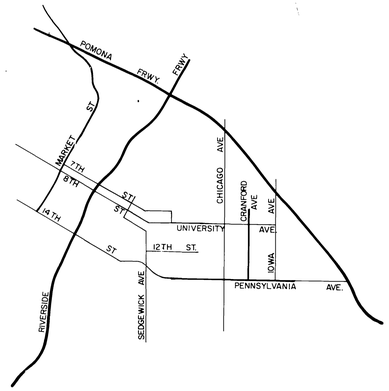
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT



CITY OF RIVERSIDE

VICINITY MAP
NO SCALE

GENERAL NOTES

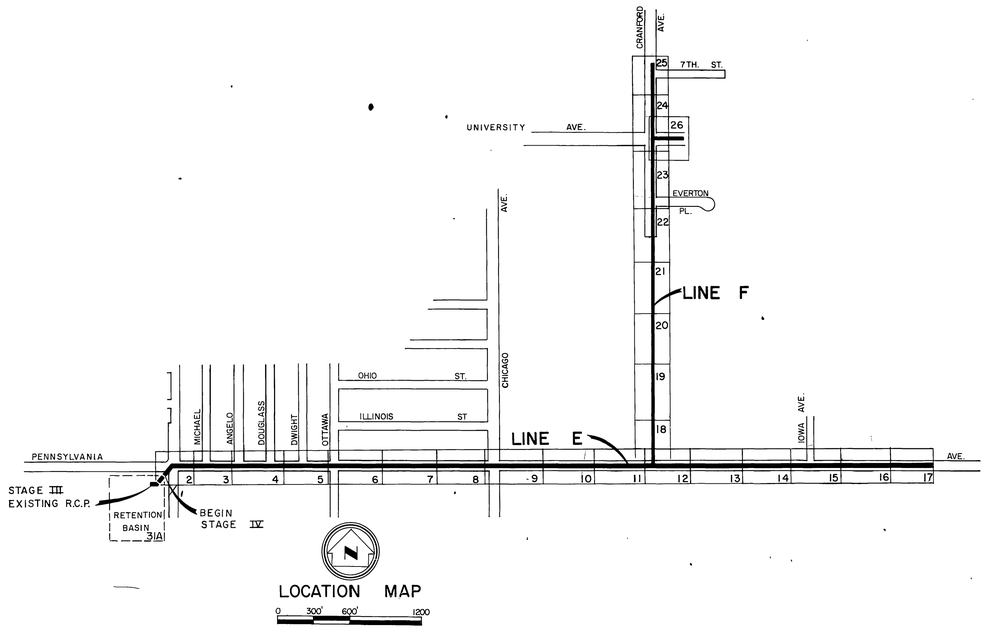
1. ELEVATIONS SHOWN ARE IN FEET ABOVE THE USGS MEAN SEA LEVEL DATUM.
2. DIMENSIONS FOR LOCATING CATCH BASINS ARE MEASURED FROM CURB RETURN TO CENTERLINE OF BASIN, UNLESS SHOWN OTHERWISE.
3. LOCATIONS OF CATCH BASIN CONNECTOR PIPE JUNCTIONS WITH CATCH BASINS AS SHOWN ON THE DRAWINGS ARE SCHEMATIC. IT IS INTENDED THAT SUCH JUNCTIONS BE LOCATED AT THE DOWNSTREAM END OF THE BASINS UNLESS SHOWN OTHERWISE. IN ALL CASES, THE EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. LOCATIONS SHOWN ON THE PLANS FOR EXISTING SANITARY SEWER HOUSE CONNECTIONS ARE APPROXIMATE ONLY.
5. ALL OPENINGS RESULTING FROM CUTTING OR PARTIAL REMOVAL OF EXISTING CULVERTS, PIPES OR SIMILAR STRUCTURES SHALL BE SEALED WITH 6 INCHES OF CLASS "B" CONCRETE, NOTED ON THE DRAWINGS AS "PLUG".
6. ALL CURBS, GUTTERS, SIDEWALKS, DRIVEWAYS AND OTHER IMPROVEMENTS SHALL BE RECONSTRUCTED TO THEIR ORIGINAL GRADE, ELEVATION AND LOCATION UNLESS NOTED OTHERWISE.
7. SOIL TEST BORINGS FOR THIS PROJECT WERE MADE IN JULY, 1973.
8. PIPE CONNECTIONS TO MAINLINE PIPE SHALL CONFORM TO STANDARD DRAWING JS 229, J.S. NO.4, UNLESS OTHERWISE NOTED.
9. WHERE REQUIRED, CONCRETE PIPE COLLARS ARE SHOWN ON THE APPROPRIATE PROFILE.
10. PAVEMENT REPLACEMENT SHALL BE 3" OF ASPHALTIC CONCRETE ON 6" OF CLASS III BASE.
11. CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN, UNLESS OTHERWISE NOTED.

INDEX

	SHEET NO.
TITLE SHEET	1
MAIN LINE PLAN AND PROFILE	
LINE E	2-17
LINE F	18-26
CONNECTOR PIPE PROFILES	27-30
MISCELLANEOUS DETAILS	31
RETENTION BASIN	31A
TRAFFIC PLANS	32-41

R.C.F.C.W.C.D. STANDARD DWGS.

CB 100	CATCH BASIN NO.1	42
CB 101	CATCH BASIN NO.4	43-44
CB 103	MANHOLE FRAME & COVER FOR CATCH BASINS	45
CB 104	CATCH BASIN GRATE	46
CB 105	DETAILS OF CATCH BASIN OPENING	47
CB 106	CATCH BASIN REINFORCEMENT	48
CB 107	INLET TYPE IX	49
CB 110	CONCRETE DROP INLET	50
LD 201	LOCAL DEPRESSION NO.2	51
LD 202	LOCAL DEPRESSION NO.3	52
JS 227	JUNCTION STRUCTURE NO.2	53-54
JS 229	JUNCTION STRUCTURE NO.4	55
MH 252	MANHOLE NO.2	56
MH 254	MANHOLE NO.4	57-58
MH 255	MANHOLE FRAME & COVER NON-ROCKING	59
MH 257	MANHOLE SHAFT FOR CAST PIPE	60
MH 259	STANDARD DROP STEP	61
M 803	CONCRETE COLLAR FOR PIPE 12 INCHES THROUGH 66 INCHES	62
M 814	ABBREVIATIONS AND SYMBOLS	63
M 815	BEDDING AND PAY LINES	64



LOCATION MAP

0 300' 600' 1200

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

DESIGNED BY:
DRAWN BY:
DATE DRAWN:
CHECKED BY:

APPROVED BY:
CHIEF ENGINEER R.E. NO. 8822
DATE: 5-11-76

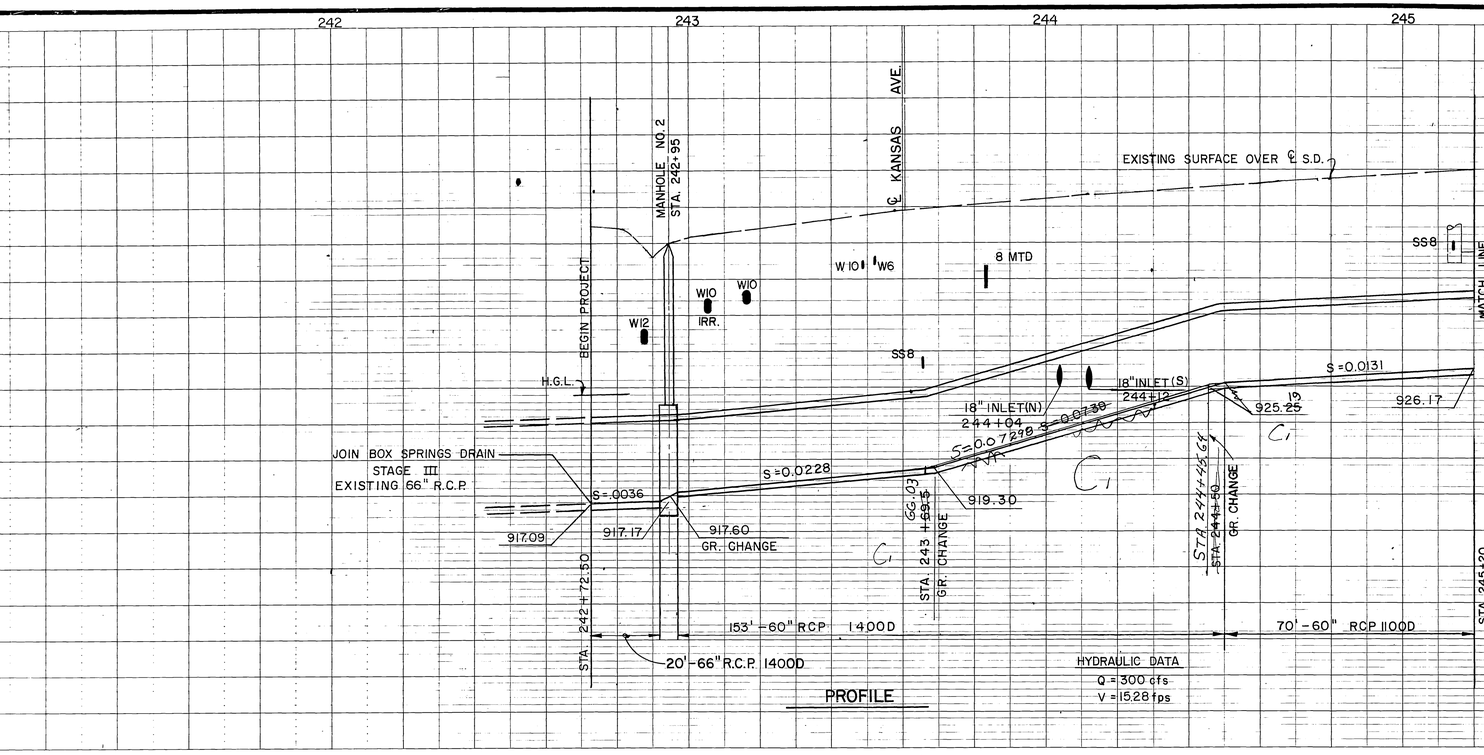
BOX SPRINGS DRAIN
STAGE IV
TITLE SHEET
1970 STORM DRAIN BOND ISSUE PROJECT NO. 6

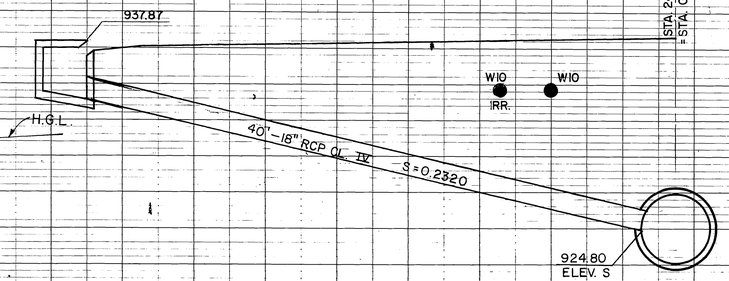
INDEX MF

PROJECT NO. 1-0-220
DRAWING NO. 1-327
SHEET NO. 1 OF 64

AS BUILT

D-319



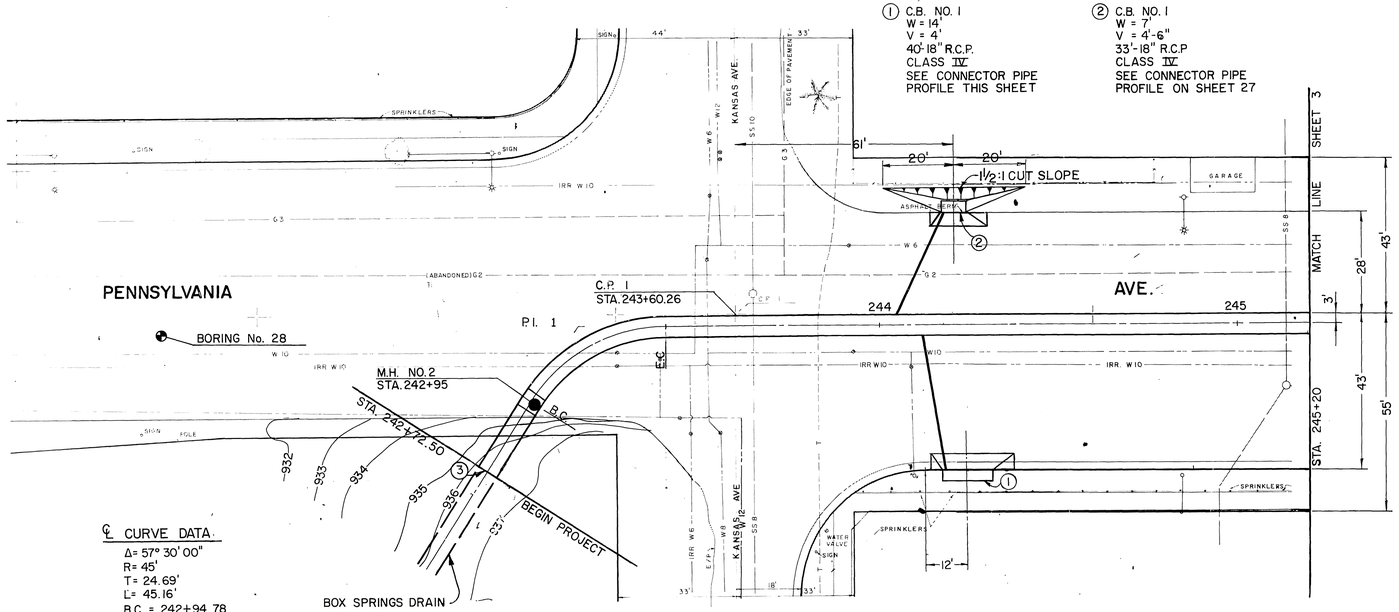


CONNECTOR PIPE PROFILE

5' 0 5'

STA. 244+12

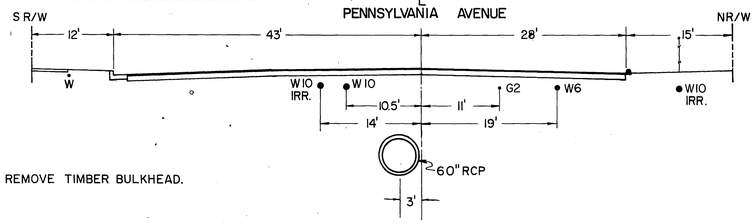
NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN, UNLESS OTHERWISE NOTED.



℄ CURVE DATA
Δ = 57° 30' 00"
R = 45'
T = 24.69'
L = 45.16'
B.C. = 242+94.78
E.C. = 243+39.94

PLAN

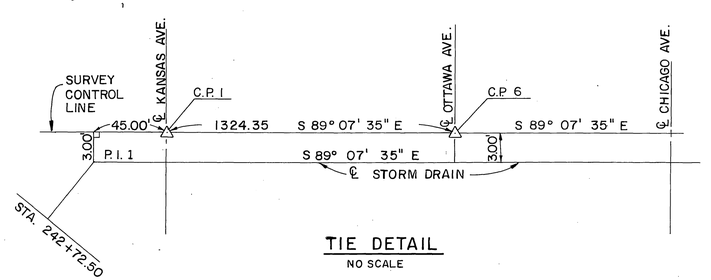
20' 0 20'



③ REMOVE TIMBER BULKHEAD.

SECTION AT STA. 244+40

10' 0 10'



TIE DETAIL
NO SCALE

BENCH MARK C.P.I - ELEV. 937.268
NAIL AND TIN AT INTERSECTION OF PENNSYLVANIA AND KANSAS.

SCALE:

DATE:

KOEBIG & KOEBIG, INC.
ENGINEERING · ARCHITECTURE · PLANNING
RIVERSIDE, CALIFORNIA

APPROVED BY:

DATE: FEB 14 1974

REGISTERED CIVIL ENGINEER NO. 10776

REVISIONS			
C1	Change Sta & Slope, GR.	[illegible]	[illegible]
REF.	DESCRIPTION	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

DESIGNED BY: [illegible]
DRAWN BY: W.J.
DATE DRAWN: 10-73
CHECKED BY:

APPROVED BY:
[signature]
CHIEF ENGINEER R.E. NO. 8822
DATE: 5-11-76

LINE E

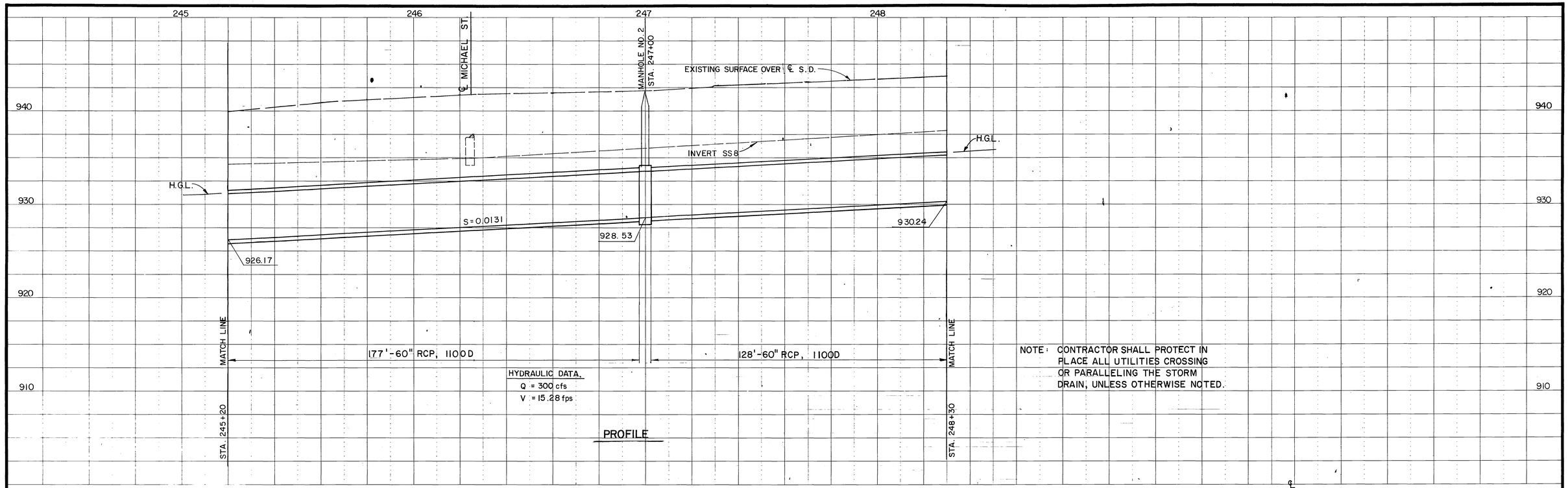
BOX SPRINGS DRAIN
STAGE IV
STA. 242+72.50 TO STA. 245+20
1970 STORM DRAIN BOND ISSUE PROJECT NO. 6

INDEX NE

PROJECT NO. 1-0-220
DRAWING NO. 1-327
SHEET NO. 2 OF 64

AS BUILT

D-319



PROFILE

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN, UNLESS OTHERWISE NOTED.

Note: W10 Found to be in the way for construction 60" R.C.P. Built on ℄ of Pennsylvania Ave.

C2

SECTION AT STA. 247+20

1. SEE TIE DETAIL SH. 2

PLAN

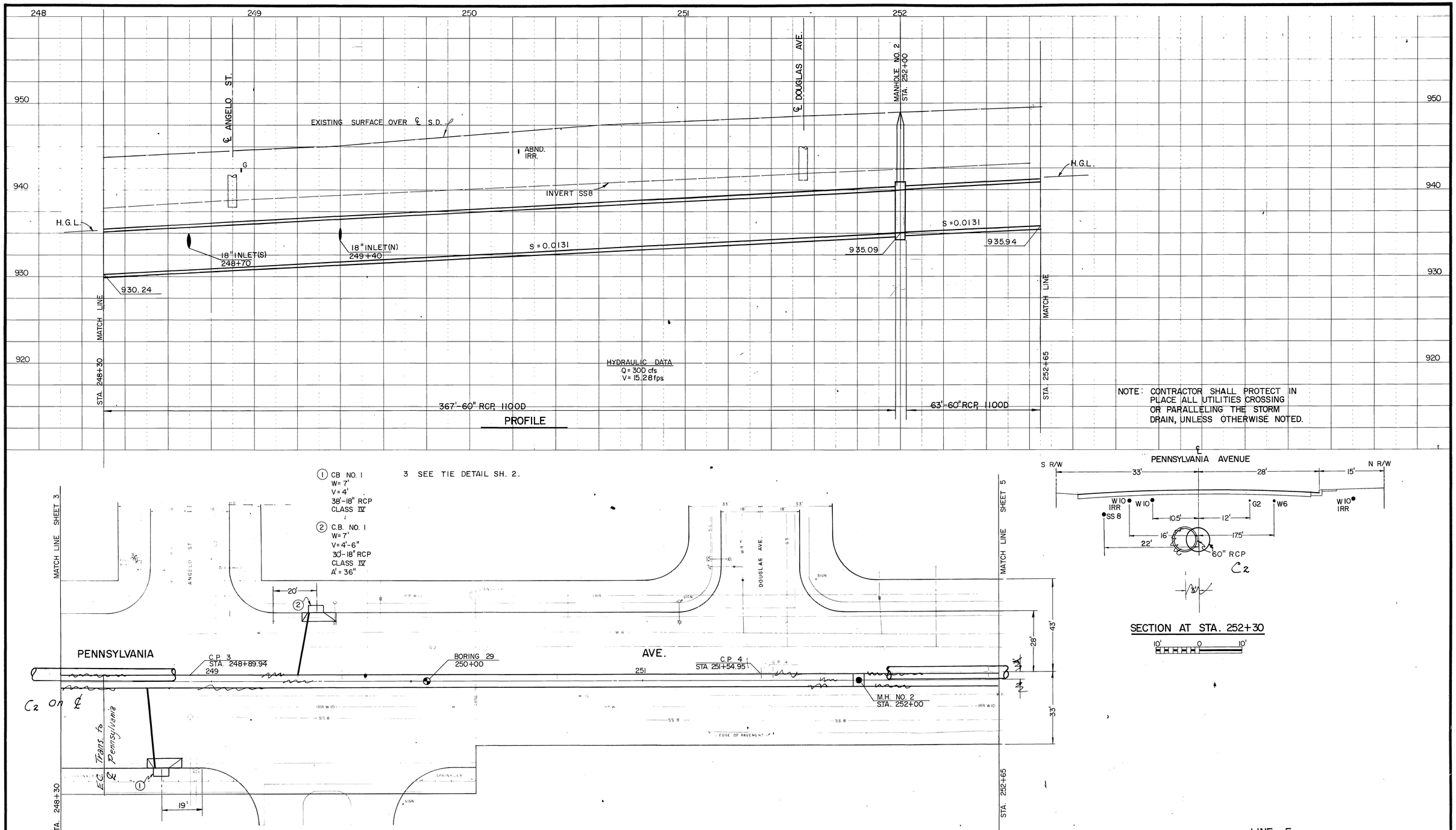
LINE E

BENCH MARK C.P. 2-ELEV. 941.752 NAIL AND TIN AT INTERSECTION OF PENNSYLVANIA AND MICHAEL.	KOEBIG & KOEBIG, INC. ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	BOX SPRINGS DRAIN STAGE IV	PROJECT NO. 1-0-220
SCALE:	APPROVED BY:	C2 RCP Relignment As Shown	DESIGNED BY:	STA. 245+20 TO STA. 248+30	DRAWING NO. 1-327
DATE:	DATE: FEB 14 1976 REGISTERED CIVIL ENGINEER NO. 10776	REF. DESCRIPTION APPR. DATE	DRAWN BY: JCD	1970 STORM DRAIN BOND ISSUE PROJECT NO. 6	SHEET NO. 3 OF 64
			DATE DRAWN: 10-73		
			CHECKED BY:		

APPROVED BY: CHIEF ENGINEER R.E. NO. 8822 DATE: 5-11-76

AS BUILT

D-319



NOTE: SEE CONNECTOR PIPE PROFILES ON SHEET 27

LINE E

INDEX WF

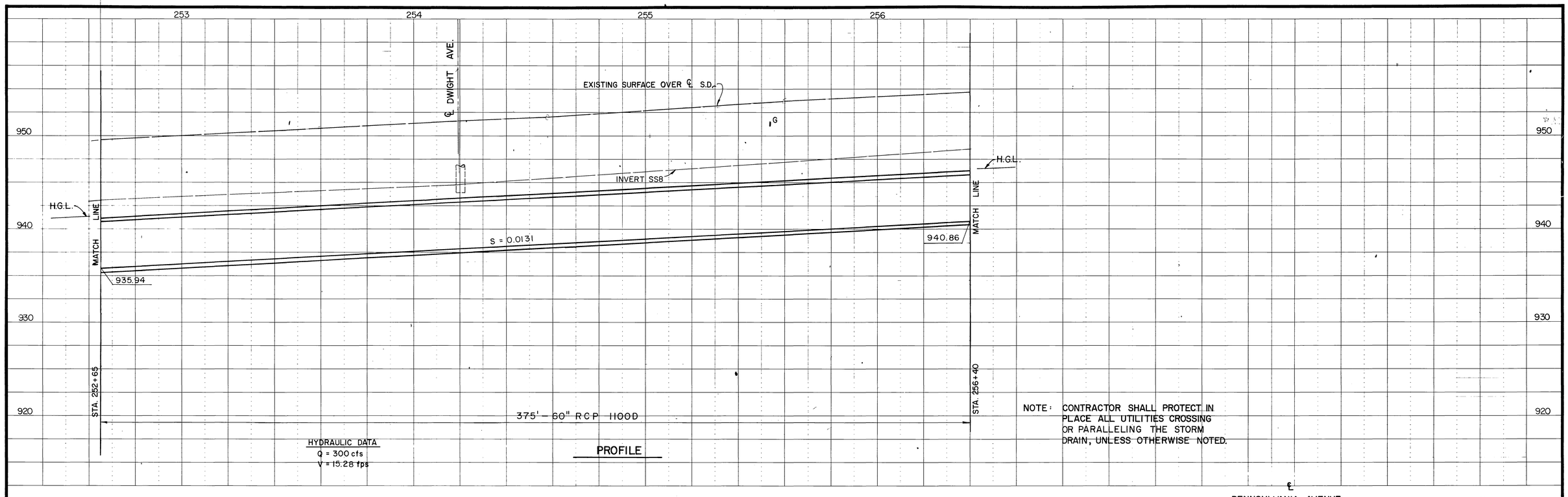
PLAN

20' 0 20'

BENCH MARK C.P. 3-ELEV. 944.618 NAIL AND TIN AT INTERSECTION OF PENNSYLVANIA AND ANGELO.	KOEBIG & KOEBIG, INC. ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	BOX SPRINGS DRAIN STAGE IV	PROJECT NO. 1-0-220
SCALE:	APPROVED BY: [signature] REGISTERED CIVIL ENGINEER NO. 10776	C2 Change in Alignment As Shown	DESIGNED BY: [signature]	STA. 248+30 TO STA. 252+65	DRAWING NO. 1-327
DATE:	DATE:	REF. DESCRIPTION APPR. DATE	DRAWN BY: / DATE DRAWN: 10-73 / CHECKED BY:	1970 STORM DRAIN BOND ISSUE PROJECT NO. 6	SHEET NO. 4 OF 64
			APPROVED BY: [signature] CHIEF ENGINEER R.E. NO. 8822 DATE: 5-11-76		

AS BUILT

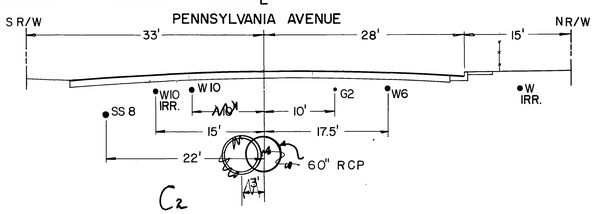
D-319

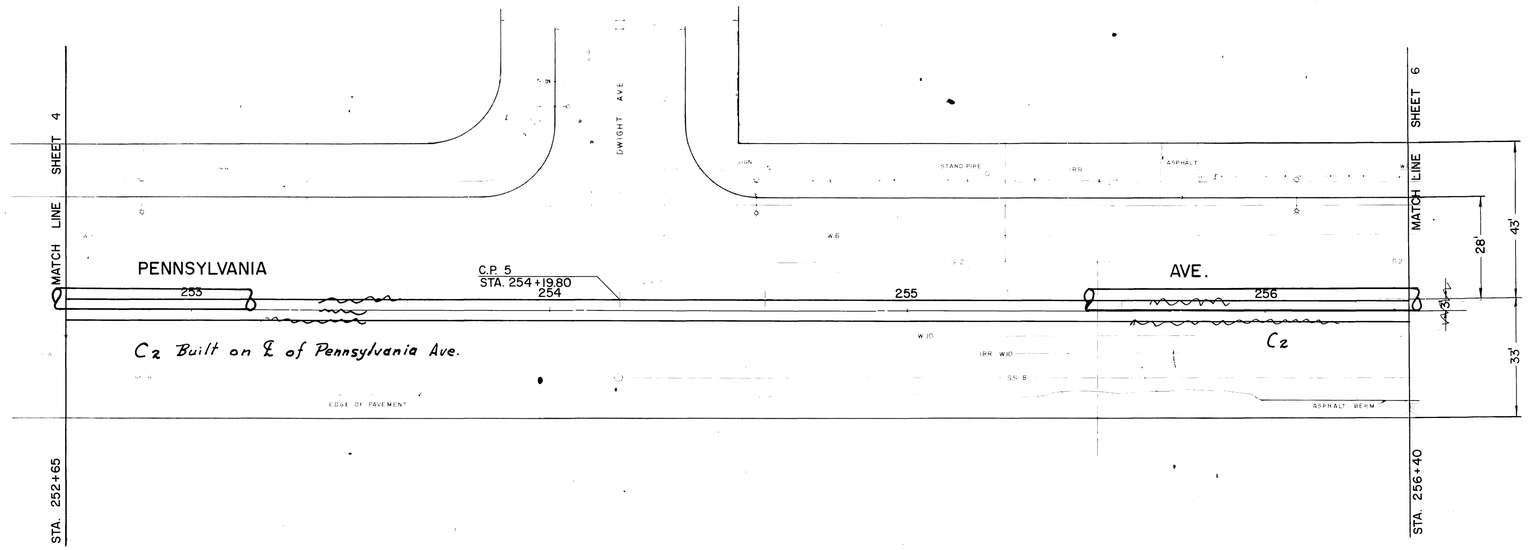


HYDRAULIC DATA
Q = 300 cfs
V = 15.28 fps

PROFILE

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN, UNLESS OTHERWISE NOTED.





PLAN

20' 0 20'

SECTION AT STA. 254+70

10' 0 10'

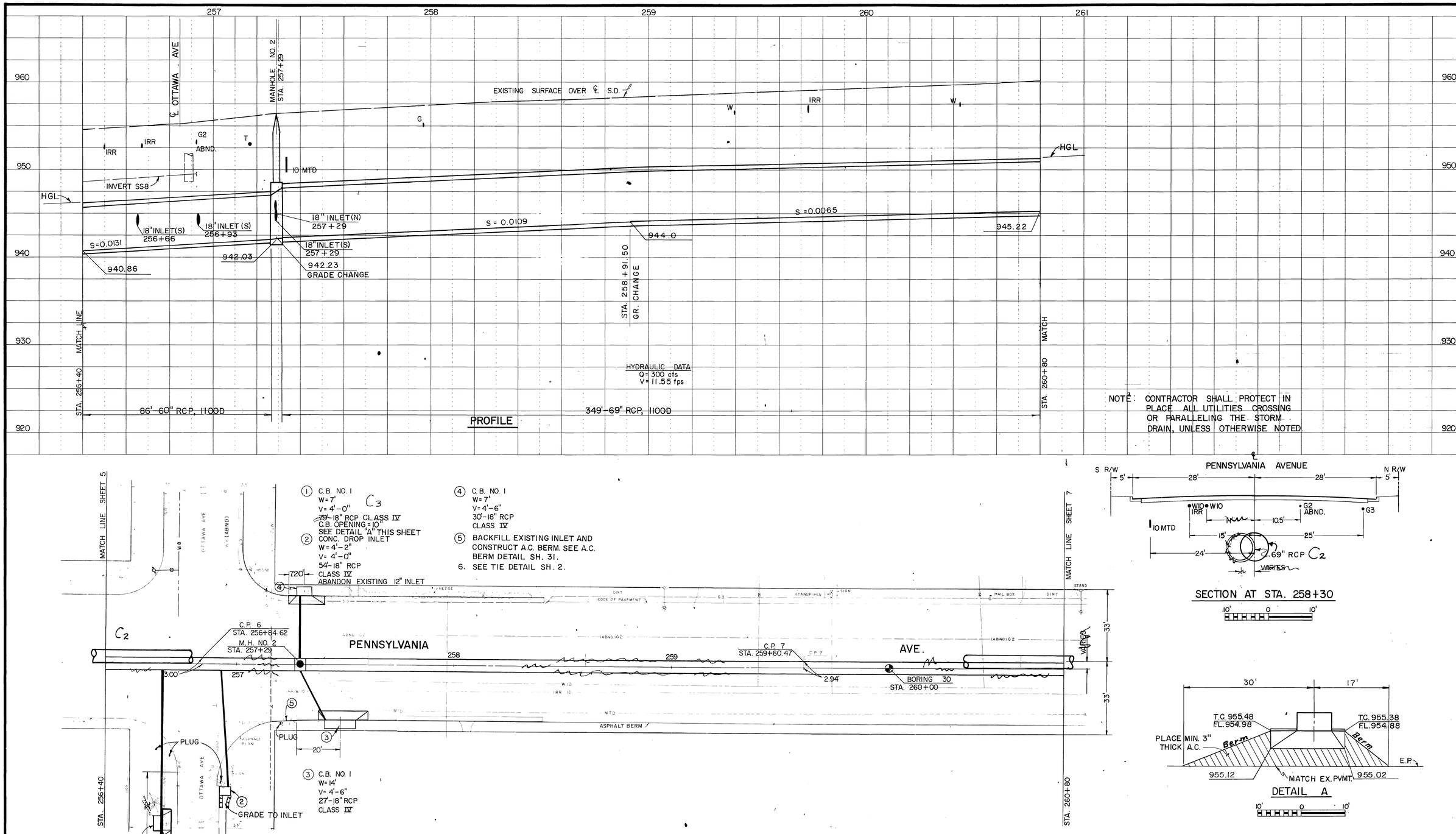
1. SEE TIE DETAIL SH. 2.

LINE E

BENCH MARK C.P.5-ELEV. 951.615 NAIL AND TIN AT INTERSECTION OF PENNSYLVANIA AND DWIGHT.	KOEBIG & KOEBIG, INC. ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	BOX SPRINGS DRAIN STAGE IV STA. 252+65 TO STA. 256+40 1970 STORM DRAIN BOND ISSUE PROJECT NO. 6	PROJECT NO. 1-0-220
SCALE:	APPROVED BY:	C2 Built as shown	DESIGNED BY:		DRAWING NO. 1-327
DATE:	DATE: 5-14-1976 REGISTERED CIVIL ENGINEER NO. 10776	REF. DESCRIPTION APPR. DATE	DRAWN: W.J. DATE DRAWN: 10-73	APPROVED BY: John W. Bryant CHIEF ENGINEER R.E.NO. 8822 DATE: 5-11-76	SHEET NO. 5 OF 64
			CHECKED BY:		

AS BUILT

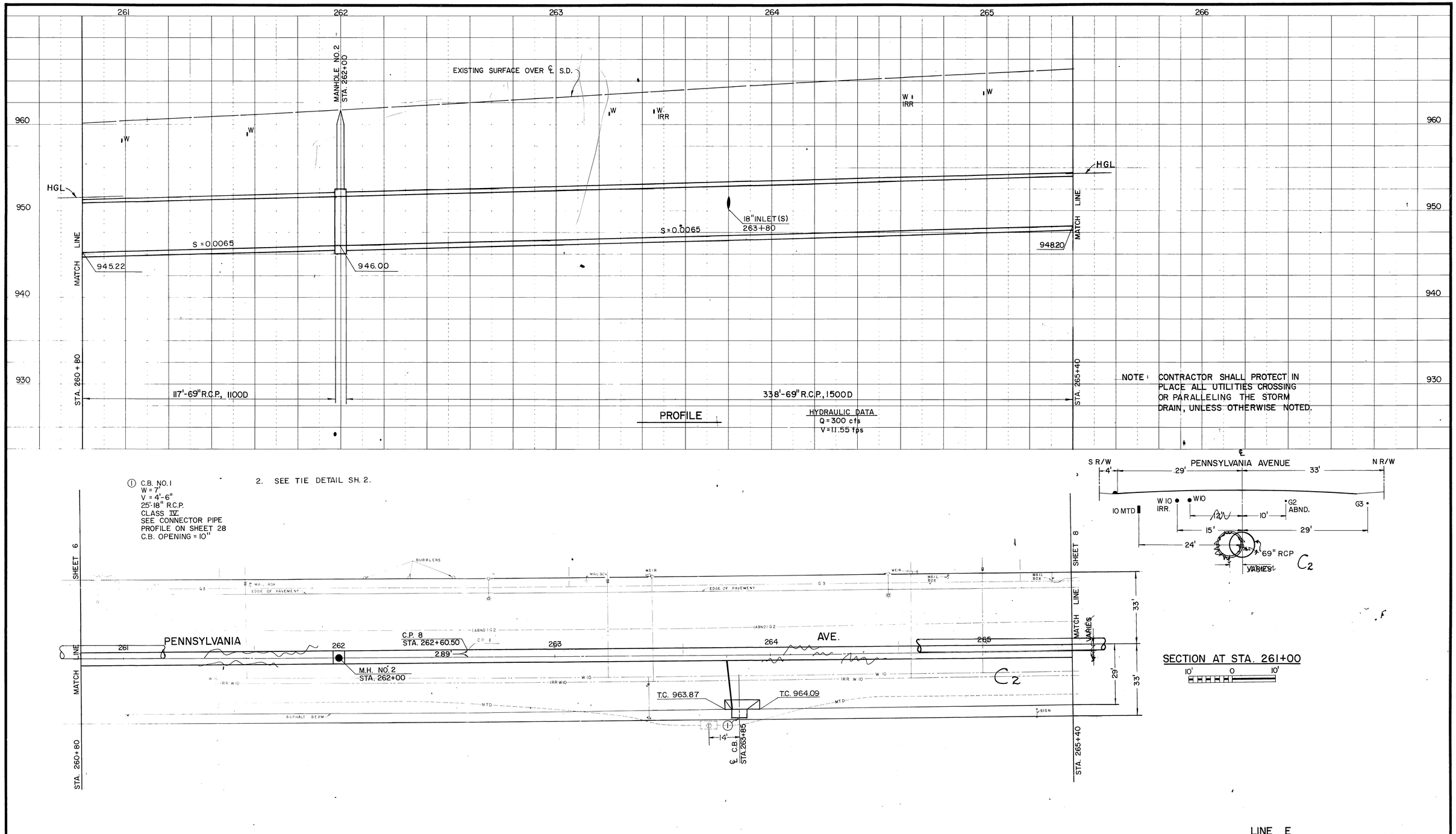
D-319



BENCH MARK C.P.6-ELEV. 955.243 2" IRON PIPE IN CAPPED WELL AT INTERSECTION OF PENNSYLVANIA AND OTTAWA DOWN .60.	KOEBIG & KOEBIG, INC. ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	BOX SPRINGS DRAIN STAGE IV STA. 256+40 TO STA 260+80 1970 STORM DRAIN BOND ISSUE PROJECT NO. 6	PROJECT NO. 1-0-220
SCALE:	APPROVED BY:	C3 C.B. No 1 Relocated as shown	DESIGNED BY:		DRAWING NO. 1-327
DATE:	DATE: REGISTERED CIVIL ENGINEER NO. 10776	C2 Relignment as shown	DRAWN BY:	APPROVED BY: John W. Bryant CHIEF ENGINEER R.E. NO. 8822	SHEET NO. 6 OF 64
		REF. DESCRIPTION APPR. DATE	DATE DRAWN: 10-73	DATE: 5-11-76	
			CHECKED BY:		

AS BUILT

D-319



LINE E

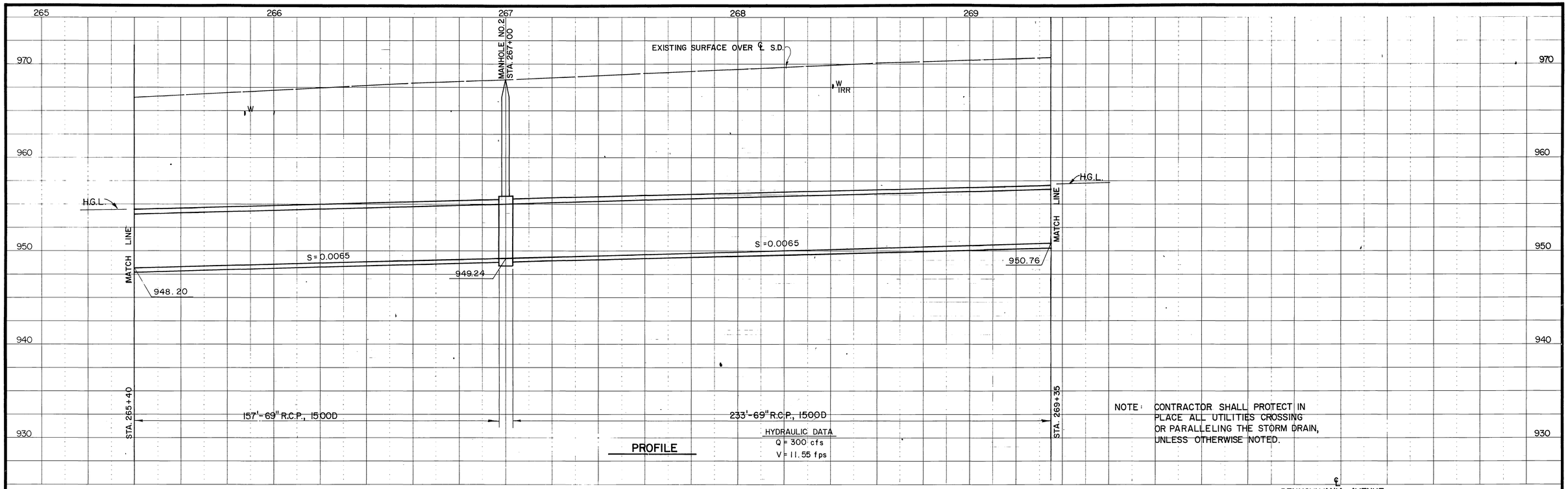
PLAN

20' 0 20'

BENCH MARK C.P. 8-ELEV. 962.567 NAIL AND TIN ON CENTERLINE OF PENNSYLVANIA 575 FT. EAST OF OTTAWA.	KOEBIG & KOEBIG, INC. ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	BOX SPRINGS DRAIN STAGE IV STA. 260+80 TO STA. 265+40 1970 STORM DRAIN BOND ISSUE PROJECT NO. 6	PROJECT NO. 1-0-220
SCALE:	APPROVED BY:	C2 Relignment As shown	DESIGNED BY: DAE		DRAWING NO. 1-327
DATE:	DATE: REGISTERED CIVIL ENGINEER NO. 10776	REF. DESCRIPTION APPR. DATE	DRAWN BY: W.J.	APPROVED BY: John K. Bryant CHIEF ENGINEER-R.E. NO. 8822	SHEET NO. 7 OF 64
			DATE DRAWN: 10-73	DATE: 5-11-76	
			CHECKED BY:		

AS BUILT

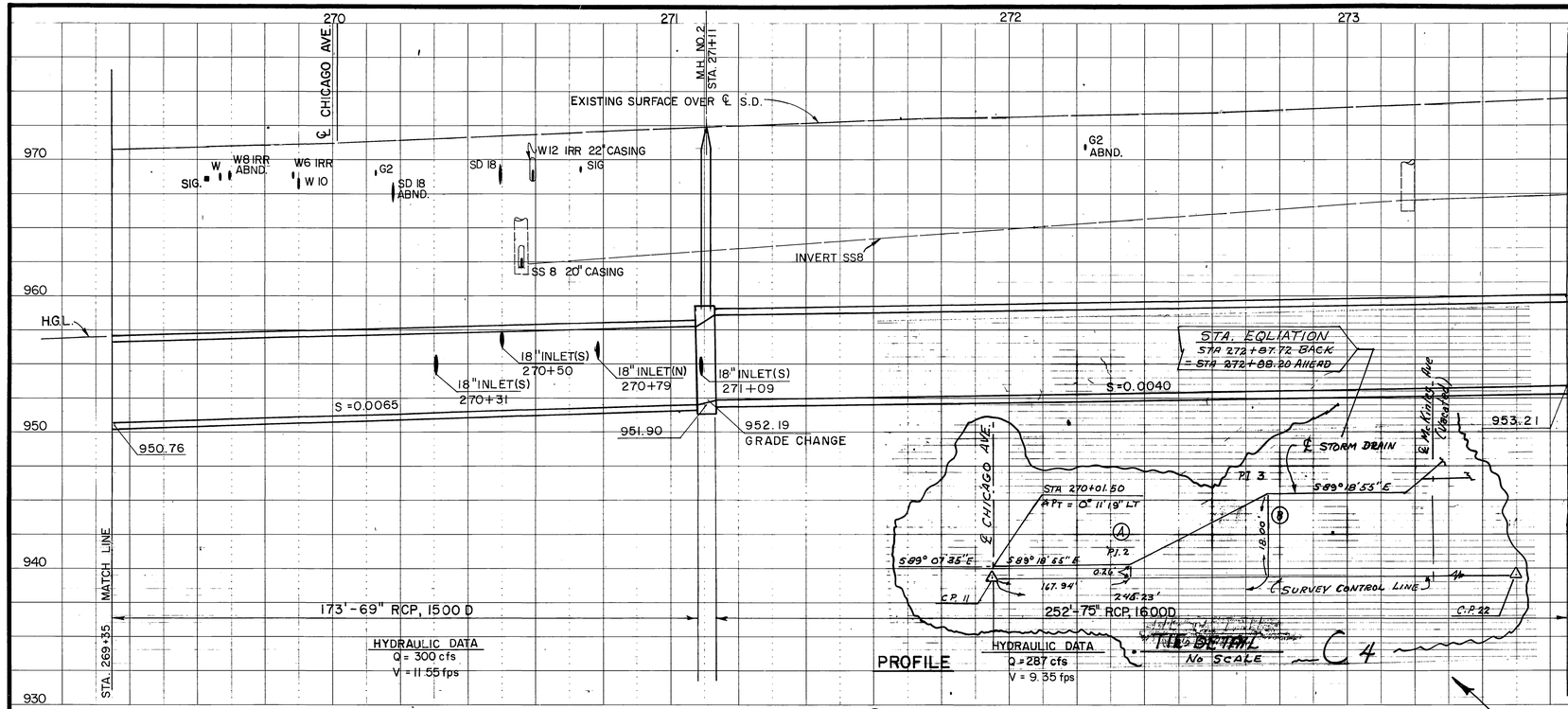
D-319

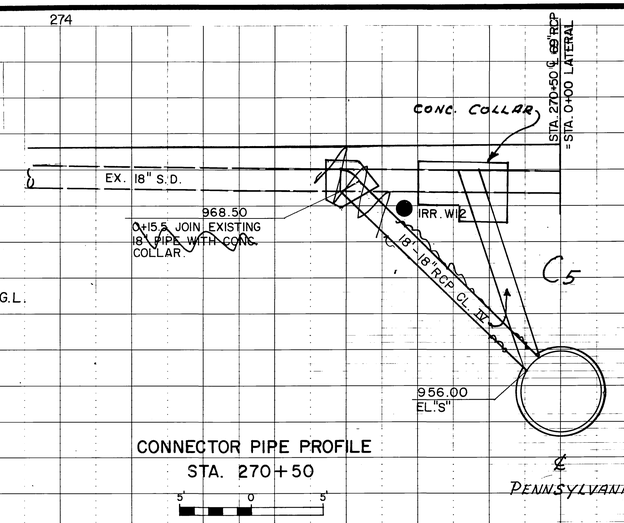


BENCH MARK C.P. 10-ELEV. 970.138 NAIL AND TIN ON CENTERLINE OF PENNSYLVANIA 1175 FT. EAST OF OTTAWA.	KOEBIG & KOEBIG, INC. ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	BOX SPRINGS DRAIN STAGE IV STA. 265+40 TO STA. 269+35 1970 STORM DRAIN BOND ISSUE PROJECT NO. 6	PROJECT NO. 1-0-220
SCALE:	APPROVED BY: [signature]		DESIGNED BY: [signature]		DRAWING NO. 1-327
DATE:	DATE: FEB 14 1974 REGISTERED CIVIL ENGINEER NO. 10776	C2 S.D. Relignment as shown — REF. DESCRIPTION APPR. DATE	DRAWN BY: W.J. DATE DRAWN: 10-73 CHECKED BY:	APPROVED BY: [signature] CHIEF ENGINEER R.E. NO. 8822 DATE: 5-11-76	SHEET NO. 8 OF 64

AS BUILT

D-319

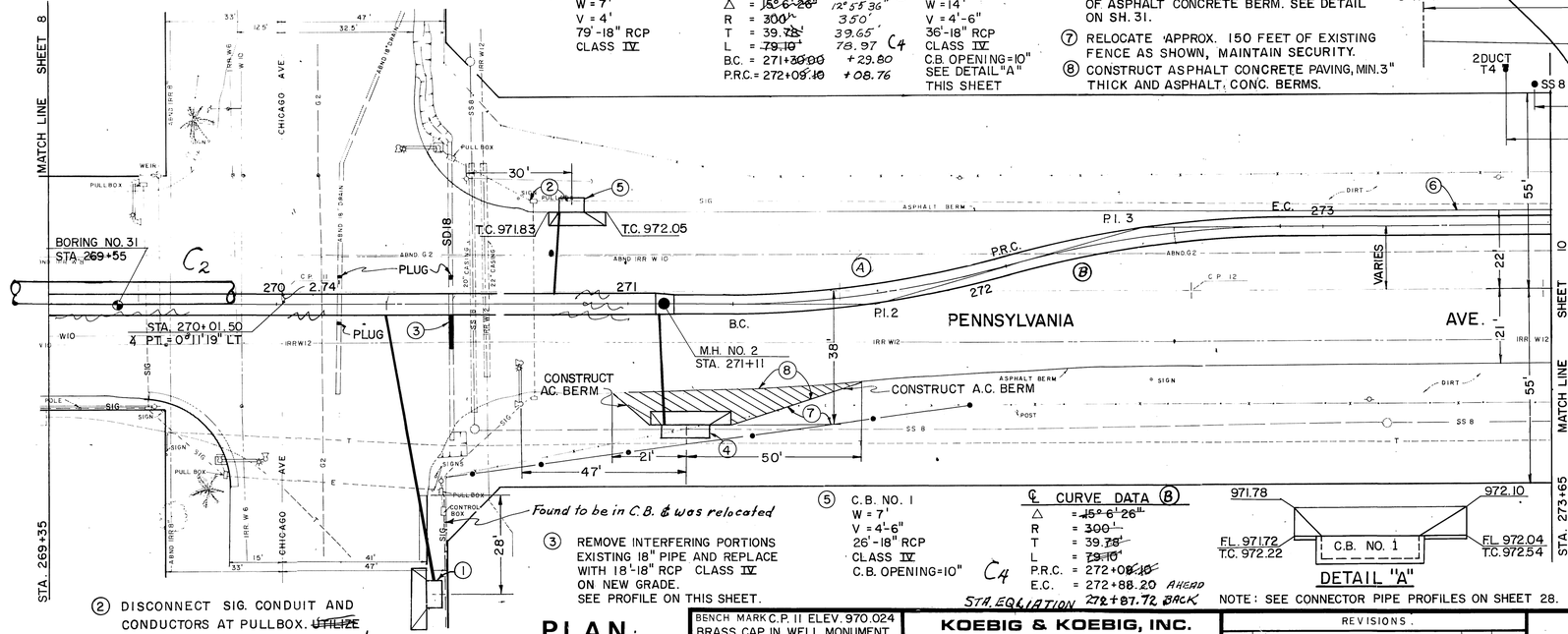




CONNECTOR PIPE PROFILE
STA. 270+50

5' 0 5'

NOTE CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN, UNLESS OTHERWISE NOTED.



① C.B. NO. 1
W = 7'
V = 4'
79'-18" RCP
CLASS IV

℄ CURVE DATA (A)
Δ = 15° 6' 26"
R = 300'
T = 39.78'
L = 79.10'
B.C. = 271+39.00
P.R.C. = 272+09.10

④ C.B. NO. 1
W = 14'
V = 4'-6"
36'-18" RCP
CLASS IV
C.B. OPENING = 10"
SEE DETAIL "A" THIS SHEET

12° 55' 36"
350'
39.65'
78.97 C4
+29.80
+08.76

⑤ REMOVE & REPLACE INTERFERING PORTIONS OF ASPHALT CONCRETE BERM. SEE DETAIL ON SH. 31.

⑦ RELOCATE APPROX. 150 FEET OF EXISTING FENCE AS SHOWN, MAINTAIN SECURITY.

⑧ CONSTRUCT ASPHALT CONCRETE PAVING, MIN. 3" THICK AND ASPHALT CONC. BERMS.

② DISCONNECT SIG. CONDUIT AND CONDUCTORS AT PULLBOX. ~~UTILIZE SLACK IN CONDUCTORS, AND ADD SUFFICIENT LENGTH OF CONDUIT TO RELOCATE~~ AROUND CATCH BASIN.

③ REMOVE INTERFERING PORTIONS EXISTING 18" PIPE AND REPLACE WITH 18'-18" RCP CLASS IV ON NEW GRADE. SEE PROFILE ON THIS SHEET.

PLAN

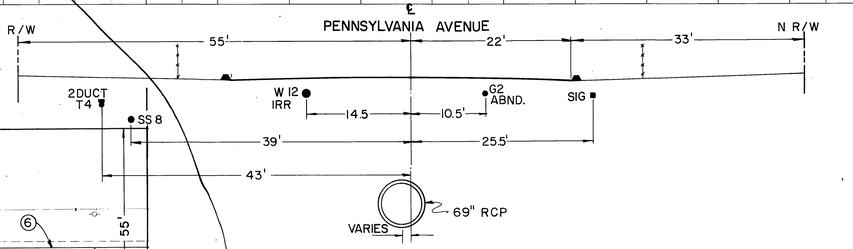
20' 0 20'

⑤ C.B. NO. 1
W = 7'
V = 4'-6"
26'-18" RCP
CLASS IV
C.B. OPENING = 10" C4

℄ CURVE DATA (B)
Δ = ~~15° 6' 26"~~
R = ~~300'~~
T = ~~39.78'~~
L = ~~79.10'~~
P.R.C. = ~~272+08.10~~
E.C. = 272+88.20 AHEAD
STA. EQUATION 272+87.72 BACK

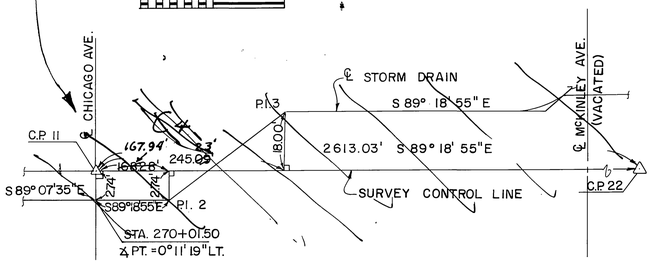
971.78
FL. 97.172
T.C. 972.22
C.B. NO. 1
FL. 972.04
T.C. 972.54
972.10
DETAIL "A"

NOTE: SEE CONNECTOR PIPE PROFILES ON SHEET 28.



SECTION AT STA. 271+70

10' 0 10'



TIE DETAIL
NO SCALE

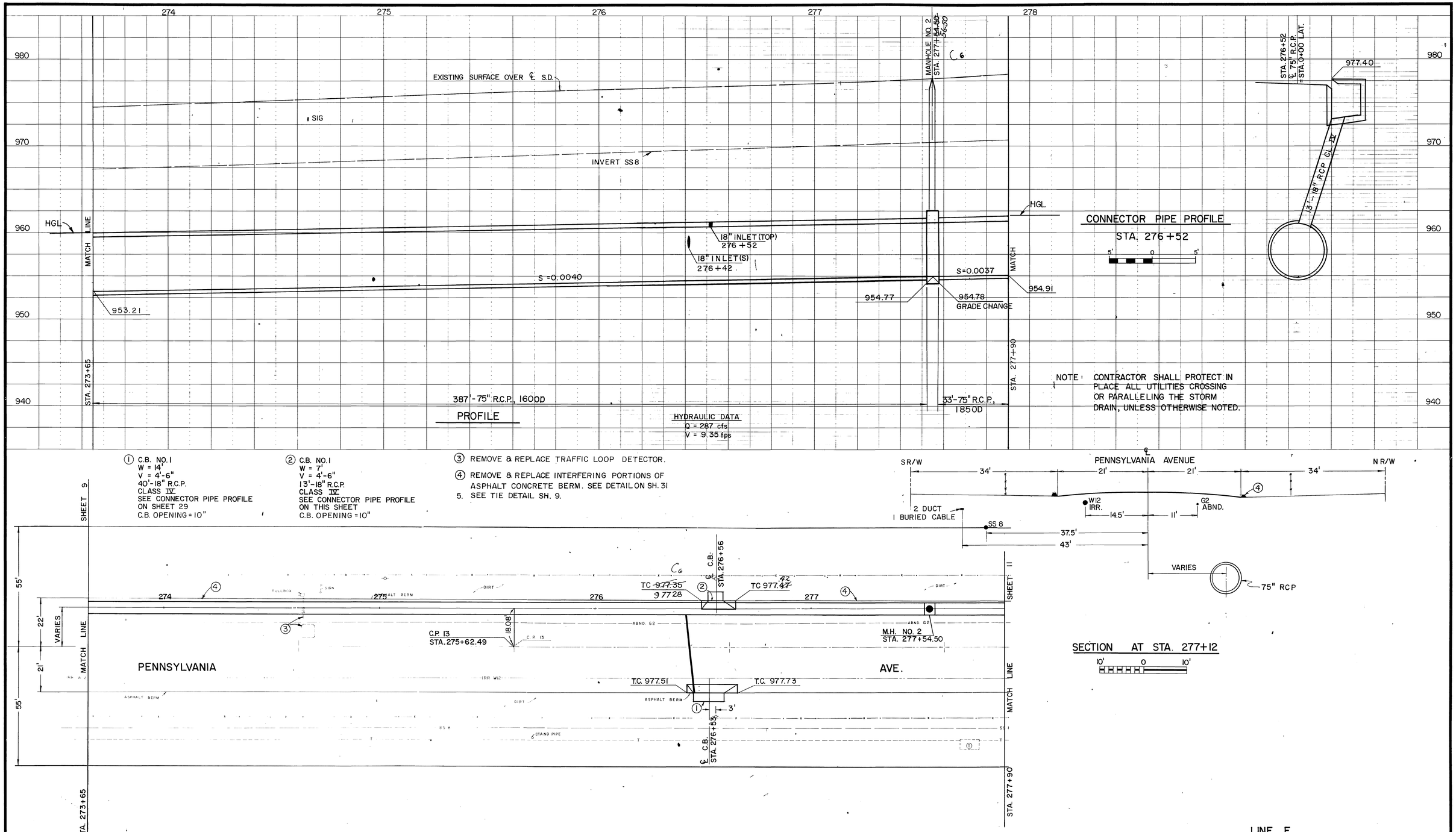
LINE E

BENCH MARK C.P. 11 ELEV. 970.024 BRASS CAP IN WELL MONUMENT AT INTERSECTION OF PENNSYLVANIA AND CHICAGO DOWN 1.2.	KOEBIG & KOEBIG, INC. ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	BOX SPRINGS DRAIN STAGE IV STA. 269+35 TO STA. 273+65 1970 STORM DRAIN BOND ISSUE PROJECT NO. 6	PROJECT NO. 1-0-220
SCALE:	APPROVED BY:	C5 Change Connector Pipe	DESIGNED BY: ALC		DRAWING NO. 1-327
DATE:	DATE: FEB 14 1974 REGISTERED CIVIL ENGINEER NO. 10776	C4 Sta. & Curve Data (A)-(B) Changed	DRAWN BY: JCD	APPROVED BY: CHIEF ENGINEER R.E. NO. 8822	SHEET NO. 9 OF 64
		C2 S.D. Relignment, Change.	DATE DRAWN: 10-73	DATE: 5-11-76	
		R.E.F. DESCRIPTION APPR DATE	CHECKED BY:		

AS BUILT

INDEX MAP

D-319



LINE E

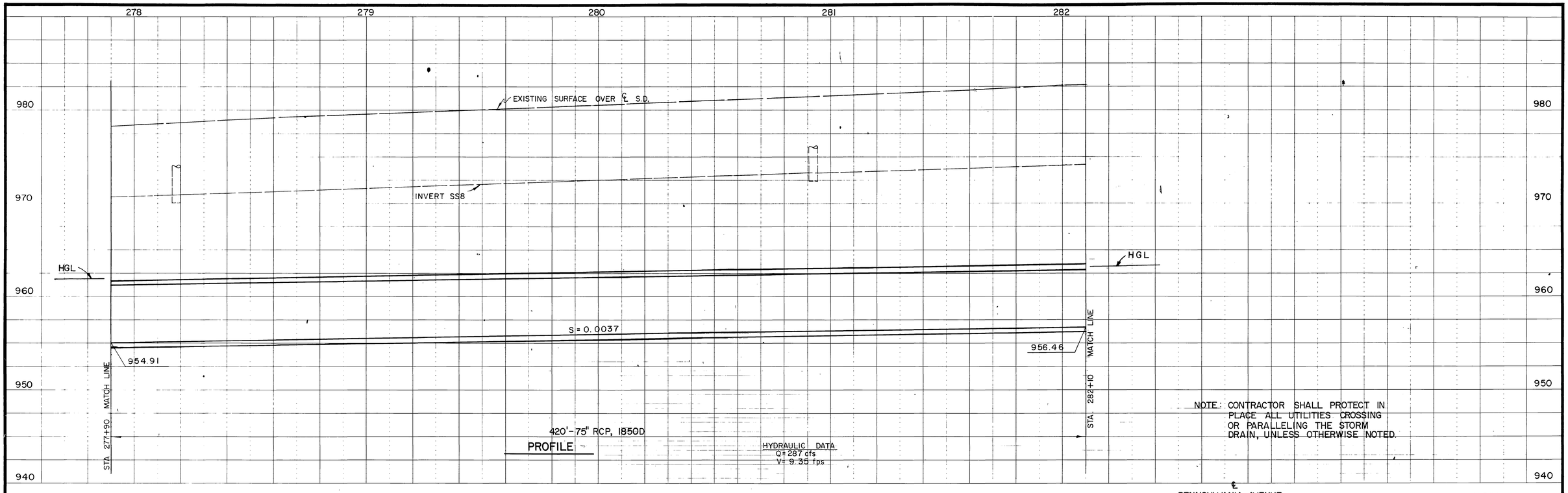
PLAN

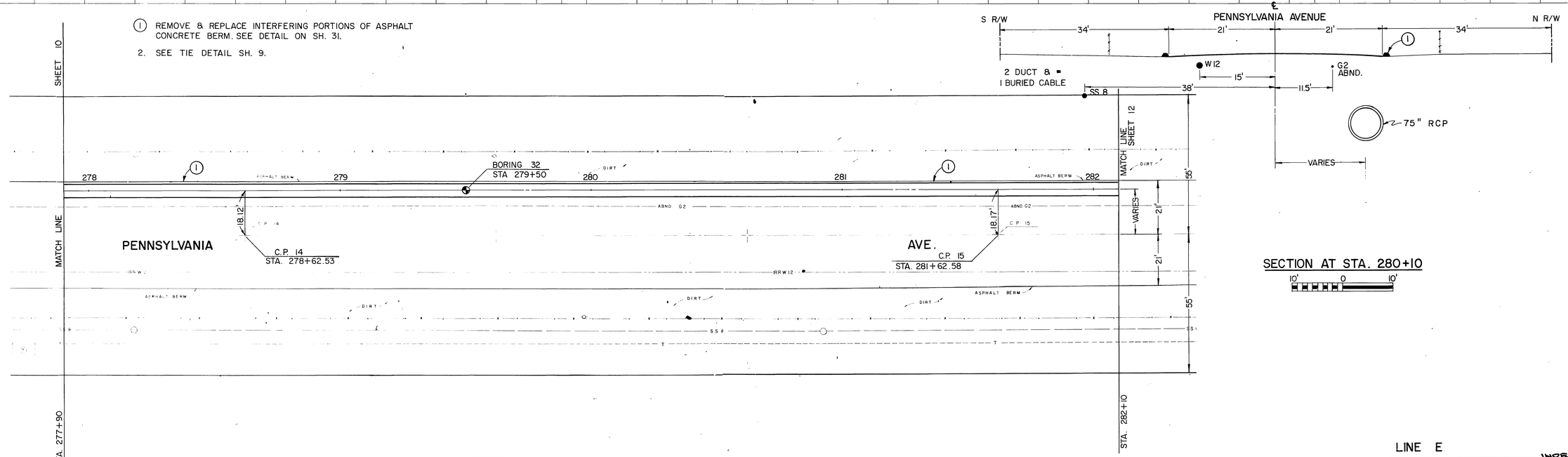
20' 0 20'

BENCH MARK C.P. 13-ELEV. 976.936 NAIL AND TIN ON CENTERLINE OF PENNSYLVANIA 559 FT. E OF CHICAGO.	KOEBIG & KOEBIG, INC. ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	BOX SPRINGS DRAIN STAGE IV STA. 273+65 TO STA. 277+90 1970 STORM DRAIN BOND ISSUE PROJECT NO. 6	PROJECT NO. 1-0-220
SCALE:	APPROVED BY: [signature] REGISTERED CIVIL ENGINEER NO. 10776	C6 Sta. & EL. Change	DESIGNED BY: [signature]		DRAWING NO. 1-327
DATE:	DATE: FEB 14 1974	REF. DESCRIPTION APPR. DATE	DRAWN BY: W.J. DATE DRAWN: 10-73 CHECKED BY:	APPROVED BY: [signature] CHIEF ENGINEER R.E. NO. 8822 DATE: 5-11-76	SHEET NO. 10 OF 64

AS BUILT

D-319





BENCH MARK C.P. 14-ELEV. 979.889
NAIL AND TIN ON CENTERLINE OF PENNSYLVANIA 859 FT. EAST OF CHICAGO.

SCALE:

DATE:

KOEBIG & KOEBIG, INC.
ENGINEERING · ARCHITECTURE · PLANNING
RIVERSIDE, CALIFORNIA

APPROVED BY:

DATE: FEB 14 1974

REGISTERED CIVIL ENGINEER NO. 10776

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE
	No Change		

AS BUILT

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

DESIGNED BY: AJE
DRAWN BY: CPM
DATE DRAWN: 10-73
CHECKED BY:

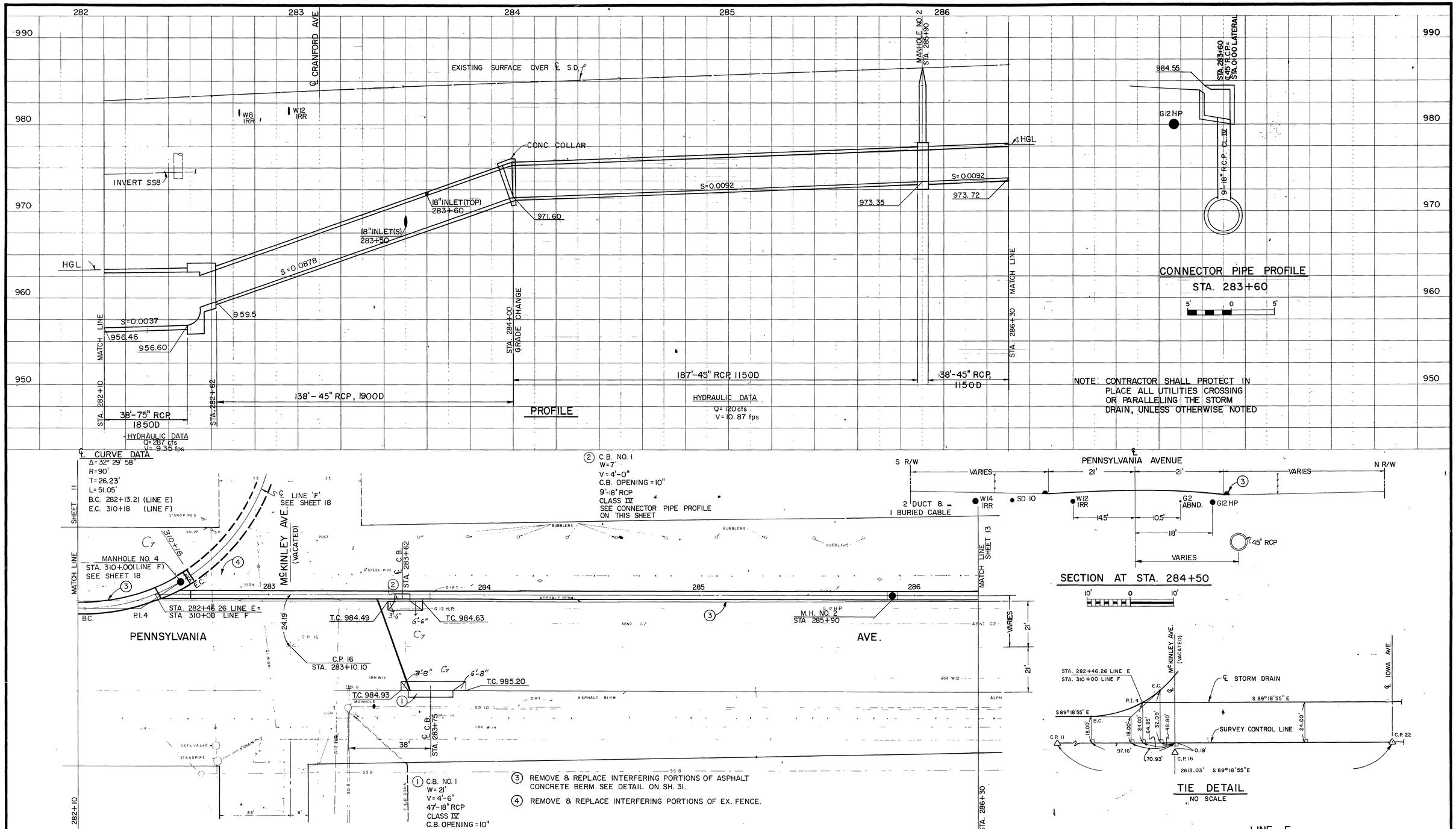
APPROVED BY:
CHIEF ENGINEER R/E NO. 8822
DATE: 5-11-76

BOX SPRINGS DRAIN
STAGE IV
STA. 277+90 TO STA. 282+10
1970 STORM DRAIN BOND ISSUE PROJECT NO. 6

INDEX OF

PROJECT NO. 1-0-220
DRAWING NO. 1-327
SHEET NO. 11 OF 64

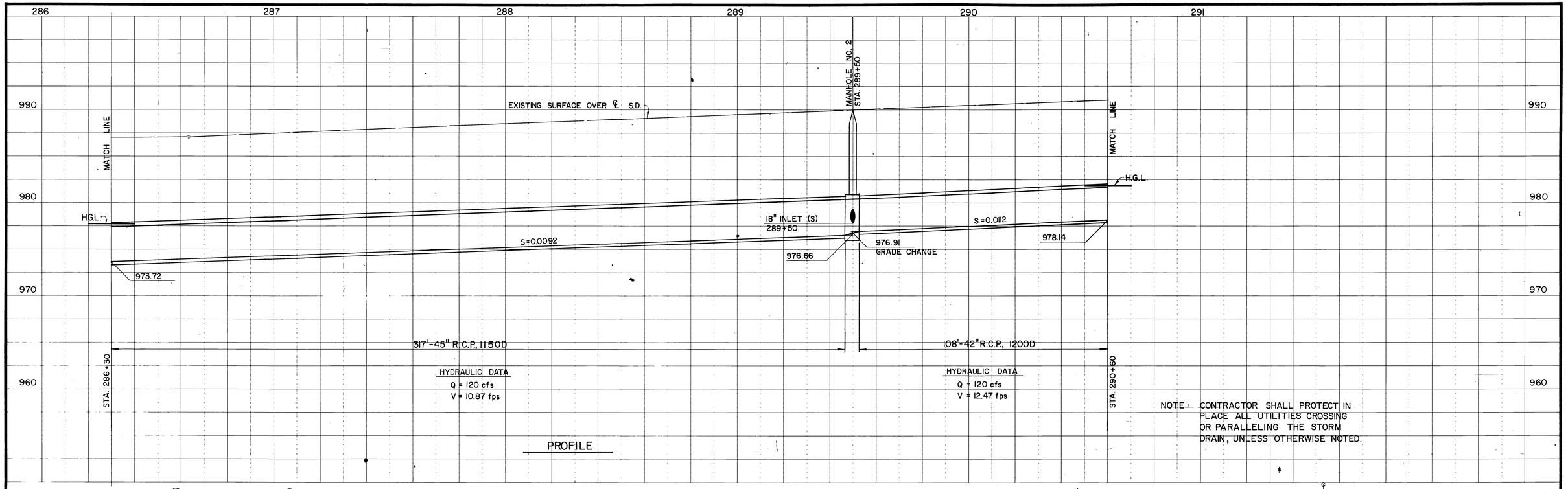
D-319



BENCH MARK C.P. 16-ELEV. 984.339 P.K. NAIL FLUSH WITH PAVE. AT INTERSECTION OF CRANFORD AND PENNSYLVANIA.	KOEBIG & KOEBIG, INC. ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	BOX SPRINGS DRAIN STAGE IV STA. 282+10 TO STA. 286+30 1970 STORM DRAIN BOND ISSUE PROJECT NO. 6	PROJECT NO 1-0-220
SCALE:	APPROVED BY:		DESIGNED BY:	APPROVED BY:	DRAWING NO. 1-327
DATE:	DATE: FEB 14 1974 REGISTERED CIVIL ENGINEER NO. 10776	C7 Changes As Shown	DRAWN BY:	CHIEF ENGINEER R.E. NO. 8822	SHEET NO. 12 OF 64
		REF. DESCRIPTION APPR. DATE	DATE DRAWN: 10-73	DATE: 5-11-76	
			CHECKED BY:		

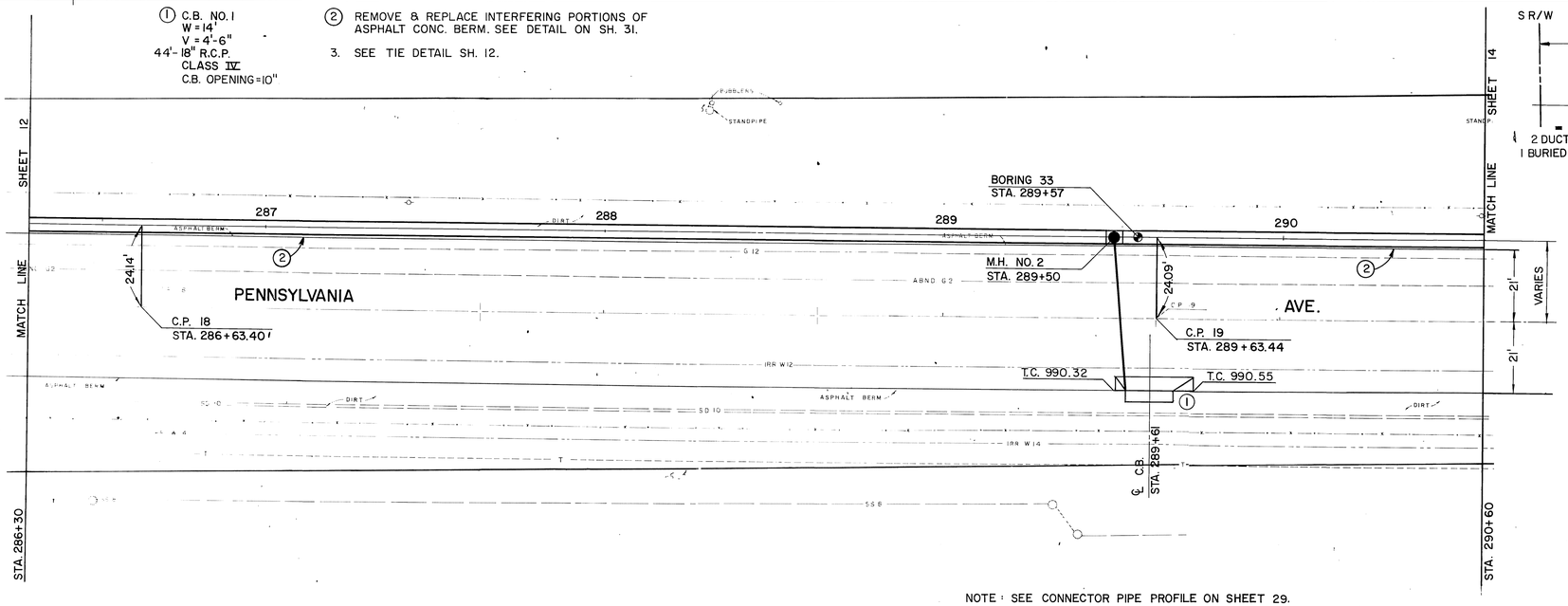
AS BUILT

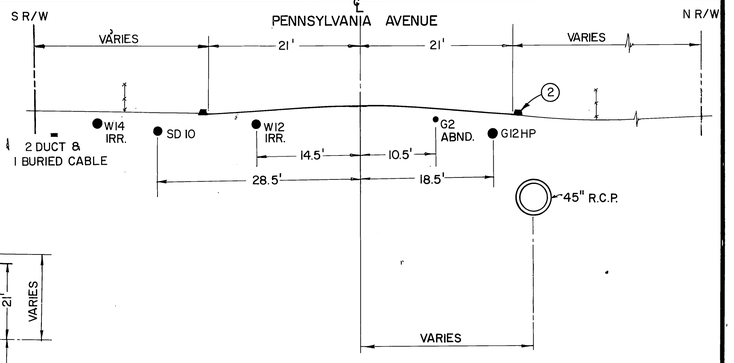
D-319



PROFILE

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN, UNLESS OTHERWISE NOTED.





SECTION AT STA. 288+15

10' 0 10'

NOTE: SEE CONNECTOR PIPE PROFILE ON SHEET 29.

PLAN

20' 0 20'

LINE E

INDEX LE

BENCH MARK C.P.19-ELEV. 990.621
NAIL AND TIN ON CENTERLINE OF PENNSYLVANIA 653 FT. EAST OF CRANFORD.

SCALE:

DATE:

KOEBIG & KOEBIG, INC.
ENGINEERING · ARCHITECTURE · PLANNING
RIVERSIDE, CALIFORNIA

APPROVED BY:

DATE: FEB 14 1974

REGISTERED CIVIL ENGINEER NO. 10776

REVISIONS			
	No Change		
REF.	DESCRIPTION	APPR.	DATE

AS BUILT

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

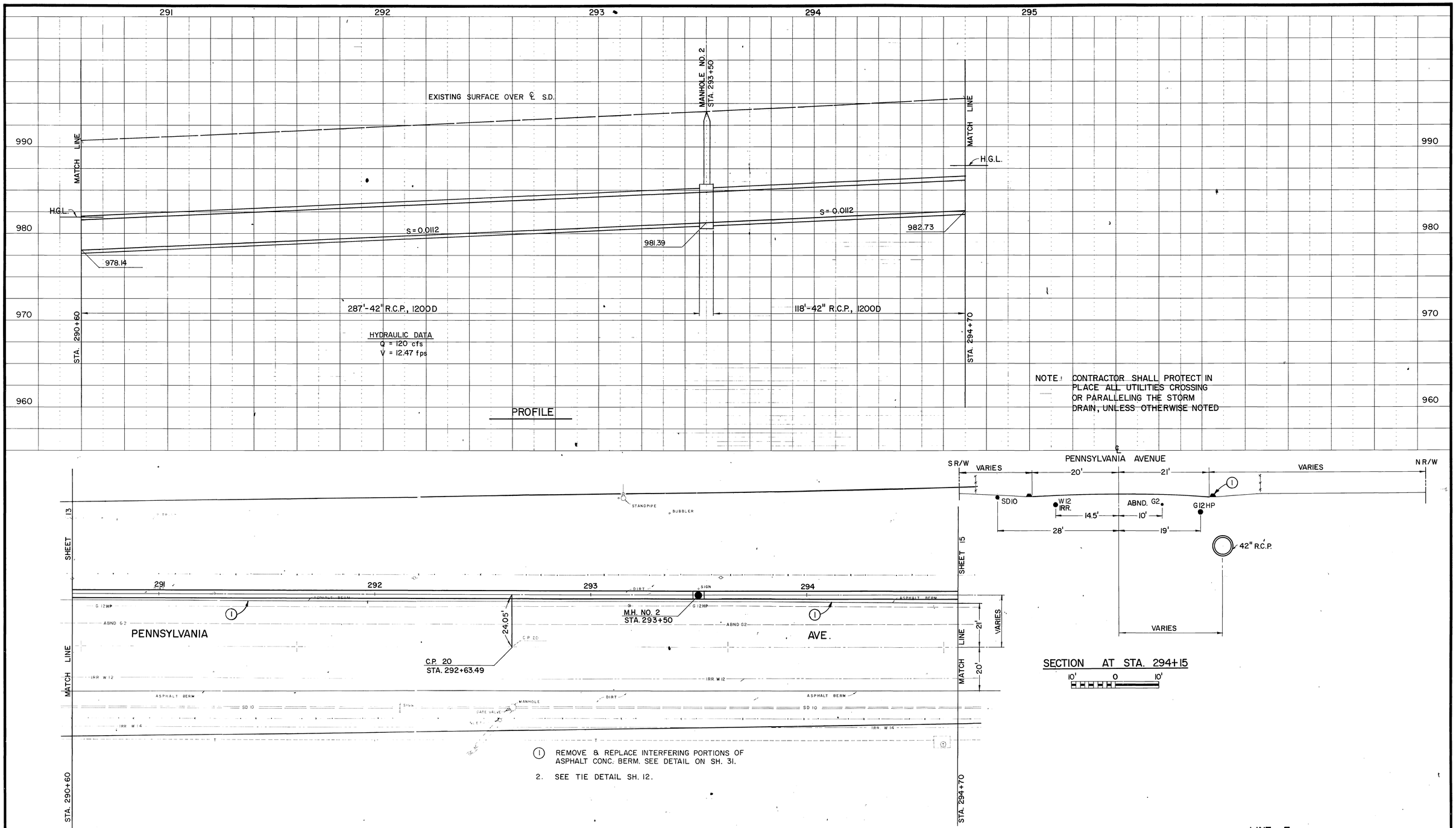
DESIGNED BY: GAE
DRAWN BY: W.N.
DATE DRAWN: 10-73
CHECKED BY:

APPROVED BY:
CHIEF ENGINEER-R.E. NO. 8822
DATE: 5-11-76

BOX SPRINGS DRAIN
STAGE IV
STA. 286+30 TO STA. 290+60
1970 STORM DRAIN BOND ISSUE PROJECT NO. 6

PROJECT NO. 1-0-220
DRAWING NO. 1-327
SHEET NO. 13 OF 64

D-319



1. REMOVE & REPLACE INTERFERING PORTIONS OF ASPHALT CONC. BERM. SEE DETAIL ON SH. 31.
2. SEE TIE DETAIL SH. 12.

LINE E

PLAN

20' 0 20'

BENCH MARK C.P.20-ELEV. 993.584 NAIL AND TIN ON CENTERLINE OF PENNSYLVANIA 953 FT. EAST OF CRANFORD.

SCALE:

DATE:

KOEBIG & KOEBIG, INC.
ENGINEERING · ARCHITECTURE · PLANNING
RIVERSIDE, CALIFORNIA

APPROVED BY: [signature]
REGISTERED CIVIL ENGINEER NO. 10776
DATE: FEB 14 1974

REVISIONS

REF.	DESCRIPTION	APPR.	DATE
	No Change		

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

DESIGNED BY: [signature]
DRAWN BY: W.J.
DATE DRAWN: 10-73
CHECKED BY:

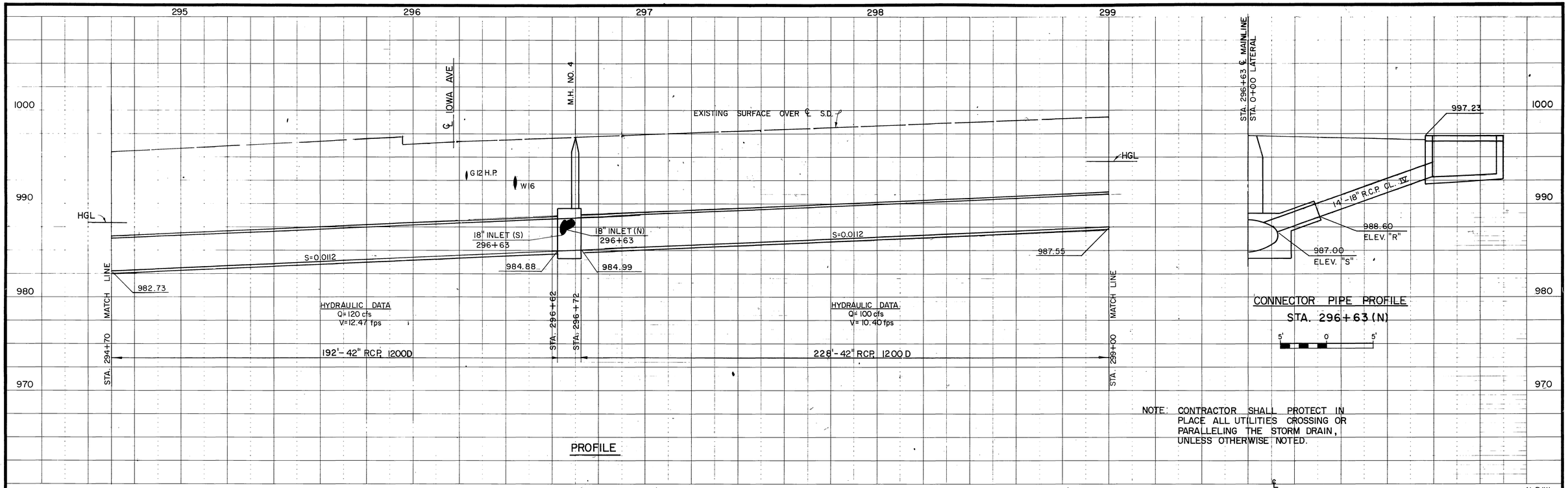
APPROVED BY: [signature]
CHIEF ENGINEER R.E. NO. 8822
DATE: 5-11-76

BOX SPRINGS DRAIN
STAGE IV
STA. 290+60 TO STA. 294+70
1970 STORM DRAIN BOND ISSUE PROJECT NO. 6

PROJECT NO. 1-0-220
DRAWING NO. 1-327
SHEET NO. 14 OF 64

AS BUILT

D-319

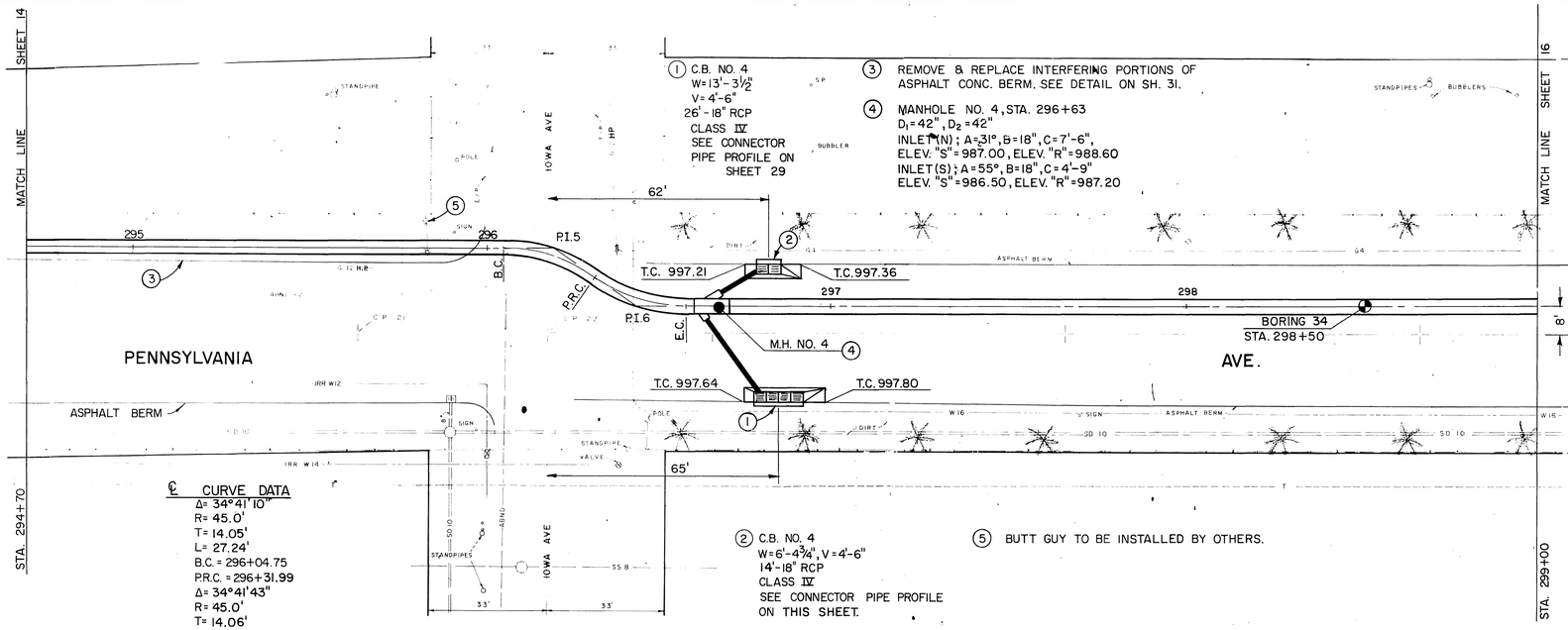


PROFILE

CONNECTOR PIPE PROFILE
STA. 296+63 (N)

5' 0 5'

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN, UNLESS OTHERWISE NOTED.



① C.B. NO. 4
W=13'-3½"
V= 4'-6"
26'-18" RCP
CLASS IV
SEE CONNECTOR PIPE PROFILE ON SHEET 29

② C.B. NO. 4
W=6'-4¾", V=4'-6"
14'-18" RCP
CLASS IV
SEE CONNECTOR PIPE PROFILE ON THIS SHEET.

③ REMOVE & REPLACE INTERFERING PORTIONS OF ASPHALT CONC. BERM. SEE DETAIL ON SH. 31.

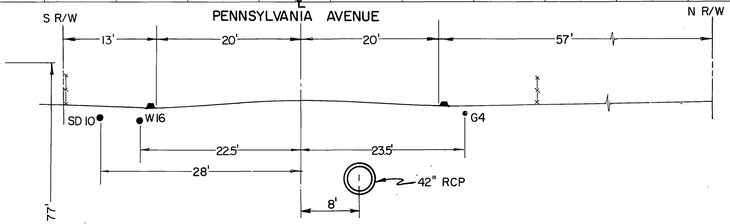
④ MANHOLE NO. 4, STA. 296+63
D_1=42", D_2=42"
INLET (N); A=31°, B=18", C=7'-6",
ELEV. "S"=987.00, ELEV. "R"=988.60
INLET (S); A=55°, B=18", C=4'-9"
ELEV. "S"=986.50, ELEV. "R"=987.20

⑤ BUTT GUY TO BE INSTALLED BY OTHERS.

℄ CURVE DATA
Δ= 34°41' 10"
R= 45.0'
T= 14.05'
L= 27.24'
B.C. = 296+04.75
P.R.C. = 296+31.99
Δ= 34°41'43"
R= 45.0'
T= 14.06'
L= 27.25'
E.C. = 296+59.24

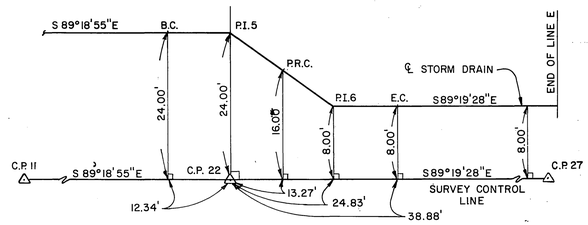
PLAN

20' 0 20'



SECTION AT STA. 297+65

10' 0 10'



TIE DETAIL
NO SCALE

LINE E

INDEX MF

BENCH MARK C.P. 22-ELEV. 995.980
BRASS CAP IN WELL MONUMENT DOWN 1.12' AT INTERSECTION OF IOWA AND PENNSYLVANIA

SCALE:

DATE:

KOEBIG & KOEBIG, INC.
ENGINEERING · ARCHITECTURE · PLANNING
RIVERSIDE, CALIFORNIA

APPROVED BY: Robert H. Koebig
DATE: FEB 14 1974 REGISTERED CIVIL ENGINEER NO. 10776

REVISIONS			
REF.	DESCRIPTION	APPR	DATE
	No Change		

AS BUILT

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

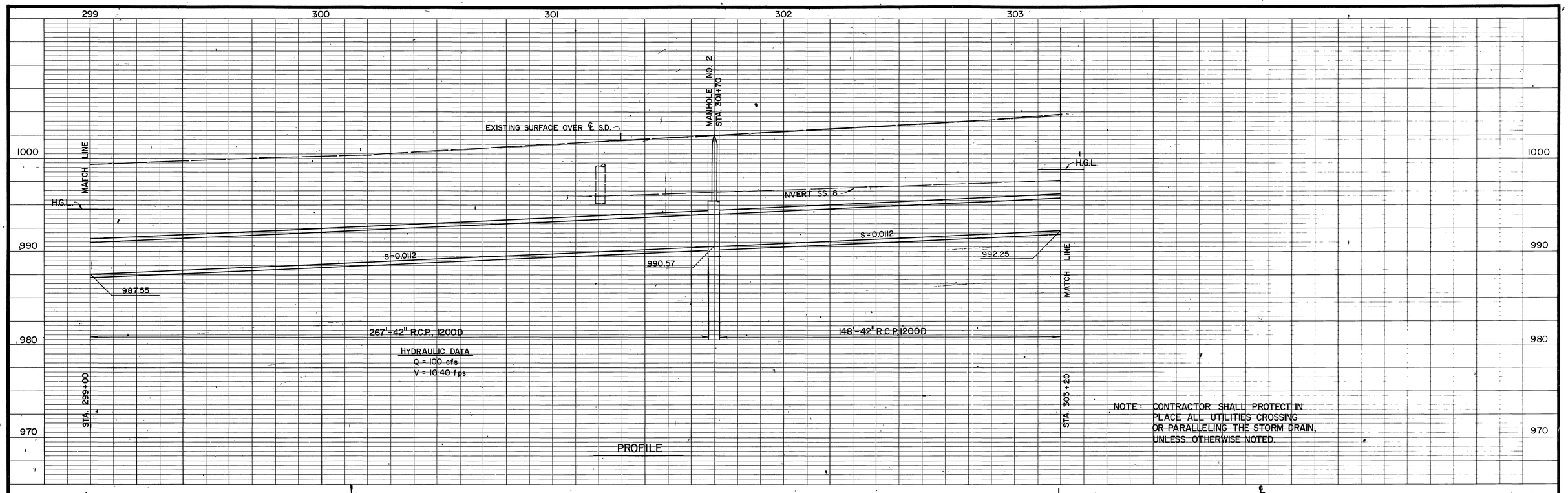
DESIGNED BY: MAE
DRAWN BY: GPM
DATE DRAWN: 10-73
CHECKED BY:

APPROVED BY: John V. Bryant
CHIEF ENGINEER R.C.E. NO. 8822
DATE: 5-11-76

BOX SPRINGS DRAIN
STAGE IV
STA. 294+70 TO STA. 299+00
1970 STORM DRAIN BOND ISSUE PROJECT NO. 6

PROJECT NO. 1-0-220
DRAWING NO. 1-327
SHEET NO. 15 OF 64

D-319

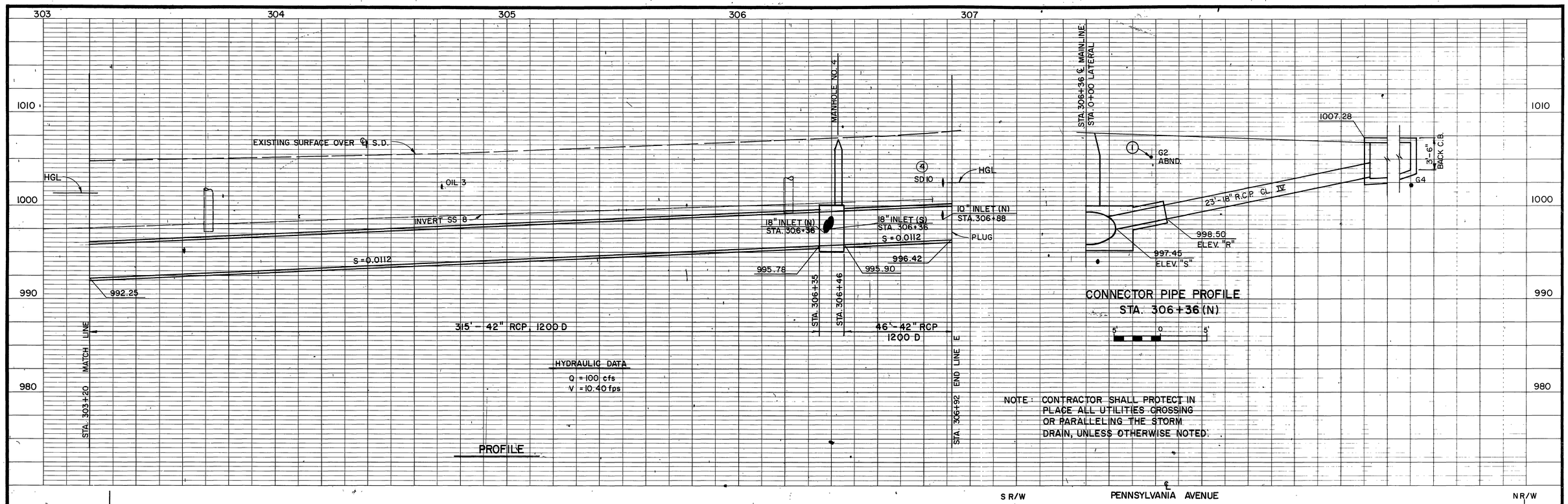


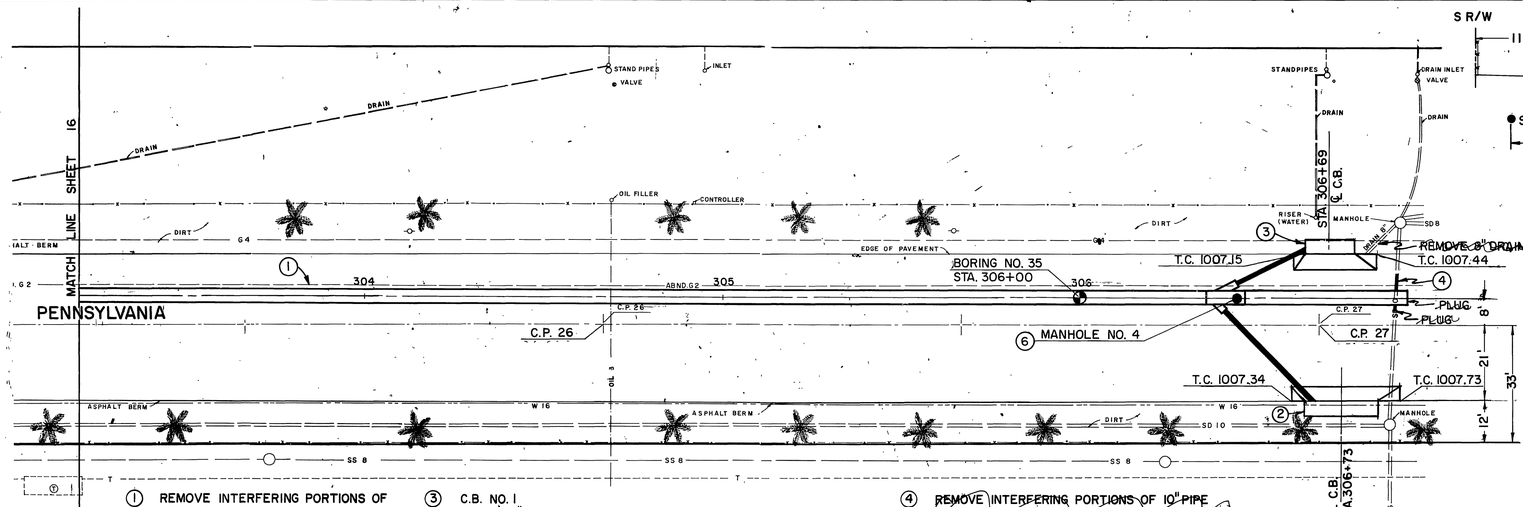
BENCH MARK C.P. 25 ELEV. 1002.449 NAIL AND TIN ON CENTERLINE OF PENNSYLVANIA 546 FT. EAST OF IOWA.	KOEBIG & KOEBIG, INC. ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	BOX SPRINGS DRAIN STAGE IV STA. 299+00 TO STA. 303+20 1970 STORM DRAIN BOND ISSUE PROJECT NO. 6	PROJECT NO. 1-0-220
SCALE:	APPROVED BY: [signature] REGISTERED CIVIL ENGINEER NO. 10776	No Change	DESIGNED BY: [initials]		DRAWING NO. 1-327
DATE:	DATE: FEB 14 1974	REF. DESCRIPTION APPR. DATE	DRAWN BY: W.J.	APPROVED BY: John W. Bryant CHIEF ENGINEER R.E. NO. 8822	SHEET NO. 16 OF 64
			DATE DRAWN: 10-73	DATE: 5-11-76	
			CHECKED BY:		

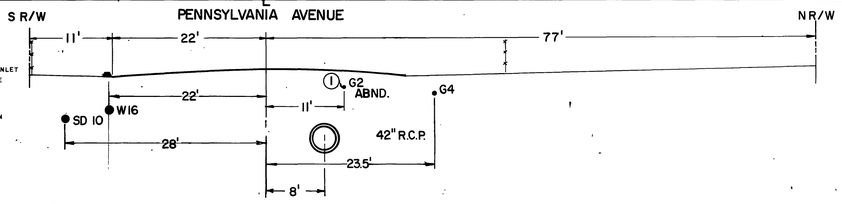
AS BUILT

INDEX 4F

D-319







SECTION AT STA. 305+65

10' 0 10'

① REMOVE INTERFERING PORTIONS OF ABANDONED GAS LINE.

② C.B. NO. 1 MODIFIED
W = 21'
V = 7'
40'-18" R.C.P.
CLASS IV
SEE CATCH BASIN DETAILS ON SHEET 31
C.B. OPENING = 10"

③ C.B. NO. 1
W = 14'-0"
V = 4'-6"
23'-18" R.C.P.
CLASS IV
SEE CONNECTOR PIPE PROFILE ON THIS SHEET
C.B. OPENING = 10"

④ REMOVE INTERFERING PORTIONS OF 10" PIPE AND REPLACE ON NEW GRADE.

5. SEE TIE DETAILS SH. 15.

Cb 10" Pipe replaced across pipe trench

⑥ MANHOLE NO. 4, STA. 306+36
D_1 = 42", D_2 = 42"
INLET (N); A = 27°, B = 18", C = 8'-6",
ELEV. "S" = 997.45, ELEV. "R" = 998.50
INLET (S); A = 45°, B = 18", C = 5'-6"
ELEV. "S" = 997.00, ELEV. "R" = 997.30

NOTE: SEE CONNECTOR PIPE PROFILES ON SHEET 29.

LINE E

INDEX 1F

PLAN

20' 0 20'

BENCH MARK C.P. 27-ELEV. 1007.555
NAIL AND TIN ON CENTERLINE OF PENNSYLVANIA 1046 FT. EAST OF IOWA.

SCALE:

DATE:

KOEBIG & KOEBIG, INC.
ENGINEERING · ARCHITECTURE · PLANNING
RIVERSIDE, CALIFORNIA

APPROVED BY: Norbert H. Weinberg
DATE: FEB 14 1974
REGISTERED CIVIL ENGINEER NO. 10776

REVISIONS

REF.	DESCRIPTION	APPR.	DATE
Cb	Changes made as shown		

AS BUILT

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

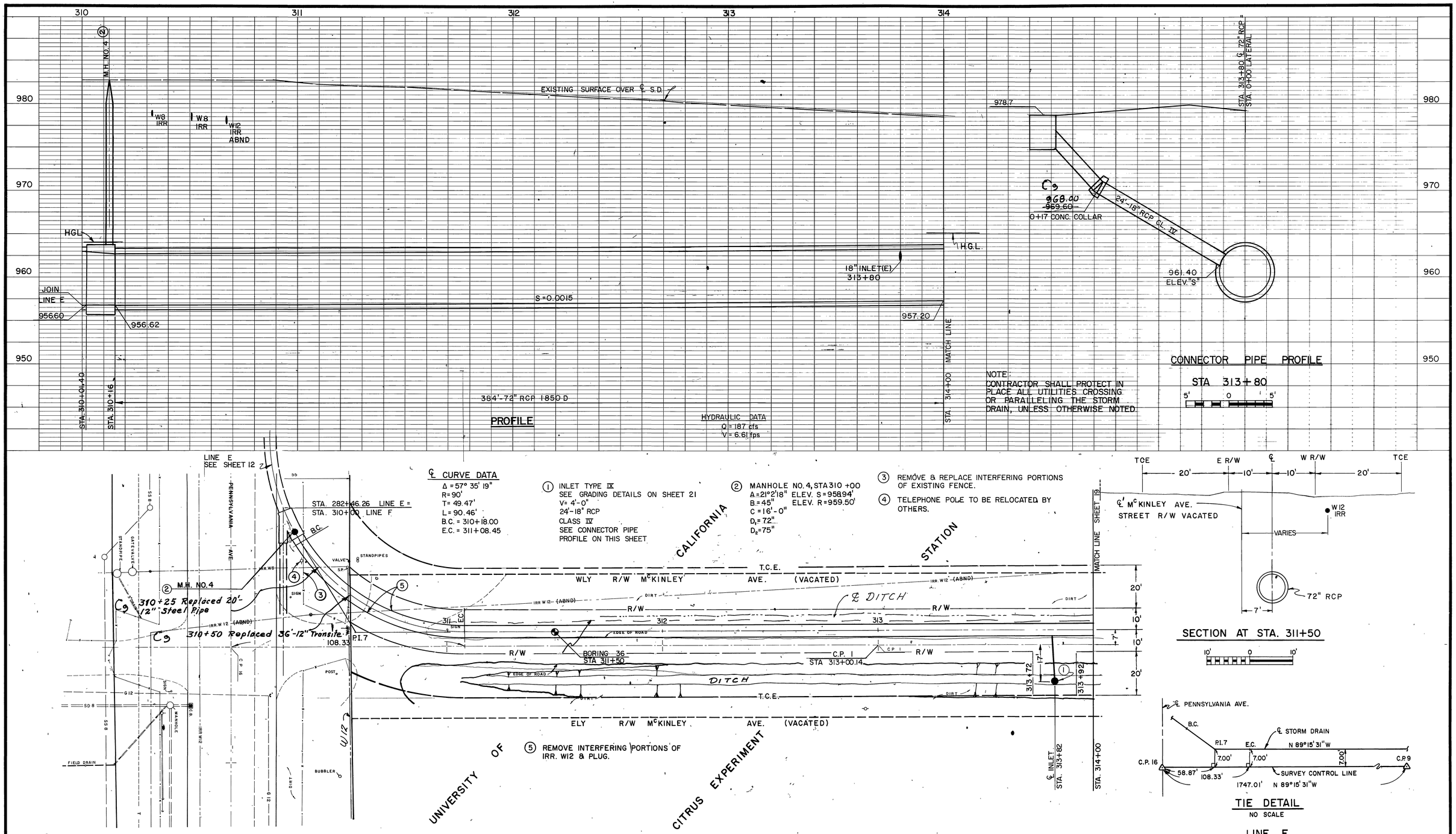
DESIGNED BY: [illegible]
DRAWN BY: JCD
DATE DRAWN: 10-73
CHECKED BY:

APPROVED BY: John W. Bryant
CHIEF ENGINEER R/E. NO. 8822
DATE: 5-11-74

BOX SPRINGS DRAIN
STAGE IV
STA. 303+20 TO STA. 306+92
1970 STORM DRAIN BOND ISSUE PROJECT NO. 6

PROJECT NO. 1-0-220
DRAWING NO. 1-327
SHEET NO. 17 OF 64

D-319



PLAN

20' 0 20'

BENCH MARK C.P. 1 - ELEV. 980.862 NAIL & TIN ON CENTERLINE OF CRANFORD 300' NORTH OF PENNSYLVANIA

SCALE:

DATE:

KOEBIG & KOEBIG, INC.
ENGINEERING · ARCHITECTURE · PLANNING
RIVERSIDE, CALIFORNIA

APPROVED BY: [signature]
REGISTERED CIVIL ENGINEER NO. 10976
DATE: FEB 14 1974

REVISIONS

REF.	DESCRIPTION	APPR.	DATE
C9	Changes as shown	WJH	[illegible]

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

DESIGNED BY: [illegible]
DRAWN BY: [illegible]
DATE DRAWN: 11-73
CHECKED BY:

APPROVED BY: [signature]
CHIEF ENGINEER R.E. NO. 8822
DATE: 5-11-76

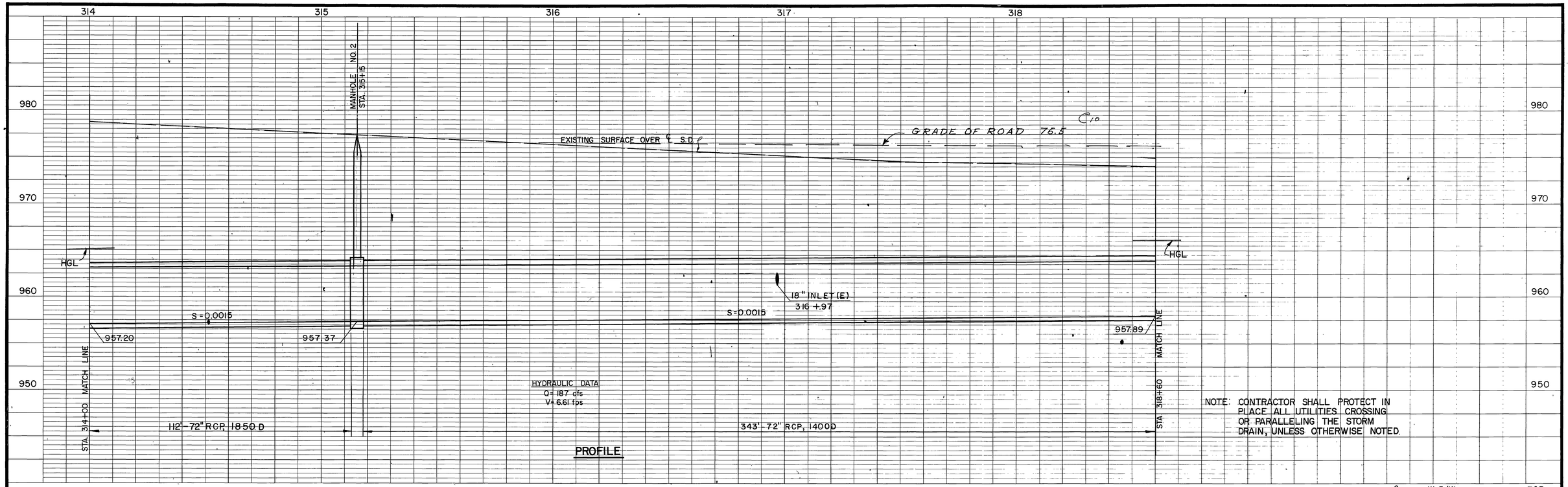
BOX SPRINGS DRAIN
STAGE IV
STA. 310+18 TO STA. 314+00
1970 STORM DRAIN BOND ISSUE PROJECT NO. 6

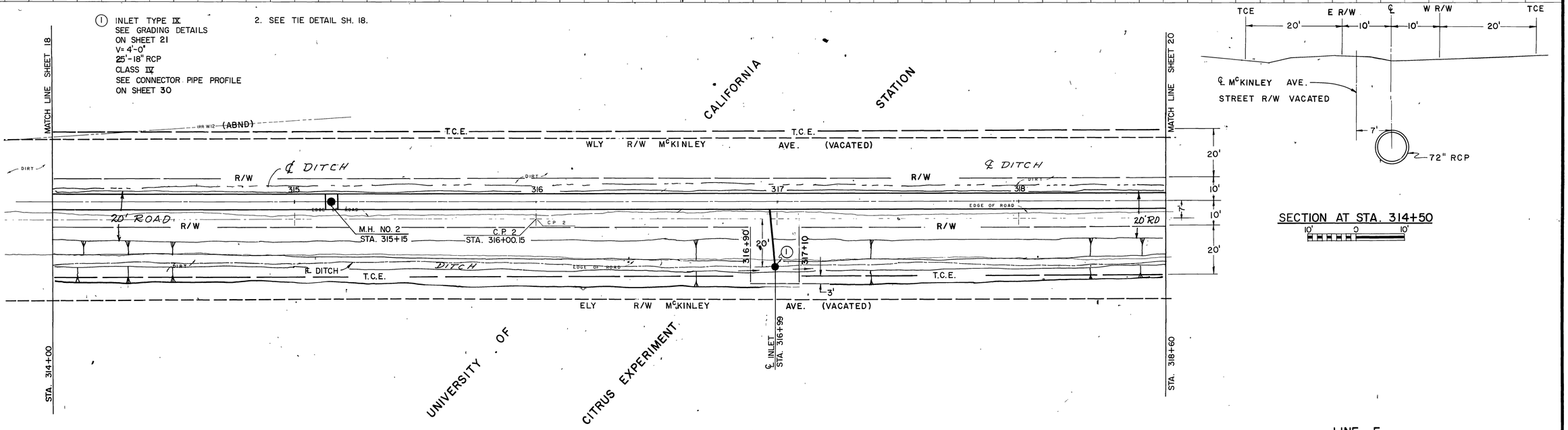
INDEX 1F

PROJECT NO. 1-0-220
DRAWING NO. 1-327
SHEET NO. 18 OF 64

AS BUILT

D-319





LINE F

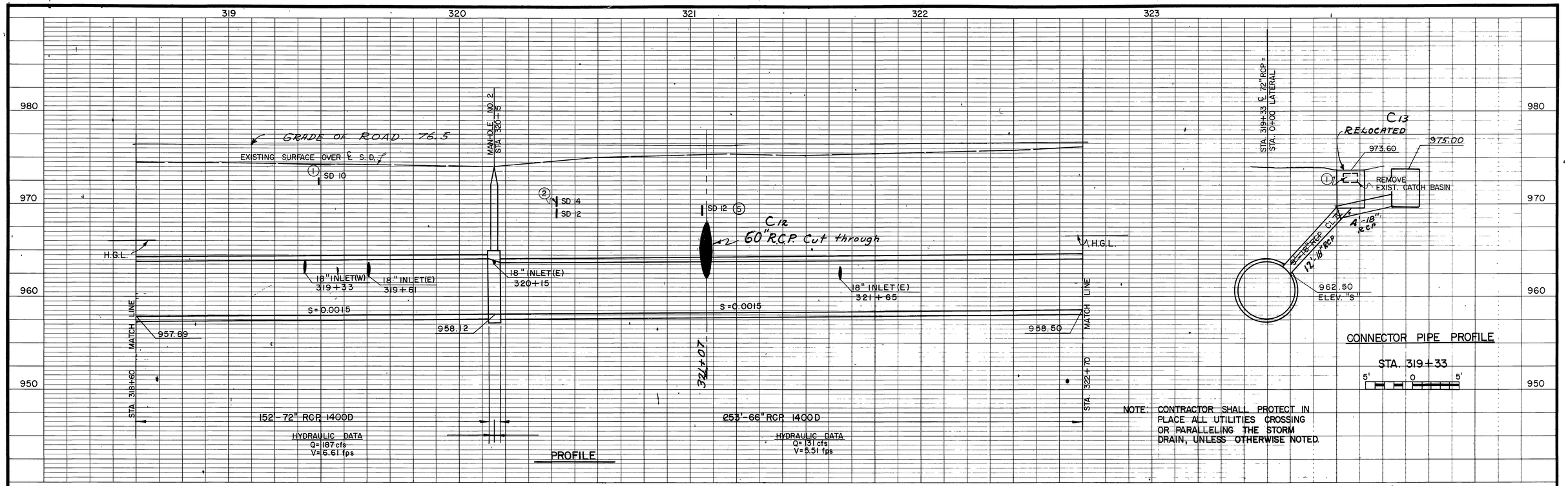
PLAN

20' 0 20'

BENCH MARK C.P. 2-ELEV. 976.780 SET NAIL ON CENTERLINE OF CRANFORD 600' NORTH OF PENNSYLVANIA	KOEBIG & KOEBIG, INC. ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	BOX SPRINGS DRAIN STAGE IV
SCALE:	APPROVED BY: Norbert H. Weinberg	C10 Changes as shown	DESIGNED BY: SAE	STA. 314+00 TO STA. 318+60
DATE:	DATE: FEB 14 1974 REGISTERED CIVIL ENGINEER NO. 10776	REF. DESCRIPTION APPR. DATE	DRAWN BY: cpm	1970 STORM DRAIN BOND ISSUE PROJECT NO. 6
			DATE DRAWN: 11-73	PROJECT NO. 1-0-220
			CHECKED BY:	DRAWING NO. 1-327
			APPROVED BY: Robert W. Bryant CHIEF ENGINEER R.E. NO. 8822	SHEET NO. 19 OF 64
			DATE: 5-11-76	

AS BUILT

D-319



NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN, UNLESS OTHERWISE NOTED.

① INLET TYPE IX
V= 4'-0"
~~12'-8"~~ 9'-18" RCP
CLASS IV
REMOVE EXISTING CATCH BASIN AND INTERFERING PORTIONS OF 10" PIPE
SEE CONNECTOR PIPE PROFILE ON THIS SHEET

C11

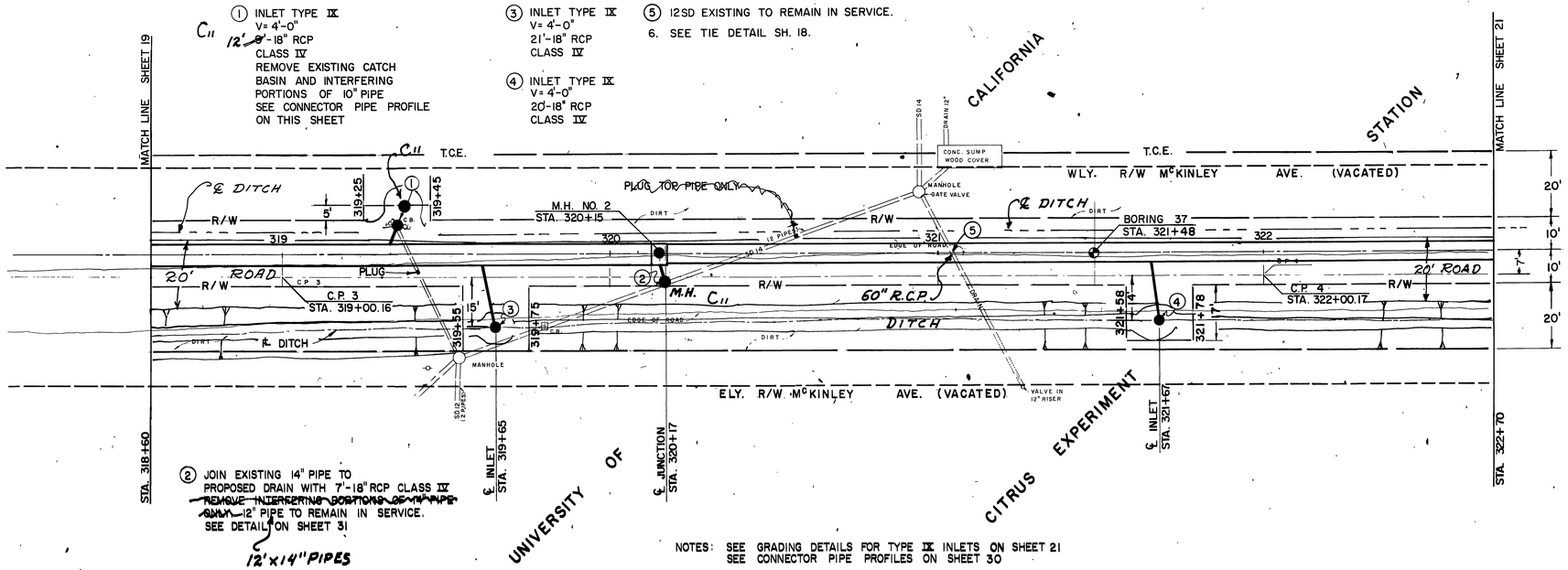
② JOIN EXISTING 14" PIPE TO PROPOSED DRAIN WITH 7'-18" RCP CLASS IV
~~REMOVE INTERFERING PORTIONS OF 14" PIPE ONLY~~ 12" PIPE TO REMAIN IN SERVICE.
SEE DETAIL ON SHEET 31

12'x14" PIPES

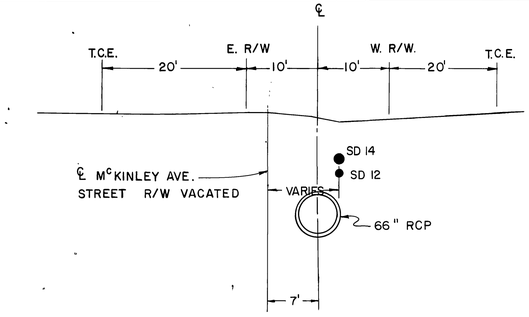
③ INLET TYPE IX
V= 4'-0"
21'-18" RCP
CLASS IV

④ INLET TYPE IX
V= 4'-0"
20'-18" RCP
CLASS IV

⑤ 12SD EXISTING TO REMAIN IN SERVICE.
6. SEE TIE DETAIL SH. 18.



PLAN



SECTION AT STA. 320+50
10' 0 10'

NOTES: SEE GRADING DETAILS FOR TYPE IX INLETS ON SHEET 21
SEE CONNECTOR PIPE PROFILES ON SHEET 30

LINE F

BENCH MARK C.P. 3-ELEV. 974.721
SET NAIL ON CENTERLINE OF CRANFORD 900' NORTH OF PENNSYLVANIA

SCALE:

DATE:

KOEBIG & KOEBIG, INC.
ENGINEERING · ARCHITECTURE · PLANNING
RIVERSIDE, CALIFORNIA

APPROVED BY:

DATE: 18 14 1974

REGISTERED CIVIL ENGINEER NO. 10776

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE
C13	Relocated Connector Pipe		
C14	Located 60"RCP S.D.		
C11	Changes As Shown		

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

DESIGNED BY: ℄
DRAWN BY: cpm
DATE DRAWN: 11-73
CHECKED BY:

APPROVED BY:
CHIEF ENGINEER R.E. NO. 8822
DATE: 5-11-76

BOX SPRINGS DRAIN
STAGE IV
STA. 318+60 TO STA. 322+70
1970 STORM DRAIN BOND ISSUE PROJECT NO. 6

PROJECT NO 1.0-220
DRAWING NO. 1-327
SHEET NO. 20 OF 64

AS BUILT

D-319

323 324 325 326 327

980 970 960 950

10' DIA. OIL STORAGE TANKS

GRADE ROAD

EXISTING SURFACE OVER ℄ S.D.

E W6 W6 E

MANHOLE NO. 2
STA. 325+80

H.G.L.

18" INLET (E)
324+11

S=0.0015

956.50

958.97

959.14

MATCH LINE
STA. 322+70

MATCH LINE
STA. 327+00

HYDRAULIC DATA
Q=131 cfs
V=5.51 fps

307'-66" RCP, 1400 D

118'-66" RCP, 1600 D

PROFILE

976.06
976.50

STA. 324+11 ℄ 66" R.C.P.
+ STA. 0+00 LATERAL

W6 W6 E E

26'-18" RCP, CL. IV

968.70
0+19 CONC. COLLAR

962.00
ELEV. "S"

CONNECTOR PIPE PROFILE
STA. 324+11

5' 0 5'

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN, UNLESS OTHERWISE NOTED.

MATCH LINE SHEET 20

STA. 322+81.72

STA. 323+58.65

10' DIA. OIL STORAGE TANKS
LENGTH = 34.25'

① INLET TYPE IX
V=4'
26'-18" RCP
CLASS IV
SEE CONNECTOR PIPE
PROFILE ON THIS SHEET

② GRADE EXISTING DITCH ALL AROUND INLET TO PROVIDE ADEQUATE DRAINAGE.

CALIFORNIA

STATION

MATCH LINE SHEET 22

324+15

T.C.E. WLY. R/W Mc KINLEY AVE. (VACATED) T.C.E.

℄ DITCH

STANDPIPE

GROVE THERMOMETER

E (PROPOSED) EDGE OF ROAD R/W E (PROPOSED)

DIRT

323 324 325 326

EDGE OF ROAD

ROAD

20' ROAD

C.P. 5
324+00.18

M.H. NO. 2
STA. 325+80

R/W R/W

F.L. DITCH

T.C.E.

INLETS

POLE

RELOCATED C14

ELY. R/W Mc KINLEY AVE. (VACATED)

EDGE OF ROAD

STA. 322+70

324+06 ℄ INLET 324+21 324+26

STA. 327+00

③ RELOCATE GROVE THERMOMETER ELECTRICAL LINE FROM STA. 324+08.50 TO STA. 329+08.50 18 FEET WEST OF CONTROL LINE.

4. SEE TIE DETAIL SH. 18.

UNIVERSITY OF CITRUS EXPERIMENT

EXISTING DITCH
4' BOTTOM

4' DITCH

FLOW

4' 3'

C14

4:1 SLOPE

GRADING DETAIL
INLET TYPE IX
NO SCALE

PLAN
20' 0 20'

T.C.E. E. R/W W. R/W T.C.E.
15' 10' 10' 15'

E E
12' 1'

℄ Mc KINLEY AVE.
STREET R/W VACATED

7'

66" RCP

SECTION AT STA. 325+50
10' 0 10'

LINE F

INDEX 6E

BENCH MARK C.P. 5 - ELEV. 978.239
SET NAIL ON CENTERLINE OF CRANFORD 1400' NORTH OF PENNSYVANIA

SCALE:

DATE:

KOEBIG & KOEBIG, INC.
ENGINEERING · ARCHITECTURE · PLANNING
RIVERSIDE, CALIFORNIA

APPROVED BY:

DATE: FEB 14 1974

REGISTERED CIVIL ENGINEER NO. 10776

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE
C14	Relocate Inlet Type IX as shown		

AS BUILT

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

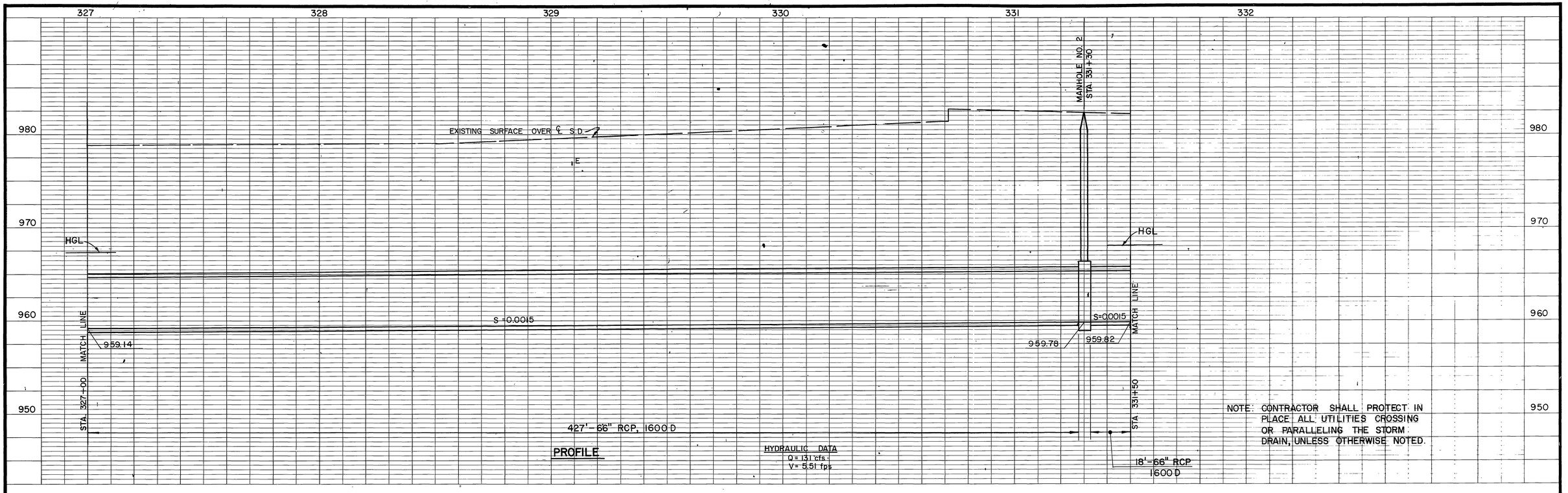
DESIGNED BY: RAE
DRAWN BY: CMW
DATE DRAWN: 11-73
CHECKED BY:

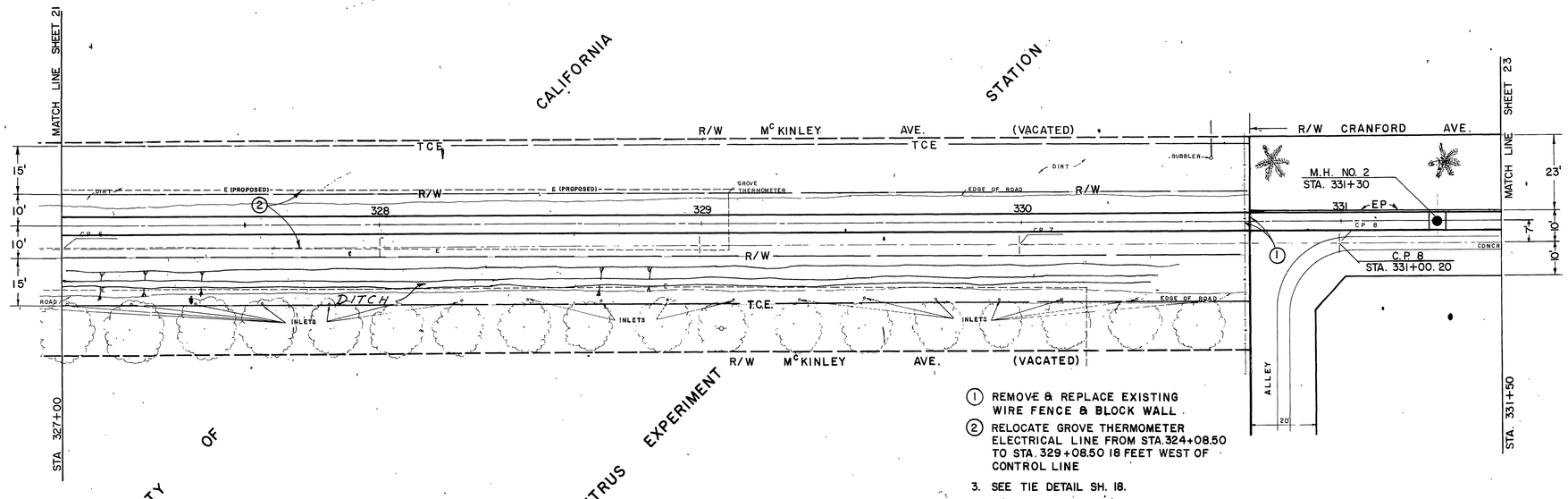
APPROVED BY:
John W. Bryant
CHIEF ENGINEER B.E. NO. 8822
DATE: 5-11-76

BOX SPRINGS DRAIN
STAGE IV
STA. 322+70 TO STA. 327+00
1970 STORM DRAIN BOND ISSUE PROJECT NO. 6

PROJECT NO. 1-0-220
DRAWING NO. 1-327
SHEET NO. 21 OF 64

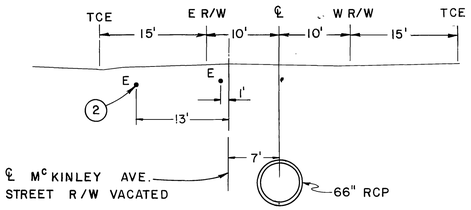
D-319





PLAN

20' 0 20'



SECTION AT STA. 328+50

10' 0 10'

LINE F

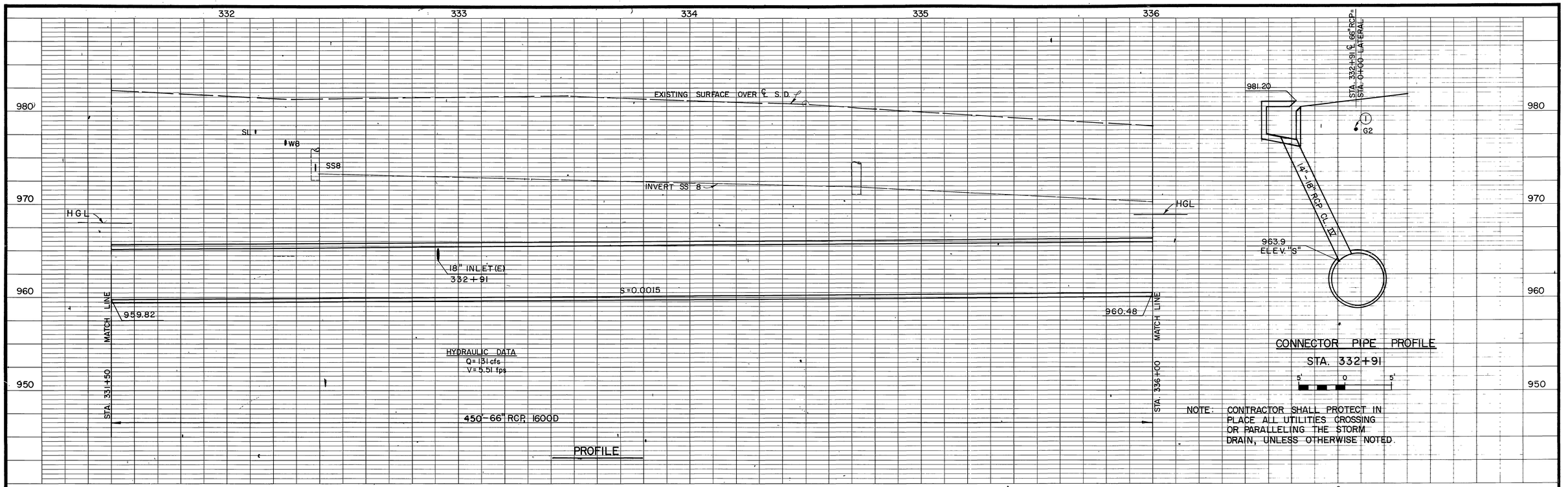
INDEX 6

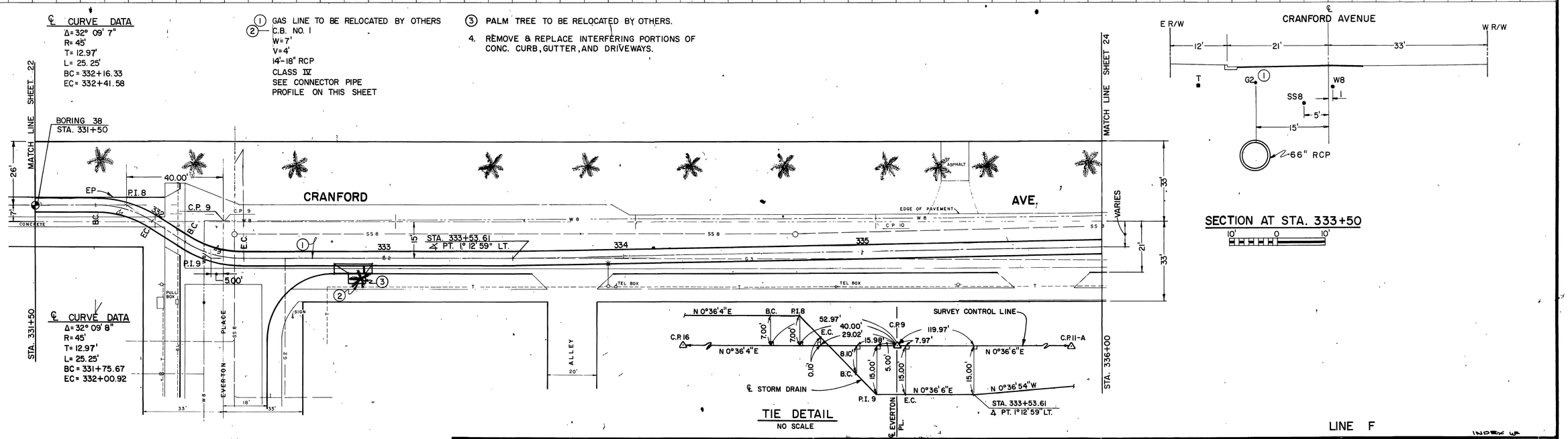
BENCH MARK C.P. 8 - ELEV. 982.437 SET NAIL ON CENTERLINE OF CRANFORD 633' SOUTH OF UNIVERSITY	**KOEBIG & KOEBIG, INC.** ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	BOX SPRINGS DRAIN STAGE IV STA. 327+00 TO STA. 331+50 1970 STORM DRAIN BOND ISSUE PROJECT NO. 6
SCALE:	APPROVED BY:	REF. / DESCRIPTION / APPR. / DATE: No Change	DESIGNED BY: AOE	APPROVED BY: John V. Bryant CHIEF ENGINEER R.E. NO. 8822
DATE:	DATE: FEB 14 1974 · REGISTERED CIVIL ENGINEER NO. 10776		DRAWN BY: LPW	DATE: 5-11-76
			DATE DRAWN: 11-73	
			CHECKED BY:	

PROJECT NO. 1.0-220
DRAWING NO. 1-327
SHEET NO. 22 OF 64

AS BUILT

D-319





BENCH MARK C.P. 9 - ELEV. 981.339
TOP OF 3/4" IN I.P. AT EVERTON AND CRANFORD

SCALE:

DATE:

KOEBIG & KOEBIG, INC.
ENGINEERING · ARCHITECTURE · PLANNING
RIVERSIDE, CALIFORNIA

APPROVED BY:

DATE: FEB 14 1974

REGISTERED CIVIL ENGINEER NO. 10776

REVISIONS			
No Change			
REF.	DESCRIPTION	APPR.	DATE

AS BUILT

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

DESIGNED BY: JOE
DRAWN BY: cpm
DATE DRAWN: 11-73
CHECKED BY:

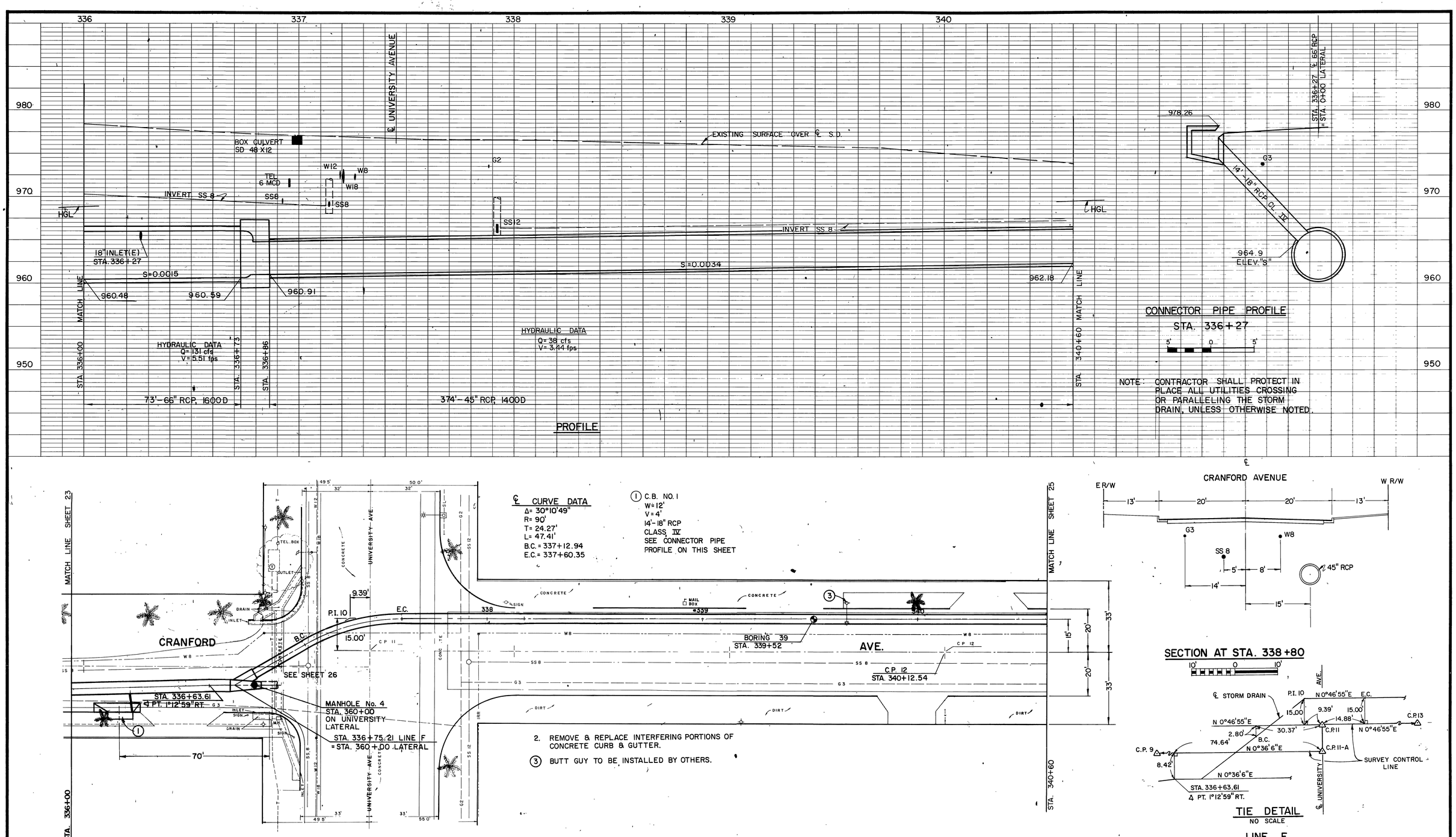
APPROVED BY:
CHIEF ENGINEER R.E. NO. 8822
DATE: 5-11-76

BOX SPRINGS DRAIN
STAGE IV
STA. 331+50 TO STA. 336+00
1970 STORM DRAIN BOND ISSUE PROJECT NO. 6

INDEX 6

PROJECT NO. 1-0-220
DRAWING NO. 1-327
SHEET NO. 23 OF 64

D-319



BENCH MARK C.P. 11-ELEV. 976.769 PK NAIL AT CENTER OF CRANFORD (WEST) AND UNIVERSITY AVE.	KOEBIG & KOEBIG, INC. ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	BOX SPRINGS DRAIN STAGE IV
SCALE:	APPROVED BY: Norbert H. Weinberg	No Change	DESIGNED BY: JAC	STA. 336+00 TO STA. 340+60
DATE:	DATE: FEB 14 1974 REGISTERED CIVIL ENGINEER NO. 10776	REF. DESCRIPTION APPR. DATE	DRAWN BY: RPM	1970 STORM DRAIN BOND ISSUE PROJECT NO. 6
			DATE DRAWN: 11-75	
			CHECKED BY:	
			APPROVED BY: John K. Bryant CHIEF ENGINEER R.E. NO. 8822	
			DATE: 5-11-76	

INDEX 6F

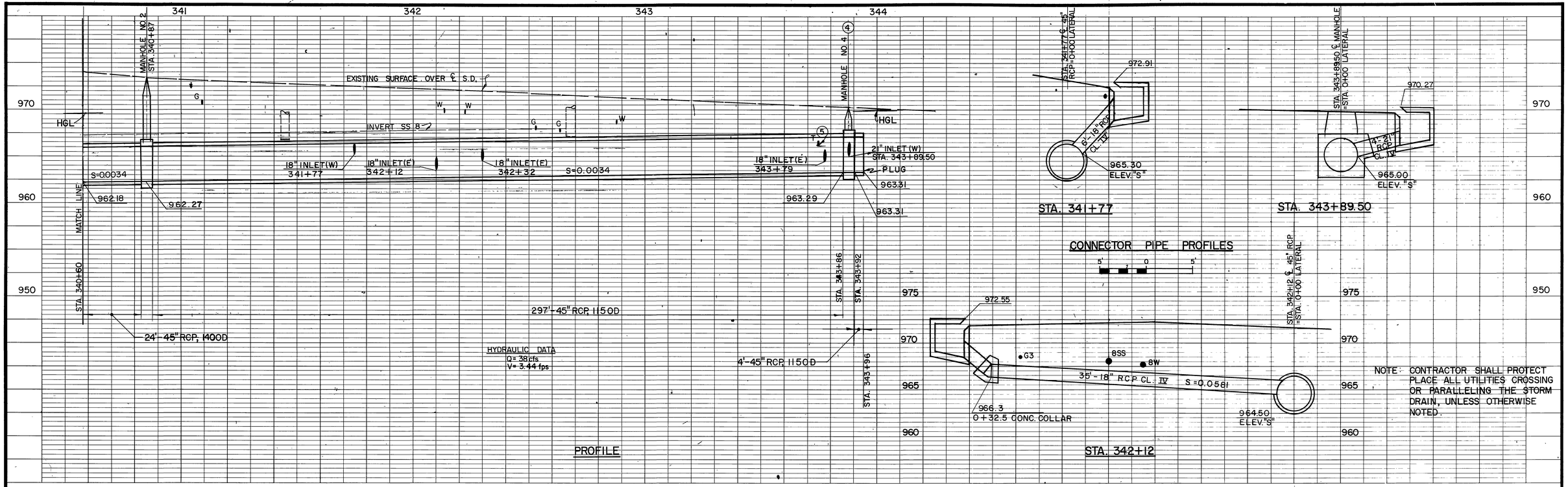
PROJECT NO. 1-0-220

DRAWING NO. 1-327

SHEET NO. 24 OF 64

AS BUILT

D-319



(1) C.B. NO. 1
W=14'
V=4'-6"
6'-18" RCP
CLASS IV

(2) C.B. NO. 1
W=7'
V=4'
35'-18" RCP
CLASS IV
A'= 36"

(3) C.B. NO. 1
W=21'
V=4'
69'-18" RCP
CLASS IV

(4) C.B. NO. 1
W=14'
V=4'
4'-21" RCP
CLASS IV
L.D. NO. 2, CASE C

(5) TELEPHONE CONDUIT TO BE RELOCATED BY OTHERS.

(6) C.B. NO. 1
W=7'
V=5'-0"
37'-18" RCP
CLASS IV
L.D. NO. 2; CASE C

(7) MANHOLE NO. 4 STA. 343+89.67
A= 85°
B= 21"
C= 3'-3" ELEV. S=965.0
D1= 45° ELEV. R=965.5
D2= 45°

(8) PALM TREES TO BE RELOCATED BY OTHERS.

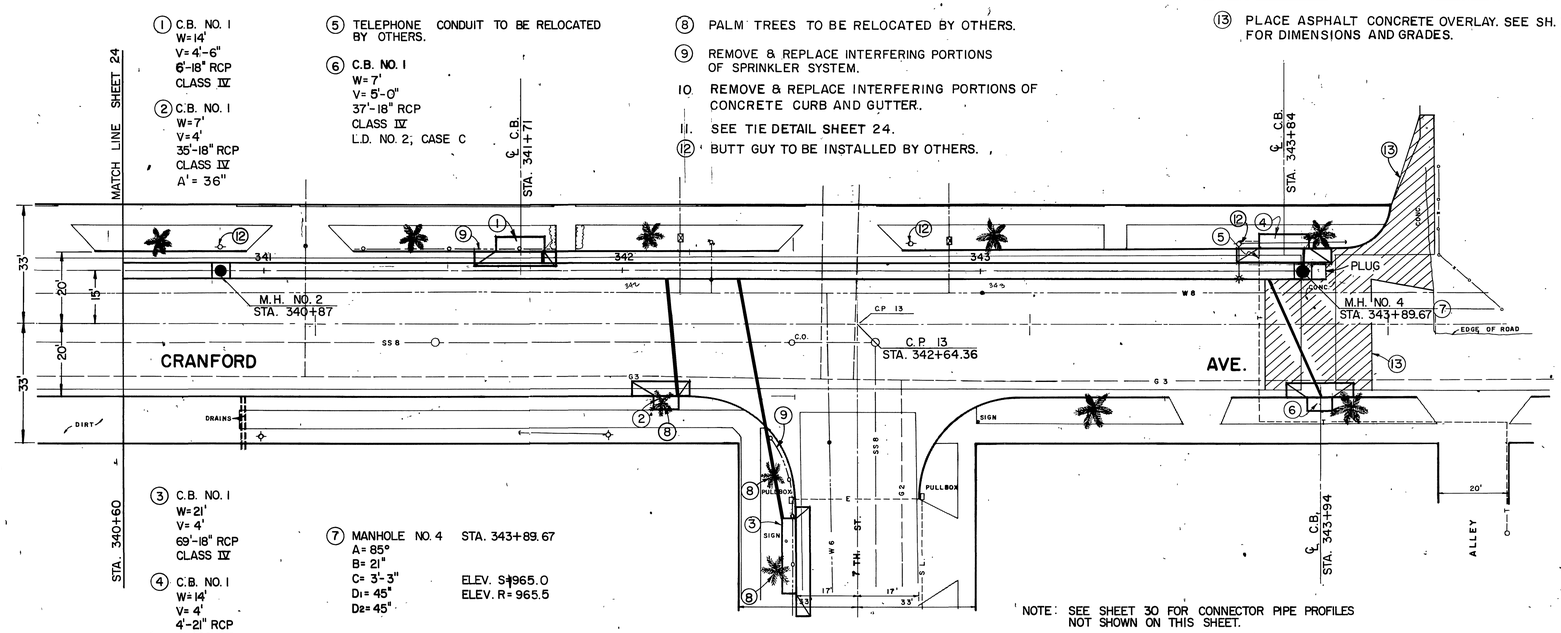
(9) REMOVE & REPLACE INTERFERING PORTIONS OF SPRINKLER SYSTEM.

(10) REMOVE & REPLACE INTERFERING PORTIONS OF CONCRETE CURB AND GUTTER.

(11) SEE TIE DETAIL SHEET 24.

(12) BUTT GUY TO BE INSTALLED BY OTHERS.

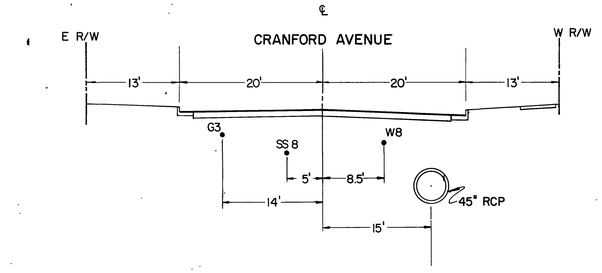
(13) PLACE ASPHALT CONCRETE OVERLAY. SEE SH. 31. FOR DIMENSIONS AND GRADES.



NOTE: SEE SHEET 30 FOR CONNECTOR PIPE PROFILES NOT SHOWN ON THIS SHEET.

PLAN

20' 0 20'



SECTION AT STA. 340+90

10' 0 10'

LINE F

INDEX 6

BENCH MARK C.P. 13-ELEV. 971.617
TOP OF 2" I.P. AT 7TH AND CRANFORD

SCALE:

DATE:

KOEBIG & KOEBIG, INC.
ENGINEERING · ARCHITECTURE · PLANNING
RIVERSIDE, CALIFORNIA

APPROVED BY:

DATE: FEB 14 1974

REGISTERED CIVIL ENGINEER NO. 10776

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE
	No Change		

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

DESIGNED BY: RAE
DRAWN BY: RPM
DATE DRAWN: 11-73
CHECKED BY:

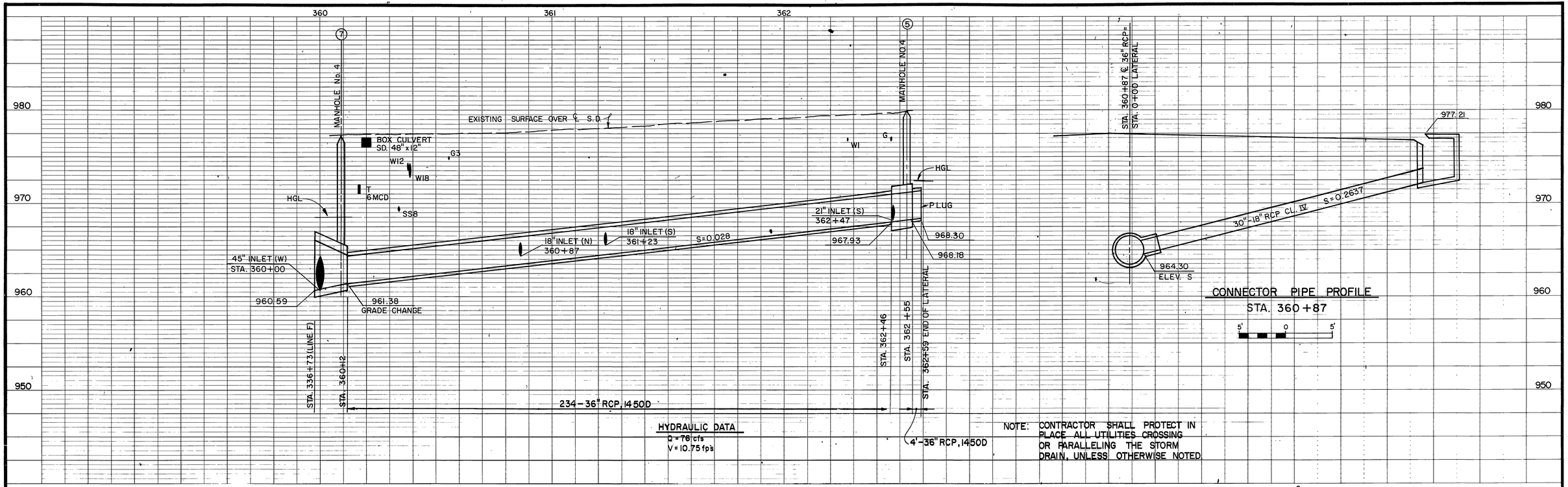
APPROVED BY:
CHIEF ENGINEER R.E. NO. 8822
DATE: 5-11-76

BOX SPRINGS DRAIN
STAGE IV
STA. 340+60 TO STA. 343+96
1970 STORM DRAIN BOND ISSUE PROJECT NO. 6

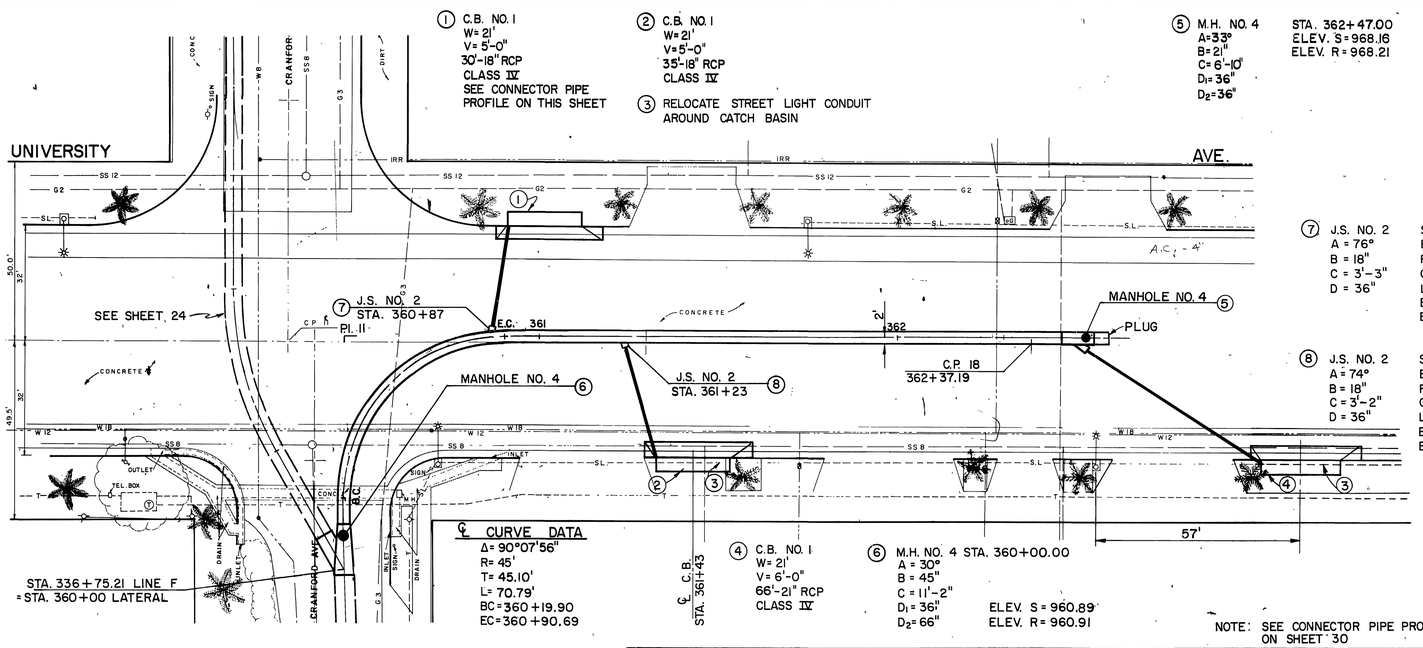
PROJECT NO. 1-0-220
DRAWING NO. 1-327
SHEET NO. 25 OF 64

AS BUILT

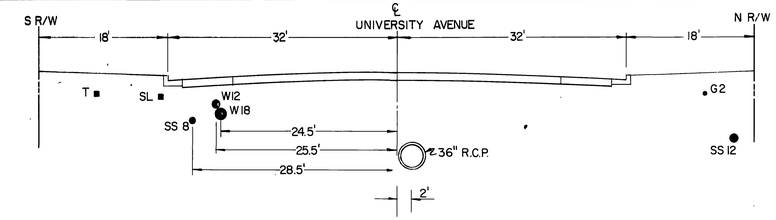
D-319



NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN, UNLESS OTHERWISE NOTED

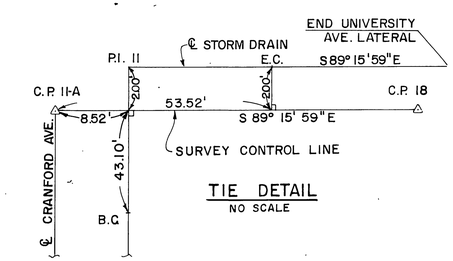


NOTE: SEE CONNECTOR PIPE PROFILES ON SHEET 30



STA. 361+65

10' 0 10'



TIE DETAIL
NO SCALE

UNIVERSITY AVENUE LATERAL
LINE F

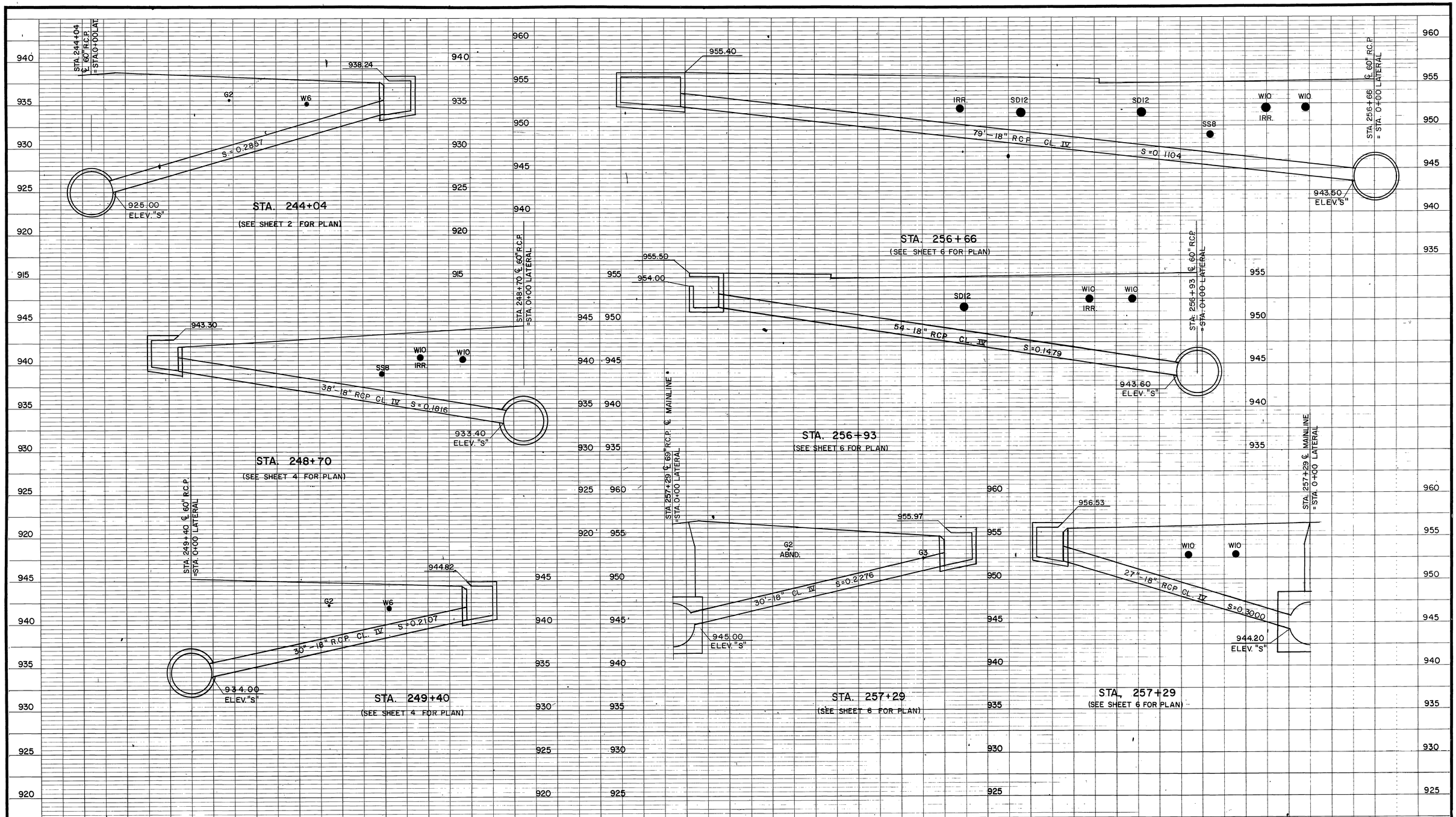
PLAN

20' 0 20'

BENCH MARK	KOEBIG & KOEBIG, INC. ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	BOX SPRINGS DRAIN STAGE IV	PROJECT NO. 1-0-220
SCALE:	APPROVED BY: [signature] REGISTERED CIVIL ENGINEER NO. 10776	No Change	DESIGNED BY: [signature]	STA. 336+73 (LINE F) TO STA. 362+55	DRAWING NO. 1-327
DATE:	DATE: FEB	REF. DESCRIPTION APPR. DATE	DRAWN BY: [signature] DATE DRAWN: 11-73 CHECKED BY:	1970 STORM DRAIN BOND ISSUE PROJECT NO. 6	SHEET NO. 26 OF 64
			APPROVED BY: [signature] CHIEF ENGINEER R.E. NO. 8822 DATE: 5-11-75		

AS BUILT

D-319

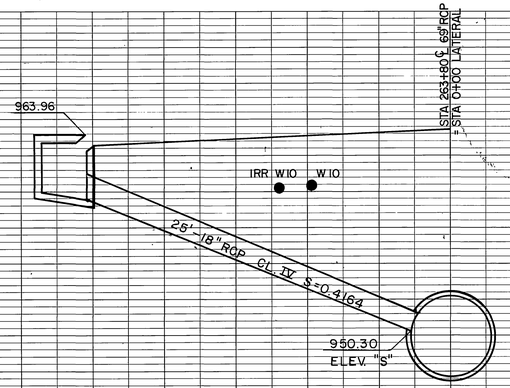


BENCH MARK	KOEBIG & KOEBIG, INC. ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	BOX SPRINGS DRAIN STAGE IV CONNECTOR PIPE PROFILES 1970 STORM DRAIN BOND ISSUE PROJECT NO. 6	PROJECT NO. 1-0-220
SCALE:	APPROVED BY: Norbert H. Weinberg REGISTERED CIVIL ENGINEER NO. 10776	No Change	DESIGNED BY: JAE		DRAWING NO. 1-327
DATE:	DATE: FEB 14 1974	REF. DESCRIPTION APPR. DATE	DRAWN BY: JCD		SHEET NO. 27 OF 64
			DATE DRAWN: 10-73		
			CHECKED BY:		

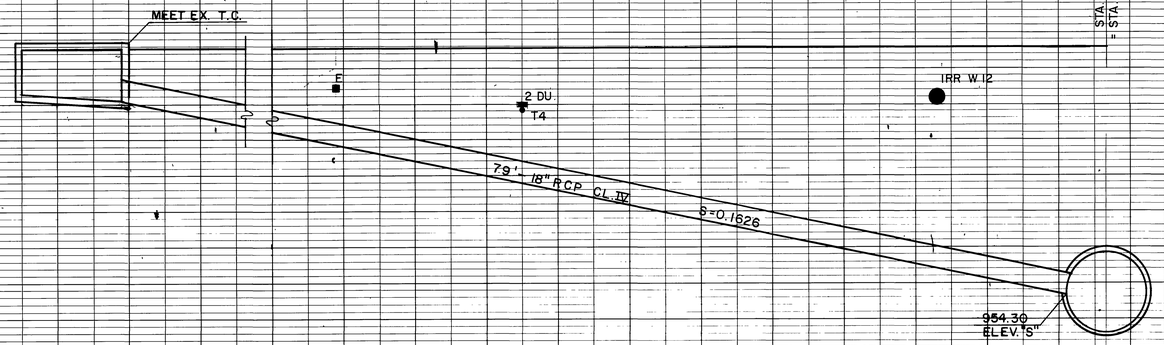
APPROVED BY: John W. Bryant CHIEF ENGINEER R.E. NO. 8822 DATE: 5-11-76

AS BUILT

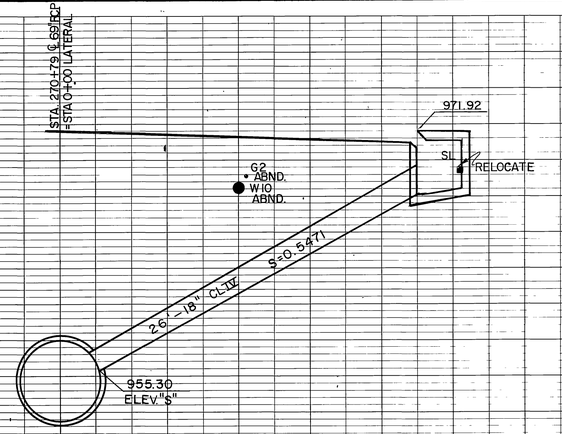
D-319



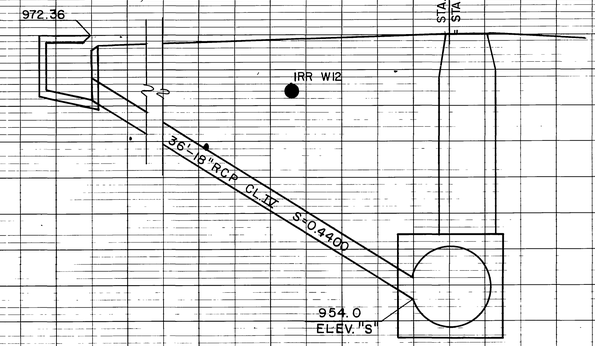
STA. 263+80
(SEE SHEET 7 FOR PLAN)



STA. 270+31
(SEE SHEET 9 FOR PLAN)



STA. 270+79
(SEE SHEET 9 FOR PLAN)



STA. 271+09
(SEE SHEET 9 FOR PLAN)

5' 0 5'

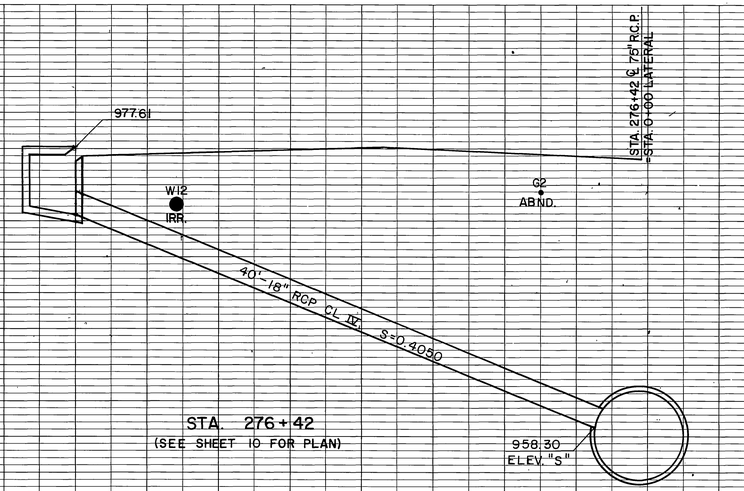
BENCH MARK	KOEBIG & KOEBIG, INC. ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
SCALE:	APPROVED BY: _____ REGISTERED CIVIL ENGINEER NO. 10776		DESIGNED BY: JDC / DRAWN BY: JCD / DATE DRAWN: 10-23 / CHECKED BY:
DATE:	DATE: ~~FEB 14 1974~~	REF. No Change DESCRIPTION APPR. DATE	APPROVED BY: John K. Bryant CHIEF ENGINEER R.E. NO. 8822 DATE: 5-11-76

BOX SPRINGS DRAIN
STAGE IV
CONNECTOR PIPE PROFILES
1970 STORM DRAIN BOND ISSUE PROJECT NO. 6

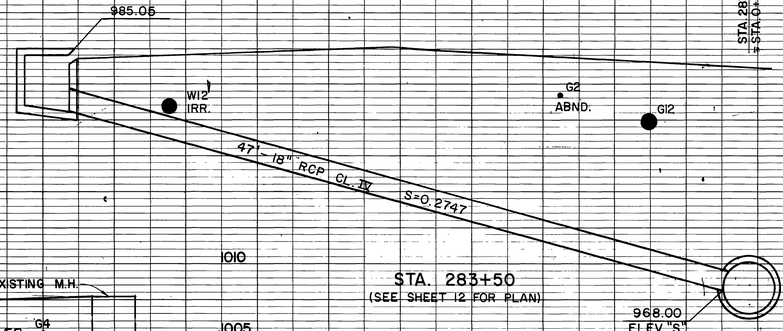
INDEX 15
PROJECT NO. 1-0-220
DRAWING NO. 1-327
SHEET NO. 28 OF 64

AS BUILT

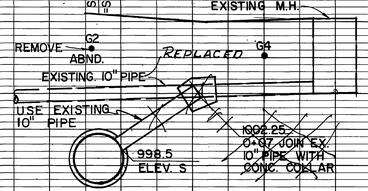
D-319



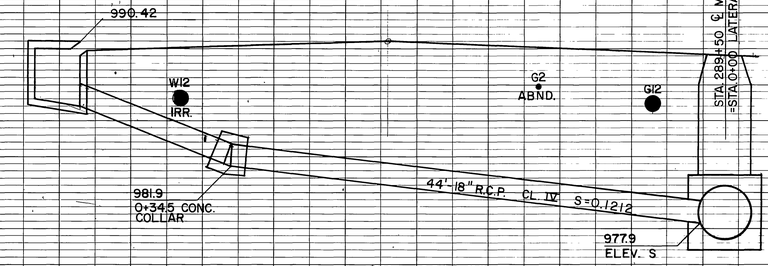
STA. 276+42
(SEE SHEET 10 FOR PLAN)



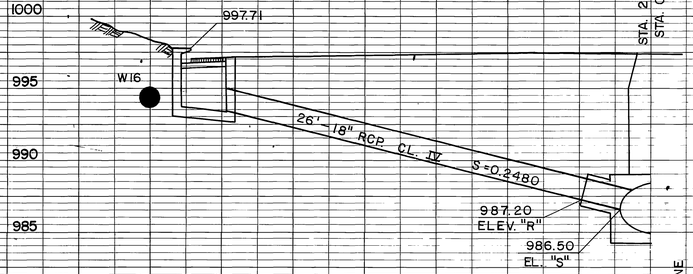
STA. 283+50
(SEE SHEET 12 FOR PLAN)



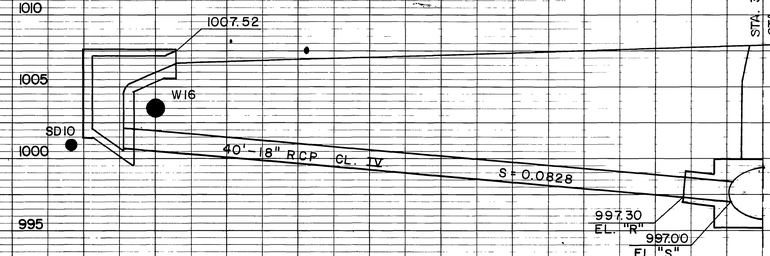
STA. 306+88
(SEE SHEET 17 FOR PLAN)



STA. 289+50
(SEE SHEET 13 FOR PLAN)



STA. 296+63 (S)
(SEE SHEET 15 FOR PLAN)



STA. 306+36 (S)
(SEE SHEET 17 FOR PLAN)

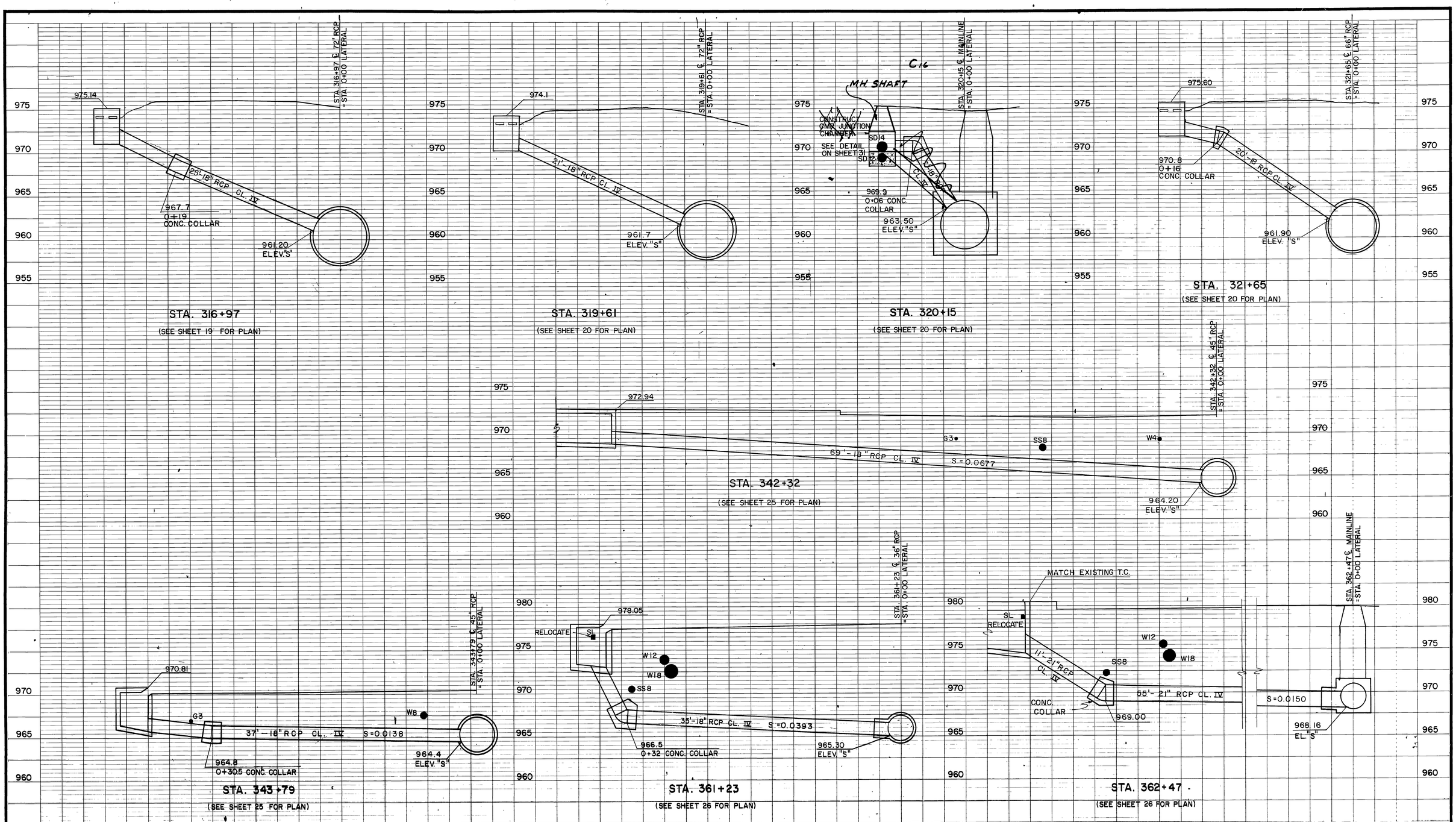
5' 0 5'

BENCH MARK	KOEBIG & KOEBIG, INC. ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	BOX SPRINGS DRAIN STAGE IV CONNECTOR PIPE PROFILES 1970 STORM DRAIN BOND ISSUE PROJECT NO. 6	PROJECT NO. 1-0-220
SCALE:	APPROVED BY:	C/S REF. Ex. 10" Pipe Replaced DESCRIPTION	DESIGNED BY: [illegible]		DRAWING NO. 1-327
DATE:	DATE: FEB 14 1974 REGISTERED CIVIL ENGINEER NO. 10776	APPR. DATE	DRAWN: [illegible] DATE DRAWN: 10-73	APPROVED BY: CHIEF ENGINEER R.E. NO. 8822 DATE: 5-11-76	SHEET NO. 29 OF 64
			CHECKED BY:		

INDEX 4F

AS BUILT

D-319

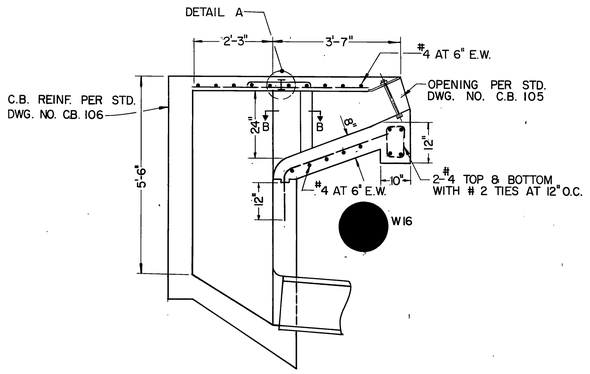


5' 0 5'

BENCH MARK	KOEBIG & KOEBIG, INC. ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	BOX SPRINGS DRAIN STAGE IV CONNECTOR PIPE PROFILES 1970 STORM DRAIN BOND ISSUE PROJECT NO. 6	INDEX LF
SCALE:	APPROVED BY: [signature] REGISTERED CIVIL ENGINEER NO. 10776	C16 Sta 320+15 Const. Changes	DESIGNED BY: LOE		PROJECT NO. 1.0-220
DATE:	DATE: FEB 14 1974	REF. DESCRIPTION APPR. DATE	DRAWN BY: JCD		DRAWING NO. 1-327
			DATE DRAWN: 10-73		SHEET NO. 30 OF 64
			CHECKED BY:		

AS BUILT

D-319

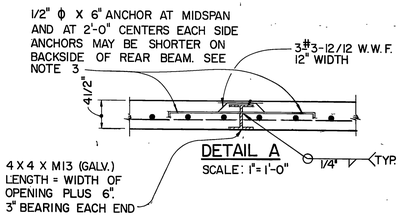


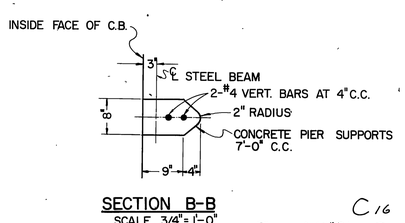
CATCH BASIN MODIFICATION AT STA. 306+74

(SEE SHEET 17 FOR PLAN)
SCALE: 1/2"=1'-0"

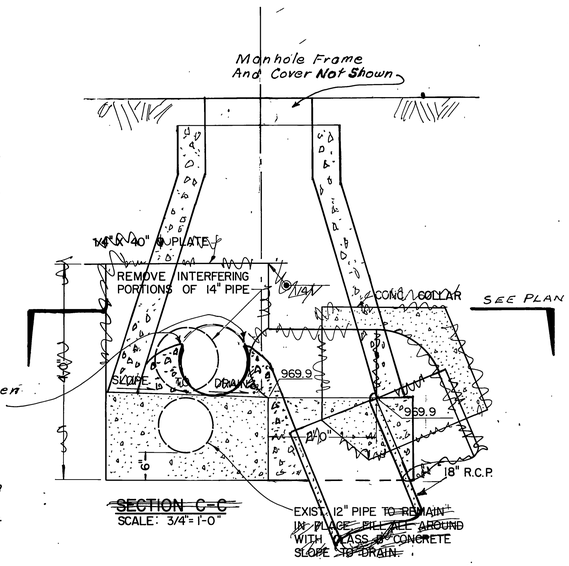
NOTES

1. DETAILS NOT SHOWN SHALL BE PER STANDARD DRAWING NO. CB 100
2. PLACE STEPS IN END WALL OF CATCH BASIN.
3. ELECTRICALLY WELDED STUDS 1/2" X 8" NELSON H4F OR EQUAL MAY BE USED IN LIEU OF THE DEFORMED BAR ANCHORS.





SECTION B-B
SCALE 3/4"=1'-0"

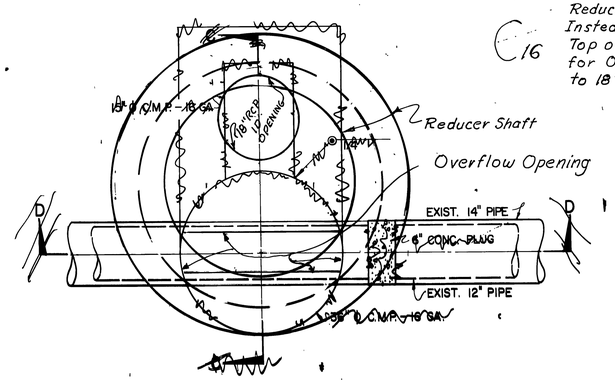


C16
Top of 14" Pipe Broken Out For Overflow

SECTION C-C
SCALE: 3/4"=1'-0"

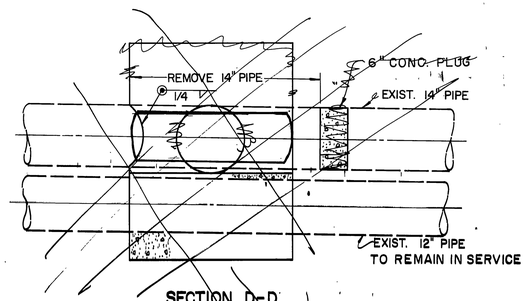
NOTE: Manhole Frame & Cover with Reducer Shaft Built as shown Instead of 36" C.M.P.-16 Ga. Top of 14" Existing Pipe Cut out for Overflow. Conc. shaped to 18" R.C.P. See Plan sh. 20.

C16



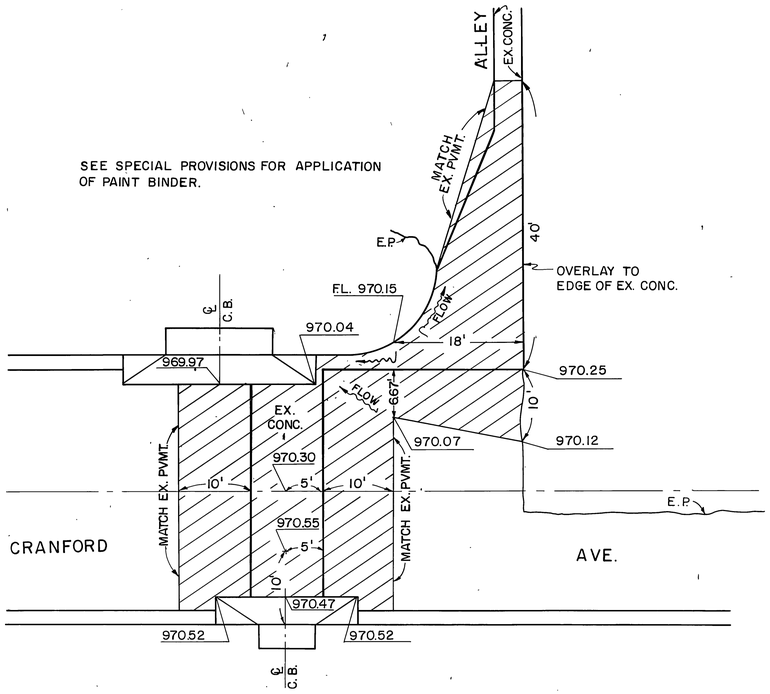
JUNCTION STRUCTURE AT STA. 320+17 PLAN VIEW

(SEE SHEET 20)
SCALE: 3/4"=1'-0"



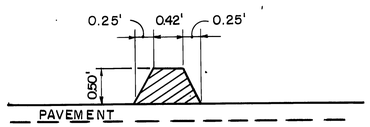
SECTION D-D
SCALE 3/4"=1'-0"

SEE SPECIAL PROVISIONS FOR APPLICATION OF PAINT BINDER.



DETAIL - ASPHALT CONCRETE OVERLAY

(SEE SHEET 25 FOR PLAN)
10' 0 10'



DETAIL - TRAPEZOIDAL A.C. BERM

NO SCALE

KOEBIG & KOEBIG, INC. ENGINEERING · ARCHITECTURE · PLANNING RIVERSIDE, CALIFORNIA	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
APPROVED BY: DATE: FEB 14 1974 REGISTERED CIVIL ENGINEER NO. 10776	C16 REF. U.S. at Sta 320+17 Changed DESCRIPTION WSB APPR. DATE	DESIGNED BY: DRAWN BY: DATE DRAWN: CHECKED BY: APPROVED BY: CHIEF ENGINEER R.E. NO. 8822 DATE: 5-11-76

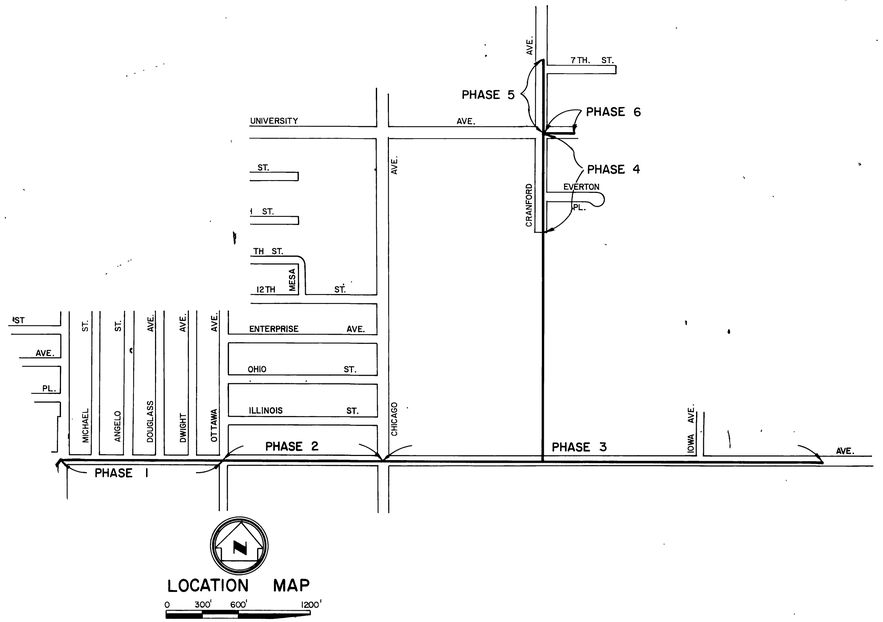
BOX SPRINGS DRAIN
STAGE IV
MISCELLANEOUS DETAILS
1970 STORM DRAIN BOND ISSUE PROJECT NO. 6

INDEX 6

PROJECT NO. 1-0-220
DRAWING NO. 1-327
SHEET NO. 31 OF 64

AS BUILT

D-319



LOCATION MAP

0 300' 600' 1200'

GENERAL NOTES

1. THE CONTRACTOR SHALL CONSTRUCT THE STORM DRAIN FACILITY IN PHASES AS SHOWN ON THESE PLANS.
2. THE CONTRACTOR SHALL COMPLETE THE WORK IN ONE PHASE BEFORE COMMENCING THE WORK IN ANY OTHER PHASE, UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
3. ACCESS TO PRIVATE PROPERTY SHALL BE MAINTAINED AT ALL TIMES.
4. THE CONTRACTOR SHALL NOTIFY THE RIVERSIDE CITY TRAFFIC ENGINEERING DIVISION (714/787-7366) AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY WORK NEAR A TRAFFIC SIGNAL OR INTERCONNECT.
5. THE REQUIREMENTS SHOWN ON THESE PLANS ARE MINIMUM. THE CONTRACTOR MAY BE REQUIRED TO FURNISH ADDITIONAL TRAFFIC SIGNS OR DEVICES TO PROVIDE FOR PUBLIC SAFETY OR TO FACILITATE THE FLOW OF TRAFFIC IF DEEMED NECESSARY BY THE ENGINEER.
6. WHEN CONDITIONS SO WARRANT (SEE NOTE 5), THE CONTRACTOR SHALL FURNISH FLAGMEN AS REQUIRED BY THE ENGINEER. EACH FLAGMAN SHALL WEAR A RED FLOURESCENT VEST AND SHALL USE A C-28 SIGN (SLOW-STOP). THE CONTRACTOR SHALL FURNISH AND ERECT C-9 SIGNS IN ADVANCE OF FLAGMEN.
7. DELINEATORS SHALL BE USED TO SEPARATE OPPOSING LANES OF TRAFFIC AND ELSEWHERE WHERE SHOWN ON THESE PLANS OR WHERE DIRECTED BY THE ENGINEER. DELINEATORS SHALL BE RUBBER OR PLASTIC, APPROX. 4" DIAMETER AND 42" HIGH, FLOURESCENT ORANGE OR RED. CONES WILL NOT BE PERMITTED. DELINEATORS USED DURING DARKNESS SHALL BE REFLECTORIZED WITH THE REFLECTORS FACING TRAFFIC.
8. ALL BARRICADES WHICH ARE USED DURING THE HOURS OF DARKNESS SHALL BE EQUIPPED WITH FLASHING LIGHTS POSITIONED TO FACE ONCOMING TRAFFIC ON THE EDGE OF THE BARRICADE NEAREST THE TRAFFIC

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE
	No Change		

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

DESIGNED BY:
DRAWN BY:
DATE DRAWN:
CHECKED BY:

APPROVED BY: John W. Bellamy
CHIEF ENGINEER R.E. NO. 8822
DATE: 5-11-76

INDEX UF

BOX SPRINGS DRAIN
STAGE IV
PHASE LOCATION MAP AND NOTES
1970 STORM DRAIN BOND ISSUE PROJECT NO. 6

PROJECT NO. 1-0-220
DRAWING NO. 1-327
SHEET NO. 32 OF 64

AS BUILT

D-319

PENNSYLVANIA AVE.

KANSAS AVE

MATCH EX. SURFACE

FLOW

VARIES

PUMP HOUSE

TOE OF SLOPE

HINGE POINT

MATCH EXISTING GROUND

MATCH EX. SURFACE

HINGE POINT

TOE OF SLOPE

MATCH EXISTING SURFACE AT FENCE.

PLAN

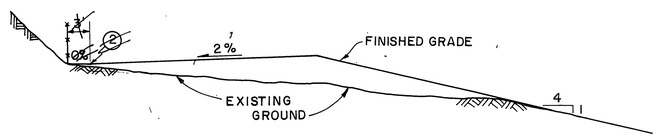
40' 0 1 40'

RETENTION BASIN CONTROL POINTS

POINT	COORDINATES	
	NORTH	EAST
A	657, 269.520	I, 664, 540.780
B	657, 273.018	I, 664, 307.385
C	657, 279.438	I, 663, 878.984
D	656,609.011	I, 664,530.450
E	656,618.632	I, 663,868.466

NOTES:

1. FORM 6 INCH DEEP "V" CHANNEL, 3 FEET WIDE FROM FENCE TO EDGE OF ROAD. REMOVE 3 FEET OF ASPHALT CONCRETE BERM.
2. GRADE 3' WIDE SURFACE, 0% CROSS SLOPE, FROM STA. 4+33 TO STA. 6+10, SOUTH SIDE OF RETENTION BASIN.



SECTION (A)

10' 0 10'

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE
C17	Changes as shown		

AS BUILT

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

DESIGNED BY: DTS & RM
DRAWN BY:
DATE DRAWN: 5-12-76
CHECKED BY:

APPROVED BY:
CHIEF ENGINEER R.E./NO. 8822
DATE: 5-11-76

BOX SPRINGS DRAIN
STAGE IV RETENTION BASIN
1970 STORM DRAIN BOND ISSUE PROJECT NO. 6

INDEX 6

PROJECT NO. 1.0-220
DRAWING NO. 1-327
SHEET NO. 31A OF 64

D-319