

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR GRADING

County State Aid Highway No. 5

Between T 4 N 0 47 And CSA H 0 22
A POINT 3558.14' S. B. 244632' E
From OF N.W. COR. SEC 25 T 32 R 25 To N.W. COR. SEC 28 T 33 R 25

GROSS LENGTH 41,499.2 FEET 7.860 MILES
BRIDGES LENGTH 0.0 FEET 0.0 MILES
EXCEPTIONS LENGTH 0.0 FEET 0.0 MILES
NET LENGTH 41,499.29 FEET 7.860 MILES

INDEX OF SHEETS
Sheet No. 1 Title Sheet & Layout Map
No. 2-3 Exp. Quantities & Typical Sec.
No. 4 To 5 Plan & Profile
No. 14 To 60 Cross Sections

SCALE PLAN 1" = 100'
PROFILE HORZ 1" = 100'
VERT 1" = 10'
CROSS SECTIONS 1" = 10'

SOIL FACTOR STA. 100+00 TO 350+00 - 50%
STA. 350+00 TO 514+88 - 30%

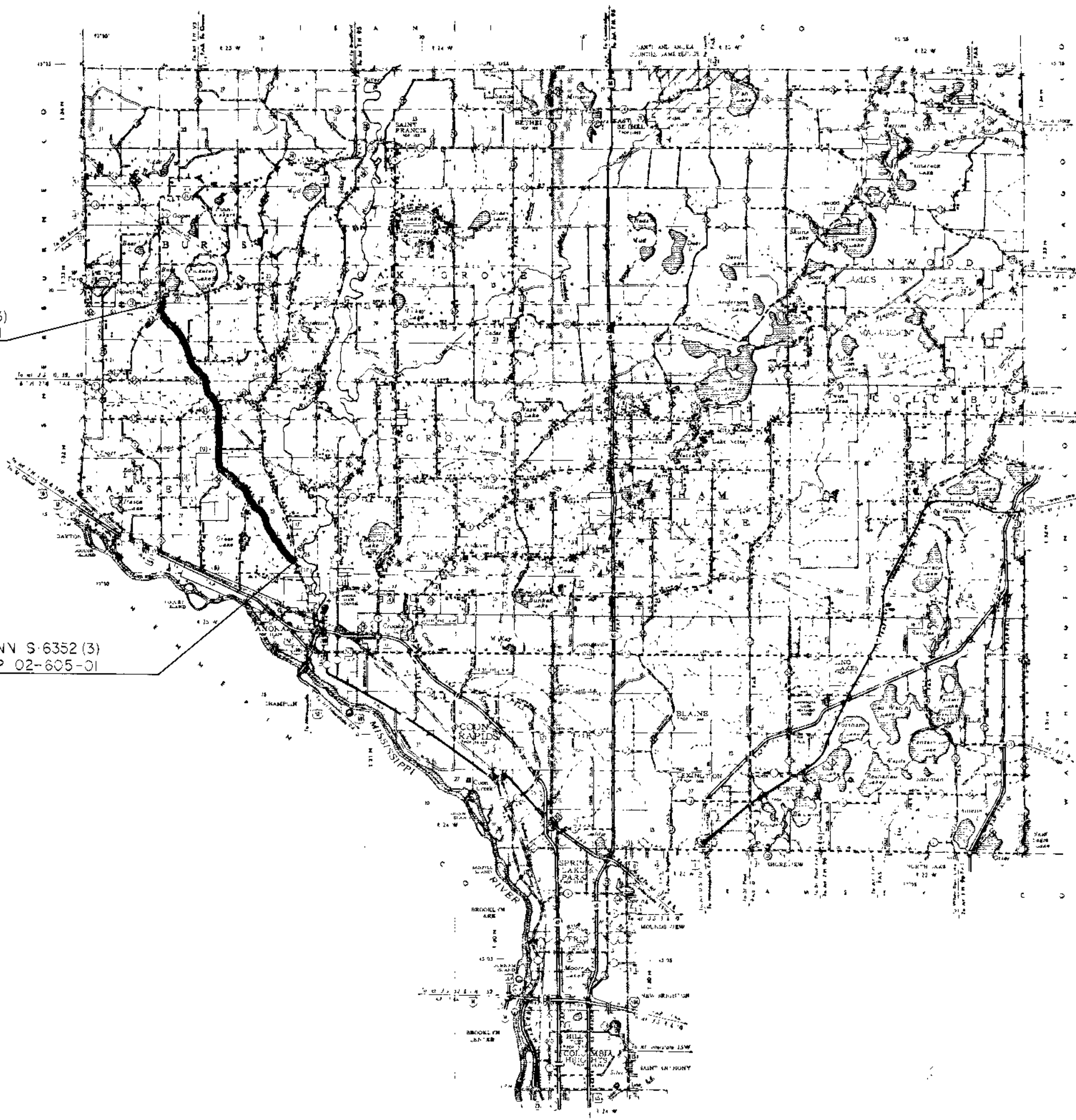
CONVENTIONAL SIGNS

STATE LINE	-----
COUNTY LINE	-----
TOWNSHIP OR RANGE LINE	-----
SECTION LINE	-----
QUARTER LINE	-----
20' CENTER LINE	-----
RIGHT OF WAY LINE	-----
PROPOSED RIGHT OF WAY LINE	-----
PROPERTY LINE (ELEV. AND AREA)	-----
INDICATED PLACED PROPERTY	-----
CORPORATE OR CITY LIMITS	-----
TRUNK HIGHWAY CENTER LINE	-----
RETAINING WALL	-----
RAILROAD	-----
RAILROAD RIGHT OF WAY LINE	-----
RIVER OR CREEK	-----
DRY GULCH	-----
DRAINAGE DITCH	-----
ELECTRIC POWER LINE	-----
TELEPHONE OR TELEGRAM LINE	-----
JOINT TELEPHONE AND POWER	-----
CONDUIT	-----
TELEPHONE CABLE (SERIAL)	-----
TELEPHONE CABLE (UNDESIGNATED)	-----
POWER CABLE (UNDESIGNATED)	-----
SEA WALL	-----
WELL	-----
WELL PILE	-----
SQUARE PILE	-----
BARBED WIRE FENCE	-----
WOODEN WIRE FENCE	-----
CHAIN LINK FENCE	-----
RAILROAD CROSSING BEEL	-----
STONE WALL OR FENCE	-----
WOODEN POST AND RAIL FENCE	-----
HEDGE	-----
WATER PIPE	-----
SEWER PIPE	-----
DRAIN TILE	-----
SPRINKLER	-----
WATER	-----
ORCHARD	-----
GRASS	-----
HURDLES	-----
JACK-BAM	-----
WAGON	-----
TRAIL HYDRANT	-----
STREET LIGHT	-----
RAILROAD CROSSING SIGN	-----
RAILROAD CROSSING BEEL	-----
ELECTRIC WARNING SIGN	-----
ACCESSING GATE	-----
WATER GUARD	-----
OVERPASS (Highway Street)	-----
UNDERPASS (Highway Street)	-----
BRIDGE	-----
BUILDING (See Story Form)	-----
1 FRAME 1 CONCRETE	-----
2 FRAME 1 CONCRETE	-----
3 FRAME 1 CONCRETE	-----
WOODEN SHED	-----
WOODEN SHED	-----
GRAVEL PILE	-----
WIND PILE	-----
BURNING PIT	-----
ROCK QUARRY	-----
REINFORCED CORNER	-----

MINN S 6352 (3)
END PROJECT S.P. 02-605-01
STA. 514+88

EQ LOR PT 210+86.96 ±
POC 210+75.67

MINN S 6352 (3)
BEGIN PROJECT S.P. 02-605-01
STA. 00+00



DESIGN DESIGNATION

ADT (CURRENT YEAR) 614
ADT (FUTURE YEAR) 500
T (HEAVY COMMERCIAL) 200
9 Ton Design
Design Speed 50 MPH
Design Speed not achieved at:
STA. _____ TO STA. _____ MPH
STA. _____ TO STA. _____ MPH

SPECIFICATIONS

THE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION", DATED JAN. 1, 1972 SHALL GOVERN

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES SHALL 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.

E.J. Lundholm
COUNTY ENGINEER DATE 12-29-71

ANOKA COUNTY REG. NO. 2351

RECOMMENDED FOR APPROVAL *C.E. Weichelt* 12-29-71
DISTRICT ENGINEER S.A.

RECOMMENDED FOR APPROVAL *D.F. Brasby* 4-6-72

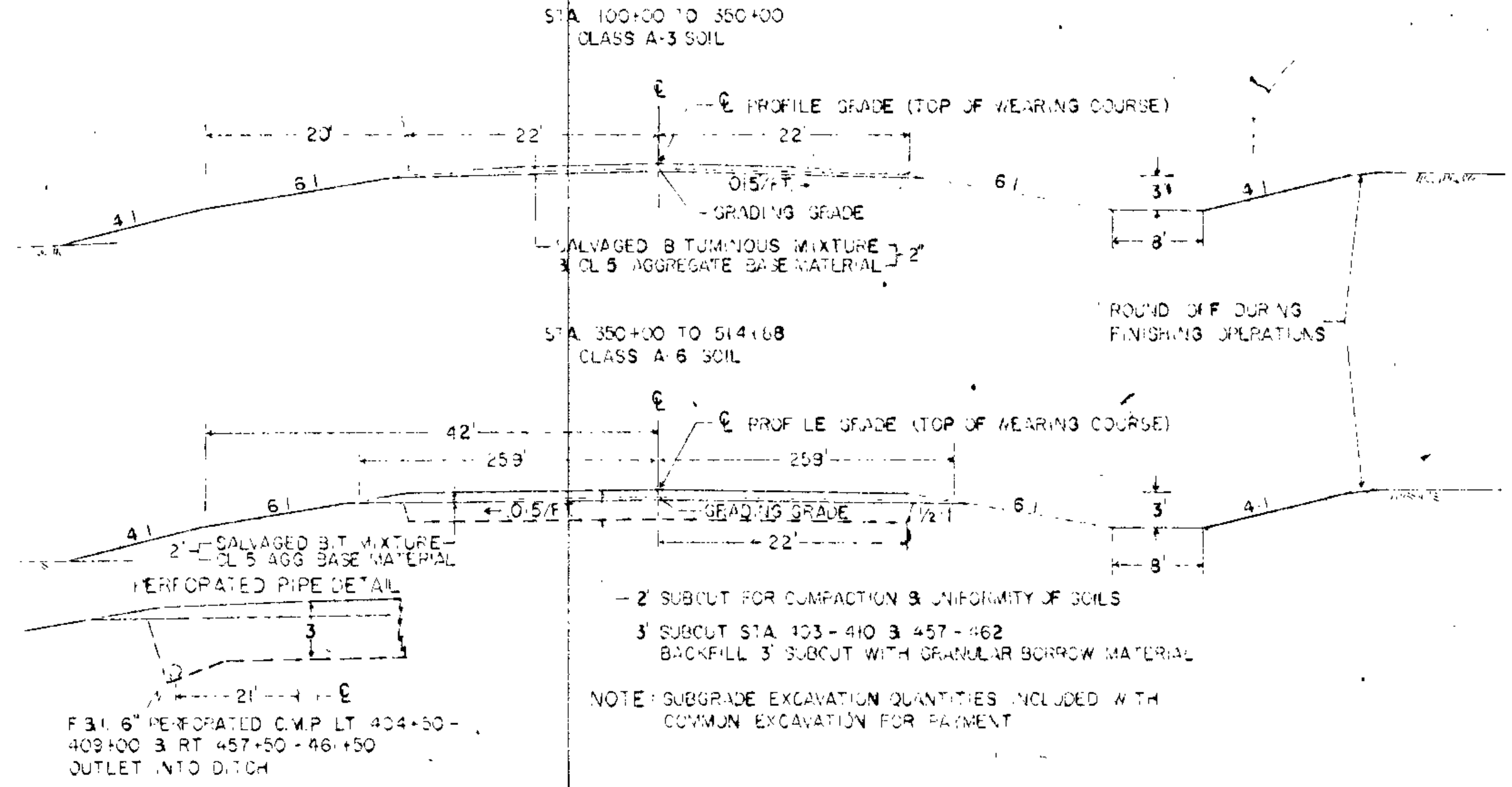
APPROVED *A. M. Gustafson* 4/6/72
STATE AID ENGINEER

Minn. Proj. No. S-6352 (3) County Proj. No. _____

State Proj. No. 02-605-01 S.A.P. _____

Anoka County, Minnesota. Plan No. _____ Sheet 1 of 60 Sheets

TYPICAL GRADING SECTIONS



SPECIAL DETAILS

EXCESS FEAT (MUCK EXCAVATION) SHALL BE USED AS TOP SOIL COVERING AND SPREAD TO A UNIFORM DEPTH OVER THE LENGTH OF THE ENTIRE PROJECT. THIS WORK SHALL BE INCIDENTAL TO MUCK EXCAVATION.

CLASS 5 AGGREGATE BASE MATERIAL SHALL BE USED TO SUPPLEMENT THE SALVAGED BITUMINOUS MIXTURE TO MAKE APPROX. 2" THICKNESS. ENTRANCES AND ROAD APPROACHES SHALL BE COVERED WITH 2" CL. 5 AGGREGATE (APPROX. 1400 TON).

GUARD POSTS (WITHOUT CABLE) SHALL BE REMOVED AS INCIDENTAL TO COMMON EXCAVATION. (APPROX. 85 POSTS).

SALVAGE BITUMINOUS MIXTURE QUANTITIES ARE COMPUTED AS THE VOLUME OF BITUMINOUS IN ITS ORIGINAL POSITION BASED ON AVE. DEPTH OF 4" AND AVE. WIDTH OF 24". ALLOWANCE FOR SALVAGED BITUMINOUS MIXTURE WILL BE MADE ON THE BASIS OF PLANNED QUANTITIES.

THE REMOVAL OF SHEDS RT. 199+80, LT. 203+00 AND LT. 351+85 SHALL BE INCIDENTAL TO CLEARING & GRUBBING OPERATIONS AND NO DIRECT COMPENSATION SHALL BE MADE.

FORM D. 68 - 0-68

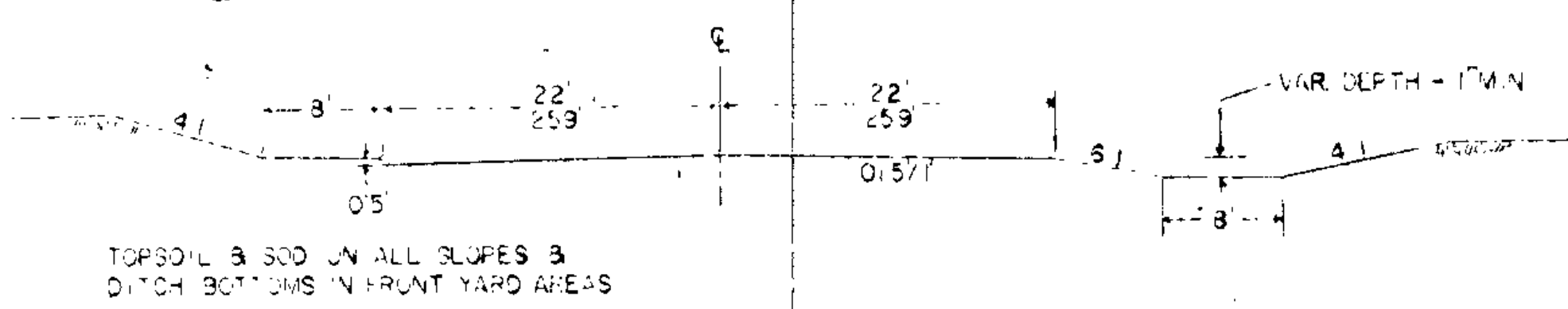
The following Standard Detail plates, approved by the Bureau of Public Roads, shall apply on this project.

PLATE NO.	DESCRIPTION
3000 F	REINFORCED CONCRETE PIPE
3006 A	GASNET JOINT FOR R.C. PIPE
3014 E	REINFORCED CONCRETE PIPE ARCH
3040 C	CORRUGATED METAL PIPE
3100 F	CONCRETE APRON FOR REINFORCED CONC. PIPE
3110 C	CONC. APRON FOR REINFORCED CONC. PIPE ARCH
3114 C	SECTIONAL CONC. APRON FOR REINFORCED CONC. PIPE ARCH
3123 F	METAL APRON FOR C.M. PIPE
3145 A	CONCRETE PIPE JOINT TIES (U-BOLTS)
3000 C	STANDARD BARRICADES
3008 D	CONTRACTOR'S SIGN
3000 B	APPROACHES AND ENTRANCES
3102 C	SODDING AT PIPE CULVERT ENDS

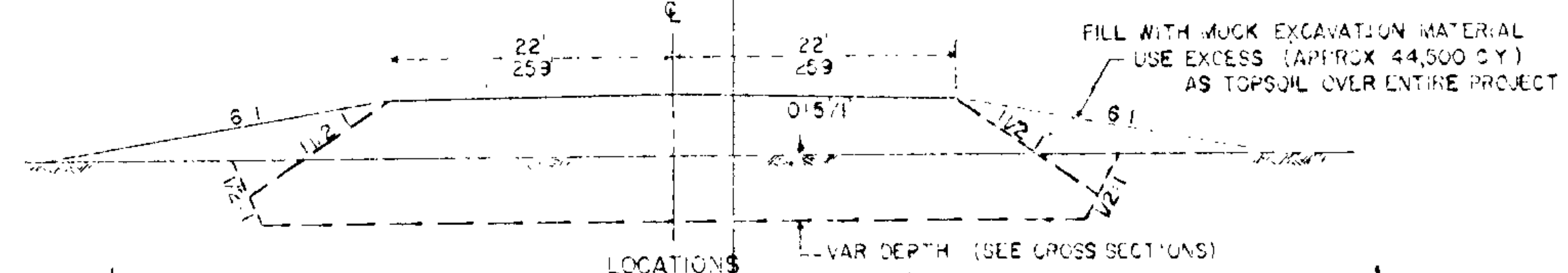
STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES
2031.503	FIELD LABORATORY, TYPE B	EACH	1
2101.501	CLEARING	ACRE	22.6
2101.502	CLEARING	TREE	124
2101.505	GRUBBING	ACRE	13
2101.507	GRUBBING	TREE	134
2104.521	SALVAGE PORTABLE CULVERTS	LIN. FT.	70
2104.501	REMOVE PORTABLE CULVERTS	LIN. FT.	953
2104.521	SALVAGE FENCE	LIN. FT.	25,747
2157.504	INSTALL FENCE	LIN. FT.	23,652
2104.509	REMOVE CONC. OR MASONRY STRUCT.	EACH	1
2105.501	COMMON EXCAVATION	CU. YD.	352,862
2105.505	MUCK EXCAVATION	CU. YD.	72,178
2105.521	GRAVULAR BORROW (E.V.)	CU. YD.	67,720
2105.531	SALVAGED BITUMINOUS MIXTURE (E.V.)	CU. YD.	22,184
2123.503	MOTOR GRADER	HR	40
2123.509	DOZER	HR	80
2130.501	WATER	MG. GALLONS	600
2211.501	AGGREGATE BASE CL. V	TON	6,000
2442.501	REMOVE OLD BRIDGE	LUMP SUM	1
2451.507	GRANULAR BEDDING (C.V.)	CU. YD.	1,104
2501.501	CULVERT EXCAVATION CL. I	CU. YD.	1,809
2501.511	15" C.M. PIPE CULVERT	LIN. FT.	2,772
2501.511	18" C.M. PIPE CULVERT	LIN. FT.	772
2501.511	24" R.C. PIPE CULVERT CL. II	LIN. FT.	1,062
2501.511	24" R.C. PIPE CULVERT CL. III	LIN. FT.	262
2501.511	24" R.C. PIPE CULVERT CL. IV	LIN. FT.	120
2501.511	36" R.C. PIPE CULVERT CL. IV	LIN. FT.	138
2501.515	15" C.M. PIPE APRONS	EACH	164
2501.515	18" C.M. PIPE APRONS	EACH	30
2501.515	24" R.C. PIPE APRONS	EACH	32
2501.515	36" R.C. PIPE APRONS	EACH	2
2501.521	102" SPAN R.C. PIPE ARCH CULV. CL. II	LIN. FT.	86
2501.521	138" SPAN R.C. PIPE ARCH CULV. CL. II	LIN. FT.	84
2501.525	102" SPAN R.C. PIPE ARCH APRONS	EACH	2
2501.525	138" SPAN R.C. PIPE ARCH APRONS	EACH	2
2501.571	INSTALL 15" C.M. PIPE CULVERT	LIN. FT.	30
2501.571	INSTALL 18" C.M. PIPE CULVERT	LIN. FT.	40
2502.541	6" PERFORATED C.M. PIPE DRAIN	LIN. FT.	550
2575.501	ROADSIDE SEEDING	ACRE	70
2575.502	SEED MIXTURE NO. 5	POUND	3500
2575.505	SODDING	SQ. YD.	26,874
2575.511	MULCH MATERIAL, TYPE 5	TON	53
2575.531	COMM. FERTILIZER ANALYSIS 0-0-10	TON	175

SPECIAL DITCH SECTION



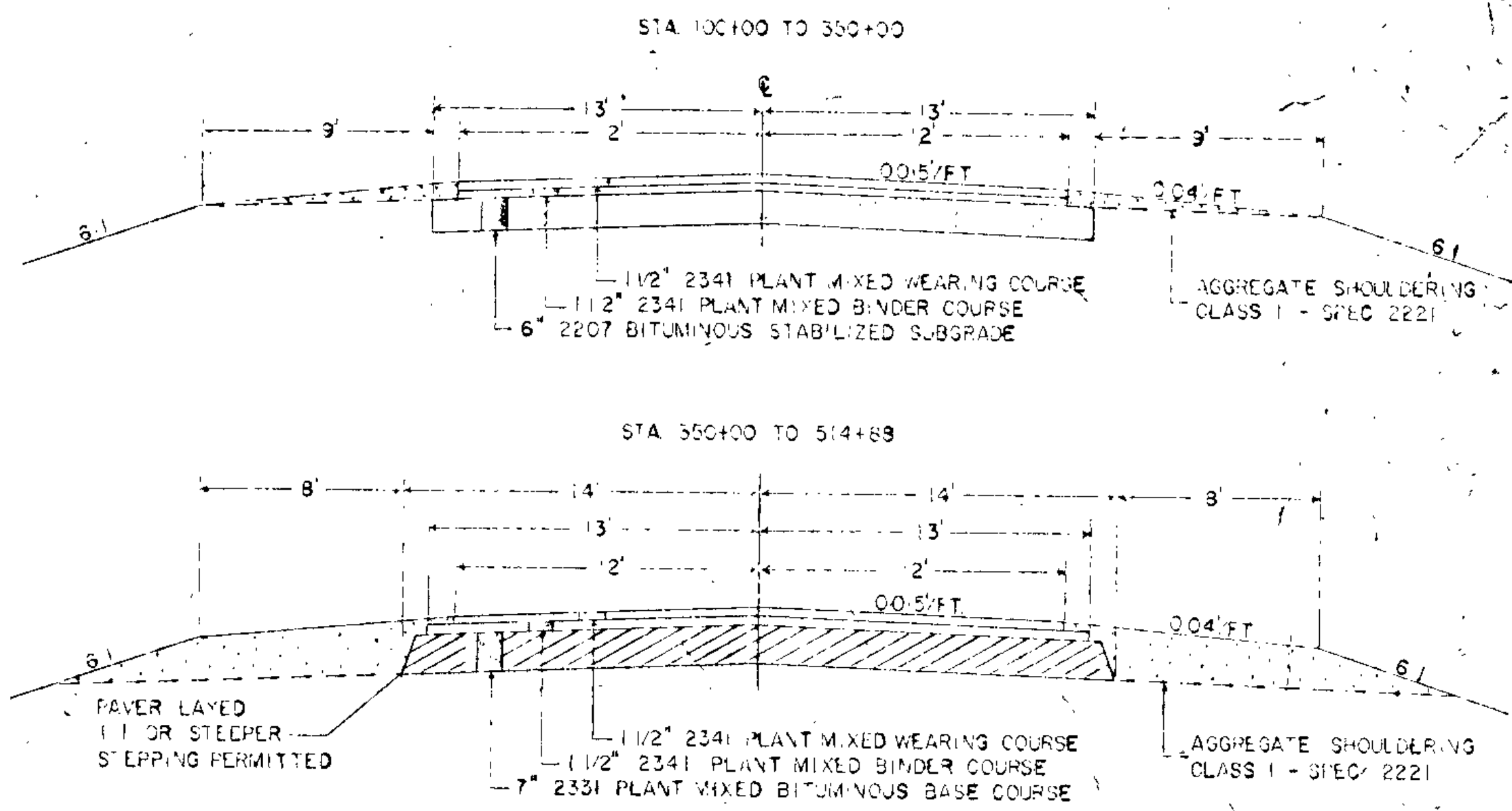
MUCK EXCAVATION

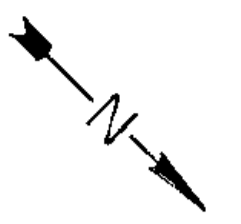


LOCATIONS

STA. TO	STA.
90+00	187+81
204+75	236+25
226+50	229+50
323+87	332+00
365+00	370+00
372+60	373+55
410+50	417+00
462+50	463+25

FUTURE BITUMINOUS SECTIONS





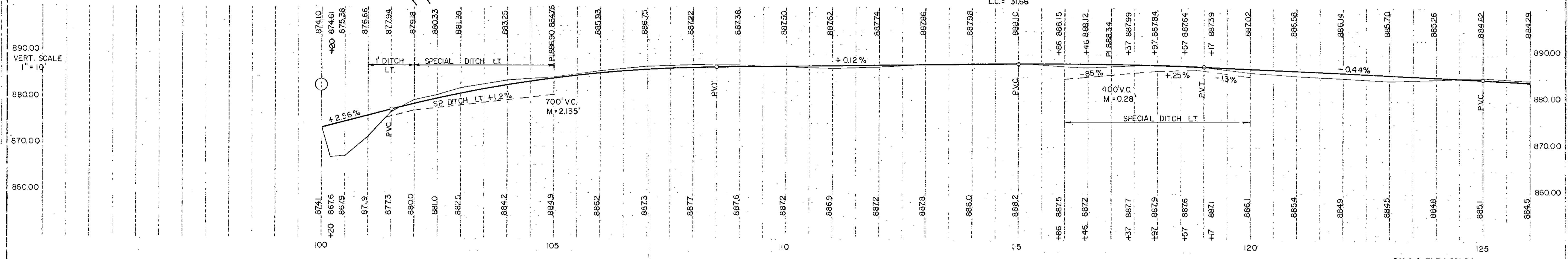
B.M. #1, ELEV. 885.43
TOP NE. COR. BOT. STEP
I-S-F, LT. 101+79

B.M. #2, ELEV. 889.74
TOP NE. COR. BOT. STEP
SIDE DOOR, I-S-F, LT. 118+31

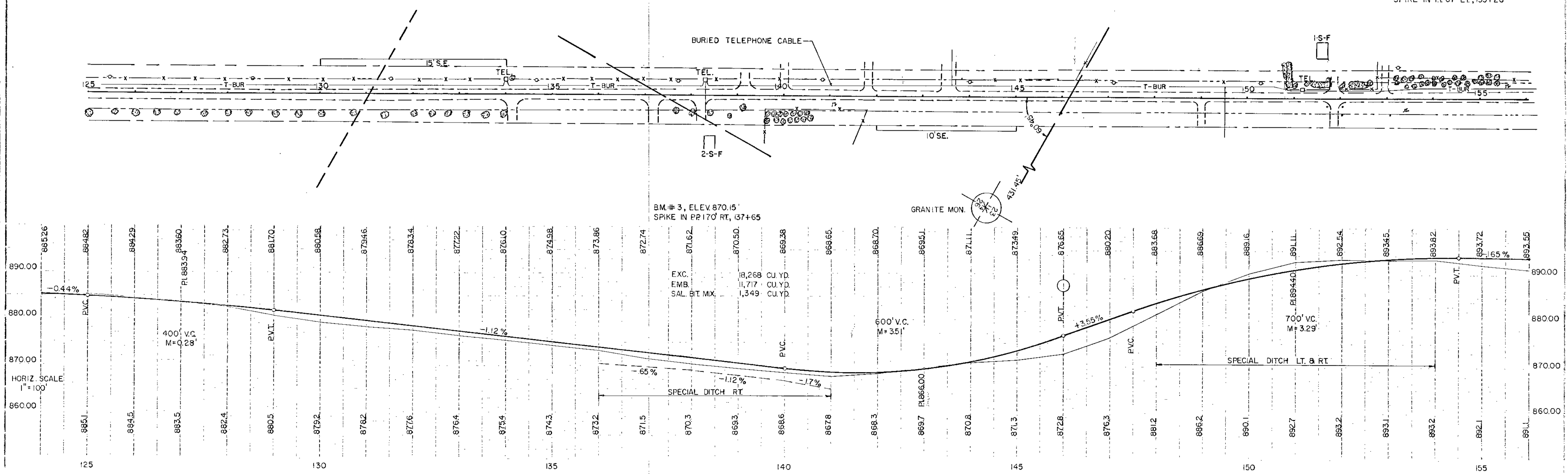
BEGIN PROJECT SP-02-605-01
STA. 100+00

R.I. = STA. 103+26.13
Δ = 12°02' RT.
ΔC = 2°00'
DC = 4°00'
TS = 276.13'
LS = 250.00'
LC = 50.80'

PI. = 116+63.21
Δ = 16°35' RT.
ΔC = 1°35'
DC = 5°00'
TS = 317.39'
LS = 300.00'
LC = 31.66'



B.M. #4, ELEV. 891.84
SPIKE IN PP67' LT. 153+26



B.M. NO. 5 ELEV. 891.89
TOP N.E. COR. TOP STEP
2-S.F. LT. 165 + 62

B.M. NO. 6 ELEV. 874.17
TOP SE. COR. BOT STEP
1-S.F. RT. 175 + 60

LSR
PI = 177+39.25
Δ = 23° 27' LT.
AC = 8° 27'
DC = 5° 00'
TS = 388.43'
LS = 300.00'
LC = 169.00'

LSR
PI = STA. 177+39.25
Δ = 22° 00' LT.
AC = 7° 00'
DC = 5° 00'
TS = 373.29'
LS = 300.00'
LC = 140.00'

LSR
PI = 176+59.82
Δ = 22° 00' LT.
AC = 7° 00'
DC = 5° 00'
TS = 373.29'
LS = 300.00'
LC = 140.00'

LSR
PI = 178+19.82
Δ = 22° 00' LT.
AC = 7° 00'
DC = 5° 00'
TS = 373.29'
LS = 300.00'
LC = 140.00'

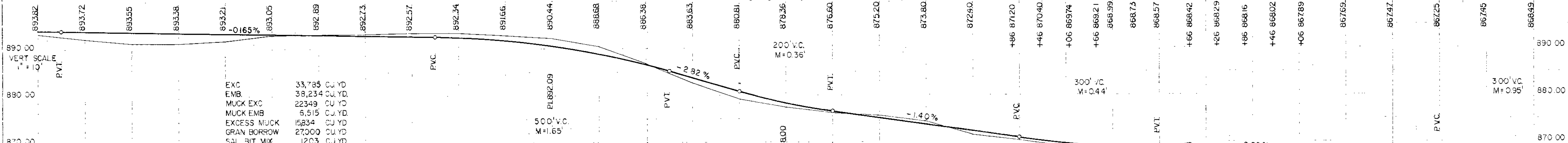
LSR
PI = 181+19.82
Δ = 22° 00' LT.
AC = 7° 00'
DC = 5° 00'
TS = 373.29'
LS = 300.00'
LC = 140.00'

CONSTRUCT ROAD APPROACH
83+00' X-CULV.
F&I 24" X 68" RC CULV. CL II
F&I 2-24" CONC. APRONS
EXC. INCL. WITH MUCK EXC.

BURIED TELEPHONE CABLE

2-S-F

BIT ENT



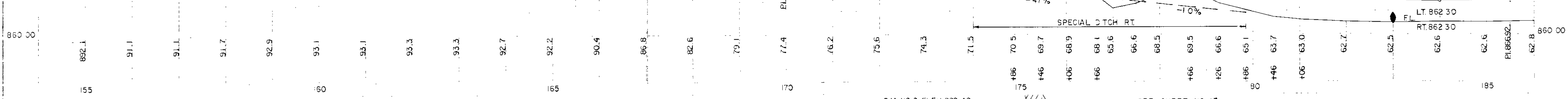
EXC. 33,785 CU. YD.
EMB. 38,234 CU. YD.
MUCK EXC. 22,349 CU. YD.
MUCK EMB. 5,515 CU. YD.
EXCESS MUCK 15,834 CU. YD.
GRAN. BORROW 27,000 CU. YD.
SAL. BIT. MIX. 1203 CU. YD.

500' V.C.
M=1.65

200' V.C.
M=0.36

300' V.C.
M=0.44

300' V.C.
M=0.35



SPECIAL DITCH RT

B.M. NO. 3 ELEV. 889.40
SPIKE IN PP LT. 203+00

SEE SHEET NO. 13
FOR ROAD CONNECTION

EQ. LOR PT 210+86.96
POC 210+75.67

SALVAGE BITUMINOUS FROM EXISTING
ROAD AND GRADE ROADWAY TO BLEND
INTO ADJACENT PROPERTY. PLACE
4" TOPSOIL & SEED.

POND

POND

POND

PIG SHED

SEEDLINGS

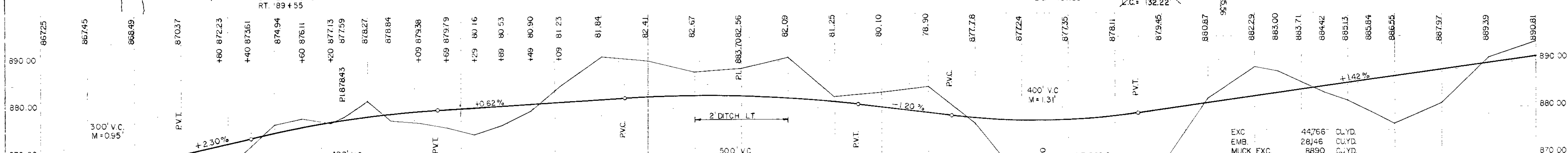
SEEDLINGS

LSR
PI = 191+16.39
Δ = 26° 48' 30" RT
AC = 11° 48' 30"
DC = 5° 00'
TS = 423.78'
LS = 300.00'
LC = 236.17'

206+00' X-CULV.
F&I 24" X 122" RC CULV. CL III
F&I 2-24" CONC. APRONS
EXC. INCL. WITH MUCK EXC.

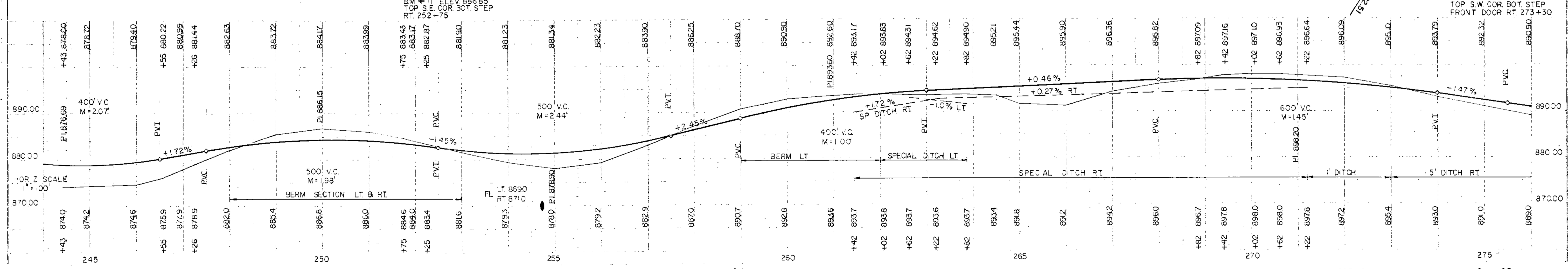
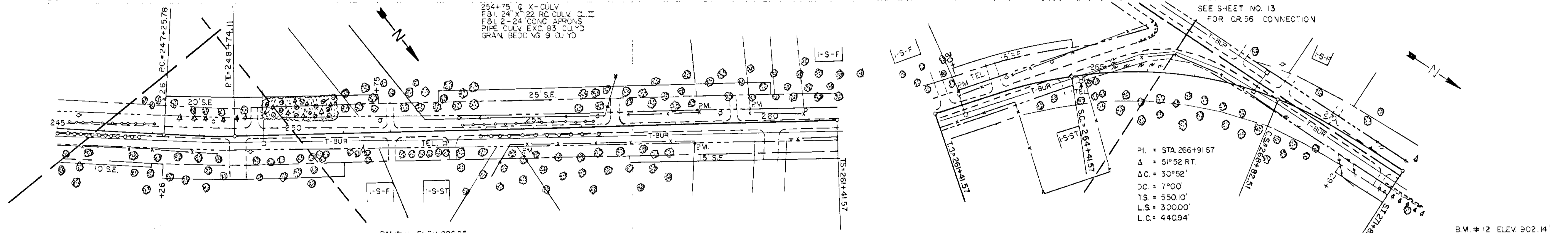
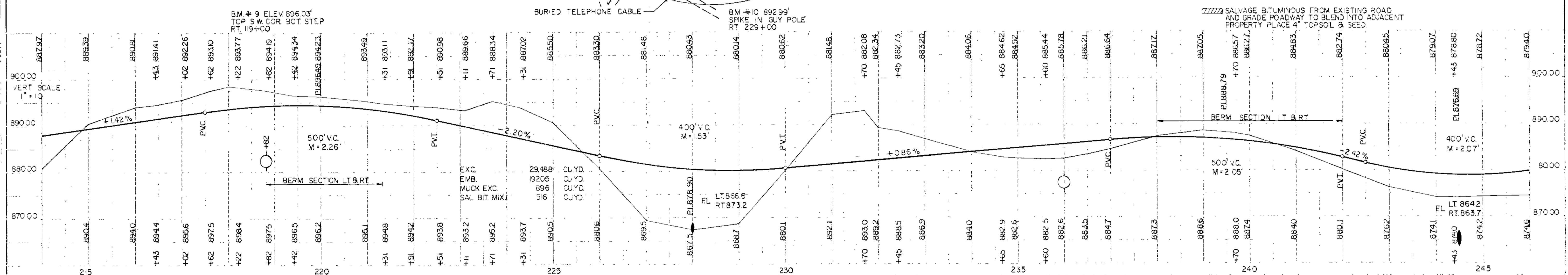
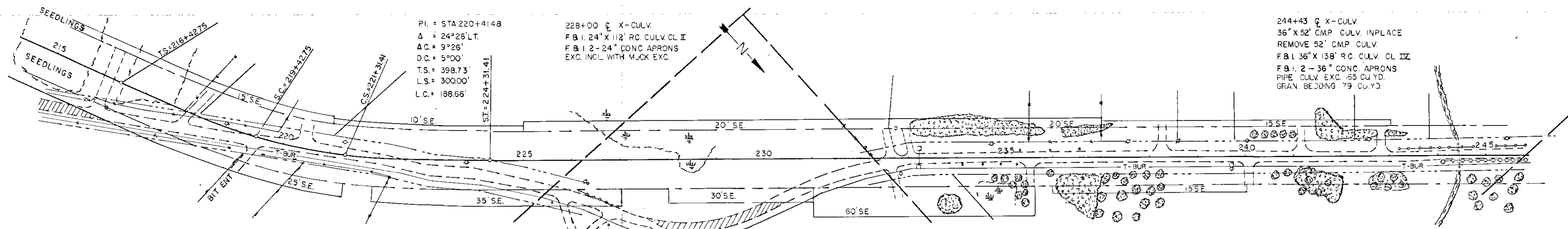
LSR
PI = 210+36.28
Δ = 3° 02' 30"
DC = 5° 00'
TS = 50.72'
LS = 101.39'

LSR
PI = STA. 210+25
Δ = 3° 58' RT.
DC = 3° 00'
TS = 66.19'
LS = 132.22'

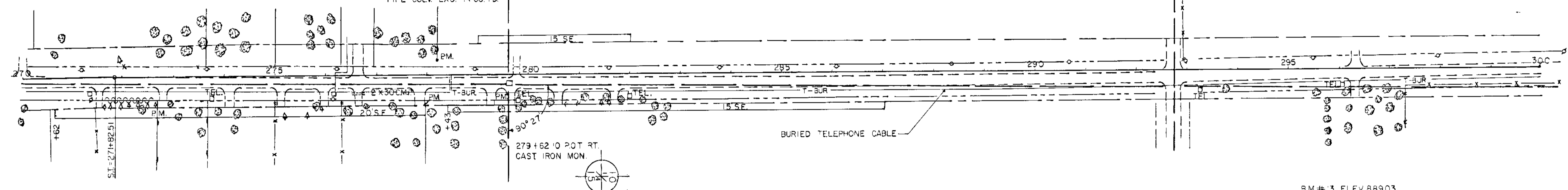
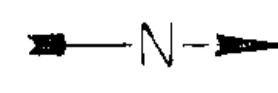


B.M. NO. 7 ELEV. 886.95
SPIKE IN 16" OAK
RT. 89+55

EXC. 44,766 CU. YD.
EMB. 28,946 CU. YD.
MUCK EXC. 8890 CU. YD.
MUCK EMB. 5,319 CU. YD.
EXCESS MUCK 3,571 CU. YD.
SAL. BIT. MIX. 823 CU. YD.
INCLUDES ROAD CONNECTION LT. 207+50

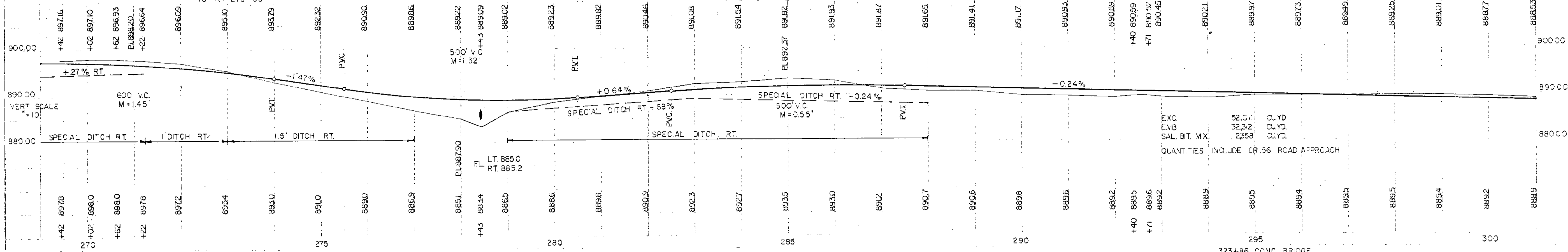


278+45 X-CULV.
 18" X 36" S.C. CULV. INP
 REMOVE 36" S.C. CULV.
 F&I 24" X 56" R.C. CULV. CL. IV
 F&I 2-24" CONC. APRONS
 PIPE CULV. EXC. 4 CU.YD.



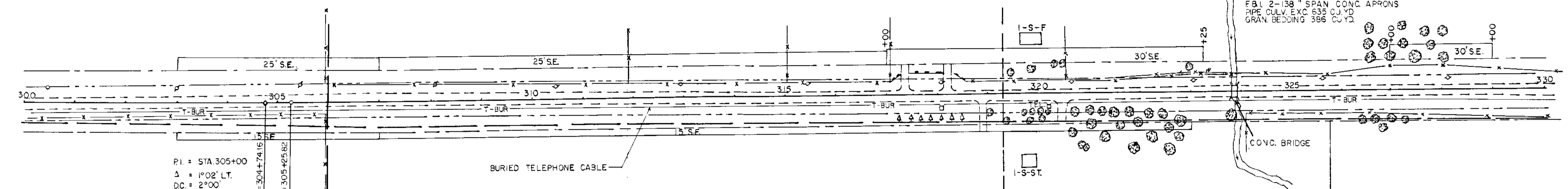
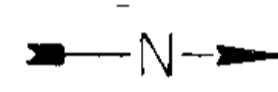
BM # 2, ELEV 902.14
 TOP S.W. COR. BOT FRONT STEP
 40' RT 273+30

BM # 3, ELEV 889.03
 SPIKE IN DBL. ELM 130' RT 296+50



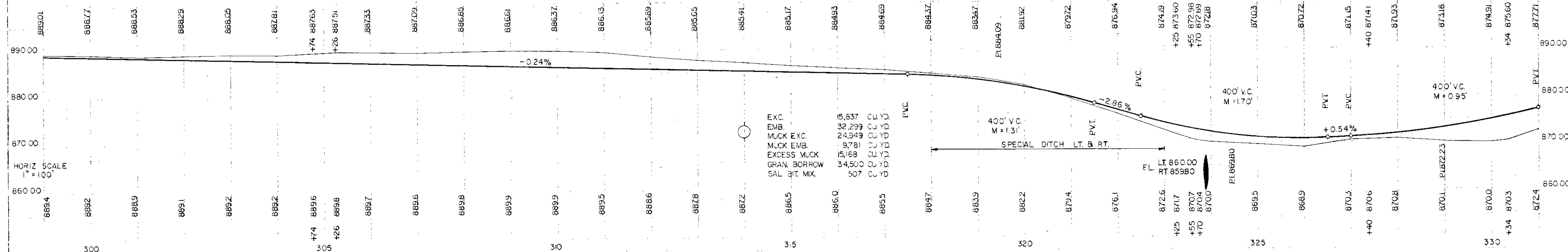
EXC. EMB. SAL. BIT. MIX. QUANTITIES INCLUDE CR. 56 ROAD APPROACH

PI = STA. 305+00
 $\Delta = 1^{\circ}02' LT.$
 $DC = 2^{\circ}00'$
 $TS = 25.84$
 $LC = 51.67'$
 $PC = 304+74.15$
 $PT = 305+425.82$



323+86 CONC BRIDGE
 REMOVE
 F&I 138" SPAN X 84" R.C.P. ARCH. CULV. CL. II
 F&I 2-38" SPAN CONC. APRONS
 PIPE CULV. EXC. 635 CU.YD.
 GRAN. BEDDING 366 CU.YD.

BM # 4, ELEV 876.04
 SPIKE IN 20' OAK 110' RT 323+40

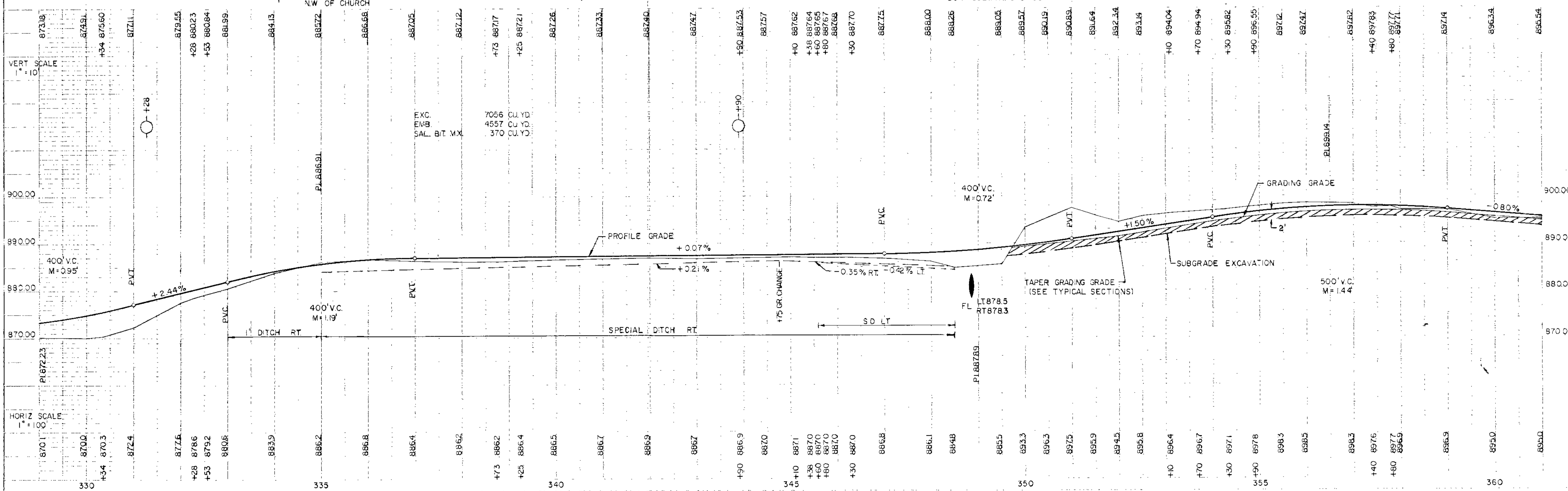
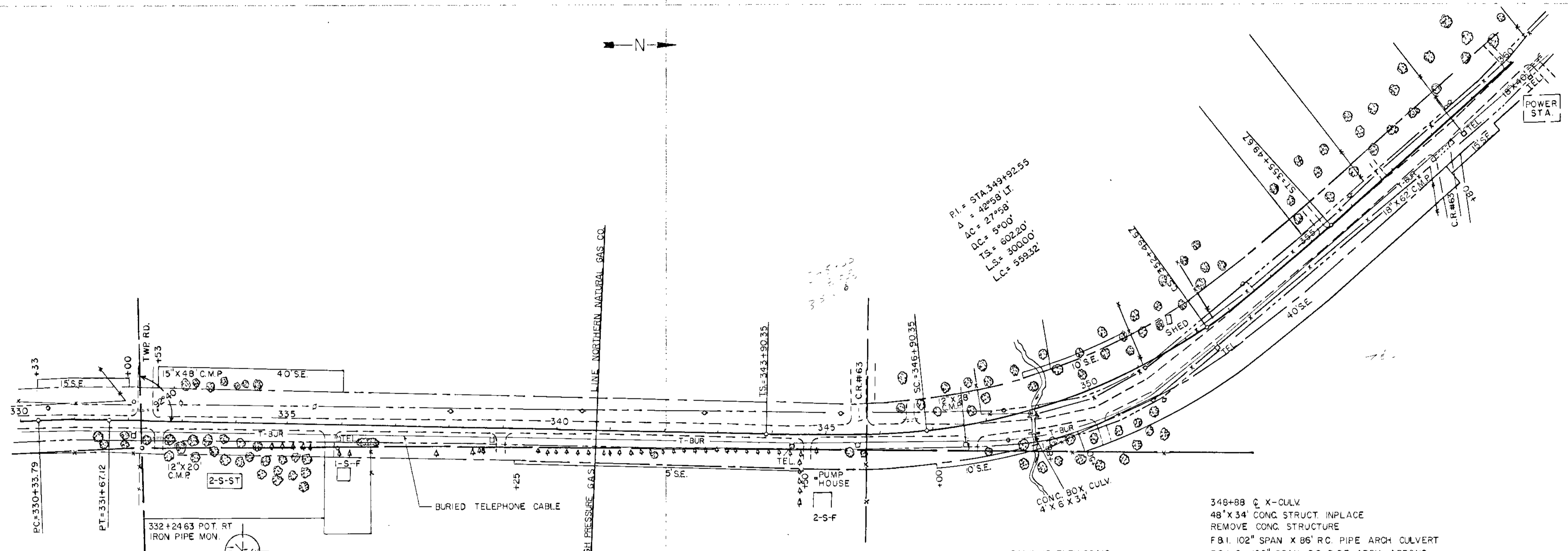
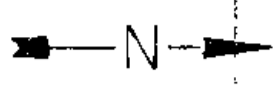


EXC. EMB. MUCK EXC. EXCESS MUCK GRAN. BORROW SAL. BIT. MIX. QUANTITIES

EXC. EMB. SAL. BIT. MIX. QUANTITIES INCLUDE CR. 56 ROAD APPROACH

PLAN
 NOTE BOOK ATTACHED HERETO
 NO. _____
 RE. OF WAY CHANGED.

PLAN
 NOTE BOOK ATTACHED HERETO
 NO. _____
 RE. OF WAY CHANGED.



348+88 C X-CULV
 48' X 34' CONC. STRUCT. INPLACE
 REMOVE CONC. STRUCTURE
 F.B.I. 102" SPAN X 86' RC. PIPE ARCH CULVERT
 F.B.I. 2 - 102" SPAN RC. PIPE ARCH APRONS
 PIPE CULV. EXC. 184 CU. YD.
 GRAN. BEDDING 50 CU. YD.

BM # 16, ELEV. 884.12
 U.S.G.S. BM. ON CONC
 BOX CULV. RT. 348+88

EXC.
 EMB.
 SAL. BIT. MX.
 7056 CU. YD.
 4557 CU. YD.
 370 CU. YD.

BM # 15, ELEV. 888.67
 SPIKE IN 14" OAK 80' RT.
 NW OF CHURCH

PLAN
 PROJECTED
 NOTE BOOK
 NO. 104741
 DATE OF WAY RELEASED

PLAN
 PROJECTED
 NOTE BOOK
 NO. 104741
 DATE OF WAY RELEASED

PI. = STA 388+51.36
 Δ = 29°15' LT.
 ΔC = 14°15'
 D.C. = 5°00'
 T.S. = 449.79'
 L.S. = 30000'
 L.C. = 285.00'

PI. = STA. 374+62.82
 Δ = 32°18' RT.
 D.C. = 2°00'
 T.S. = 82963'
 L.C. = 1615.00'

360+36 C X-CULV.
 18" X 78" CMP CULVERT INPLACE
 REMOVE 78" CMP CULV.
 F&I 24" X 106" RC CULV. CL II
 F&I 2-24" APRONS
 PIPE CULV. EXC. 64 CU YD
 GRAN. BEDDING 5 CU YD.

B.M. #17, ELEV 89343
 TOP NW COR. CHIMNEY
 BASE RT. 367+40

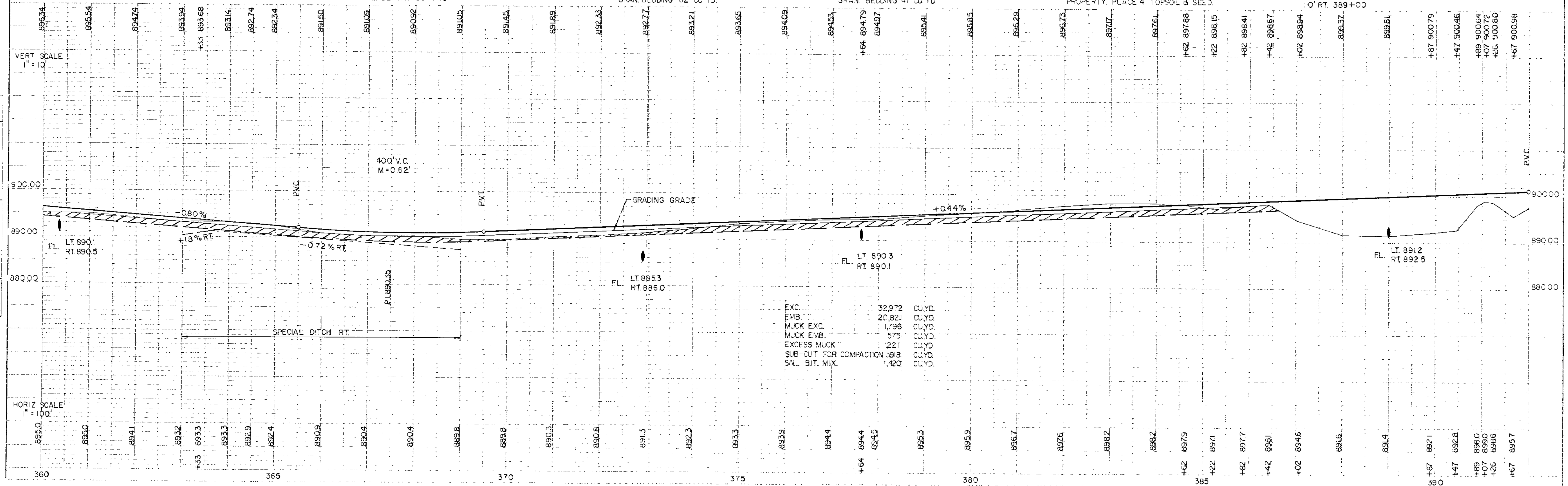
372+94 C X-CULV.
 15" X 40" SCP CULV. INPLACE
 REMOVE 40" SCP CULV.
 F&I 24" X 88" RC CULV. CL II
 F&I 2-24" CONC. APRONS
 EXC. INCL. WITH MUCK EXC.
 GRAN. BEDDING 62 CU YD.

377+63 C X-CULV.
 12" X 38" SCP CULV. INPLACE
 REMOVE 38" SCP CULV.
 F&I 24" X 64" RC CULV. CL II
 F&I 2-24" CONC. APRONS
 PIPE CULV. EXC. 93 CU YD
 GRAN. BEDDING 47 CU YD.

SAVAGE BIT MINUS FROM EXISTING ROAD
 AND GRADE ROADWAY TO BLEND INTO ADJACENT
 PROPERTY. PLACE 4" TOPSOIL B SEED

B.M. #8, ELEV 89790
 SPIKE N 30° RED OAK
 O RT. 389+00

389+00 C X-CULV.
 F&I 24" X 34" RC CULV. CL II
 F&I 2-24" CONC. APRONS
 PIPE CULV. EXC. 65 CU YD
 GRAN. BEDDING 65 CU YD.



EXC.	32,972	CU YD.
EMB.	20,821	CU YD.
MUCK EXC.	1,798	CU YD.
MUCK EMB.	575	CU YD.
EXCESS MUCK	221	CU YD.
SUB-CUT FOR COMPACTION	598	CU YD.
SAL. BIT. MIX.	1,420	CU YD.

4.4+00 @ X-CULV.
 FB.I. 24" X 92' RC CULV. CL II
 FB.I. 2-24" CONC. APRONS
 EXC. INCL. WITH MUCK EXC.
 GRAN. BEDDING 64 CU. YD.

/// SALVAGE BITUMINOUS FROM EXISTING ROAD
 AND GRADE ROADWAY TO BLEND INTO ADJACENT
 PROPERTY PLACE 4" TOPSOIL & SEED

BM #19, ELEV 92561
 TOP S. COR. BOT. FRONT STEP
 RT 405+65

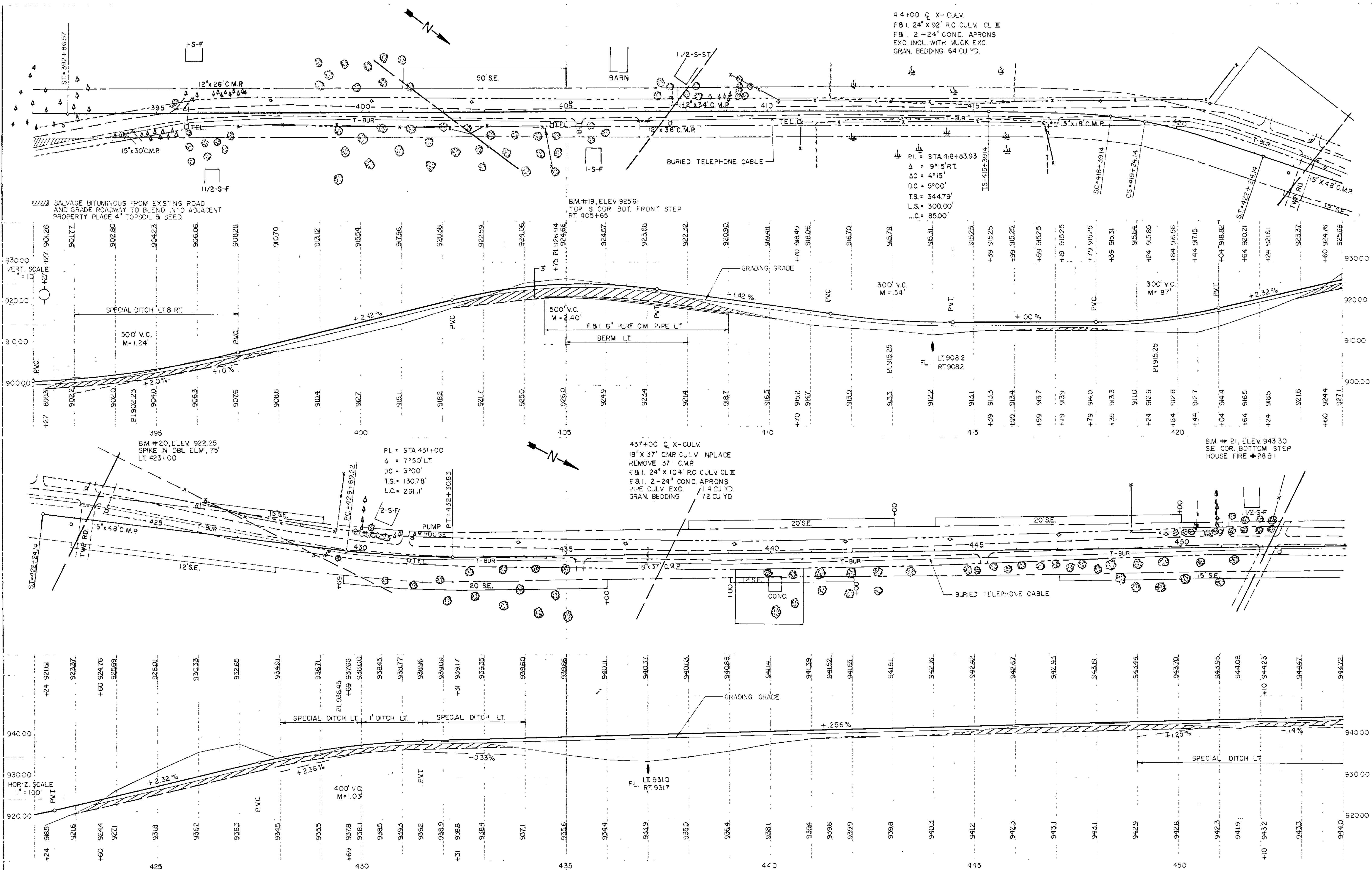
PI = STA 418+83.93
 $\Delta = 19^{\circ}15' RT.$
 $\Delta C = 4^{\circ}15'$
 $DC = 5^{\circ}00'$
 $TS = 344.79'$
 $L.S. = 300.00'$
 $L.C. = 85.00'$

BM #20, ELEV. 922.25
 SPIKE IN DBL ELM, 75'
 LT 423+00

PI = STA. 431+00
 $\Delta = 7^{\circ}50' LT.$
 $DC = 3^{\circ}00'$
 $TS = 130.78'$
 $L.C. = 261.11'$

437+00 @ X-CULV.
 18" X 37' CMP CULV. INPLACE
 REMOVE 37' C.M.P.
 FB.I. 24" X 104' RC CULV. CL II
 FB.I. 2-24" CONC. APRONS
 PIPE CULV. EXC. 114 CU. YD.
 GRAN. BEDDING 72 CU. YD.

BM #21, ELEV 943.30
 SE. COR. BOTTOM STEP
 HOUSE FIRE #2831

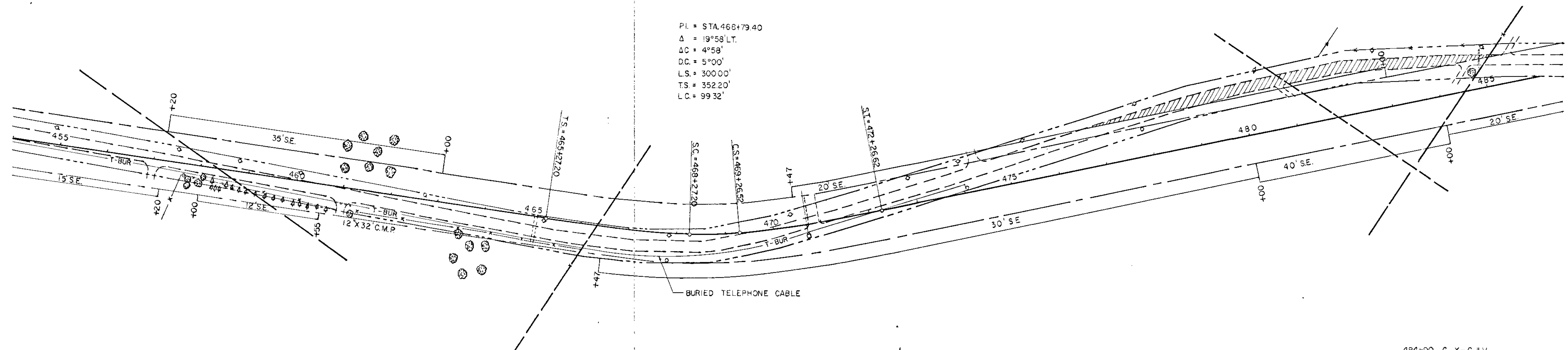


PLAN
 PROPERTY
 PREPARED BY
 DATE
 NO.

PLAN
 PROPERTY
 PREPARED BY
 DATE
 NO.

B.M. # 23, ELEV. 935.76
 SPIKE IN TEL. POLE
 100' LT. 474+05

PI = STA. 468+79.40
 Δ = 19°58' LT.
 ΔC = 4°58'
 DC = 5°00'
 L.S. = 300.00'
 T.S. = 352.20'
 L.C. = 99.32'

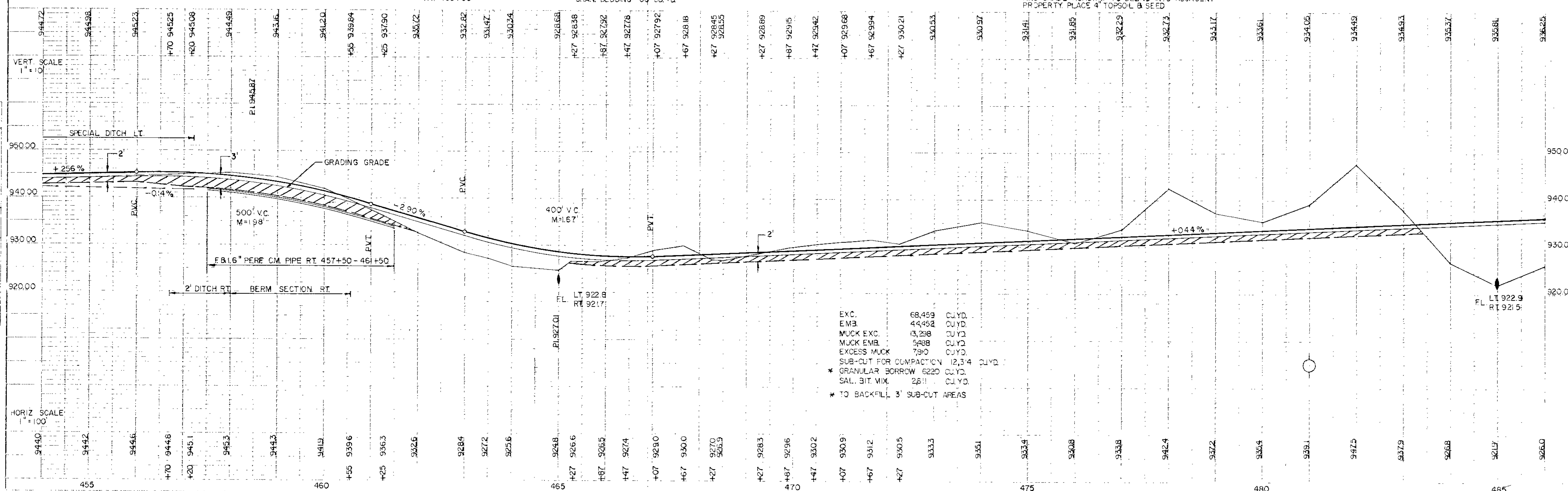


465+02 C X-CULV.
 18" X 44" C.M.P. & SCP INPLACE
 REMOVE 44" CULV.
 F.B.I. 24" X 86" R.C. CULV. CL. II
 F.B.I. 2-24" CONC. APRONS
 PIPE CULV. EXC. 153 CU.YD.
 GRAN. BEDDING 60 CU.YD.

B.M. # 22, ELEV. 932.63
 SPIKE IN 16" OAK 100'
 RT. 463+33

████████ SALVAGE BITUMINOUS FROM EXISTING ROAD
 AND GRADE ROADWAY TO BLEND INTO ADJACENT
 PROPERTY PLACE 4" TOPSOIL & SEED

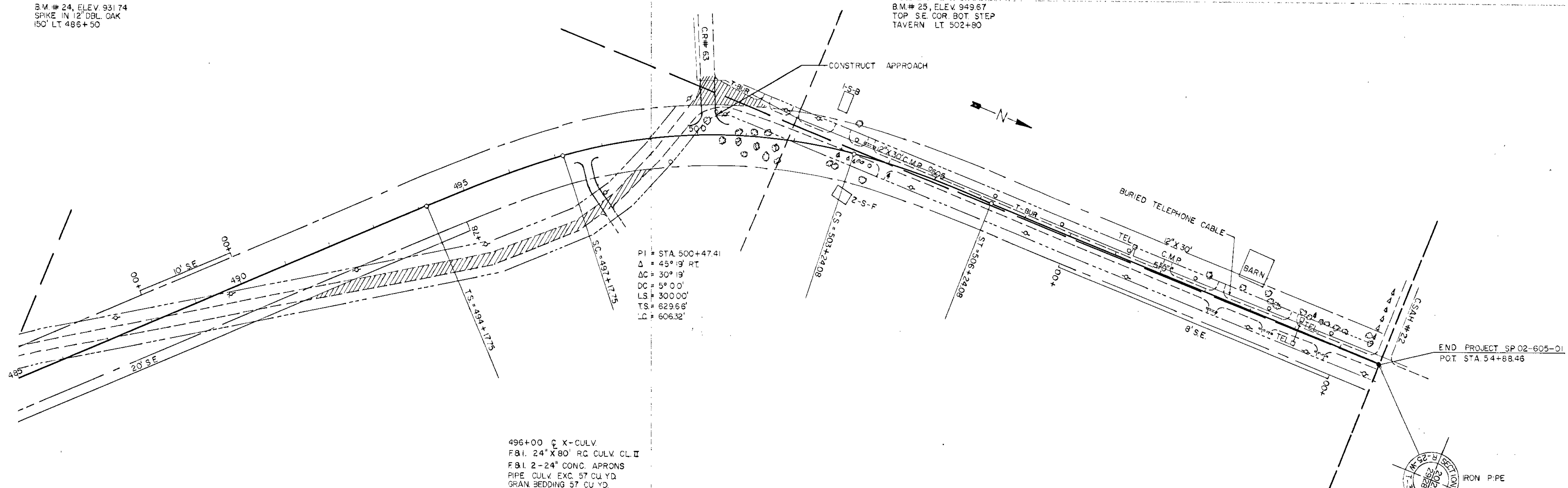
484+90 C X-CULV.
 18" X 50" C.M.P. CULV. INPLACE
 REMOVE 50" C.M.P. CULV.
 F.B.I. 24" X 140" R.C. CULV. CL. III
 F.B.I. 2-24" CONC. APRONS
 PIPE CULV. EXC. 182 CU.YD.
 GRAN. BEDDING 92 CU.YD.



EXC.	68,458	CU.YD.
EMB.	44,458	CU.YD.
MUCK EXC.	13,238	CU.YD.
MUCK EMB.	5,488	CU.YD.
EXCESS MUCK	790	CU.YD.
SUB-CUT FOR COMPACTION	12,314	CU.YD.
* GRANULAR BORROW	6220	CU.YD.
SAL. BIT. MIX	2611	CU.YD.
* TO BACKFILL 3' SUB-CUT AREAS		

B.M. # 24, ELEV. 931.74
SPIKE IN 12" DBL. OAK
150' LT. 486+50

B.M. # 25, ELEV. 949.67
TOP SE COR. BOT. STEP
TAVERN LT. 502+80

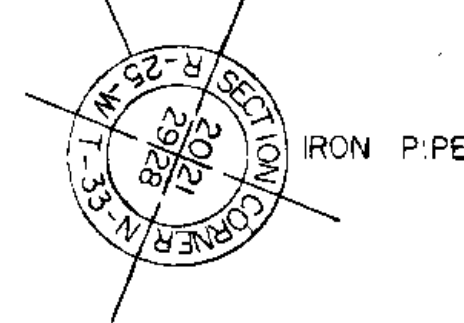


PI = STA 500+47.41
Δ = 45° 19' RT
ΔC = 30° 19'
DC = 5° 00'
LS = 300.00'
TS = 629.66'
LD = 606.32'

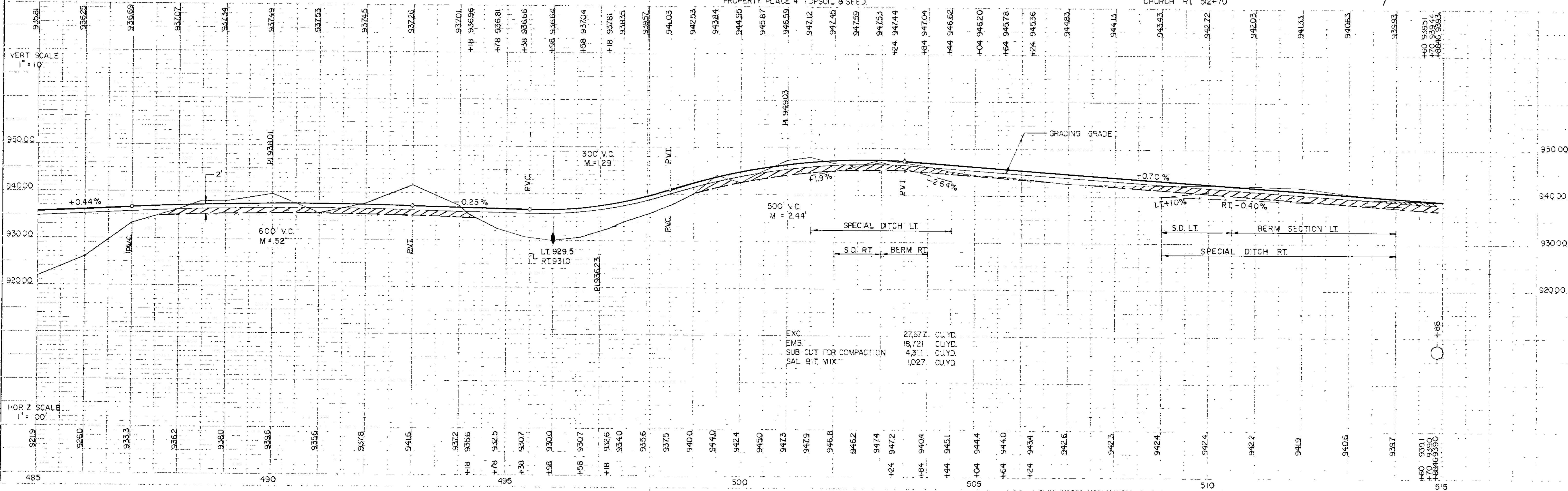
496+00 X-CULV.
F&I. 24" X 80" RC CULV. CL. II
F&I. 2-24" CONC. APRONS
PIPE CULV. EXC. 57 CU. YD.
GRAN. BEDDING 57 CU. YD.

/// SALVAGE BITUMINOUS FROM EXISTING ROAD
AND GRADE ROADWAY TO BLEND INTO ADJACENT
PROPERTY PLATS 4, TOPSOIL B SEED

B.M. # 26, ELEV. 944.57
TOP SW COR. BOT. STEP
CHURCH RT. 512+70



END PROJECT SP 02-605-01
POT. STA. 54+88.46

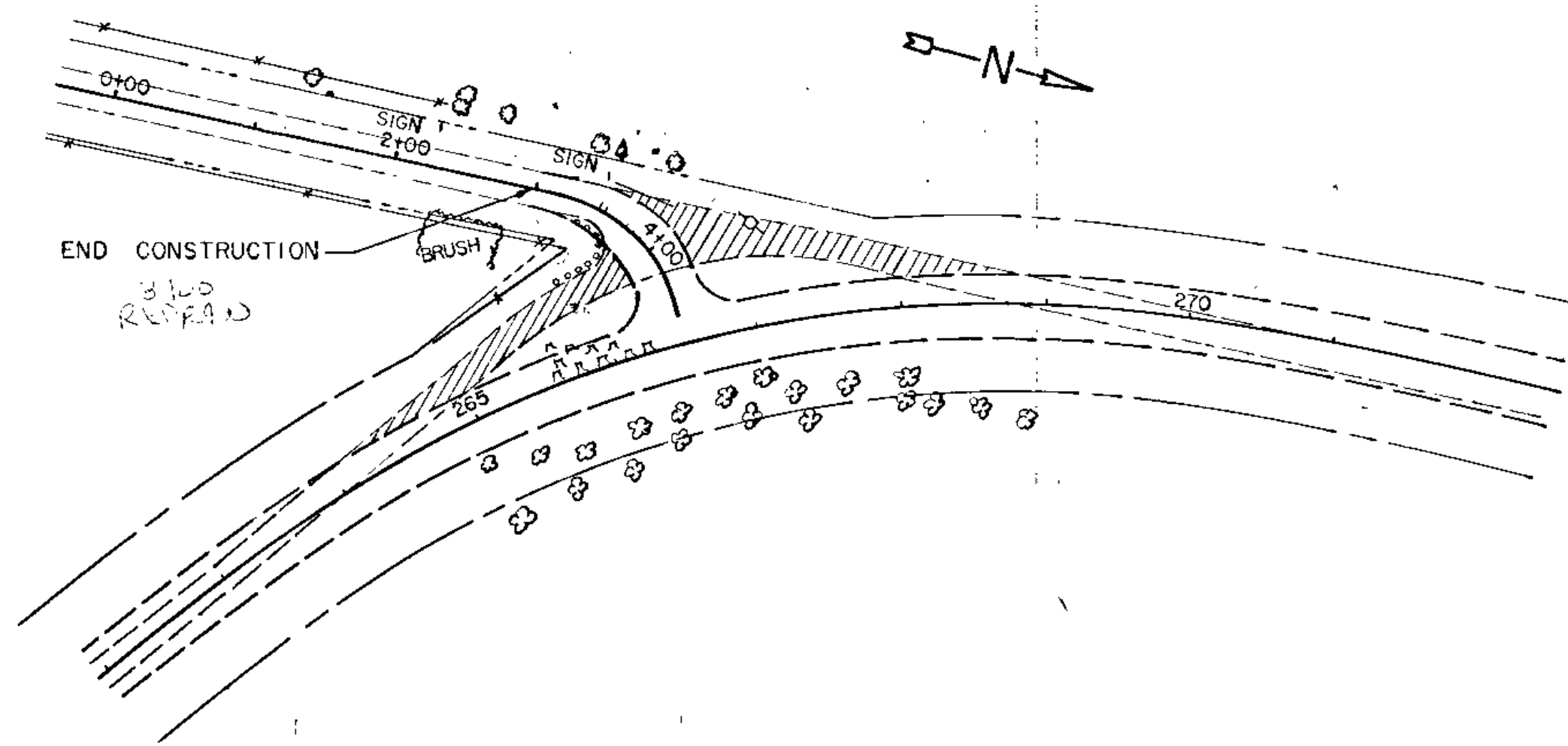


EXC. 27,677.00 CU. YD.
EMB. 18,721.00 CU. YD.
SUB-CUT FOR COMPACTION 4,311.00 CU. YD.
SAL. BIT. MIX. 1,027.00 CU. YD.

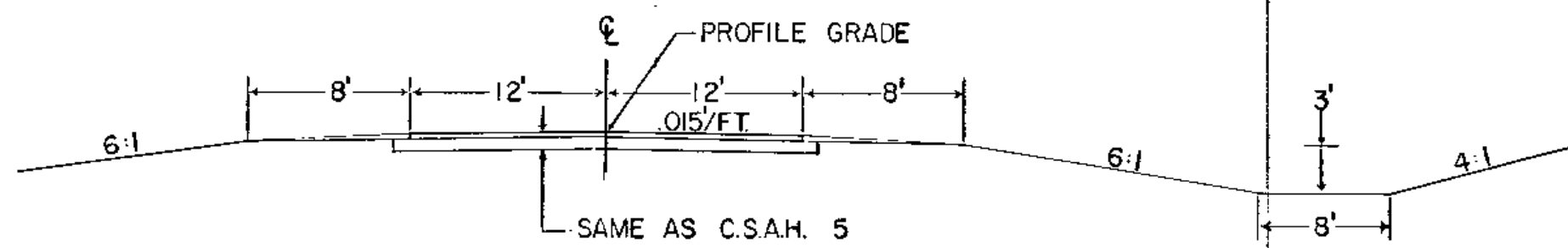
DATE: 11/11/11
 DRAWN BY: J. L. HARRIS
 CHECKED BY: J. L. HARRIS
 NO. 13

DATE: 11/11/11
 DRAWN BY: J. L. HARRIS
 CHECKED BY: J. L. HARRIS
 NO. 13

P.I. = 3+81.97
 Δ = 62°
 D.C. = 42°
 T.S. = 81.97'
 L.C. = 147.62



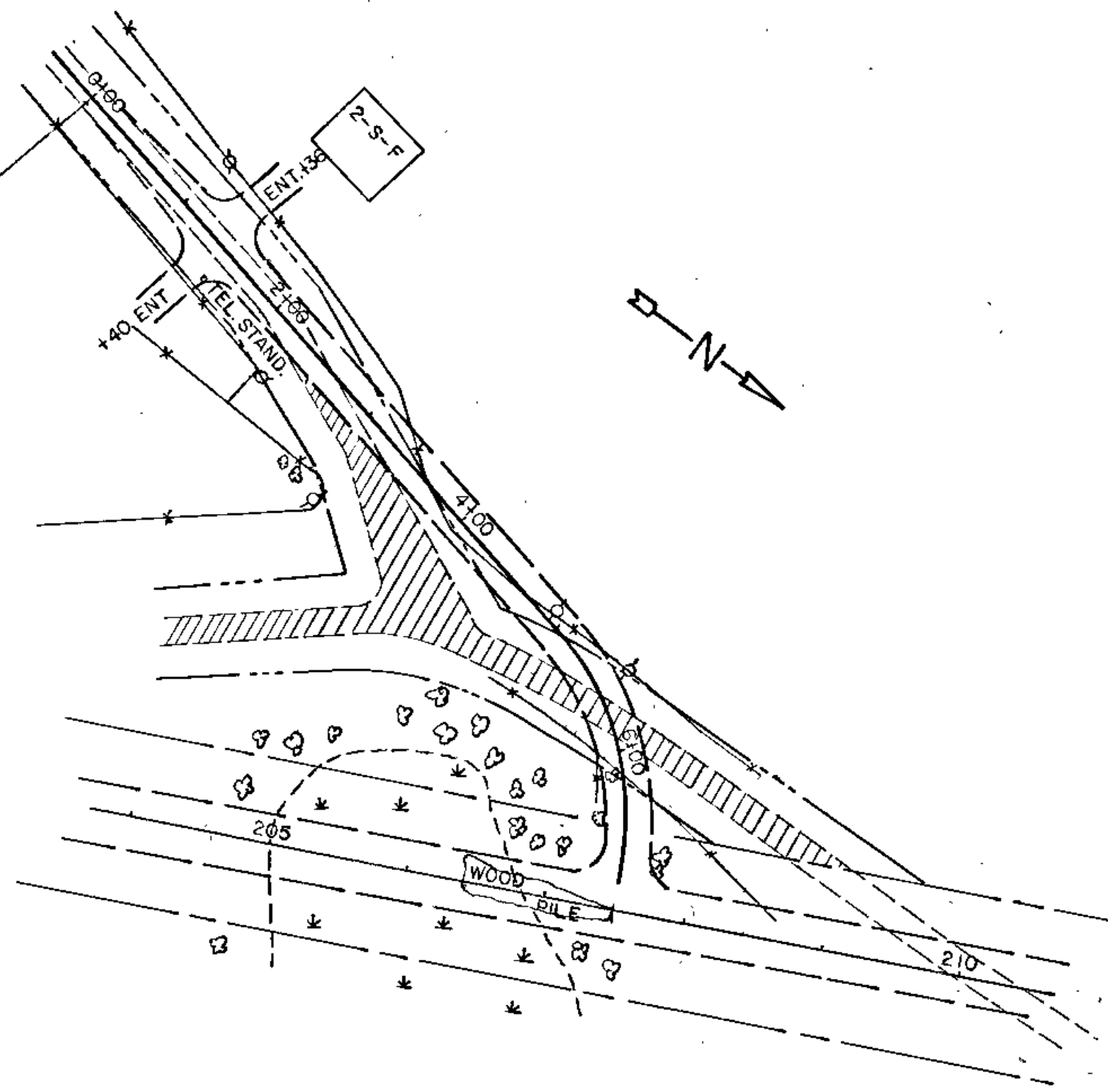
TYPICAL SECTION



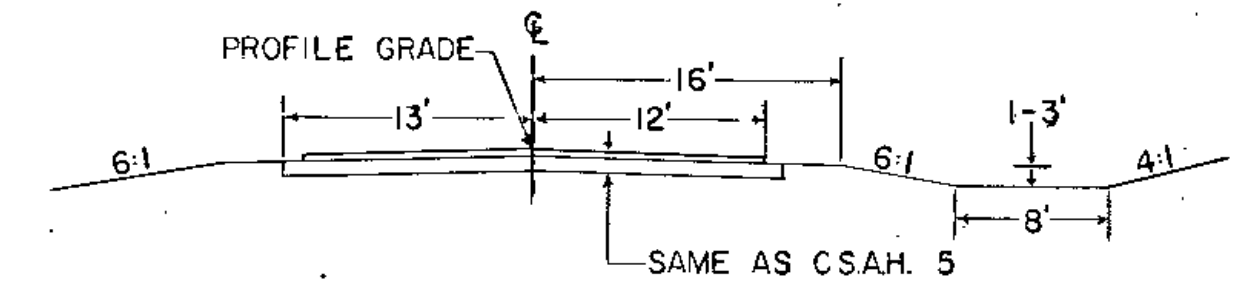
C.R. 56 JCT. CSAH 5 STA. 266+50 LT.

END CONSTRUCTION

P.I. = 7+00.18
 Δ = 52°10'
 D.C. = 28°00'
 T.S. = 100.18
 L.C. = 186.31



TYPICAL SECTION



TWP. RD. JCT. CSAH 5 STA. 207+50 LT.

VERT. SCALE
1" = 10'

HORIZ. SCALE
1" = 100'

