PRELIMINARY HYDROLOGY & HYDRAULICS SUPPLEMENTAL REPORT

MOTTE COUNTRY PLAZA

City of Menifee
County of Riverside, California

PREPARED FOR:

City of Menifee
Engineering Department
29844 Haun Road
Menifee, CA 92586

December, 2020

PREPARED BY:

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Brandon M. Barnett, RCE 78472

Strategically Engineering our Client's Vision

December, 2020 JN: 20.2112.1

City of Menifee
29844 Haun Road
Menifee, CA 92586

Attention: **Ryan Fowler**

Subject: **Supplemental Report to the Preliminary Hydrology and Hydraulics Report**

Regarding: **Motte Country Plaza Planning Application Plot Plan No. 2018-300, Conditional Use Permit No. 2018-301 & 2018-320 and Tentative Parcel Map No. 2018-302**

1.0 INTRODUCTION

This report was prepared as a supplement to the *Motte Country Plaza, TPM 2018-302, Preliminary Hydrology and Hydraulics Report*, dated May 2020, by Webb and Associates. The Motte Country Plaza Tentative Parcel Map (TPM) 2018-302, located in the City of Menifee, California proposes to split the existing parcel into two parcels. Parcel 1 is to be located on the west and parcel 2 located on the east with an existing train cart restaurant being relocated to parcel 1 and a commercial center proposed in parcel 2.

The original report prepared by Webb and Associates, only addresses the existing and proposed conditions for the commercial center proposed in parcel 2. At the request of the City of Menifee, this supplemental report is prepared to address any change in drainage conditions resulting from the relocation of the train cart restaurant into parcel 1 and to examine potential storm drain connection to the proposed Riverside County Flood Control and Water Conservation District's (RCFC) Master Drainage Plan (MDP) Line A-3, known as Romoland MDP Line A-3, to be located in Palomar Road.

2.0 EXISTING CONDITIONS

The overall existing conditions utilized in this supplemental report are the same as the conditions utilized in the original report prepared by Webb and Associates. The existing site consists of a train cart restaurant, parking areas, drive aisles, and landscaped areas. The site layout generally drains to the southwesterly corner of the site through ribbon gutters, and continuing into the parking area of TPM 2018-302. The existing condition rational method hydrologic calculations and map are included within Section 3 – Hydrologic Studies of the Preliminary Hydrology and Hydraulics Report.

3.0 PROPOSED CONDITIONS

The proposed conditions utilized in this supplemental report are generally the same as the conditions in the Preliminary Hydrology and Hydraulics Report. The proposed project condition for the site is a redeveloped commercial site within parcel 2. The existing train car restaurant is to be relocated from parcel 2 to a

western portion of parcel 1 that is currently vacant. Parcel 2 will be redeveloped to include two proposed buildings, a gas station, and parking area. The proposed drainage will mimic the existing condition flowing to the southerly side of the project through ribbon gutters. The flows will be captured in the proposed underground chambers designed to store the flow. The proposed 18-inch RCP storm drain line is proposed to convey all captured flows offsite into the 48-inch RCP Romoland-Motte Farms Storm Drain.

This supplemental report proposes an alternate storm drain alignment to convey all captured flows offsite into the future Romoland MDP Line A-3. The storm drain alignment proposed in this supplemental report will be referred to as Storm Drain Line Alternative B. The supplemental report will discuss the impacts of Storm Drain Alternative B further in **Section 3.2** and **Section 3.3**, and the impacts of the parcel 1 improvements from the relocation of the train cart restaurant in **Section 3.1**.

3.1 PARCEL 1 IMPROVEMENTS

The train car restaurant to be relocated from parcel 2 to parcel 1. KWC Engineers has evaluated the site conditions to determine the impact of the addition of the train car within Parcel 1 of the existing development. The following quantities represent the proposed train car location and the associated improvements on Parcel 1:

Train Car located in Parcel 1:	3,566 s.f.
Access Ramp:	193 s.f.
Restrooms:	539 s.f.
Utility Room:	187 s.f.
Trash Enclosure:	403 s.f.
Total:	4,888 s.f.

The train car restaurant is 3,566 square feet and during the process of moving the restaurant to the neighboring parcel, the Motte Country Plaza project proposes the construction of 193 square feet of ADA ramp, 539 square feet of train car restrooms, a 187 square foot utility room, and a 403 square foot trash enclosure. Thus, the total impervious area being added to parcel 1 is 4,888 square feet. Additionally, approximately 637 square feet of pervious pavers are provided within the drive aisle and walkway that provide access to the proposed trash enclosure area.

A comparison of existing improvements to proposed improvements for parcel 1 is summarized in Table 1.

Table 1. Parcel 1 Existing vs Proposed Improvements

Drainage Area	**Existing Condition**		**Proposed Condition**		**Difference** (Prop – Exist)	
	Impervious (sf)	**Pervious** (sf)	**Impervious** (sf)	**Pervious** (sf)	**Impervious** (%)	**Pervious** (%)
Parcel 1	71,556	49,857	76,444	44,969	4.0%	4.0%

The proposed relocation and improvements results in a 4% increase to the impervious area. Based on the fact that any redevelopment currently proposed within Parcel 1 will have an insignificant impact on the

hydrology, KWC is proposing that the project proceeds to be conditioned utilizing the currently provided information within the application package as well as the information provided in this supplemental report.

3.2 PARCEL 2 IMPROVEMENTS

The parcel 2 improvements are generally the same as the improvements proposed within the preliminary hydrology report. Parcel 2 will be redeveloped to include two proposed buildings, gas station, and parking area. The ribbon gutters will convey all the flows into a proposed sump catch basin located at the southeasterly corner of the site. The flow continues into a MWS vault in order to be treated for water quality requirements before entering into the underground chambers. A proposed 18-inch RCP storm drain line is proposed to convey all flows offsite directly into the Romoland-Motte Farms Storm Drain. KWC Engineers proposes a Storm Drain Line Alternative B that will outlet into the RCFC Romoland MDP Line A-3.

3.3 ROMOLAND MDP LINE A-3

This supplement concludes Riverside County Flood Control and Water Conservation District's Romoland Master Drainage Plan Line A-3 will be constructed prior to the entitlement of the Motte Country Plaza project. MDP Line A-3 begins on Mclaughlin Road and ends at Malone Avenue running through Varela Lane and Palomar Road, adjacent to the project site. Romoland MDP Line A-3 is proposed to be a 6.5-feet high by 12.0 feet wide single cell reinforced concrete box (RCB) designed Caltrans standards.

The City of Menifee has requested KWC Engineers to look at an alternate storm drain alignment for the Motte Country Plaza that discharges into the future Romoland MDP Line A-3. Storm Drain Line A is the currently proposed alignment that discharges into the existing Romoland Motte Farms Storm Drain mentioned in the preliminary Hydrology Report by Webb Associates. The alignment proposes approximately 1,260 linear feet of storm drain. Storm Drain Line Alternative B is the alternate alignment that is proposed within this supplemental report. The alignment proposes approximately 320 linear feet of storm drain that outlets into the MDP Line A-3.

4.0 HYDROLOGY

KWC Engineers has evaluated the site conditions and county hydrology requirements to determine the impact of discharging into the future storm drain line. Drainage area "A" consists of Parcel 2 and a small portion of Parcel 1, which totals to 1.40 acres. According to the County of Riverside's "Hydrology Manual", the rational method is intended for use on small watersheds of less than 300 to 500-acres. The hydrology analysis was prepared using the rational method. **Table 2** summarizes the proposed condition 10 and 100-year storm event rational method results for Storm Drain Line A and Line B. Refer to the Proposed Condition Hydrology Key Map **Figure 1** in **Appendix A** for locations of the drainage areas and peak flows. Both alignment alternatives discharge 3.70 cfs during the 100-year storm event. Proposed condition rational method calculations for Storm Drain Line B can be found in **Appendix A** of the supplemental report. Rational method calculations pertaining to Storm Drain Line A will be a part of the preliminary Hydrology Report.

Table 2. Proposed Condition Peak Flow Summary

Storm Drain Line	Drainage Area	Area (acres)	Q_{10} (cfs)	Q_{100} (cfs)
Storm Drain Line A	A	1.40	2.55	3.70
Storm Drain Line B	A	1.40	2.55	3.70

5.0 HYDRAULICS

The proposed drainage facilities for the Motte Country Plaza development were sized for the 100-year flow rates utilizing the WSPG (Water Surface and Pressure Gradient) computer program, see **Appendix B**. Storm Drain Line A discharges into the existing Romoland Motte Farms Storm Drain in Tract 29495-1. The proposed 18-inch RCP storm drain line is proposed to convey all captured flows offsite. Storm Drain Line A's hydraulic grade line generally stays 5 feet below ground. All flows within the storm drain will be kept underneath the ground. The proposed 18-inch RCP conveys flows east and outlets directly into the 6.5-feet high x 12-feet wide Romoland MDP-Line A-3. Storm Drain Line B's hydraulic grade line generally stays 4 feet below ground. All flows within the storm drain will be kept underneath the ground. The existing 48-inch Romoland Motte Farms Storm Drain, and is referred to as Storm Drain Line C in the hydraulic calculations. Storm Drain Line C's hydraulic grade line generally stays 0.5 feet below the top of the v-channel at the portion of analysis. The storm drain runs through a v-channel and the hydraulic grade is approximately 0.5 feet above the center of the v-channel. All of the flow will be kept within the v-channel.

6.0 CONCLUSIONS

Based on the future development of Romoland MDP-Line A-3, an alternate storm drain alignment has been proposed by KWC Engineers as requested by the city. Storm Drain Line A is to be constructed if the Romoland MDP Line A-3 is not constructed before the entitlement of the Motte Country Plaza project. Alternative A proposes 1,260 linear feet of storm drain to connect into the existing 48" Romoland Motte Farms Storm Drain. Line A discharges 3.70 cfs into the existing storm drain system. Storm Drain Line B is to be constructed if the Romoland MDP Line A-3 is constructed before the entitlement of the project. Alternative B proposes 320 linear feet of storm drain to connect into the future Romoland MDP Line A-3. Line B discharges 3.70 cfs into the future storm drain system. The proposed hydrology and hydraulic calculations are utilizing the currently provided information within the application package as well as the newly proposed storm drain alignment to determine the results provided within this supplemental report.

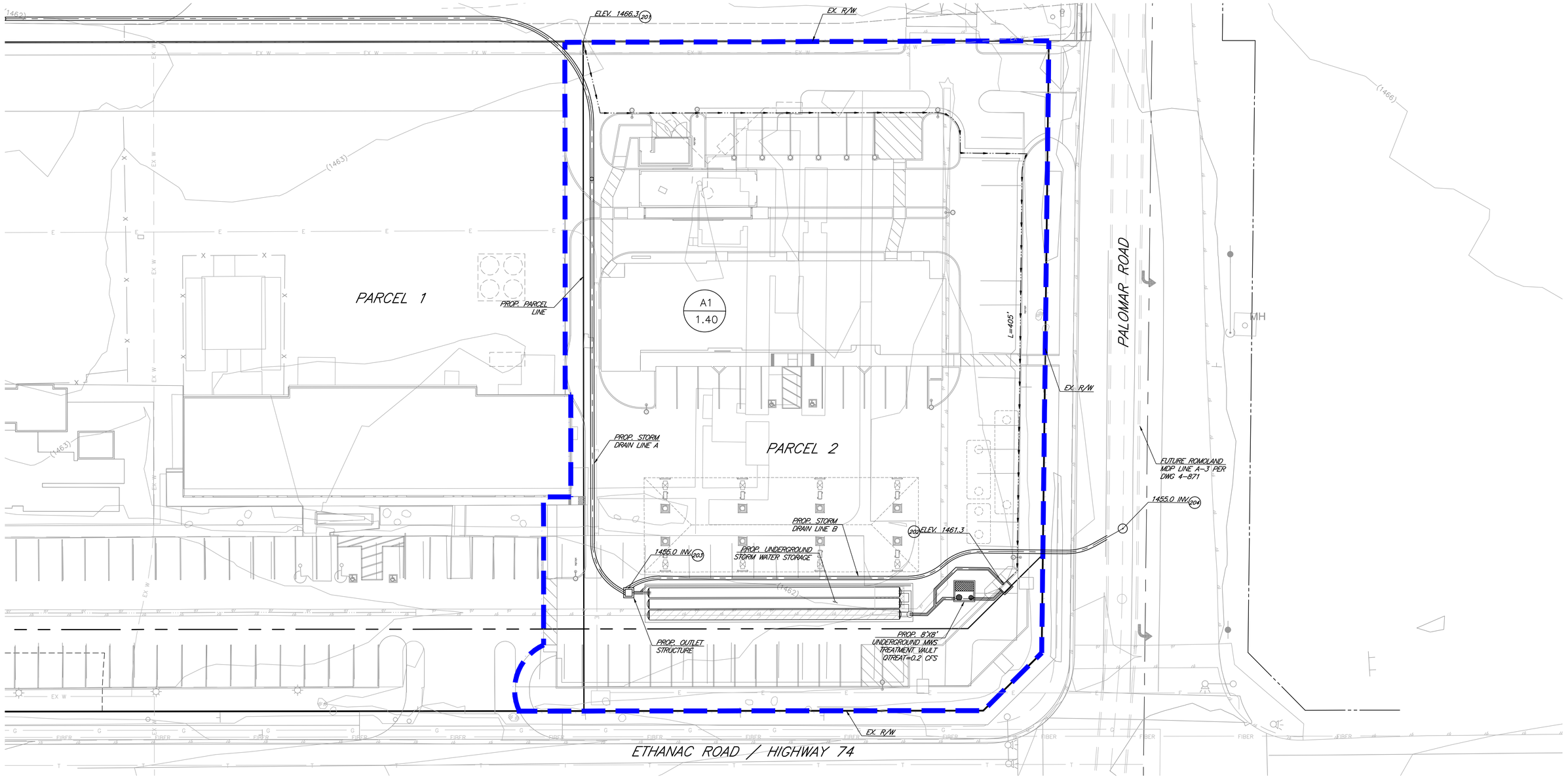
Engineer of Responsibility:

Brandon Barnett, PE, PLS
P.E. 78472

Appendix

A

PROPOSED CONDITION HYDROLOGY RATIONAL METHOD & KEY MAP



DRAINAGE AREA A					TRIBUTARY
NODE	10-YR STORM RUNOFF	TC (MIN.)	100-YR STORM RUNOFF	TC (MIN.)	AREA (AC.)
202	Q10 = 2.55 CFS	–	Q100 = 3.70 CFS	–	1.40
203	Q10 = 2.55 CFS	–	Q100 = 3.70 CFS	–	–
204	Q10 = 2.55 CFS	–	Q100 = 3.70 CFS	–	–

LEGEND

- MAJOR WATERSHED BOUNDARY
- MINOR WATERSHED BOUNDARY
- FLOW PATH
- SOIL BOUNDARY
- C17 / 70.21 — DRAINAGE AREA DESIGNATION / ACRES
- (340) — NODE DESIGNATION
- L=300' — LENGTH OF EXISTING FLOW PATH

20' 0 20' 40' 60'
SCALE IN FEET

FIGURE 1

PROPOSED CONDITION HYDROLOGY KEY MAP

FOR

MOTTE COUNTRY PLAZA

CITY OF CITY OF MENIFEE

HYD: CS	KWC ENGINEERS CIVIL ENGINEERING, PLANNING AND CONSTRUCTION MANAGEMENT 1880 COMPTON AVENUE, SUITE 100 • CORONA, CA 92881-3370 • 909-734-2130	SHEET 1 OF 1
DRAFT: CS		
CHECK: BMB		

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10 YEAR PROPOSED CONDITION

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1

Rational Hydrology Study Date: 12/08/20 File:2112D10A.out

MOTTE COUNTRY PLAZA
PROPOSED CONDITION
RCFC&WCD 10-YEAR STORM
BY:CS

********* Hydrology Study Control Information **********

English (in-lb) Units used in input data file

Program License Serial Number 6062

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Perris Valley] area used.
10 year storm 10 minute intensity = 1.880(In/Hr)
10 year storm 60 minute intensity = 0.780(In/Hr)
100 year storm 10 minute intensity = 2.690(In/Hr)
100 year storm 60 minute intensity = 1.120(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.780(In/Hr)
Slope of intensity duration curve = 0.4900

++

Process from Point/Station 101.000 to Point/Station 102.000

**** INITIAL AREA EVALUATION ****

```
      ----------------------------------------------------------------------
---
      Initial area flow distance =   405.000(Ft.)
      Top (of initial area) elevation =  1466.300(Ft.)
      Bottom (of initial area) elevation =  1461.300(Ft.)
      Difference in elevation =     5.000(Ft.)
      Slope =    0.01235  s(percent)=       1.23
      TC = k(0.300)*[(length^3)/(elevation change)]^0.2
      Initial area time of concentration =    7.976 min.
      Rainfall intensity =      2.097(In/Hr) for a    10.0 year storm
      COMMERCIAL subarea type
      Runoff Coefficient = 0.870
      Decimal fraction soil group A = 0.000
      Decimal fraction soil group B = 1.000
      Decimal fraction soil group C = 0.000
      Decimal fraction soil group D = 0.000
      RI index for soil(AMC 2)  =  56.00
      Pervious area fraction =  0.100; Impervious fraction =  0.900
      Initial subarea runoff =      2.554(CFS)
      Total initial stream area =        1.400(Ac.)
      Pervious area fraction = 0.100


      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
+++
      Process from Point/Station      102.000 to Point/Station
103.000
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ----------------------------------------------------------------------
---
      Upstream point/station elevation =  1458.300(Ft.)
      Downstream point/station elevation =  1455.000(Ft.)
      Pipe length  =   185.00(Ft.)   Manning's N = 0.013
      No. of pipes = 1  Required pipe flow  =     2.554(CFS)
      Nearest computed pipe diameter  =     12.00(In.)
      Calculated individual pipe flow  =     2.554(CFS)
      Normal flow depth in pipe =    6.26(In.)
      Flow top width inside pipe =   11.99(In.)
      Critical Depth =    8.22(In.)
      Pipe flow velocity =      6.17(Ft/s)
      Travel time through pipe =    0.50 min.
      Time of concentration (TC) =     8.48 min.


      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
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      Process from Point/Station      103.000 to Point/Station
104.000
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ----------------------------------------------------------------------
---
      Upstream point/station elevation =  1455.000(Ft.)
      Downstream point/station elevation =  1452.420(Ft.)
      Pipe length  =   219.00(Ft.)   Manning's N = 0.013
```

No. of pipes = 1 Required pipe flow =   2.554(CFS)
Nearest computed pipe diameter =   12.00(In.)
Calculated individual pipe flow =   2.554(CFS)
Normal flow depth in pipe =   7.12(In.)
Flow top width inside pipe =   11.79(In.)
Critical Depth =   8.22(In.)
Pipe flow velocity =   5.26(Ft/s)
Travel time through pipe =   0.69 min.
Time of concentration (TC) =   9.17 min.
End of computations, total study area =   1.40 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.100
Area averaged RI index number = 56.0

100 YEAR PROPOSED CONDITION

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1

Rational Hydrology Study Date: 12/08/20 File:2112D100A.out

MOTTE COUNTRY PLAZA
PROPOSED CONDITION
RCFC&WCD 100-YEAR STORM
BY:CS

********* Hydrology Study Control Information **********

English (in-lb) Units used in input data file

Program License Serial Number 6062

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Perris Valley] area used.
10 year storm 10 minute intensity = 1.880(In/Hr)
10 year storm 60 minute intensity = 0.780(In/Hr)
100 year storm 10 minute intensity = 2.690(In/Hr)
100 year storm 60 minute intensity = 1.120(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.120(In/Hr)
Slope of intensity duration curve = 0.4900

++

Process from Point/Station 101.000 to Point/Station 102.000

**** INITIAL AREA EVALUATION ****

```
      ----------------------------------------------------------------------
---
      Initial area flow distance =   405.000(Ft.)
      Top (of initial area) elevation =  1466.300(Ft.)
      Bottom (of initial area) elevation =  1461.300(Ft.)
      Difference in elevation =     5.000(Ft.)
      Slope =    0.01235  s(percent)=       1.23
      TC = k(0.300)*[(length^3)/(elevation change)]^0.2
      Initial area time of concentration =    7.976 min.
      Rainfall intensity =      3.010(In/Hr) for a   100.0 year storm
      COMMERCIAL subarea type
      Runoff Coefficient = 0.877
      Decimal fraction soil group A = 0.000
      Decimal fraction soil group B = 1.000
      Decimal fraction soil group C = 0.000
      Decimal fraction soil group D = 0.000
      RI index for soil(AMC 2)  =  56.00
      Pervious area fraction =  0.100; Impervious fraction =  0.900
      Initial subarea runoff =      3.695(CFS)
      Total initial stream area =        1.400(Ac.)
      Pervious area fraction = 0.100


      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
+++
      Process from Point/Station      102.000 to Point/Station
103.000
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ----------------------------------------------------------------------
---
      Upstream point/station elevation =  1458.300(Ft.)
      Downstream point/station elevation =  1455.000(Ft.)
      Pipe length  =   185.00(Ft.)   Manning's N = 0.013
      No. of pipes = 1  Required pipe flow  =     3.695(CFS)
      Nearest computed pipe diameter  =     12.00(In.)
      Calculated individual pipe flow  =     3.695(CFS)
      Normal flow depth in pipe =    7.95(In.)
      Flow top width inside pipe =   11.35(In.)
      Critical Depth =    9.83(In.)
      Pipe flow velocity =      6.69(Ft/s)
      Travel time through pipe =    0.46 min.
      Time of concentration (TC) =     8.44 min.


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      Process from Point/Station      103.000 to Point/Station
104.000
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ----------------------------------------------------------------------
---
      Upstream point/station elevation =  1455.000(Ft.)
      Downstream point/station elevation =  1452.420(Ft.)
      Pipe length  =   219.00(Ft.)   Manning's N = 0.013
```

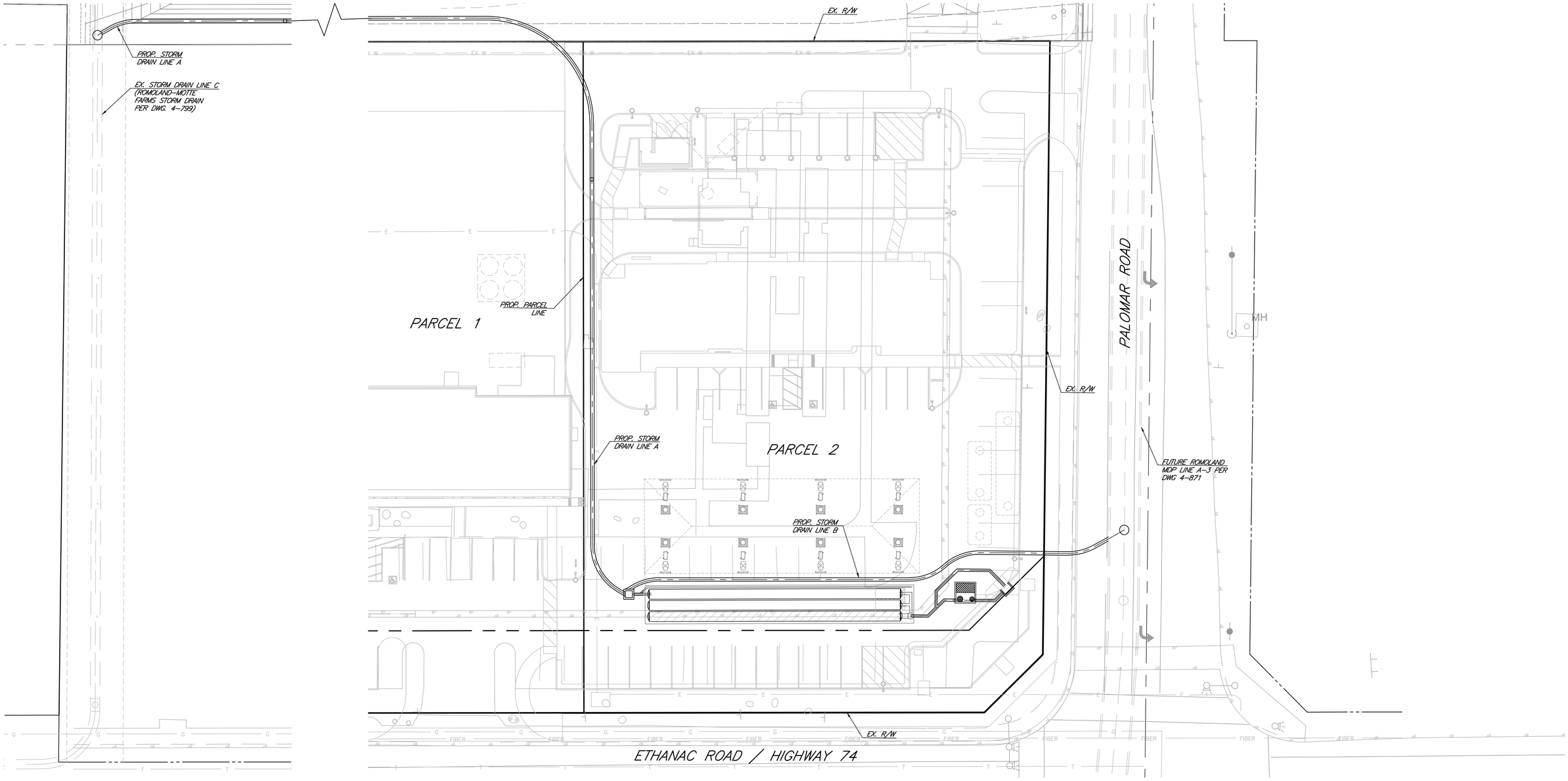
No. of pipes = 1 Required pipe flow =   3.695(CFS)
Nearest computed pipe diameter =   12.00(In.)
Calculated individual pipe flow =   3.695(CFS)
Normal flow depth in pipe =   9.39(In.)
Flow top width inside pipe =   9.91(In.)
Critical Depth =   9.83(In.)
Pipe flow velocity =   5.61(Ft/s)
Travel time through pipe =   0.65 min.
Time of concentration (TC) =   9.09 min.
End of computations, total study area =   1.40 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.100
Area averaged RI index number = 56.0

Appendix

B

STORM DRAIN HYDRAULICS



LEGEND

- BOUNDARY LINE
- PROPOSED PARCEL LINE
- EXISTING R/W
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- FUTURE STORM DRAIN

N

20' 0 20' 40' 60'

SCALE IN FEET

STORM DRAIN LAYOUT

FOR

MOTTE COUNTRY PLAZA

CITY OF CITY OF MENIFEE

KWC ENGINEERS
CIVIL ENGINEERING, PLANNING AND CONSTRUCTION MANAGEMENT
1880 COMPTON AVENUE, SUITE 100 CORONA, CA 92881-3370 909-734-2130

SHEET 1 OF 1

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T1 JN 20.2112.1 MOTTE COUNTRY PLAZA                                                    0
T2 CITY OF MENIFEE
T3 STORM DRAIN LINE A - MODELED BY CS
SO   1000.000 1444.530 1                        1453.500
R    1006.140 1444.590 1      .013                            .000    .000 0
R    1017.810 1444.710 1      .013                          29.700    .000 0
R    1079.080 1445.320 1      .013                            .000    .000 0
JX   1083.080 1445.330 2      .013
R    1679.080 1451.490 1      .013                            .000    .000 0
JX   1683.080 1451.500 3      .013
R    1886.690 1453.190 3      .013                            .000    .000 0
R    1957.360 1453.970 3      .013                          89.970    .000 0
R    1979.080 1454.080 1      .013                            .000    .000 0
JX   1983.080 1454.090 4      .013
R    2136.660 1454.870 4      .013                            .000    .000 0
R    2160.200 1454.990 4      .013                         -59.950    .000 0
R    2163.250 1455.000 4      .013                            .000    .000 0
WE   2163.250 1455.000 5      .200
SH   2163.250 1455.000 5                        1458.420
CD   1  4   1    .000   1.500     .000  .000  .000   .00
CD   2  4   1    .000   1.500     .000  .000  .000   .00
CD   3  4   1    .000   1.500     .000  .000  .000   .00
CD   4  4   1    .000   1.500     .000  .000  .000   .00
CD   5  3   0    .000   7.810    4.330  .000  .000   .00
Q              3.700   .0
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Program Package Serial Number: 1873

WATER SURFACE PROFILE LISTING Date:12- 9-2020 Time:11:25:26

JN 20.2112.1 MOTTE COUNTRY PLAZA

CITY OF MENIFEE

STORM DRAIN LINE A - MODELED BY CS

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/ Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
1000.000	1444.530	8.970	1453.500	3.70	2.09	.07	1453.57	.00	.73	.00	1.500	.000	.00	1 .0
6.140	.0098					.0012	.01	8.97	.00	.62	.013	.00	.00	PIPE
1006.140	1444.590	8.918	1453.508	3.70	2.09	.07	1453.58	.00	.73	.00	1.500	.000	.00	1 .0
11.670	.0103					.0012	.01	.00	.00	.61	.013	.00	.00	PIPE
1017.810	1444.710	8.820	1453.530	3.70	2.09	.07	1453.60	.00	.73	.00	1.500	.000	.00	1 .0
61.270	.0100					.0012	.08	8.82	.00	.62	.013	.00	.00	PIPE
1079.080	1445.320	8.286	1453.606	3.70	2.09	.07	1453.67	.00	.73	.00	1.500	.000	.00	1 .0
JUNCT STR	.0025					.0012	.00	8.29	.00		.013	.00	.00	PIPE
1083.080	1445.330	8.281	1453.611	3.70	2.09	.07	1453.68	.00	.73	.00	1.500	.000	.00	1 .0
596.000	.0103					.0012	.74	8.28	.00	.61	.013	.00	.00	PIPE
1679.080	1451.490	2.860	1454.350	3.70	2.09	.07	1454.42	.00	.73	.00	1.500	.000	.00	1 .0
JUNCT STR	.0025					.0012	.00	2.86	.00		.013	.00	.00	PIPE
1683.080	1451.500	2.855	1454.355	3.70	2.09	.07	1454.42	.00	.73	.00	1.500	.000	.00	1 .0
191.985	.0083					.0012	.24	2.86	.00	.65	.013	.00	.00	PIPE
1875.065	1453.094	1.500	1454.594	3.70	2.09	.07	1454.66	.00	.73	.00	1.500	.000	.00	1 .0
11.625	.0083					.0011	.01	1.50	.00	.65	.013	.00	.00	PIPE
1886.690	1453.190	1.413	1454.603	3.70	2.14	.07	1454.67	.00	.73	.70	1.500	.000	.00	1 .0
8.771	.0110					.0011	.01	1.41	.24	.60	.013	.00	.00	PIPE

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
1895.461	1453.287	1.318	1454.605	3.70	2.25	.08	1454.68	.00	.73	.98	1.500	.000	.00	1 .0
6.548	.0110					.0012	.01	1.32	.31	.60	.013	.00	.00	PIPE
1902.010	1453.359	1.246	1454.605	3.70	2.36	.09	1454.69	.00	.73	1.13	1.500	.000	.00	1 .0
5.475	.0110					.0013	.01	1.25	.35	.60	.013	.00	.00	PIPE
1907.485	1453.419	1.184	1454.603	3.70	2.47	.10	1454.70	.01	.73	1.22	1.500	.000	.00	1 .0
4.746	.0110					.0014	.01	1.19	.39	.60	.013	.00	.00	PIPE
1912.231	1453.472	1.129	1454.600	3.70	2.59	.10	1454.70	.01	.73	1.29	1.500	.000	.00	1 .0
4.197	.0110					.0016	.01	1.13	.44	.60	.013	.00	.00	PIPE
1916.428	1453.518	1.078	1454.597	3.70	2.72	.11	1454.71	.01	.73	1.35	1.500	.000	.00	1 .0
3.738	.0110					.0018	.01	1.09	.48	.60	.013	.00	.00	PIPE
1920.166	1453.559	1.032	1454.592	3.70	2.85	.13	1454.72	.01	.73	1.39	1.500	.000	.00	1 .0
3.335	.0110					.0020	.01	1.04	.52	.60	.013	.00	.00	PIPE
1923.501	1453.596	.989	1454.586	3.70	2.99	.14	1454.72	.01	.73	1.42	1.500	.000	.00	1 .0
2.968	.0110					.0022	.01	1.00	.57	.60	.013	.00	.00	PIPE
1926.469	1453.629	.949	1454.578	3.70	3.14	.15	1454.73	.01	.73	1.45	1.500	.000	.00	1 .0
2.622	.0110					.0025	.01	.96	.61	.60	.013	.00	.00	PIPE
1929.091	1453.658	.911	1454.569	3.70	3.29	.17	1454.74	.01	.73	1.46	1.500	.000	.00	1 .0
2.197	.0110					.0028	.01	.92	.66	.60	.013	.00	.00	PIPE

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1931.287	1453.682	.876	1454.558	3.70	3.45	.19	1454.74	.01	.73	1.48	1.500	.000	.00	1 .0
HYDRAULIC JUMP														
1931.287	1453.682	.598	1454.281	3.70	5.63	.49	1454.77	.03	.73	1.47	1.500	.000	.00	1 .0
2.363	.0110					.0106	.03	.63	1.48	.60	.013	.00	.00	PIPE
1933.650	1453.708	.612	1454.320	3.70	5.46	.46	1454.78	.03	.73	1.47	1.500	.000	.00	1 .0
13.462	.0110					.0096	.13	.64	1.42	.60	.013	.00	.00	PIPE
1947.112	1453.857	.634	1454.491	3.70	5.21	.42	1454.91	.03	.73	1.48	1.500	.000	.00	1 .0
5.651	.0110					.0084	.05	.66	1.33	.60	.013	.00	.00	PIPE
1952.763	1453.919	.657	1454.577	3.70	4.97	.38	1454.96	.03	.73	1.49	1.500	.000	.00	1 .0
2.851	.0110					.0074	.02	.68	1.24	.60	.013	.00	.00	PIPE
1955.614	1453.951	.682	1454.633	3.70	4.74	.35	1454.98	.02	.73	1.49	1.500	.000	.00	1 .0
1.354	.0110					.0065	.01	.70	1.15	.60	.013	.00	.00	PIPE
1956.968	1453.966	.707	1454.673	3.70	4.52	.32	1454.99	.02	.73	1.50	1.500	.000	.00	1 .0
.392	.0110					.0057	.00	.73	1.08	.60	.013	.00	.00	PIPE
1957.360	1453.970	.735	1454.705	3.70	4.30	.29	1454.99	.00	.73	1.50	1.500	.000	.00	1 .0
2.998	.0051					.0052	.02	.73	1.00	.75	.013	.00	.00	PIPE
1960.358	1453.985	.746	1454.731	3.70	4.22	.28	1455.01	.00	.73	1.50	1.500	.000	.00	1 .0
18.722	.0051					.0050	.09	.75	.97	.75	.013	.00	.00	PIPE

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS) / SF Ave	Vel Head / HF	Energy Grd.El. / SE Dpth	Super Elev / Froude N	Critical Depth / Norm Dp	Flow Top Width / "N"	Height/ Dia.-FT / X-Fall	Base Wt or I.D. / ZR	ZL	No Wth Prs/Pip / Type Ch
1979.080	1454.080	.746	1454.826	3.70	4.22	.28	1455.10	.00	.73	1.50	1.500	.000	.00	1 .0
JUNCT STR	.0025				.0046	.02	.75	.97		.013		.00	.00	PIPE
1983.080	1454.090	.795	1454.885	3.70	3.89	.23	1455.12	.00	.73	1.50	1.500	.000	.00	1 .0
8.452	.0051				.0044	.04	.80	.86	.74	.013		.00	.00	PIPE
1991.532	1454.133	.766	1454.899	3.70	4.08	.26	1455.16	.00	.73	1.50	1.500	.000	.00	1 .0
7.810	.0051				.0048	.04	.77	.92	.74	.013		.00	.00	PIPE
1999.342	1454.173	.745	1454.917	3.70	4.22	.28	1455.19	.00	.73	1.50	1.500	.000	.00	1 .0
137.318	.0051				.0050	.69	.74	.97	.74	.013		.00	.00	PIPE
2136.660	1454.870	.745	1455.615	3.70	4.22	.28	1455.89	.02	.73	1.50	1.500	.000	.00	1 .0
1.031	.0051				.0051	.01	.76	.97	.74	.013		.00	.00	PIPE
2137.691	1454.875	.744	1455.619	3.70	4.23	.28	1455.90	.02	.73	1.50	1.500	.000	.00	1 .0
22.509	.0051				.0050	.11	.76	.98	.74	.013		.00	.00	PIPE
2160.200	1454.990	.744	1455.734	3.70	4.23	.28	1456.01	.00	.73	1.50	1.500	.000	.00	1 .0
2.078	.0033				.0048	.01	.74	.98	.85	.013		.00	.00	PIPE
2162.278	1454.997	.773	1455.769	3.70	4.03	.25	1456.02	.00	.73	1.50	1.500	.000	.00	1 .0
.972	.0033				.0044	.00	.77	.91	.85	.013		.00	.00	PIPE
2163.250	1455.000	.779	1455.779	3.70	3.99	.25	1456.03	.00	.73	1.50	1.500	.000	.00	1 .0
WALL	ENTRANCE													

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS) / SF Ave	Vel Head / HF	Energy Grd.El. / SE Dpth	Super Elev / Froude N	Critical Depth / Norm Dp	Flow Top Width / "N"	Height/ Dia.-FT / X-Fall	Base Wt or I.D. / ZR	ZL	No Wth Prs/Pip / Type Ch
2163.250	1455.000	1.143	1456.143	3.70	.75	.01	1456.15	.00	.28	4.33	7.810	4.330	.00	0 .0

```
T1 JN 20.2112.1 MOTTE COUNTRY PLAZA                                                    0
T2 CITY OF MENIFEE
T3 STORM DRAIN LINE B - MODELED BY CS
SO   1000.000 1453.420 1                          1458.250
R    1014.460 1453.530 1      .013                                .000    .000 0
R    1026.160 1453.610 1      .013                              29.800    .000 0
R    1063.630 1453.880 1      .013                                .000    .000 0
R    1080.200 1454.000 1      .013                             -42.190    .000 0
R    1096.580 1454.120 1      .013                              41.720    .000 0
R    1202.750 1454.890 1      .013                                .000    .000 0
R    1214.530 1454.980 1      .013                             -30.000    .000 0
R    1216.790 1455.000 1      .013                                .000    .000 0
WE   1216.790 1455.000 2      .200
SH   1216.790 1455.000 2                          1458.420
CD   1  4   1    .000   1.500     .000  .000  .000   .00
CD   2  3   0    .000   7.810    4.330  .000  .000   .00
Q              3.700   .0
```

Program Package Serial Number: 1873

WATER SURFACE PROFILE LISTING Date:12- 9-2020 Time:11:26:13

JN 20.2112.1 MOTTE COUNTRY PLAZA

CITY OF MENIFEE

STORM DRAIN LINE B - MODELED BY CS

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/ Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
1000.000	1453.420	4.830	1458.250	3.70	2.09	.07	1458.32	.00	.73	.00	1.500	.000	.00	1 .0
14.460	.0076					.0012	.02	4.83	.00	.66	.013	.00	.00	PIPE
1014.460	1453.530	4.738	1458.268	3.70	2.09	.07	1458.34	.00	.73	.00	1.500	.000	.00	1 .0
11.700	.0068					.0012	.01	.00	.00	.68	.013	.00	.00	PIPE
1026.160	1453.610	4.680	1458.290	3.70	2.09	.07	1458.36	.00	.73	.00	1.500	.000	.00	1 .0
37.470	.0072					.0012	.05	4.68	.00	.67	.013	.00	.00	PIPE
1063.630	1453.880	4.457	1458.337	3.70	2.09	.07	1458.40	.00	.73	.00	1.500	.000	.00	1 .0
16.570	.0072					.0012	.02	.00	.00	.67	.013	.00	.00	PIPE
1080.200	1454.000	4.367	1458.367	3.70	2.09	.07	1458.43	.00	.73	.00	1.500	.000	.00	1 .0
16.380	.0073					.0012	.02	.00	.00	.67	.013	.00	.00	PIPE
1096.580	1454.120	4.276	1458.396	3.70	2.09	.07	1458.46	.00	.73	.00	1.500	.000	.00	1 .0
106.170	.0073					.0012	.13	4.28	.00	.67	.013	.00	.00	PIPE
1202.750	1454.890	3.638	1458.528	3.70	2.09	.07	1458.60	.00	.73	.00	1.500	.000	.00	1 .0
11.780	.0076					.0012	.01	.00	.00	.66	.013	.00	.00	PIPE
1214.530	1454.980	3.570	1458.550	3.70	2.09	.07	1458.62	.00	.73	.00	1.500	.000	.00	1 .0
2.260	.0089					.0012	.00	3.57	.00	.64	.013	.00	.00	PIPE
1216.790	1455.000	3.553	1458.553	3.70	2.09	.07	1458.62	.00	.73	.00	1.500	.000	.00	1 .0
WALL ENTRANCE														

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1216.790	1455.000	3.635	1458.635	3.70	.24	.00	1458.64	.00	.28	4.33	7.810	4.330	.00	0 .0

```
T1 JN 20.2112.1 MOTTE COUNTRY PLAZA                                                    0
T2 CITY OF MENIFEE
T3 EXISTING STORM DRAIN LINE C - MODELED BY CS
SO   2972.620 1443.680 1                          1453.000
R    3269.260 1444.570 1      .013                                .000    .000 0
R    3300.760 1444.670 1      .013                             -40.110    .000 0
R    3332.170 1444.760 1      .013                              39.990    .000 0
JX   3337.670 1444.780 2      .013
WE   3337.670 1444.780 2      .200
SH   3337.670 1444.780 2                          1453.000
CD   1  4   1    .000   4.000     .000  .000  .000   .00
CD   2  3   0    .000   8.620    5.500  .000  .000   .00
Q              52.80   .0
```

Program Package Serial Number: 1873

WATER SURFACE PROFILE LISTING Date:12- 9-2020 Time: 2:51:20

JN 20.2112.1 MOTTE COUNTRY PLAZA
CITY OF MENIFEE
EXISTING STORM DRAIN LINE C - MODELED BY CS

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
2972.620	1443.680	9.320	1453.000	52.80	4.20	.27	1453.27	.00	2.18	.00	4.000	.000	.00	1 .0
296.640	.0030					.0014	.40	9.32	.00	2.40	.013	.00	.00	PIPE
3269.260	1444.570	8.831	1453.401	52.80	4.20	.27	1453.67	.00	2.18	.00	4.000	.000	.00	1 .0
31.500	.0032					.0014	.04	.00	.00	2.35	.013	.00	.00	PIPE
3300.760	1444.670	8.810	1453.480	52.80	4.20	.27	1453.75	.00	2.18	.00	4.000	.000	.00	1 .0
31.410	.0029					.0014	.04	.00	.00	2.44	.013	.00	.00	PIPE
3332.170	1444.760	8.799	1453.559	52.80	4.20	.27	1453.83	.00	2.18	.00	4.000	.000	.00	1 .0
JUNCT STR	.0036					.0000	.00	.00	.00		.013	.00	.00	PIPE

WARNING - Junction Analysis - Change in Channel Type

WALL	ENTRANCE													
3337.670	1444.780	9.038	1453.818	52.80	1.11	.02	1453.84	.00	1.42	5.50				

Appendix

C

REFERENCE MATERIAL

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

ROMOLAND MOTTE FARMS STORM DRAIN

GENERAL NOTES

1. THE CONTRACTOR SHALL CONSTRUCT THE FLOOD CONTROL IMPROVEMENTS SHOWN ON THE DRAWINGS IN CONFORMANCE WITH THE REQUIREMENTS OF THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT'S SPECIAL PROVISIONS AND DETAILED SPECIFICATIONS DATED SEPTEMBER 1984, AND DESIGN MANUAL STANDARD DRAWINGS DATED MAY 1971.
2. AN ENCROACHMENT PERMIT IS REQUIRED FROM RIVERSIDE COUNTY FLOOD CONTROL. CONTACT ED LOTZ AT (909) 955-1266. AFTER THE PERMIT IS ISSUED THE DISTRICT MUST BE NOTIFIED TWO WEEKS PRIOR TO CONSTRUCTION.
3. CONSTRUCTION INSPECTION WILL BE PERFORMED BY RIVERSIDE COUNTY FLOOD CONTROL. CONTACT DALE ANDERSON AT (909) 955-1288. (THE DISTRICT MUST BE NOTIFIED 20 DAYS PRIOR TO CONSTRUCTION.)
4. ALL STATIONING REFERS TO CENTERLINE OF CONSTRUCTION UNLESS OTHERWISE NOTIFIED.
5. STATIONING FOR LATERALS AND CONNECTOR PIPE REFER TO THE CENTERLINE-CENTERLINE INTERSECTION STATION.
6. FORTY-EIGHT HOURS BEFORE EXCAVATION, CALL UNDERGROUND SERVICE ALERT 1-800-227-2600
7. ALL ELEVATIONS SHOWN ARE IN FEET AND DECIMALS THEREOF BASED ON U.S.C. & G.S. DATUM.
8. ALL CROSS SECTIONS ARE TAKEN LOOKING DOWNSTREAM.
9. ELEVATIONS OF UTILITIES ARE APPROXIMATE UNLESS OTHERWISE NOTED.
10. OPENINGS RESULTING FROM THE CUTTING OR PARTIAL REMOVAL OF EXISTING CULVERTS, PIPES OR SIMILAR STRUCTURES TO BE ABANDONED SHALL BE SEALED WITH 6" OF CLASS "B" CONCRETE.
11. PIPE CONNECTED TO THE MAINLINE PIPE SHALL CONFORM TO JUNCTION STRUCTURE NO. 4 (JS 229) UNLESS OTHERWISE NOTED.
12. BEDDING PIPE -SHALL CONFORM TO RCFC&WCD STD. M815, EXCEPT FOR COVER<2 FEET. FOR COVER <2 FEET, CONCRETE SLURRY (2000 PSI PSI - 2 SACK) SHALL BE USED. THE ENTIRE TRENCH SHALL BE SLURRY EXTENDING 4 INCHES MINIMUM AND 12 INCHES MAXIMUM ABOVE THE TOP OF THE PIPE.
13. ALL EXCAVATION, BEDDING & BACKFILL FOR THESE PLANS SHALL BE PERFORMED PER THE SOILS REPORT BY JOHN R. BYERLY INCORPORATED DATED JANUARY 9, 1991.
14. "V" IS THE DEPTH OF INLET OF CATCH BASINS MEASURED FROM THE TOP OF CURB TO INVERT OF CONNECTOR PIPE.
15. CATCH BASINS SHALL BE LOCATED SO THAT LOCAL DEPRESSION SHALL BEGIN AT EXISTING CURB RETURN JOINT, UNLESS OTHERWISE SPECIFIED.
16. ALL CURBS, GUTTERS, SIDEWALKS, DRIVEWAYS AND OTHER EXISTING IMPROVEMENTS TO BE RECONSTRUCTED IN KIND AND AT THE SAME ELEVATION AND LOCATION AS THE EXISTING IMPROVEMENTS UNLESS OTHERWISE NOTED.
17. TEMPORARY EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IMMEDIATELY FOLLOWING ROUGH GRADING TO PREVENT DEPOSITION OF DEBRIS ONTO DOWNSTREAM PROPERTIES OR DRAINAGE FACILITIES.

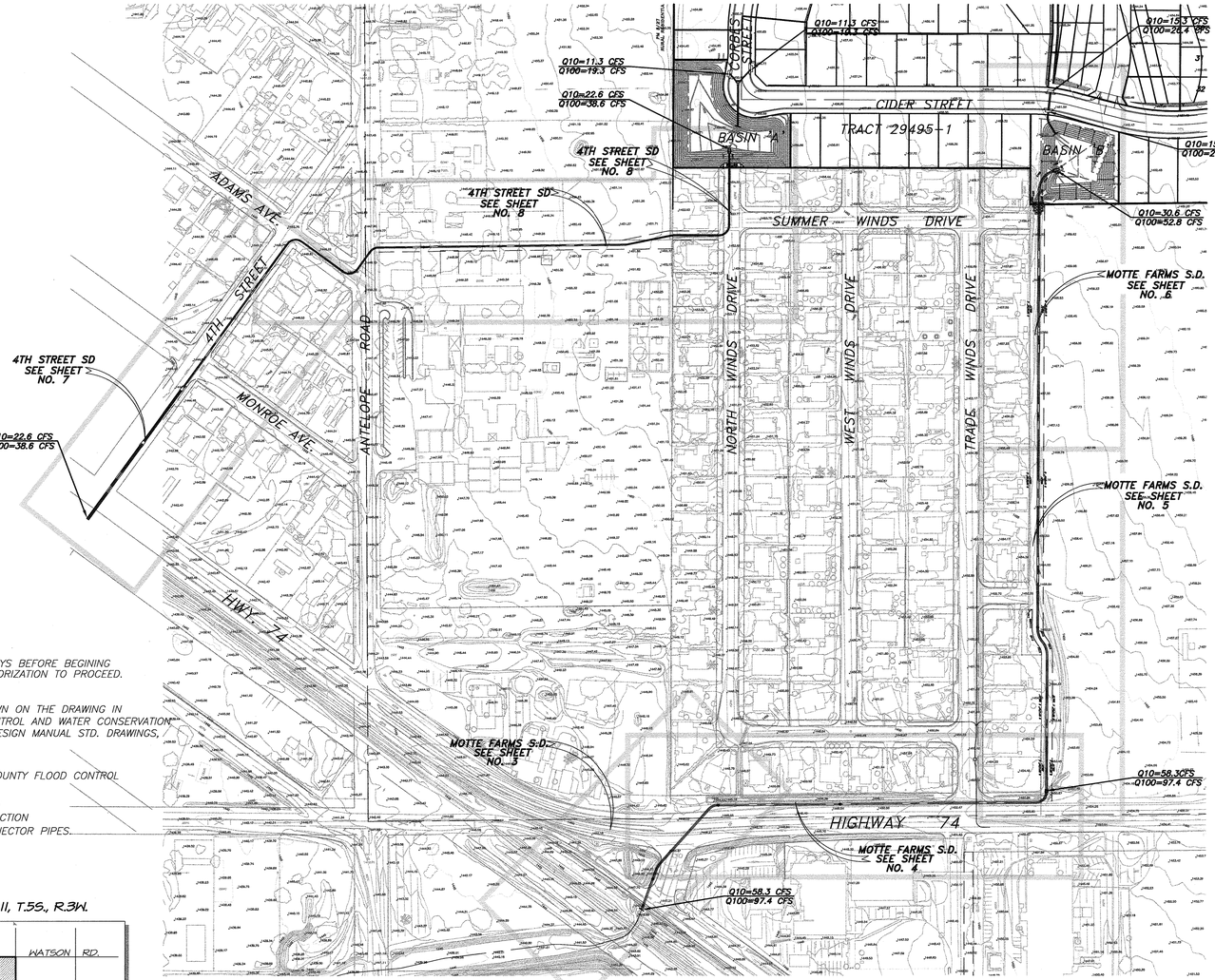
NOTICE:
THE CONTRACTOR SHALL NOTIFY THE DISTRICT IN WRITING A MINIMUM OF 20 DAYS BEFORE BEGINING CONSTRUCTION, AND SHALL NOT BEGIN CONSTRUCTION BEFORE OBTAINING AUTHORIZATION TO PROCEED.

THE CONTRACTOR SHALL CONSTRUCT THE FLOOD CONTROL IMPROVEMENTS SHOWN ON THE DRAWING IN CONFORMANCE WITH THE REQUIREMENTS OF THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT'S M.O.U. STANDARD SPECIFICATIONS, DATED SEPTEMBER 1984, AND DESIGN MANUAL STD. DRAWINGS, RECENT EDITION.

THE FOLLOWING ITEMS ARE TO BE INSPECTED AND MAINTAINED BY RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT.

48" RCP FROM STA. 29+67.12 TO STA. 43+54.66 AS SHOWN ON SHEETS 3-6
ALL MANHOLES AND OTHER STRUCTURES REQUIRED TO COMPLETE THE CONSTRUCTION OF THE ABOVE MENTIONED MAINLINE PIPE. EXCLUDING CATCH BASINS AND CONNECTOR PIPES.

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR GRADING PERMIT HAS BEEN ISSUED

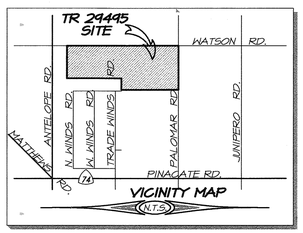


INDEX MAP

150 0 150 300 450

Scale 1" = 150'

W1/2 SW1/4 SEC. 11, T.5S., R.3W.



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

INDEX:

	SHEET NO.
TITLE SHEET	1
DETAIL SHEET	2
PLAN & PROFILE SHEET	3-8

R.C.F.C.&W.C.D. STANDARD DRAWINGS

		SHEET NO.
MH 252	MANHOLE NO. 2	3-8
TS 303	TRANSITION STRUCTURE NO. 3	3-8

CONSTRUCTION NOTES & QUANTITIES:

		QUANTITIES ARE FOR BONDING PURPOSES ONLY - CONTRACTOR TO BID PROJECT BASED ON HIS OWN "TAKE-OFF"	R.C.F.C.	R.C.T.D.
*	(1)	INSTALL 19" x 30" OF LO-HED PIPE MANUFACTURED BY HYDRO CONDUIT PER DETAIL SHEET 7 OF 8		400 LF
*	(2)	INSTALL 24" R.C.P. - DLOAD PER PLAN		276 LF
*	(3)	INSTALL 36" R.C.P. - DLOAD PER PLAN		1,453 LF
*	(4)	CONSTRUCT MANHOLE PER DETAIL ON SHEET 7		1 EA
*	(5)	CONSTRUCT TRANSITION STRUCTURE PER DETAIL ON SHEET 7		1 EA
*	(6)	CONSTRUCT PIPE HEADWALL PER CAL TRANS STD DWG. D89		1 EA
	(7)	INSTALL 48" R.C.P. - DLOAD PER PLAN	2,320 LF	* 70 LF
	(8)	CONSTRUCT MANHOLE NO. 2 PER R.C.F.C.&W.C.D. STD. DWG. NO. MH 252	3 EA	* 4 EA
	(9A)	CONSTRUCT MANHOLE NO. 2 PER R.C.F.C.&W.C.D. STD. DWG. NO. MH 252 AND DETAIL "A"	3 EA	* 2 EA
	(9)	CONSTRUCT 48" STAND PIPE WITH GRATE ASSEMBLE PER DETAIL ON SHEET 6	1 EA	
	(9A)	CONSTRUCT 48" STAND PIPE WITH GRATE ASSEMBLE PER DETAIL ON SHEET 8		* 1 EA
	(11)	PLACE GROUTED NO.2 BACKING RIP RAP - 1 FOOT THICK FOR EMERGENCY OVERFLOW	2 EA	
	(12)	INSTALL MANHOLE FRAME AND COVER (PRESSURE TYPE) PER R.C.F.C.&W.C.D. ST. DWG. NO.256 (SEE DETAIL ON SHEET 2)	3 EA	* 2 EA
	(13)	INSTALL STANDARD PRESSURE MANHOLE SHAFT PER R.C.F.C.&W.C.D. ST. DWG. NO.258 (SEE DETAIL ON SHEET 2)	3 EA	* 2 EA
	(14)	PLACE NO.2 BACKING RIP RAP - 1 FOOT THICK PLACED OVER MIRAFI 700X FILTER FABRIC OR EQUIVALENT AND 8" OF CLASS 2 BASE	1,039 SF	
~~*~~	~~(X)~~	~~CONSTRUCT 2'X4' RC BOX PER CAL TRANS STD. DWG. D80 (ALTERNATE OPTION FOR (1))~~		~~* 344 LF~~
~~*~~	~~(X)~~	~~CONSTRUCT MH NO. 3 PER R.C.F.C.& W.C.D. STD. DWG. NO. MH253 (ALTERNATE FOR NO. (4))~~		~~* 1 EA~~
*	(17)	CONSTRUCT JUNCTION STRUCTURE No.2 PER R.C.F.C.& W.C.D. STD. DWG. NO. JS 227		* 1 EA
**	(18A)	INSTALL BROOKS 36" x 36" CATCH BASIN 3636 CB MODIFY TO USE ALHAMBRA 36" X 36" COVER AND FRAME VANDAL PROOF IN 4 PLACES A2017		* 1 EA
**	(18B)	INSTALL BROOKS 36" x 36" CATCH BASIN 3636 CB MODIFY TO USE ALHAMBRA 36" X 36"..... 1 EA GRATE AND FRAME ADA COMPLIANT, GALVANIZED, VANDAL PROOF TWO PLACES(LOCK DOWN)		
*	(19)	INSTALL 18" RCP CLASS IV (2000 D)..... 49 LF		* 10 LF
*	(20)	INSTALL TRASH RACK PER DETAIL ON SHEET 2		* 1 EA
*	(21)	CONSTRUCT P.C.C. DIP SECTION PER COUNTY OF RIVERSIDE STD. NO. 307		* 1 EA

~~* INDICATES POSSIBLE ALTERNATE OPTION. TO BE DETERMINED BY CONTRACTOR~~

* INDICATES ITEMS TO BE MAINTAINED BY THE RIVERSIDE COUNTY TRANSPORTATION DEPT. WITHIN RCTD R/W

** INDICATES ITEMS TO BE MAINTAINED BY THE ROMOLAND SCHOOL DISTRICT

BENCHMARK

1.1 MILES SOUTHWEST OF LAKE SKINNER DAM FROM THE INTERSECTION OF BOREL ROAD AND BOOTLEG ROAD, 118 FEET NORTH OF THE CENTERLINE OF BOOTLEG ROAD, 21 FEET EAST OF THE CENTERLINE OF BOREL RD. 8 FEET SOUTH OF A TELEPHONE RISER, A 3-1/4 INCH STANDARD MWDSC ALUMINUM DISK, SET FLUSH, IN TOP OF, AND IN THE CENTER OF A 3 FEET WIDE CATCH BASIN, 1 FEET EAST OF CURB FACE.

MWD DESIGNATION: SD 6 1
NAVD 88 ELEV. 1401.44

MONUMENT NOTE:

CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONMENTATION AND/OR BENCHMARKS WHICH WILL BE DISTURBED OR DESTROYED BY CONSTRUCTION. SUCH POINTS SHALL BE REFERENCED AND REPLACED WITH APPROPRIATE MONUMENTATION BY A LICENSED LAND SURVEYOR OR A REGISTERED CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING. A CORNER RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILLED BY THE LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER AS REQUIRED BY THE LAND SURVEYOR'S ACT.

BASIS OF BEARING

THE CENTERLINE ANTELOPE ROAD AS SHOWN ON TRACT 4540, M.B. 74/62-63 RECORDS OF RIVERSIDE COUNTY, CALIFORNIA AND BEING N 00°21'19" W

AS BUILT
APPROVED BY:
DATE 7/5/06

INDEX OF SHEETS:

SHEET NO.(s)	DESCRIPTION
SHEET # 1	TITLE SHEET
SHEET # 2	DETAIL SHEET
SHEET # 3-8	PLAN AND PROFILE

MDC
IP# 020004

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

REGISTERED PROFESSIONAL ENGINEER KHALED A. OTHMAN NO. 33950 EXP. 06-30-06 CIVIL STATE OF CALIFORNIA

APPROVED BY:
KHALED A. OTHMAN 10/18/06
DATE
R.C.E. No. 33950 EXP. DATE: 6/30/06
FOR TRANSPORTATION DEPT.

RECOMMENDED FOR APPROVAL BY:
DATE: 12/15/03

PREPARED BY:
adkan ENGINEERS
6820 AIRPORT DRIVE, RIVERSIDE, CA 92504
TEL: (909) 688-0241 • FAX: (909) 688-0599
CHARISSA J.A. LEACH, R.C.E. 53390 DATE 12.5.03

ENGINEERS SEAL
REGISTERED PROFESSIONAL ENGINEER CHARISSA J.A. LEACH NO. 53390 EXP. 6-30-07 CIVIL STATE OF CALIFORNIA

BENCH MARK:
SEE SHEET 1

REVISIONS			
REF.	REVISIONS	APPR.	DATE
	AS BUILT		6/16/06

DESIGNED BY:
DRAWN BY:
DATE DRAWN:
CHECKED BY:

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

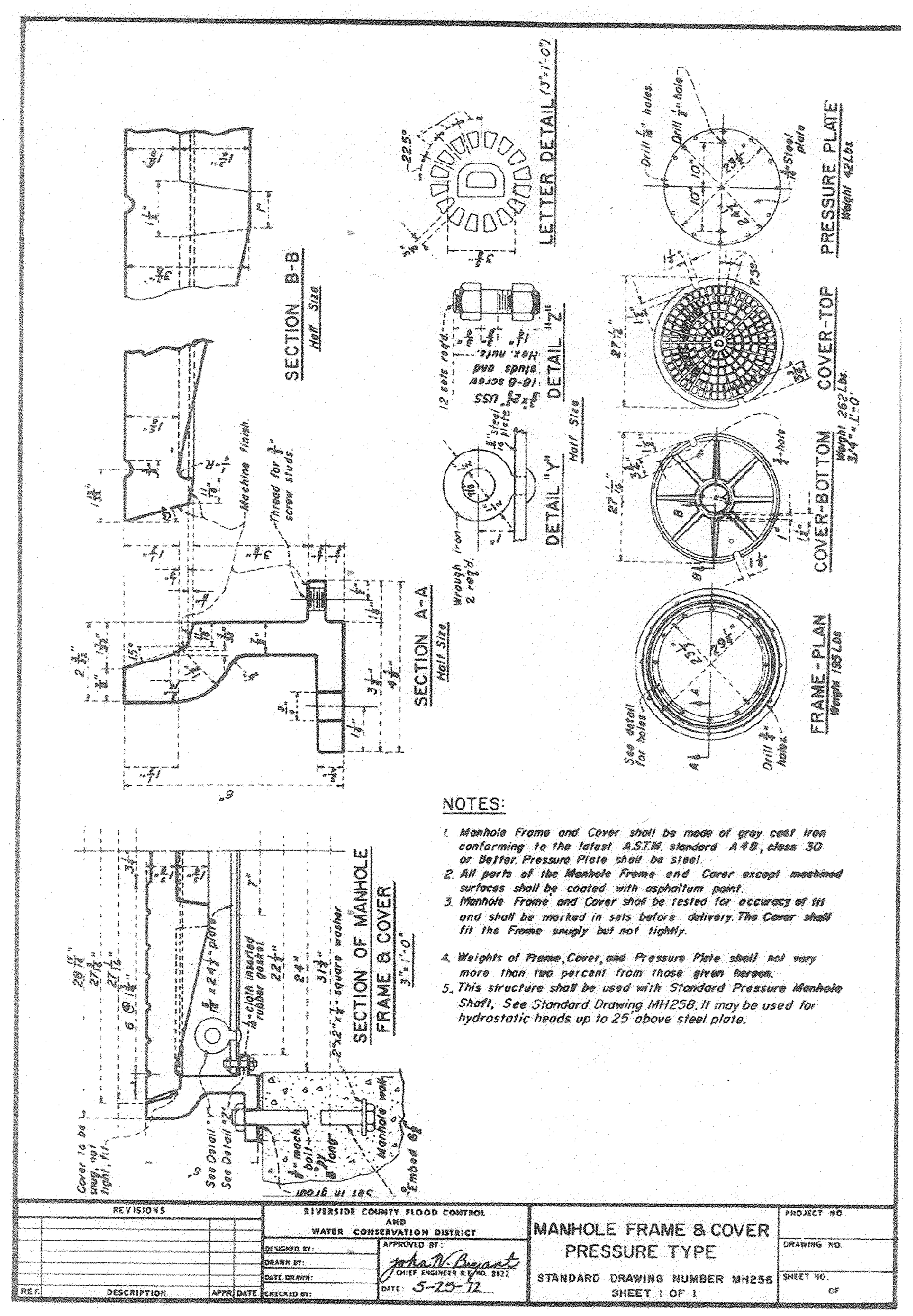
RECOMMENDED FOR APPROVAL BY:
PLANNING ENGINEER
DATE: 12.24.2003

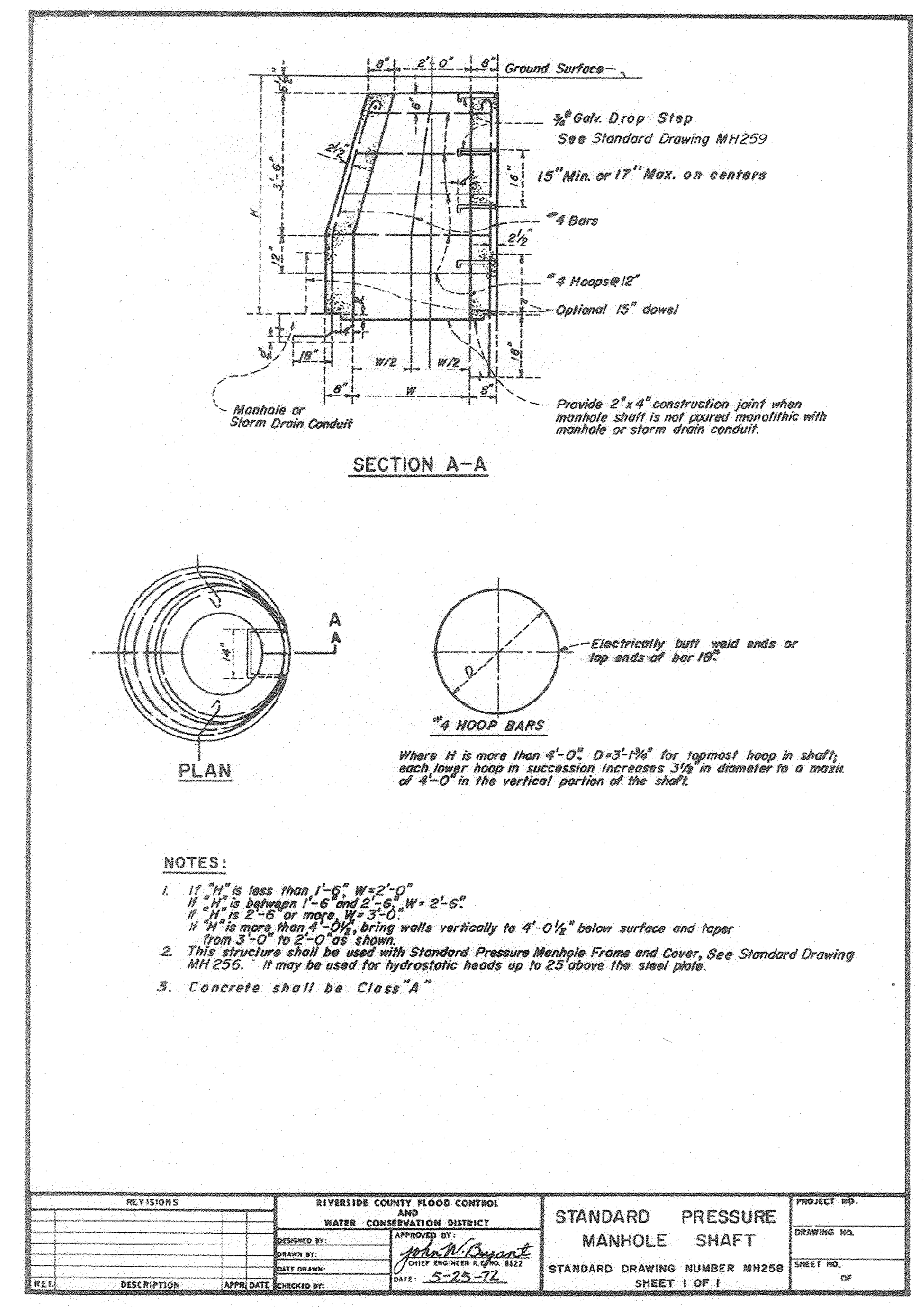
APPROVED BY:
CHIEF ENGINEER
DATE: 12-24-03

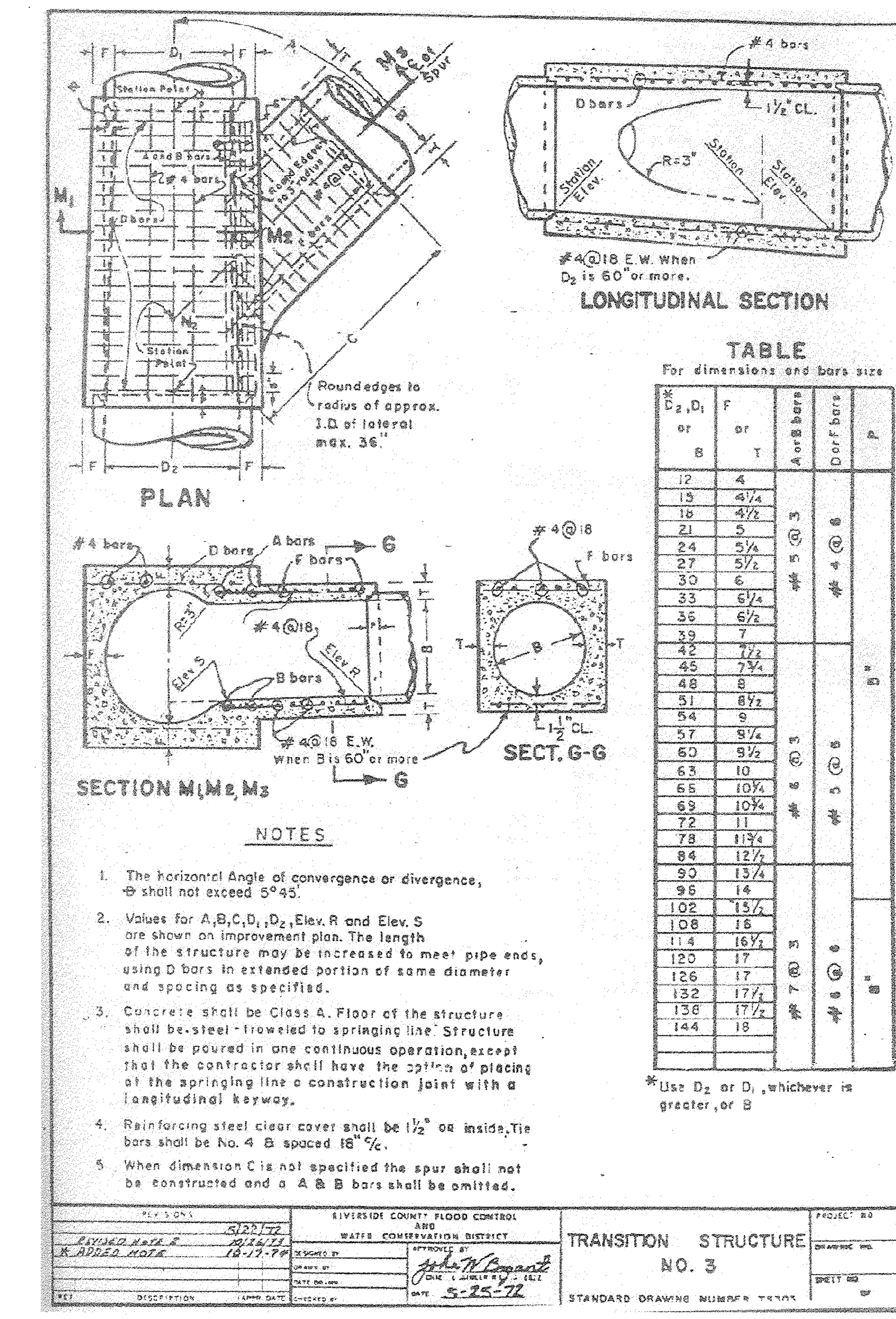
ROMOLAND-MOTTE FARMS STORM DRAIN
4TH STREET STORM DRAIN
TITLE SHEET
TRACT 29495-1

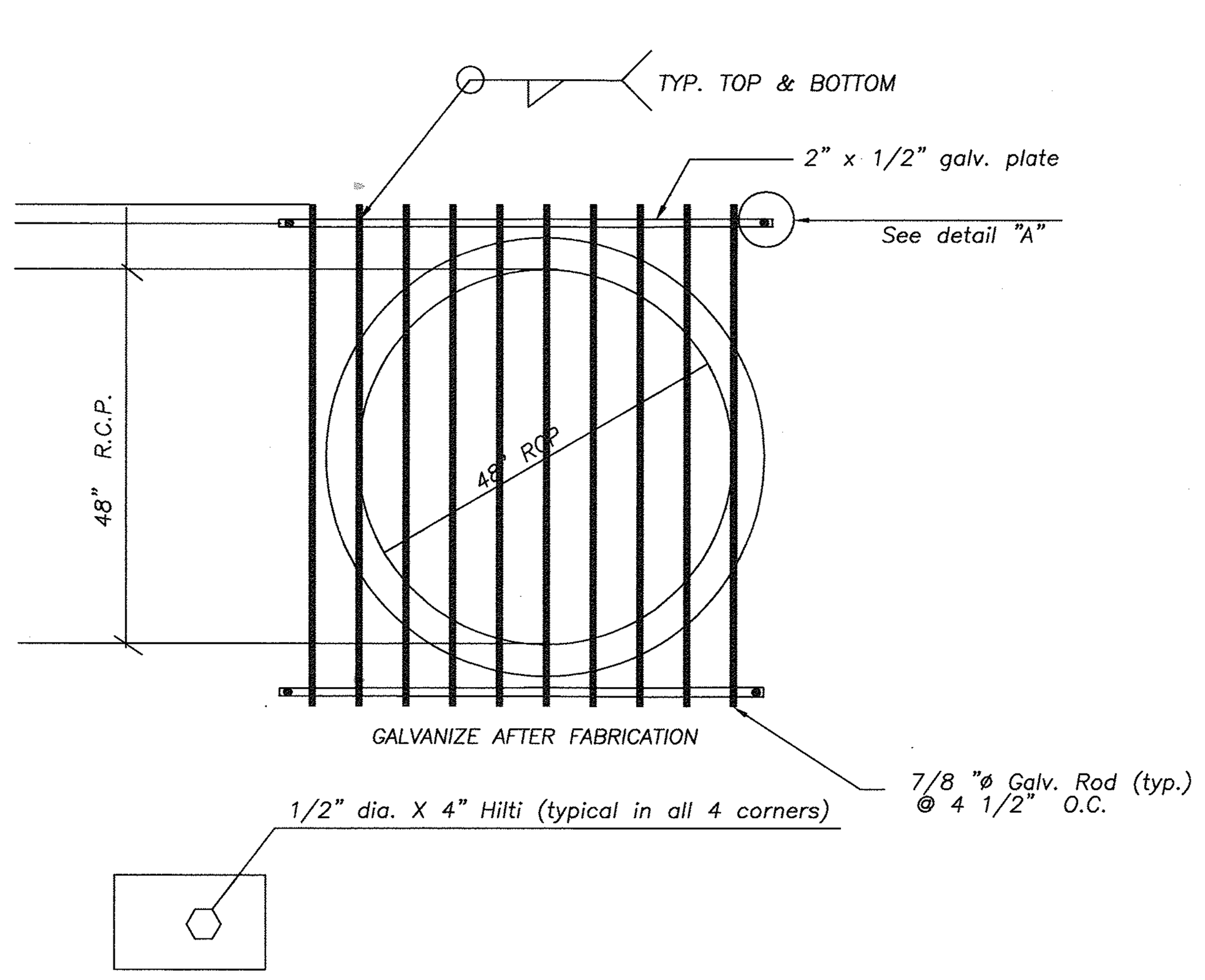
PROJECT NO. 4-0-0314
DRAWING NO. 4-799
SHEET NO. 1 OF 8

U:\Drawing\ASHBY\5708\29495-1\5708S001.dwg Dec 04, 2003 - 2:14pm



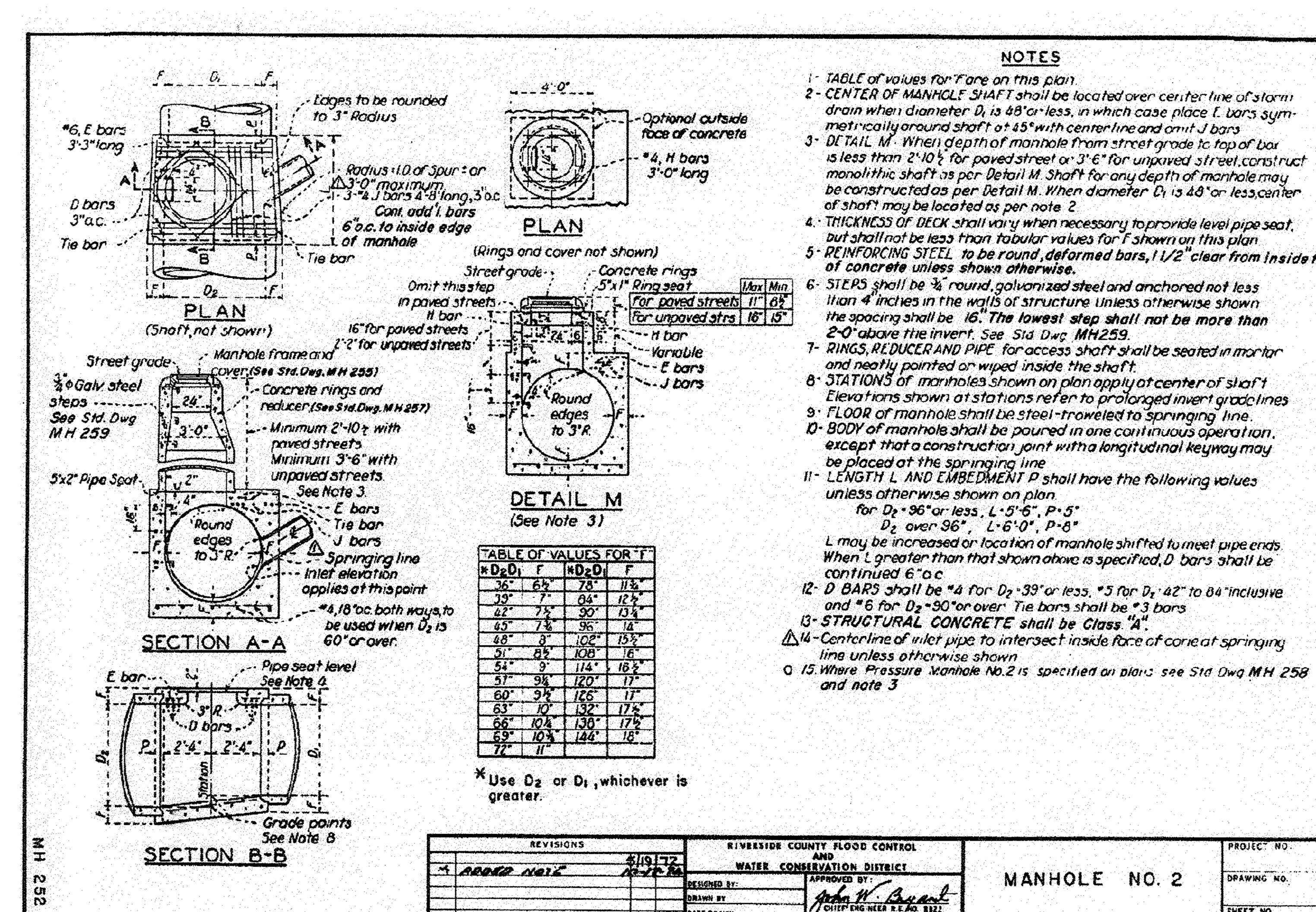






48" TRASH RACK DETAIL

STATION 19+38.14 – SHEET 3



AS BUILT
APPROVED BY: [signature]
DATE 7/5/06

MDC
IP# 020004

Underground Service Alert DIGALERT Call: TOLL FREE 1-800 227-2600 TWO WORKING DAYS BEFORE YOU DIG	REGISTERED PROFESSIONAL ENGINEER KHALED A. OTHMAN NO. 33950 EXP. 06-30-06 CIVIL STATE OF CALIFORNIA	APPROVED BY: KHALED A. OTHMAN DATE 12/16/03 R.C.E. No. 33950 EXP. DATE: 6/30/06 FOR TRANSPORTATION DEPT.	RECOMMENDED FOR APPROVAL BY: WILLDAN DATE: 12/15/03	PREPARED BY: adkan ENGINEERS 6820 AIRPORT DRIVE, RIVERSIDE, CA 92504 TEL: (909) 688-0241 · FAX: (909) 688-0599 CHARISSA J.A. LEACH, R.C.E. 53390 12-5-03 DATE	ENGINEERS SEAL: REGISTERED PROFESSIONAL ENGINEER CHARISSA J.A. LEACH NO. 53390 EXP. 6-30-07 CIVIL STATE OF CALIFORNIA	BENCH MARK: SEE SHEET 1

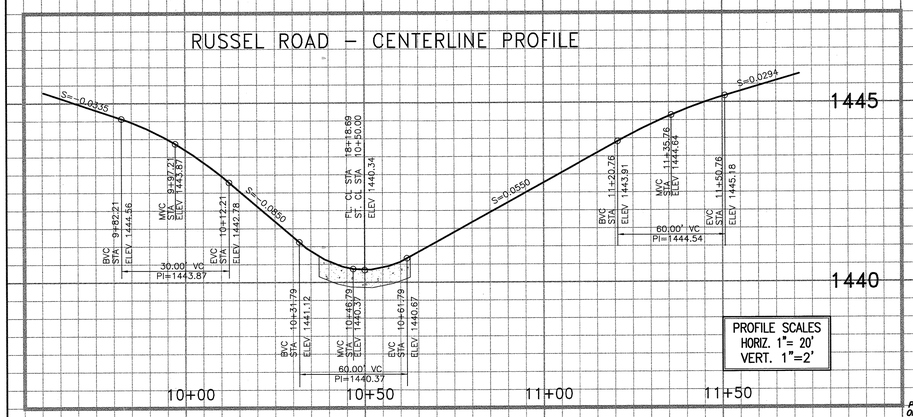
REF.	REVISIONS	APPR.	DATE
	AS BUILT		6/16/06

DESIGNED BY:
DRAWN BY:
DATE DRAWN:
CHECKED BY:

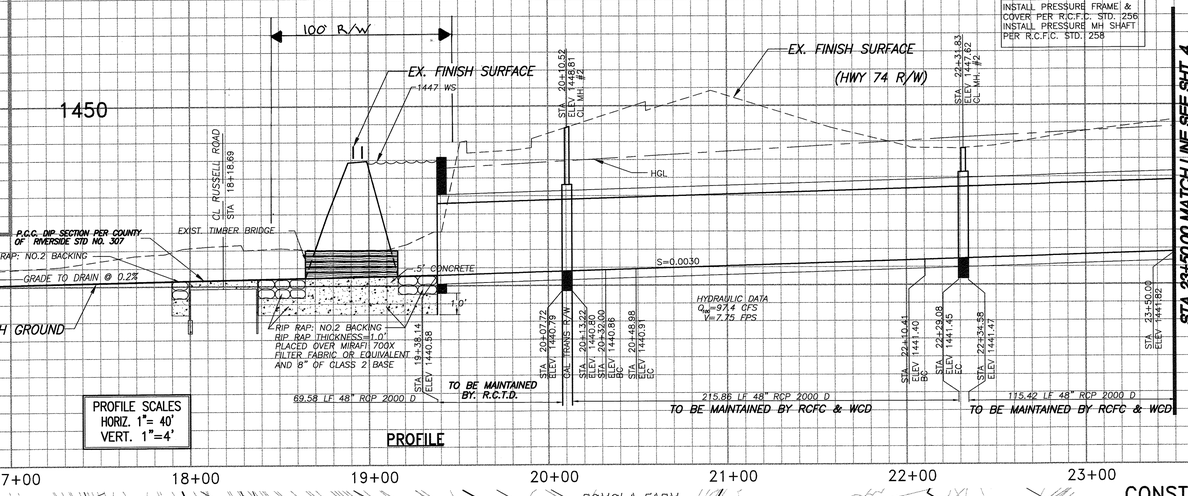
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: DATE: 12/23/03
APPROVED BY: Stuart McKibbin DATE: 12-24-2003

ROMOLAND–MOTTE FARMS STORM DRAIN DETAIL SHEET TRACT 29495–1

PROJECT NO. 4-0-0314
DRAWING NO. 4-799
SHEET NO. 2 OF 8

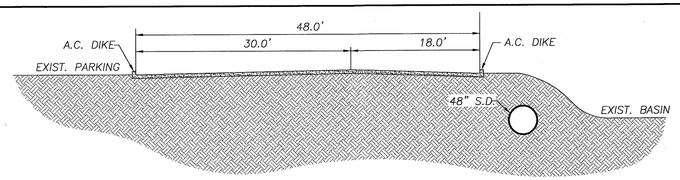


CONCRETE PROTECTION FOR EXISTING TIMBER BRIDGE TO BE CONSTRUCTED BY B.N.S.F. FORCES. CONCRETE SLAB UPSTREAM AND RIP-RAP DOWNSTREAM WITHIN R/R R/W ALSO TO BE CONSTRUCTED BY B.N.S.F. FORCES. (NOT CONSTRUCTED AS OF MAR. 15, 2006)



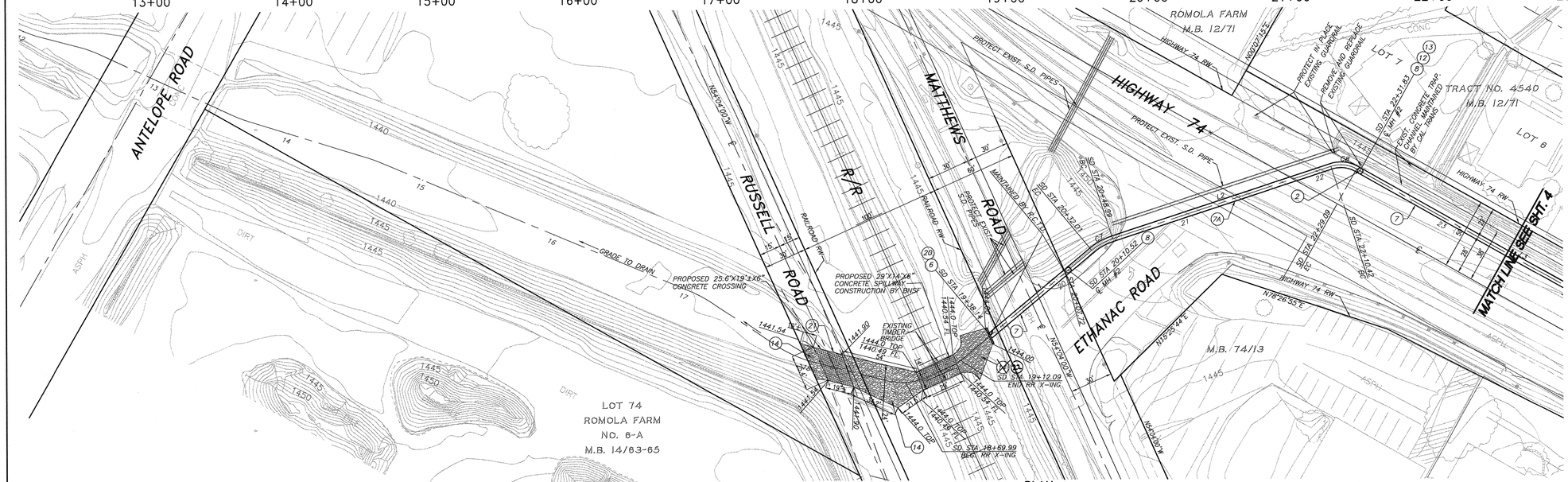
PROFILE SCALES HORIZ. 1"= 40' VERT. 1"=4'

PROFILE



ETHANAC ROAD
STATION 20+40
1"=10'

NOTE:
INSTALL PRESSURE FRAME & COVER PER R.C.F.C. STD. 256
INSTALL PRESSURE MH SHAFT PER R.C.F.C. STD. 258



PLAN

CONSTRUCTION NOTES

6. CONSTRUCT PIPE HEADWALL PER CAL TRANS STD. DWG. D89
7. INSTALL 48" R.C.P. DLOAD PER PLAN
7A. INSTALL 48" R.C.P. JACK PIPE STA. 20+48.99 TO STA. 22+10.42 NOT INSTALLED WITH JACK AND BORE. OPEN TRENCH INSTALLATION.
8. CONSTRUCT MANHOLE NO. 2 PER R.C.F.C.&W.C.D. STD. DWG. NO. MH 252
12. INSTALL MANHOLE FRAME AND COVER (PRESSURE TYPE)PER R.C.F.C.&W.C.D. ST. DWG. NO.256
13. INSTALL STANDARD PRESSURE MANHOLE SHAFT PER R.C.F.C.&W.C.D. ST. DWG. NO.258
14. PLACE NO.2 BACKING RIP RAP – 1 FOOT THICK PLACED OVER MIRAFI 700X FILTER FABRIC OR EQUIVALENT AND 8" OF CLASS 2 BASE
20. INSTALL TRASH RACK PER DETAIL ON SHEET 2
21. CONSTRUCT P.C.C. DIP SECTION PER COUNTY OF RIVERSIDE STD. NO. 307
23. PLACE NO.2 BACKING RIP-RAP-6 INCH THICK PLACED OVER MIRAFI 700 X FILTER FABRICK OR EQUIVALENT AND 8" OF CLASS 2 BASE.

STORM DRAIN DATA TABLE

NUMBER	DIRECTION	DISTANCE
L1	N20°17'43"E	93.86'
L2	N41°54'57"E	161.43'
L3	N89°28'11"E	702.99'

NUMBER	Δ=	R='	L='	T='
C7	21°37'15"	45.00	16.98	8.59
C8	47°33'14"	22.50	18.67	9.91

AS BUILT
APPROVED BY: [signature]
DATE 7/5/06

40 0 40 80 120
Scale 1" = 40'

MDC
IP# 020004

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

REGISTERED PROFESSIONAL ENGINEER KHALED A. OTHMAN NO. 33950 EXP. 06-30-06 CIVIL STATE OF CALIFORNIA

APPROVED BY: [signature] 12/16/03
KHALED A. OTHMAN DATE
R.C.E. No. 33950 EXP. DATE: 6/30/06
FOR TRANSPORTATION DEPT.

RECOMMENDED FOR APPROVAL BY: [signature]
WILLDAN
DATE: 12/15/03

PREPARED BY:
adkan ENGINEERS
6820 AIRPORT DRIVE, RIVERSIDE, CA 92504
TEL: (909) 688-0241 • FAX: (909) 688-0599
[signature] 12-5-03
CHARISSA J.A. LEACH, R.C.E. 53390 DATE

ENGINEERS SEAL
REGISTERED PROFESSIONAL ENGINEER CHARISSA J.A. LEACH NO. 53390 EXP. 6-30-07 CIVIL STATE OF CALIFORNIA

BENCH MARK: SEE SHEET 1

REF.	REVISIONS	APPR.	DATE
	AS BUILT	[signature]	6/16/06

DESIGNED BY:
DRAWN BY:
DATE DRAWN:
CHECKED BY:

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL: [signature]
DATE: 12/23/03

APPROVED BY: [signature]
DATE: 12-24-2003

ROMOLAND–MOTTE FARMS STORM DRAIN
PLAN & PROFILE
TRACT 29495-1

PROJECT NO. 4-0-0314
DRAWING NO. 4-799
SHEET NO. 3 OF 8

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CONSTRUCTION NOTES

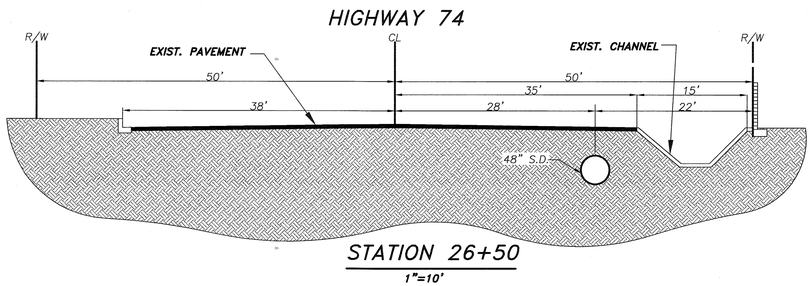
(7) INSTALL 48" R.C.P. – DLOAD PER PLAN

(8) CONSTRUCT MANHOLE NO. 2 PER R.C.F.C.&W.C.D. STD. DWG. NO. MH 252

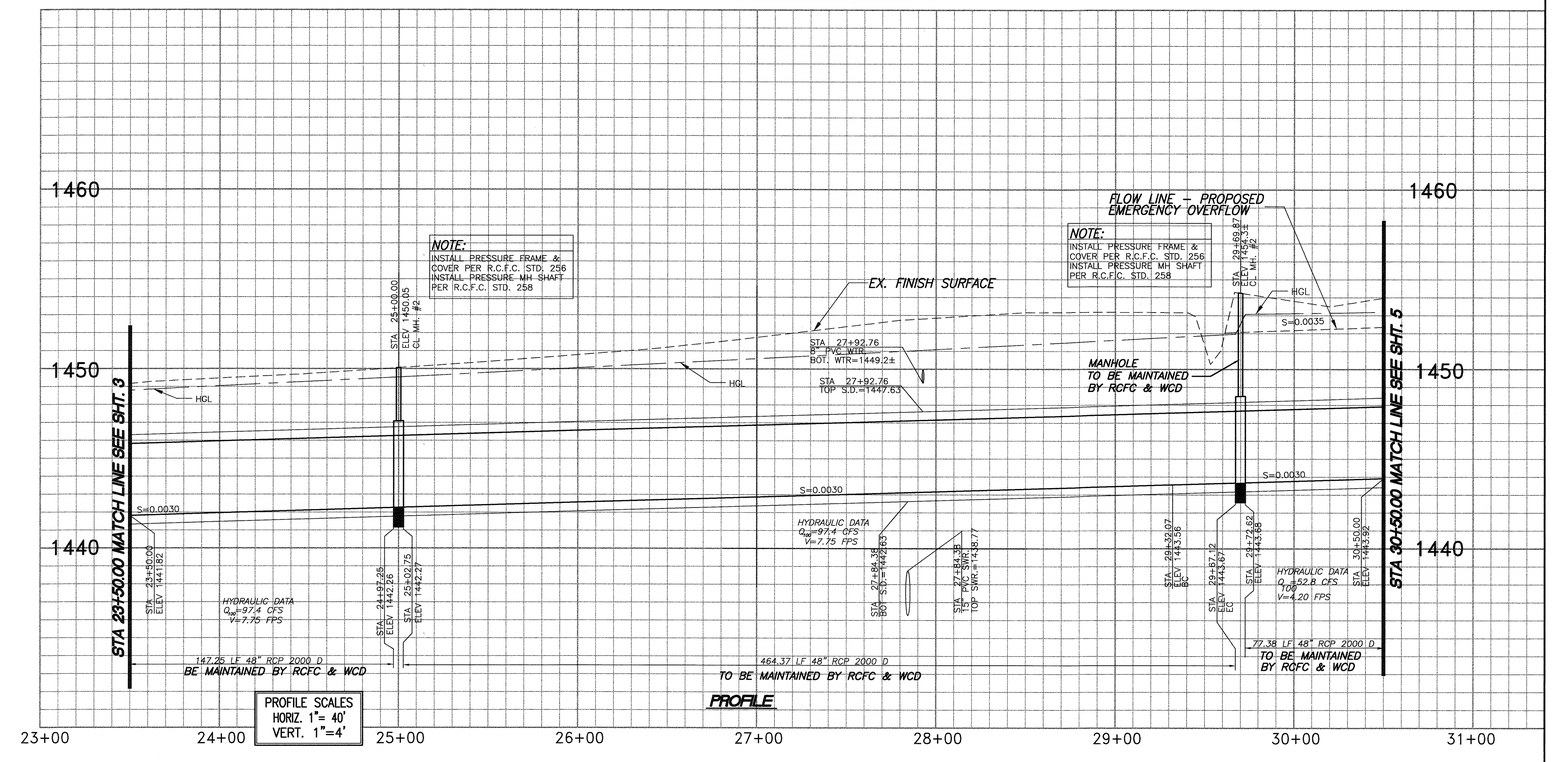
(8A) CONSTRUCT MANHOLE NO. 2 PER R.C.F.C.&W.C.D. STD. DWG. NO. MH 252 AND DETAIL "A", THIS SHEET.

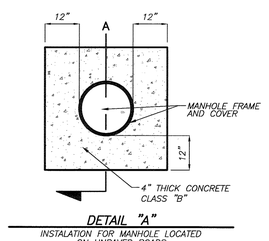
(12) INSTALL MANHOLE FRAME AND COVER (PRESSURE TYPE) PER R.C.F.C.&W.C.D. ST. DWG. NO.256 (SEE DETAIL ON SHT. 2)

(13) INSTALL STANDARD PRESSURE MANHOLE SHAFT PER R.C.F.C.&W.C.D. ST. DWG. NO.258 (SEE DETAIL ON SHT. 2)

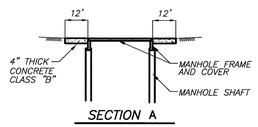


STATION 26+50
1"=10'





DETAIL "A"
INSTALATION FOR MANHOLE LOCATED ON UNPAVED ROADS
N.T.S.

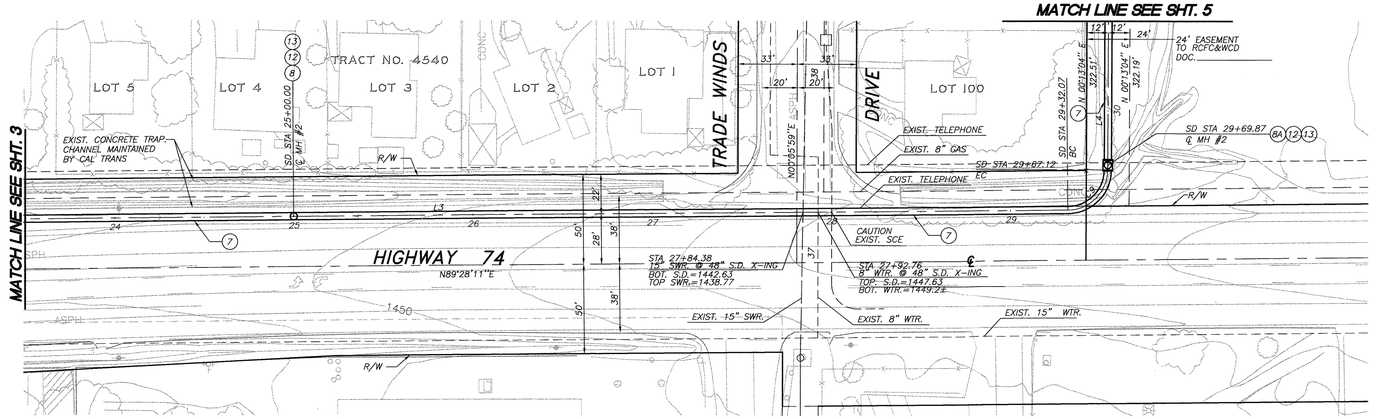


SECTION A

STORM DRAIN DATA TABLE

NUMBER	DIRECTION	DISTANCE
L3	N89°28'11"E	702.99'
L4	N00°13'04"E	302.14'

NUMBER	Δ=	R='	L='	T='
C9	89°15'07"	22.50	35.05	22.21



PLAN
40 0 40 80 120
Scale 1" = 40'

AS BUILT
APPROVED BY:
DATE 7/5/06

MDC
IP# 020004

RECOMMENDED FOR APPROVED BY:
DATE:

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

REGISTERED PROFESSIONAL ENGINEER KHALED A. OTHMAN NO. 33950 EXP. 06-30-06 CIVIL STATE OF CALIFORNIA

APPROVED BY:
KHALED A. OTHMAN 12/16/03
R.C.E. No. 33950 EXP. DATE: 6/30/06
FOR TRANSPORTATION DEPT.

RECOMMENDED FOR APPROVAL BY:
DATE: 12/15/03

PREPARED BY:
adkan ENGINEERS
6820 AIRPORT DRIVE, RIVERSIDE, CA 92504
TEL: (909) 688-0241 • FAX: (909) 688-0599
CHARISSA J.A. LEACH, R.C.E. 53390 12-5-03
DATE

ENGINEERS SEAL
REGISTERED PROFESSIONAL ENGINEER CHARISSA J.A. LEACH NO. 53390 EXP. 6-30-07 CIVIL STATE OF CALIFORNIA

BENCH MARK:
SEE SHEET 1

REVISIONS			
REF.	REVISIONS	APPR.	DATE
	AS BUILT		6/16/06

DESIGNED BY:
DRAWN BY:
DATE DRAWN:
CHECKED BY:

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY:
DATE: 12/23/03

APPROVED BY:
DATE: 12-24-2003

ROMOLAND–MOTTE FARMS STORM DRAIN
PLAN & PROFILE
TRACT 29495–1

PROJECT NO. 4-0-0314
DRAWING NO. 4-799
SHEET NO. 4 OF 8

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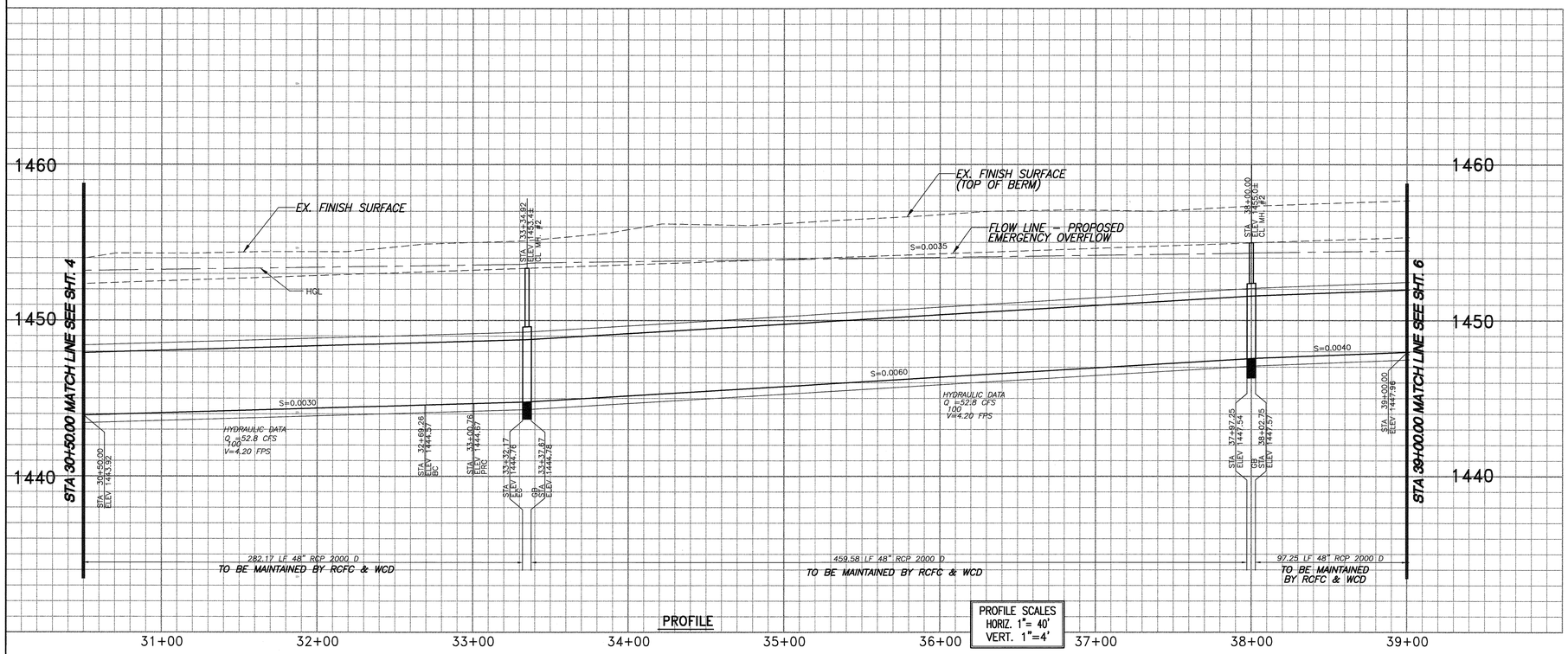
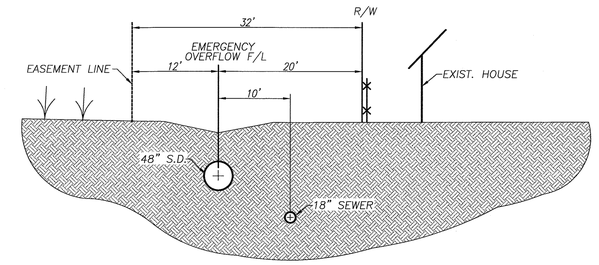
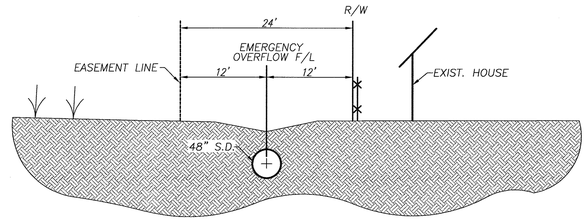


PROFILE

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



STATION 36+00
1"=10'



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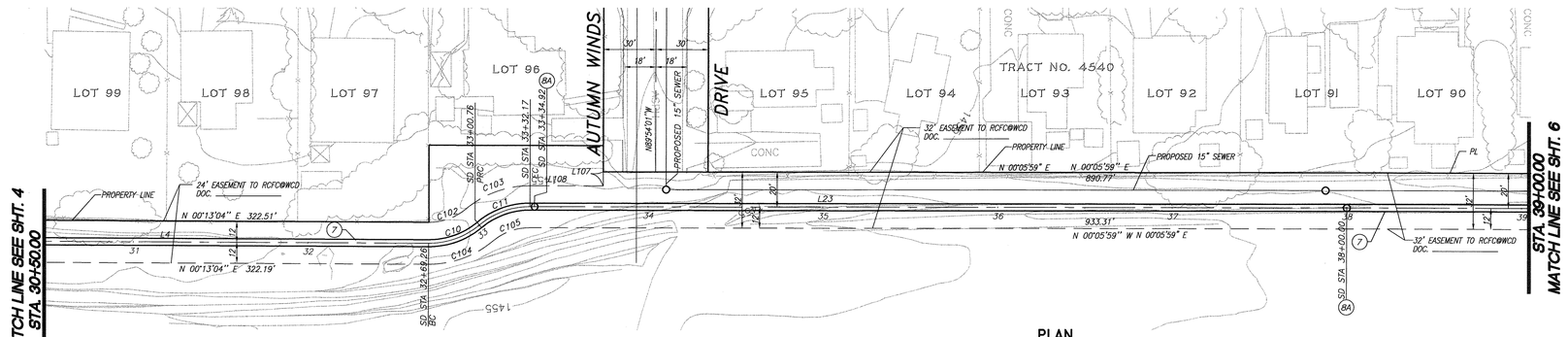
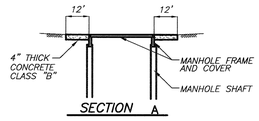


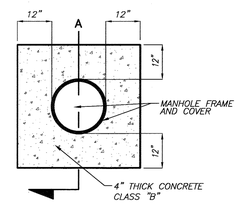
PLAN

40 0 40 80 120

Scale 1" = 40'

ROMOLAND – MOTTE FARMS
STORM DRAIN





DETAIL "A"
INSTALLATION FOR MANHOLE LOCATED ON UNPAVED ROADS
N.T.S.

CONSTRUCTION NOTES

(7) INSTALL 48" R.C.P. – DLOAD PER PLAN

(8A) CONSTRUCT MANHOLE NO. 2 PER R.C.F.C.&W.C.D. STD. DWG. NO. MH 252 AND DETAIL "A", THIS SHEET.

STORM DRAIN DATA TABLE

NUMBER	DIRECTION	DISTANCE
L4	N00°13'04"E	302.14'
L23	N00°05'59"E	565.08'
L107	N89°54'01"W	8.00'
L108	N00°05'59"E	42.09'

NUMBER	Δ=	R='	L='	T='
C10	40°06'45"	45.00	31.50	16.43
C11	39°59'39"	45.00	31.41	16.38
C102	40°06'45"	33.00	23.10	12.05
C103	39°59'39"	57.00	39.79	20.74
C104	40°06'45"	57.00	39.91	20.81
C105	39°59'39"	33.00	23.03	12.01

AS BUILT
APPROVED BY:
DATE 7/5/06

IP# 020004 MDC

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

REGISTERED PROFESSIONAL ENGINEER KHALED A. OTHMAN NO. 33950 EXP. 06-30-06 CIVIL STATE OF CALIFORNIA

APPROVED BY: KHALED A. OTHMAN 12/16/03 DATE
R.C.E. No. 33950 EXP. DATE: 6/30/06
FOR TRANSPORTATION DEPT.

RECOMMENDED FOR APPROVAL BY: GILLDAN
DATE: 12/15/03

PREPARED BY: adkan ENGINEERS
6820 AIRPORT DRIVE, RIVERSIDE, CA 92504
TEL: (909) 688-0241 • FAX: (909) 688-0599
CHARISSA J.A. LEACH, R.C.E. 53390 12.5.03 DATE

ENGINEERS SEAL: REGISTERED PROFESSIONAL ENGINEER CHARISSA J.A. LEACH NO. 53390 EXP. 6-30-07 CIVIL STATE OF CALIFORNIA

BENCH MARK: SEE SHEET 1

REVISIONS			
REF.	REVISIONS	APPR.	DATE
	AS BUILT		6/16/06

DESIGNED BY:
DRAWN BY:
DATE DRAWN:
CHECKED BY:

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY: DATE: 12/23/03

APPROVED BY: DATE: 12-24-2003

ROMOLAND–MOTTE FARMS STORM DRAIN
PLAN & PROFILE
TRACT 29495-1

PROJECT NO. 4-0-0314
DRAWING NO. 4-799
SHEET NO. 5 OF 8

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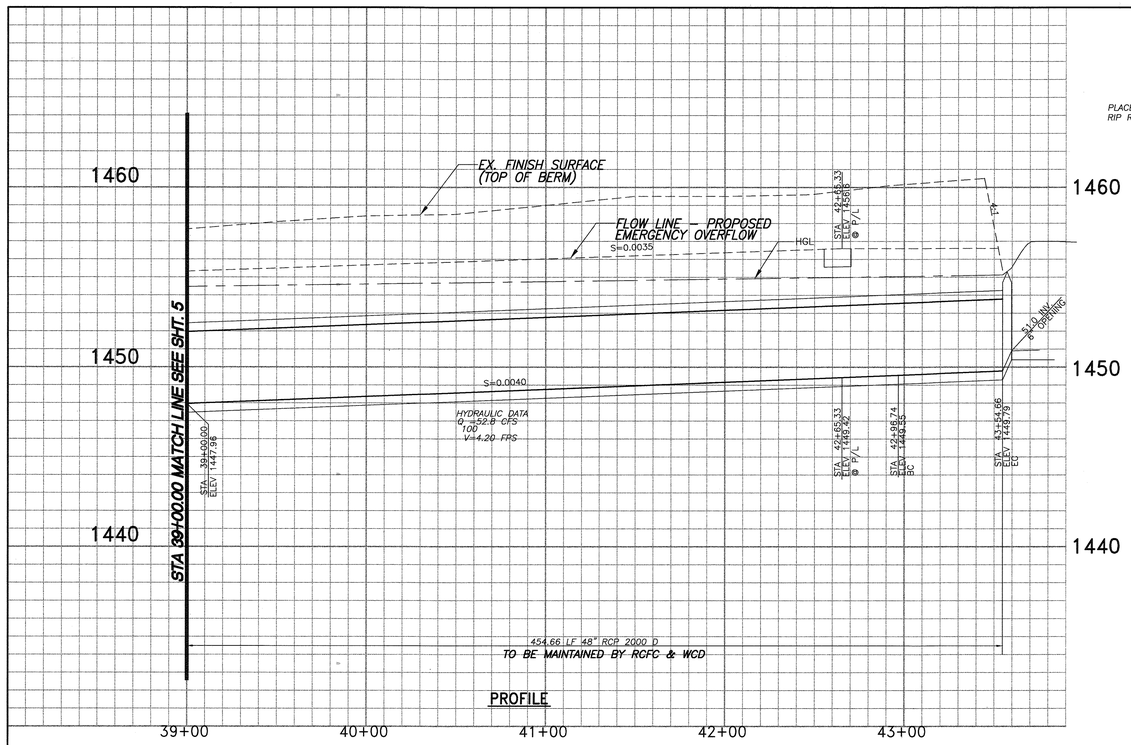
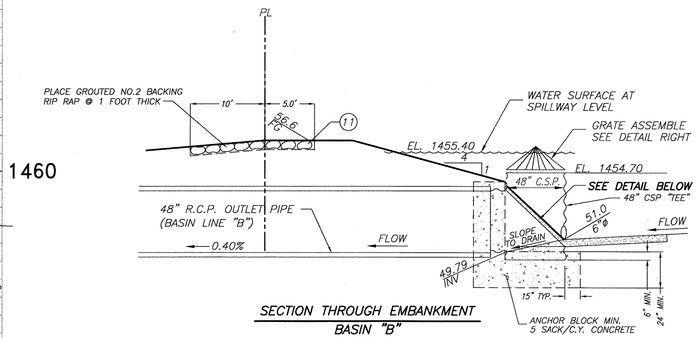
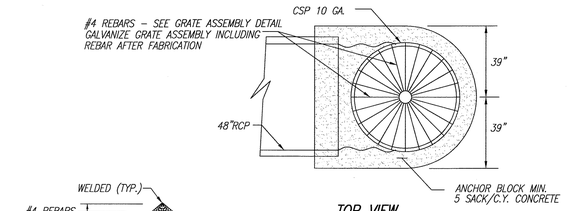


PROFILE

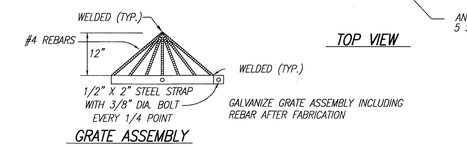
PROFILE SCALES
HORIZ. 1"= 40'
VERT. 1"=4'



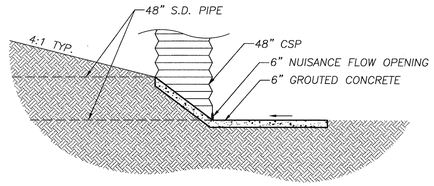
SECTION THROUGH EMBANKMENT
BASIN "B"
N.T.S.



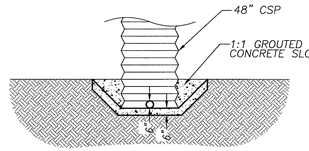
TOP VIEW



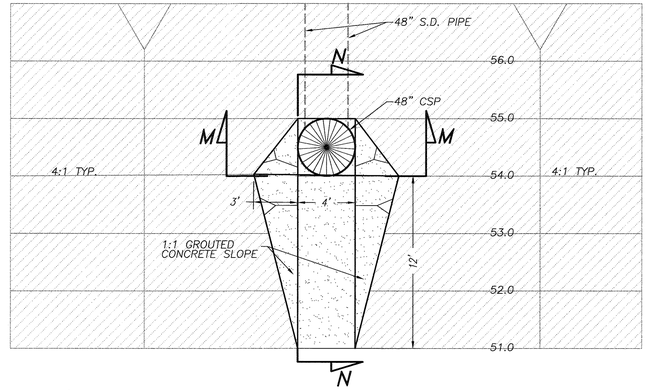
GRATE ASSEMBLY



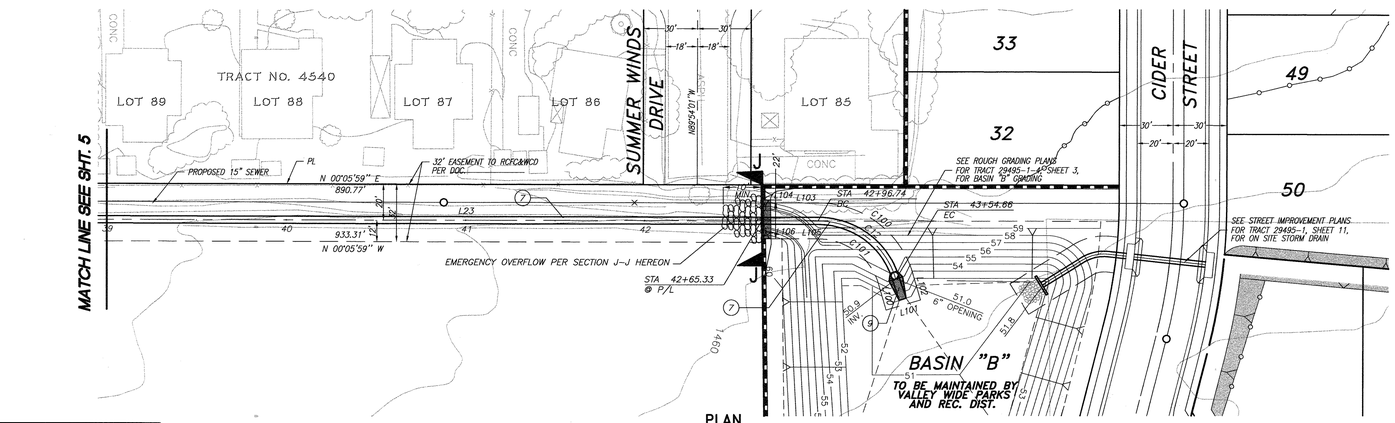
SECTION N-N



SECTION M-M



OUTLET DETAIL - BASIN "B"
N.T.S.

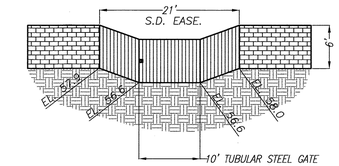


PLAN

STORM DRAIN DATA TABLE

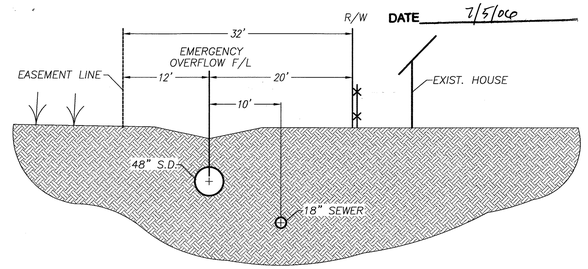
NUMBER	DIRECTION	DISTANCE
L23	N00°05'59"E	565.08'
L100	N73°50'26"E	15.00'
L101	N16°09'34"W	20.00'
L102	N73°50'26"E	15.00'
L103	N00°05'59"E	31.40'
L104	N88°29'57"E	10.00'
L105	N00°05'59"E	31.40'
L106	N85°18'29"E	2.00'

NUMBER	Δ=	R='	L='	T='
C12	73°44'27"	45.00	57.92	33.75
C100	73°44'27"	55.00	70.79	41.25
C101	73°44'27"	35.00	45.05	26.25



SECTION J-J
1"=10'

AS BUILT
APPROVED BY:
DATE 7/5/06



STATION 40+00
1"=10'

ROMOLAND - MOTTE FARMS STORM DRAIN

40 0 40 80 120
Scale 1" = 40'

CONSTRUCTION NOTES

(7) INSTALL 48" R.C.P. - DLOAD PER PLAN
(9) CONSTRUCT 48" STAND PIPE RISER WITH GRATE ASSEMBLE PER DETAIL ABOVE
(11) PLACE GROUTED NO.2 BACKING RIP RAP - 1 FOOT THICK FOR EMERGENCY OVERFLOW

IP# 020004 MDC

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

REGISTERED PROFESSIONAL ENGINEER KHALED A. OTHMAN NO. 33950 EXP. 06-30-06 CIVIL STATE OF CALIFORNIA

APPROVED BY: KHALED A. OTHMAN 12/16/03 DATE
R.C.E. No. 33950 EXP. DATE: 6/30/06
FOR TRANSPORTATION DEPT.

RECOMMENDED FOR APPROVAL BY: WILLDAN
DATE: 12/15/03

PREPARED BY: adkan ENGINEERS
6820 AIRPORT DRIVE, RIVERSIDE, CA 92504
TEL (909) 688-0241 • FAX (909) 688-0599
CHARISSA J.A. LEACH, R.C.E. 53390 12.5.03 DATE

ENGINEERS SEAL: REGISTERED PROFESSIONAL ENGINEER CHARISSA J.A. LEACH NO. 53390 EXP. 6-30-07 CIVIL STATE OF CALIFORNIA

BENCH MARK: SEE SHEET 1

REF.	REVISIONS	APPR.	DATE
	AS BUILT	CL	6/16/06

DESIGNED BY:
DRAWN BY:
DATE DRAWN:
CHECKED BY:

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL: DATE: 12/23/03

APPROVED BY: DATE: 12-24-2003

ROMOLAND-MOTTE FARMS STORM DRAIN
PLAN & PROFILE
TRACT 29495-1

PROJECT NO. 4-0-0314
DRAWING NO. 4-799
SHEET NO. 6 OF 8

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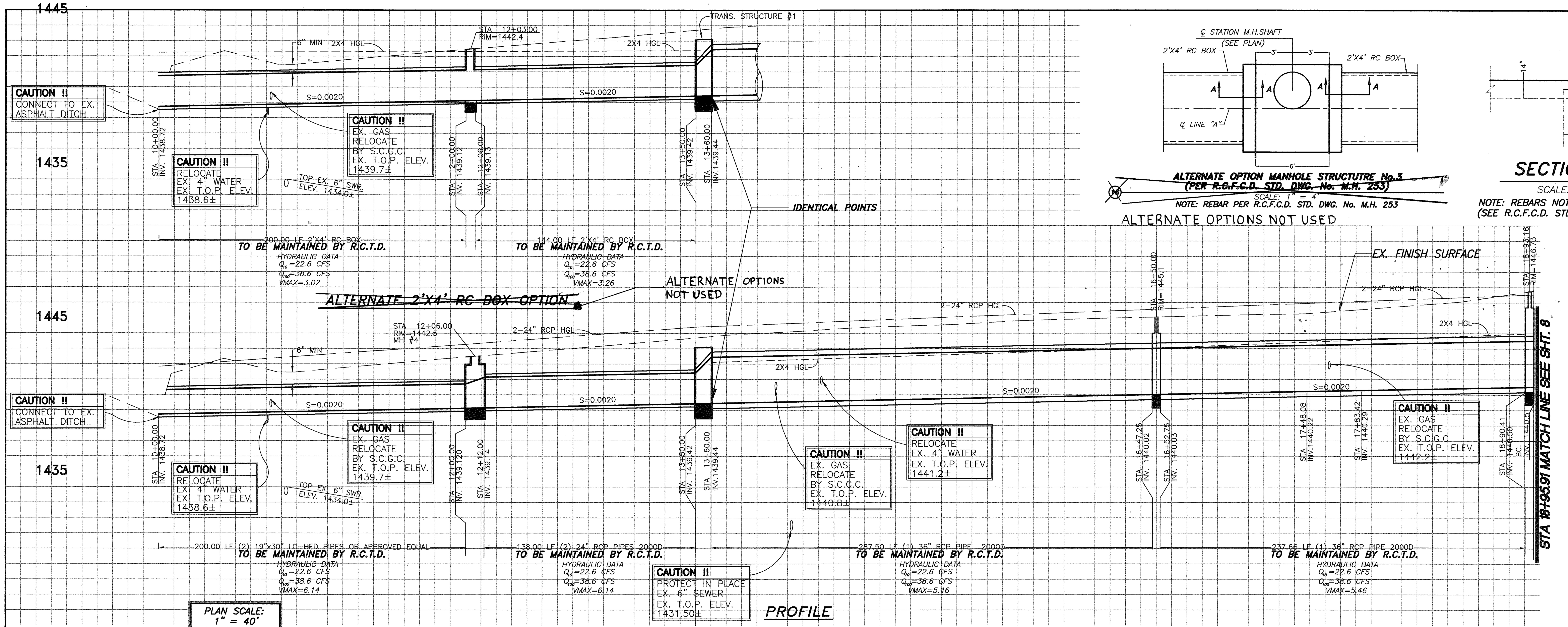
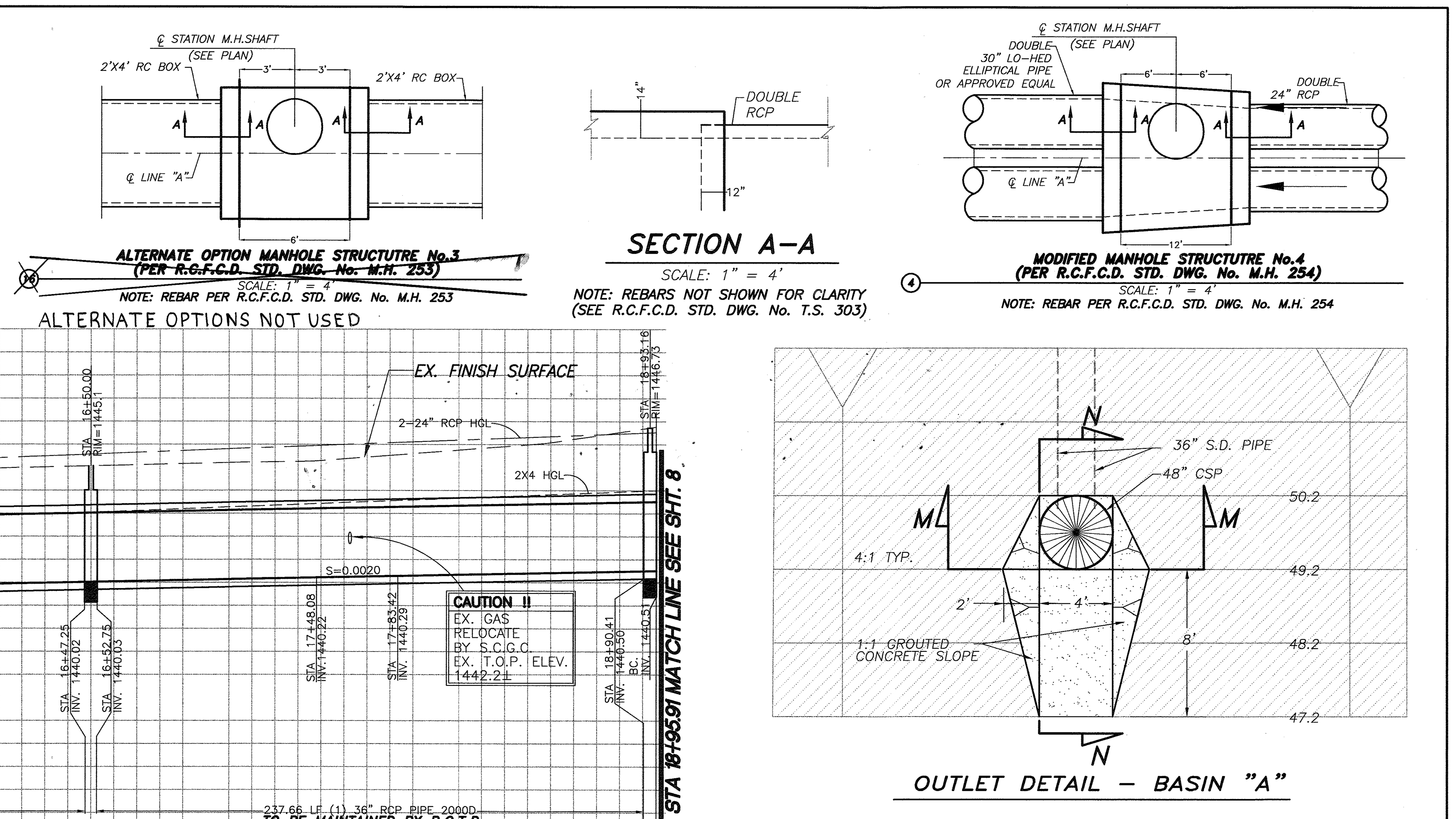
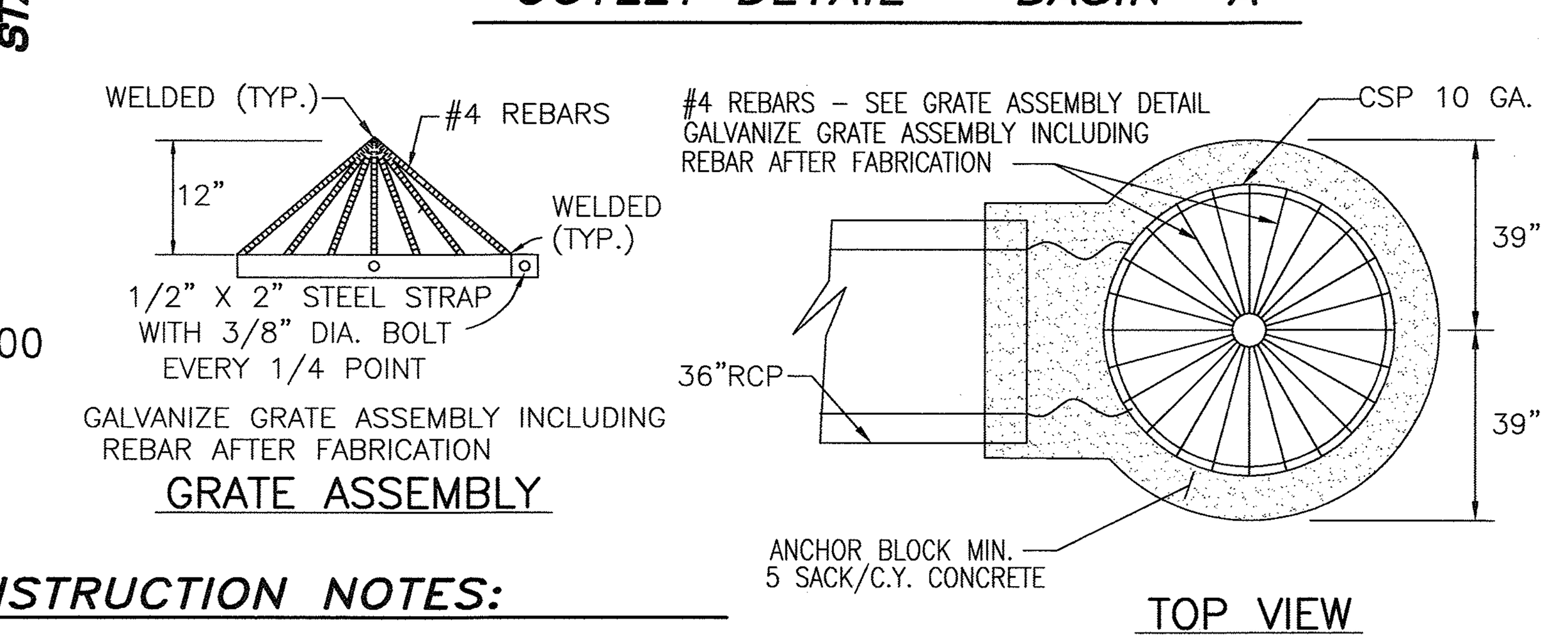
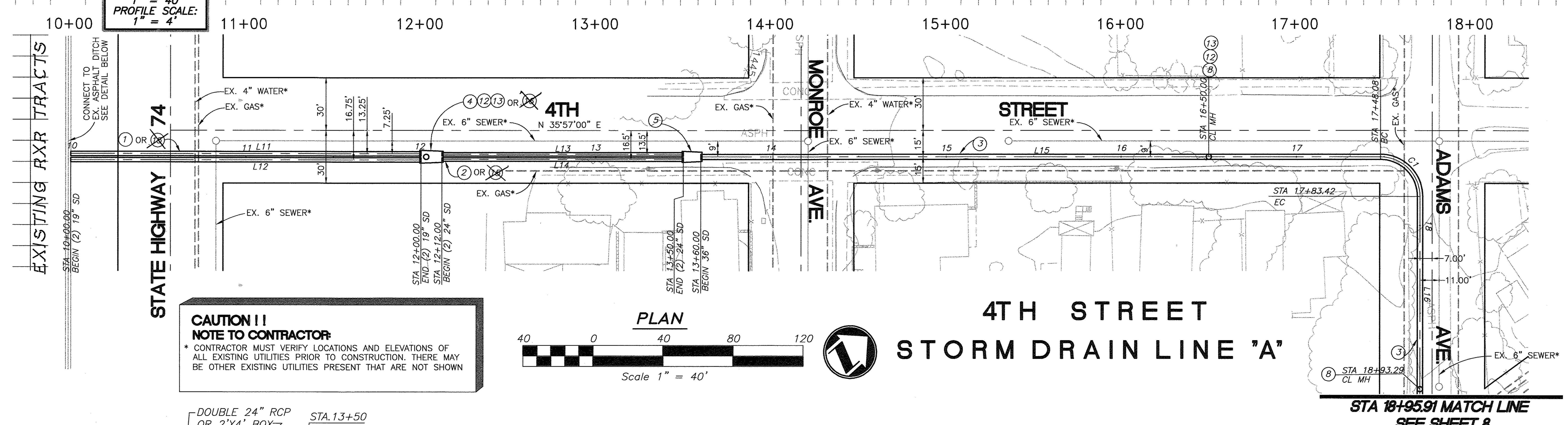








CAUTION !!
NOTE TO CONTRACTOR:
* CONTRACTOR MUST VERIFY LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. THERE MAY BE OTHER EXISTING UTILITIES PRESENT THAT ARE NOT SHOWN

4TH STREET
STORM DRAIN LINE "A"

CONSTRUCTION NOTES:

1. INSTALL 19" x 30" OF LO-HED PIPE MANUFACTURED BY HYDRO CONDUIT PER DETAIL HEREON
2. INSTALL 24" RCP DLOAD PER PLAN
3. INSTALL 36" RCP DLOAD PER PLAN
4. CONSTRUCT MANHOLE PER DETAIL HEREON
5. CONSTRUCT TRANSITION STRUCTURE PER DETAIL HEREON
8. CONSTRUCT MANHOLE #2 PER R.C.F.C.&W.C.D. STD. DWG. MH252
12. INSTALL MANHOLE FRAME AND COVER (PRESSURE TYPE) PER R.C.F.C.&W.C.D. ST. DWG. NO.256 (SEE DETAIL ON SHEET 2)
13. INSTALL STANDARD PRESSURE MANHOLE SHAFT PER R.C.F.C.&W.C.D. ST. DWG. NO.258 (SEE DETAIL ON SHEET 2)
~~CONSTRUCT 2'X4' RC BOX CAL TRANS STD. DWG. D80~~
~~CONSTRUCT MH NO. 3 PER R.C.F.C.& W.C.D. STD. DWG. NO. MH253 (SEE DETAIL HEREON)~~

~~INDICATES POSSIBLE ALTERNATE OPTION. TO BE DETERMINED BY CONTRACTOR~~
ALTERNATE OPTIONS NOT USED

AS BUILT
APPROVED BY: [signature]
DATE 7/5/06

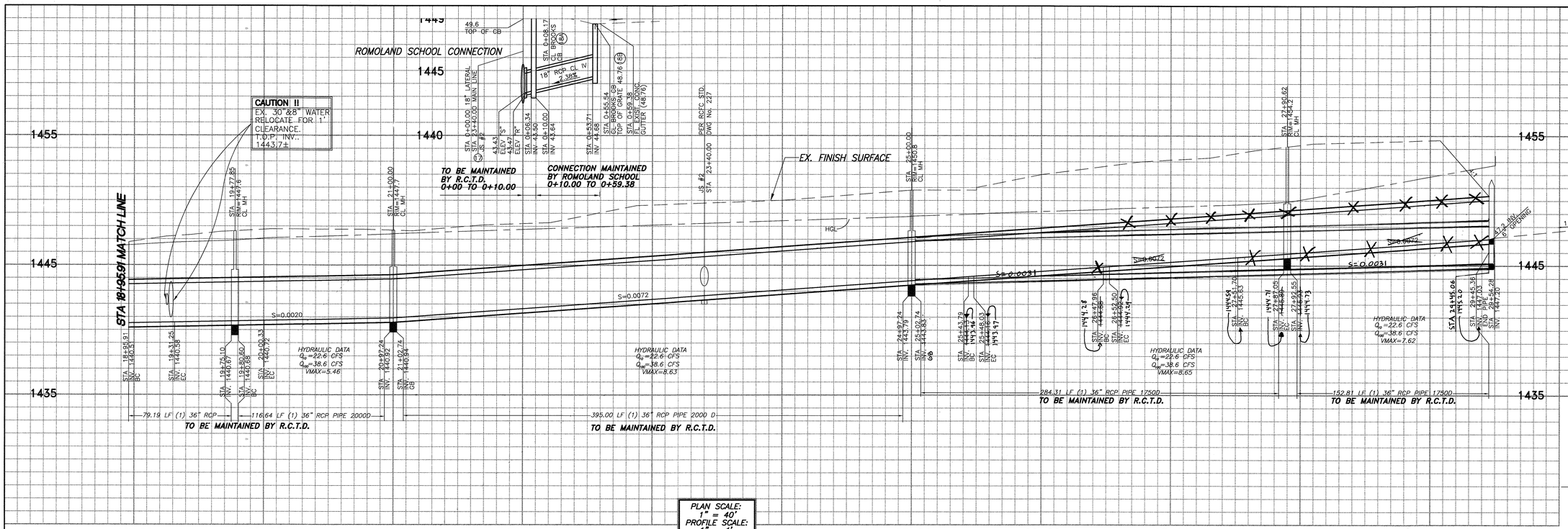
STORM DRAIN DATA TABLE

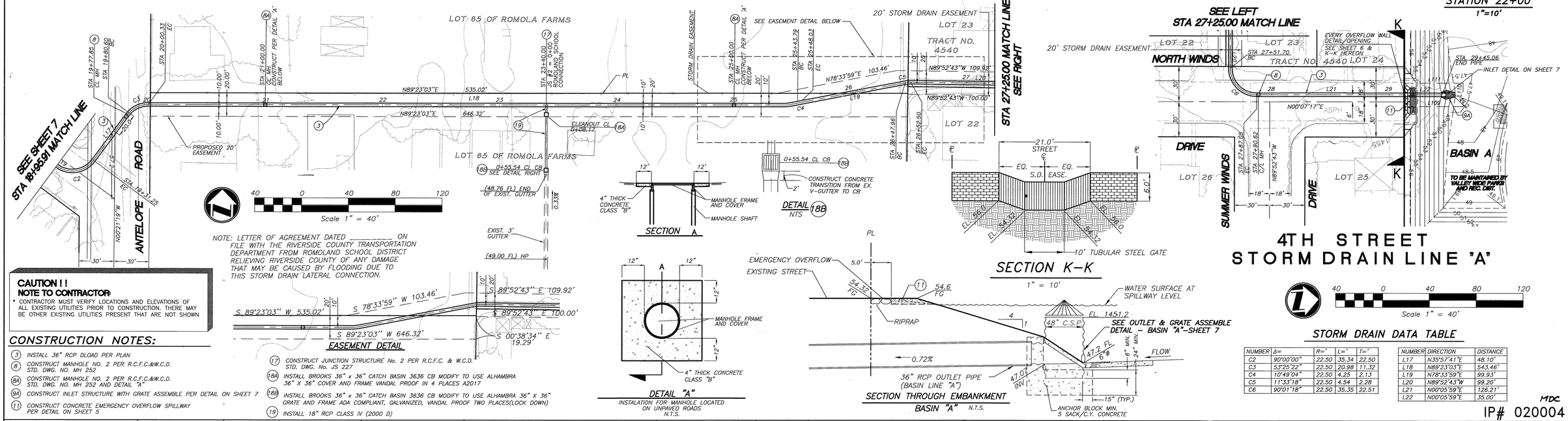
NUMBER	Δ=	R='	L='	T='
C1	90°00'00"	22.50	35.34	22.50

NUMBER	DIRECTION	DISTANCE
L11	N35°57'41"E	200.00'
L12	N35°57'41"E	200.00'
L13	N35°57'41"E	138.00'
L14	N35°57'41"E	138.00'
L15	N35°57'41"E	388.08'
L16	N54°02'19"W	112.49'

MDC
IP# 020004

Underground Service Alert DIGALERT Call: TOLL FREE 1-800 227-2600 TWO WORKING DAYS BEFORE YOU DIG	APPROVED BY: KHALED A. OTHMAN 12/16/03 R.C.E. No. 33950 EXP. DATE: 6/30/06 FOR TRANSPORTATION DEPT.	RECOMMENDED FOR APPROVAL BY: WILLDAN DATE: 12/15/03	PREPARED BY: adkan ENGINEERS 6820 AIRPORT DRIVE, RIVERSIDE, CA 92504 TEL (909) 688-0241 · FAX: (909) 688-0599 CHARISSA J.A. LEACH, R.C.E. 53390 12.5.03 DATE	BENCH MARK: SEE SHEET 1	REVISIONS: AS BUILT, 6/16/06	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	ROMOLAND-MOTTE FARMS STORM DRAIN PLAN & PROFILE TRACT 29495-1	PROJECT NO. 4-0-0314 DRAWING NO. 4-799 SHEET NO. 7 OF 8





CAUTION !!
NOTE TO CONTRACTOR:
* CONTRACTOR MUST VERIFY LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. THERE MAY BE OTHER EXISTING UTILITIES PRESENT THAT ARE NOT SHOWN

CONSTRUCTION NOTES:

(3) INSTALL 36" RCP DLOAD PER PLAN
(8) CONSTRUCT MANHOLE NO. 2 PER R.C.F.C.&W.C.D. STD. DWG. NO. MH 252
(8A) CONSTRUCT MANHOLE NO. 2 PER R.C.F.C.&W.C.D. STD. DWG. NO. MH 252 AND DETAIL "A"
(9A) CONSTRUCT INLET STRUCTURE WITH GRATE ASSEMBLE PER DETAIL ON SHEET 7
(11) CONSTRUCT CONCRETE EMERGENCY OVERFLOW SPILLWAY PER DETAIL ON SHEET 5
(17) CONSTRUCT JUNCTION STRUCTURE No. 2 PER R.C.F.C. & W.C.D.
(18A) INSTALL BROOKS 36" x 36" CATCH BASIN 3636 CB MODIFY TO USE ALHAMBRA 36" X 36" COVER AND FRAME VANDAL PROOF IN 4 PLACES A2017
(18B) INSTALL BROOKS 36" x 36" CATCH BASIN 3636 CB MODIFY TO USE ALHAMBRA 36" X 36" GRATE AND FRAME ADA COMPLIANT, GALVANIZED, VANDAL PROOF TWO PLACES(LOCK DOWN)
(19) INSTALL 18" RCP CLASS IV (2000 D)

STORM DRAIN DATA TABLE

NUMBER	Δ=	R='	L='	T='
C2	90°00'00"	22.50	35.34	22.50
C3	53°25'22"	22.50	20.98	11.32
C4	10°49'04"	22.50	4.25	2.13
C5	11°33'18"	22.50	4.54	2.28
C6	90°01'18"	22.50	35.35	22.51

NUMBER	DIRECTION	DISTANCE
L17	N35°57'41"E	48.10'
L18	N89°23'03"E	543.46'
L19	N78°33'59"E	99.93'
L20	N89°52'43"W	99.20'
L21	N00°05'59"E	126.21'
L22	N00°05'59"E	35.00'

MDC

IP# 020004

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

REGISTERED PROFESSIONAL ENGINEER KHALED A. OTHMAN NO. 33950 EXP. 06-30-06 CIVIL STATE OF CALIFORNIA

APPROVED BY: KHALED A. OTHMAN 12/15/03 DATE
R.C.E. No. 33950 EXP. DATE: 6/30/06
FOR TRANSPORTATION DEPT.

RECOMMENDED FOR APPROVAL BY: WILLDAN DATE: 12/15/03

PREPARED BY: adkan ENGINEERS
6820 AIRPORT DRIVE, RIVERSIDE, CA 92504
TEL: (909) 688-0241 • FAX: (909) 688-0599
CHARISSA J.A. LEACH, R.C.E. 53390 DATE 12-5-03

ENGINEERS SEAL: REGISTERED PROFESSIONAL ENGINEER CHARISSA J.A. LEACH NO. 53390 EXP. 6-30-07 CIVIL STATE OF CALIFORNIA

BENCH MARK: SEE SHEET 1

REF.	REVISIONS	APPR.	DATE
	AS BUILT	MDC	6/14/06

DESIGNED BY:
DRAWN BY:
DATE DRAWN:
CHECKED BY:

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL: DATE:
APPROVED BY: DATE:

ROMOLAND–MOTTE FARMS STORM DRAIN
PLAN & PROFILE
TRACT 29495–1

PROJECT NO. 4-0-0314
DRAWING NO. 4-799
SHEET NO. 8 OF 8

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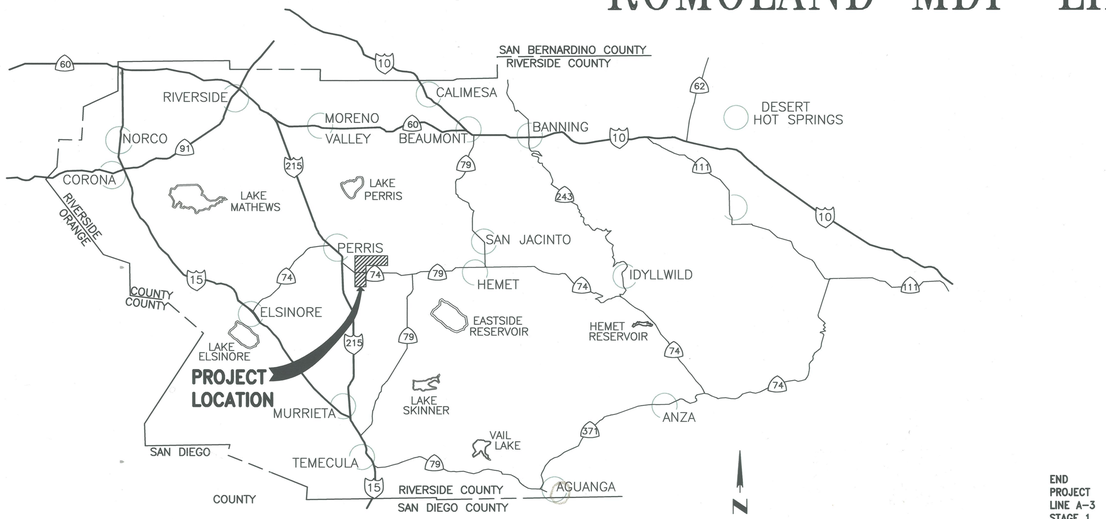
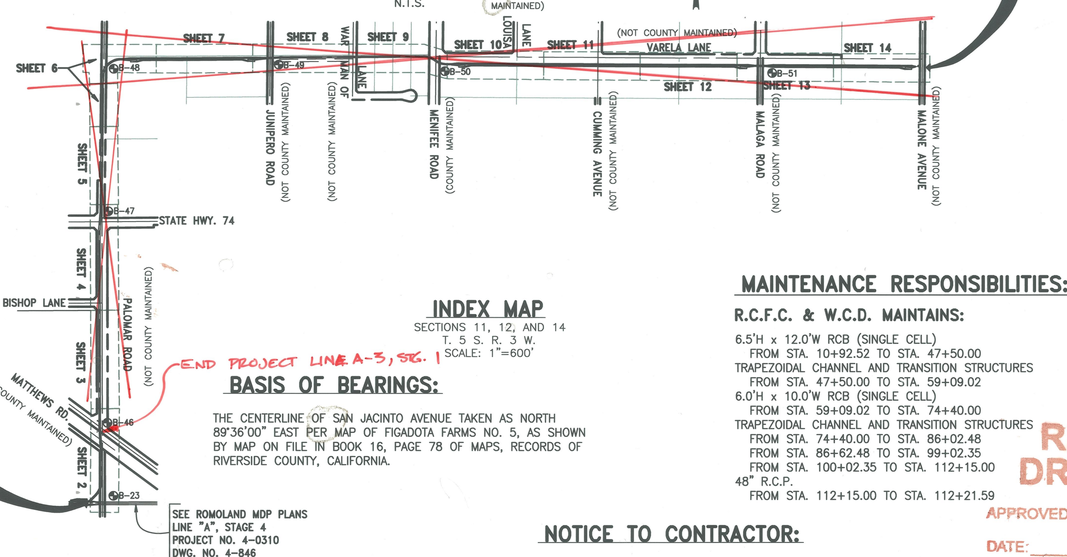
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
ROMOLAND MDP-LINE A-3 STAGE 1



VICINITY MAP
N.T.S.



INDEX MAP
SECTIONS 11, 12, AND 14
T. 5 S. R. 3 W.
SCALE: 1"=600'

BASIS OF BEARINGS:
THE CENTERLINE OF SAN JACINTO AVENUE TAKEN AS NORTH 89°36'00" EAST PER MAP OF FIGADOTA FARMS NO. 5, AS SHOWN BY MAP ON FILE IN BOOK 16, PAGE 78 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

SEE ROMOLAND MDP PLANS
LINE "A", STAGE 4
PROJECT NO. 4-0310
DWG. NO. 4-846

GENERAL NOTES
1. ALL STATIONING REFERS TO CENTERLINE OF CONSTRUCTION.
2. ALL CHANNEL/STORM DRAIN REFERENCES AND CROSS SECTIONS ARE TAKEN LOOKING DOWNSTREAM.
3. TOPOGRAPHY BY AERIAL PHOTOGRAPHS TAKEN AT AN ALTITUDE NOT TO EXCEED A FLYING HEIGHT TO CONTOUR INTERVAL RATIO OF 1800. PHOTOGRAPHY DATED 11-15-03.
4. THE VERTICAL DATUM IS DERIVED FROM (NGVD 29) THE HORIZONTAL DATUM IS DERIVED FROM (NAD 83).
5. STANDARD DRAWINGS CALLED FOR ON THE PLAN & PROFILE SHALL CONFORM TO R.C.F.C. & W.C.D. STD. DRAWINGS, OR CALTRANS/ COUNTY STANDARD PLANS.
6. ELEVATIONS AND LOCATIONS OF UTILITIES WERE OBTAINED FROM AVAILABLE INFORMATION AND ARE SHOWN APPROXIMATELY ON THESE PLANS. 48 HOURS BEFORE EXCAVATION CALL UNDERGROUND SERVICE ALERT AT 1-800-227-2600. ALL UTILITIES SHALL BE PROTECTED IN PLACE EXCEPT AS NOTED ON PLANS AND SPECIFICATIONS.
7. THE CONTRACTOR IS REQUIRED TO CONTACT ALL UTILITY AGENCIES REGARDING TEMPORARY SUPPORT AND SHORING REQUIREMENTS FOR THE VARIOUS UTILITY LINES SHOWN ON THESE PLANS.
8. ALL OPENINGS RESULTING FROM CUTTING OR PARTIAL REMOVAL OF EXIST. CULVERTS, PIPES, OR SIMILAR STRUCTURES TO BE ABANDONED, SHALL BE SEALED AT BOTH ENDS WITH 6" MIN. CLASS "B" CONCRETE OR REMOVED.
9. ALL RECONSTRUCTION, RESURFACING AND PAVEMENT DELINEATION, CURBS, SIDEWALKS AND OTHER IMPROVEMENTS ARE TO BE RECONSTRUCTED IN KIND USING THE SAME STRUCTURAL SECTIONS, LOCATIONS AND ELEVATIONS AS THE EXISTING IMPROVEMENTS, UNLESS OTHERWISE NOTED.
10. ⊕ INDICATES APPROX. SOIL BORING LOCATION PER SOILS REPORT DATED APRIL 2004.
11. THE RC BOX WALL AND SLAB THICKNESSES SHALL BE INCREASED TO HAVE 2 1/2" CONCRETE COVER BETWEEN THE INSIDE RCB AND THE REINFORCING STEEL. FOR FLOW VELOCITIES BETWEEN 20 AND 30 fps F'c = 5000 PSI AND FOR VELOCITIES GREATER THAN 30 fps F'c = 6000 PSI UNLESS OTHERWISE SPECIFIED.
12. ~~THE CONTRACTOR SHALL CONSTRUCT THE FLOOD CONTROL IMPROVEMENTS SHOWN ON THE DRAWINGS IN CONFORMANCE WITH THE REQUIREMENTS OF THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT'S MEMORANDUM OF UNDERSTANDING STANDARD SPECIFICATIONS DATED SEPTEMBER 1984, AND DESIGN MANUAL STANDARD DRAWINGS DATED APRIL 2004.~~
13. AN ENROACHMENT PERMIT IS REQUIRED FROM R.C.T.D. PLEASE CONTACT MOJAHED SALAMA AT (951) 955-6790. ~~IF AN ENCROACHMENT PERMIT IS REQUIRED FROM RIVERSIDE COUNTY FLOOD CONTROL, THEN CONTACT ED LOTZ AT (951) 955-1266. AFTER THE PERMIT IS ISSUED, THE DISTRICT MUST BE NOTIFIED ONE WEEK PRIOR TO CONSTRUCTON.~~
14. ~~CONSTRUCTION INSPECTION MAY BE PERFORMED BY RIVERSIDE COUNTY FLOOD CONTROL. CONTACT KENT ALLEN AT (951) 955-1288. THE DISTRICT MUST BE NOTIFIED 20 DAYS PRIOR TO CONSTRUCTION. ALTERNATELY, CONSTRUCTION INSPECTION MAY BE PERFORMED BY AN OUTSIDE CONSULTANT.~~

MAINTENANCE RESPONSIBILITIES:

R.C.F.C. & W.C.D. MAINTAINS:
6.5'H x 12.0'W RCB (SINGLE CELL)
FROM STA. 10+92.52 TO STA. 47+50.00
TRAPEZOIDAL CHANNEL AND TRANSITION STRUCTURES
FROM STA. 47+50.00 TO STA. 59+09.02
6.0'H x 10.0'W RCB (SINGLE CELL)
FROM STA. 59+09.02 TO STA. 74+40.00
TRAPEZOIDAL CHANNEL AND TRANSITION STRUCTURES
FROM STA. 74+40.00 TO STA. 86+02.48
FROM STA. 86+62.48 TO STA. 99+02.35
FROM STA. 100+02.35 TO STA. 112+15.00
48" R.C.P.
FROM STA. 112+15.00 TO STA. 112+21.59

R.C.T.D. MAINTAINS:
STRUCTURAL INTEGRITY OF:
6.0'H x 10.0'W RCB (SINGLE CELL)
FROM STA. 86+02.48 TO STA. 86+62.48 (CUMMING AVE.)
6.0'H x 10.0'W RCB (SINGLE CELL)
FROM STA. 99+02.35 TO STA. 100+02.35 (MALAGA RD.)

RECORD DRAWINGS
APPROVED BY: Alan Friend
DATE: 2/9/17

INDEX

	SHEET NO.:
TITLE SHEET	1
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GRADING DETAILS	16-19
~~PRE-CAST RCB DETAILS (HWY 74)~~	~~20~~
LATERAL A-3-3 PLAN & PROFILE	21
RAILROAD ~~PRE-CAST~~ RCB DETAILS (RCTC/~~BNSF~~) SCRRA	22
E.M.W.D. WATER CROSSING	23
E.M.W.D. WATER CROSSING	24
E.M.W.D. WATER CROSSING	25

NOTICE TO CONTRACTOR:
THE EXISTENCE AND LOCATIONS OF ALL UNDERGROUND UTILITIES (UTILITY PIPES, STRUCTURES, ETC.) SHOWN ON THESE PLANS WERE ASCERTAINED BY A REVIEW OF RECORDS PROVIDED BY THESE MEMBER AGENCIES AND ARE APPROXIMATE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY FOR UTILITIES NOT SHOWN OR NOT IN THE LOCATION SHOWN.

THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS. LOCATIONS OF UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION.

CALL UNDERGROUND SERVICE ALERT (U.S.A.) 1-800-227-2600 AT LEAST 2 WORKING DAYS PRIOR TO EXCAVATION.

R.C.F.C. & W.C.D. STANDARD DRAWINGS

MH253	MANHOLE NO. 3
CH326	TRAPEZOIDAL CHANNEL
CH329	TRANSITION STRUCTURE
CH330	MAINTENANCE RAMP
M801	CHAINLINK FENCE AND GATE
M814	ABBREVIATIONS AND SYMBOLS
M815	BEDDING AND PAY LINES
M816	CONCRETE BULKHEAD
JS226	JUNCTION STRUCTURE NO. 1

CALTRANS STANDARDS

B11-47	CABLE RAILING
D81	REINFORCED CONCRETE DOUBLE BOX CULVERT
D82	PARAPET WALL
D86B	WARPED ENDWALL
D73	DRAINAGE INLET (TYPE G1)

APWA STANDARD

610-1 RETAINING WALL (TYPE 1)

⚠ SEE SHEET 1A AND SPECIAL PROVISIONS FOR SCRRA AND RCTC NOTES.

BNSF AND RCTC NOTES:

1. CONTRACTOR SHALL CONTACT THE BURLINGTON NORTHERN SANTA FE (BNSF) ROADMASTER, DAVE GONZALES; PHONE NO. 909-386-4061, AT LEAST FIVE (5) WORKING DAYS (MONDAY THROUGH FRIDAY) BEFORE STARTING CONSTRUCTION.

2. CONTRACTOR SHALL CONTACT THE BURLINGTON NORTHERN SANTA FE (BNSF) ROADMASTER, DAVE GONZALES; PHONE NO. 909-386-4061, AT LEAST TEN (10) WORKING DAYS (MONDAY THROUGH FRIDAY) IN ADVANCE OF WHEN FLAGGING SERVICES WILL BE REQUIRED. EACH TIME A FLAGGER IS CALLED, THE MINIMUM PERIOD OF BILLING SHALL BE THE EIGHT (8) HOUR BASIC DAY. THE COST OF FLAGGING SERVICES PROVIDED BY THE RAILWAY, WHEN DEEMED NECESSARY BY THE RAILWAY'S REPRESENTATIVE, WILL BE BORNE BY THE CONTRACTOR.

3. CONTRACTOR SHALL CONTACT THE RIVERSIDE COUNTY TRANSPORTATION COMMISSION, CLAUDIA CHASE 951-787-7937, AT LEAST 5 WORKING DAYS (MONDAY THROUGH FRIDAY) BEFORE STARTING CONSTRUCTION.

4. RAIL TRACK ELEVATIONS OVER THE RCB SHALL BE PROFILED TO DETECT ANY CHANGE IN ELEVATION. BEFORE AND AFTER PROFILES SHALL BE PERFORMED BY A LICENSED SURVEYOR. A LETTER REPORT FROM THE SURVEYOR SHALL BE SUBMITTED TO BNSF AND RCTC STATING MONITORING RESULTS, WITHIN SEVEN (7) DAYS OF THE COMPLETION WORK WITHIN THE RCTC R/W. THE REPORT SHALL BE SENT TO GREG ROUSSEAU OF BNSF AT 740 EAST CARNEGIE DRIVE, SAN BERNARDINO, CALIFORNIA 92408 AND CLAUDIA CHASE OF RCTC AT POST OFFICE BOX 12008, RIVERSIDE, CALIFORNIA 92502-2208.

5. A SAFETY ORIENTATION COURSE SHALL BE COMPLETED BY ALL WORKERS PRIOR TO ENTERING RAILROAD PROPERTY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT THE SAFETY TRAINING AND IMPLEMENTATION OF A SAFETY PROGRAM FOR ITS EMPLOYEES. TRAINING MATERIALS ARE AVAILABLE ON THE WEB SITE: WWW.CONTRACTORORIENTATION.COM THE CONTRACTOR MUST COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY REGULATIONS.

6. THE CONTRACTOR SHALL NOTIFY BNSF, RCTC AND RCFCD WITHIN FORTY FIVE (45) DAYS OF THE DATE AND LOCATION FOR FABRICATION OF RCB ELEMENTS. INSPECTIONS OF THESE ELEMENTS WILL BE MADE BY RCFCD PERSONNEL DURING FABRICATION. THE CONTRACTOR WILL BE REQUIRED TO PRESENT A COPY OF THE RCFCD INSPECTION CERTIFICATION TO THE BNSF AND RCTC REPRESENTATIVES AT THE CONSTRUCTION COORDINATION MEETING.

7. CONTRACTOR SHALL CONTACT BNSF, RCTC AND RCFCD FOR A CONSTRUCTION COORDINATION MEETING, PRIOR TO BNSF PROVIDING A TRACK OUTAGE SCHEDULE.

IP 050154 MS 4051
CALTRANS PERMIT NUMBER: 08-05-N-MC-0356

SEAL-COUNTY
REGISTERED PROFESSIONAL ENGINEER ALAN D. FRENCH NO. 45702 EXP. 12-31-08 CIVIL STATE OF CALIFORNIA

COUNTY OF RIVERSIDE
TRANSPORTATION DEPARTMENT
APPROVED BY: Alan Friend 12-18-07
ALAN D. FRENCH, P.E. R.C.E. 45702 EXP. 12-31-08 — DATE
RECOMMENDED BY — DATE 12/18/07

REGISTERED PROFESSIONAL ENGINEER SCOTT R. HILDEBRAND NO. C44762 EXP. 3-31-08 CIVIL STATE OF CALIFORNIA

ALBERT A. WEBB ASSOCIATES
3788 McCRAY ST.
RIVERSIDE, CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256
PREPARED BY: DATE: 12-13-07
R.C.E. NO. C44762 EXP. DATE 3-31-08

Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services.
TWO WORKING DAYS BEFORE YOU DIG

PERMANENT BENCH MARK
B.M. NO. S 327-1935
3.9 MI. NW FROM WINCHESTER
3.9 MI. NW ALONG THE ATCHISON,TOPEKA AND SANTA FE RAILWAY FROM THE STATION AT WINCHESTER, RIVERSIDE COUNTY, AT MENIFEE SIDING, 198 YRDS. NW OF THE SE SWITCH STAND, 72 FT. E OF MILEPOST 6, 16.5 FT. NE OF THE CENTERLINE OF THE TRACK, AND 4.5 FT. NE OF THE STATION SIGN. A STANDARD DISK, STAMPED R 327 1935 AND SET IN THE TOP OF A CONCRETE POST.
ELEVATION: 1478.07

REF.	REVISIONS	APPR.	DATE
⚠	ADDED NOTES.	RR	2/9/17

DESIGNED BY: J.C.C.
DRAWN BY: R.R.
DATE DRAWN: Dec 2007
CHECKED BY:

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: PLANNING ENGINEER DATE: 1-3-2008
APPROVED BY: CHIEF ENGINEER DATE: 1-3-08

ROMOLAND MDP
LINE A-3 STAGE 1
TITLE SHEET

PROJECT NO. 4-0-00431
DRAWING NO. 4-871
SHEET NO. 1 OF 25

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96

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

SCRRA AND RCTC NOTES:

1. CONTRACTOR SHALL CONTACT THE SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY (SCRRA), CHRISTOS SOURMELIS 909–394–3418, AT LEAST 5 WORKING DAYS (MONDAY THROUGH FRIDAY) BEFORE STARTING CONSTRUCTION.

2. CONTRACTOR SHALL CONTACT THE RIVERSIDE COUNTY TRANSPORTATION COMMISSION, RUBY ARELLANO 951–787–7141, AT LEAST 5 WORKING DAYS (MONDAY THROUGH FRIDAY) BEFORE STARTING CONSTRUCTION.

3. RAIL TRACK ELEVATIONS OVER THE RCB SHALL BE PROFILED TO DETECT ANY CHANGE IN ELEVATION. BEFORE AND AFTER PROFILES SHALL BE PERFORMED BY A LICENSED SURVEYOR.

4. A LETTER REPORT FROM THE SURVEYOR SHALL BE SUBMITTED TO SCRRA AND RCTC STATING MONITORING RESULTS, WITHIN SEVEN (7) DAYS OF THE COMPLETION WORK WITHIN THE RCTC R/W. THE REPORT SHALL BE SENT TO CHRISTOS SOURMELIS OF SCRRA AT 279 E. ARROW HIGHWAY, SUITE 101, SAN DIMAS, CA 91773 AND RUBY ARELLANO OF RCTC AT POST OFFICE BOX 12008, RIVERSIDE, CALIFORNIA 92502–2208.

5. THE CONTRACTOR SHALL NOTIFY SCRRA, RCTC AND RCFCD WITHIN FORTY FIVE (45) DAYS OF THE DATE AND LOCATION FOR FABRICATION OF RCB ELEMENTS. INSPECTIONS OF THESE ELEMENTS WILL BE MADE BY RCFCD PERSONNEL DURING FABRICATION. THE CONTRACTOR WILL BE REQUIRED TO PRESENT A COPY OF THE RCFCD INSPECTION CERTIFICATION TO THE SCRAA AND RCTC REPRESENTATIVES AT THE CONSTRUCTION COORDINATION MEETING.

6. BEFORE EXCAVATING, THE CONTRACTOR MUST DETERMINE WHETHER ANY UNDERGROUND PIPE LINES, ELECTRIC WIRES, OR CABLES, INCLUDING FIBER OPTIC CABLE SYSTEMS, ARE PRESENT AND LOCATED WITHIN THE PROJECT WORK AREA BY CALLING THE SOUTHERN CALIFORNIA UNDERGROUND SERVICE ALERT AT 811.

7. CONTRACTOR IS TO COMPLETE SCRRA'S TEMPORARY RIGHT OF ENTRY AGREEMENT, FORM 6". THIS FORM IS AVAILABLE ON SCRRA'S WEBSITE AT WWW.METROLINKTRAINS.COM ("ABOUT US", AND "ENGINEERING AND CONSTRUCTION").

8. THE PIPELINE CROSSING CONSTRUCTION WILL BE DONE AS PER SCRRA ENGINEERING STANDARD ES5001.

9. ANY PROPOSED EXCAVATION THAT MAY OCCUR IN SCRRA RIGHT–OF–WAY OR THAT MAY AFFECT OPERATIONS ON SCRRA TRACKS MUST ADHERE TO THE DESIGN, SUBMITTAL AND REVIEW REQUIREMENTS PRESENTED IN SCRRA'S EXCAVATION SUPPORT GUIDELINES AND SHALL NOT PROCEED WITHOUT ACCEPTANCE BY SCRRA. THE GUIDELINES ARE AVAILABLE ON SCRRA'S WEBSITE WWW.METROLINKTRAINS.COM, (ABOUT US, AND ENGINEERING AND CONSTRUCTION).

RECORD DRAWINGS

APPROVED BY: Donald Kyser

DATE: 2/9/17

Don't Dig...Until You Call U.S.A. Toll Free 1–800–227–2600

for the location of buried utility lines.

Don't disrupt vital services.

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BENCH MARK
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EL. 1478.07

REF.	REVISIONS	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

DESIGNED BY: ROHINI MUSTAFA
DRAWN BY: MICHAEL ARMENTA
DATE DRAWN: AUGUST 2014

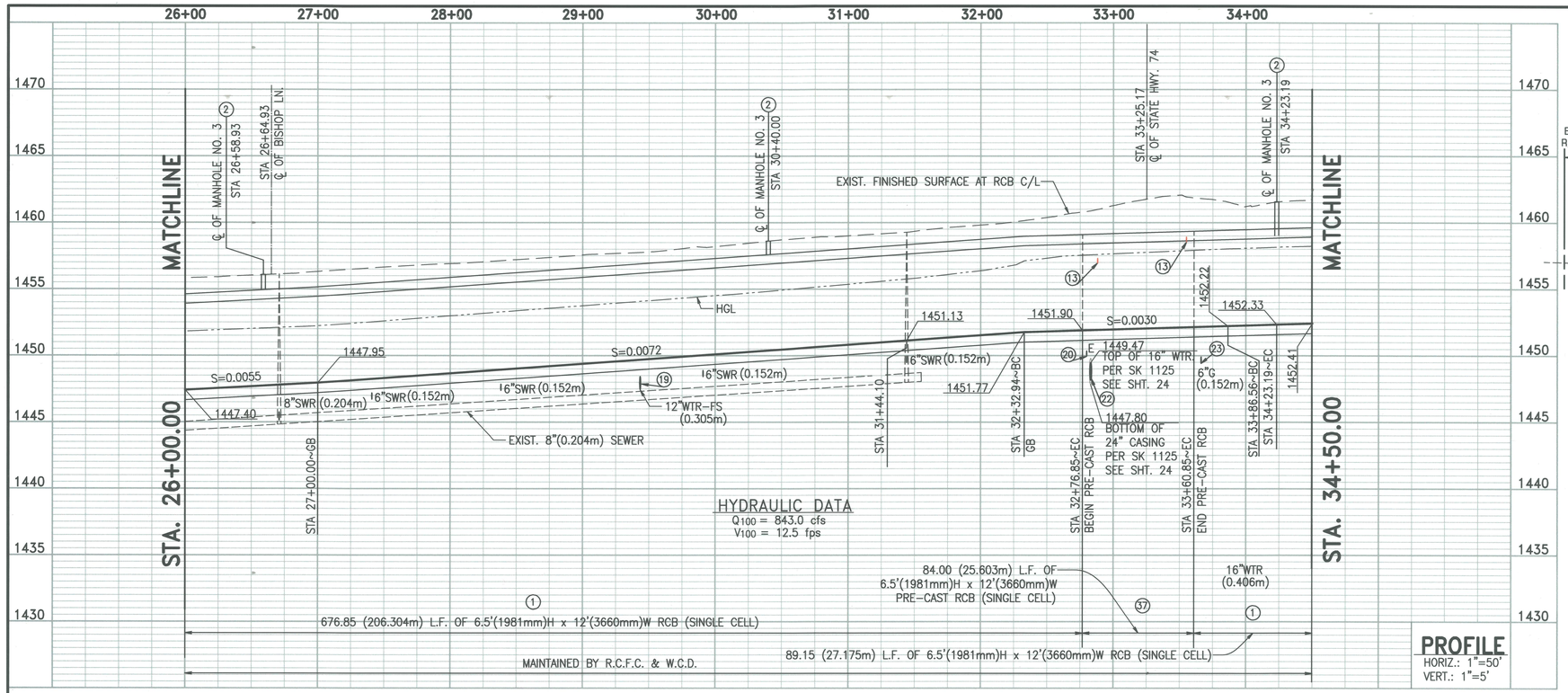
RECOMMENDED FOR APPROVAL BY:
DATE: 9/22/2014

APPROVED BY:
DATE: 22 Sept 2014

ROMOLAND MDP LINE A–3
STAGE 1

TITLE SHEET
SCRRA AND RCTC NOTES

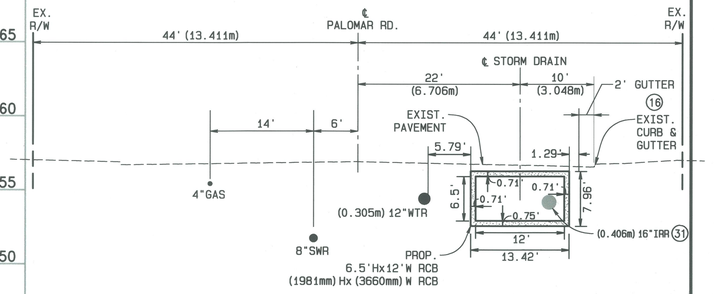
PROJECT NO. 4–0–00431
DRAWING NO. 4–871
SHEET NO. 1A OF 25



PROFILE

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

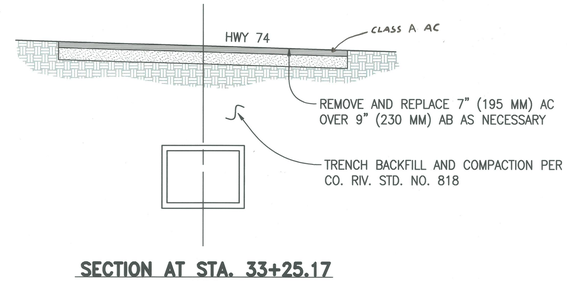
NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE CHANNEL UNLESS OTHERWISE NOTED.



SECTION AT STA. 29+00.00

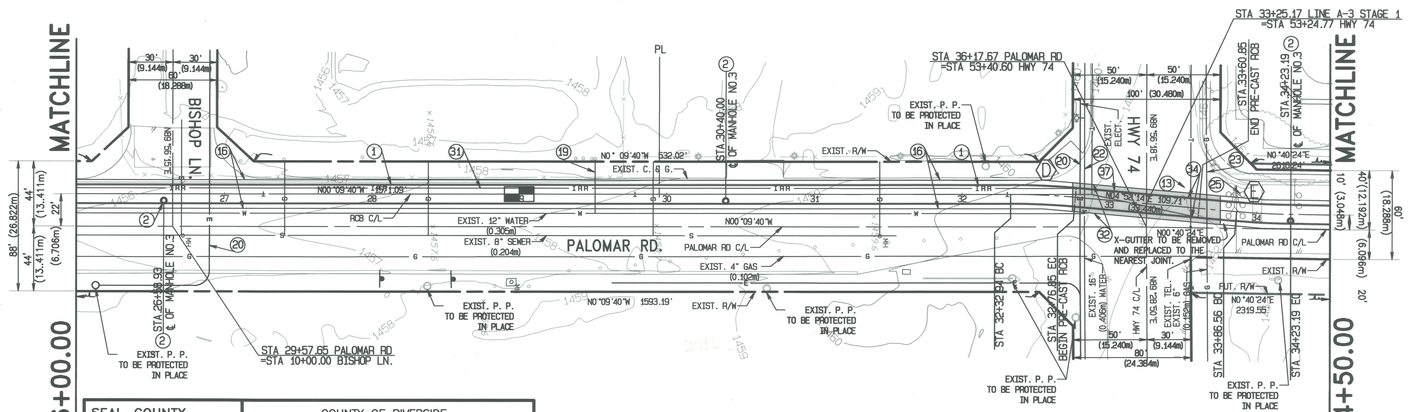
TYPICAL FROM 26+00.00 TO 32+32.94

GRAPHIC SCALE 1"=10'
0 10 20 30



SECTION AT STA. 33+25.17

N.T.S.



PLAN

GRAPHIC SCALE 1"=50'
0 50 100 150

CONSTRUCTION NOTES

1. CONSTRUCT 6.5'(1981mm)Hx12.0'(3660mm)W RCB (SINGLE CELL) PER CALTRANS STD. D80
2. CONSTRUCT MANHOLE NO. 3 PER RCFCWCD STD. DWG. MH253
13. EXISTING TELEPHONE LINE TO BE REMOVED & REPLACED BY OTHERS
16. EXISTING IMPROVEMENTS TO BE REMOVED AND REPLACED
19. EXISTING FIRE SERVICE TO BE REMOVED AND REPLACED AS SHOWN
20. EXISTING ELECTRIC LINE TO BE REMOVED AND REPLACED BY SCE
22. EXISTING 16"(0.406m) WATER LINE TO BE RELOCATED PER SK-1125 SEE SHEET 24
23. EXISTING 6"(0.152m) GAS LINE RELOCATED BY OTHERS AS SHOWN
25. EXISTING TRAFFIC SIGNAL DETECTOR SENSORS TO BE REMOVED AND REPLACED
31. EXISTING 16"(0.406m) IRRIGATION LINE TO BE REMOVED
32. REMOVE AND REPLACE 7" (195 MM) AC OVER 9" (230 MM) AB AS NECESSARY PER SECTION HEREON
37. INSTALL PRE-CAST 6.5'(1981mm)Hx12.0'(3660mm)W RCB (SINGLE CELL) PER DETAIL ON SHT. NO. 20

℄ CURVE DATA (D)

Δ = 05°01'54"
R = 500.00' (152.400m)
T = 21.97' (6.697m)
L = 43.91' (13.384m)
BC = STA. 32+32.94
EC = STA. 32+76.85

℄ CURVE DATA (E)

Δ = 04°11'50"
R = 500.00' (152.400m)
T = 18.32' (5.584m)
L = 36.63' (11.165m)
BC = STA. 33+86.56
EC = STA. 34+23.19

CALTRANS PERMIT NUMBER: 08-05-N-MC-0356
IP 050154 MS 4051

SEAL-COUNTY

REGISTERED PROFESSIONAL ENGINEER ALAN D. FRENCH NO. 45702 EXP. 12-31-08 CIVIL STATE OF CALIFORNIA

COUNTY OF RIVERSIDE
TRANSPORTATION DEPARTMENT

APPROVED BY: Alan French 12-18-07
ALAN D. FRENCH, P.E. DATE
R.C.E. 45702 EXP. 12-31-08

RECOMMENDED BY 12/18/07
DATE

REGISTERED PROFESSIONAL ENGINEER SCOTT R. HILDEBRANDT NO. C44762 EXP. 3-31-08 CIVIL STATE OF CALIFORNIA

ALBERT A. WEBB ASSOCIATES
3788 McCRAY ST.
RIVERSIDE, CA. 92506
PH. (951) 686-1070

PREPARED BY: DATE: 12-13-07
R.C.E. NO. C44762 EXP. DATE 3-31-08

Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services.
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ELEVATION: 1478.07

REF.	REVISIONS	APPR.	DATE

DESIGNED BY: J.C.C.
DRAWN BY: R.R.
DATE DRAWN: Dec 2007
CHECKED BY:

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: DATE: 12/20/07
APPROVED BY: DATE: 1-3-2008

ROMOLAND MDP
LINE A-3 STAGE 1
STA. 26+00.00 TO STA. 34+50.00

PROJECT NO. 4-0-00431
DRAWING NO. 4-871
SHEET NO. 4 OF 25

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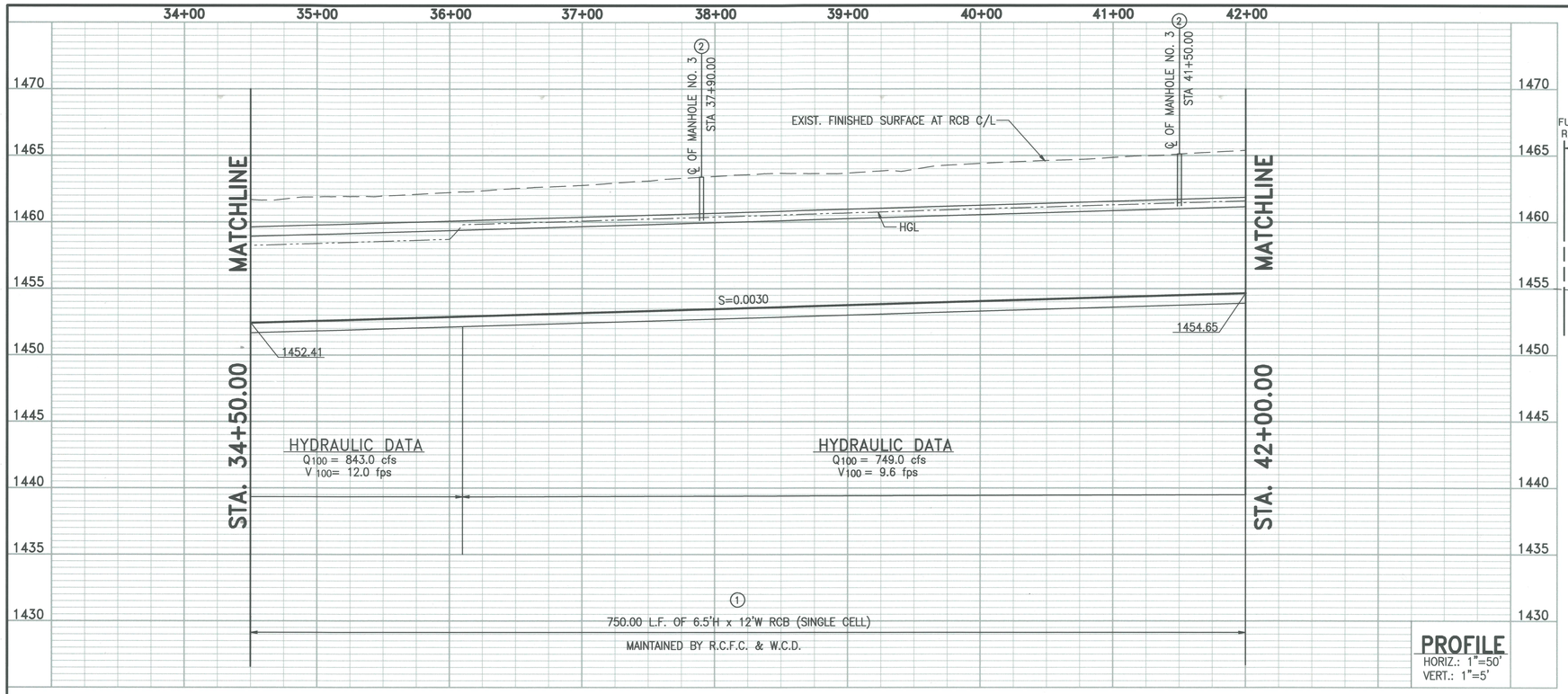

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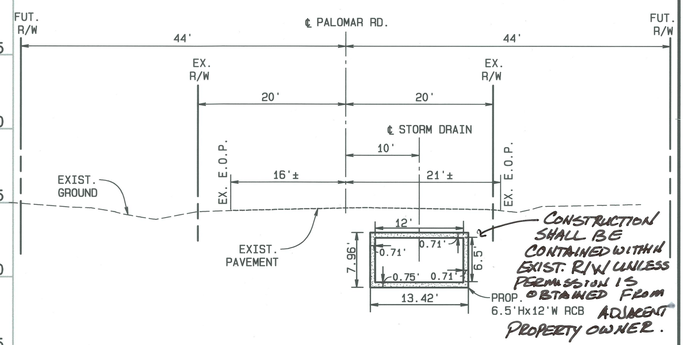


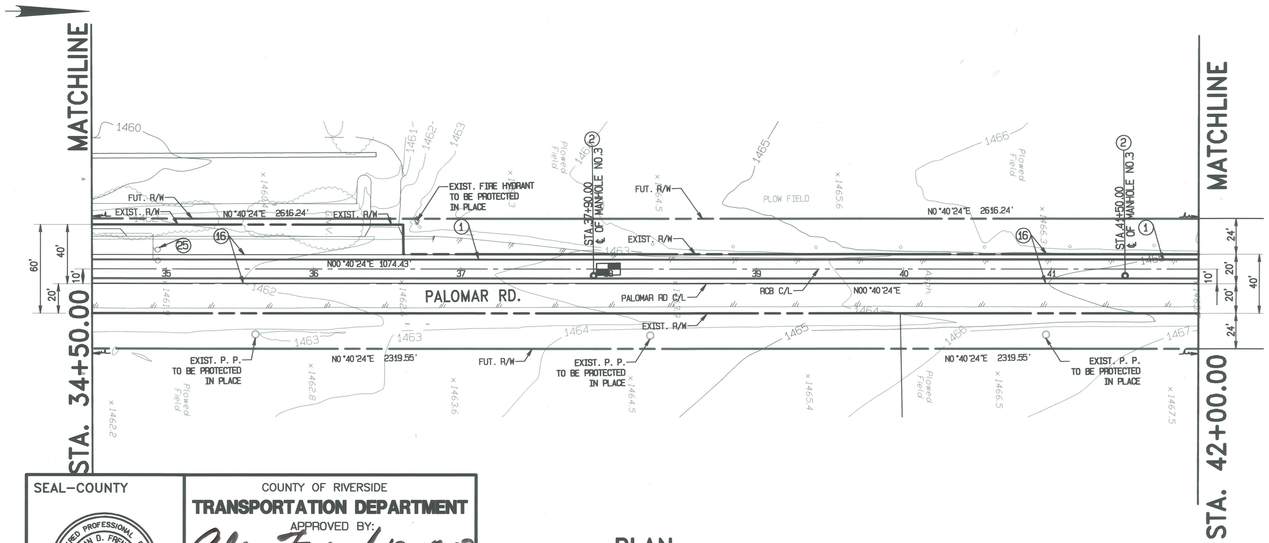
SECTION AT STA. 38+00.00

TYPICAL FROM 34+50.00 TO 42+00.00

GRAPHIC SCALE 1"=10'

0 10 20 30

Z



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⑯ EXISTING IMPROVEMENTS TO BE REMOVED AND REPLACED AS NECESSARY
㉕ EXISTING TRAFFIC SIGNAL DETECTOR SENSORS TO BE REMOVED AND REPLACED AS NECESSARY

PLAN

GRAPHIC SCALE 1"=50'

0 50 100 150

SEAL–COUNTY

REGISTERED PROFESSIONAL ENGINEER ALAN D. FRENCH NO. 45702 EXP. 12-31-08 CIVIL STATE OF CALIFORNIA

COUNTY OF RIVERSIDE
TRANSPORTATION DEPARTMENT
APPROVED BY: Alan French 12-18-07
ALAN D. FRENCH, P.E. DATE
R.C.E. 45702 EXP. 12-31-08
RECOMMENDED BY 12/18/07 DATE

RECORD DRAWING
APPROVED BY
DATE

IP 050154 MS 4051

REGISTERED PROFESSIONAL ENGINEER SCOTT R. HILDEBRANDT NO. C44762 EXP. 3-31-08 CIVIL STATE OF CALIFORNIA

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RIVERSIDE, CA. 92506
PH. (951) 686-1070
PREPARED BY: DATE: 12/3/07
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DATE DRAWN: Dec 2007
CHECKED BY:

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: DATE: 12/28/07
APPROVED BY: DATE: 1-3-2008

ROMOLAND MDP
LINE A-3 STAGE 1
STA. 34+50.00 TO STA. 42+00.00

PROJECT NO. 4-0-00431
DRAWING NO. 4-871
SHEET NO. 5 OF 25

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