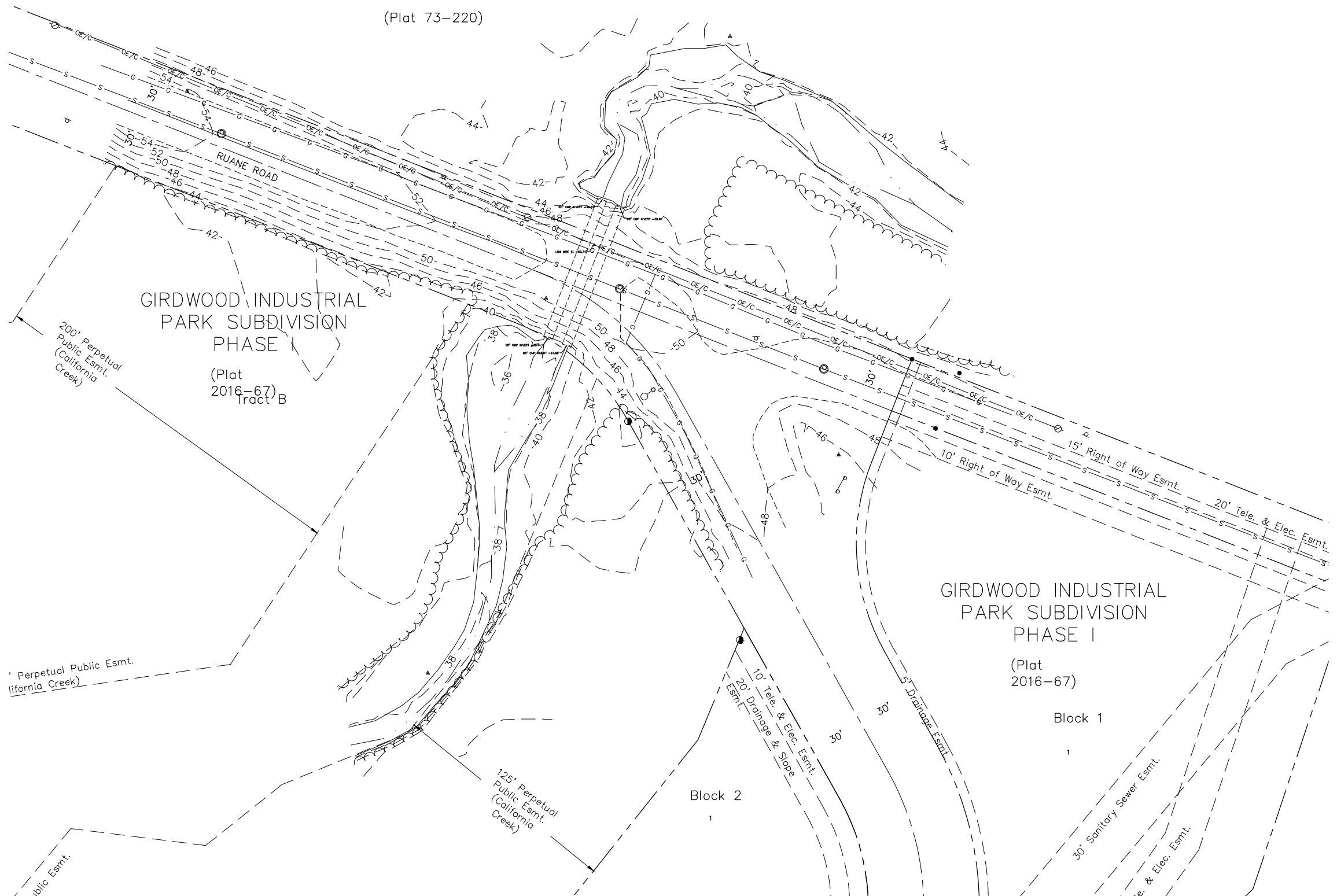


SUPPLEMENTAL CADASDRAL SURVEY

Tract 18-B  
(Plat 73-220)



File: S:\Projects\MOA\PM&E\Ruane\_Road\_Emergency\_Repair\01\_CAD\10148.22\_Ruane\_Cdl-Crk\_Base.dwg

PROJECT: —  
STATUS: —



DATE	—
SCALE	—
FIGURE	—
SHEET TITLE	

DATE	—
SCALE	—
FIGURE	—

JOB# 10148.22  
 RUANE RD & CAL. CREEK SURVEY  
 H/E CONTROL  
 (STATIC)

POINT	HT	RCVR	ANT	START/STOP	PHOTOS
201	1.051 (M) 3.45 (FT)	ROVER9 (6576)	GS14 TRIPOD	11:41 / 16:54	201(1-2)

1	1.238 (M) 4.065 (FT)	ROVER5 (6279)	GS14 TRIPOD	12:44 / 16:41	1(1-6)
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EQUIP: ROVER9, ROVER5  
 FILE: 1014822M211124R6  
 WEATHER 12° SNOWING

3821 - 50

11-24-2021

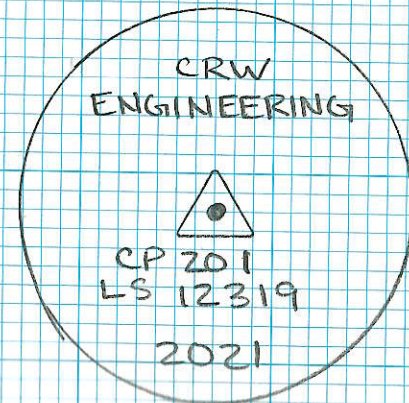
B. BURGIN

DESCRIPTION

FND 2 1/2" ALLCAP, .1'  
 ABOVE SURFACE, FLUMES  
 & IN GOOD CONDITION

SET 2" ALLCAP ON 5/8" x 30"  
 REBAR, FLUSH W/ SURFACE,  
 SET IN GRASS AREA @ INT.  
 OF RUANE RD / BEDROCK  
 CIRCLE, ≈ 67' SE FROM  
 STOP SIGN, ≈ 12.7' NW  
 FROM GIRDWOOD INDUSTRIAL  
 PARK SIGN S NORTH  
 BOLLARD

CAP DIAGRAM



"CRW ALLCAP" TYPICAL

JOB#10148.22

RUANE RD & CAL: CREEK SURVEY

HZ CONTROL  
(STATIC)

EQUIP: ROVER6

FILE: 1014822MZ1124RL6

WEATHER: 12° SNOWING

11-24-2021

B. BURGIN

POINT	HT	RCVR	ANT	START / STOP	PHOTOS
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2	1.218 (M) 4.00 (FT)	ROVER6 (6288)	GS14 TRIPOD	13:33 / 15:20	2(1-6)
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3	1.240 (M) 4.07 (FT)	ROVER6 (6288)	GS14 TRIPOD	15:32 / 16:44	3(1-6)
---	------------------------	------------------	----------------	------------------	--------

DESCRIPTION

CAP DIAGRAM

SET 2" ALLCAP ON 5/8" x 30" REBAR, FLUSH W/ SURFACE, ON THE SHOULDER OF THE SOUTH SIDE OF RUANE RD, ABOVE CALIFORNIA CREEK (CONVERT), ≈ 100' WEST FROM STOP SIGN, ≈ 40' FROM EPP W/ SPORT FISH DAILY LIMIT SIGN ON IT

"CRW ALLCAP"  
TYPICAL

SET 2" ALLCAP ON 5/8" x 30" REBAR, FLUSH W/ SURFACE, ON NORTH SIDE OF RUANE RD, ≈ 75' SE FROM EPP, ≈ 138' NW FROM NO PARKING ANYTIME SIGN, ≈ 63' NE FROM NO PARKING ANYTIME SIGN, 1' NORTH OF EDGE OF PAVT

"CRW ALLCAP"  
TYPICAL

JOB # 10148.22

RUANE RD & CAL. CREEK SURVEY

TOPO

BASE @ 1  
(ROVERS CH2)

HI = 1.238 (M)  
4.065 (FT)

START / STOP  
12:44 / 16:41

POINT	HT	DESCRIPTION
4001	6 00	<del>START TOPO</del>
4002	6 00	✓ IN # 2 START TOPO
4037	6 40	✓ IN # 2

3821 - 52

EQUIP: GS18 (8072)

ROVERS (0279)

FILE: 1014822M211124R6

WEATHER: 12° SNOWING

11-24-2021

B. BURGIN

JOB# 10148.ZZ  
 RUANE RD & CALI. CREEK SURVEY

TOPO

$\pi$  @ 2 HI = 5<sup>30</sup>  $\Delta H = 0.01$   
 $\Delta V = 0.03$   
 BS @ 3 HT = 5<sup>59</sup> HD = 223.91

POINT	RH	DESCRIPTION
4038	5 <sup>59</sup>	✓ ON # 3 $\Delta H = 0.01$ $\Delta V = 0.03$
4039	6 <sup>00</sup>	START TOPO
4212	8 <sup>00</sup>	CHANGE ROD HEIGHT,
4254	5 <sup>59</sup>	✓ ON # 3 $\Delta H = 0.02$ $\Delta V = 0.03$

EQUIP: TS16

FILE: 10148ZZM21128T6

WEATHER: 25° SNOW

11-28-2021

B. BURGIN

L. BELL

JOB # 10148.22  
RUANE RD & CACI CREEK SURVEY

TOPO  
RTK GPS

BASE 1  
HI: 1.221m/  
4.01'

TIME: 10:15am

POINT	HR	DESCRIPTION
8001	6:56	✓ e2
8002		START TOPO

3821-54

11/30/2021  
25°F SNOW  
L. BELL

JOB# 10148.22  
RUANE RD & CALL. CREEK SURVEY

TOPO

X @ 2 HI = 546 ΔH = 0.02  
BS @ 3 HT = 574 ΔV = 0.02  
HD = 223.91

POINT	RH	DESCRIPTION
4255	574	✓ ON # 3 ΔH = 0.02 ΔV = 0.03
4256	000	START TOPO
4268		
4267	700	CHANGE, ROD. HEIGHT,
4294	600	C.R.H.
4340	900	C.R.H.
4341	600	C.R.H.
4435	900	C.R.H.
4436	574	✓ ON # 3 ΔH = 0.02 ΔV = 0.02

EQUIP: TS15  
FILE: 1014822M21128T6  
WEATHER: 24° SNOW

3821-55  
11-30-2021  
B. BURGIN  
L. BELL

JOB# 10148.22  
 RUANE RD E (ALL CREEK SURVEY)  
 TOPO

BASE @ 1 HI = 1.207 (M) START / STOP  
 (ROVER) CH2) 3.96 (FT) 10:06 /

POINT	HT	DESCRIPTION
4437	5 <u>50</u>	✓ ON # 2 $\Delta H = 0.03$ $\Delta V = 0.03$
4438	" "	✓ ON # 2 W/ TILT
4439	5 <u>50</u>	START TOPO
4472	15 <u>00</u>	CHANGE, ROD, HEIGHT,
4475	6 <u>50</u>	C.R.H.
<del>4477</del>	6 <u>50</u>	✓ ON # 2 $\Delta H = 0.03$ $\Delta V = 0.04$
44077		

\* CHANGED IN FBK FILE SO NOT TO OVERRIDIGHT  
 (4476 & 4477 → 44076 & 44077)

EQUIP: GS18, ROVER  
 FILE: 1014822M711201RK  
 WEATHER: 27° SUNNY

3821-56

12-01-2021  
 B. BURGIN  
 L. BELL

JOB# 10148.22  
 RUANE RD E CALI CREEK SURVEY

TOPO /  
 HZ CONTROL

KA @ 2 HI = 540 ΔH = 0.00  
 BS @ 3 HT = 537 ΔV = 0.04  
 HD = 223.91

POINT	HT	DESCRIPTION
4476	537	✓ ON # 3 ΔH = 0.01 ΔV = 0.03
<del>447</del>		
451	403	SET 12" NAIL
4477	537	✓ ON # 3 ΔH = 0.01 ΔV = 0.03
4478	600	START TOPO
4480	1100	CHANGE ROD HEIGHT,
4481	1500	C.R.H.
4482	1030	C.R.H.
4483	600	C.R.H.
4492	770	C.R.H.
4495	670	C.R.H.
4498	537	✓ ON # 3 ΔH = 0.01 ΔV = 0.03

EQUIP: TS15  
 FILE: 1014822MZ11Z8T6  
 WEATHER: 27° SUNNY

3821 - 57  
 12-01-2021  
 B. BURGINS  
 L. BELL

JOB# 10148.22

RUANE RD & CALI CREEK SURVEY  
TOPO

TA @ 451	HI = 4 <u>43</u>	$\Delta H = 0.00$
BS @ 2	HT <u>451</u>	$\Delta V = 0.01$
	541	HD = 212.24

POINT	RH	DESCRIPTION
4499	<u>451</u> 541	✓ ON # 2 $\Delta H = 0.00$ $\Delta V = 0.02$
4500	6 <u>70</u>	START TOPO
4570	7 <u>20</u>	CHANGE ROD HEIGHT
4572	13 <u>30</u>	C.R.H.
4573	16 <u>00</u>	C.R.H.
4580	5 <u>41</u>	✓ ON # 2 $\Delta H = 0.07$ $\Delta V = 0.00$

EQUIP: TSIS

FILE: ~~1014822M2112011~~  
1014822M21112816

WEATHER: 27° SUNNY

3821 - 58

12-01-2021

B. BURGIN

L. BELL

JOB # 10148.22  
 RUANE RD & CALI CREEK SURVEY

TOPO

$\pi @ 3$  HI = 5<sup>10</sup>  $\Delta H = 0.01$   
 $\Delta V = 0.02$   
 BS @ 2 HT = 5<sup>18</sup> HD = 223.91

POINT	RH	DESCRIPTION
4581	5 <sup>18</sup>	✓ ON # 2 $\Delta H = 0.01$ $\Delta V = 0.03$
4582	13 <sup>00</sup>	START TOPO
4591	8 <sup>00</sup>	CHANGE ROD HEIGHT.
4592	7 <sup>00</sup>	C.R.H.
4593	8 <sup>00</sup>	C.R.H.
4654	6 <sup>00</sup>	C.R.H.
4673	10 <sup>00</sup>	C.R.H.
4691	5 <sup>18</sup>	✓ ON # 2 $\Delta H = 0.02$ $\Delta V = 0.03$
452	5 <sup>72</sup>	SET 12" SPIKE FLUSH W/ SURFACE.
4692	5 <sup>18</sup>	✓ ON # 2 $\Delta H = 0.02$ $\Delta V = 0.03$

EQUIP: TS15  
 FILE: 1014822MZ1120ZTS

12-02-2021  
 B. BURGIN  
 L. BELL

WEATHER: 17° CLOUDY

JOB# 10148.22  
RVANE RD & CALI CREEK SURVEY

TOPO

TA @ 452 HI = 549  $\Delta H = 0.00$   
BS @ 3 HT = 545  $\Delta V = 0.01$   
HD = 294.72'

POINT	RH	DESCRIPTION
4693	545	✓ on # 3 $\Delta H = 0.01$ $\Delta V = 0.01$
4694	7 <sup>00</sup>	START TOPO
4801	545	✓ on # 3 $\Delta H = 0.03$ $\Delta V = 0.02$

EQUIP: TS15

FILE: 1014822M211202T5

WEATHER: 4° F CLOUDY

3821-60

12-03-2021

B. BURGIN

JOB# 10148.22  
 RUANE RD & CALI CREEK SURVEY  
 TOPO

A @ 452 HI = 5<sup>75</sup> (FT)  $\Delta H = 0.01$   
 $\Delta V = 0.01$   
 BS @ 3 NI = 5<sup>05</sup> (FT) HI = 294.72

POINT	RHI	DESCRIPTION
4802	5 <sup>05</sup>	✓ # 3 $\Delta H = 0.01$ $\Delta V = 0.00$
4803	7 <sup>00</sup>	START TOPO
4902	5 <sup>60</sup>	CHANGE ROD HEIGHT.
4912	6 <sup>70</sup>	C.R.H.
4915	5 <sup>50</sup>	C.R.H.
4916	8 <sup>00</sup>	C.R.H.
4933	5 <sup>50</sup>	C.R.H.
4984	5 <sup>05</sup>	✓ on # 3 $\Delta H = 0.03$ $\Delta V = 0.00$

A @ 3 HI = 5<sup>05</sup> (FT)  $\Delta H = 0.01$   
 $\Delta V = 0.01$   
 BS @ 452 NI = 5<sup>74</sup> (FT) HI = 294.72  
 $\Delta H = 0.01$   
 $\Delta V = 0.00$

4985	5 <sup>74</sup>	✓ on # 452 $\Delta H = 0.01$ $\Delta V = 0.00$
4986	13 <sup>00</sup>	START TOPO
4988	5 <sup>74</sup>	✓ on # 452 $\Delta H = 0.01$ $\Delta V = 0.00$

EQUIP: TS15  
 FILE: 1014822M211202TS  
 WEATHER: 32° F SNOW

3821-61  
 12-06-2021  
 B. BURGIN  
 L. BELL

JOB#10148.22

RUANE RD & CALI CREEK SURVEY  
INVERTS

SSMH# 4986

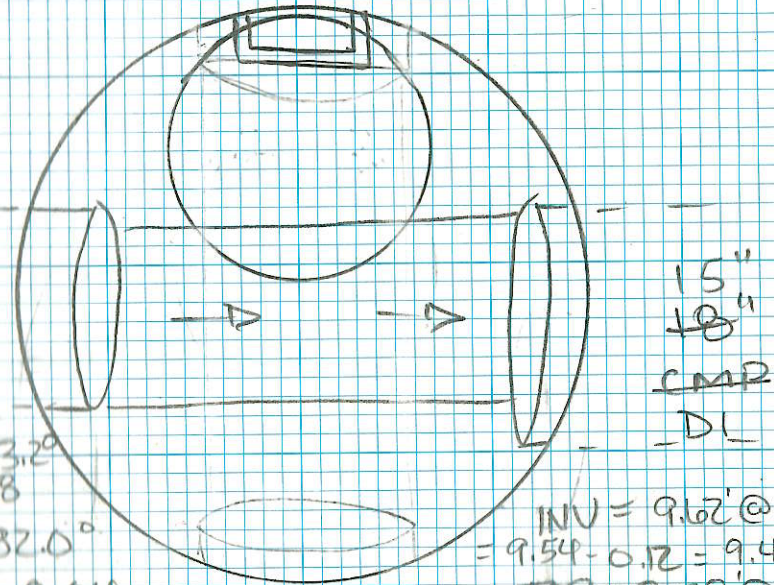
S. RIM EL = 49.11'

1.3' T.O.B.

4' BARREL

LID TYPE = SEWER 2.1'

PHOTOS: 4986 SSMH (1-4)



INV = 9.57 @ 83.2°  
 = 9.50 - 0.12 = 9.38  
 TOP = 8.24 @ 82.0°  
 = 8.16 - 0.12 = 8.04

INV EL = 39.73'

INV = 9.62 @ 82.4°  
 = 9.54 - 0.12 = 9.42  
 TOP = 8.28 @ 82.4°  
 = 8.21 - 0.12 = 8.09

INV EL = 39.69'

3821-62

12-06-2021

B. BURGIN

L. BELL

SSMH# 4097

S. RIM EL = 50.86'

LID @ T.O.B.

4' BARREL

LID TYPE = SEWER 2.1'

PHOTOS = 4097 SSMH (1-4)

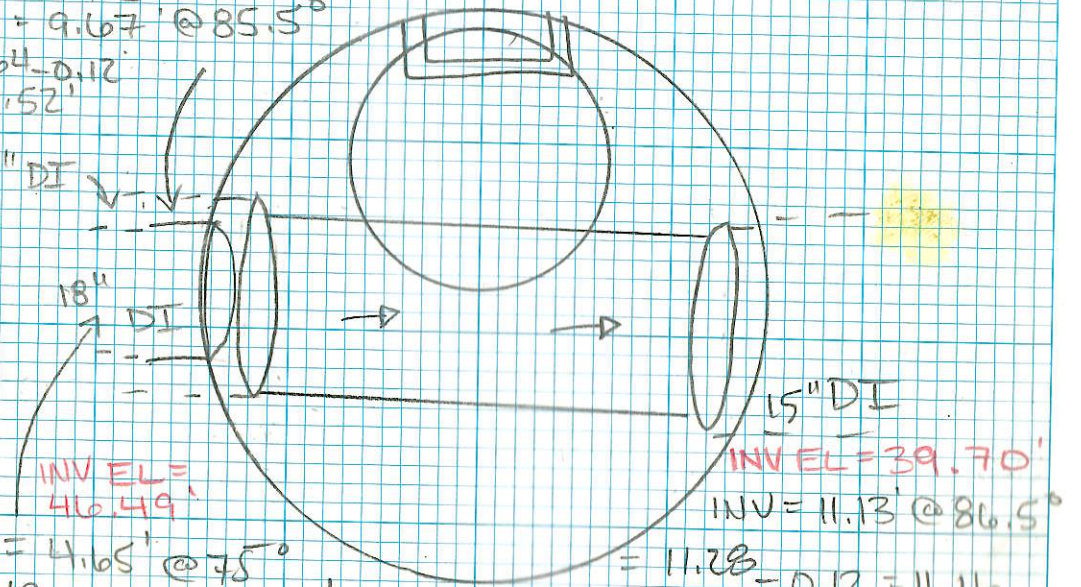
INV EL = 39.93'

INV = 11.08 @ 86°  
 = 11.05 - 0.12 = 10.93  
 TOP = 9.67 @ 85.5°  
 = 9.64 - 0.12  
 = 9.52'

15" DI

INV EL = 46.49'

INV = 4.65 @ 75°  
 = 4.49 - 0.12 = 4.37  
 TOP = 3.35 @ 65°  
 = 3.04 - 0.12 = 2.92



INV EL = 39.70'  
 INV = 11.13 @ 86.5°

= 11.28 - 0.12 = 11.16  
 TOP = 9.76 @ 84°  
 = 9.71 - 0.12 = 9.59

JOB# 10148.22  
 RUANE RD @ CALI CREEK SURVEY  
 INVERTS

SSMH# 4048

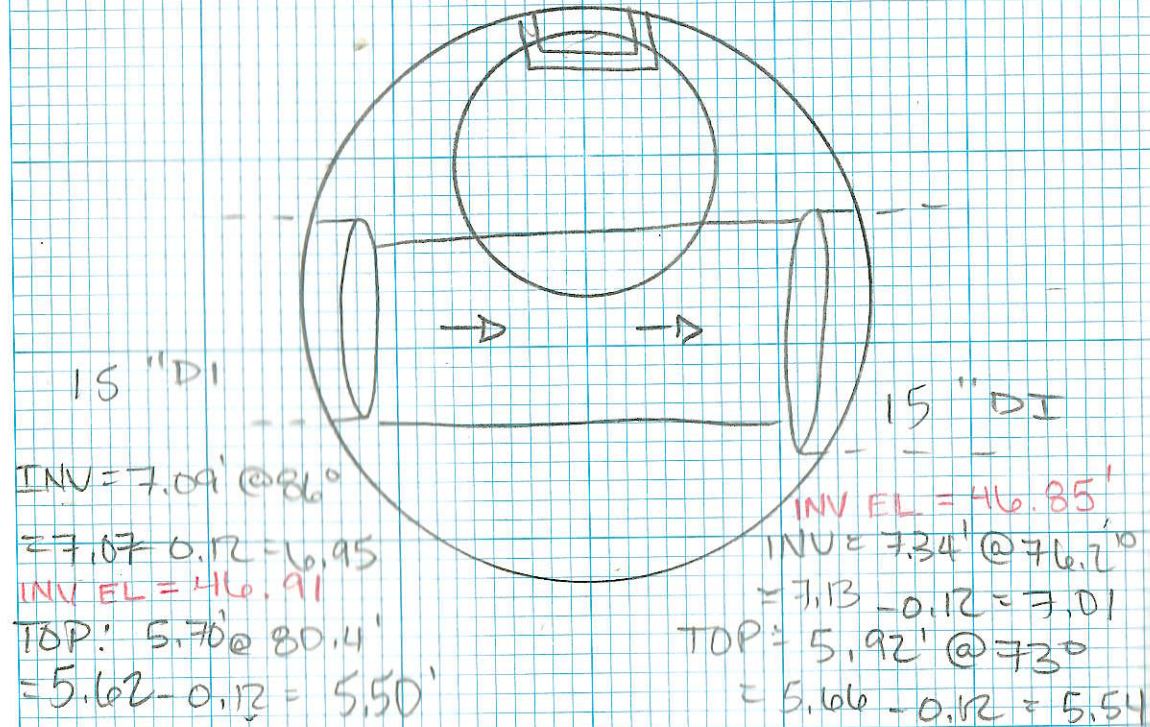
S. RIM EL = 53.86'

2.3" T.O.B.

4' BARREL

LID TYPE = 2.1" SEWER

PHOTOS: 4048 SSMH (1-5)



3821-63  
 12-06-2021  
 B. BURGIN  
 L. BELL

JOB# 10148.22  
 RUANE RD & CALI CREEK SURVEY  
 HZ CONTROL

BASE4@1  
 (CH 2 )  
 HI = 1.249 (M)  
 4.10 (FT)  
 START/STOP  
 14:30/17:20  
 POINT HIT RCVR ANT START/STOP PHOTOS  
 4989 6.00 ✓ ON# 2 ΔH = 0.05  
 ΔV = 0.04

601 8.00 ROVERL (6288) GIS14 POLE \*RTK 601(1-4)

602 8.00 ROVERL (6288) GIS14 POLE \*RTK 602(1-4)

\*\*\* ALL BOUNDARY RESHOT W/ TPS,  
 SEE FB 3821 PGS 72-74 \*\*\*

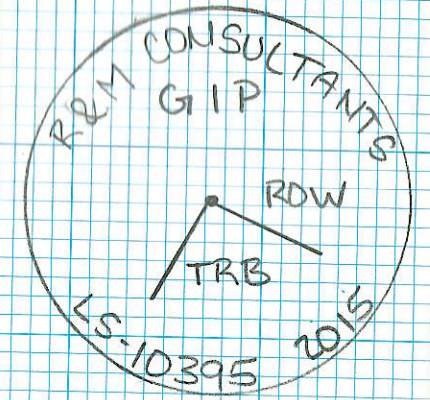
EQUIP BASELI, ROVERL  
 FILE: 1014822M211209RB  
 WEATHER: 32° CLOUDY / SNOW

3821-64  
 12-09-2021  
 B. BURGINS

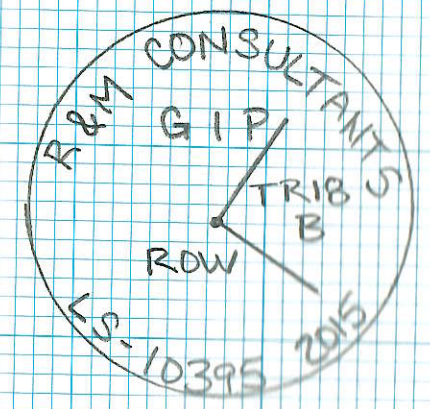
DESCRIPTION

CAP DIAGRAM

END 2" ALCAP, .3' BELOW  
 SURFACE, PLUMB & IN  
 GOOD CONDITION



END 2" ALCAP, .2'  
 BELOW SURFACE, PLUMB  
 & IN GOOD CONDITION



JOB# 10148.22  
 RUAME RD & CALI CREEK SURVEY

LEVELS  
 LEVEL LOOP 1

POINT	TURN	ELEV.	ADJ. ELEV.
GW 3			70.85
	TP1	75.414	
	TP2	74.570	
	TP3	65.514	
	TP4	67.335	
	TP5	72.679	
	TP6	73.061	
	TP7	74.996	
	TP8	78.164	
	TP9	84.205	
	TP10	84.115	
	TP11	73.728	
	TP12	66.677	
	TP13	58.934	
3		54.334	54.322
2		50.521	50.509
1		45.922	45.908
	TP14	51.742	

EQUIP: DNAID  
 FILE: 1014822MZ1209L  
 WEATHER: 26° SNOW

3821-65  
 12-09-2021  
 B. BURMAN

DESCRIPTION  
 BOLT ON SOUTHERN ENTRANCE TO FOREST SERVICE BUILDING

SURVEY TURTLE



SET 2" ALCAP



SURVEY TURTLE

RUANE RD @ CALI CREEK SURVEY

JOB # 10148.22

LEVELS  
LEVEL LOOP 1

POINT	TURN	ELEV.	ADJ. ELEV.
	TP14	51.742	
GW 1		56.805	56.79

EQUIP: DNAID  
FILE: 1014822M21209L  
WEATHER: 26° SNOW

3821 - 66  
12-09-2021  
B. BURGWIN

DESCRIPTION  
SURVEY TURTLE  
BOLT ON AWWU GARAGE BLDG'S  
NW CORNER

JOB# 10148.22  
 RUANE RD & CALI CREEK SURVEY  
 HZ CONTROL

BASE4 @ 1 HI = 1.249 (M) START/STOP  
 (CH 2 ) 4ND (FT) 14:30/17:20

POINT HT RCUR ANT START/STOP POINTS

\*\*\* ALL BOUNDARY RESHOT W/ TPS, SEE  
 FB 3821 PGS 72-74\*\*\*

603 8.00 ROVERL (6288) GS14 \*RTK (603(1-5))  
 POLE

604 6.00 " " " " \*RTK (604(1-2))

EQUIP: BASE4, ROVER  
 FILE: 1014822MZ11209R6  
 WEATHER: 26° SNOW

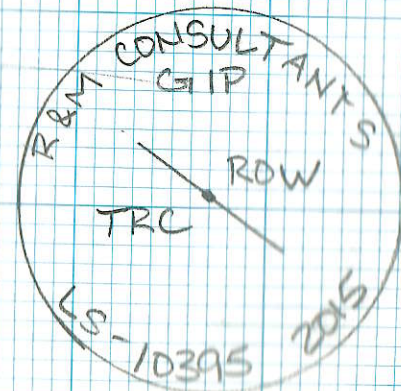
3821-67  
 12-09-2021  
 B. BURGIN

DESCRIPTION

FND 3 1/4" BRAS CAP,  
 13' BELOW SURFACE,  
 PLUMB & IN GOOD  
 CONDITIONS



FND 2" AL CAP, .2'  
 BELOW SURFACE, PLUMB  
 & IN GOOD CONDITIONS



JOB# 10148.ZZ

RUANE RD & CALI CREEK SURVEY  
HZ CONTROL

BASE 14 @ 1 HI = 1.249 (M) START/STOP  
(CH 2) 4.10 (FT) 14:30 / 17:20  
POINT HT. RCVR ANT START/STOP PHOTOS

\*\*\* ALL BOUNDARY RESHOT W/TPS, SEE  
FB 3821 PGS 72-74 \*\*\*

605 700 GS14 ROVER (6288) GS14 POLE \*RTK 605(1-3)

606 " " " " " " " " 606(1-2)

4990 600 ✓ ON #2  $\Delta H = 0.05$   
 $\Delta V < 0.05$

3821-68

12-09-2021

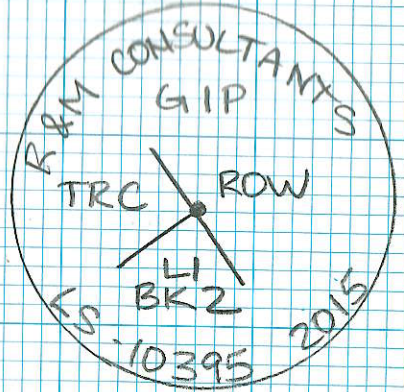
B. BURGIN

EQUIP: ~~DNAD~~ ROVER 6 & 7  
FILE: 10148ZZM211209RL6  
WEATHER: 26° SNOW

DESCRIPTIONS

CAP DIAGRAM

605 END 2" ALCAP,  
FLUSH W/ SURFACE,  
SLIGHTLY LEANING,  
GOOD CONDITION



END 5/8" REBAR W/  
MISSING CAP, 2'  
BELOW SURFACE,  
PLUMB & IN GOOD  
CONDITION

JOB# 10148.22  
 RUANE RD & CALI CREEK SURVEY  
 HE CONTROL

BASE @ 1 HI = 1.607 (M) START / STOP  
 (ROVER 7 6173) 3.63 (FT) 11:40 / 17:00

POINT	HIT	ROVER	ANT	START / STOP	PHOTOS
4991	6 <sup>00</sup>	✓	ON # 2	$\Delta H = 0.05$ $\Delta V = 0.06$	

607	6 <sup>00</sup>	ROVER 6 (6288)	GISK POLE	* RTK	607(1-5)
-----	-----------------	-------------------	--------------	-------	----------

608	"	"	"	"	" 608(1-2)
-----	---	---	---	---	------------

4991	6 <sup>00</sup>	✓	ON # 2	$\Delta H = 0.06$ $\Delta V = 0.03$	
------	-----------------	---	--------	--	--

\*\*\* ALL BOUNDARY RESHOT W/ TPS, SEE  
 FB 3821 PGS 72-74 \*\*\*

EQUIP: ROVER 6 & 7  
 FILE: 1014822MZ11209RL6  
 WEATHER: 26° CLOUDY

3821-69  
 12-10-2021  
 B. BURGHN  
 D. CAMPBELL

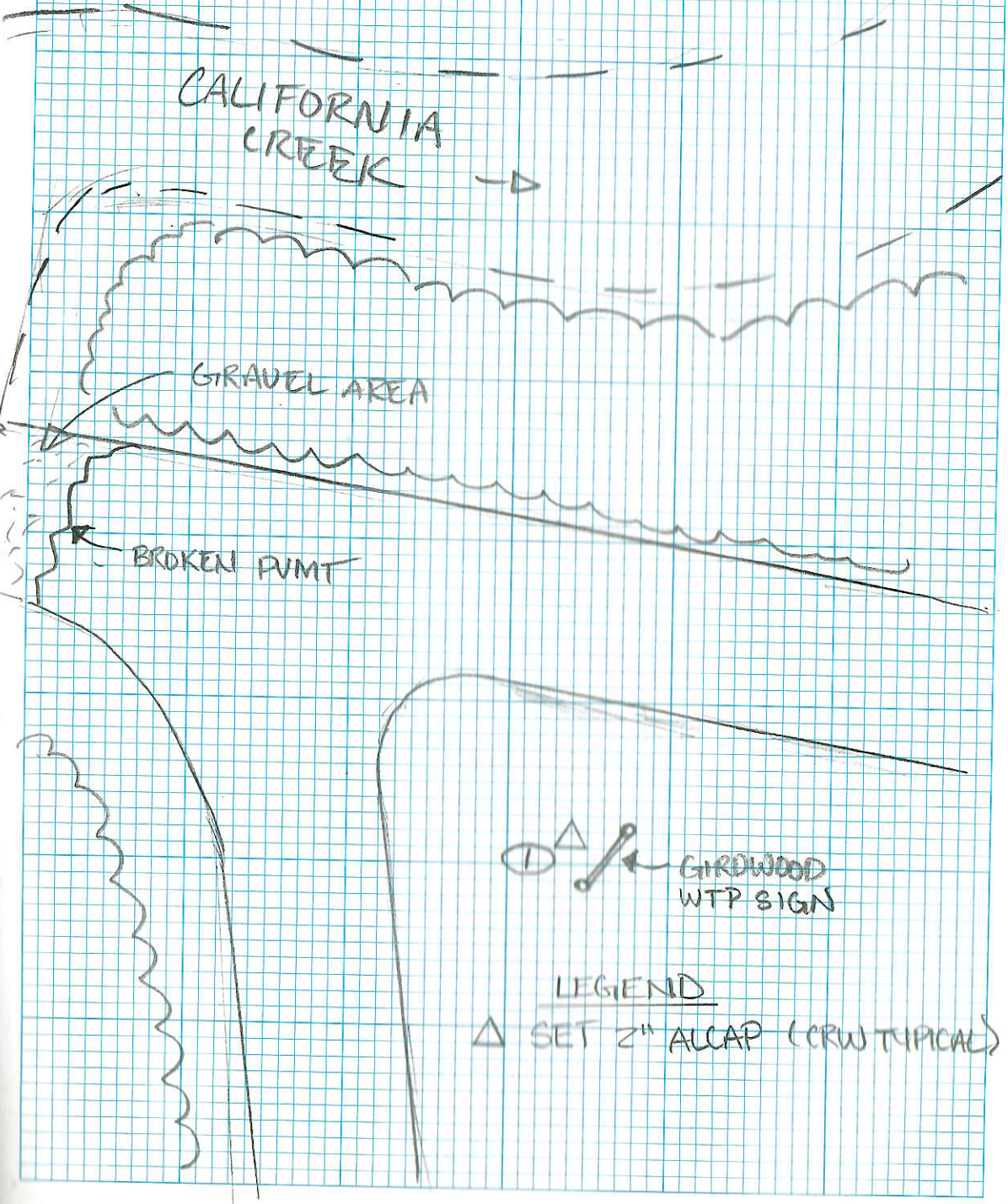
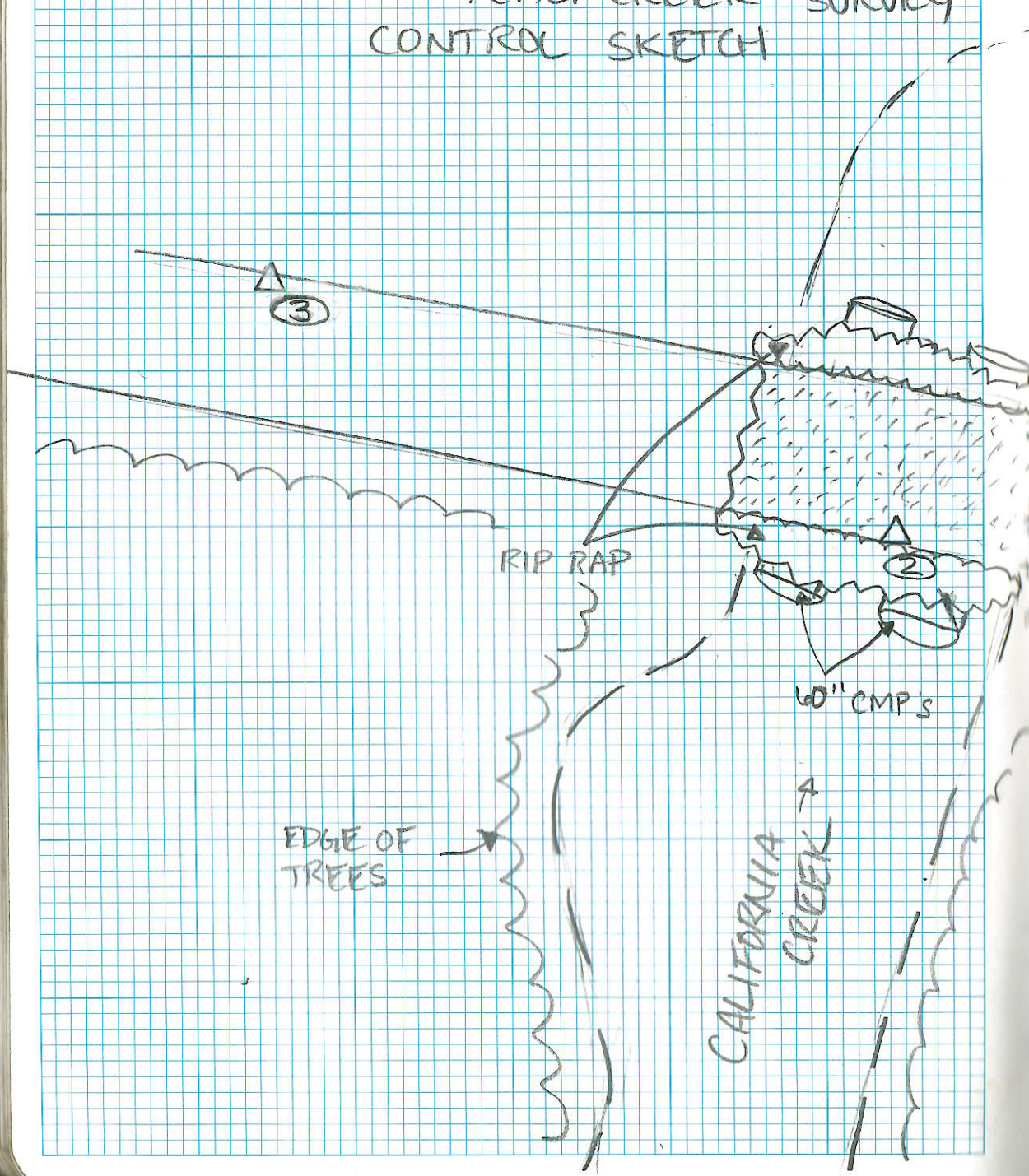
DESCRIPTION

CAP DIAGRAM

FND 5/8" REBAR FLUSH  
 W/ PUNT, PLUMB & IN  
 GOOD CONDITION

FND 5/8" REBAR,  
 JACKED OUT & LEANING,  
 1.8' ABOVE SURFACE, SHOT  
 @ ENTRY POINT

JOB # 10148.22  
RUANE RD & CALI CREEK SURVEY  
CONTROL SKETCH



EQUIP: ROVER6,  
FILE: 104822M21214RL6  
WEATHER: 41° SUNNY

JOB# 10148, 22  
RVANE RD E CALI CREEK SURVEY  
MZE CONTROL

BASE @ 1 HI = 1.323 (M)  
4.34 (FT) START/STOP  
12:55 /

POINT	HT	RCVR	ANT	START / STOP	PHOTOS
4992	6 <sup>00</sup>	✓	OW # 2	ΔH = 0.06 ΔV = 0.06	
4993	6 <sup>00</sup>	✓	OW # 3	ΔH = 0.07 ΔV = 0.02	
601	8 <sup>00</sup>	ROVER6	65M POLE		
602					
603					
4994	6 <sup>00</sup>	✓	OW # 2	ΔH = 0. ΔV = 0.	

\* SHOT CONTROL IN W/ TPS.  
SEE FB 3821 PGS 72 - 74

DESCRIPTION

CAP DIAGRAM

JOB# 10148.22  
 RUANE RD E CALI CREEK SURVEY

HE CONTROL

POINT	HT	DESCRIPTION
	$\pi @ 3$	$HI = 525$ $\Delta H = 0.00$
	$BS @ 1$	$HT = 569$ $\Delta V = 0.013$ $HD = 403.471$
4995	<u>569</u>	$\checkmark$ ON # 1 $\Delta H = 0.00$ $\Delta V = 0.03$
603	<u>581</u>	3/4" BRASS CAP MON, *SEE FB 3821 PG 67 FOR DETAILS / SKETCH
602	<u>555</u>	2" ALLCAP, *SEE FB 3821 PG 64 FOR DETAILS / SKETCH
4996	<u>569</u>	$\checkmark$ ON # 1 $\Delta H = 0.00$ $\Delta V = 0.03$
	$\pi @ 3$	$HI = 525$ $\Delta H = 0.00$
	$BS @ 2$	$HT = 582$ $\Delta V = 0.01$ $HD = 223.908$
4997	<u>582</u>	$\checkmark$ ON # 2 $\Delta H = 0.00$ $\Delta V = 0.01$
603	<u>581</u>	" "
602	<u>555</u>	" "
4998	<u>582</u>	$\checkmark$ ON # 2 $\Delta H = 0.00$ $\Delta V = 0.01$
	$\pi @ 603$	$HI = 580$ $\Delta H = 0.01$
	$BS @ 2$	$HT = 582$ $\Delta V = 0.04$ $HD = 740.370$
4999	<u>582</u>	$\checkmark$ ON # 2 $\Delta H = 0.01$ $\Delta V = 0.02$
601	<u>880</u>	2" ALLCAP, *SEE FB 3821 PG 64 FOR DETAILS / SKETCH
49 3000	<u>582</u>	$\checkmark$ ON # 2 $\Delta H = 0.01$ $\Delta V = 0.02$

EQUIP: TS15  
 FILE: 1014822M211214T5  
 WEATHER: 4° F SUNNY

3821-72  
 12-14-2021  
 B. BURGIN

EQUIP: TSIS  
FILE: 1014822M211214TS  
WEATHER: 4°F SUNNY

JOB# 10148.22  
RUANE RD E CALI CREEK SURVEY  
HZ CONTROL

TI@603 HI = 580 ΔH = 0.01  
BS@3 HT = 524 ΔV = 6.02  
HD = 517.868'

POINT	HT	DESCRIPTION
5001	524	✓ ON # 3 ΔH = 0.01 ΔV = 0.02
601	880	2" ALLCAP, *SEE FB 3821 PG 64 FOR DETAILS / SKETCH
5002	524	✓ ON # 3 ΔH = 0.01 ΔV = 0.01

TI@2 HI = 582 ΔH = 0.00  
BS@3 HT = 524 ΔV = 0.00

5003	524	✓ ON # 3 ΔH = 0.00 ΔV = 0.00 HD = 223.908
606	582	5/8" REBAR MISSING CAP, *SEE FB 3821 PG 68 FOR DETAILS / SKETCH
607	557	5/8" REBAR FLUSH W/ SURFACE, * SEE FB 3821 PG 69 FOR DETAILS / SKETCH
604	600	2" ALLCAP, *SEE FB 3821 PG 67 FOR DETAILS / SKETCH
5004	524	✓ ON # 3 ΔH = 0. ΔV = 0.

TI@2 HI = 582 ΔH = 0.00  
BS@1 HT = 569 ΔV = 6.03  
HD = 179.293

5005	569	✓ ON # 1 ΔH = ΔV =
606	582	" "
607	557	" "
604	600	" "
5006	569	✓ ON # 1 ΔH = 0.00 ΔV = 6.02

JOB# 10148,22  
 RWANE RD & CALI CREEK SURVEY  
 HZ CONTROL

T@ 1 HI = 569 ΔH = 0.01  
 BS@ 2 HT = 582 ΔV = 0.01  
 HD = 179,293

POINT	HT	DESCRIPTION
5007	582	✓ ON # 2 ΔH = 0.01 ΔV = 0.01
605	800	2" ALCAP, *SEE FB3821 PG 68 FOR DETAILS / SKETCH
608	568	5/8" REBAR BENT OVER, *SEE FB3821 PG 69 FOR DETAILS / SKETCH
5008	582	✓ ON # 2 ΔH = 0.01 ΔV = 0.02

T@ 1 HI = 569 ΔH = 0.00  
 BS@ 3 HT = 524 ΔV = 0.01  
 HD = 403,147

5009	524	✓ ON # 3 ΔH = 0.01 ΔV = 0.01
605	800	2" ALCAP " "
608	568	5/8" REBAR BENT " "
5010	524	✓ ON # 3 ΔH = 0.00 ΔV = 0.00

EQUIP: TS15  
 FILE: 1014822M211214TS  
 WEATHER: 40°F SONNY

3821-74  
 12-14-2021  
 B. BURGINS

JOB# 10148, 22

RUANIE RD & CALI CREEK SURVEY

INVERTS

SSMH # 5021

SW 4913-12

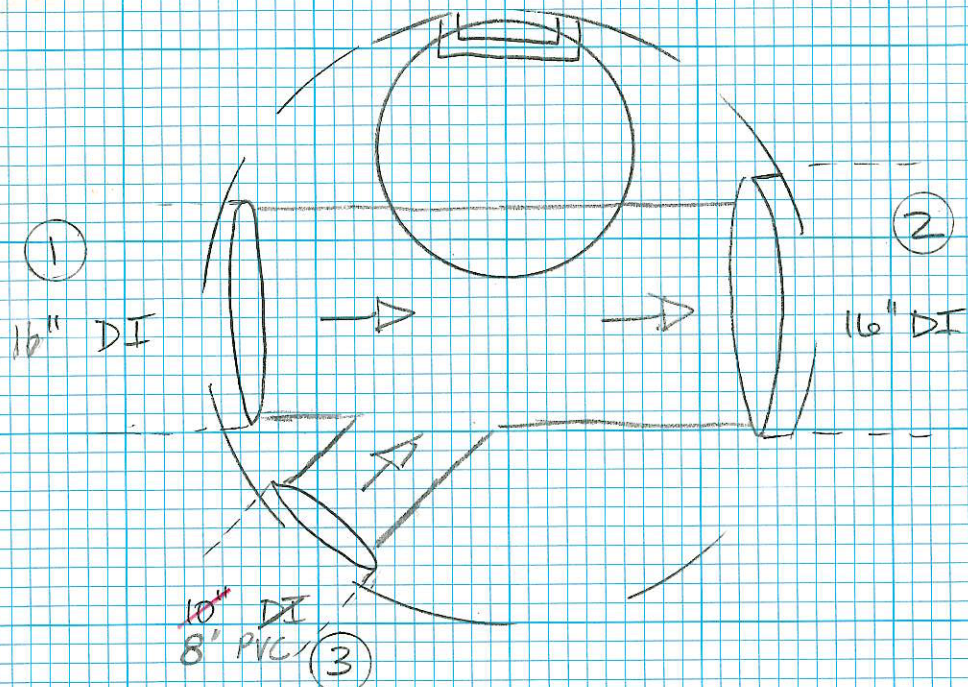
S. RIM EL = 51.02'

4' BARREL

1.7' T.O.B

HD TYPE = SEWER 2.1'

PHOTOS: 5021 (1-15)



3:55 61

2-9-2022

B. BURGIN

①: INV =  $12.37' @ 83^\circ = 12.28 - 0.12 = 12.16'$   
 INV EL = 38.86'

TOP =  $10.99' @ 81.7^\circ = 10.87' - 0.12 = 10.75'$   
 TOP EL = 40.26

②: INV =  $12.39' @ 86.7^\circ = 12.37' - 0.12 = 12.25'$   
 INV EL = 38.77'

TOP =  $11.02' @ 86.6^\circ = 11.00 - 0.12 = 10.88'$   
 TOP EL = 40.14

③: INV =  $12.35' @ 81.6^\circ = 12.22 - 0.12 = 12.10'$   
 INV EL = 38.92'

TOP =  $11.64' @ 80.7^\circ = 11.49' - 0.12 = 11.36'$   
 TOP EL = 39.65'

JOB# 10148.22

RUANIE RD & CALI CREEK SURVEY  
INVERTS

SSMH# 5019

SE4913-16

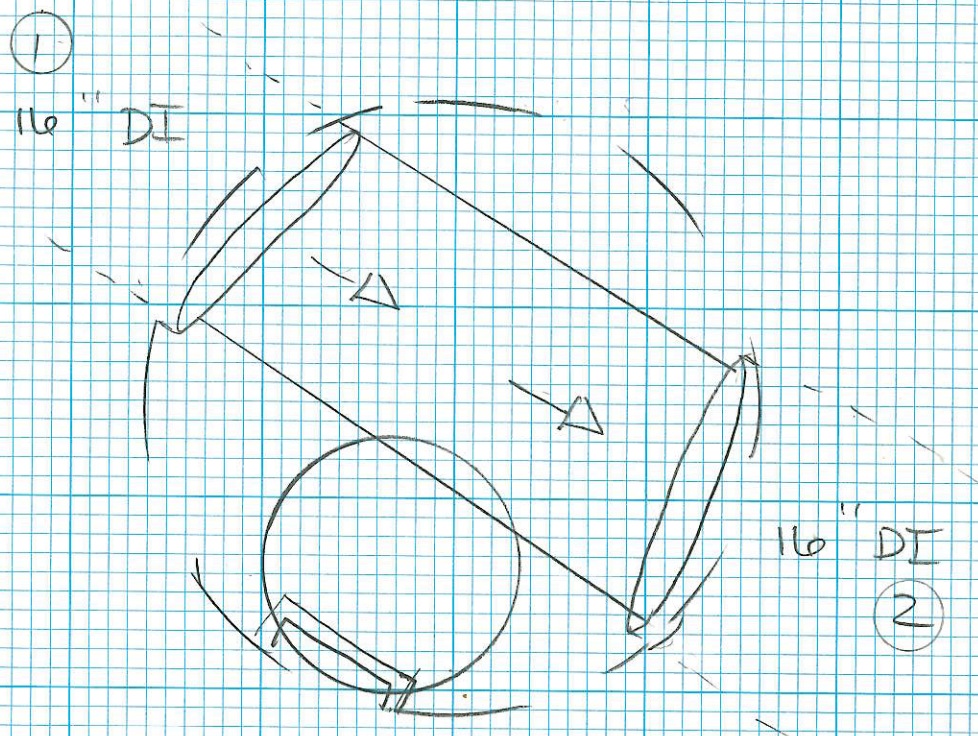
S. RIM EL = 65.59'

4' BARREL

HD @ T.O.B.

LID TYPE = 2.1' SEWER

PHOTOS: 5019 (1-16)



3.35 62

2-9-2022

B. BURGIN

① : INV: ~~18.17' @ 89.4° = 18.17 - 0.12 = 18.05'~~  
 \* SEDIMENT IN INV, HAD TO REMEASURE  
 #2ND 18.24 @ 89.7° = 18.24 - 0.12 = 18.12'  
 \*CHK ~~18.23 @ 89.4° = 18.23 - 0.12 = 18.11'~~  
 INV EL = 47.47'  
 TOP: N/A

② : INV: ~~18.11' @ 90° = 18.11 - 0.12 = 17.99'~~  
 18.22' @ 89.6° = 18.22 - 0.12 = 18.10'  
~~18.20 @ 89.6° = 18.20 - 0.12 = 18.08'~~  
 INV EL = 47.49'  
 TOP: 16.87' @ 88° = 16.86' - 0.12 = 16.74'  
 Top EL = 48.85'