RIVERSIDE CITY OF RIVERSIDE CALIFORNIA

PUBLIC WORKS DEPARTMENT

CONSTRUCTION LEGEND

CENTER LINE — RIGHT-OF-WAY LINE — SUBDIVISION LOT LINE — TOP OF SLOPE — TOE OF SLOPE — DIRECTION OF FLOW

SPECIFIC CONSTRUCTION NOTES

NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE RESPECTIVE STANDARD DRAWING AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN OR COVER SHEET BELOW. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATES TO BE CONSTRUCTED.

122 / MOD — 60' OF REVERSE TAPER IS CONCRETE MEDIAN. 60' OF REVERSE TAPER IS PAVEMENT STRIPE.

S229, S8230, M803 — RIVERSIDE COUNTY FLOOD CONTROL STANDARD DRAWINGS.

87-11, 073-13, 077-A2, 81-A1 — STATE OF CALIFORNIA BUSINESS AND TRANSPORTATION AGENCY, DEPARTMENT OF TRANSPORTATION STANDARD PLANS DATED MARCH, 1977.

NC80, ND83

A / 13 — DETAIL / SHEET; C-9, D-4 — SAN DIEGO REGIONAL STANDARD DRAWING.

⊙A PROPOSED ELEVATION — SEE TABLE ON SHEETS 3 AND 5

(601.00) EXISTING ELEVATION

800.00 PROPOSED ELEVATION

S — INSTALL NEW TRAFFIC SIGNS AS SHOWN ON PLANS

R / 11 — REMOVE ENTIRE TREE. CLASS IS SHOWN ON PLAN.
CLASS I 6" TO 18" DIA.
CLASS II OVER 18" TO 36" DIA.
CLASS III OVER 36" DIA.

T / I — TRANSPLANT PALM TREES TO LOCATION INDICATED ON PLAN OR WHERE DIRECTED BY THE PARK DEPARTMENT. SIZE CLASSES ARE THE SAME AS FOR TREE REMOVAL.

TEXTURED CONCRETE

REGRADE DRIVEWAY TO GRADES AND MATERIAL SHOWN ON PLAN, A.C. 2½" THICK.
PAVED DRAINAGE DITCH, A.C. 2½" THICK.
EXISTING A.C. PAVEMENT TO BE REMOVED.

⚠ 1A — EXISTING A.C. PAVEMENT TO BE REMOVED PRIOR TO CONSTRUCTION OF STRUCTURAL SECTION OF 0.42' A.C. OVER 0.45' CLASS 2 BASE.
⚠ 1B — CONSTRUCT STRUCTURAL SECTION OF 0.42' A.C. OVER CLASS 2 BASE.

⚠ 2A — EXISTING A.C. PAVEMENT TO BE REMOVED PRIOR TO CONSTRUCTION OF STRUCTURAL SECTION OF 0.30' A.C. OVER 0.60' CLASS 2 BASE.
⚠ 2B — CONSTRUCT STRUCTURAL SECTION OF 0.30' A.C. OVER 0.60' CLASS 2 BASE.

⚠ 3A — EXISTING A.C. PAVEMENT TO BE REMOVED PRIOR TO CONSTRUCTION OF STRUCTURAL SECTION OF 0.22' A.C. OVER 0.40' CLASS 2 BASE.
⚠ 3B — CONSTRUCT STRUCTURAL SECTION OF 0.40' A.C. OVER 0.60' CLASS 2 BASE.

⚠ 4 — CONSTRUCT STRUCTURAL SECTION OF 0.45' A.C. OVER NATIVE SOIL.

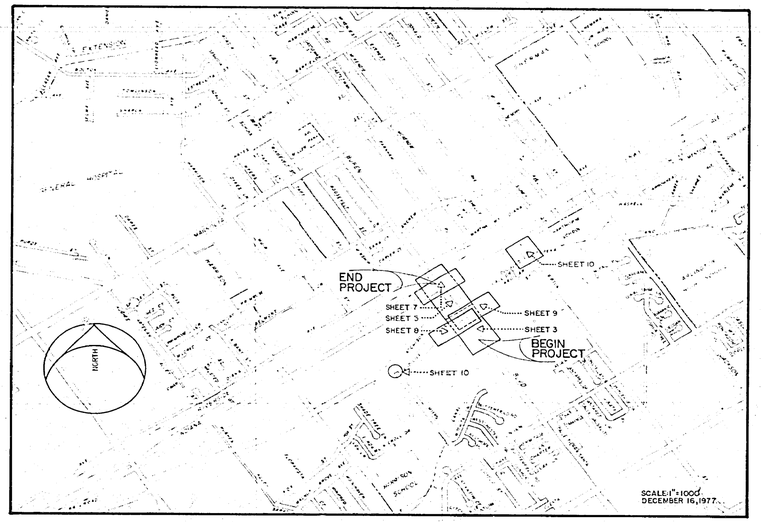
GENERAL CONSTRUCTION NOTES

1. CONSTRUCTION TO BE IN ACCORDANCE WITH THE STATE OF CALIFORNIA SPECIFICATIONS, JANUARY 1978.
2. EXACT LOCATIONS AND DEPTHS OF UNDERGROUND UTILITIES ARE UNKNOWN. THE LOCATIONS AND DEPTHS SHOWN ON THIS PLAN ARE FROM UTILITY RECORDS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO LOCATE AND PROTECT ALL UTILITIES WHETHER OR NOT SHOWN ON PLAN. WHERE THE COVER TO THE TOP OF A UTILITY IS KNOWN IT IS SHOWN IN THE PROFILE. IF COVER IS UNKNOWN THE UTILITY IS SHOWN IN THE PROFILE BY: ~~~?~~~ UTILITY NAME.
3. RIGHTS OF ENTRY HAVE BEEN OBTAINED FOR WORK SHOWN ON PRIVATE PROPERTY.
4. UNLESS OTHERWISE NOTED ON PLAN: ALL FILL SLOPES TO BE 2:1. SLOPES LESS THAN 2' HIGH ARE NOT NECESSARILY SHOWN ON THE PLAN. ALL CUT SLOPES LESS THAN 2' HIGH TO BE 2:1. ALL CUT SLOPES 2' HIGH OR HIGHER TO BE 1¾:1.
5. ALL ELEVATIONS SHOWN ON THE PLAN SHALL BE STAKED IN THE FIELD.
6. EXISTING UTILITIES SHOWN IN CONFLICT WITH PROPOSED STORM DRAIN FACILITIES WILL BE ABANDONED PRIOR TO CONSTRUCTION.
7. EXCAVATION TO INCLUDE REMOVAL OF ALL EXISTING UTILITIES AND OTHER IMPROVEMENTS ENCOUNTERED WITHIN THE EXCAVATION AREA.

⚠ REVISED STRUCTURAL SECTIONS PER APPENDUM NO.1 2/29/80

VAN BUREN UNDERPASS AT THE A.T.&S.F.

LENGTH = 1180 L.F.
T.I. = 10.5



PROJECT LOCATION PLAN

0' 500' 1000' 2000' 3000' 4000' 5000' 6000'

SCALE 1" = 1000'

EXISTING UNDERGROUND & TOPOGRAPHY LEGEND

EXISTING UNDERGROUND UTILITIES

SANITARY SEWER	8"S	TELEPHONE CONDUIT	T
WATER LINE	6"W	ELECTRICAL CONDUIT	E
STORM DRAIN	24" D	STREET LIGHTING	SL
GAS LINE	4"G	TRAFFIC SIGNAL	SIG
IRRIGATION LINE	20" IRR	FIRE ALARM	F

EXISTING TOPOGRAPHY

BLOCK WALL — BOARD FENCE — WIRE FENCE — CHAIN LINK FENCE — TOP OF SLOPE — TOE OF SLOPE — DIRECTION OF FLOW

SANITARY SEWER MH — SANITARY SEWER CLEANOUT — STORM DRAIN MH — IRRIGATION VALVE — WATER MH — GAS MH — ELECTRIC MH — TELEPHONE MH OR VAULT — WATER METER — FIRE HYDRANT — SPRINKLER HEAD — VALVE — AIR VALVE — AIR VENT

POLE & GUY ANCHOR — ELECTRIC POLE — TELEPHONE POLE — JOINT USE POLE — PULL BOX — TRAFFIC SIGN — PARKING METER — FIRE ALARM BOX — STREET NAME SIGN — GAS METER — MAIL BOX — FAUCET — TELEPHONE RISER — WHEEL STOP — A.C. BERM — STEEL POST — WOOD POST

PEDESTRIAN PUSH BUTTON — RAILROAD TRACKS — RAILROAD SIGN — RAILROAD SIGNAL — STREET LIGHT & TRAFFIC SIGNAL ON MAST ARM — STREET LIGHT (UPRIGHT) — STREET LIGHT — TRAFFIC SIGNAL — TRAFFIC SIGNAL ON MAST ARM — TRAFFIC SIGNAL CONTROLLER — TRAFFIC SIGNAL PRESSURE DETECTOR — TRAFFIC SIGNAL LOOP DETECTOR

CONCRETE — ASPHALT — EP EDGE OF PAVEMENT — BUILDING — UNDERGROUND STRUCTURE — OVERHANGING STRUCTURE

CITRUS TREE — OR DECIDUOUS TREE — OR PALM TREE — OR SHRUBBERY — TREE STUMP — EVERGREEN TREE

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SANITARY SEWER	11
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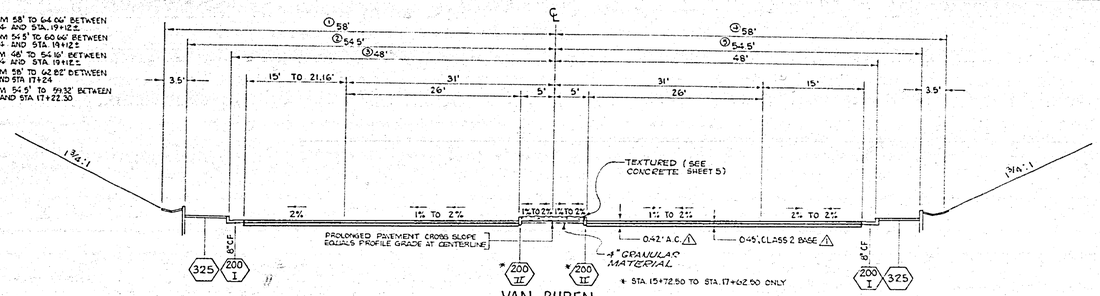
CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT				Van Buren Underpass	ACCOUNT NO. 30 675 224 07
APPROVED BY	INT	DATE	APPROVED BY:	TITLE SHEET	DRAWING NUMBER R-2039
PRINCIPAL ENGINEER			PUBLIC WORKS DIRECTOR		SHEET 1 OF 45
TRAFFIC DIVISION			DATE		
CHIEF P/A ENGINEER				DESIGNED BY DZR DRAWN BY — CHECKED BY DZR	

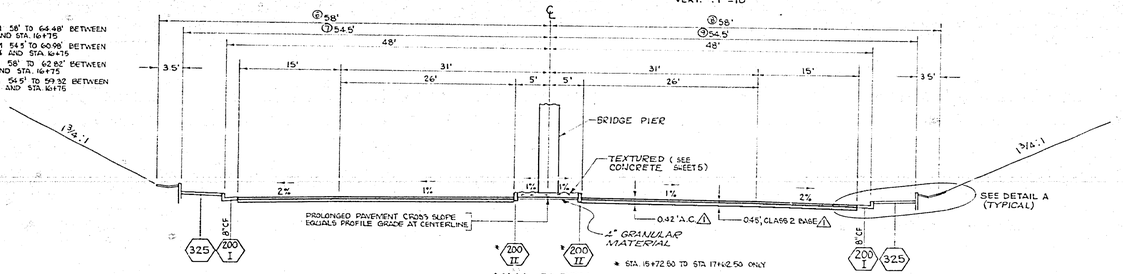
① VARIES FROM 58' TO 64.66' BETWEEN STA 15+15.94 AND STA. 19+12.2
② VARIES FROM 54.5' TO 60.66' BETWEEN STA. 15+15.94 AND STA. 19+12.2
③ VARIES FROM 48' TO 54.16' BETWEEN STA. 15+15.94 AND STA. 19+12.2
④ VARIES FROM 58' TO 62.82' BETWEEN STA. 16+15 AND STA 17+24
⑤ VARIES FROM 54.5' TO 59.32' BETWEEN STA. 16+15 AND STA 17+22.30



VAN BUREN
16+75 TO 19+25

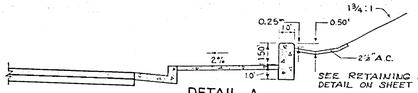
SCALE HORIZ. : 1" = 10'
VERT. : 1" = 10'

⑥ VARIES FROM 58' TO 64.48' BETWEEN STA. 16+23 AND STA. 16+75
⑦ VARIES FROM 54.5' TO 60.98' BETWEEN STA. 16+26.84 AND STA. 16+75
⑧ VARIES FROM 58' TO 62.82' BETWEEN STA 16+60 AND STA. 16+75
⑨ VARIES FROM 54.5' TO 59.32' BETWEEN STA. 16+59.93 AND STA. 16+75



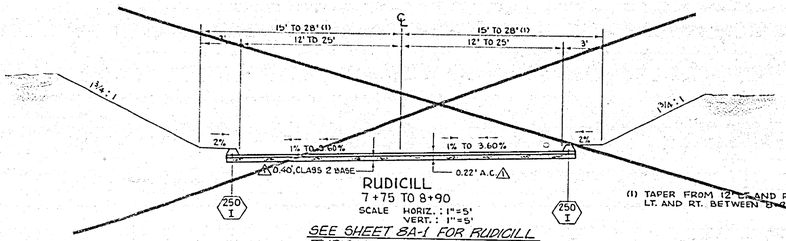
VAN BUREN
10+00 TO 16+75

SCALE HORIZ.: 1" = 10'
VERT. : 1" = 10'



DETAIL A

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

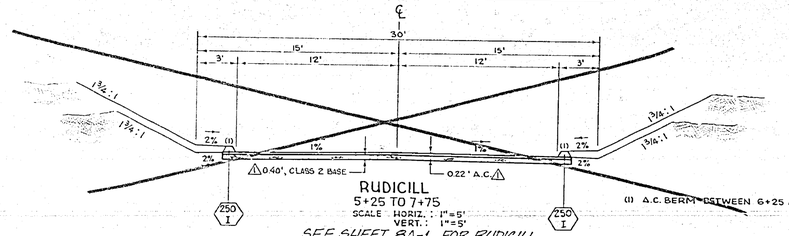


RUDICILL
7+75 TO 8+90

SCALE HORIZ.: 1" = 5'
VERT.: 1" = 5'

(1) TAPER FROM 12' LT. AND RT. TO 25' LT. AND RT. BETWEEN 8+25 AND 8+90

SEE SHEET 8A-1 FOR RUDICILL TYPICAL SECTIONS PER ADDENDUM NO. 1

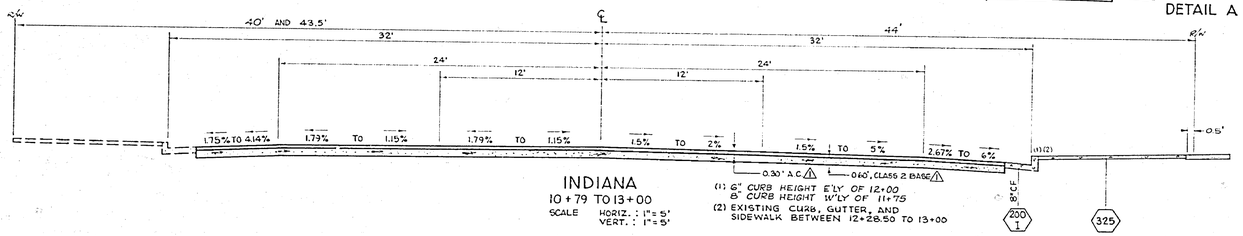


RUDICILL
5+25 TO 7+75

SCALE HORIZ.: 1" = 5'
VERT.: 1" = 5'

(1) A.C. BERM BETWEEN 6+25 AND 7+75

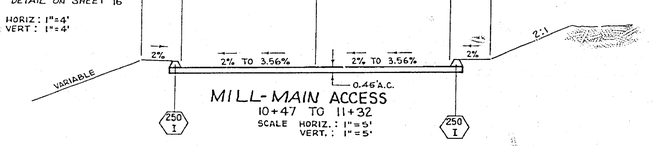
SEE SHEET 8A-1 FOR RUDICILL TYPICAL SECTIONS PER ADDENDUM NO. 1



INDIANA
10+79 TO 13+00

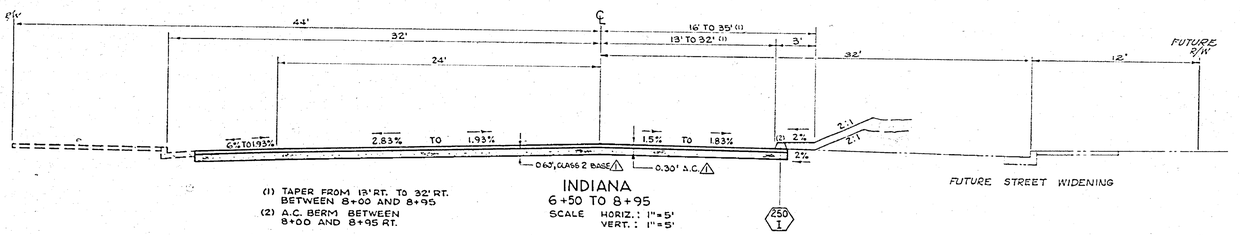
SCALE HORIZ.: 1" = 5'
VERT.: 1" = 5'

(1) 6" CURB HEIGHT E'LY OF 12+00
8" CURB HEIGHT W'LY OF 11+75
(2) EXISTING CURB, GUTTER, AND SIDEWALK BETWEEN 12+28.50 TO 13+00



MILL-MAIN ACCESS
10+47 TO 11+32

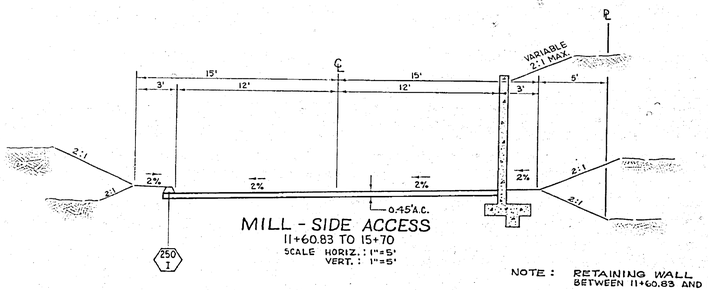
SCALE HORIZ.: 1" = 5'
VERT.: 1" = 5'



INDIANA
6+50 TO 8+95

SCALE HORIZ.: 1" = 5'
VERT.: 1" = 5'

(1) TAPER FROM 13' RT. TO 32' RT. BETWEEN 8+00 AND 8+95
(2) A.C. BERM BETWEEN 8+00 AND 8+95 RT.



MILL - SIDE ACCESS
11+60.83 TO 15+70

SCALE HORIZ.: 1" = 5'
VERT.: 1" = 5'

NOTE : RETAINING WALL BETWEEN 11+60.83 AND 12+62.50

MARK	REVISIONS	APP'R	DATE
⚠	REVISED STRUCTURAL SECTIONS PER ADDENDUM NO. 1	SK	2/29/80

DESIGNED BY RCH DRAWN BY S.K.M. CHECKED BY AKR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

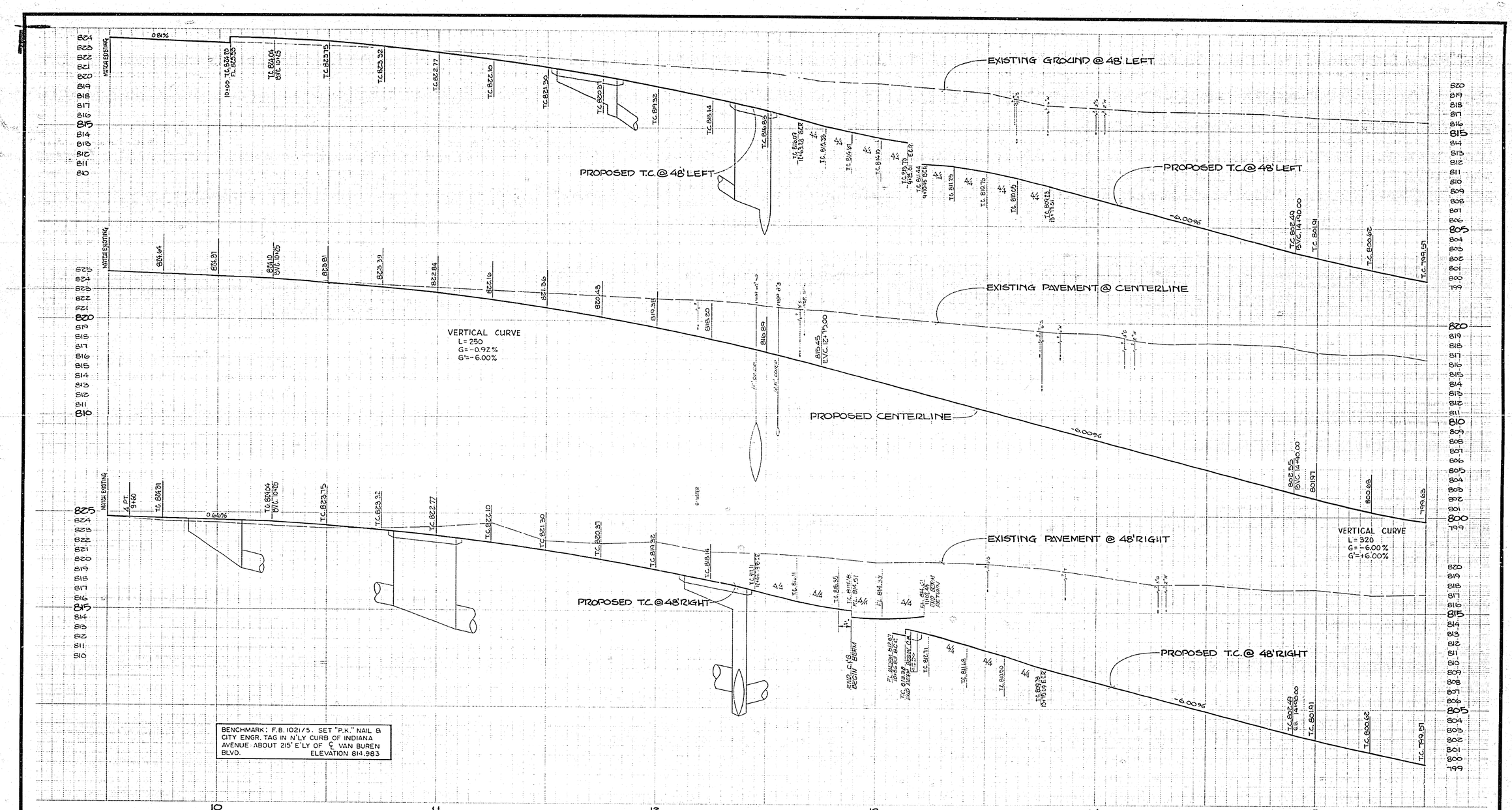
APPROVED	BY	DATE
PRINCIPAL ENGINEER		11/12/80
TRAFFIC DIVISION		11/18/80
CHIEF P.E. ENGINEER		1/21/81

APPROVED BY: Hoyt L. Allen, PUBLIC WORKS DIRECTOR
DATE 1/18/80

Van Buren Underpass
(TYPICAL SECTIONS)

HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

Indexed RKE
ACCOUNT NO. [illegible]
R-2039
SHEET 2 OF 45



MARK	REVISIONS	APPR	DATE

DESIGNED BY REH DRAWN BY CV. SX CHECKED BY DJR

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		
PARK DEPARTMENT		
TRAFFIC DIVISION		
CHIEF PUB. WKS. ENGR.		

APPROVED BY
DIRECTOR OF PUBLIC WORKS
DATE 1/18/80

Van Buren Underpass
(VAN BUREN BLVD. PROFILES)

HORIZONTAL SCALE: 1"=20' VERTICAL SCALE: 1"=4'

INDEXED RAF
ACCOUNT No. 30 575 224 07
DRAWING NUMBER
R-2039
SHEET 4 OF 45

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

Van Buren Underpass
(VAN BUREN BLVD.)
STA. 15+50 to 21+25

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

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 11-3-80

ACCOUNT NO. R-2039

SHEET 5 OF 45

FILE NO.

Endorsed Rec

REVISIONS	APPR.	DATE
1. REVISED PROP. IMPROVEMENTS - R/W & RT. TO		10/80
2. REVISED PROP. IMPROVEMENTS - L.P.S. & S.B.		11/80
3. SEE SHEET 9 REVISION 3		2/81
4. ADDED PROPOSED FIRE HYDRANT & SERVICE		3/81

DESIGNED BY [illegible] DRAWN BY JV SK. CHECKED BY RJR

CURVE	Δ	R	T	L
①	10°17'05"	1000.00'	90.00'	179.65'
②	10°17'05"	1000.00'	90.07'	179.69'
③	84°46'31"	35.00'	81.92'	51.79'
④	7°18'16"	550.00'	53.75'	107.36'
⑤	91°53'27"	35.00'	56.18'	56.18'
⑥	45°00'00"	200.00'	82.84'	157.08'

POINT	STATION	STREET	OFFSET	ELEVATION
A	19+24.54	VAN BUREN	46.18 LT.	807.67
B	19+43.91	"	50.40 LT.	808.23
C	19+32.97	INDIANA	37.10 RT.	808.55
D	19+22.85	"	27.41 RT.	808.60
E	19+06.07	"	24.00 RT.	808.54
F	19+33.99	"	24.00 LT.	810.00
G	19+48.95	"	27.27 LT.	810.21
H	20+34.40	VAN BUREN	36.40 LT.	810.03
I	20+52.03	"	27.27 LT.	810.19
J	20+67.02	"	24.00 LT.	810.36
K	19+50.02	"	24.00 LT.	810.68
L	19+79.89	"	49.73 LT.	808.46
M	20+10.06	"	46.58 LT.	809.26
N	20+29.06	"	42.81 LT.	809.92
O	20+42.98	"	38.41 LT.	810.44

POINT	STATION	STREET	OFFSET	ELEVATION
AA	19+40.43	VAN BUREN	40.00 RT.	809.93
BB	19+55.34	"	43.02 RT.	810.49
CC	10+47.24	INDIANA	38.01 RT.	811.03
DD	10+63.45	"	26.91 RT.	811.48
EE	10+79.00	"	24.00 RT.	811.92
FF	10+64.49	"	24.00 LT.	812.36
GG	10+49.18	"	27.06 LT.	812.10
HH	20+35.70	VAN BUREN	35.71 RT.	811.85
II	20+48.68	"	27.04 RT.	811.80
JJ	20+63.98	"	24.00 RT.	811.79
KK	19+76.00	"	36.55 RT.	810.56
LL	20+00.00	"	35.43 RT.	811.49
MM	20+25.00	"	32.98 RT.	811.74

BENCHMARK: F.B. 1021/5. SET "P.K." NAIL & CITY ENGR. TAG IN N'LY CURB OF INDIANA AVENUE ABOUT 215' E'LY OF ℄ VAN BUREN BLVD. ELEVATION 814.983

MOUNT ON BRIDGE

91 South Corona

91 North San. Bernardino

ALSO SEE TRAFFIC REP. SHT. 5 OF PATRICIAN

SECTION A-A
NO SCALE

EXISTING P.C.C. SWALE
EXISTING PAVEMENT
2½" AC
MATCH LINE OF SLOPE

EXISTING GROUND @ 48' LEFT

PROPOSED T.C. @ 48' LEFT

EXISTING T.C. @ 32' LEFT

EXISTING PAVEMENT @ CENTERLINE

PROPOSED PAVEMENT @ CENTERLINE

VERTICAL CURVE
L = 320'
a = -6.00%
a = +6.00%

VERTICAL CURVE
L = 260'
a = +6.00%
a = -0.41%

EXISTING PAVEMENT @ 48' RIGHT

PROPOSED T.C. @ 48' RIGHT

EXISTING T.C. @ 32' RIGHT

BENCHMARK: F.B. 1021/5. SET "P.K." NAIL & CITY ENGR. TAG IN N'LY CURB OF INDIANA AVENUE ABOUT 215' E'LY OF ℄ VAN BUREN BLVD. ELEVATION 814.983

MARK	REVISIONS	APPR.	DATE

DESIGNED BY REH DRAWN BY S.K. CHECKED BY DJR

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		
PARK DEPARTMENT		
TRAFFIC DIVISION		
CHIEF PUB WKS ENGR.		

APPROVED BY _____
DIRECTOR OF PUBLIC WORKS
DATE 1/18/00

Van Buren Underpass

(VAN BUREN BLVD. PROFILES)

HORIZONTAL SCALE 1"=20' VERTICAL SCALE 1"=4'

Indexed Rec

ACCOUNT NO. 30 575 224 07

DRAWING NUMBER
R-2039

SHEET 6 OF 45

-CAUTION-
PACIFIC TELEPHONE CABLES UNDERGROUND
BEFORE EXCAVATING CALL COLLECT:

	7:30 A.M. to 5 P.M.	After Hours & Holidays
Orange County	714-633-0811	714-547-6606
Riverside County	714-684-0071	714-547-6606
Inyo County	714-684-0071	714-547-6600
San Bernardino County	714-684-0071	714-547-6600
Los Angeles County	213-621-3111	24 HOUR SERVICE
Ventura County	213-621-3111	24 HOUR SERVICE
San Diego County	714-295-0595	714-232-0027

FOR FREE CABLE LOCATING SERVICE

MARK	REVISIONS	APPR.	DATE
⚠1	INSTALL 12 L.F. A.C.P. RT OF STA 10+80 INDIANA		2/1/80

DESIGNED BY REH DRAWN BY JV. SK CHECKED BY BLP

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY
PRINCIPAL ENGINEER
PARK DEPARTMENT
TRAFFIC DIVISION
CHIEF P. W. ENGINEER

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 11/12/80

Van Buren Underpass
(INDIANA AVENUE)

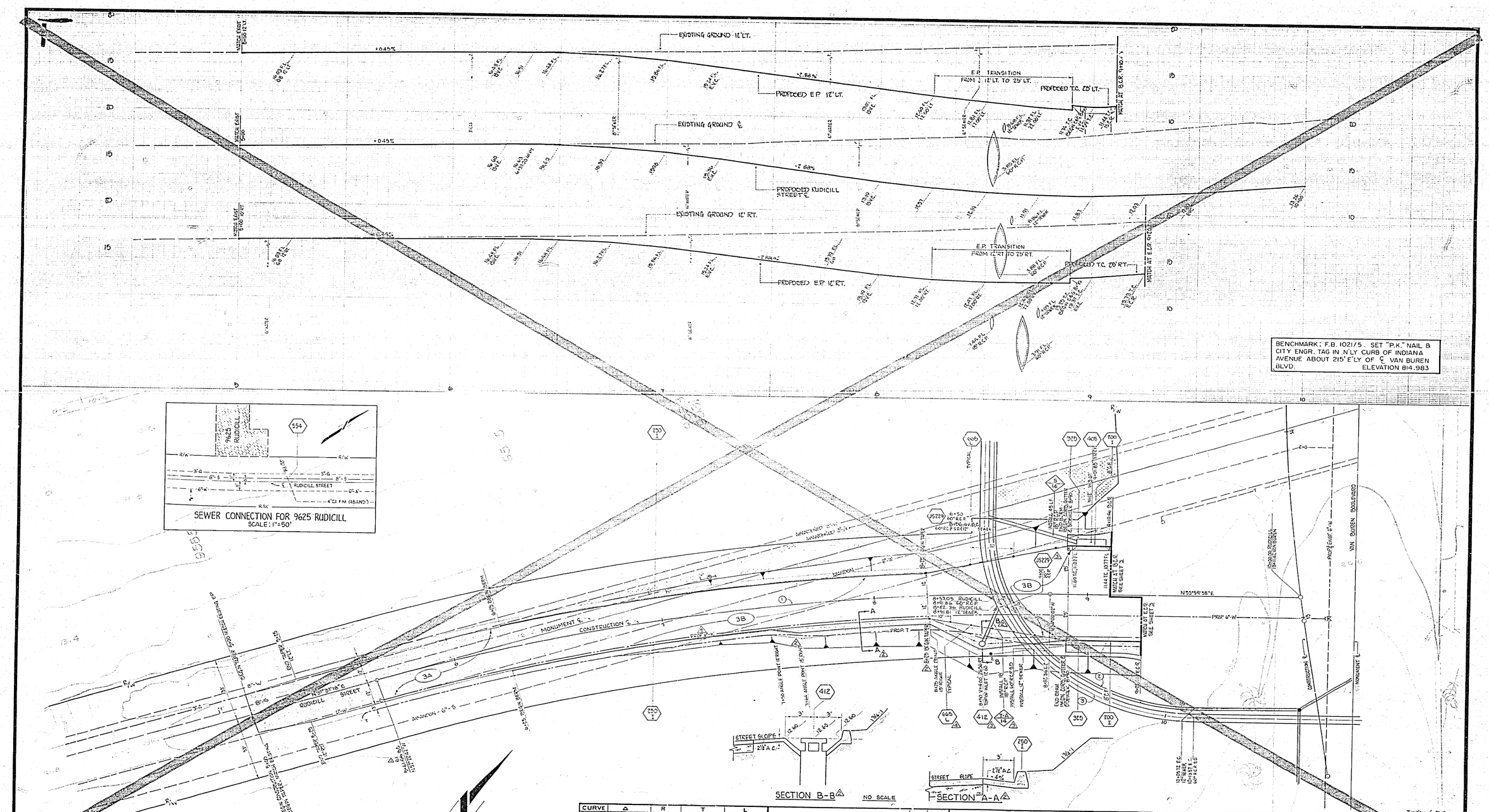
HORIZ. SCALE: 1" = 20' VERT. SCALE: 1" = 4'

Indexed KKE
ACCOUNT NO.

R-2039

SHEET 7 OF 45

FILE NO.



CURVE	Δ	R	T	L
1	18°22'40"	1000.00'	161.77'	320.75'
2	90°00'00"	95.00'	95.00'	149.23'
3	90°00'00"	100.00'	100.00'	157.08'

MARK	REVISIONS	APPR.	DATE
1	STA 5+61.06 CORRECTED TO 5+61.61		1/29/80
2	DITCH & BERM MODIFIED - ADDENDUM NO. 1		2/29/80
3	PIPE INLET, 24" RCP & JS229 RELOCATED - ADDENDUM NO. 1		2/29/80
4	TYPE 'L' MARKERS RELOCATED - ADDENDUM NO. 1		2/29/80
5	REVISED LOCATION OF PROP. 6" WATER LINE		3/6/80

DESIGNED BY RFH DRAWN BY TLV SK CHECKED BY BLR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY
PRINCIPAL ENGINEER
PARK DEPARTMENT
TRAFFIC DIVISION
CHIEF P.W. ENGINEER

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 1/18/80

Van Buren Underpass
(RUDICILL STREET)

HORIZ. SCALE: 1" - 20' VERT. SCALE: 1" - 4'

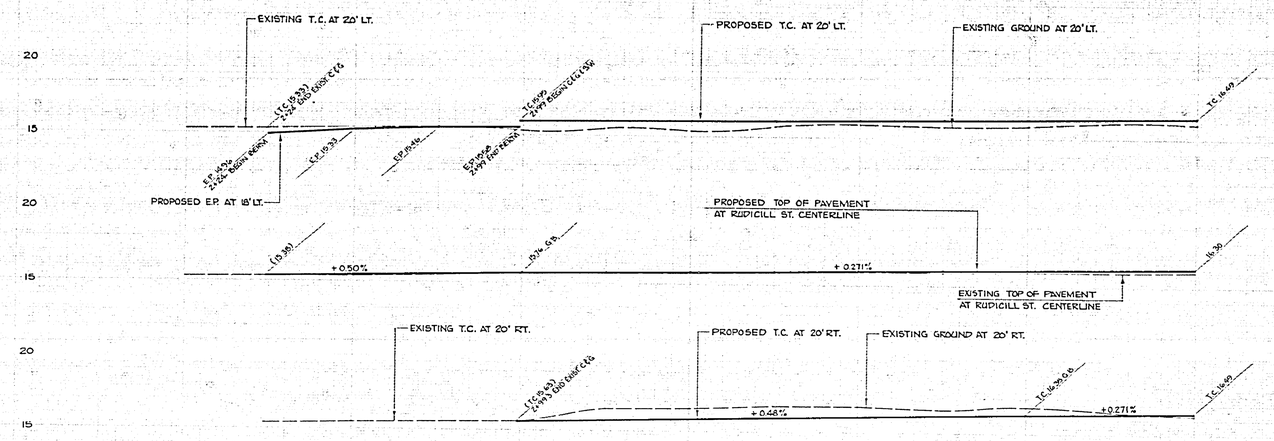
Indexed KHC

ACCOUNT NO. 1-1-5-224-1

R-2039

SHEET 8 OF 45

FILE NO.



BENCHMARK: F.B. 1021/5. SET "P.K." NAIL & CITY ENGR. TAG IN E'LY CURB OF VAN BUREN BLVD. NEAR STA. 9+00 ADJ. ELEV. 825.008 ELEVATION 825.015

CONSTRUCTION LEGEND

CENTER LINE — ℄ —
RIGHT OF WAY LINE — R/W —
SUBDIVISION LOT LINE — P/L —
TOP OF SLOPE
TOE OF SLOPE
DIRECTION OF FLOW

SPECIFIC CONSTRUCTION NOTES

NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE RESPECTIVE STANDARD DRAWING AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN OR BELOW IN THESE NOTES. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATES TO BE CONSTRUCTED.

JS229 RIVERSIDE COUNTY FLOOD CONTROL STANDARD DRAWINGS

EXISTING A.C. PAVEMENT TO BE REMOVED.

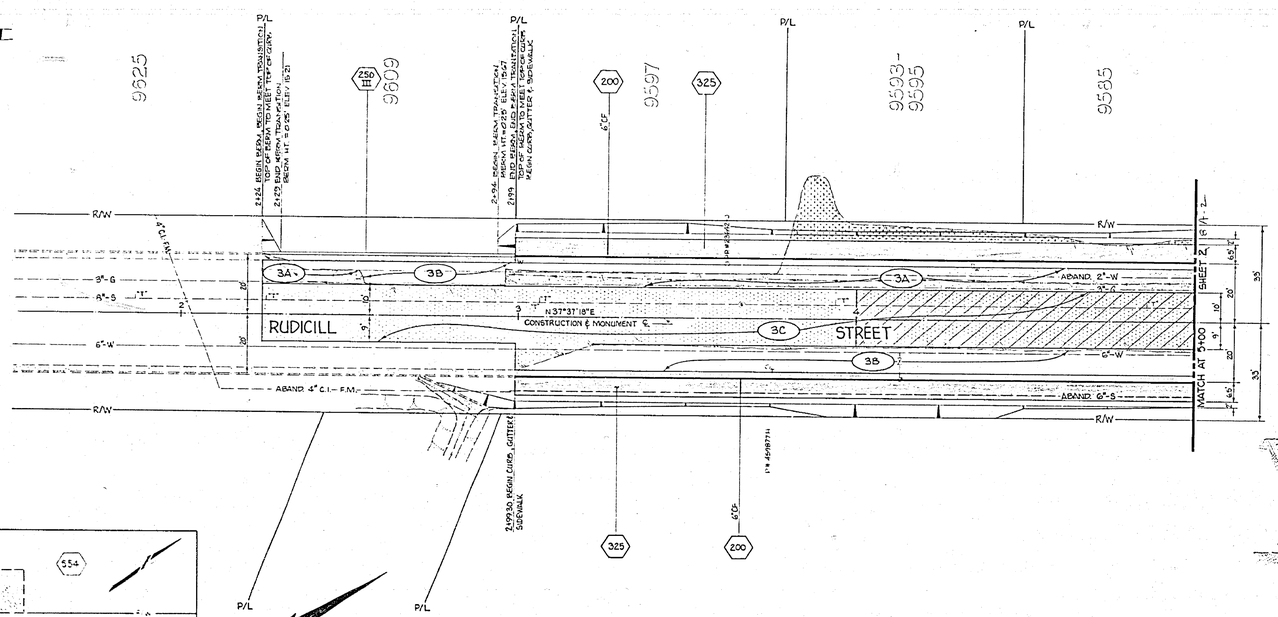
3A EXISTING A.C. PAVEMENT TO BE REMOVED PRIOR TO CONSTRUCTION OF STRUCTURAL SECTION OF 0.22' A.C., OVER 0.40' CLASS 2 BASE.

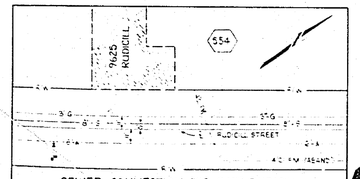
3B CONSTRUCT STRUCTURAL SECTION OF 0.22' A.C., OVER 0.40' CLASS 2 BASE.

3C OVERLAY EXISTING A.C. PAVEMENT WITH A VARIABLE THICKNESS OF ASPHALT CONCRETE. MINIMUM OVERLAY TO BE 1½" THICK.

PLACE PAVEMENT REINFORCING FABRIC.

REGRADE DRIVEWAY TO GRADE AND MATERIALS SHOWN ON PLAN, A.C. 5" THICK. PAVED DRAINAGE DITCH, A.C. 2½" THICK.

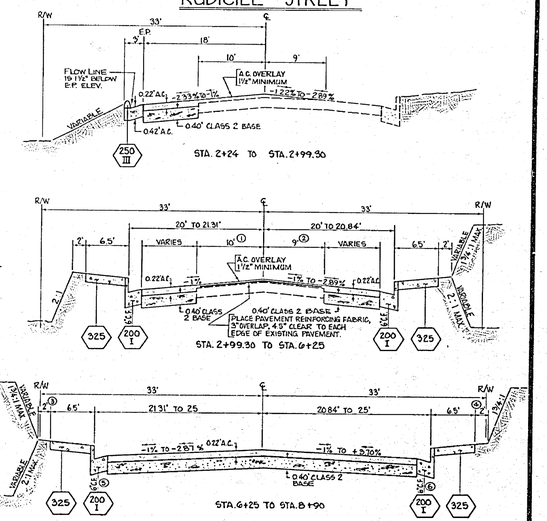




SEWER CONNECTION FOR 9625 RUDICILL
SCALE: 1"=50'

TYPICAL SECTIONS RUDICILL STREET

SCALE: HORIZ.: NO SCALE VERT.: 1"=2'



NOTES
1. VARIES FROM 10' TO 11.74' BETWEEN STA. 5+61.61 AND STA. 6+25
2. VARIES FROM 9' TO 7.26' BETWEEN STA. 5+61.61 AND STA. 6+25
3. VARIES FROM 2' TO 3.5' BETWEEN STA. 8+75 AND STA. 8+90
4. VARIES FROM 2' TO 0.5' BETWEEN STA. 8+75 AND STA. 8+90
5. VARIES FROM 6" TO 8" BETWEEN STA. 8+25 AND STA. 8+50
6. VARIES FROM 6" TO 8" BETWEEN STA. 8+75 AND STA. 8+90

Indexed RKE

MARK	REVISIONS	APPR	DATE

DESIGNED BY [illegible] DRAWN BY [illegible] CHECKED BY [illegible]

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY
PRINCIPAL ENGINEER [illegible] 5/17/82
PARK DEPARTMENT
TRAFFIC DIVISION [illegible] 5/17/82
CHIEF P.W. ENGINEER

APPROVED BY William D. Gardner
PUBLIC WORKS DIRECTOR
DATE 3/11/80

RUDICILL ST.

780' w'ly to 110' w'ly of ℄ Van Buren Blvd.

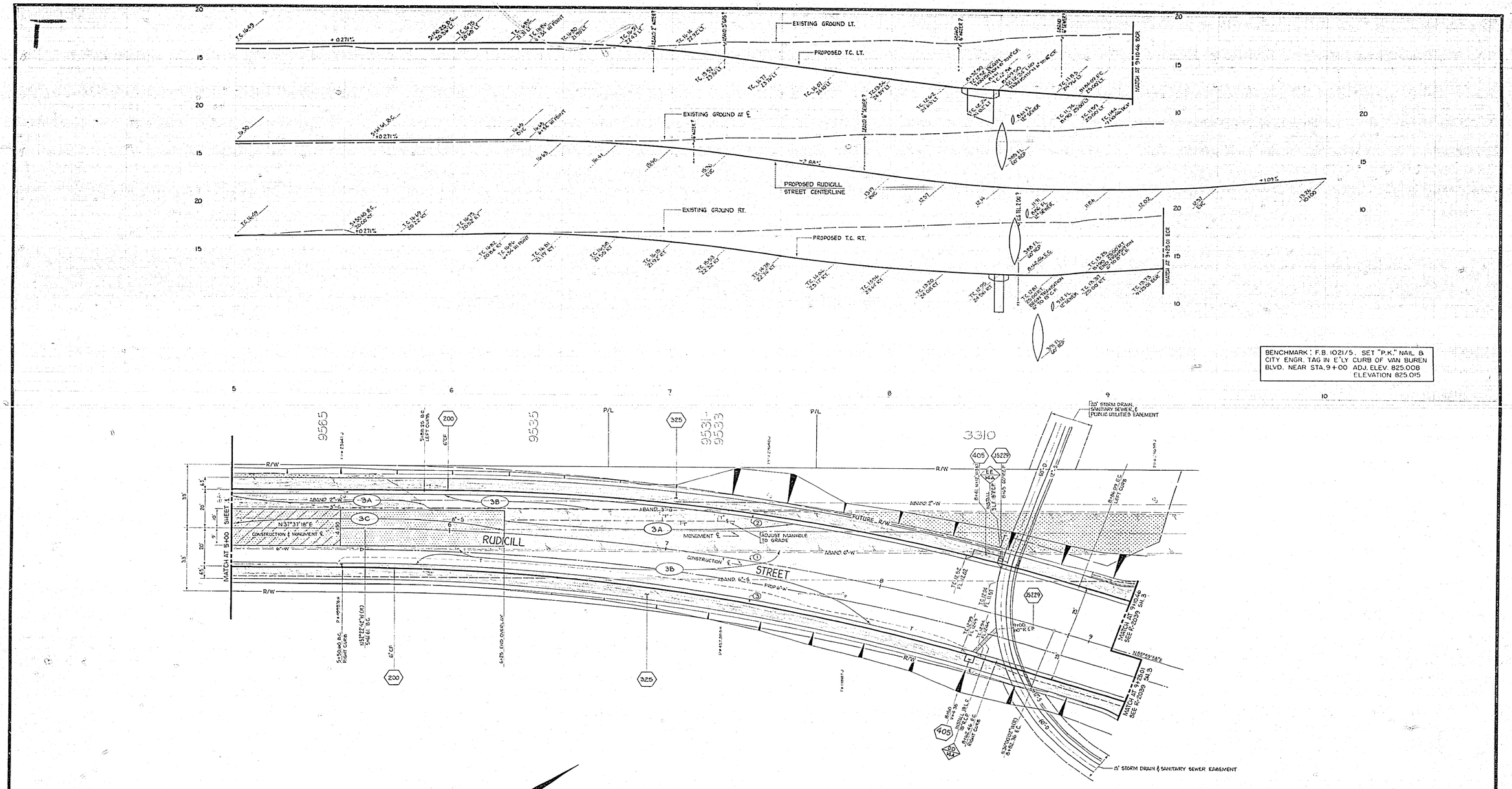
HORIZ. SCALE: 1" - 20' VERT. SCALE: 1" - 4'

ACCOUNT NO. 38-575-224-39

R-2039

SHEET 8A-1 OF 45

FILE NO.



CURVE	Δ	R	T	L
①	18°22'40"	1000'	161.77'	320.75'
②	18°22'40"	950'	153.68'	304.72'
③	18°22'40"	950'	153.68'	304.72'

MARK	REVISIONS	APPR.	DATE

DESIGNED BY [illegible] DRAWN BY [illegible] CHECKED BY [illegible]

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY
PRINCIPAL ENGINEER
PARK DEPARTMENT
TRAFFIC DIVISION
CHIEF P.W. ENGINEER

APPROVED BY
William D. [illegible]
PUBLIC WORKS DIRECTOR
DATE 3/13/80

RUDICILL ST.
780' w'ly to 110' w'ly of ℄ Van Buren Blvd

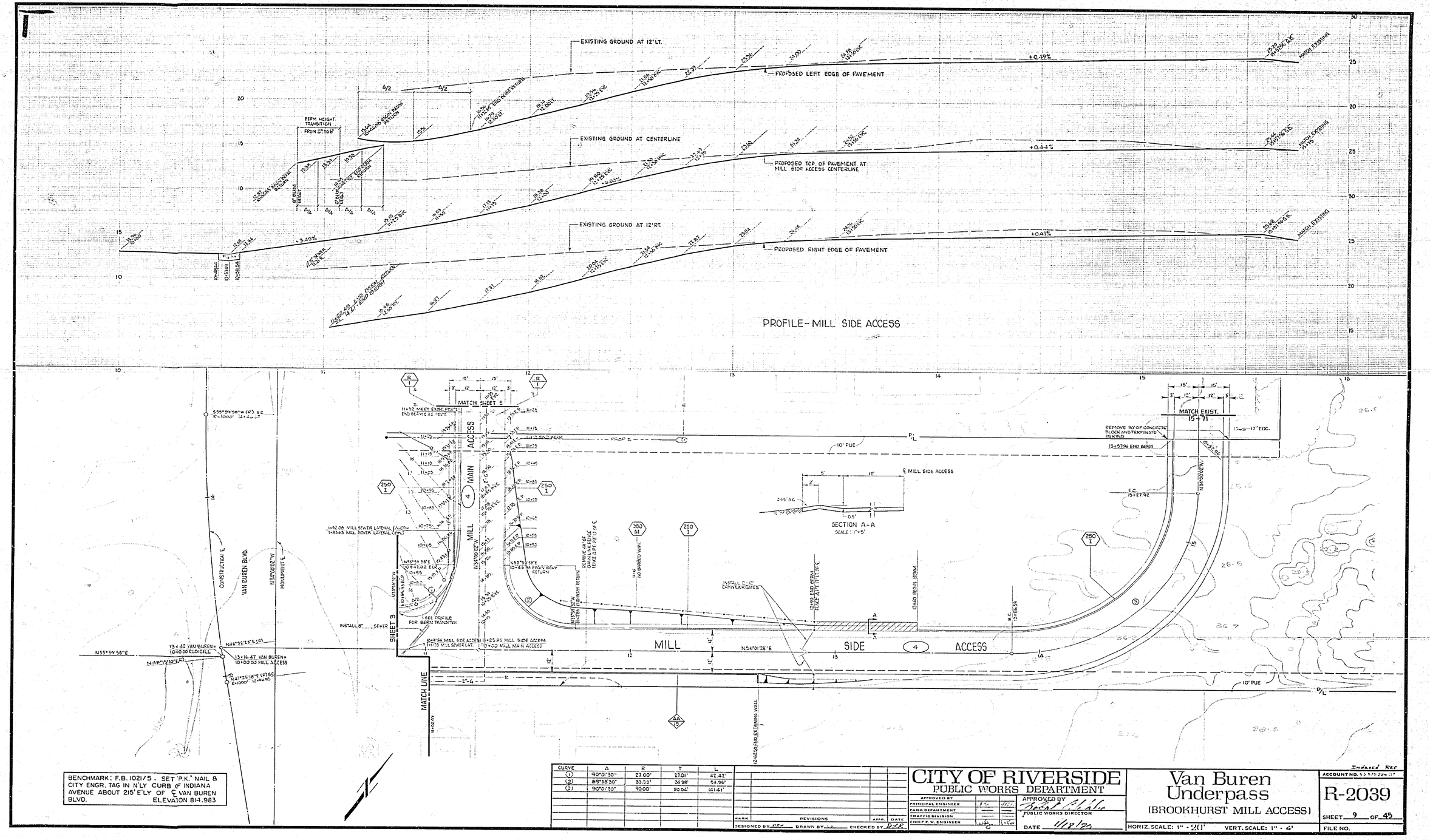
HORIZ. SCALE: 1" - 20' VERT. SCALE: 1" - 4'

Indexed NLE
ACCOUNT NO. 38-575-224-38

R-2039

SHEET 8A-2 OF 45

FILE NO.



CURVE	Δ	R	T	L
(1)	90°01'30"	27.00'	27.01'	42.42'
(2)	89°58'30"	35.00'	34.98'	54.96'
(3)	90°01'30"	90.00'	90.04'	141.41'

MARK	REVISIONS	APPR.	DATE

DESIGNED BY DEH DRAWN BY CHECKED BY DJR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY
PRINCIPAL ENGINEER
PARK DEPARTMENT
TRAFFIC DIVISION
CHIEF P.W. ENGINEER

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 1/18/80

Van Buren Underpass
(BROOKHURST MILL ACCESS)

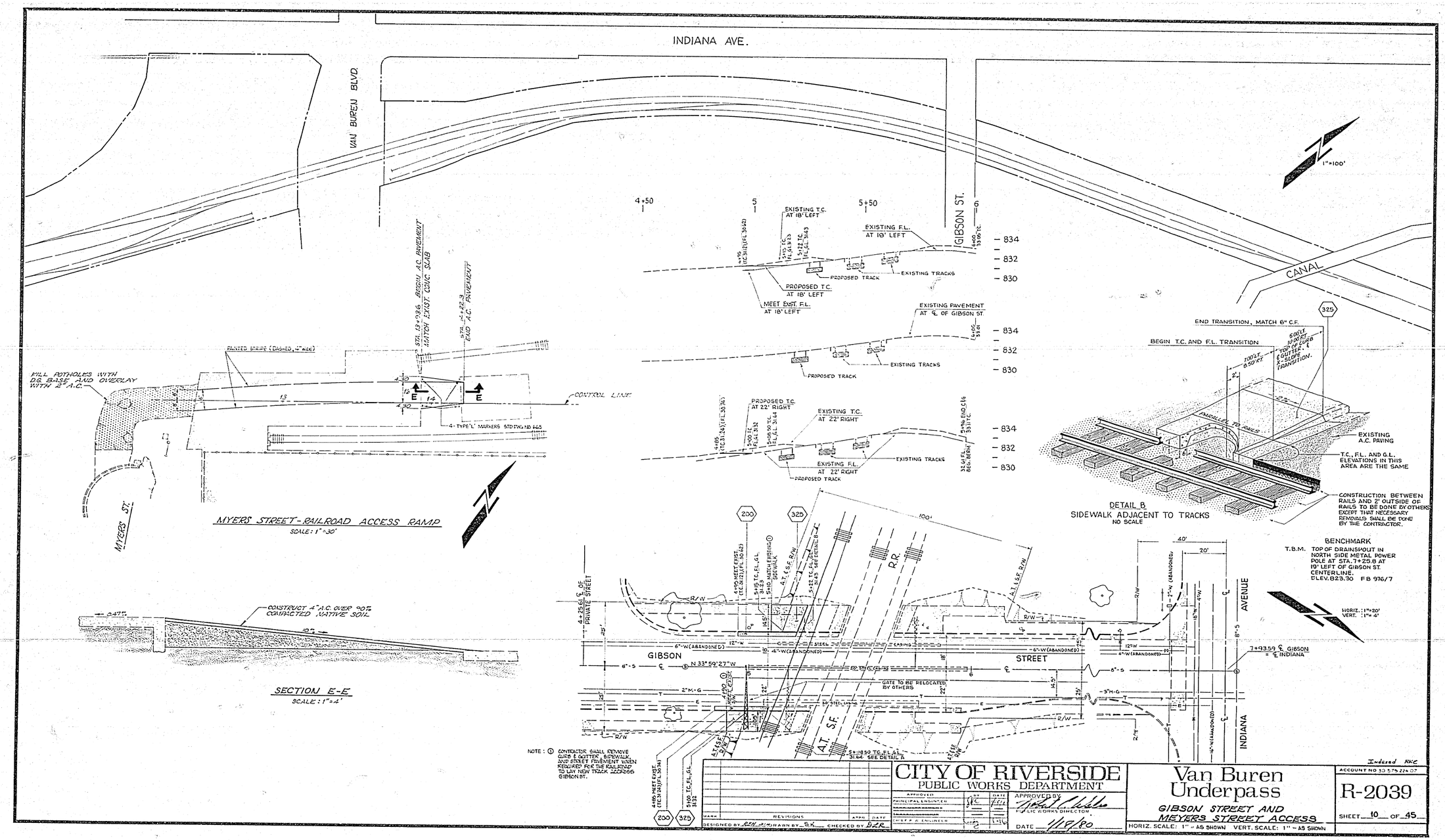
HORIZ. SCALE: 1" = 20' VERT. SCALE: 1" = 4'

Indexed Rec
ACCOUNT NO. 50 575 224 07

R-2039

SHEET 9 OF 45

FILE NO.



CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY: PUBLIC WORKS DIRECTOR
DATE 1/18/80

Van Buren Underpass
GIBSON STREET AND MEYERS STREET ACCESS

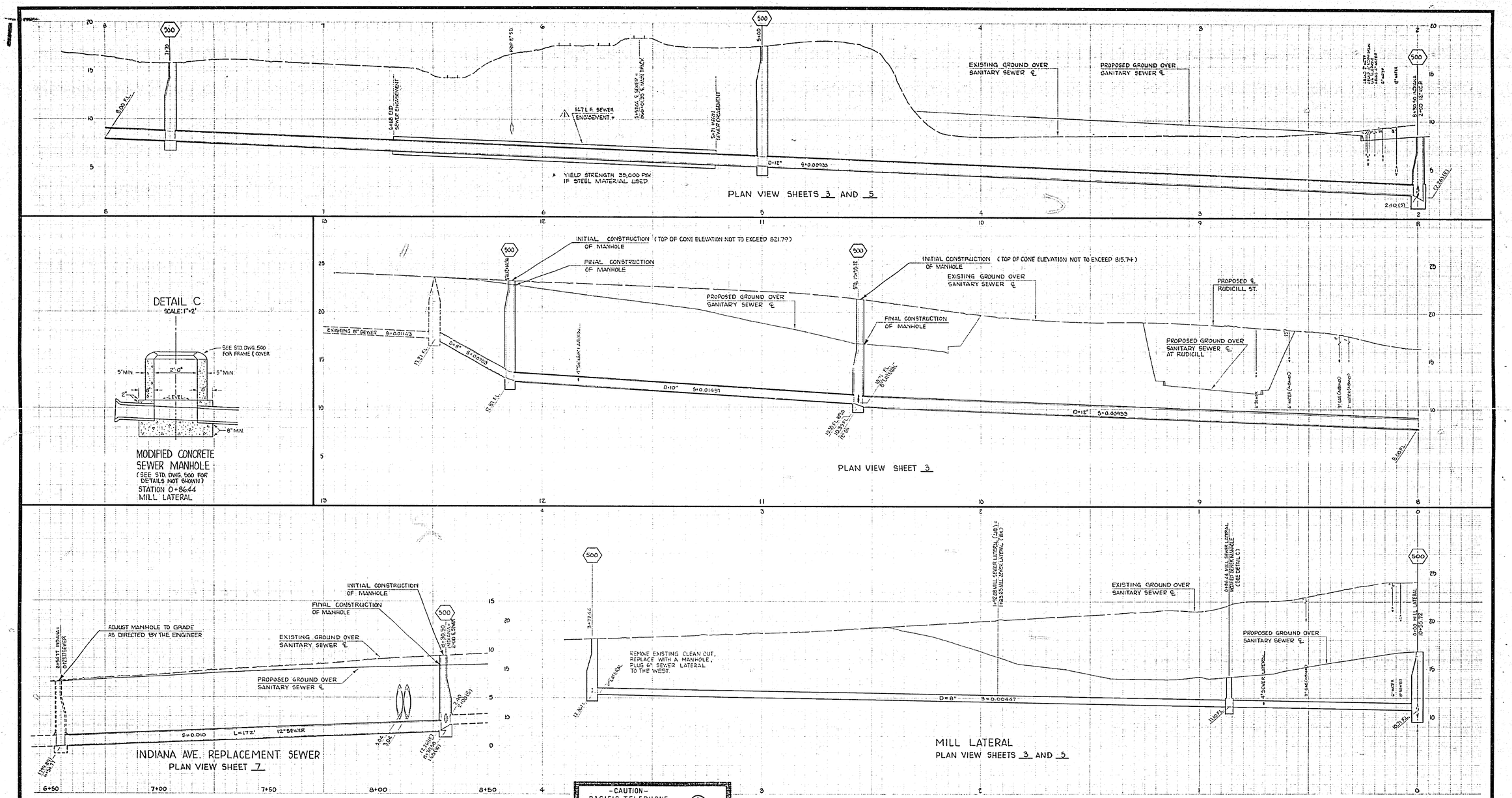
HORIZ. SCALE: 1" = AS SHOWN VERT. SCALE: 1" = AS SHOWN

Indexed RKC
ACCOUNT NO 30 575 224 07

R-2039

SHEET 10 OF 45

DESIGNED BY RSH DRAWN BY SK CHECKED BY DZR



BENCHMARK: F.B. 1021/5. SET "P.K." NAIL & CITY ENGR. TAG IN N'LY CURB OF INDIANA AVENUE ABOUT 215' E'LY OF ℄ VAN BUREN BLVD. ELEVATION 814.983

-CAUTION-
PACIFIC TELEPHONE CABLES UNDERGROUND
BEFORE EXCAVATING CALL COLLECT:

	7:30 A.M. to 5 P.M.	After Hours & Holidays
Orange County	714-635-0911	714-547-6616
Riverside County	714-684-0071	714-547-6616
Inyo County	714-684-0071	714-547-6616
San Bernardino County	714-684-0071	714-547-6616
Los Angeles County	213-621-3111	24 HOUR SERVICE
Ventura County	213-621-3111	
San Diego County	714-296-1595	714-232-0077

FOR FREE CABLE LOCATING SERVICE

MARK	REVISIONS	APPR.	DATE
1	INCREASED SEWER ENCASEMENT 44 L.F. AND ADDED NOTE		2/7/86

DESIGNED BY REN. DRAWN BY B.K. CHECKED BY DLR

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		
PARK DEPARTMENT		
TRAFFIC DIVISION		
CHIEF PUB. WKS. ENGR.		

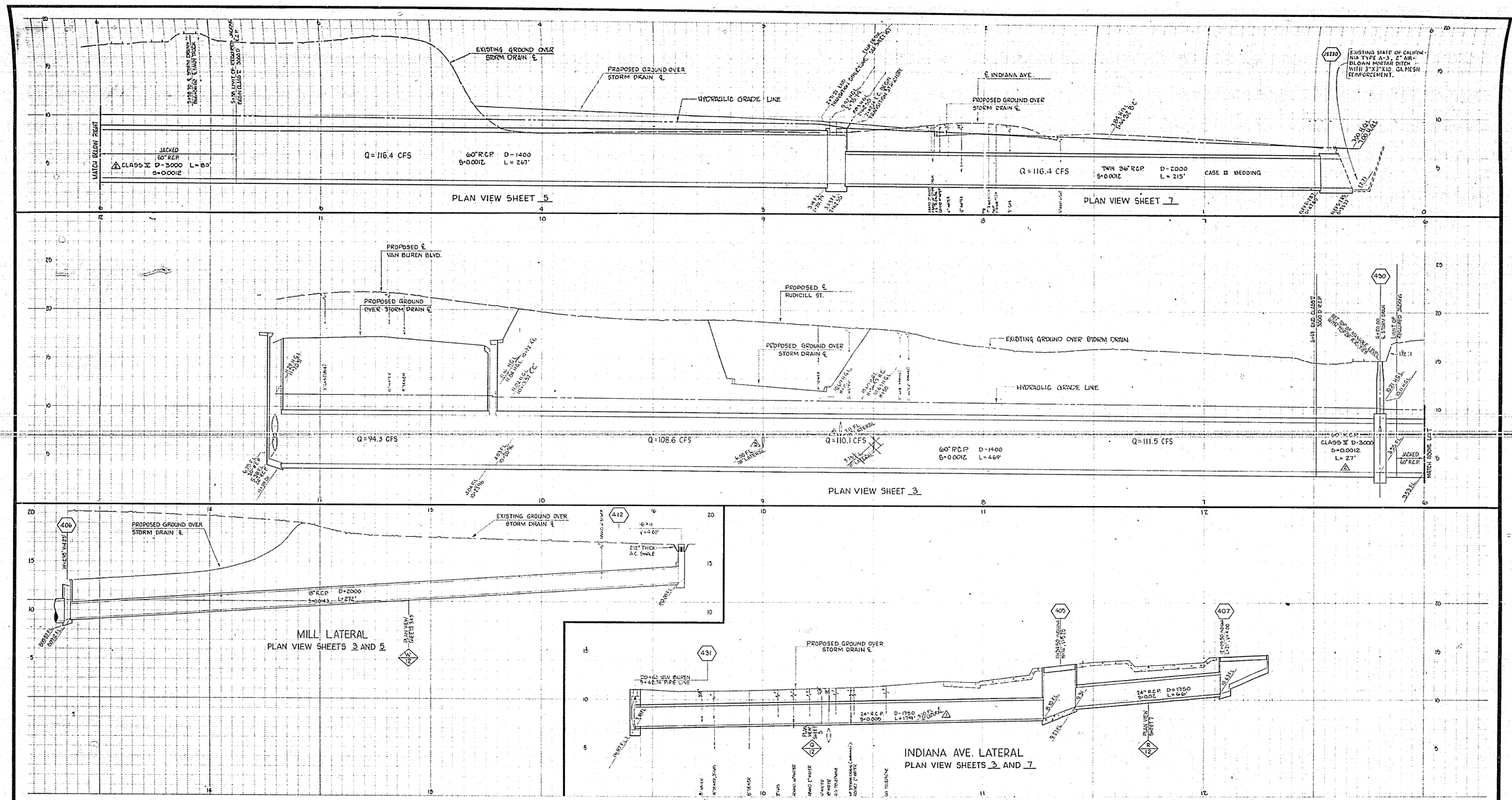
APPROVED BY [signature]
DIRECTOR OF PUBLIC WORKS
DATE 1/18/86

Van Buren Underpass
SEWER

SCALE: HORIZONTAL: 1"=20' VERTICAL: 1"=4'

Indexed RKE

ACCOUNT No. 30 575 224 07
DRAWING NUMBER
R-2039
SHEET 11 OF 45



BENCHMARK: F.B. 1021/5. SET "P.K." NAIL & CITY ENGR. TAG IN N'LY CURB OF INDIANA AVENUE ABOUT 215' E'LY OF ℄ VAN BUREN BLVD. ELEVATION 814.983

MARK	REVISIONS	APPR	DATE
1	ADDED 4" LATERAL 10+80 INDIANA LATERAL		2/1/80
2	REVISED 60" R.C.P. FROM D-1400 TO CLASS V D-3000 FROM 5+38 TO 6+49		2/7/80
3	REVISED LOCATION OF INLET PER ADDENDUM NO. 1		2/29/80
4	REVISED LOCATION OF INLET PER ADDENDUM NO. 1		3/6/80

DESIGNED BY REH CHK DRAWN BY DV SK CHECKED BY DLR

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

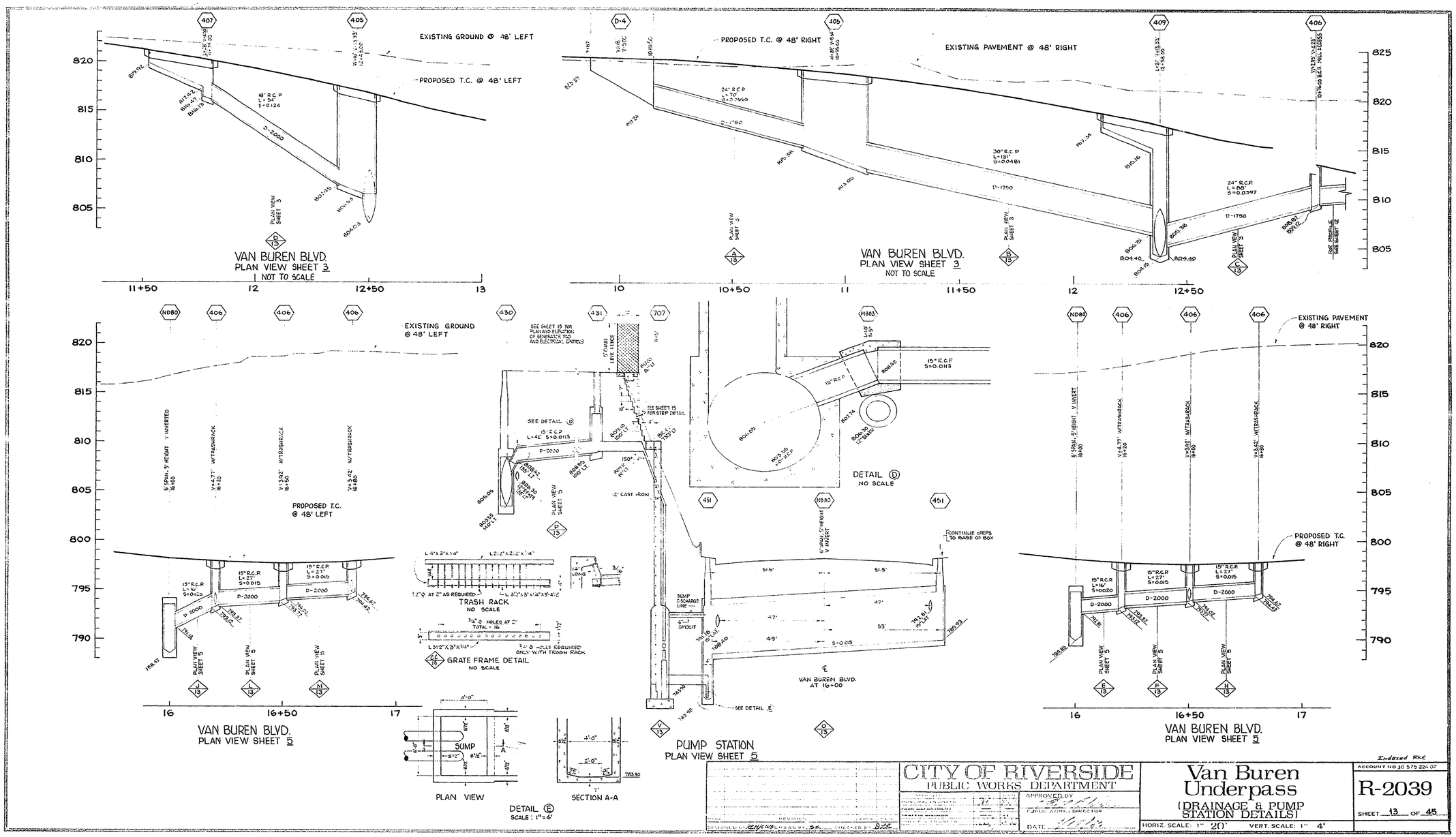
APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		
MARK DEPARTMENT		
TRAFFIC DIVISION		
CHIEF PUB. WKS ENGR.		

APPROVED BY
DIRECTOR OF PUBLIC WORKS
DATE

Van Buren Underpass
(STORM DRAIN)

SCALE: HORIZONTAL 1"=20' VERTICAL 1"=4'

Indexed RKC
ACCOUNT No. 30 575 224 07
DRAWING NUMBER
R-2039
SHEET 12A OF 45



CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE

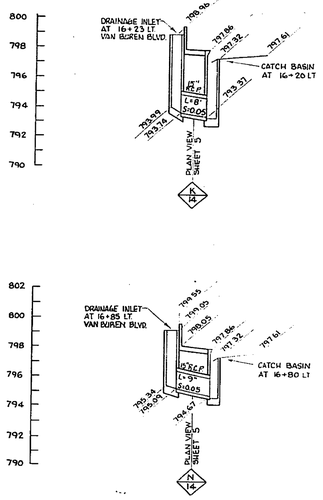
Van Buren Underpass
(DRAINAGE & PUMP STATION DETAILS)

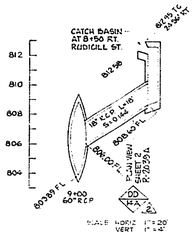
HORIZ. SCALE: 1" 20' VERT. SCALE: 1" 4'

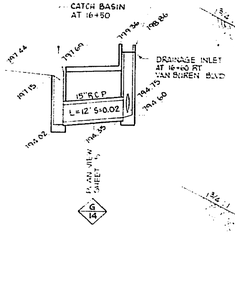
Indexed RKC
ACCOUNT NO 30 575 224 07

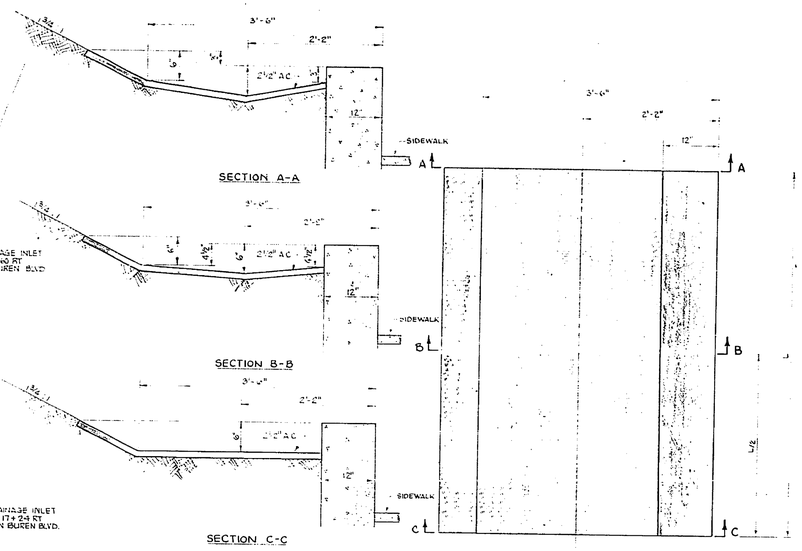
R-2039

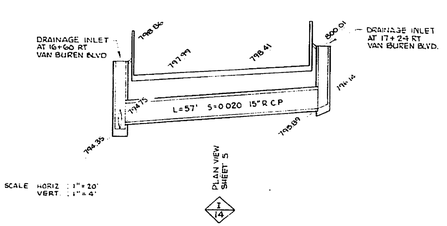
SHEET 13 OF 45

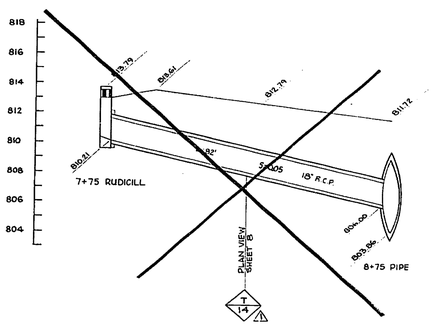


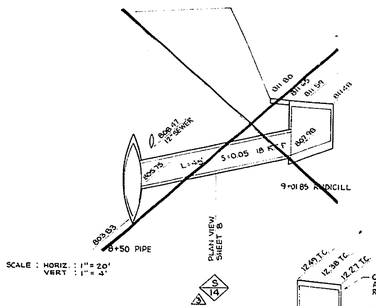


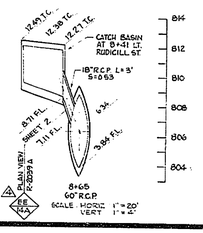


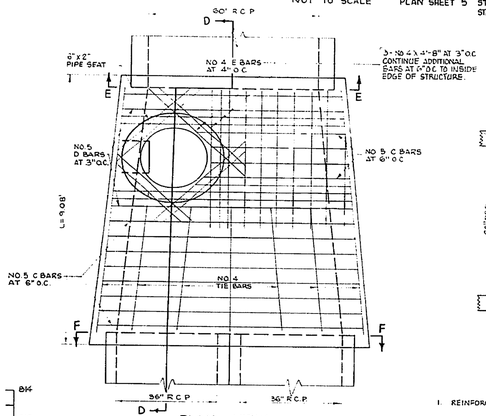


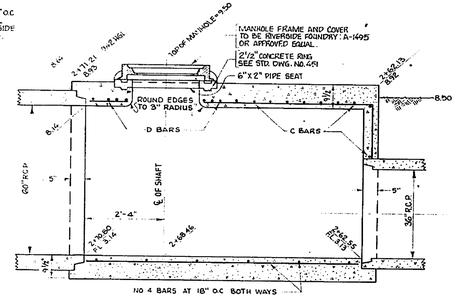


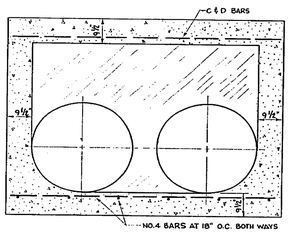


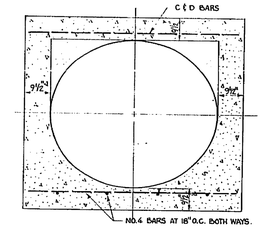












DITCH TRANSITION ON VAN BUREN BLVD

NOT TO SCALE PLAN SHEET 5 STA. 15+60 TO STA. 16+20.80 & STA. 16+87.33 TO STA. 17+20 LT.
STA. 16+00 TO STA. 16+57.98 & STA. 17+26.23 TO STA. 17+40 RT.

TRANSITION STRUCTURE

NOT TO SCALE STA. 2462.13 TO 2477.21 STORM DRAIN

NOTES

1. REINFORCING STEEL SHALL BE ROUND DEFORMED STRAIGHT BARS 1½" CLEAR FROM FACE OF CONCRETE UNLESS SHOWN OTHERWISE. TIE BARS SHALL BE NO 4 AND SPACED 18" O/C CENTERS OR CLOSER.
2. CONCRETE SHALL BE CLASS A WITH A 28 DAY STRENGTH OF 3250.
3. STEPS SHALL BE ¾" ROUND GALVANIZED STEEL AND ANCHORED NOT LESS THAN 6" IN THE WALLS OF STRUCTURE, UNLESS OTHERWISE SHOWN THE SPACING SHALL BE 1'-5" ON CENTERS, THE LOWEST STEP SHALL BE NOT MORE THAN 2' ABOVE THE INVERT. (ALHAMBRA FDY. A-3320 OR EQUAL)
4. THE RING FOR THE ACCESS SHAFT SHALL BE SEATED IN CEMENT MORTAR AND NEATLY POINTED OR WIPED INSIDE SHAFT.
5. FLOOR OF MANHOLE SHALL BE STEEL TROWELED TO SPRINGING LINE.
6. BODY OF MANHOLE SHALL BE POURED IN ONE CONTINUOUS OPERATION, EXCEPT THAT THE CONTRACTOR SHALL HAVE THE OPTION OF PLACING AT THE SPRINGING LINE A CONSTRUCTION JOINT WITH LONGITUDINAL KEYWAY.
7. COVER SHALL HAVE LETTER D IN CENTER.

MARK	REVISIONS	APPR.	DATE
1	DETAIL DELETED PER ADDENDUM NO. 1		2/29/80
2	DETAIL ADDED PER ADDENDUM NO. 1		2/29/80
3	DETAIL DELETED PER ADDENDUM NO. 1		3/11/80
4	DETAIL ADDED PER ADDENDUM NO. 1		3/11/80

DESIGNED BY RHL DRAWN BY SK CHECKED BY DRF

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

	APPROVED	BY	DATE
	PRINCIPAL ENGINEER		
	PARK DEPARTMENT		
	DRAFTING DIVISION		
	CHIEF P. W. ENGINEER		

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 11/18/80

Van Buren Underpass
(DRAINAGE DETAILS)

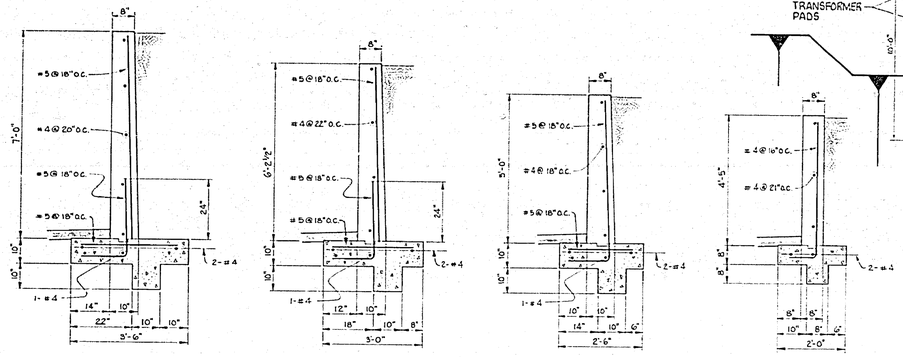
Indexed RHL

ACCOUNT NO. 30-575-224-07

R-2039

SHEET 14A OF 45

HORIZ. SCALE: 1" = AS SHOWN VERT. SCALE: 1" = AS SHOWN

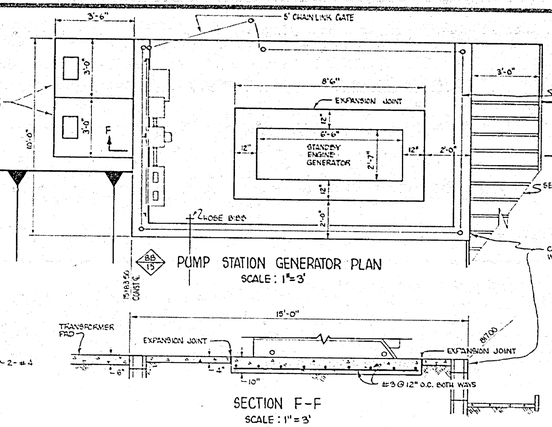


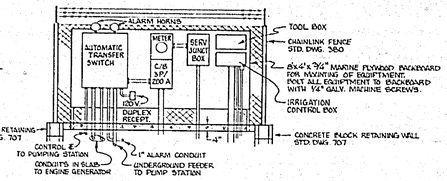
SECTIONS

RETAINING WALL @ MILL SIDE ACCESS

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

NOTE: FOR WEEP HOLE AND WEAKENED PLANE DETAILS, SEE SHEET 16



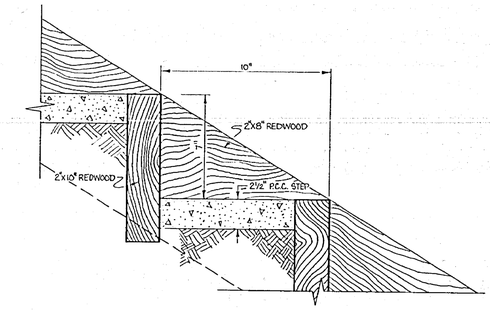


CONTROL PANEL ELEVATION

SCALE: 1"=3'

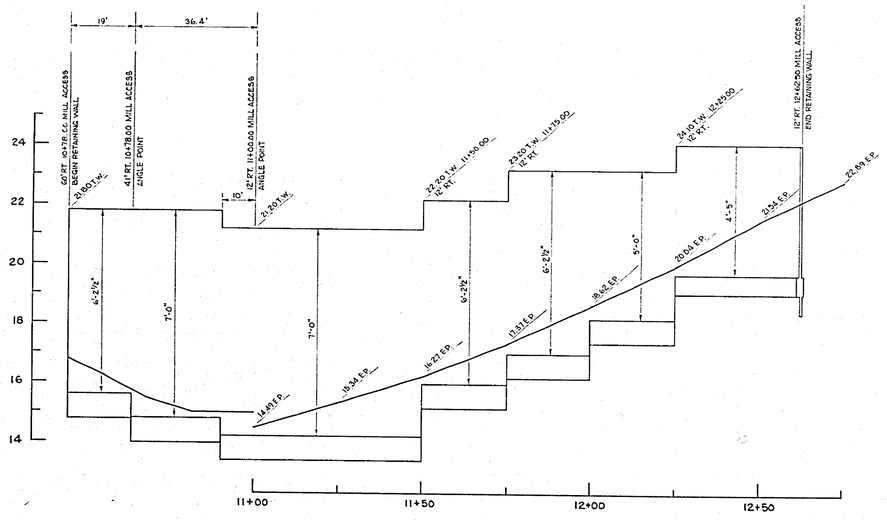
SECTION F-F

SCALE: 1"=3'



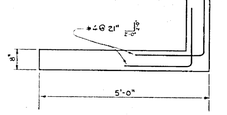
STEP DETAIL

NO SCALE

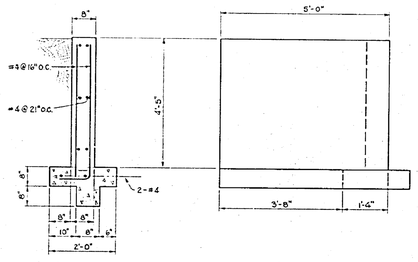


RETAINING WALL @ MILL SIDE ACCESS

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



PLAN



SECTION ELEVATION

RETURN WALL @ MILL SIDE ACCESS

SCALE: 1"=2' STA. 12+62.50

MARK	REVISIONS	APP'D	DATE		

DESIGNED BY GWS DRAWN BY S.K. CHECKED BY RKE

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED	BY	DATE
PRINCIPAL ENGINEER		
MANAGEMENT		
GENERAL MANAGER		
CHIEF P. E. ENGINEER		11-26

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 11/19/80

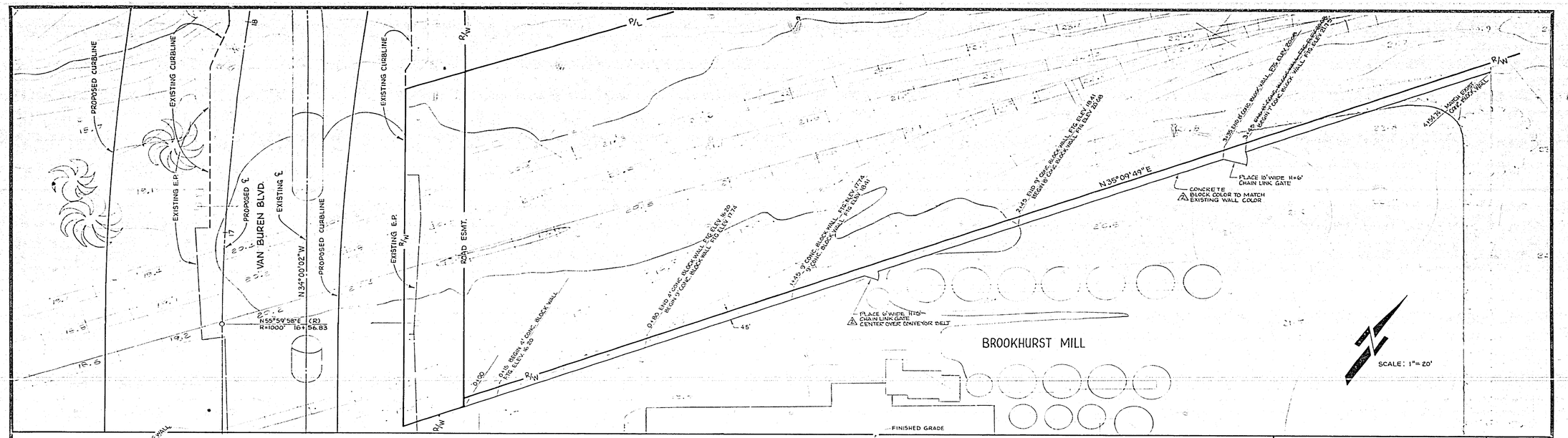
Van Buren Underpass
(RETAINING WALL, GENERATOR PLAN & ELEVATION)

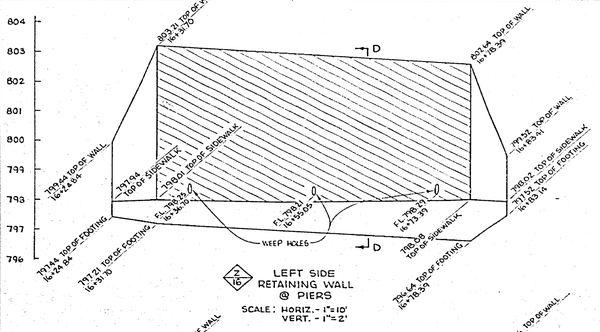
HORIZ. SCALE: 1" = AS SHOWN VERT. SCALE: 1" = AS SHOWN

Indexed RKE
ACCOUNT NO 30 575 224 07

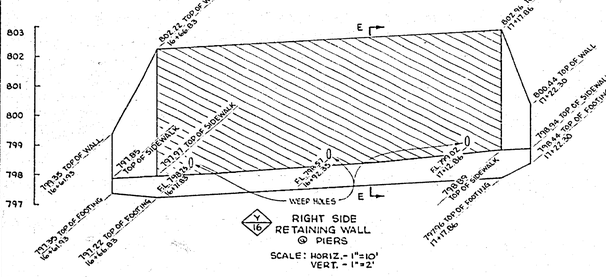
R-2039

SHEET 15 OF 45

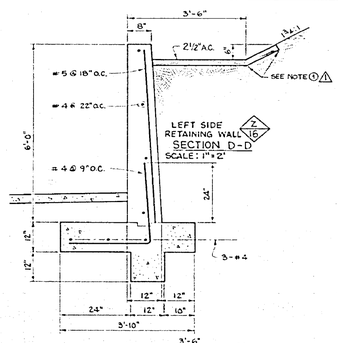


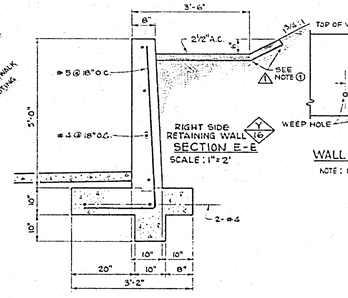


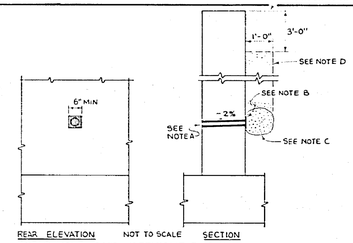
2/16 LEFT SIDE RETAINING WALL @ PIERS
SCALE: HORIZ.- 1"=10'
VERT. - 1"=2'



7/16 RIGHT SIDE RETAINING WALL @ PIERS
SCALE: HORIZ.- 1"=10'
VERT. - 1"=2'

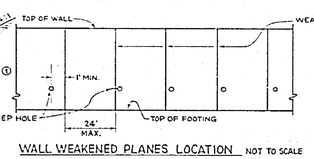






WEEP HOLE AND PERVIOUS BACKFILL

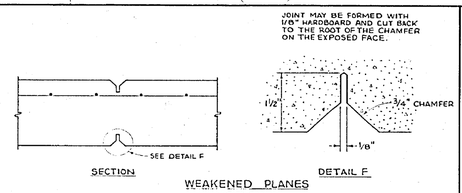
NOTES:
- A. 4"ϕ DRAINS WHERE SHOWN ON PLAN. EXPOSED WALL DRAINS SHALL BE LOCATED 3"± ABOVE FINISHED GRADE.
- B. 6" SQUARE ALUMINUM OR GALVANIZED STEEL WIRE & MESH HARDWARE CLOTH (MIN. WIRE DIAMETER 0.03") ANCHOR FIRMLY TO BACKFACE.
- C. ONE CUBIC FOOT PERVIOUS BACKFILL MATERIAL IN AN ENGINEERED FILTER FABRIC (SUCH AS BIDIM OR EQUAL).
- D. PERVIOUS BACKFILL MATERIAL CONTINUOUS BEHIND WALL OR ABUTMENT.



WALL WEAKENED PLANES LOCATION NOT TO SCALE

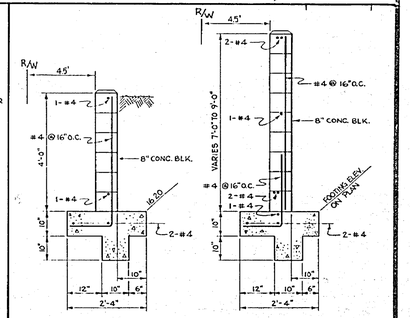
NOTE: USE ON ALL WALLS EXCEPT AS NOTED OTHERWISE

JOINT MAY BE FORMED WITH 1/8" HARDBOARD AND CUT BACK TO THE DEPTH OF THE CHAMFER ON THE EXPOSED FACE.



⚠ NOTE① THIS SECTION OF A.C. DITCH SHALL BE CONSTRUCTED WITHIN THE FOLLOWING LIMITS ONLY.
STA. 16+00 RT. TO STA. 17+40 RT.
STA. 15+20 LT. TO STA. 17+20 LT.

7/16 RETAINING WALL IN BACK OF SIDEWALK BETWEEN RUDICILL AND INDIANA
SCALE: 1"=1'
PER DETAIL A, SHEET 2



CONCRETE BLOCK WALL ALONG SANTA FE / BROOKHURST R/W
SCALE: 1"=2'

MARK	REVISIONS	APP'D	DATE
⚠1	ADDED NOTE ①	R.E.C.	2/11/80
⚠2	ADDED CHAIN LINK GATES PER ADDENDUM NO.1	R.E.C.	2/25/80

DESIGNED BY REH DRAWN BY S.K. CHECKED BY R.E.C.

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

	APPROVED	DATE
PRINCIPAL ENGINEER		
PARK & TRAIL PLANNER		
ASSOCIATE ENGINEER		
CHIEF P.E. INSPECTOR		

APPROVED BY: Robert Miller
PUBLIC WORKS DIRECTOR
DATE 1/28/80

Van Buren Underpass
(RETAINING WALL DETAIL)

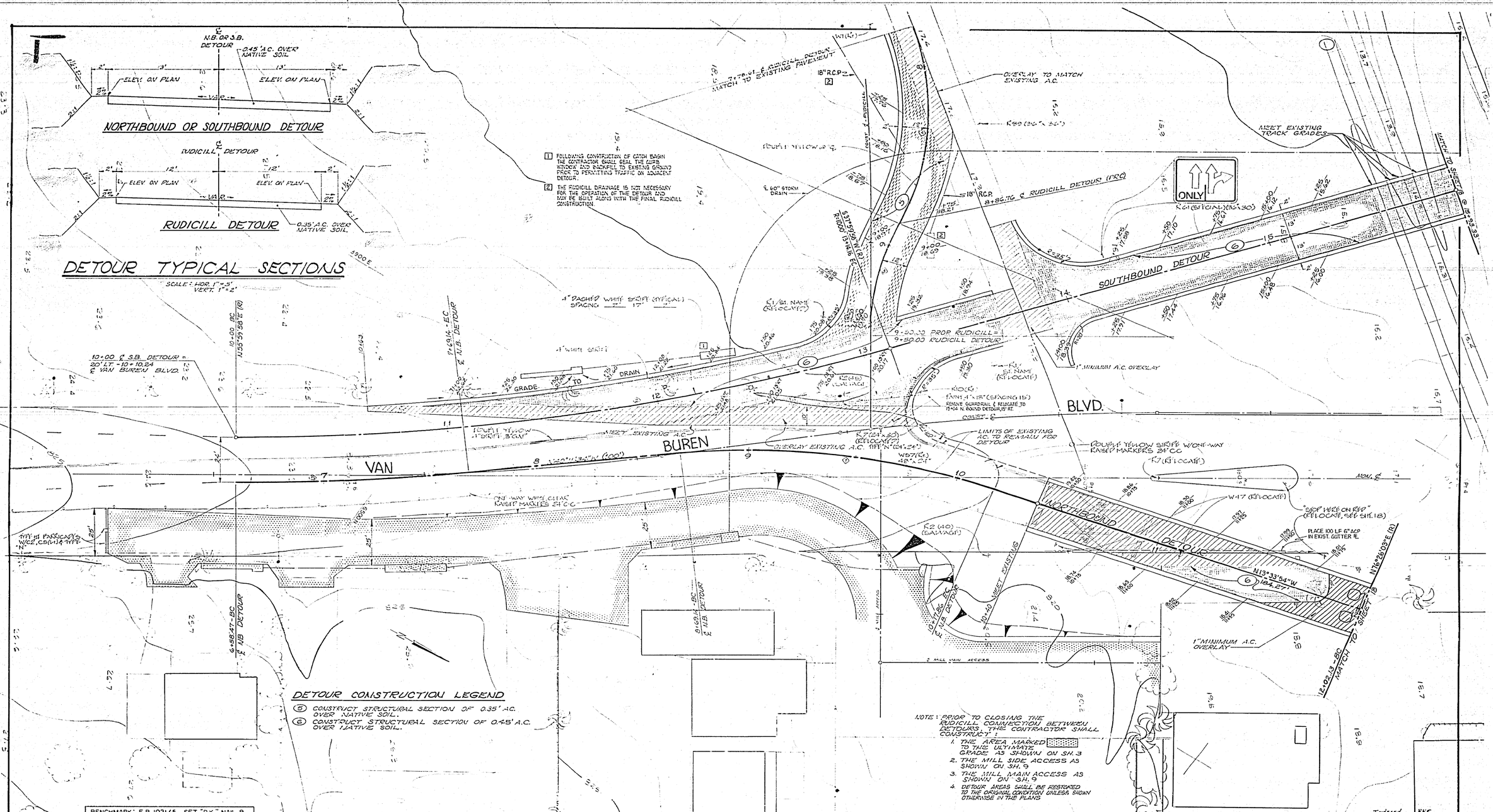
Indexed RKE

ACCOUNT NO. 415-420-720-7

R-2039

SHEET 16 OF 45

HORIZ. SCALE: 1" = AS SHOWN VERT. SCALE: 1" = AS SHOWN



BENCHMARK: F.B. 1021/5. SET "P.K." NAIL & CITY ENGR. TAG IN N'LY CURB OF INDIANA AVENUE ABOUT 215' E'LY OF ℄ VAN BUREN BLVD. ELEVATION 814.983

CURVE DATA

INDEX	R	Δ	T	L
1	320'	26°37'40"	75.73'	148.72'
2	1000'	18°00'00"	158.38'	314.16'
3	140'	25°52'55"	32.17'	63.24'
4	140'	44°15'33"	56.93'	108.15'
5	1024'	6°11'32"	55.39'	110.67'

MARK	REVISIONS	APPR	DATE

DESIGNED BY GKW DRAWN BY SK/KL CHECKED BY BLR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY
PRINCIPAL ENGINEER
PARKING DEPARTMENT
TRAFFIC DIVISION
CHIEF P.W. ENGINEER
PUBLIC WORKS DIRECTOR
DATE 1/18/86

Van Buren Underpass
(DETOUR)

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

Indexed KKC
ACCOUNT NO 30 575 224 07

R-2039

SHEET 17 OF 45

VAN BUREN BLVD.

INDIANA AVE.

PROPOSED ℄

MONUMENT ℄

NEAT EXISTING TRACK GRADES

MATCH SHEET 11

MATCH SHEET 17

GATE TO BE PLACED & REMOVED BY THE RAILROAD CONTRACTOR TO REMOVE FOUNDATION.

SOUTHBOUND

NORTHBOUND

DETOUR

℄ 60" STORM DRAIN

℄ TWIN 54" STORM DRAIN

DO NOT STOP ON TRACKS SIGNS (RELOCATE TO N/B PATROL ROADWAY)

S36°34'55"W 75.00'

S83°25'01"E (R) 191.82' EC

S36°34'55"W (R) 191.82' EC

N56°33'57"W 31.44'

S31°26'03"W (R) 14.25' EC

S33°26'05"W (R) 14.25' EC

S56°25'01"E (R) 191.82' BC

S36°34'55"W (R) 75.00'

S31°26'03"W (R) 14.25' BC

N78°26'03"E (R) 202.13' EC

S31°59'58"W (R) 16.78' BC

N55°59'58"E (R) 16.22.10' EC

S55°59'58"W (R) 20.14.48' EC

WAT-4B(G) RELOCATE (FROM TRAFFIC SIGNAL STANDARD (1 ROYAL WOOD 1 EST.)

WAT-4B(G) RELOCATE

EXISTING BERM TO REMAIN TO 2' BEYOUD SIGNAL POLE WHILE DETOURS ARE BEING USED

OVERLAY TO MEET EXISTING A.C.

LIMITS OF EXIST. A.C. TO REMAIN FOR DETOURS

SAWCUT, REMOVE & REPLACE EXIST. A.C.

SAWCUT (SALVAGE)

REMOVE EXIST. A.C. (SALVAGE)

REMOVE EXIST. CONCRETE (SALVAGE)

SAWCUT, REMOVE & REPLACE EXIST. CONCRETE

INSTALL 12" C.I.P. STORM DRAIN

INSTALL 15" STORM DRAIN CONNECTOR

SPLICE EXIST. INTERCEPT EXIST. CONDUIT, INSTALL PULLBOX

FEATHER AS NECESSARY TO MEET EXISTING A.C.

WAT (RELOCATE)

INSTALL 12" C.I.P.

INSTALL LOOP DETECTORS (SEE SHT. 17)

DASHED WHITE

1" MINIMUM AC OVERLAY

RELOCATE

MEET EXISTING TRACK GRADES

GATE TO BE PLACED & REMOVED BY THE RAILROAD CONTRACTOR TO REMOVE FOUNDATION.

GUARDRAIL RELOCATED FROM: 13+20 CONSTRUCTION CENTERLINE, 15' LT.

RAILROAD CONTROLLERS TO BE RELOCATED BY OTHERS

POWER POLE TO BE PLACED BY OTHERS

PAVEMENT MARKING (TYPICAL @ RR CROSSINGS) YELLOW W/ 8" WIDE DIAGONALS @ 24" O.C.

W17-1(36"x36") C17(12"x24") W17-1A(G) (RELOCATE)

C1 (48"x48")

C18 (60"x24")

R7, R10 (SALVAGE)

CONSTRUCTION & DETOUR SIGNING REQUIREMENTS NOT SHOWN ON PLAN

STA P.I.	P.R./ A.H.	FACING	COPY	SIZE	MTG.	REMARKS
11+50			C1	48"x48"		R30 "SLT OF THEATER ENTRANCE
12+00			C1	48"x48"		
12+50			C18	60"x24"		
13+00			W17-1(36") C18	36"x36" 60"x24"		
13+50			C18	60"x24"		
14+00			C18	60"x24"		

NOTE: W7-1A(G) IS A 4"x4" WOOD POST SIGN TO BE LOCATED ON INDIANA AVE. NORTH APPROACH LEGS WHEN IT IS WORKING IN INTERSECTION AND/OR ON INDIANA AVE.

BENCHMARK: F.B. 1021/5. SET "P.K." NAIL & CITY ENGR. TAG IN N'LY CURB OF INDIANA AVENUE ABOUT 215' E'LY OF ℄ VAN BUREN BLVD. ELEVATION 814.983

CURVE DATA

INDEX	R	Δ	T	L
1	320'	24°39'55"	69.67'	137.20'
2	200'	40°34'55"	78.95'	141.66'
3	200'	58°34'55"	112.19'	204.49'
4	320'	45°00'00"	132.55'	251.33'
5				
6				

MARK	REVISIONS	APPR.	DATE

DESIGNED BY GHH DRAWN BY S.K./MM CHECKED BY SLR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED:		DATE
PRINCIPAL ENGINEER	JC	11/21
TRAFFIC DIVISION	[illegible]	11/16/88
CHIEF ASSISTANT ENGINEER	[illegible]	11/16

APPROVED BY: [signature] PUBLIC WORKS DIRECTOR

DATE 11/16/88

Van Buren Underpass (DETOUR)

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

ACCOUNT NO 30 575 224 07

R-2039

SHEET 18 OF 45

MARK	REVISIONS	APPR	DATE

DESIGNED BY [signature] DRAWN BY MH CHECKED BY [signature]

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY		
PRINCIPAL ENGINEER		
PARK DEPARTMENT		
TRAFFIC DIVISION		1/1/80
CHIEF P. W. ENGINEER		
PUBLIC UTILITIES		

APPROVED BY [signature]
PUBLIC WORKS DIRECTOR
DATE 1/8/80

Van Buren Underpass

TRAFFIC SIGNALS AT VAN BUREN BLVD., INDIANA AVE. RIVERSIDE FRWY. & A.T.S.F. CROSSING

SCALE: 1" = 20'

INDEXED REF
ACCOUNT NO 20-575-224-07

X-224

SHEET 19 OF 45

R-2039

CONDUCTOR SCHEDULE

CONDUIT RUNS

FUNCTION	CONDUCTORS SIZE	INSULATION	1	2	3	4	5	6	*7	[illegible]	*8	*9	10	10A	11	12	13
VEH. HEADS																	
(C1) Φ1+6	#14	T.W.															
(C2) 1+2																	
(C3) 1+2+6																	
(C4) 1+2+4+6(Fut5)																	
(C7)(C8) 1+2+3+4(Fut5)																	
(C11) 6(Fut.5)			3	3		3	3		3		3	3	3				
(C12) 1+2+3				3		3	3	3	3		3	3	3				
(C17) 1+2+3+4						3	3		3		3	3	3				
3																	3
4									3		3	3	3				
(C29) 4(Fut5)																	3
6																	
PED. HEADS																	
Φ2W					2	2	2		2		2	2	4		2	2	
4W								2	2		2	2	2				
6W																	
PED PUSH BUTTONS																	
Φ2W					1	2	3		3		3	3	11		1	1	
4W								1	2		2	2	2				
6W													3				
SPARES			3	3	3	3	3	3	3		3	3	15		3	3	3
DETECTOR CABLE	#14/2	P.E.															
Φ6 (Fut5)						1	2		2		2	2	2				
1														1			
2														7	2	2	
2																	
2														2			
3							1		1		1	1	3	6		1	
4							2	2	4		4	4	5		1	1	
6														6	1	1	
R.R. PRE-EMPT	#14																
12 V. COMMON					1	1	1	1	1		1	1	1		1	1	
120 V. COMMON	#10		1	1	1	1	1	1	1		1	1	1		1	1	1
SIGNAL SERVICE	#8	T.H.W.											2				
LUMINAIRES						2	2		2		2	2					
INTERCONNECT																	
TOTALS	#14	T.W.	6	9	7	17	18	10	25		25	25	50		7	7	9
	#14/2	P.E.				1	5	2	7		7	7	10		4	4	
	#12	T.W.															
	#10	T.W.	1	1	1	1	1	1	1		1	1	1		1	1	1
	#8	T.H.W.				2	2		2		2	2	2				
			(EXIST)	(EXIST)	(EXIST)	(EXIST)	(EXIST)	(EXIST)	(EXIST)		(EXIST)	(EXIST)	(EXIST)	(EXIST)	(ABAN)	(EXIST)	(ABAN)
CONDUIT SIZE			1½"	1½"	1½"	2"	3"	1½"	3"		3"	3"	3"	2"	1½"	1½"	1½"

FUNCTION	14	15	16	17	18	19	20	20A	21	22	23	24	25	26	27	28	29	30	31
VEH. HEADS																			
(C1) Φ1+6			3				3	3		3	3	3	3	3	3				
(C2) 1+2			3				3	3		3	3								
(C3) 1+2+6		—	3	3		3													
(C4) 1+2+4+6(Fut5)			3																
(C7)(C8) 1+2+3+4(Fut5)			10				10	10		5		5	5			5	5	5	
(C11) 6(Fut.5)																			
(C12) 1+2+3																			
(C17) 1+2+3+4																			
3	3		3	3		3													
4																			
(C29) 4(Fut5)	3		3	3	3														
6			6				6	6		3		3				3	3		
PED. HEADS																			
Φ2W	2		6	2	4	2	4	4		2	2	2				2	2		
4W																			
6W			2				2	2		2	2					12			
PED PUSH BUTTONS																			
Φ2W	1	7		2	1	1	4	4		2		1				2	1		
4W																			
6W		3					3	3	1	1									
SPARES	3	3		3	3	3	6	6	3	3	3	3	3	3	3	3	3	3	
DETECTOR CABLE																			
Φ6 (Fut5)																			
1							1	1		1		1	1	1	1				
2	2						5	5		1		1	1			2	2	2	2
2			1	1															
2		2					2	2		2		2	2	1					
3	2	1					1	1	1										
4	1																		
6	1	5					5	5		3						2	2		
R.R. PRE-EMPT			2				2	2		2		2	2	2					
12 V. COMMON	1	1		1	1	1	1	1	1	1	1	1							
120 V. COMMON	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	
SIGNAL SERVICE																			
LUMINAIRES		2		2		2	2	2		2	2	2				2	2	2	
INTERCONNECT							■									■	■		
TOTALS #14 T.W.	13	14	44	17	12	13	44	44	4	27	11	60	13	8	6	17	14	9	
#14/2 P.E.	6	8		1			14	14	1	7		4	4	2	1	4	4	2	2
#12 T.W.																			
#10 T.W.	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	
#8 T.H.W.		2		2		2	2	2		2	2	2				2	2	2	
	(EXIST)	(EXIST)	(EXIST)	(EXIST)	(EXIST)	(EXIST)	(EXIST)	(EXIST)	(ABAN)	(EXIST)	(EXIST)	(EXIST)	(EXIST)	(ABAN)	(ABAN)	(ABAN)	(EXIST)	(ABAN)	(ABAN)
CONDUIT SIZE	2"	2½"	2	1½	1½"	1½"	2½-3	3"	3"	3"	3"	2½"	2½"	2"	1½"	2"	2"	2"	2"

* 1. RUNS 7, 8, 9 AND A PORTION OF 10 HAVE #10 CONDUCTORS IN PLACE OF #14 AS SHOWN

CONSTRUCTION NOTES:

(1) CONTRACTOR SHALL REUSE EXISTING DETECTOR CABLES FOR NEW DETECTOR LOOP INSTALLATION FOR N/B VAN BUREN APPROACH LANES. DO NOT REMOVE CABLE IF NOT UTILIZED FOR THIS PROJECT

(2) CONDUIT RUNS 26 AND 27 SHALL REMAIN OPERABLE FOR DETOUR ROUTING. THE ENGINEER WILL NOTIFY THE CONTRACTOR WHEN SAID RUNS CAN BE ABANDONED.

(3) *INTERCONNECT CABLE SHALL BE AS RECOMMENDED BY THE MANUFACTURER. CABLE SHALL CONTAIN A MINIMUM OF 3 SPARE CONDUCTORS

(4) EXISTING CONDUCTORS IN RUNS 24 & 25 SHALL BE WITHDRAWN TO CONTROLLER AND REPLACE WITH NEW CONDUCTORS, EXCEPT DETECTOR LOOP LEAD-IN CABLES.

(5) NEW CONDUCTORS FOR PHASE 1 QUEUE DETECTOR LOOPS, PHASE 6 VEHICLE, PHASE 2 PED. PUSH BUTTON, PED. COMMON, PHASE 2 PED, INTERCONNECT, AND ADDITIONAL LEAD-IN FOR PHASE 6 DETECTOR LOOPS SHALL BE ADDED IN APPROPRIATE CONDUIT RUNS (SEE PLANS) AND IN CONDUIT RUN 28 NOT SHOWN ON CONDUCTOR SCHEDULE.

ADJUST EXISTING CONDUITS TO A MINIMUM OF 30" BELOW PROPOSED GRADE; SEE PLAN R-2099 SHEET 5&7. THIS CONTRACT. THIS WORK SHOULD BE COORDINATED WITH STREET IMPROVEMENTS

EQUIPMENT SCHEDULE

LOCATION	STANDARD	VEHICLE HEADS HEAD	VEHICLE HEADS MOUNTING	VEHICLE HEADS BACK PLATE	PEDESTRIAN HEADS HEAD	PEDESTRIAN HEADS MOUNTING	PEDESTRIAN HEADS PPB	LUMINAIRE WATTAGE	INT ILLUM STREET NAME SIGN	REMARKS
A	TYPE 1				1W2C	TP-1-T	1			
B	TYPE 17	1W3C(12")	MAS	1				400 W		
		1W3C	SV-1-T	1			1			
C	TYPE 1				1W2C	TP-1-T	1			
D	TYPE 17	1W3C (12")	MAS	1				400 W		
		2W3C	SV-2-T	1	1W2C	SP-1-T	1			
E	TYPE 1	1W3C(R,Y,12"GA)	TV-1-T	1	1W2C	SP-1-T	1			
F	TYPE 1	1W3C	TV-2-T	2						
		1W3C(R,Y,12"GA)								
G	TYPE 1	1W3C	TV-1-T	1						
H	TYPE 17	1W3C (12")	MAS	1	1W2C	SP-1-T	1	400 W		
		2W3C	SV-2-T	1						
I	TYPE 1	2W3C	TV-2-T	1	1W2C	SP-1-T	1			Salvage all existing vehicle
		1-(R,Y,12"GA)								indications, including framework.
										Install indications from Loc (L)
J	24-3-7	*1W3C (12")	MAS	1	1W2C	SP-1-T	1	400 W		Salvage exist. Type 17 Std. Relocate
	35'SA,12'LA	1W3C (12")	MAS	1						all equip. to new Std. Provide & install
		1W3C	SV-1-T							PV indication as shown.
K	TYPE 1				1W2C	TP-1-T	1			
L	TYPE 1	1W3C(R,Y,12"GA)	TV-2-T	1						Relocate Standard's to location (C)
		1W3C		1						Sht. 22, X-461, Relocate all equip. to
										Location (I)
M	TYPE 17	1W3C (12")	MAS	1				1000 W		
		1W3C	SV-1-T	1	1W2C	SP-1-T	1			
N	TYPE 1	2W3C	TV-2-T	2	1W2C	SP-1-T	1			
O	68J10618	1W3C(12")	MAS	1				400 W		Adjust Std. to new grade. Remove
		1W3C	SV-1-T	1	1W2C	SP-1-T	1			exist. foundation.
P	TYPE 1	1W5C	TV-1-T	1						Adjust Std. to new grade. Remove exist.
		(R,Y,G, 12"Y+GA)								foundation.
Q	TYPE 16	1W3C (12")	MAS	1						Relocate Std. & equip as shown on detour plan
		1W3C (12")	SV-1-T	1						R-2039 sht. 17&18; Salvage Std. & equip. when
										detour is terminated.
R	TYPE 17	**1W5C (12")	MAS	1				1000 W		Salvage exist. Std. & SV-1-T mtg. Veh.
		(R,Y,12"Y&GA)								head. Relocate PV head & Luminaire
		1W3C	SV-1-T	1						to new 26 Std.
S	TYPE 1	2W3C	TV-2T	2	1W2C	SP-1-T	1			Relocate Std. & PPB to Location (E) Sht. 22,
										X-461. Relocate other equip. to new 26 Std.,
										modify framework to SV-2-TD mtg.
T	68J10618	1W3C (12")	MAS	1				400 W		
		1W3C	SV-1-T	1	2W2C	SP-2-T	1			
U	Ped Post						1			Install pedestrian post & push button
										from location (X)
V	Type 26-3-10	**1W5C(12")	MAS	1				1000 W		Provide & install Std., Mas head &
	45'SA,15'LA	1W3C(12")	MAS	1						PPB. Install PV head and Luminaire
		2W3C	SV-2-TD	2						from loc (R) and equip. from Loc (S)
W	PPB & POST						1			
X	PPB & POST						1			Relocate PPB & POST to location (U)

** 4 SECTION, PROGRAMMED VISIBILITY HEAD, RED, GREEN AND YELLOW BALL, GREEN AND YELLOW ARROWS.

EXISTING DETECTOR & LEAD-IN DESIGNATIONS

MARK	REVISIONS	APPR	DATE

DESIGNED BY ___ DRAWN BY ___ CHECKED BY ___

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY: PRINCIPAL ENGINEER; PARK DEPARTMENT; TRAFFIC DIVISION; CHIEF P. W. ENGINEER; PUBLIC UTILITIES

APPROVED BY ___ PUBLIC WORKS DIRECTOR

DATE ___

Van Buren Underpass

TRAFFIC SIGNALS AT VAN BUREN BLVD., INDIANA AVE. RIVERSIDE FRWY. & A.T.S.F. CROSSING

SCALE: 1" = 20'

Indexed RKE

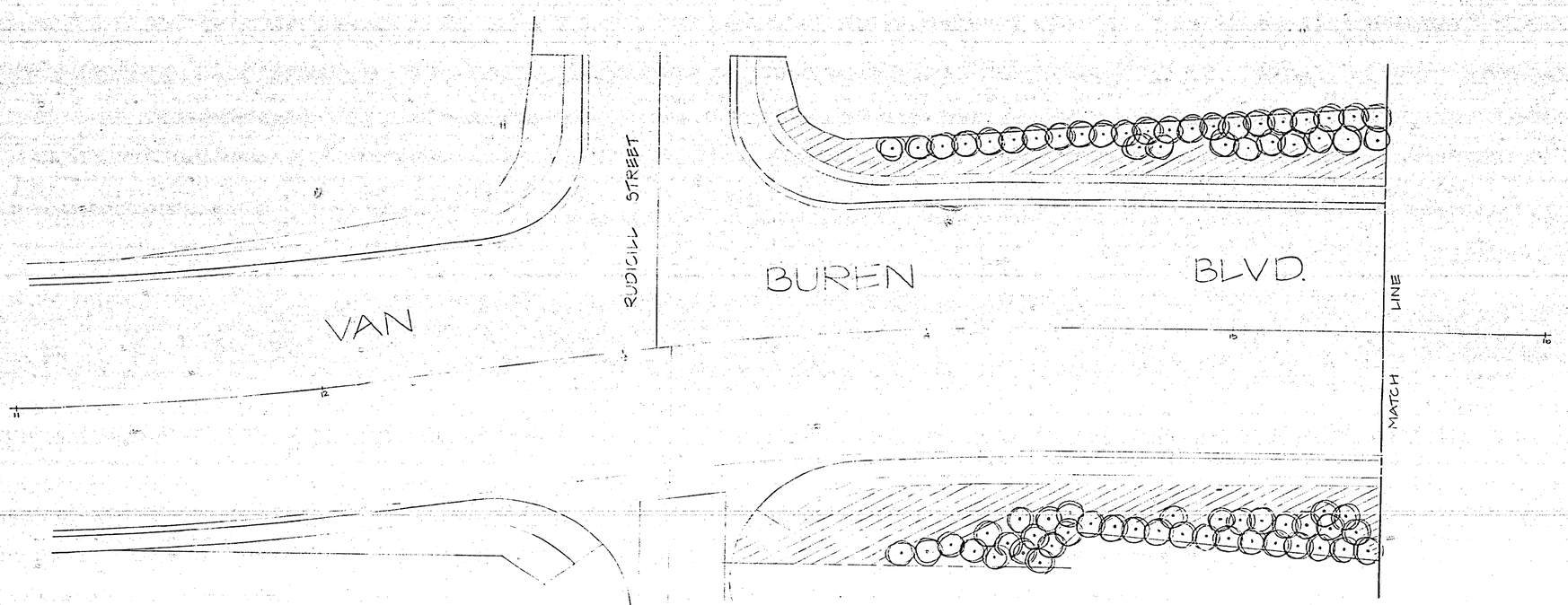
ACCOUNT NO. 30-575-224-07

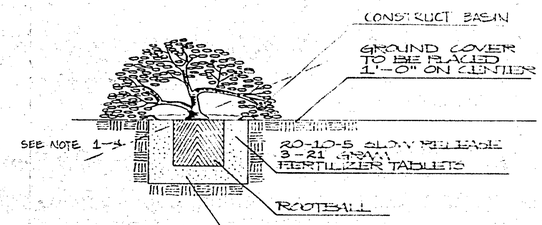
X-224

SHEET 21 OF 45

FILE NO.

R-2039





NOTE

1. PLANTING DETAIL TO BE ADJUSTED ON SLOPES SO THAT AXIS OF SHRUB REMAINS PERPENDICULAR WITH THE FINISH GRADE.

SHRUB PLANTING DETAIL

MARK	REVISIONS	APPR	DATE

DESIGNED BY JLH DRAWN BY CHECKED BY

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

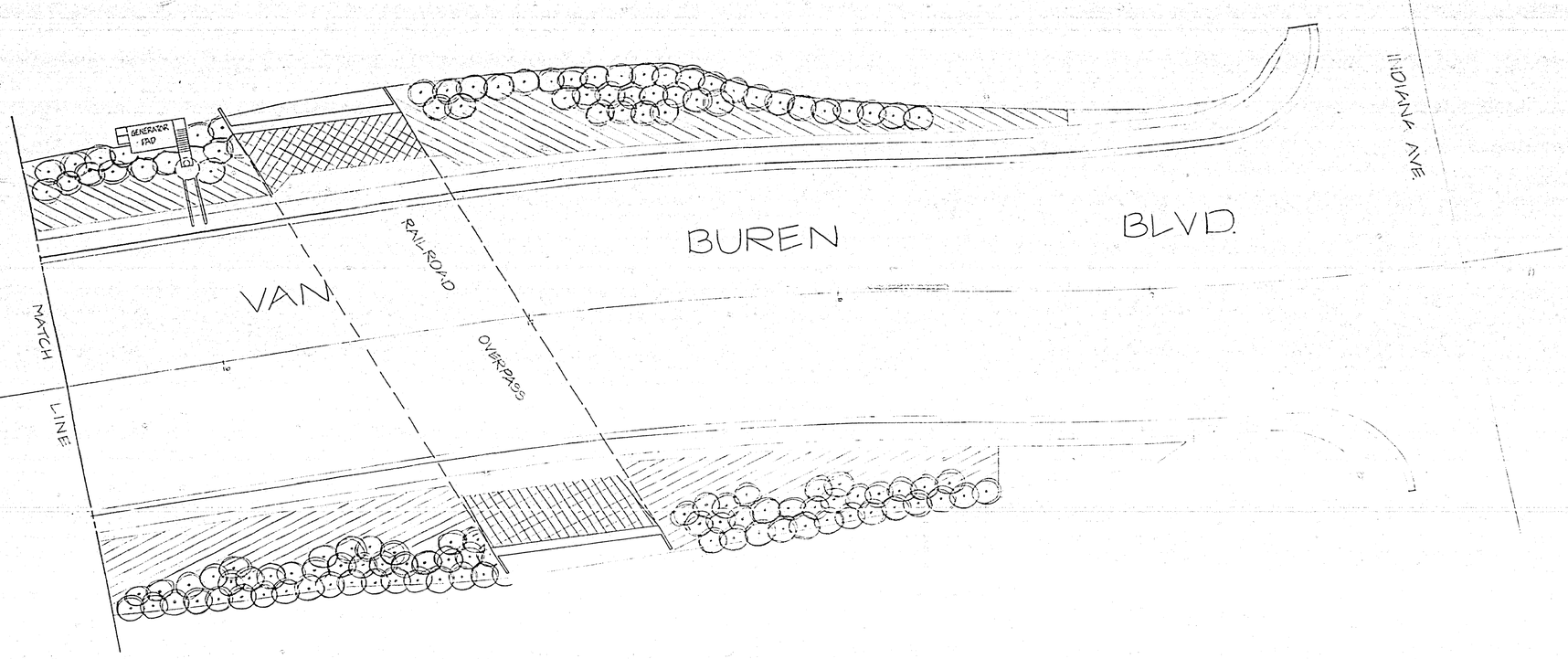
APPROVED BY		
PRINCIPAL ENGINEER		
PARK DEPARTMENT		
TRAFFIC DIVISION		
CHIEF P. W. ENGINEER		

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 11/8/65

Van Buren Underpass
LANDSCAPING PLAN

HORIZ. SCALE: 1" - 20' VERT. SCALE: 1" -

INDEXED BLC
ACCOUNT NO. 30-575 224 07
R-2039
SHEET 23 OF 45
FILE NO.



BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	SYMBOLS
TECOMARIA * CAPENSIS	CAPE HONEYSUCKLE	5 GAL	200	
MYOPORUM * PARVIFOLIUM	MYOPORUM	FLAT	160	12" O.C.
HEDERA * HELIX	ENGLISH IVY	FLAT	30	12" O.C.

* NOTES

1. PREPARATION OF AREAS INDICATED ON PLANS FOR GROUND COVER SHALL INCLUDE APPLICATION OF AN APPROVED PRE-EMERGENT CHEMICAL ACCORDING TO MANUF. SPECS. THE PRE-EMERGENT SHALL BE APPLIED AT THE FOLLOWING INTERVALS:
   A. BEFORE PLANTING
   B. BEGINNING OF MAINTENANCE PERIOD
   C. END OF MAINTENANCE
2. THE PRE-EMERGENT SHALL BE APPLIED UNDER THE INSPECTION OF THE CITY PARK INSPECTOR.

NO.	REVISIONS	APPD	DATE

DESIGNED BY ____ DRAWN BY ____ CHECKED BY ____

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY
PRINCIPAL ENGINEER
PARK DEPARTMENT
DRAFTING DIVISION
CHIEF M. ENGINEER

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 11-6-80

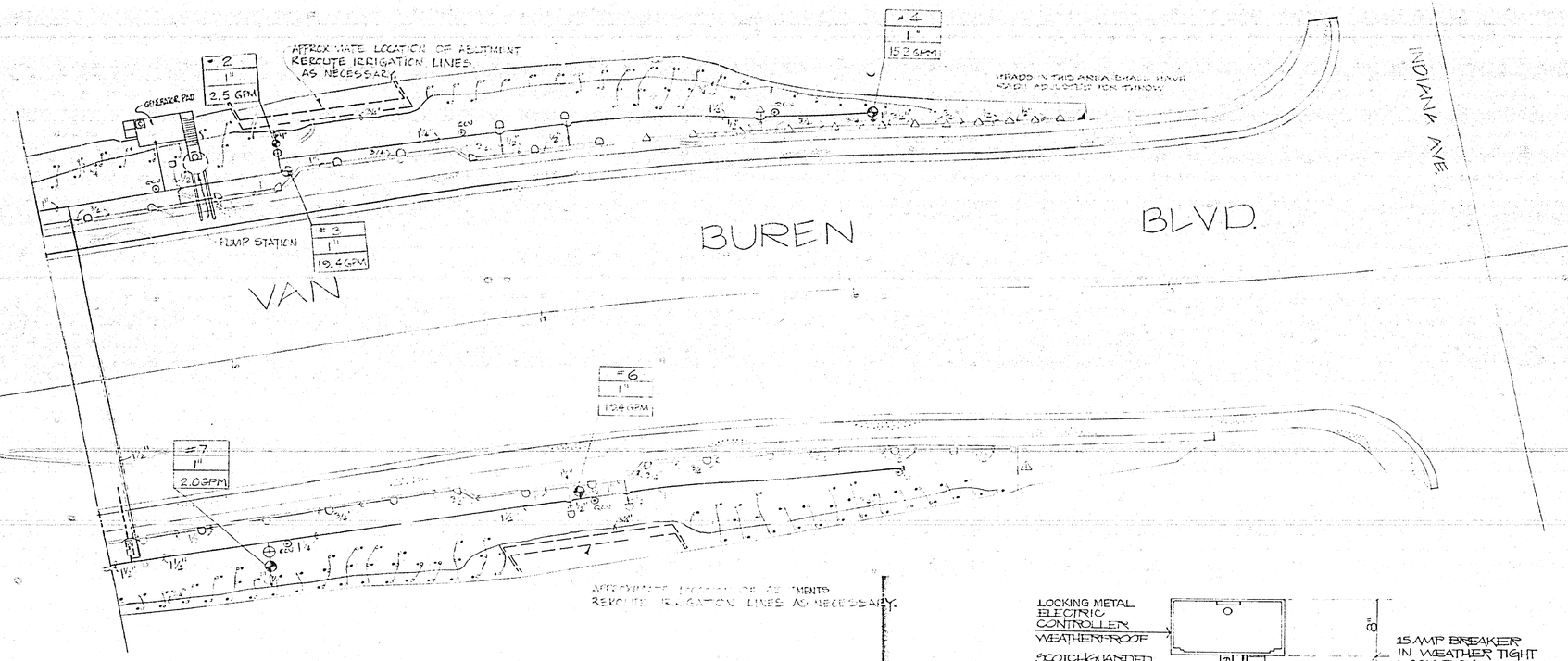
Van Buren Underpass
LANDSCAPING PLAN

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

Indexed RKE
ACCOUNT NO 30 575 224 07

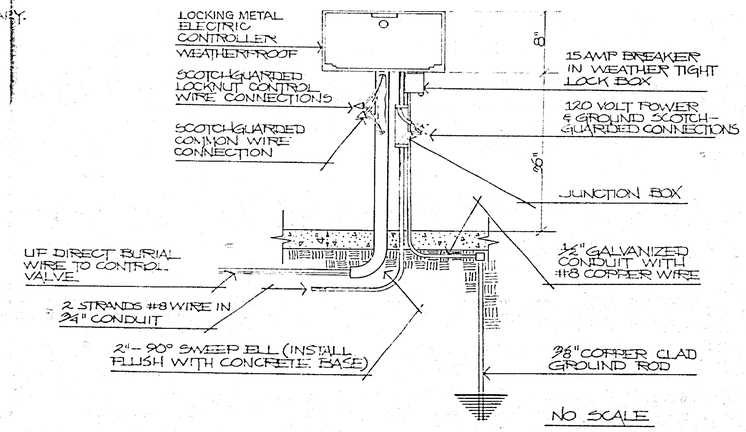
R-2039

SHEET 24 OF 45
FILE NO.



IRRIGATION LEGEND

symbol	description	nozzle	radius	gpm	psi	pattern
	TORO 316-10-02 STREAM ROTOR SHRUB HEAD		21'	2.66	35	360°
	TORO 308-10-02 " " " "		21'	1.36	35	180°
	TORO 304-10-02 " " " "		21'	.70	35	90°
	TORO 550-12-08 STREAM SHRUB HEAD		16'	1.2	30	180°
	TORO 550-12-04 " " " "		16'	.8	30	90°
	EIN-TAL SELF REGULATING EMITTER (2 G.P.H.)					
	TORO 216-06-04 REMOTE CONTROL VALVE		—	—	—	—
	TORO 473-13 ¾" QUICK COUPLER WITH VINYL LOCKING COVER					
	1½" PRESSURE TYPE BACKFLOW PREVENTER					
M	1½" WATER METER					
	1" PRESSURE REGULATING VALVE - TYPE B					
	1" AMIAD 120 MESH FILTER					
	MAIN LINE (SCH. 40 PVC)					
	1½" MAIN LINE (SCH 40 PVC) IN 3" SLEEVE (SCH 40 PVC)					
	LATERAL LINE (CLASS 200 PVC)					
	LATERAL DRIP LINE EIN-TAL MODULAR FLEXTUBING					
	¾" MAIN DRIP LINE (POLYETHYLENE PIPE)					
C	RAINBIRD RC-8A (PEDESTAL) AUTOMATIC CONTROLLER					
+	HOSE BIBB					



CONTROL DETAIL

CONTROLLER TO BE COORDINATED WITH ELECTRICAL.

STATIC PRESSURE = 57 P.S.I.

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

Van Buren Underpass
IRRIGATION PLAN

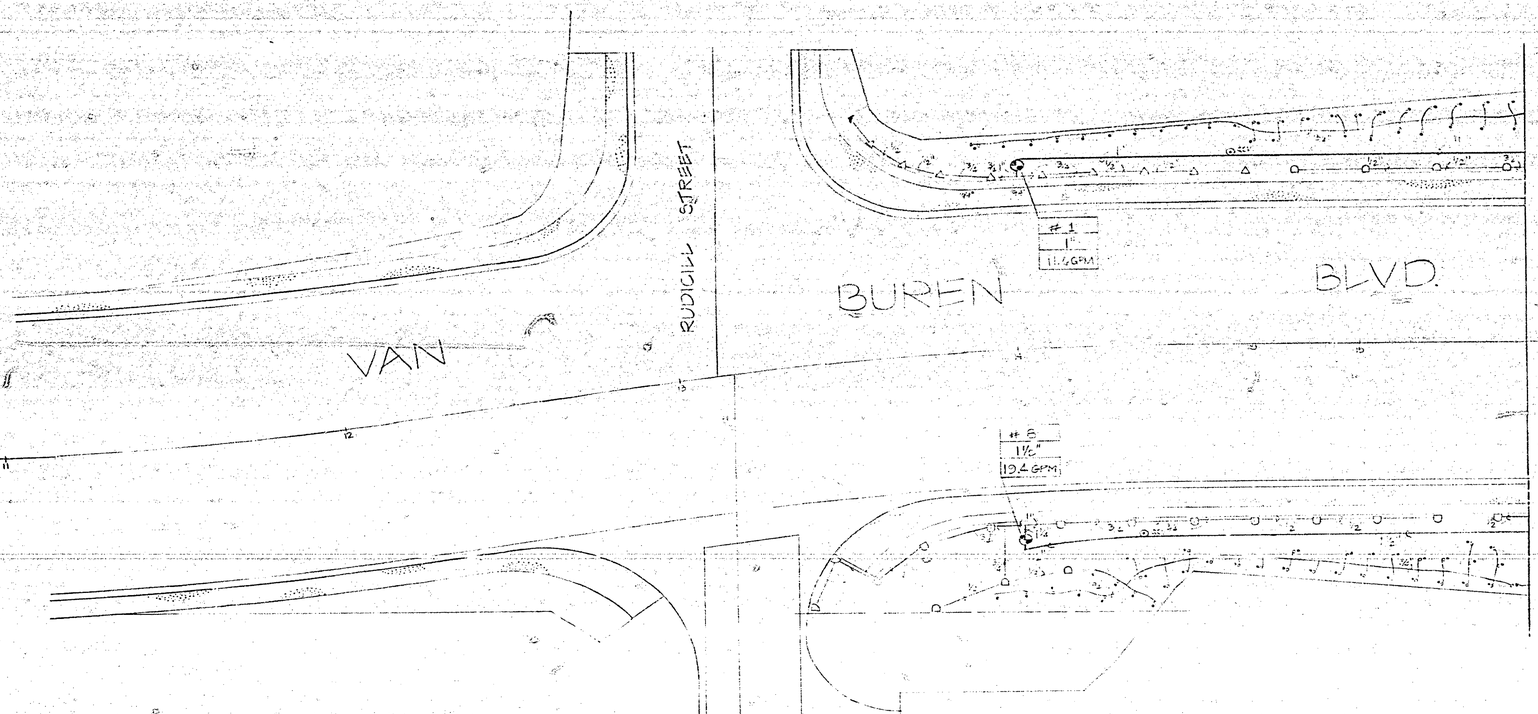
ACCOUNT NO. 30 575 224 07

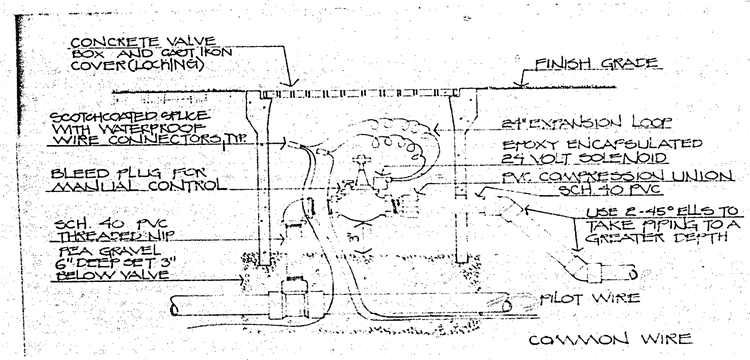
R-2039

SHEET 25 OF 45

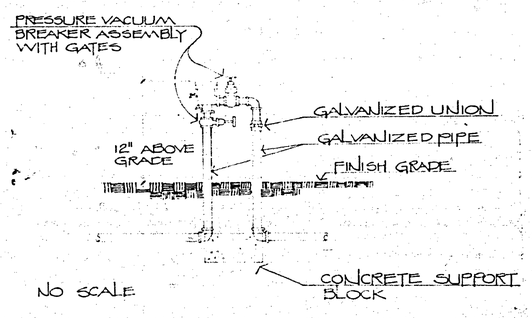
HORIZ. SCALE: 1" = 20' VERT. SCALE: 1"

FILE NO.

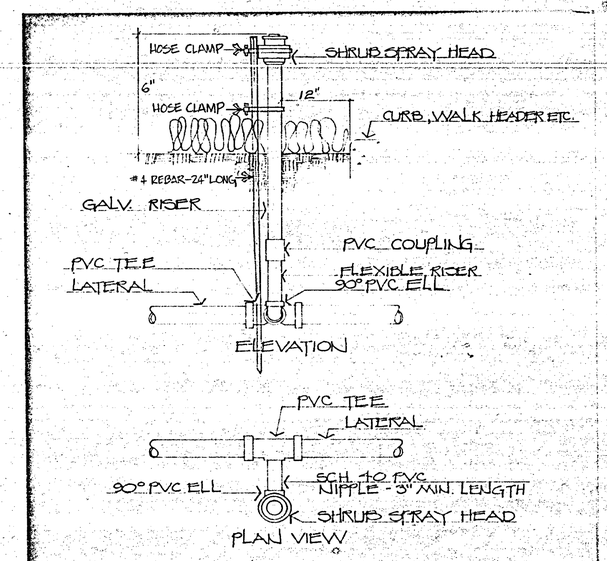




REMOTE CONTROL VALVE



PRESSURE VACUUM BREAKER



SHRUB SPRAY HEAD DETAIL

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY DIRECTOR OF PUBLIC WORKS
DATE 11/18/82

Van Buren Underpass

IRRIGATION PLAN

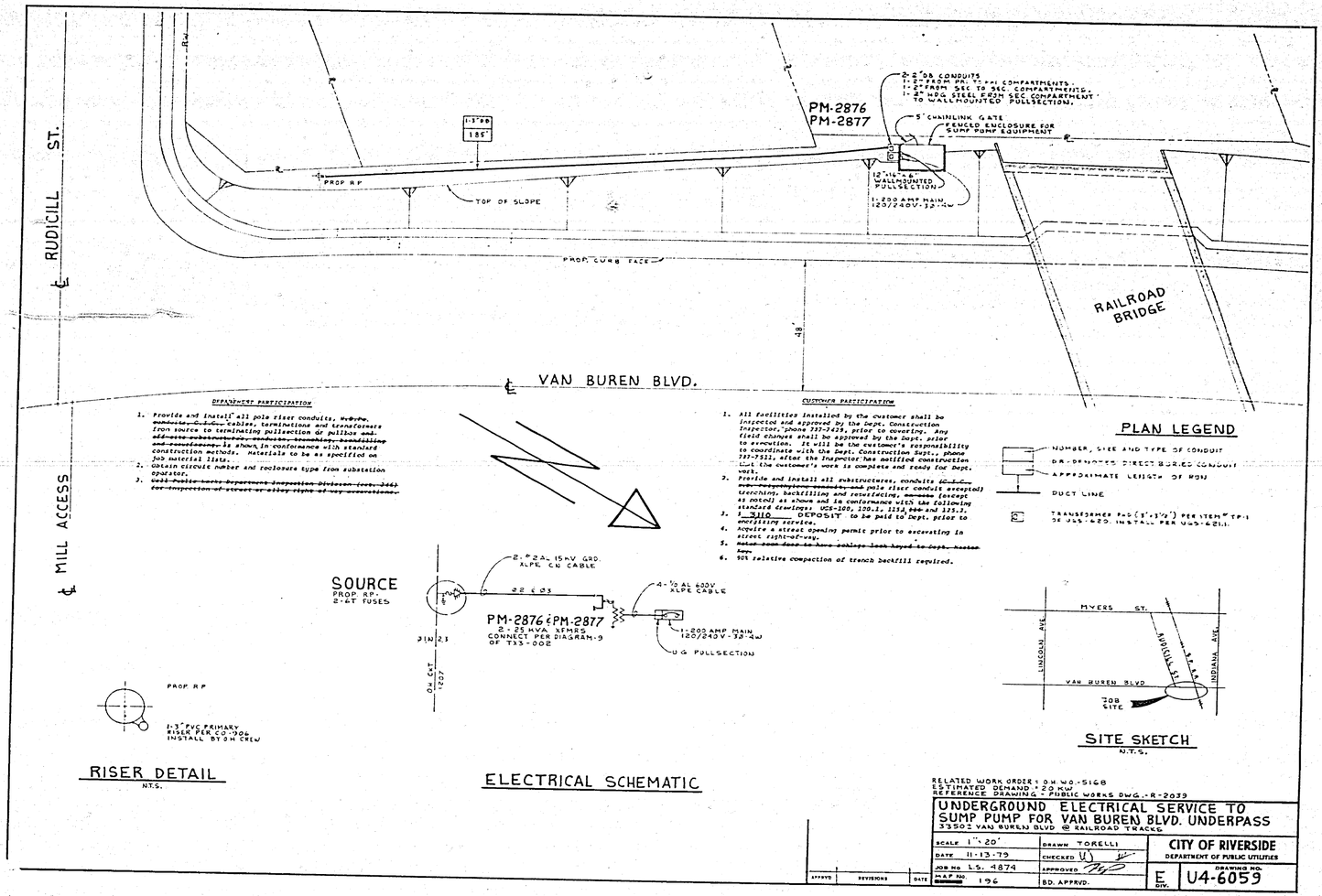
Indexed RKC
ACCOUNT NO 30-575224-07

R-2039

SHEET 26 OF 45

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

FILE NO.



DEPARTMENT PARTICIPATION

1. Provide and install all pole riser conduits, ~~weather-proof risers, cables~~, terminations and transformers from source to terminating pullsection or pullbox and ~~duct-to-underground conduit terminations for handholes and manholes~~ as shown, in conformance with standard construction methods. Materials to be as specified on job material lists.
2. Obtain circuit number and reclosure type from substation operator.
3. ~~Call Public Works Department Inspection Division (ext. 346) for inspection of street or alley right of way excavations.~~

CUSTOMER PARTICIPATION

1. All facilities installed by the customer shall be inspected and approved by the Dept. Construction Inspector, phone 787-7429, prior to covering. Any field changes shall be approved by the Dept. prior to execution. It will be the customer's responsibility to coordinate with the Dept. Construction Supt., phone 787-7511, after the Inspector has notified Construction that the customer's work is complete and ready for Dept. work.
2. Provide and install all substructures, conduits ~~(i.e.,Cor-rugated, fiberglass, manhole and pole riser conduit excepted)~~ trenching, backfilling and resurfacing, ~~concrete~~ (except as noted) as shown and in conformance with the following standard drawings. UCS-100, 120.1, 1134, 940 and 133.1.
3. 1,310. DEPOSIT to be paid to Dept. prior to ~~ensuing~~ service.
4. Acquire a street opening permit prior to excavating in street right-of-way.
5. ~~Notify each home to have garage door keyed to Dept. master key.~~
6. 90% relative compaction of trench backfill required.

PLAN LEGEND

- NUMBER, SIZE AND TYPE OF CONDUIT
- DR-DENOTES DIRECT BURIED CONDUIT
- APPROXIMATE LENGTH OF RUN
- DUCT LINE
- TRANSFORMER PAD (3'x3½") PER ITEM "TP-1" OF U&S-4.20. INSTALL PER U&S-4.21.1.

ELECTRICAL SCHEMATIC

RISER DETAIL
N.T.S.

SITE SKETCH
N.T.S.

RELATED WORK ORDER: O.H. WO-5168
ESTIMATED DEMAND - 20 KW
REFERENCE DRAWING - PUBLIC WORKS DWG.-R-2039

UNDERGROUND ELECTRICAL SERVICE TO SUMP PUMP FOR VAN BUREN BLVD. UNDERPASS
3350± VAN BUREN BLVD @ RAILROAD TRACKS

SCALE 1"=20'	DRAWN TORELLI	CITY OF RIVERSIDE DEPARTMENT OF PUBLIC UTILITIES	
DATE 11-13-79	CHECKED		
JOB NO. L.S. 4874	APPROVED		
MAP NO. 196	BD. APPRVD.	E DIV.	DRAWING NO. U4-6059

APPVD | REVISIONS | DATE

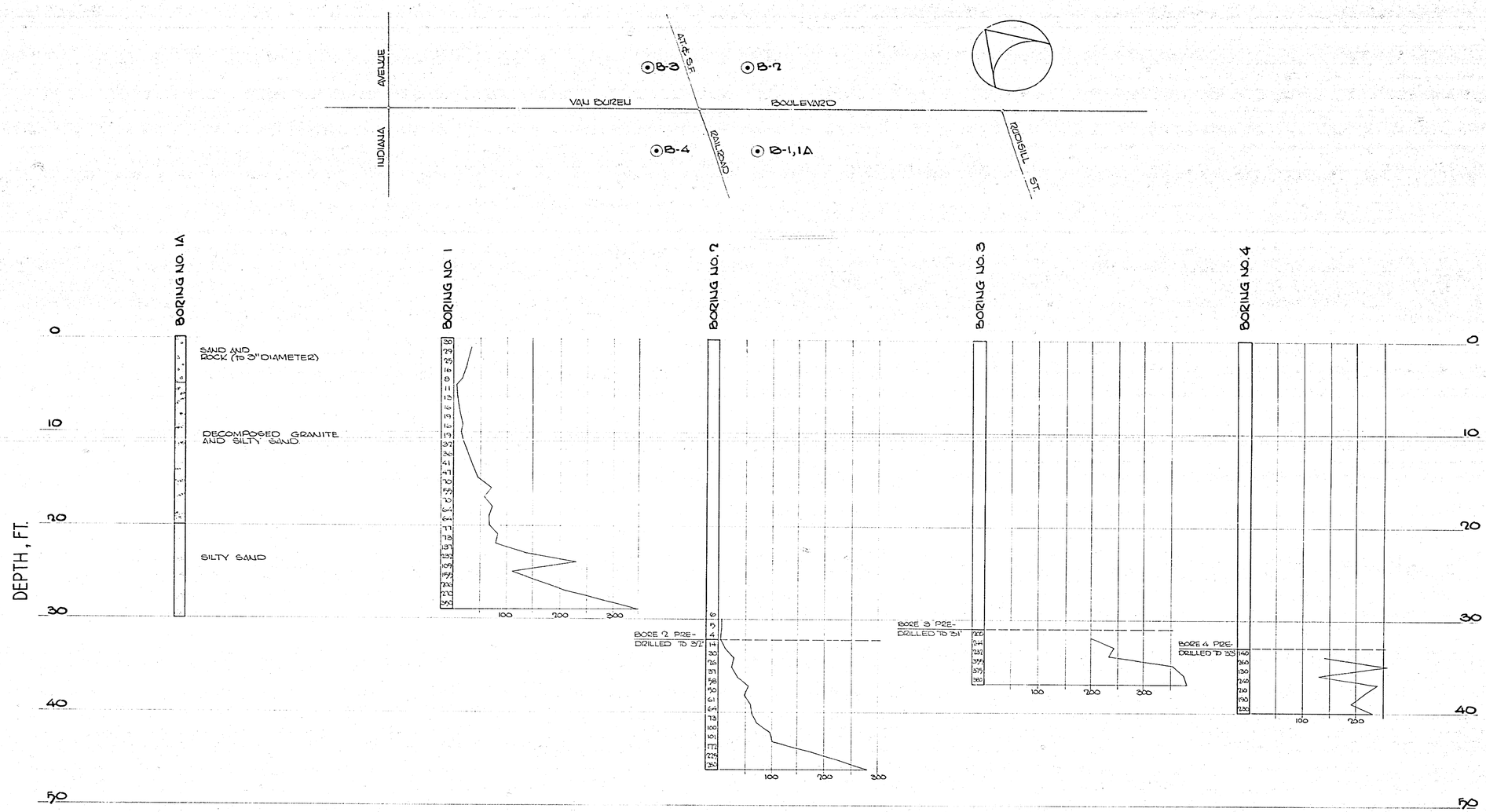
CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 11/26/79

Van Buren Underpass

Indexed R.W.C.
ACCOUNT NO 3-0175.224-0
R-2039
SHEET 27 OF 46
FILE NO.

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



DRIVING WEIGHT 140 LBS.

DROP HEIGHT 30 INCHES

NUMBERS ON BORINGS 1 THROUGH 4 REPRESENTS BLOWS PER FOOT PENETRATION.

Indexed RKC

LOG OF TEST BORINGS FOR

VAN BUREN BLVD. UNDERPASS

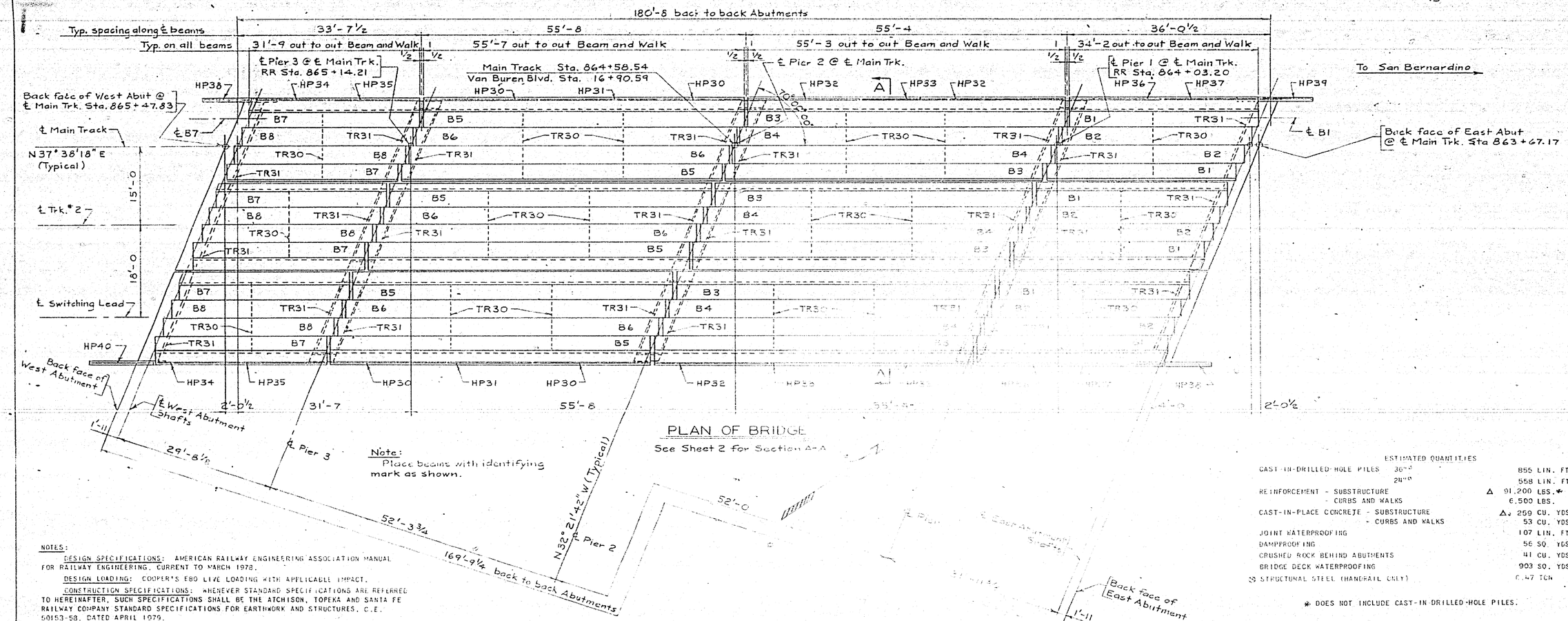
R-2039

SHEET 28 OF 45

HORIZ. SCALE: 1" = 50' VERT. SCALE: 1" = 5'

FILE NO.

1/18/80



Note: Place beams with identifying mark as shown.

PLAN OF BRIDGE

See Sheet 2 for Section A-A

NOTES:

DESIGN SPECIFICATIONS: AMERICAN RAILWAY ENGINEERING ASSOCIATION MANUAL FOR RAILWAY ENGINEERING, CURRENT TO MARCH 1978.

DESIGN LOADING: COOPER'S E80 LIVE LOADING WITH APPLICABLE IMPACT.

CONSTRUCTION SPECIFICATIONS: WHENEVER STANDARD SPECIFICATIONS ARE REFERRED TO HEREINAFTER, SUCH SPECIFICATIONS SHALL BE THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY STANDARD SPECIFICATIONS FOR EARTHWORK AND STRUCTURES, C.E. 50153-58, DATED APRIL 1979.

STRUCTURE EXCAVATION AND BACKFILL: STRUCTURE EXCAVATION AND BACKFILL FOR ABUTMENTS SHALL BE IN ACCORDANCE WITH SECTION 3 OF THE STANDARD SPECIFICATIONS.

CAST-IN-DRILLED-HOLE CONCRETE PILES: CAST-IN-DRILLED-HOLE CONCRETE PILES SHALL BE IN ACCORDANCE WITH SECTION 5 OF THE STANDARD SPECIFICATIONS.

REINFORCEMENT: PLACEMENT OF REINFORCEMENT SHALL BE AS PER SECTION 6 OF THE STANDARD SPECIFICATIONS. THE MINIMUM CONCRETE COVER ON REINFORCEMENT SHALL BE TWO INCHES EXCEPT WHERE SHOWN OTHERWISE ON THE PLANS.

CAST-IN-PLACE CONCRETE: ALL CONCRETE AND CONCRETE WORK SHALL BE AS PER SECTION 6 OF THE STANDARD SPECIFICATIONS.

ALL CONCRETE SHALL BE AIR-ENTRAINED CONTAINING NOT LESS THAN 4 PERCENT NOR MORE THAN 6 PERCENT AIR BY VOLUME AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3500 P.S.I. MAXIMUM SIZE OF COARSE AGGREGATE SHALL BE ONE INCH.

ALL HORIZONTAL CONSTRUCTION JOINTS SHALL BE CLEANED BY ABRASIVE BLAST CLEANING METHODS TO THE EXTENT THAT CLEAN AGGREGATE IS EXPOSED BEFORE FRESH CONCRETE IS PLACED AGAINST THE JOINT.

THE CONTACT SURFACE OF THE BEAMS WHERE CURBS AND WALKS ARE TO BE CAST, AFTER ABRASIVE BLAST CLEANING, SHALL BE COATED WITH DELTA AS15-18 A&B LIQUID TYPE EPOXY AFTER WHICH THE CONCRETE SHALL BE DEPOSITED WHILE THE EPOXY IS STILL TACKY.

BRIDGE SEATS SHALL BE FINISHED LEVEL WITH A WOOD FLOAT.

THE TOP SURFACE OF WALKS SHALL BE GIVEN A BROOM FINISH TRANSVERSE TO THE LONGITUDINAL AXIS OF THE BEAMS.

ALL OTHER CONCRETE SURFACES SHALL BE FINISHED IN ACCORDANCE WITH SECTIONS 51-1.18A AND 51-1.18B OF THE STANDARD SPECIFICATIONS; STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION.

THE RAINCROSS SYMBOL OF THE CITY OF RIVERSIDE SHALL BE CAST IN BOTH ENDS OF THE THREE PIER CAPS IN ACCORDANCE WITH THE CITY'S PLANS.

THE DATE OF THE CONSTRUCTION YEAR SHALL BE CAST IN THE SUBSTRUCTURE CONCRETE AS DIRECTED BY THE ENGINEER.

JOINT WATERPROOFING: THE CONSTRUCTION JOINT BETWEEN THE ABUTMENT CAP AND THE PARAPET WALL SHALL BE WATERPROOFED ON THE DIRT SIDE AS PER PARAGRAPH 6.17.4 OF SECTION 6 OF THE STANDARD SPECIFICATIONS.

DAMPPROOFING: THE DIRT SIDE OF ABUTMENTS AND WINGWALLS SHALL BE DAMPPROOFED AS PER PARAGRAPH 6.13 OF SECTION 6 OF THE STANDARD SPECIFICATIONS.

CRUSHED ROCK BEHIND ABUTMENTS: CRUSHED ROCK SHALL BE AS PER PARAGRAPH 6.12.2 OF SECTION 6 OF THE STANDARD SPECIFICATIONS.

ANCHOR RODS: ANCHOR RODS ON BRIDGE SEATS SHALL BE EITHER CAST IN PLACE OR SET WITH NON SHRINK GROUT IN PREFORMED HOLES. DRILLED HOLES WILL NOT BE PERMITTED. ANCHOR RODS MUST BE WITHIN 1/4" OF PLAN LOCATION OR BEAMS WILL NOT FIT.

BONDING AREAS: ALL CONCRETE AREAS ON BRIDGE SEATS AND PRESTRESSED CONCRETE BEAMS WHICH ARE TO RECEIVE EPOXY MATERIALS SHALL BE ABRASIVE BLAST CLEANED AND SHALL BE DUST FREE.

BEARING PAD ADHESIVE: CLEAN TOP AND BOTTOM SURFACES OF BEARING PADS WITH METHYL ETHYL KETONE TO REMOVE ALL TRACES OF MOLD RELEASE AGENTS. WHEN MATING SURFACES ARE CLEAN AND DRY, DELTA AS23-18 A&B GEL TYPE EPOXY SHALL BE APPLIED TO A 5 MIL THICKNESS ON THE BRIDGE SEAT AND THE BOTTOM SIDE OF THE BEARING PAD AND THEN THE PAD SHALL BE SET AND HELD IN THE PROPER LOCATION ON THE BRIDGE SEAT UNTIL THE EPOXY TAKES ITS INITIAL SET.

MORTAR FOR SETTING BEAMS: JUST BEFORE SETTING BEAMS, MORTAR CONSISTING OF EQUAL PARTS BY VOLUME OF DELTA AS23-18 A&B GEL TYPE EPOXY AND DRY SILICA SAND MIXED IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS SHALL BE SPREAD ON TOP OF BEARING PADS TO A THICKNESS OF APPROXIMATELY 1/8 INCH IN ORDER TO OBTAIN UNIFORM BEARING. SCRAPE EXCESS MORTAR FROM AROUND BEARING PADS AFTER BEAMS ARE SET.

PRECAST PRESTRESSED CONCRETE BEAMS: BEAMS SHALL BE SET IN THE PROPER LOCATION USING CARE NOT TO DAMAGE CONCRETE MEMBERS. AFTER BEAMS ARE SET, LIFTING LOOPS SHALL BE BURNED OFF ONE INCH BELOW THE SURFACE OF THE CONCRETE AND THE RESULTING RECESSES SHALL BE PATCHED WITH EPOXY MORTAR AS USED FOR SETTING BEAMS.

TIE RODS: BEFORE THE EPOXY MORTAR ON THE BEARING PADS HAS TAKEN INITIAL SET, THE TIE RODS SHALL BE PLACED THROUGH THE BEAMS AND THE NUTS SHALL BE TIGHTENED TO PULL THE BEAMS TOGETHER AS MUCH AS POSSIBLE AFTER WHICH THE THREADS SHALL BE BURRED SUFFICIENTLY TO PREVENT THE NUTS FROM LOOSENING.

BEAM KEYWAYS: AFTER TIE RODS ARE TIGHTENED AND THREADS ARE BURRED, BOTTOM AND ENDS OF KEYWAYS SHALL BE SEALED AS NECESSARY TO PREVENT GROUT LOSS. THE KEYWAYS SHALL THEN BE FILLED WITH EPOXY GROUT CONSISTING OF ONE PART DELTA AS15-18 A&B LIQUID TYPE EPOXY, TWO PARTS DRY SILICA SAND AND TWO PARTS 1/4" - 3/8" DRY PEA GRAVEL BY VOLUME. THE SAND AND GRAVEL MUST BE CLEAN AND DRY. IF THE SAND AND GRAVEL ARE NOT OBTAINED BAGGED, ARRANGEMENTS MUST BE MADE TO KEEP THEM DRY.

WHERE A VERTICAL OFFSET OCCURS AT ADJACENT BEAMS, THE OFFSET SHALL BE SMOOTHED WITH SAND-EPOXY GROUT HAVING A SLOPE NOT GREATER THAN 1:2 IN 12.

BRIDGE DECK WATERPROOFING: BRIDGE DECK WATERPROOFING SHALL BE AS PER SECTION 11 OF THE STANDARD SPECIFICATIONS.

BEFORE THE ASPHALTIC PANELS ARE PLACED, THE WATERPROOFING STOPS SHALL BE BOLTED TO THE BACK OF THE PARAPET WALLS TO RETAIN THE ENDS OF THE WATERPROOFING MEMBRANE AND THE ASPHALTIC PANELS.

HANDRAIL: HANDRAIL PANELS ON THE WALKS AND WINGWALLS SHALL BE ERECTED TRUE TO LINE AND GRADE.

DELTA EPOXYS ARE MADE BY:
DELTA PLASTICS COMPANY
7009 AVENUE 30N
VISALIA, CALIF. 93277

ESTIMATED QUANTITIES

CAST-IN-DRILLED-HOLE PILES	36"ϕ	855 LIN. FT.
	24"ϕ	558 LIN. FT.
REINFORCEMENT - SUBSTRUCTURE		Δ 91,200 LBS.*
- CURBS AND WALKS		6,500 LBS.
CAST-IN-PLACE CONCRETE - SUBSTRUCTURE		Δ 259 CU. YDS.*
- CURBS AND WALKS		53 CU. YDS.
JOINT WATERPROOFING		107 LIN. FT.
DAMPPROOFING		56 SQ. YDS.
CRUSHED ROCK BEHIND ABUTMENTS		41 CU. YDS.
BRIDGE DECK WATERPROOFING		903 SQ. YDS.
S STRUCTURAL STEEL (HANDRAIL ONLY)		0.47 TON

* DOES NOT INCLUDE CAST-IN-DRILLED-HOLE PILES.

S Rev. 1/80 WEH
Δ Rev. 3/80 WEH

1-34'-2, 1-55'-3, 1-55'-7 and 1-31'-9 prestressed concrete spans under 3 tracks on CIDH concrete piles, 70°00'00" Left skew. Walk and handrail both sides.

SHEET 1
Indexed RKE

B.E.S. 3100

THE A.T. & S.F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

GENERAL PLAN

SCALE: NONE — CHICAGO, ILL., SEPT., 1979

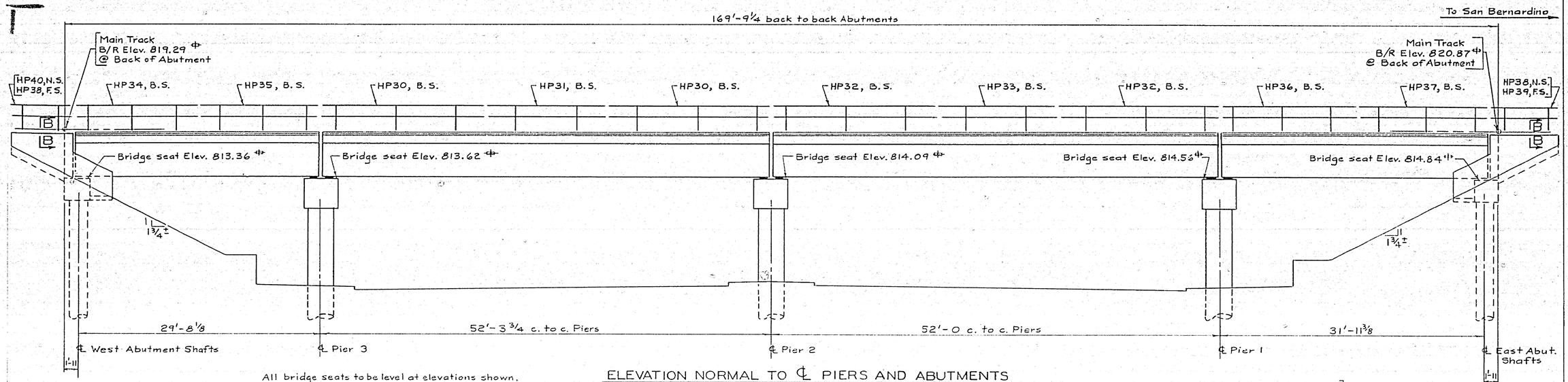
CORRECT: W. E. Hall — BRIDGE ENGINEER SYSTEM

APPROVED: W. S. Carlton — CHIEF ENGINEER

MADE BY: GEH
CHECKED BY: [illegible]
EXAMINED BY: [illegible]

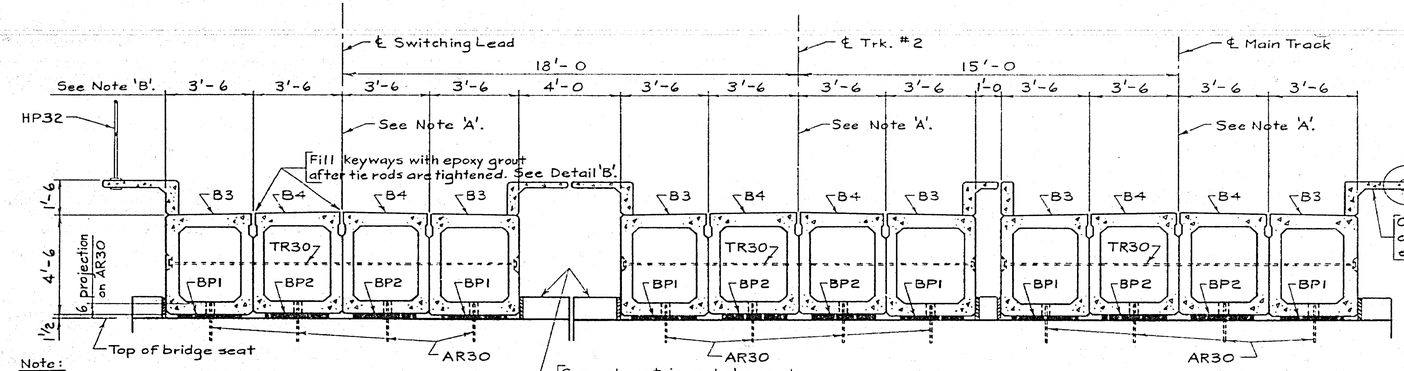
R-2039

SH. 29 OF 45



All bridge seats to be level at elevations shown.

ELEVATION NORMAL TO ℄ PIERS AND ABUTMENTS



Note:
⊗ After beams are set, lifting loops shall be burned off one inch below the surface of the concrete and the resulting recesses shall be patched with epoxy mortar as used for setting beams.

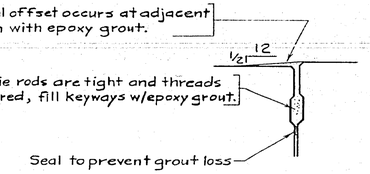
SECTION A-A

Dimensions shown are normal to tracks and beams.
See Shts. 3 & 4 for 'Anchor Rod and Bearing Pad Location Plan.'

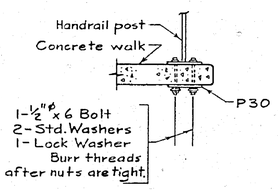
Note 'A':
Set interior beams first at ℄ trk. and then set exterior beams.

Note 'B':
Nominal dimensions. Actual dimensions may vary due to beam pack-out.

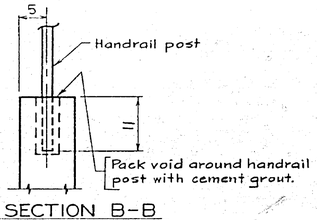
Where vertical offset occurs at adjacent beams, smooth with epoxy grout.



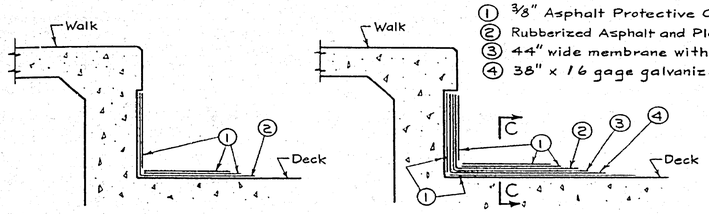
DETAIL 'B'



DETAIL 'A'



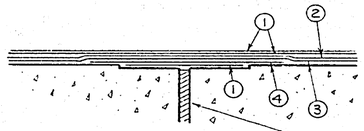
SECTION B-B



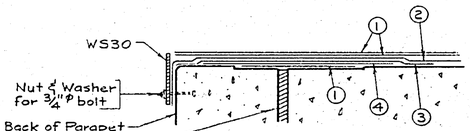
WATERPROOFING DETAILS

AT INTERIOR OF SPAN — AT ENDS OF SPAN

① ⅜" Asphalt Protective Cover Sheet.
② Rubberized Asphalt and Plastic-Film Membrane Waterproofing.
③ 44" wide membrane with plastic side down.
④ 38" x 16 gage galvanized sheet metal.



SECTION C-C AT PIER



SECTION C-C AT ABUTMENT

Waterproofing Step, WS30, shall be given a heavy coating of petrolatum before being placed.

℄ Rev. 7/80 GEH ⊗ Rev. 1/80 WEW

MADE BY: GEH
CHECKED BY: MJF
EXAMINED BY: CCS

SHEET 2

B. E. S. 3100

THE A. T. & S. F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

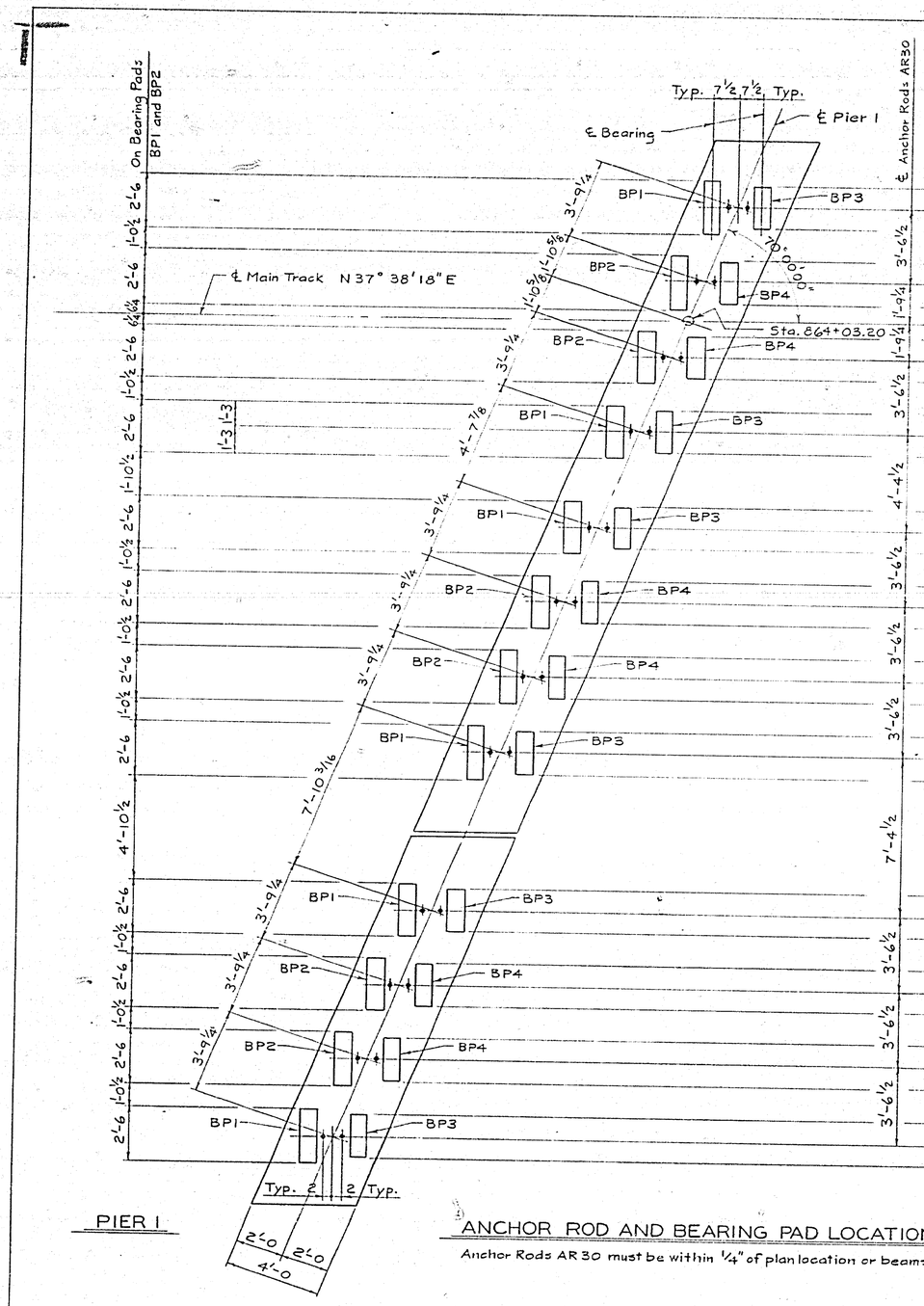
GENERAL ELEVATION

SCALE: NONE
CORRECT:

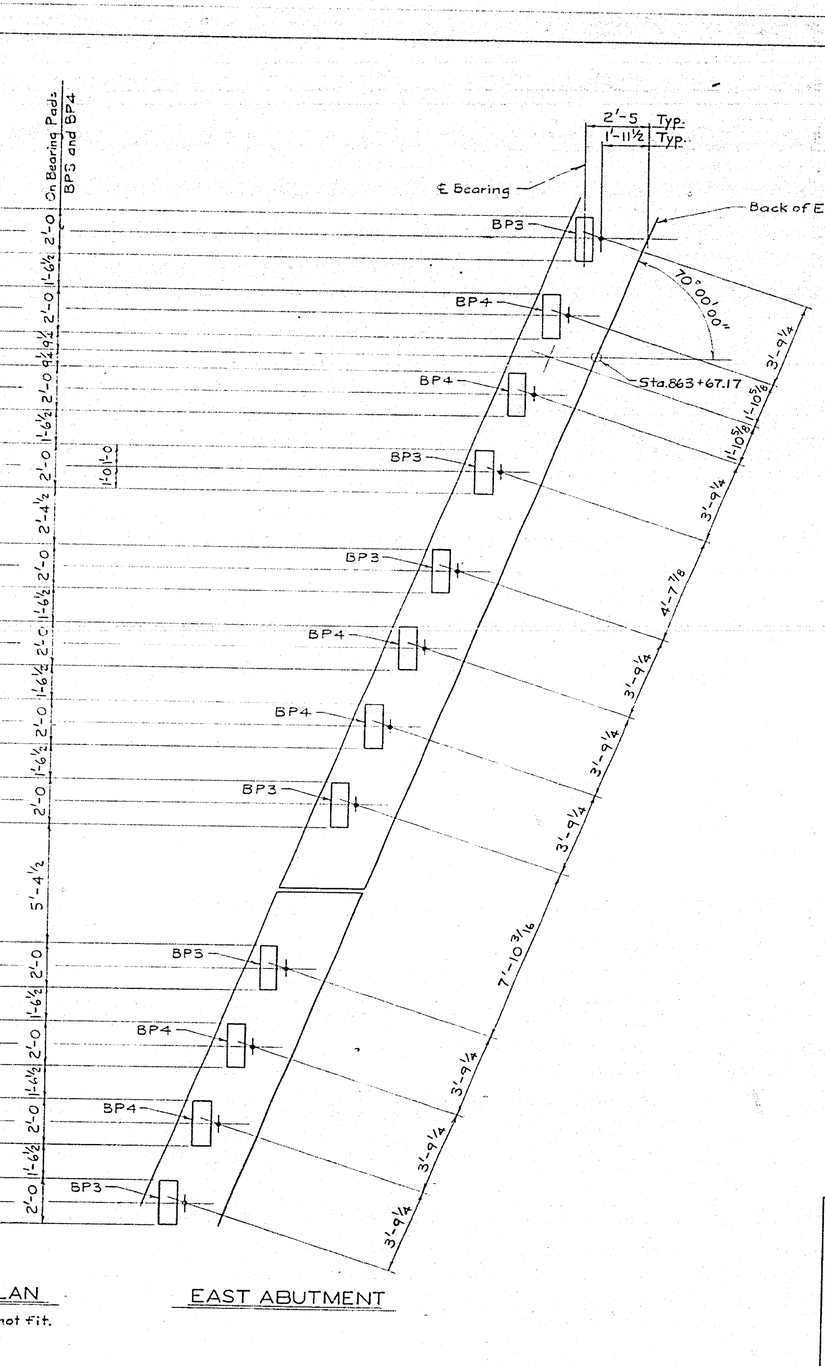
CHICAGO, ILL., SEPT., 1979
APPROVED:

BRIDGE ENGINEER SYSTEM — CHIEF ENGINEER

R-2039 SH. 30 OF 45



PIER 1



EAST ABUTMENT

ANCHOR ROD AND BEARING PAD LOCATION PLAN

Anchor Rods AR 30 must be within 1/4" of plan location or beams will not fit.

Work Sheets 3 and 4 together.

SHEET 3
Indexed RKE

B.E.S. 3100

THE A. T. & S. F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

ANCHOR ROD AND BEARING PAD LOCATION

SCALE: NONE
CORRECT:

CHICAGO, ILL., SEPT., 1979
APPROVED:

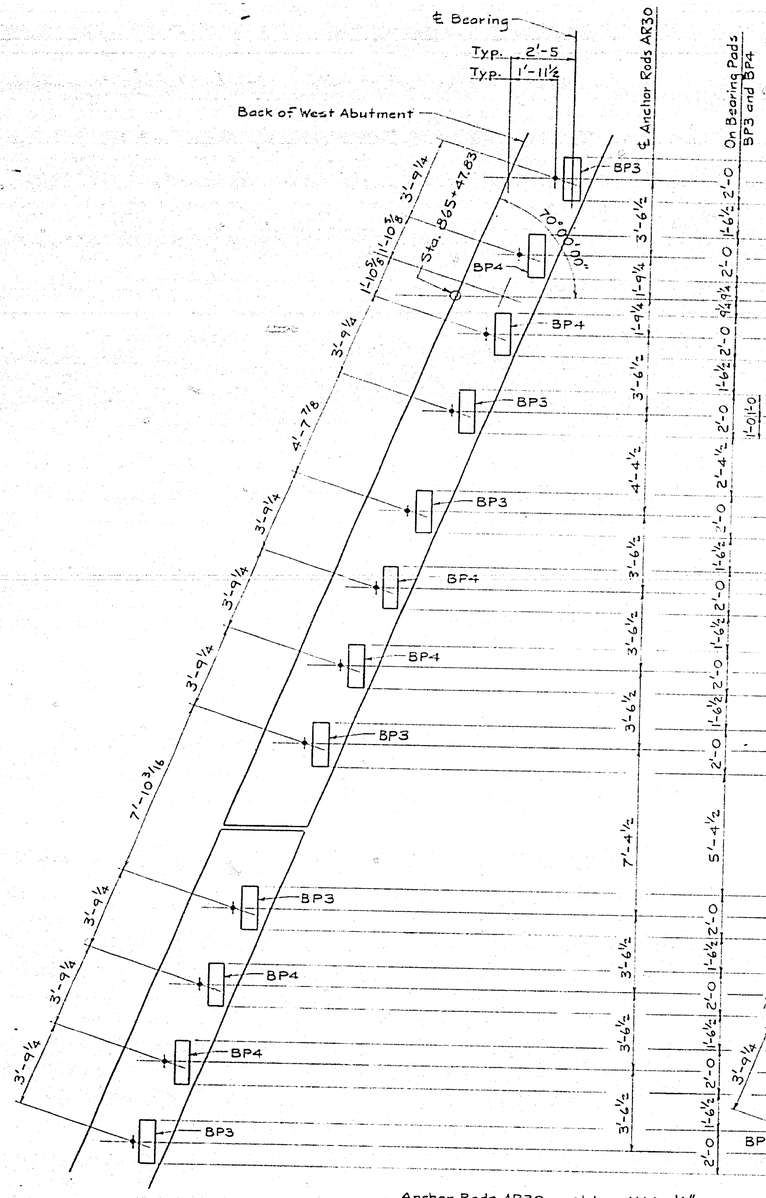
BRIDGE ENGINEER SYSTEM

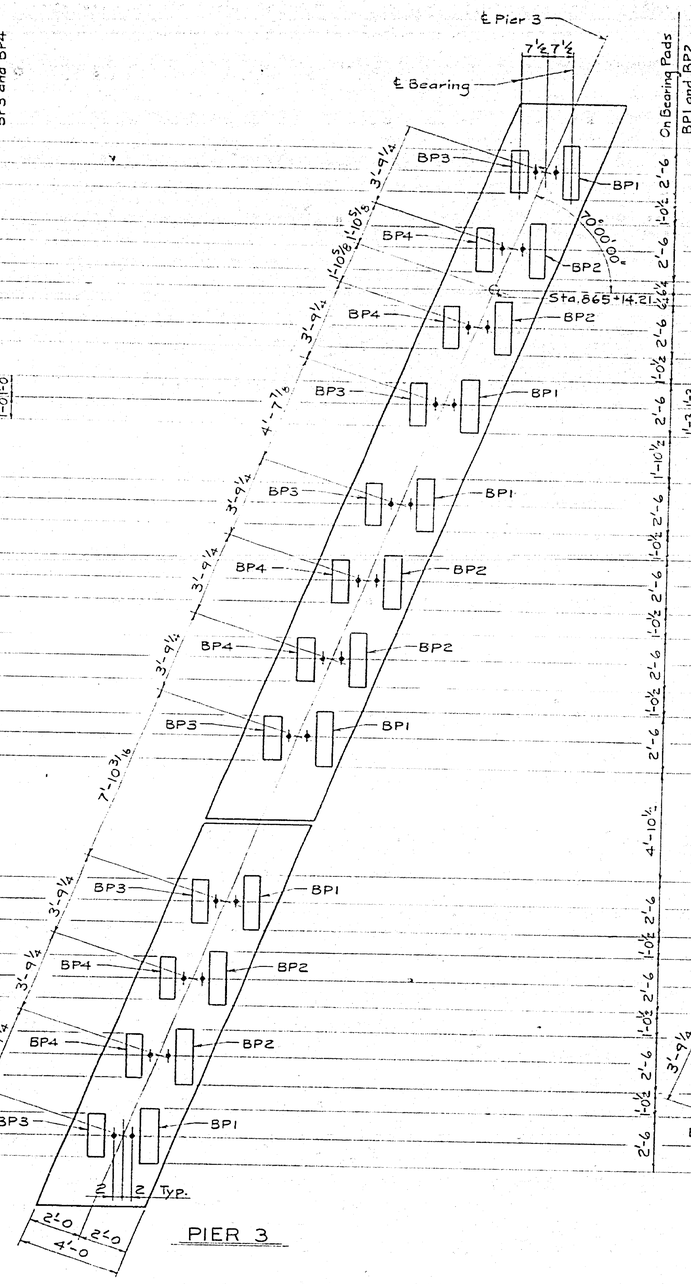
CHIEF ENGINEER

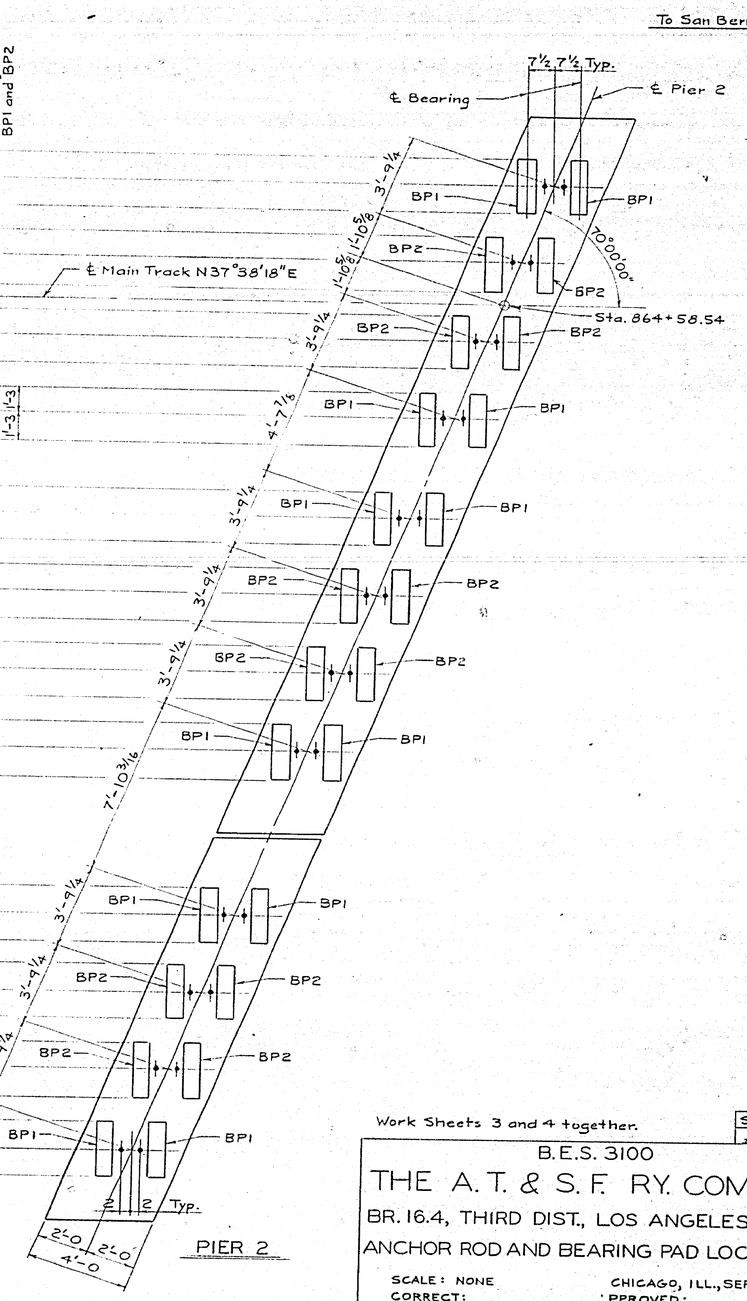
MADE BY: GEH
CHECKED BY: PUS
EXAMINED BY: CSG

R-2039

SH. 31 OF 45







ANCHOR ROD AND BEARING PAD LOCATION PLAN

Work Sheets 3 and 4 together.

SHEET 4

B.E.S. 3100

THE A. T. & S. F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

ANCHOR ROD AND BEARING PAD LOCATION

SCALE: NONE
CORRECT:

CHICAGO, ILL., SEPT., 1979
APPROVED:

BRIDGE ENGINEER SYSTEM

CHIEF ENGINEER

MADE BY: GEH
CHECKED BY: FLE
EXAMINED BY: CEG

R-2039

SH. 32 OF 45

Table 'A'	
Pier 1	RR Sta. 864+03.20
Pier 2	RR Sta. 864+58.54
Pier 3	RR Sta. 865+14.21

Note:
Rain cross symbol to be cast in each end of pier caps. For detail of symbol see drawing by City.

Top of Pier Elevations:
Pier 1 — 814.56 ℄
Pier 2 — 814.09 ℄
Pier 3 — 813.62 ℄

H1 & D1 bars are not shown. See Elevation below.

Anchor Rods AR30. See Shts. 3 & 4 for location.

⊗ Conduit to be placed in this pile of Piers 1, 2 and 3 as per Lighting Conduit- Detail 'A' and Detail 'B'.

PIERS 1, 2 AND 3
(View looking west)
T1 not shown. See Plan above.

TYPICAL SHAFT

Pile Tip Elevations	
Pier 1	℄ 768.5
Pier 2	℄ 764.1
Pier 3	℄ 767.6

SECTION A-A FOR PIER 2

SECTION A-A FOR PIERS 1 AND 3

DETAIL 'B'

Note:
Detail 'B' to be located on street side of Piers 1 and 3 and on both sides of Pier 2. ⊗

B1 and D1 are cast in Pier cap.

VIEW C-C

VIEW B-B

CONCRETE RETAINER DETAIL AT PIERS

Note: Concrete retainer to be cast after beams are set.

LIGHTING CONDUIT-DETAIL 'A'

SHEET 5

B.E.S. 3100

THE A.T. & S.F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

PIERS 1, 2 AND 3

SCALE: NONE
CORRECT:

CHICAGO, ILL., SEPT., 1979
APPROVED:

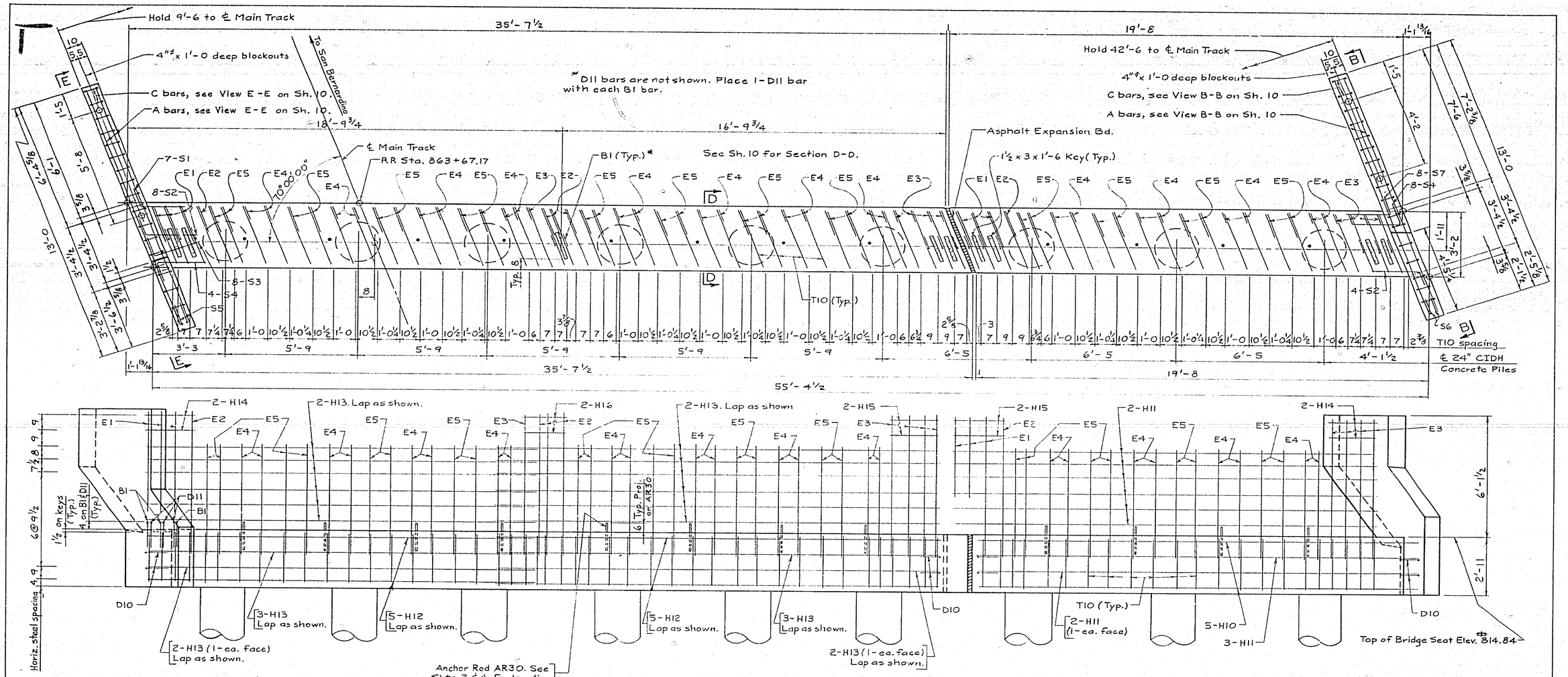
BRIDGE ENGINEER SYSTEM

CHIEF ENGINEER

℄ Rev. 7/80 GEH ⊗ Rev. 1/80 WEAL

MADE BY: GEH
CHECKED BY: PHE
EXAMINED BY: CEA

R-2089 SH. 33 OF 45



EAST ABUTMENT

Note:
Details not shown or noted are similar to those shown for West Abutment on Sh. 8.
East Abutment Pile Tip Elev. 780.9. See Sh. 8.

Work Sheets 6, 7 and 10 together.

SHEET 6

B.E.S. 3100

THE A. T. & S. F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

EAST ABUTMENT

SCALE: NONE
CORRECT:

CHICAGO, ILL., SEPT., 1979
APPROVED:

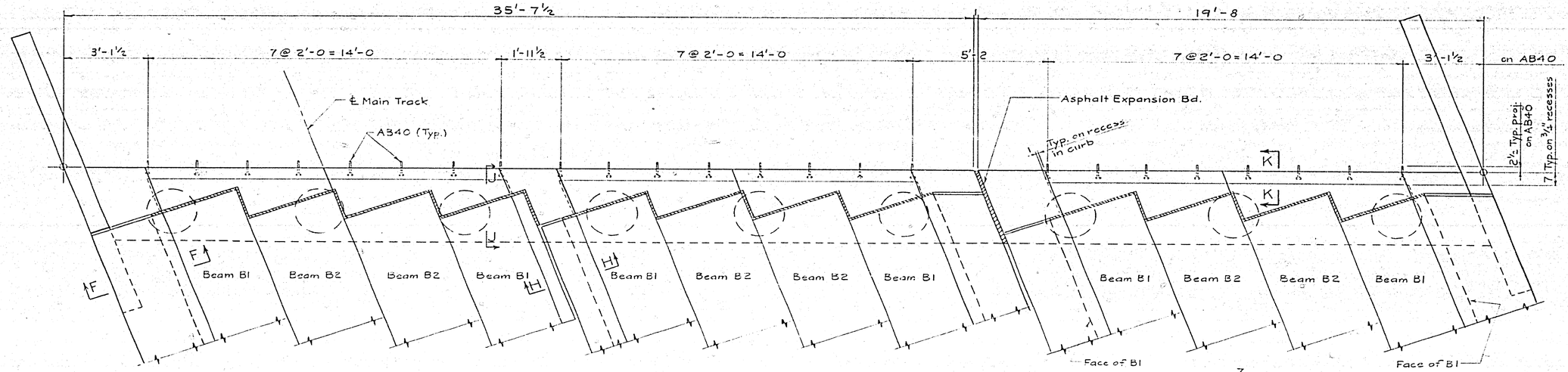
BRIDGE ENGINEER SYSTEM

CHIEF ENGINEER

Rev. 7/80 GEH

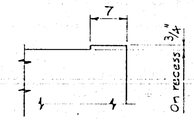
MADE BY: GEH
CHECKED BY: PHS
EXAMINED BY: CEG

R-2039 SH. 34 OF 45

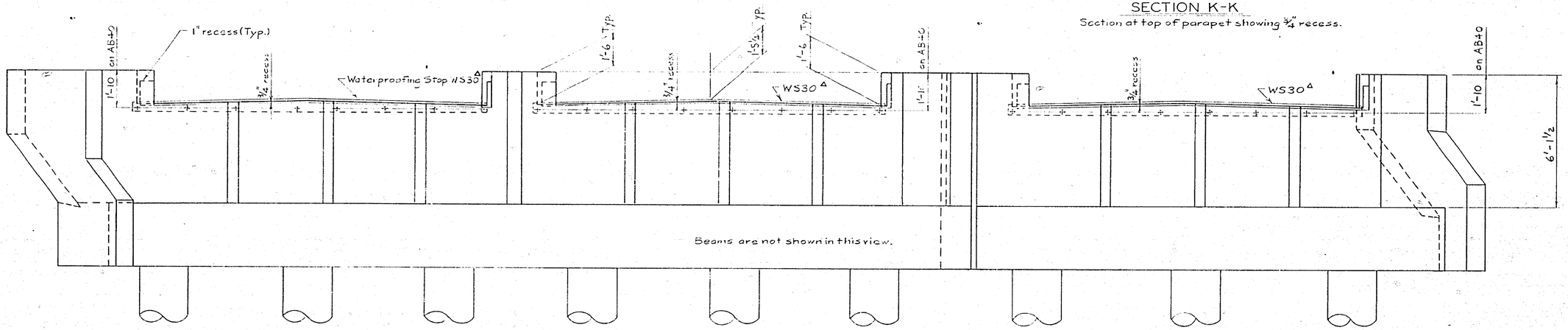


Δ Waterproofing Step WS30 shall be given a heavy coating of petrolatum before being placed in position. After WS30 is in position and nuts have been tightened, burr threads on bolts.

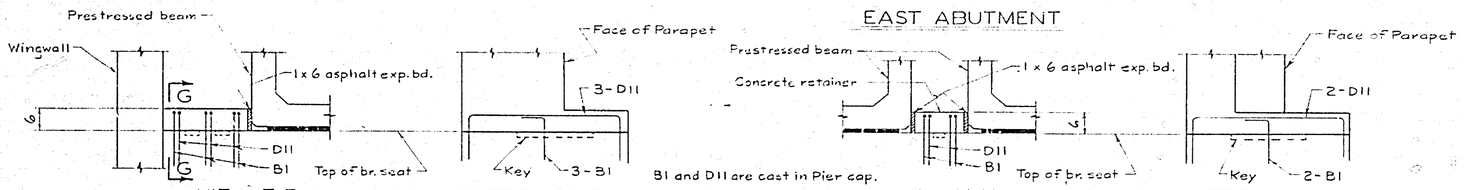
Note:
Dimensions on parapet wall may vary. Cast parapet wall after beam curbs and walks are in place so that top of parapet is level with top of beams and walks and steps in parapet wall are in line with face of curbs.



SECTION K-K
Section at top of parapet showing ¾" recess.



EAST ABUTMENT



CONCRETE RETAINER DETAIL

Note: Concrete retainer to be cast after beams are set.

Note
Concrete retainers are not shown for remaining locations Details are to be similar to those shown here.

Work Sheets 6, 7 and 10 together.

SHEET 7
Indexed REC

B.E.S. 3100

THE A.T. & S.F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

EAST ABUTMENT

SCALE: NONE — CHICAGO, ILL., SEPT., 1979

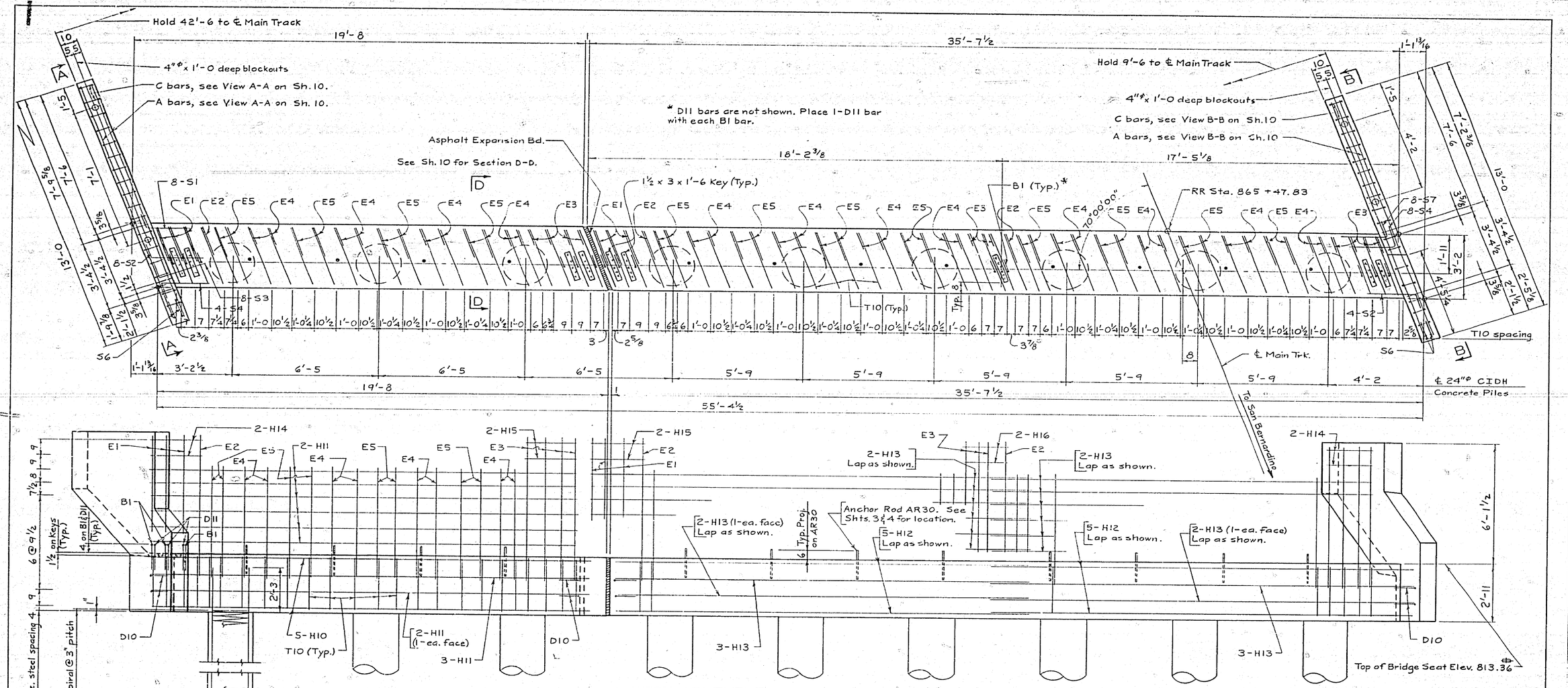
CORRECT: — APPROVED:

BRIDGE ENGINEER SYSTEM — CHIEF ENGINEER

MADE BY: GEH
CHECKED BY: FAL
EXAMINED BY: CES

R-2039

SH. 35 OF 45



Work Sheets 8, 9 and 10 together.

SHEET 8

B.E.S. 3100

THE A. T. & S. F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

WEST ABUTMENT

SCALE: NONE

CHICAGO, ILL., SEPT., 1979

CORRECT:

APPROVED:

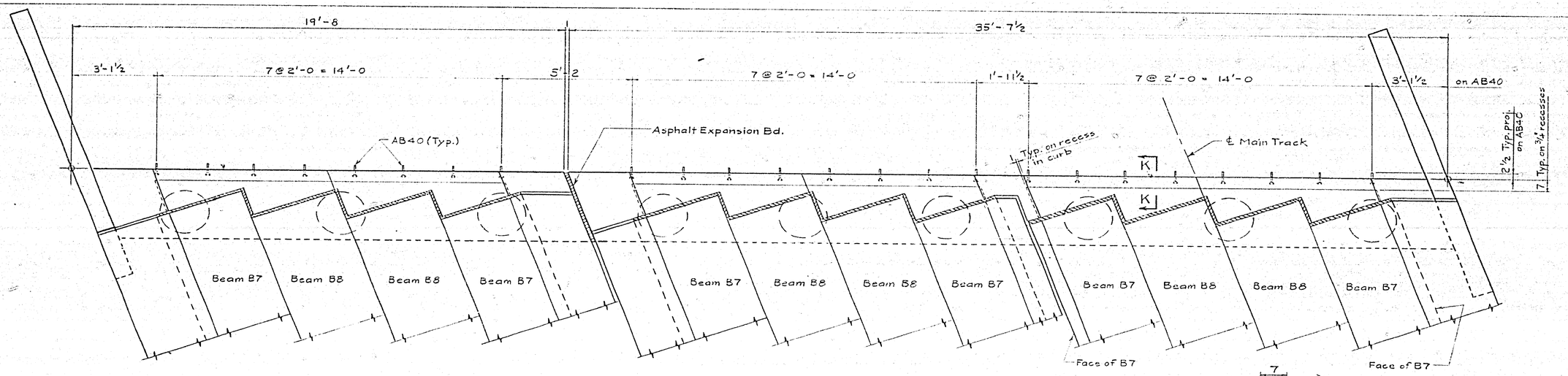
BRIDGE ENGINEER SYSTEM

CHIEF ENGINEER

Rev. 7/80 GEH

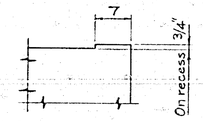
MADE BY: GEH
CHECKED BY: [illegible]
EXAMINED BY: CEG

R-2039 SH. 36 OF 45

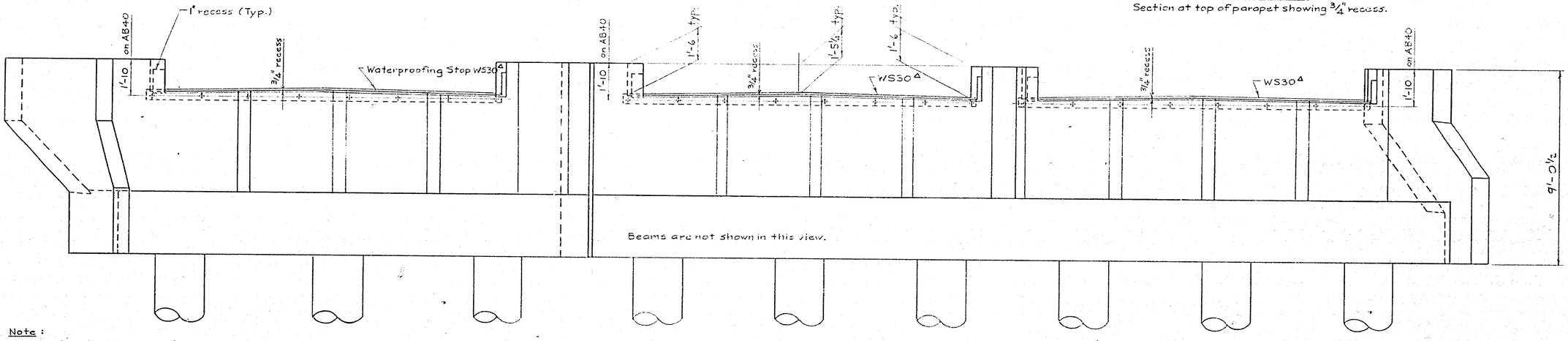


Δ Waterproofing Stop WS30 shall be given a heavy coating of petrolatum before being placed in position. After WS30 is in position and nuts have been tightened, burr threads on bolts.

Note:
Dimensions on parapet wall may vary. Cast parapet wall after beam curbs and walks are in place so that top of parapet is level with top of beams and walks and steps in parapet wall are in line with face of curbs.



SECTION K-K
Section at top of parapet showing ¾" recess.



Note:
Concrete retainers are not shown. Details for concrete retainers are to be similar to those shown for East Abutment on Sheet 7.

WEST ABUTMENT

Work Sheets 8, 9 and 10 together.

SHEET 9
Indexed RKE

B.E.S. 3100
THE A. T. & S. F. RY. COMPANY
BR. 16.4, THIRD DIST., LOS ANGELES DIV.
WEST ABUTMENT

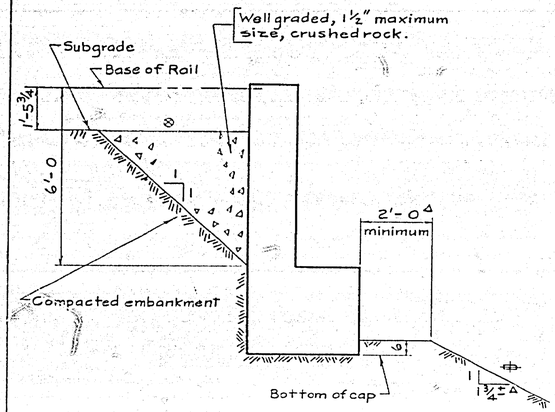
SCALE: NONE
CORRECT:
BRIDGE ENGINEER SYSTEM

CHICAGO, ILL., SEPT., 1979
APPROVED:
CHIEF ENGINEER

MADE BY: GEH
CHECKED BY: ?
EXAMINED BY: CEG

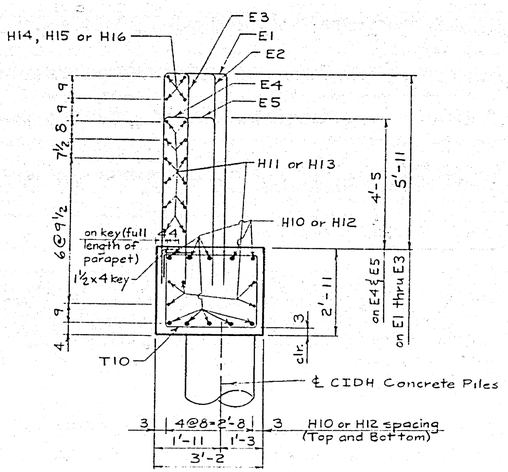
R-2039

SH. 37 OF 45



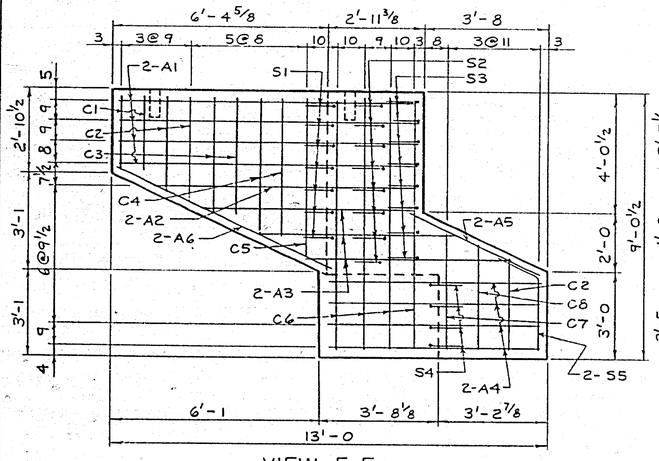
HEAD OF BANK DETAIL ALONG ℄ TRACK

Δ Normal to roadway

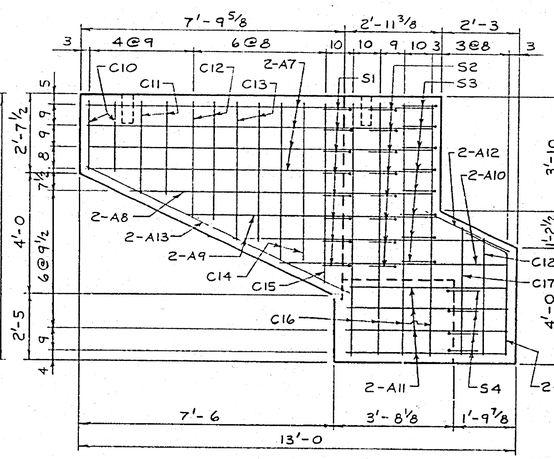


SECTION D-D

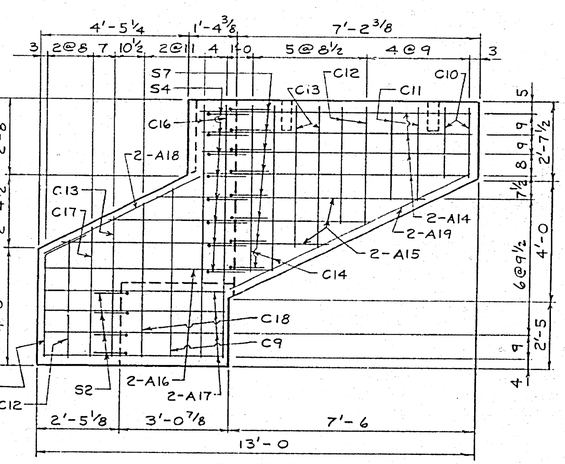
For location of Views A-A, B-B and E-E and Section D-D, see Sheets 6 and 8.



VIEW E-E



VIEW A-A



VIEW B-B

Work Sheets 6, 7 and 10 together.
Work Sheets 8, 9 and 10 together.

SHEET 10

B.E.S. 3100

THE A. T. & S. F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

ABUTMENTS

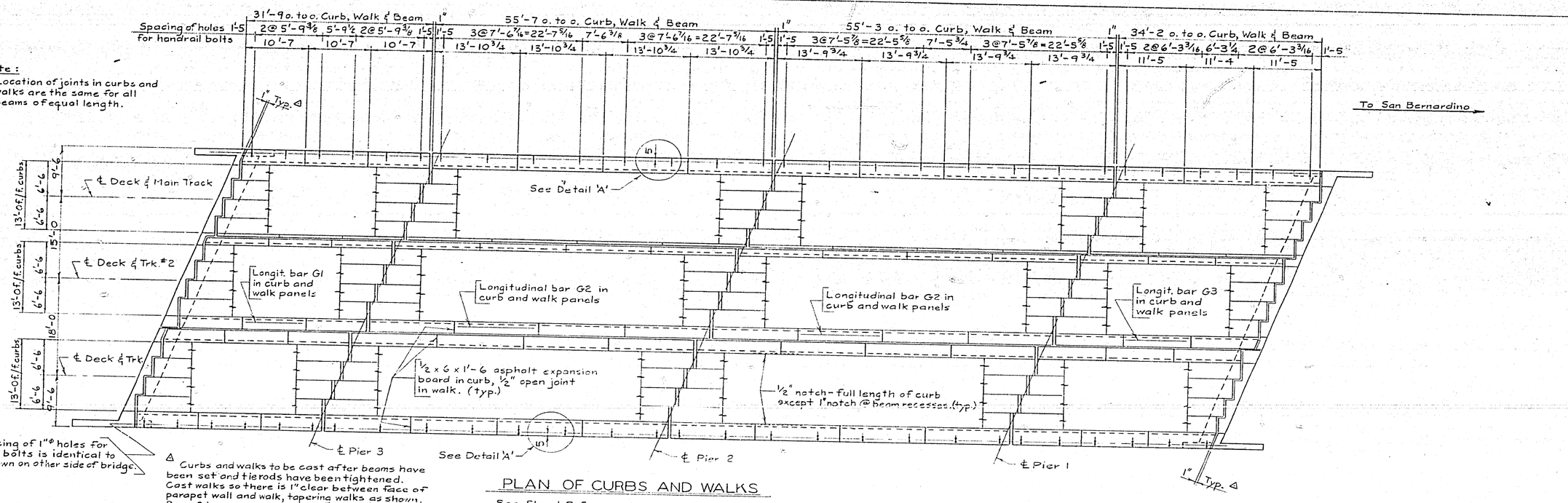
SCALE: NONE
CORRECT:
BRIDGE ENGINEER SYSTEM

CHICAGO, ILL., SEPT., 1979
APPROVED:
CHIEF ENGINEER

⊕ Rev. 7/80 GEH ⊗ Rev. 1/80 WBH

MADE BY: GEH
CHECKED BY: PHG
EXAMINED BY: CEG

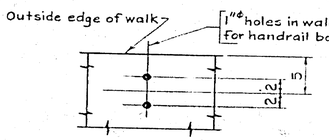
R-2039 SH. 38 OF 45



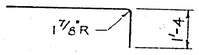
△ Curbs and walks to be cast after beams have been set and tierods have been tightened. Cast walks so there is 1" clear between face of parapet wall and walk, tapering walks as shown. Burn C bars as required to maintain 1 1/2" of covering concrete. Fan W bars as required, making sure to get at least one W bar outside of handrail bolt holes.

PLAN OF CURBS AND WALKS

See Sheet 2 for erection of handrail panels.



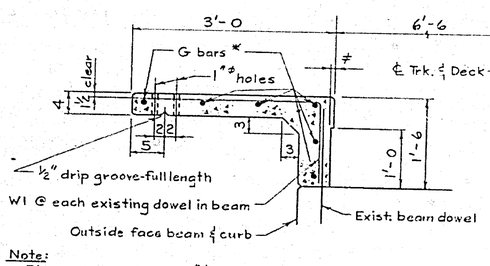
DETAIL 'A'



W1, W2 AND W3

REINFORCING STEEL FOR CURBS AND WALKS				
NO.	MARK	SIZE	LENGTH	SHAPE
87	G1	#4	10'-3	STRAIGHT
232	G2	#4	13'-6	do
87	G3	#4	11'-0	do
358	W1	#5	4'-0	SEE DETAIL
358	W2	#5	3'-5	do
179	W3	#5	2'-4	do

FOR REINFORCEMENT MATERIAL AND FABRICATION NOTES, SEE SHEET 12.

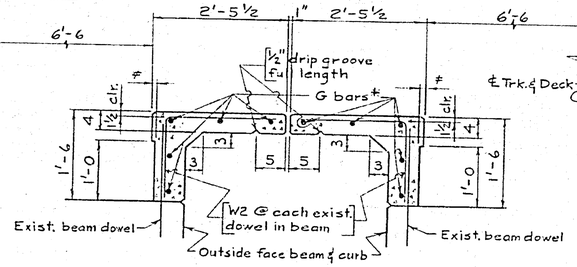


Note: Place W1 so as to miss 1"ϕ holes in walk.

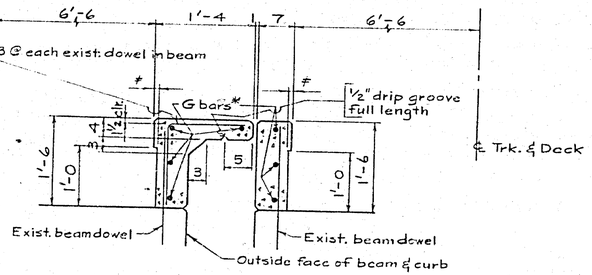
TYPICAL SECTION THRU EXTERIOR CURB AND WALK

* Use G1 bars for curb and walk panels on 31'-9 beams.
Use G2 bars for curb and walk panels on 55'-7 and 55'-3 beams.
Use G3 bars for curb and walk panels on 34'-2 beams.

Notch in curb to be 1/2" except at ends of beams where notch is to be 1" within limits of recesses in beams.



TYPICAL SECTION THRU WIDE INTERIOR CURB AND WALKS



TYPICAL SECTION THRU NARROW INTERIOR CURB AND WALK

SHEET 11
Indexed RHC

B.E.S. 3100

THE A.T. & S.F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

CURB AND WALK DETAILS

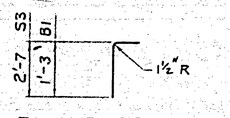
SCALE: NONE
CORRECT:
BRIDGE ENGINEER SYSTEM

CHICAGO, ILL., SEPT., 1979
APPROVED:
CHIEF ENGINEER

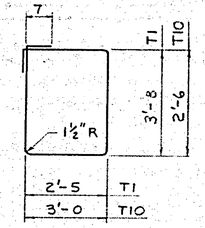
MADE BY: GEH
CHECKED BY: WG
EXAMINED BY: CLG

R-2039

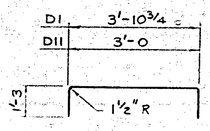
SH. 39 OF 45



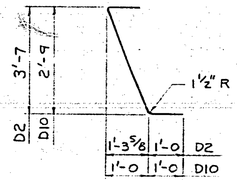
B1 AND S3



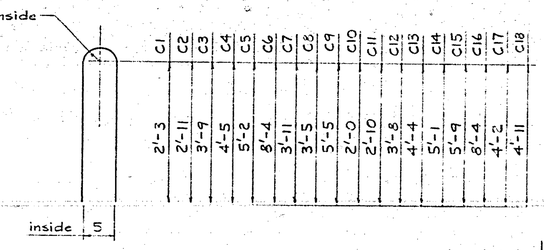
T1 AND T10



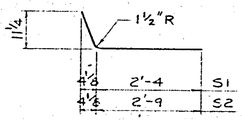
D1 AND D11



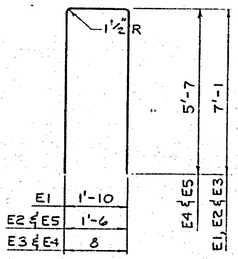
D2 AND D10



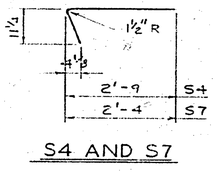
C1 THRU C18



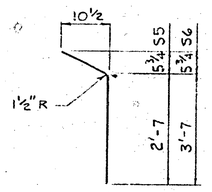
S1 AND S2



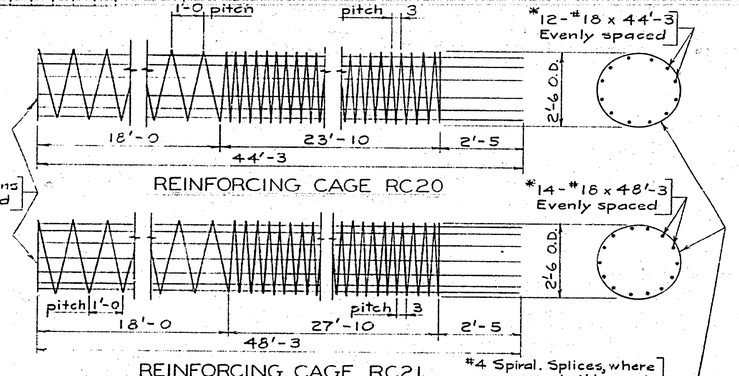
E1 THRU E5

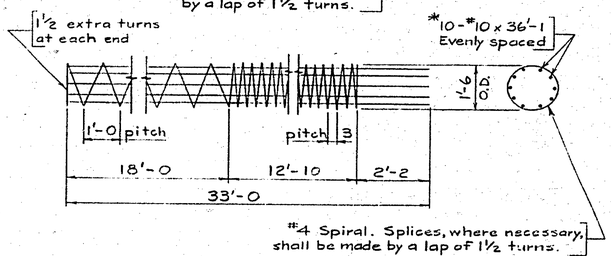


S4 AND S7



S5 AND S6





REINFORCING STEEL DETAILS

All dimensions shown (except on bars C1 thru C18) are out to out of bars.

Note:
Each reinforcing cage shall have at least 3 spiral spacer bars.

*No splicing of vertical steel in spiral cage is permitted. Bars must be full length.

REINFORCING STEEL REQUIRED

TOTAL	E. ABUT.	W. ABUT.	PIER 1	PIER 2	PIER 3	MARK	SIZE	LENGTH	SHAPE
8	8	-	-	-	-	A1	#4	9'-0	STRAIGHT
2	2	-	-	-	-	A2	#4	8'-2	do
6	5	-	-	-	-	A3	#4	6'-6	do
8	8	-	-	-	-	A4	#4	6'-3	do
2	2	-	-	-	-	A5	#4	4'-6	do
2	2	-	-	-	-	A6	#4	7'-6	do
8	-	8	-	-	-	A7	#4	10'-5	do
2	-	2	-	-	-	A8	#4	9'-2	do
4	-	4	-	-	-	A9	#4	7'-9	do
2	-	2	-	-	-	A10	#4	7'-0	do
8	-	8	-	-	-	A11	#4	4'-7	do
2	-	2	-	-	-	A12	#4	3'-0	do
2	-	2	-	-	-	A13	#4	9'-0	do
16	8	8	-	-	-	A14	#4	8'-1	do
12	6	6	-	-	-	A15	#4	7'-10	do
4	2	2	-	-	-	A16	#4	7'-2	do
16	8	8	-	-	-	A17	#4	5'-0	do
4	2	2	-	-	-	A18	#4	5'-6	do
4	2	2	-	-	-	A19	#4	8'-6	do
88	14	14	20	20	20	B1	#4	1'-9	SEE DETAIL
2	2	-	-	-	-	C1	#4	5'-2	SEE DETAIL
3	3	-	-	-	-	C2	#4	6'-6	do
2	2	-	-	-	-	C3	#4	8'-2	do
2	2	-	-	-	-	C4	#4	9'-6	do
1	1	-	-	-	-	C5	#4	11'-0	do
4	4	-	-	-	-	C6	#4	17'-4	do
1	1	-	-	-	-	C7	#4	8'-6	do
1	1	-	-	-	-	C8	#4	7'-6	do
2	1	1	-	-	-	C9	#4	11'-6	do

REINFORCING STEEL REQUIRED (CONT'D.)

TOTAL	E. ABUT.	W. ABUT.	PIER 1	PIER 2	PIER 3	MARK	SIZE	LENGTH	SHAPE
6	2	4	-	-	-	C10	#4	4'-8	SEE DETAIL
6	2	4	-	-	-	C11	#4	6'-4	do
9	3	6	-	-	-	C12	#4	8'-0	do
8	3	5	-	-	-	C13	#4	9'-4	do
6	2	4	-	-	-	C14	#4	10'-10	do
1	-	1	-	-	-	C15	#4	12'-2	do
8	2	6	-	-	-	C16	#4	17'-4	do
3	1	2	-	-	-	C17	#4	9'-0	do
2	1	1	-	-	-	C18	#4	10'-6	do
30	-	-	10	10	10	D1	#4	6'-4	SEE DETAIL
36	-	-	12	12	12	D2	#4	5'-10	do
16	8	8	-	-	-	D10	#4	4'-11	do
28	14	14	-	-	-	D11	#4	5'-6	do
12	6	6	-	-	-	E1	#4	16'-0	do
8	5	3	-	-	-	E2	#4	15'-8	do
20	9	11	-	-	-	E3	#4	14'-10	do
48	24	24	-	-	-	E4	#4	11'-10	do
48	24	24	-	-	-	E5	#4	12'-8	do
108	-	-	36	36	36	H1	#9	18'-2	STRAIGHT
18	-	-	6	6	6	H2	#4	18'-2	do
36	-	-	12	12	12	H3	#4	17'-7	do
20	10	10	-	-	-	H10	#7	19'-4	do
34	17	17	-	-	-	H11	#4	19'-4	do
40	20	20	-	-	-	H12	#7	18'-7	do
68	34	34	-	-	-	H13	#4	18'-2	do
16	8	8	-	-	-	H14	#4	2'-9	do
16	8	8	-	-	-	H15	#4	2'-3	do
8	4	4	-	-	-	H16	#4	1'-8	do
15	7	8	-	-	-	S1	#4	3'-4	SEE DETAIL
24	12	12	-	-	-	S2	#4	3'-9	do
16	8	8	-	-	-	S3	#4	3'-7	do
24	12	12	-	-	-	S4	#4	3'-9	do
2	2	-	-	-	-	S5	#4	3'-7	do
6	2	4	-	-	-	S6	#4	4'-7	do
16	8	8	-	-	-	S7	#4	3'-4	do
396	-	-	132	132	132	T1	#4	13'-4	SEE DETAIL
136	68	68	-	-	-	T10	#4	12'-2	do
18	-	-	9	-	9	RC20	REINFORCING CAGE		do
9	-	-	-	9	-	RC21	REINFORCING CAGE		do
18	9	9	-	-	-	RC22	REINFORCING CAGE		do

NOTES:

MATERIAL: REINFORCEMENT SHALL BE AS PER A.S.T.M. DESIGNATION: A615 OR A617, GRADE 40 FOR #4 AND #5 BARS AND GRADE 60 FOR #6 BARS AND LARGER.

SPIRAL REINFORCEMENT FOR REINFORCING CAGES SHALL BE HOT ROLLED DEFORMED BARS AS PER A.S.T.M. DESIGNATION: A615 OR A617, GRADE 40.

FABRICATION: FABRICATION OF REINFORCEMENT SHALL BE AS PER CHAPTER 7 OF THE C.R.S.I. MANUAL OF STANDARD PRACTICE.

REINFORCING BARS AND CAGES SHALL BE IDENTIFIED BY THE FABRICATOR WITH THE APPLICABLE MARK SHOWN ON THE REINFORCING STEEL LISTS.

SHEET 12
Indexed RKC

B.E.S. 3100

THE A. T. & S. F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

REINFORCING STEEL DETAILS

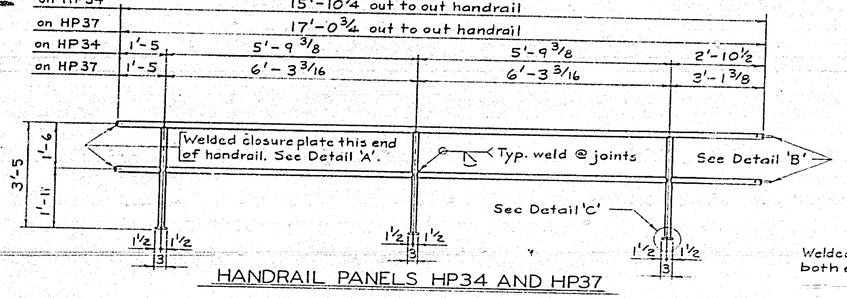
SCALE: NONE — CHICAGO, ILL., SEPT., 1979

CORRECT: — APPROVED:

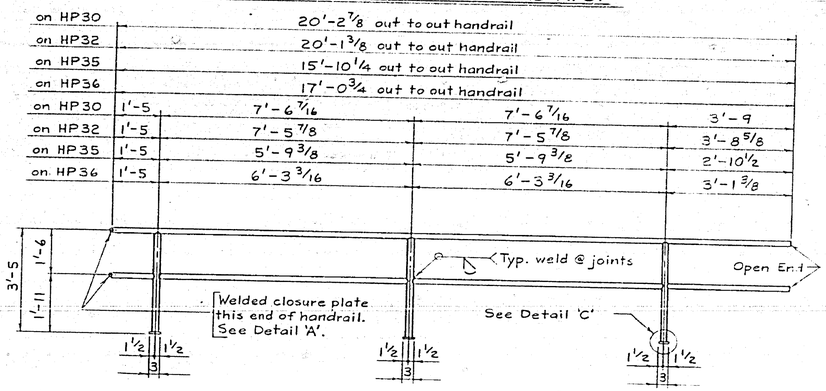
BRIDGE ENGINEER SYSTEM — CHIEF ENGINEER

MADE BY: GEH
CHECKED BY: RKC
EXAMINED BY: CEG

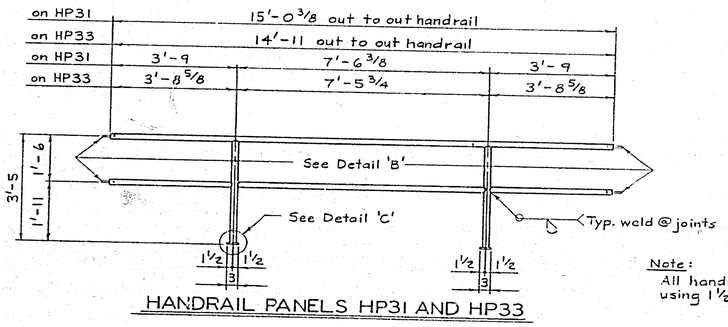
R-2039 — SH. 40 OF 45



HANDRAIL PANELS HP34 AND HP37

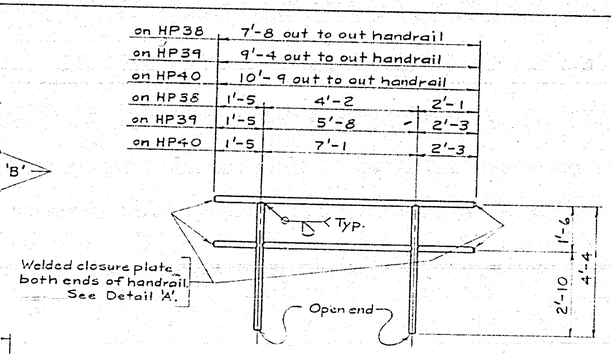


HANDRAIL PANELS HP30, HP32, HP35 AND HP36

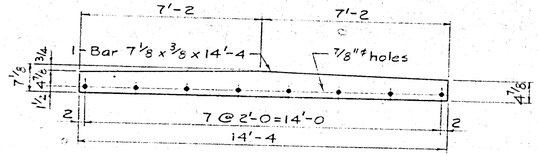


HANDRAIL PANELS HP31 AND HP33

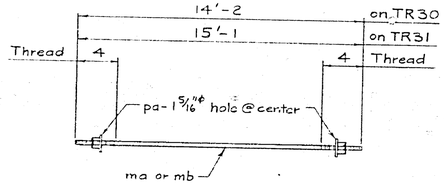
Note:
All handrail panels to be fabricated using 1 1/2"ϕ standard black pipe, A.S.T.M. A53.



HANDRAIL PANELS HP38, HP39 AND HP40



WATERPROOFING STOP WS30



TIE ROD TR30

1-Bar 1 1/4"ϕ x 14'-2 ~ ma
2-Std. Hex. Nuts, 1 1/4"ϕ tap
2-Bars 4 3/4 x 3/8 x 0'-4 3/4 ~pa

TIE ROD TR31

1-Bar 1 1/4"ϕ x 15'-1 ~ mb
2-Std. Hex. Nuts, 1 1/4"ϕ tap
2-pa

NO.	REQUIRED DESCRIPTION	MARK
	STRUCTURAL STEEL	
96	1-1/4"ᴰ X 1'-6 BAR	AR30
4	HANDRAIL PANEL, SEE DETAIL	HP30
2	do	HP31
4	do	HP32
2	do	HP33
2	do	HP34
2	do	HP35
2	do	HP36
2	do	HP37
2	do	HP38
1	do	HP39
1	do	HP40
56	PLATE, SEE DETAIL	P30
18	TIE ROD, SEE DETAIL	TR30
24	do	TR31
6	WATERPROOFING STOP, SEE DETAIL	WS30
	MISCELLANEOUS	
112	1/2"ᴰ X 6" MACHINE BOLT, HEX. HEAD AND NUT	
48	3/4"ᴰ X 6-1/2" MACHINE BOLT, HEX. HEAD	AB40
48	HEX. NUT FOR 3/4"ᴰ MACHINE BOLT	
224	STANDARD CUT WASHER FOR 1/2"ᴰ BOLT	
48	STANDARD CUT WASHER FOR 3/4"ᴰ BOLT	
112	LOCK WASHER FOR 1/2"ᴰ BOLT	
24	ELASTOMERIC BEARING PAD, SEE DETAIL	BP1
24	do	BP2
24	do	BP3
24	do	BP4

NOTES:

MATERIAL: PLATES AND BARS SHALL MEET THE REQUIREMENTS OF A.S.T.M. DESIGNATION: A36.

STANDARD WEIGHT BLACK PIPE FOR HANDRAIL PANELS SHALL MEET THE REQUIREMENTS OF A.S.T.M. DESIGNATION: A53.

MACHINE BOLTS AND NUTS SHALL MEET THE REQUIREMENTS OF A.S.T.M. DESIGNATION: A307, GRADE A.

LAMINATED ELASTOMERIC BEARING PADS SHALL MEET THE REQUIREMENTS OF THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY SPECIFICATION C.E. 50153-59, DATED OCTOBER 1978.

FABRICATION: FABRICATION, WORKMANSHIP AND WELDING SHALL BE IN ACCORDANCE WITH CHAPTER 15, PART 3, OF THE AMERICAN RAILWAY ENGINEERING ASSOCIATION MANUAL.

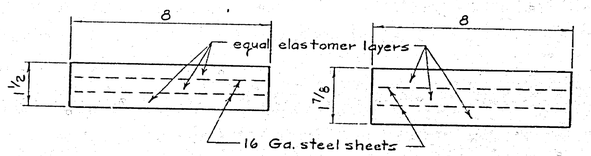
OPEN HOLES: AS NOTED.

SHOP PAINT: NONE

THE FABRICATOR SHALL PROVIDE 1/4"ᴰ VENT HOLES IN THE BOTTOM OF PIPE HANDRAILING ELEMENTS AS NECESSARY FOR THE GALVANIZING PROCESS.

GALVANIZING: ALL MATERIAL LISTED ON THIS SHEET, EXCEPT ELASTOMERIC BEARING PADS, IS TO BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH A.S.T.M. DESIGNATION: A123 OR A153, AS APPLICABLE.

AFTER GALVANIZING, ALL ELEMENTS SHALL BE FREE OF FINS, ABRASIONS, ROUGH OR SHARP EDGES, AND OTHER SURFACE DEFECTS, AND NUTS SHALL BE TAPPED 0.030" OVERSIZE TO PERMIT NUT ROTATION ON THREADED ELEMENTS.



1-Pad 8 x 1 1/2 x 2'-6 ~ BP1
1-Pad 8 x 1 1/2 x 2'-0 ~ BP3
1-Pad 8 x 1 7/8 x 2'-6 ~ BP2
1-Pad 8 x 1 7/8 x 2'-0 ~ BP4

LAMINATED ELASTOMERIC BEARING PADS

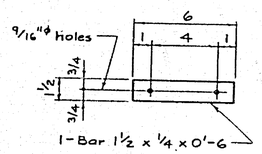
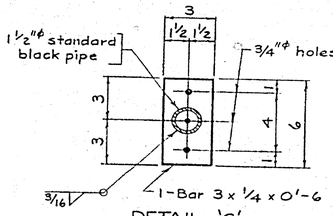
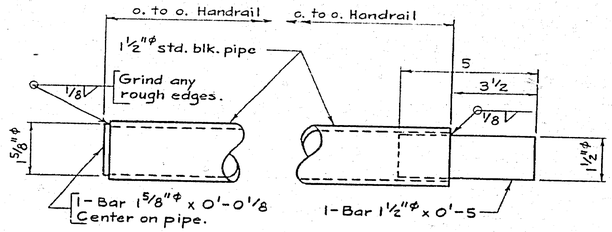


PLATE P30



DETAIL 'C'

Base plate for handrail post.



DETAIL 'A'

DETAIL 'B'

SHEET 13
Indexed REC

B.E.S. 3100

THE A. T. & S. F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

STEEL AND MISCELLANEOUS DETAILS

SCALE: NONE
CORRECT:

CHICAGO, ILL., SEPT, 1979
APPROVED:

BRIDGE ENGINEER SYSTEM

CHIEF ENGINEER

MADE BY: GEH
CHECKED BY: PAF
EXAMINED BY: CEA

R-2039

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