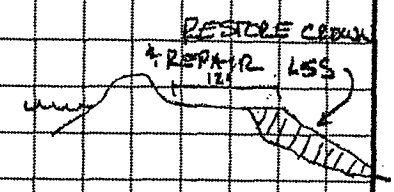
BURNS ENGINEERING
Bethel Plaza, P.O. Box 761
BETHEL ISLAND, CALIFORNIA 94511
925(~~415~~) 684-3470

JOB RD#1607 HONKER BAY
SHEET NO. 1 OF 4
CALCULATED BY B BURNS DATE 6/5/00
CHECKED BY _____ DATE _____
SCALE _____

HONKER BAY

SITE ① 3600' INTERIOR LEVEE ROAD ALONG RACK CREEK
" ② 1600' LEVEE ROAD TO ACCESS HONKER BAY
" ③ 2800' " " " " " "
" ④ 1500' LEVEE FRONTAGE ALONG HONKER BAY



REPAIR/REBUILD ACCESS ROADS FOR TRUCKING

SITE ① PLACE 3/4" AB TO REPAIR EXIST. GRAVEL ROAD AFTER JOB DONE

$$\frac{(\overset{0.8}{1''}\text{TK})(10')(3800')}{27} \times 1.9 \text{ TONS/CY} = 227 \text{ TONS A.B.}$$

SITE (2A) 600 LF LOCATED 500' TO 1100' NORTH OF PUMP

RAISE CROWN ALONG LOW SPOT DAMAGED IN 1998 FLOOD

$$\frac{(2'H)(14'W)(600'L)}{27} \times 1.9 \text{ T/CY} = 1182 \text{ TONS FILL}$$

REPAIR GRAVEL $= \frac{(.25')(10')(600')}{27} \times 1.9 = 105$ TONS AB

REPAIR LANDSIDE SLOPE FLOOD DAMAGE

$$\frac{1}{2}\frac{(2'H)(20'W)(600'L)}{27} \times 1.9 \text{ T/CY} = 422 \text{ TONS FILL}$$

SITE (2B) 500 LF LOCATED FROM PUMP TO 500' NORTH OF PUMP.

RESTORE CROWN & REPAIR LSS FLOOD DAMAGE

$$\frac{(2'H)(20'W)(500'L)}{27} \times 1.9 \text{ T/CY} = 1408 \text{ TONS FILL}$$

SITE 2A + 2B - CHECK PERMIT LIMIT: $1182 + 422 + 1408 = \frac{3012 \text{ TONS}}{1.9 \text{ T/CY}} = 1585 \text{ CY} < 2000 \text{ CY, OK}$

USE 918 TONS AS MAX IN PROJECT $ TOTAL

SUB TOTALS: AB = 227 + 105 = 332 TONS
FILL = 918

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JOB RD#1607 - HONKER BAY
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CALCULATED BY R. BURNS DATE 6/5/00
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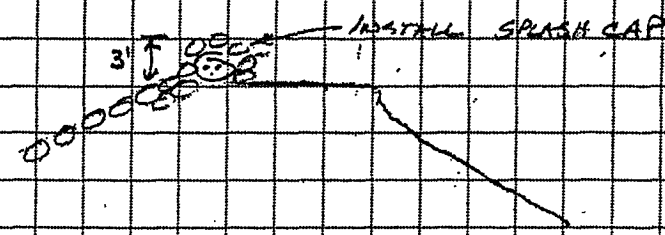
SITE (4) RESTORE CROWN & LSS



RIPRAP

$$\frac{(2'+3'+2')}{27}(2'H)(1500) \times 1.6\ T/cy = 1245\ T$$

REPAIR BARE SPOTS IN RIPRAP =

FABRIC $\frac{1500\ LF}{360\ LF/ROLL}$ @ \$300/ROLL = \$1500

EQUIPMT TIME TO CONSTRUCT SPLASH CAP

EXC + LOADER, 200 LF/DAY

$$\left(\frac{1500'}{200\ LF/DAY}\right) 8\ \frac{HR}{DAY} \times (\$90 + \$8.5) = \$10,500$$

\$12,000

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JOB: HONKER BAY
SHEET NO. 3 OF 4
CALCULATED BY: BB DATE: 5/25/00
CHECKED BY: DATE:
SCALE:

ESTIMATE MATERIAL COSTS

TRUCKING - TRUCK MATERIAL FROM SYAR, 3 HOUR ROUND TRIP, 3 TRIPS PER DAY (9 HR DAY), 24 TONS PER TRUCK & TRANSFER FOR FILL & AB, 20 TONS FOR RIPRAP

$\frac{3\text{HR} \times \$70/\text{HR}}{24\text{ TONS}} = \$8.75$ /TON FOR FILL & AB $\frac{3\text{HR} \times \$70/\text{HR}}{20\text{T}} = \$10.50$/TON FOR RIPRAP

SYAR (LAKE HELMAN = VALLEJO)

FILL (3" MINUS) $\$6$/TON + TAX 7.375% = $\$6^{44}$/TON + TRUCKING $\$8^{75}$/TON = $\$15.19$/TON

12"x24" RIPRAP $\$17^{05}$/TON + TAX = $\$18^{31}$/TON + $\$10^{50}$/TON = $\$28.81$/TON

3/4" AB $\$8$ " " = 8^{59} + 8^{75} = $\$17.34$/TON

ESTIMATE CONTRACTOR COSTS TO PLACE MATERIAL

CLEAR VEGETATION FROM LSS, SITES 2, 3, & 4 = 1600' + 2800' + 1500' = 5900'

EXCAVATOR CAN WORK 1000'/DAY => 6 DAYS $\left(\frac{8\text{ HR}}{\text{DAY}}\right)(6\text{ DAY})(\$70/\text{HR}) = \$4320$ SAY $\$4500$

MOVE IN EXCAVATOR $500 + 2 HRS @ $70/HR CRANE = 680
" " WHEEL LOADER ($85/HR) 200
} 880 => $1,000

ASSUME THESE TWO MACHINES CAN PLACE MATERIAL THAT 3 TRUCKS PER DAY CAN HAUL, 9 HR DAY

3 TRUCKS x 3 TRIPS/DAY x 22 TONS/TRIP = 198 TONS/DAY

9 HR x ($70 + $85) = $1575/DAY

$\frac{\$1575}{198\text{ TONS}} = \$7.96$/TON => $8/TON TO PLACE

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JOB RD 1607 HONKER BAY
SHEET NO. 4 OF 4
CALCULATED BY BB DATE 6/5/00
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MATERIAL TOTALS		× (MATERIAL COST + TRUCKING + PLACEMENT)	$ TOTAL
AB:	332	($17.34 /TON + $8/TON)	= $8,412
FILL:	918 T	($15.19 /TON + ")	= 21,300
RIPRAP:	1245 T	($28.81 /TON + ")	= 45,828

ENGRG / INSPECTION

90 HR INSPECTOR @ $55 = 4950
24 HR ENGR @ $83 = 1992
$7,000

COST TOTALS:

MOVE-IN	$1,000
CLEAR VEG	4,500
SPLASH CAP FABRIC + EQMT	12,000
AB, SUPPLY & PLACE	8,400
FILL, " "	21,300
RIPRAP, " "	45,800
ENGRG / INSP	7,000
	100,000

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