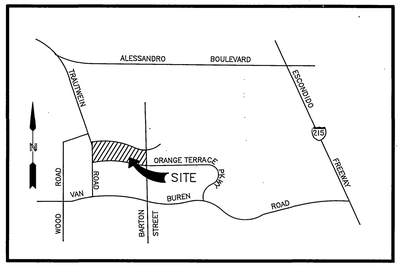
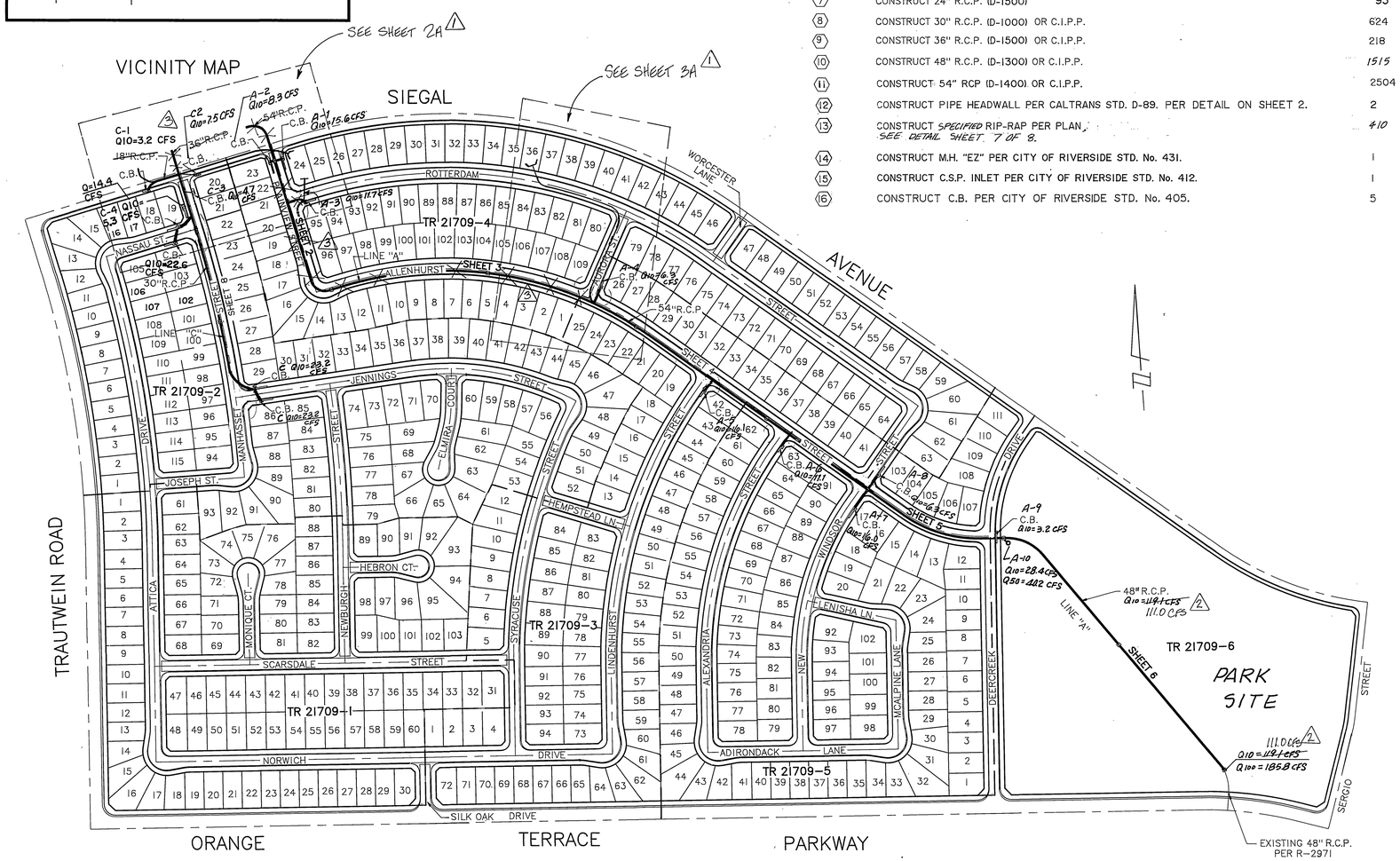
STORM DRAIN IMPROVEMENT PLANS

TRACT 21709 1–6



VICINITY MAP



INDEX MAP

SCALE 1"=200'

CONSTRUCTION NOTES

1	CONSTRUCT M.H. "AX" PER CITY OF RIV. STD. No. 430	8	EA.
2	CONSTRUCT M.H. "JM" PER CITY OF RIV. STD. NO.432	3	EA.
3	CONSTRUCT J.S. "B" PER CITY OF RIV. STD. NO.421	2	EA.
4	CONSTRUCT J.S. NO. 4 PER CITY OF RIV. STD. NO. 423	5	EA.
5	CONSTRUCT C.B. PER CITY OF RIV. STD. NO.407	12	EA.
6	CONSTRUCT 18" R.C.P. (D-2000)	536	L.F.
7	CONSTRUCT 24" R.C.P. (D-1500)	93	L.F.
8	CONSTRUCT 30" R.C.P. (D-1000) OR C.I.P.P.	624	L.F.
9	CONSTRUCT 36" R.C.P. (D-1500) OR C.I.P.P.	218	L.F.
10	CONSTRUCT 48" R.C.P. (D-1300) OR C.I.P.P.	1515	L.F.
11	CONSTRUCT 54" RCP (D-1400) OR C.I.P.P.	2504	L.F.
12	CONSTRUCT PIPE HEADWALL PER CALTRANS STD. D-89. PER DETAIL ON SHEET 2.	2	EA.
13	CONSTRUCT SPECIFIED RIP-RAP PER PLAN, SEE DETAIL SHEET 7 OF 8.	410	CY.
14	CONSTRUCT M.H. "EZ" PER CITY OF RIVERSIDE STD. No. 431.	1	EA.
15	CONSTRUCT C.S.P. INLET PER CITY OF RIVERSIDE STD. No. 412.	1	EA.
16	CONSTRUCT C.B. PER CITY OF RIVERSIDE STD. No. 405.	5	EA.

QUANTITIES

GENERAL NOTES

1. QUANTITIES SHOWN ARE FOR INFORMATION ONLY AND THE CITY OF RIVERSIDE IS NOT RESPONSIBLE FOR THEIR ACCURACY.
2. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RIVERSIDE DEPT. OF PUBLIC WORKS, STANDARD DRAWINGS, 175 SUPPLEMENTAL NOTES AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, CURRENT EDITION.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CLEAR THE RIGHT OF WAY IN ACCORDANCE WITH THE PROVISIONS OF LAW AS IT AFFECTS EACH UTILITY INCLUDING IRRIGATION LINES AND APPURTENANCES AND AT NO COST TO THE CITY.
4. NOTICE TO THE CONTRACTOR. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING 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 ON RECORD OR NOT SHOWN ON THESE PLANS.
5. 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.
6. THE CONTRACTOR SHALL CALL IN A LOCATIONS REQUEST TO UNDERGROUND SERVICE ALERT (USA), PHONE NO. 1-800-227-2600, TWO WORKING DAYS BEFORE DIGGING. NO CONSTRUCTION PERMIT WILL BE ISSUED BY THE DEPARTMENT OF PUBLIC WORKS INVOLVING EXCAVATION FOR UNDERGROUND FACILITIES UNLESS THE APPLICANT HAS BEEN PROVIDED AN INQUIRY IDENTIFICATION NUMBER BY U.S.A.
7. THE DEVELOPER SHALL BE RESPONSIBLE FOR PRESERVING OR RE-ESTABLISHING AND REFERENCING SURVEY MONUMENTS DESTROYED, DISTURBED, OR BURIED AS A RESULT OF CONSTRUCTION SHOWN HEREON.
8. ALL EMBANKMENT FILL SHALL BE COMPACTED TO 90% MAXIMUM DRY DENSITY AND SHALL BE OF AN APPROVED QUALITY.
9. ANY TRAFFIC CONTROL STRIPING OBLITERATED AND/OR BADLY WORN DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR WITHIN FIVE (5) DAYS AFTER NOTIFICATION FROM THE CITY INSPECTOR.
10. BEFORE THE RIP-RAP IS ACCEPTED AS PLACED AT THE OUTLET OF DRAINAGE STRUCTURES, IT SHALL BE TESTED UNDER FLOWS AS CLOSE AS POSSIBLE TO DESIGN CONDITIONS WITH WATER OBTAINED FROM FIRE HYDRANTS IN THE IMMEDIATE AREA.
11. ALL FLAGGED ELEVATIONS SHALL BE STAKED IN THE FIELD BY THE PRIVATE ENGINEER.
12. CONTRACTOR 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 CONTRACTOR SHALL DEFEND, INDEMNITY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
13. ALL C.I.P.P. SHALL HAVE A MINIMUM STRENGTH OF 3000 PSI.
14. DEVELOPER SHALL GIVE WESTERN MUNICIPAL WATER DISTRICT (780-4170) WRITTEN NOTICE FIVE (5) WORKING DAYS PRIOR TO START OF CONSTRUCTION AND TO ALLOW W.M.W.D. TEN (10) WORKING DAYS FOR COMPLETION OF WORK.
15. A MINIMUM COVER DEPTH OF 3.0 FT. SHOULD BE MAINTAINED IF C.I.P.P. IS TO BE USED.
16. THE CONCRETE COVER ON THE INSIDE OF ALL CONCRETE PIPE MUST BE INCREASED TO PROVIDE A MIN. OF 1.5" OVER THE REINFORCING OR 2" THICKENED INVERT FOR C.I.P.P. WHEN THE DESIGN VELOCITIES EXCEED 20 fps. THE CONCRETE DESIGN STRENGTH IN THESE REACHES SHALL BE fc=6000 psi FOR VELOCITIES EXCEEDING 30 fps.
17. 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.

EROSION CONTROL NOTES

SEE SHEET 7 OF 8

*AS-BUILT PER PLANS 10-04-05 GH

Underground Service Alert
Call: TOLL FREE
1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRIVATE ENGINEERING NOTE

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.

REGISTERED PROFESSIONAL ENGINEER — JOHN W. CANTY — No. 17550 — Exp. 6/30/01 — CIVIL — STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF: John W. Canty
EXPIRATION DATE: 6/30/01 DATE: 12/29/99

CEG CANTY ENGINEERING GROUP, INC.
CIVIL ENGINEERING - PLANNING - SURVEYING
3120 CHICAGO AVENUE, SUITE 180, P.O. BOX 52050, RIVERSIDE, CA 92517
TEL (909) 683 - 5234 FAX (909) 683 - 5301
CITY BUSINESS TAX CERTIFICATE NO. 69372 EXP. 4-7-99

SCALE AS NOTED
DATE JANUARY 1998

BENCH MARK: V.B. 10-64 ELEV. 1700.670 DATE: 1971 BRASS DISK FLUSH & MARKED V.B. 10-64, 0.6 MI. E. ON VAN BUREN BLVD. FROM CL INT. OF VAN BUREN & WOOD RD., 205' N. OF VAN BUREN @ THE N.E. SIDE OF GRANITE BOULDERS, ON TOP OF 3'x15'x18' BOULDER.

MARK	REVISIONS	APPR.	DATE
3	REVISED S.D. SYSTEM JJC	TMC	11/20/98
2	REVISED Q'S JJC	TMC	11/20/98
1	ADDED SHEETS 2A & 3A JJC	TMC	11/20/98

DESIGNED BY DD DRAWN BY DD CHECKED BY JJC

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	DATE	BY
PRINCIPAL ENGINEER	9/28/98	[illegible]
PARK DEPARTMENT	6-3-98	[illegible]
TRAFFIC DIVISION	—	—
CHIEF P.W. ENGINEER	9/25/98	TMC
STREET SERVICES	12/12/98	[illegible]

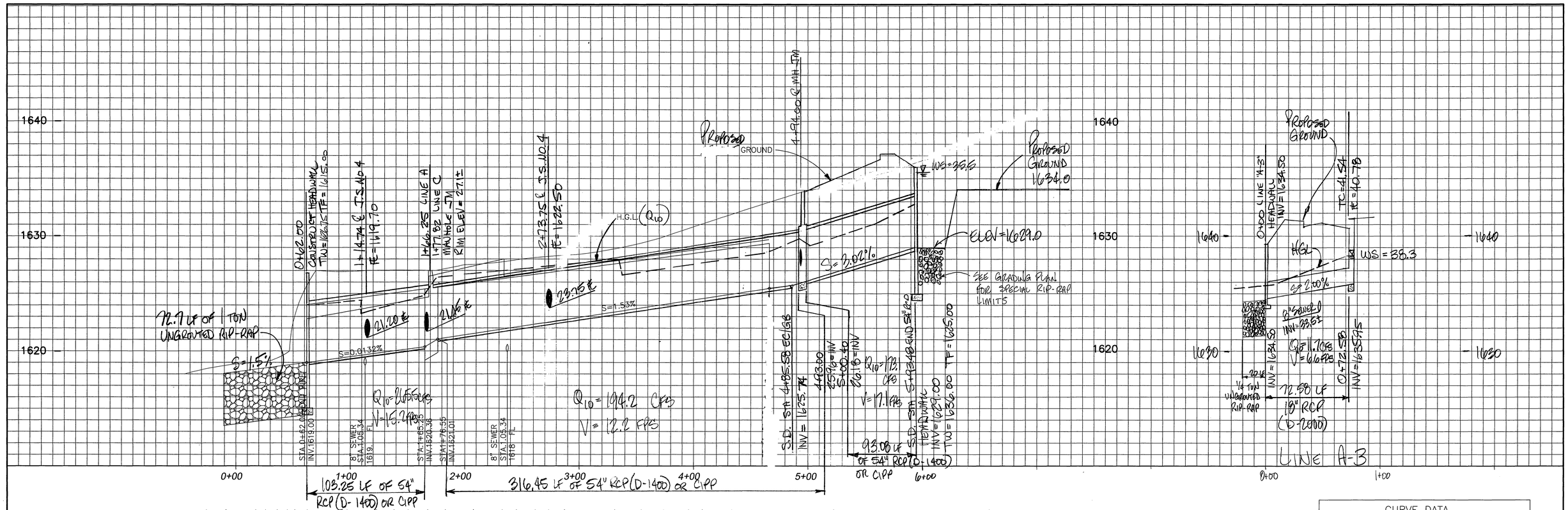
APPROVED BY R. McDowell
PUBLIC WORKS DIRECTOR
DATE 9-28-98

TRACT 21709 1–6
STORM DRAIN IMPROVEMENT PLANS
TITLE SHEET

D-581
1 OF 8 SHEETS

FOR McMillin
W.O.F.B. FILE NO. 1001-007

INDEXED 10-4-98 GH



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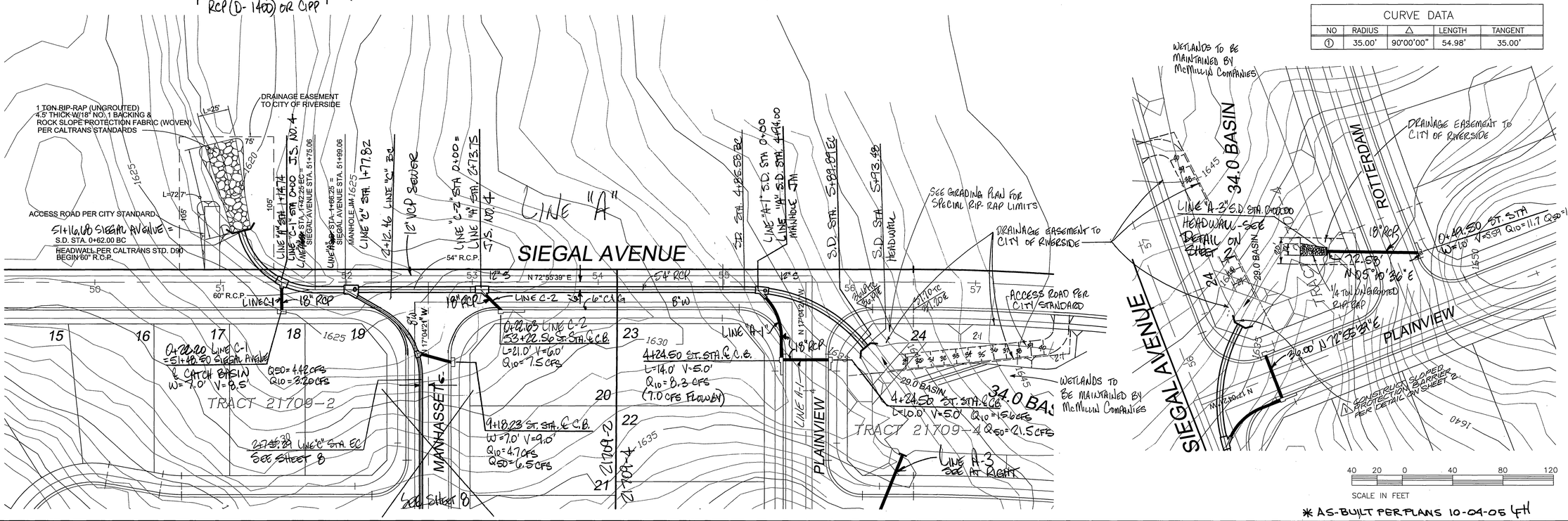

* AS-BUILT PER PLANS 10-04-05 KH

Underground Service Alert
Call: TOLL FREE 1 - 800 227 - 2600
TWO WORKING DAYS BEFORE YOU DIG

PRIVATE ENGINEERING NOTE

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REGISTERED PROFESSIONAL ENGINEER — JOHN W. CANTY No. 17550 Exp. 6-30-01 CIVIL — STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF:
REGISTERED CIVIL ENGINEER NO 17550
EXPIRATION DATE: 6-30-01 DATE: 11/4/98

CEG CANTY ENGINEERING GROUP, INC.
CIVIL ENGINEERING – PLANNING – SURVEYING
2020 IOWA AVENUE, SUITE 102, P.O. BOX 52050, RIVERSIDE, CA 92507
TEL (909) 683 – 5234 FAX (909) 683 – 5301
CITY OF RIV. BUSINESS TAX ACCT. NO. 69372 EXP. DATE 04-07-99

SCALE: 1"=40'
DATE: SEPTEMBER 1998

BENCH MARK: CITY OF RIVERSIDE "E8-4" P.K. NAIL AND TAG ON TOP OF 55 X 50' X 20' HIGH GRANITE BOULDER, 100' W'LY OF TRAUTWEIN ROAD AND 0.3 MILE N'LY OF WOOD ROAD. FB 735/74 ELEV: 1588.453

MARK	REVISIONS	APPR.	DATE
1	ADDED SLOPED PROTECTION BARRIER (NPU)		

DESIGNED BY BC DRAWN BY BC CHECKED BY JWC

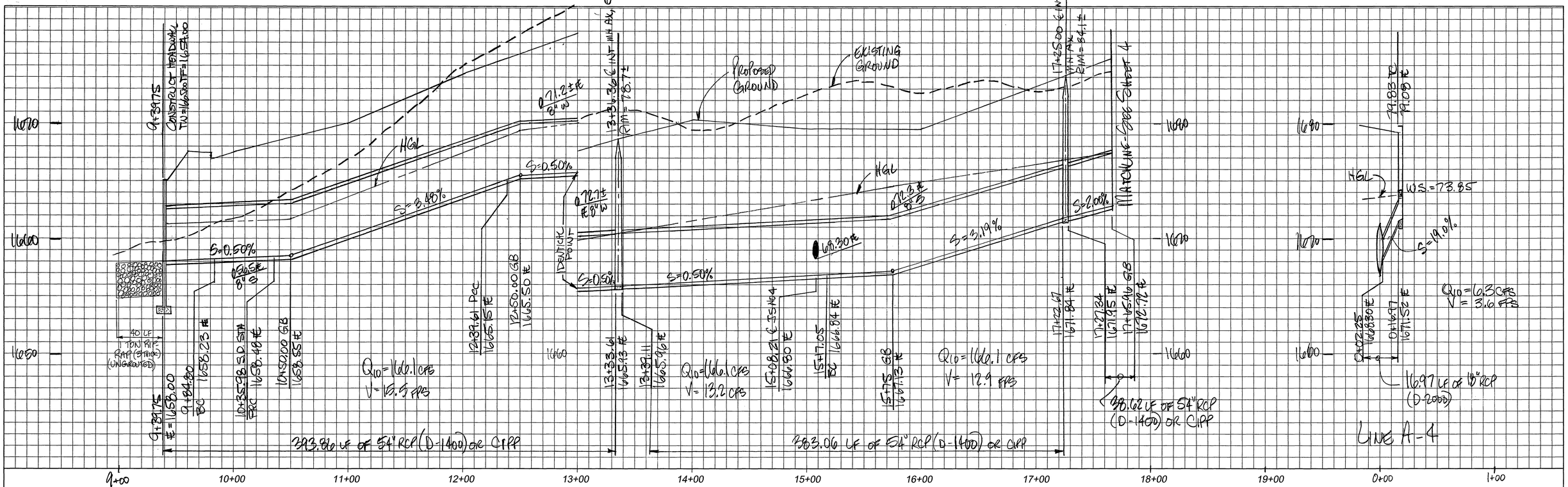
CITY OF RIVERSIDE, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

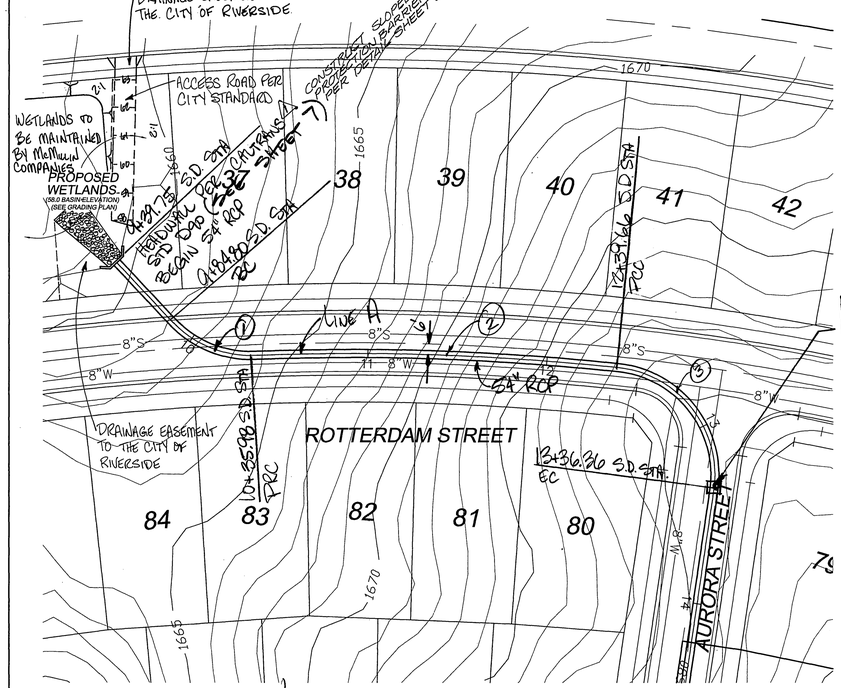
APPROVED BY	BY	DATE
PRINCIPAL ENGR.		
PARK DEPARTMENT		
TRAFFIC DIVISION		
P.W. ENGI. MANAGER		
ST. SERVICES		

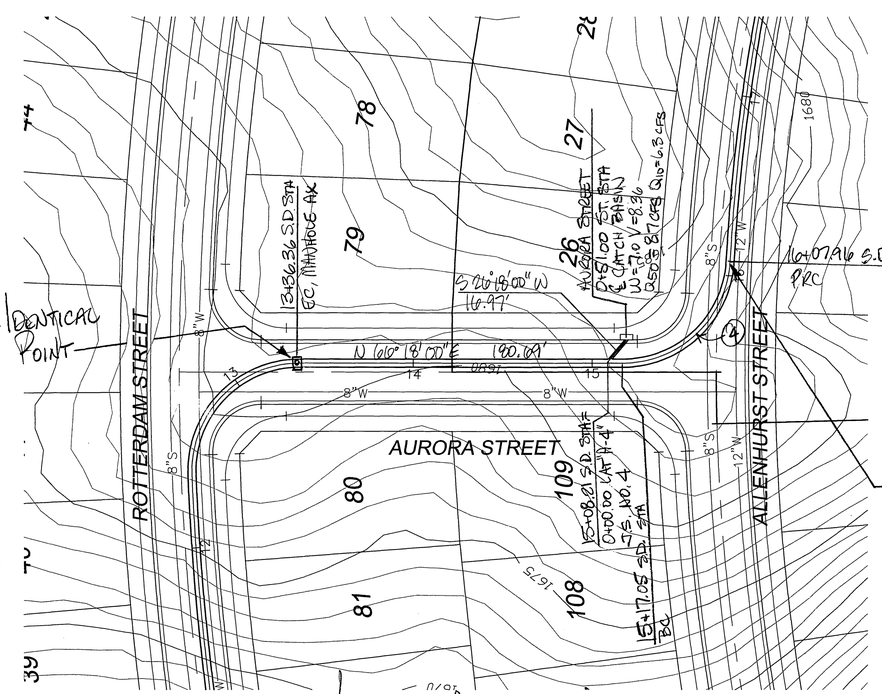
APPROVED BY R. McGrath
DIRECTOR OF PUBLIC WORKS
DATE 2-3-99

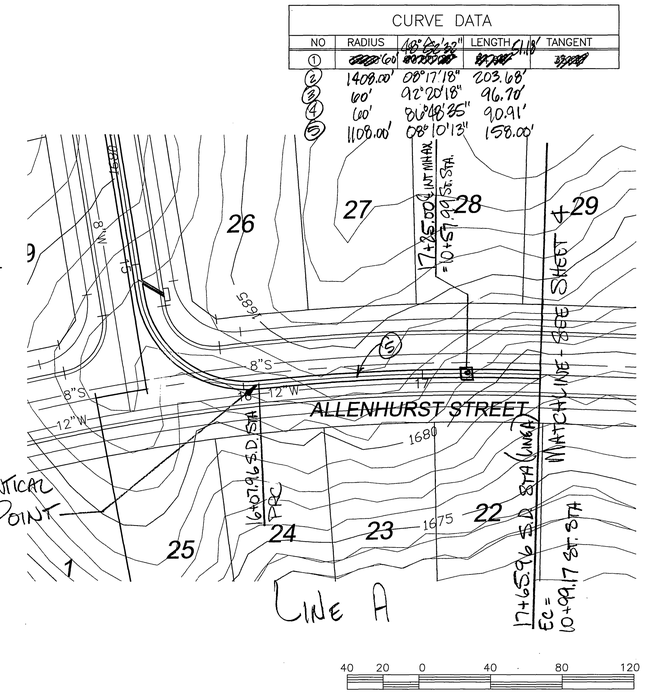
TRACT No. 21709
STORM DRAIN PLAN
LINE A - SIEGAL AVENUE
LINE A-3 - ROTTERDAM STREET
FOR: McMILLIN

PROJECT NO. D-581
SHEET 2A OF 8
FILE NO.: 1001-007









CURVE DATA

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4	60'	86°48'35"	90.91'	
5	1108.00'	08°10'13"	158.00'	

40 20 0 40 80 120
SCALE IN FEET

*AS-BUILT PER PLANS 10-04-05 LH

Underground Service Alert
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227 - 2600
TWO WORKING DAYS BEFORE YOU DIG

PRIVATE ENGINEERING NOTE

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.

REGISTERED PROFESSIONAL ENGINEER
JOHN W. CANTY
No. 17550
Exp. 6-30-01
CIVIL
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF:
REGISTERED CIVIL ENGINEER Nº 17550
EXPIRATION DATE: 6-30-01 DATE: 11/22/99

CEG CANTY ENGINEERING GROUP, INC.
CIVIL ENGINEERING – PLANNING – SURVEYING
2020 IOWA AVENUE, SUITE 102, P.O. BOX 52050, RIVERSIDE, CA 92507
TEL (909) 683 – 5234 FAX (909) 683 – 5301
CITY OF RIV. BUSINESS TAX ACCT. NO. 69372 EXP. DATE 04-07-99

SCALE: 1"=40'
DATE: SEPTEMBER 1998

BENCH MARK: CITY OF RIVERSIDE "EB-A" P.K. NAIL AND TAG ON TOP OF 35 X 50' X 20' HIGH GRANITE BOULDER, 100' W'LY OF TRAUTWEIN ROAD AND 0.3 MILE N'LY OF WOOD ROAD. FB 735/74 ELEV: 1588.453

MARK	REVISIONS	APPR.	DATE
1	ADDED SLOPED PROTECTION BARRIER	JWC	

DESIGNED BY BC DRAWN BY BC CHECKED BY JWC

CITY OF RIVERSIDE, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

APPROVED BY	BY	DATE
PRINCIPAL ENGR.	TTG	
PARK DEPARTMENT		
TRAFFIC DIVISION		
P.W. ENGL. MANAGER	TTG	2/1/99
ST. SERVICES	RK	2/1/99

APPROVED BY R. McGrath
DIRECTOR OF PUBLIC WORKS
DATE 2-2-99

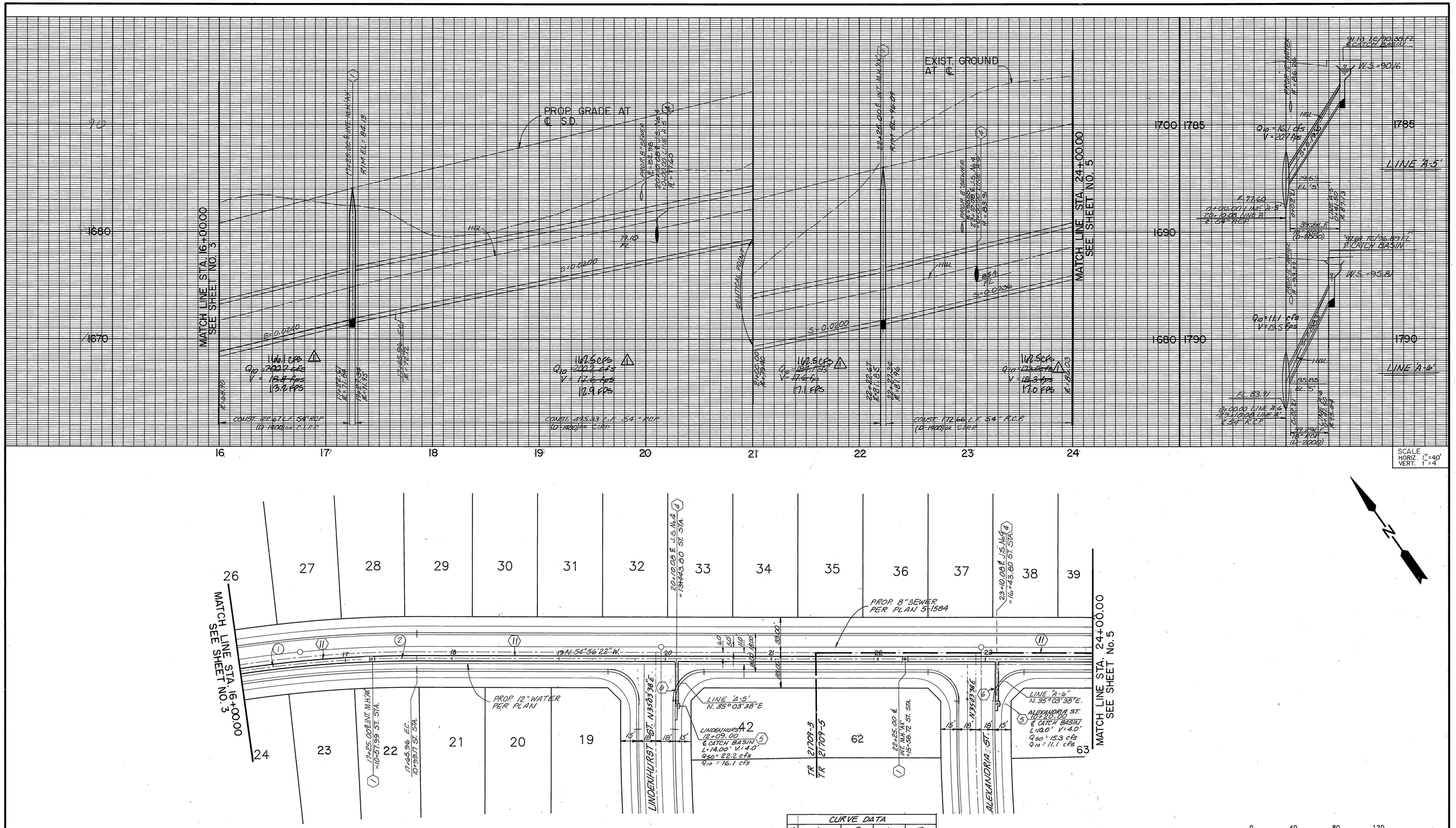
TRACT No. 21709
STORM DRAIN PLAN
LINE A - ROTTERDAM, AURORA & ALLENHURST STREET

FOR: McMILLIN

PROJECT NO. D-581

SHEET 3A OF 8

FILE NO.: 1001-007



CURVE DATA				
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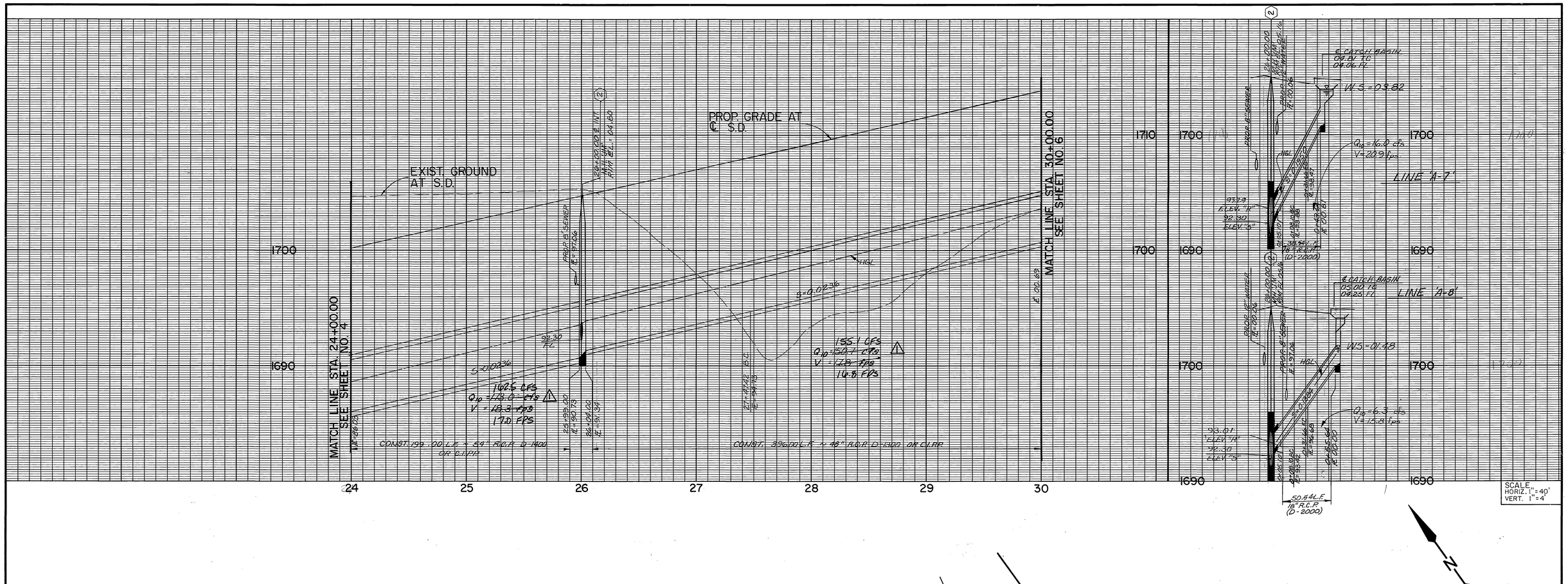
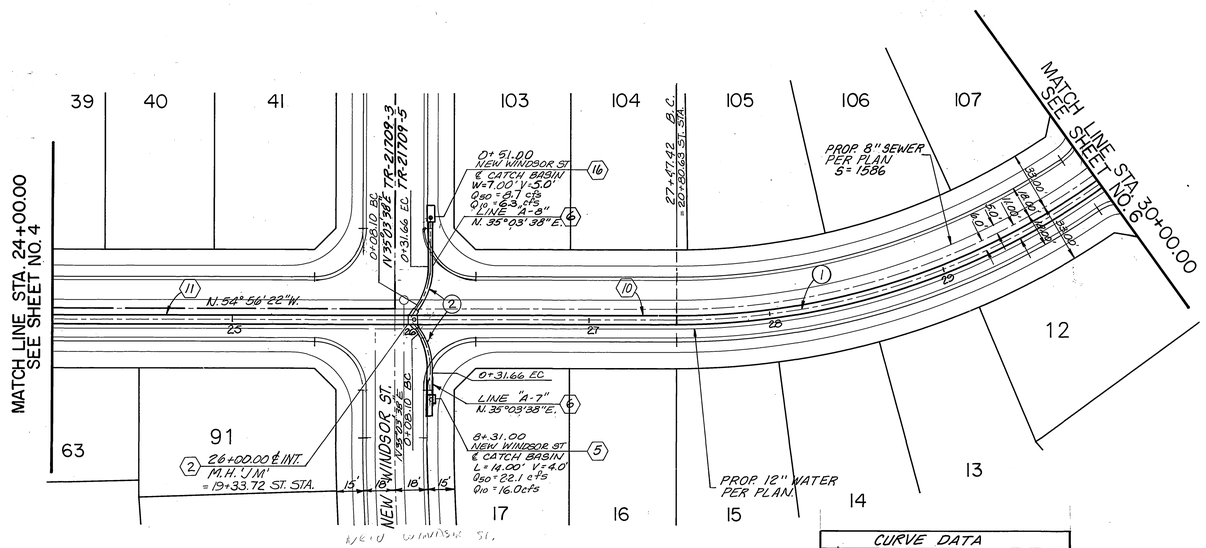
SCALE 1" = 40' (0 40 80 120 FEET)

* AS-BUILT PER PLANS 10-04-05 HH

Underground Service Alert	PRIVATE ENGINEERING NOTE		PREPARED UNDER THE DIRECTION OF:	CANTY ENGINEERING GROUP, INC.		CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT	TRACT 21709 STORM DRAIN IMPROVEMENT PLANS ALLENHURST STREET LINE 'A', 'A-5', 'A-6'	D-581 4 OF 8 SHEETS
Call: TOLL FREE 1-800-227-2600 TWO WORKING DAYS BEFORE YOU DIG	CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNITY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.	REGISTERED PROFESSIONAL ENGINEER JOHN W. CANTY No. 17550 Exp. 6/30/01 CIVIL STATE OF CALIFORNIA	REGISTERED CIVIL ENGINEER NO. 17550 EXPIRATION DATE: 6/30/01 DATE: 12/29/97	CEG 3120 CHICAGO AVENUE, SUITE 180, P.O. BOX 52050, RIVERSIDE, CA 92517 TEL (909) 683 - 5234 FAX (909) 683 - 5301	APPROVED BY / DATE / BY: PRINCIPAL ENGINEER 9/23/98 SC; PARK DEPARTMENT; TRAFFIC DIVISION; CHIEF P.W. ENGINEER JRB 9/15/98; STREET SERVICES 12/22/98	APPROVED BY K. M. Scott PUBLIC WORKS DIRECTOR DATE 9-28-98	FOR McMillin	W.O.F.B. FILE NO. 1001-007
			SCALE AS NOTED DATE JANUARY, 1998	BENCH MARK: V.B. 10-64 ELEV. 1700.670 DATE: 1971 BRASS DISK FLUSH & MARKED V.B. 10-64, 0.6 MI. E. ON VAN BUREN BLVD. FROM CL INT. OF VAN BUREN & WOOD RD., 205' N. OF VAN BUREN @ THE N.E. SIDE OF GRANITE BOULDERS, ON TOP OF 3'x15'x18' BOULDER.	MARK / REVISIONS / APPR. / DATE: 1 REVISED Q's & V's DWC JRB 12/22/98	DESIGNED BY DD DRAWN BY DD CHECKED BY JWC			

INDEXED 10-9-98 HH





M.H. "JM" 26+00.00		
	LINE "A-7"	LINE "A-8"
A	60°00'00"	60°00'00"
B	18"	18"
C'	5.10'	5.10'
D	48"	48"
D_2	54"	54"
E	4.00'	4.00'
L'	5.00'	5.00'

CURVE DATA				
NO	Δ	R	L	T
1	36°05'47"	406.00'	255.78'	132.30'
2	30°00'00"	45.00'	23.56'	12.06'

SCALE 1" = 40' (0 40 80 120 FEET)

* AS-BUILT PER PLANS 10-04-05 GH

Underground Service Alert
Call: TOLL FREE
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TWO WORKING DAYS BEFORE YOU DIG

PRIVATE ENGINEERING NOTE

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.

REGISTERED PROFESSIONAL ENGINEER JOHN W. CANTY No. 17550 Exp. 6/30/01 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF:
REGISTERED CIVIL ENGINEER NO. 17550
EXPIRATION DATE: 6/30/01 DATE: 12/28/97

CEG CANTY ENGINEERING GROUP, INC.
CIVIL ENGINEERING - PLANNING - SURVEYING
3120 CHICAGO AVENUE, SUITE 180, P.O. BOX 52050, RIVERSIDE, CA 92517
TEL (909) 683 - 5234 FAX (909) 683 - 5301

SCALE: AS NOTED
DATE: JANUARY, 1998

BENCH MARK: V.B. 10-64 ELEV. 1700.670 DATE: 1971 BRASS DISK FLUSH & MARKED V.B. 10-64, 0.6 MI. E. ON VAN BUREN BLVD. FROM CL INT. OF VAN BUREN & WOOD RD., 205' N. OF VAN BUREN ⊕ THE N.E. SIDE OF GRANITE BOULDERS, ON TOP OF 3'x15'x18' BOULDER.

MARK	REVISIONS	APPR.	DATE
1	REVISED Q's & V's/HGL	JB	12/30/98

DESIGNED BY DD DRAWN BY DD CHECKED BY JWC

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	DATE	BY
PRINCIPAL ENGINEER	9/22/98	
PARK DEPARTMENT		
TRAFFIC DIVISION		
CHIEF P.W. ENGINEER	9/25/98	
STREET SERVICES	9/29/98	

APPROVED BY R. M. Built
PUBLIC WORKS DIRECTOR
DATE 9-28-98

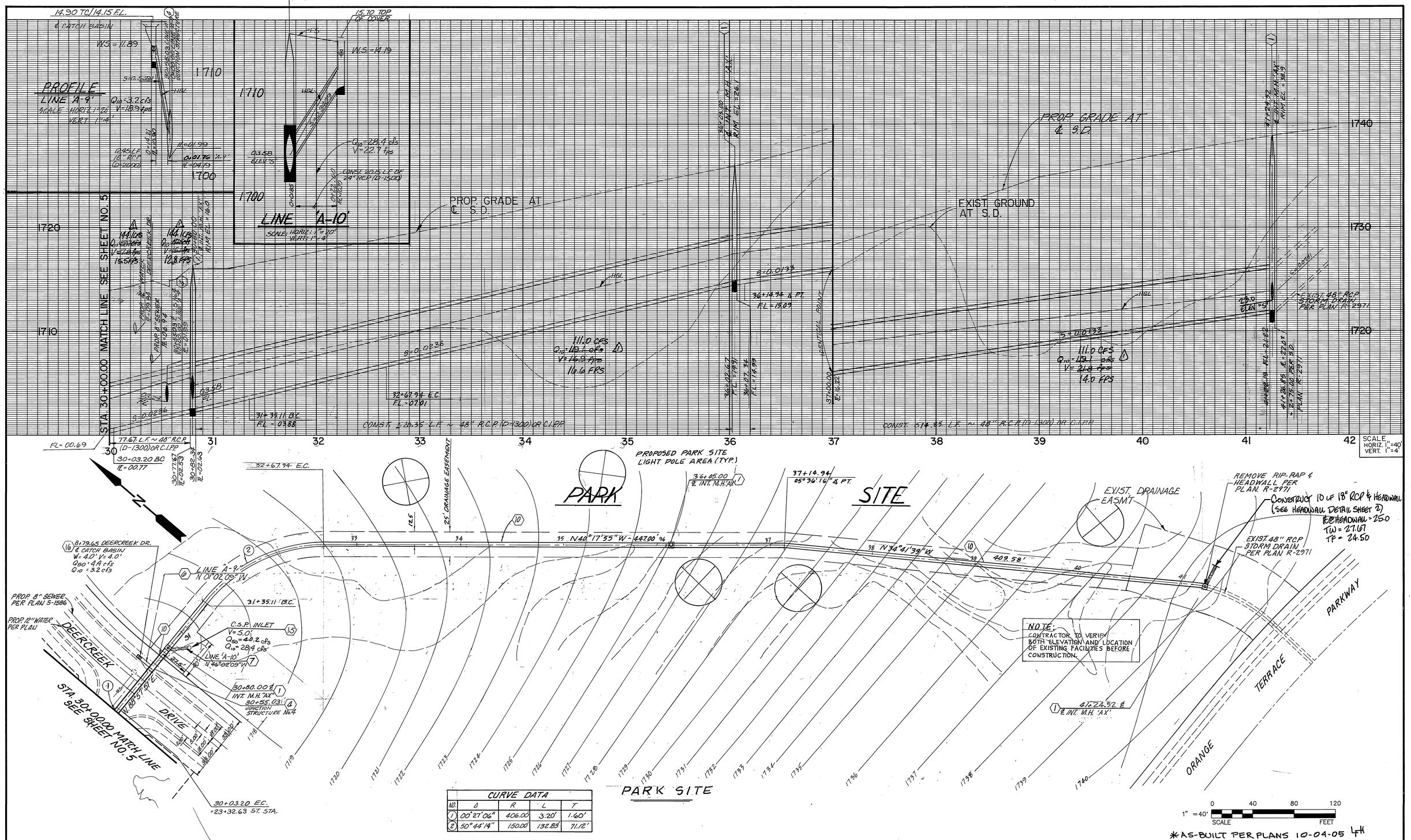
TRACT 21709
STORM DRAIN
IMPROVEMENT PLANS
ALLENHURST STREET
LINE 'A', 'A-7', 'A-8'

FOR McMillin

D-581
5 OF 8 SHEETS

W.O.F.B. FILE NO. 1001-007

INDEXED 10-9-98 GH



CURVE DATA				
NO.	Δ	R	L	T
1	00°27'06"	406.00'	3.20'	1.60'
2	50°44'14"	150.00'	132.88'	71.12'

Underground Service Alert
Call: TOLL FREE
1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRIVATE ENGINEERING NOTE

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.

REGISTERED PROFESSIONAL ENGINEER JOHN W. CANTY No. 17550 Exp. 6/30/01 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF:
REGISTERED CIVIL ENGINEER NO. 17550
EXPIRATION DATE: 6/30/01 DATE: 12/29/97

CEG CANTY ENGINEERING GROUP, INC.
CIVIL ENGINEERING - PLANNING - SURVEYING
3120 CHICAGO AVENUE, SUITE 180, P.O. BOX 52050, RIVERSIDE, CA 92517
TEL (909) 683 - 5234 FAX (909) 683 - 5301

SCALE: AS NOTED
DATE: JANUARY, 1998

BENCH MARK: V.B. 10-64 ELEV. 1700.670 DATE: 1971 BRASS DISK FLUSH & MARKED V.B. 10-64, 0.6 MI. E. ON VAN BUREN BLVD. FROM CL INT. OF VAN BUREN & WOOD RD., 205' N. OF VAN BUREN @ THE N.E. SIDE OF GRANITE BOULDERS, ON TOP OF 3'x15'x18' BOULDER.

MARK	REVISIONS	APPR.	DATE
1	REVISED Q'S & V'S	JWC	12/29/98

DESIGNED BY DD DRAWN BY DD CHECKED BY JWC

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

	APPROVED BY	DATE	BY
PRINCIPAL ENGINEER	9/28/98	
PARK DEPARTMENT	6-3-98	
TRAFFIC DIVISION		
CHIEF P.W. ENGINEER	9/25/98	
STREET SERVICES	12/22/98	

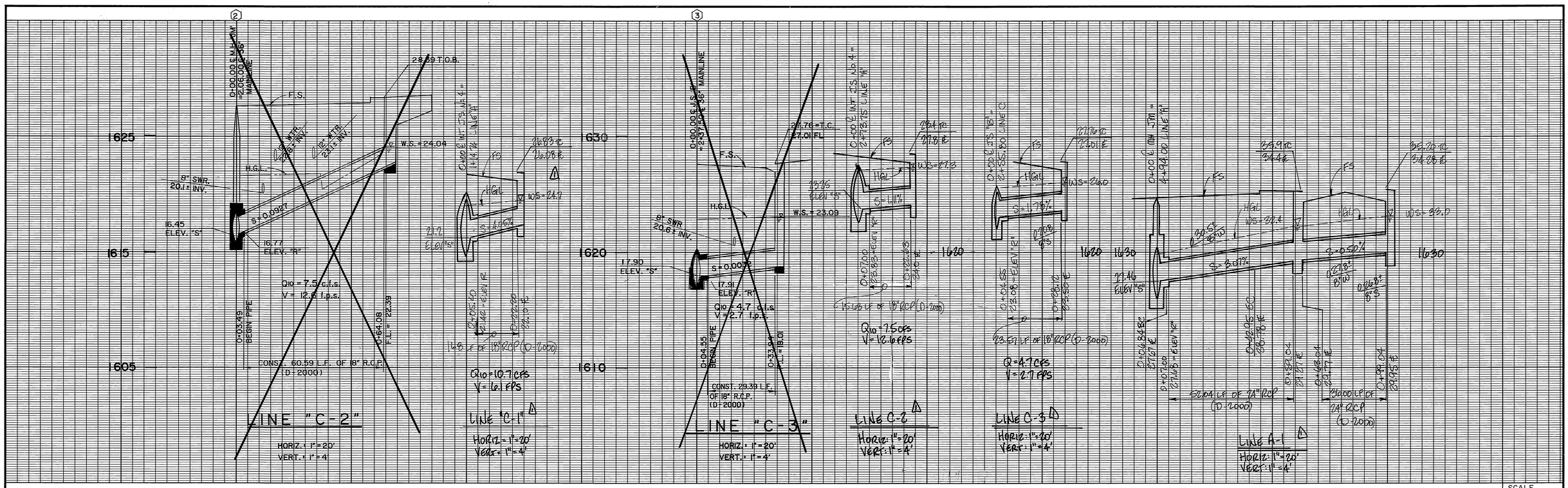
APPROVED BY R. M. Scott
PUBLIC WORKS DIRECTOR
DATE 9-28-98

TRACT 21709
STORM DRAIN IMPROVEMENT PLANS
LINE "A"
LINE "A-9", "A-10"

D-581
6
OF 8 SHEETS

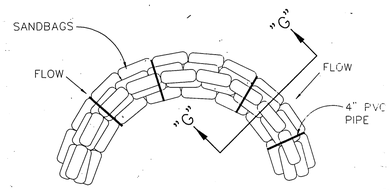
FOR McMillin
W.O.F.B. FILE NO. 1001-007

INDEXED 10-9-98 GH

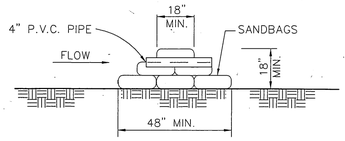


EROSION CONTROL NOTES

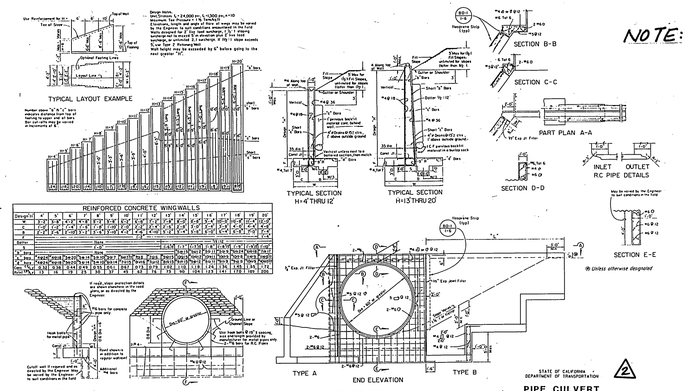
1. EROSION CONTROL SYSTEM SHALL BE INSPECTED AFTER EVERY RAINSTORM.
2. DAMAGED AND/OR DISPLACED SAND-BAGS SHALL BE REPLACED IMMEDIATELY.
3. SEDIMENT SHALL BE REMOVED FROM PONDING AREAS WHEN IT REACHES SIX INCHES IN DEPTH.
4. BURLAP SAND-BAGS SHALL NOT BE USED.
5. SAND-BAG MATERIAL SHALL BE POLYPROYLENE, POLYETHYLENE, OR POLYAMIDE WOVEN FABRIC. MINIMUM UNIT WEIGHT TO BE 4 OZ./S.Y. MULLEN BURST STRENGTH TO BE 300 P.S.I. MINIMUM. ULTRAVIOLET STABILITY SHALL EXCEED TO 70 PERCENT.
6. SAND-BAG BERM SHOWN THUS:
7. THE EROSION CONTROL MEASURES SHOWN ON THIS PLAN ARE MINIMUM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING STORM DRAIN SYSTEMS FROM SILTATION DURING CONSTRUCTION UTILIZING ADDITIONAL PROTECTION IF NECESSARY.
8. ALL REMOVABLE EROSION PROTECTIVE DEVICES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE 5 DAY RAIN PROBABILITY FORECAST EXCEEDS 40%.
9. AFTER A RAINSTORM ALL SILT AND DEBRIS SHALL BE REMOVED FROM STREETS, CHECK BERMS, AND BASINS.
10. GRADED AREAS ON THE PERMITTED AREA PERIMETER MUST DRAIN AWAY FROM THE FACE OF SLOPES AT THE CONCLUSION OF EACH WORKING DAY. DRAINAGE TO BE DIRECTED TOWARD DESTILTING FACILITIES.
11. THE PERMITTEE AND CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS CONDITION.



DETAIL "D"
SANDBAG CHECK DAM
N.T.S.



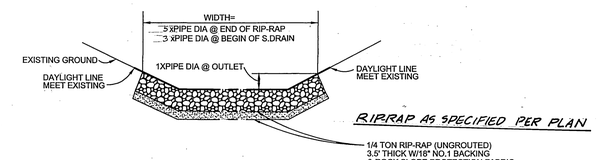
DETAIL "G"–"G"
N.T.S.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PIPE CULVERT
HEADWALLS, ENDWALLS AND WINGWALLS
TYPES A, B AND C

NO SCALE



RIPRAP AS SPECIFIED PER PLAN

1/4 TON RIP-RAP (UNGROUTED)
3.5' THICK W/18" NO.1 BACKING
& ROCK SLOPE PROTECTION FABRIC
(WOVEN) PER CALTRANS STDS.

1/2 TON RIP-RAP (UNGROUTED)
3.5' THICK W/18" NO.1 BACKING
& ROCK SLOPE PROTECTION FABRIC
(WOVEN) PER CALTRANS STDS.

1 TON RIP-RAP (UNGROUTED)
4.5' THICK W/18" NO.1 BACKING
& ROCK SLOPE PROTECTION FABRIC
(WOVEN) PER CALTRANS STDS.

2 TON RIP-RAP (UNGROUTED)
5.5' THICK W/18" NO.1 BACKING
& ROCK SLOPE PROTECTION FABRIC
(WOVEN) PER CALTRANS STDS.

TYPICAL RIP-RAP DETAIL
SECTION C-C
NOT TO SCALE
C

NOTE: GROUT RIP-RAP 20 L.F. FROM OUTLET HEADWALL (1/3 EXPOSED, 2/3 EMBEDDED)

1" = 40'
0 40 80 120
SCALE FEET

* AS-BUILT PER PLANS 10-04-05 GH

Underground Service Alert
Call: TOLL FREE
1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRIVATE ENGINEERING NOTE

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REGISTERED PROFESSIONAL ENGINEER
JOHN W. CANTY
No. 17550
Exp. 6/30/99
CIVIL
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF:
REGISTERED CIVIL ENGINEER NO. 17550
EXPIRATION DATE: 6/30/01 DATE: 12/21/97

CEG CANTY ENGINEERING GROUP, INC.
CIVIL ENGINEERING - PLANNING - SURVEYING
3120 CHICAGO AVENUE, SUITE 180, P.O. BOX 52050, RIVERSIDE, CA 92517
TEL (909) 683 - 5234 FAX (909) 683 - 5301

SCALE AS NOTED
DATE JANUARY, 1998

BENCH MARK: V.B. 10-64 ELEV. 1700.670 DATE: 1971 BRASS DISK FLUSH & MARKED V.B. 10-64, 0.6 MI. E. ON VAN BUREN BLVD. FROM CL INT. OF VAN BUREN & WOOD RD., 205' N. OF VAN BUREN @ THE N.E. SIDE OF GRANITE BOULDERS, ON TOP OF 3'x15'x18' BOULDER.

MARK	REVISIONS	APPR.	DATE
2	ADDED HEADWALL DETAIL	TRG	6/24/98
1	REVISED PROFILES	TRG	6/24/98

DESIGNED BY DD DRAWN BY DD CHECKED BY JWC

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

	APPROVED BY	DATE	BY
PRINCIPAL ENGINEER		9/23/98	
PARK DEPARTMENT			
TRAFFIC DIVISION			
CHIEF P.W. ENGINEER		9/25/98	
STREET SERVICES		10/21/98	

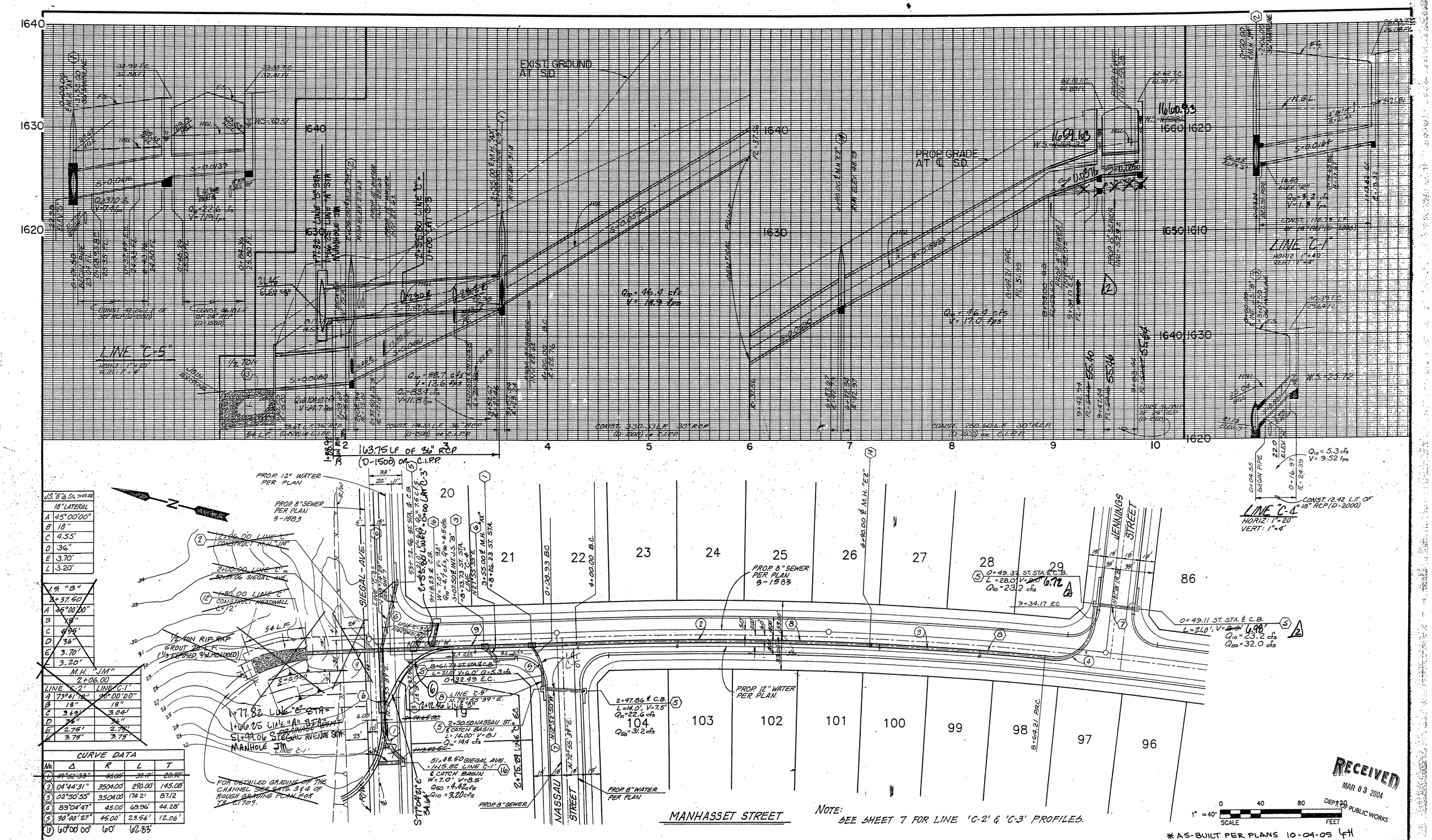
APPROVED BY R. McDuffie
PUBLIC WORKS DIRECTOR
DATE 9-28-98

TRACT 21709
STORM DRAIN
IMPROVEMENT PLANS
LINE "C-2" & "C-3" PROFILES

D-581
7
OF 8 SHEETS

FOR McMillin
W.O.F.B. FILE NO. 1001-002

INDEXED 10-9-98 GH



J.S. "B" Sta. 3+07.50	
18" LATERAL	
A	45°00'00"
B	18"
C	4.55'
D	36"
E	3.70'
L	3.20'

J.S. "B"	
2+37.50	
A	45°00'00"
B	18"
C	4.55'
D	36"
E	3.70'
L	3.20'

M.H. "JM" 2+06.00		
LINE	"C-2"	"C-1"
A	73°41'10"	90°00'00"
B	18"	18"
C	3.49'	3.04'
D	36"	36"
E	2.75'	2.75'
L	3.75'	3.75'

CURVE DATA

No.	Δ	R	L	T
1	49°52'33"	45.00'	39.17'	20.92'
2	04°44'31"	3504.00'	290.00'	145.08'
3	02°50'55"	3504.00'	174.2'	87.12
4	89°04'47"	45.00'	69.96'	44.28'
5	30°00'27"	45.00'	23.56'	12.06'
6	60°00'00"	60'	62.83'	

NOTE: SEE SHEET 7 FOR LINE 'C-2' & 'C-3' PROFILES.

RECEIVED MAR 03 2004 DEPT. OF PUBLIC WORKS

1" = 40' SCALE 0 40 80 FEET

* AS-BUILT PER PLANS 10-04-05 LH

Underground Service Alert

Call: TOLL FREE

1-800-227-2600

TWO WORKING DAYS BEFORE YOU DIG

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PREPARED UNDER THE DIRECTION OF: [signature]

REGISTERED CIVIL ENGINEER NO. 17550

EXPIRATION DATE: 6/30/01 DATE: 12/29/97

CBG CANTY ENGINEERING GROUP, INC.
CIVIL ENGINEERING - PLANNING - SURVEYING
3120 CHICAGO AVENUE, SUITE 180, P.O. BOX 52050, RIVERSIDE, CA 92517
TEL (909) 683 - 5234 FAX (909) 683 - 5301

SCALE AS NOTED

DATE JANUARY, 1998

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MARK	REVISIONS	APPR.	DATE
2	REVISED PROFILE @ JENNINGS		
1	REVISED MAINLINE LOCATION	TAB	12/30/98

DESIGNED BY DD DRAWN BY BD CHECKED BY JWC

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	DATE	BY
PRINCIPAL ENGINEER	7/22/98	
PARK DEPARTMENT		
TRAFFIC DIVISION		
CHIEF P.W. ENGINEER	9/25/98	TAB
STREET SERVICES	12/21/98	

APPROVED BY R. McGrath

9-28-98

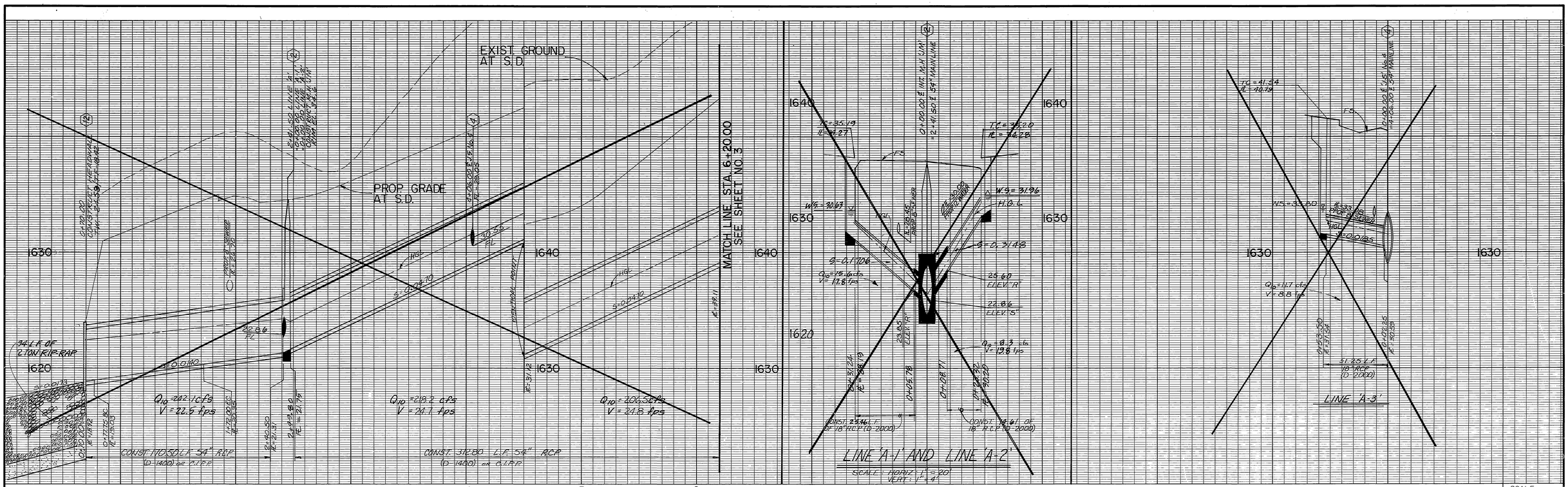
TRACT 21709
STORM DRAIN
IMPROVEMENT PLANS
MANHASSET STREET
LINE 'C', 'C-1', 'C-2', 'C-3', 'C-4', 'C-5'

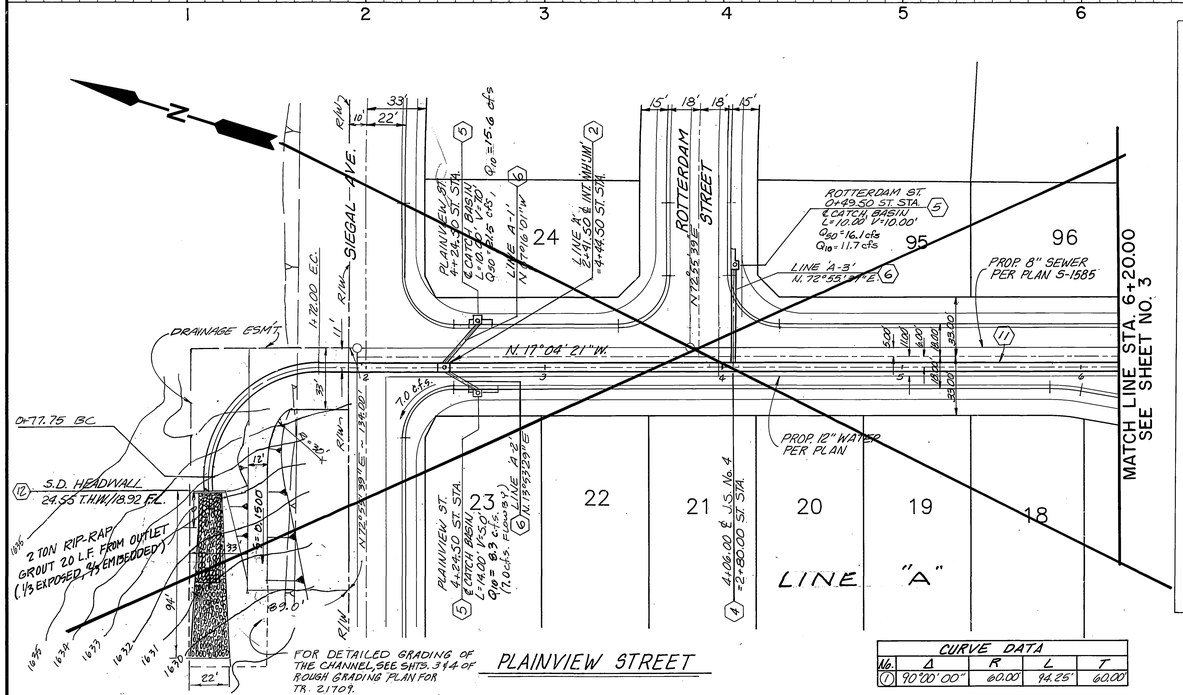
D-581
8
OF 8 SHEETS

FOR McMillin

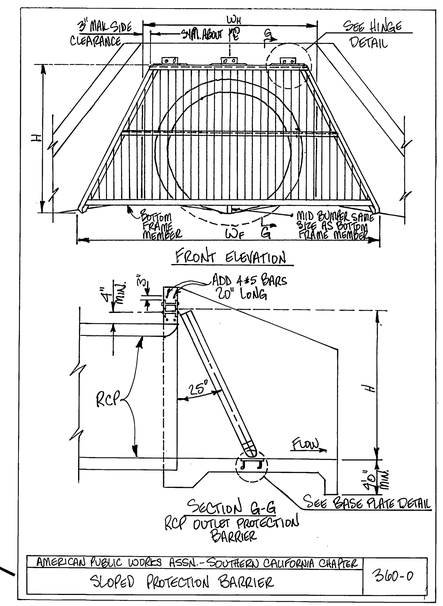
W.O.F.B. FILE NO. 1001-007

INDEXED 10-9-98 LH

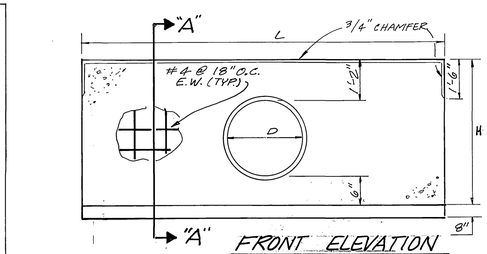


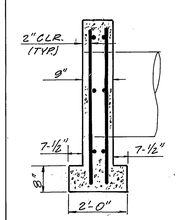


CURVE DATA				
No.	Δ	R	L	T
1	90°00'00"	60.00'	94.25'	60.00'



AMERICAN PUBLIC WORKS ASSN.-SOUTHERN CALIFORNIA CHAPTER
SLOPED PROTECTION BARRIER 360-0





S.D.	STA.	D	H	L
LINE A	0+70.00	54"	6'-2"	17'-0"
LINE C	1+30.00	36"	4'-8"	12'-0"
LINE A3	0+00	18"	3'-2"	7'-0"

PIPE HEADWALL DETAILS

N.T.S.

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

1" = 40' SCALE 0 40 80 120 FEET

*AS-BUILT PER PLANS 10-04-06 LH

Underground Service Alert
Call: TOLL FREE
1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRIVATE ENGINEERING NOTE

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REGISTERED PROFESSIONAL ENGINEER — DAVID W. CANTY — No. 17550 — Exp. 6/30/01 — CIVIL — STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF:
REGISTERED CIVIL ENGINEER NO. 17550
EXPIRATION DATE: 6/30/01 DATE: 12/29/97

CEG CANTY ENGINEERING GROUP, INC.
CIVIL ENGINEERING - PLANNING - SURVEYING
3120 CHICAGO AVENUE, SUITE 180, P.O. BOX 52050, RIVERSIDE, CA 92517
TEL (909) 683 - 5234 FAX (909) 683 - 5301

SCALE AS NOTED
DATE JANUARY 1998

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MARK	REVISIONS	APPR.	DATE
2	ADDED DETAIL SLOPED PROTECTION BARRIER	JWC	
1	ADDED SHEETS 2A & 3A	TPG	12/29/98

DESIGNED BY DD DRAWN BY DD CHECKED BY JWC

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	DATE	BY
PRINCIPAL ENGINEER	9/21/98	
PARK DEPARTMENT		
TRAFFIC DIVISION		
CHIEF P.W. ENGINEER	9/25/98	DRC
STREET SERVICES	12/22/98	RR

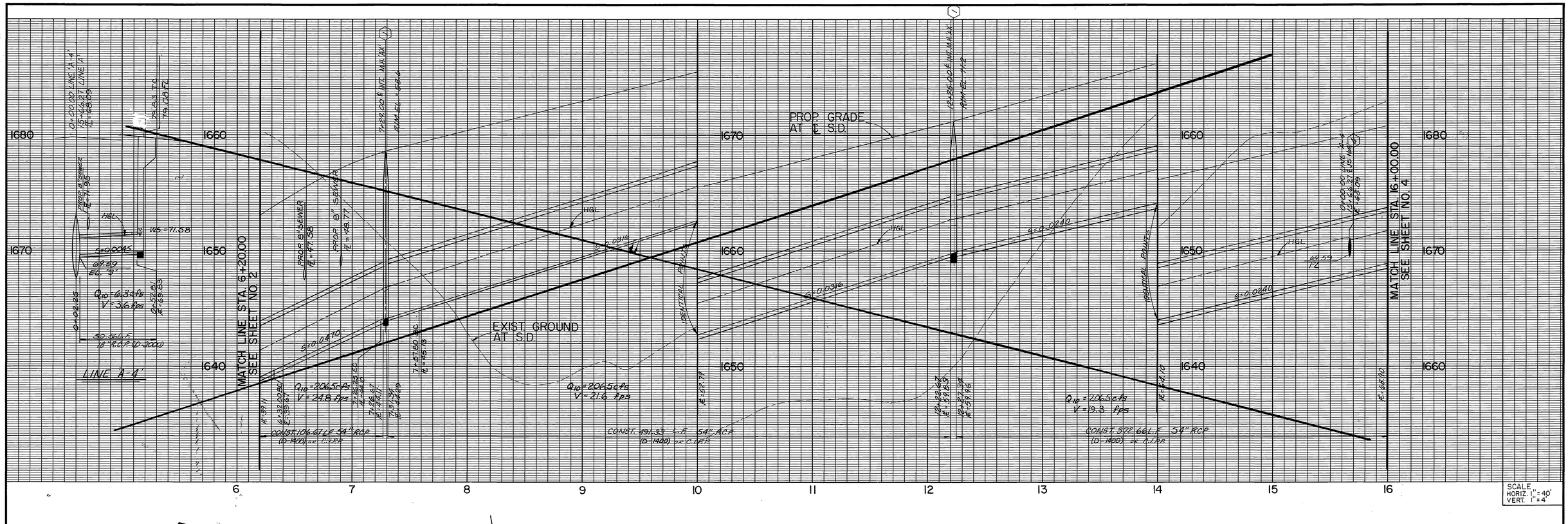
APPROVED BY R. M. Scott
PUBLIC WORKS DIRECTOR
DATE 9-28-98

TRACT 21709
STORM DRAIN IMPROVEMENT PLANS
PLAINVIEW STREET
LINE 'A', 'A-1', 'A-2', 'A-3'

D-581
2
OF 8 SHEETS

FOR McMillin
W.O.F.B. FILE NO. 1001-007

INDEXED 10-9-98 LH


PROP. GRADE AT ℄ S.D.
EXIST. GROUND AT S.D.
MATCH LINE STA. 6+20.00 SEE SHEET NO. 2
MATCH LINE STA. 16+00.00 SEE SHEET NO. 4
LINE 'A-4'
Q10 = 20.6 cfs V = 3.6 fps
Q10 = 206.5 cfs V = 24.8 fps
Q10 = 206.5 cfs V = 21.6 fps
Q10 = 206.5 cfs V = 19.3 fps
CONST. 106.61' L.F. 54" RCP (D-1900) OR C.I.P.P.
CONST. 491.33' L.F. 54" RCP (D-1900) OR C.I.P.P.
CONST. 372.66' L.F. 54" RCP (D-1900) OR C.I.P.P.
PROP. 8" SEWER
PROP. 8" SEWER
PROP. 8" SEWER
PROP. 12" WATER
PROP. 8" SEWER
PROP. 8" SEWER
PROP. 8" SEW