

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR GRADING & AGGREGATE BASE

County Highway No. 60

Between COUNTY ROAD 60 And CSAH 17

A POINT 200' WEST & 6' SOUTH OF THE S.W. COR.
From OF THE N.E. 1/4 OF THE N.E. 1/4 SEC. 15, T32, R23 To A POINT 7' WEST OF THE S.E. COR. OF THE
NE 1/4 OF THE N.W. 1/4 SEC. 13, T32, R23
Give proper reference to Sections, Township and Range

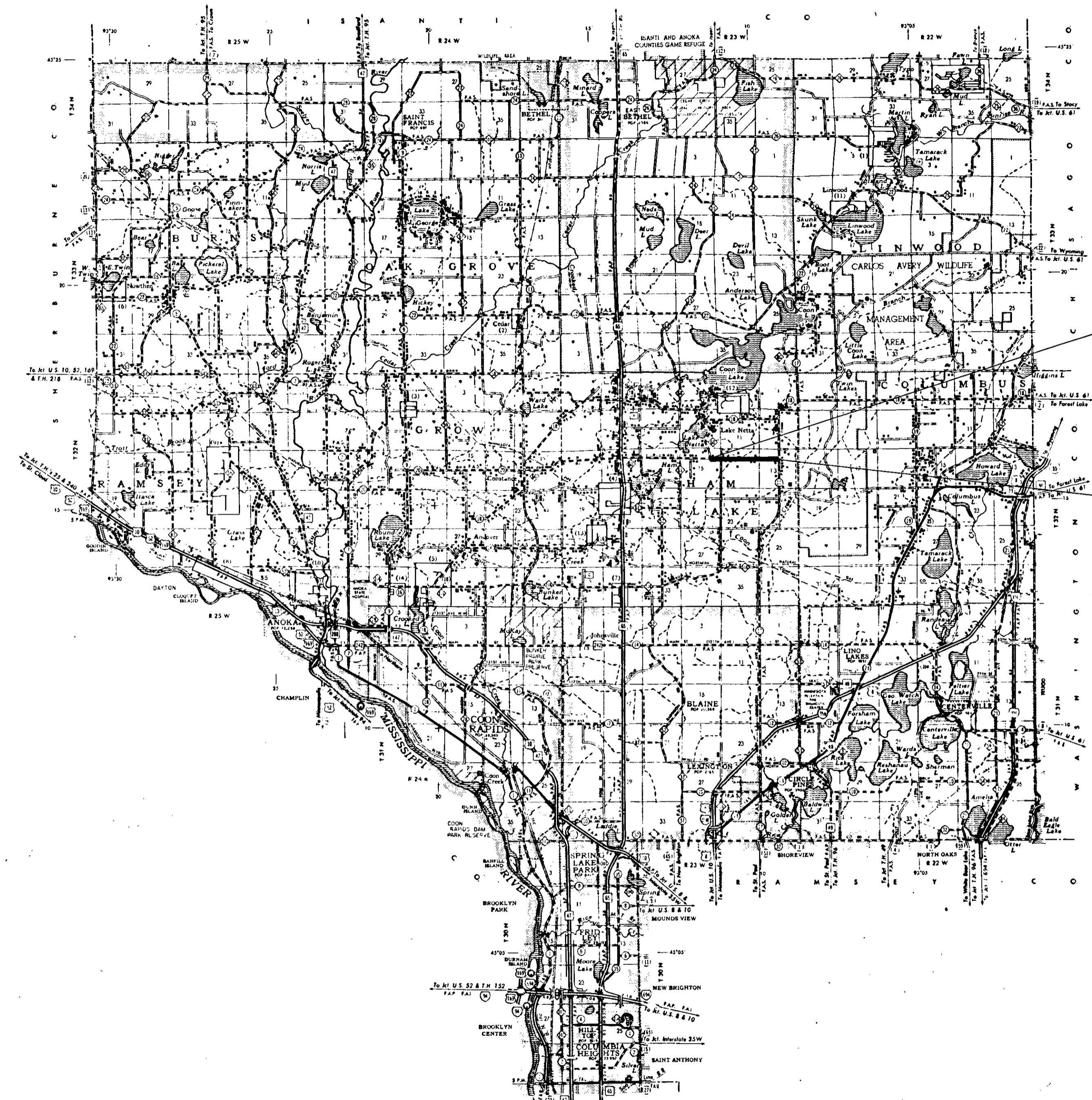
GROSS LENGTH 9508 FEET 1.80 MILES
BRIDGES-LENGTH 0 FEET 0 MILES
EXCEPTIONS-LENGTH 0 FEET 0 MILES
NET LENGTH 9508 FEET 1.80 MILES

INDEX OF SHEETS

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CONVENTIONAL SIGNS

- STATE LINE
- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- RIGHT OF WAY LINE
- PRESENT RIGHT OF WAY LINE
- CONTROL OF ACCESS LINE
- PROPERTY LINE (Except Land Lines)
- INDICATED PLATTED PROPERTY
- CORPORATE OR CITY LIMITS
- TRUNK HIGHWAY CENTER LINE
- RETAINING WALL
- RAILROAD
- RAILROAD RIGHT OF WAY LINE
- RIVER OR CREEK
- DRY RUN
- DRAINAGE DITCH
- ELECTRIC POWER LINE
- PHONE OR TELEGRAPH LINE
- JOINT TELEPHONE AND POWER
- CONDUIT
- TELEPHONE CABLE-AERIAL
- TELEPHONE CABLE-UNDERGROUND
- POWER CABLE UNDERGROUND
- GAS MAIN
- CULVERT
- DROP INLET
- RAILROAD RAIL
- BARBED WIRE FENCE
- WOVEN WIRE FENCE
- CHAIN LINK FENCE
- RAILROAD SHOW FENCE
- STONE WALL OR FENCE
- WATER PIPE
- SEWER PIPE
- DRAIN TILE
- SPRINGS
- MARSH
- TIMBER
- ORCHARD
- BRUSH
- NURSERIES
- CATCH BASIN
- MANHOLE
- PIPE HYDRANT
- STREET LIGHT
- RAILROAD CROSSING SIGN
- ELECTRIC CROSSING SIGN
- CROSSING RATE
- CATTLE GUARD
- DIVERSS (Highway Over)
- UNDERPASS (Highway Under)
- BRIDGE
- BUILDING (One Story Frame)
- FRAME
- CONCRETE
- STONE
- BRICK
- STUCCO
- IRON PIPE OR ROD
- MONUMENT (STONE, CONCRETE, OR METAL)
- WOODEN HUB
- GRAVEL PIT
- SAND PIT
- BORROW PIT
- ROCK QUARRY
- MELANDER CORNER



BEGIN PROJECT CP 84-16-60
STA. 10+00

OR P.I. 52+12.25, Δ = 0° 22' 33" RT. =
SURVEY P.I. 52+12.08, Δ = 0° 17' 31" RT.

OR P.T. 51+87.97 =
SURVEY P.O.T. 81+88.12

END PROJECT CP 84-16-60
STA. 105+08

SCALE

INDEX MAP	2 Mi.
PLAN & PROFILE	VERT. 10'
	HORIZ. 100'
CROSS SECTIONS	VERT. 10'
	HORIZ. 10'

DESIGN DESIGNATION

ADT (CURRENT YEAR) _____

ADT (FUTURE YEAR) _____

T (HEAVY COMMERCIAL)

9 Ton Design Soil Factor A-3, 50%

Design Speed 55 MPH

Design Speed not achieved at:

STA. _____ TO STA. _____ MPH

STA. _____ TO STA. _____ MPH

SPECIFICATIONS

THE "STANDARD SPECIFICATIONS FOR CONSTRUCTION", 1983 EDITION AND SUPPLEMENTAL SPECIFICATIONS, DATED NOVEMBER 30, 1984 SHALL GOVERN.

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH, IN THE CONSTRUCTION OF THIS PROJECT.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Paul K. Lund
COUNTY ENGINEER DATE Feb. 19, 1985

ANOKA COUNTY REG. NO. 6549

RECOMMENDED FOR APPROVAL _____ 19____
DISTRICT STATE AID ENGINEER

RECOMMENDED FOR APPROVAL _____ 19____

APPROVED _____ 19____
STATE AID ENGINEER

Minn. Proj. No. _____ County Proj. No. 84-16-60
State Proj. No. _____ S.A.P. _____

STATEMENT OF ESTIMATED QUANTITIES

Table with columns: ITEM NO., ITEM, UNIT, TOTAL ESTIMATED QUANTITIES, TOTAL FINAL QUANTITIES. Includes items like Mobilization, Field Office, Clearing, Grubbing, and various materials.

- 1. FROM EXCESS MUCK MATERIAL FOR USE AS TOPSOIL
2. FOR DUST CONTROL
3. INCLUDES 192 TONS FOR ENTRANCES AND 150 TONS FOR STREET APPROACHES
4. CONSISTS OF 4-7" 30" BENDS
5. FOR EROSION CONTROL
6. BITUMINOUS ITEMS FOR REPLACING PAVEMENT AT INTERSECTION STA. 10+00 TO 12+75

SPECIAL DETAILS

EXCAVATED MUCK MATERIAL SHALL BE USED TO CONSTRUCT INSLOPES ADJACENT TO MUCK EXCAVATION AREAS AND AS TOPSOIL THROUGHOUT THE PROJECT. APPROXIMATELY 4,831 CU. YDS. OF EXCESS MUCK MATERIAL SHALL BE UTILIZED AS TOPSOIL.

STANDARD PLATES table with columns: PLATE NO., DESCRIPTION. Lists plates 0004 A through 9102 C.

SALVAGE & INSTALL FENCE table with columns: STATION, LOC, SALVAGE, INSTALL, REMARKS. Includes fence installation details.

CLEARING AND GRUBBING table with columns: STATION (TO STATION), LOC, CLEARING TREE/ACRE, GRUBBING TREE/ACRE. Lists clearing and grubbing work.

DRAINAGE table with columns: STATION, LOCATION, IN PLACE, REMARKS, REMOVE, PORTABLE CULVERTS. Details drainage and culvert specifications.

SODDING table with columns: STATION, LOC., S.Y. Lists sodding locations and quantities.

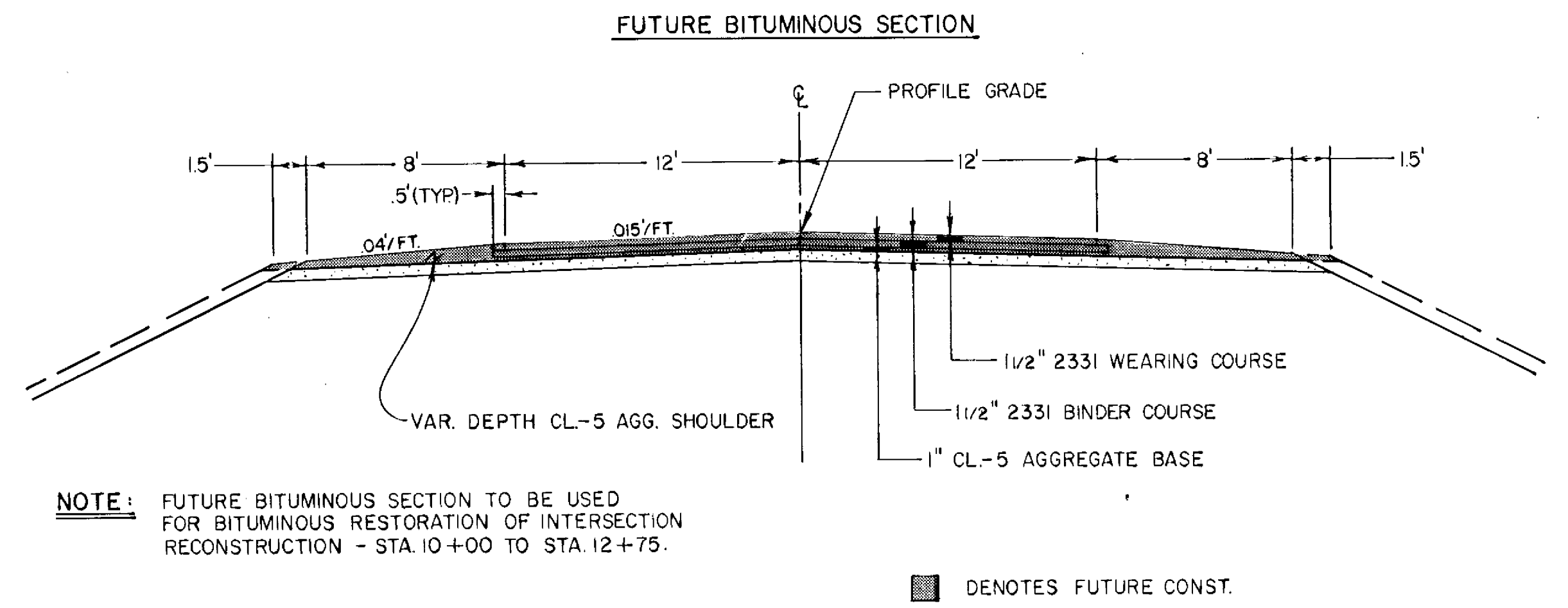
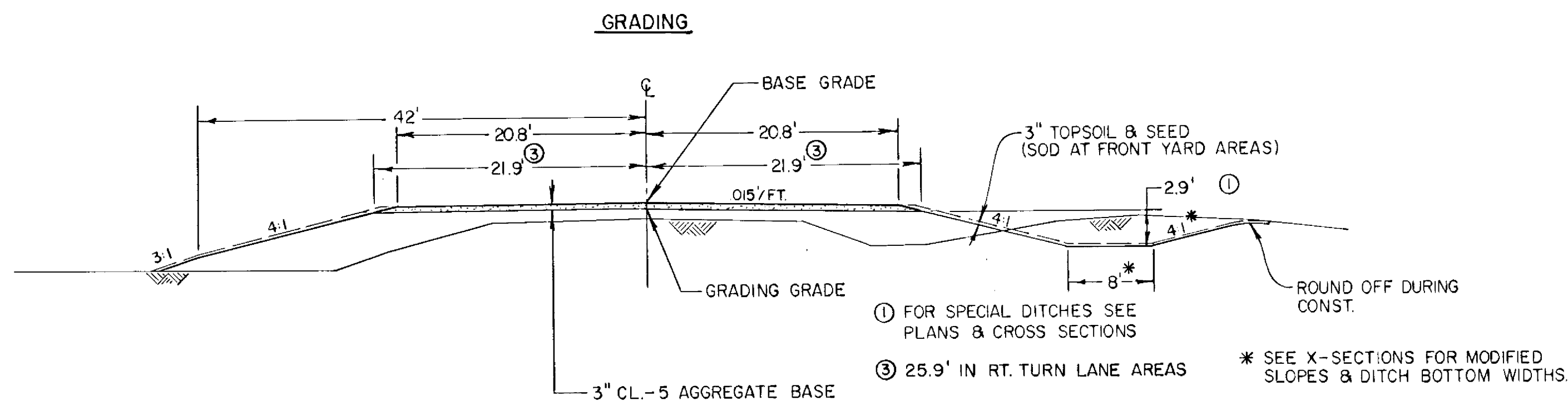
BASIS OF PLANNED QUANTITIES

- 2331 PLANT MIXED BINDER COURSE BITUMINOUS MIXTURE (10 LBS./SQ. YD./1" THICKNESS BITUMINOUS MAT'L. FOR MIXTURE 45% BY WT.
2341 PLANT MIXED WEARING COURSE BITUMINOUS MIXTURE (10 LBS./SQ. YD./1" THICKNESS BITUMINOUS MAT'L. FOR MIXTURE 60% BY WT.
2357 BITUMINOUS MATERIAL FOR TACK COAT 05 GAL./SQ. YD.
2575 MULCH MATERIAL, TYPE -1 2 TONS / ACRE
2575 SEED MIXTURE NO. 3 40 LBS. / ACRE
2575 COMMERCIAL FERTILIZER, ANALYSIS 10-10-10 500 LBS./AC. - BOTH SEED & SOD AREAS
2575 ROADSIDE SEEDING - HORIZ. MEAS. +10%

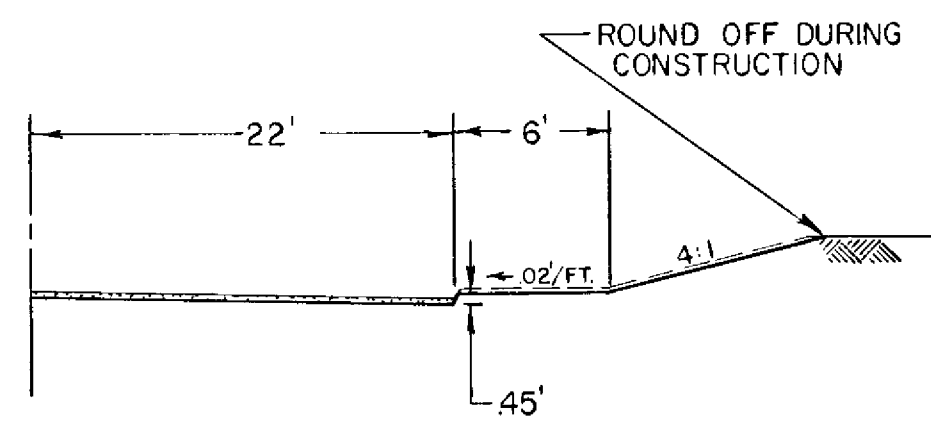
1. E.G.T. 4-7" 30"-50" RCP BENDS & 30" RCP APRONS

TYPICAL SECTIONS

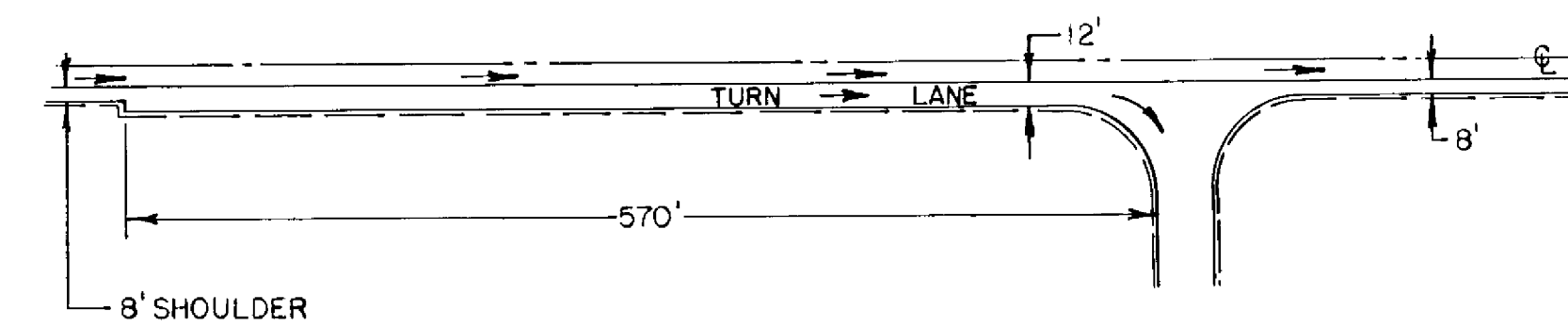
ALL DIMENSIONS NOMINAL



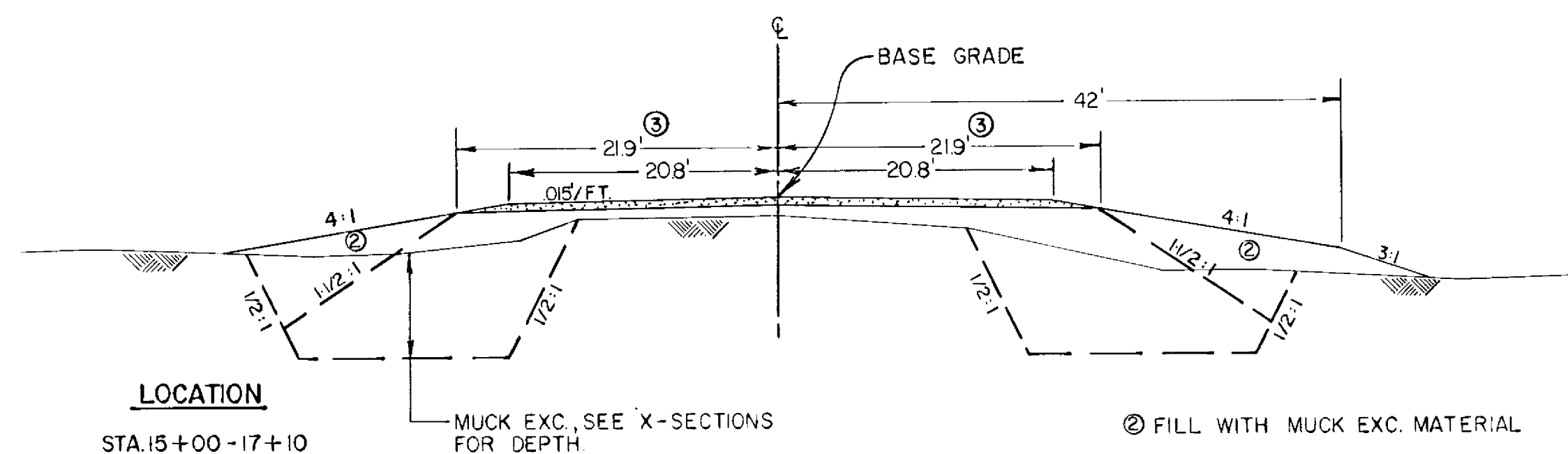
BERM SECTION



TYPICAL RIGHT TURN LANE



MUCK EXCAVATION

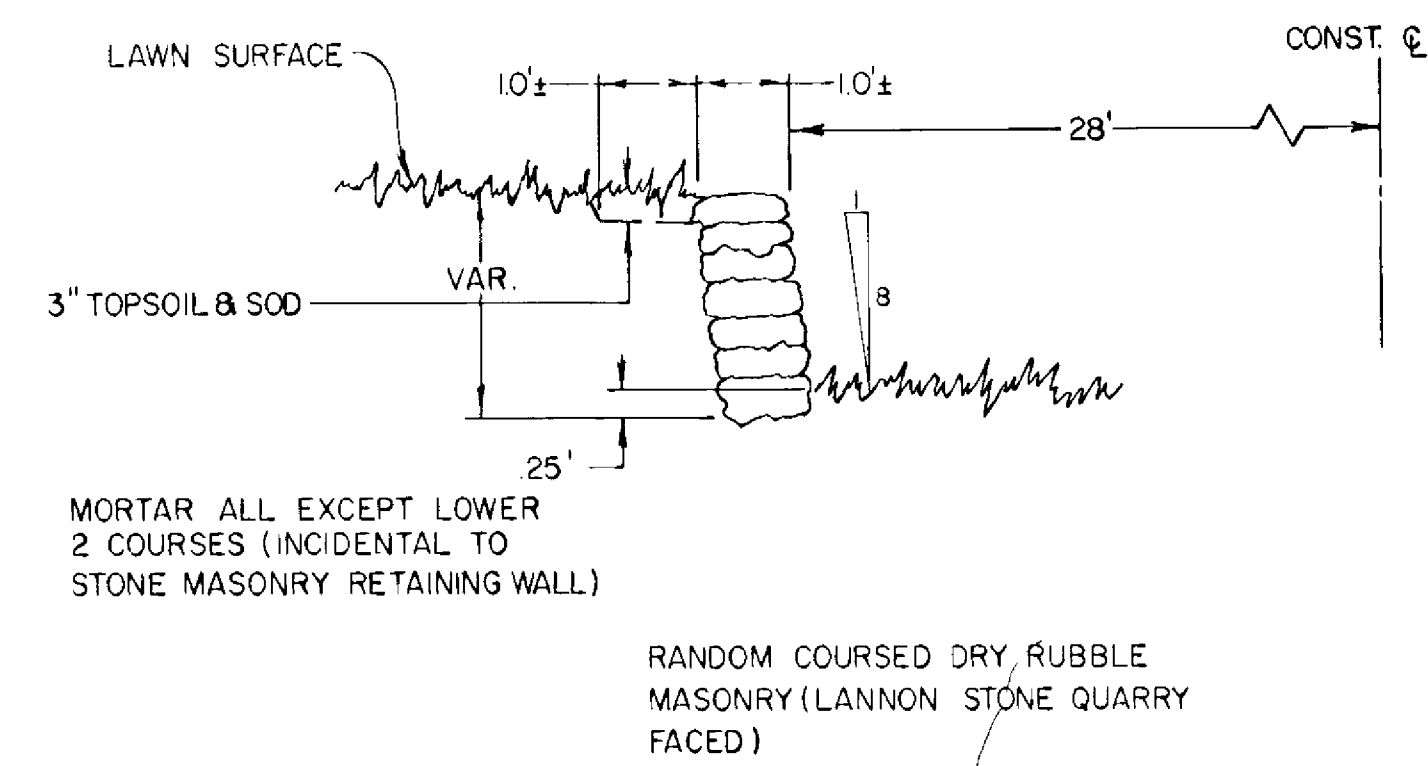


LOCATION

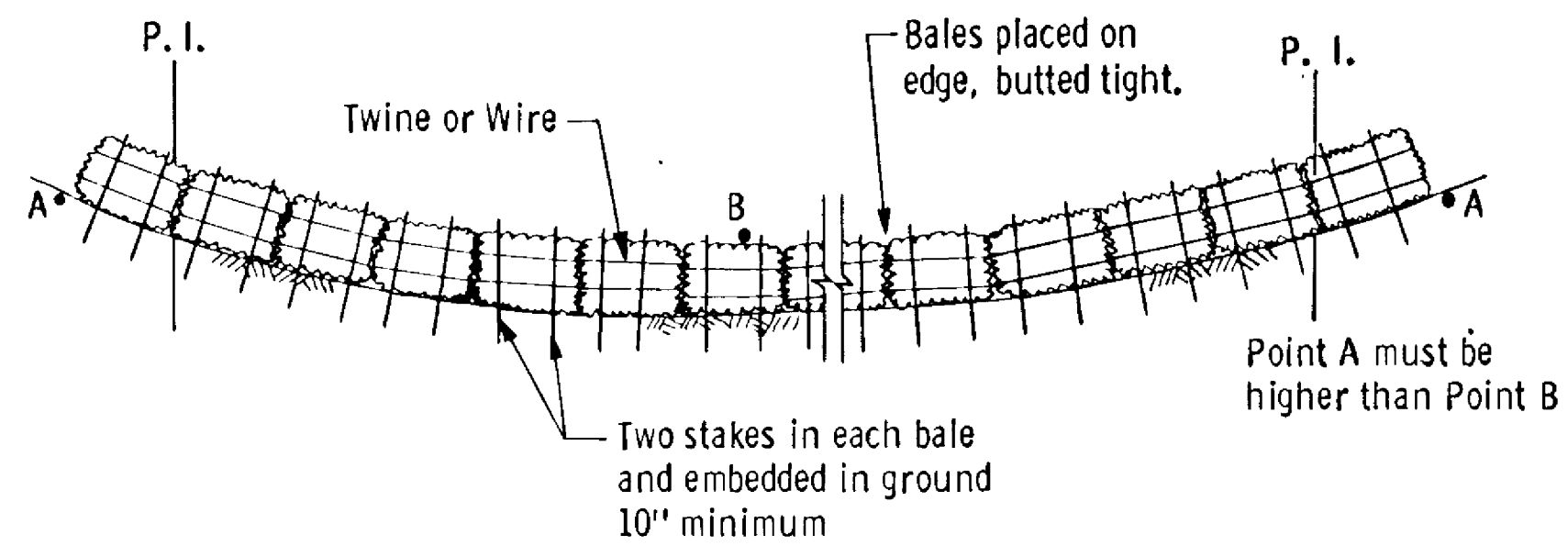
- STA. 15+00 - 17+10
- STA. 33+40 - 36+20
- STA. 37+42 - 42+30
- STA. 46+70 - 48+35
- STA. 56+00 - 65+50
- STA. 68+80 - 70+50
- STA. 75+75 - 79+40
- STA. 82+90 - 83+64
- STA. 88+50 - 90+75
- STA. 96+00 - 104+85

RETAINING WALL DETAIL

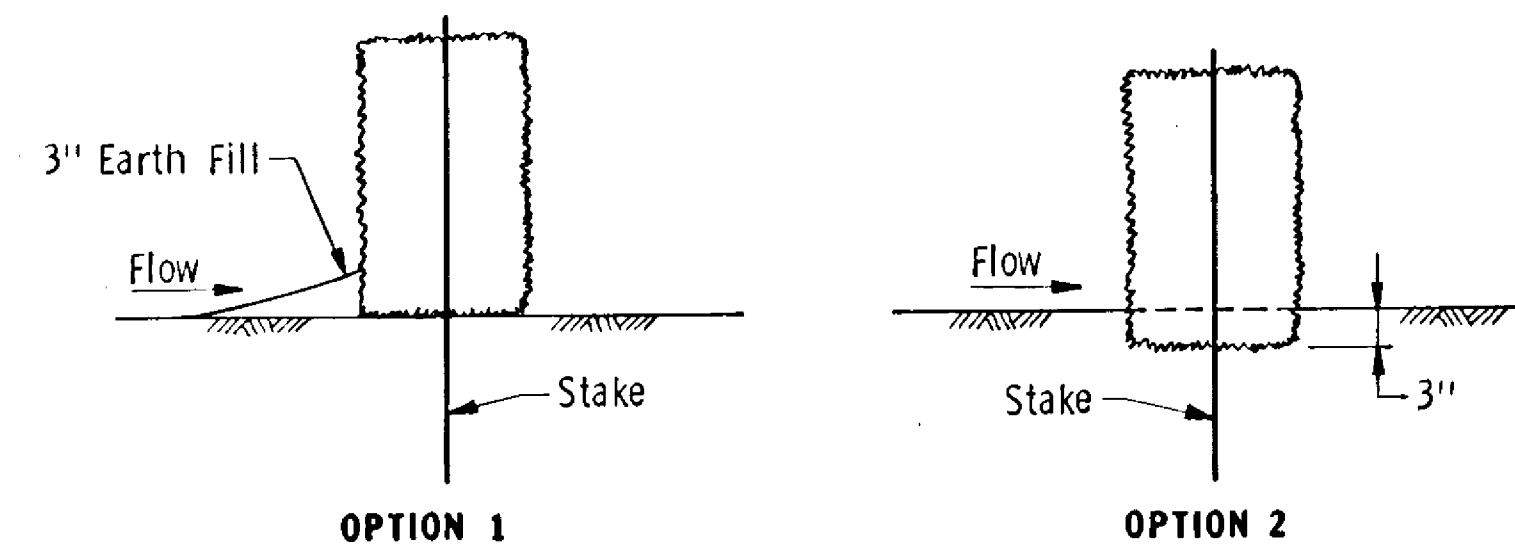
STA. 82+54 TO STA. 85+13 LT.



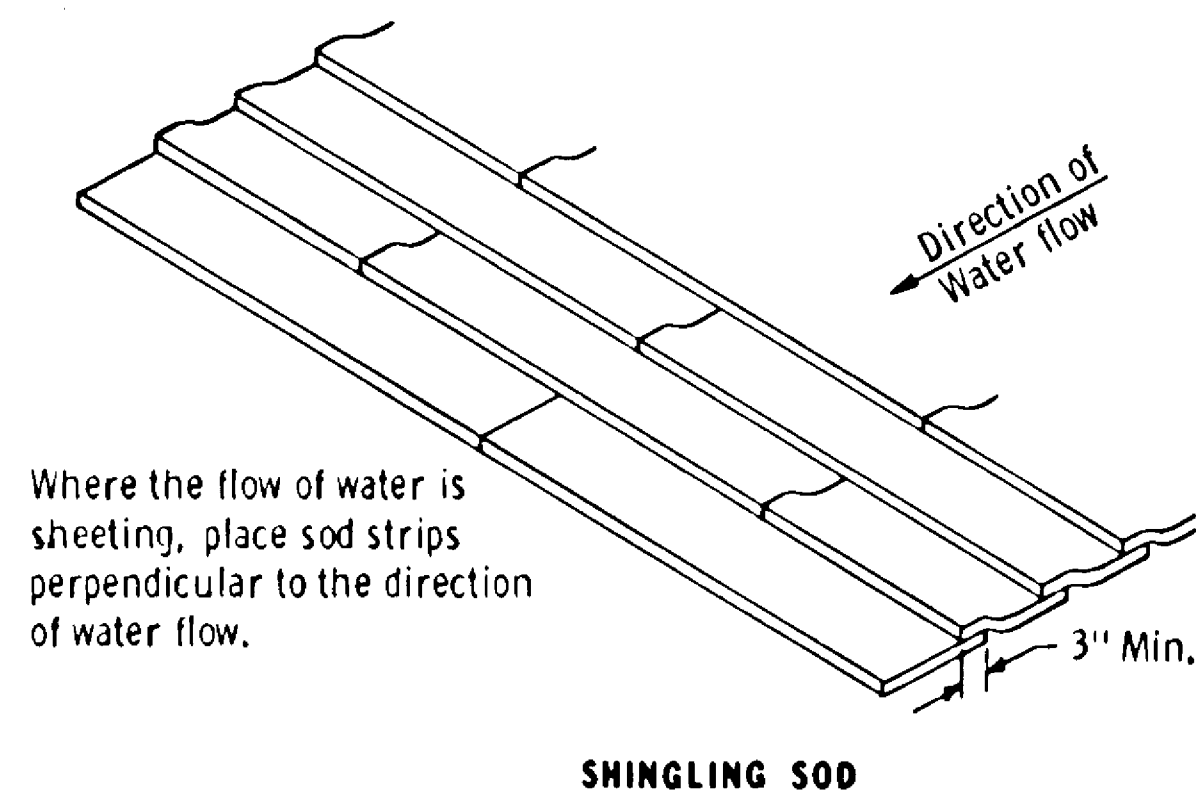
ALL DIMENSIONS NOMINAL



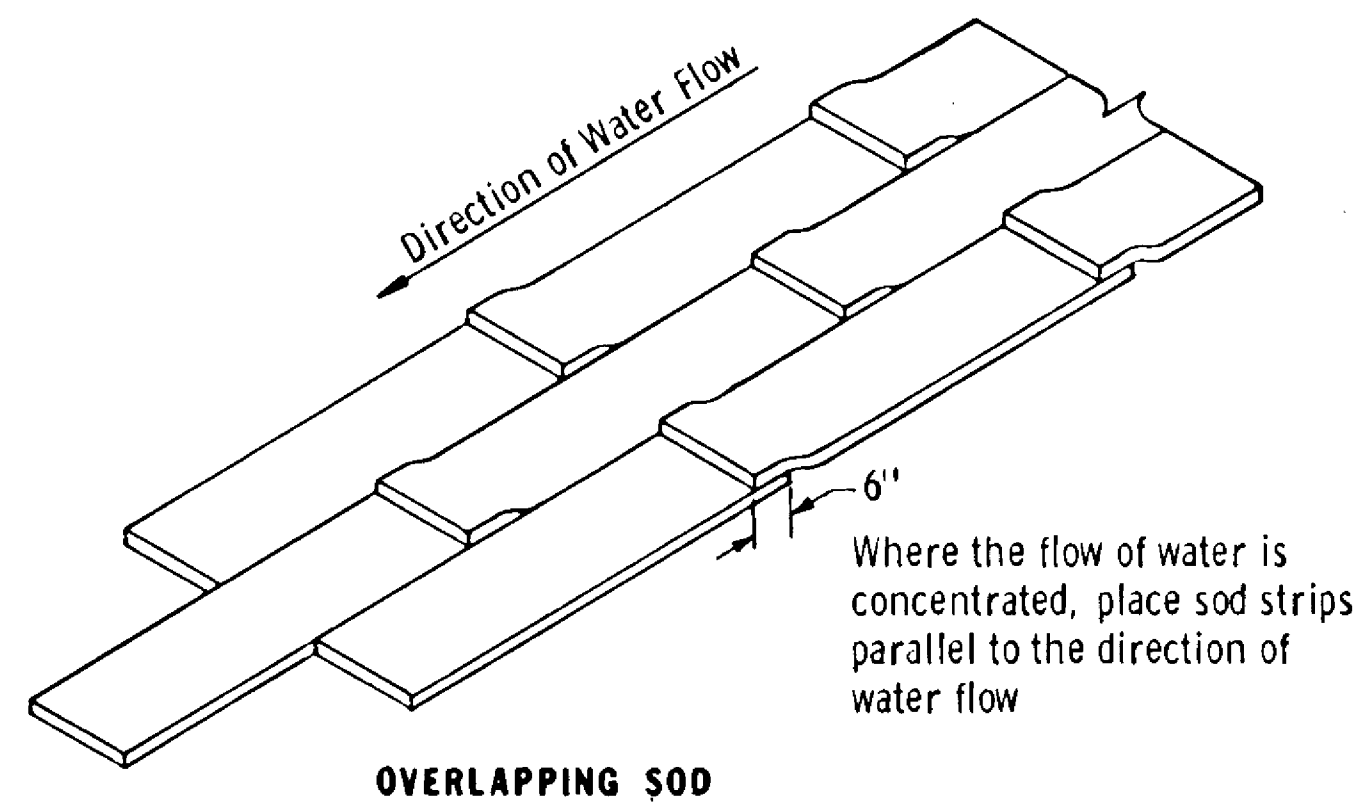
BALE HAY OR STRAW DITCH CHECK



DITCH CHECK SECTIONS

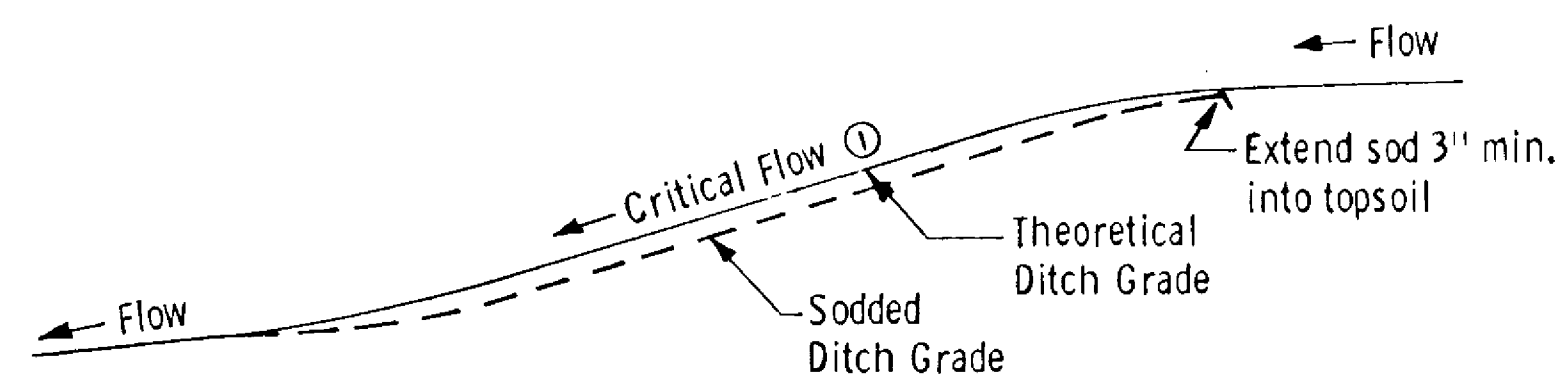


SHINGLING SOD



OVERLAPPING SOD

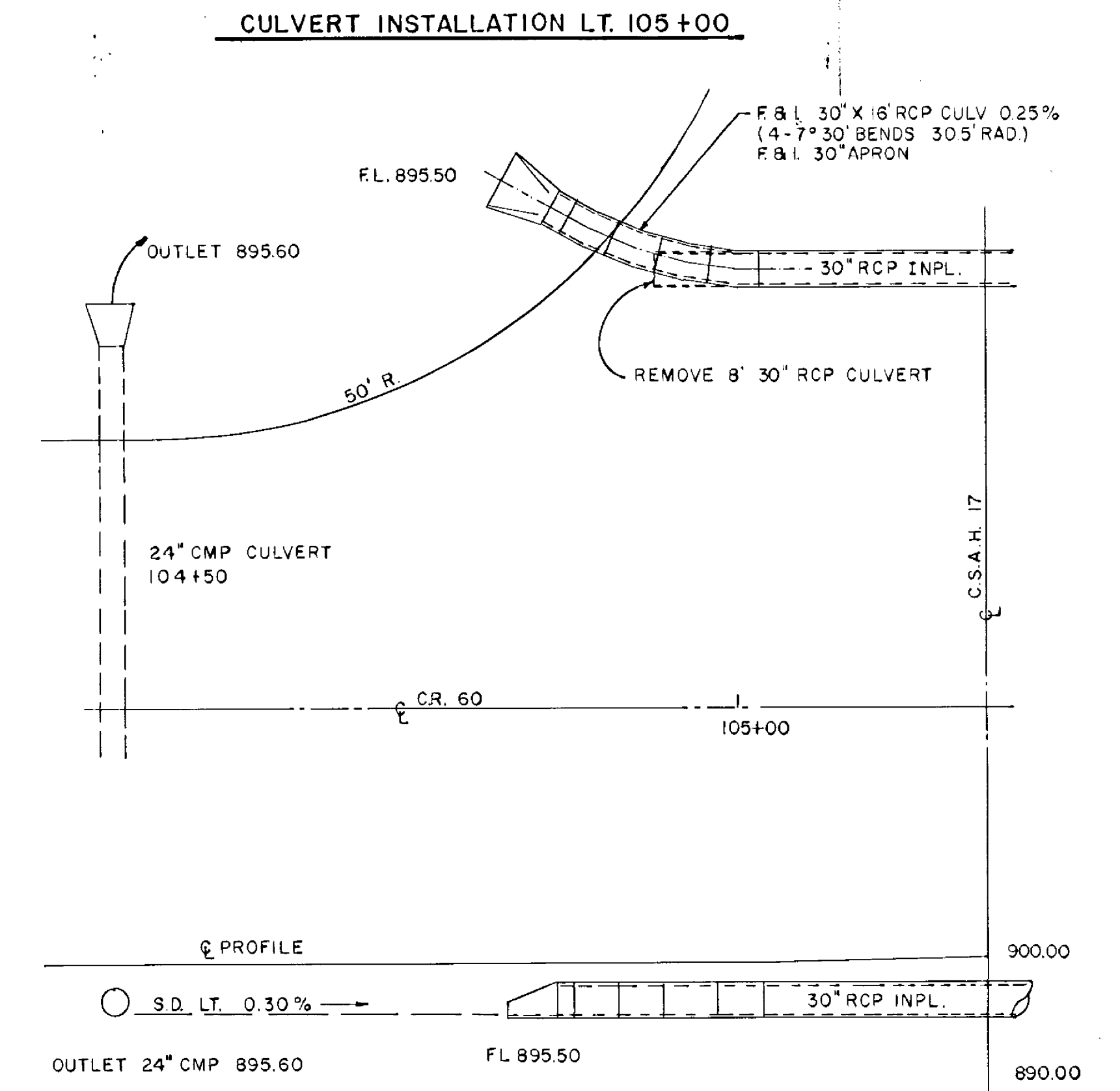
SPECIAL SOD PLACEMENT TECHNIQUES



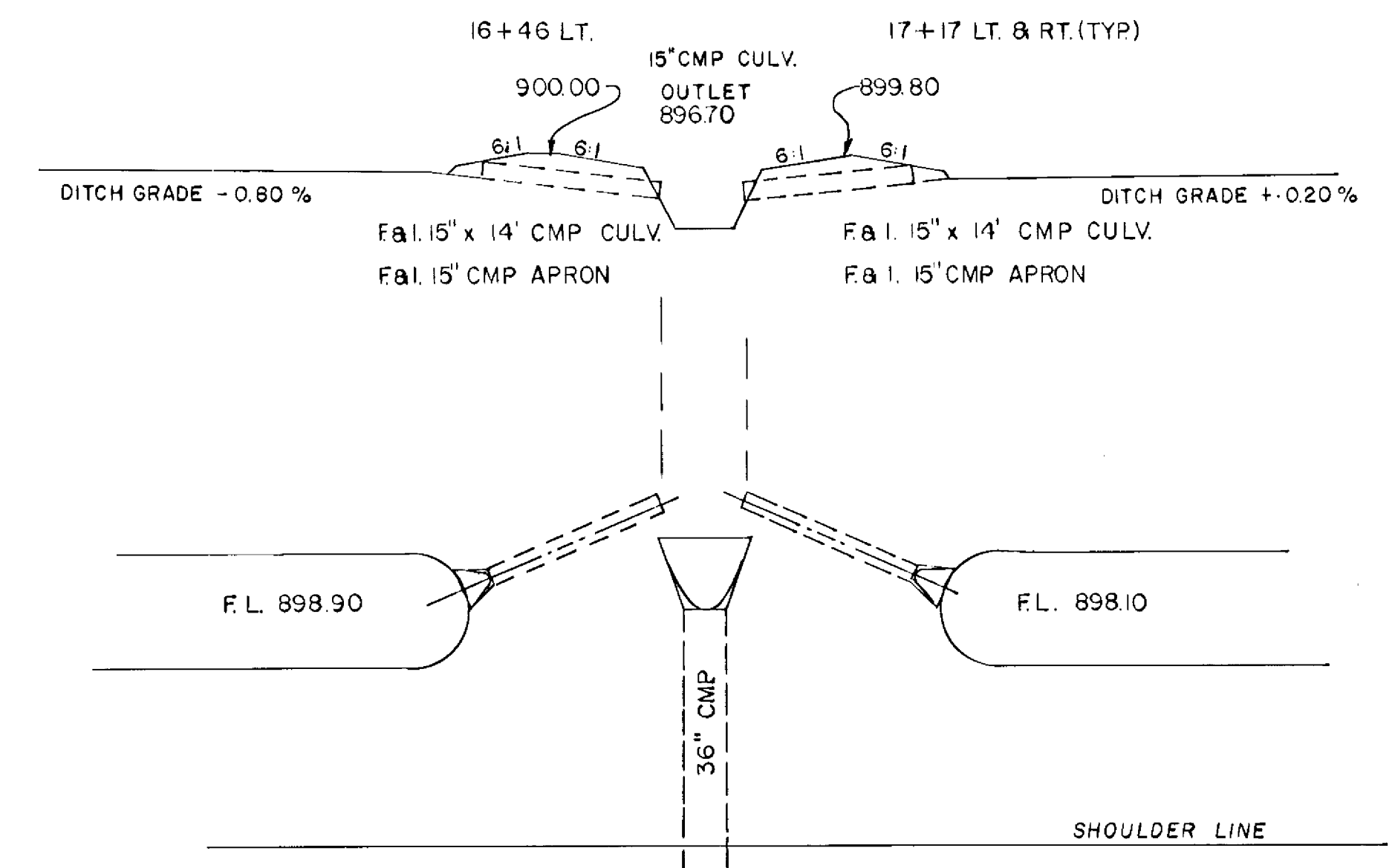
DITCH PROFILE

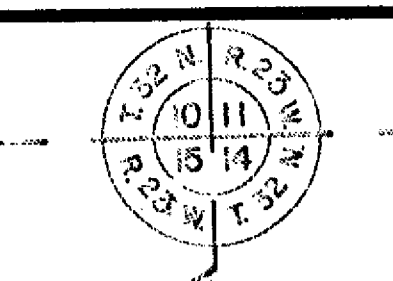
- ① 2.0% GRADE OR GREATER IN A-3 SOIL.
- 2.5% GRADE OR GREATER IN A-6 SOIL.

SODDED DITCH DETAILS



DITCH BLOCK DETAILS

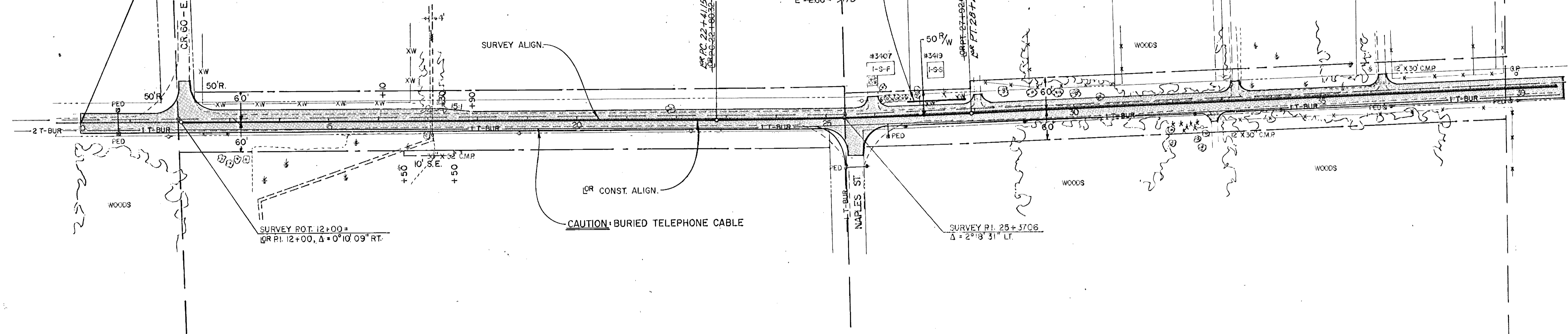




NOTE: SEE SHEET NO. 4 FOR DITCH BLOCK
CONST. DETAILS STA. 16+46 LT. &
STA. 17+17 LT. & RT.

ORPI 25+36.50
 $\Delta = 2^\circ 33' 41''$ RT $2^\circ 56' 21''$ RT
D = 0° 30'
R = 11,459.16'
T = 256.18' $PA 23'$
L = 512.28' $SB 33'$
E = 286' $A 78'$

BEGIN PROJECT CR 84-16-60
RO.T. STA. 10+00

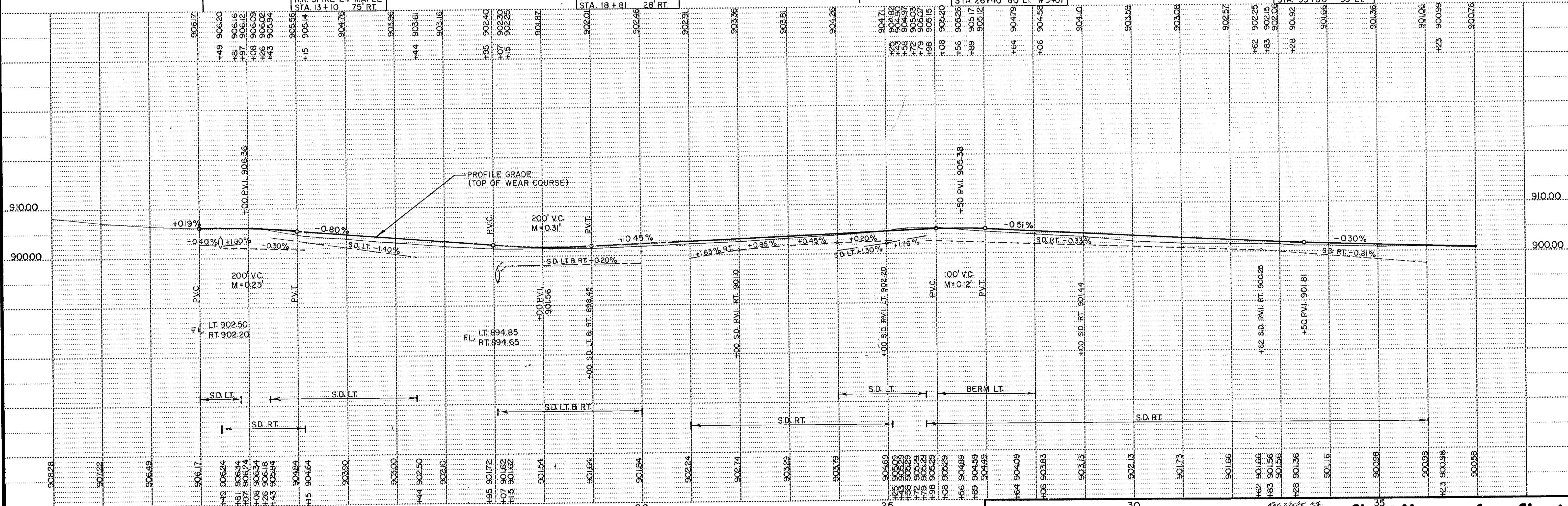


B.M. # 5 ELEV. 901.01
RR SPIKE 24' MAPLE
STA. 13+10 75' RT.

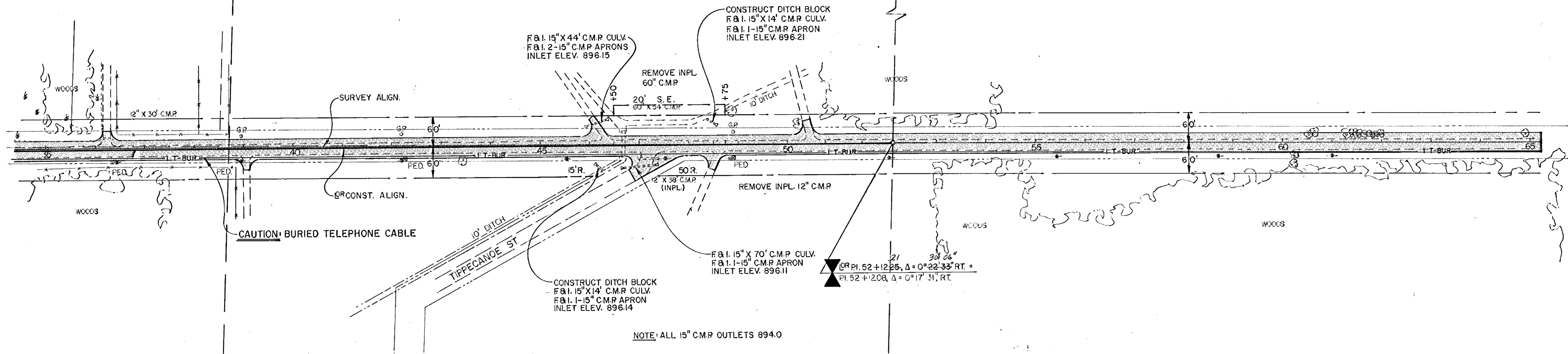
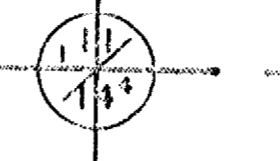
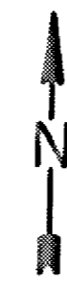
B.M. # 6 ELEV. 901.48
DBL. SPK. PP
STA. 18+81 28' RT.

B.M. # 7 ELEV. 906.02
TOP SE COR CONC SLAB
BY FRONT DOOR
STA. 26+40 80' LT # 3407

B.M. # 8 ELEV. 901.48
DBL. SPK. PP
STA. 33+00 55' LT.



TELETYPE POST - SINGLE PLAN - PROFILE - 1024

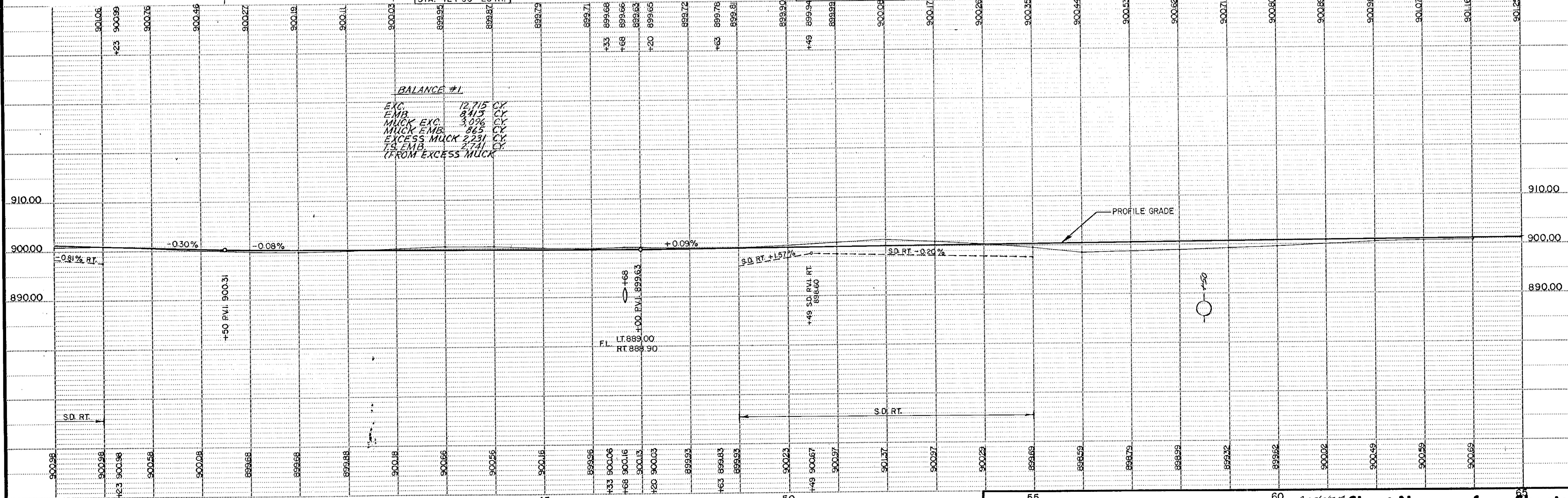


B.M. # 9 ELEV. 899.01
DBL. SPIKE P.P.
STA. 42+50 28' RT.

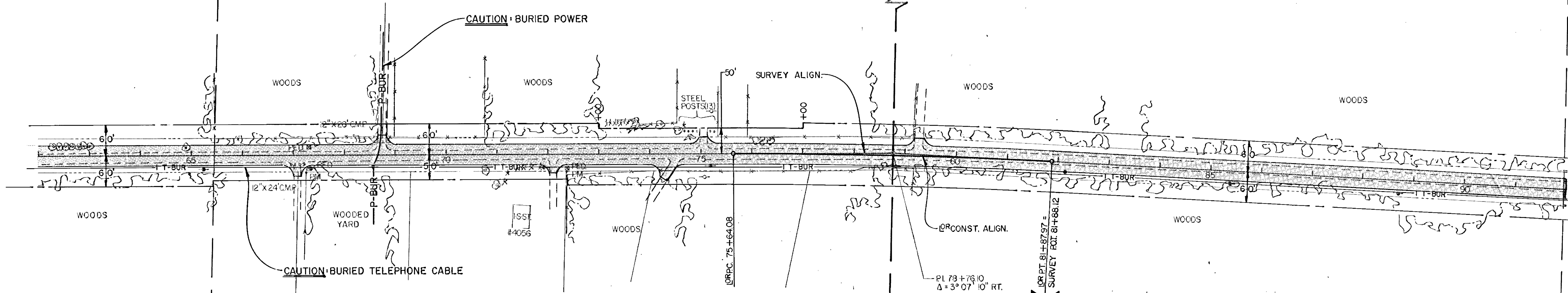
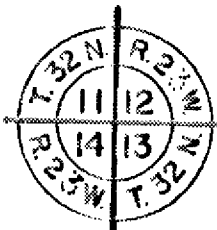
B.M. # 10 ELEV. 903.47
R.R. SPK. DBL. 18" OAK
STA. 50+25 45' LT.

B.M. # 11 ELEV. 898.90
R.R. SPK. 18" ELM
STA. 58+00 125' RT.

BALANCE #1
 EXC. 12,715 CY
 EMB. 8,413 CY
 MUCK EXC. 3,096 CY
 MUCK EMB. 863 CY
 EXCESS MUCK 2,231 CY
 EMB. 2,741 CY
 (FROM EXCESS MUCK)



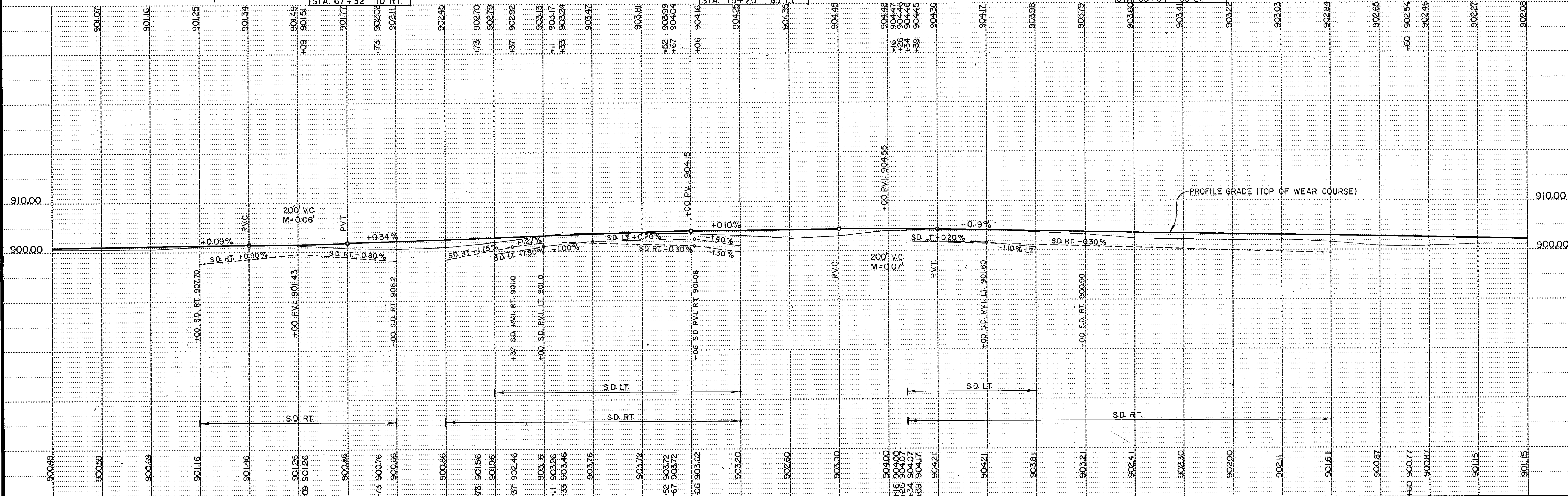
TELETYPE POST - SINGLE PLAN - PROFILE - 122A



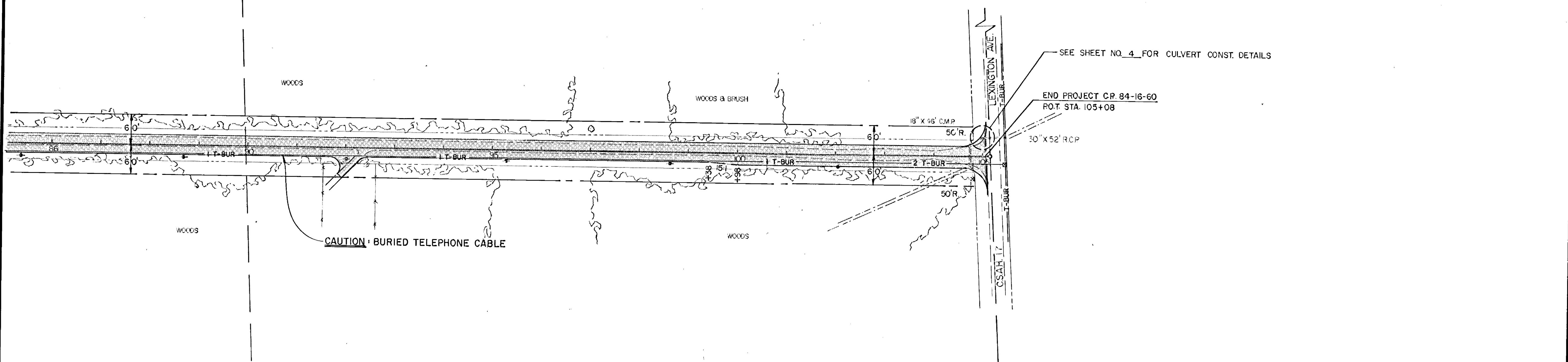
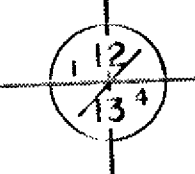
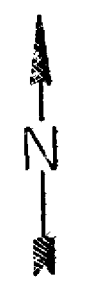
BM #12 ELEV. 901.82
R.R. SPIKE PP
STA. 67+32 110' RT.

BM #13 ELEV. 905.06
R.R. SPIKE PP
STA. 75+20 85' LT.

BM #14 ELEV. 900.92
R.R. SPIKE PP
STA. 83+64 90' LT.



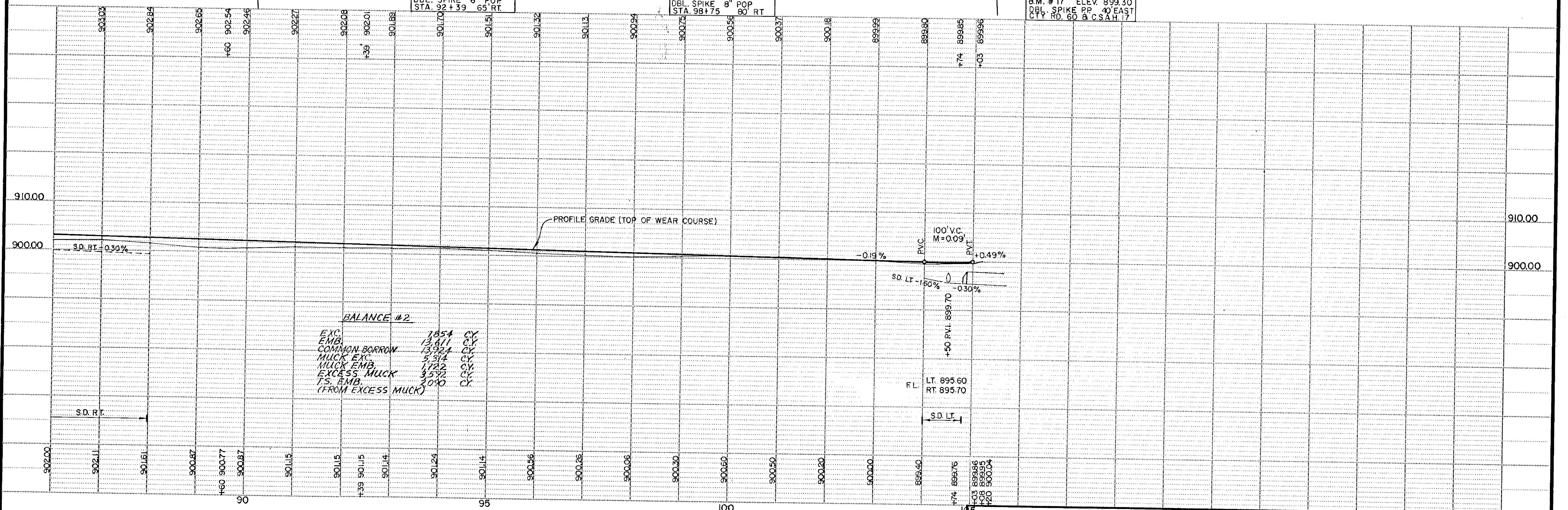
TELEPHONE POST - SINGLE PLAN - PROFILE - 102A



B.M. # 15 ELEV. 901.17
DBL. SPIKE 6" POP
STA. 92+39 65' RT

B.M. # 16 ELEV. 899.26
DBL. SPIKE 6" POP
STA. 98+75 80' RT

B.M. # 17 ELEV. 899.30
DBL. SPIKE PP. 40' EAST
CTY. RD. 60 & CSAH 17



BALANCE #2

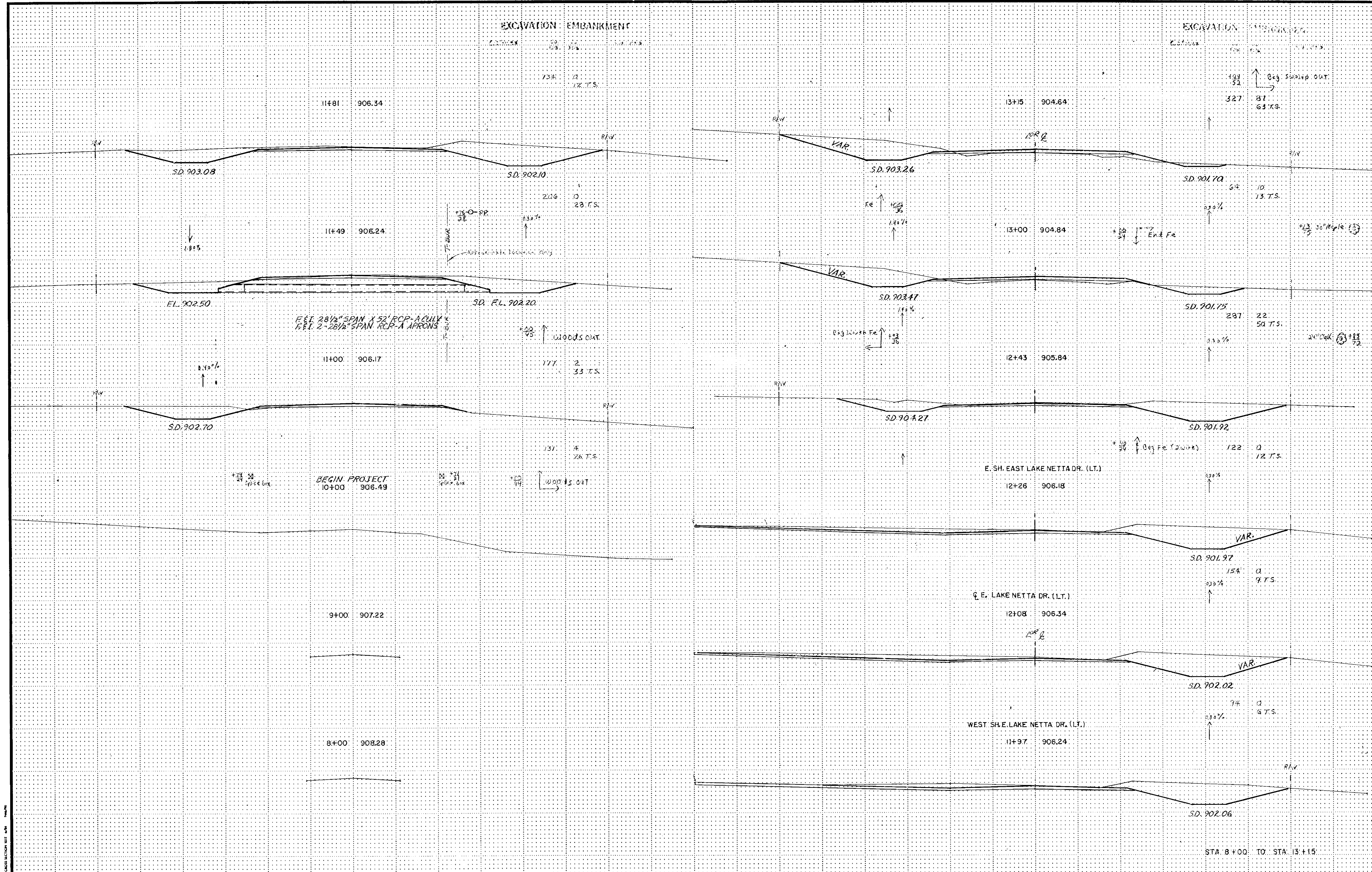
EXC.	1854	CY
EMB.	13,611	CY
COMMON BORROW	13,924	CY
MUCK EXC.	5,314	CY
MUCK EMB.	1,722	CY
EXCESS MUCK	3,592	CY
T.S. EMB.	2,090	CY
(FROM EXCESS MUCK)		

TELETYPE POST - SINGLE PLAN - PROFILE - 102M

HECKED 3/1/64
JW

EXCAVATION EMBANKMENT

EXCAVATION



F.F.T. 28 1/2" SPAN X 52' RCP - A CULV. &
F.F.T. 2 - 28 1/2" SPAN RCP - A APRONS

E. SH. EAST LAKE NETTA DR. (LT.)

E. LAKE NETTA DR. (LT.)

WEST SH. E. LAKE NETTA DR. (LT.)

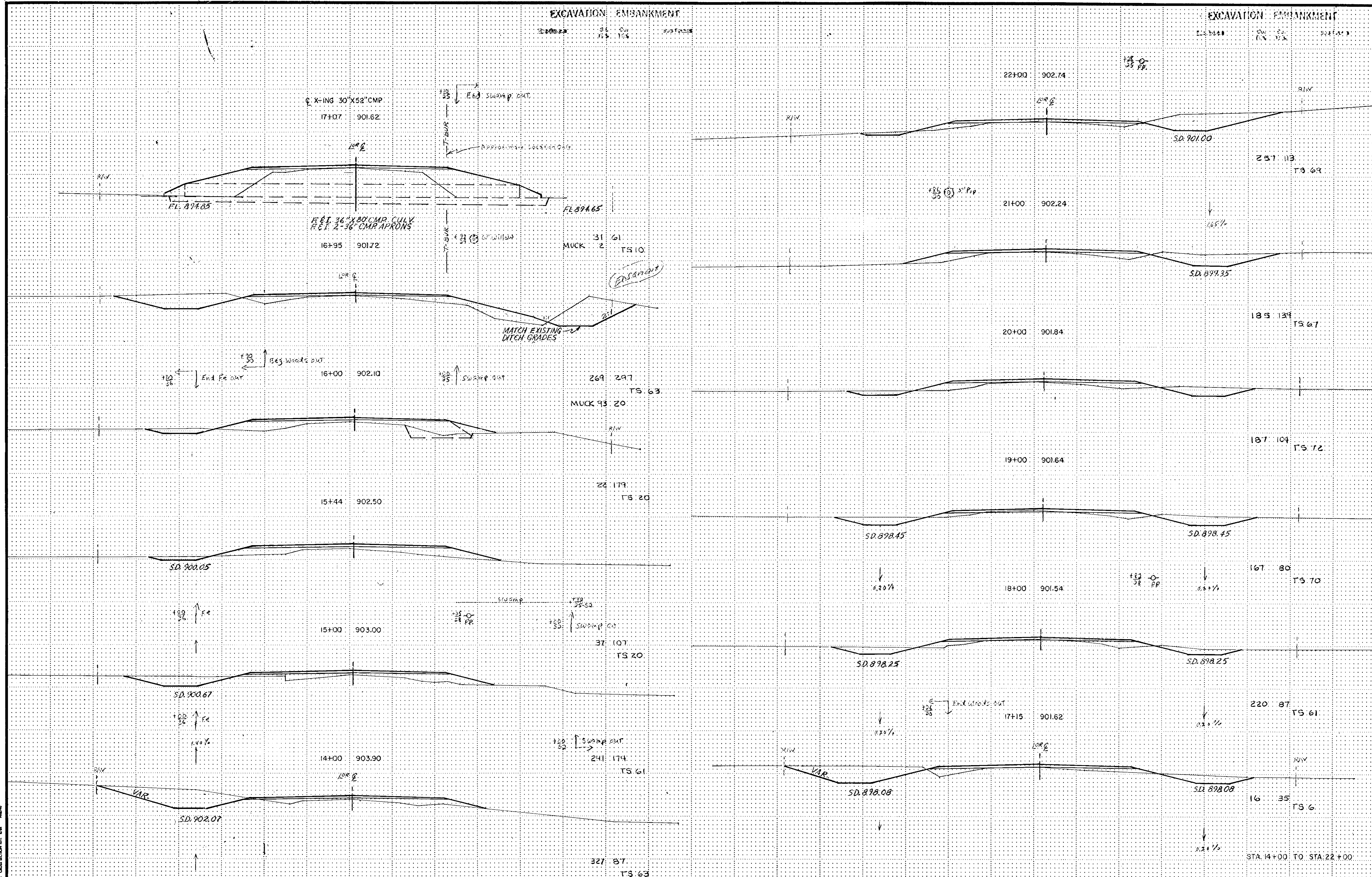
STA. 8+00 TO STA. 13+15

TULSA COUNTY CROSS SECTION DIST. 64-16-60

CHECKED 9/1/84
JW

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT



ILLINOIS POST CROSS SECTION DIST. 674

checked 9/1/60
JA

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT

C NAPLES (RT.)
25+58 905.29

26+89 904.59

W. SH. NAPLES
25+43 905.29

26+56 904.89

25+25 905.09

26+08 905.29

25+00 904.69

C 20' SAND ENT. LT.
25+98 905.29

24+00 903.79

25+79 905.29

23+00 903.29

E. SH. NAPLES (RT.)
25+72 905.29

50' R/W

60' R/W

R/W

SD. 902.96

SD. 902.64

SD. 902.20

SD. 900.70

SD. 902.55

SD. 902.50

SD. 902.30

SD. 901.85

SD. 902.14

SD. 902.25

SD. 902.40

SD. 902.44

SD. 903.50

SD. 903.47

1.76%

1.76%

1.50%

0.22%

0.45%

0.85%

0.33%

0.33%

1.76%

1.76%

VAR.

VAR.

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80' 0"

124' 4"

25' 0"

65' 0"

34' 0"

142' 0"

TS 16

TS 26

TS 5

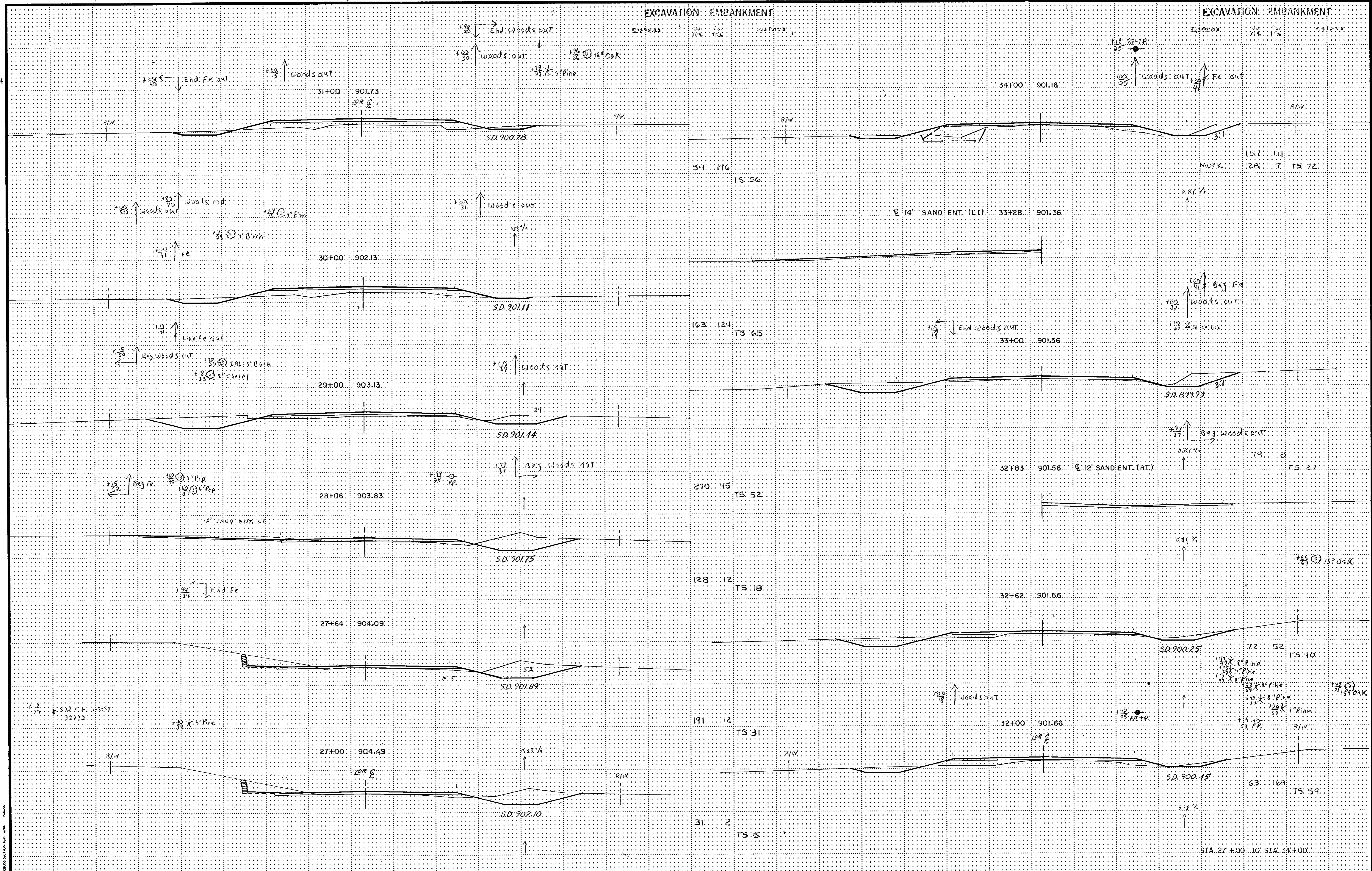
TS 10

TS 4

TS 12

STA. 23+00 TO 26+89

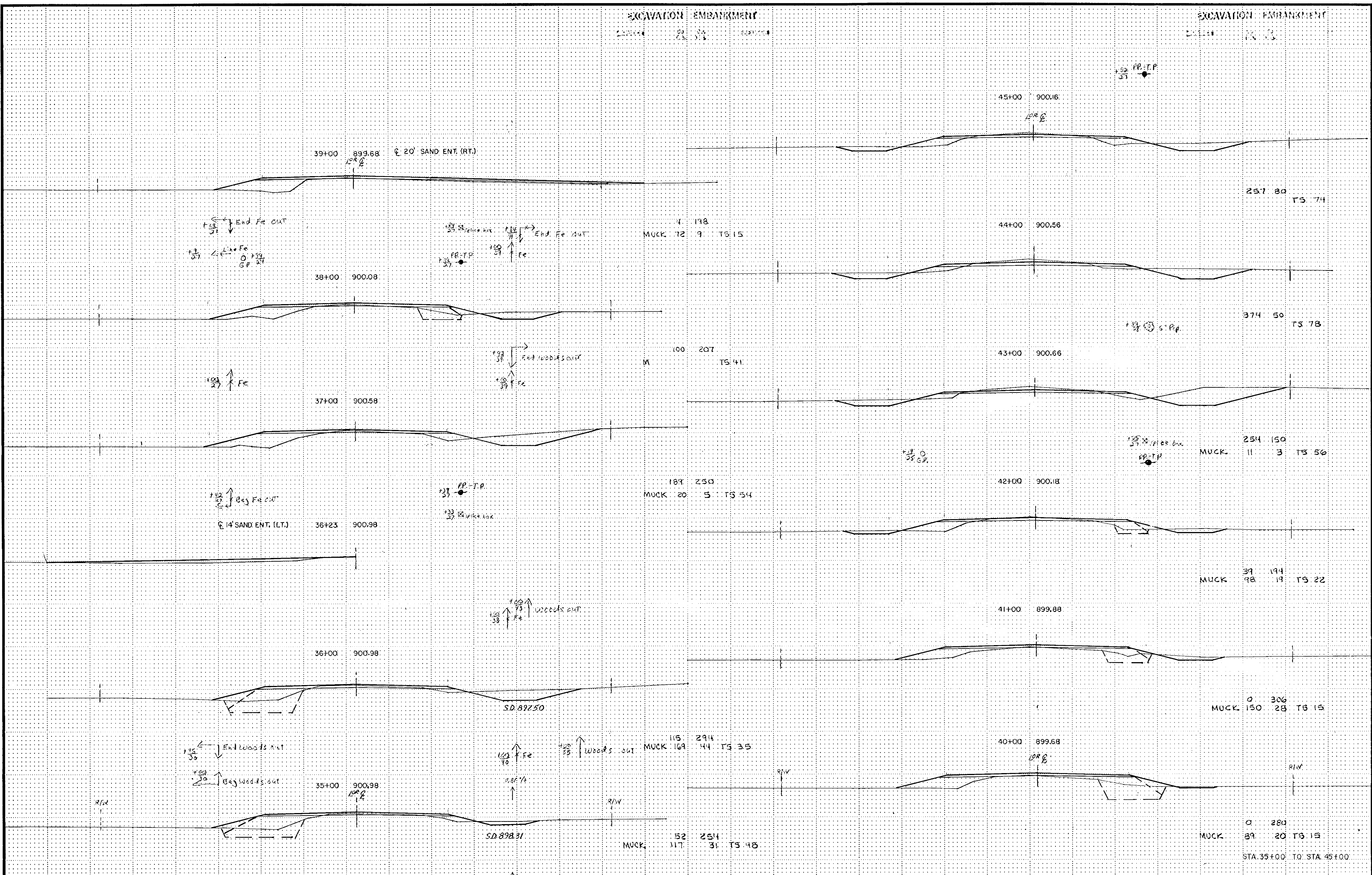
CHECKED 9/24/54
SA



EXC'D 7/2/48
SN

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT



HECKED 5/24/60
JW

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT

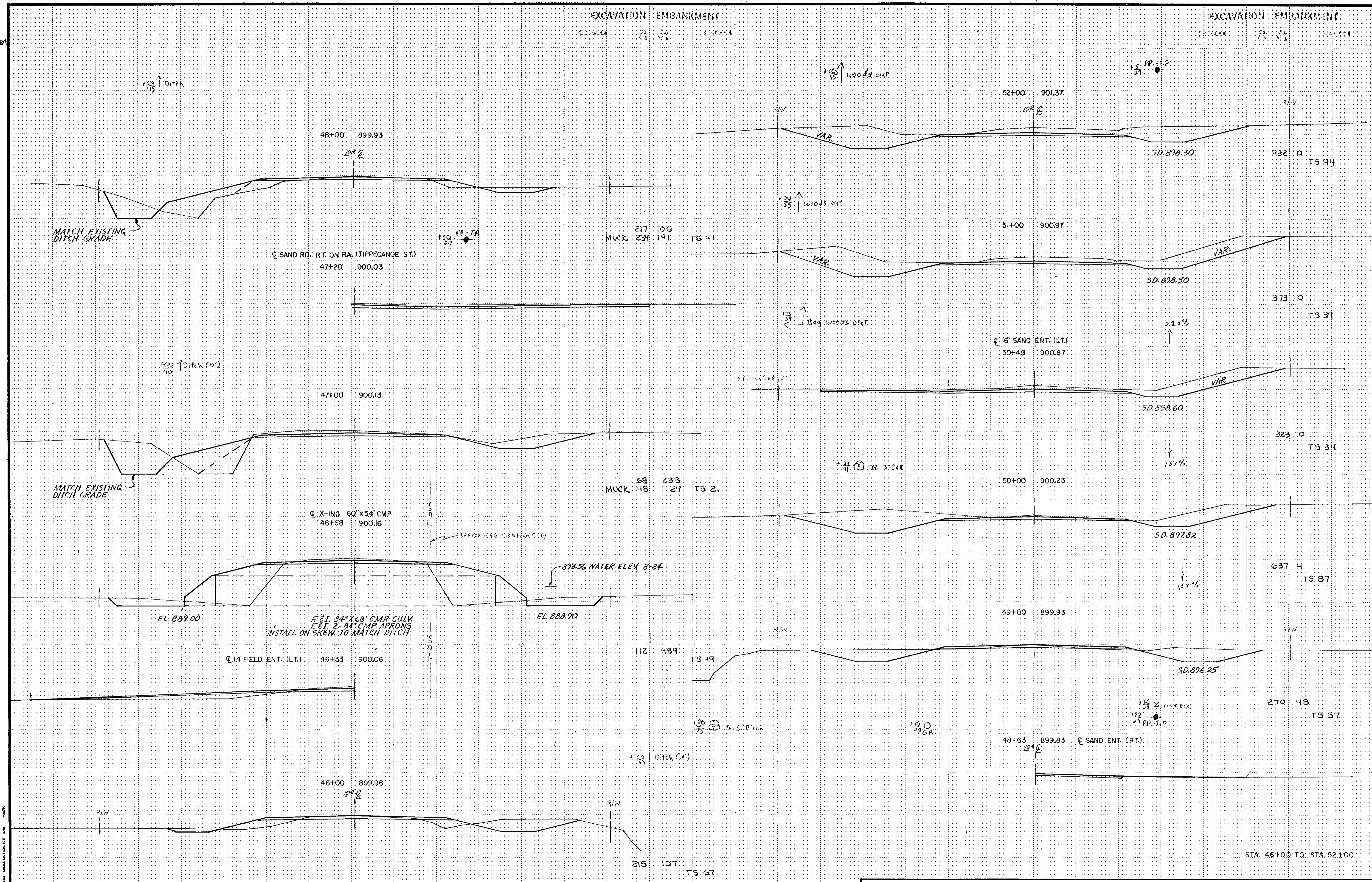


ILLUSTRATION CROSS SECTION UNIT 4-40

CHECKED 2/22/58
JW

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT



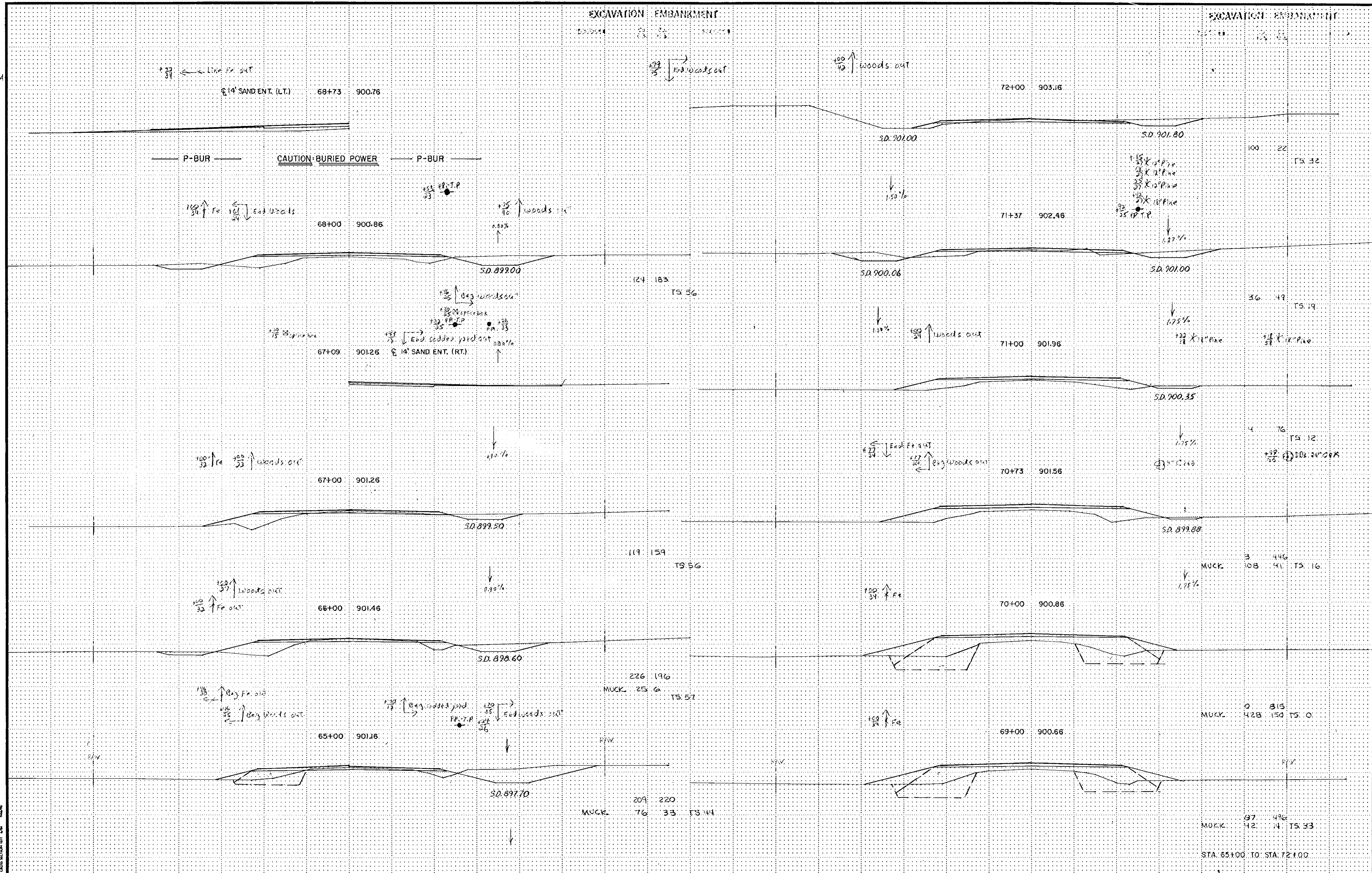
VERTICAL CURVE CROSS SECTION UNIT 44'

2

FIELD 9/24/64
SW

EXCAVATION EMBANKMENT

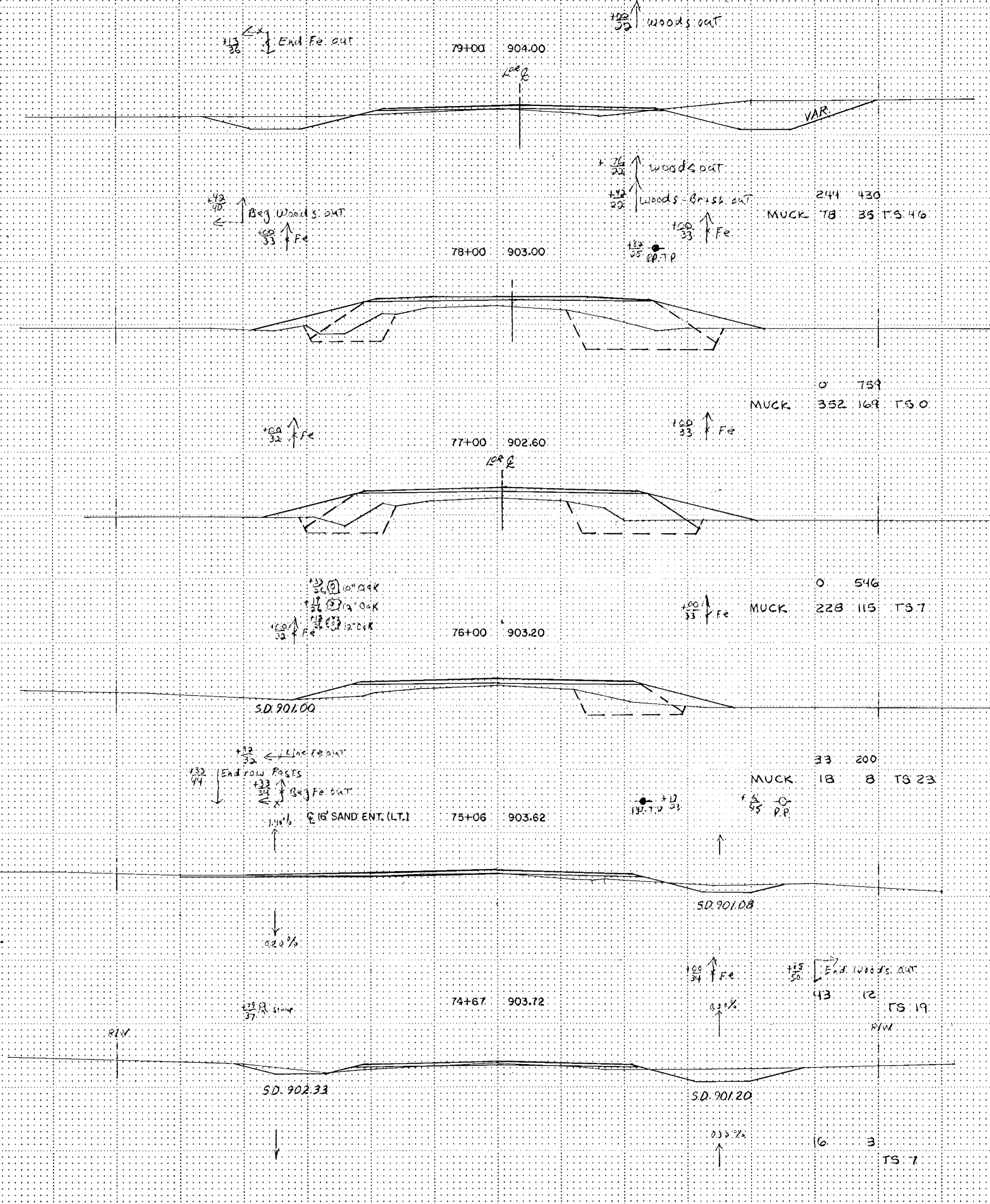
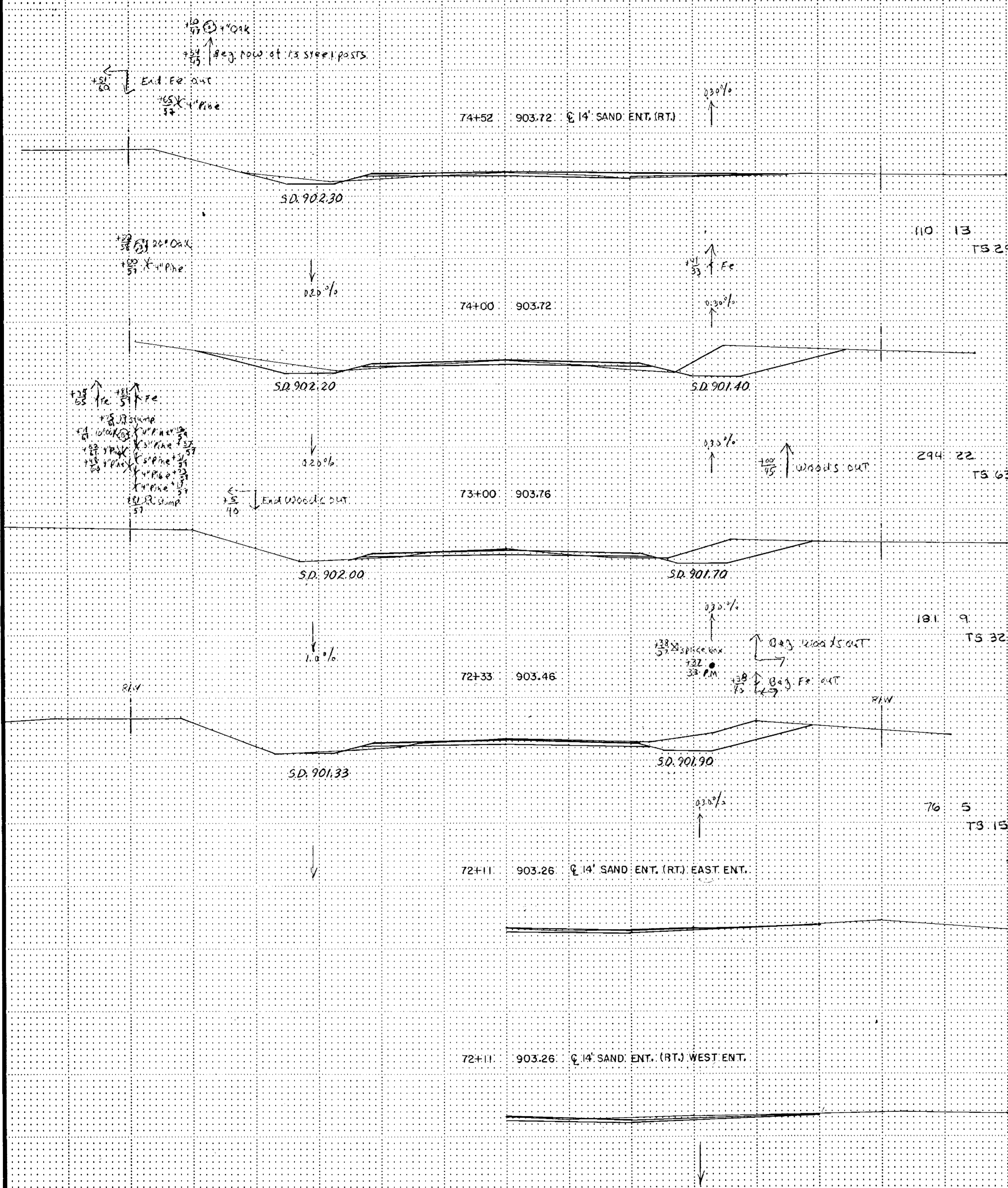
EXCAVATION EMBANKMENT



HECKED 9/20/84
JW

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT

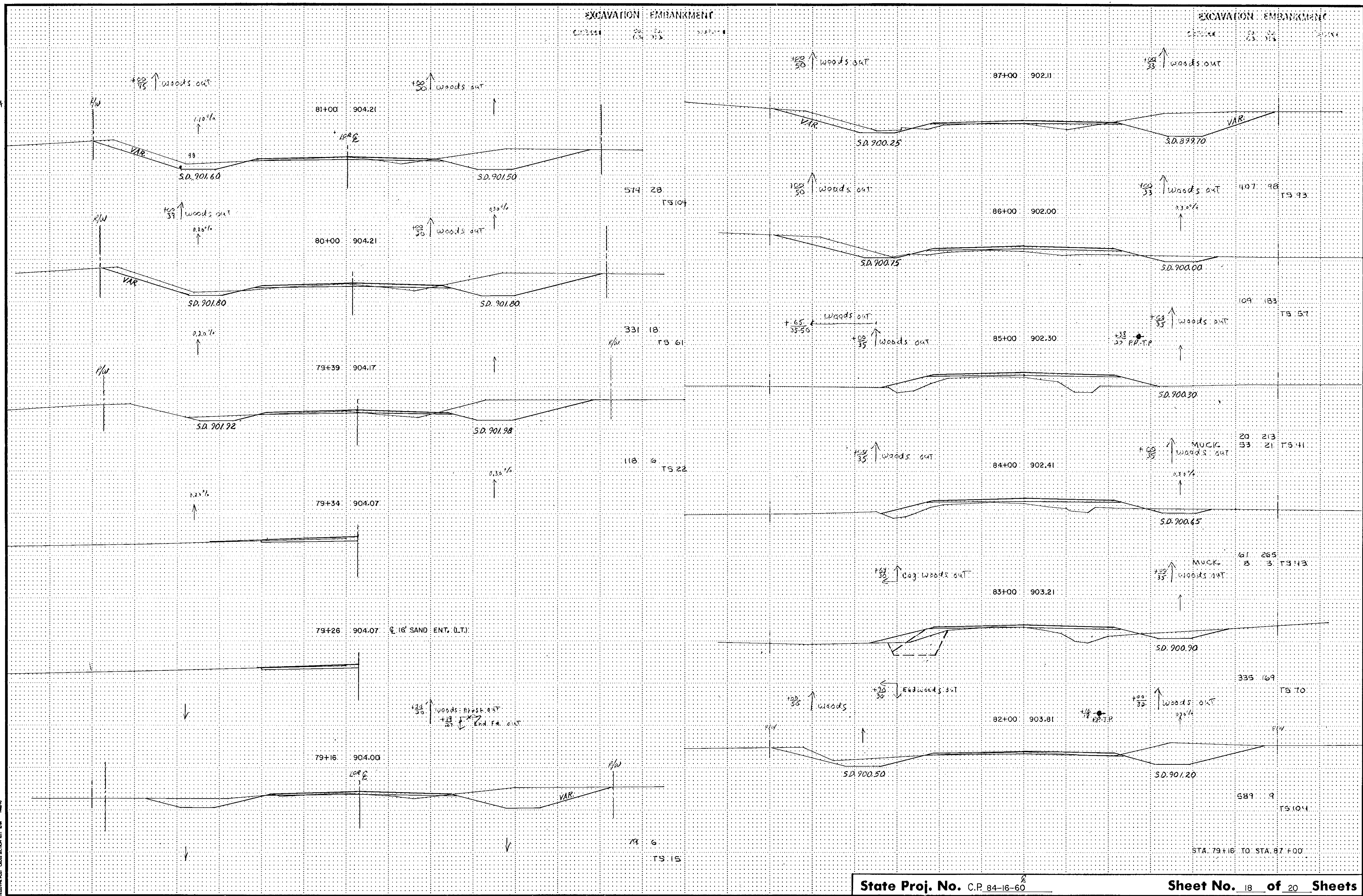


STA. 72+11 TO STA. 79+00

EXCAVATION EMBANKMENT

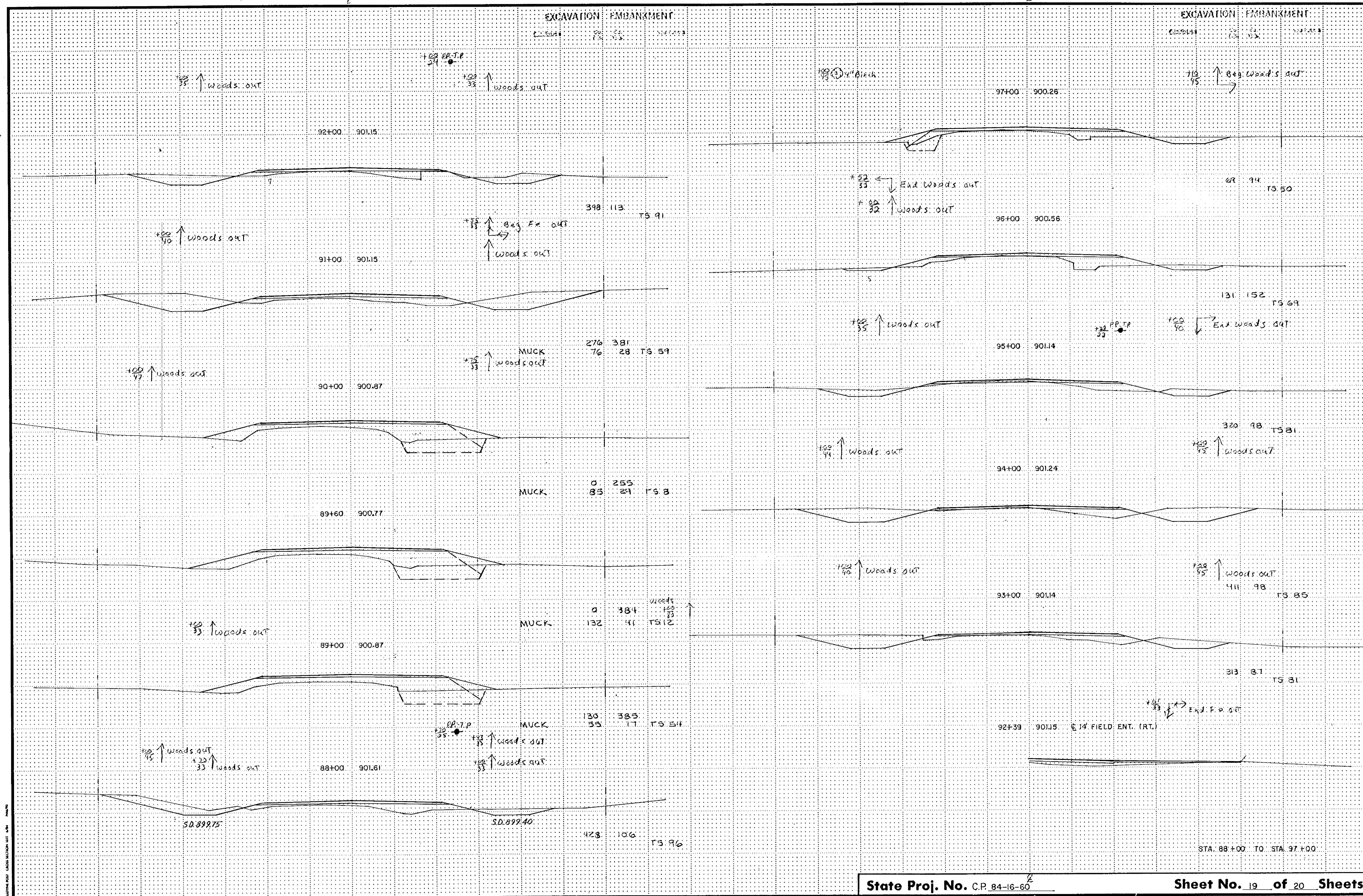
EXCAVATION EMBANKMENT

CHECKED 3/21/94
SW



ILLINOIS ROAD CROSS SECTION UNIT 6-84

CHECKED 9/24/69
SM



CHECKED 3/4/64
JW

EXCAVATION		EMBANKMENT	
22,569	8,410	22,026	2,587

PROJECT TOTALS
 MUCK 22,569 8,410 TS 483

