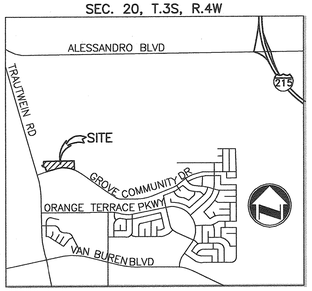
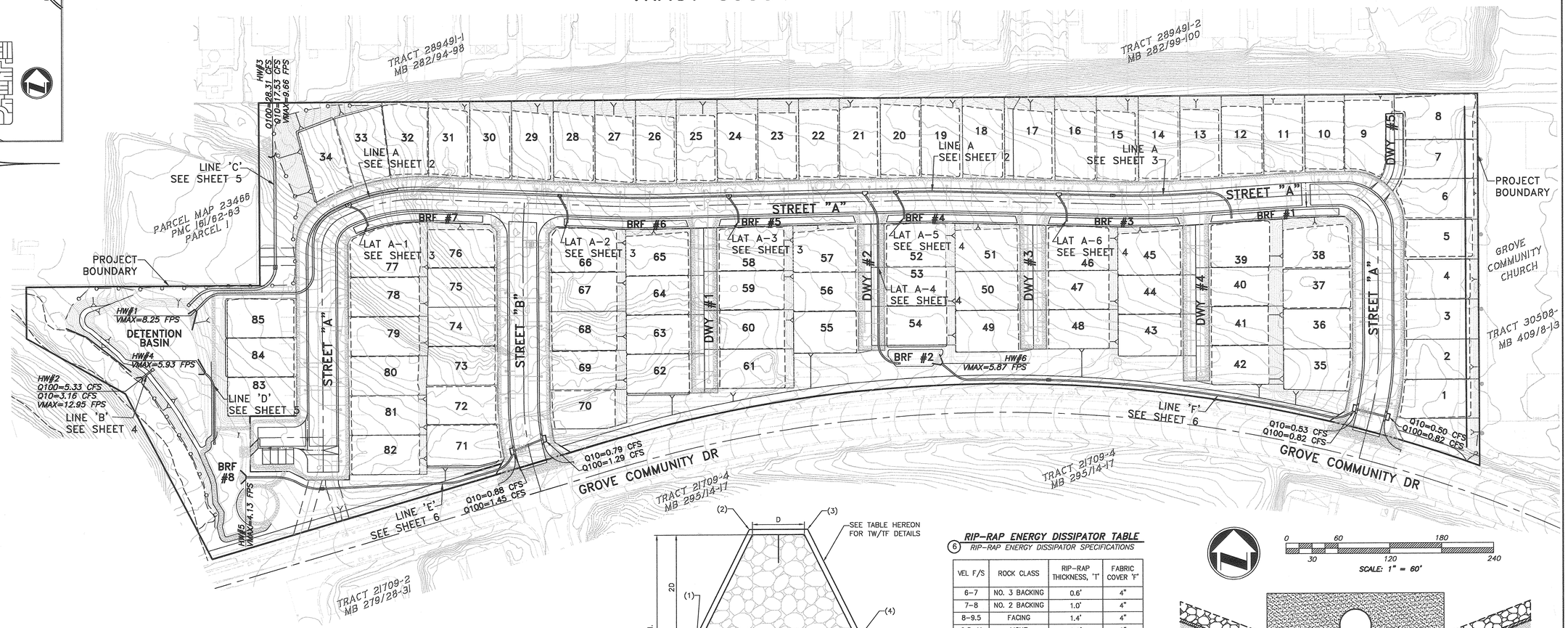
IN THE CITY OF RIVERSIDE, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

# PRIVATE STORM DRAIN IMPROVEMENT PLANS
## ORANGECREST
## TRACT 39534

SEC. 20, T.3S, R.4W




VICINITY MAP
(N.T.S.)




### OWNER /APPLICANT

RIDGE CREST CARDINAL – RIVERSIDE, LP
353 E. ANGELENO AVE, SUITE A
BURBANK, CA 91502
TEL: (323) 450-2334

### ENGINEER

adkan ENGINEERS
6879 AIRPORT DRIVE
RIVERSIDE, CA 92504
TEL: 951-688-0241
FAX: 951-688-0599

### SOILS ENGINEER

LGC GEO-ENVIRONMENTAL, INC.
27570 COMMERCE CENTER DR., #128
TEMECULA, CA 92590
PHONE (951) 297-2450

### ZONING/LAND USE

| | |
|---|---|
| EXISTING LAND USE: | VACANT |
| PROPOSED LAND USE: | PLANNED RESIDENTIAL DEVELOP. |
| EXISTING ZONING: | R-1-8500 |
| PROPOSED ZONING: | R-1-8500 |

### UTILITY PURVEYORS

| | |
|---|---|
| WATER: | WESTERN MUNICIPAL WATER DISTRICT |
| SEWER: | CITY OF RIVERSIDE |
| GAS: | SOUTHERN CALIFORNIA GAS COMPANY |
| ELECTRICITY: | CITY OF RIVERSIDE |

### ASSESSORS PARCEL NUMBERS

284-140-014, 284-140-018

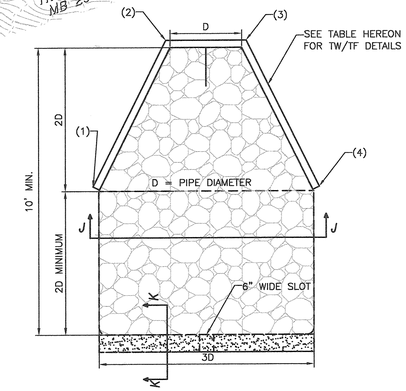
### STORM DRAIN GENERAL NOTES:

1. NO PERSON SHALL PERFORM ANY CONSTRUCTION ACTIVITY OR INSTALL ANY OBJECTS WITHIN THE PUBLIC RIGHT-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. 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.
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. 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.
5. QUANTITIES SHOWN ARE FOR INFORMATION ONLY AND THE CITY OF RIVERSIDE IS NOT RESPONSIBLE FOR THEIR ACCURACY.
6. THE DEVELOPER SHALL BE RESPONSIBLE FOR PRESERVING OR REESTABLISHING AND REFERENCING SURVEY MONUMENTS DESTROYED, DISTURBED OR BURIED AS A RESULT OF CONSTRUCTION SHOWN HEREON.
7. THE CONTRACTOR SHALL COORDINATE TRENCHING FOR CABLE TELEVISION WITH OTHER TRENCHING WITHIN THE PROJECT.
8. ALL FLAGGED ELEVATIONS SHALL BE STAKED IN THE FIELD BY THE PRIVATE ENGINEER.
9. THE CONTRACTOR SHALL CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (USA), PHONE # 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.
10. BEFORE THE RIP-RAP AT THE OUTLET OF ANY DRAINAGE STRUCTURE IS ACCEPTED BY THE CITY, IT SHALL BE TESTED UNDER FLOWS AS CLOSE AS POSSIBLE TO DESIGN CONDITIONED WITH WATER OBTAINED FROM FIRE HYDRANTS IN THE IMMEDIATE AREA.

### CONSTRUCTION NOTES AND QUANTITY ESTIMATE

THE QUANTITIES SHOWN BELOW ARE FOR BONDING INFORMATION ONLY. THE CONTRACTOR IS TO CONSTRUCT PROJECT PER THESE PLANS AND SUBMIT CONSTRUCTION BID BASED ON THEIR OWN QUANTITY "TAKE-OFF".

| | | | |
|---|---|---|---|
| 1 | INSTALL 15" DIA. R.C.P. WITH BEDDING CASE NO. III PER CITY OF RIVERSIDE STD. NO 452 (D LOAD PER PLAN) | 154 | LF |
| 2 | INSTALL 18" DIA. R.C.P. WITH BEDDING CASE NO. III PER CITY OF RIVERSIDE STD. NO 452 (D LOAD PER PLAN) | 1,950 | LF |
| 3 | INSTALL 24" DIA. R.C.P. WITH BEDDING CASE NO. III PER CITY OF RIVERSIDE STD. NO 452 (D LOAD PER PLAN) | 495 | LF |
| 4 | INSTALL 30" DIA. R.C.P. WITH BEDDING CASE NO. III PER CITY OF RIVERSIDE STD. NO 452 (D LOAD PER PLAN) | 245 | LF |
| 5 | CONSTRUCT 7' CATCH BASIN PER CITY OF RIVERSIDE STD. NO. 400 (TYPE I) | 4 | EA |
| 6 | INSTALL RIP-RAP PAD SEE DETAILS HEREON | 16 | CY |
| 7 | CONSTRUCT HEADWALL PER CALTRANS STD. D-89 SEE DETAILS HEREON | 104 | LF |
| 8 | CONSTRUCT MANHOLE EZ PER CITY OF RIVERSIDE STD. NO. 431 | 7 | EA |
| 9 | CONSTRUCT MANHOLE JM PER CITY OF RIVERSIDE STD. NO. 432 | 1 | EA |
| 10 | CONSTRUCT JUNCTION STRUCTURE B PER CITY OF RIVERSIDE STD. NO. 421 SEE SHEET 6 FOR DETAIL | 2 | EA |
| 11 | INSTALL 18"X18" BROOKS BOX WITH KNOCK OUT TO CONNECT TO STORM DRAIN MAIN LINE. DEPTH CALLED OUT PER PROFILES. CONNECT PERFORATED PIPES AS NEEDED FOR STORM TREATMENT DISCHARGE WITHIN BMP AREAS. INVERT CALLED OUT PER PROFILES. | 7 | EA |
| 12 | CONSTRUCT MODIFIED CB 110 PER DETAILS ON SHEET 5 | 2 | EA |
| 13 | INSTALL 2'X2' BROOKS BOX WITH KNOCK OUT TO CONNECT TO STORM DRAIN MAIN LINE. DEPTH CALLED OUT PER PROFILES. CONNECT PERFORATED PIPES AS NEEDED FOR STORM TREATMENT DISCHARGE WITHIN BMP AREAS. INVERT CALLED OUT PER PROFILES. | 1 | EA |




6 RIP-RAP DETAIL
RIP-RAP ENERGY DISSIPATOR DETAIL (TYPICAL)
N.T.S.

6 RIP-RAP CALCULATION TABLE

| | HW #1 | HW #2 | HW #3 | HW #4 | HW #5 | HW #6 |
|---|---|---|---|---|---|---|
| D | 2' | 1.5' | 2.5' | 1.5' | 1.5' | 1.5' |
| 2 D | 4' | 3' | 5' | 3' | 3' | 3' |
| 3 D | 6' | 4.5' | 7.5' | 4.5' | 4.5' | 4.5' |
| 10-2D | 6' | 7' | 5' | 7' | 7' | 7' |
| A | 52 SF | 40.5 SF | 62.5 SF | 40.5 SF | 40.5 SF | 40.5 SF |
| T | 1.4' | 3.4' | 2' | 0.6' | 0.6' | 0.6' |
| VOL. | 2.70 CY | 5.10 CY | 4.63 CY | 0.90 CY | 0.90 CY | 0.90 CY |

6 RIP-RAP ENERGY DISSIPATOR TABLE
RIP-RAP ENERGY DISSIPATOR SPECIFICATIONS

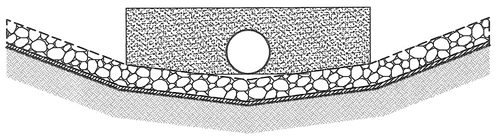
| VEL F/S | ROCK CLASS | RIP-RAP THICKNESS, 'T' | FABRIC COVER 'F' |
|---|---|---|---|
| 6-7 | NO. 3 BACKING | 0.6' | 4" |
| 7-8 | NO. 2 BACKING | 1.0' | 4" |
| 8-9.5 | FACING | 1.4' | 4" |
| 9.5-11 | LIGHT | 2.0' | 6" |
| 11-13 | 1/4 TON | 2.7' | 6" |
| 13-15 | 1/2 TON | 3.4' | 8" |
| 15-17 | 1 TON | 4.3' | 8" |
| 17-20 | 2 TON | 5.4' | 10" |

RIP-RAP ENERGY DISSIPATER NOTES:
1. PLAN SHALL SPECIFY:
   1.1. ROCK CLASS AND THICKNESS
   1.2. FILTER MATERIAL, NUMBER OF LAYERS, AND THICKNESS
2. RIP-RAP SHALL BE EITHER QUARRY STONE OR BROKEN CONCRETE. COBBLES ARE NOT ACCEPTABLE.
3. FABRIC COVER, 'F', SHALL BE CLASS 2 BASE.
4. FILTER FABRIC SHALL BE MIRAFI 1100N OR EQUIVALENT.

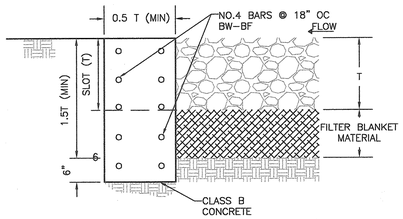
6 HEADWALL DETAILS TABLE
TOP OF WALL/TOP OF FOOTING ELVELATIONS

| HEADWALL NO. | (1) TW TF | (2) TW TF | (3) TW TF | (4) TW TF |
|---|---|---|---|---|
| 1 | 1625.00 1624.00 | 1627.00 1624.00 | 1627.50 1624.00 | 1625.00 1624.00 |
| 2 | 1623.50 1622.60 | 1625.50 1622.60 | 1625.50 1622.60 | 1624.25 1622.50 |
| 3 | 1622.51 1620.50 | 1623.18 1620.50 | 1623.18 1620.50 | 1621.84 1620.50 |
| 4 | 1625.34 1624.00 | 1626.68 1624.00 | 1626.68 1624.00 | 1625.34 1624.00 |
| 5 | 1628.34 1627.00 | 1629.68 1627.00 | 1629.68 1627.00 | 1628.34 1627.00 |
| 6 | 1649.34 1648.00 | 1650.68 1648.00 | 1650.68 1648.00 | 1649.34 1648.00 |

0 60 180
30 120 240
SCALE: 1" = 60'



6 SECTION J-J
RIP-RAP ENERGY DISSIPATER DETAIL
N.T.S.




6 SECTION K-K
RIP-RAP ENERGY DISSIPATOR DETAIL (TYPICAL)
N.T.S.

### SHEET INDEX

| | |
|---|---|
| SHEET 1: | TITLE SHEET |
| SHEET 2: | LINE A PLAN & PROFILE |
| SHEET 3: | LINE A PLAN & PROFILE, LAT A-1 TO LAT A-3 PLAN & PROFILE |
| SHEET 4: | LAT A-4 TO LAT A-6 PLAN & PROFILE LINE B PLAN & PROFILE |
| SHEET 5: | LINE C PLAN & PROFILE LINE D PLAN & PROFILE |
| SHEET 6: | LINE E PLAN & PROFILE LINE F PLAN & PROFILE |

WESTERN MUNICIPAL WATER DISTRICT:
FOR NON-INTERFERENCE COMPLIANCE
SHEET 1 THROUGH 6
DEREK KAWAII 1/12/17
DIRECTOR OF ENGINEERING DATE

811 Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER CHARLESS J.A. LEACH NO. 53390 EXP. 6-30-17 CIVIL STATE OF CALIFORNIA

CITY OF RIVERSIDE BUSINESS TAX ACCT.#058833 EXP.1/1/17

PLANS PREPARED BY: adkan ENGINEERS
Civil Engineering · Surveying · Planning
6879 Airport Drive, Riverside, CA 92504
Tel:(951) 688-0241 Fax:(951) 688-0599
Under the Supervision of: Charlesss J.A. Leach R.C.E. 53390 Exp. 06.30.17 Date: 12/13/16

BENCHMARK: E8-E3=1613.520
P.K. NAIL AND CITY TAG IN THE SIDEWALK OVER THE NORTHERLY WALL OF A CATCH BASIN ALONG THE EASTERLY CURB OF TRAUTWEIN ROAD, 250 FEET SOUTHERLY OF THE SOUTHERLY DRIVE TO THE ORANGECREST ELECTRIC SUBSTATION. THE MARK IS 2 FEET EASTERLY OF THE FACE OF CURB.
ELEVATION: 1613.520 NAVD 29

| MARK | REVISIONS | APPR. | DATE |
|---|---|---|---|
| | | | |

DESIGNED BY: MLH DRAWN BY: JT CHECKED BY: C-

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

| APPROVED BY | DATE | BY |
|---|---|---|
| ENGINEERING MANAGER | | |
| CAPITAL PROJECTS | 12-14-16 | AW |
| TRAFFIC DIVISION | 12-14-16 | RH |

APPROVED BY
CITY ENGINEER/PW DIRECTOR
DATE 12/19/16

STORM DRAIN PLAN
TRACT 39534
TITLE SHEET

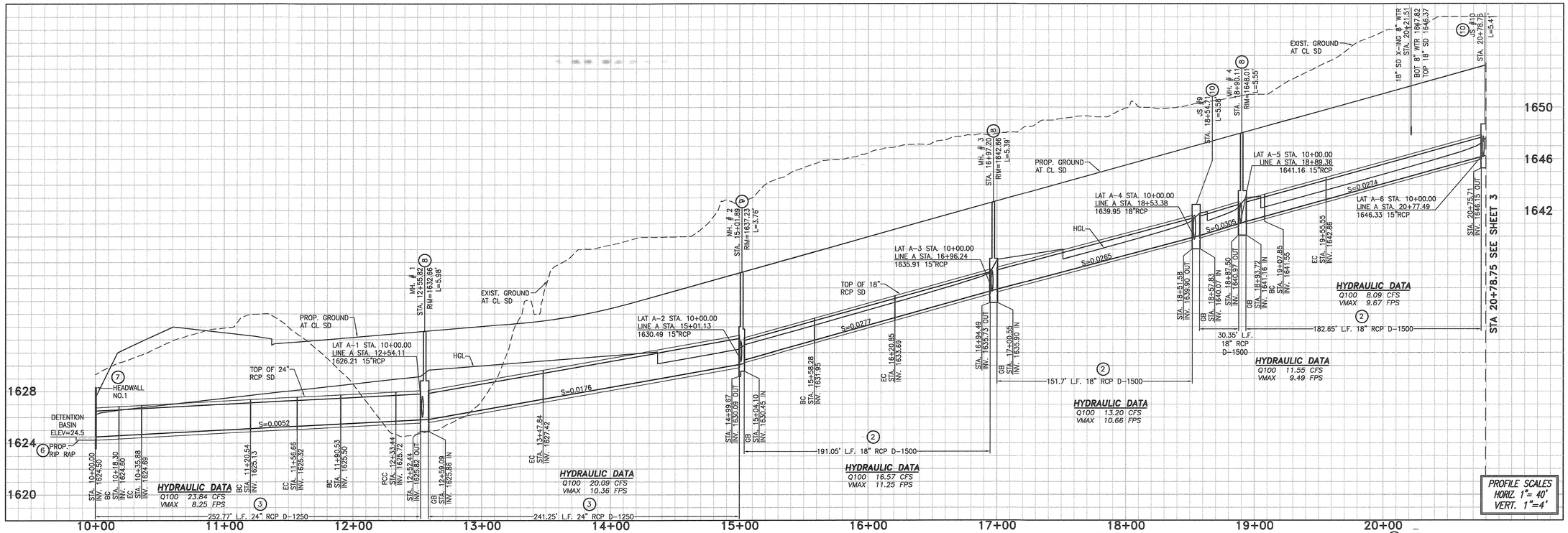
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

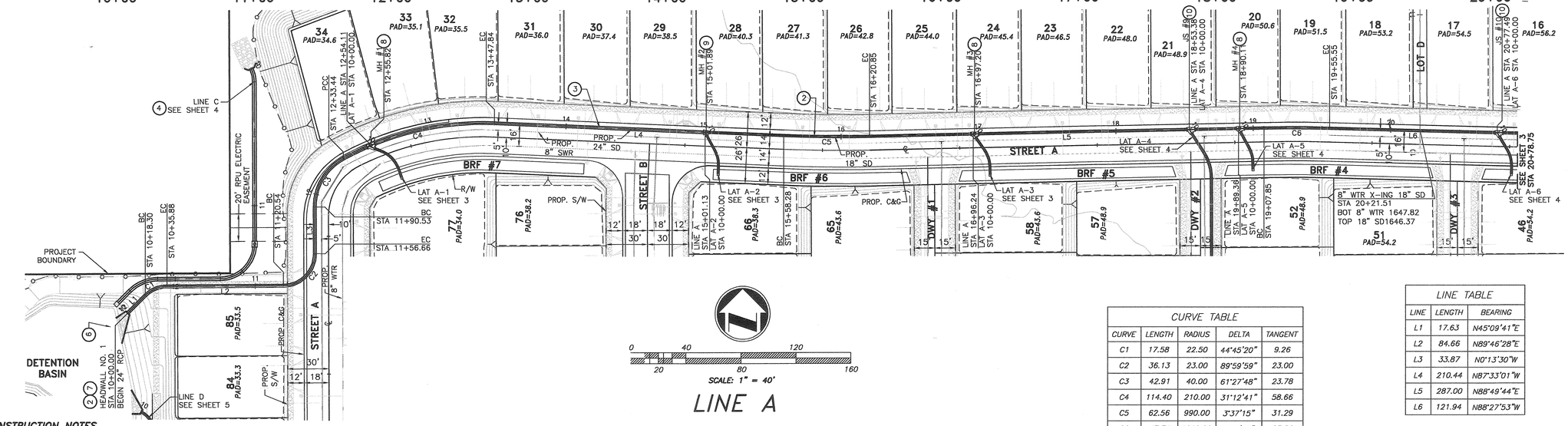
WDID 8 33C377605
PW16-0327
P14-0472

ACCOUNT NO.
D-885

SHEET 1 OF 6

J.N. 9004




LINE A

| CURVE TABLE | | | | |
|---|---|---|---|---|
| CURVE | LENGTH | RADIUS | DELTA | TANGENT |
| C1 | 17.58 | 22.50 | 44°45'20" | 9.26 |
| C2 | 36.13 | 23.00 | 89°59'59" | 23.00 |
| C3 | 42.91 | 40.00 | 61°27'48" | 23.78 |
| C4 | 114.40 | 210.00 | 31°12'41" | 58.66 |
| C5 | 62.56 | 990.00 | 3°37'15" | 31.29 |
| C6 | 47.71 | 1010.00 | 2°42'23" | 23.86 |

| LINE TABLE | | |
|---|---|---|
| LINE | LENGTH | BEARING |
| L1 | 17.63 | N45°09'41"E |
| L2 | 84.66 | N89°46'28"E |
| L3 | 33.87 | N0°13'30"W |
| L4 | 210.44 | N87°33'01"W |
| L5 | 287.00 | N88°49'44"E |
| L6 | 121.94 | N88°27'53"W |

## CONSTRUCTION NOTES

1. INSTALL 15" DIA. R.C.P. WITH BEDDING CASE NO. III PER CITY OF RIVERSIDE STD. NO 452 (D LOAD PER PLAN)
2. INSTALL 18" DIA. R.C.P. WITH BEDDING CASE NO. III PER CITY OF RIVERSIDE STD. NO 452 (D LOAD PER PLAN)
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6. INSTALL RIP-RAP PAD SEE SHEET 1 FOR DETAILS
7. CONSTRUCT HEADWALL PER CALTRANS STD. D-89 SEE SHEET 1 FOR DETAILS
8. CONSTRUCT MANHOLE EZ PER CITY OF RIVERSIDE STD. NO. 431
9. CONSTRUCT MANHOLE JM PER CITY OF RIVERSIDE STD. NO. 432
10. CONSTRUCT JUNCTION STRUCTURE B PER CITY OF RIVERSIDE STD. NO. 421 SEE SHEET 6 FOR DETAIL
11. INSTALL 18"X18" BROOKS BOX WITH KNOCK OUT TO CONNECT TO STORM DRAIN MAIN LINE. DEPTH CALLED OUT PER PROFILES. CONNECT PERFORATED PIPES AS NEEDED FOR STORM TREATMENT DISCHARGE WITHIN BMP AREAS. INVERT CALLED OUT PER PROFILES.
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CITY OF RIVERSIDE BUSINESS TAX ACCT.#058833 EXP.1/1/17

WESTERN MUNICIPAL WATER DISTRICT:
REVIEWED FOR CONFLICTS BY: DATE

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REGISTERED PROFESSIONAL ENGINEER CHARISSA J.A. LEECH NO. 53390 EXP. 6-30-17 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY: adkan ENGINEERS
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Tel:(951) 688-0241 Fax:(951) 688-0599
Under the Supervision of: Charissa J.A. Leech R.C.E. 53390 Exp. 06.30.17 Date: 12/13/16

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ELEVATION: 1613.520 NAVD 29

| MARK | REVISIONS | APPR. | DATE |
|---|---|---|---|
| | | | |

DESIGNED BY: MLH DRAWN BY: JT CHECKED BY: C-

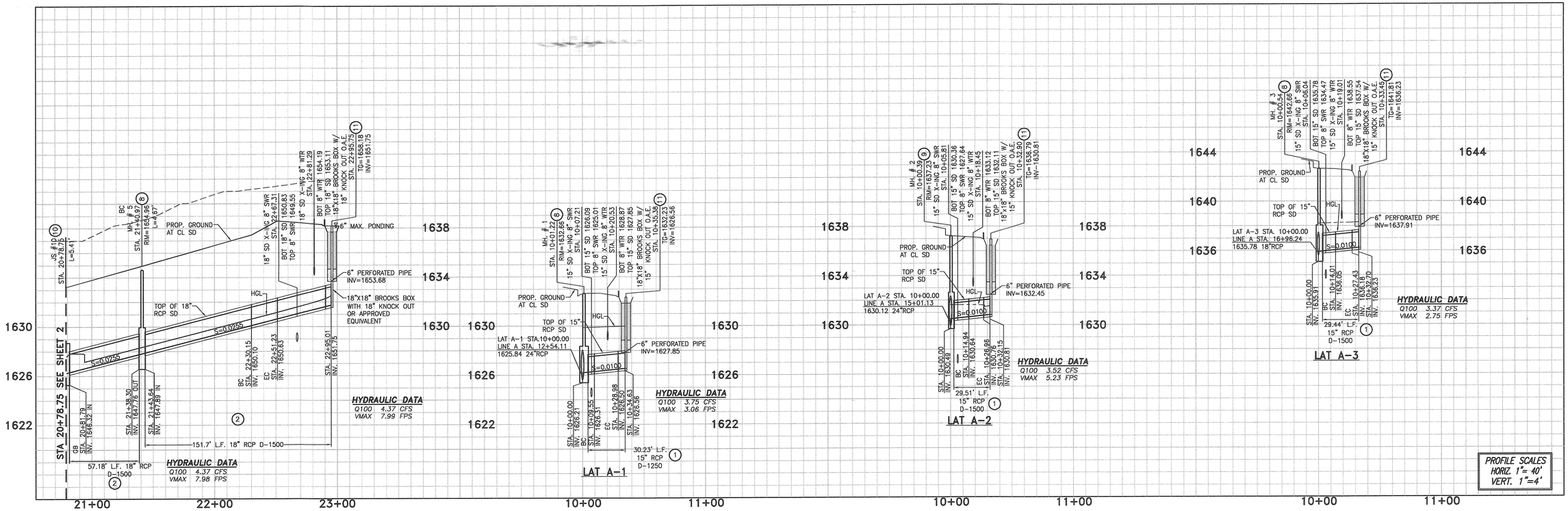
CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

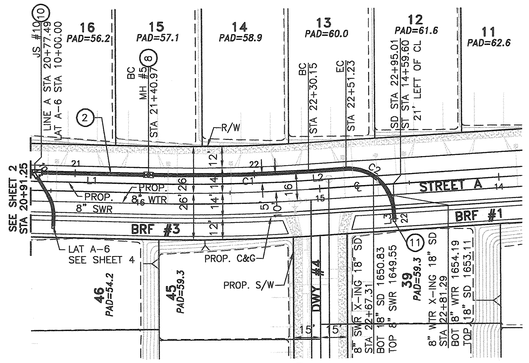
| APPROVED BY | DATE | BY |
|---|---|---|
| ENGINEERING MANAGER | | |
| CAPITAL PROJECTS | | |
| TRAFFIC DIVISION | 12-14-16 | |

APPROVED BY
CITY ENGINEER/PW DIRECTOR
DATE 12/19/16

STORM DRAIN PLAN
TRACT 39534
LINE A
STA 10+00 TO STA 20+91.25
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

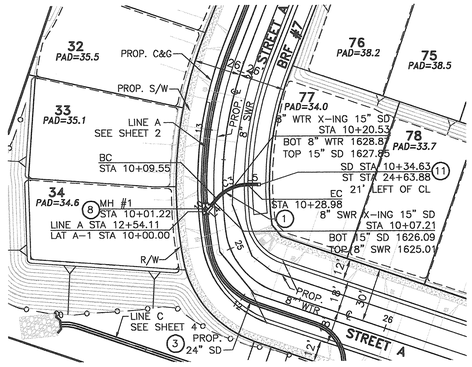
WDID 8 33C377605
PW16-0327
P14-0472
ACCOUNT NO.
D-885
SHEET 2 OF 6
J.N. 9004



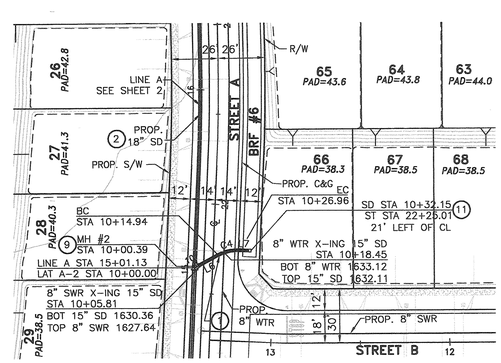

SCALE: 1" = 40'

LINE A



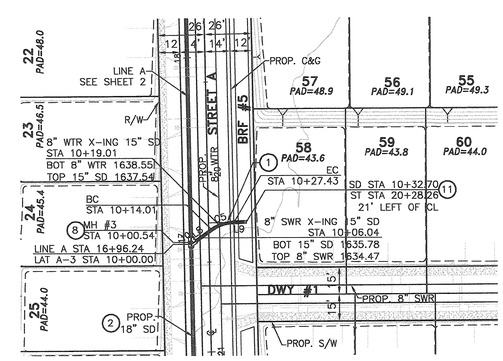

SCALE: 1" = 40'

LAT A-1




SCALE: 1" = 40'

LAT A-2




SCALE: 1" = 40'

LAT A-3

## CONSTRUCTION NOTES

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6. *INSTALL RIP-RAP PAD* SEE SHEET 1 FOR DETAILS
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### LINE TABLE

| LINE | LENGTH | BEARING |
|---|---|---|
| L1 | 63.48 | N88°27'53"W |
| L2 | 21.07 | N86°22'25"E |
| L3 | 4.51 | N3°37'35"W |
| L4 | 9.55 | N68°29'05"W |
| L5 | 5.65 | N18°59'17"W |
| L6 | 14.94 | N28°10'51"W |
| L7 | 5.18 | N2°26'59"E |
| L8 | 14.01 | N35°21'00"W |
| L9 | 5.27 | N1°10'16"W |

### CURVE TABLE

| CURVE | LENGTH | RADIUS | DELTA | TANGENT |
|---|---|---|---|---|
| C1 | 89.18 | 990.00 | 5°09'41" | 44.62 |
| C2 | 39.27 | 25.00 | 90°00'00" | 25.00 |
| C3 | 19.44 | 22.50 | 49°29'49" | 10.37 |
| C4 | 12.03 | 22.50 | 30°37'50" | 6.16 |
| C5 | 13.42 | 22.50 | 34°10'44" | 6.92 |

WESTERN MUNICIPAL WATER DISTRICT:
REVIEWED FOR CONFLICTS BY: DATE

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CITY OF RIVERSIDE BUSINESS TAX ACCT.#058833 EXP.1/1/17

PLANS PREPARED BY: adkan ENGINEERS
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Tel:(951) 688-0241 Fax:(951) 688-0599
Under the Supervision of: Charissa J.A. Leach R.C.E. 53390 Exp. 06.30.17 Date: 12/13/16

BENCHMARK: E8-E3=1613.520
P.K. NAIL AND CITY TAG IN THE SIDEWALK OVER THE NORTHERLY WALL OF A CATCH BASIN ALONG THE EASTERLY CURB OF TRAUTWEIN ROAD, 250 FEET SOUTHERLY OF THE SOUTHERLY DRIVE TO THE ORANGECREST ELECTRIC SUBSTATION. THE MARK IS 2 FEET EASTERLY OF THE FACE OF CURB.
ELEVATION: 1613.520 NAVD 29

| MARK | REVISIONS | APPR. | DATE |
|---|---|---|---|

DESIGNED BY: MLH DRAWN BY: JT CHECKED BY: C-

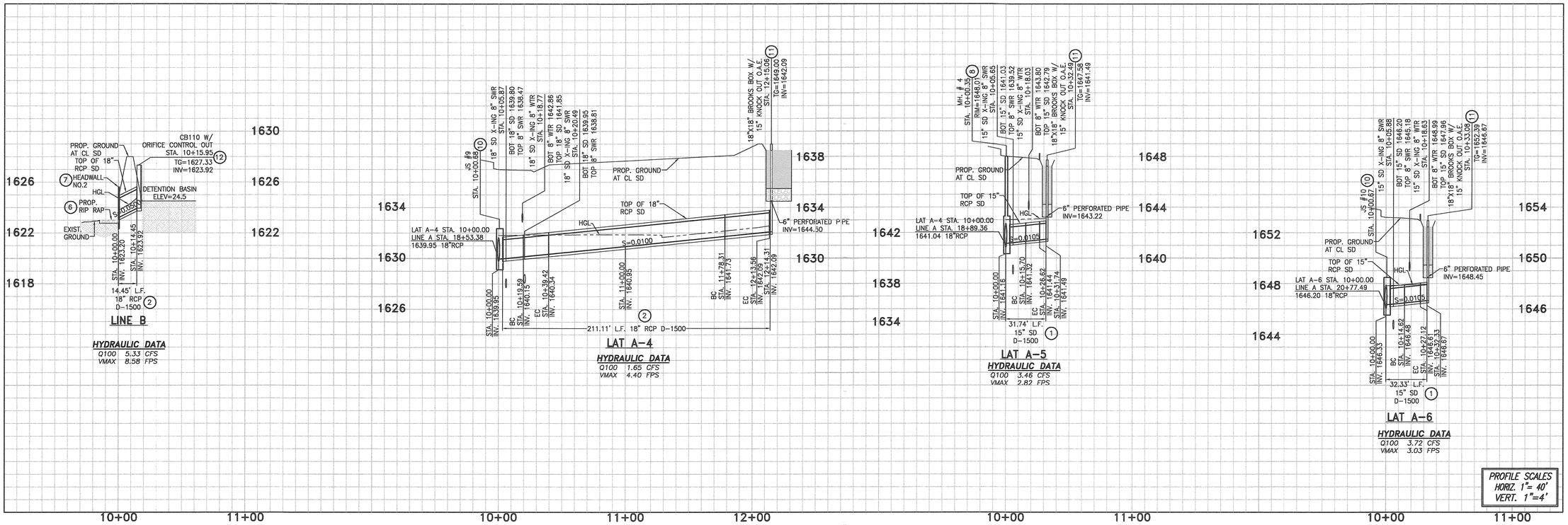
CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

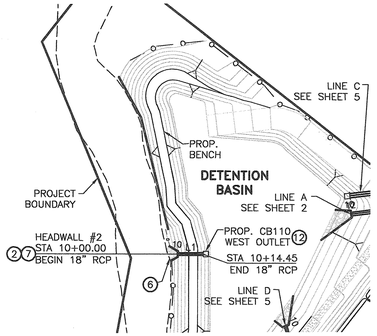
| APPROVED BY | DATE | BY |
|---|---|---|
| ENGINEERING MANAGER | | |
| CAPITAL PROJECTS | | |
| TRAFFIC DIVISION | 12-14-16 | PH |

APPROVED BY
CITY ENGINEER/PW DIRECTOR
DATE 12/19/16

STORM DRAIN PLAN
TRACT 39534
LINE A
STA 20+91.21 TO STA 23+07.51
LAT A-1, LAT A-2, LAT A-3
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

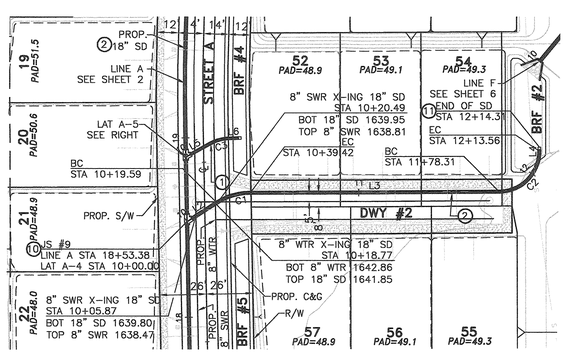
WDID 8 33C377605
PW16-0327
P14-0472
ACCOUNT NO. D-885
SHEET 3 OF 6
J.N. 9004



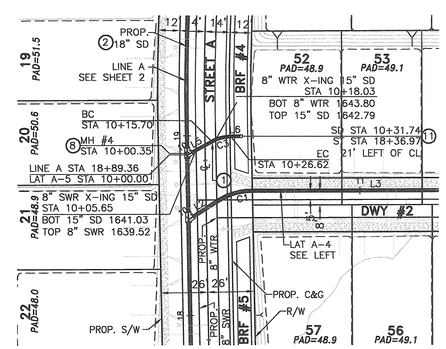

SCALE: 1" = 40'

LINE B



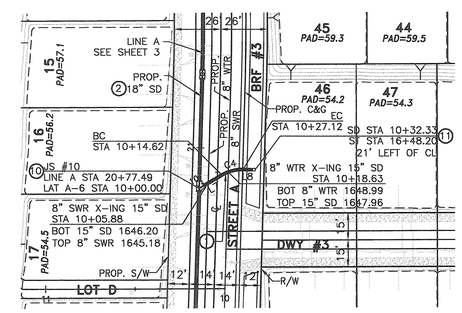

SCALE: 1" = 40'

LAT A-4




SCALE: 1" = 40'

LAT A-5




SCALE: 1" = 40'

LAT A-6

## CONSTRUCTION NOTES

1. INSTALL 15" DIA. R.C.P. WITH BEDDING CASE NO. III PER CITY OF RIVERSIDE STD. NO 452 (D LOAD PER PLAN)
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6. INSTALL RIP-RAP PAD SEE SHEET 1 FOR DETAILS
7. CONSTRUCT HEADWALL PER CALTRANS STD. D-89 SEE SHEET 1 FOR DETAILS
8. CONSTRUCT MANHOLE EZ PER CITY OF RIVERSIDE STD. NO. 431
9. CONSTRUCT MANHOLE JM PER CITY OF RIVERSIDE STD. NO. 432
10. CONSTRUCT JUNCTION STRUCTURE B PER CITY OF RIVERSIDE STD. NO. 421 SEE SHEET 6 FOR DETAIL
11. INSTALL 18"X18" BROOKS BOX WITH KNOCK OUT TO CONNECT TO STORM DRAIN MAIN LINE. DEPTH CALLED OUT PER PROFILES. CONNECT PERFORATED PIPES AS NEEDED FOR STORM TREATMENT DISCHARGE WITHIN BMP AREAS. INVERT CALLED OUT PER PROFILES.
12. CONSTRUCT MODIFIED CB 110 PER DETAILS ON SHEET 5
13. INSTALL 2'X2' BROOKS BOX WITH KNOCK OUT TO CONNECT TO STORM DRAIN MAIN LINE. DEPTH CALLED OUT PER PROFILES. CONNECT PERFORATED PIPES AS NEEDED FOR STORM TREATMENT DISCHARGE WITHIN BMP AREAS. INVERT CALLED OUT PER PROFILES.

### LINE TABLE

| LINE | LENGTH | BEARING |
|---|---|---|
| L1 | 14.45 | N51°58'36"E |
| L2 | 19.59 | N32°41'11"W |
| L3 | 138.88 | N0°13'32"W |
| L4 | 0.75 | N90°00'00"E |
| L5 | 15.70 | N28°58'11"W |
| L6 | 5.12 | N1°10'16"W |
| L7 | 14.62 | N30°16'42"W |
| L8 | 5.21 | N1°32'07"E |

### CURVE TABLE

| CURVE | LENGTH | RADIUS | DELTA | TANGENT |
|---|---|---|---|---|
| C1 | 19.83 | 35.00 | 32°27'39" | 10.19 |
| C2 | 35.25 | 22.50 | 89°46'28" | 22.41 |
| C3 | 10.92 | 22.50 | 27°47'55" | 5.57 |
| C4 | 12.49 | 22.50 | 31°48'49" | 6.41 |

WESTERN MUNICIPAL WATER DISTRICT:
REVIEWED FOR CONFLICTS BY: DATE

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REGISTERED PROFESSIONAL ENGINEER CHARISSA J.A. LEACH NO. 53390 EXP. 6-30-17 CIVIL STATE OF CALIFORNIA

CITY OF RIVERSIDE BUSINESS TAX ACCT.0058833 EXP.1/1/17

PLANS PREPARED BY: adkan ENGINEERS
Civil Engineering · Surveying · Planning
6879 Airport Drive, Riverside, CA 92504
Tel:(951) 688-0241 Fax:(951) 688-0599
Under the Supervision of: Charissa J.A. Leach R.C.E. 53390 Exp. 06.30.17 Date: 12/13/16

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ELEVATION: 1613.520 NAVD 29

| MARK | REVISIONS | APPR. | DATE |
|---|---|---|---|

DESIGNED BY: MLH DRAWN BY: JT CHECKED BY: C-

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

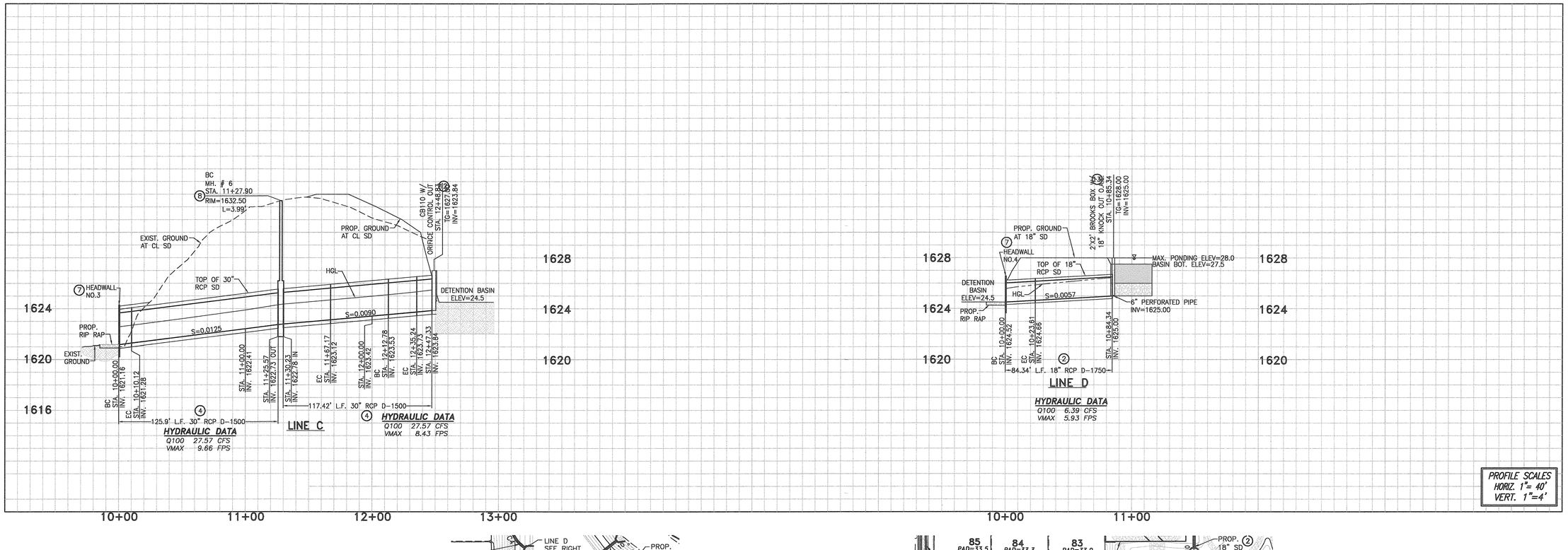
| APPROVED BY | DATE | BY |
|---|---|---|
| ENGINEERING MANAGER | | |
| CAPITAL PROJECTS | | |
| TRAFFIC DIVISION | | |

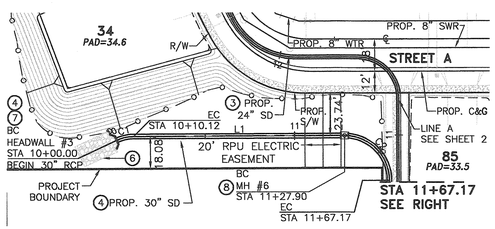
APPROVED BY
CITY ENGINEER/PW DIRECTOR
DATE 12/13/16

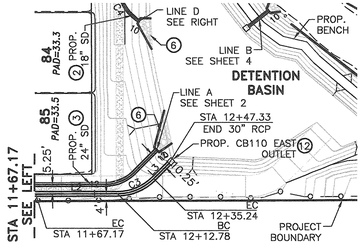
STORM DRAIN PLAN
TRACT 39534
LINE B
LAT A-4, LAT A-5, LAT A-6

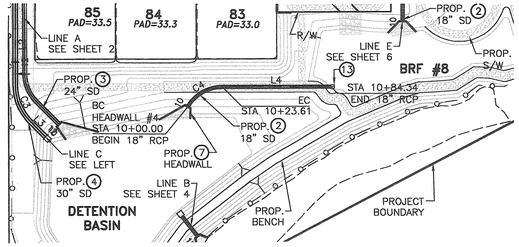
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

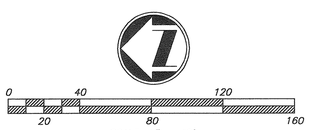
WDID 8 33C377605
PW16-0327
P14-0472
ACCOUNT NO. D-885
SHEET 4 OF 6
J.N. 9004



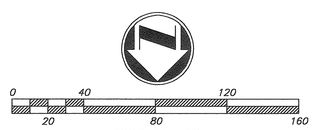



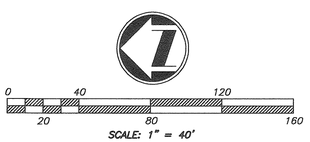



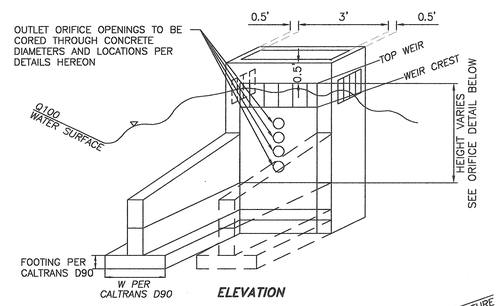

LINE C



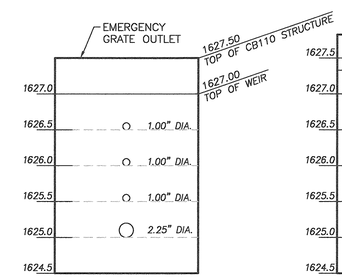

LINE C



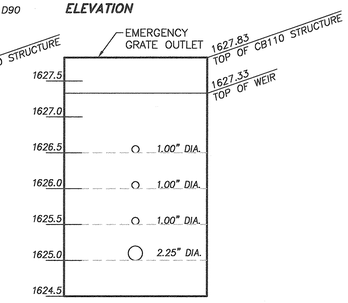

LINE D




ELEVATION




BASIN 1 EAST OUTLET




BASIN 1 WEST OUTLET

(12) MODIFIED CB110 INLET DETAIL
N.T.S.

NOTE: REFER TO RCFC STANDARD DRAWING CB110 FOR STANDARD DIMENSIONS, REINFORCEMENT AND OTHER NOTES.

| LINE TABLE | | |
|---|---|---|
| LINE | LENGTH | BEARING |
| L1 | 117.78 | N0°13'30"W |
| L2 | 45.61 | N89°46'28"E |
| L3 | 12.09 | N45°01'08"E |
| L4 | 60.73 | N0°13'32"W |

| CURVE TABLE | | | | |
|---|---|---|---|---|
| CURVE | LENGTH | RADIUS | DELTA | TANGENT |
| C1 | 10.12 | 22.50 | 25°46'35" | 5.15 |
| C2 | 39.27 | 25.00 | 89°59'59" | 25.00 |
| C3 | 22.46 | 28.75 | 44°45'20" | 11.84 |
| C4 | 23.61 | 22.50 | 60°07'15" | 13.02 |

## CONSTRUCTION NOTES

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CITY OF RIVERSIDE BUSINESS TAX ACCT.#058833 EXP.1/1/17

PLANS PREPARED BY:
adkan ENGINEERS
Civil Engineering · Surveying · Planning
6879 Airport Drive, Riverside, CA 92504
Tel:(951) 688-7241 Fax:(951) 688-0599
Under the Supervision of: Charissa J.A. Leach R.C.E. 53390 Exp. 06.30.17 DATE 12/13/16

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| MARK | REVISIONS | APPR. | DATE |
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DESIGNED BY: MLH DRAWN BY: JT CHECKED BY: C-

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

| APPROVED BY | DATE | BY |
|---|---|---|
| ENGINEERING MANAGER | | |
| CAPITAL PROJECTS | | |
| TRAFFIC DIVISION | 12-14-16 | |

APPROVED BY
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STORM DRAIN PLAN
TRACT 39534
LINE C
LINE D
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

WDID 8 33C377605
PW16-0327
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ACCOUNT NO.
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SHEET 5 OF 6
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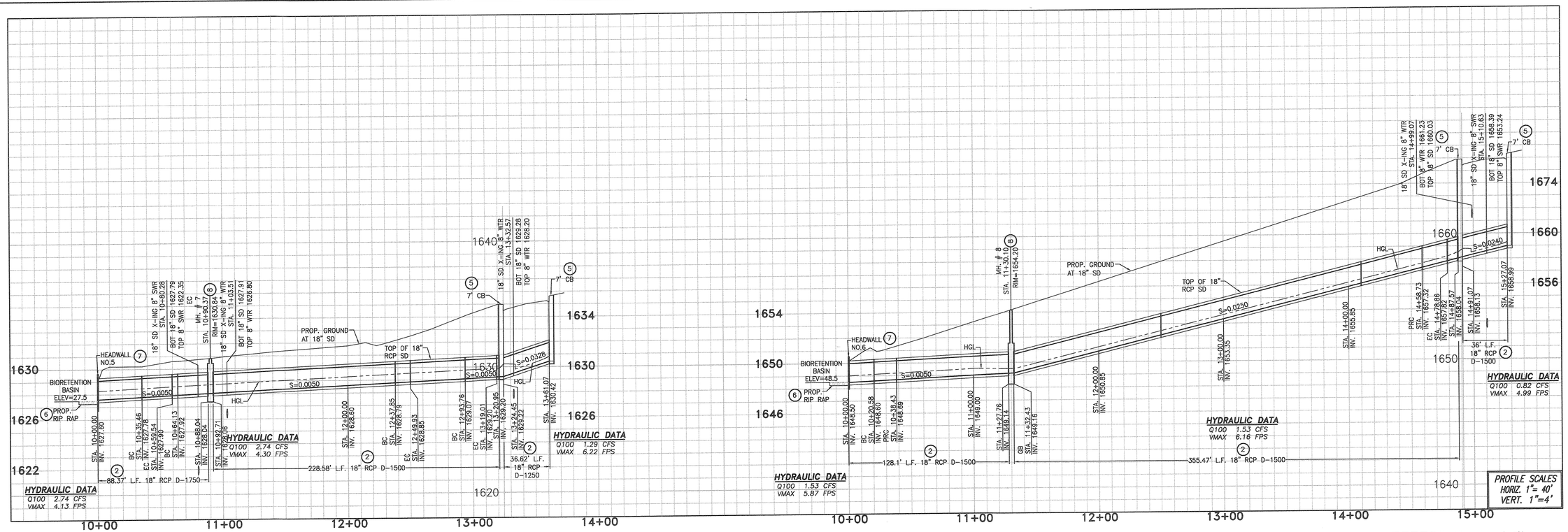
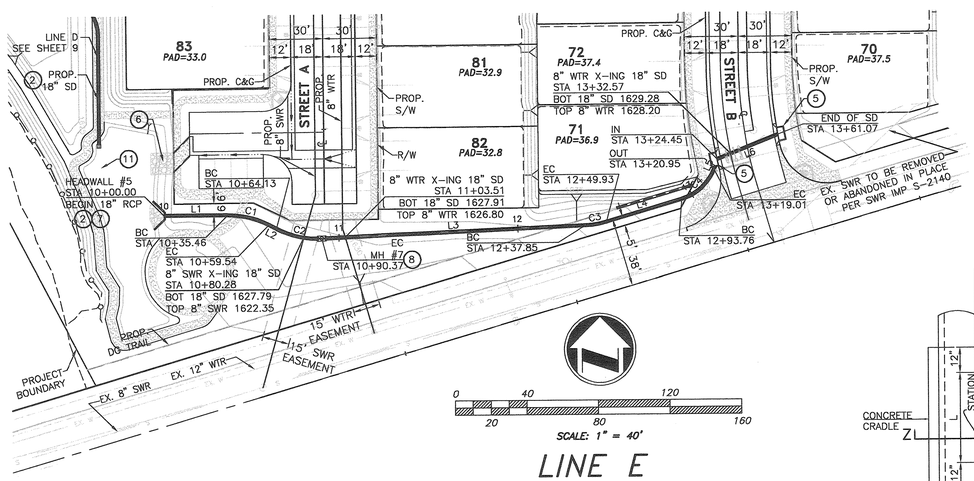
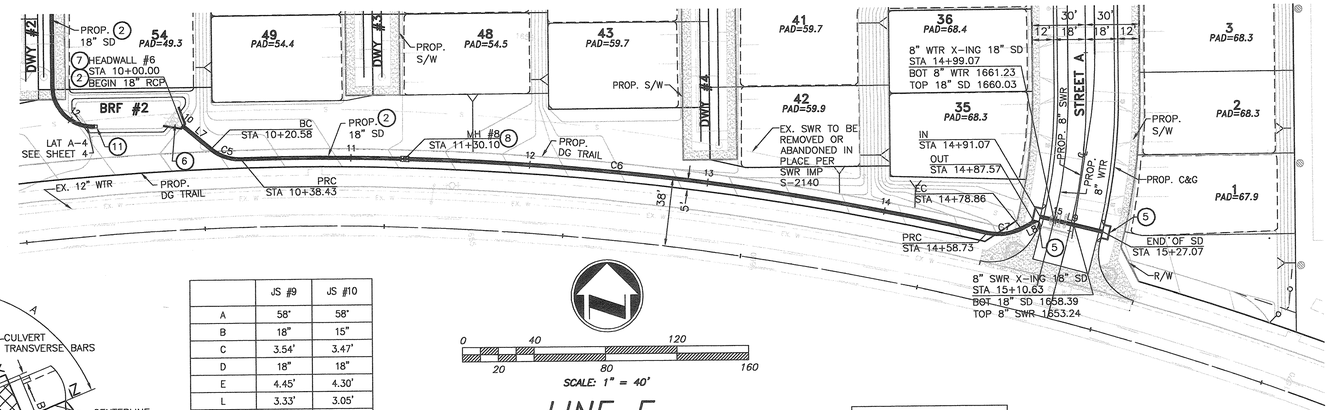
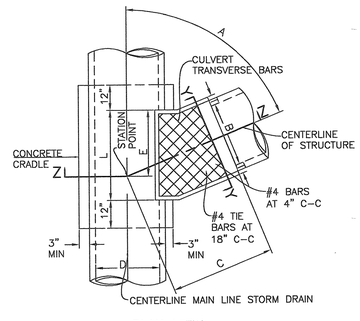
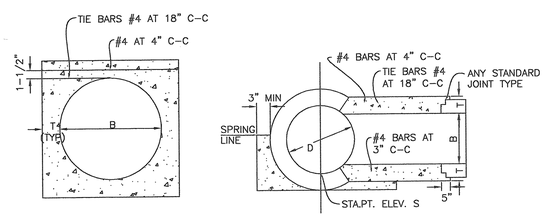



| | JS #9 | JS #10 |
|---|---|---|
| A | 58" | 58" |
| B | 18" | 15" |
| C | 3.54' | 3.47' |
| D | 18" | 18" |
| E | 4.45' | 4.30' |
| L | 3.33' | 3.05' |
| T | 4½" | 4¼" |




10 JUNCTION STRUCTURE B DETAIL
N.T.S.

| LINE TABLE | | |
|---|---|---|
| LINE | LENGTH | BEARING |
| L1 | 35.46 | N90°00'00"E |
| L2 | 4.59 | N62°24'31"W |
| L3 | 147.47 | N87°30'56"E |
| L4 | 43.83 | N73°40'27"E |
| L5 | 1.94 | N21°59'48"E |
| L6 | 36.62 | N68°10'15"E |
| L7 | 20.58 | N50°22'04"W |
| L8 | 8.71 | N62°14'21"E |
| L9 | 36.00 | N76°05'55"W |

| CURVE TABLE | | | | |
|---|---|---|---|---|
| CURVE | LENGTH | RADIUS | DELTA | TANGENT |
| C1 | 24.08 | 50.00 | 27°35'29" | 12.28 |
| C2 | 26.25 | 50.00 | 30°04'33" | 13.43 |
| C3 | 12.08 | 50.00 | 13°50'29" | 6.07 |
| C4 | 25.25 | 28.00 | 51°40'37" | 13.56 |
| C5 | 17.85 | 25.00 | 40°54'33" | 9.32 |
| C6 | 420.30 | 1638.00 | 14°42'06" | 211.31 |
| C7 | 20.13 | 28.00 | 41°11'09" | 10.52 |

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CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

| APPROVED BY | DATE | BY |
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| ENGINEERING MANAGER | | |
| CAPITAL PROJECTS | | |
| TRAFFIC DIVISION | 12-14-16 | |

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DATE 12/19/16

STORM DRAIN PLAN
TRACT 39534
LINE E
LINE F
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

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PW16-0327
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ACCOUNT NO.
D-885
SHEET 6 OF 6
J.N. 9004