FILE: 2008061(4-24-09)BA.PDF

2008061

ANDERSON CONSULTING ENGR
Boulder Slough
Topo Culverts

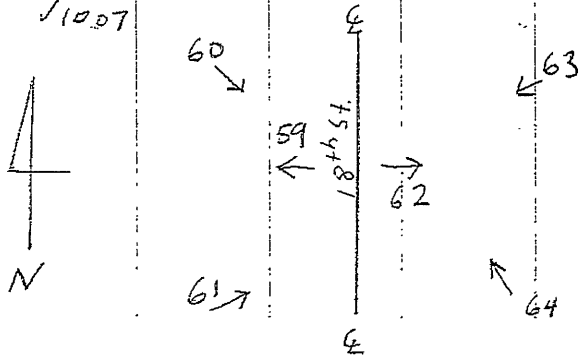
BA

4-13-09

1/1060

Base @ VRS

Pt #		Desc		
1000	✓71	CP-17th U/S		FND MAG : ✱ Keyed In
1001	✓72	CP-17th D/S		FND MAG : ✱ Keyed In
1002		CP-Nail1	18th St.	CP-Nail1 - Set 60D Nail, 2^{S} S. of EOC
✓1003				
1004		CP-MAG1	18th St.	CP-MAG1 - Set 1¼" Mag Nail, 1° E. of EOC In Joint E. of PC, 13° N. of N edge of Dr.
✓1005				
1006		CP-MAG2	18th St.	CP-MAG2 - Set 1¼" Mag Nail, 0^{S} E of EOC In Joint, 6° S. of S. Edge of Dr.
✓1007				



2008061 Cont

PT#

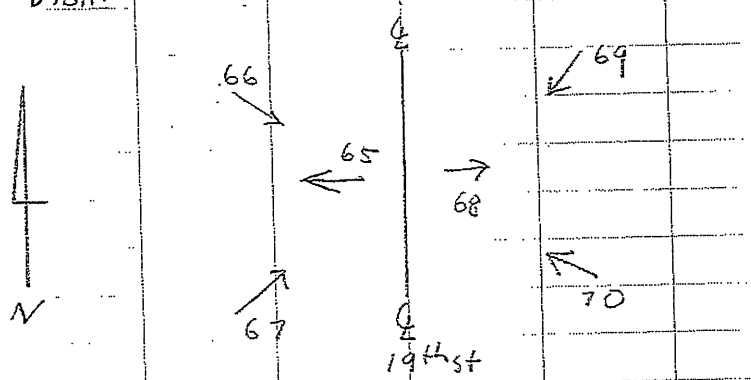
Desc

1008 CP-MAG 3 19th St

✓1009

1010 CP-MAG 4 19th St.

✓1011

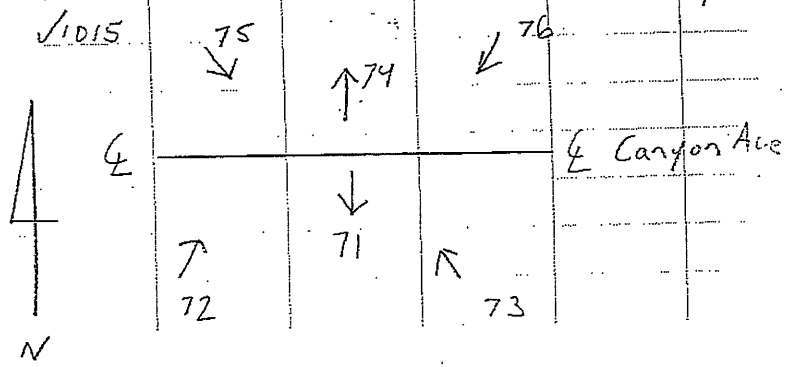


1012 CP-MAG5 Canyon

✓1013

1014 CP-MAG6 Canyon

✓1015



BA

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CP-MAG3 - Set 1¼" Mag Nail In Joint 3° W. of EOC of Walk, S. side of Dr.

CP-MAG4 - Set 1¼" Mag Nail In Joint of C&G N. Edge of Dr Curb Cut, In Line w/ TBC to E.

CP-MAG5 - Set 1¼" Mag Nail In Asphalt, 1° S. of PT of C&G, E side Dr.

CP-MAG6 - Set 1¼" Mag Nail In Joint SW, 4° N. of C&G, 28° E of FH

BA

4-13-09

3/1060

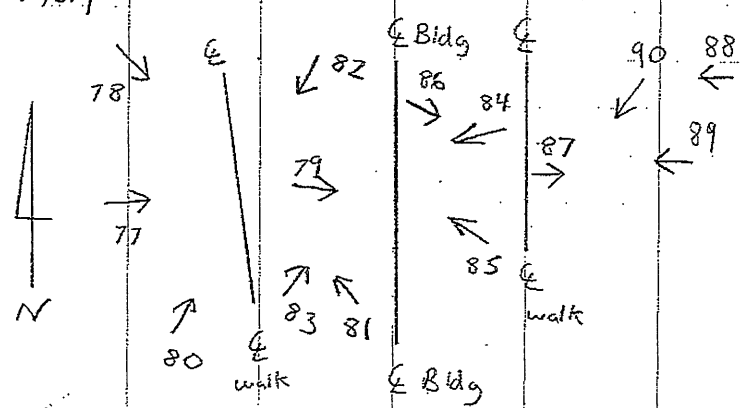
8061 PT# | Cont | Desc

1016 ✓1017 — CP-MAG7 — W

CP-MAG7- Set 1¼" Mag Nail In Crack In S.W. 13° S. of TBW, 2.5 E. of Fx

1018 ✓1019 — CP-MAG8 — W

CP-MAG8- Set 1¼" Mag Nail In Joint of S.W. 0.4 N. of EOC, 12° E. of EOC For Bus STOP

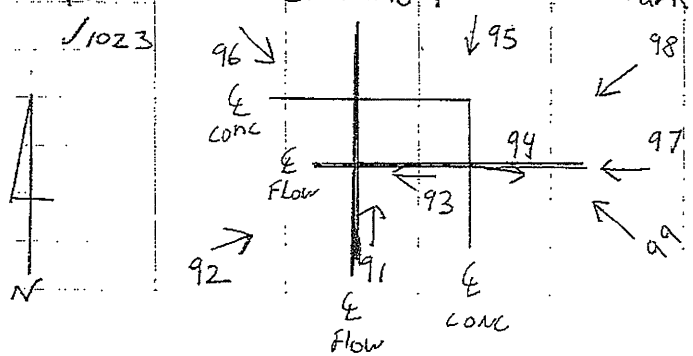


1020 ✓1021 — CP-Nail 2 — S. of Conc

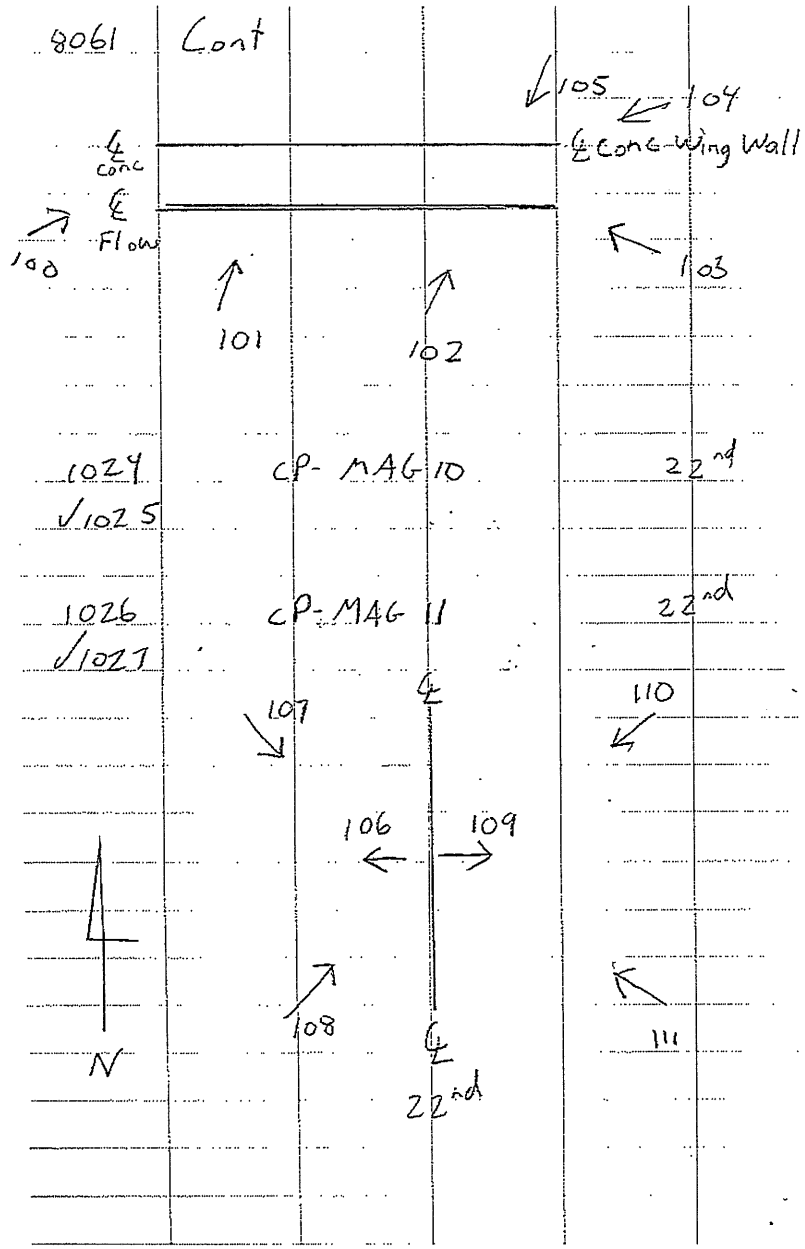
CP-Nail 2 - Set 60D Nail, 3° S of Top Bank 7° N. of EOA, In Line w/ EOA to E.

1022 ✓1023 — CP-MAG9 — Park

CP-MAG9 - Set 1¼" Mag Nail In 3 Joints Come Together @ SW. Cor Park



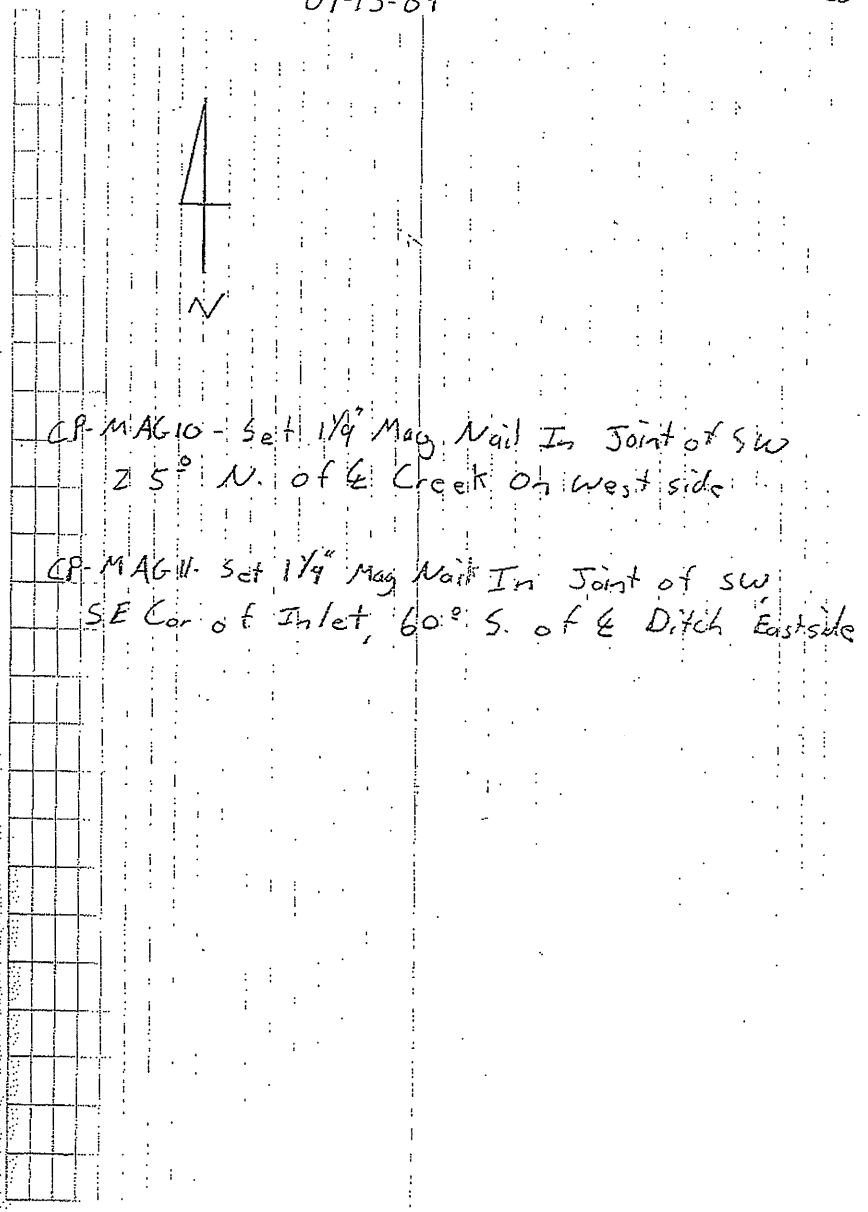
8061 Cont



BA

04-13-09

4/1060



CP-MAG 10 - Set 1¼" Mag Nail In Joint of SW 25° N. of ℄ Creek on West side

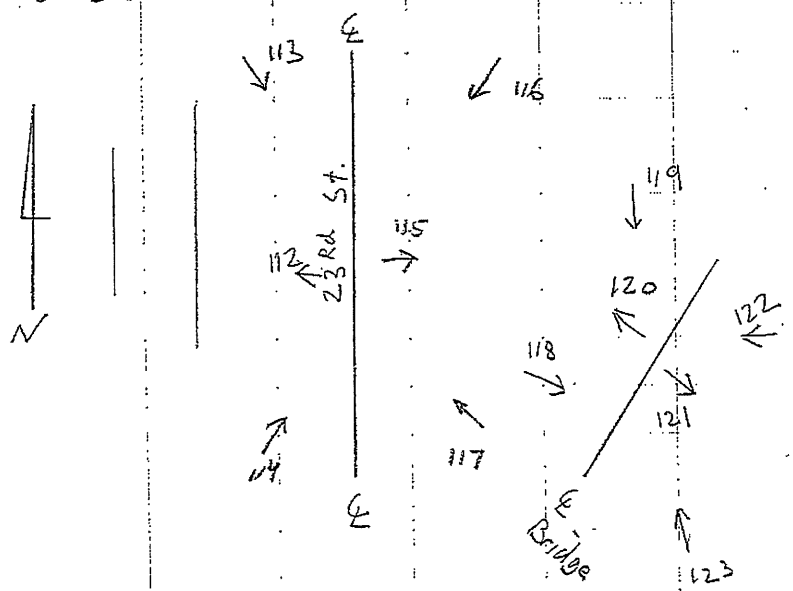
CP-MAG 11 - Set 1¼" Mag Nail In Joint of SW SE Cor of Inlet, 60° S. of ℄ Ditch East side

08061 Cont

04-13-09

Base@ VRS

P.T		Desc
1028	✓1022	CP-MAG-9
1029		CP-MAG 12
✓1030		
1031		CP-MAG 13
✓1032		

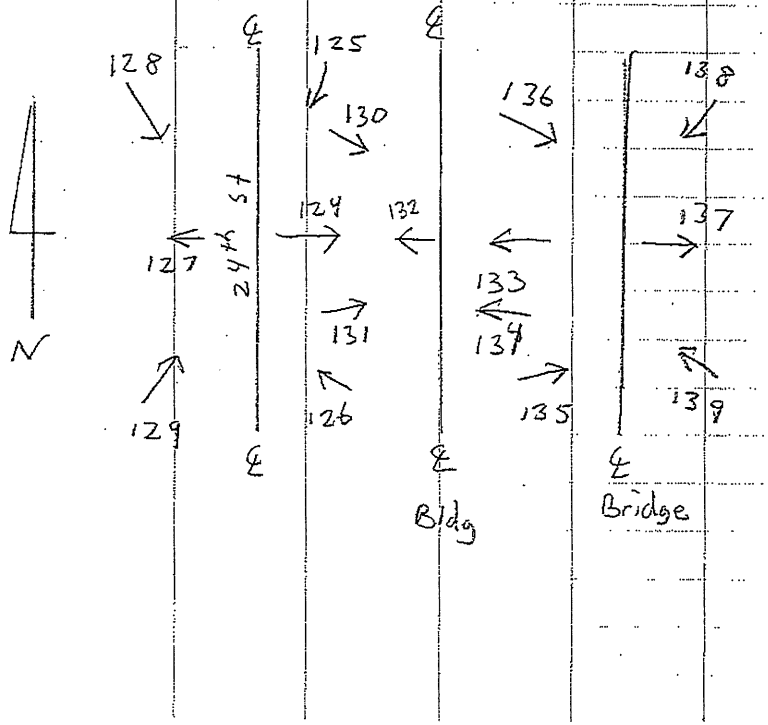


CP-MAG12 - Set 1¼" Mag Nail In Joint of SW 50° S. of ℄ Bridge West side

CP-MAG13 - Set 1¼" Mag Nail In Joint of SW 45° N. of ℄ Bridge East side

08061 Cont

PT#	Desc
1033	CP-Nail 3
✓1034	
1035	CP-MAG 14
✓1036	
1037	CP-MAG 15
✓1038	



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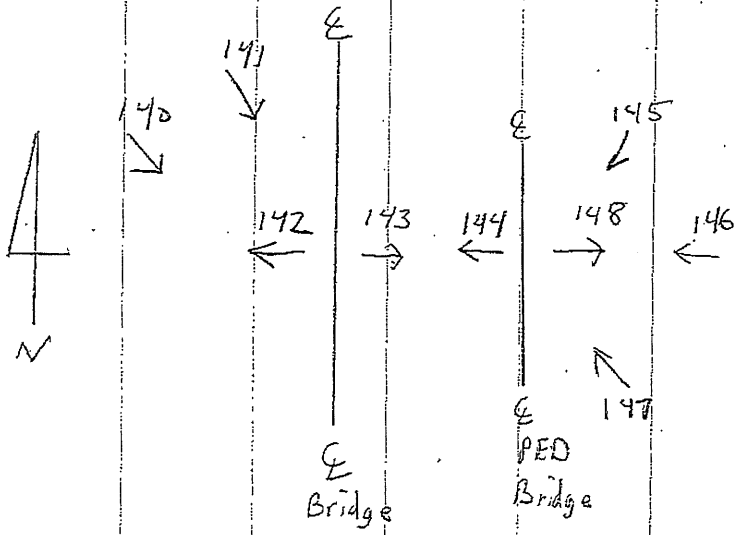
CP-Nail 3- Set 60D Nail 17° E of TBC 6° S. of Huge Stump, 10° NW of Bench

CP-MAG 14- Set 1" Mag Nail In Joint of SW 90° N. of ℄ Bridge West side

CP-MAG 15 - Set 1¼" Mag Nail In Joint of SW, 25° S. of ℄ Bridge west side

08061 Cont

PT #	Desc
1039	CP-MAG16
✓1040	
1041	CP-MAG17
✓1042	



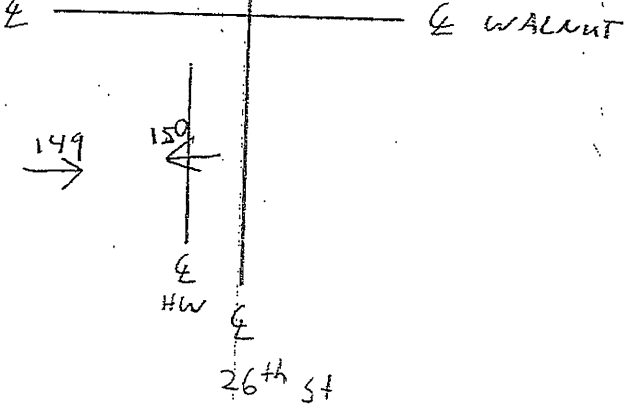
BA

4-14-09

7/1060

CP-MAG16 - Fnd 2" MAG w/ Bottle Cap In Asphalt, 35° N. of ℄ Bridge, 20° E of C/G

CP-MAG17 - Set 1¼" MAG Nail In Joint of Sw 25° W. of Bridge; In Walk 4° N. of NE Cor of Conc Pad of MB



BA

04-14-09

8/1060

0 8061
PT#
1100-1147

Cont

		Desc	
		Topo @ 26th St	
1150	1148	DMH1 Rim	5291.20
✓1151			
1152	1149	DMH2 Rim	5290.84
✓1153			
1156	1154	DMH3 Rim	5288.94
✓1157			
1158	1155	DMH4 Rim	5288.66
✓1159			
1162	1160	DMH5 Rim	5287.69
✓1163			
1164	1161	DMH6 Rim	5287.84
✓1165			
1168	1166	DMH7 Rim	5286.76
✓1169			
1170	1167	DMH8 Rim	5286.35
✓1171			

BA

04-14-09

9/1060

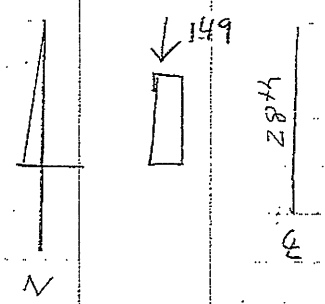
08061

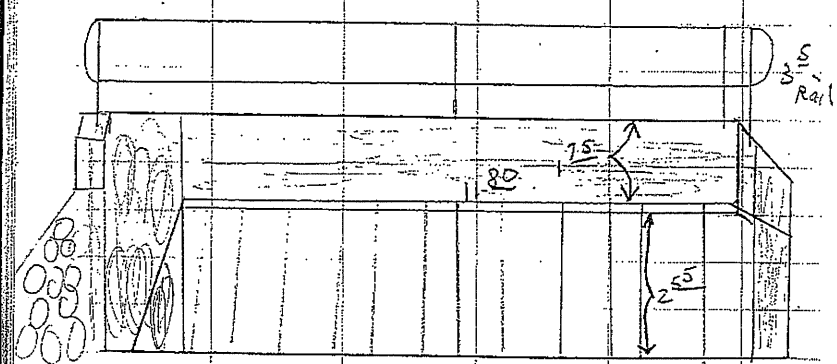
PT#	Cont	Desc	
1174	1172	DMH 9 Rim	5287.76
✓1175			
1176	1173	DMH 10 Rim	5289.38
✓1177			
1180	1178	DMH 11 Rim	5288.11
✓1181			
1182	1179	DMH 12 Rim	5286.45
✓1183			
1185	1184	DMH 13 Rim	5285.43
✓1186			
1190	1187	DMH 14 Rim	5285.11
✓1191			
1192	1188	DMH 15 Rim	5284.98
✓1193			
1194	1189	DMH 16 Rim	5284.77
✓1195			

28th Street

08061 Cont.
PT#
1196 -1232

Desc
Topo @ Inlet





Down Stream
-Conc Bridge
-w Trash Catch

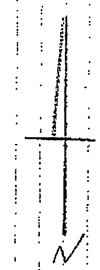
11.80 x 2.55
OPENING

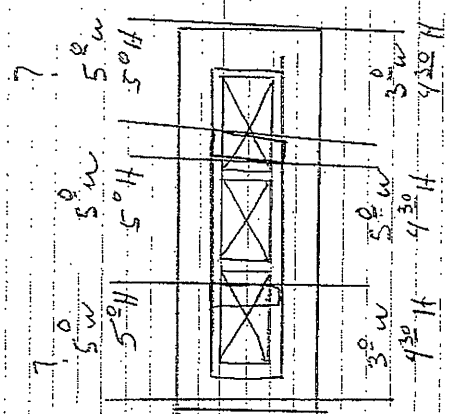
1233 MH Under Asphalt

BA

04-14-09

10/1060





3.30 x 1.90
Size Grate

2.90
To C to Opening

3.50 From To C to Top Opening

3.50
2.90

08061 Cont.

BA

04-15-09

11/1060

Base@ VRS

PT# Desc

1043 ✓1041 CP-MAG17

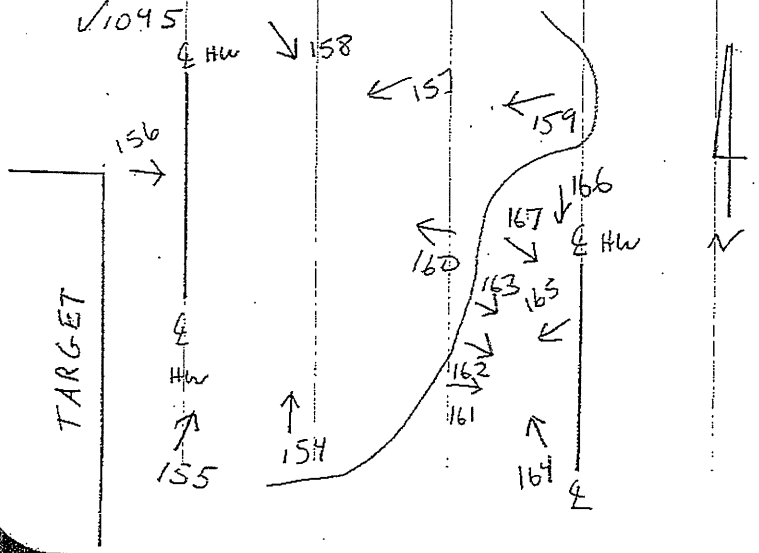
1234-1249 Topo @ Inlet East side 28th St

1252 1250 DMH17 Rim 5277.94
✓1253

1254 1251 DMH18 RIM 5277.89
✓1255

1044 CP-MAG18
✓1045

CP-MAG18- Set 1" Mag Nail on E. side Target 5° E. of EOC Cor of Back Exit

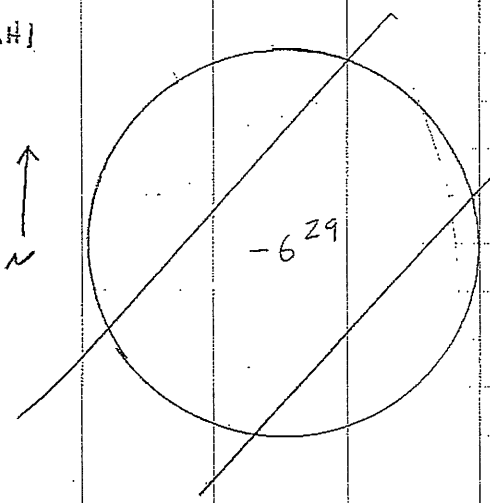


BA

04-24-09

08061 Cont

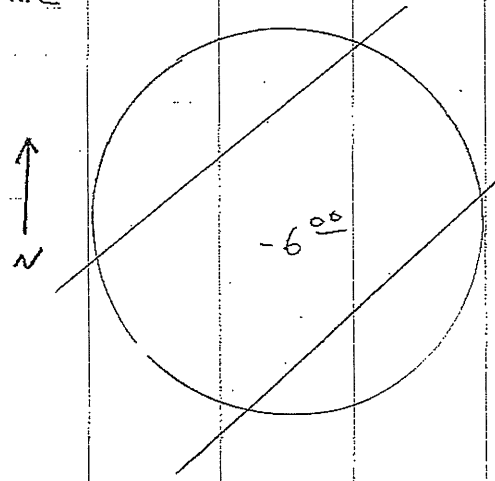
DMH1



Rim = 5291.20
INV = 5284.91

Box

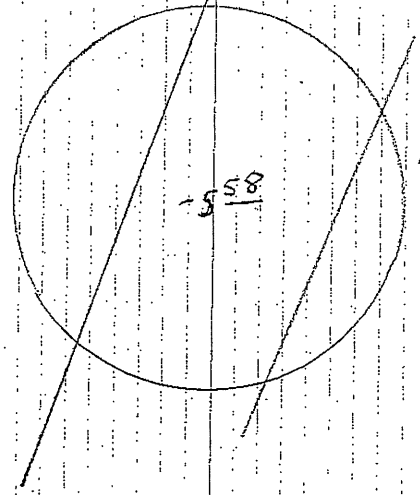
DMH2



Rim = 5290.84
INV = 5284.84

Box

DMH3



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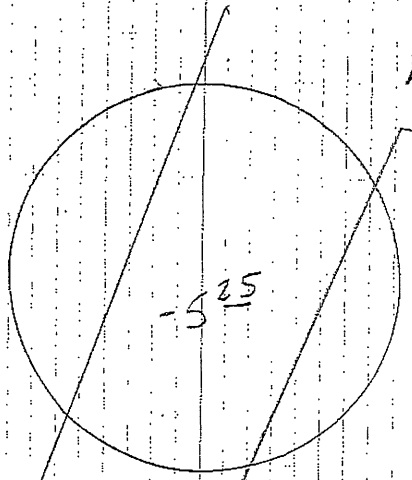
INV = 5283.36

Box

DMH4



Rim = 5288.66
INV = 5283.41

Box

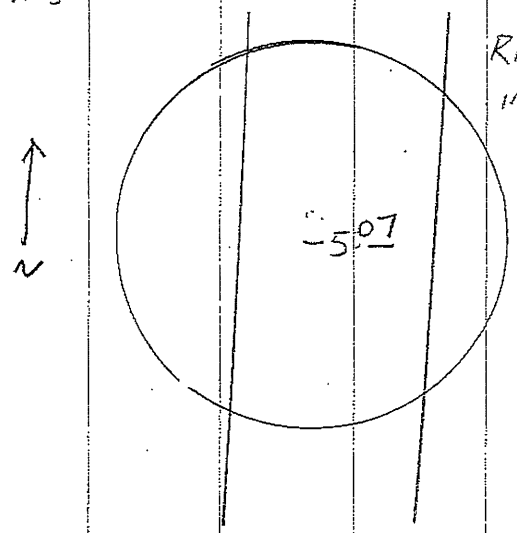
08061 Cont

BA

13/1060

04-24-09

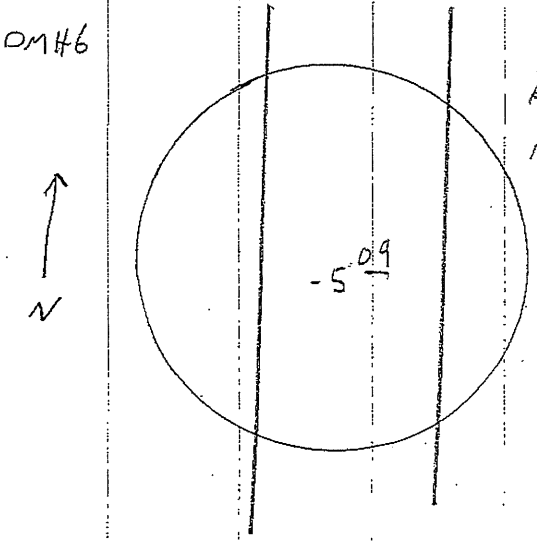
DMH5



Rim = 5287.69
INV = 5282.62

Box

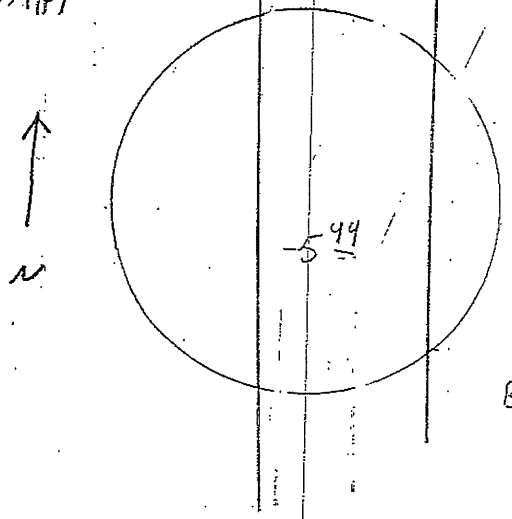
DMH6



Rim = 5287.84
INV = 5282.75

Box

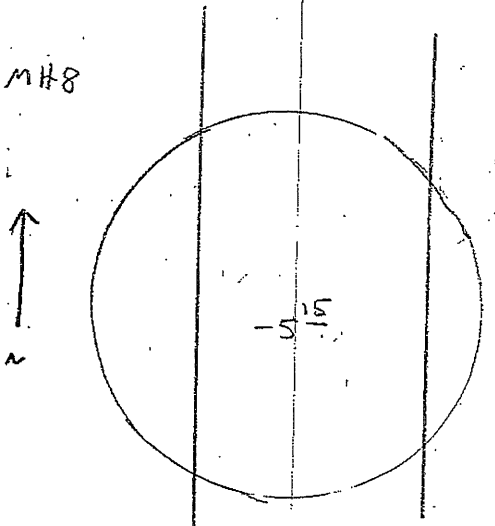
DMH7



Rim = 5286.76
INV = 5281.32

Box

DMH8



Rim = 5286.35
INV = 5281.20

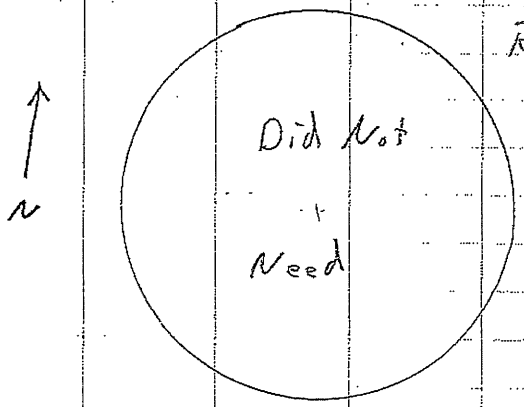
Box

03061 Cont

BA

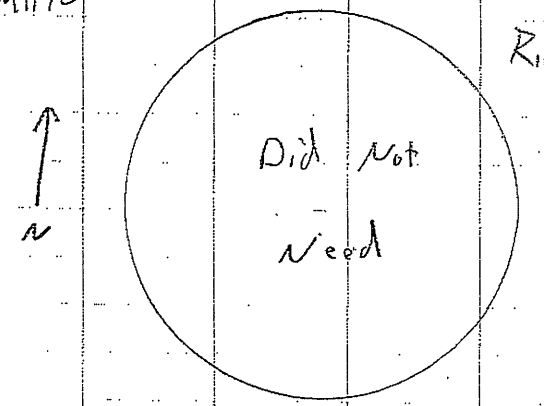
04-24-09

DMH 9



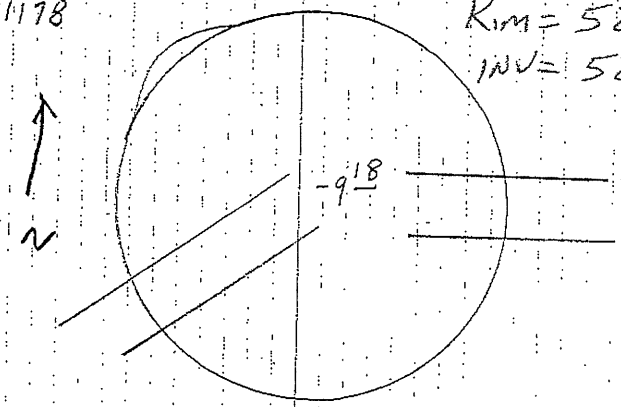
Rim 5287.76

DMH 10



Rim 5289.38

DMH 11
#1178



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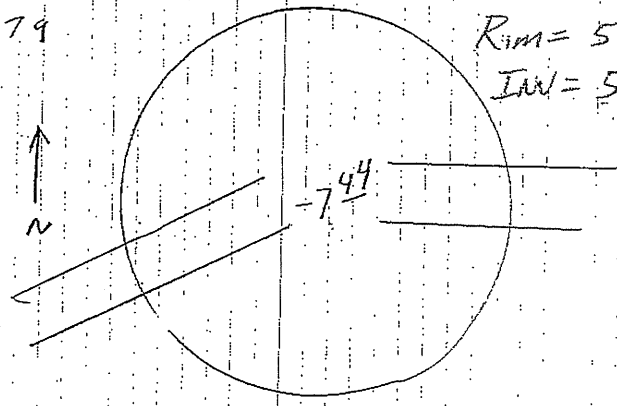
INV = 5278.93

DMH 12
#1179

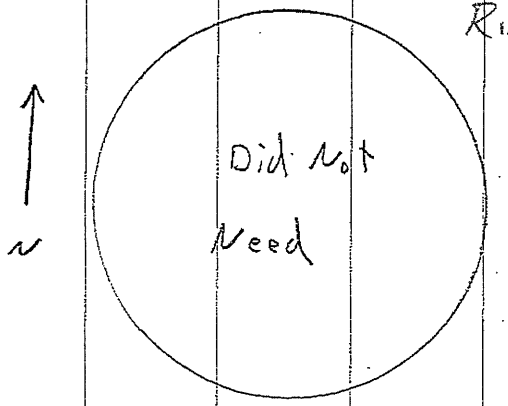


Rim = 5286.45
INV = 5279.01

08061 Cont

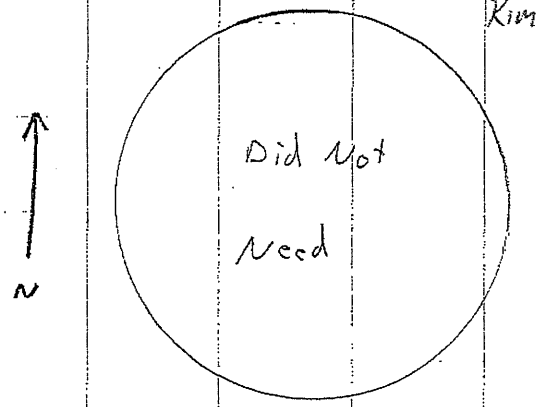
DMH 13

Rim = 5285.43



DMH 14

Rim = 5285.11



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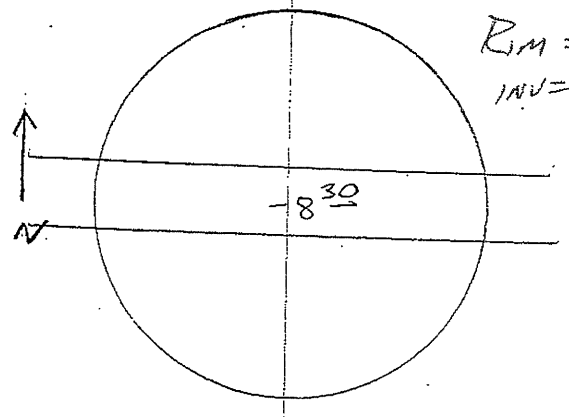
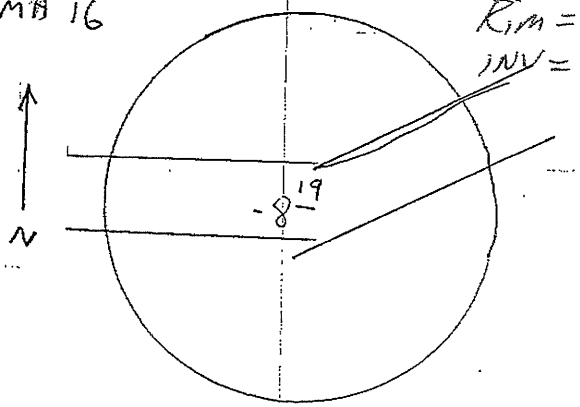
DMH 15

Rim = 5284.98
INV = 5276.68



DMH 16

Rim = 5284.77
INV = 5276.58

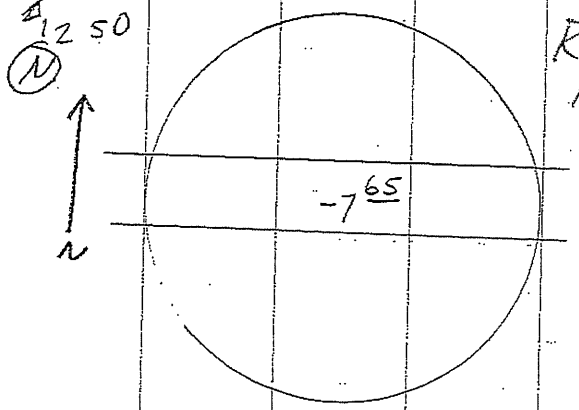


BA

07-29-09

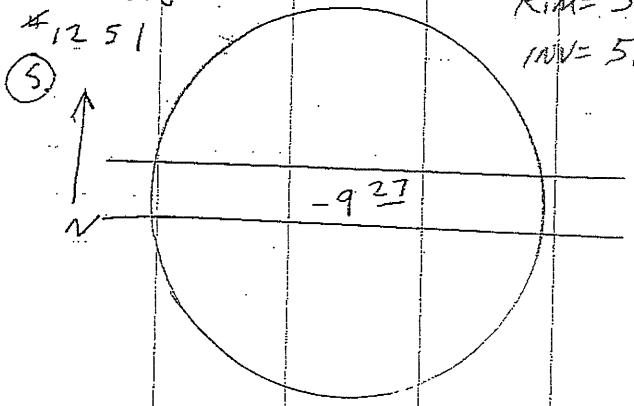
16/1060

DMH17
#12 50



RIM = 5277.94
INV = 5270.29

DMH18
#12 51



RIM = 5277.89
INV = 5268.62

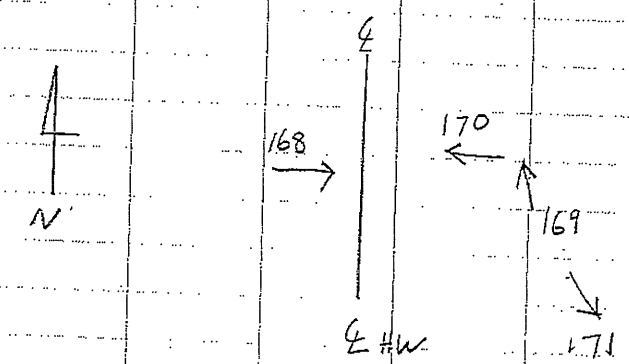
08061 Cont

PT#

Desc

1046 CP-MAG19

✓1047



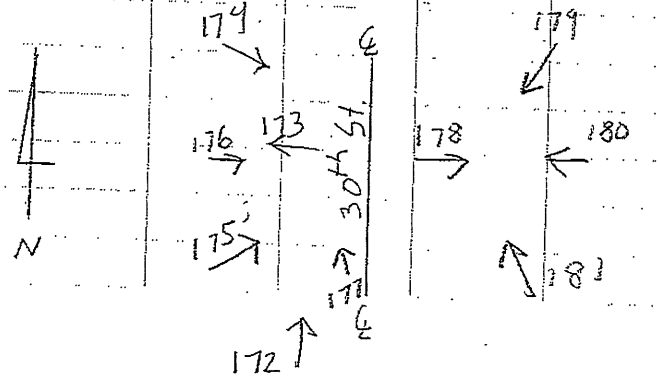
West of 30th

1048 CP-MAG20

✓1049

1050 CP-MAG21

✓1051



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04/15/09

17/1060

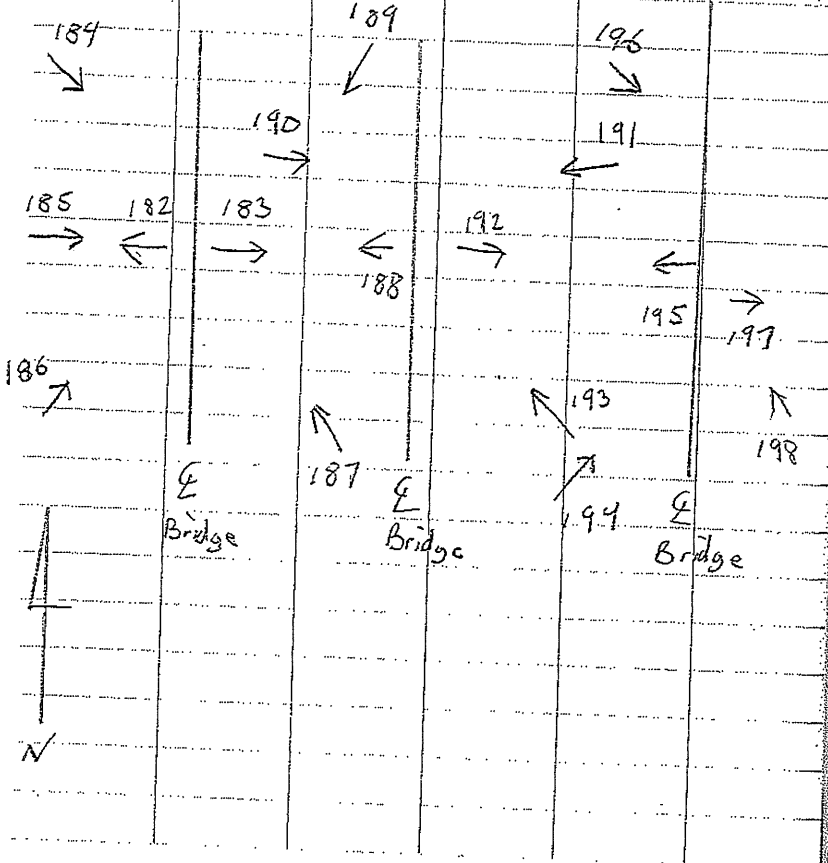
CP-MAG19- Set 1" Mag Nail In Asphalt, 1.5° E. of Nose of Median, 3° S. of C/G

CP-MAG20- Set 1" Mag Nail In Joint of Sw 25° S. of Ped Bridge

CP-MAG21- Set 1" Mag Nail In Joint of Sw 65° S. of Ped Bridge

08061 Cont

PT #	Desc
1052	CP: MAG22
✓1053	
1054	CP- MAG23
✓1055	



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04-15-09

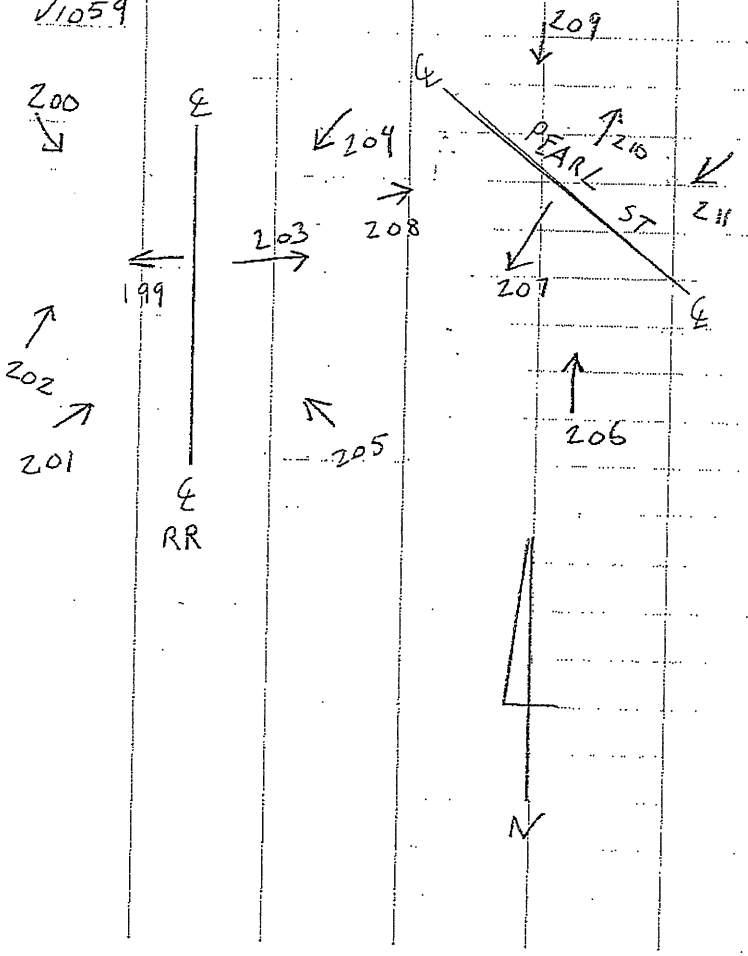
18/1060

CP-MAG22 - Set 1" Mag Nail In Asphalt 6' S. of EOA, In Between 2 Bridges

CP-MAG23 - Set 1" Mag Nail In Asphalt @ NE Cor. of Asphalt @ Dodge Dealer

08061 Cont

Pt #	Desc
1056	CP-MAG24
✓1057	
1058	CP-Nail4
✓1059	



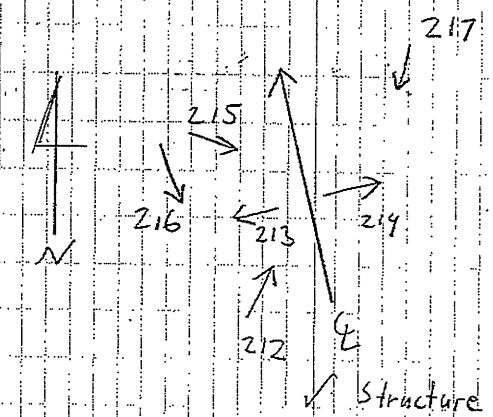
BA

04-15-09

19/1060

CP-MAG24 - Set 1" Mag Nail In Asphalt

CP-Nail4 - Set 60D Nail On RR Bed



✓ Structure NE of Pearl Bridge

Structure West of Frontier

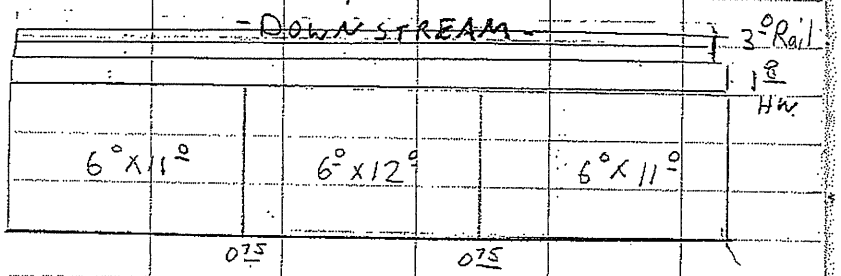
08061 Cont

Base@ VRS

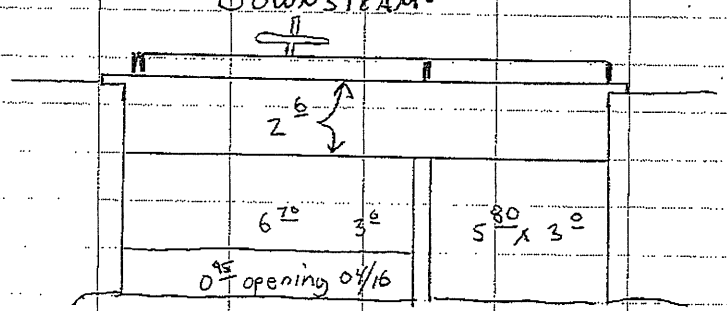
PT# Desc

1060 √1056 CP-MAG-24

1256-1286 Topo



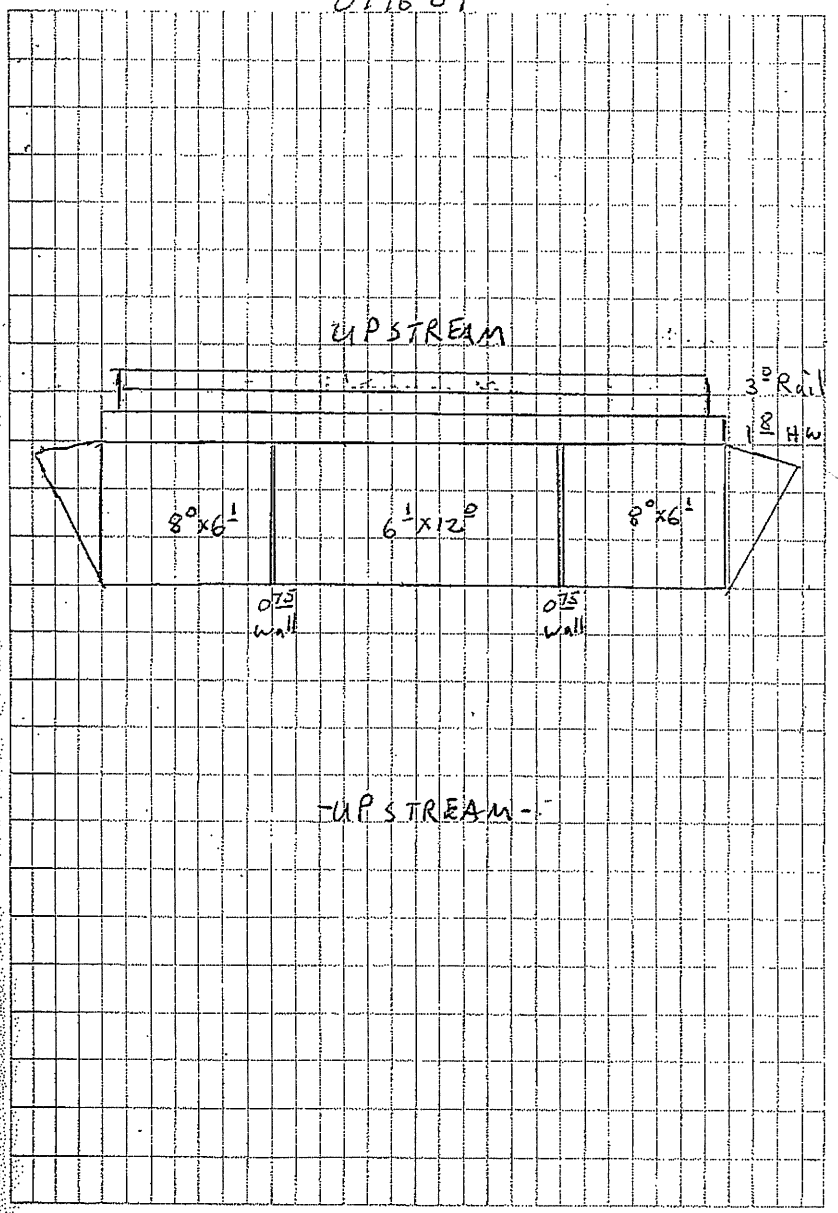
1287-1350 Topo Conc Structure W. of Frontier Ave



BA

04-16-09

20/1060



Frontier Ave

08061 Cont.

PT#

1351-1403

Desc

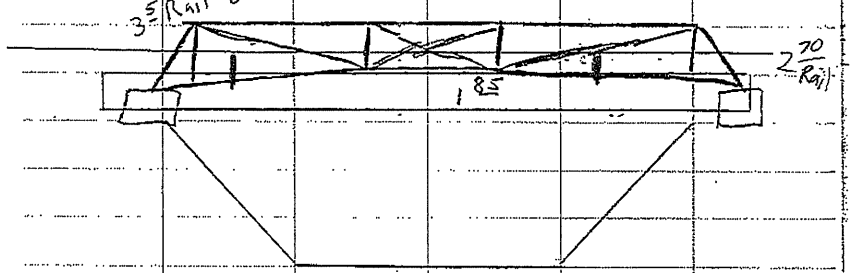
Topo Bridge @ Frontier Ave

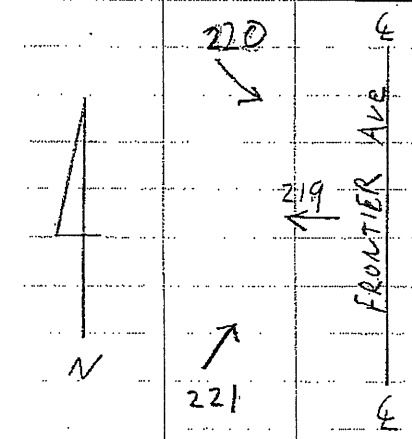
BA

04-16-09

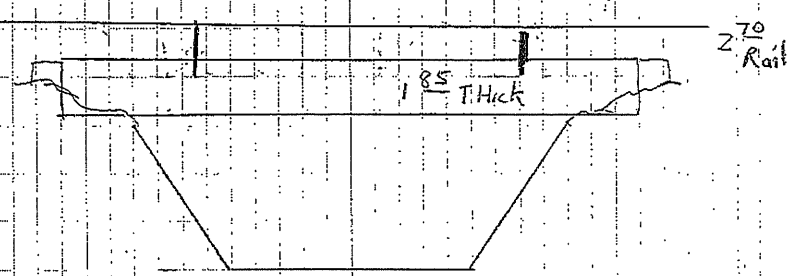
21/1060

-DOWN STREAM-





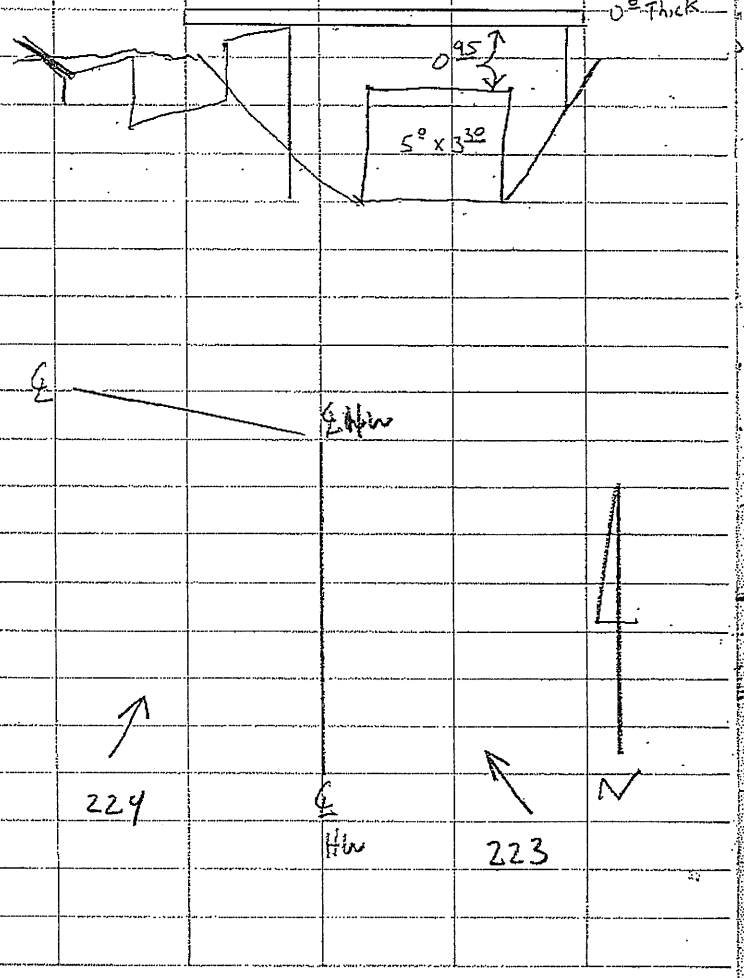
-UP STREAM-



Structure East of Frontier

08061 Cont
PT
1464-1459

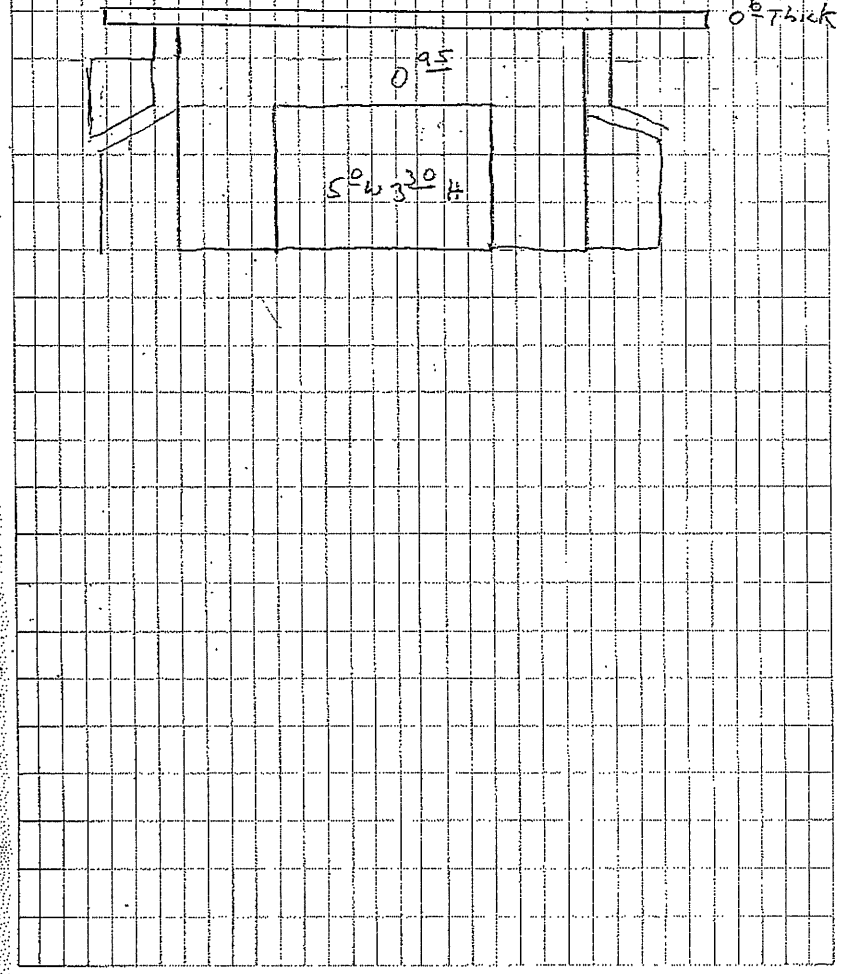
Desc
Topo Structure E Frontier Ave



BA

04-16-09

22/1060

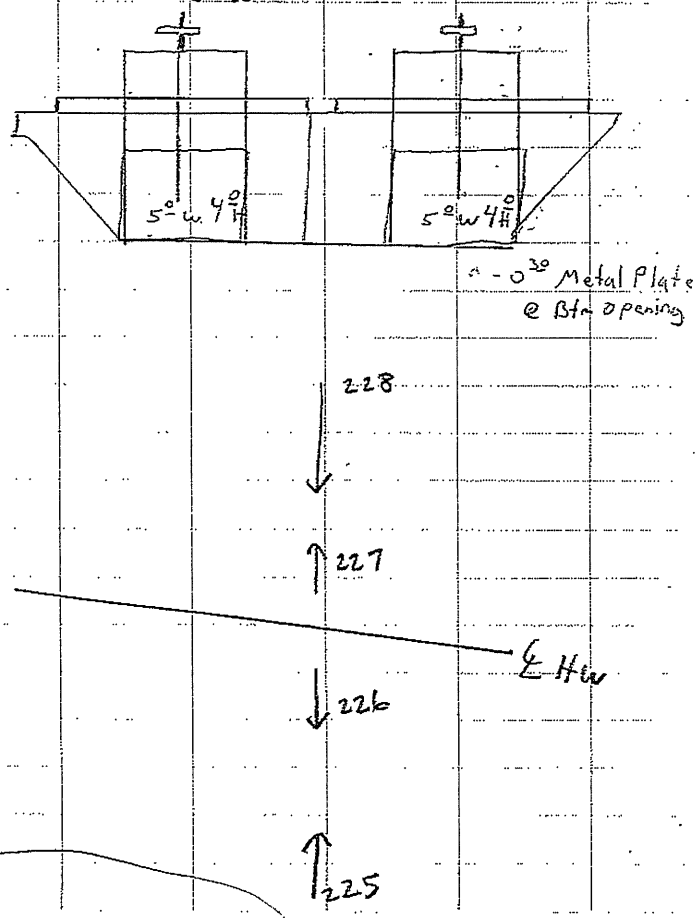


Cont

PT #

1460-1475 Topo X Sec

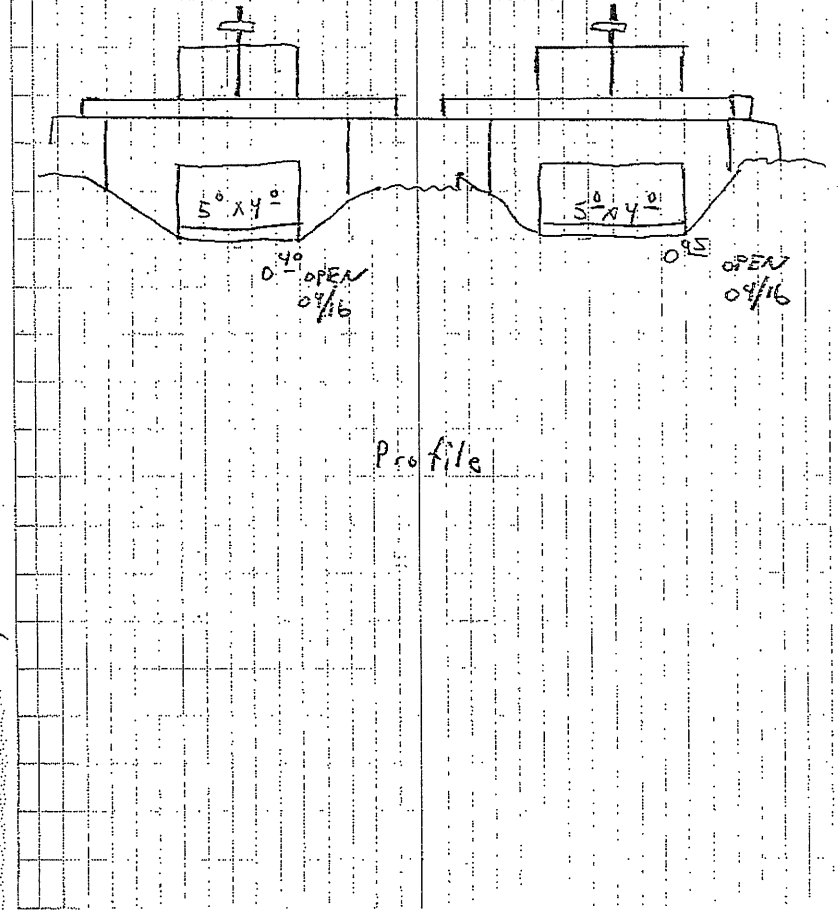
1476 - 1545 Topo Structure



BA

04-16-09

23/1060



08061 Cont

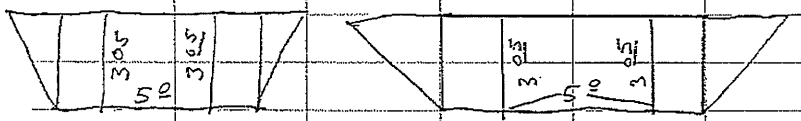
PT #

1546-1591

Desc

Topo Flumes

DOWNSTREAM



232

℄ Flume

230

231

℄ Flume

229

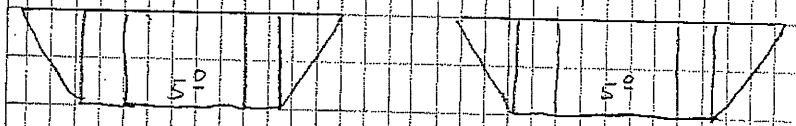
N

BA

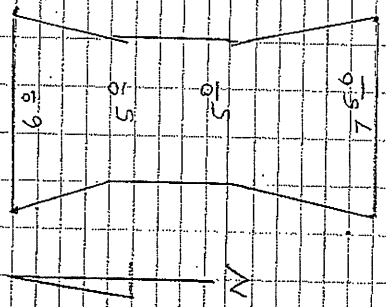
04-16-09

24/1060

UP STREAM



Profile -



N

08061 Cont
PT #
1592-1633

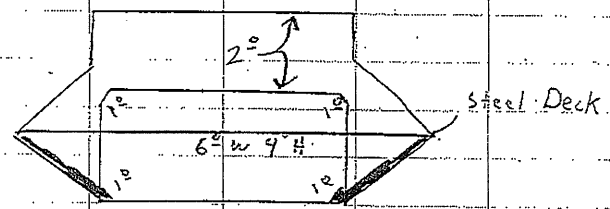
Deck
Top of Box Culverts

BA

09-16-09

25/1060

West
- DOWNSTREAM -



℄ HW

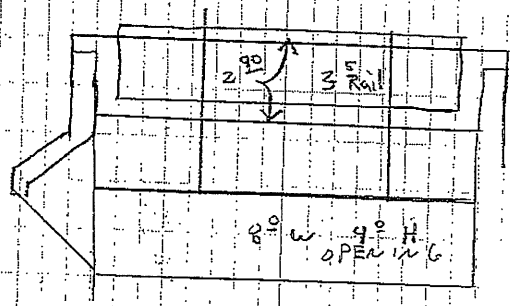
239

℄ HW

233

N

East
- DOWNSTREAM -



Profile

08061 Cont

- Setup 1 -

℄ @ #1058	CP- Nail 4	HI = 5.21
	N: 125 1312.973	Prism: 2.0
	E: 3076027.132	
	EL: 5259.31	
BS @ #1056	CP- MAG 24	HR = 5.04
	N: 125 1181.234	Prism:
	E: 3076159.450	
	EL: 5257.93	
HA = 134°52'28"	Dist	Rod
	GPS: 186 TT	Prism

PT #		Desc
1061	✓1056	CP- Mag 24
1634 - 1750		Topo @ RR & SW In of Pearl
1062	✓1056	

BA

26/1060

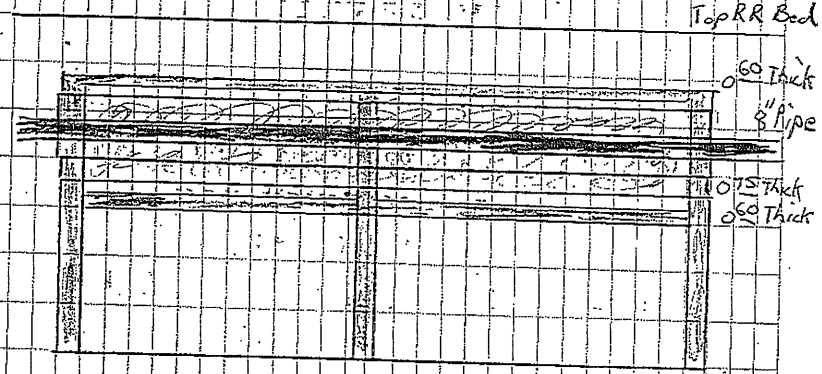
09-20-09

Started Job: Boulder

Key In Scale Factor: Did not apply

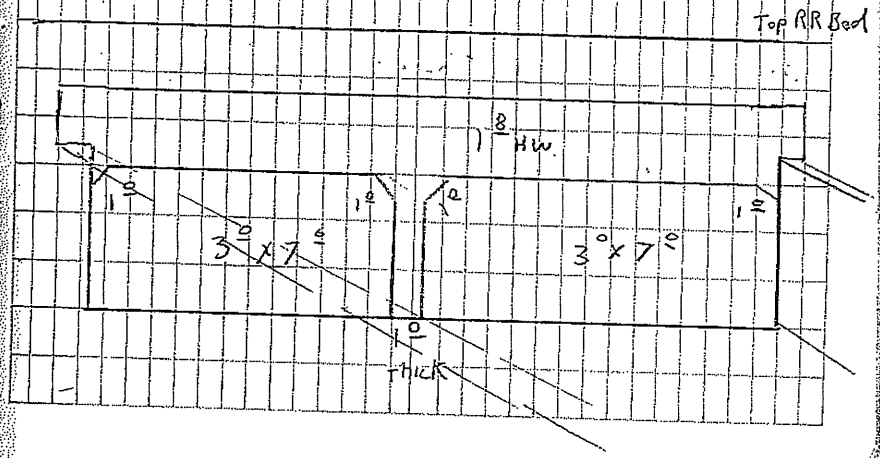
Used State Plan

- DOWN STREAM -



3 different openings $2\frac{75}{100}$ x 7' / $1\frac{80}{100}$ x 7' / $4\frac{90}{100}$ 7.10

- UP STREAM -



08061 Cont

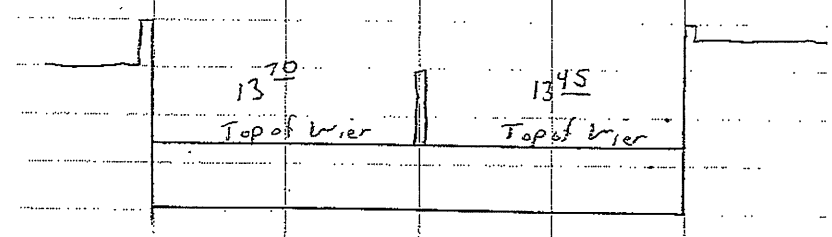
BA

04-20-08

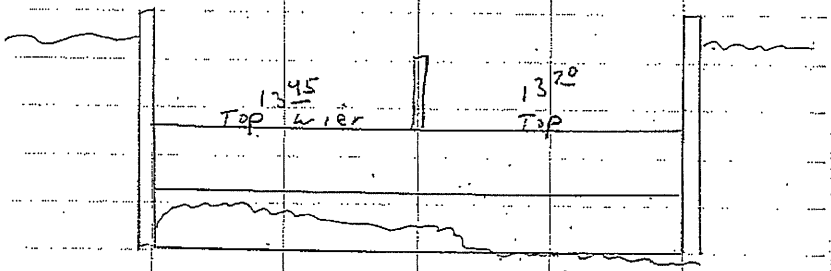
27/1060

west of Frontier of wier

- DOWNSTREAM -

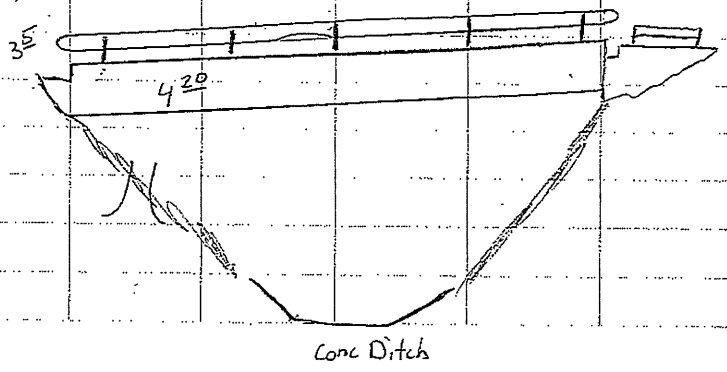


- Up Stream -



Western Bridge

- UPSTREAM -

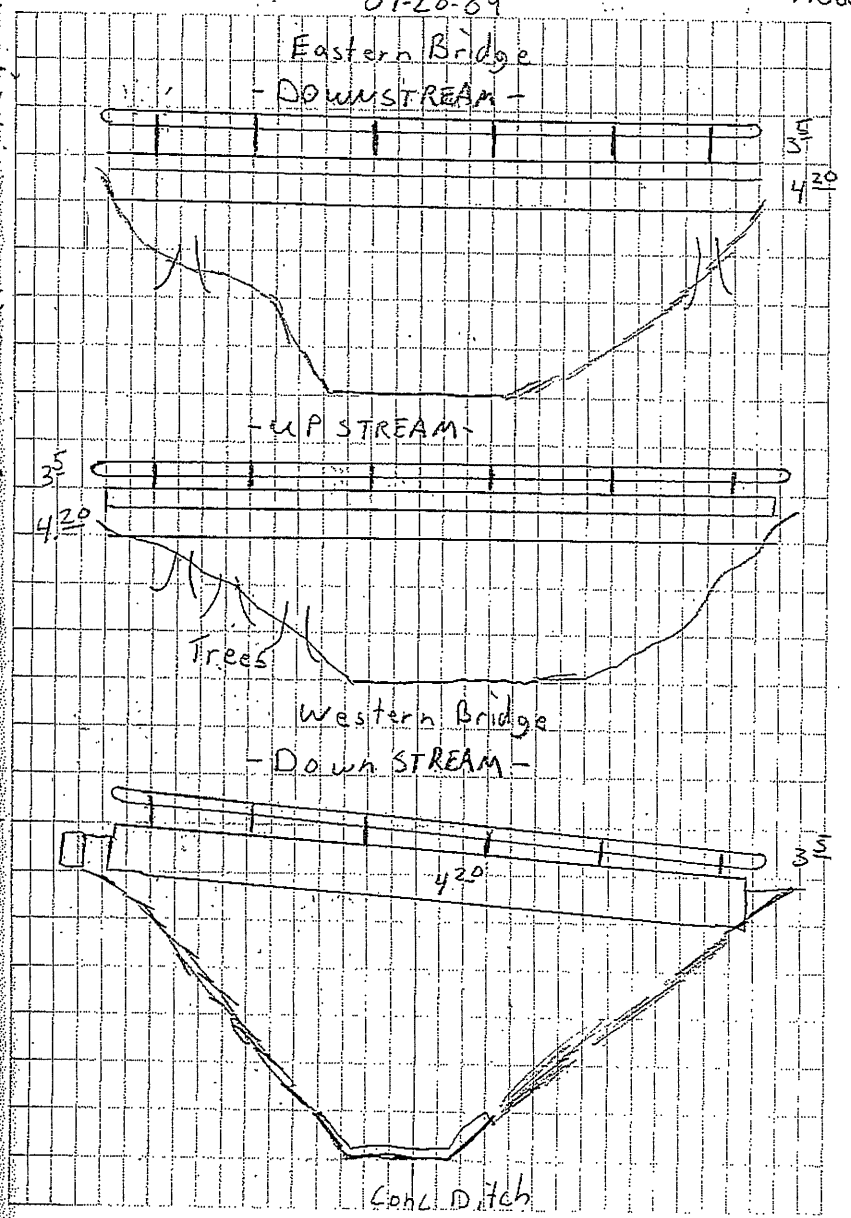


08061	Cont			
TG# 1052		CP: MAG22	HI - 5.23	
BS@# 1054		CP. MAG23	HR - 5.25	
	HA - 70-29-18	Dist - 191.34		
PT#		Desc		
1063	√1054	CP - MAG23		
1751 - 1818		Topo @ Bridges E. of 30th		
1822 - 1837		2. Bridges		
1064	√1054	CP - MAG23		
1065 - 1099		Topo @ East side of 30th Bridge		
1769, 1819 - 1821		Just East Face		
1838 -		Topo		
1839	√1054	CP. MAG23		
Base @		VRS		
PT#				
1840 - 1861		Topo Eastside of 30th Bridge		

BA

28/1060

09-20-09



08061 Cont

Base @ VRS

PT# Desc

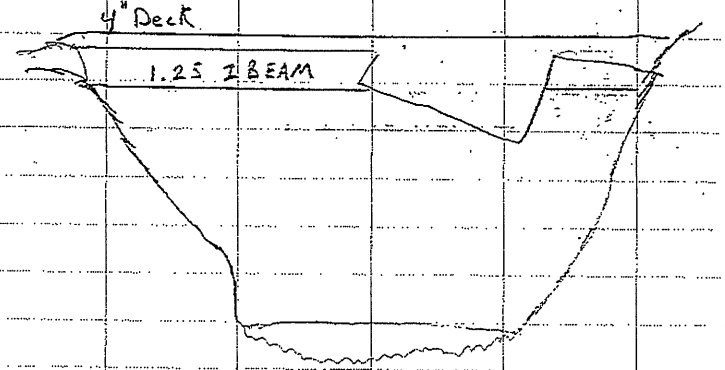
100 ✓1054 CP-MAG23

1900-1940 Topo Abandoned Bridge

4" Deck

1.25 I BEAM

-DOWNSTREAM-

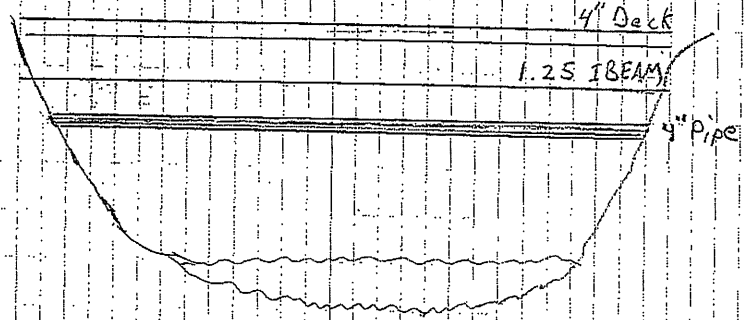


BA

04-21-09

29/1060

-UPSTREAM-



08061 Cont

Setup

π @ 1050 CP- MAG21 HI- 5^{33}

Bs @ 1044 CP- MAG18 HR- 5^{09}

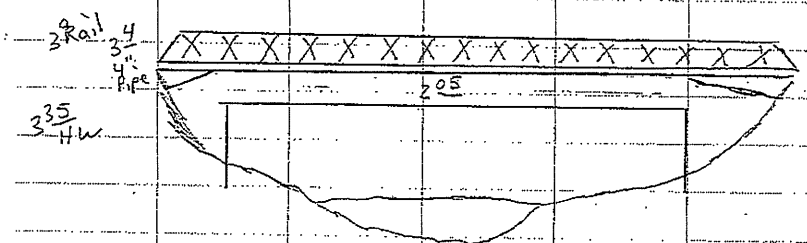
Az-261-01-39 DIST-437.25

PT#		Desc
101	✓1044	CP- MAG18
102	✓1048	CP-MAG20

1941-1992 Topo West side 30th Bridge

103	✓1048	CP-MAG18
104		Disregard
105		CP-WP1
✓106		

- DOWN STREAM -



BA

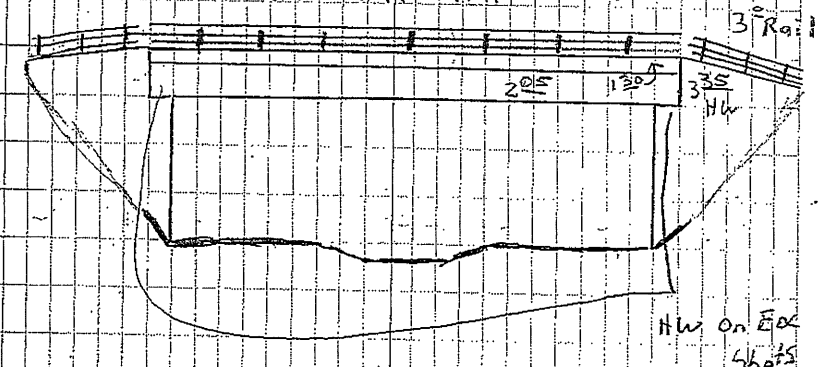
04-21-09

30/1060

1050 N: 1250925.606
E: 3068955.473
EL: 5270.151

1044 N: 1250857.435
E: 3068523.713
EL: 5274.89

- UP STREAM -



08061 Cont

- Set up -

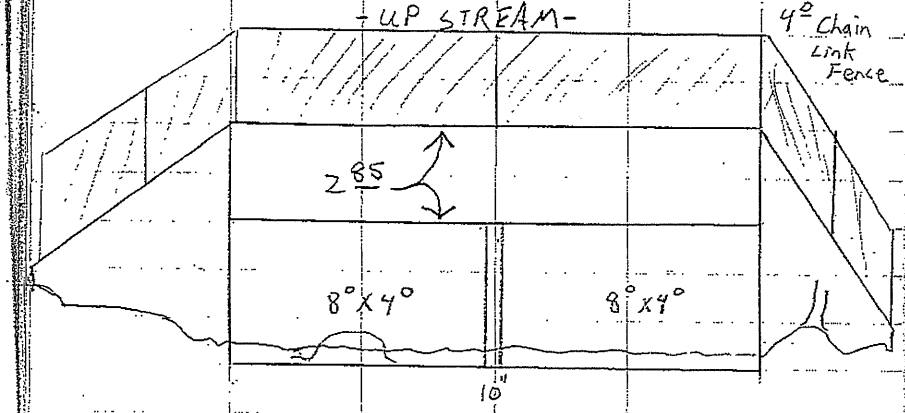
TC # 1046 CP - MAG19 HI - 5.19

BSC # 1044 CP - MAG18 HR - 5.09

Az. 218-46-40 DIST.

PT #		Desc
107	✓1044	CP - MAG18
1993 - 2068	Topo @ Box Culvert & RCP West of 30th St.	
108	✓1044	CP - MAG18

Box Culvert



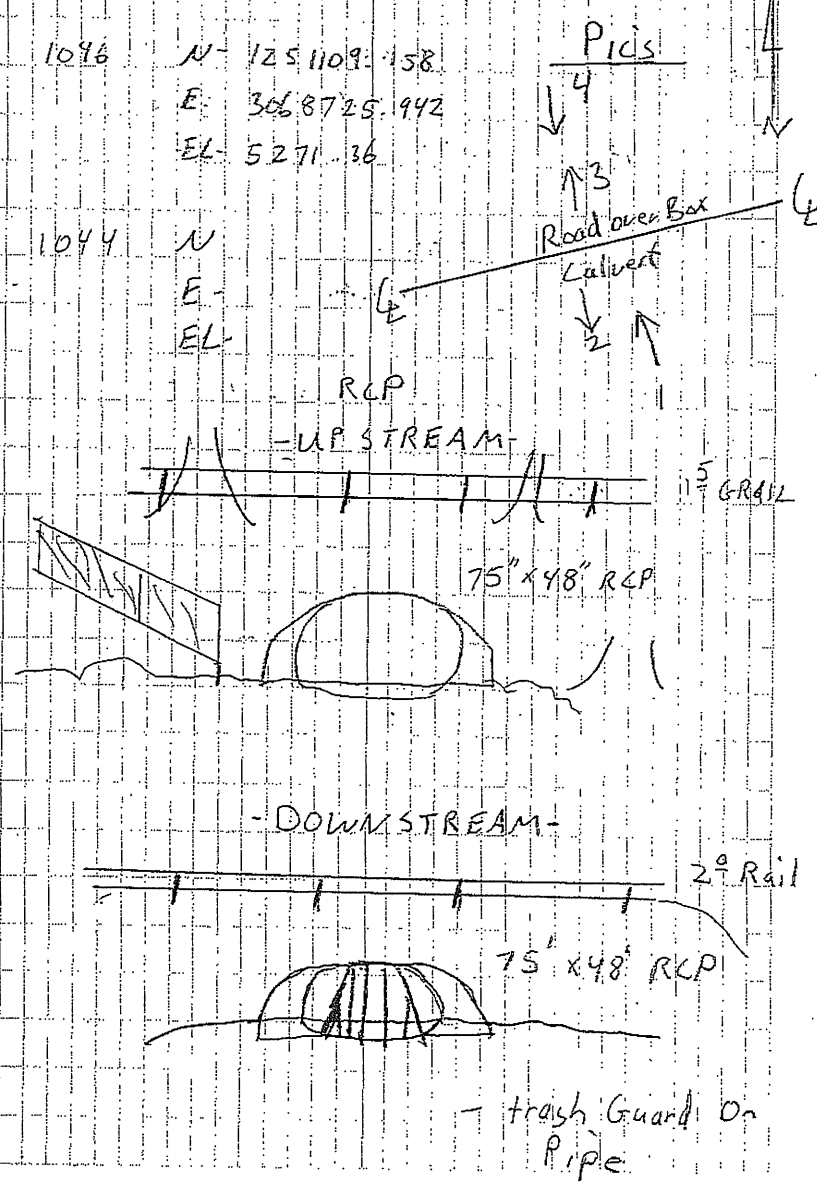
BA

04-21-09

31/1060

1046	N	125 1109.158
	E	306725.942
	EL	5271.36
1044	N	
	E	
	EL	

Pics 4



BA

04-27-09

08061	Cont		
TC@ # 1044		CP-MAG-18	HT- 5.09
BS@ # 1050		CP-MAG21	HR- 5.05
	Az= 81-09-39	DIST - 4837.25	
PT #		Desc	
109	✓1050	CP-MAG-21	
2069-2086		Topo Box Culvert	
110	✓1050		
111		CP-WPZ	CP-WPZ - Set 60D Nail
✓112			
113		CP-KELLEY	CP-KELLEY - FND YPC & SRB Kelly Survey Control Point
✓114			
2087-2088		Topo Points @ RCP	

08061 Cont

- Setup 2 -

TA @ # 111	CP-wp2		HI - 4.88
BS @ # 1044	CP-MAG18		HR - 4.80
Az - 162-03-52	Dist - 174.19		

PT #		Desc
115	✓1044	CP-MAG18
2089-2119		Top Box Culvert
116	✓1044	CP-MAG18

- Setup 3 -

TA @ # 113	CP-KELLY		HI - 5.41
BS @ # 1044	CP-MAG18		HR - 4.80
Az - 161-13-52	Dist - 275.86		

PT #		Desc
117	✓1044	CP-MAG18
2120-2199		Topo Culverts @ NE Cor Target
118	✓1044	
119	✓111	

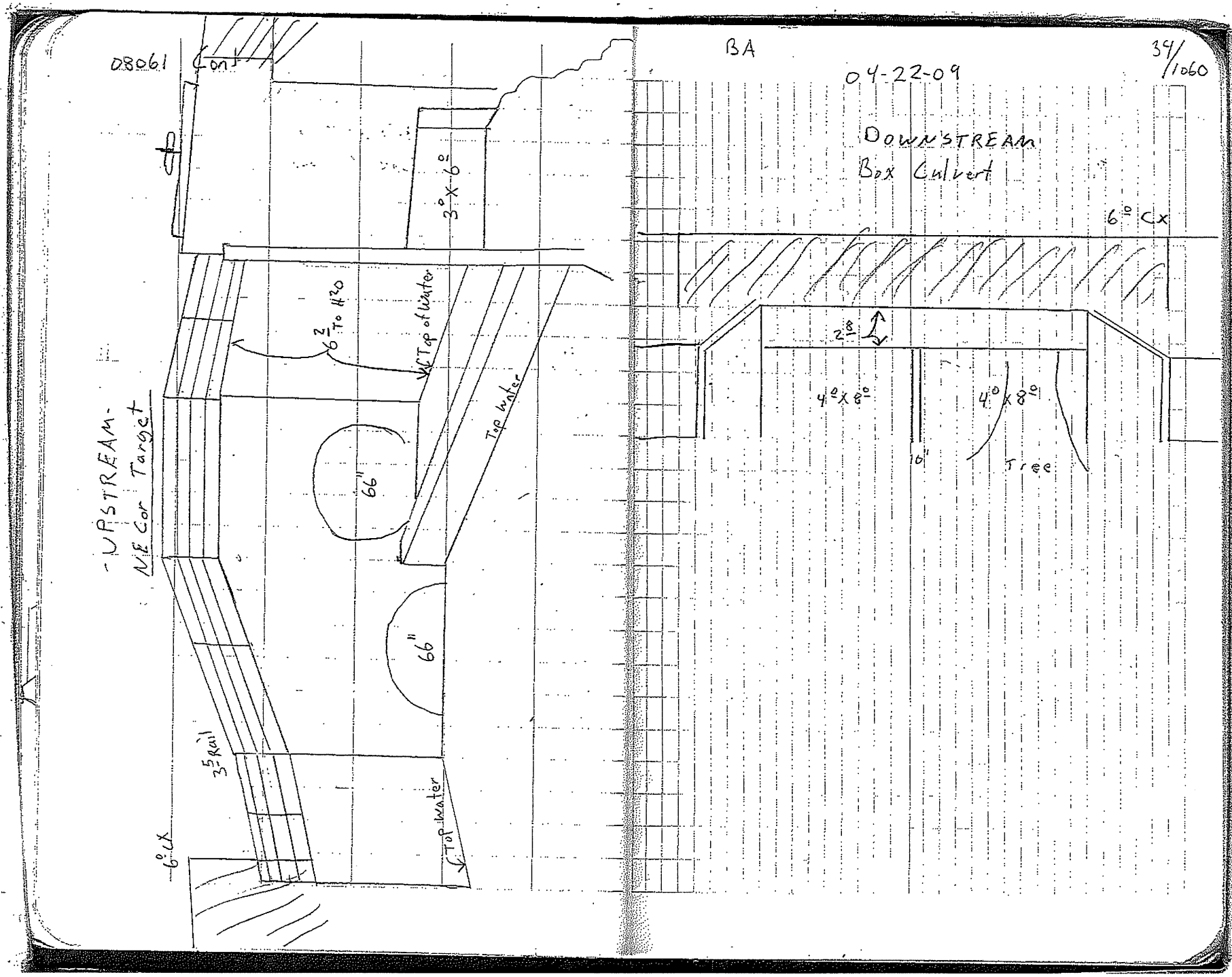
BA

04-22-09

33/1060

2.8

8½ x 11


08061 Cont
BA
04-22-09
34/1060
DOWNSTREAM
Box Culvert
6° CX
2.8
4° x 8°
4° x 8°
10'
Tree
3° x 6°
6 2 To H2O
Top of Water
Top Water
66"
66"
3.5 Rail
Top Water
6° CX
UPSTREAM
NE Cor Target

08061 Cont

- Setup 4 -

TP # 1039	CP - MAG16	HI - 5 16	
BS @ # 1041	CP - MAG17	HR - 4 66	
AZ - 94-12-40	Dist 257 06		

PT #		Desc
120	✓1041	CP - MAG17
121 - 154		Topo Bridge W of 26th St.
2250 - 2306		
155	✓1041	CP - MAG17

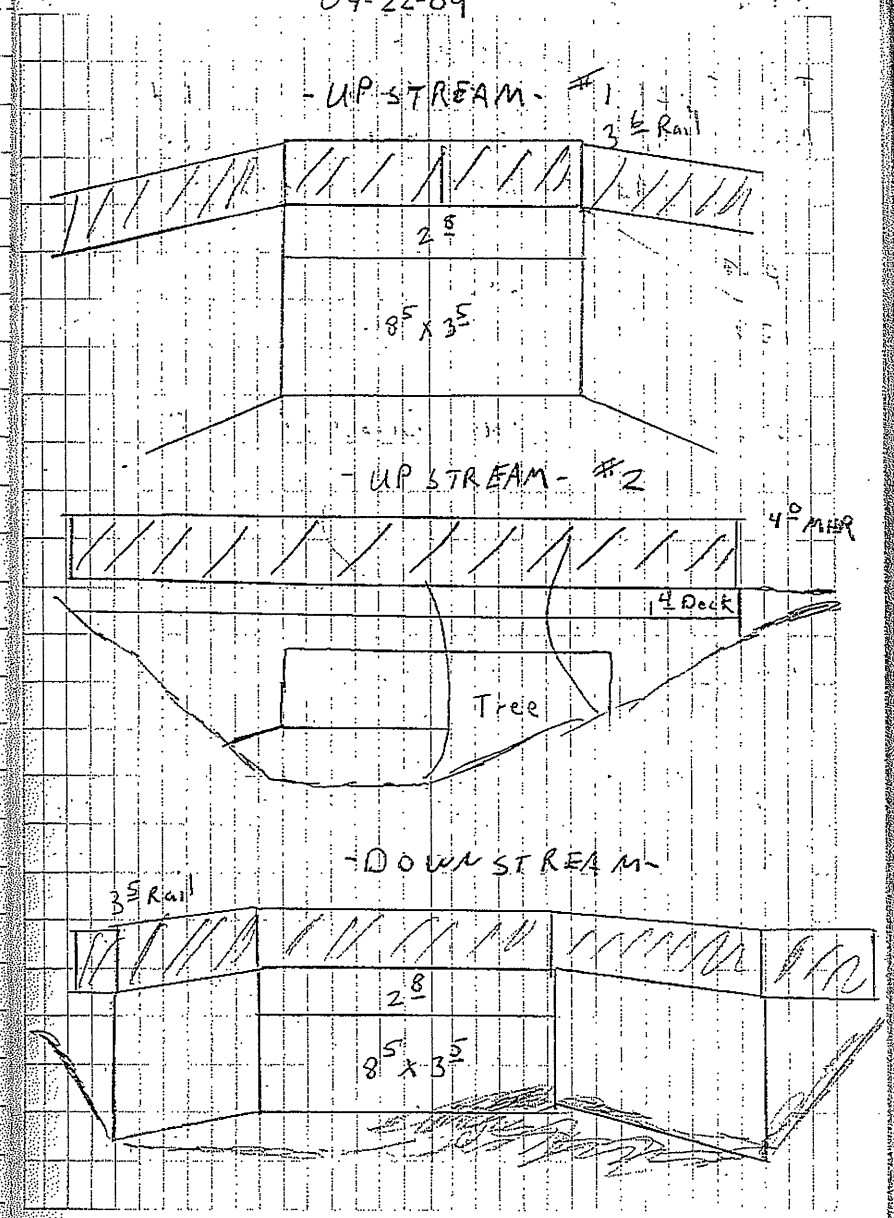
TP # 1039	CP - MAG16	HR 4 90	
BS @ # 1041	CP - MAG17	HR - 4 70	
AZ - 94-12-40			

PT #	Desc
2307 - 2311	Topo
156 ✓1041	CP - MAG17

BA

04-22-09

35/1060



08061 Cont

-Setup 5-

$\overline{\Pi}$ @ #1029 CP- MAG12 HI- 5.20

BS @ 1031 CP- MAG13 HR- 4.78

Az- 5-52-39 Dist- 103.05

PT#		Desc
157	✓1031	CP-MAG13

2312- 2473 Topo Bridge @ 23RD ST.

158 ✓1031

159 CP-WP3 Set Nail

✓160

-Setup 6-

$\overline{\Pi}$ @ #159 CP-WP3 HI- 5.18

BS @ #1029 CP- MAG12 HR- 4.85

Az- 257-28-57 Dist.

PT#		Desc
161	✓1029	CP- MAG12

2474- 2494 Topo Eastern Ped Bridge

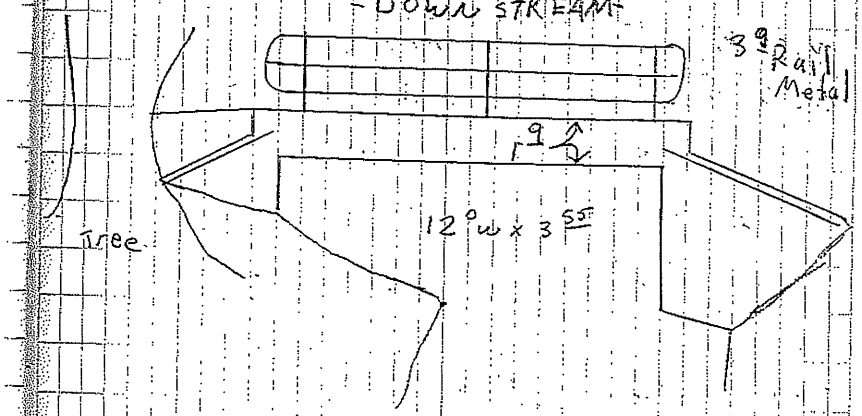
162 ✓1029 CP- MAG12

BA

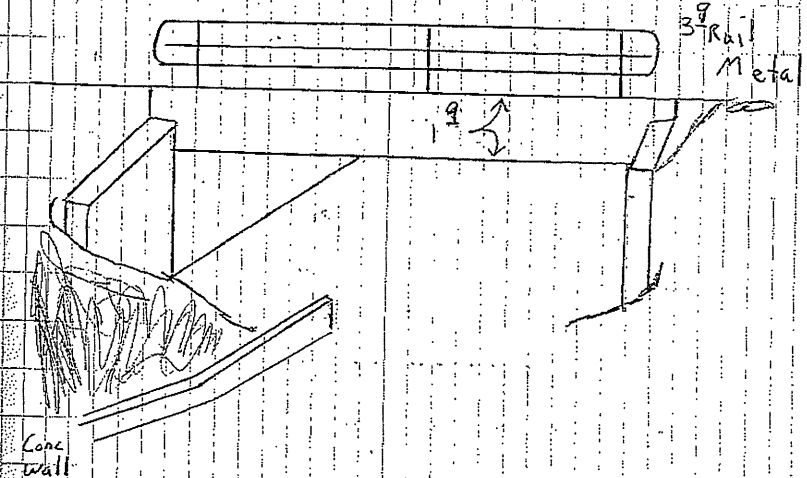
36/1060

04-22-09

- DOWN STREAM -



- UP STREAM -



08061 Cont

- Setup 1 -

AC @ #1031 CP - MAG13 HI - 5.12

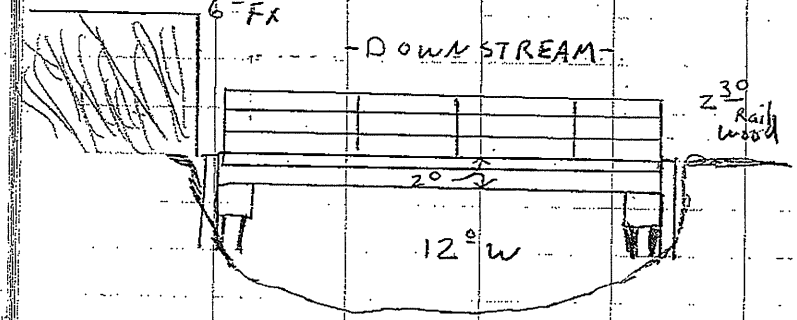
BS @ #1029 CP - MAG12 HR - 4.85

Az - 185-52-39 Dist - -

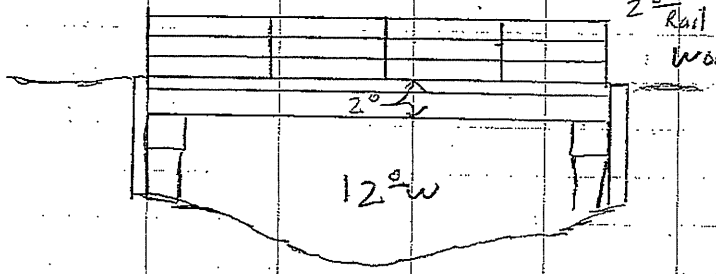
PT #		Desc
163	/1029	CP MAG12
2495 - 2496		Topo

6° Fx

- DOWNSTREAM -



- UPSTREAM -



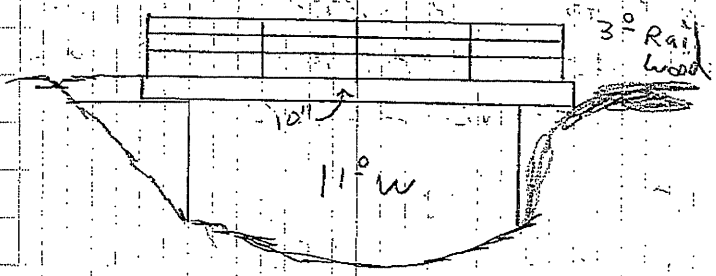
Bridge East of 23RD St

BA

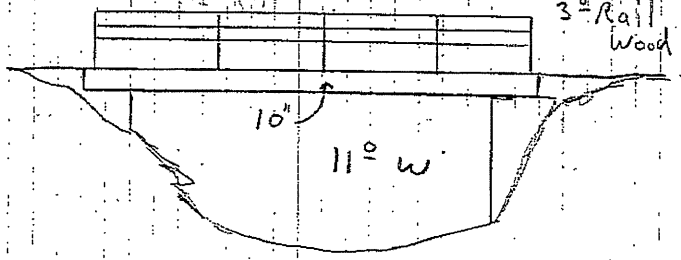
37/1060

04-22-09

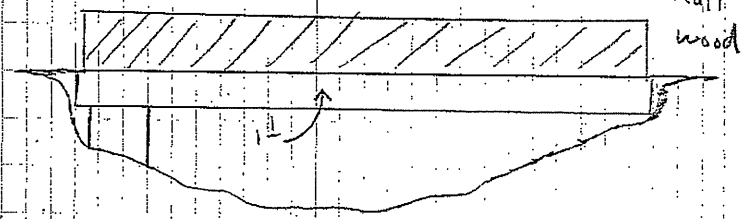
DOWNSTREAM 1st Ped



- DOWNSTREAM - 2nd Ped



Ped W. of 23RD - DOWNSTREAM -



Folsom

08061 Cont

Setup 1

T @ 1037 CP-MAG15 HI-5.00

Bs @ 1035 CP-MAG14 HR-4.71

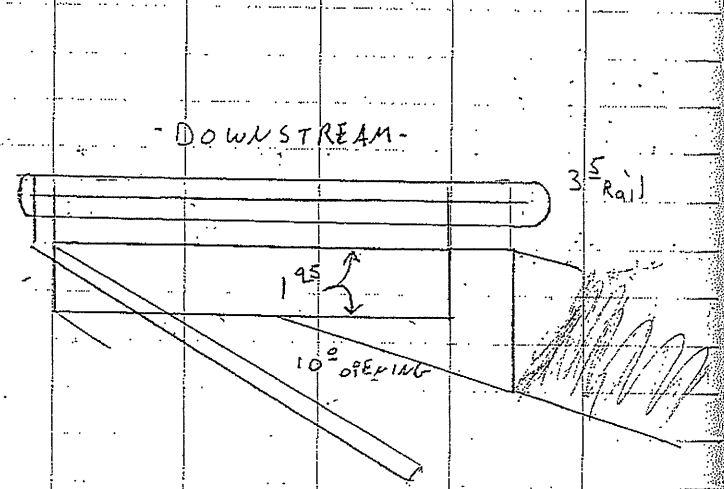
Az-357-05-24 Dist-128.93

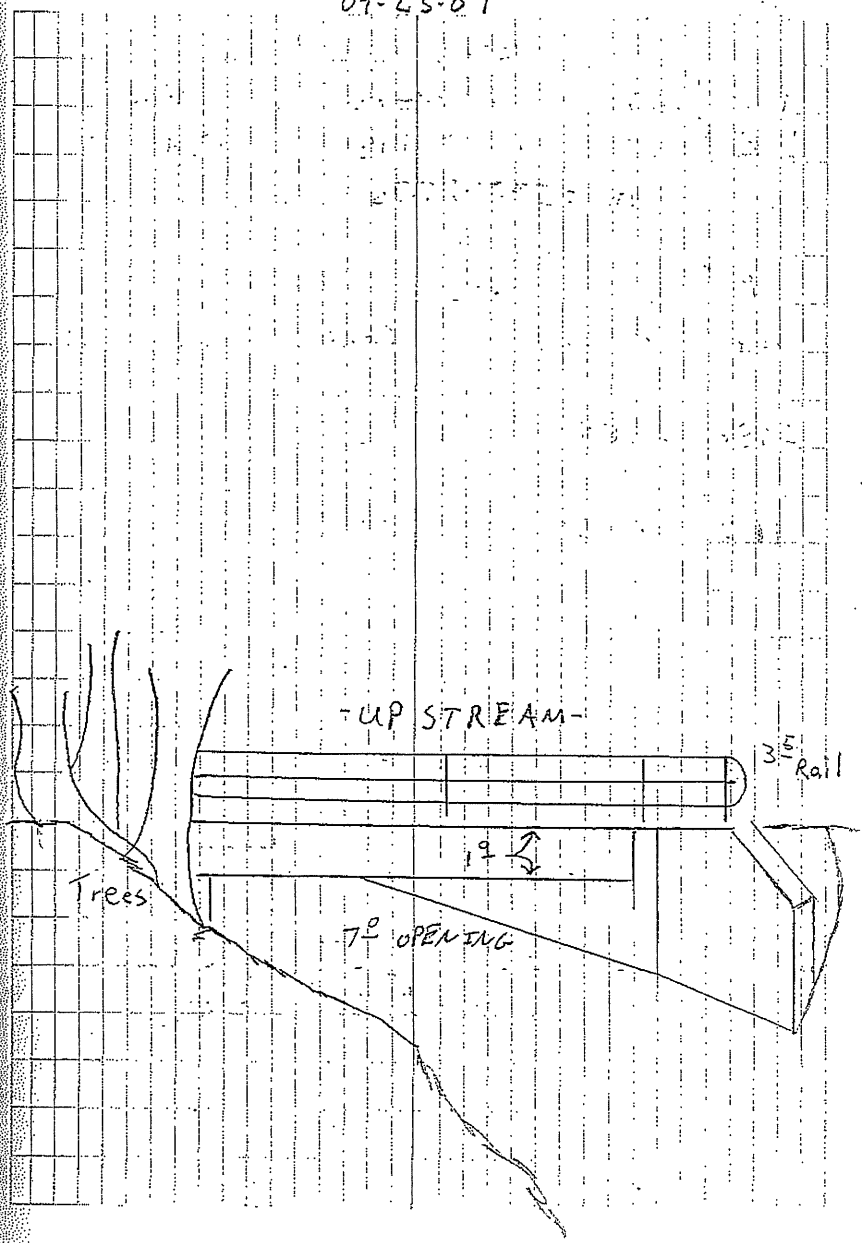
PT		Desc
164	✓1035	CP-MAG14
2497-2585		Topo @ 24K st
165	✓1035	CP-MAG14

BA

04-23-09

38/1060



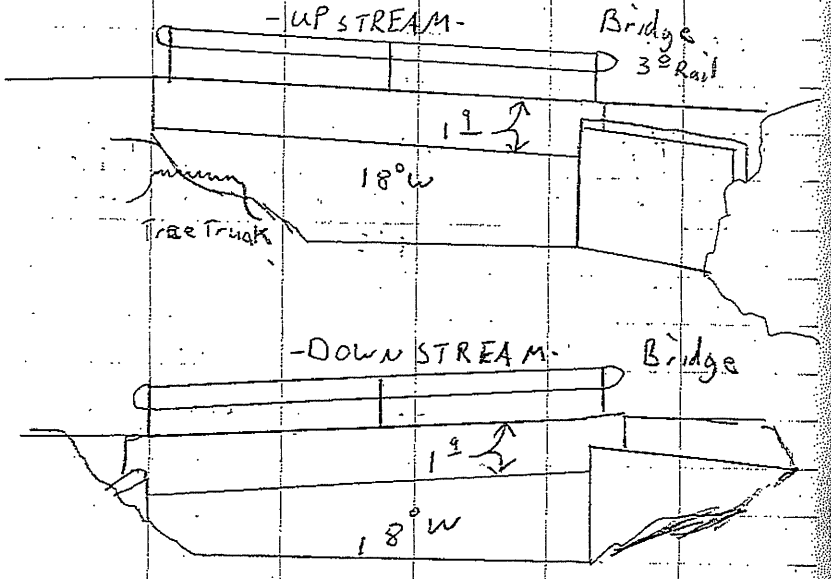


08061 Cont

- Setup 2 -

T @ ∠	1033	CP-Nail 3	HT: 5.00
Bs @ ∠	1035	CP-MAG14	HR: 4.71
	Az - 272-55-33	Dist - 347.18	

PT ∠		Desc
166	√1035	CP-MAG14
2586-2708		Topo @ E. of 24th St.
167	√1035	CP-MAG14

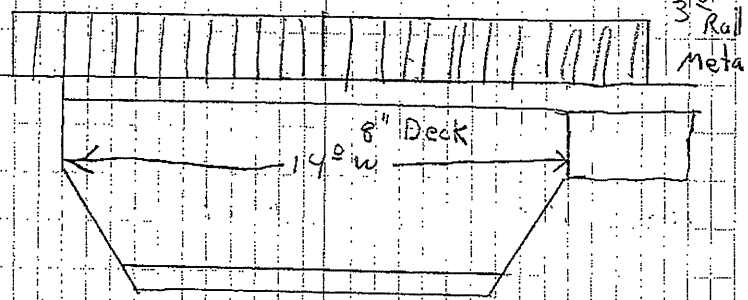


BA

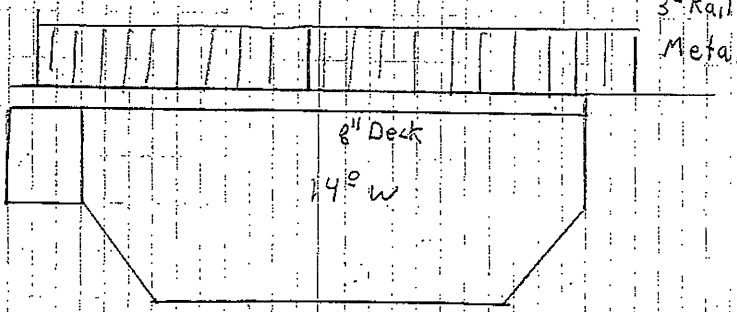
39/1060

04-23-09

-UPSTREAM- Ped Bridge



-DOWNSTREAM-



08061 Cont

Base @ VRS

PT / Desc

168 ✓1056 CP-

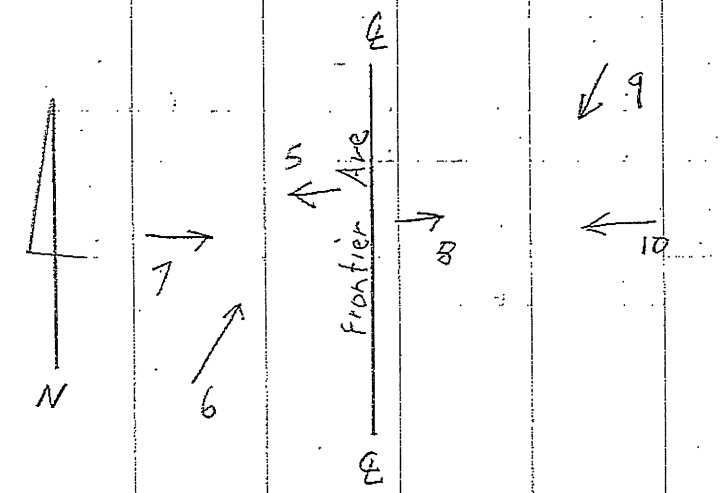
2709-2779 Topo @ Frontier Ave

169 - CP-wP4 Set 60D

✓170

171 CP-wP5 Set 60D

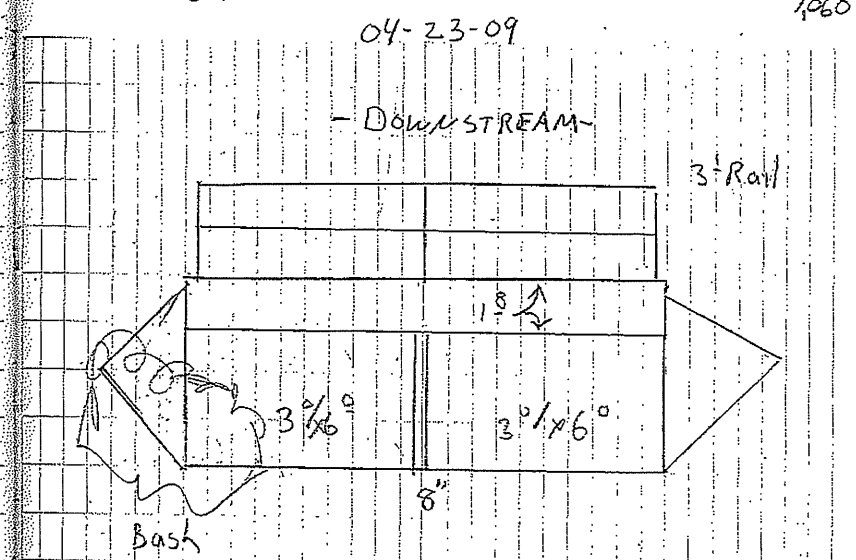
✓172

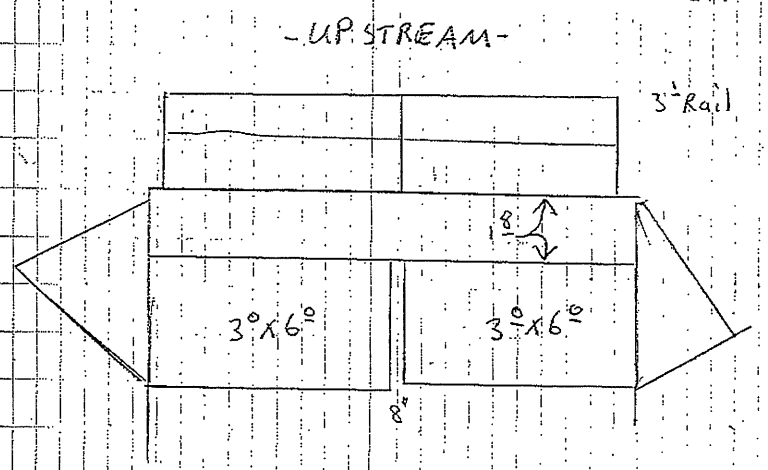


BA

40/060

04-23-09





08061 Cont

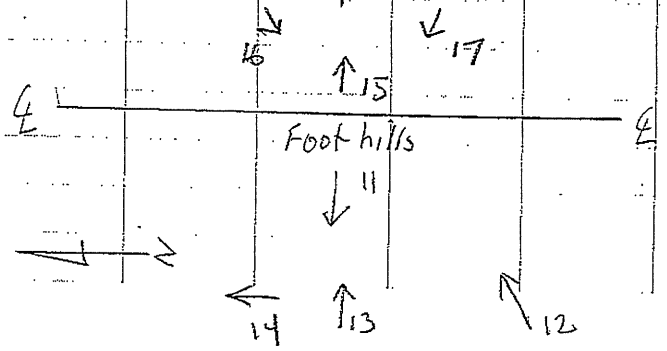
- Setup 3 -

T @ 171 CP-wP5 HI - 4.85

Bs @ 169 CP-wP4 HR - 4.60

Az - 268-52-01 Dist - 361.34

PT		Desc
173	✓ 169	CP-wP4
2780 - 2832		Topo OFF Ram Box Culvert
174	✓ 169	CP-wP4
Base @		VRS
PT		Desc
174	✓ 171	✓ Good H Bad V
		* Use EL for 171
2833 - 2866		Topo E. side of Foot Hills



BA

04-23-09

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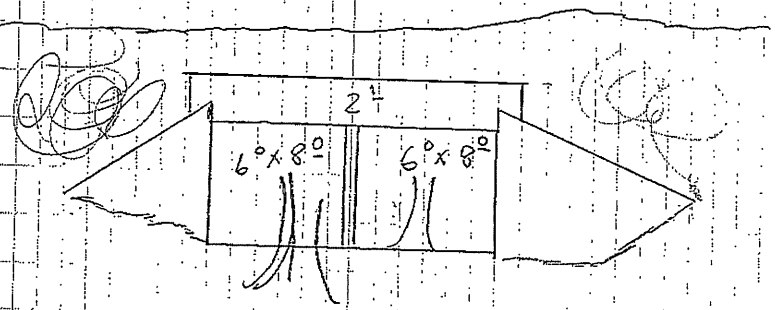
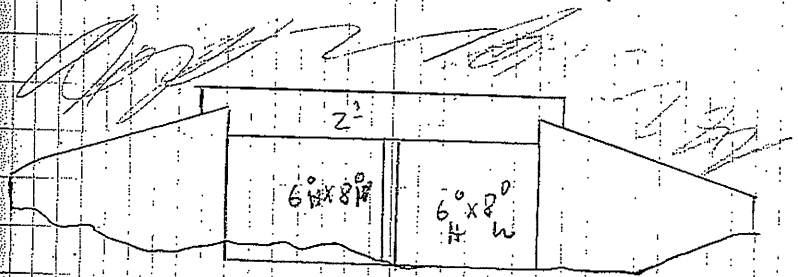
* ✓ Not Good (✓) Need to Shot for Better (EL)

- DOWNSTREAM -



- UP STREAM -

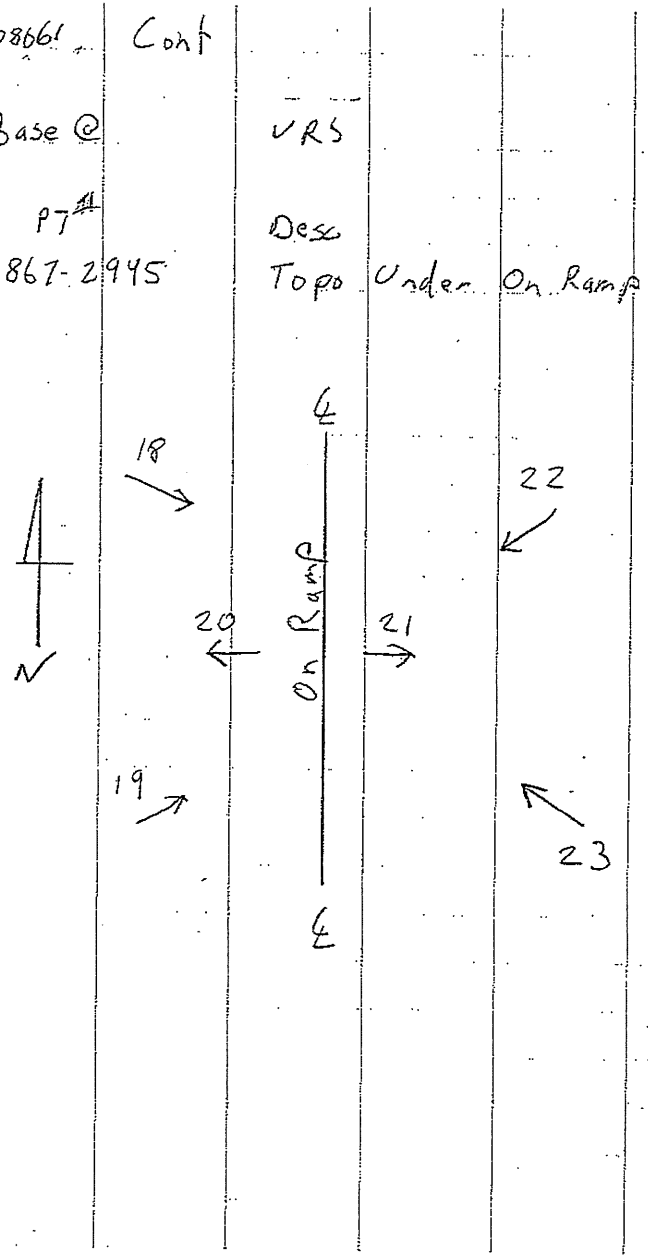


08661 Conf

Base @ VRS

PT# Desc

2867-2945 Topo Under On Ramp



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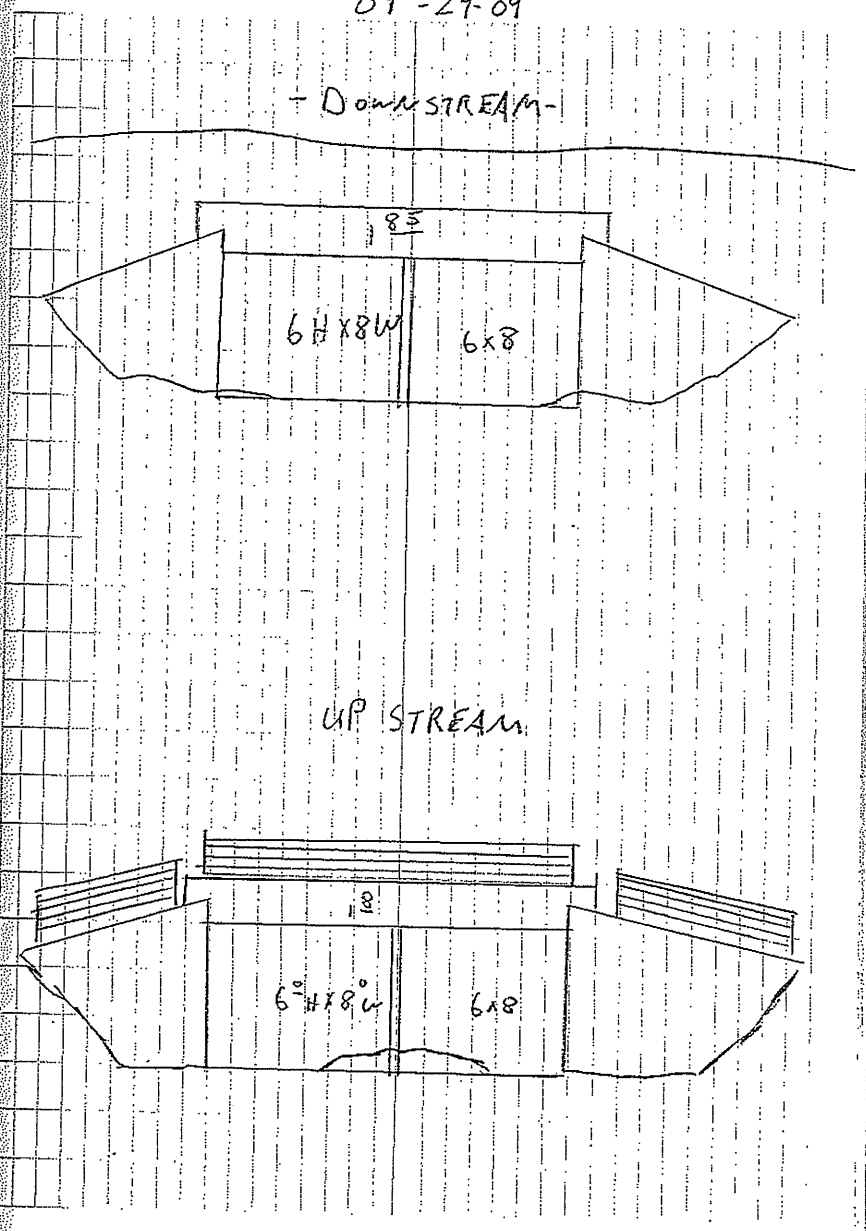
04-24-09