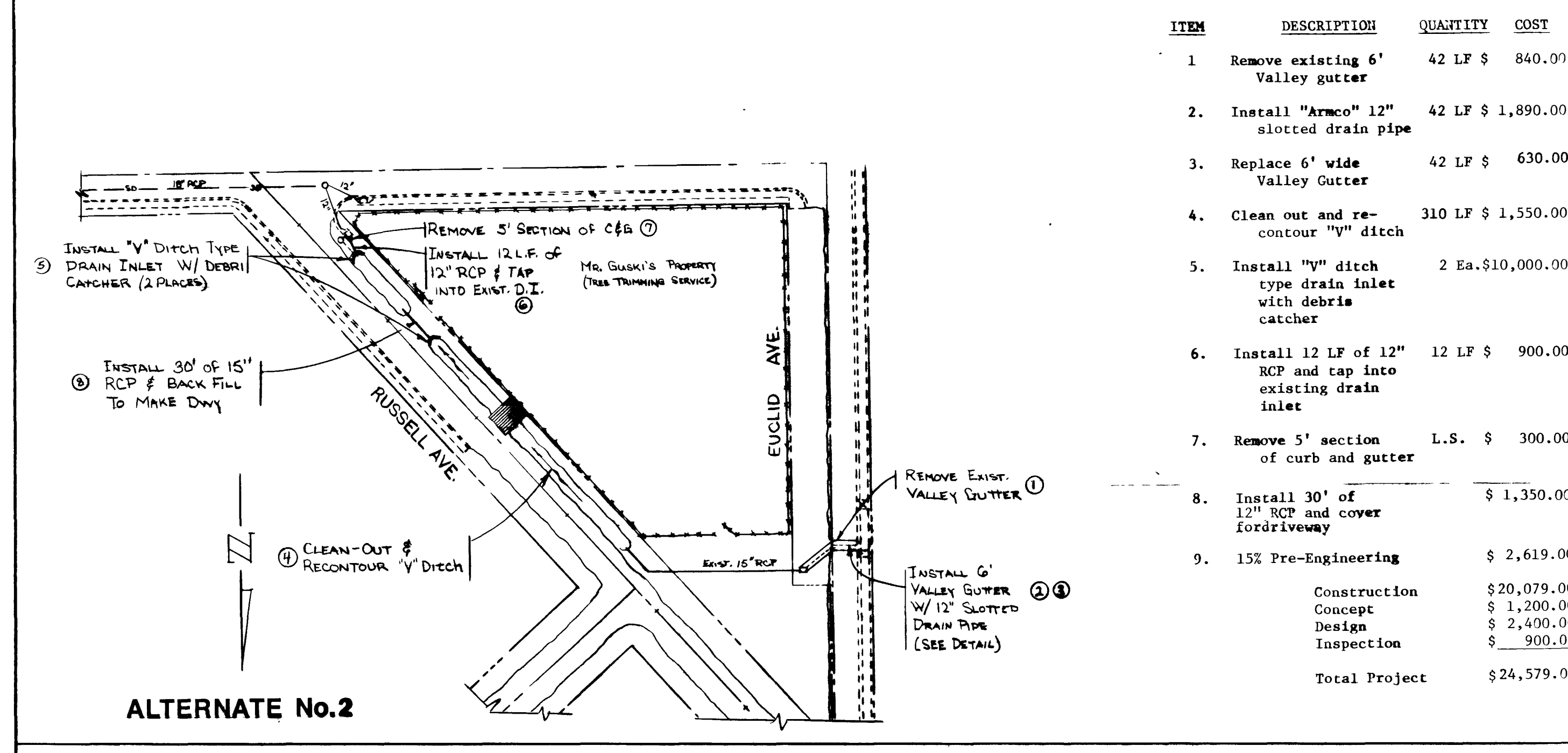
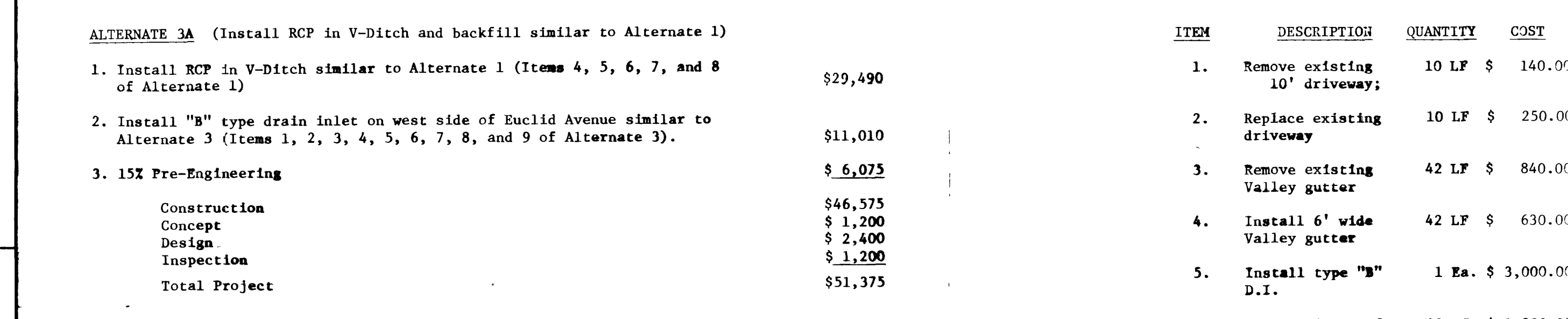


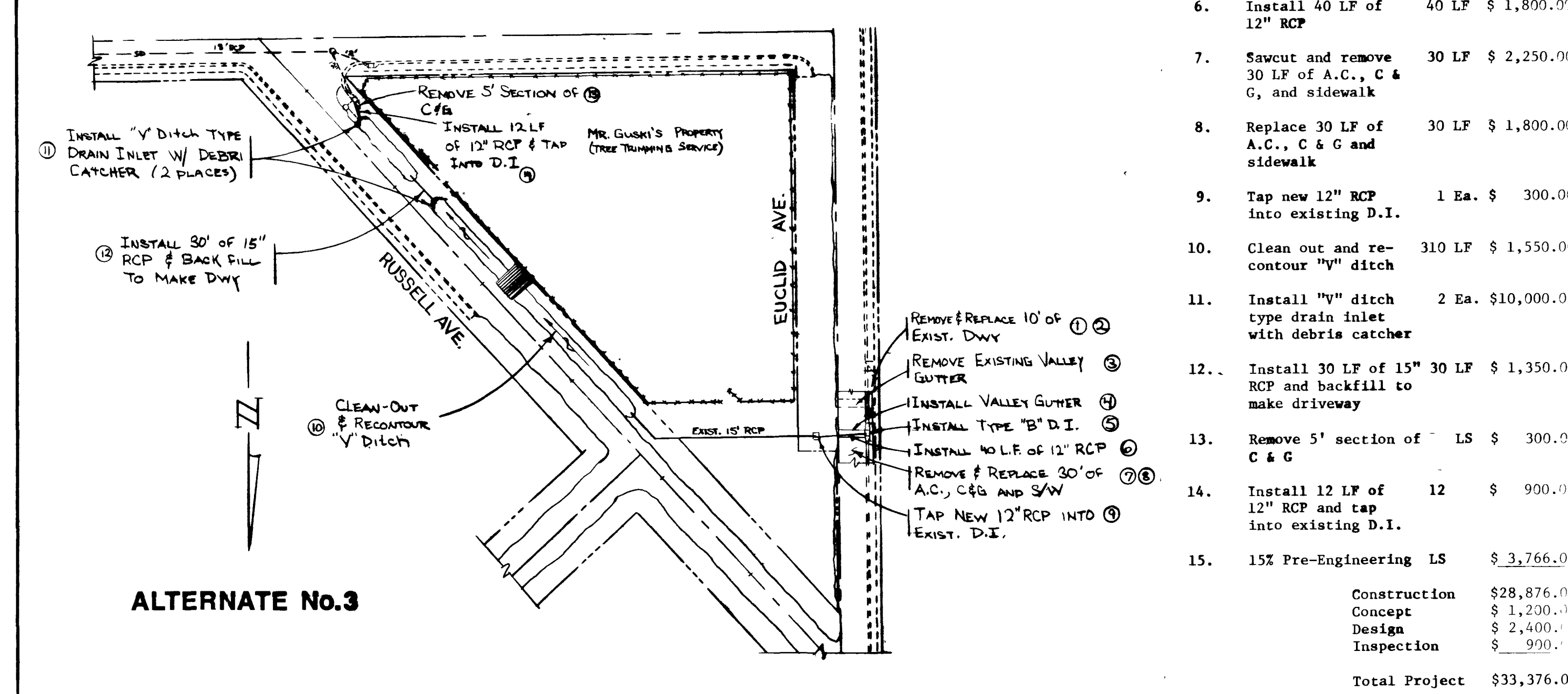
ITEM	DESCRIPTION	QUANTITY	COST
1.	50 LF of 1/2 street improvement	50 LF	\$5,000.00
2.	Remove D.I.	1 Ea.	\$ 200.00
3.	Install Type "B" D.I.	1 Ea.	\$3,000.00
4.	Install M.H.	2 Ea.	\$5,000.00
5.	Install 320 LF of 15" RCP	320 LF	\$20,800.00
6.	Backfill "V" ditch with import	460 CY	\$ 2,990.00
7.	Remove R/R tie bridge	1 Ea.	\$ 300.00
8.	Tap 15" RCP to existing D.I.	1 Ea.	\$ 200.00
9.	15% Pre-Engineering		\$ 5,654.00
	Construction		\$43,344.00
	Concept		\$ 1,200.00
	Design		\$ 2,400.00
	Inspection		\$ 1,200.00
	<b>Total Project</b>		<b>\$48,144.00</b>



ITEM	DESCRIPTION	QUANTITY	COST
1.	Remove existing 6' Valley gutter	42 LF	\$ 840.00
2.	Install "Armo" 12" slotted drain pipe	42 LF	\$ 1,890.00
3.	Replace 6' wide Valley Gutter	42 LF	\$ 630.00
4.	Clean out and re-contour "V" ditch	310 LF	\$ 1,550.00
5.	Install "V" ditch type drain inlet with debris catcher	2 Ea.	\$10,000.00
6.	Install 12 LF of 12" RCP and tap into existing drain inlet	12 LF	\$ 900.00
7.	Remove 5' section of curb and gutter	L.S.	\$ 300.00
8.	Install 30' of 12" RCP and cover for driveway		\$ 1,350.00
9.	15% Pre-Engineering		\$ 2,619.00
	Construction		\$20,079.00
	Concept		\$ 1,200.00
	Design		\$ 2,400.00
	Inspection		\$ 900.00
	<b>Total Project</b>		<b>\$24,579.00</b>



ITEM	DESCRIPTION	QUANTITY	COST
1.	Remove existing 10' driveway	10 LF	\$ 140.00
2.	Replace existing driveway	10 LF	\$ 250.00
3.	Remove existing Valley gutter	42 LF	\$ 840.00
4.	Install 6' wide Valley gutter	42 LF	\$ 630.00
5.	Install type "B" D.I.	1 Ea.	\$ 3,000.00
6.	Install 40 LF of 12" RCP	40 LF	\$ 1,800.00
7.	Sawcut and remove 30 LF of A.C., C & G, and sidewalk	30 LF	\$ 2,250.00
8.	Replace 30 LF of A.C., C & G and sidewalk	30 LF	\$ 1,800.00
9.	Tap new 12" RCP into existing D.I.	1 Ea.	\$ 300.00
10.	Clean out and re-contour "V" ditch	310 LF	\$ 1,550.00
11.	Install "V" ditch type drain inlet with debris catcher	2 Ea.	\$10,000.00
12.	Install 30 LF of 15" RCP and backfill to make driveway	30 LF	\$ 1,350.00
13.	Remove 5' section of C & G	L.S.	\$ 300.00
14.	Install 12 LF of 12" RCP and tap into existing D.I.	12	\$ 900.00
15.	15% Pre-Engineering	L.S.	\$ 3,766.00
	Construction		\$28,876.00
	Concept		\$ 1,200.00
	Design		\$ 2,400.00
	Inspection		\$ 900.00
	<b>Total Project</b>		<b>\$33,376.00</b>



Department of Public Works Engineering Design Division  
 EUCLID AVE. & RUSSELL AVE.  
 DRAINAGE PROBLEM  
 PROPOSED SOLUTIONS  
 Concept ONLY

Scale (1") NONE  
 Scale (1/2") NONE  
 Date AUG 85  
 Design by N.R. HAMP  
 Drawn by N.R. HAMP

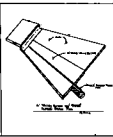
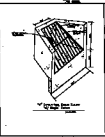
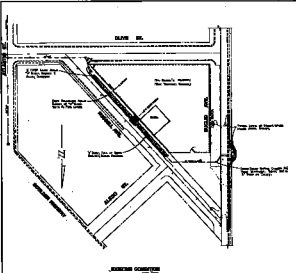
W.A. N. ASSIGNED  
 NONE  
 AUG 85

Revisions

Date

2482

Drawing no. 327-184 A



ALTERNATE No. 1

NO.	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL
1	12" DRAIN PIPE	100	1.50	150.00
2	12" MANHOLE	5	25.00	125.00
3	12" DRAIN FITTING	10	1.00	10.00
4	12" DRAIN COVER	5	2.00	10.00
5	12" DRAIN CLEANOUT	5	1.50	7.50
6	12" DRAIN VALVE	5	2.00	10.00
7	12" DRAIN BRACKET	5	1.50	7.50
8	12" DRAIN HOOK	5	1.50	7.50
9	12" DRAIN WAD	5	1.50	7.50
10	12" DRAIN STOP	5	1.50	7.50
11	12" DRAIN GATE	5	1.50	7.50
12	12" DRAIN CHAIN	5	1.50	7.50
13	12" DRAIN PIN	5	1.50	7.50
14	12" DRAIN WASHER	5	1.50	7.50
15	12" DRAIN LOCKWASHER	5	1.50	7.50
16	12" DRAIN NUT	5	1.50	7.50
17	12" DRAIN BUSHING	5	1.50	7.50
18	12" DRAIN ELBOW	5	1.50	7.50
19	12" DRAIN TEE	5	1.50	7.50
20	12" DRAIN CROSS	5	1.50	7.50
21	12" DRAIN END CAP	5	1.50	7.50
22	12" DRAIN FLANGE	5	1.50	7.50
23	12" DRAIN GASKET	5	1.50	7.50
24	12" DRAIN O-RING	5	1.50	7.50
25	12" DRAIN GROMMET	5	1.50	7.50
26	12" DRAIN WASHER	5	1.50	7.50
27	12" DRAIN LOCKWASHER	5	1.50	7.50
28	12" DRAIN NUT	5	1.50	7.50
29	12" DRAIN BUSHING	5	1.50	7.50
30	12" DRAIN ELBOW	5	1.50	7.50
31	12" DRAIN TEE	5	1.50	7.50
32	12" DRAIN CROSS	5	1.50	7.50
33	12" DRAIN END CAP	5	1.50	7.50
34	12" DRAIN FLANGE	5	1.50	7.50
35	12" DRAIN GASKET	5	1.50	7.50
36	12" DRAIN O-RING	5	1.50	7.50
37	12" DRAIN GROMMET	5	1.50	7.50
38	12" DRAIN WASHER	5	1.50	7.50
39	12" DRAIN LOCKWASHER	5	1.50	7.50
40	12" DRAIN NUT	5	1.50	7.50
41	12" DRAIN BUSHING	5	1.50	7.50
42	12" DRAIN ELBOW	5	1.50	7.50
43	12" DRAIN TEE	5	1.50	7.50
44	12" DRAIN CROSS	5	1.50	7.50
45	12" DRAIN END CAP	5	1.50	7.50
46	12" DRAIN FLANGE	5	1.50	7.50
47	12" DRAIN GASKET	5	1.50	7.50
48	12" DRAIN O-RING	5	1.50	7.50
49	12" DRAIN GROMMET	5	1.50	7.50
50	12" DRAIN WASHER	5	1.50	7.50
51	12" DRAIN LOCKWASHER	5	1.50	7.50
52	12" DRAIN NUT	5	1.50	7.50
53	12" DRAIN BUSHING	5	1.50	7.50
54	12" DRAIN ELBOW	5	1.50	7.50
55	12" DRAIN TEE	5	1.50	7.50
56	12" DRAIN CROSS	5	1.50	7.50
57	12" DRAIN END CAP	5	1.50	7.50
58	12" DRAIN FLANGE	5	1.50	7.50
59	12" DRAIN GASKET	5	1.50	7.50
60	12" DRAIN O-RING	5	1.50	7.50
61	12" DRAIN GROMMET	5	1.50	7.50
62	12" DRAIN WASHER	5	1.50	7.50
63	12" DRAIN LOCKWASHER	5	1.50	7.50
64	12" DRAIN NUT	5	1.50	7.50
65	12" DRAIN BUSHING	5	1.50	7.50
66	12" DRAIN ELBOW	5	1.50	7.50
67	12" DRAIN TEE	5	1.50	7.50
68	12" DRAIN CROSS	5	1.50	7.50
69	12" DRAIN END CAP	5	1.50	7.50
70	12" DRAIN FLANGE	5	1.50	7.50
71	12" DRAIN GASKET	5	1.50	7.50
72	12" DRAIN O-RING	5	1.50	7.50
73	12" DRAIN GROMMET	5	1.50	7.50
74	12" DRAIN WASHER	5	1.50	7.50
75	12" DRAIN LOCKWASHER	5	1.50	7.50
76	12" DRAIN NUT	5	1.50	7.50
77	12" DRAIN BUSHING	5	1.50	7.50
78	12" DRAIN ELBOW	5	1.50	7.50
79	12" DRAIN TEE	5	1.50	7.50
80	12" DRAIN CROSS	5	1.50	7.50
81	12" DRAIN END CAP	5	1.50	7.50
82	12" DRAIN FLANGE	5	1.50	7.50
83	12" DRAIN GASKET	5	1.50	7.50
84	12" DRAIN O-RING	5	1.50	7.50
85	12" DRAIN GROMMET	5	1.50	7.50
86	12" DRAIN WASHER	5	1.50	7.50
87	12" DRAIN LOCKWASHER	5	1.50	7.50
88	12" DRAIN NUT	5	1.50	7.50
89	12" DRAIN BUSHING	5	1.50	7.50
90	12" DRAIN ELBOW	5	1.50	7.50
91	12" DRAIN TEE	5	1.50	7.50
92	12" DRAIN CROSS	5	1.50	7.50
93	12" DRAIN END CAP	5	1.50	7.50
94	12" DRAIN FLANGE	5	1.50	7.50
95	12" DRAIN GASKET	5	1.50	7.50
96	12" DRAIN O-RING	5	1.50	7.50
97	12" DRAIN GROMMET	5	1.50	7.50
98	12" DRAIN WASHER	5	1.50	7.50
99	12" DRAIN LOCKWASHER	5	1.50	7.50
100	12" DRAIN NUT	5	1.50	7.50

ALTERNATE No. 2

ALTERNATE No. 2

ALTERNATE No. 3

ALTERNATE No. 3

ALTERNATE No. 4

ALTERNATE No. 4

ALTERNATE No. 5

ALTERNATE No. 5

ALTERNATE No. 6

ALTERNATE No. 6

ALTERNATE No. 7

ALTERNATE No. 7

ALTERNATE No. 8

ALTERNATE No. 8

ALTERNATE No. 9

ALTERNATE No. 9

ALTERNATE No. 10

ALTERNATE No. 10

**Department of Public Works**  
**OFFICE OF THE SUPERVISOR**  
**DRAINAGE DIVISION**

**PROPOSED SOLUTIONS**  
**CONCEPT ONLY**