## GENERAL NOTES

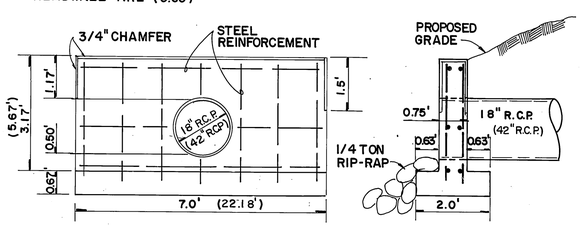
1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CLEAR THE RIGHT-OF-WAY IN ACCORDANCE WITH THE PROVISIONS OF LAW AS IT EFFECTS EACH UTILITY INCLUDING IRRIGATION LINES & APPURTENANCES AND AT NO COST TO THE CITY.
2. CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF RIVERSIDE, DEPT. OF PUBLIC WORKS STANDARD DRAWINGS, STD. DWG. NO. 10 & THE STD SPECS. FOR PUBLIC WORKS CONSTRUCTION CURRENT EDITION.
3. THE PRIVATE ENGINEER SIGNING THESE PLANS IS RESPONISIBLE FOR ASSURING THE ACCURACY AND ACCEPTABILITY OF THE WORK HEREON. IN THE EVENT OF DESCREPANCIES ARISING DURING THE CONSTRUCTION AS A RESULT OF ERRORS OR OMISSIONS, THE PRIVATE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING AN ACCEPTABLE SOLUTION AND REVISING THE PLANS FOR APPROVAL BY THE CITY.
4. BEDDING SHALL BE PER CITY OF RIVERSIDE STD. DWG. NO. 452, CASE I
5. 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.
6. ALL FLAGGED ELEVATIONS SHALL BE STAKED IN THE FIELD BY THE PRIVATE ENGINEER.
7. THE CONTRACTOR SHALL CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (U.S.A.), PHONE NO. 1-800-422-4133, 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 WITH AN INQUIRY IDENTIFICATION NUMBER BY U.S.A.
8. BEFORE THE RIP-RAP IS ACCEPTED, 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.

## CONSTRUCTION NOTES

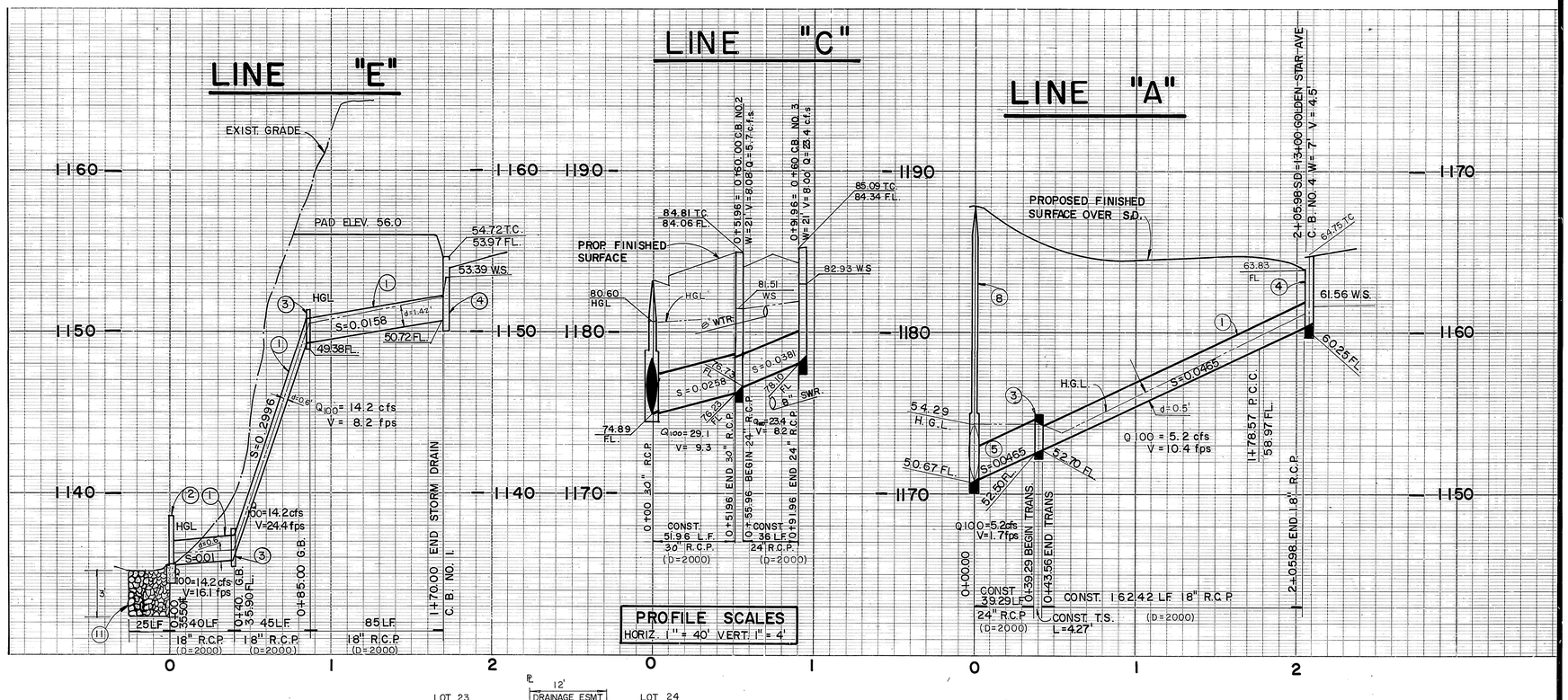
(1) 18" R.C.P.
(2) CONSTRUCT HEADWALL PER DETAIL HEREON
(3) CONSTRUCT CONCRETE COLLAR PER CITY OF RIV. STD. 424
(4) CONSTRUCT CATCH BASIN PER CITY OF RIV. STD 405
(5) 24" R.C.P.
(6) 42" R.C.P.
(7) 48" R.C.P.
(8) CONSTRUCT CITY OF RIV. STD. NO. 432 MANHOLE "J M"
(9) CONSTRUCT CITY OF RIV. STD. NO. 421 JUNCTION STRUCTURE B
(10) CONSTRUCT CITY OF RIV. STD. NO. 412 C.S.P. INLET
(11) RIP-RAP 1/4 TON (TO LIMITS SHOWN.)
(12) CONSTRUCT JUNC. STRUCTURE "E", PER CITY STD. 422
(13) INSTALL 8" CONCRETE PIPE
(14) CONSTRUCT HEADWALL GRATE PER DETAIL ON SHEET 2
(15) CONSTRUCT CITY OF RIV. STD. NO. 431 MANHOLE "E2"

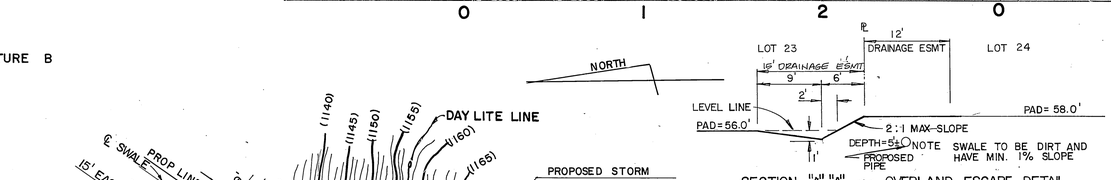
## HEADWALL DETAIL NOTE

1. ALL REINFORCING STEEL IS #4 BARS ALL VERT. AND HORIZ. TIE BARS AT 18" MAX. SPACING.
2. DIMENSIONS PARTICULAR ONLY TO THE 42" R.C.P. HEADWALL ARE (0.00)



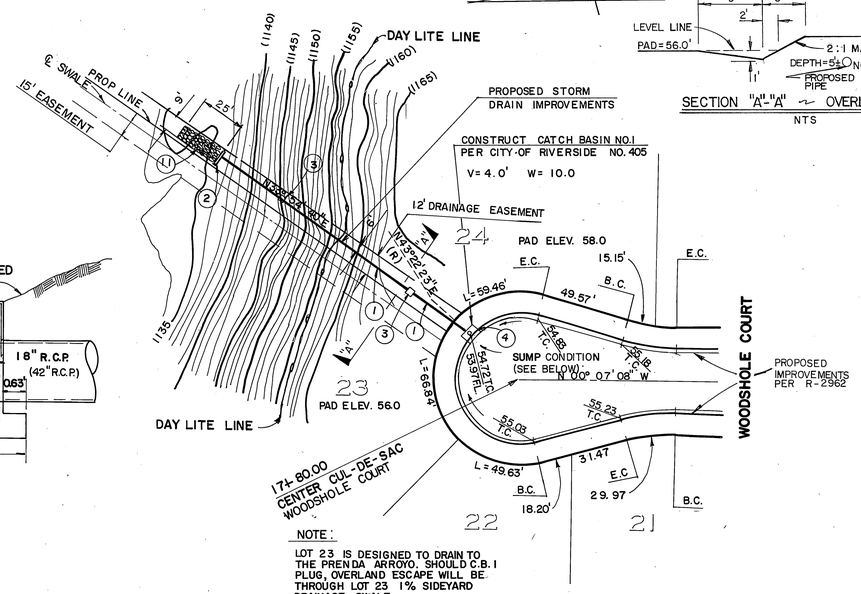

HEADWALL DETAIL
N.T.S.



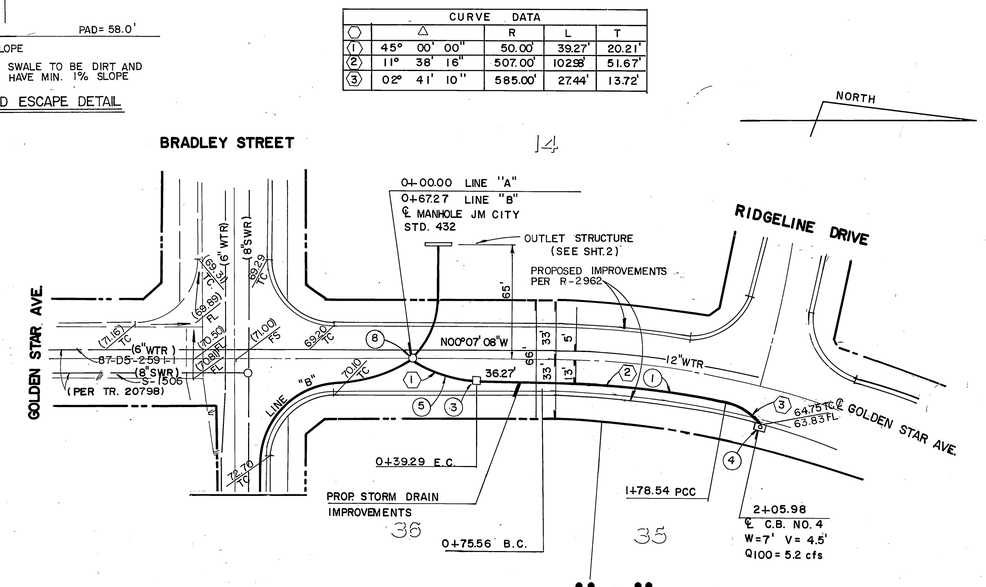

SECTION "A"-"A" ~ OVERLAND ESCAPE DETAIL
NTS

| CURVE DATA | | | | |
|---|---|---|---|---|
| | Δ | R | L | T |
| (1) | 45° 00' 00" | 50.00' | 39.27' | 20.21' |
| (2) | 11° 38' 16" | 507.00' | 102.98' | 51.67' |
| (3) | 02° 41' 10" | 585.00' | 27.44' | 13.72' |




NOTE:
LOT 23 IS DESIGNED TO DRAIN TO THE PRENDA ARROYO. SHOULD C.B. 1 PLUG, OVERLAND ESCAPE WILL BE THROUGH LOT 23 1% SIDEYARD DRAINAGE SWALE.

LINE "E"




LINE "A"

CITY OF RIVERSIDE
WATER DEPARTMENT
APPROVED BY: R. McGrath
DATE: 8-1-88

Underground Service Alert
DIG ONLY WHERE YOU SEE WHITE
Call: TOLL FREE
1-800 422-4133
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. 17560 Exp. 6/30/89 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF: John W Canty
REGISTERED CIVIL ENGINEER NO. 17560
EXPIRATION DATE: 6/30/89 DATE: 5/2/88

**J.F. DAVIDSON ASSOCIATES, INC.**
CIVIL ENGINEERS • SURVEYORS • PLANNERS
P.O. BOX 493, ■ RIVERSIDE, CA 92502 (714) 686-0844
11200 SO. MT. VERNON AVE. #D, □ COLTON, CA 92324 (714) 825-1082
73-080 EL PASEO, #103, □ PALM DESERT, CA 92260 (619) 346-5691
JFD ASSOCIATES

SCALE: HORIZ. 1" = 40' VERT. 1" = 4'
DATE: FEB 1988

BENCH MARK: B.M. F6-G
PK NAIL ON TOP OF CONCRETE VAULT ON THE WEST SIDE OF WASHINGTON 15' NORTHERLY OF ℄ OF MUIRFIELD RD. PRODDED

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

DESIGNED BY J.S. DRAWN BY T.F.E. CHECKED BY M.M.

CITY OF RIVERSIDE, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

| | BY | DATE |
|---|---|---|
| APPROVED BY | | |
| PRINCIPAL ENGINEER | [illegible] | 10-17-88 |
| PARK DEPARTMENT | | |
| TRAFFIC DIVISION | | |
| CHIEF P.W. ENGR. | [illegible] | 10-14-88 |
| | [illegible] | 10/19/88 |

APPROVED BY: Barry Bell
DIRECTOR OF PUBLIC WORKS
DATE: 10/17/88

IN THE CITY OF RIVERSIDE
TRACT NO. 22527
**STORM DRAIN**
GOLDEN STAR AVE. LINE "A"
WOODSHOLE COURT. LINE "E"
FOR MANNING CO.

PROJECT NO. D-547
SHEET 1 OF 2
FILE NO. 870-9925 (M)

INDEXED 11-15-88 LH

PROPOSED GRADE OVER STORM DRAIN

PROPOSED INVERT ELEV. OF STORM DRAIN PIPING

PROPOSED GRADE OVER STORM DRAIN

PROP. INVERT ELEV. OF STORM DRAIN PIPING

PROPOSED GRADE OVER STORM DRAIN

1+85.08 EC/GRD. CHANGE CONC. COLLAR PER C/R STD. 424

0+67.27 ℄ MANHOLE "J.M." CITY STD. 432 RIM = 88.0

CONSTR. 264.27 LF OF 42" R.C.P. (D=2000) @ S=0.0297

CONSTR. 172.81 LF OF 42" R.C.P. (D=1750) @ S=0.0108

CONSTR. 67.27 LF OF 48" R.C.P. (D=1750) @ S = 0.0108

Q 100 = 155.0 c.f.s. V=16.2 TO 20.1 f.p.s.

Q 100= 155.0 V= 20.1 TO 30.1 f.p.s.

IDENTICAL POINTS

4+00.00 = 0+00.00 LINE "B"

5+36.81 ℄ MANHOLE "J.M." C/R STD. 432 RIM=88.2

0+00.00 LINE "C" = 6+38.38 LINE "B"

6+38.38 = 0+00.00 LINE "D" = 5+50.00 BRADLEY STREET JUNC. STRUCTURE B C/R STD. 421

7+60.95 LINE "B" = 0+00.00 LINE "F" JUNCTION STRUCTURE "B" PER C/R STD. 421

9+52.08 BC ℄ MANHOLE PER C/R STD. 461 RIM = 96.4 ± RIM

9+91.35 EC

88.16 FL

CONSTRUCT HEADWALL PER DETAIL SHEET 1 H = 4.5' ± L = 42.45'

PROP. 12" WTR

CONSTR. 99.17 LF 42" R.C.P. (D=2000) S=0.0385

0+00 = 10+32.33 LINE "D"

32.33 LF 18" R.C.P.

END 18" R.C.P.

PROP. FINISHED SUR.

86.5 E.P.

85.5 TC B

12" WTR

S=0.015

78.66 FL

79.17 FL

77.69 FL 42" R.C.P.

8" SWR

Q=6.65 c.f.s. V=3.76 f.p.s.

FLOWLINE OF GRADED ARROYO/NATURAL DRAINAGE COURSE

ENERGY DISSIPATOR (SEE AT RIGHT)

GROUTED

Q 100 = 160.2 c.f.s. V = 13.3 f.p.s.

(Q100 = 137.2) existing V= 4.6 fps

V = 3.75 fps

50'

ENERGY DISSIPATOR N.T.S.

1/4 TON NON-GROUTED RIP-RAP

8" CONC. PIPE

GRADED SWALE

OUTFLOW BEGIN 48" R.C.P. (LINE "A")

48" R.C.P.

60'

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

PROP. GROUND

HEADWALL GRATE

48" R.C.P

CONSTRUCT HEADWALL PER DETAIL SHEET 1

SECTION "A"-"A"

LINE "A" SEE SHT. 1 of 2 FOR PLAN & PROFILE

0+67.27 ℄ M.H. "J.M" PER CITY STD 432

1+06.54 PRC = 10+63.00 GOLDEN STAR

PROPOSED CONTOUR GRADING

FLOWLINE Vnatural = 4.6 fps V proposed = 3.75 fps

0+00.00 BEGIN IMPROVEMENTS CONSTR. HEADWALL PER DETAIL SHEET 1 H=5.67 L=15.0

0+28.00 BC

116.44

124.15

133.00

139.73

119.73

LINE "C" SEE PROFILE SHT. 1 of 2

LINE "D" SEE PROFILE ABOVE

LINE "F" SEE PROFILE ABOVE

0+91.96 LINE "C" C.B. NO. 2 V=8.08' W=21' Q10=5.7 cfs TC=84.73 FL=84.06 121.86

0+91.96 LINE "C" C.B. NO. 3 V=6.99' W=21' Q100=23.4 cfs

8" SWR N 89°59'24" E 658.42'

6" WTR.

12" WTR.

PROP. 12" WTR.

N 89°52'52" E 460.71'

N 89°52'52" E 499.29'

E.P. AND R/W

1+85.08 EC STORM DRAIN = 46+96.70 BRADLEY

46+33.70 BRADLEY STREET = 10+00 GOLDEN STAR AVENUE

50+94.41 BRADLEY ST = 0+00 PINE CREST DR.

5+36.81 LINE "A" = 0+0.0 LINE "B" = 50+48.43 BRADLEY ℄ MANHOLE "JM" C/R STD. NO. 432

DAYLIGHT LINE

PINE CREST DRIVE

66'

TR. 20798

TR. 22527 BDRY.

8+82.08

END OF STREET IMPROVEMENTS PER R-2962 JOIN EXIST DIRT ROAD

9+52.08 BC ℄ M.H. PER CITY STD No 461

EXIST DIRT ROAD

TENTATIVE TR 22527

LIMITS OF PONDING WATER SURFACE

VACANT LANDS

GRADING AND DRAINAGE EASEMENT

EXIST. DRAINAGE

NATURAL CHANNEL DRAINAGE

INSTALL 40.00 LF OF 18" RCP (2000 D)

CONSTRUCT HEADWALL (SEE SHEET 1) SHEET 1 FOR DETAILS THW = 96.1' / FL = 92.6'

SCALE IN FEET 40 20 0 40 80 120

| M.H. "JM" DATA @ S.D STA. 5+36.81 | M.H. "JM" DATA @ S.D. STD. 0+67.27 | JUNC. STRUC. DATA @ STA. 6+38.38 |
|---|---|---|
| A = 60° 00' 00" | A = 90° 00' 00" | A = 60° 00' 00" |
| B = 24" | B = 24" | B = 18" |
| C = 5.1 | C = 4.2 | C = 3.48' |
| $D_1 = D_2$ = 42" | $D_1$ = 42" $D_2$ = 48" | $D_1 = D_2$ = 42" |
| E = 6.6' | E = 5.7' | E = 2.53 |
| L = 8.90' | L = 8.74' | L = 2.60' |
| ELEV. $R_1$ = 74.82 | ELEV. R = 50.87 | ELEV. R = 78.74 |
| ELEV. $S_1$ = 74.69 | ELEV. S = 50.67 | ELEV. S = 78.69 |

| CURVE DATA | | | | |
|---|---|---|---|---|
| | △ | R | L | T |
| 1 | 90° 00' 00" | 50.00' | 78.54' | 50.00' |
| 2 | 45° 00' 00" | 50.00' | 39.27' | 20.71' |

NOTE: BEDDING SHALL BE PER CITY OF RIVERSIDE STD. DWG. NO 452, CASE I

LINE "B"

LINE "F"

Q = 6.65 C.F.S.
V = 3.76 F.P.S.

81.84 H.G.L.

82.25 W.S.

80.5 FL

S=0.016

79.38 ℄ 42" R.C.P.

79.88 ℄ 8" SWR

38.50 LF 18" R.C.P.

NOTES:
1. ALL STEEL BARS TO BE USED SHALL BE # 4 REBAR.
2. BAR SPACING 6" MAX.
3. TRIM ANCHOR BOLTS UPON COMPLETION
4. REMOVE ALL RUST AND PAINT BLACK USING APPROVED PAINT.

HEADWALL GRATE DETAIL

2"x2"x1/2" STEEL TAB (TYP) 12" ANCHOR BOLT

3/4" CHAMFER

1" HINGES

5'-0"

4'-0"

FRAME

DOOR

PADLOCK

3'-0"

10'-0"

5.67

0.50'

1.50'

0.67'

2:1 SLOPE

42" RCP 48" R.C.P.

DOOR MOVEMENT

6" SPACING

12" ANCHOR BOLT

EXIST. GRD.

2'-0"

0.67'

CUT-OFF WALL

LINE "D"

CONSTRUCTION NOTES

1. 18" RCP
2. CONSTRUCT HEADWALL PER DETAIL ON SHEET 1
3. CONSTRUCT CONCRETE COLLAR PER CITY STD. NO. 424.
4. CONSTRUCT CATCH BASIN PER CITY STD. NO. 405 (W,V AS SHOWN)
5. 24" RCP
6. 42" RCP
7. 48" RCP
8. CONSTRUCT C/R STD. NO. 432 MANHOLE "J M"
9. CONSTRUCT CITY OF RIVERSIDE STD. NO. 421 JUNC. STRUCT B.
10. CONSTRUCT CITY OF RIVERSIDE STD. NO. 412 CSP INLET.
11. RIP-RAP (1/4 TON) TO LIMITS SHOWN. (11G GROUTED)
12. CONSTRUCT JUNCTION STRUCTURE C, PER CITY OF RIV. STD. DWG. 422 L=10', $R_2$ = 4', D = 35'.
15. CONSTRUCT CITY OF RIVERSIDE STD. NO. 451 MANHOLE "B2"

E BRADLEY AVENUE

40' ± DIRT TRAVELED WAY (UNPAVED)

(2-5% MAX)

TOP = 1147 ±

EXIST GROUND

SECTION "M-M" (N.T.S.)

PROPOSED CONTOUR GRADING

PINE CREST DRIVE

NON-GROUTED RIP-RAP

5'

95.17 THW.

2:1 SLOPE

90.5 FL

INSTALL 40.00 LF OF 18" RCP (2000 D)

SECTION "L"-"L" N.T.S.

EXIST FLOWLINE

PARCEL 1

PARCEL 2

PARCEL MAP NO. 9296

PM 42/59

CITY OF RIVERSIDE WATER DEPARTMENT

APPROVED BY: R. McGrath

DATE: 8-1-88

SEE SHEET ONE FOR GENERAL NOTES

Underground Service Alert

DIG ALERT IDENTIFICATION NUMBER

Call: TOLL FREE 1-800 422-4133

TWO WORKING DAYS BEFORE YOU DIG

PRIVATE ENGINEERING NOTE

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REGISTERED PROFESSIONAL ENGINEER JOHN W. CANTY No. 17550 Exp. 06-30-89 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF: John W. Canty

REGISTERED CIVIL ENGINEER NO. 17550

EXPIRATION DATE 6-30-89 DATE: 11/5/87

J.F. DAVIDSON ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • PLANNERS

P.O. BOX 493 ■ RIVERSIDE, CA 92502 (714) 686-0844

11200 SO. MT. VERNON AVE. #D □ COLTON, CA 92324 (714) 825-1082

73-080 EL PASEO, #103 □ PALM DESERT, CA 92260 (619) 346-5691

JFD ASSOCIATES

SCALE PLAN: 1"= 40'

DATE NOV. 1987

BENCH MARK: BM F6-G ELEV.: 1029.59
PK NAIL ON TOP OF CONCRETE VAULT ON THE WEST SIDE OF WASHINGTON 15' NORTHERLY OF C.L. OF MURRIETA ROAD PRODDED.

| MARK | REVISIONS | APPR. | DATE |
|---|---|---|---|
| 2 | REVISED OFFSITE GRADING ADDED 18" RCP THROUGH EARTH DIKE FOR LOW FLOWS | MM | 9/27/89 |
| 1 | ADDED GROUTING LIMITS TO ENERGY DIS | MM | 4/19/89 |

DESIGNED BY JDS DRAWN BY TE CHECKED BY MM QK

CITY OF RIVERSIDE, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

| | BY | DATE |
|---|---|---|
| APPROVED BY PRINCIPAL ENGINEER | | 10-7-88 |
| PARK DEPARTMENT | | |
| TRAFFIC DIVISION | | |
| CHIEF P.W. ENGR. | | 10-14-88 |
| | | 10/17/88 |

APPROVED BY Barry Bell DIRECTOR OF PUBLIC WORKS

DATE 10/17/88

STORM DRAIN IMPROVEMENTS
TRACT 22527
LINE "A","C",&"D"
BRADLEY STREET

FOR MANNING CO.

PROJECT NO. D-547

SHEET 2 OF 2

FILE NO. 8709925 (M)

INDEXED 11-15-88 LH