

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR GRADING, BASE, & BIT SURFACE

County Highway No. 57

Between U.S. # 10 And CSAH # 5

A PT. 358.35' N. & 6.18' E. OF THE W 1/4 COR. SEC. 35, T32N, R25W A PT. 1,358.72' E. AND 385.05' S. OF THE To N.W. COR., SEC. 23, T32N, R25W

Give proper reference to Sections, Township and Range

GROSS LENGTH 12,450 FEET 2.358 MILES
BRIDGES-LENGTH 0.0 FEET 0.0 MILES
EXCEPTIONS-LENGTH 240 FEET 0.005 MILES
NET LENGTH 12,426 FEET 2.353 MILES

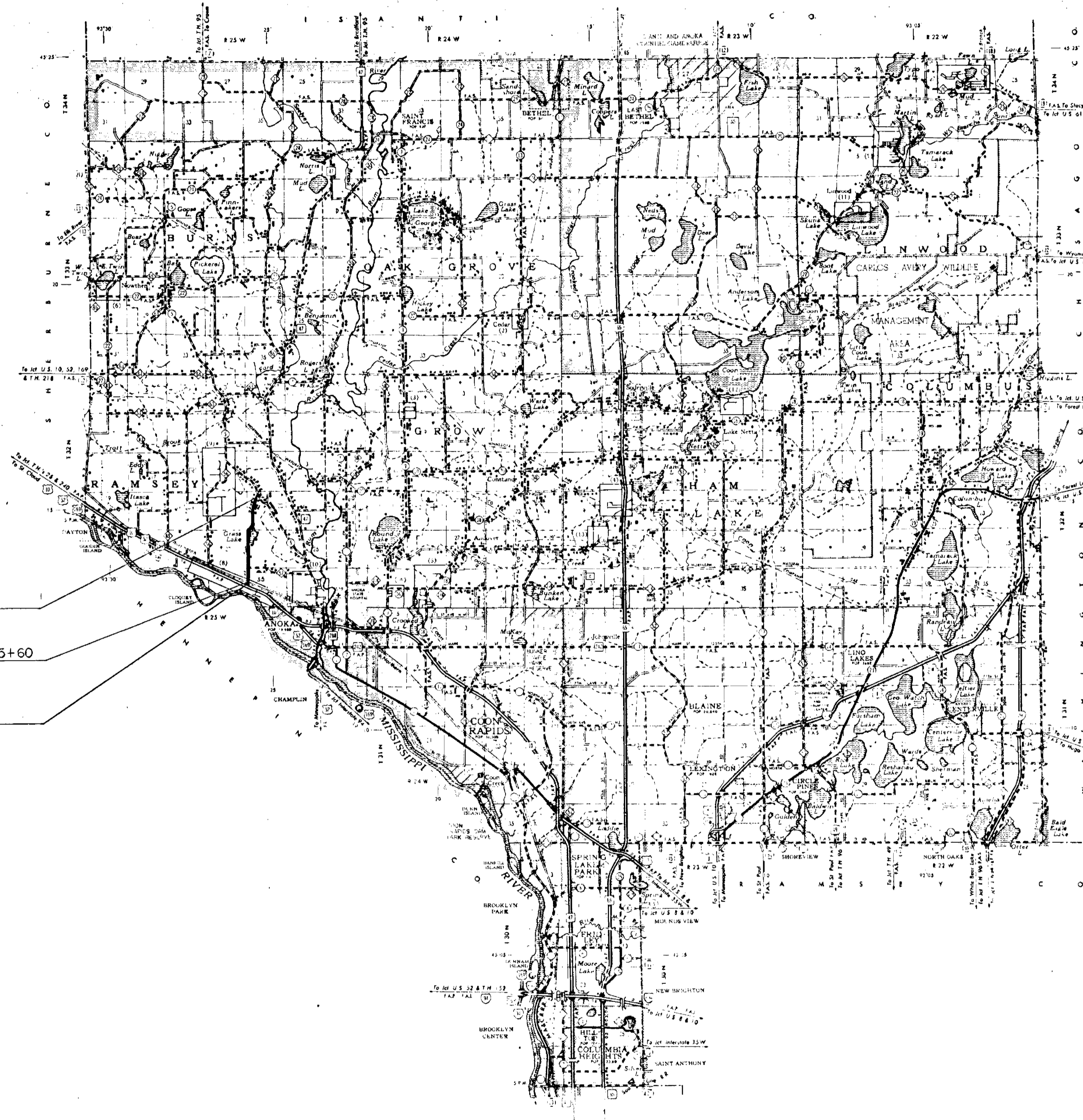
INDEX OF SHEETS

- Sheet No. 1 Title Sheet & Layout Map
- No. 2-3 Est. Quantities & Typical Sec.
- No. 4 To 6 Plan & Profile
- No. 7 To 17 Cross Sections

SCALES PLAN & PROFILE - HORIZ. 1" = 100'
VERT. 1" = 10'
CROSS SECTIONS - 1" = 10'

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 (EASEMENT LINE)
- VACATED 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
- TELEPHONE OR TELEGRAPH LINE
- JOINT TELEPHONE AND POWER
- CONDUIT
- TELEPHONE CABLE (AERIAL)
- TELEPHONE CABLE UNDERGROUND
- POWER CABLE UNDERGROUND
- OAS (WALL)
- COLLEBT.
- DROP INLET
- GUARD RAIL
- BARBED WIRE FENCE
- WOVEN WIRE FENCE
- CHAIN LINK FENCE
- RAILROAD SIGN FENCE
- STONE WALL OR FENCE
- HEAVY
- WATER PIPE
- SEWER PIPE
- DRAIN TILE
- SPRINGS
- MARSH
- TIMBER
- ORCHARD
- BRUSH
- NURSERIES
- CATCH BASIN
- MANHOLE
- FIRE HYDRANT
- STREET LIGHT
- RAILROAD CROSSING SIGN
- RAILROAD CROSSING BELL
- ELECTRIC WARNING SIGN
- CROSSING GATE
- CATTLE GUARD
- OVERPASS (Highway Over)
- UNDERPASS (Highway Under)
- BRIDGE
- BUILDING (One Story Frame)
- FRAME
- CONCRETE
- STONE
- TILE
- BRICK
- ST. STUCCO
- IRON PIPE OR ROD
- MONUMENT (STONE, CONCRETE, OR METAL)
- WOODEN HUB
- TRAVEL PIT
- SAND PIT
- BERM PIT
- ROCK QUARRY
- MEANDER CORNER



END C.P. 74-06-57
STA. 124+50

EXCEPTION 5+36 TO 5+60
(RAILROAD CROSSING)

BEG. C.P. 74-06-57
STA. 0+00

DESIGN DESIGNATION

ADT (CURRENT YEAR) 1,000
ADT (FUTURE YEAR) 2,300
T (HEAVY COMMERCIAL)
7 ULT. 9 Ton Design 50% SOIL FACTOR
Design Speed 50 MPH
Design Speed not achieved at:
STA. _____ TO STA. _____ MPH _____
STA. _____ MPH _____

SPECIFICATIONS

THE "STANDARD" SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, DATED JAN. 1, 1972, SHALL GOVERN.
AS AMENDED BY "SUPPLEMENTAL SPECIFICATIONS" DATED JAN. 1, 1974

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 Nov. 13, 1975

ANOKA COUNTY REG. NO. _____

RECOMMENDED FOR APPROVAL _____ 19____
DISTRICT STATE AID ENGINEER

RECOMMENDED FOR APPROVAL _____ 19____

APPROVED _____ 19____
STATE AID ENGINEER

Minn. Proj. No. _____ County Proj. No. 74-06-57

State Proj. No. _____ S. A. P. _____

STATEMENT OF ESTIMATED QUANTITIES

| ITEM NO. | ITEM | UNIT | TOTAL ESTIMATED QUANTITIES |
|------------|---|-------------|----------------------------|
| 2101.501 | CLEARING | ACRE | 2.60 |
| 2101.502 | CLEARING | TREE | 95 |
| 2101.506 | GRUBBING | ACRE | 2.60 |
| 2101.507 | GRUBBING | TREE | 94 |
| 2104.501 | REMOVE PORTABLE CULVERTS | LIN. FT. | 96' |
| 2104.521 | SALVAGE PORTABLE CULVERTS | LIN. FT. | 44' |
| 2104.521 | SALVAGE FENCE | LIN. FT. | 8,440' |
| 557.604 | INSTALL FENCE | LIN. FT. | 8,219' |
| 2105.501 | COMMON EXCAVATION | CU. YD. | 66,300 |
| 2105.505 | MUCK EXCAVATION | CU. YD. | 17,838 |
| 2105.531 | SALVAGE BITUMINOUS MIXTURE (E.V.) | CU. YD. | 2,213 |
| 2105.535 | SALVAGED TOPSOIL (L.V.) | CU. YD. | 11,600 |
| ① 2123.503 | MOTOR GRADER | HR | 12 |
| ① 2123.509 | DOZER | HR | 12 |
| ② 2130.501 | WATER | M - GALLONS | 350 |
| ③ 2211.501 | AGGREGATE BASE CL 5 | TON | 19,356 |
| 2331.504 | BITUMINOUS MATERIAL FOR MIXTURE | TON | 262 |
| ④ 2331.508 | WEARING COURSE MIXTURE | TON | 4,360 |
| 2501.571 | INSTALL 15" C.M. PIPE CULVERT | LIN. FT. | 1,040 |
| 2501.571 | INSTALL 18" C.M. PIPE CULVERT | LIN. FT. | 270 |
| 2501.571 | INSTALL 24" C.M. PIPE CULVERT | LIN. FT. | 104 |
| 2501.571 | INSTALL 29" SPAN C.M. P. - ARCH CULVERT | LIN. FT. | 134 |
| 2501.573 | INSTALL 15" METAL APRONS | EACH | 50 |
| 2501.573 | INSTALL 18" METAL APRONS | EACH | 12 |
| 2501.573 | INSTALL 24" METAL APRONS | EACH | 2 |
| 2501.573 | INSTALL 29" SPAN METAL PIPE - ARCH APRONS | EACH | 4 |
| 2575.501 | ROADSIDE SEEDING | ACRE | 17.0 |
| 2575.502 | SEED MIXTURE NO. 3 | POUND | 680 |
| 2575.505 | SODDING | SQ. YD. | 7,400 |
| 2575.511 | MULCH MATERIAL TYPE-I | TON | 34 |
| 2575.519 | DISC. ANCHORING | ACRE | 17 |

- ① FOR OBLITERATION OF OLD ROAD OUTSIDE OF THE GRADING AREA
- ② FOR DUST CONTROL
- ③ INCLUDES 554 TON FOR ENTRANCES & ROAD APPROACHES
- ④ INCLUDES 565 TON FOR STREET APPROACHES & ENTRANCES

BASIS FOR PLANNED QUANTITIES

- 2331 PLANT MIXED BITUMINOUS WEARING COURSE. BITUMINOUS MIXTURE 220LBS./ SQ. YD. BITUMINOUS MATERIAL FOR MIXTURE 6.0% BY WT.
- 3138 AGGREGATE BASE 145 LBS./ CU. FT., COMPACTED.

SPECIAL DETAILS

MATERIAL FROM THE TOP 6" OF THE NATURAL TOPSOIL SHALL NOT BE USED IN THE UPPER 1 FOOT OF THE ROADBED.

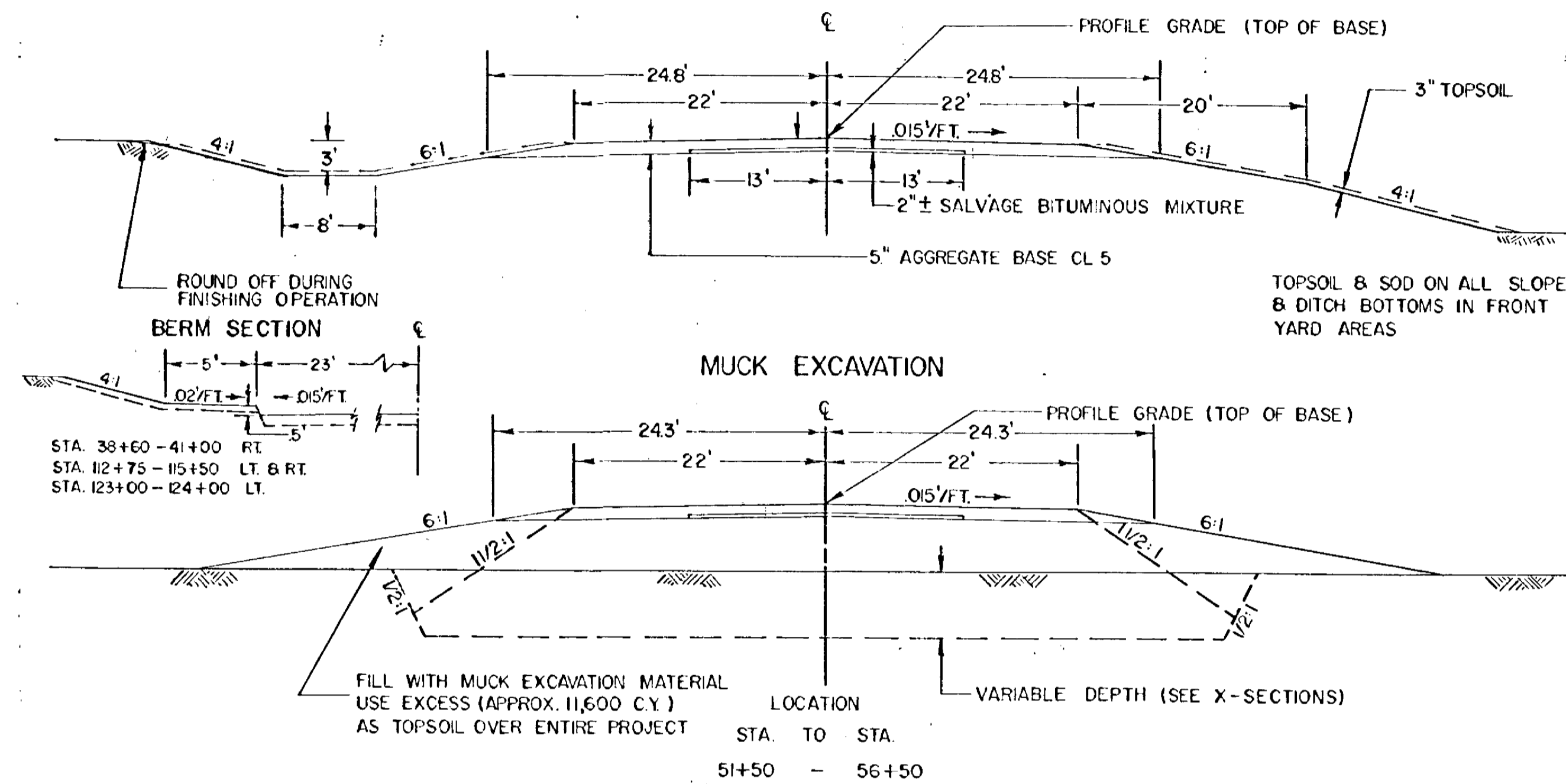
SALVAGE BITUMINOUS MIXTURE QUANTITY IS COMPUTED AS THE VOLUME OF BITUMINOUS IN ITS ORIGINAL POSITION BASED ON AN AVERAGE DEPTH OF 0.2" AND AVERAGE WIDTH OF 24". PAYMENT FOR SALVAGED BITUMINOUS MIXTURE WILL BE MADE ON THE BASIS OF PLANNED QUANTITIES.

EXCESS PEAT (MUCK EXCAVATION) SHALL BE USED FOR TOPSOIL COVERING AND SPREAD TO A UNIFORM DEPTH OVER THE LENGTH OF THE ENTIRE PROJECT. THIS WORK WILL BE PAID FOR UNDER SALVAGED TOPSOIL ITEM.

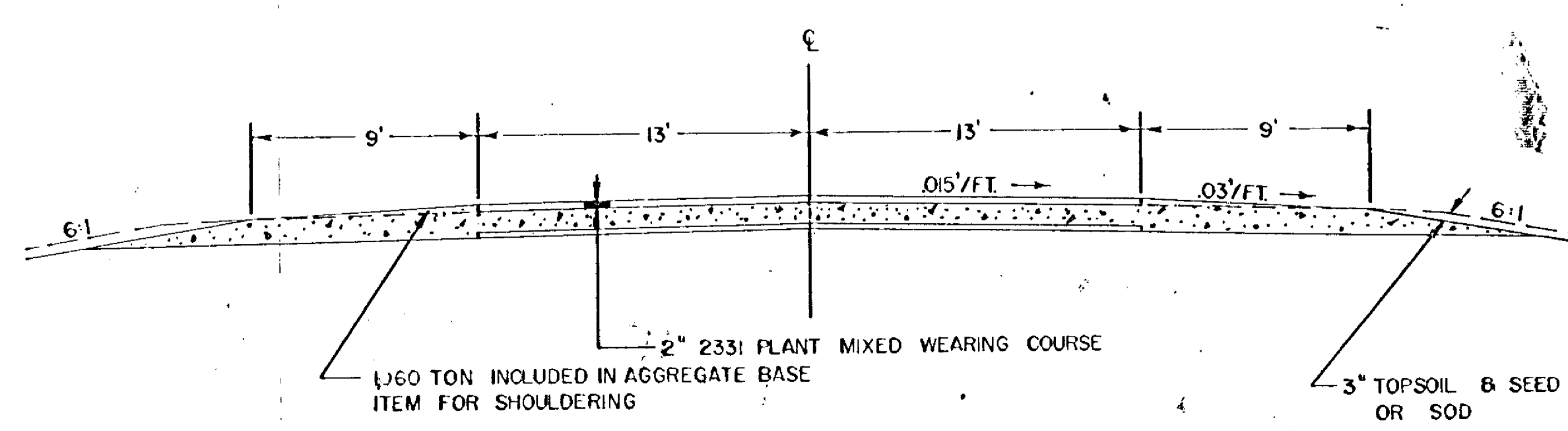
THE FOLLOWING STANDARD DETAIL PLATES, APPROVED BY THE BUREAU OF PUBLIC ROADS, SHALL APPLY OF THIS PROJECT.

| PLATE NO. | DESCRIPTION |
|-----------|--|
| 0002 A | SPECIFICATION REFERENCE TO STANDARD PLATES |
| 3123 F | METAL APRON FOR C.M. PIPE |
| 8000 D | STANDARD BARRICADES |
| 8008 D | CONTRACTORS SIGN |
| 9000 B | APPROACHES AND ENTRANCES |

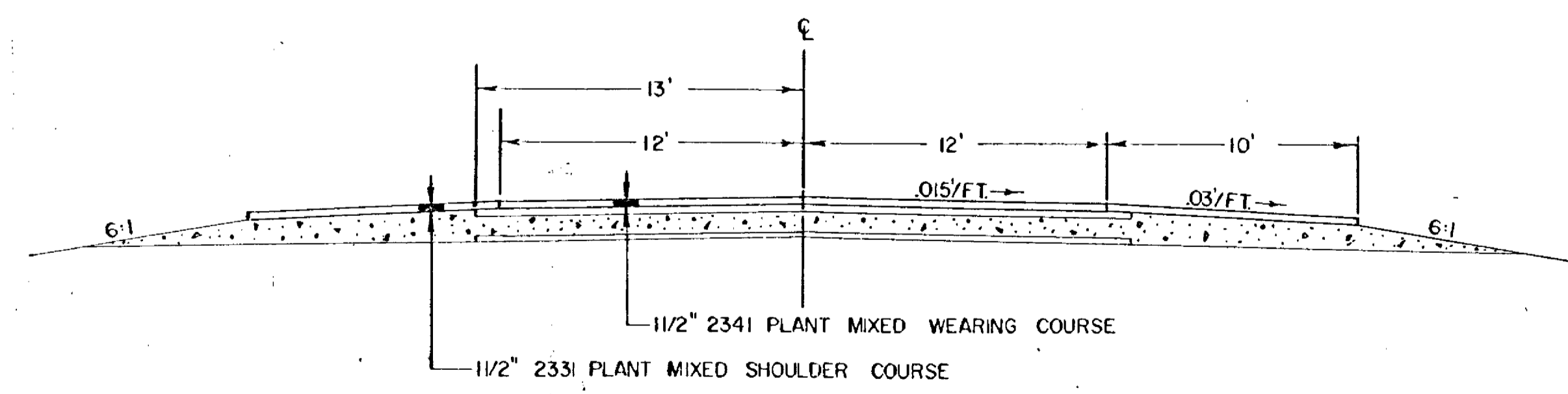
TYPICAL GRADING SECTIONS



TYPICAL BITUMINOUS SECTION



FUTURE BITUMINOUS SECTION

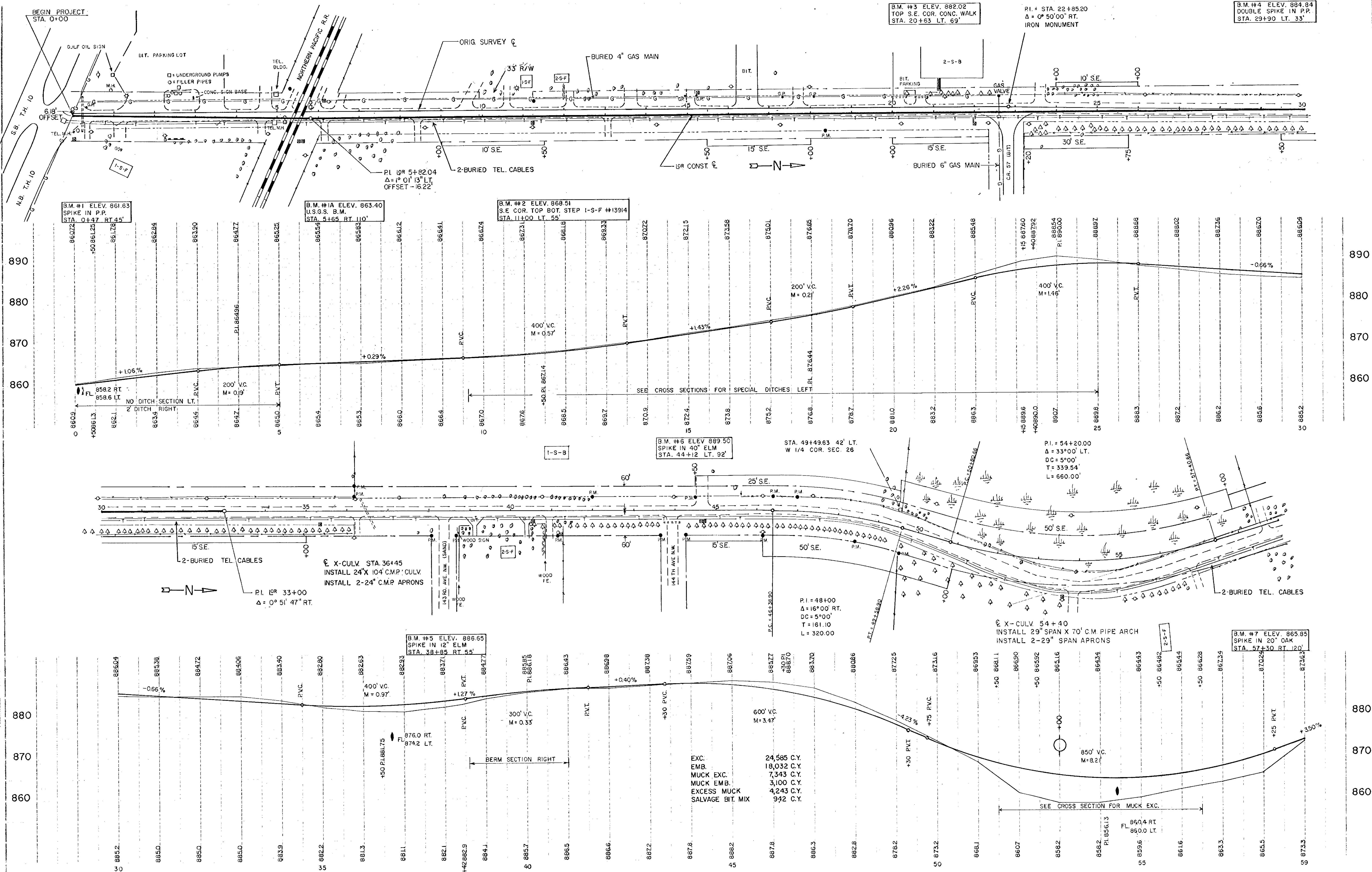


| DRAINAGE | | | | | | | | | | |
|----------|------|------------------------------|--------------------|-------|--------------------|-------|---------------------------------|-------|-----------------------|-------|
| STA. | LOC. | REMARKS | INSTALL 15" C.M.P. | | INSTALL 18" C.M.P. | | INSTALL 29" SPAN C.M. PIPE ARCH | | INSTALL 24" CMP CULV. | |
| | | | LIN. FT. | APRON | LIN. FT. | APRON | LIN. FT. | APRON | LIN. FT. | APRON |
| 0+20 | C | REMOVE 96' R.C.P. | 82' | 2 | | | | | | |
| 0+36 | RT. | | 36' | 2 | | | | | | |
| 1+15 | RT. | | 36' | 2 | | | | | | |
| 1+75 | LT. | NO CULVERT REQ. | | | | | | | | |
| 3+40 | LT. | NO CULVERT REQ. | | | | | | | | |
| 4+60 | RT. | NO CULVERT REQ. | | | | | | | | |
| 4+72 | LT. | NO CULVERT REQ. | | | | | | | | |
| 6+00 | LT. | NO CULVERT REQ. | | | | | | | | |
| 6+16 | RT. | NO CULVERT REQ. | | | | | | | | |
| 6+50 | LT. | NO CULVERT REQ. | | | | | | | | |
| 8+44 | RT. | | 40' | 2 | | | | | | |
| 9+62 | LT. | | 44' | 2 | | | | | | |
| 10+59 | LT. | | 36' | 2 | | | | | | |
| 12+16 | LT. | | 36' | 2 | | | | | | |
| 13+08 | RT. | | 40' | 2 | | | | | | |
| 13+60 | LT. | | 44' | 2 | | | | | | |
| 15+13 | LT. | | 36' | 2 | | | | | | |
| 16+44 | LT. | | 66' | 2 | | | | | | |
| 17+70 | LT. | | 36' | 2 | | | | | | |
| 20+16 | LT. | TO REMAIN IN PLACE | | | | | | | | |
| 20+71 | LT. | TO REMAIN IN PLACE | | | | | | | | |
| 22+83 | RT. | C.R. # 57 | | | 62' | 2 | | | | |
| 23+60 | LT. | NO CULVERT REQ. | | | | | | | | |
| 32+50 | RT. | | 40' | 2 | | | | | | |
| 36+30 | RT. | | 40' | 2 | | | | | | |
| 36+45 | C | | | | | | | 104' | 2 | |
| 38+00 | LT. | | 40' | 2 | | | | | | |
| 38+37 | RT. | 143 RD AVE. | 56' | 2 | | | | | | |
| 39+10 | RT. | NO CULVERT REQ. | | | | | | | | |
| 40+39 | RT. | NO CULVERT REQ. | | | | | | | | |
| 40+94 | RT. | NO CULVERT REQ. | | | | | | | | |
| 43+98 | LT. | SALVAGE 44', NO CULVERT REQ. | | | | | | | | |
| 44+65 | RT. | NO CULVERT REQ. | | | | | | | | |
| 53+90 | RT. | | | | 50 | 2 | | | | |
| 54+40 | C | | | | | | 70' | 2 | | |
| 56+75 | RT. | | | | 36' | 2 | | | | |
| 58+63 | LT. | | | | 36' | 2 | | | | |
| 65+85 | RT. | | 44' | 2 | | | | | | |
| 70+00 | LT. | | | | 50' | 2 | | | | |
| 74+00 | RT. | | 36' | 2 | | | | | | |
| 75+30 | LT. | | 36' | 2 | | | | | | |
| 76+00 | RT. | | 36' | 2 | | | | | | |
| 77+80 | LT. | | 36' | 2 | | | | | | |
| 79+70 | RT. | NO CULVERT REQ. | | | | | | | | |
| 81+40 | LT. | | 36' | 2 | | | | | | |
| 100+57 | LT. | | | | 36' | 2 | | | | |
| 100+65 | RT. | NO CULVERT REQ. | | | | | | | | |
| 101+20 | C | | | | | | 64' | 2 | | |
| 105+13 | LT. | NO CULVERT REQ. | | | | | | | | |
| 106+19 | LT. | NO CULVERT REQ. | | | | | | | | |
| 106+38 | RT. | NO CULVERT REQ. | | | | | | | | |
| 107+63 | LT. | NO CULVERT REQ. | | | | | | | | |
| 108+84 | RT. | | 36' | 2 | | | | | | |
| 110+72 | LT. | NO CULVERT REQ. | | | | | | | | |
| 111+78 | RT. | | 36' | 2 | | | | | | |
| 112+85 | LT. | NO CULVERT REQ. | | | | | | | | |
| 113+57 | RT. | NO CULVERT REQ. | | | | | | | | |
| 114+63 | LT. | NO CULVERT REQ. | | | | | | | | |
| 116+83 | LT. | | 36' | 2 | | | | | | |
| 123+88 | LT. | NO CULVERT REQ. | | | | | | | | |
| 123+88 | RT. | NO CULVERT REQ. | | | | | | | | |
| | | | 1040' | 50 | 270' | 12 | 134' | 4 | 104' | 2 |

| CLEARING AND GRUBBING | | | | | |
|-----------------------|----------------|----------|------|----------|------|
| STA. TO STA. | LOCATION | CLEARING | | GRUBBING | |
| | | TREE | ACRE | TREE | ACRE |
| 0+90 | 48' RT. | | | | |
| 12+52 | 43' LT.-SAVE | | | | |
| 12+41 | 44' LT.-SAVE | | | | |
| 23+31 - 24+89 | 40' - 60' RT. | 14 | | 13 | |
| 23+78 - 25+00 | 32' - 54' LT. | | .10 | | .10 |
| 24+95 - 36+04 | 46' - 60' RT. | | .65 | | .65 |
| 38+35 | 31' LT. | | | | |
| 38+88 | 33' LT. | | | | |
| 39+15 - 40+60 | 33' LT. | | | | |
| 39+50 - 40+50 | 34' - 41' RT. | | .05 | | .05 |
| 40+59 | 30' RT. | | | | |
| 40+85 | 35' RT. | | | | |
| 41+15 | 28' RT. | | | | |
| 41+31 | 28' RT. | | | | |
| 41+47 | 28' RT. | | | | |
| 41+00 - 41+90 | 27' - 33' LT. | 10 | | 10 | |
| 41+05 - 43+59 | 36' - 40' RT. | | .15 | | .15 |
| 45+46 | 55' LT. | | | | |
| 44+33 - 49+25 | 34' - 42' RT. | | .30 | | .30 |
| 49+00 - 50+07 | 33' - 60' LT. | | .10 | | .10 |
| 49+61 - 51+40 | 40' - 108' RT. | | .25 | | .25 |
| 51+62 - 51+74 | 15' LT. | 4 | | 4 | |
| 52+60 | 10' RT. | | | | |
| 52+90 | 27' RT. | | | | |
| 58+08 | 8' LT. | | | | |
| 58+28 - 59+22 | 13' - 58' LT. | | .15 | | .15 |
| 72+00 | 52' RT. | | | | |
| 72+02 | 53' RT. | | | | |
| 83+00 - 85+00 | 40' - 65' RT. | | .15 | | .15 |
| 85+14 - 85+68 | 38' - 55' LT. | 14 | | 14 | |
| 88+23 | 29' LT. | | | | |
| 91+07 | 60' - 75' LT. | | | | |
| 91+44 - 94+00 | 15' - 65' LT. | 7 | .20 | 7 | .20 |
| 92+00 - 96+50 | 42' - 52' RT. | | .25 | | .25 |
| 93+55 | 30' LT. | 3 | | 3 | |
| 98+40 - 100+30 | 30' - 36' RT. | | .10 | | .10 |
| 100+86 | 46' RT. | | | | |
| 100+95 | 52' RT. | | | | |
| 112+75 - 114+91 | 27' - 40' RT. | | .15 | | .15 |
| 112+98 | 26' RT. | | | | |
| 116+05 - 117+57 | 30' - 44' LT. | 12 | | 12 | |

| SODDING | | |
|-----------------|-----------|-------|
| STA. TO STA. | LOC. | S.Y. |
| 0+00 - 1+00 | LT. & RT. | 503 |
| 10+66 - 12+08 | LT. | 391 |
| 20+28 - 22+50 | LT. | 473 |
| 38+50 - 41+30 | RT. | 391 |
| 55+00 - 58+00 | RT. | 1,472 |
| 76+78 - 78+88 | LT. | 217 |
| 80+00 - 82+00 | LT. | 605 |
| 100+00 - 101+00 | RT. | 317 |
| 104+50 - 109+00 | LT. | 983 |
| 110+82 - 118+00 | LT. | 1,089 |
| 112+75 - 115+00 | RT. | 281 |
| 123+96 - 124+50 | LT. | 71 |
| TOTAL = 7,393 | | |

| SALVAGE & INSTALL FENCE | | | | |
|-------------------------|-----------|--------|--------|------------|
| STA. TO STA. | LOC. | REMOVE | RESET | REMARKS |
| 6+04 | RT. | 12' | | LINE FENCE |
| 23+21 - 36+16 | RT. | 1,313' | 1,295' | |
| 23+78 - 36+18 | LT. | 1,246' | 1,220' | |
| 10+50 - 40+83 | RT. | 33' | 33' | |
| 45+60 - 62+82 | LT. & RT. | 1,732' | 1,732' | |
| 49+49 | LT. | 50' | 28' | LINE FENCE |
| 58+45 | LT. | 47' | | LINE FENCE |
| 62+82 | RT. | 58' | 40' | LINE FENCE |
| 71+55 - 73+90 | RT. | 255' | 255' | |
| 73+93 | LT. | 9' | | LINE FENCE |
| 82+00 - 86+88 | RT. | 500' | 488' | |
| 84+65 - 104+56 | LT. | 1,991' | 1,966' | |
| 104+59 | RT. | 18' | | LINE FENCE |
| 112+74 - 115+00 | RT. | 226' | 226' | |
| 118+14 - 121+00 | LT. | 300' | 286' | |
| 118+25 - 124+75 | RT. | 650' | 650' | |
| | | 8,440' | 8,219' | |



B.M. #3 ELEV. 882.02
TOP S.E. COR. CONC. WALK
STA. 20+63 LT. 69'

P.I. # STA. 22+85.20
 $\Delta = 0^\circ 50' 00''$ RT.
IRON MONUMENT

B.M. #4 ELEV. 884.84
DOUBLE SPIKE IN P.P.
STA. 29+90 LT. 33'

B.M. #1 ELEV. 861.83
SPIKE IN P.P.
STA. 0+47 RT. 45'

B.M. #1A ELEV. 863.40
U.S.G.S. B.M.
STA. 5+65 RT. 110'

B.M. #2 ELEV. 868.51
S.E. COR. TOP BOT. STEP I-S-F #13914
STA. 11+00 LT. 55'

B.M. #6 ELEV. 889.50
SPIKE IN 40' ELM
STA. 44+12 LT. 92'

B.M. #5 ELEV. 886.65
SPIKE IN 12" ELM
STA. 38+85 RT. 55'

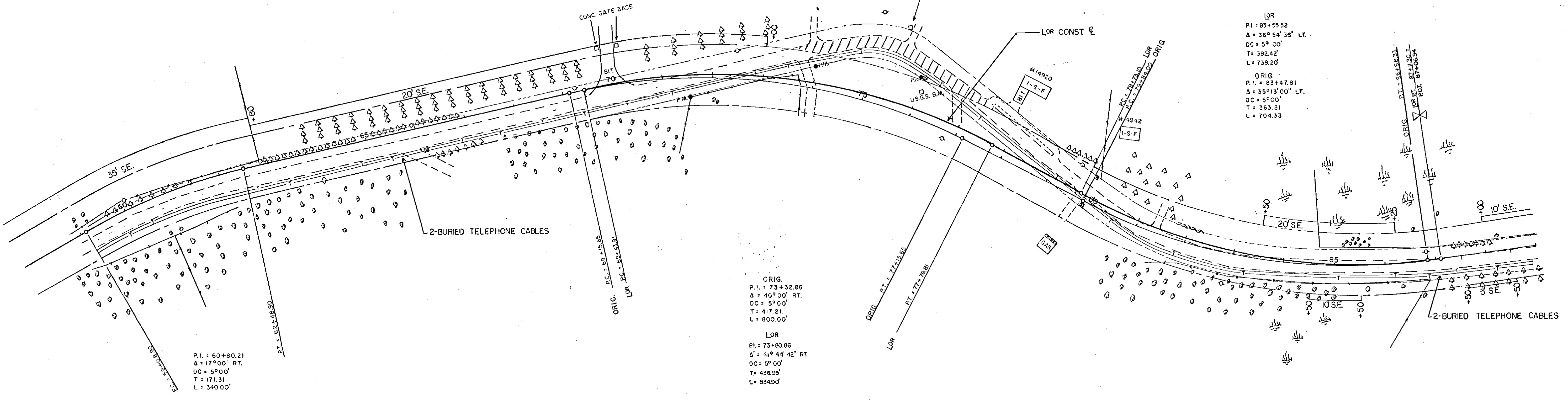
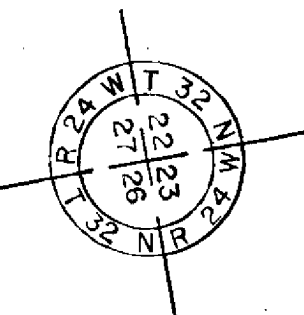
B.M. #7 ELEV. 865.85
SPIKE IN 20" OAK
STA. 57+30 RT. 120'

EXC. 24,585 C.Y.
EMB. 18,032 C.Y.
MUCK EXC. 7,343 C.Y.
MUCK EMB. 3,100 C.Y.
EXCESS MUCK 4,243 C.Y.
SALVAGE BIT MIX 942 C.Y.

B.M. # 8 ELEV. 891.65
TOP S.W. COR. CONC. GATE BASE
STA. 69+85 LT. 75'

B.M. # 9 ELEV. 888.23
S.E. COR. TOP STEP
STA. 80+50 LT. 150'

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



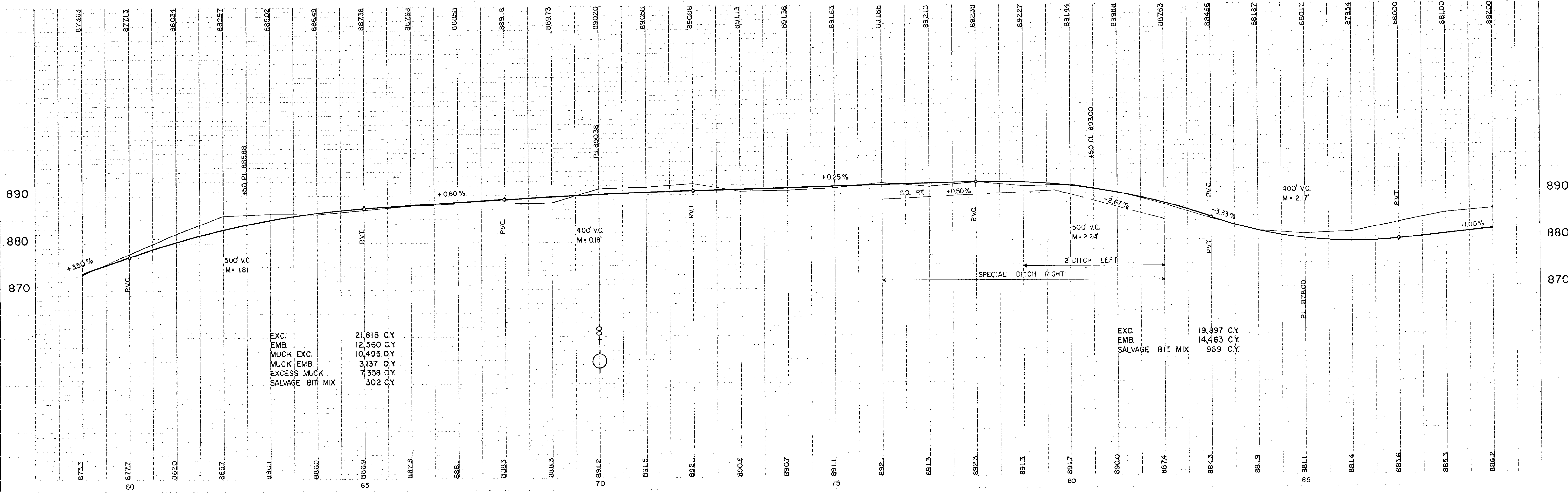
ORIG.
P.I. = 83+55.52
Δ = 36° 54' 36" LT.
DC = 5° 00'
T = 382.42'
L = 738.20'

ORIG.
P.I. = 83+47.81
Δ = 35° 13' 00" LT.
DC = 5° 00'
T = 363.81'
L = 704.33'

ORIG.
P.I. = 73+32.86
Δ = 40° 00' RT.
DC = 5° 00'
T = 417.21'
L = 800.00'

LOR
P.I. = 73+90.86
Δ = 49° 44' 42" RT.
DC = 5° 00'
T = 436.95'
L = 834.90'

P.I. = 60+80.21
Δ = 17° 00' RT.
DC = 5° 00'
T = 171.31'
L = 340.00'



EXC. 21,818 C.Y.
EMB. 12,560 C.Y.
MUCK EXC. 10,495 C.Y.
MUCK EMB. 3,137 C.Y.
EXCESS MUCK 7,358 C.Y.
SALVAGE BIT MIX 302 C.Y.

EXC. 19,897 C.Y.
EMB. 14,463 C.Y.
SALVAGE BIT MIX 969 C.Y.

