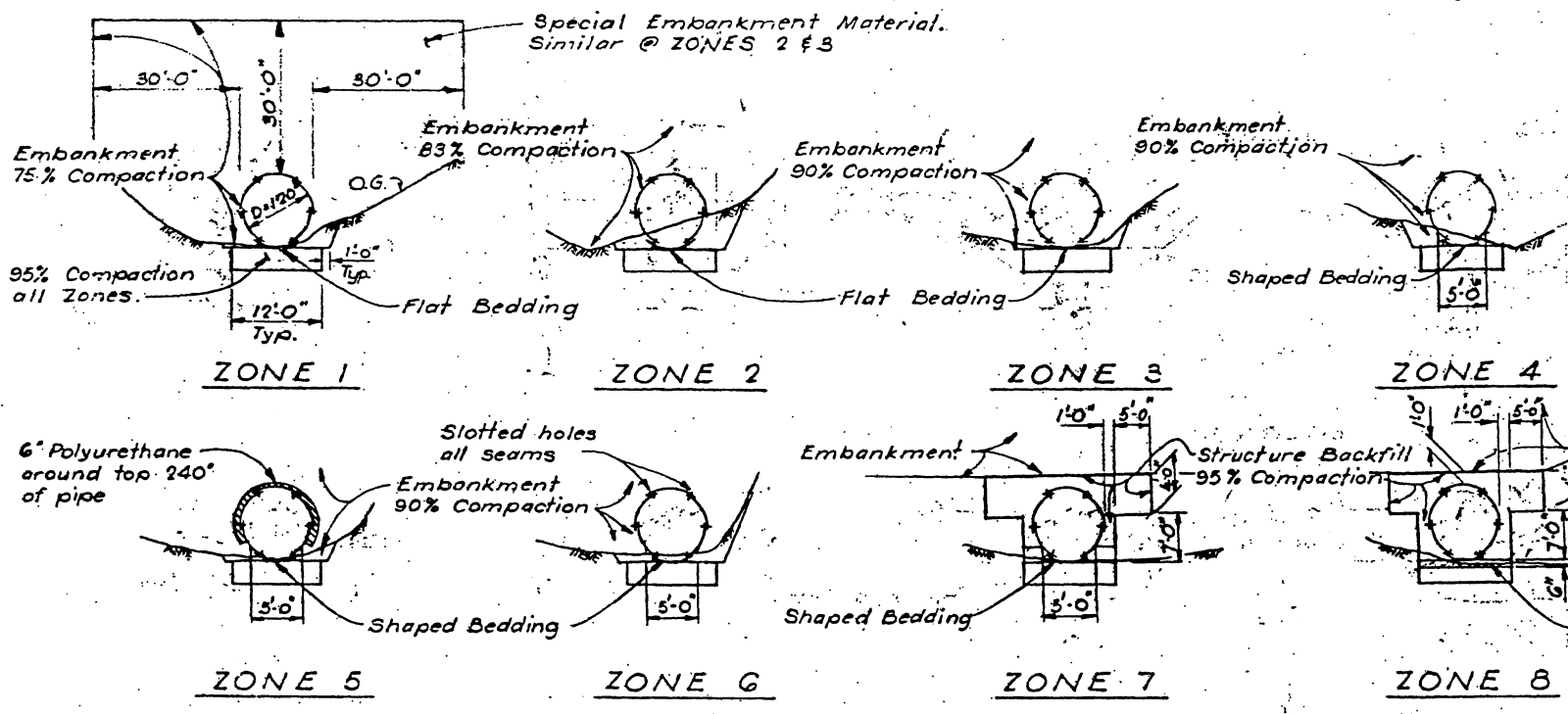
STATE OF CALIFORNIA
D B CULVERT
FOUNDATION PLAN NO. 2
 BRIDGE NO. 53-2613 POST MILE 10.6 CU 063741 WO 07203
 SHEET 3 OF 5

AS BUILT PLANS
 Contract No. 07-063744
 Date Completed

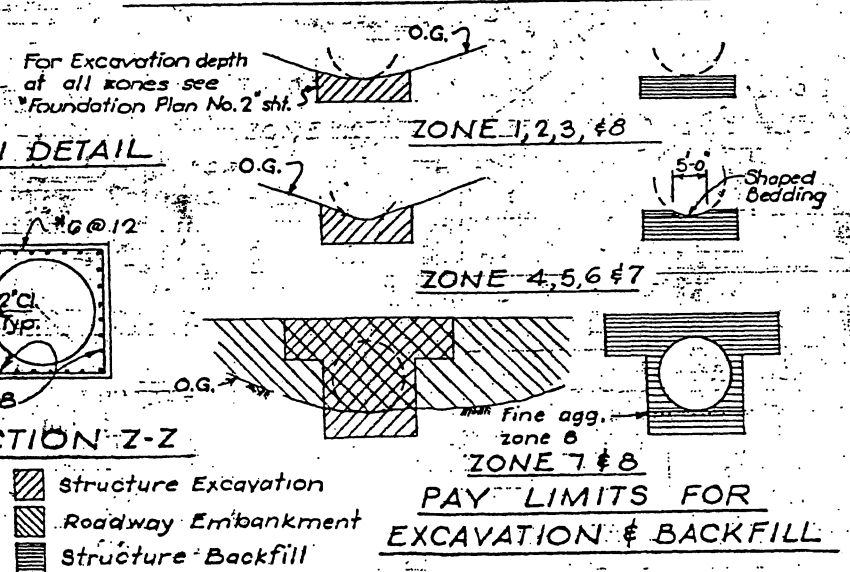
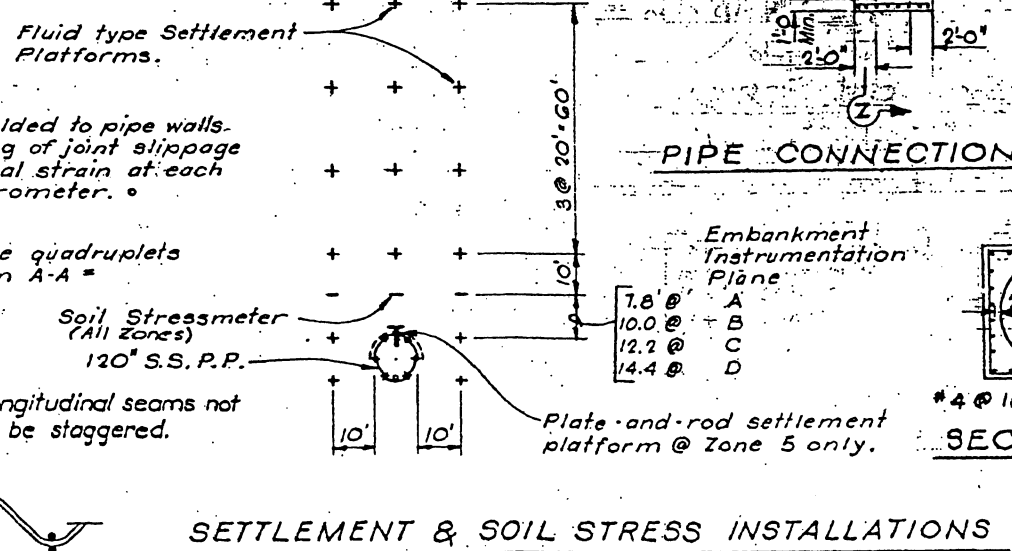
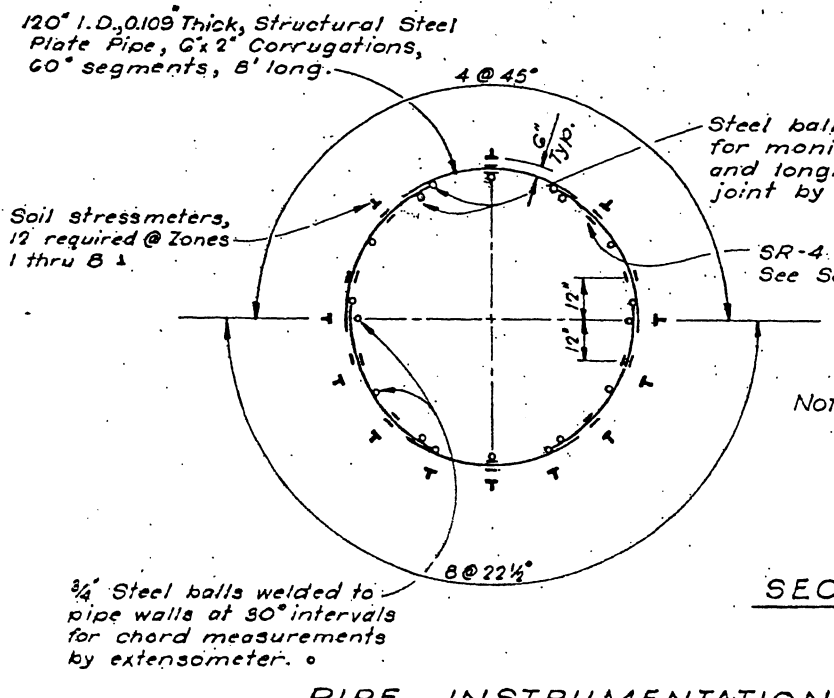
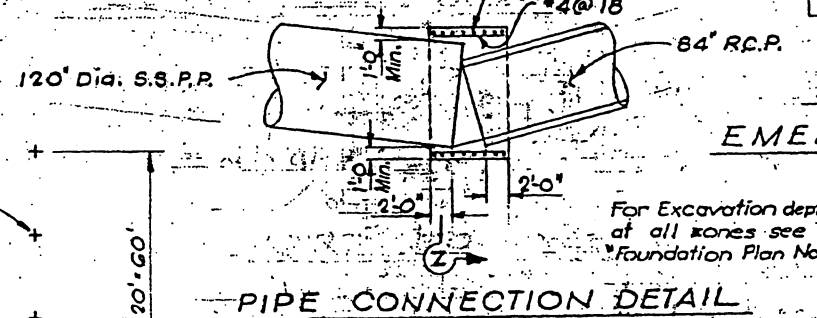
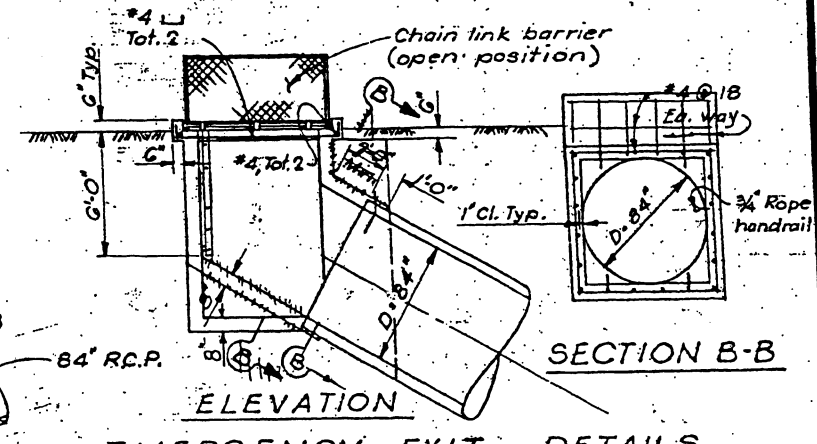
ORIGINAL SCALE IN INCHES

DIST.	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	210	RIZO/DI/15.8	V75	263

A. E. Bachus
 May 7, 1973



AS BUILT
 CORRECTIONS BY D.D. MAXIE
 CONTRACT NO. 07-063743
 DATE: 10-28-75

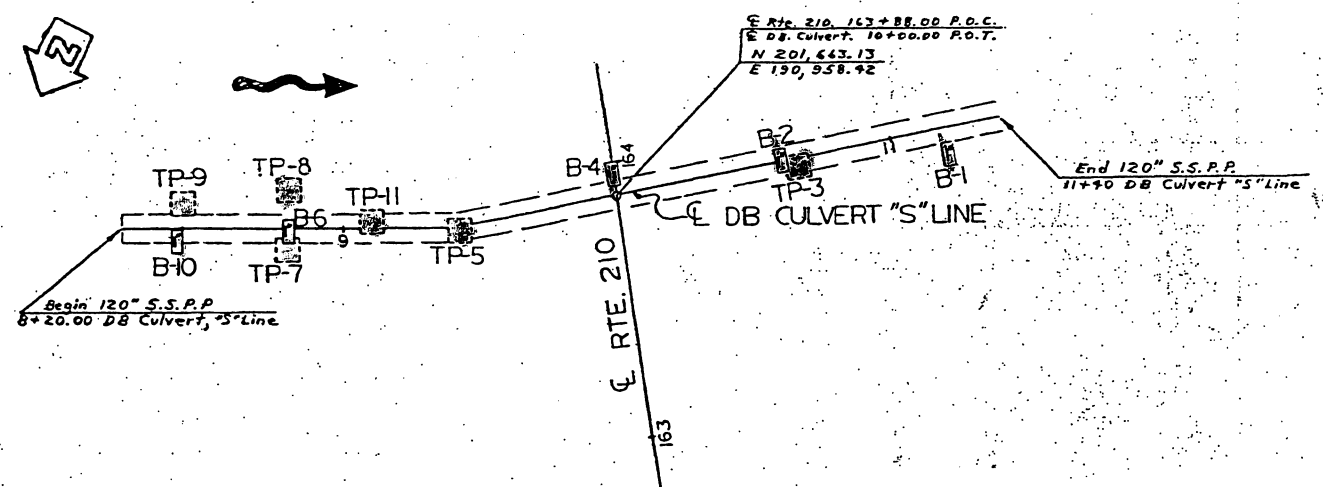


GENERAL NOTES
 DESIGN: A.A.S.H.O. dated 1969 with revisions and as supplemented by BRIDGE PLANNING AND DESIGN MANUAL.
 REINFORCED CONCRETE: $f_s = 24,000$ PSI
 $f_c = 1,300$ PSI
 $n = 10$

BRIDGE DEPARTMENT DESIGN SECTION 9		STATE OF CALIFORNIA	
Project Engineer: <i>R. White</i>		DB CULVERT	
DESIGN: By <i>R. White</i> Checked: <i>Allen B. ...</i>		DETAILS NO. 1	
DETAILS: By <i>J. Ikami 12/71</i> Checked: <i>J. Ikami</i>		BRIDGE NO. 53-2613	
QUANTITIES: By <i>C. Leary 12-71</i> Checked: <i>J. Ikami</i>		POST MILE 10.6	
Drawings price bearing under certain date		WD 063741 CU 07203	
		SHEET 4 OF 5	

AS BUILT PLANS
 Contract No. 07-063744
 Date Completed: No 7000 7379

BENCH MARKS
 BM L-11A Elev. 1364.36
 Fd. 2 x 2 and T in 2" IP L-11-A
 (Dist. 07 Survey Reg. No. 73-252
 by 1-5 Smith and party 6-1-73)



PLAN
 Scale: 1" = 30'

PROFILE
 Scale: Vert. 1" = 10'
 Horiz. 1" = 20'

LEGEND OF BORING OPERATIONS

JET BORING
 No. of feet
 No. of samples
 No. of tests
 No. of tests (at 15 ft. or nearest)

ROTARY BORING (WET)
 No. of feet
 No. of samples
 No. of tests
 No. of tests (at 15 ft. or nearest)

SOIL TUBE
 No. of feet
 No. of samples
 No. of tests
 No. of tests (at 15 ft. or nearest)

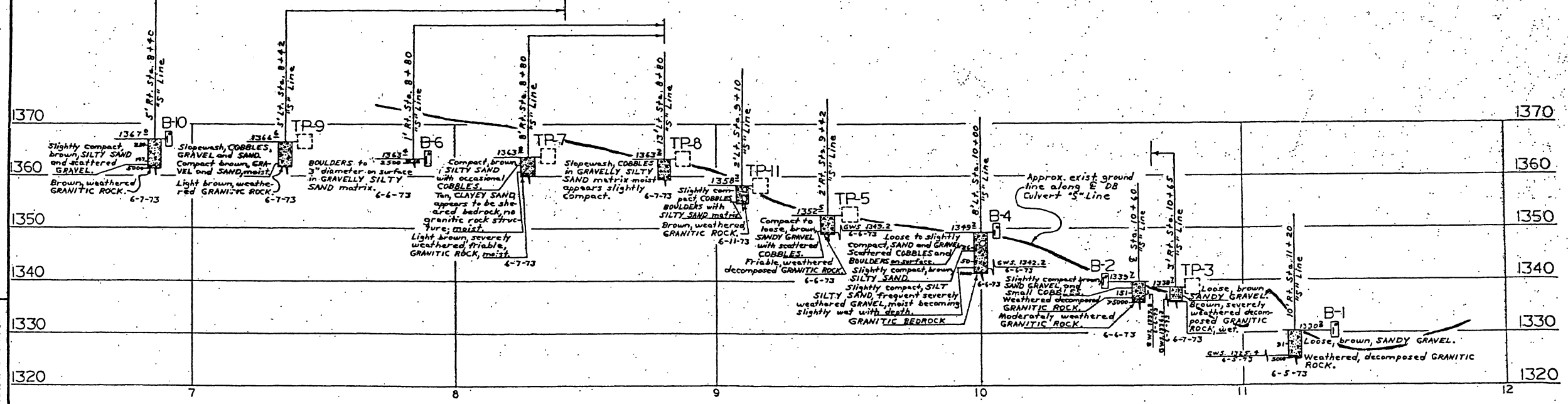
LEGEND OF EARTH MATERIALS

GRAVEL
 SILTY CLAY or CLAYEY SILT
 PEAT and/or ORGANIC MATTER
 FILL MATERIAL
 IMBECILS ROCK
 SANDY SILT
 CLAYEY SAND
 SANDY SAND

CLAY
 SILTY CLAY
 CLAYEY SAND
 SANDY SILT
 SANDY SAND

SOIL
 Very soft
 Loose
 Slightly compact
 Compact
 Very dense

Consistency Classification for Soils
 According to the Standard Penetration Test (SPT) Blow Count (N) and Plasticity Index (PI) or Liquid Limit (LL) and Plasticity Index (PI).



NOTE: B-4 is a combination of test pit and soil tube (first 5' is a test pit).

AS BUILT PLANS
 Contract No. 07-063744
 Date Completed
 Document No. 2000 7379

AS BUILT None (if 470)
 CORRECTIONS BY O.D. Maxie
 CONTRACT NO. 07-063743
 10-28-75

ENGINEERING GEOLOGY SECTION

FIELD STUDY BY	L. E. RAND, 6-11-73	APPROVED BY	J. L. Champlin
DRAWN BY	E. S. JIMENEZ, 7-5-73	ENGINEERING GEOLOGIST	362
CHECKED BY	W. C. IN, 7-6-73	CERTIFIED ENGINEERING GEOLOGIST NUMBER	

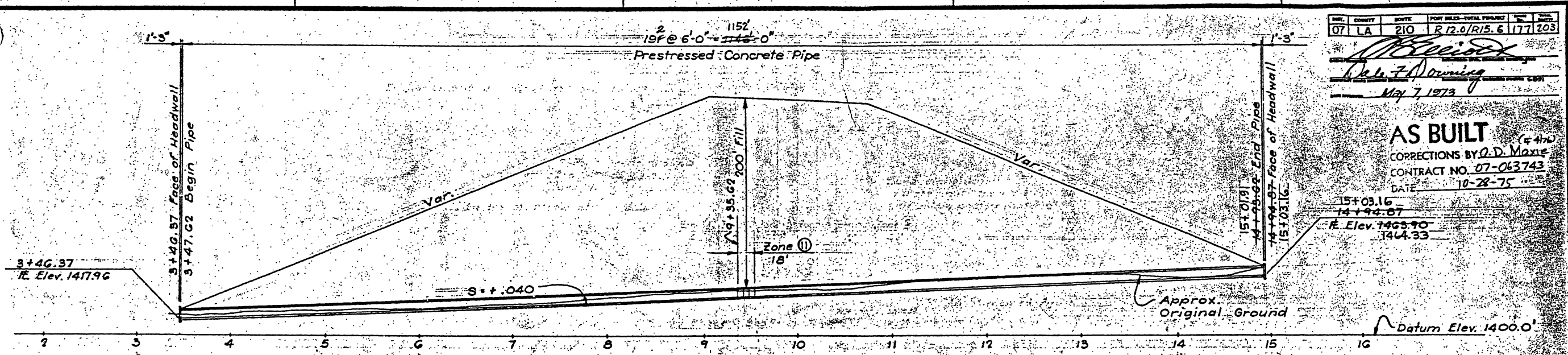
State of CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE DEPARTMENT DESIGN SECTION 9	BRIDGE NO. 53-2613	DB CULVERT
	PROJECT ENGINEER Nichols	POST MILE 10.6	LOG OF TEST BORINGS

NO.	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	210	R 12.0/R 15.6	177	203

Beckwith
DeL. Downing
 May 7 1973

AS BUILT (F 476)
 CORRECTIONS BY *O.D. Maxie*
 CONTRACT NO. 07-063743
 DATE 10-28-75

15+03.16
 14+94.87
 E. Elev. 7465.90
 744.33



INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN
2	FOUNDATION PLAN NO. 1
3	FOUNDATION PLAN NO. 2
4	FOUNDATION PLAN NO. 3
5	84\" R.C.P. DETAILS
6	INLET STRUCTURE
7	OUTLET STRUCTURE
8	LOG OF TEST BORINGS NO. 1
9	LOG OF TEST BORINGS NO. 2
10	LOG OF TEST BORINGS NO. 3
11	LOG OF TEST BORINGS NO. 4
12	LOG OF TEST BORINGS NO. 5
13	LOG OF TEST BORINGS NO. 6

STANDARD PLANS DATED JANUARY, 1973

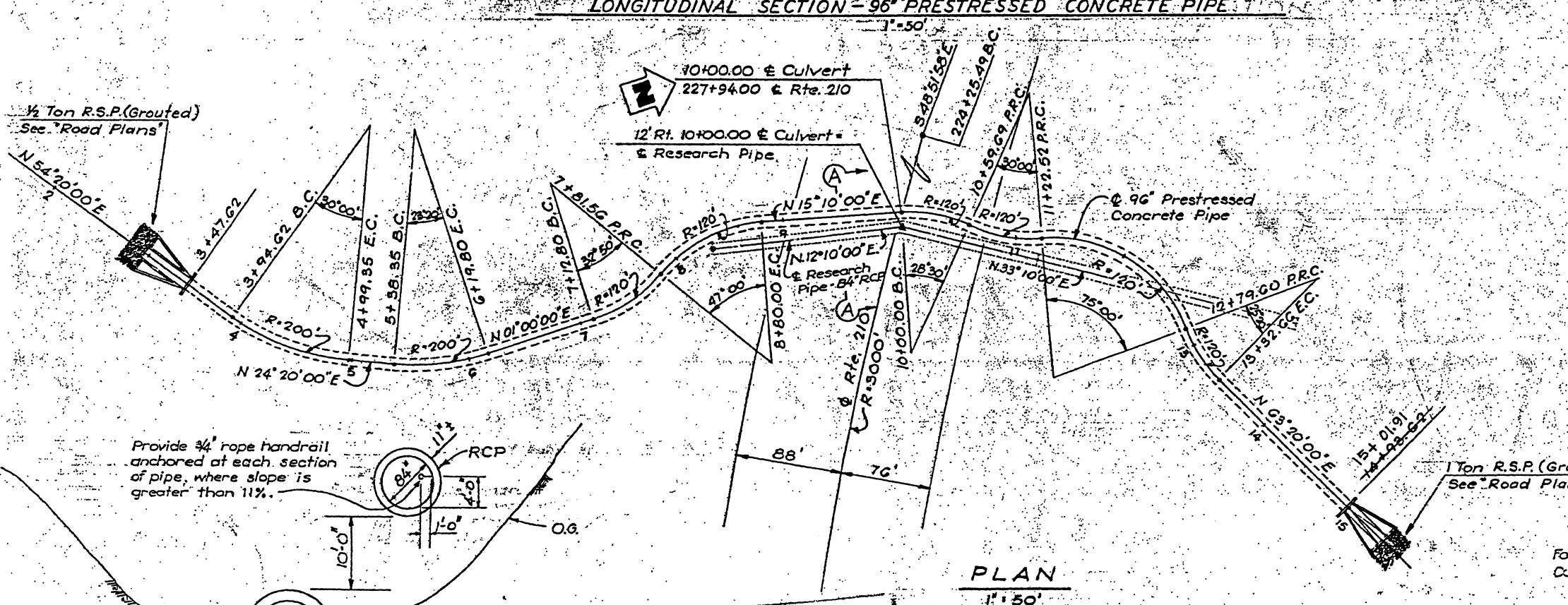
862-B.3 EXCAVATION AND BACKFILL MISCELLANEOUS - LIMITS OF PAYMENT

862-C.5 EXCAVATION AND BACKFILL CULVERT, PIPE AND ARCHES - LIMITS OF PAYMENT

866-B.1 PIPE CULVERT HEADWALLS, ENDWALLS AND WEALED WINGWALLS

APPROXIMATE QUANTITIES

STRUCTURE EXCAVATION	9,830 CY
SHAPED BEDDING	10,970 SF
STRUCTURE BACKFILL	13,645 SF
BALED STRAW	1,522 TON
CEMENT TREATED BEDDING MATERIAL	11 CY
CLASS A CONCRETE (STRUCTURE)	410 CY
BAR REINFORCING STEEL	19,000 LB
COOLAS FIBER FIBER	1.3 MFTM
POLYSTYRENE PIPE ENCASMENT	391 CY
84\" REINFORCED CONCRETE PIPE (CLASS II)	224 LF
84\" REINFORCED CONCRETE PIPE (CLASS III SPECIAL)	48 LF
84\" REINFORCED CONCRETE PIPE (CLASS IV SPECIAL)	48 LF
84\" REINFORCED CONCRETE PIPE (CLASS V SPECIAL)	165 LF
MISCELLANEOUS IRON AND STEEL	1,950 LB
96\" PRESTRESSED CONCRETE PIPE	1,128 LF
96\" PRESTRESSED CONCRETE PIPE (INSTRUMENTED)	38 LF



For Longitudinal Section - 84\" Reinforced Concrete Pipe, see \"84\" RCP - Details\" sheet.

AS BUILT PLANS
 Contract No. 07-063744
 Date Completed _____
 Document No. 7000 7379

Standard Plan Sheet No. _____
 Detail No. _____

BRIDGE DEPARTMENT		DESIGN SECTION 9	
Section Supervisor: <i>A.F. Maxie</i>		Project Engineer: <i>Nichols</i>	
DESIGN	<i>Allet-Riche</i>	Checked	<i>A.F. Maxie</i>
DETAILS	<i>J. Ikami</i>	Checked	<i>A.F. Maxie</i>
LAYOUT	<i>Nichols</i>	Checked	<i>Sloane</i>
QUANTITIES	<i>Sloane</i>	Checked	<i>Schroeder</i>
SPECIFICATIONS	<i>W.D. Nichols</i>	Checked	<i>DEM</i>

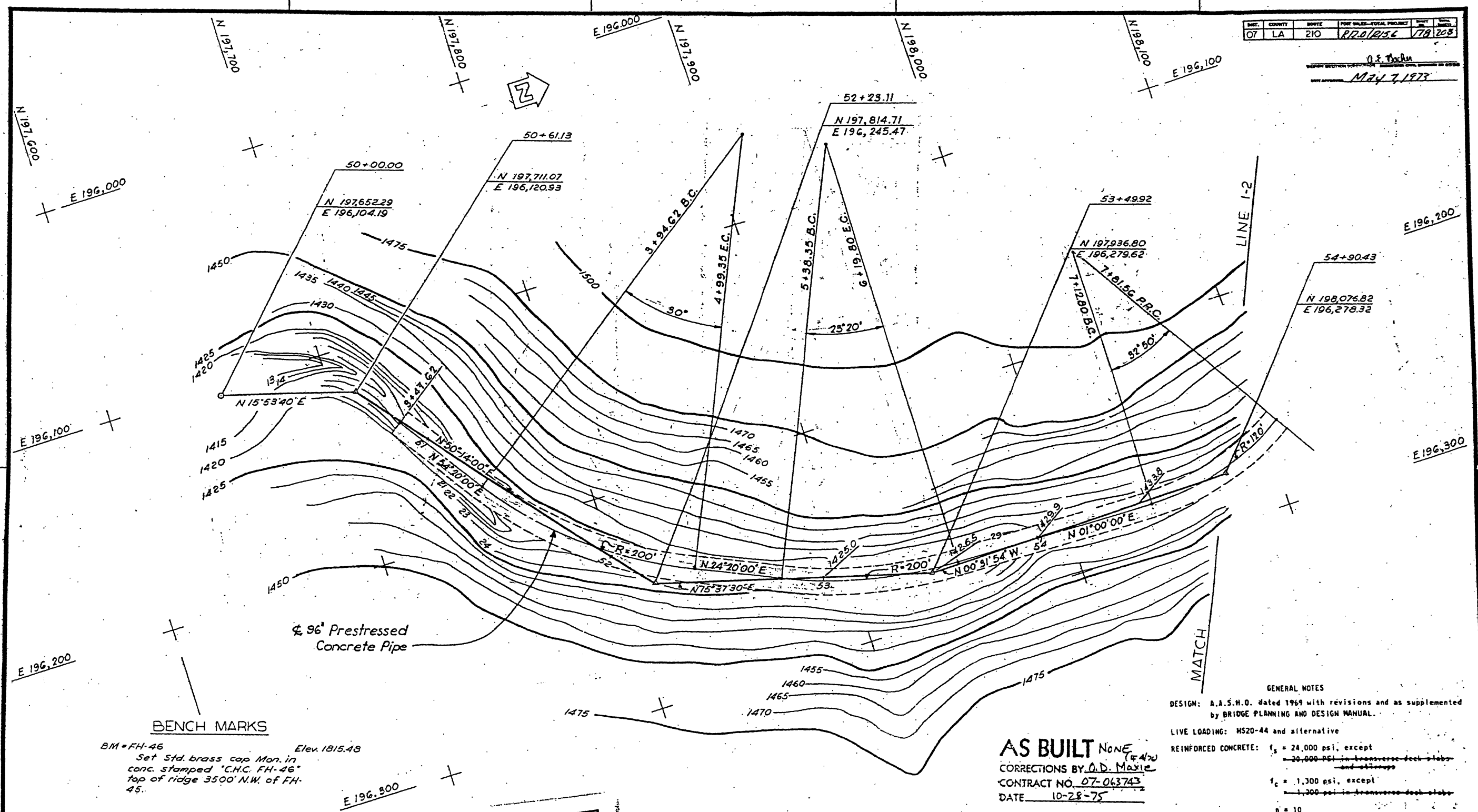
CROSS CANYON CULVERT		GENERAL PLAN	
BRIDGE NO. 53-2359	POST MILE 13.6	DRAWING NO.	SHEET 13

WO 063741
 CU 07203

Storage price bearing earlier revision dates

DIST.	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	210	R20/R56	178	205

D. F. Tachino
 DRAWN SECTION SUPERVISOR
 DATE: May 7, 1977



BENCH MARKS
 BM = FH-46 Elev. 1815.48
 Set Std. brass cap Mon. in conc. stamped "C.H.C. FH-46" top of ridge 3500' N.W. of FH-45.

GENERAL NOTES
 DESIGN: A.A.S.H.O. dated 1969 with revisions and as supplemented by BRIDGE PLANNING AND DESIGN MANUAL.
 LIVE LOADING: HS20-44 and alternative
 REINFORCED CONCRETE: $f_c = 24,000$ psi, except
 20,000 psi in transverse deck slabs and abutments
 $f_c = 1,300$ psi, except
 1,300 psi in transverse deck slabs
 $n = 10$

AS BUILT NONE
 CORRECTIONS BY *A.D. Maxie*
 CONTRACT NO. 07-063743
 DATE 10-28-75

AS BUILT PLANS
 Contract No. 07-063744
 Date Completed
 Document No. 2000 7379

CONTOURS CHECKED AND VERIFIED IN FIELD
 Date: 11-6-68
 by: R.D. Gilstrap

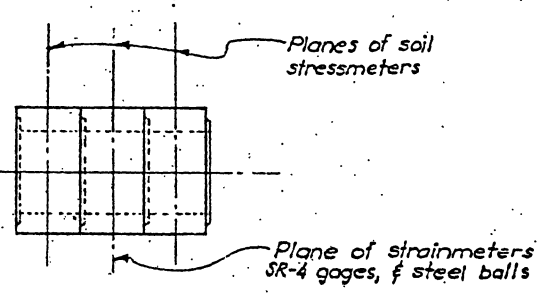
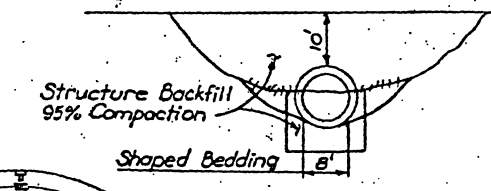
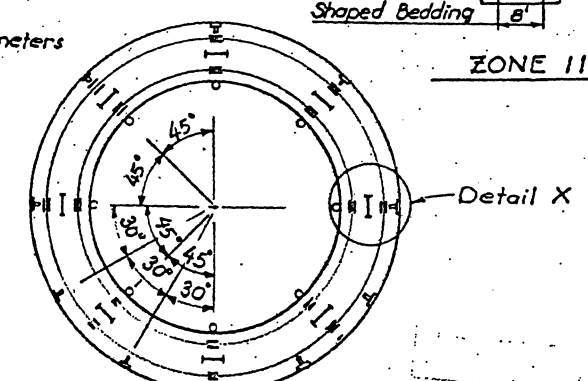
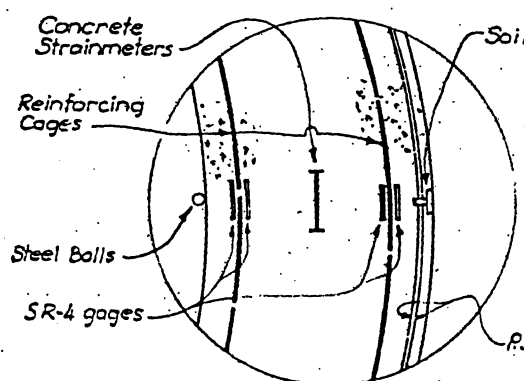
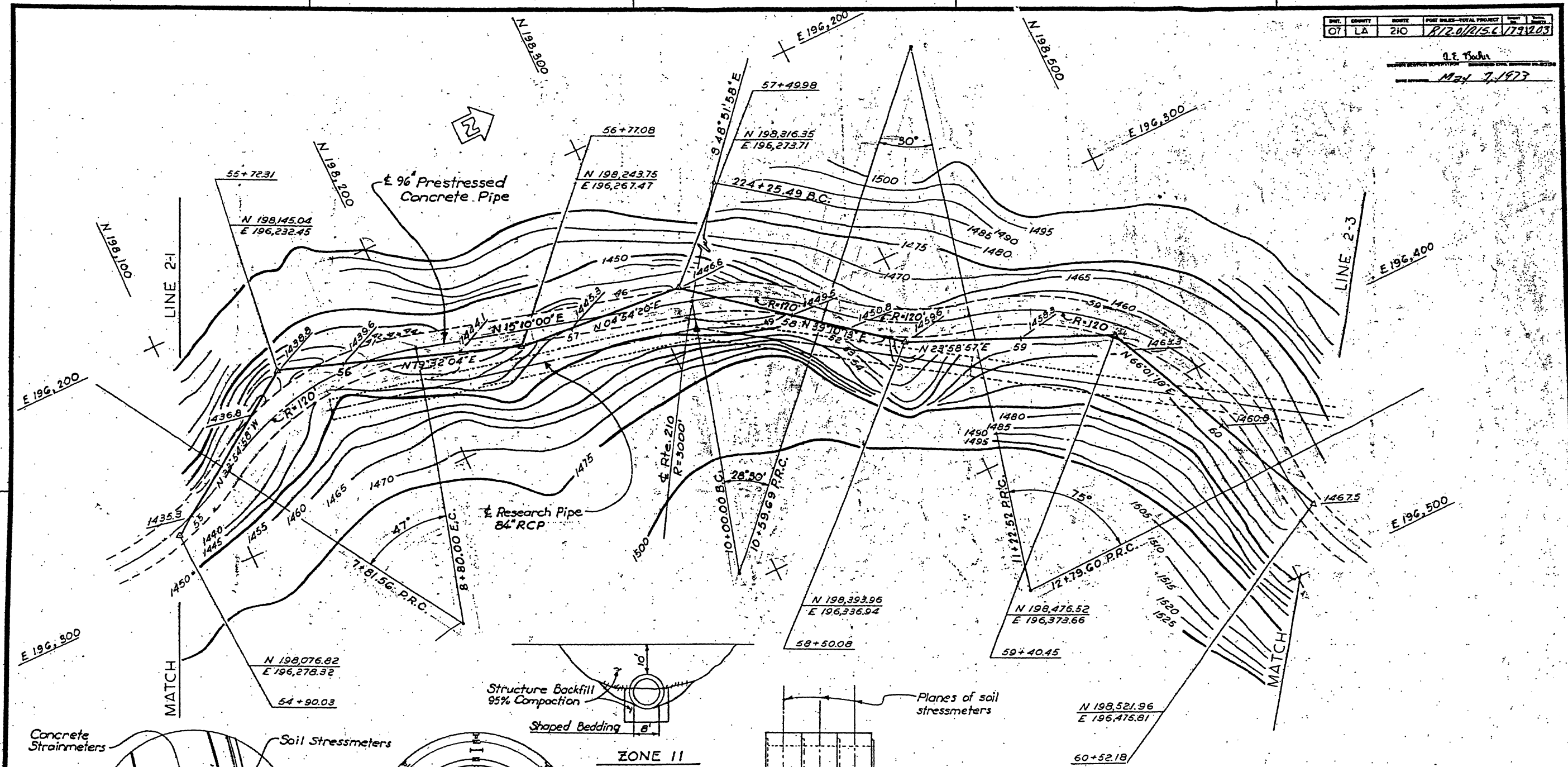
BRIDGE DEPARTMENT	
DESIGN SECTION 9	
Project Engineer	<i>K. Tachino</i>
DESIGN	by <i>D. F. Tachino</i>
DETAILS	by <i>Don Schwab</i>
QUANTITIES	by <i>Don Schwab</i>

	DRAWN	CHECKED
DATE	11-27-68	12-10-68
BY	K. Tachino	R. D. Gilstrap

STATE OF CALIFORNIA			
CROSS CANYON CULVERT			
FOUNDATION PLAN NO. 1			
BRIDGE NO. 53-2359	POST MILE 13.6	DRAWING NO. 532354	SCALE 1"=20'
		SHEET 2	OF 1

SHEET	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	SHEET	OF
07	LA	210	R12.0/115.6	179	203

G. F. Bach
 DATE OF REVISION
 May 7, 1973



DETAIL X 96" PRESTRESSED CONCRETE PIPE INSTRUMENTATION - ZONE 11

AS BUILT
 CORRECTIONS BY O. D. Maxie
 CONTRACT NO. 07-063743
 DATE 10-28-75

CONTOURS CHECKED AND VERIFIED IN FIELD
 DATE 11-6-68
 BY R.D. GILSTRAP

DATE	11-27-68	12-10-68
BY	K. Tachino	R.D. Gilstrap

BRIDGE DEPARTMENT DESIGN SECTION	
DESIGN	By P. Nichols
DETAILS	By Don Schroeder
QUANTITIES	By W.D. [unclear]
	By DON SCHROEDER

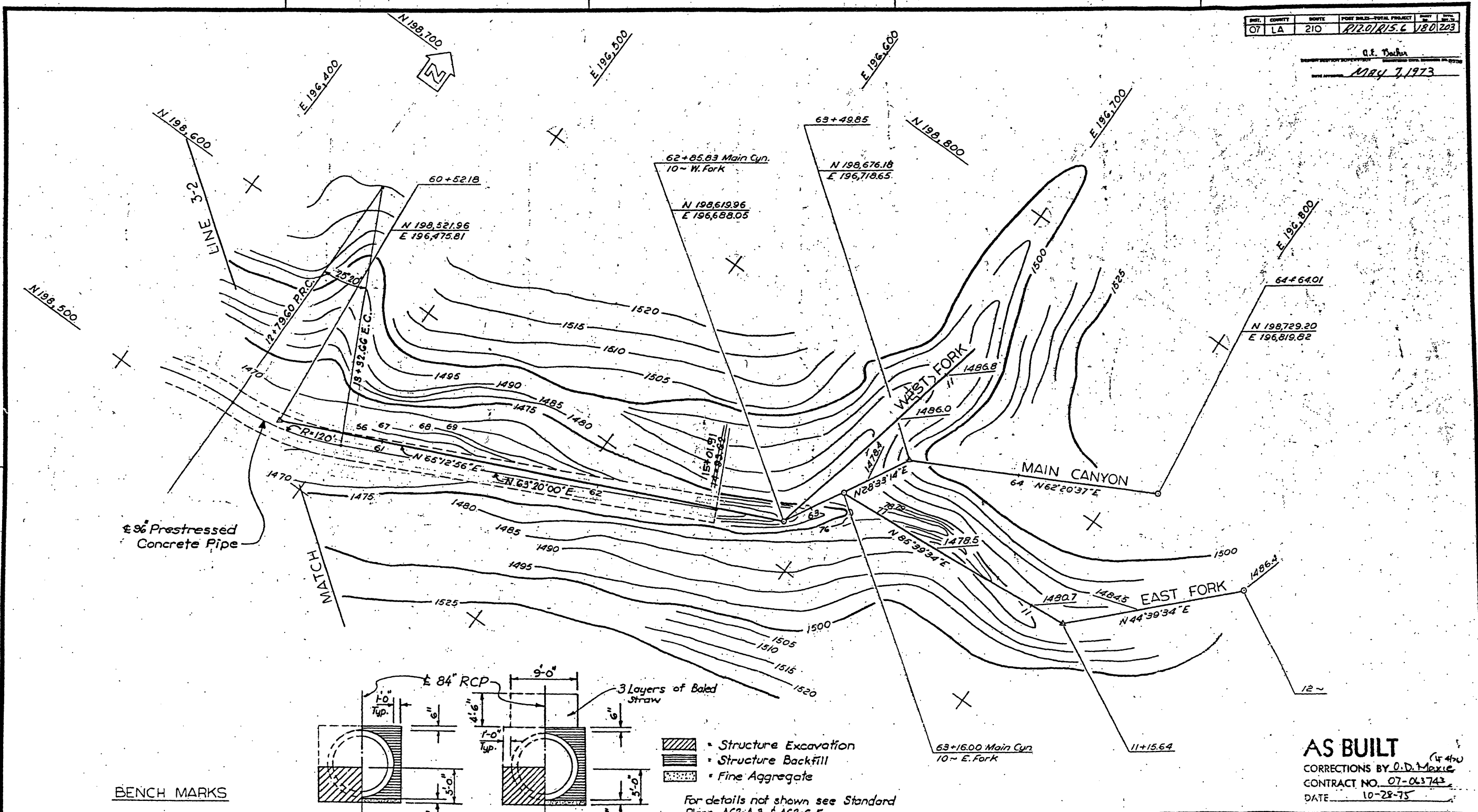
STATE OF CALIFORNIA	
CROSS CANYON CULVERT	
FOUNDATION PLAN NO. 2	
BRIDGE NO. 53-2359	POST MILE 13.6
DRAWING NO. 532359	SCALE 1"=20'
SHEET 3	OF 15

AS BUILT PLANS
 Contract No. 07-063743

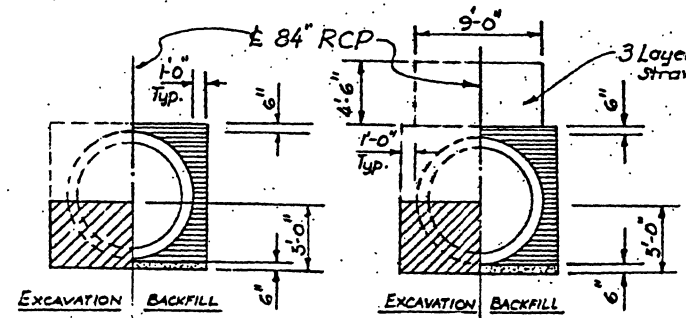
SHEET	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	SHEET NO.
07	LA	210	R12.0/R15.6	180/203

G.E. Tochino

MAY 7, 1973



8" Prestressed Concrete Pipe



- Structure Excavation
- Structure Backfill
- Fine Aggregate

For details not shown see Standard Plans A62-A.3 & A62-C.5
 For location of Sections BB & C-C see "84" RCP Details" sheet.

AS BUILT
 CORRECTIONS BY O.D. Maxie
 CONTRACT NO. 07-063744
 DATE 10-28-75

BENCH MARKS

See Sheet 1 of 3 for Bench Marks.

AS BUILT PLANS
 Contract No. 07-063744
 Date Completed
 Document No. 70007379

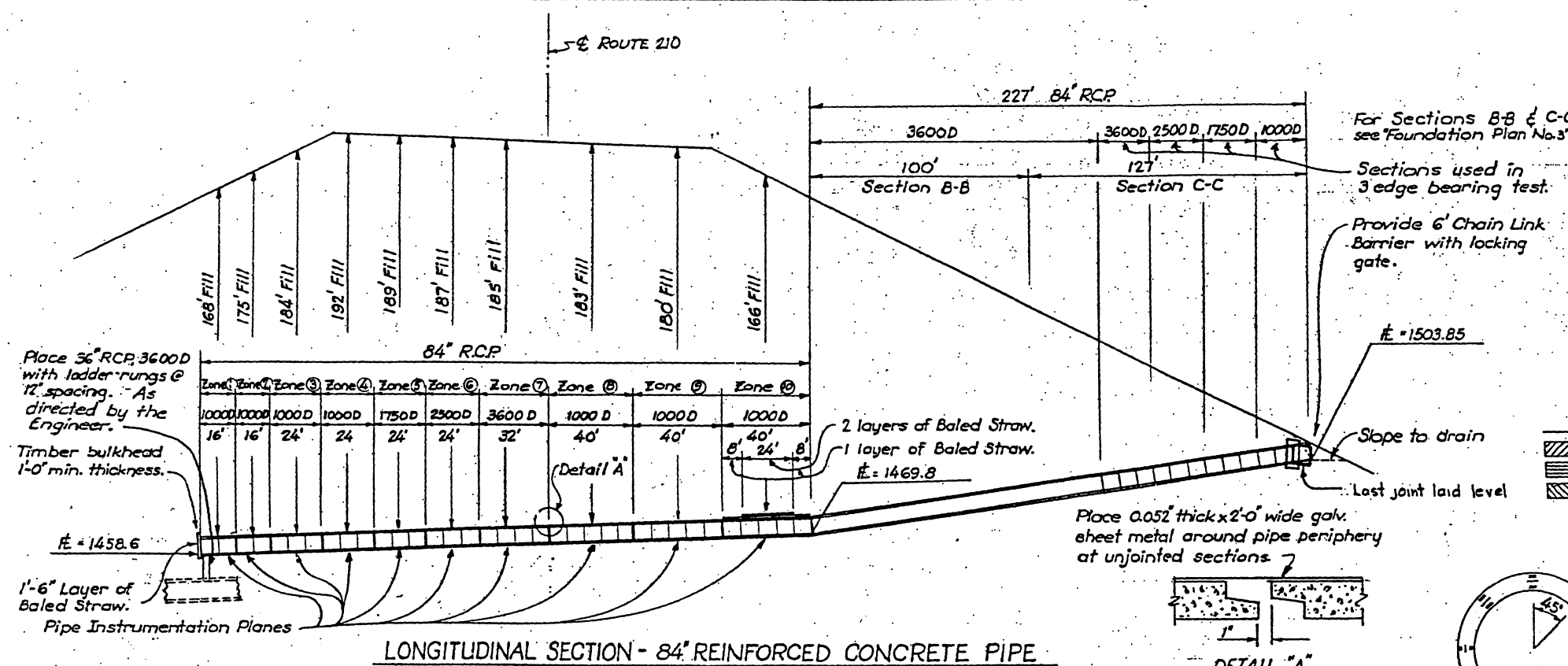
BRIDGE DEPARTMENT DESIGN SECTION		STATE OF CALIFORNIA	
Project Engineer	<i>R. Nichols</i>	CROSS CANYON CULVERT	
DESIGN	<i>R. Nichols</i>		
DETAILS	<i>Don Schroeder</i>		
QUANTITIES	<i>W. Schaefer</i>	FOUNDATION PLAN NO. 3	
	<i>Don Schroeder</i>		
DATE	11-27-68	12-10-68	BRIDGE NO. 53-2359
BY	K. Tochino	R.D. Gilstrap	POST MILE 13.6
			DRAWING NO. 532359
			SCALE 1"=20'
			SHEET 4 OF 13

CONTOURS CHECKED AND VERIFIED IN FIELD
 DATE 11-6-68
 BY R.D. GILSTRAP

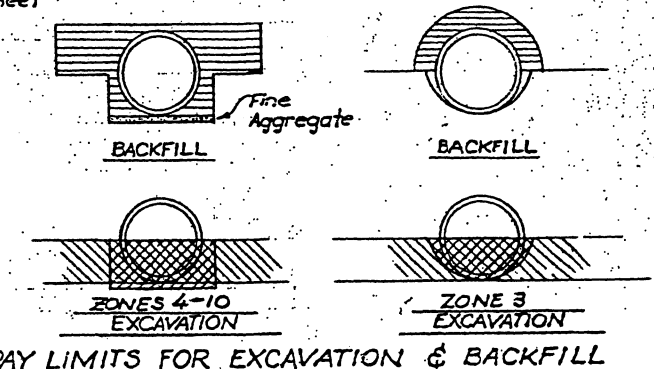
WO
 CU

DIST.	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	210	R12.0/R15.6	101	203

O.E. Parker
 8552
 May 7, 1973

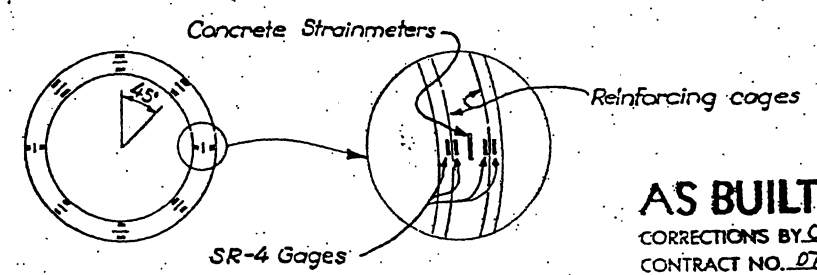


LONGITUDINAL SECTION - 84\"/>



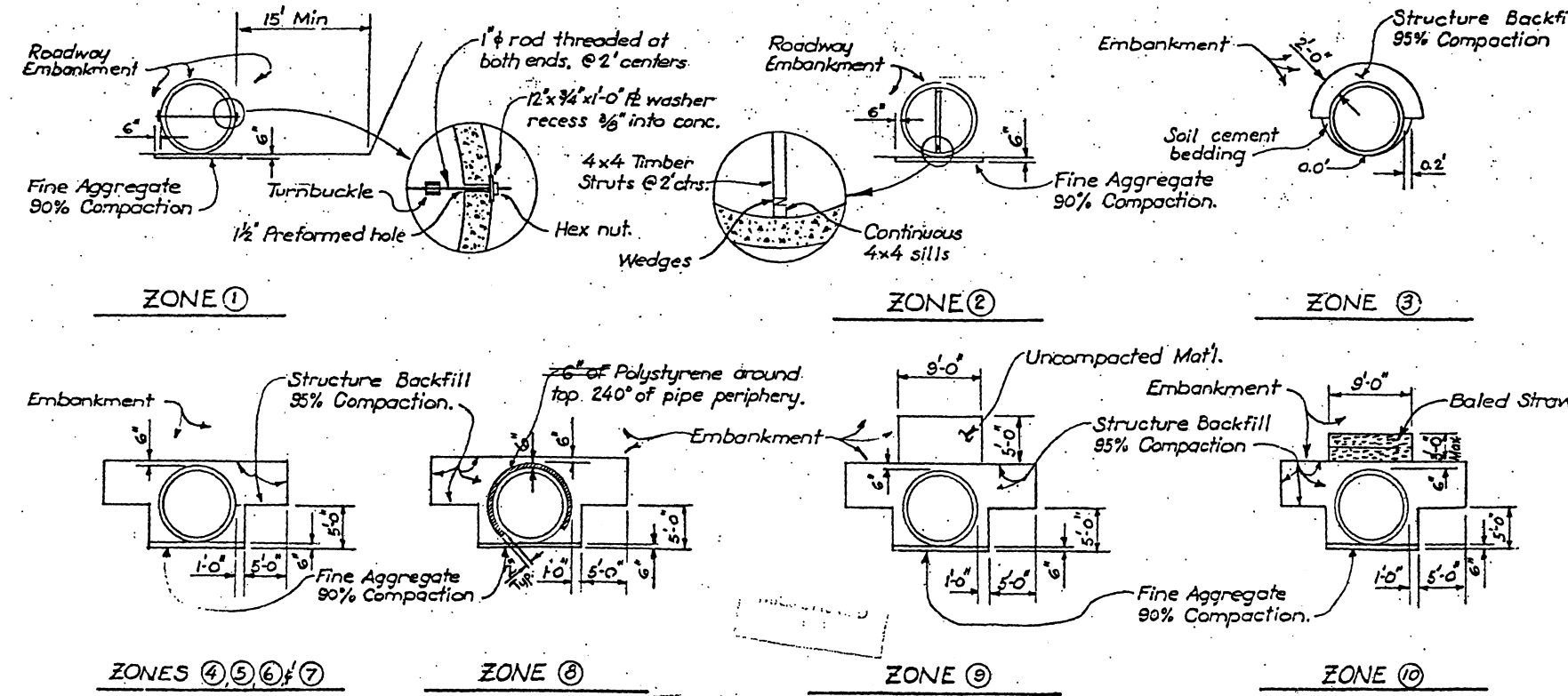
PAY LIMITS FOR EXCAVATION & BACKFILL

- Structure Excavation
- Structure Backfill
- Roadway Embankment



STRAIN GAGE LAYOUT
Zones 1-10

AS BUILT (if any)
 CORRECTIONS BY O.D. MAXIE
 CONTRACT NO. 07-063743
 DATE 10-28-75



PIPE INSTRUMENTATION

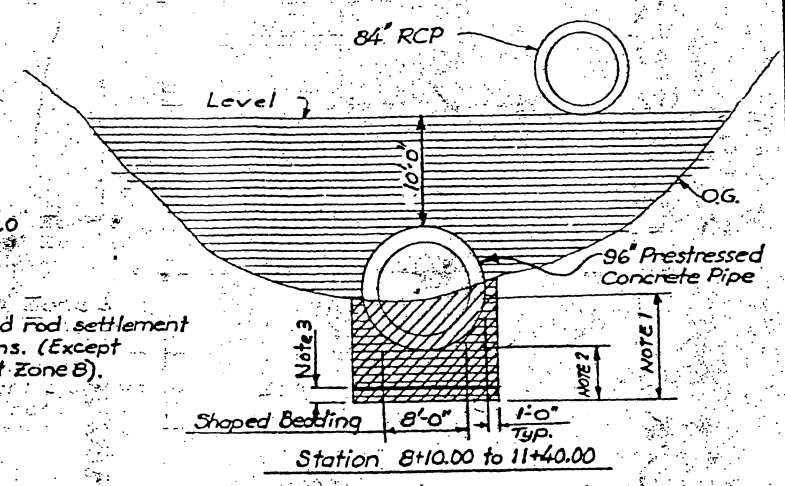
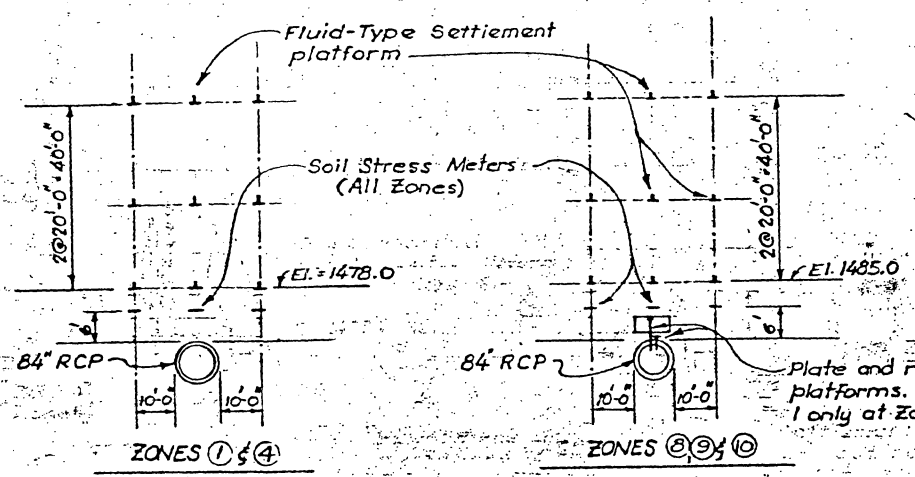
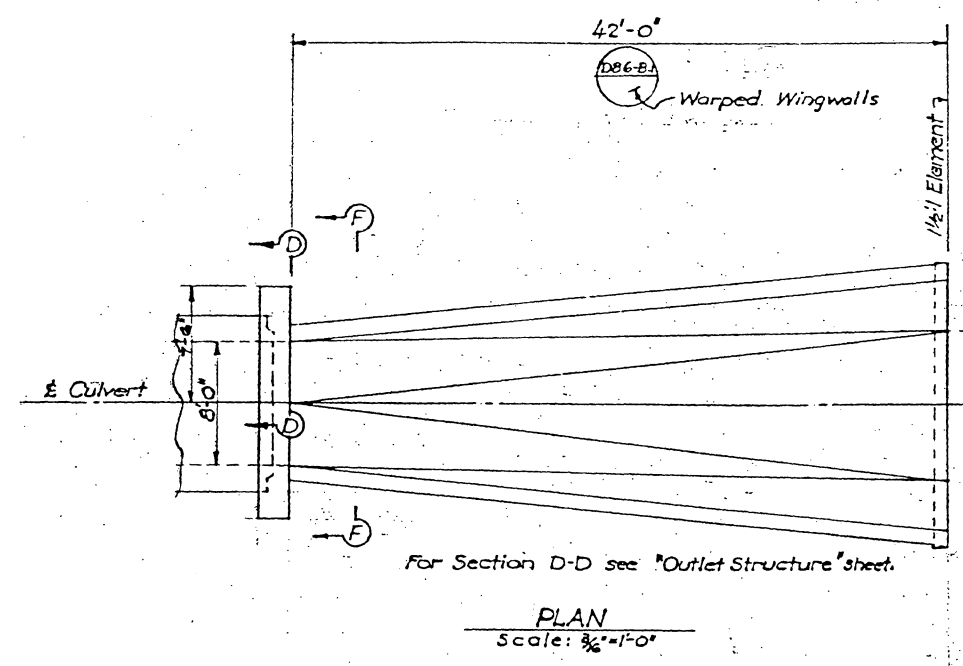
BRIDGE DEPARTMENT DESIGN SECTION 9		STATE OF CALIFORNIA TRANSPORTATION AGENCY DIVISION OF HIGHWAYS			
Project Engineer: <i>Nichols</i>		CROSS CANYON CULVERT			
DESIGN: by <i>Gilbert Parker</i>					
CHECKED: by <i>O.E. Parker</i>					
DETAILS: by <i>O'Leary 7-73</i>		84\"/> 			
CHECKED: by <i>O.E. Parker</i>					
QUANTITIES: by <i>O'Leary 7-72</i>		BRIDGE NO. 53-2359	POST MILE 13.6	DRAWING NO.	SHEET 5 OF 13
CHECKED: by <i>J. J. ...</i>					

AS BUILT PLANS
 Contract No. 07-063744

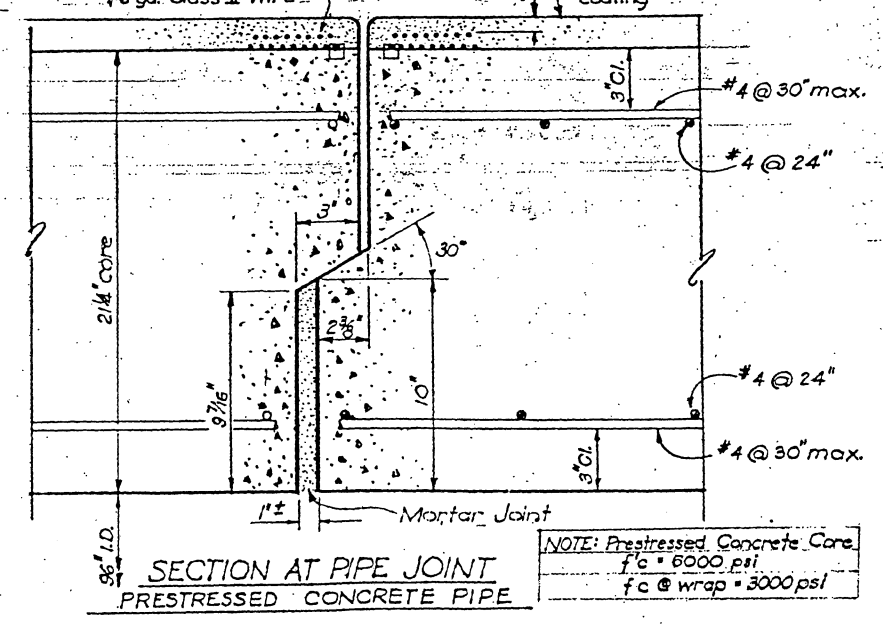
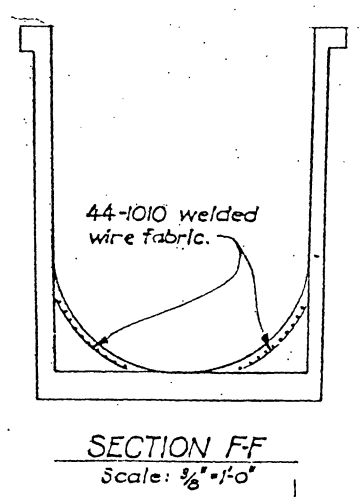
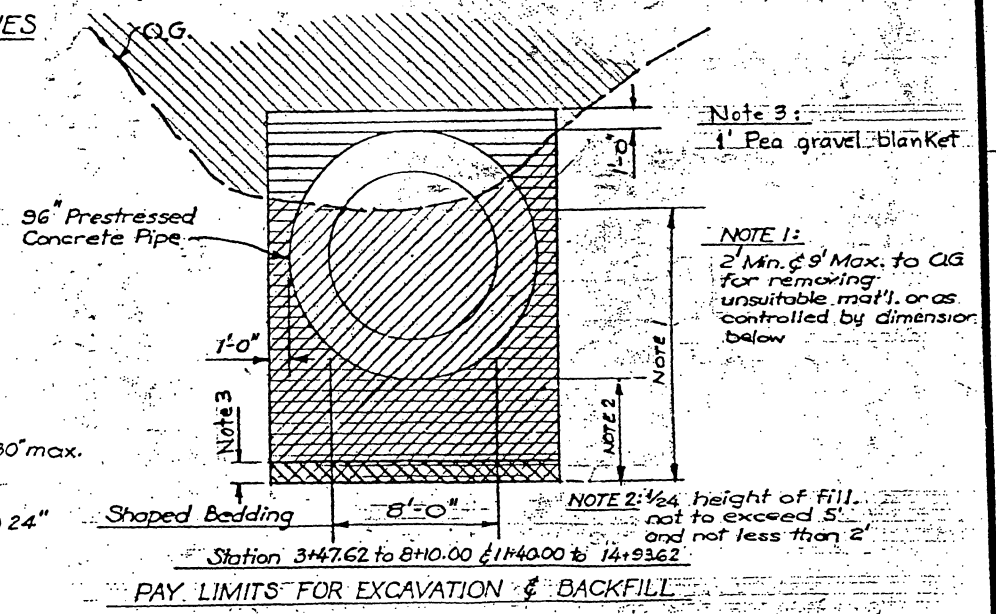
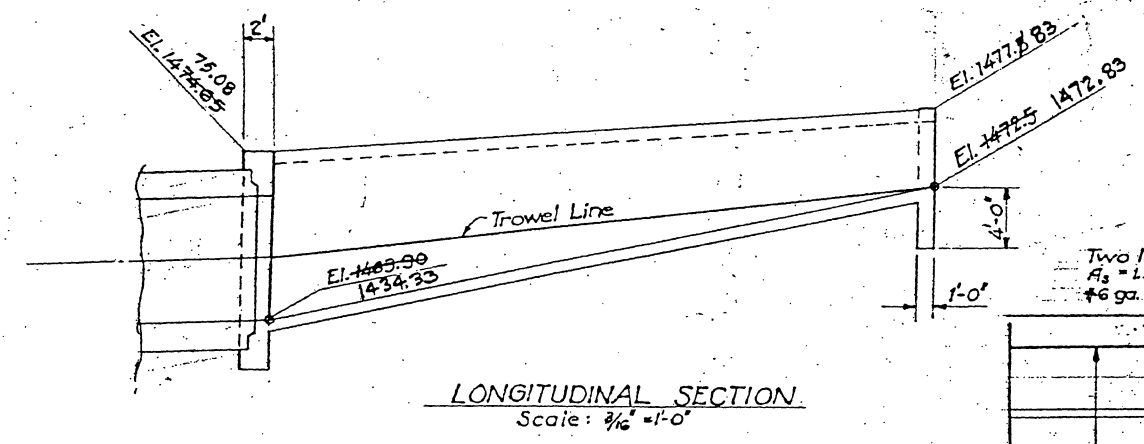
WO 063741
 CUI

DIST.	COUNTY	ROUTE	POST MILE - TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	210	112.0/115.6	162	203

A.F. Bachus
 DESIGNER
 May 7, 1973



EMBANKMENT INSTRUMENTATION PLANES
 No Scale



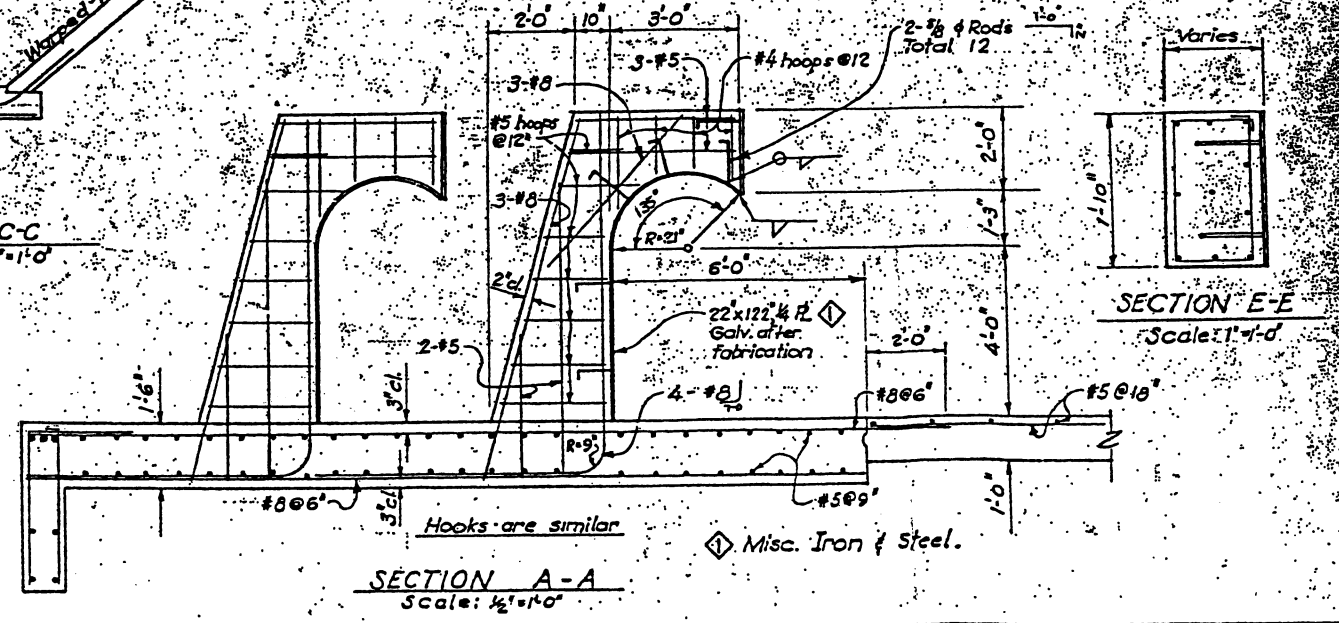
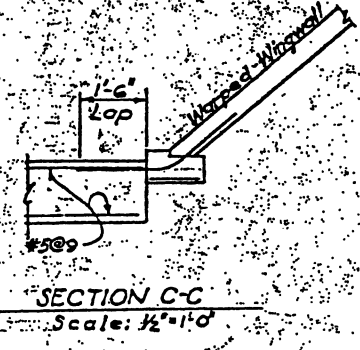
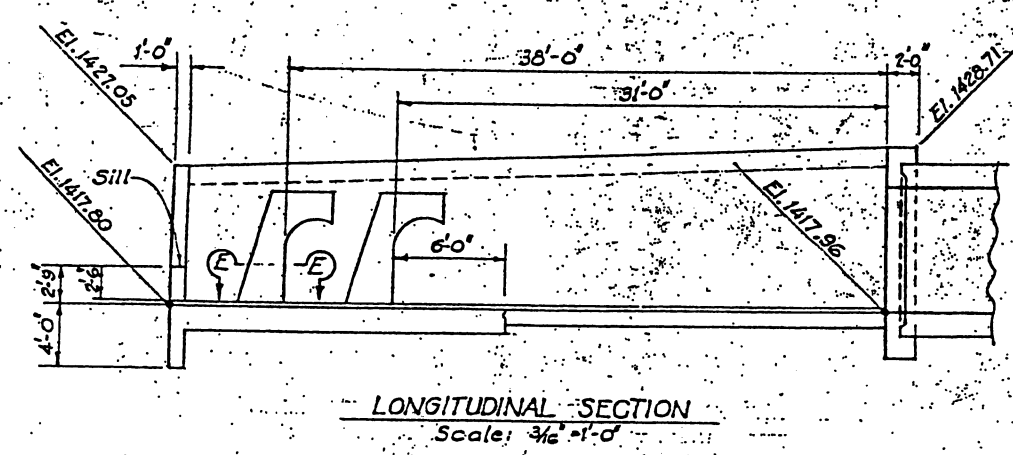
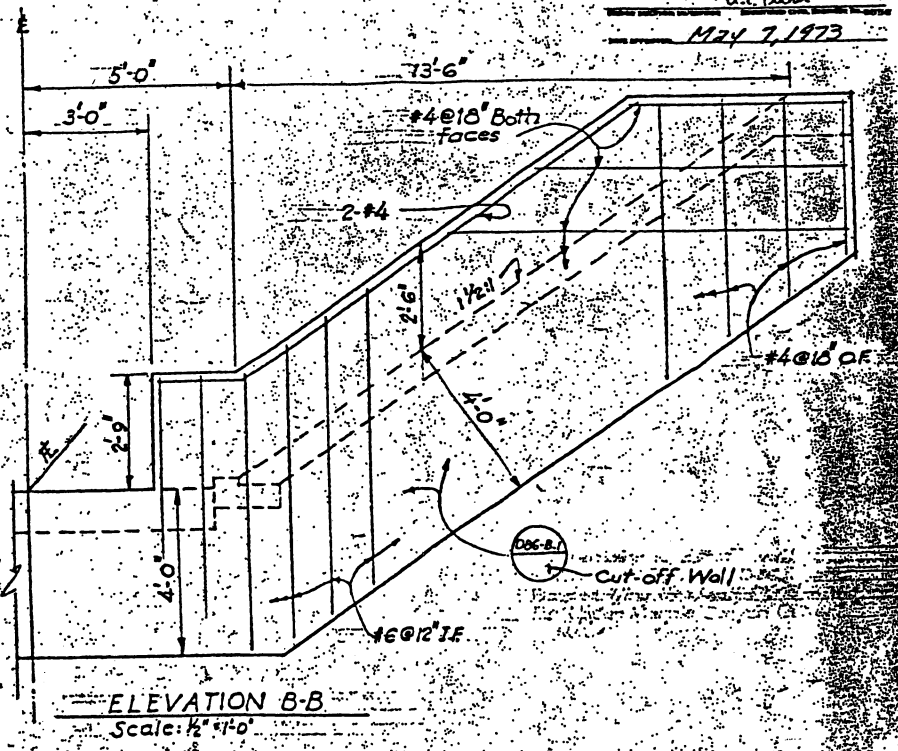
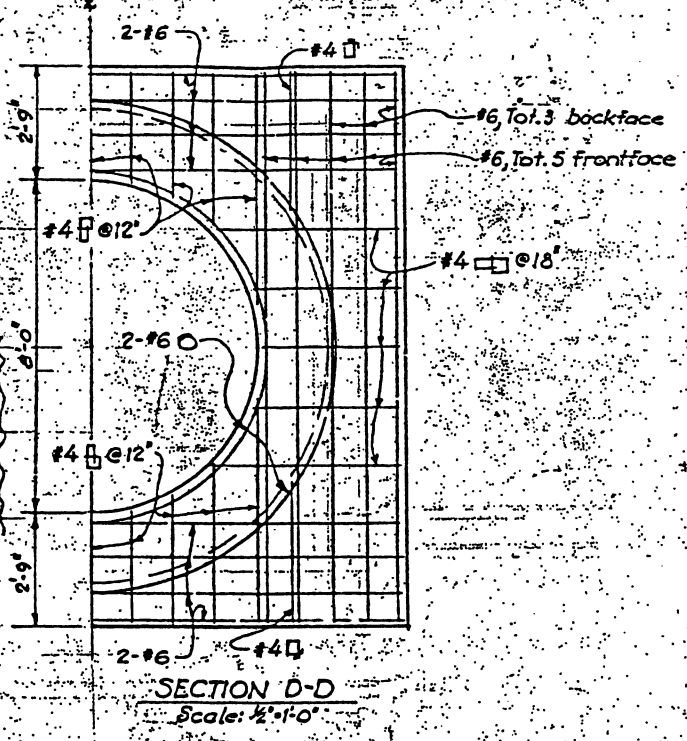
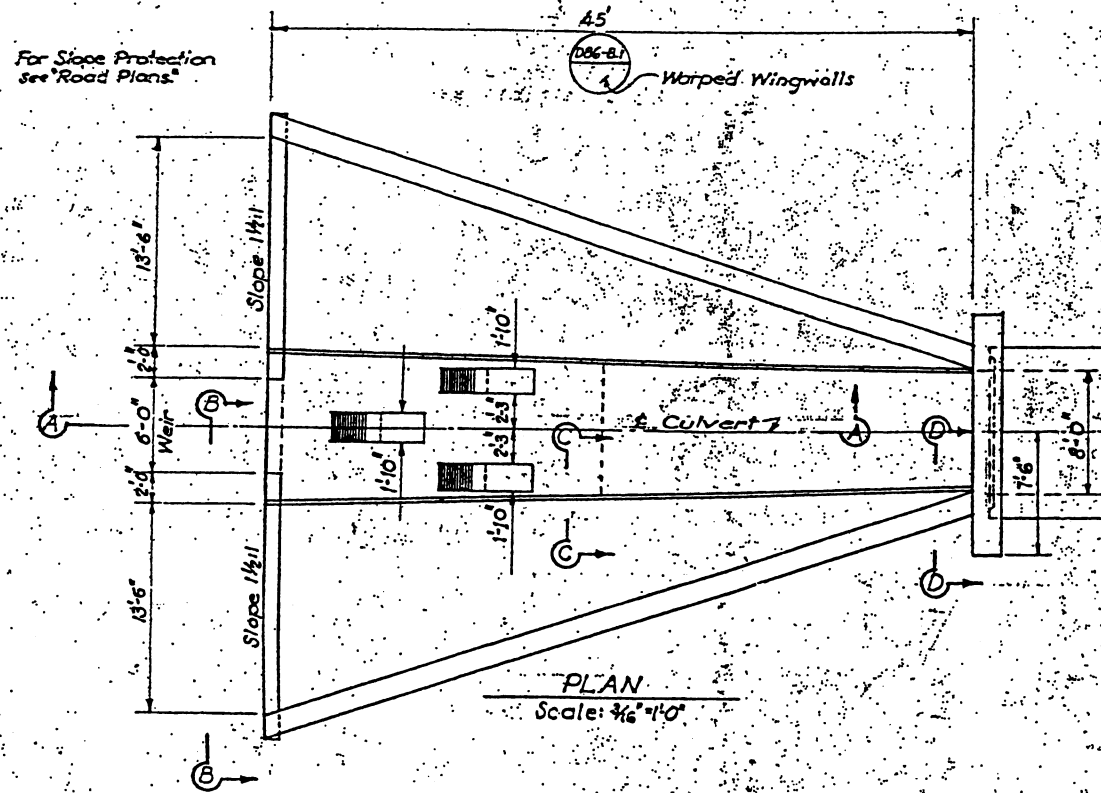
AS BUILT PLANS
 Contract No. 07-063744
 Date Completed
 Document No. 2000 7379

AS BUILT
 CORRECTIONS BY O.D. Maxie
 CONTRACT NO. 07-063743
 DATE 10-26-75

BRIDGE DEPARTMENT DESIGN SECTION 9		CROSS CANYON CULVERT	
Project Engineer: P. Nicholas		INLET STRUCTURE	
DESIGN	by P. Nicholas	BRIDGE NO.	53-2359
DETAILS	checked by O'Leary T-69	POST MILE	15.6
QUANTITIES	checked by P. Nicholas	DRAWING NO.	532359-3
	checked by P. SCHAEFER	SHEET	6
		OF	13

NO.	COUNTY	ROUTE	POST MILE - TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	210	R120/R154	103	203

O.J. Taha
 MAY 7, 1973



AS BUILT PLANS
 Contract No. 07-063744
 Date Completed _____
 Document No. 7000 7379

AS BUILT NONE (if 42)
 CORRECTIONS BY O.D. MAXIE
 CONTRACT NO. 07-063743
 DATE 10-28-75

BRIDGE DEPARTMENT DESIGN SECTION 9	
Project Engineer	R. Miller
DESIGN	by R. Miller
DETAILS	by O'Leary 7-69
QUANTITIES	by D.J. Schaeffer

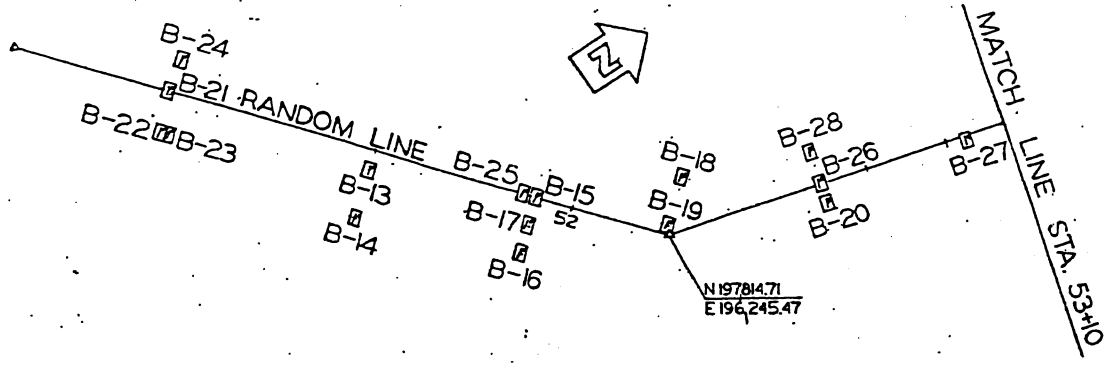
CROSS CANYON CULVERT	
OUTLET STRUCTURE	
BRIDGE NO. 53-2359	POST MILE 13.6
DRAWING NO. 532359-4	SHEET 7 OF 13

NO.	COUNTY	DISTRICT	POST MILE-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	210	RIZORIS-C	184	203

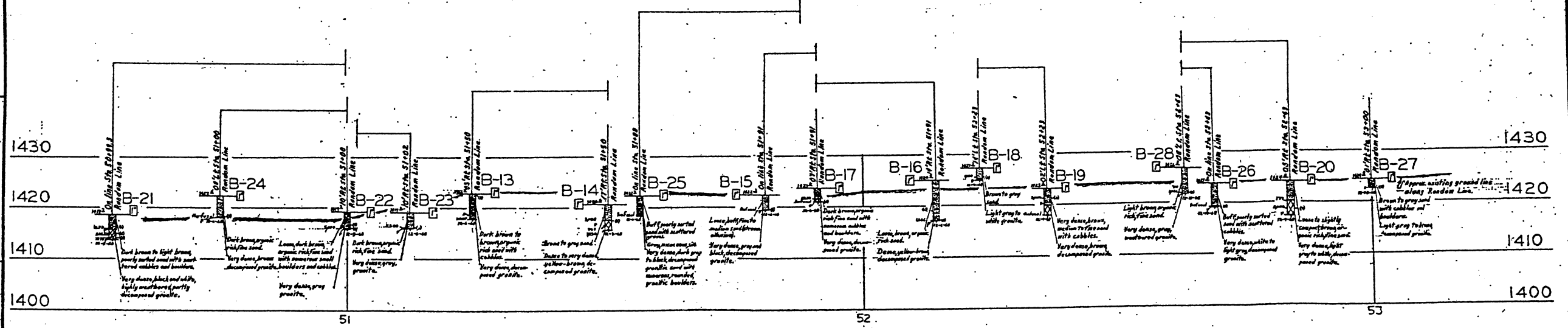
0.5 Miles
 May 7, 1923
 ESSB

BENCH MARK
 BM FH-46 Elev 1815.48
 Set 5/4 brass cap Mon. in conc. stamped
 C.H.C. FH-46 top of ridge 3500' N.W.
 of FH-45.

NOTE:
 For Gravel Refect Surface see sheets 232/6 of 6



PLAN
 Scale: 1" = 20'



PROFILE
 Scale: Vert 1" = 4' Horiz 1" = 10'

AS BUILT PLANS
 Contract No. 07-063744
 Date Completed
 Document No. 2000 7379

AS BUILT none
 CORRECTIONS BY O.D. Maxine
 CONTRACT NO. 07-063743
 DATE 10-28-25

FIELD STUDY
 DRAWN BY M. MARVIN B-31-78
 CHECKED BY W. C. GALE B-31-78
 Approved: [Signature]

BRIDGE DEPARTMENT
 ENGINEERING GEOLOGY SECTION

LEGEND OF EARTH MATERIALS

Gravel	Clayey Silt	Siltstone	Shale
Sand	Clayey Sand	Quartzite	Sandstone
Silt	Sandstone	Granite	Basalt
Clay	Shale	Metamorphic Rock	Unconsolidated

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

STATE OF CALIFORNIA
 SHEET 1 OF 6

CROSS CANYON CULVERT

LOG OF TEST BORINGS NO. 1

BRIDGE NO. 53-2359	POST MILE 16	DRAWING NO. 532359	SHEET 8	OF 13
--------------------	--------------	--------------------	---------	-------

POST MILES-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
112.01856	185	203

O. F. Fisher
 May 7, 1973



LEGEND OF BORING OPERATIONS

① Penetration
 ② 2 1/2" Core
 ③ Station within Day
 ④ Station within Day
 ⑤ JTY
 ⑥ Core
 ⑦ Test pit

LEGEND OF EARTH MATERIALS

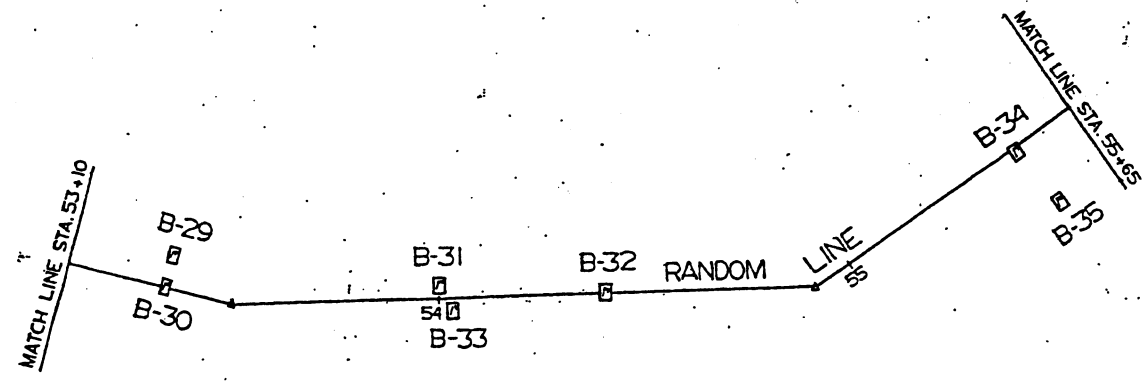
GRAVEL
 SAND
 SILT
 CLAY
 SILTY SAND
 SILTY CLAY
 SILTY CLAY WITH SAND
 ORGANIC MATTER
 PALM MATERIAL
 MINERAL ROCK
 STRATIFIED ROCK
 METAMORPHIC ROCK

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

Present names for some soil structures are shown in parentheses. The classification is based on the percentage of material passing through the standard sieve sizes. The classification is based on the percentage of material passing through the standard sieve sizes.

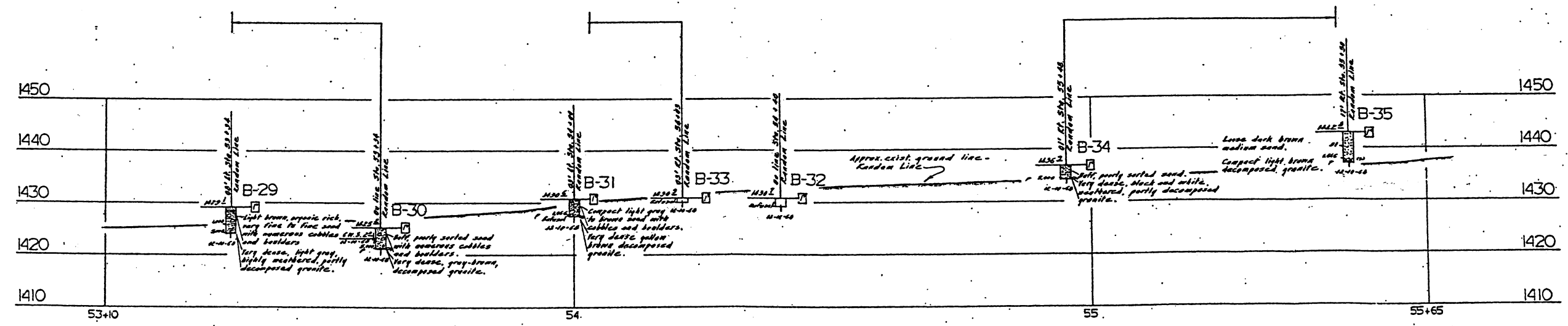
NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

BENCH MARK
 SEE SHEET 1



PLAN
 Scale: 1" = 20'

PROFILE
 Scale: Vert. 1" = 10'
 Horiz. 1" = 10'



AS BUILT PLANS
 Contract No. 07-063744
 Date Completed _____
 Document No. 7000 7379

AS BUILT NONE
 CORRECTIONS BY O. D. Maxie
 CONTRACT NO. 07-063743
 DATE 10-28-75

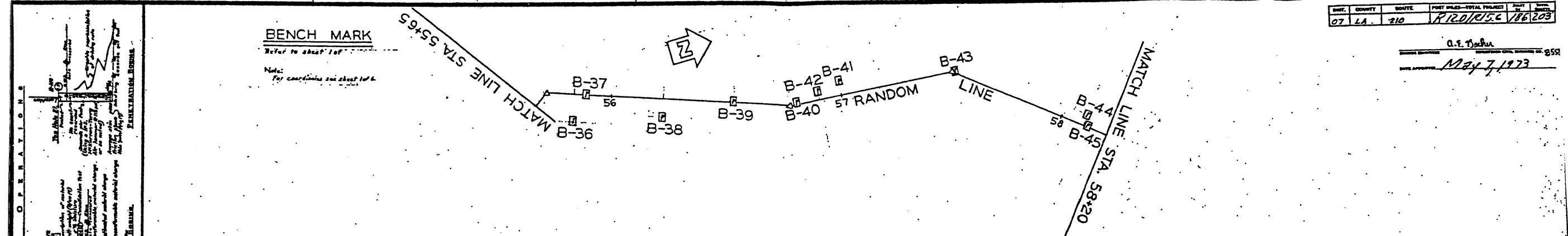
STATE OF CALIFORNIA SHEET 2 OF 6

CROSS CANYON CULVERT

LOG OF TEST BORINGS NO. 2

BRIDGE NO. 53-2359	POST MILE 13.6	DRAWING NO. 532359	SHEET 9	OF 13
--------------------	----------------	--------------------	---------	-------

G. E. Doherty
May 7, 1973



PLAN
 Scale: 1"=20'

LEGEND OF PENETRATION

BENCH MARK
 Refer to sheet 107

Note:
 For coordinates see sheet 107A

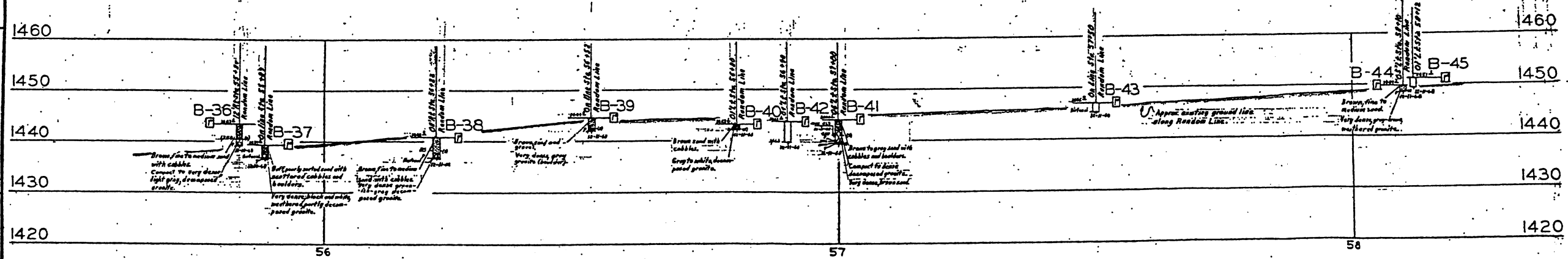
- Penetration
- 2 1/2 Cone Penetration
- Standard Penetration (SPT)
- Remmert sounding (RWS)
- Alaska sounding (AS)
- Jet sounding
- Cone sounding
- Test pit

LEGEND OF EARTH MATERIALS

- Gravel
- Silty clay or clayey silt
- Sand
- Silt
- Clay
- Silty clay or clayey silt
- Silty sand
- Organic silt
- Fill material
- Interspersed rock
- Strombolian rock
- Hydrothermal rock

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.



PROFILE
 Scale: Vert. 1"=10'
 Horiz. 1"=10'

AS BUILT PLANS

Contract No. 07-063744
 Date Completed _____
 Document No. 7000 7379

AS BUILT NONE
 (LF 476)
 CORRECTIONS BY D. D. Maxie
 CONTRACT NO. 07-063743
 DATE 10-28-75

STATE OF CALIFORNIA			SHEET 3 OF 6	
CROSS CANYON CULVERT				
LOG OF TEST BORINGS NO. 3				
BRIDGE NO. 53-2359	POST MILE 13.6	DRAWING NO. 53-2359	SHEET 10	OF 13

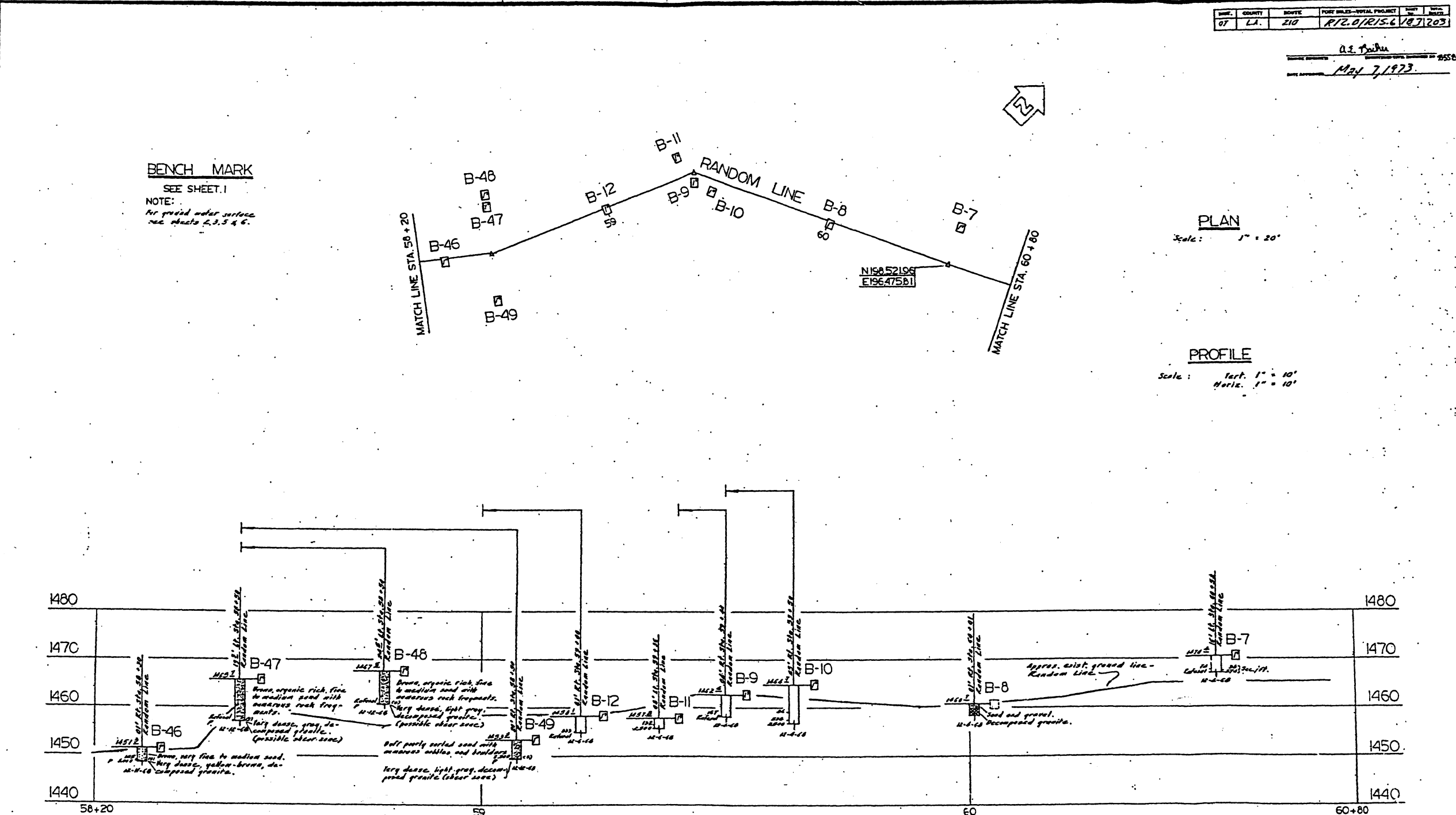
A.E. Doherty
 DATE: May 7, 1973

LEGEND OF BORINGS OPERATIONS

LEGEND OF EARTH MATERIALS

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SITE LIMITS

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.



AS BUILT PLANS
 Contract No. 07-063744
 Date Completed _____
 Document No. 2000 7379

AS BUILT NONE 1542
 CORRECTIONS BY D.D. Maxie
 CONTRACT NO. 07-063743
 DATE 10-28-75

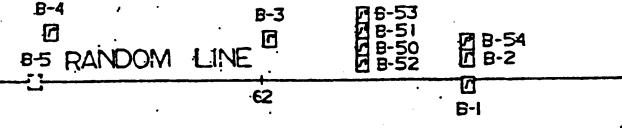
STATE OF CALIFORNIA			
SHEET 4 OF 6			
CROSS CANYON CULVERT			
LOG OF TEST BORINGS NO. 4			
BRIDGE NO. 23-2359	POST MILE 13.6	DRAWING NO. 532359	SHEET 11 OF 13
SECTION DATES (PRELIMINARY STAKE ONLY)			

Q. F. Yabu
 May 7, 1973



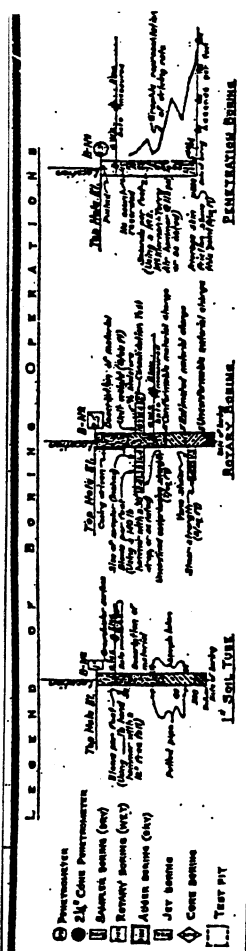
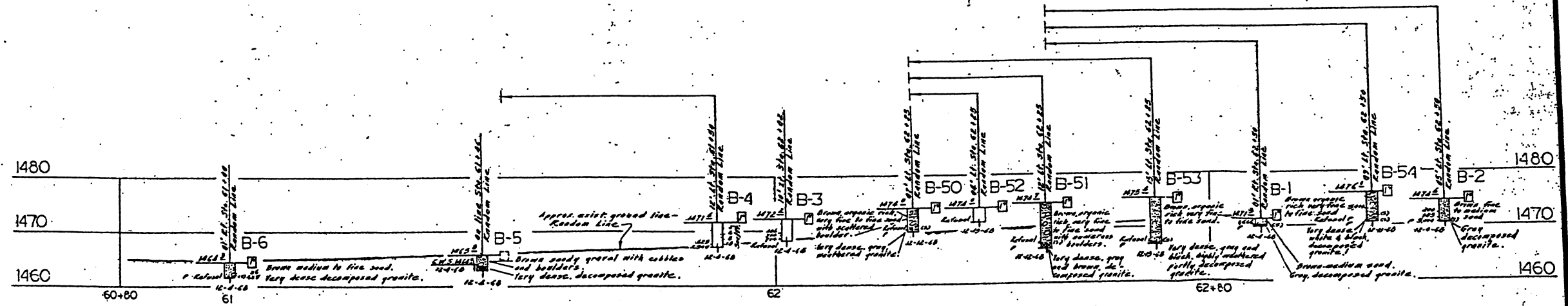
BENCH MARK
 SEE SHEET 1

MATCH LINE STA. 60+80



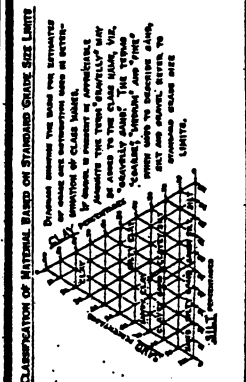
PLAN
 Scale: 1" = 20'

PROFILE
 Scale: Vert. 1" = 10'
 Horiz. 1" = 10'



LEGEND OF EARTH MATERIALS

Gravel	Silty clay or clayey silt
Sand	Silt
Silt	Clay
Clay	Sandy clay or silty sand
Sandy clay or silty sand	Silty sand
Silty sand	Organic matter
Fill material	Impure rock
Impure rock	Stratified rock
Stratified rock	Metamorphic rock



NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

AS BUILT PLANS
 Contract No. 07-063744
 Date Completed
 Document No. 7000 7379

AS BUILT NONE (if any)
 CORRECTIONS BY O.D. Maxie
 CONTRACT NO. 07-063743

DATE	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07 LA	210	R120/R15-6	109/203		

O.E. Fisher
 May 7, 1973

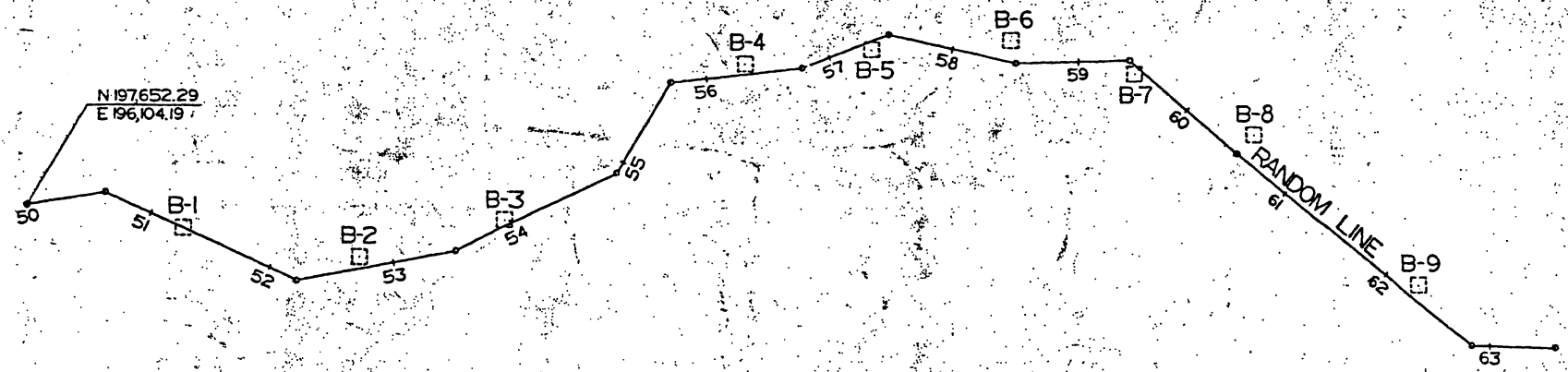
LEGEND OF EARTH MATERIALS

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

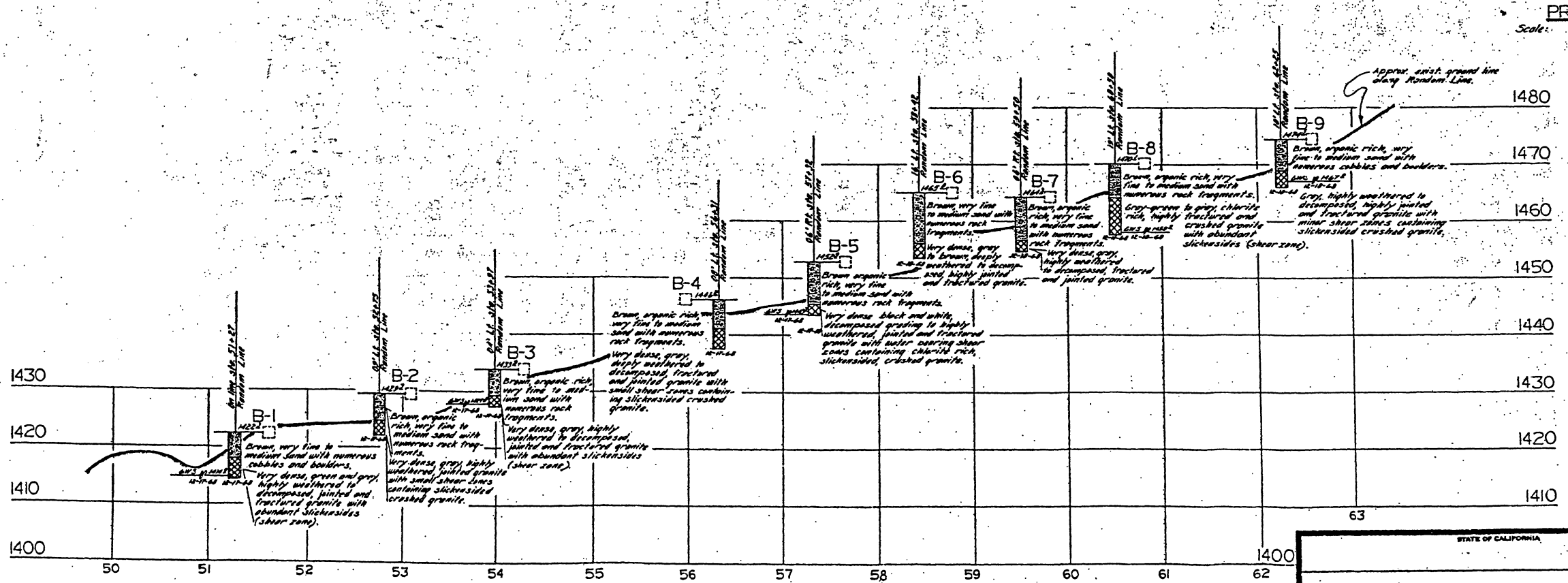
LEGEND OF MATERIALS

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

BENCH MARK
 BM# FH-46 Elev. 1415.44
 Set 5th brass cap Mark in conc. stamped
 "C.N.C. FH-46" top of ridge 3500' NW
 of FH-42



PLAN
 Scale: 1"=60'



FIELD STUDY	BY K.C. LOAN	8-10-69
DRAWN	BY J. L. LORAN	8-21-69
CHECKED	BY W.C. COLE	9-2-69

BRIDGE DEPARTMENT
 ENGINEERING GEOLOGY SECTION

STATE OF CALIFORNIA		SHEET 6 OF 6	
CROSS CANYON CULVERT			
LOG OF TEST BORINGS NO. 6			
BRIDGE NO. 53-2359	POST MILE 23.6	DRAWING NO. 532359	SHEET 13 OF 15

AS BUILT PLANS
 Contract No. 07-063744
 Date Completed

AS BUILT NONE
 CORRECTIONS BY D.D. Maxie
 CONTRACT NO. 07-063743
 DATE 10-28-75

WO 063741

189

NOTICE TO CONTRACTORS

- SPECIFICATIONS:** ALL WORK SHALL CONFORM TO THE 1985 EDITION INCL 264 '87 SUPPLEMENTS OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ADOPTED BY THE BOARD OF PUBLIC WORKS OF THE CITY OF LOS ANGELES AS MODIFIED BY STANDARD PLAN S-610-17
- THIS IMPROVEMENT CONSISTS OF WORK CALLED FOR ONLY ON THIS PLAN.
- ALL PROVISIONS OF THE LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PERMIT SHALL BE COMPLIED WITH. THIS PERMIT IS INCLUDED IN THE SPECIAL PROVISIONS FOR THIS PROJECT. PERMIT NO. B7057-B
- STANDARD PLANS FOR THIS PROJECT**
 - S-610-17 NOTICE TO CONTRACTORS - COMPREHENSIVE
 - S-251-1 PIPE LAYING IN TRENCHES
 - S-140-0 MANHOLES - GENERAL
 - S-141-0 BRICK MANHOLE
 - S-282-1 FRAME AND COVER - 24"

L.A.C.F.C.D. STANDARD DRAWINGS

- 2-D17B FENCE AND GATE DETAILS FOR CHANNEL R/W
- 2-D261.1 TO 1.3 PROTECTION BARRIER
- 2-D180 TYPICAL FENCE, GATE & HEADWALL DETAILS FOR CHANNEL WALLS
- 2-D 253 STD. DOUBLE PIPE AND WIRE REYEMENT

5. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE WORK AREA TRAFFIC CONTROL HANDBOOK (MATCH) ADOPTED BY THE BOARD OF PUBLIC WORKS OF THE CITY OF LOS ANGELES.

6. TRAFFIC LANE REQUIREMENTS

LA TUNA CYN. RD.
ONE LANE OF TRAFFIC IN EACH DIRECTION AT ALL TIMES.

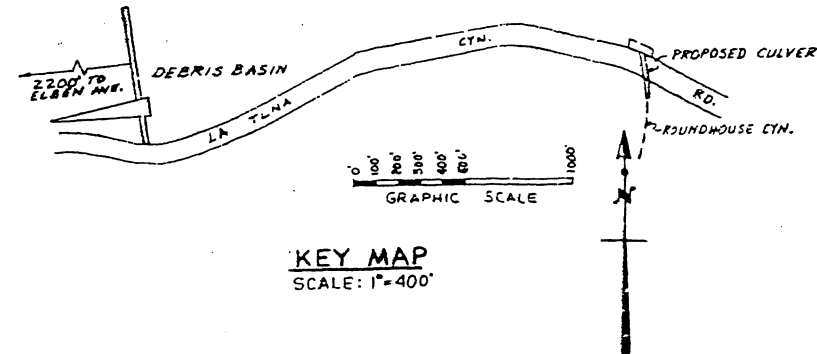
7. HYDRAULIC DATA

- EXIST. DIRT CHANNEL - MAX. Q = 670 cfs.
HEIGHT OF CHANNEL = DEPTH OF WATER = 5'
STORM FREQUENCY PROTECTION = 1 YR. APPROX.
- MIN. DESIGN FLOOD $Q_D = 1417$ cfs. (bulk)
NORMAL DEPTH $d_n = 4.59'$ (FUTURE CHANNEL)
- DESIGN FLOOD $Q_{50} = 1860$ cfs. (bulk)
NORMAL DEPTH $d_n = 5.67'$ (FUTURE CHANNEL)
- BASE FLOOD $Q_{100} = 2061$ cfs. (bulk)
NORMAL DEPTH $d_n = 6.12'$ (FUTURE CHANNEL)
- OVERTOPPING FLOOD - $Q = 1860$ cfs.
DEPTH OF FLOW = 2.0'
ELEV. OF H.S. = $1173.5 + 2.0 = 1175.5'$ (AVERAGE)

FAUP M-L584 (2)

INDEX TO SHEETS

SHT. NO.	PLANS OF	FROM	TO
1	TITLE SHEET		
2	STORM DRAIN CULVERT AND OPEN CHANNEL	ROUNDHOUSE CYN. 100' S/O LA TUNA CYN. RD.	60' N/O LA TUNA CYN. RD.
3-7	STRUCTURAL		



LA TUNA CANYON ROAD CULVERT AT
ROUNDHOUSE CANYON W.O. 51381

NO.	REVISION DESCRIPTION	DNV./DIST. ENGR.	DATE	CITY ENGINEER	DATE
1	Added reference to LACFCO Plan on Sht. 2	Ed. Hume	8-10-87	R. S. Horii	8-31-87

CITY OF LOS ANGELES		
ROBERT S. HORII CITY ENGINEER		
APPROVALS	ENGINEER	DATE
STRUCTURAL	R. S. Horii	7-31-86
WASTEWATER		
ST. LIGHTING		
TRAFFIC & RSP		
SURVEY		
APPROVED: <i>Sept 24</i>		1986
Robert S. Horii		CITY ENGINEER



DESIGNED BY: *[Signature]* DRAWN BY: *[Signature]* CHECKED BY: *[Signature]*

PROJECT ENGINEER: *[Signature]* PROJECT NO. 51381

STREETS: LA TUNA CYN. RD. ROUNDHOUSE CYN. RD.

STRUCTURES: CULVERT

STORM DRAIN: 18" X 24" R/W

SURVEY: 1970 X ADJ.

DATE: 7/1/84

FIELD BOOK NO. 577 DATE OF SURVEY: JULY 1984

PRELIMINARY MAP NO. 51381 DATE: JULY 1984

PROFILE: 1173.5 TO 1175.5 DATE: JULY 1984

SECTION: 100' TO 100' DATE: JULY 1984

PAGE: 1 OF 1

REFERENCES:

DISTRICT MAP NO. 7545

DRAINAGE MAP NO. 51381

SUPERSEDES PLAN NO. D-22684

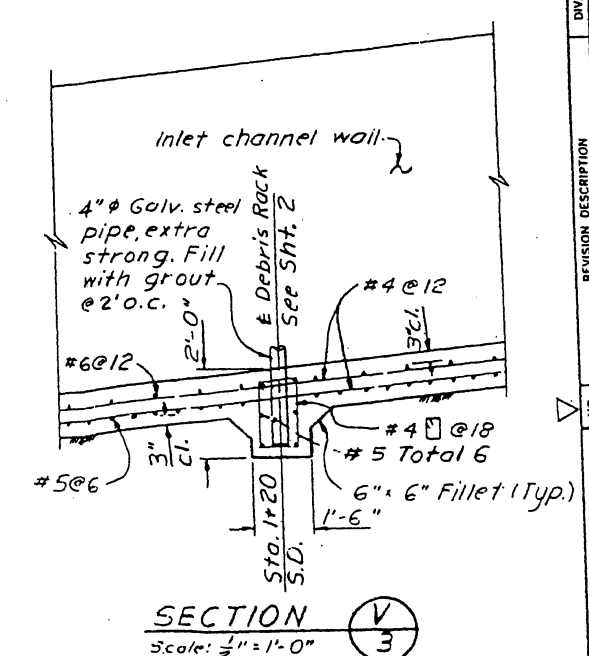
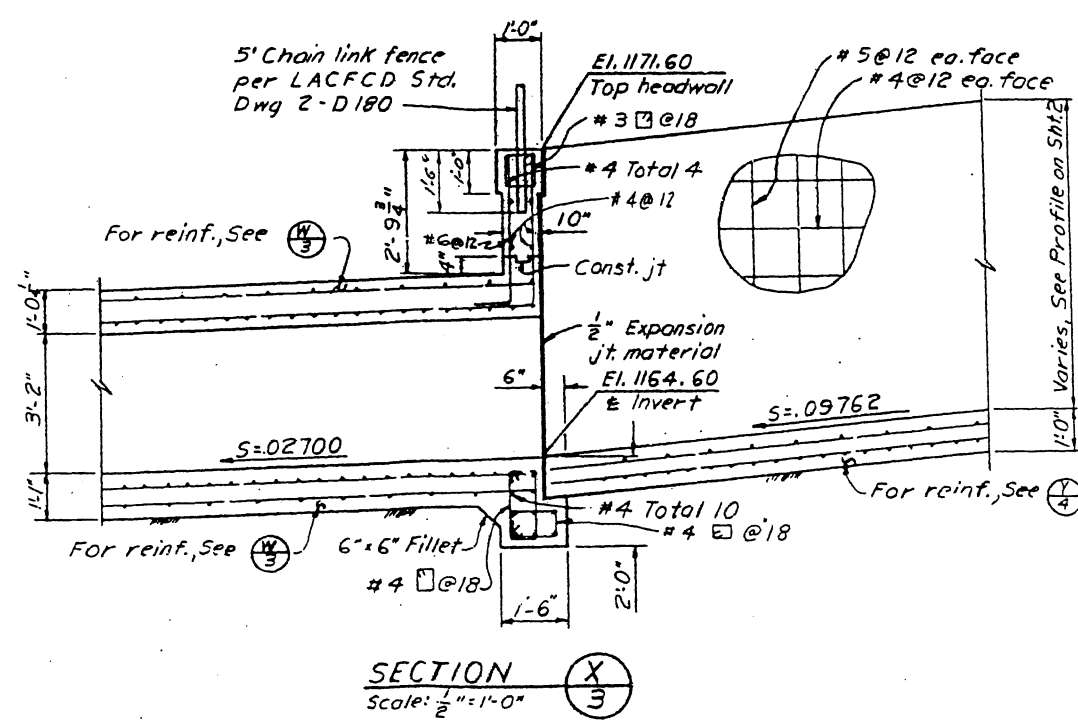
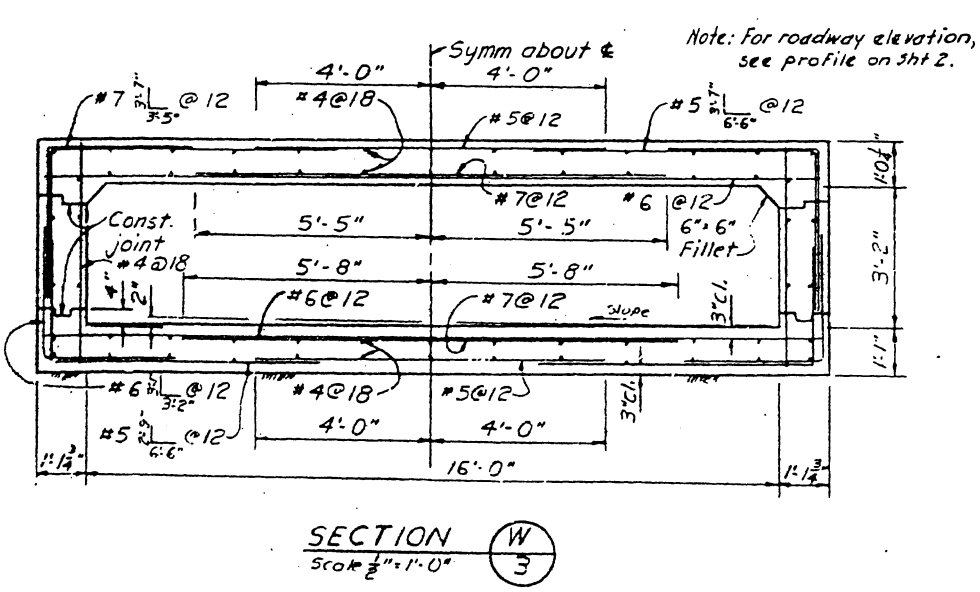
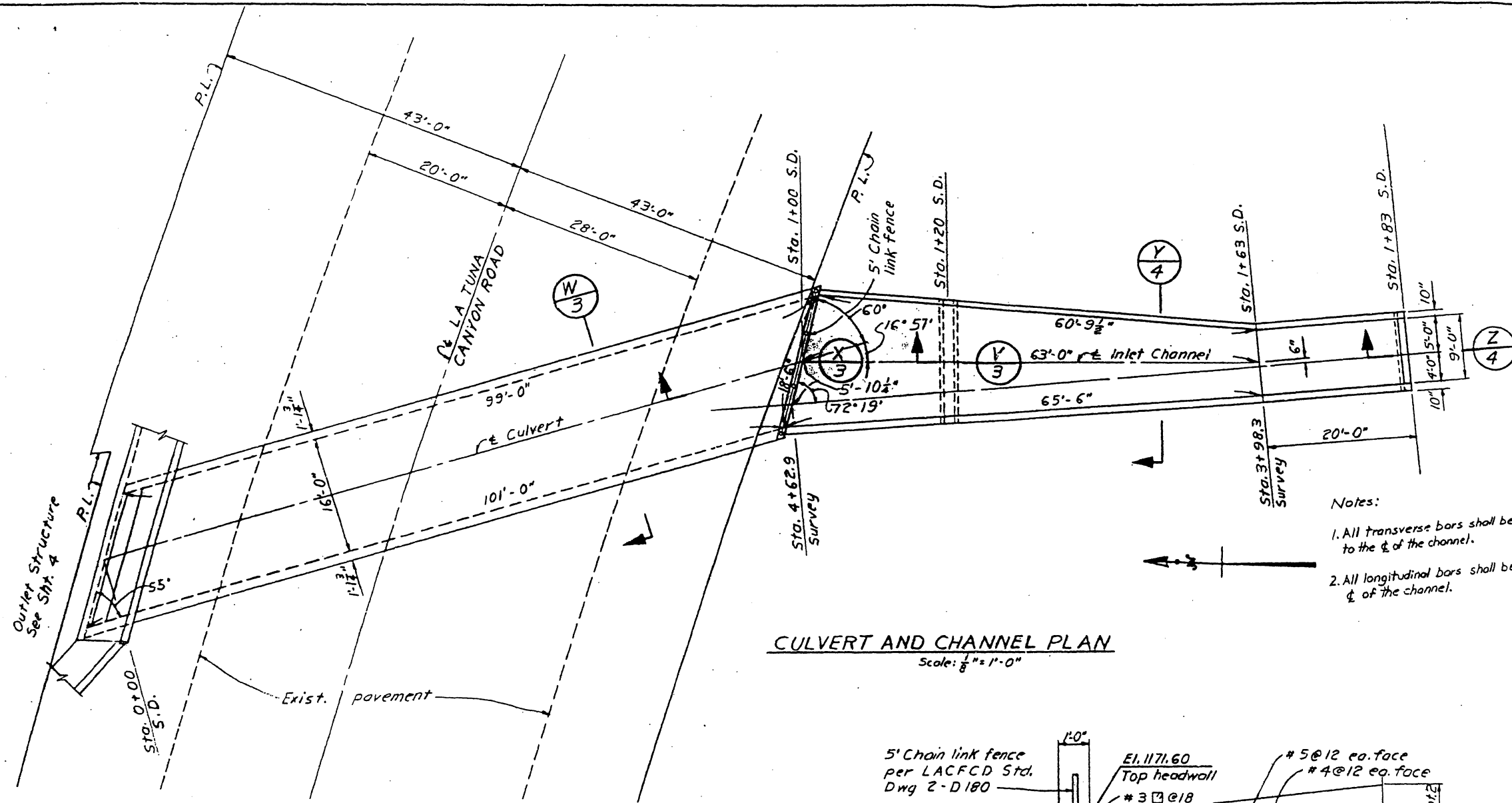
INDEX QUIDS

PROJECT DISPOSITION: 1/01 SERIAL NO. 172

WORK ACCEPTED: 2/11 BY: GJ

CONSTRUCTION CHANGES MADE: 2/11 BY: GJ

PROJECT ABANDONED:



DESIGNED	A. Nohness	DATE	10-85
DRAWN	G. Martinez	DATE	10-85
CHECKED	J. S. ...	DATE	10-85
SUPERVISED	D. ...	DATE	10-85
PROJECT ENGR.	ALEX ...	DATE	11-85
ASST. DIV./DIST. ENGR.	...	DATE	11-85

CULVERT AND CHANNEL PLAN AND SECTIONS

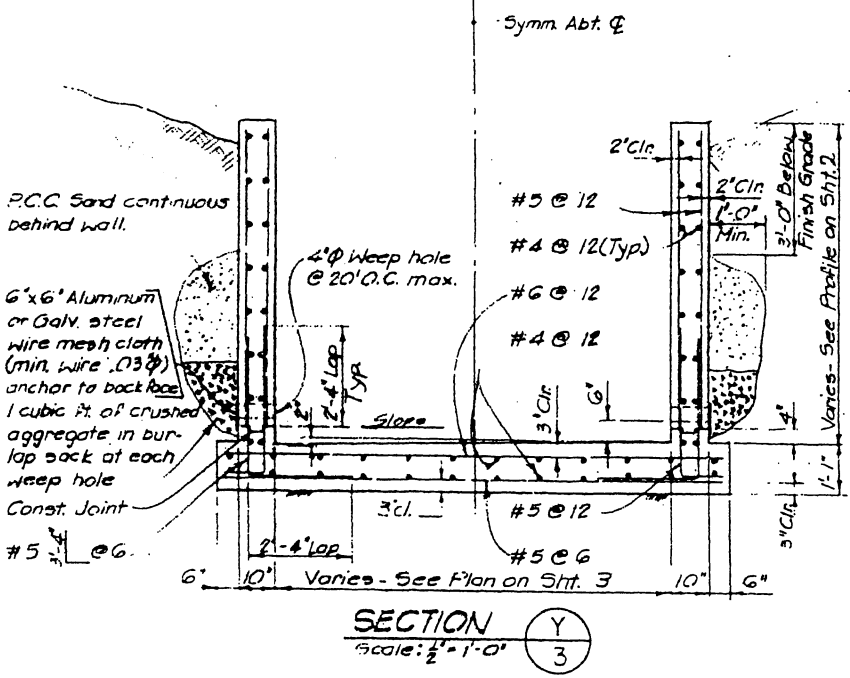
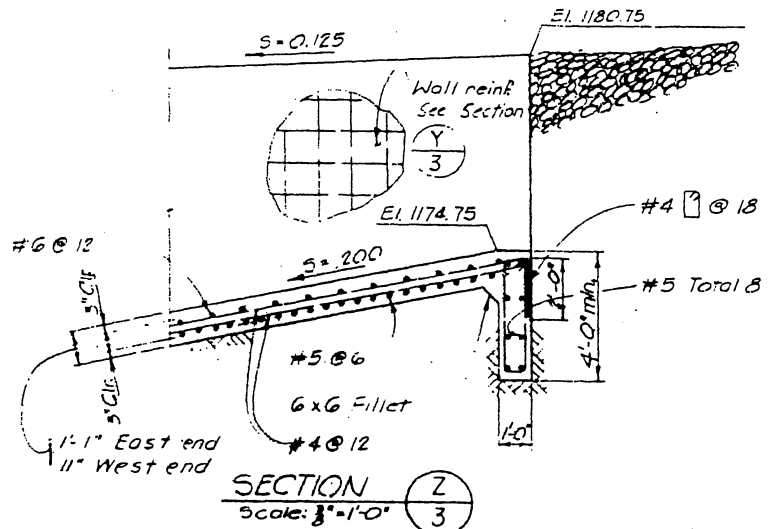
NO.	REVISION DESCRIPTION	DATE

LA TUNA CANYON ROAD CULVERT AT ROUNDHOUSE CANYON W.O. 51381

CITY OF LOS ANGELES
ROBERT S. HORII
CITY ENGINEER

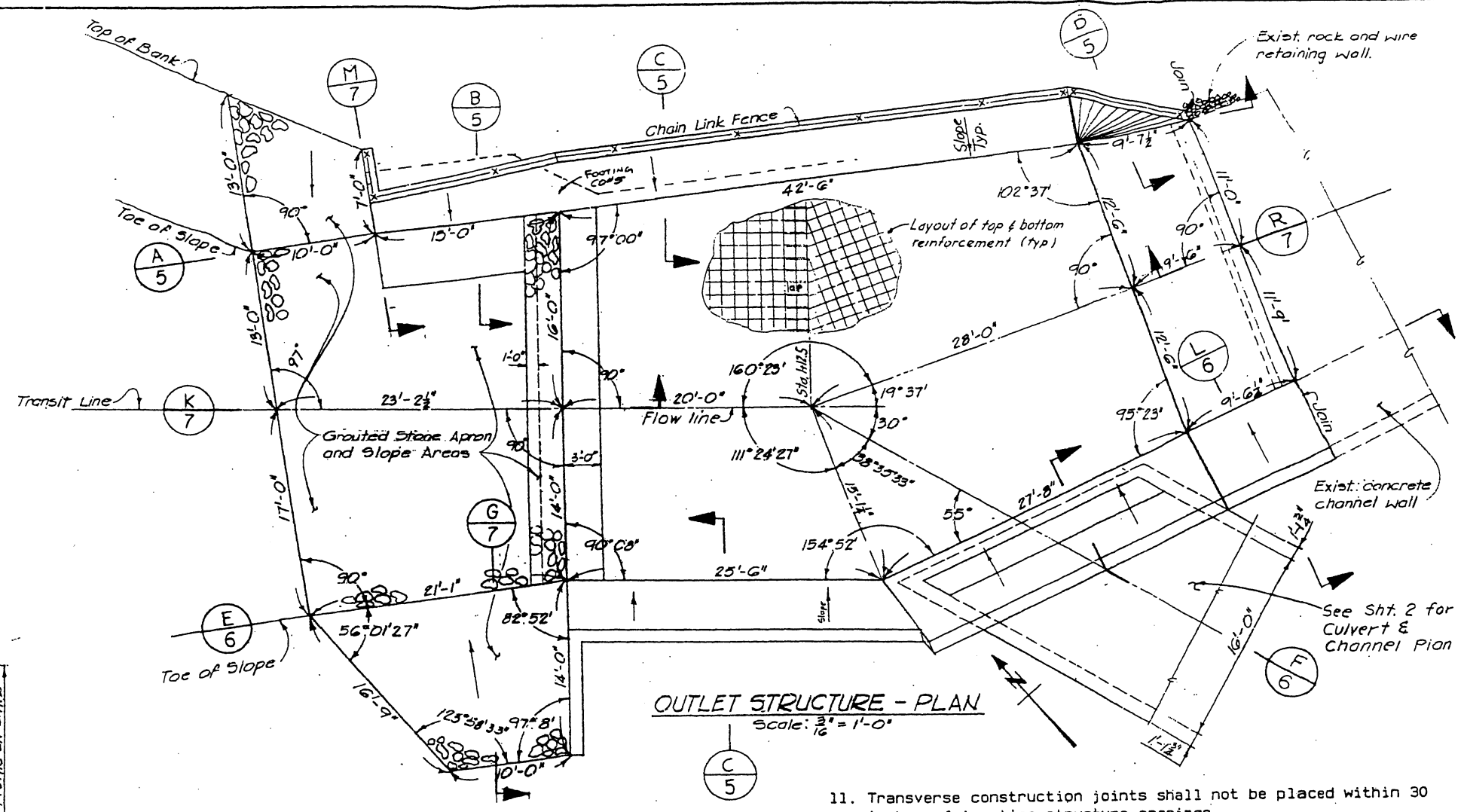
DATE: 10-15-85

[Signature]
DIV./DIST. ENGR.



STRUCTURAL NOTES:

- All concrete used in this project shall be Class 658-C-4000* Co#2
- All reinforcement shall conform to the requirements of ASTM designation A615, Grade 60.
- Bar spacing is center to center of bars. Bar cover is the clear distance between surface of bar and face of concrete and shall be 2 inches unless otherwise noted. Reinforcement shall terminate 2 inches from concrete surface, unless otherwise noted.
- All bar bends and hooks shall conform to American Concrete Institute's "Building Code Requirements for Reinforced Concrete," Section 7.1.
- Placing of reinforcement shall conform to the American Concrete Institute's "Building Code Requirements for Reinforced Concrete," Section 7.5.



- Concrete dimensions shall be measured horizontally or vertically on the profile and parallel to or at right angles.
- Unless otherwise detailed herein or approved by the Engineer, splices of reinforcing bars made by lapping shall comply with the following requirements (#11 Bars or smaller):
 - Bars shall be lapped 45 diameters of the smaller bar spliced, up to #8 bars and 60 diameters for bars larger than #8 up to #11 bar.
 - Bars may be continuous in lieu of splicing.
 - Bars shown as spliced shall be continuous at all other locations.
 - Splices in adjacent bars shall be staggered at least one splice length.
 - Bars detailed as continuous and longer than 60 ft. may be spliced in 60 foot lengths at locations determined by the Contractor. Longitudinal steel shall be continuous and extend through all construction joints.
- Transverse construction joints in wall and slabs shall be in same place. No staggering of joints will be permitted. Transverse construction joints shall be normal to the centerline of construction.
- No splices in transverse steel reinforcement will be permitted other than shown on the drawings without approval of the Engineer. No more than two splices will be permitted in any longitudinal bar between transverse joints. Splices shall be staggered.
- Unless otherwise shown on the drawings, transverse joints (in both slabs and walls) shall be placed at the end of each pour, but the spacing thereof shall not exceed fifty feet or less than ten feet. All construction joints in bottom slab, top slab and side walls shall be in the same plane. No staggering of joints will be permitted.

* CO#2 APPROVED THE USE OF SPOTCRITE 630-C-4000 FOR THE OUTLET STRUCTURE (WALLS ONLY) TRANSFERRED CONCRETE CO.

- Transverse construction joints shall not be placed within 30 inches of junction structure openings.
- Exposed edges of concrete members shall be rounded or beveled.
- At the beginning and ending of all pours, a complete curtain of main reinforcement shall be placed 3 inches from the transverse construction joints.

DESIGN DATA

CULVERT:

Live Load: HS 20-44
 Dead Load: Earth load per Marston's Formula: W=110 pcf.
 $K_y=K_y' = 0.150$
 $B_d =$ Outside width of box plus 3 feet.
 Side earth: 37 psf per foot of depth (E.F.P.).
 Internal water pressure: 62.4 psf per foot of depth.
 Weight of concrete: 150 pcf.

RECTANGULAR CHANNEL

Live Load: HS15-44
 Side earth: 37 psf per foot of depth (E.F.P.).
 Internal water pressure: 40 psf per foot of depth (E.F.P.).

TRAPEZOIDAL CHANNEL

Side earth pressure: 62.4 psf per foot of depth (E.F.P.).

ALLOWABLE STRESSES FOR CONCRETE

$F_c = 4000$ psi @ 28 days
 $F_c = 1800$ psi
 $F_s = 24,000$ psi
 $n = 8$

DATE	DESIGNED	DRAWN	CHECKED	SUPERVISED	PROJECT ENGR.	ASST. DIV. ENGR.
10-85	Damian Topoulos	Manuel Bartheleme	Leo	Dimitrios Topoulos	ALEX V. BARAKAT	John V. Barakata
10-87					R.E. NO. C-2513	R.E. NO. C-11746
10-11					7-55	11-27

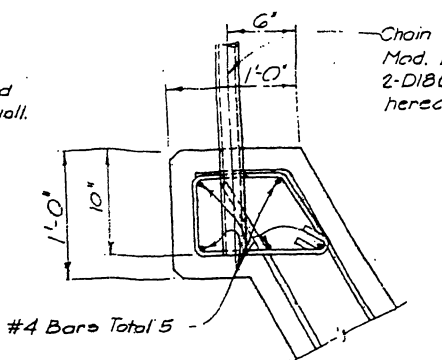
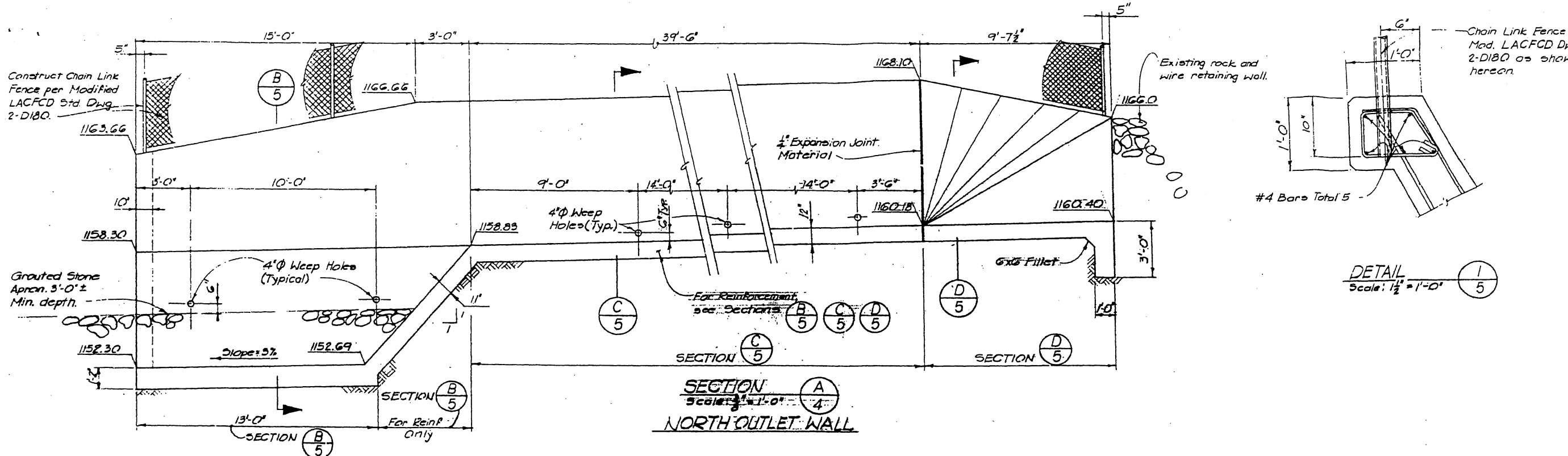
OUTLET STRUCTURE PLAN AND SECTIONS

NO.	REVISION DESCRIPTION	DATE	DIV./ASST. ENGR.

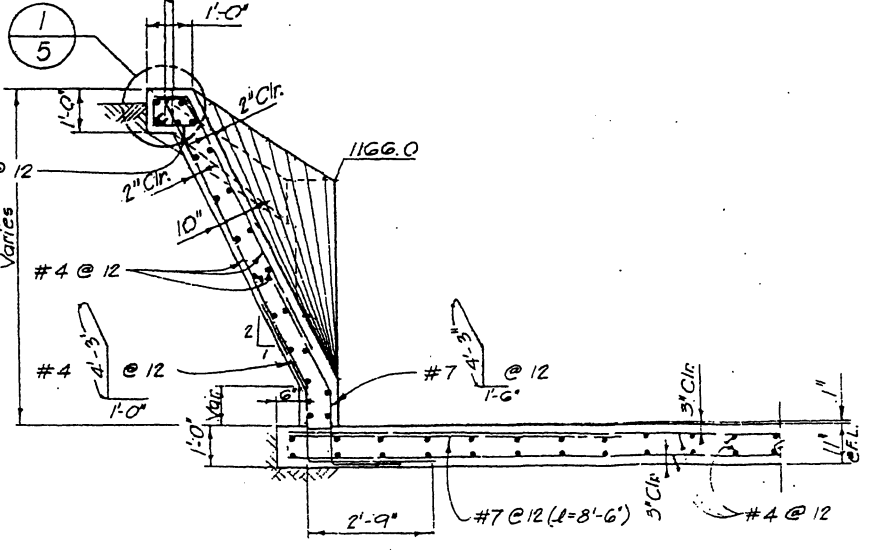
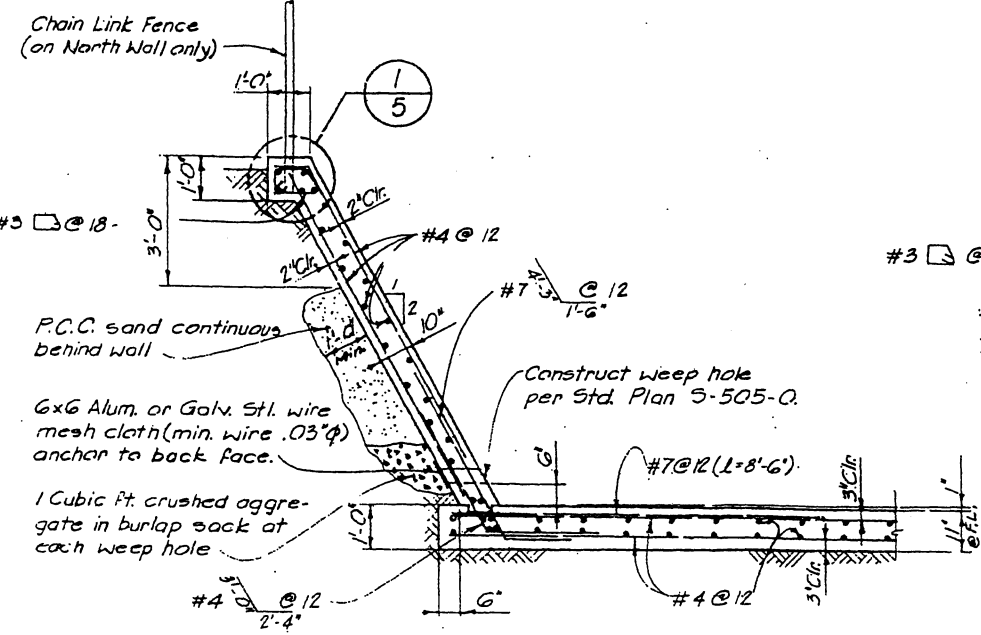
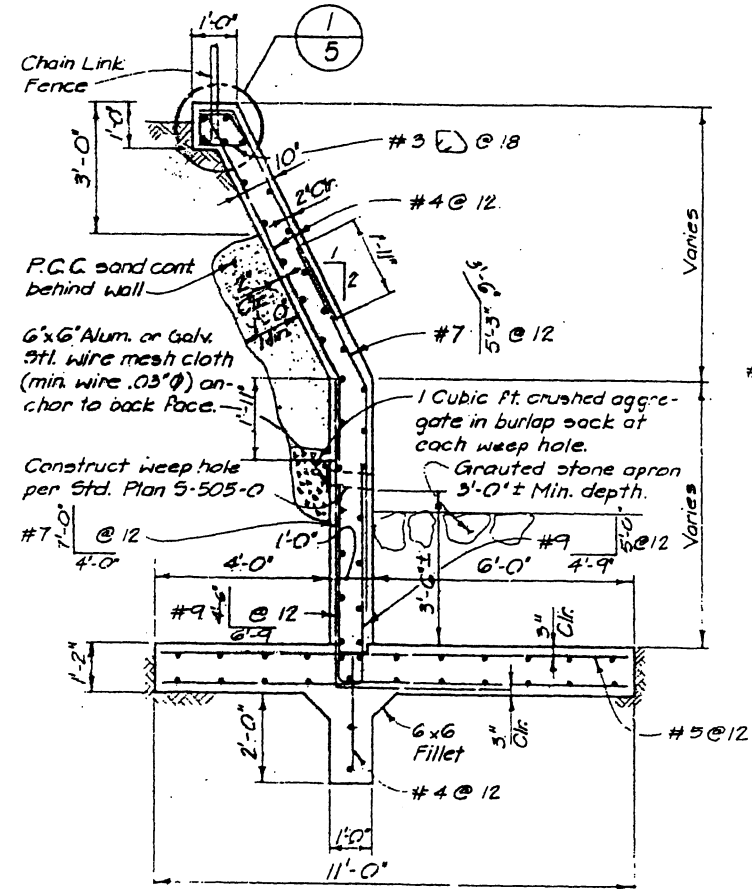
NO.	REVISION DESCRIPTION	DATE	DIV./ASST. ENGR.

CITY OF LOS ANGELES
 CITY ENGINEER
 RT. S. HORRI

DATE: 11-11-10
 DIV. ENGR. R.E. NO.



DETAIL 1/5
Scale: 1/2" = 1'-0"



NOTE: All Longitudinal Bars are #4 @ 12
SECTION B/B
Scale: 1/2" = 1'-0"

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

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

DESIGNED	D. Topolovskaya	DATE	10-87
DRAWN	M. G. Williams		10-87
CHECKED	(Signature)		10-87
SUPERVISED	(Signature)		10-87
PROJECT ENGR.	Alex. Williams		11-85
ASST. DIV. ENGR.	(Signature)		11-85

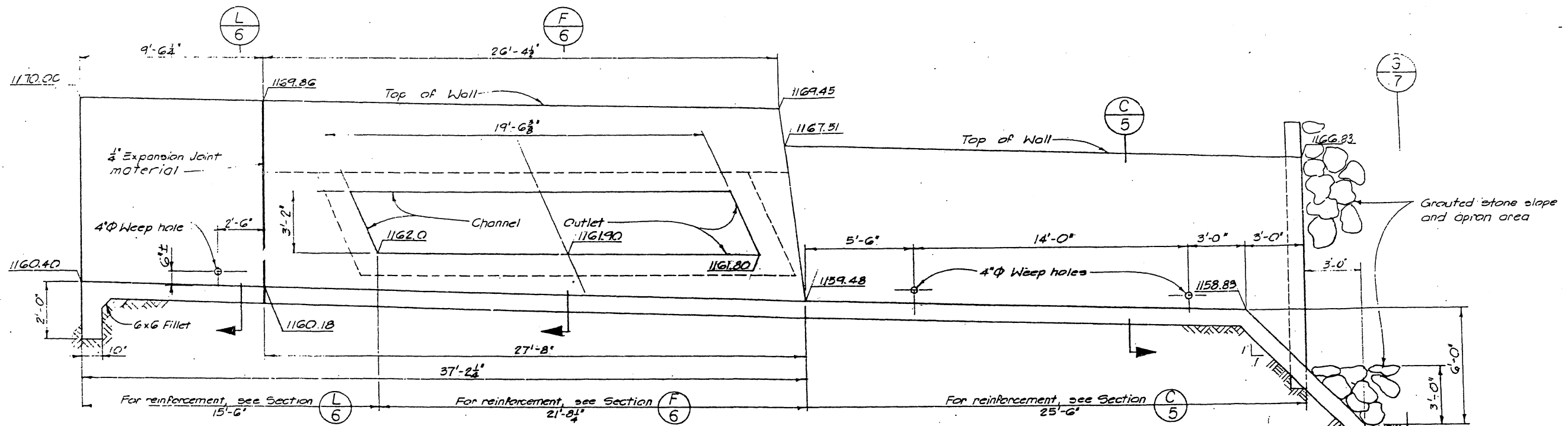
NORTH OUTLET WALL
SECTIONS AND DETAIL

NO.	REVISION DESCRIPTION	DIV./DIST. ENGR.	DATE

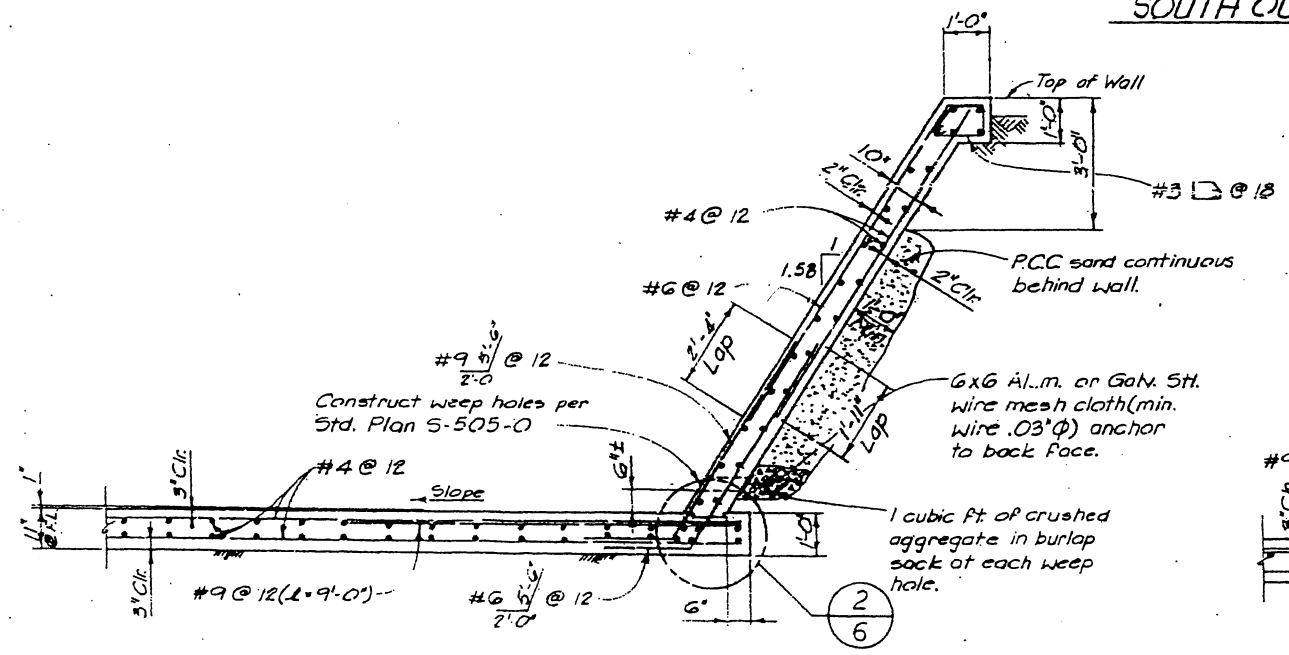
CITY OF LOS ANGELES
CITY ENGINEER
ROBERT S. HORII

DATE: 11-19-87
(Signature)
DIV. ENGR.

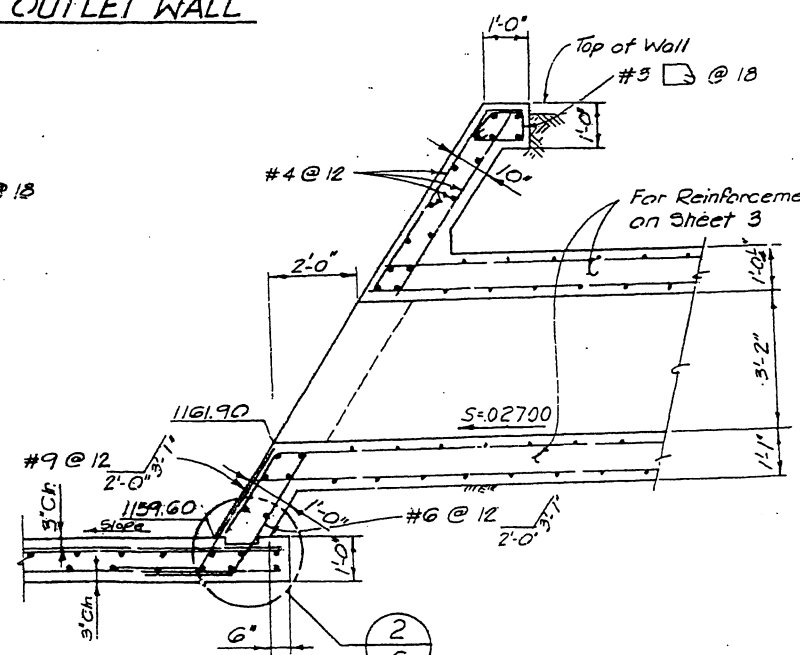
LA TUNA CANYON ROAD CULVERT AT
ROUNDHOUSE CANYON W.O. 51381



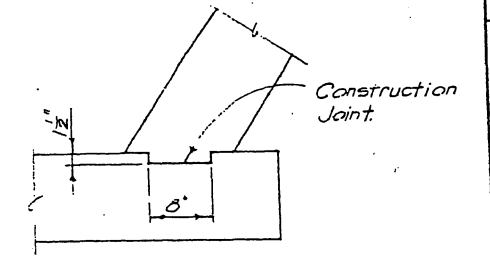
SECTION E 4
Scale: $\frac{3}{8}" = 1'-0"$
SOUTH OUTLET WALL



SECTION L 6
Scale: $\frac{1}{2}" = 1'-0"$



SECTION F 6
Scale: $\frac{1}{2}" = 1'-0"$



CONSTRUCTION JOINT DETAIL 2 6
Scale: 1" = 1'-0"

DATE	NO.	REVISION DESCRIPTION
10-85	1	DESIGNED
10-87	2	DRAWN
10-87	3	CHECKED
10-87	4	SUPERVISED
10-87	5	PROJECT ENGR.
11-87	6	ASST. DIV. / DIST. ENGR.

SOUTH OUTLET WALL SECTIONS

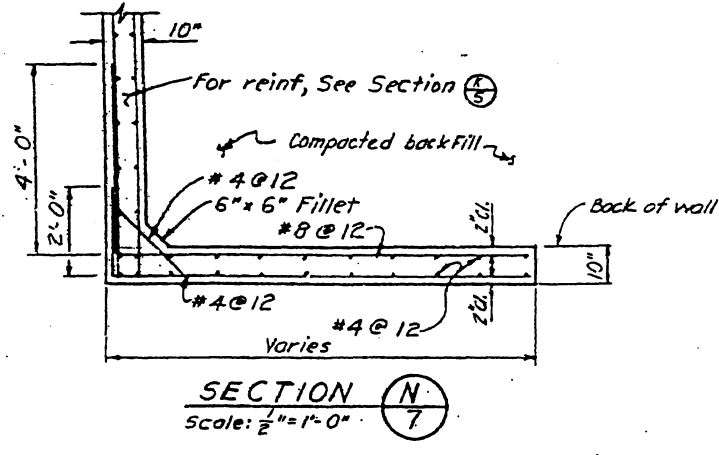
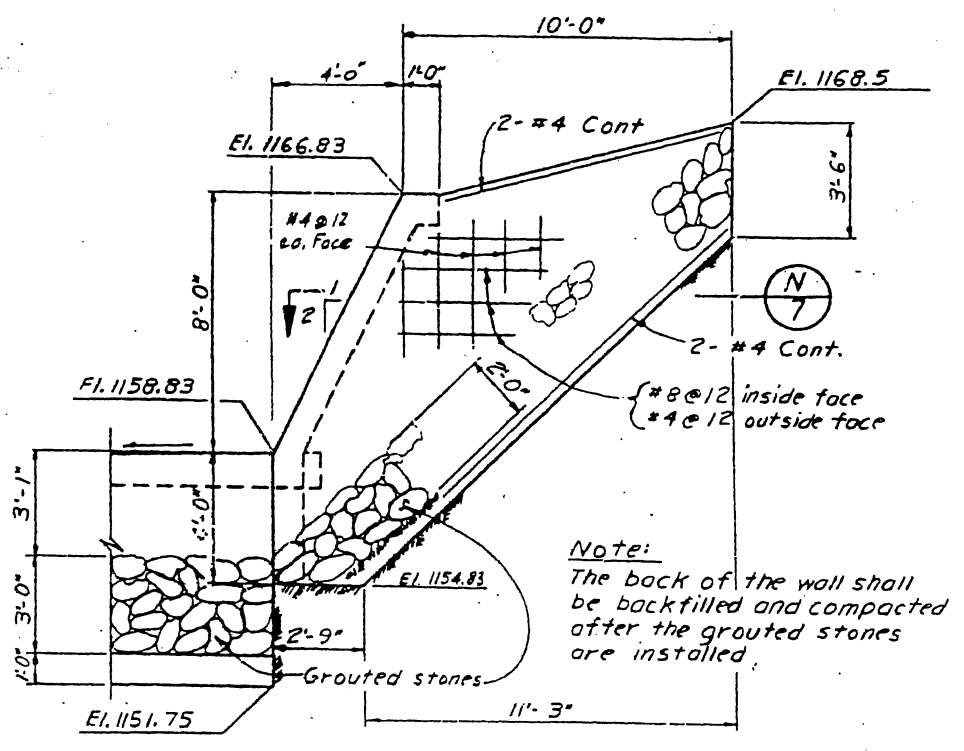
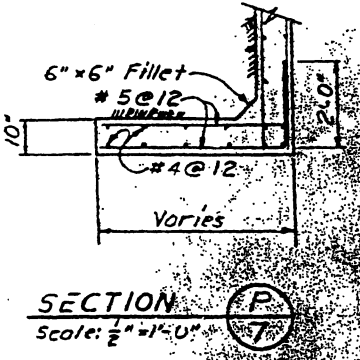
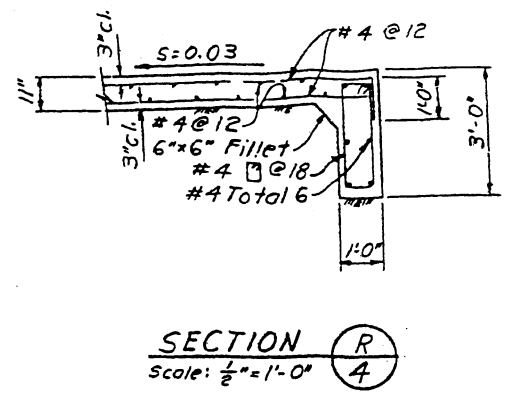
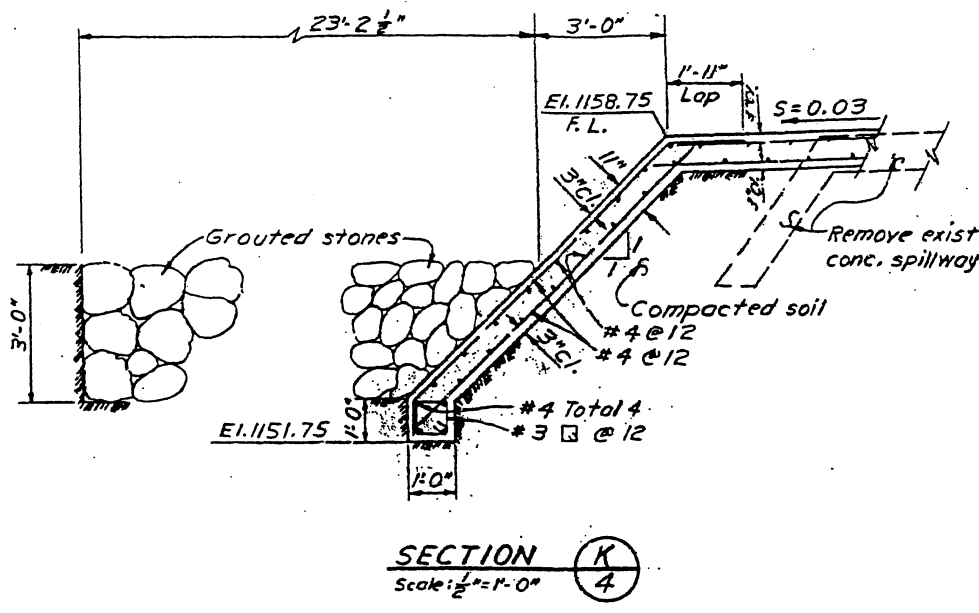
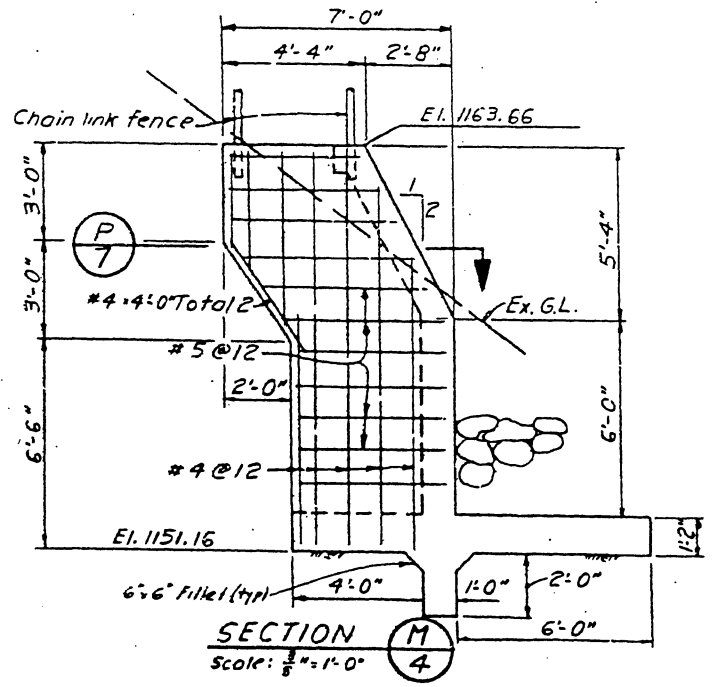
NO.	REVISION DESCRIPTION	DATE	DIV. / DIST. ENGR.

CITY OF LOS ANGELES
 CITY ENGINEER
 ROBERT S. MORI
 DATE: 10/15/87
 DIV. / DIST. ENGR.
 PROJECT NO. 51381

LA TUNA CANYON ROAD CULVERT AT ROUNDHOUSE CANYON W.O. 51381

D-8823

D-8823



Note:
The back of the wall shall be backfilled and compacted after the grouted stones are installed.

NO.	REVISION DESCRIPTION	DATE
1	DESIGNED: Damian Tapoulidis	10-85
2	DRAWN: G. Martin	10-85
3	CHECKED: [Signature]	10-85
4	SUPERVISOR: [Signature]	10-85
5	PROJECT ENG: [Signature]	10-85
6	ASST. DIV. ENGINEER: [Signature]	10-85

CITY OF LOS ANGELES
ENGINEER
DATE: 10/15/85
LA TUNA CANYON ROAD CULVERT AT ROUNDHOUSE CANYON W.O. 51381