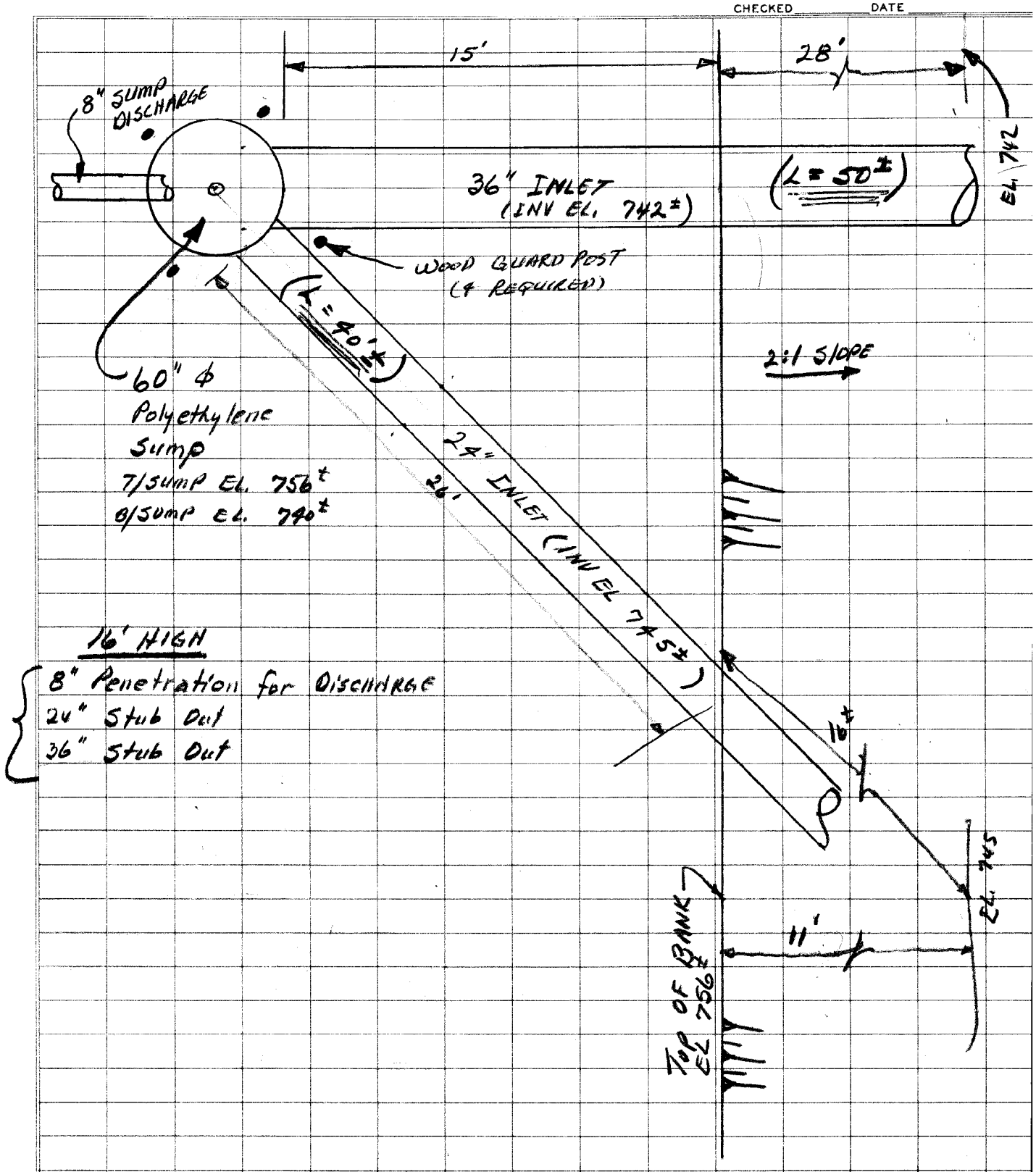
KIF
COAL YARD DRAINAGE POND
SUMP & INLET PIPES

COMPUTED JLG DATE 9/29/94
CHECKED DATE



16' HIGH

- 8" Penetration for Discharge
- 24" Stub Out
- 36" Stub Out

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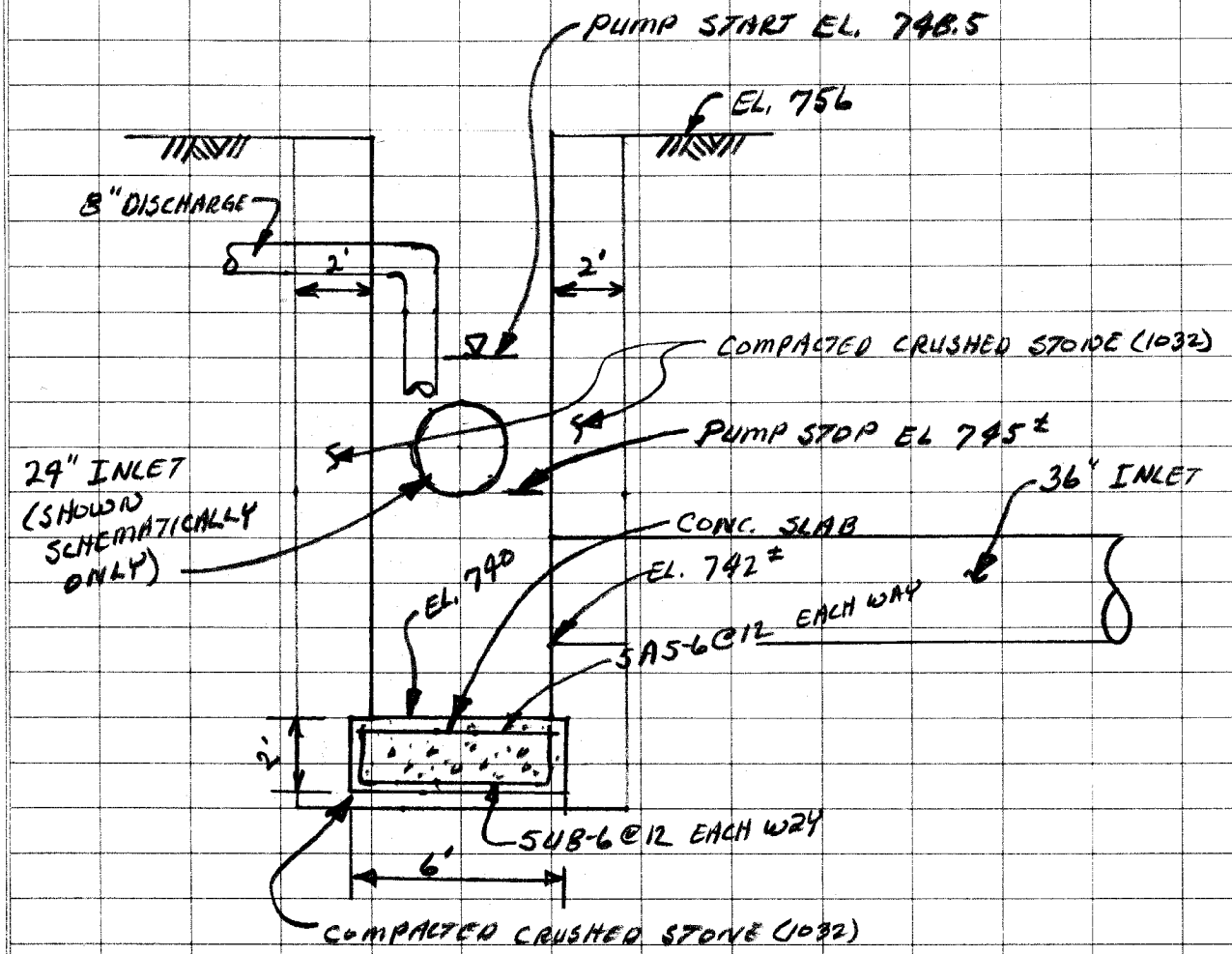

SUMP:

a) STRUCTURAL EXCAVATION — 600 C.Y. ✓

SAME AS 9/24/94 CALCS SH 3 OF 4

b) CRUSHED STONE BACKFILL

BASE: $(6 \times 6 \times 0.5) + [(1.5' \times 2 \times 6)\ 4] =$

$18 + 72 = 90$ C.F.

SIDE OF SUMP:

$\left[\left(\frac{\pi \times 9^2}{4}\right) - \left(\frac{\pi \times 5^2}{4}\right)\right] 16 =$

$[(63.62) - (19.64)]\ 16 =$ 704 C.F.

794 C.F. (29.5 C.Y.) ✓

$(794\ \text{C.F.})\left(\frac{130\#}{\text{CF}}\right)\left(\frac{1\ \text{Ton}}{2000\#}\right) =$ 52 Ton

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c) Concrete (Assume 6'x6'x2')
6x6x2 x 1/27 = 2.67 say 3 C.Y. ✓

d) Reinforcing Steel (Assum #5 bars)
SA5-6 & SU8-6 say 250 lbs ✓

e) Compacted Backfill (EARTH) 583 C.Y. ✓
Same as 9/24/94 CALCS SH 3 of 4

2) 36" PE PIPE
a) Length = 50 L.F (Buy 60' - comes in 20' Lengths @ 20.00/ft.)

4 Couplings @ 28.00 EA Required

b) Structural Excavation 20 C.Y. ✓
Same as 9/24/94 CALCS SH 4 of 4

c) Backfill: THOROUGHLY COMPACTED
Same as 9/24/94 CALCS SH 4 of 4 13 C.Y. ✓

3) 24" PE PIPE
a) Length = 40 L.F @ 17.00/ft

2 Coupling @ 24.00 EA Required

b) Structural Excavation
Same as 36" Prorated by length

20 C.Y. x 40/50 = 16 C.Y. ✓

c) Backfill: Thoroughly Compacted
Same as 36" Prorated by length

13 x 40/50 = 10.4 11 C.Y. ✓

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~~4~~ Protection around open sump — DELETE - WILL HAVE TOP !!

Say 4' High chain link fence w/ 4' GATE

Length = 40 L.F. (including gate)

(10' Square around Sump)

5) Identification @ Pipe Ends for Protection During Pond Clean w/ Dragline.

Pond Bottom @ 740±

Pump Stop @ 745

Pump Start @ 748.5

Min 10' High + depth into ground (say 6')

16' long - steel post/or beam or creosote pole (min 6" dia) @ end of 36" pipe — 2 EA ✓

2 EA ✓

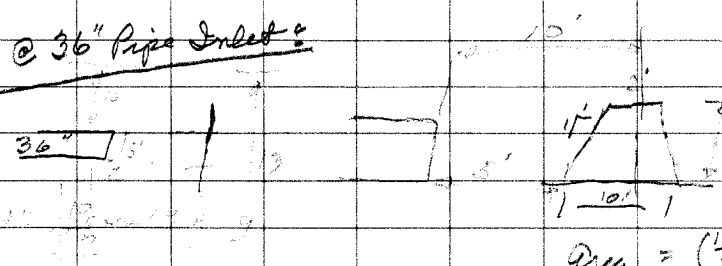
Std. 6' High fence post @ end of 24" pipe

2 EA ✓

6) Guard Posts to keep vehicle traffic off Sump

Wood Guard Post — 4 EACH ✓

7) Riprap @ 36" Pipe Inlet:



Area = $(\frac{1+2}{2})(4) = 24$ D'

L = 20 + 13 + 20 = 53'

Vol. = $(24)(53)(\frac{1}{27}) = 47$ say 50 C.Y. ✓

TVA 489 (EN DES-11-76)

SHEET ____ OF ____

KIF

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CHECKED ____ DATE ____

INFO ON PIPES:

9/28/94 - Talked w/ Larry French (404-949-3436) - Atlanta

9/29/94 - Jerry Clark (615-946-7777) - SMARTA, TN.
APCO
Called w/ following information

a) 5' Dia Polyethylene Sump 16' deep w/ 36" Pipe Stub out
No Top
$573 + freight

b) 5' Dia Polyethylene Sump 16' deep w/ 36" & 24" Stub out
and 8" penetration for discharge pipe
No Top
$615 7+ frieght

c) Can set on concrete and anchor
pump removal guiderail system
through bottom.

d) Recommend 2' compacted dense graded
aggregate around sump.

e) 36" PE Pipe is 40.37 per foot; Note twice
as expensive as ADS pipe. It is a better
pipe but is not needed in this application.

Called Ken on 9/29/94 a.m.
Had left message for him
Call me on 9/28/94
J.B.S.

Ken Lewis (224-1121)

1. 36" Intake pipe is 2' off bottom of pond
could add a ~~second~~ high level (say 24") intake at say 4 or 5 ft off bottom

$1,000

2. Pumphouse (Exist)

a. Rec. Rep assumed relay and had light & receptacle from Xformer (480 to 120V) in exist pumphouse

Manu Pick ?

1. Do you want/need light & receptacle?
2. If so, can we leave pumphouse?
3. can relocate Xfmr. — put in enclosed metal box (cabinet) on ~~Utility~~ structural beam type structure ($3,000)

3. ~~Stand~~ Alone:

Ed. Durham: 8102
Cheryl Kamidoi: 8668

OPTION
3,000

Per Ed Durham on 9/29/94 - cried purchase new Xfmr. and box for enclosure. They (Ed) Rose indicated would require to do a Estimate. Enclosure support structure unpad is not required & civil etc.
J.B.S.