IN THE CITY OF RIVERSIDE, CALIFORNIA

STORM DRAIN IMPROVEMENT PLANS

TRACT NO. 29242

GENERAL NOTES

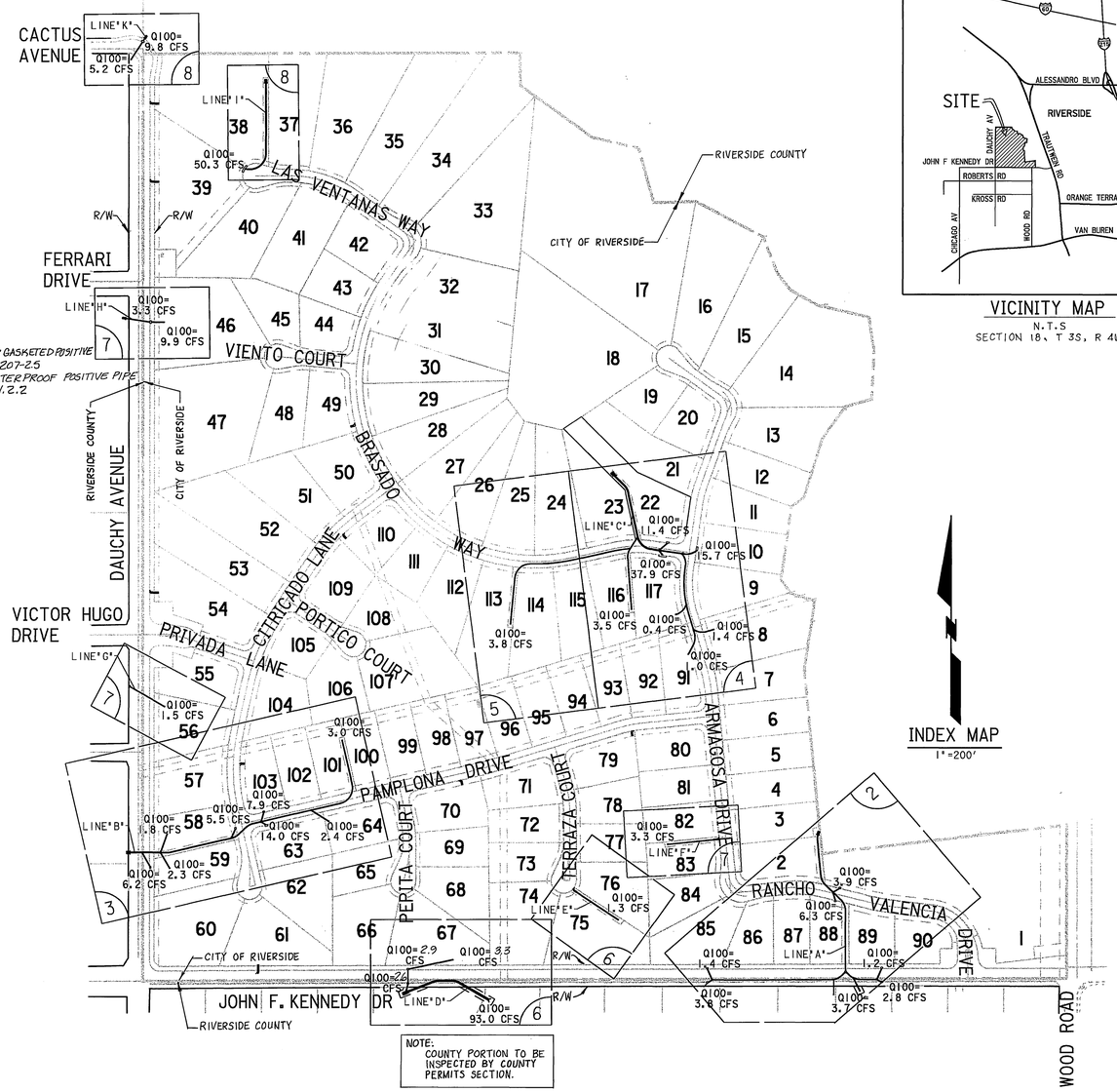
1. NO PERSON SHALL PERFORM ANY CONSTRUCTION ACTIVITY OR INSTALL ANY OBJECTS WITHIN THE PUBLIC RIGHTS-OF-WAY OR EASEMENTS OF THE CITY OF RIVERSIDE WITHOUT A VALID CONSTRUCTION PERMIT OR, A STREET OPENING PERMIT OR AN ENCROACHMENT PERMIT ISSUED BY THE CITY'S PUBLIC WORKS DEPARTMENT.
2. QUANTITIES SHOWN ARE FOR INFORMATION ONLY AND THE CITY OF RIVERSIDE IS NOT RESPONSIBLE FOR THEIR ACCURACY.
3. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RIVERSIDE DEPARTMENT OF PUBLIC WORKS, STANDARD DRAWINGS, ITS SUPPLEMENTAL NOTES AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, CURRENT EDITION.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CLEAR THE RIGHT OF WAY IN ACCORDANCE WITH THE PROVISIONS OF LAW AS IT AFFECTS UTILITY INCLUDING IRRIGATION LINES AND APPURTENANCES AND AT NO COST TO THE CITY.
5. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISITNG UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.
6. THE PRIVATE ENGINEER SIGNING THESE PLANS IS RESPONSIBLE FOR ASSURING THE ACCURACY AND ACCEPTABILITY OF THE WORK HEREON. IN THE EVENT OF DISCREPANCIES ARISING DURING CONSTRUCTION, THE PRIVATE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING AN ACCEPTABLE SOLUTION AND REVISING THE PLANS FOR APPROVAL BY THE CITY.
7. THE CONTRACTOR SHALL CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (U.S.A.) PHONE NO. 1-800-227-2600, TWO WORKING DAYS BEFORE DIGGING. NO CONSTRUCTION PERMIT WILL BE ISSUED BY THE PUBLIC WORKS DEPARTMENT INVOLVING EXCAVATION FOR UNDERGROUND FACILITIES UNLESS THE APPLICANT HAS BEEN PROVIDED AN INQUIRY IDENTIFICATION NUMBER BY U.S.A.
8. THE DEVELOPER SHALL BE RESPONSIBLE FOR PRESERVING OR RE-ESTABLISHING AND REFERENCING SURVEY MONUMENTS DESTROYED, DISTURBED OR BURIED AS A RESULT OF CONSTRUCTION SHOWN HERON.
9. ALL EMBANKMENT FILL SHALL BE COMPACTED TO A MINIMUM OF 90% MAXIMUM DRY DENSITY AND SHALL BE OF AN APPROVED QUALITY.
10. BEFORE THE RIP RAP IS ACCEPTED BY THE CITY, AS PLACED, AT THE OUTLET OF ANY DRAINAGE STRUCTURE, IT SHALL BE TESTED UNDER FLOWS AS CLOSE AS POSSIBLE TO DESIGN CONDITIONS WITH WATER OBTAINED FROM FIRE HYDRANTS IN THE IMMEDIATE AREA.
11. *FOR ALL STEEPLY SLOPED REINFORCED CONCRETE PIPE STORM DRAINS (>24%) PROVIDE RUBBER GASKETED POSITIVE PIPE JOINTS PER STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SECTION 207-25*
12. *FOR ALL STEEPLY SLOPED CORRUGATED STEEL PIPE STORM DRAINS (>24%) PROVIDE WATERPROOF POSITIVE PIPE JOINTS PER STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SECTION 207-11.2.2*

LEGEND

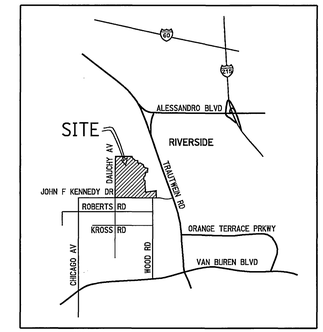
- CONTOUR (EXISTING) 216
- CONTOUR (PROPOSED) 220
- CUT-FILL LINE
- CUT OR FILL SLOPE (RATIO PER PLAN)
- RETAINING WALL
- STORM DRAIN
- BLADED SWALE
- TRACT BOUNDARY
- CENTERLINE
- CATCH BASIN & LOCAL DEPRESSION

ABBREVIATIONS

PAD ELEVATION	PE
TOP OF CURB ELEVATION	TC
INVERT ELEVATION	IE
FLOW LINE ELEVATION	FL
FINISHED SURFACE ELEVATION	FS
FINISHED GRADE ELEVATION	FG
CATCH BASIN	CB
GRADE BREAK	GB
TOP OF DIKE ELEVATION	*TD*
INDICATES HYDRAULIC GRADE LINE 100 YEAR STORM EVENT	*HGL*



NOTE:
COUNTY PORTION TO BE INSPECTED BY COUNTY PERMITS SECTION.



VICINITY MAP
N.T.S
SECTION 18, T 3S, R 4W

INDEX MAP
1"=200'

WORK TO BE DONE

THESE IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS, THE CURRENT CITY OF RIVERSIDE STANDARDS AND SPECIFICATIONS, AND THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").

PRIVATE ENGINEER'S NOTE

ALL SUBCONTRACTORS PERFORMING WORK ON OR RELATED TO THESE PLANS SHALL CONDUCT THEIR OPERATION SO THAT ALL EMPLOYEES ARE PROVIDED A SAFE PLACE TO WORK AND THE PUBLIC IS PROTECTED. ALL SUBSUBCONTRACTORS SHALL COMPLY WITH THE 'OCCUPATIONAL SAFETY AND HEALTH REGULATIONS' OF THE U.S. DEPARTMENT OF LABOR AND THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS 'CONSTRUCTION SAFETY ORDERS.' THE CIVIL ENGINEER SHALL NOT BE RESPONSIBLE IN ANY WAY FOR THE SUBCONTRACTORS COMPLIANCE WITH SAID REGULATIONS AND ORDERS.

SUBCONTRACTOR FURTHER AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB-SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE SUBCONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE CIVIL ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.

THE EXISTENCE AND APPROXIMATE LOCATIONS OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. THE CIVIL ENGINEER ASSUMES NO LIABILITY AS TO THE EXACT LOCATION OF SAID LINES NOR FOR UTILITY OR IRRIGATION LINES WHOSE LOCATIONS ARE NOT SHOWN. COMPANIES PRIOR TO WORK OR EXCAVATION TO DETERMINE THE EXACT LOCATION OF ALL LINES AFFECTING THIS WORK, WHETHER OR NOT SHOWN HERON, AND FOR ANY DAMAGE OR PROTECTION TO THESE LINES.

OWNER/DEVELOPER

CONTINENTAL RESIDENTIAL, INC., dba CONTINENTAL HOMES
2237 FARADAY AVENUE, SUITE 100
CARLSBAD, CA. 92008
ATTN: DAVID LOTHER
(760) 931-1980

SOILS ENGINEER

GEOSOILS, INC.
24890 JEFFERSON AVENUE
TEMECULA, CA. 92562
ATTN: JOHN P. FRANKLIN OR DAVID W. SKELLY
(909) 677-9651

CONSTRUCTION NOTES & QUANTITY ESTIMATE

(1)	PLACE 48" RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)	244 LF
(2)	PLACE 36" RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)	272 LF
(3)	PLACE 30" RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)	286 LF
(4)	PLACE 24" RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)	618 LF
(5)	PLACE 18" RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)	3,492 LF
(6)	CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD. NO. 405	18 EA
(7)	CONSTRUCT CONCRETE PIPE SLOPE ANCHOR PER DETAIL ON SHEET NO. 9	4 EA
(8)	CONSTRUCT C.S.P. INLET PER CITY OF RIVERSIDE STD. NO. 412	16 EA
(9)	CONSTRUCT JUNCTION STRUCTURE 'B' PER CITY OF RIVERSIDE STD. NO. 421	2 EA
(10)	CONSTRUCT JUNCTION STRUCTURE 'C' PER CITY OF RIVERSIDE STD. NO. 422	10 EA
(12)	CONSTRUCT CONCRETE COLLAR PER CITY OF RIVERSIDE STD. NO. 424	7 EA
(13)	CONSTRUCT MANHOLE 'EZ' PER CITY OF RIVERSIDE STD. NO. 431	4 EA
(15)	CONSTRUCT PIPE HEADWALL PER CALTRANS STD. NO. D89 AS NOTED ON PLAN	8 EA
(16)	INSTALL 12"X12" BROOKS BOX OR EQUAL *AND 4" PVC PIPE*	2 EA
(17)	PLACE RIP RAP AS INDICATED ON PLAN	7 EA
(18)	*PLACE 30" CSP (GAUGE PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)*	90 LF
(19)	*CONSTRUCT CURTAIN WALL PER DETAIL ON SHEET NO. 7*	1 EA
(20)	*CONSTRUCT CONCRETE C.S.P. INLET RING PER DETAIL ON SHT. NO. 9*	14 EA
(21)	*CONSTRUCT TRASH RACK (INCLINED) PER APWA STD. 361-0 (SEE DETAIL ON SHT. 9)*	6 EA
(22)	PLACE 1.7' DIAMETER ORIFICE PER DETAIL ON SHEET NO. 3	1 EA

COUNTY OF RIVERSIDE GENERAL NOTES

1. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/OWNER OR CONTRACTOR TO APPLY TO THE RIVERSIDE COUNTY TRANSPORTATION DEPARTMENT, PERMIT SECTION, FOR AN ENCROACHMENT PERMIT FOR ALL WORK PERFORMED WITHIN PUBLIC RIGHT-OF-WAY, DEDICATED AND ACCEPTED FOR PUBLIC USE; AND TO BE RESPONSIBLE FOR SATISFACTORY COMPLIANCE FOR ALL CURRENT ENVIRONMENTAL REGULATIONS DURING THE LIFE OF CONSTRUCTION ACTIVITIES FOR THIS PROJECT. ADDITIONAL STUDIES AND/OR PERMITS MAY BE REQUIRED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEARING OF THE PROPOSED WORK AREA, AND RELOCATION COSTS OF ALL EXISTING UTILITIES. THE PERMITTEE MUST INFORM COUNTY OF CONSTRUCTION SCHEDULE AT LEAST 48 HOURS PRIOR TO BEGINNING OF CONSTRUCTION. PHONE (909)955-6790
3. ALL UNDERGROUND FACILITIES, WITH LATERALS, SHALL BE IN PLACE PRIOR TO PAVING THE STREET, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING: SEWER, WATER, ELECTRIC, GAS, STORM DRAINS.
4. ANY PRIVATE DRAINAGE FACILITIES SHOWN ON THESE PLANS ARE FOR INFORMATION ONLY. BY SIGNING THESE IMPROVEMENT PLANS, NO REVIEW OR APPROVAL OF THOSE PRIVATE FACILITIES IS PLIED OR INTENDED BY THE RIVERSIDE COUNTY TRANSPORTATION DEPARTMENT.

REGISTERED PROFESSIONAL ENGINEER MARTIN L. ANDERSON No. 51313 Exp. 6-30-08 CIVIL STATE OF CALIFORNIA
AS-BUILT 08/22/05

MS3823 IP010012

SEAL: REGISTERED PROFESSIONAL ENGINEER KHALED A. OTHMAN No. 33950 Exp. 6-30-02 CIVIL STATE OF CALIFORNIA

COUNTY OF RIVERSIDE
TRANSPORTATION DEPARTMENT
APPROVAL BY THE COUNTY TRANSPORTATION DEPT. IS FOR THE AREA WITHIN COUNTY ROAD R/W ONLY
SHEETS 1-3, 6-9
COUNTY OF RIVERSIDE — DATE 6/26/02

CAUTION:
EXACT LOCATION OF EXISTING UNDERGROUND FACILITIES IS UNKNOWN. CONTRACTOR TO VERIFY IN FIELD.

DIG ALERT™
CALL BEFORE YOU DIG!
1-800-227-2600
UNDERGROUND SERVICE ALERT
Call at least 2 working days prior to excavating.

SO. CALIFORNIA GAS COMPANY
FOR NON-INTERFERENCE COMPLIANCE
APPROVED BY — DATE 7/17/01

REGISTERED PROFESSIONAL ENGINEER EDWARD MICHEL RATICAN No. 46804 Exp. 6-30-03 CIVIL STATE OF CALIFORNIA

REVIEWED BY
WESTERN MUNICIPAL WATER DIST.
FOR NON-INTERFERENCE COMPLIANCE
SHEETS ~~2,3,6,7~~ 1 THROUGH 8
CIVIL ENGINEER — R.C.E. 21643 — DATE 5/29/02

QUESTAR SOUTHERN TRAILS PIPELINE
FOR NON-INTERFERENCE COMPLIANCE
APPROVED BY — DATE 9/5/01

PREPARED UNDER THE DIRECTION OF
EDWARD M. RATICAN — DATE 6/27/01
REGISTERED CIVIL ENGINEER NO. 46804
EXPIRATION DATE 6-30-03

RICK ENGINEERING COMPANY
San Diego Riverside Orange Phoenix Tucson
1223 University Ave., Ste. 240 • Riverside, CA 92507-3418 • (909)782-0707 • FAX (909)782-0723 • www.rickeng.com
CITY BUSINESS TAX CERTIFICATE NO. 35225 EXP. DATE 7/20/02

BENCH MARK
CITY OF RIVERSIDE BENCHMARK E8-A2, ELEVATION=1588.453' P.K. NAIL AND TAG IN TOP OF 35X50X20 FOOT GRANITE BOULDER, 100 FEET WESTERLY OF TRAUTWEIN ROAD AND 500 FEET NORTHERLY OF JESSE LANE.

MARK	REVISIONS	APPR	DATE

DESIGNED BY MLA — DRAWN BY MLAG — CHECKED BY EMR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

	BY	DATE
APPROVED BY		
PRINCIPAL ENGINEER		
PARK DEPARTMENT		
TRAFFIC DIVISION		
DEPUTY P.W. DIRECTOR		
STREET SERVICES		

APPROVED BY
DIRECTOR OF PUBLIC WORKS
DATE 9-18-2001

STORM DRAIN IMPROVEMENT PLANS
TRACT NO. 29242
TITLE SHEET

PROJECT NO. D-697
SHEET 1 OF 9
SCALE HORIZ: 1"=200' VERT: N/A
FILE NO.

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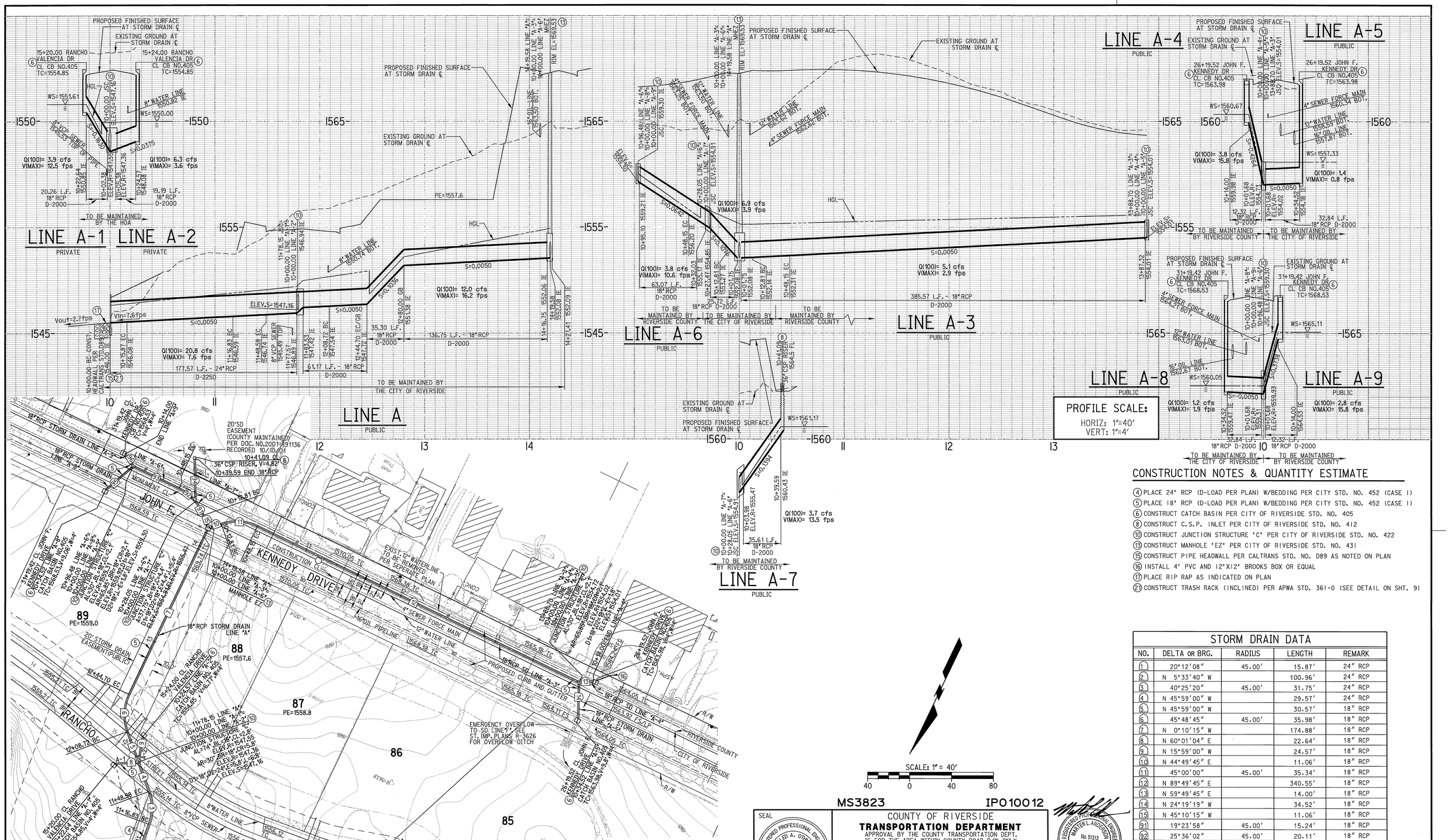
INDEXED 9-4-02

G:\d_13707\707SD1.dgn PLOT DATE: 25-JUN-2001 JN 13707A



CONSTRUCTION NOTES & QUANTITY ESTIMATE

(4) PLACE 24" RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)
(5) PLACE 18" RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)
(6) CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD. NO. 405
(8) CONSTRUCT C.S.P. INLET PER CITY OF RIVERSIDE STD. NO. 412
(10) CONSTRUCT JUNCTION STRUCTURE "C" PER CITY OF RIVERSIDE STD. NO. 422
(13) CONSTRUCT MANHOLE "EZ" PER CITY OF RIVERSIDE STD. NO. 431
(15) CONSTRUCT PIPE HEADWALL PER CALTRANS STD. NO. D89 AS NOTED ON PLAN
(16) INSTALL 4" PVC AND 12"X12" BROOKS BOX OR EQUAL
(17) PLACE RIP RAP AS INDICATED ON PLAN
(21) CONSTRUCT TRASH RACK (INCLINED) PER APWA STD. 361-0 (SEE DETAIL ON SHT. 9)

STORM DRAIN DATA

NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARK
1	20°12'08"	45.00'	15.87'	24" RCP
2	N 5°33'40" W		100.96'	24" RCP
3	40°25'20"	45.00'	31.75'	24" RCP
4	N 45°59'00" W		29.57'	24" RCP
5	N 45°59'00" W		30.57'	18" RCP
6	45°48'45"	45.00'	35.98'	18" RCP
7	N 0°10'15" W		174.88'	18" RCP
8	N 60°01'04" E		22.64'	18" RCP
9	N 15°59'00" W		24.57'	18" RCP
10	N 44°49'45" E		11.06'	18" RCP
11	45°00'00"	45.00'	35.34'	18" RCP
12	N 89°49'45" E		340.55'	18" RCP
13	N 59°49'45" E		14.00'	18" RCP
14	N 24°19'19" W		34.52'	18" RCP
15	N 45°10'15" W		11.06'	18" RCP
91	19°23'58"	45.00'	15.24'	18" RCP
92	25°36'02"	45.00'	20.11'	18" RCP
93	N 89°49'45" E		48.33'	18" RCP
94	N 26°49'08" W		39.59'	18" RCP
95	N 23°58'49" E		34.52'	18" RCP
96	N 60°10'15" W		14.00'	18" RCP

MS3823 IP010012

SEAL
REGISTERED PROFESSIONAL ENGINEER
RAQUED A. OTMAN
No. 33950
Exp. 6-30-02
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE
TRANSPORTATION DEPARTMENT
APPROVAL BY THE COUNTY TRANSPORTATION DEPT. IS FOR THE AREA WITHIN COUNTY ROAD R/W ONLY

COUNTY OF RIVERSIDE — DATE 6/4/02

REGISTERED PROFESSIONAL ENGINEER
MARTEN L. ANDERSON
No. 51313
Exp. 6-30-06
CIVIL
STATE OF CALIFORNIA

AS-BUILT
08/22/05

CAUTION:
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UNDERGROUND SERVICE ALERT
Call at least 2 working days prior to excavating.

REGISTERED PROFESSIONAL ENGINEER
EDWARD MICHEL RAYCIAN
No. 46804
Exp. 6-30-03
CIVIL
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF
EDWARD M. RAYCIAN 5/29/02
REGISTERED CIVIL ENGINEER NO. 46804
EXPIRATION DATE 6-30-03

RICK ENGINEERING COMPANY
San Diego Riverside Orange Phoenix Tucson
1223 University Ave., Ste. 240 • Riverside, CA 92507-3418 • (909)782-0707 • FAX (909)782-0723 • www.rickeng.com
CITY BUSINESS TAX CERTIFICATE NO. 35225 EXP. DATE 7/20/02

BENCH MARK
CITY OF RIVERSIDE BENCHMARK E8-A2, ELEVATION=1588.453' P.K. NAIL AND TAG IN TOP OF 35X50X20 FOOT GRANITE BOULDER, 100 FEET WESTERLY OF TRAUTWEIN ROAD AND 500 FEET NORTHERLY OF JESSE LANE.

MARK	REVISIONS	APPR	DATE

DESIGNED BY MLA DRAWN BY MLAG CHECKED BY EMR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		
PARK DEPARTMENT		
TRAFFIC DIVISION		
DEPUTY P.W. DIRECTOR		
STREET SERVICES		

APPROVED BY
DIRECTOR OF PUBLIC WORKS
DATE 6/21/02

STORM DRAIN IMPROVEMENT PLANS
TRACT NO. 29242
LINE A
(PUBLIC AND PRIVATE)
SCALE HORIZ: 1"=40' VERT: 1"=4'
PROJECT NO. D-697
SHEET 2 OF 9
FILE NO.

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INDEXED 9-4-02

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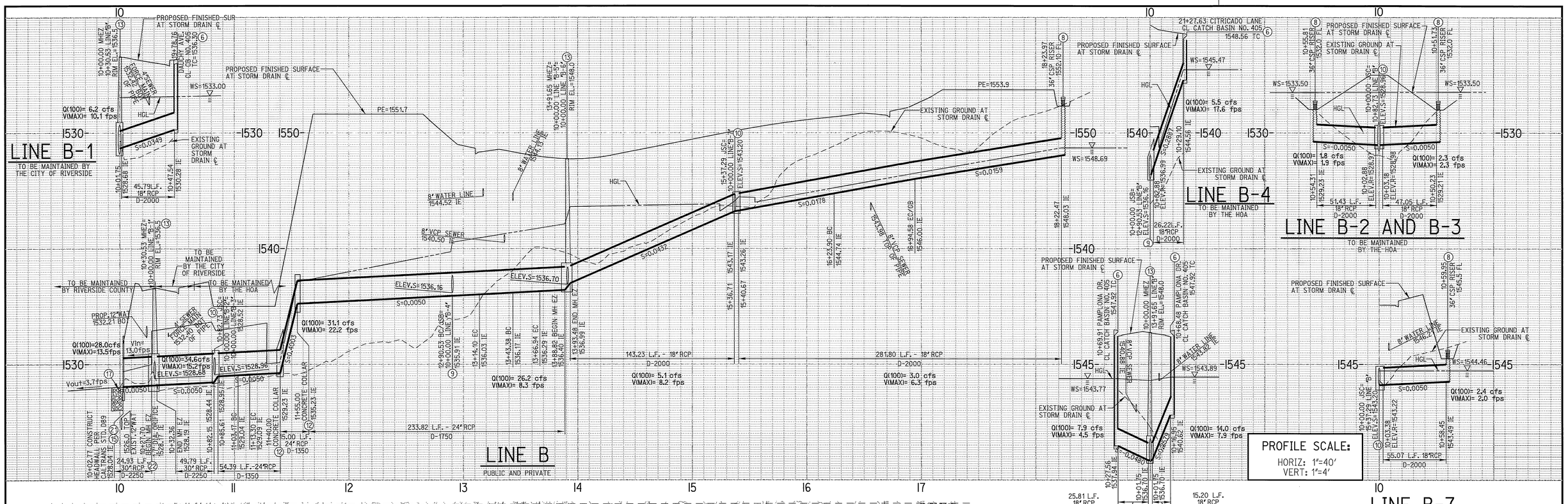

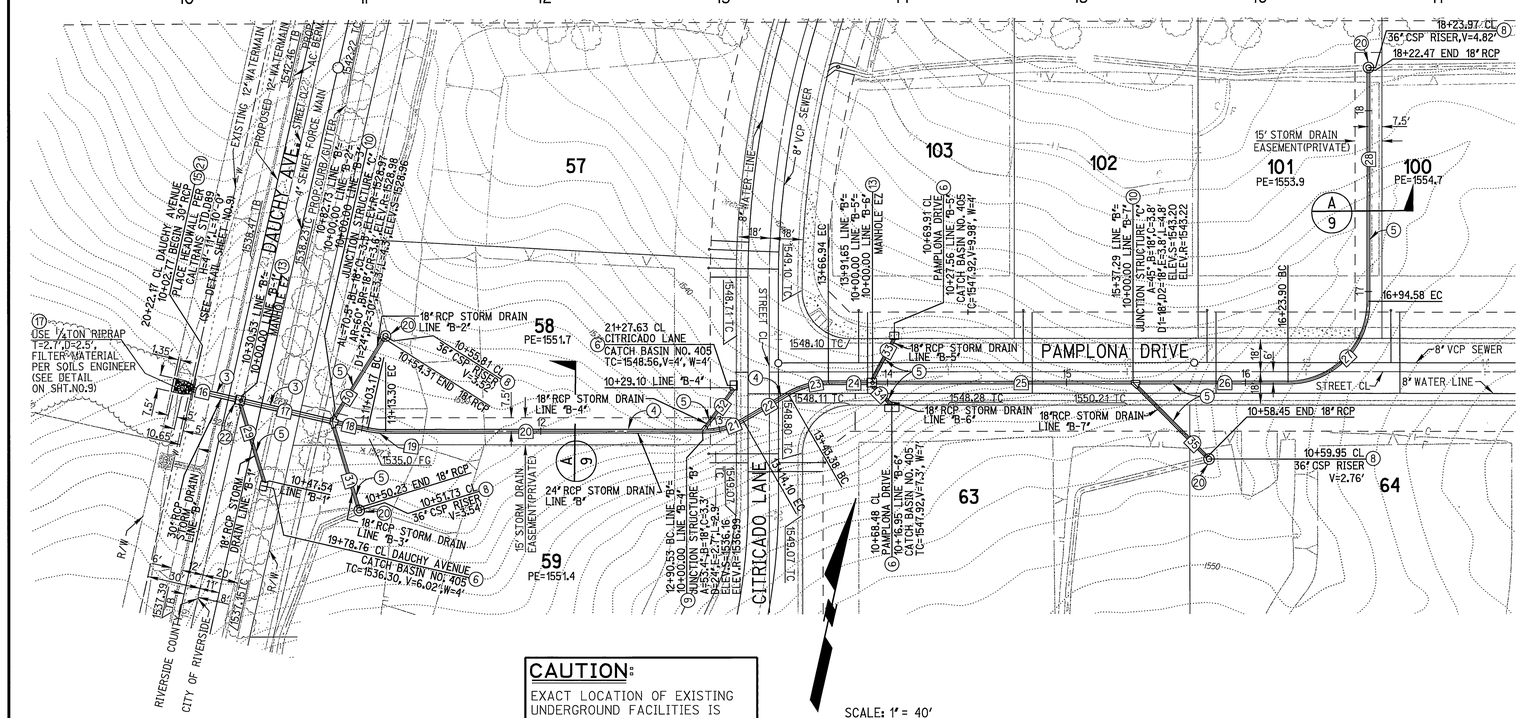

STORM DRAIN DATA

NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARK
16	N 89°59'48" W		27.76'	30" RCP
17	N 89°59'48" W		52.20'	30" RCP
18	N 89°59'48" W		20.44'	24" RCP
19	12°53'55"	45.00'	10.13'	24" RCP
20	N 77°06'17" E		177.24'	24" RCP
21	30°00'00"	45.00'	23.56'	24" RCP
22	N 47°06'17" E		29.28'	24" RCP
23	30°00'00"	45.00'	23.56'	24" RCP
24	N 77°06'16" E		24.72'	24" RCP
25	N 77°06'17" E		145.64'	18" RCP
26	N 77°06'17" E		86.61'	18" RCP
27	90°00'00"	45.00'	70.69'	18" RCP
28	N 12°53'43" W		127.89'	18" RCP
29	N 29°59'48" W		45.79'	18" RCP
30	N 19°30'09" E		54.31'	18" RCP
31	N 29°59'48" W		50.23'	18" RCP
32	N 23°41'20" E		29.10'	18" RCP
33	N 15°16'08" E		25.81'	18" RCP
34	N 57°53'44" W		15.20'	18" RCP
35	N 57°53'43" W		58.45'	18" RCP

CONSTRUCTION NOTES & QUANTITY ESTIMATE

(3) PLACE 30"RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)
(4) PLACE 24"RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)
(5) PLACE 18"RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)
(6) CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD. NO. 405
(8) CONSTRUCT C.S.P. INLET PER CITY OF RIVERSIDE STD. NO. 412
(9) CONSTRUCT JUNCTION STRUCTURE 'B' PER CITY OF RIVERSIDE STD. NO. 421
(10) CONSTRUCT JUNCTION STRUCTURE 'C' PER CITY OF RIVERSIDE STD. NO. 422
(12) CONSTRUCT CONCRETE COLLAR PER CITY OF RIVERSIDE STD. NO. 424
(13) CONSTRUCT MANHOLE 'EZ' PER CITY OF RIVERSIDE STD. NO. 431
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(17) PLACE RIP RAP AS INDICATED ON PLAN
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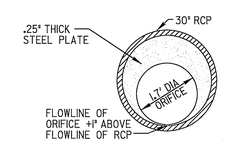
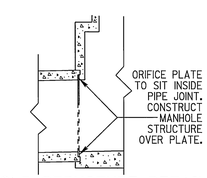
(22) PLACE 1.7' DIAMETER ORIFICE PER DETAIL THIS SHEET



ORIFICE DETAIL (22)
N.T.S.



MANHOLE STRUCTURE DETAIL MODIFIED FOR ORICIFE PLATE
N.T.S.

REGISTERED PROFESSIONAL ENGINEER MARTEN L. ANDERSON No. 51313 Exp. 6-30-06 CIVIL STATE OF CALIFORNIA
AS-BUILT 08/22/05

MS3823 IP010012

CAUTION: EXACT LOCATION OF EXISTING UNDERGROUND FACILITIES IS UNKNOWN. CONTRACTOR TO VERIFY IN FIELD.

DIG ALERT — CALL BEFORE YOU DIG! 1-800-227-2600 UNDERGROUND SERVICE ALERT Call at least 2 working days prior to excavating.

SEAL: REGISTERED PROFESSIONAL ENGINEER MAHLED A. OTMAN No. 33950 Exp. 6-30-02 CIVIL STATE OF CALIFORNIA

COUNTY OF RIVERSIDE
TRANSPORTATION DEPARTMENT
APPROVAL BY THE COUNTY TRANSPORTATION DEPT. IS FOR THE AREA WITHIN COUNTY ROAD R/W ONLY
COUNTY OF RIVERSIDE — DATE 6/4/02

REGISTERED PROFESSIONAL ENGINEER EDWARD MICHEL RATICAN No. 46804 Exp. 6-30-03 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF EDWARD M. RATICAN 5/29/02
REGISTERED CIVIL ENGINEER NO. 46804
EXPIRATION DATE 6-30-03

RICK ENGINEERING COMPANY
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CITY BUSINESS TAX CERTIFICATE NO. 35225 EXP. DATE 7/20/02

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MARK	REVISIONS	APPR	DATE

DESIGNED BY MLA DRAWN BY MLAG CHECKED BY EMR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		
PARK DEPARTMENT		
TRAFFIC DIVISION		
DEPUTY P.W. DIRECTOR		
STREET SERVICES		

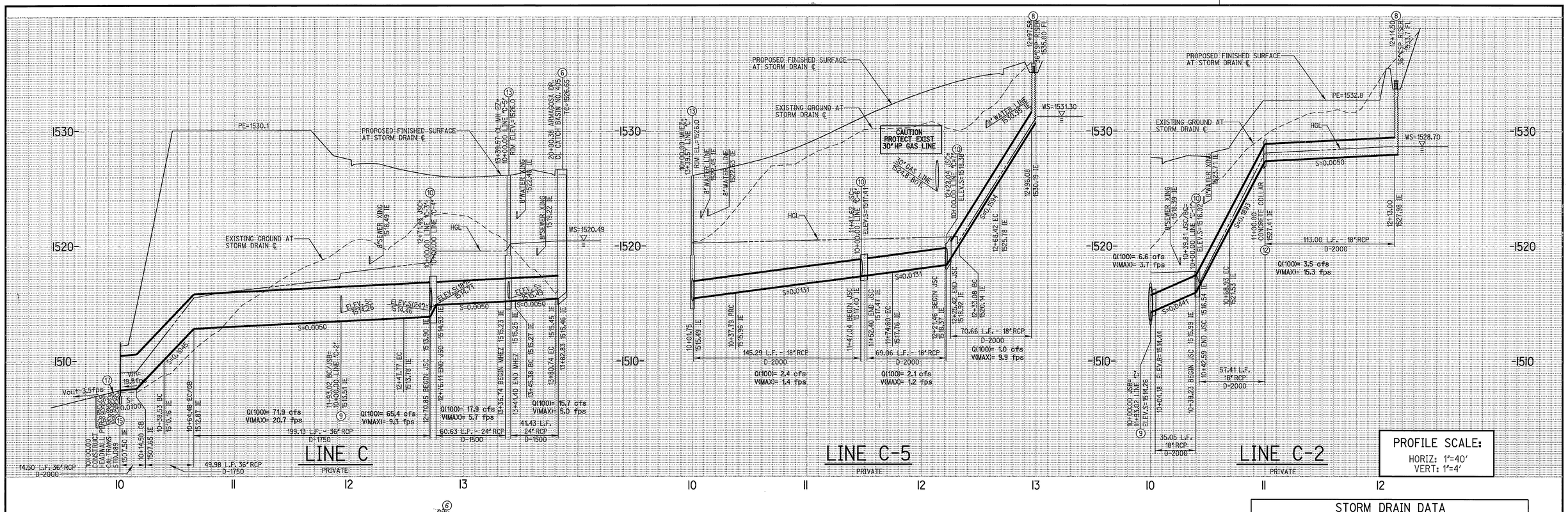
APPROVED BY — DIRECTOR OF PUBLIC WORKS — DATE 6/21/02

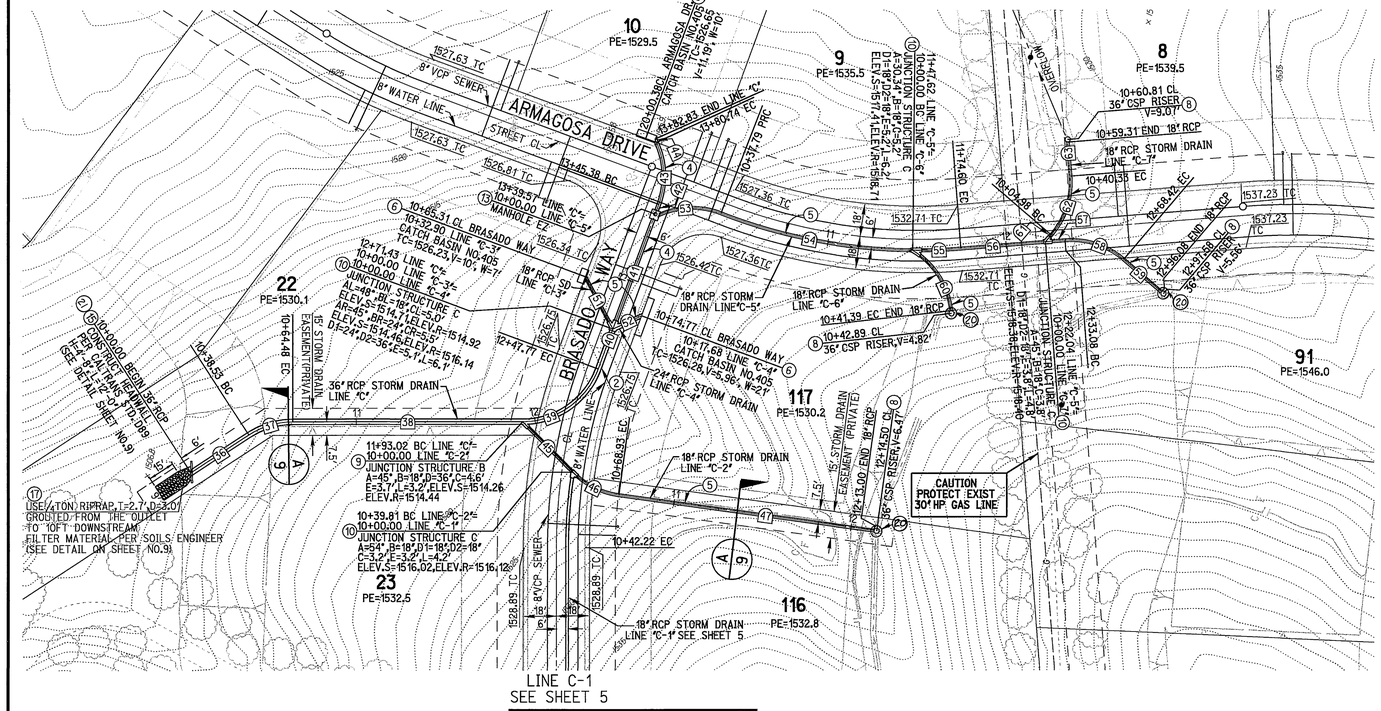
STORM DRAIN IMPROVEMENT PLANS
TRACT NO. 29242
LINE B
(PUBLIC AND PRIVATE)
SCALE HORIZ: 1"=40' VERT: 1"=4'
PROJECT NO. D-697
SHEET 3 OF 9
FILE NO.

© 2000 Rick Engineering Company

INDEXED 9-4-02

G:\d_13707\707sd3.dgn PLOT DATE: 29-MAY-2002 JN 13707A





CONSTRUCTION NOTES & QUANTITY ESTIMATE

(2) PLACE 36" RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)
(4) PLACE 24" RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)
(5) PLACE 18" RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)
(6) CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD. NO. 405
(8) CONSTRUCT C.S.P. INLET PER CITY OF RIVERSIDE STD. NO. 412
(9) CONSTRUCT JUNCTION STRUCTURE "B" PER CITY OF RIVERSIDE STD. NO. 421
(10) CONSTRUCT JUNCTION STRUCTURE "C" PER CITY OF RIVERSIDE STD. NO. 422
(12) CONSTRUCT CONCRETE COLLAR PER CITY OF RIVERSIDE STD. NO. 424
(13) CONSTRUCT MANHOLE "EZ" PER CITY OF RIVERSIDE STD. NO. 431
(15) CONSTRUCT PIPE HEADWALL PER CALTRANS STD. NO. D89 AS NOTED ON PLAN
(17) PLACE RIP RAP AS INDICATED ON PLAN
(20) CONSTRUCT CONCRETE C.S.P. INLET RING PER DETAIL ON SHT. NO. 9
(21) CONSTRUCT TRASH RACK (INCLINED) PER APWA STD. 361-0 (SEE DETAIL ON SHT. 9)

STORM DRAIN DATA

NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARK
36	N 45°13'46" W		38.53'	36" RCP
37	33°02'49"	45.00'	25.96'	36" RCP
38	N 12°10'57" W		128.54'	36" RCP
39	69°42'43"	45.00'	54.75'	36" RCP
40	N 81°53'40" W		23.66'	36" RCP
41	N 81°53'40" W		68.14'	24" RCP
42	N 81°53'41" W		5.80'	24" RCP
43	45°01'25"	45.00'	35.36'	24" RCP
44	N 53°47'12" E		2.10'	24" RCP
45	N 32°49'03" E		39.81'	18" RCP
46	37°04'58"	45.00'	29.12'	18" RCP
47	N 4°15'54" W		144.07'	18" RCP
51	N 49°58'35" E		32.90'	18" RCP
52	N 36°53'40" W		17.68'	24" RCP
53	45°53'04"	45.00'	36.04'	18" RCP
54	20°33'56"	306.00'	109.83'	18" RCP
55	5°03'06"	306.00'	26.98'	18" RCP
56	N 16°37'30" W		47.44'	18" RCP
57	N 16°37'30" W		11.04'	18" RCP
58	45°00'00"	45.00'	35.34'	18" RCP
59	N 28°22'30" E		27.65'	18" RCP
60	52°41'59"	45.00'	41.39'	18" RCP
61	N 61°37'30" W		4.98'	18" RCP
62	45°00'00"	45.00'	35.34'	18" RCP
63	N 73°22'30" E		18.98'	18" RCP

REGISTERED PROFESSIONAL ENGINEER MARTIN L. ANDERSON No. 51313 Exp. 6-30-06 CIVIL STATE OF CALIFORNIA

AS-BUILT 08/22/05

SCALE: 1" = 40'
40 0 40 80

CAUTION:
EXACT LOCATION OF EXISTING UNDERGROUND FACILITIES IS UNKNOWN. CONTRACTOR TO VERIFY IN FIELD.

DIG ALERT
CALL BEFORE YOU DIG!
1-800-227-2600
UNDERGROUND SERVICE ALERT
Call at least 2 working days prior to excavating.

REGISTERED PROFESSIONAL ENGINEER EDWARD MICHEL RATICAN No. 46804 Exp. 6-30-03 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF
EDWARD M. RATICAN 8/15/01
REGISTERED CIVIL ENGINEER NO. 46804
EXPIRATION DATE 6-30-03

RICK ENGINEERING COMPANY
San Diego Riverside Orange Phoenix Tucson
1223 University Ave., Ste. 240 • Riverside, CA 92507-3418 • (909)782-0707 • FAX (909)782-0723 • www.rickeng.com
CITY BUSINESS TAX CERTIFICATE NO. 35225 EXP. DATE 7/20/02

BENCH MARK
CITY OF RIVERSIDE BENCHMARK E8-A2, ELEVATION=1588.453' P.K. NAIL AND TAG IN TOP OF 35X50X20 FOOT GRANITE BOULDER, 100 FEET WESTERLY OF TRAUTWEIN ROAD AND 500 FEET NORTHERLY OF JESSE LANE.

MARK	REVISIONS	APPR	DATE

DESIGNED BY MLA DRAWN BY MLAG CHECKED BY EMR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		
PARK DEPARTMENT		
TRAFFIC DIVISION		
DEPUTY P.W. DIRECTOR		8/15/01
STREET SERVICES		8/15/01

APPROVED BY R. McBride
DIRECTOR OF PUBLIC WORKS
DATE 9-18-2001

STORM DRAIN IMPROVEMENT PLANS
TRACT NO. 29242
LINE C
(PRIVATE)
SCALE HORIZ: 1"=40' VERT: 1"=4'

PROJECT NO. D-697
SHEET 4 OF 9
FILE NO.

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INDEXED 9-4-02 PLOT DATE: 12-AUG-2001 JN 13707A

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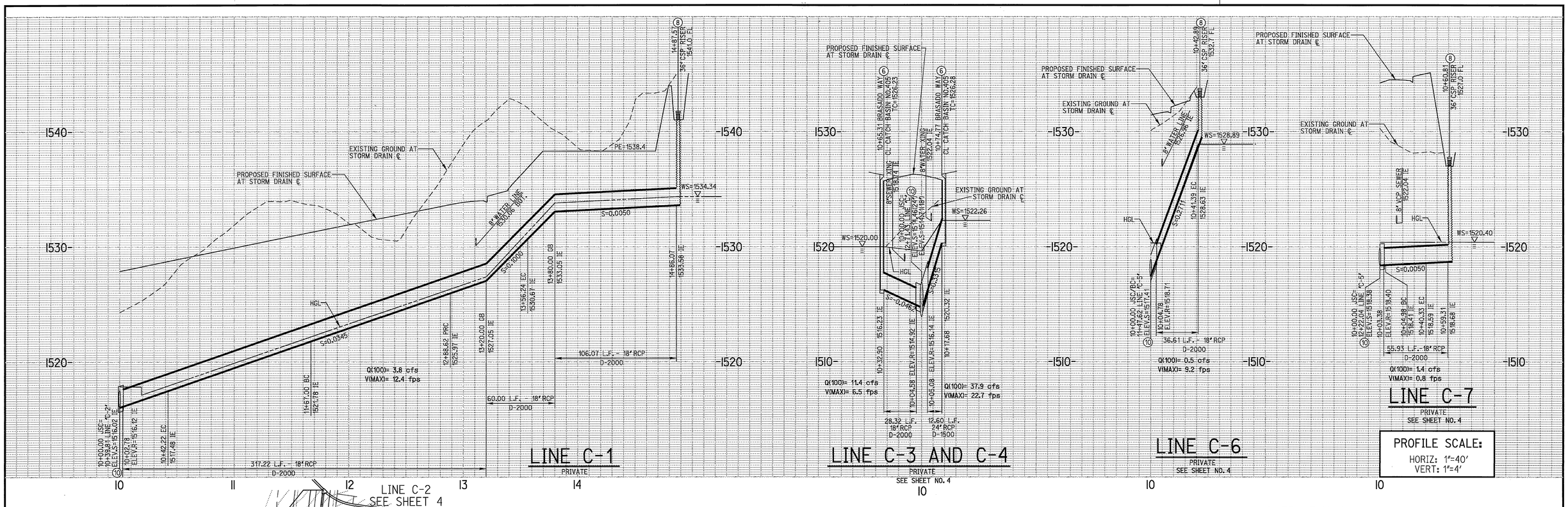

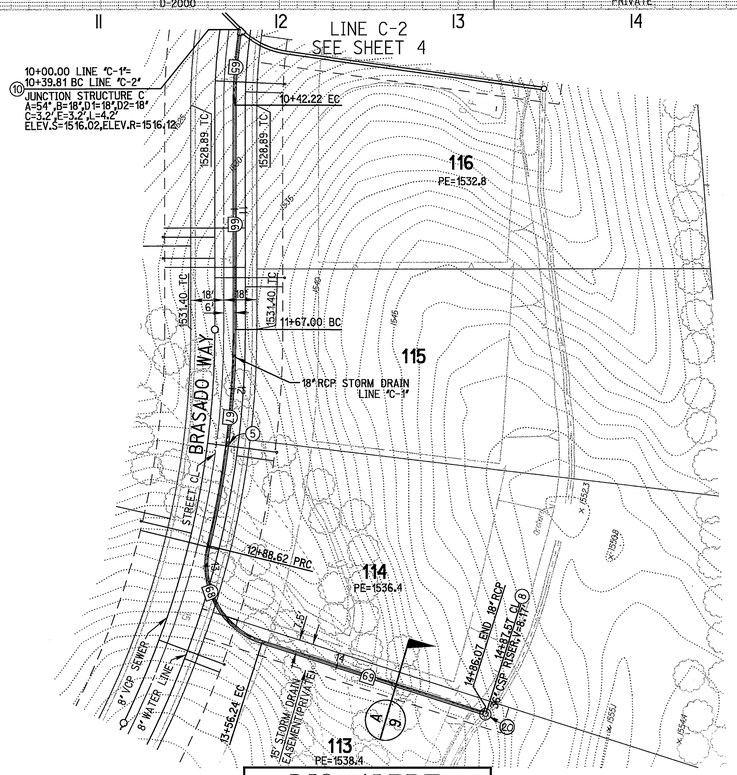

CONSTRUCTION NOTES & QUANTITY ESTIMATE

(5) PLACE 18" RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)
(6) CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD. NO. 405
(8) CONSTRUCT C.S.P. INLET PER CITY OF RIVERSIDE STD. NO. 412
(10) CONSTRUCT JUNCTION STRUCTURE "C" PER CITY OF RIVERSIDE STD. NO. 422
(20) CONSTRUCT CONCRETE C.S.P. INLET RING PER DETAIL ON SHT. NO. 9

STORM DRAIN DATA

NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARK
65	9°00'05"	268.72'	42.22'	18" RCP
66	N 77°49'03" E		124.78'	18" RCP
67	13°46'20"	506.00'	121.63'	18" RCP
68	86°05'51"	45.00'	67.62'	18" RCP
69	N 5°29'31" E		129.82'	18" RCP

REGISTERED PROFESSIONAL ENGINEER MARTEN L. ANDERSON No. 51313 Exp. 6-30-06 CIVIL STATE OF CALIFORNIA

AS-BUILT 08/22/05

SCALE: 1" = 40'
40 0 40 80

CAUTION:
EXACT LOCATION OF EXISTING UNDERGROUND FACILITIES IS UNKNOWN. CONTRACTOR TO VERIFY IN FIELD.

DIG ALERT
CALL BEFORE YOU DIG!
1-800-227-2600
UNDERGROUND SERVICE ALERT
Call at least 2 working days prior to excavating.

REGISTERED PROFESSIONAL ENGINEER EDWARD MICHEL RATICAN No. 46804 Exp. 6-30-03 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF
EDWARD M. RATICAN 8/15/01
REGISTERED CIVIL ENGINEER NO. 46804
EXPIRATION DATE 6-30-03

RICK ENGINEERING COMPANY
San Diego Riverside Orange Phoenix Tucson
1223 University Ave., Ste. 240 • Riverside, CA 92507-3418 • (909)782-0707 • FAX (909)782-0723 • www.rickeng.com
CITY BUSINESS TAX CERTIFICATE NO. 35225 EXP. DATE 7/20/02

BENCH MARK
CITY OF RIVERSIDE BENCHMARK E8-A2, ELEVATION=1588.453' P.K. NAIL AND TAG IN TOP OF 35X50X20 FOOT GRANITE BOULDER, 100 FEET WESTERLY OF TRAUTWEIN ROAD AND 500 FEET NORTHERLY OF JESSE LANE.

MARK	REVISIONS	APPR	DATE

DESIGNED BY MLA DRAWN BY MLAG CHECKED BY EMR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		8/15/01
PARK DEPARTMENT		
TRAFFIC DIVISION		
DEPUTY P.W. DIRECTOR		8/15/01
STREET SERVICES		8/15/01

APPROVED BY
R. Mc Snath
DIRECTOR OF PUBLIC WORKS
DATE 9-18-2001

STORM DRAIN IMPROVEMENT PLANS
TRACT NO. 29242
LINE C
(PRIVATE)
SCALE
HORIZ: 1"=40' VERT: 1"=4'

PROJECT NO. D-697
SHEET 5 OF 9
FILE NO.

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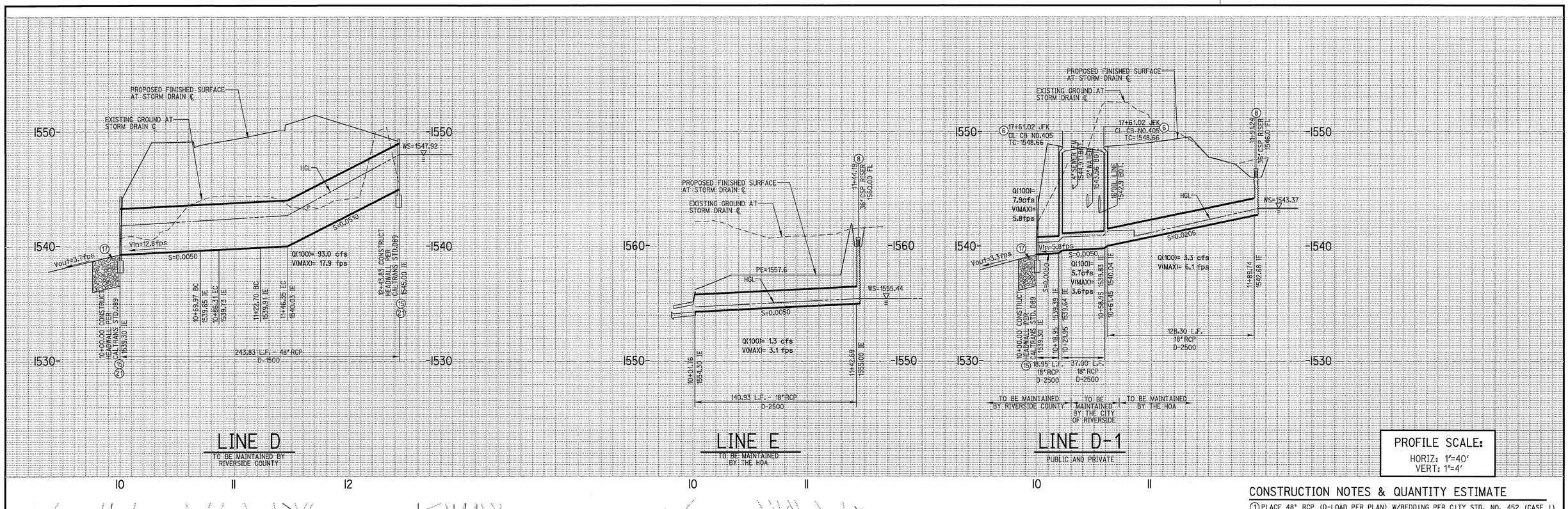
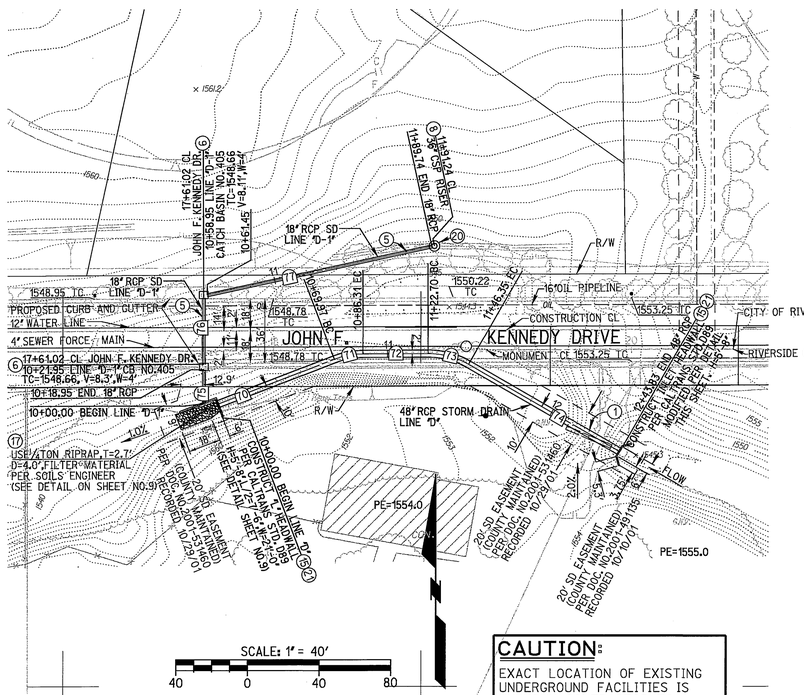
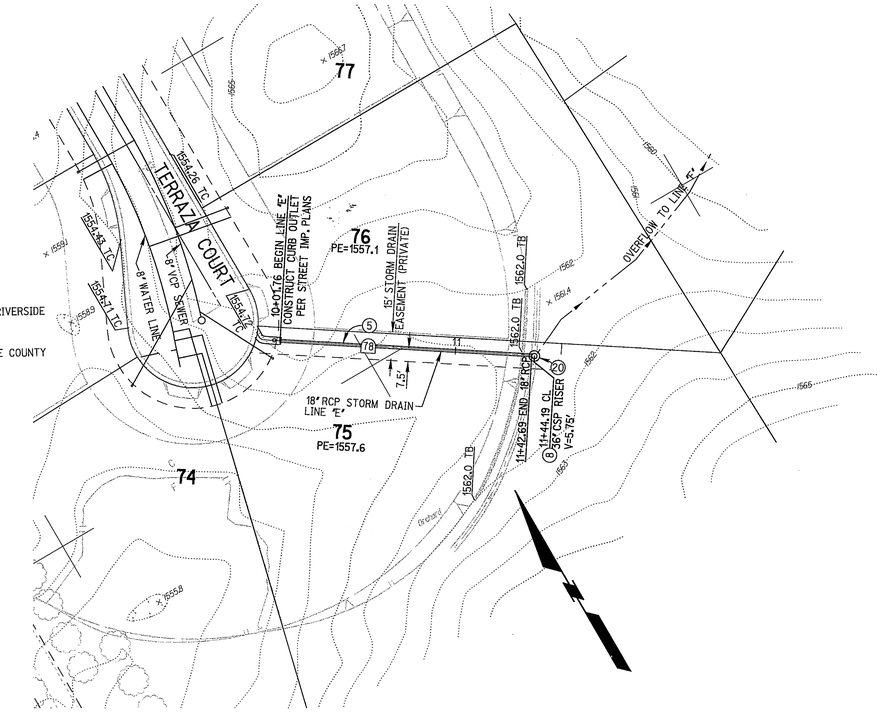
INDEXED 9-9-02 GH
PLOT DATE: 12-AUG-2001 JN 13707A

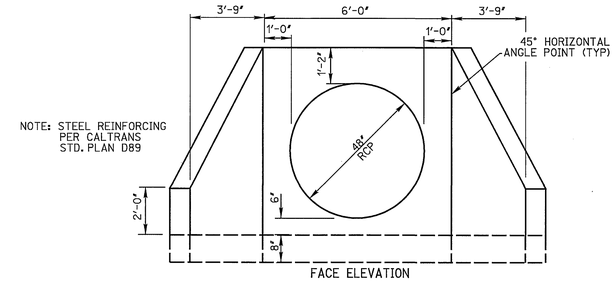






CONSTRUCTION NOTES & QUANTITY ESTIMATE

1. PLACE 48" RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)
5. PLACE 18" RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)
6. CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD. NO. 405
8. CONSTRUCT C.S.P. INLET PER CITY OF RIVERSIDE STD. NO. 412
15. CONSTRUCT PIPE HEADWALL PER CALTRANS STD. NO. D89 AS NOTED ON PLAN
17. PLACE RIP RAP AS INDICATED ON PLAN
20. CONSTRUCT CONCRETE C.S.P. INLET RING PER DETAIL ON SHT. NO.9
21. CONSTRUCT TRASH RACK(INCLINED) PER APWA STD.361-0 (SEE DETAIL ON SHT.9)



MODIFIED INLET HEADWALL
LINE "D" STA. 12+43.83
(15) N.T.S.

STORM DRAIN DATA

NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARK
(70)	N 69°01'20" E		69.97'	48" RCP
(71)	20°48'25"	45.00'	16.34'	48" RCP
(72)	N 89°49'45" E		36.39'	48" RCP
(73)	30°06'39"	45.00'	23.65'	48" RCP
(74)	N 60°03'36" W		97.48'	48" RCP
(75)	N 0°10'45" W		18.95'	18" RCP
(76)	N 0°10'15" W		37.00'	18" RCP
(77)	N 77°51'13" E		128.29'	18" RCP
(78)	N 56°31'31" W		140.93'	18" RCP

REGISTERED PROFESSIONAL ENGINEER MARTEN L. ANDERSON No. 51313 Exp. 6-30-08 CIVIL STATE OF CALIFORNIA

AS-BUILT 08/22/05

CAUTION:
EXACT LOCATION OF EXISTING UNDERGROUND FACILITIES IS UNKNOWN. CONTRACTOR TO VERIFY IN FIELD.

SEAL
REGISTERED PROFESSIONAL ENGINEER KHALED A. OTHMAN No. 33950 Exp. 6-30-02 CIVIL STATE OF CALIFORNIA

COUNTY OF RIVERSIDE
TRANSPORTATION DEPARTMENT
APPROVAL BY THE COUNTY TRANSPORTATION DEPT. IS FOR THE AREA WITHIN COUNTY ROAD R/W ONLY
COUNTY OF RIVERSIDE — DATE 6/14/02

DIG ALERT
CALL BEFORE YOU DIG!
1-800-227-2600
UNDERGROUND SERVICE ALERT
Call at least 2 working days prior to excavating.

REGISTERED PROFESSIONAL ENGINEER EDWARD MICHEL RAYCAN No. 46804 Exp. 6-30-03 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF EDWARD M. RAYCAN 12/14/01
REGISTERED CIVIL ENGINEER NO. 46804
EXPIRATION DATE 6-30-03

RICK ENGINEERING COMPANY
San Diego Riverside Orange Phoenix Tucson
1223 University Ave., Ste. 240 • Riverside, CA 92507-3418 • (909)782-0707 • FAX (909)782-0723 • www.rickeng.com
CITY BUSINESS TAX CERTIFICATE NO. 35225 EXP. DATE 7/20/02

BENCH MARK
CITY OF RIVERSIDE BENCHMARK E8-A2, ELEVATION=1588.453' P.K. NAIL AND TAG IN TOP OF 35X50X20 FOOT GRANITE BOULDER, 100 FEET WESTERLY OF TRAUTWEIN ROAD AND 500 FEET NORTHERLY OF JESSE LANE.

MARK	REVISIONS	APPR	DATE

DESIGNED BY MLA DRAWN BY MLAG CHECKED BY EMR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		
PARK DEPARTMENT		
TRAFFIC DIVISION		
DEPUTY P.W. DIRECTOR		
STREET SERVICES		6/14/02

APPROVED BY
DIRECTOR OF PUBLIC WORKS
DATE 6/14/02

STORM DRAIN IMPROVEMENT PLANS
TRACT NO. 29242
LINE D AND LINE E
(PUBLIC AND PRIVATE)
SCALE HORIZ: 1"=40' VERT: 1"=4'
PROJECT NO. D-697
SHEET 6 OF 9
FILE NO.

INDEXED 9-4-02

PLOT DATE: 11-DEC-2001 JN 13707A

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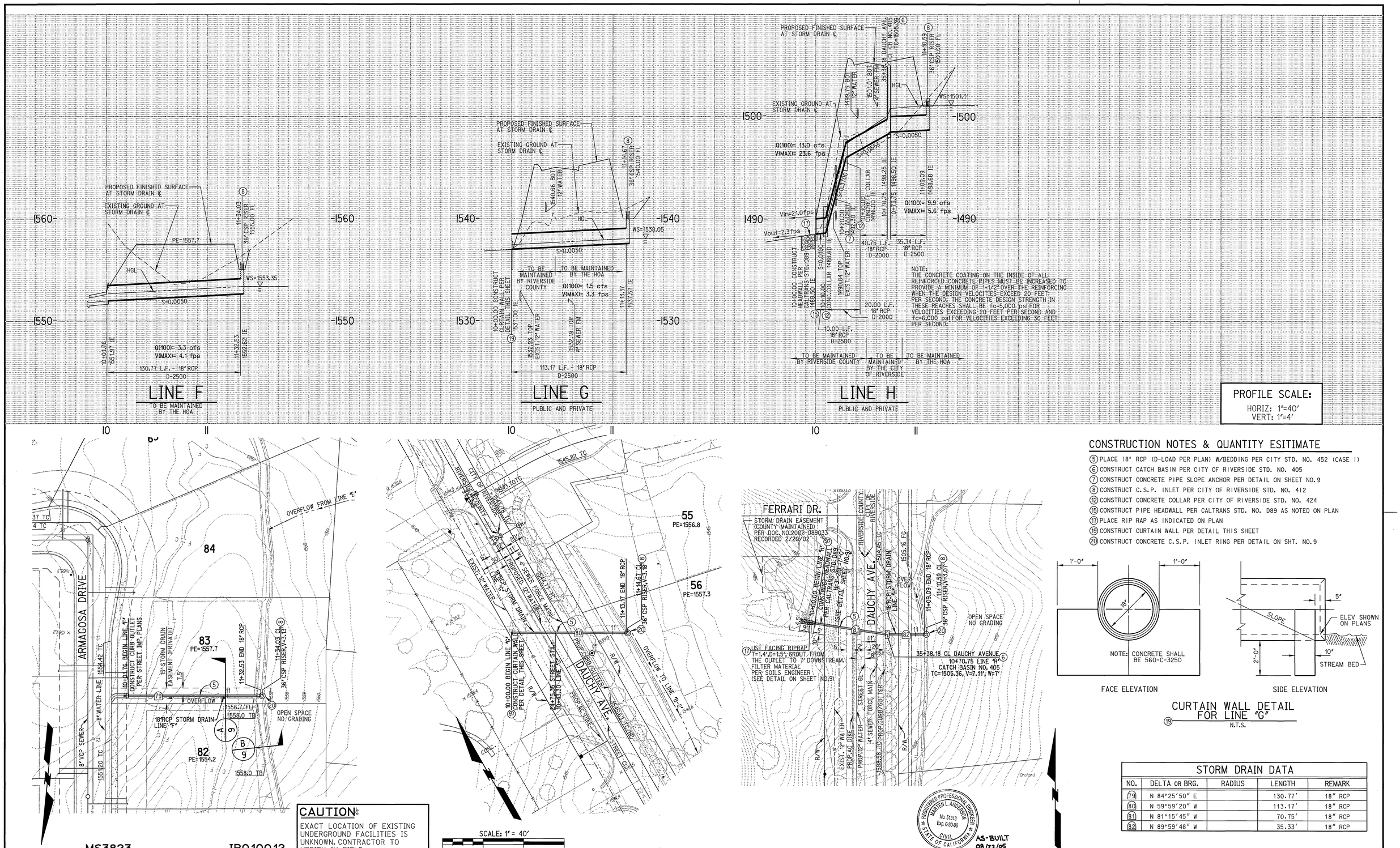

CONSTRUCTION NOTES & QUANTITY ESITIMATE

(5) PLACE 18" RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)
(6) CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD. NO. 405
(7) CONSTRUCT CONCRETE PIPE SLOPE ANCHOR PER DETAIL ON SHEET NO.9
(8) CONSTRUCT C.S.P. INLET PER CITY OF RIVERSIDE STD. NO. 412
(12) CONSTRUCT CONCRETE COLLAR PER CITY OF RIVERSIDE STD. NO. 424
(15) CONSTRUCT PIPE HEADWALL PER CALTRANS STD. NO. D89 AS NOTED ON PLAN
(17) PLACE RIP RAP AS INDICATED ON PLAN
(19) CONSTRUCT CURTAIN WALL PER DETAIL THIS SHEET
(20) CONSTRUCT CONCRETE C.S.P. INLET RING PER DETAIL ON SHT. NO.9

CURTAIN WALL DETAIL FOR LINE "G"
(19) N.T.S.

STORM DRAIN DATA

NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARK
(79)	N 84°25'50" E		130.77'	18" RCP
(80)	N 59°59'20" W		113.17'	18" RCP
(81)	N 81°15'45" W		70.75'	18" RCP
(82)	N 89°59'48" W		35.33'	18" RCP

MS3823 IP010012

CAUTION: EXACT LOCATION OF EXISTING UNDERGROUND FACILITIES IS UNKNOWN. CONTRACTOR TO VERIFY IN FIELD.

SEAL — REGISTERED PROFESSIONAL ENGINEER, KHALED A. OTAMAN, No. 33950, Exp. 6-30-02, CIVIL, STATE OF CALIFORNIA

COUNTY OF RIVERSIDE
TRANSPORTATION DEPARTMENT
APPROVAL BY THE COUNTY TRANSPORTATION DEPT. IS FOR THE AREA WITHIN COUNTY ROAD R/W ONLY

COUNTY OF RIVERSIDE — DATE 6/14/02

DIG ALERT — CALL BEFORE YOU DIG! 1-800-227-2600 UNDERGROUND SERVICE ALERT Call at least 2 working days prior to excavating.

REGISTERED PROFESSIONAL ENGINEER, EDWARD MICHEL RATZLAFF, No. 46804, Exp. 6-30-03, CIVIL, STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF EDWARD M. RATZLAFF 5/28/02
REGISTERED CIVIL ENGINEER NO. 46804
EXPIRATION DATE 6-30-03

RICK ENGINEERING COMPANY
San Diego Riverside Orange Phoenix Tucson
1223 University Ave., Ste. 240 • Riverside, CA 92507-3418 • (909)782-0707 • FAX (909)782-0723 • www.rickeng.com
CITY BUSINESS TAX CERTIFICATE NO. 35225 EXP. DATE 7/20/02

BENCH MARK
CITY OF RIVERSIDE BENCHMARK E8-A2, ELEVATION=1588.453' P.K. NAIL AND TAG IN TOP OF 35X50X20 FOOT GRANITE BOULDER, 100 FEET WESTERLY OF TRAUTWEIN ROAD AND 500 FEET NORTHERLY OF JESSE LANE.

MARK	REVISIONS	APPR	DATE

DESIGNED BY MLA DRAWN BY MLAG CHECKED BY EMR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		
PARK DEPARTMENT		
TRAFFIC DIVISION		
DEPUTY P.W. DIRECTOR		
STREET SERVICES		

APPROVED BY Tim Bond, DIRECTOR OF PUBLIC WORKS — DATE 6/11/02

STORM DRAIN IMPROVEMENT PLANS
TRACT NO. 29242
LINE F, LINE G & LINE H
(PUBLIC AND PRIVATE)
SCALE HORIZ: 1"=40' VERT: 1"=4'
PROJECT NO. D-697
SHEET 7 OF 9
FILE NO.

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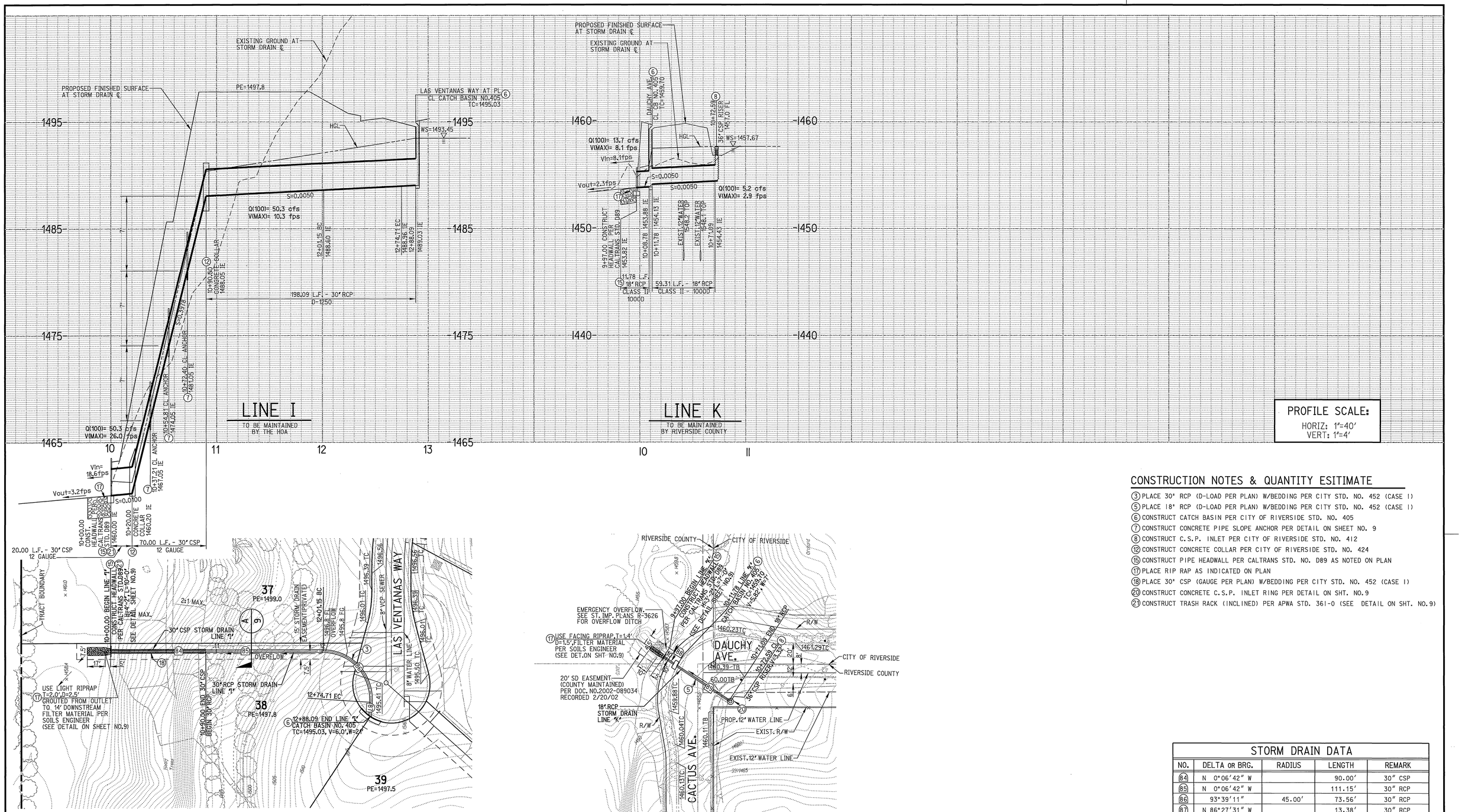
INDEXED 9-4-02 GH
PLOT DATE: 29-MAY-2002 JN 13707A



CONSTRUCTION NOTES & QUANTITY ESITIMATE

(3) PLACE 30" RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)
(5) PLACE 18" RCP (D-LOAD PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)
(6) CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD. NO. 405
(7) CONSTRUCT CONCRETE PIPE SLOPE ANCHOR PER DETAIL ON SHEET NO. 9
(8) CONSTRUCT C.S.P. INLET PER CITY OF RIVERSIDE STD. NO. 412
(12) CONSTRUCT CONCRETE COLLAR PER CITY OF RIVERSIDE STD. NO. 424
(15) CONSTRUCT PIPE HEADWALL PER CALTRANS STD. NO. D89 AS NOTED ON PLAN
(17) PLACE RIP RAP AS INDICATED ON PLAN
(18) PLACE 30" CSP (GAUGE PER PLAN) W/BEDDING PER CITY STD. NO. 452 (CASE I)
(20) CONSTRUCT CONCRETE C.S.P. INLET RING PER DETAIL ON SHT. NO.9
(21) CONSTRUCT TRASH RACK (INCLINED) PER APWA STD. 361-0 (SEE DETAIL ON SHT. NO.9)

STORM DRAIN DATA

NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARK
(84)	N 0°06'42" W		90.00'	30" CSP
(85)	N 0°06'42" W		111.15'	30" RCP
(86)	93°39'11"	45.00'	73.56'	30" RCP
(87)	N 86°27'31" W		13.38'	30" RCP
(88)	N 33°14'58" E		11.78'	18" RCP
(89)	N 33°14'58" E		59.31'	18" RCP

REGISTERED PROFESSIONAL ENGINEER MARTEN L. ANDERSON No. 51313 Exp. 6-30-06 CIVIL STATE OF CALIFORNIA

AS-BUILT 08/22/05

MS3823 IP010012

CAUTION: EXACT LOCATION OF EXISTING UNDERGROUND FACILITIES IS UNKNOWN. CONTRACTOR TO VERIFY IN FIELD.

SCALE: 1" = 40'
40 0 40 80

SEAL: REGISTERED PROFESSIONAL ENGINEER KHALED A. OTHMAN No. 33950 Exp. 6-30-02 CIVIL STATE OF CALIFORNIA

COUNTY OF RIVERSIDE
TRANSPORTATION DEPARTMENT
APPROVAL BY THE COUNTY TRANSPORTATION DEPT. IS FOR THE AREA WITHIN COUNTY ROAD R/W ONLY

6/4/02
COUNTY OF RIVERSIDE DATE

DIG ALERT
CALL BEFORE YOU DIG!
1-800-227-2600
UNDERGROUND SERVICE ALERT
Call at least 2 working days prior to excavating.

REGISTERED PROFESSIONAL ENGINEER EDWARD MICHEL RATCHAI No. 46804 Exp. 6-30-03 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF 5/29/02
EDWARD M. RATCHAI
REGISTERED CIVIL ENGINEER NO. 46804
EXPIRATION DATE 6-30-03

RICK ENGINEERING COMPANY
San Diego Riverside Orange Phoenix Tucson
1223 University Ave., Ste. 240 • Riverside, CA 92507-3418 • (909)782-0707 • FAX (909)782-0723 • www.rickeng.com
CITY BUSINESS TAX CERTIFICATE NO. 35225 EXP. DATE 7/20/02

BENCH MARK
CITY OF RIVERSIDE BENCHMARK E8-A2, ELEVATION=1588.453' P.K. NAIL AND TAG IN TOP OF 35X50X20 FOOT GRANITE BOULDER, 100 FEET WESTERLY OF TRAUTWEIN ROAD AND 500 FEET NORTHERLY OF JESSE LANE.

MARK	REVISIONS	APPR	DATE

DESIGNED BY MLA DRAWN BY MLAG CHECKED BY EMR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		
PARK DEPARTMENT		
TRAFFIC DIVISION		
DEPUTY P.W. DIRECTOR		
STREET SERVICES		

APPROVED BY
DIRECTOR OF PUBLIC WORKS
DATE 6/21/02

STORM DRAIN IMPROVEMENT PLANS
TRACT NO. 29242
LINE I AND LINE K
(PUBLIC AND PRIVATE)
SCALE HORIZ: 1"=40' VERT: 1"=4'

PROJECT NO. D-697
SHEET 8 OF 9
FILE NO.

INDEXED 9-4-02 KH

G:\d_13707\707sd8.dgn PLOT DATE: 29-MAY-2002 JN 13707A

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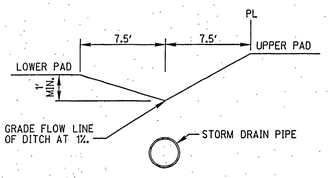
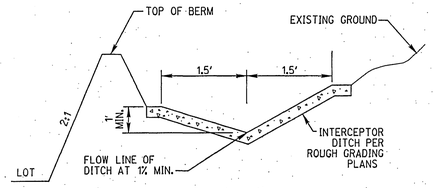
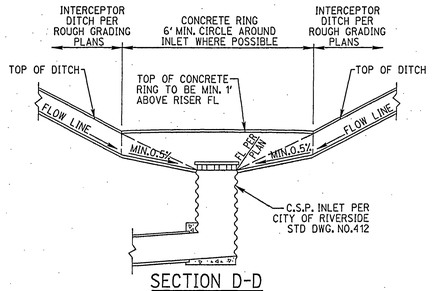


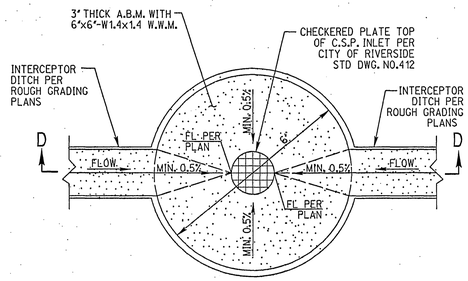
A/9 EMERGENCY OVERFLOW
N.T.S.



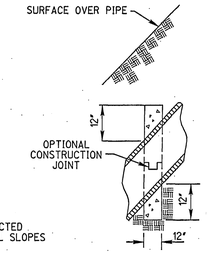
B/9 EMERGENCY OVERFLOW BERM TO PROTECT LOT
N.T.S.



SECTION D-D

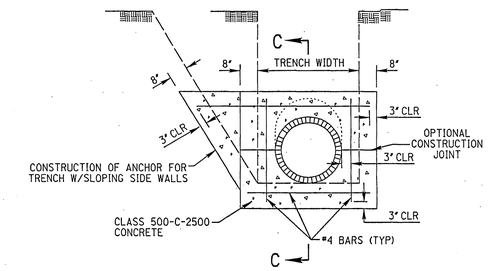


CONCRETE C.S.P. INLET RING (20)
NTS



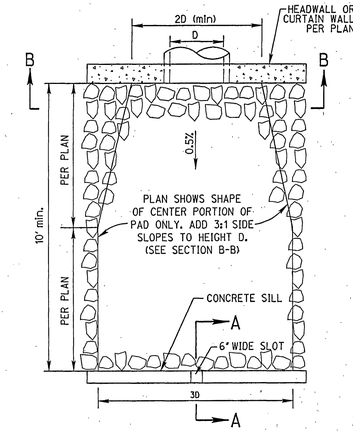
NOTE:
PIPE ANCHORS SHALL BE CONSTRUCTED AT 7' VERTICAL INTERVALS ON ALL SLOPES OF 5:1 OR STEEPER.

SECTION C-C

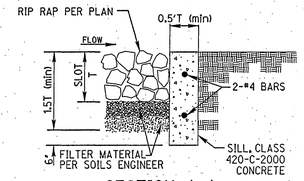


CONCRETE ANCHOR DETAIL (7)
NTS

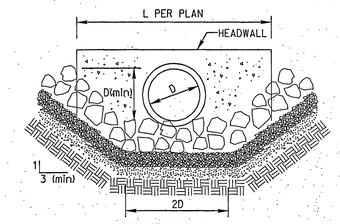
NOTE:
1. ALL PADS REQUIRE FILTER MATERIAL TO BE SPECIFIED BY SOILS ENGINEER
2. SEE CALTRANS STANDARD SPECIFICATONS 72-2 FOR GRADATION OF FACING CLASS RIPRAP, USE METHOD A PLACEMENT



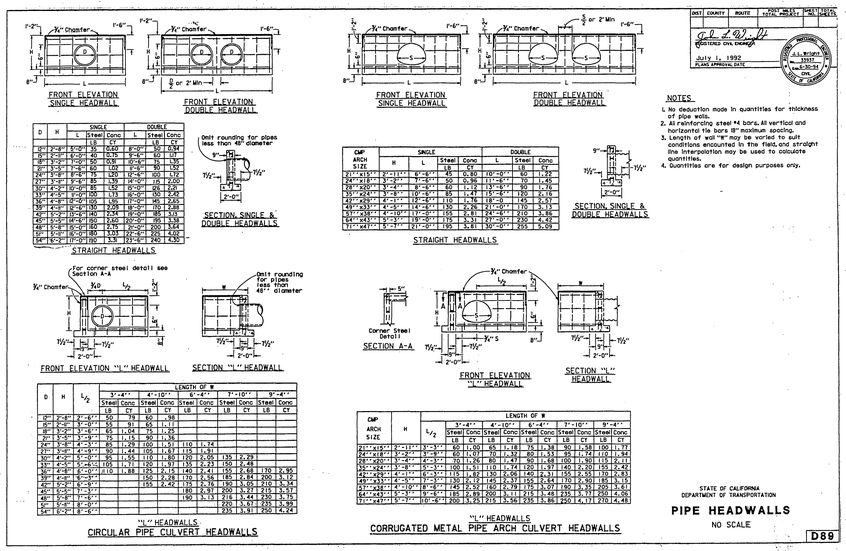
RIP RAP ENERGY DISSIPATOR DETAIL (17)
N.T.S.



SECTION A-A



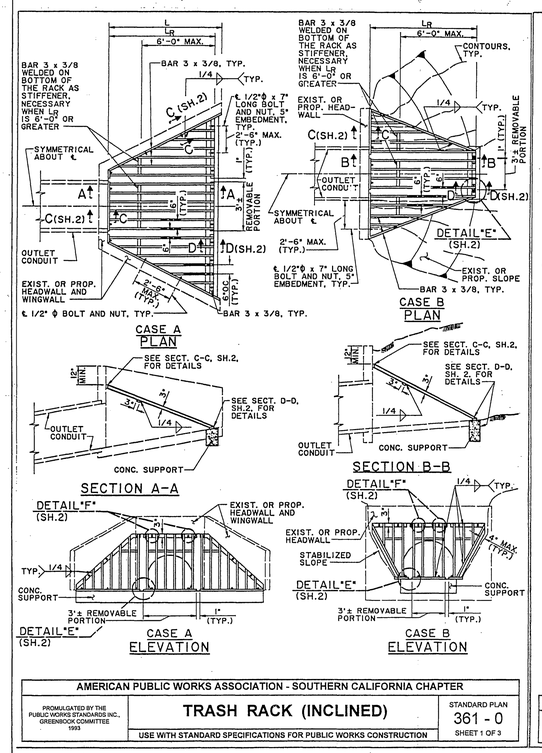
SECTION B-B



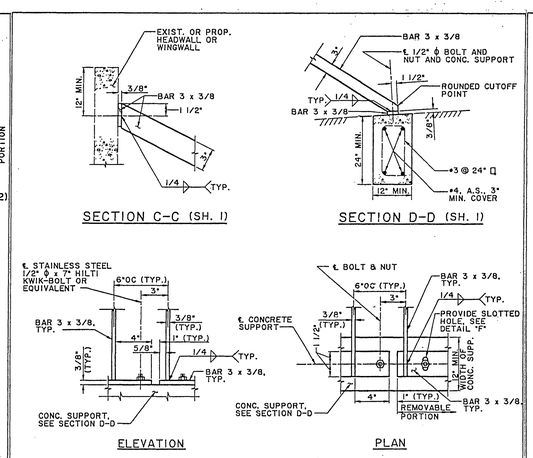
NOTES
1. No deduction made in quantities for thickness of pipe walls.
2. All reinforcing steel #4 bars, all vertical and horizontal tie bars 8" maximum spacing.
3. Length of wall "W" may be varied to suit conditions encountered in the field,and straight line interpolation may be used to calculate quantities.
4. Quantities are for design purposes only.

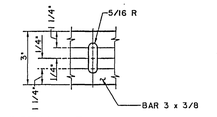
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PIPE HEADWALLS
NO SCALE
D89

PIPE HEADWALL DETAIL (3)
N.T.S.



AMERICAN PUBLIC WORKS ASSOCIATION - SOUTHERN CALIFORNIA CHAPTER
PROMULGATED BY THE PUBLIC WORKS STANDARDS INC., GREENBOOK COMMITTEE 1993
TRASH RACK (INCLINED)
USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION
STANDARD PLAN 361 - 0
SHEET 1 OF 3





DETAIL "F" (SH. 1)
APPLIES TO THE TOP AND BOTTOM BARS OF THE REMOVABLE PORTION ONLY

AMERICAN PUBLIC WORKS ASSOCIATION - SOUTHERN CALIFORNIA CHAPTER
TRASH RACK (INCLINED)
STANDARD PLAN 361 - 0
SHEET 2 OF 3

TRASH RACK DETAIL (21)
N.T.S.

NOTES

1. MAXIMUM SIZE OF OUTLET TO BE USED WITH THIS RACK IS 48" PIPE OR 48" WIDE RCB. MAXIMUM LENGTH OF RACK L_R IS 10'-0".
2. L_R CAN BE ADJUSTED SO THAT THE SLOPE OF THE RACK IS APPROXIMATELY 2 HORIZONTAL TO 1 VERTICAL.
3. THE CONCRETE SUPPORT IS NOT NECESSARY IF EXISTING OR PROPOSED INLET STRUCTURE HAS ADEQUATE SUPPORT CUTOFF WALL. IT DOES NOT ELIMINATE THE NEED FOR A CUTOFF WALL BUT CAN BE INTEGRATED WITH ONE WHEN REQUIRED AT A PARTICULAR INSTALLATION.
4. GALVANIZE ALL EXPOSED FERROUS PARTS AFTER FABRICATION.
5. IF FIELD WELDS ARE NECESSARY, USE GALVICON, GALVALLOY OR AGENCY APPROVED EQUAL FOR COATING.
6. ALL BOLTS SHALL BE 1/2" IN DIAMETER AND 7" IN LENGTH. ON REMOVABLE PORTION OF THE RACK, USE 300 SERIES STAINLESS STEEL BOLTS AND NUTS. FOR WINGWALL BOLTS FOR CASE A, AND WHERE HEADWALL AND WINGWALL ARE EXISTING, HILTI KWIK-BOLT OR EQUIVALENT CAN BE USED.

REGISTERED PROFESSIONAL ENGINEER MARTON L. ANDERSON No. 51313 Exp. 6-30-06 CIVIL STATE OF CALIFORNIA
AS-BUILT 08/22/05

AMERICAN PUBLIC WORKS ASSOCIATION - SOUTHERN CALIFORNIA CHAPTER
TRASH RACK (INCLINED)
STANDARD PLAN 361 - 0
SHEET 3 OF 3

MS3823 IP010012

SEAL
REGISTERED PROFESSIONAL ENGINEER KHALED A. OTHMAN No. 33950 Exp. 6-30-02 CIVIL STATE OF CALIFORNIA

COUNTY OF RIVERSIDE
TRANSPORTATION DEPARTMENT
APPROVAL BY THE COUNTY TRANSPORTATION DEPT. IS FOR THE AREA WITHIN COUNTY ROAD R/W ONLY
COUNTY OF RIVERSIDE — 6/4/02 DATE

DIG ALERT™
CALL BEFORE YOU DIG!
1-800-227-2600
UNDERGROUND SERVICE ALERT
Call at least 2 working days prior to excavating.

REGISTERED PROFESSIONAL ENGINEER EDWARD MICHEL RATICAN No. 46804 Exp. 6-30-03 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF EDWARD M. RATICAN 9/14/01
REGISTERED CIVIL ENGINEER NO. 46804
EXPIRATION DATE 6-30-03

RICK ENGINEERING COMPANY
San Diego Riverside Orange Phoenix Tucson
1223 University Ave., Ste. 240 • Riverside, CA 92507-3418 • (909)782-0707 • FAX (909)782-0723 • www.rickeng.com
CITY BUSINESS TAX CERTIFICATE NO. 35225 EXP. DATE 7/20/02

BENCH MARK
CITY OF RIVERSIDE BENCHMARK E8-A2, ELEVATION=1588.453' P.K. NAIL AND TAG IN TOP OF 35X50X20 FOOT GRANITE BOULDER, 100 FEET WESTERLY OF TRAUTWEIN ROAD AND 500 FEET NORTHERLY OF JESSE LANE.

MARK	REVISIONS	APPR	DATE

DESIGNED BY MLA DRAWN BY MLAG CHECKED BY EMR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		
PARK DEPARTMENT		
TRAFFIC DIVISION		
DEPUTY P.W. DIRECTOR		7/18/01
STREET SERVICES		7/18/01

APPROVED BY R. McGrath
DIRECTOR OF PUBLIC WORKS
DATE 9-18-2001

STORM DRAIN IMPROVEMENT PLANS
TRACT NO. 29242
DETAIL SHEET
SCALE HORIZ: NTS VERT: N/A
PROJECT NO. D-697
SHEET 9 OF 9
FILE NO.

INDEXED 9-4-02 LH PLOT DATE: 30-AUG-2001 JN 13707A

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