

STATE OF VERMONT AGENCY OF TRANSPORTATION

Dated OCT 18 1984

Cooley Corporation
Contractor

Roy Cooley
Signature

Cooley Corp. /President



CONTRACT PLANS

THESE PLANS DO NOT REFLECT
CHANGES MADE ON THE PROJECT.

PROPOSED IMPROVEMENT

R. Saun
Transportation Secretary's Signature

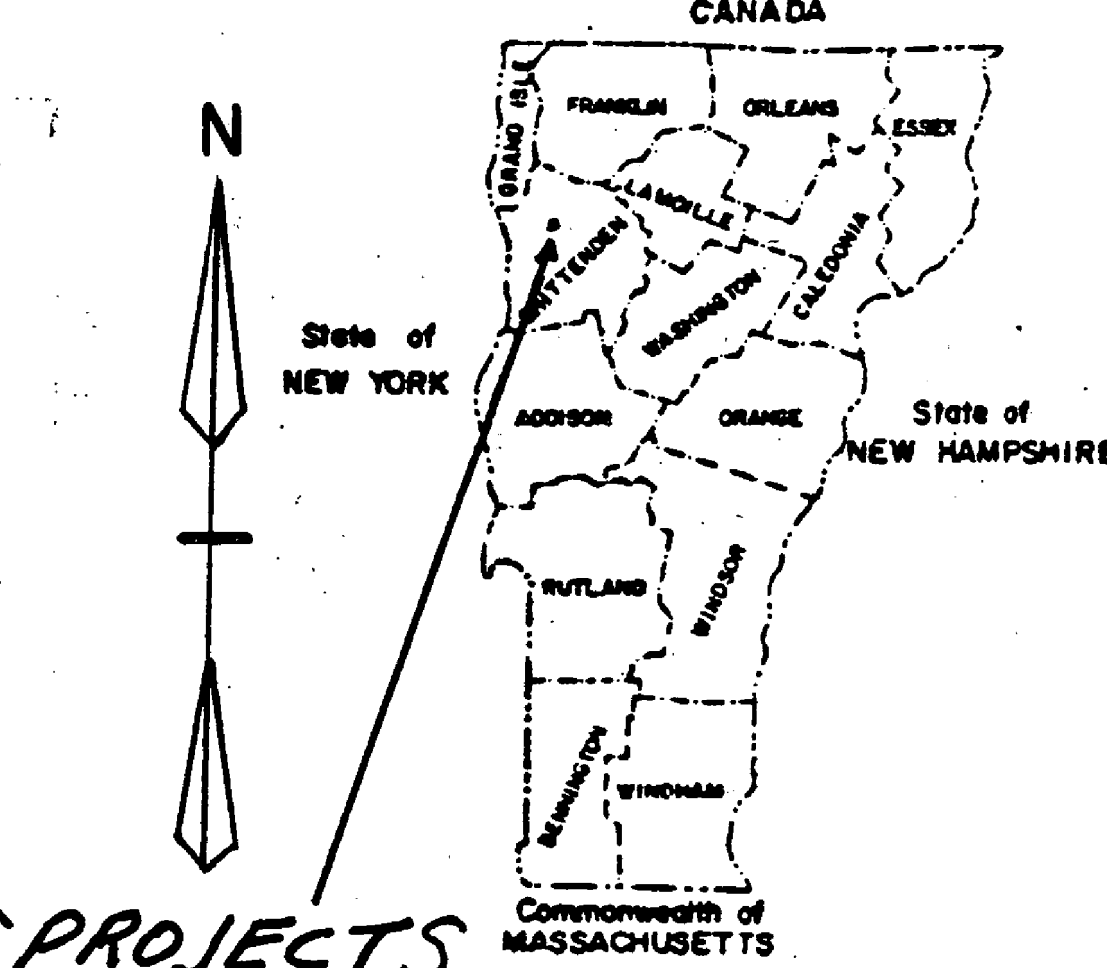
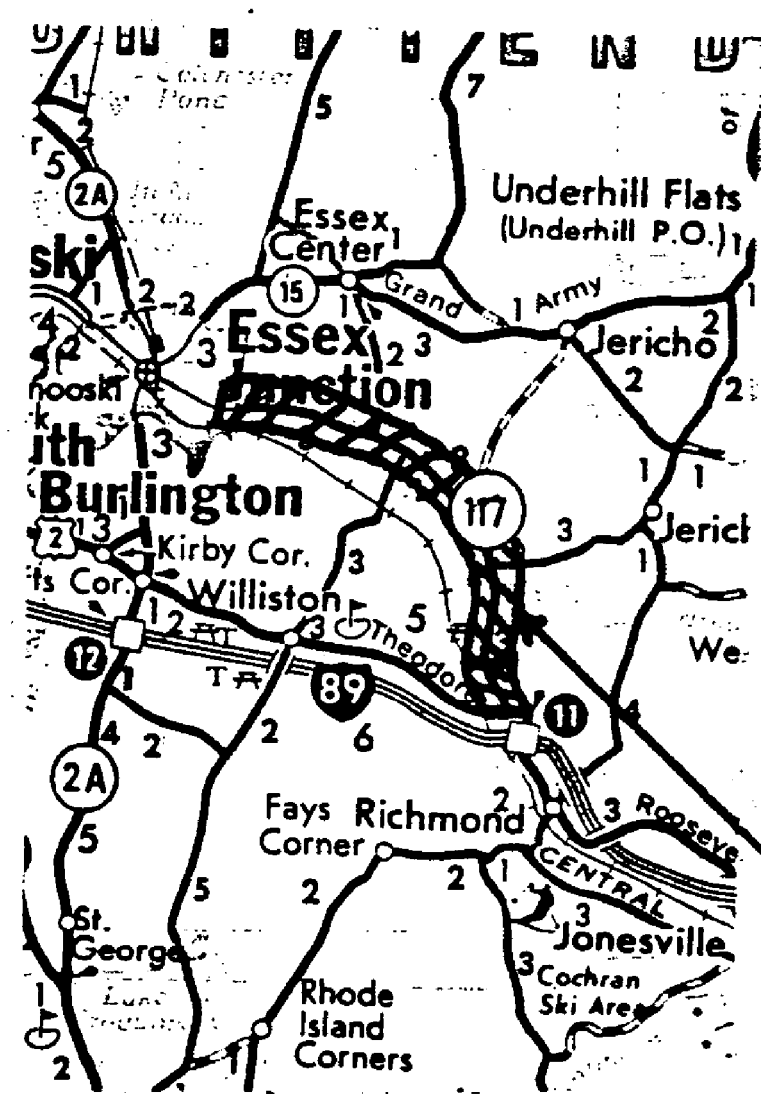
RESURFACING PROJECT

TOWNS OF: ESSEX & ESSEX - JERICHO - RICHMOND

COUNTY OF: CHITTENDEN

ROUTE NO: VT. ROUTE 117

ROUTE CLASS: FAU - FAS



PROJECTS



1 INCH REPRESENTS 5 MILES

INDEX OF SHEETS

SEE SHEET TWO

These plans are subject to such engineering changes as may be required by the Federal Highway Administration or the Director of Engineering and Construction.

Construction is to be carried on in accordance with these plans and the Standard Specifications for Highway and Bridge Construction dated March, 1976, as approved by the Federal Highway Administration on October 27, 1976 for use on this project, including all subsequent revisions and such revised specifications and special provisions as are incorporated in these plans.

**PROJECT PROCESSED UNDER
SECONDARY ROAD PLAN**

SUBMITTED BY ORDER OF THE STATE TRANSPORTATION BOARD

APPROVED *S. J. Gagne P.E.* DATE *9-10-84*
DIRECTOR OF ENGINEERING AND CONSTRUCTION

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____ DATE _____
DIVISION ADMINISTRATOR

PROJECT NO. M 5400 (3) S - RS 022-113

SHEET 1 OF 60 SHEETS

STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT

RESURFACING PROJECT

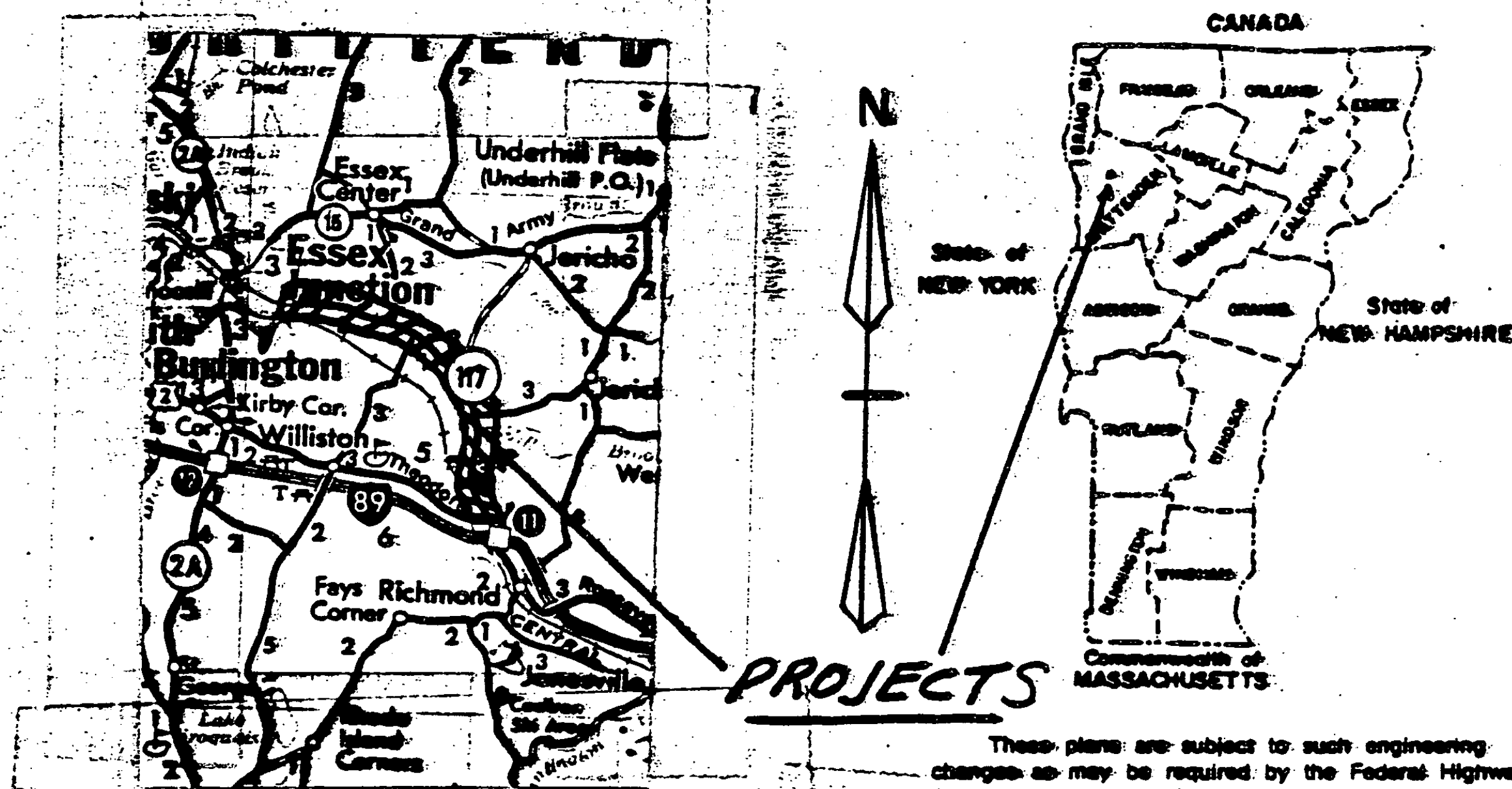
TOWNS OF: ESSEX & ESSEX - JERICHO - RICHMOND

COUNTY OF: CHITTENDEN

ROUTE NO: VT ROUTE 117

ROUTE CLASS: F4U - F4S

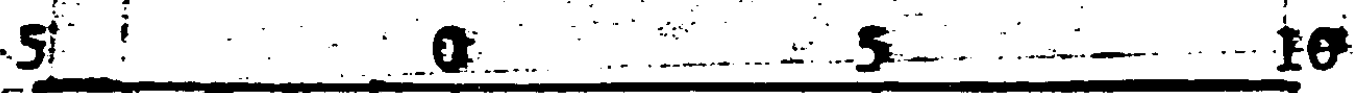
**PROJECT PROCESSED UNDER
SECONDARY ROAD PLAN**



PROJECTS

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1 INCH REPRESENTS 5 MILES

INDEX OF SHEETS

SEE SHEET TWO

SUBMITTED BY ORDER OF THE STATE TRANSPORTATION BOARD

APPROVED _____ DATE _____
DIRECTOR OF ENGINEERING AND CONSTRUCTION

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____ DATE _____
DIVISION ADMINISTRATOR

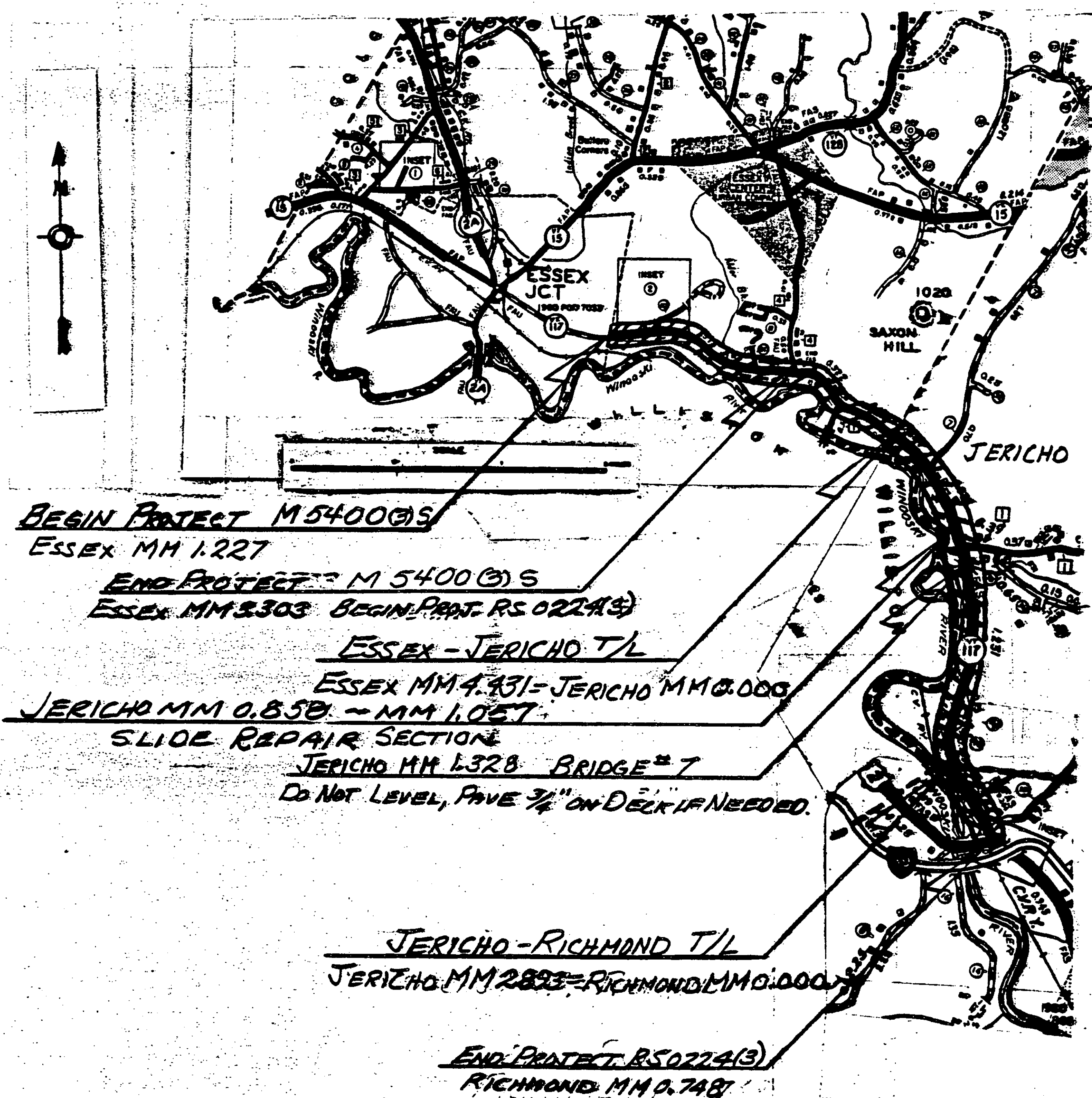
PROJECT NO. M 5400 (3) S - RS 0224 (3)

SHEET 1 OF 60 SHEETS

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42.	Standard Sheet D-6	04/04/73 R
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45.	Standard Sheet E-6	04/01/80 R
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50.	Standard Sheet E-50	03/16/82 R
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56-60.	Centerline Details	

PROJECT DESCRIPTION AND LOCATION



PROJECT LOCATION

ESSEX

BEGINNING AT MM 1.227 ON VT. 117 IN ESSEX - THE ESSEX JCT VILLAGE LINE - AND PROCEEDING SOUTHEASTERLY 2.076 MILES TO MM 3.303 - THE JCT. WITH TH-4.
 PROJECT LENGTH = 10,960' = 2.076 MI.

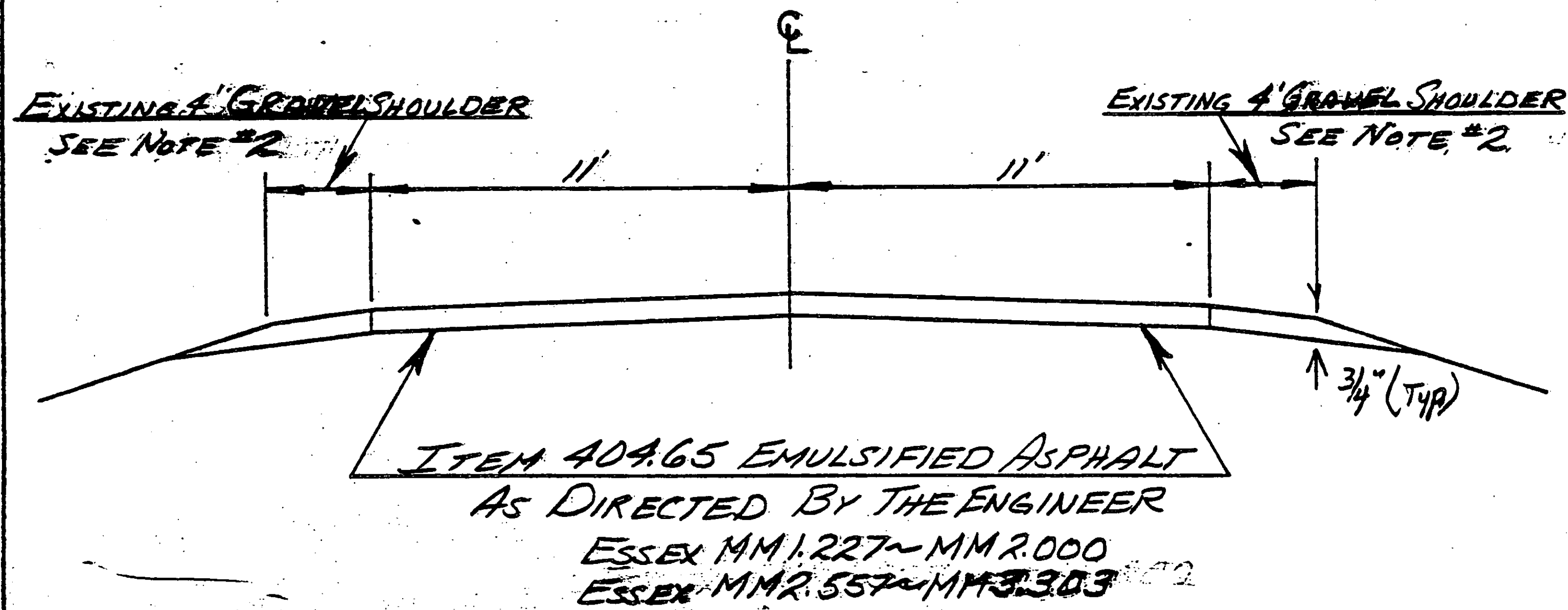
ESSEX - JERICHO - RICHMOND RS 0224(3)

BEGINNING AT MM 3303 ON VT. 117 IN ESSEX - THE JCT. WITH TH-4 - AND PROCEEDING SOUTHEASTERLY 4.769 MILES TO RICHMOND MM 0.748 - THE JCT. OF VT. 117 AND US 2.
 PROJECT LENGTH = 25,182' = 4.769 MI.

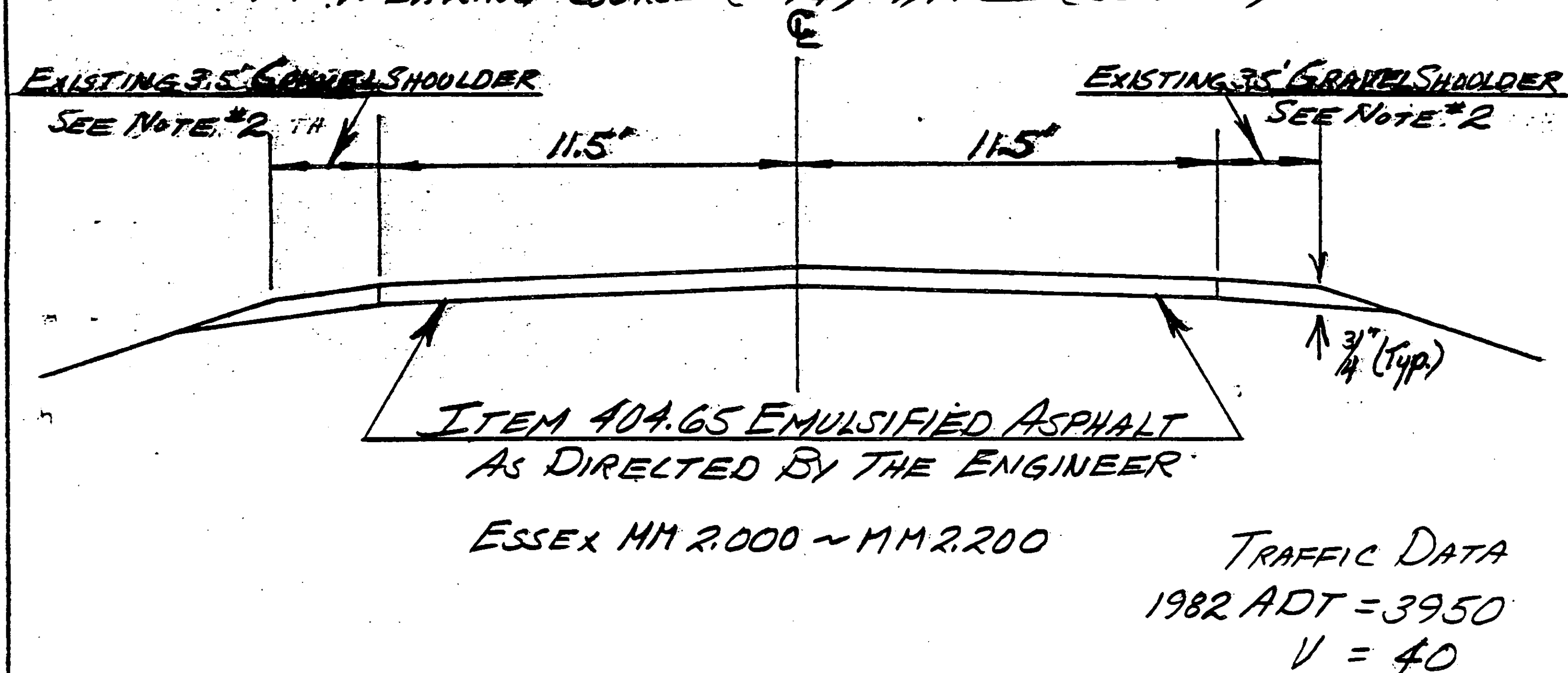
PROJECT <u>ESSEX - JERICHO - RICHMOND</u>	NO. <u>M 5400(3) S</u> <u>RS 0224(3)</u> SHEET <u>3</u> OF <u>60</u> SHEETS
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TYPICAL SECTIONS & DESIGN DATA

ITEM 406.25, BITUMINOUS CONCRETE PAVEMENT
 LEVELING COURSE, TYPE III OR IV (22' WIDE), EST. 250 TONS/MI.
 AS DIRECTED BY THE ENGINEER. *SEE NOTE #1
 1/4" WEARING COURSE ($\pm 1/4$) TYPE III (22' WIDE)



ITEM 406.25, BITUMINOUS CONCRETE PAVEMENT
 LEVELING COURSE, TYPE III OR IV (23' WIDE), EST. 250 TONS/MI.
 AS DIRECTED BY THE ENGINEER. *SEE NOTE #1
 1/4" WEARING COURSE ($\pm 1/4$) TYPE III (23' WIDE)



NOTE #1: LEVEL COURSE BASED ON 22' WIDE ROADWAY, QUANTITY FACTORED FOR ACTUAL WIDTH.

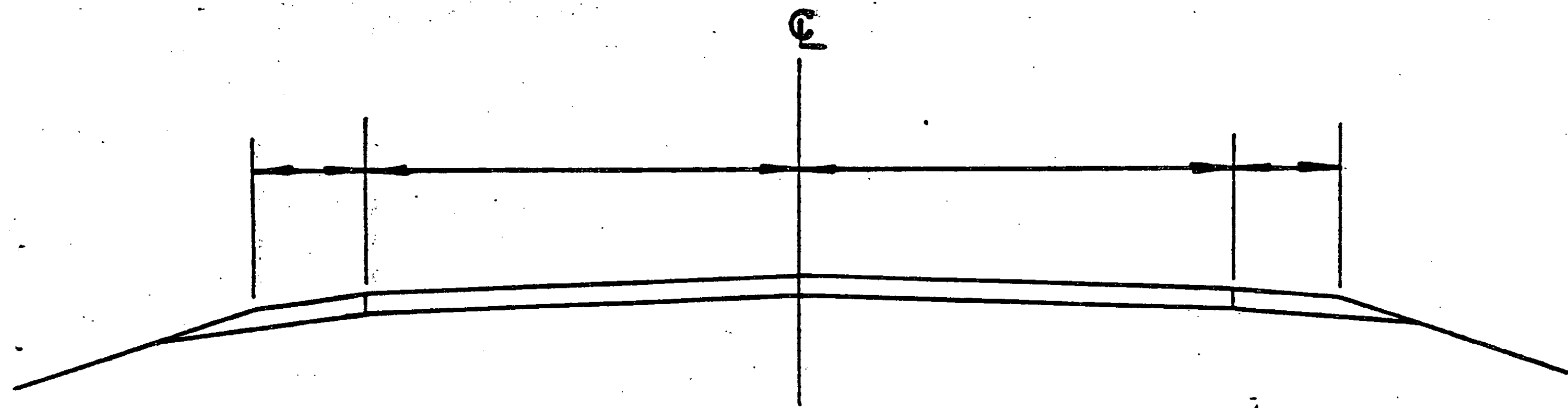
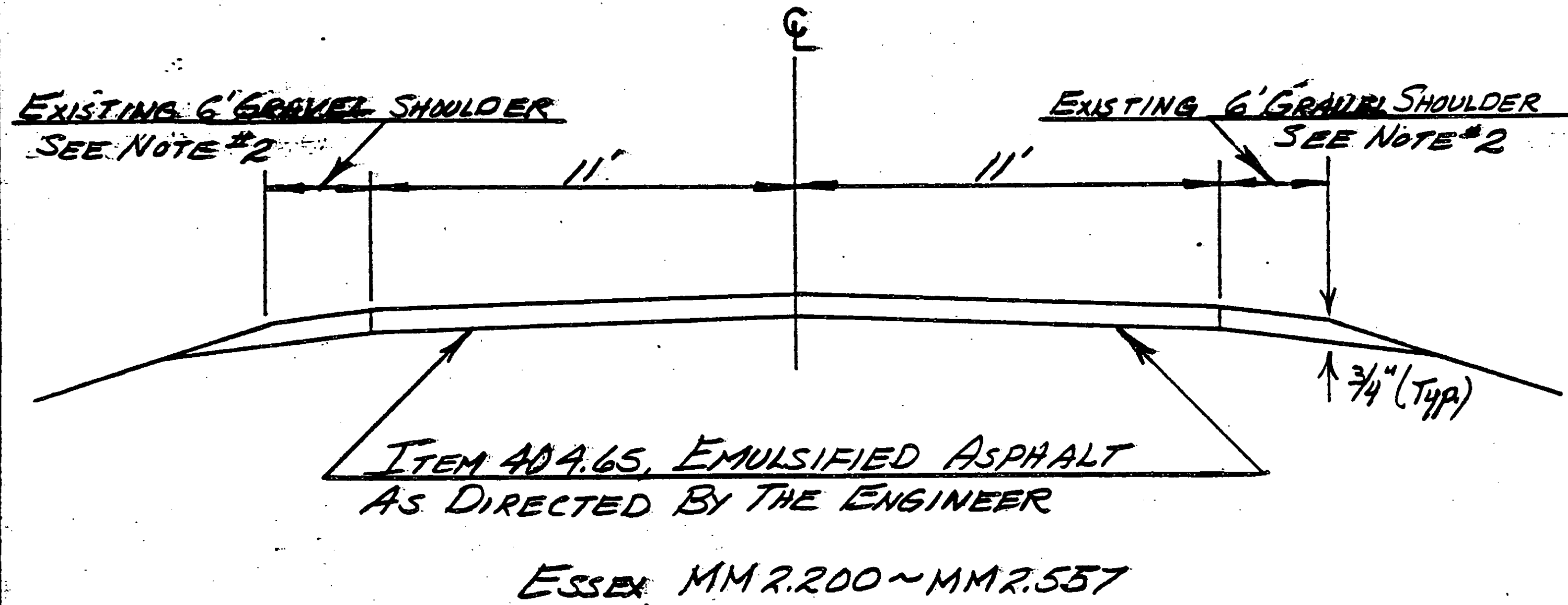
NOTE #2: SHOULDERS TO BE PAVED - REFER TO SHEET 60160 FOR DETAILS.

PROJECT ESSEX

NO. M 5400(3) S
 SHEET 4 OF 60

TYPICAL SECTIONS & DESIGN DATA

ITEM 406.25, BITUMINOUS CONCRETE PAVEMENT
 LEVELING COURSE, TYPE III OR IV (22' WIDE), EST. 250 TONS/MI.
 AS DIRECTED BY THE ENGINEER *SEE NOTE #1
 1/4" WEARING COURSE ($\pm 1/4"$) TYPE III (22' WIDE)



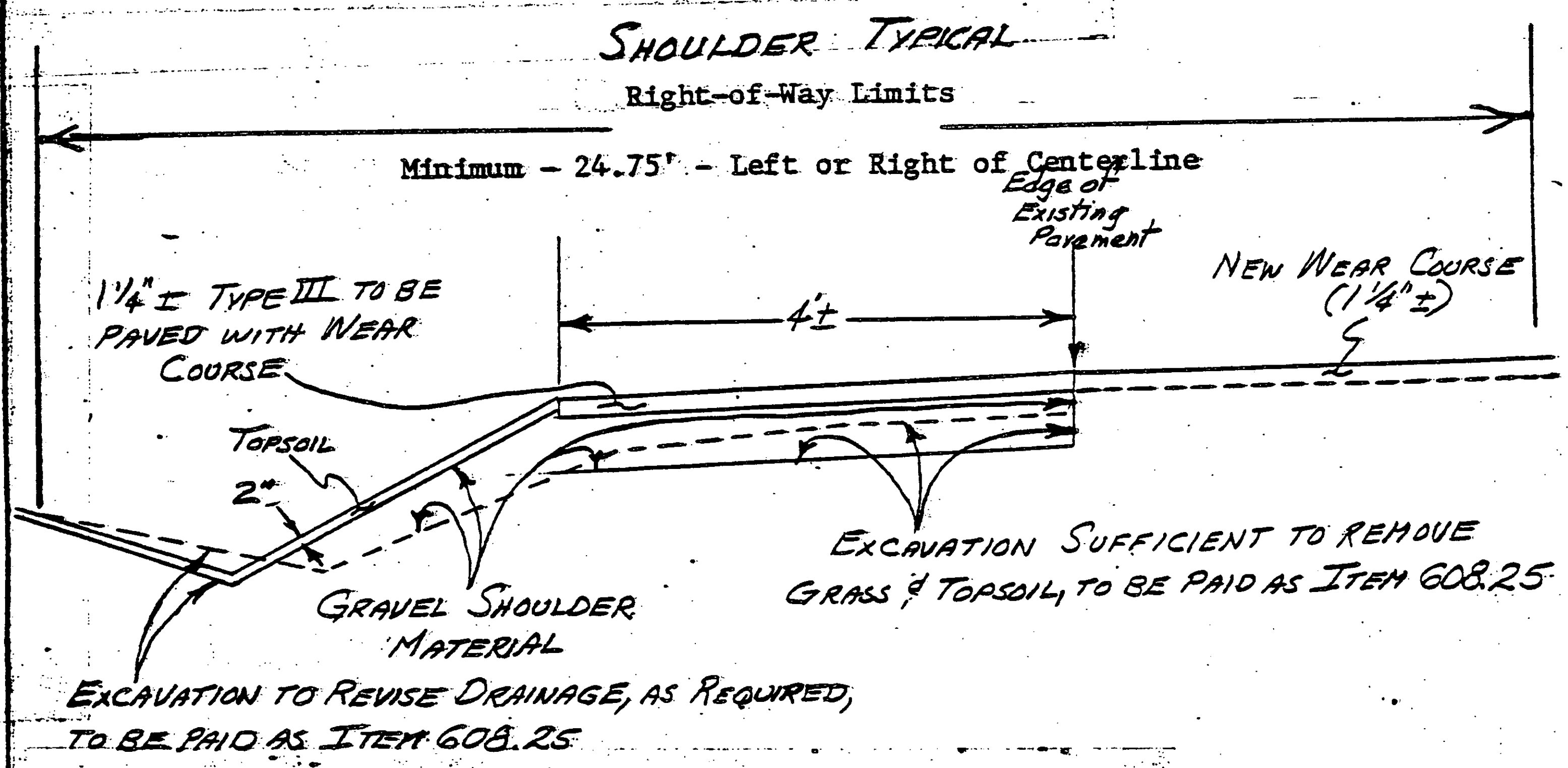
NOTE #1: LEVEL COURSE BASED ON 22' WIDE ROADWAY, QUANTITY FACTORED FOR ACTUAL WIDTH

NOTE #2: SHOULDERS TO BE PAVED - REFER TO SHEET 60/60 FOR DETAILS

PROJECT ESSEX

NO. M 5400 (3) S
 SHEET 5 OF 60

TYPICAL SECTIONS & DESIGN DATA



ESSEX - M 5400(3)S

MT 1.227 to MT 3.303

NOTES:

- 1) Where shoulders are less than 4' wide, they may be widened to 4' as long as the existing drainage and a reasonable slope - not greater than 1-1/2 - can be maintained. Where a shoulder cannot be reasonably widened to 4', a shoulder as wide as possible will be constructed and paved. Where existing shoulders are wider than 4', the shoulder will be paved as directed by the Engineer and any remainder matched with the item of Shoulder Gravel.
- 2) Where gravel is exposed on the shoulder surface, excavation shall be only to the depth necessary to lay the shoulder pavement.
- 3) If culverts in drives or intersecting roadways are the only reason for not widening the shoulder, there is included a nominal quantity of 50 lf of Item 601.7250- Relaying Pipe Culvert- which will be full compensation for all necessary equipment, materials, and labor to remove the culvert and relay it in the location designated by the Engineer.
However, if the excavated material is unsuitable for use as backfill, suitable backfill will be obtained and it will be paid for at the Contract Price for Gravel Shoulders under whichever option is bid. A nominal quantity of 50 cy has been included in the gravel quantity for this purpose.
- 4) It is expected that the Contractor and/or his employees will use care in excavating any culverts to be relayed or extended. Existing culverts damaged by the Contractor's operations will be replaced at the Contractor's expense.

Shoulder Sheet 1 of 2

NO. M 5400 (3) S

PROJECT ESSEX

SHEET 6 OF 60 SHEETS

TYPICAL SECTIONS & DESIGN DATA

NOTES (continued)

5) In the event that a drive or intersection culvert is designated by the Engineer to be relayed; there are included in the contract three sizes of each of three types of culvert- CGMP, CAACP, or RCP, Class III-which may be used to replace a poor condition culvert designated to be relayed.

6) If it becomes necessary to extend a roadway or other culvert to match new slopes, the work will be paid for in the following manner:

- A) Excavating and backfilling will be paid at the contract price for Item 608.25- All Purpose Excavator Rental.
- B) Backfill material will be paid at the contract price for Gravel Shoulders.
- C) The additional length of culvert will be paid at the contract price for the size and type used, which will be full compensation for furnishing and installing the new culvert at the location of the extension designated by the Engineer.

7) Items 651.10-Seed (Urban Mix), 651.15-Fertilizer, 651.20-Agricultural Limestone, 651.25-Hay Mulch, and 653.10-Topsoil- have been included in the contract to restore lawns and the roadside to an attractive appearance. See sheet 10 of 60 sheets.

8) It is expected that the shoulder work, including excavating, filling, compacting the shoulder gravel, extending and/or relaying culverts, and as much of the Turf Establishment as possible will be done after the level course of pavement is done on the main roadway, so that the wear course may be paved on both the roadway and the shoulders at the same time.

9) Item 608.37-Truck Rental- has been estimated on the basis of using two trucks with the All Purpose Excavator on the shoulder work to complete the work as soon as possible in an effort to minimize the conflict with the traveling Public. This item will not be used to pay for the hauling of Shoulder Gravel or Topsoil.

10) There is included in Item 406.25-Bituminous Concrete Pavement- a quantity of 30 tons to be used to patch pavements in side streets or drives where relaying of culverts is necessary and to build 25' tapers before the beginning point and after the ending point of each section of paved shoulder.

II) Limits of right-of-way is 24.75 feet minimum, left and right of centerline of roadway. Resident Engineer will contact the Agency of Transportation, Right-of-Way Division and property owners before anticipated widening for the four (4) paved shoulders.

- A) Do not exceed right-of-way limits, varies, for ditch widening.
- B) Do not exceed right-of-way limits, varies, for fill slope construction.

Shoulder Sheet 2 of 2

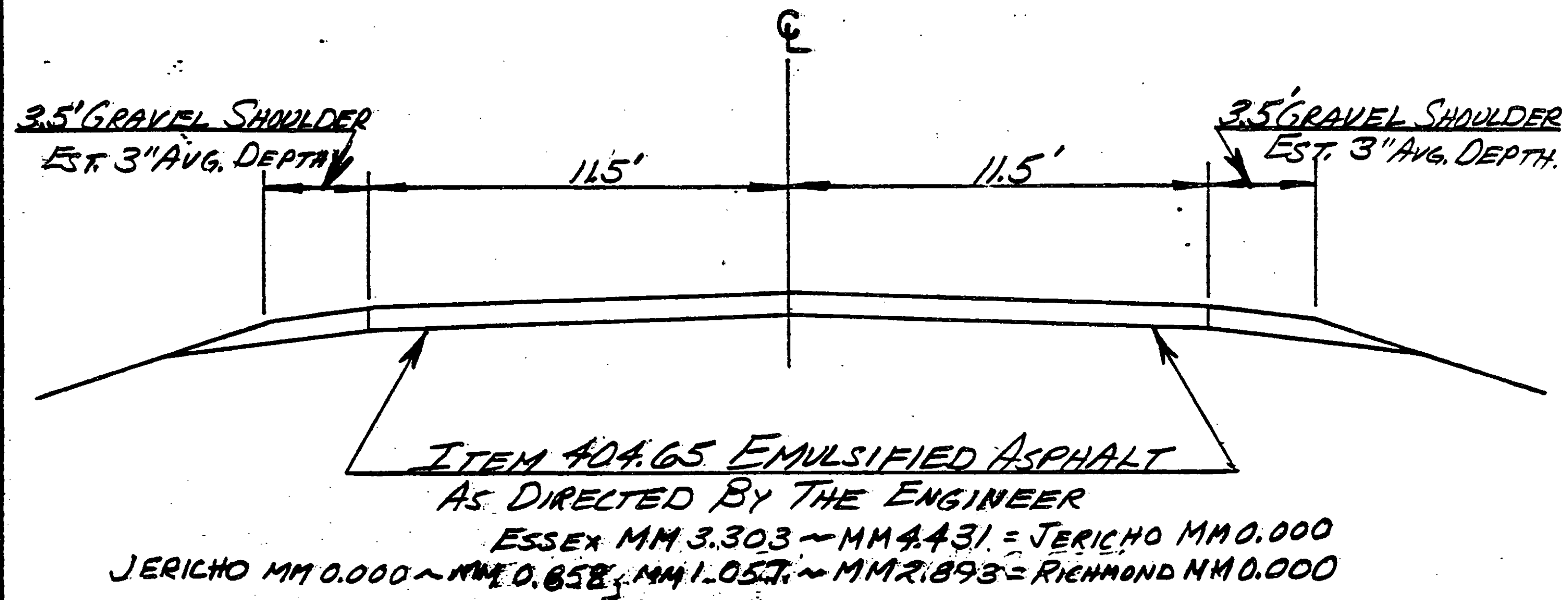
NO. M 5400(3) S

PROJECT ESSEX

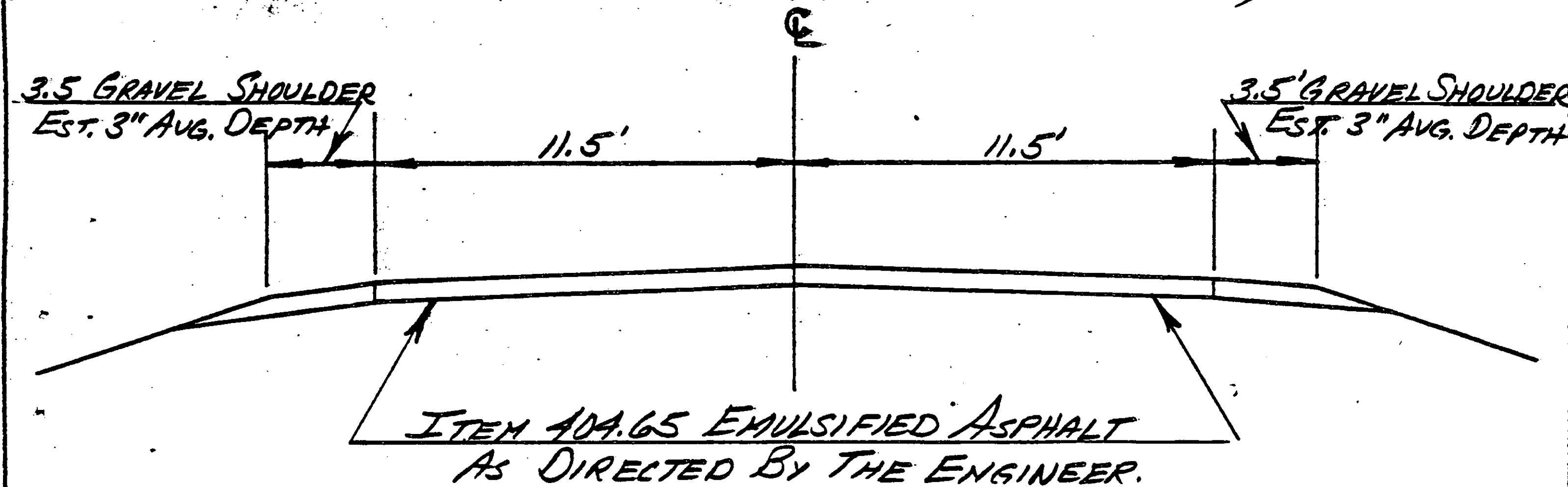
SHEET 7 OF 60 SHEETS

TYPICAL SECTIONS & DESIGN DATA

ITEM 406.25, BITUMINOUS CONCRETE PAVEMENT
 LEVELING COURSE, TYPE III OR II (22' WIDE), EST. 150 TONS/MI.
 AS DIRECTED BY THE ENGINEER *SEE NOTE #1
 1/4" WEARING COURSE ($\pm 1/4"$) TYPE III (23' WIDE)



ITEM 406.25, BITUMINOUS CONCRETE PAVEMENT
 LEVELING COURSE, TYPE III OR II (23' WIDE), EST. 250 TONS/MI.
 AS DIRECTED BY THE ENGINEER *SEE NOTE #1
 1/4" WEARING COURSE ($\pm 1/4"$) TYPE III (23' WIDE)



RICHMOND MM 0.000 ~ MM 0.748

TRAFFIC DATA
 1982 ADT = 3950
 V = 50

NOTE #1: LEVEL COURSE BASED ON 22' WIDE ROADWAY, QUANTITY FACTORED FOR ACTUAL WIDTH.

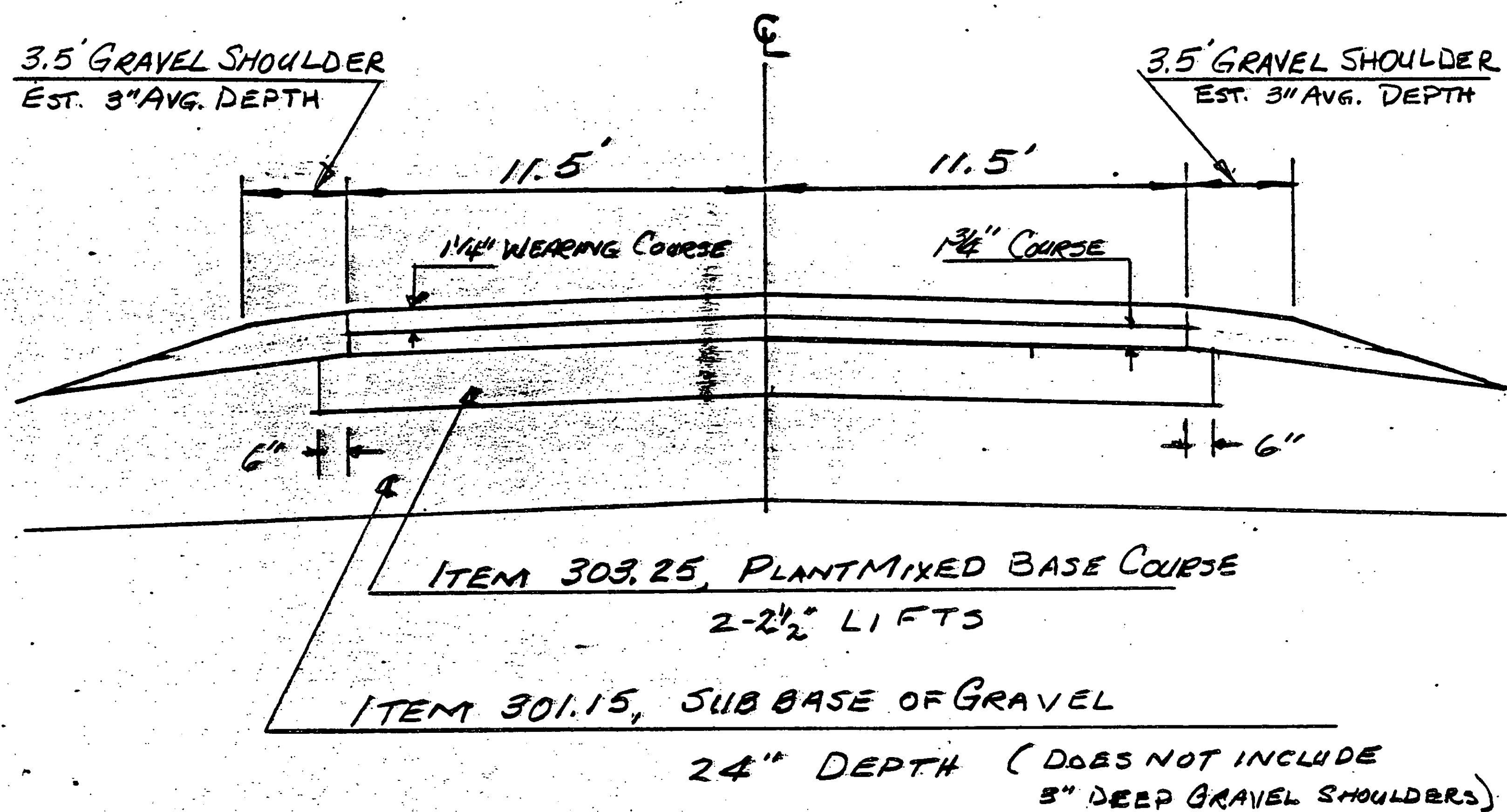
TYPICAL SECTIONS & DESIGN DATA

ITEM 406.25, BITUMINOUS CONCRETE PAVEMENT
 3" DEPTH - TO BE LAID IN TWO COURSES - 23' WIDE

1 - 1 3/4" COURSE (1/4) TYPE II

1 - 1 1/4" WEARING COURSE (1/4) TYPE III

NOTE: ESTIMATE FOR THIS SECTION DOES NOT
 INCLUDE 1 1/4" WEARING COURSE OR GRAVEL SHOULDERS
 THESE ARE TO BE CONTINUOUS WITH ADJACENT
 AREAS. SEE SHEET 20 OF 60.



JERICO MM 0.850 ~ MM 1.057

TRAFFIC DATA

1982 ADT 3340

V 50

SEEDING FORMULA, ITEM 651.10
URBAN AREAS

% WT	LBS/A	NAME	PUR%	GERM%
37.50	30	· CREEPING RED FESCUE (VAR. PENNLAWN)	98	85
31.25	25	KENTUCKY BLUEGRASS (VAR. COMMON)	85	75
31.25	25	PERENIAL RYE GRASS (VAR. PENNFINE)	95	90
<u>100.00</u>	<u>80</u>	LBS/ACRE		

THE SEED MIXTURE SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE FROM ALL NOXIOUS WEED SEED.

HAY MULCH, ITEM 651.25 TO BE PLACED ON ALL EARTH SLOPES AT THE RATE OF TWO TONS PER ACRE

FERTILIZER, ITEM 651.15, SHALL BE MIXED AS FOLLOWS: (SAND FORMULA)

NITROGEN 10%

PHOSPHORUS 20%

POTASH 20%

FERTILIZER SHALL BE DELIVERED IN BAGS NOT TO EXCEED 100LBS EACH AND IS TO BE APPLIED AT RATE OF 500LBS. PER ACRE.

AGRICULTURAL LIMESTONE, ITEM 651.20, TO BE APPLIED TO ALL EARTH SLOPES AT THE RATE OF TWO TONS PER ACRE OR AS DIRECTED BY THE ENGINEER.

TOPSOIL, ITEM 65310 TO BE USED WITH SEED, ITEM 651.10 IN RESIDENTIAL AREAS, AS DIRECTED BY THE ENGINEER.

PROJECT ESSEX

NO M 5400(3)S
SHEET 10 OF 60

SEED, ITEM 651.10
TO BE APPLIED AS DIRECTED BY THE ENGINEER

%WT	LBS/A	NAME	PUR%	GERM%
3.33	2	CROWN VETCH	97	75
50.00	30	CREEPING RED FESCUE	98	85
8.33	5	TIMOTHY	99	85
16.67	10	PERENNIAL RYE GRASS(VAR. PENNFINE)	95	85
8.34	5	ALFALFA (VAR. SARANAC)	99	85
8.33	5	BIRDSFOOT TREFOIL(VAR.EMPIRE)	98	85
5.00	3	HIGHLAND BENT GRASS	92	85
<u>100.00</u>	<u>60</u>	<u>LBS/ACRE</u>		

THE SEED MIXTURE SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS WEED SEED.

MARKER POSTS, (WOOD OR STEEL AS SPECIFIED)
TO BE PLACED AS DIRECTED BY THE ENGINEER.

FERTILIZER, ITEM 651.15 (STANDARD FORMULA)
FORMULA 10-20-10 TO BE USED WITH SEED, ITEM 651.10.
ITEM 651.15 APPLIED AT THE RATE OF 500 LBS/ACRE.

AGRICULTURAL LIMESTONE, ITEM 651.20
TO BE APPLIED AT RATE OF 2 TONS/ACRE
OR AS DIRECTED BY THE ENGINEER.

HAY MULCH, ITEM 651.25
TO BE PLACED ON EARTH SLOPES AT THE RATE OF
2 TONS/ACRE.

TOPSOIL, ITEM 653.10
TO BE USED WITH SEED, ITEM 651.10 IN RESIDENTIAL
AREAS, AS DIRECTED BY THE ENGINEER.

PROJECT LENGTHS AND ITEM QUANTITIES

ITEM DESCRIPTION	OPTION																REMARKS
	LENGTH	MWIDTH	OVERLAY DEPTH	STABILIZED BASE	GRAVEL SHOULDERS	EMULSIFIED ASPHALT	BITUMINOUS CONCRETE PAVEMENT	CHANGE FLEV. OF CB, DI, OR 'III	ALL PURPOSE EXC. RENTAL, TYPE I	POWER BROOM RENTAL	EXFORMED TRAFFIC OFFICERS	FLACPERSONS	'ORILLIZATION	TEMPORARY PAVEMENT	MARKING - WHITE	TEMP. PAFF	
ITEM NUMBER	311.10	402.10	402.11	404.65	406.25	604.40	608.25	608.30	630.10	630.15	635.10	646.35	646.36				
UNIT	FEET	FT	INCH	S.Y.	CY	TON	CWT	TON	EA	HR	HR	HR	HR	LS	LF		
LOCATION																	
<i>COMPOSITE ESTIMATE</i>																	
<i>ESSEX M 5A00(3)S</i>	10,940	22	1 1/4		2300	3795	85	3600	5	120	120	300	300		21,950	30,500	
<i>ESSEX JER. - RICHMOND RS 0224(3)</i>	25,182	23	1 1/4		2930	3845	170	5550	2	10	48	150	150		50,400	79,600	
<i>JERICHO RS0224</i>								135				26	26				<i>SLIP AREA 1 3/4" TYPE II, BINDER</i>
<i>TOTALS - PAGE</i>	<i>36,142</i>				<i>4,630</i>	<i>7640</i>	<i>255</i>	<i>9285</i>	<i>7</i>	<i>130</i>	<i>160</i>	<i>476</i>	<i>476</i>	<i>1</i>	<i>72,350</i>	<i>110,100</i>	

PROJECT LENGTHS AND ITEM QUANTITIES

ITEM DESCRIPTION	ITEM NUMBER	UNIT	FT	HR	LB	LB	TON	TON	CY	LF	LF	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	REMARKS		
<i>COMPOSITE ESTIMATE</i>																					
Essex H. 5400(3)S				200	120	1000	4	4	400	150	50	50	50	50	50	50	50	50	50	50	SEE Item 5, Sheet 7 of 60
Essex-Jer-Richmond R5 0224 (3)																					
JERICHO R50224(3)							3	3													SLIP AREA
JERICHO R50224 (3)								3													TEMP EROSION CONT.
TOTALS PAGE				200	120	1000	7	10	400	150	50	50	50	50	50	50	50	50	50	50	

PROJECT LENGTHS AND ITEM QUANTITIES

ITEM DESCRIPTION	LENGTH	WIDTH	REMOVAL AND DISPOSAL OF EXISTING GUARD RAIL	COMMON EXCAVATION	SAND BORROW	GRANULAR BORROW	ROCK BORROW	GRAVEL FILL FOR SLOPE STAB.	TRENCH EXCAV. OF EARTH	SUBBASE OF ROCK	PLANT MIXED GRAVEL	CONCRETE BASE COURSE	REINFORCING STEEL	18" ACCGMP .064	24" ACCGMP .064	18" RCP CLASS III	CAST IRON GRATE W/FRAME TYPE A	REMARKS
ITEM NUMBER	202.40	203.15	203.31	203.32	203.33	203.35	204.20	204.21	301.15	303.25	501.25	607.15	601.1552	601.1572	601.2613	604.45		
UNIT	FEET	FT	LF	CY	CY	CY	CY	CY	CY	CY	CY	TON	CY	LB	LF	LF	LF	EA
COMPOSITE ESTIMATE																		
ESSEX M 5400(3)S																		
ESSEX, JER. RICHMOND RS 0224(3)																		
JERICO RS 0224(3)			737	8700	350	6500	14000	550	80	10	3000	800	5	296	78	12	8	1
TOTALS PAGE			737	8700	350	6500	14000	550	80	10	3000	800	5	296	78	12	8	1

SLIP AREA
 NOTE: FOR DETAILED SUMMARY OF QUANT. IN SLIP AREA SEE SHEETS 24 & 25 of 60.

PROJECT LENGTHS AND ITEM QUANTITIES

ITEM DESCRIPTION	1. INCH 204.25 605.101 605.95 619.15 621.20 621.77 646.64 646.66 649.12 651.10 651.12 651.15 654.30 620.50 201.10																		REMARKS
ITEM NUMBER	STRUCTURE EXCAVATION 6" UNDERDRAIN UNDERDRAIN FLUSHING BASIN WOOD MARKER POSTS GUARDRAIL, STA. ST. BM/W/P TYPE II B.C.T. FOR GR., STAY BM W/P DURABLE 2" STOP BAR FILTER FABRIC SEED (STANDARD MARKING) SEED - WINTER RYE FERTILIZER (STANDARD FORMULA) SILT FENCE REMOVING AND RESETTING FENCE CLEARING AND GRUBBING																		
UNIT	FEET	FT	CY	LF	EA	EA	LF	EA	LF	EA	SY	LB	LB	LB	LF	LF	LS		
COMPOSITE																			
ESSEX M5400(3)																			
ESSEX, JERICHO - RICHMOND RS0224(3)																			
JERICHO RS0224(3)			14000	522	2	6	900	1	50	13	3000	100	100	800	1000	970	1	SLIP AREA	
JERICHO RS0224(3)															1000			SLIP AREA TEMP. EROSI. CONT	
TOTAL/PAGE			14000	522	2	6	900	1	50	13	3000	100	100	800	1000	970	1		

PROJECT LENGTHS AND ITEM QUANTITIES

ITEM DESCRIPTION

LENGTH

WIDTH

TEMP. BARRIER RAIL

DURABLE 4" REFL. YELLOW LINE

DURABLE 8" REFL. WHITE LINE

TRAFFIC PAVEMENT MARKINGS

REMOVING SIGN POSTS TYPE A

SETTING SIGNS

ERECTING SALV. POSTS

REMOVE AND REPLACE DELINEATORS TYPE A

SIGNS TYPE A

REPLACE GUARD RAIL

ITEM NO

UNIT

LOCATION

621.36 646.61 646.62 646.70 675.35 675.53 675.55 675.60 676.13

LF LF LF SF LB EA EA SF EA

COMPOSITE

ESSEX M 540(3)S
MM 1.95 ~ MM 2.18 RT
MM 2.58 ~ MM 2.69 RT
ESSEX - JERICHO - RICHMOND - RS 0224(3)

140 15 10 80
58
550 60 200 140 10 5 40

M 540(3)S

1000

SLIP AREA (EST)

1000 550 60 200 280 25 15 120 58

ESSEX

M. 540(3)S

PROJECT LENGTHS AND ITEM QUANTITIES

ITEM DESCRIPTION	ITEM NUMBER															REMARKS
	UNIT	FEET	FT	INCH	C.Y.	TON	CWT	TON	EA	HR	HR	HR	HR	LS	L.F.	
LOCATION																
Essex MM1.227~MM1.800		4080	22				25	213								LEVELING @ 250 TONS/MI. WEAR COURSE
			22	1 1/4				623								
Essex MM2.000~MM2.200		1,056	23				7	58								LEVELING @ 250 TONS/MI. WEAR COURSE
			23	1 1/4				187								
Essex MM2.200~MM2.557		1,883	22				11	98								LEVELING @ 250 TONS/MI. WEAR COURSE
			22	1 1/4				320								
Essex MM2.557~MM3.303		3,941	22				24	205								LEVELING @ 250 TONS/MI. WEAR COURSE
			22	1 1/4				669								
DRIVES & APPROACHES					100	165		250								
PROJECT (EST)								1100	5	20	17	62	62	0	21,922	SEE SHEET 60160 FOR DETAILS
SHOULDERS - PROJECT					2200	3630	15	806*	90	100	200	200				*INCLUDES ALLOWANCE FOR TAPERS & PATCHING
ROUNDING							3	101	10	3	38	38		28		
TOTALS PAGE		10,960			2300	3795	85	3600	5	120	120	300	300	0	21,950	

PROJECT LENGTHS AND ITEM QUANTITIES

ITEM DESCRIPTION	646.36 TEMPORARY PAYMENT WITH MARKING - YELLOW 608.37 TRUCK RENTAL 651.10 SEED (URBAN MIX) 651.15 FERTILIZER (SAND FORMULA) 651.20 AGRICULTURAL LIMESTONE 651.25 HAY MULCH 653.10 TOPSOIL 601.7250 RELAYING PIPE CULVERT 064 601.1802 18" CGMP 044 601.1822 24" CGMP 064 601.1833 30" CGMP 060 601.2052 18" CAA CP 060 601.2072 24" CAA CP 060 601.2083 30" CAA CP 060 601.2623 18" RCP C II 601.2643 24" RCP C II 601.2653 30" RCP C II																		REMARKS
ITEM NUMBER	L.F.	FT	HR	LB	LB	TON	TON	CY	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	
UNIT LOCATION																			
PROJECT EST.	30,485																		
SHOULDERS - PROJECT			180	120	1000	4	4	400	150	50	50	50	50	50	50	50	50	50	
ROUNDING	15		20																
TOTALS PAGE	30,500		200	120	1000	4	4	400	150	50	50	50	50	50	50	50	50	50	

PROJECT LENGTHS AND ITEM QUANTITIES

ITEM DESCRIPTION

LENGTH

WIDTH

TRAFFIC SIGN POSTS, TYPE A

REMOVING SIGNS

SETTING SALVAGED POSTS

ERECTING SALV. SIGNS, TYPE A

REMOVE AND REPLACE GUARD RAIL DEW EATORS, TYPE A

ITEM NO	675.35	675.53	675.55	675.60	676.13									
UNIT	LB	EA	EA	SF										
LOCATION														
PROJECT EST	140	15	10	80										
MM 1.95-MM 2.18 ET MM 2.58-MM 2.69 ET					58									
TOTAL	140	15	10	80	58									

NOTE: SEE SHEET 37 OF 60 FOR DETAILS REGARDING ITEMS ON THIS SHEET

PROJECT LENGTHS AND ITEM QUANTITIES

ITEM DESCRIPTION	OPTION														REMARKS
	LENGTH	WIDTH	OVERLAY DEPTH	GRAVEL SHOULDERS	GRAVEL SHOULDERS	EMULSIFIED ASPHALT	BITUMINOUS CONCRETE PAVEMENT	CHANGE ELEV. OF CB, DI, OR MH	ALL PURPOSE EXCAV. RENTAL TYPE I	POWER BROOM RENTAL	UNIFORMED TRAFFIC OFFICERS	FLAGPERSONS	MOBILIZATION	TEMP. PAVT.	
ITEM NUMBER	402.10	402.11	404.65	406.25	604.40	608.25	608.30	620.10	620.15	635.10	646.35				
UNIT	FEET	FT	INCH	C.Y.	TON	CWT	TON	EA	HR	HR	HR	HR	LS	L.F.	
LOCATION															
ESSEX MM 3.303 ~ MM 4.431	10486	23				67	312								LEVEL 150T/M1
JERICHO MM 0.000 ~ MM 0.858		23	1 1/4				1860								WEAR COURSE 3.5' GRAVEL SHOULDERS
				680	1122										
JERICHO MM 0.858 ~ MM 1.057	1052	23				7	0								NO LEVEL IN SLIP AREA -
		23	1 1/4				187								WEAR COURSE TO BE PAVED CONTINUOUS
				68	113										
JERICHO MM 1.057 ~ MM 2.893	9694	23				61	288								LEVEL 150T/M1
		23	1 1/4				1719								WEAR COURSE 3.5' GRAVEL SHOULDERS
				628	1036										
RICHMOND MM 0.000 ~ MM 0.748	3950	23				25	196								LEVEL @ 250T/M.
		23	1 1/4				701								WEAR COURSE 3.5' GRAVEL SHOULDERS
				841	1388										
DRIVES & APPROACHES				100	165		200								
PROJECT (EST)							50*	2	10	38	139	139	50,361		* FOR CURBS & GUTTERS
ROUNDING				13	21	10	37			2	11	11	39		
TOTALS PAGE	25182			2330	3845	170	5550	2	10	40	150	150	50400		

PROJECT LENGTHS AND ITEM QUANTITIES

ITEM DESCRIPTION	LENGTH	WIDTH	TEMPORARY PAVEMENT MARKING YELLOW	DURABLE 24" STOP BAR	DURABLE LETTER IN WORD MARKING	DURABLE 4" REFL. YELLOW LINE	DURABLE 8" REFL. WHITE LINE	DURABLE 24" STOP BAR	TRAFFIC PAVEMENT MARKINGS	REMOVING SIGNS	SETTING SALVAGED POSTS	ELECTING SALV. SIGNS TYPE 'A'	REMARKS	
ITEM NUMBER	646.36	646.64	646.66	646.61	646.62	646.64	646.70	675.35	675.53	675.55	675.60			
UNIT	FEET	FT	L.F.	L.F.	EA	LF	LF	LF	SF	LB	EA	EA	SF	
PROJECT EST			79,572	50		550	60	50	200	140	10	5	40	
					13									
ROUNDING			28											
TOTALS PAGE			79,600	50	13	550	60	50	200	140	10	5	40	1000

RTE 2 & 17
STOP STOP AHEAD
RICHMOND MM10.60 RT

NOTE: FOR DETAILS REGARDING
ITEMS 675.35, 675.53, 675.55
& 675.60 SEE SHEET 37 OF 60

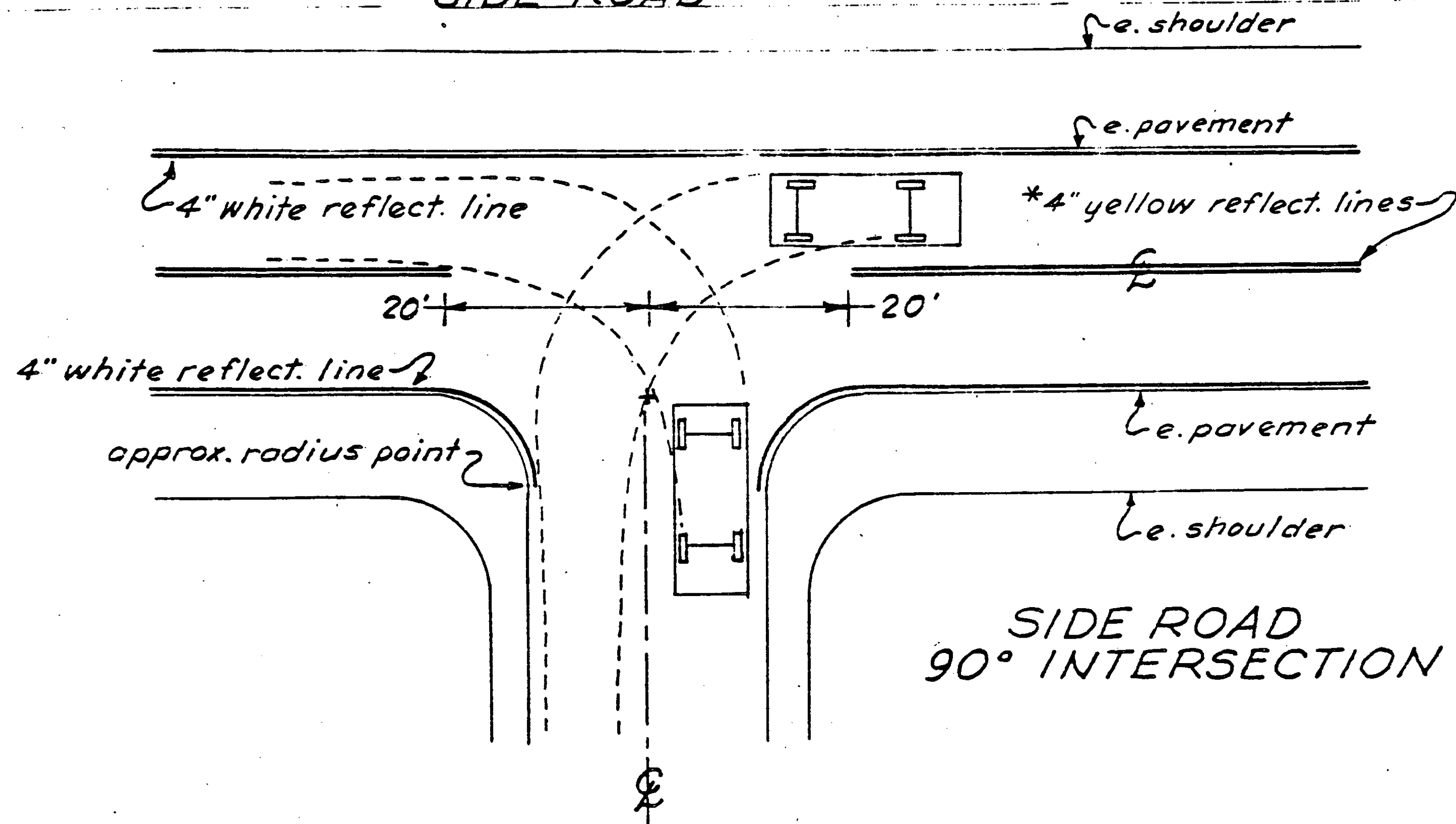
NOTE: SEE SHEETS 24 & 25
OF 60 FOR MORE
ITEMS.

NOTE:

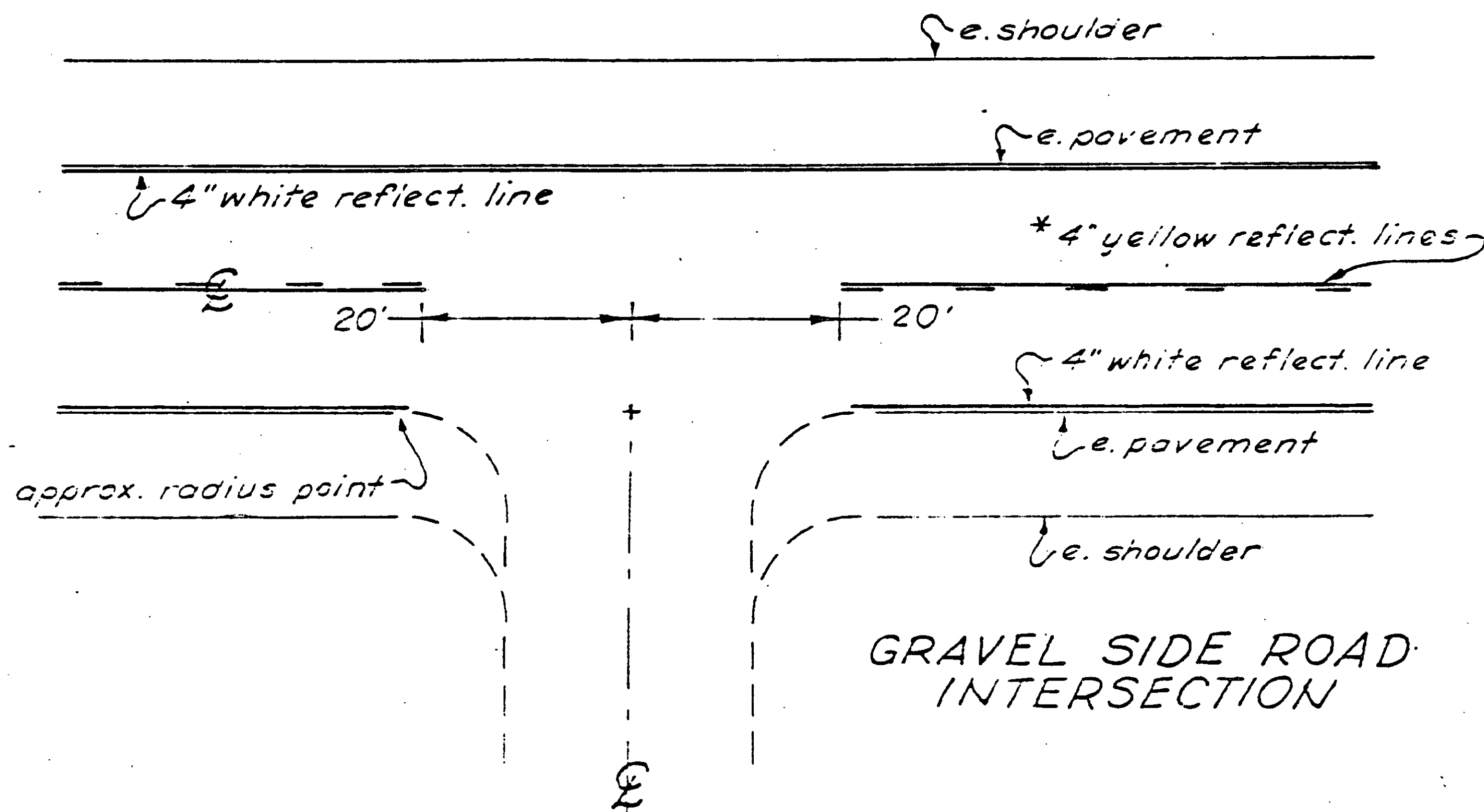
If signs and posts are within the shoulder reconstruction area, they shall be relocated according to Standard Sheet E-29 or the M.U.T.C.D. Payment for removing signs and posts shall be Item 675.53 Removing Signs, EA. Payment for reinstalling signs and post shall be Item 675.60 Erecting Salvaged Signs, Type A, S.F. and Item 675.55 Setting Salvaged Posts, EA. If a new post of adequate length is required, Item 675.35, Traffic Sign Posts Type A, LB. Quantities for this work is estimated. Traffic Design personnel will assist the Resident Engineer in sign placement, if requested.

Essex M 5400(3) S
Essex-Jericho-Richmond RS 0224(3)

Sheet 37 of 60



* Centerline treatment shall consist of a minimum of 400 feet of solid line in advance of the intersection and shall be paired with either a solid or dashed line depending on sight distance availability in the opposing lane.



GUIDELINES FOR MINIMUM INTERIM PAVEMENT MARKINGS
IN CONSTRUCTION ZONES ON FEDERAL-AID PROJECTS

- A. CENTERLINE AND GORE AREA MARKINGS SHALL BE APPLIED AT THE END OF EACH WORKING DAY. THE FOLLOWING LAYOUT REQUIREMENTS SHALL BE MET:

NO PASSING BARRIER

SOLID STRIPES.

DASHED LINE

10-FOOT SOLID LINE WITH 30-FOOT GAP.

SOLID LINE - (GORE AREAS TO INCLUDE CHANNELIZING LINE AND DASHED LINE)

PER STANDARD SHEET E-50.

EDGE LINES

WHERE SPECIFIED EDGE LINES ARE NOT REQUIRED UNTIL COMPLETION OF THE PROJECT. ON INTERSTATE PROJECTS, TEMPORARY EDGE LINES SHOULD BE APPLIED WHERE TRAFFIC VOLUMES AND SPEEDS ARE HIGH AND DELAY OF SEVERAL DAYS IS ANTICIPATED.

- B. TEMPORARY MARKINGS MAY CONSIST OF PAINT, TAPE OR RAISED PAVEMENT MARKERS (RPM'S). THE TAPE SHALL BE A RETRO-REFLECTIVE FILM ON A CONFORMABLE METALIC BACKING THAT CAN BE PAVED OVER. TAPE MAY BE USED ON THE FINAL SURFACE COURSE IF IT WILL NOT INTERFERE WITH THE FINAL MARKING APPLICATION. THE RPM'S SHALL HAVE A SELF-ADHESIVE BACKING EASILY REMOVED BEFORE PAVING AND SHALL CONFORM TO THE FOLLOWING LAYOUT PATTERN: TEMPORARY TAPE MARKINGS WILL BE OFFSET AND REMOVED WHEN PROJECT IS FINISHED AND FINAL CENTERLINE PAINTED.

NO PASSING BARRIER

NO RPM'S ALLOWED.

DASHED LINE

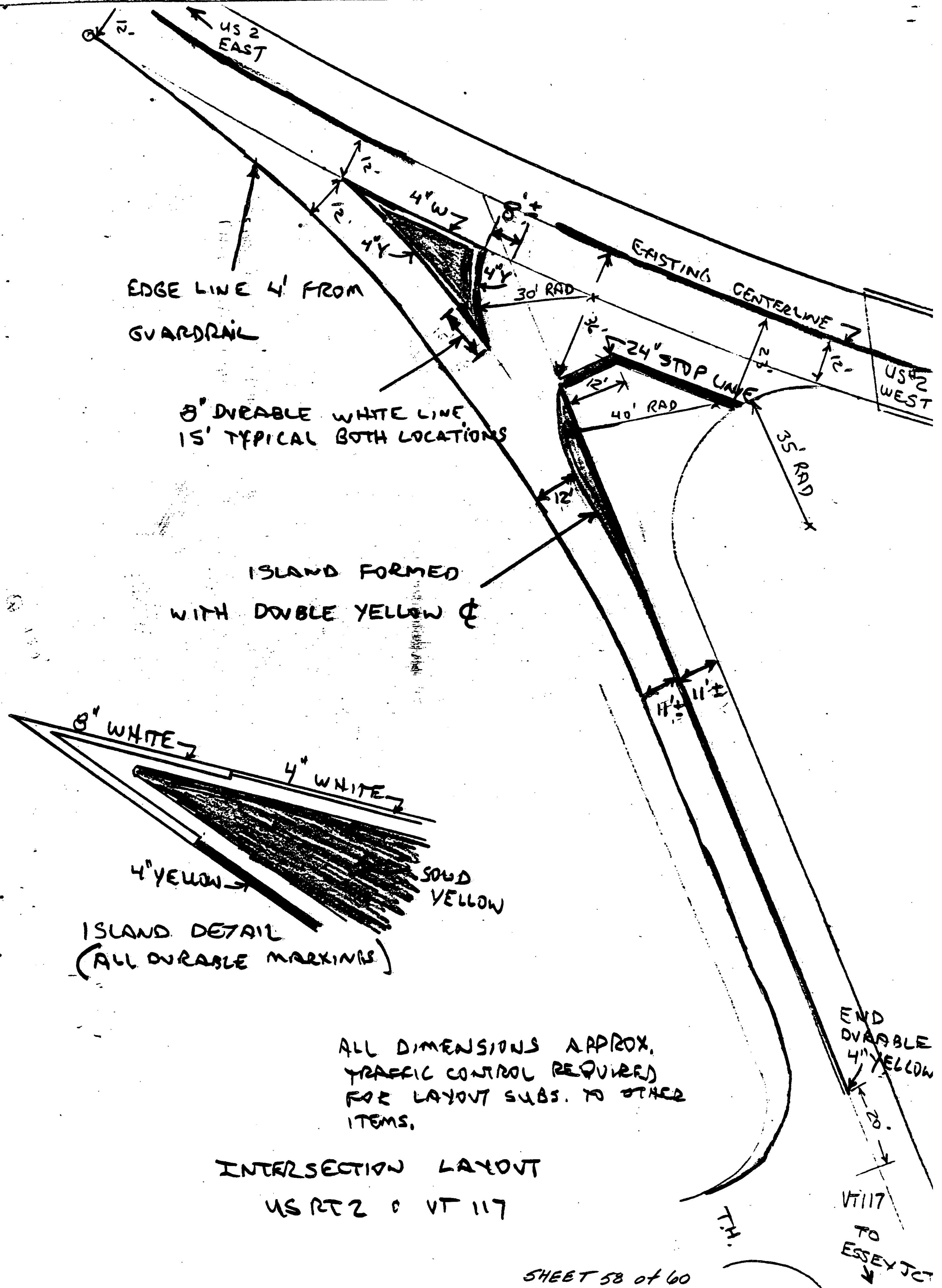
FOUR RETRO-REFLECTIVE RPM'S ON 3 1/2 FOOT CENTERS WITH A 30 FOOT GAP.

SOLID LINE - EDGE LINES

INTERSTATE MEDIAN SIDE-RETRO-REFLECTIVE RPM'S ON 4 TO 5 FOOT CENTER. DRIVERS RIGHT SIDE-RPM'S NOT ALLOWED.

- C. WHEN PAINT IS USED FOR TEMPORARY MARKING, AN ALTERNATE MATERIAL SUCH AS TAPE OR RPM'S SHALL BE ON HAND IN THE EVENT RAIN PREVENTS THE PAINT APPLICATION FROM BEING COMPLETED. ALL PAINT SHALL BE REFLECTORIZED.
- D. PAYMENT FOR PAINT AND TAPE SHALL BE COMPUTED ON A LINEAR FOOT BASIS AS IF PAINT WAS USED. PAYMENT FOR THE RPM'S SHALL BE COMPUTED AS IF AN EQUIVALENT PAINT LINE WAS USED. (FOR EXAMPLE, DASHED LINE PAID AS 10 FEET OF PAINT, SOLID LINE PAID AS THE TOTAL DISTANCE COVERED WITH THE MARKERS).
- E. PRIOR TO ACCEPTANCE, THE FINAL PAVEMENT MARKINGS SHALL BE COMPLETED FOR THE ENTIRE PROJECT BY THE CONTRACTOR AS DETAILED ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER

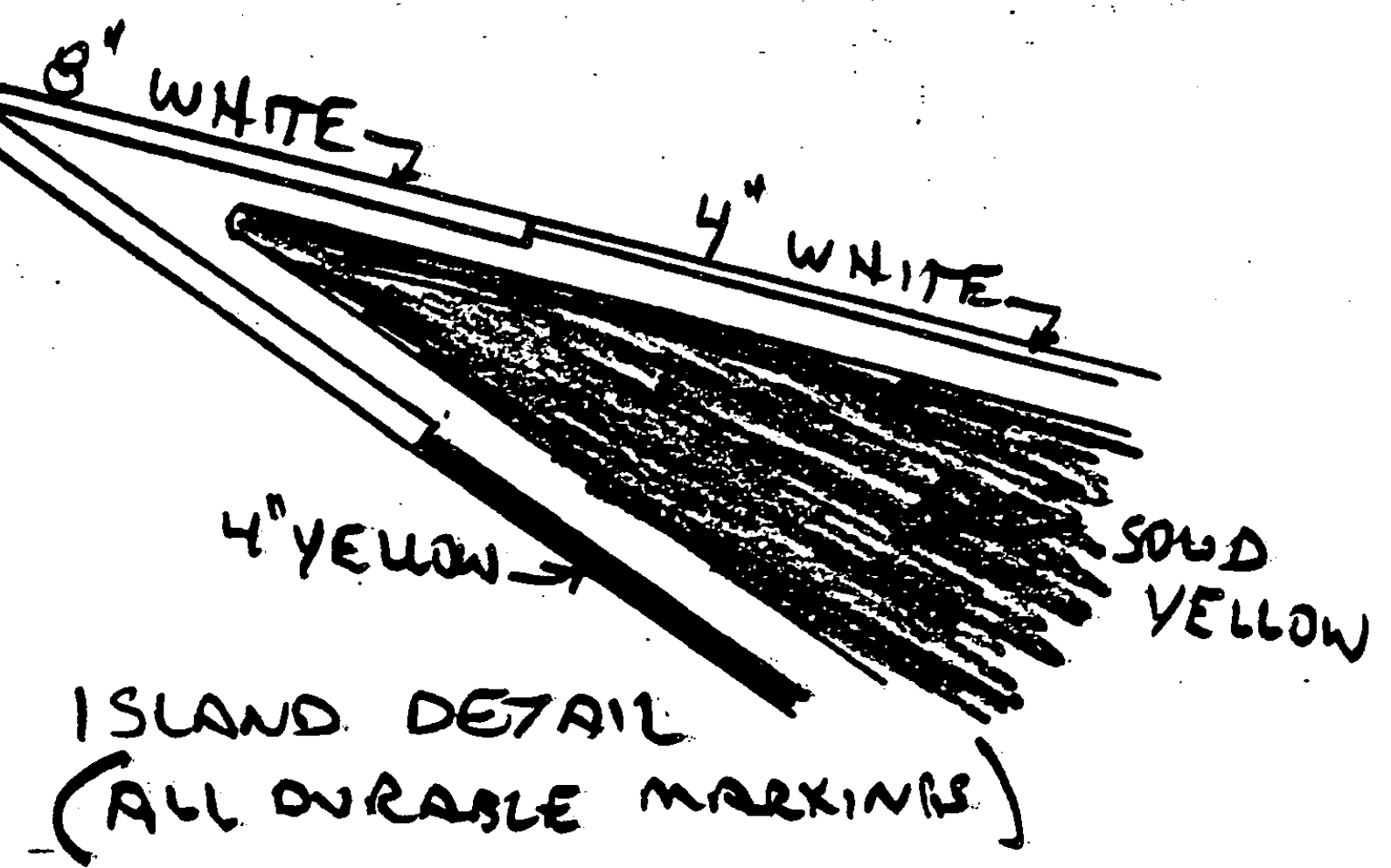
REVISED
12/22/83



EDGE LINE 4' FROM GUARDRAIL

8" DURABLE WHITE LINE 15' TYPICAL BOTH LOCATIONS

ISLAND FORMED WITH DOUBLE YELLOW



ALL DIMENSIONS APPROX. TRAFFIC CONTROL REQUIRED FOR LAYOUT SUBS. TO OTHER ITEMS.

INTERSECTION LAYOUT
US RT 2 @ VT 117

END DURABLE 4" YELLOW
VT 117 TO ESSEX JCT

TEMPORARY 4" REFLECTORIZED YELLOW LINE

- By MJB 1-18-74

MILE	MILE	LT	RT	QUAN. Lt.	QUAN. Rt.	
1.227	2.30	Solid	Solid	5665	5665	11,330
2.30	2.47	Solid	Dash	898	224	1,122
2.47	2.51	Dashed		53		53
2.51	2.59	Dash	Solid	106	422	528
2.59	3.303	Solid		3765	3765	7530
						20,563
		3 T.H.'s @ 40' EA.	= 120' x 2 =			- 240
						20,323
		50% of $\&$ Loss during Leveling				+10,162
		20,323 x 50% =				30,485
						Endg. 15
						Total 30,500

Although not indicated on this sheet, the $\&$ shall be broken at all intersecting Town Highways as shown on the plan detail sheet. The Resident Engineer shall verify the PASSING ZONE pavement markings in the field in accordance with the "Guideline on marking of centerlines." BEFORE APPLICATION
 EDGE LINES TO BE APPLIED 11" LT AND RT ON BOTH PROJECTS

TEMPORARY 4" REFLECTORIZED WHITE LINE

MILE	MILE	LT	RT		
1.227	3.303	Solid		10,961 x 2 =	21,922
					Endg. 28
					Total 21,950
					59 of 60

TEMPORARY 4" REFLECTORIZED YELLOW LINE

✓ by MJB 1-19-84

Essex
T/L
Jericho
T/L
Richmond

MILE	MILE	LT	RT	Quan. Lt.	Quan. Rt.	
	1.30	Solid	Solid			
	2.47	Solid	Solid			
2.47	2.61	Dashed				
3.303	3.92	Solid		3257	3257	6514
3.92	4.09	Solid	Dash	898	224	1122
4.09	4.12	Dashed		40		40
4.12	4.28	Dash	Solid	211	845	1056
4.28	4.431	Solid		797	797	1594
4.431	0.000					
0.00	1.32	Solid		6970	6970	13940
1.32	1.53	Solid	Dash	1109	277	1386
1.53	1.54	Dashed		13		13
1.54	1.68	Dash	Solid	185	739	924
1.68	1.88	Solid		1056	1056	2112
1.88	2.00	Solid	Dash	634	158	792
2.00	2.16	Dash	Solid	211	845	1056
2.16	2.893	Solid		3870	3870	7740
2.893	0.000					
0.000	0.03	Solid		158	158	316
0.03	0.16	Solid	Dash	686	172	858
0.16	0.22	Dashed		79		79
0.22	0.39	Dash	Solid	224	898	1122
0.39	0.48	Solid		475	475	950
0.48	0.66	Dash	Solid	238	950	1188
0.66	0.748	Solid		465	465	930
						43,732
						9-T.H.'s @ 40' Each = 360' x 2 = 720
						43,012
3.303	To End	= 43,012 @ 85% = 36,560 (Loss for leveling) + 36,560				79,572
						Rndg. 28
						Total 79,600

Although not indicated on this sheet, the $\$$ shall be broken at all intersection Town Highways as shown on the plan detail sheet. The Resident Engineer shall verify the PASSING ZONE pavement markings in the field in accordance with the "Guideline on marking of centerlines", BEFORE APPLICATION

TEMPORARY 4" REFLECTORIZED WHITE LINE

MILE	MILE	LT	RT		
					60 of 60
3.303	4.431	Solid		5956 x 2 =	11,912
T/L 0.000	2.893	Solid		15,275 x 2 =	30,550
T/L 0.000	0.748	Solid		3949 x 2 =	7,899
					50,361
				+ Rndg = 39	Total 50,400

REMOVAL AND DISPOSAL OF EXISTING GUARD RAIL
L+
14+72 ~ 22+09

GUARD RAIL, STANDARD STEEL BEAM WITH WOOD POSTS, TYPE II
L+
13+58 ~ 22+62.5

BREAKAWAY CABLE TERMINAL FOR GUARD RAIL, STEEL BEAM w/ WOOD POSTS, TYPE II
L+
22+62.5 ~ 22+67.5

TEMPORARY BARRIER RAIL WILL BE INSTALLED AS DIRECTED BY THE ENGINEER

CONSTRUCT SHEAR KEY
L+
15+50 ~ 20+00

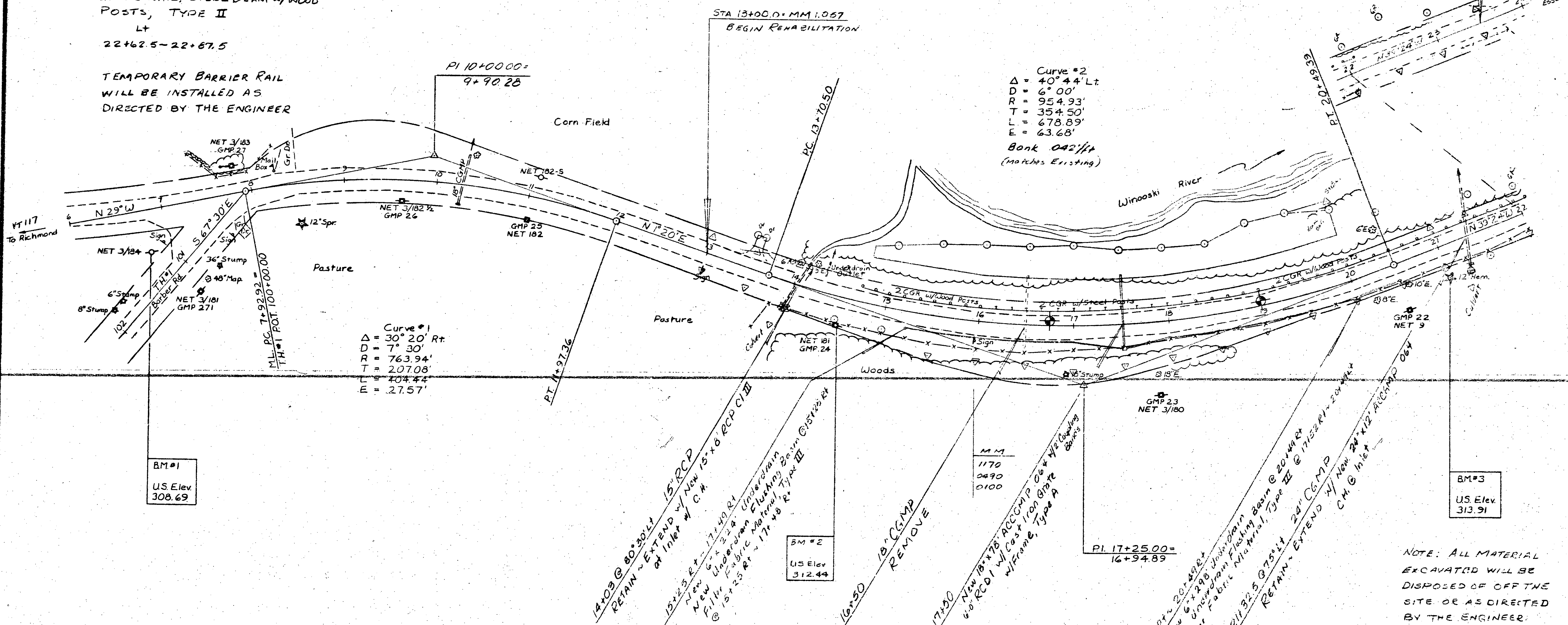
STRUCTURE EXCAVATION
L+
14+75 ~ 20+00

ROCK BORROW
L+
14+75 ~ 20+00

GRAVEL BACKFILL FOR SLOPE STABILIZATION
R+
15+25 ~ 20+50

CONSTRUCT FIELD DRIVE
L+
13+50
REMOVING AND RESETTING FENCE
R+
13+80 ~ 23+50

STA 25+50.0 = MM 0.658
END REHABILITATION



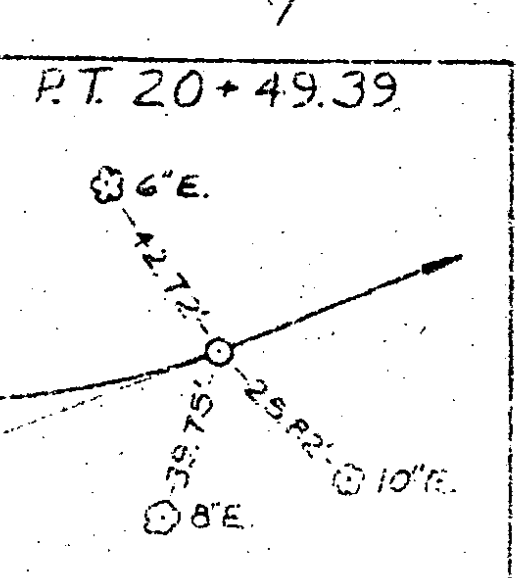
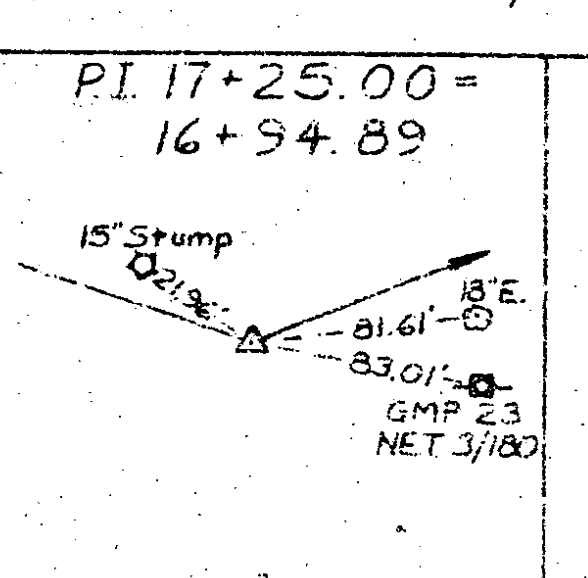
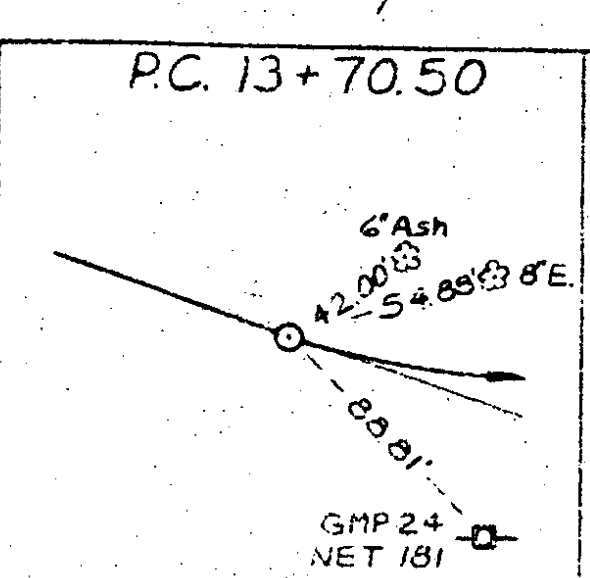
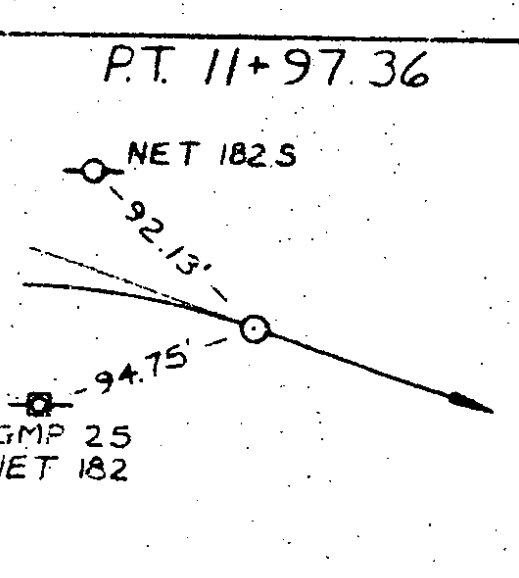
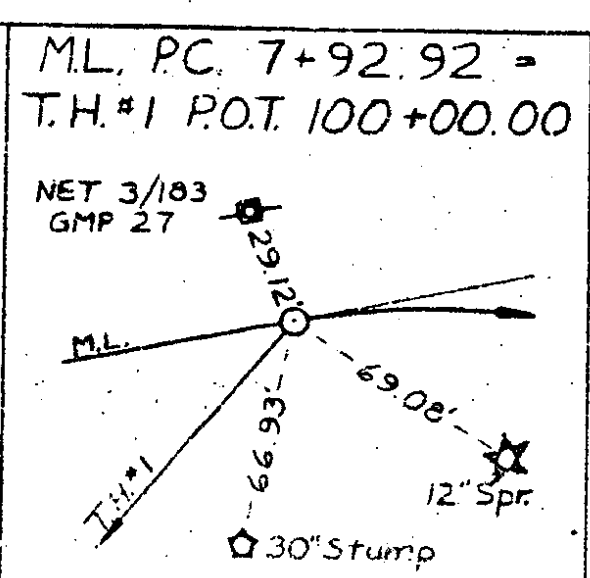
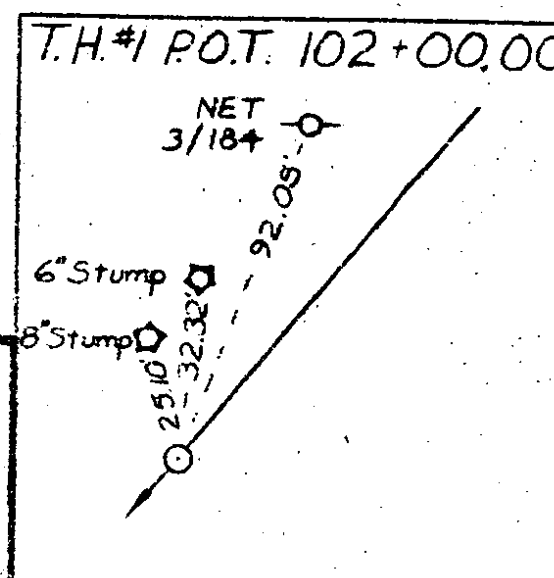
Curve #2
Δ = 40° 44' Lt
D = 6° 00'
R = 954.93'
T = 354.50'
L = 678.89'
E = 63.68'
Bank 0.42/ft
(MARCHES EXISTING)

Curve #1
Δ = 30° 20' Rt
D = 7° 30'
R = 763.94'
T = 207.08'
L = 404.44'
E = 27.57'

BM #1
US Elev.
308.69

BM #2
US Elev.
312.44

BM #3
US Elev.
313.91



NOTE: ALL MATERIAL EXCAVATED WILL BE DISPOSED OF OFF THE SITE OR AS DIRECTED BY THE ENGINEER. TWO WAY TRAFFIC WILL BE MAINTAINED DURING HOURS OF DARKNESS.

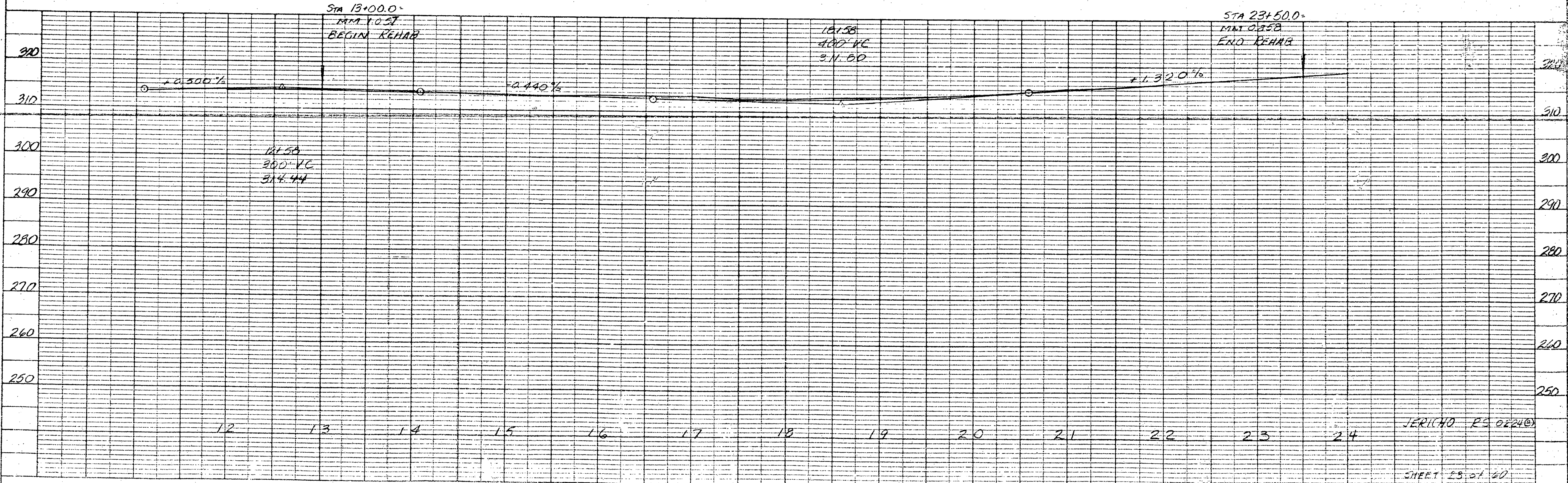
PAVING NOTE:
ESTIMATE FOR THIS SECTION (MM 0.658 - MM 1.057) INCLUDES BASE COURSE & BINDER WEAR COURSE & GRAVEL SHOULDERS ARE ESTIMATED IN PAVING SECTION

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

SURVEYED BY Beard DATE 1/84
DRAWN BY Kastner DATE 1/84
TRACED BY Kastner DATE 1/84
JERICO VT 117
PROJ. HC RS 0224(3)
SHEET 22 OF 60

PLAN	SURVEYED	DATE
	PLOTTED	
	BY	
	NOTED	
	BY	
	CHECKED	
	BY	
	DATE	

PROFILE	SURVEYED	DATE
	PLOTTED	
	BY	
	NOTED	
	BY	
	CHECKED	
	BY	
	DATE	



PC 13170.50
 D = 6°
 Bank 0.42/ft
 (to match existing)

13158 Lt
 Begin Guard Rail (Standard Steel)
 Beam w/ Wood Posts, Type II
 Item 621.28

ROW
 24.75

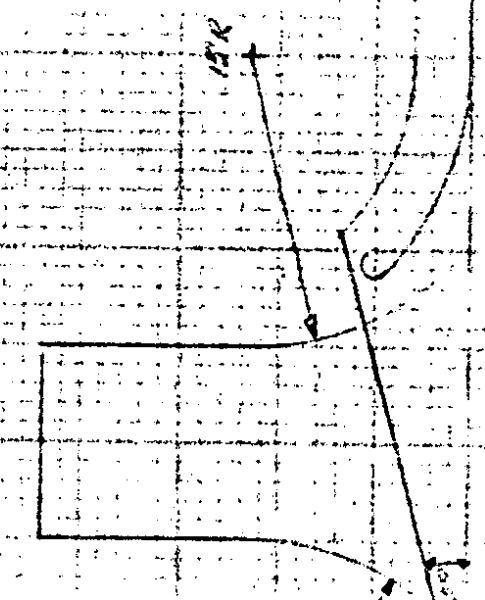
13150 Lt
 Construct Drive

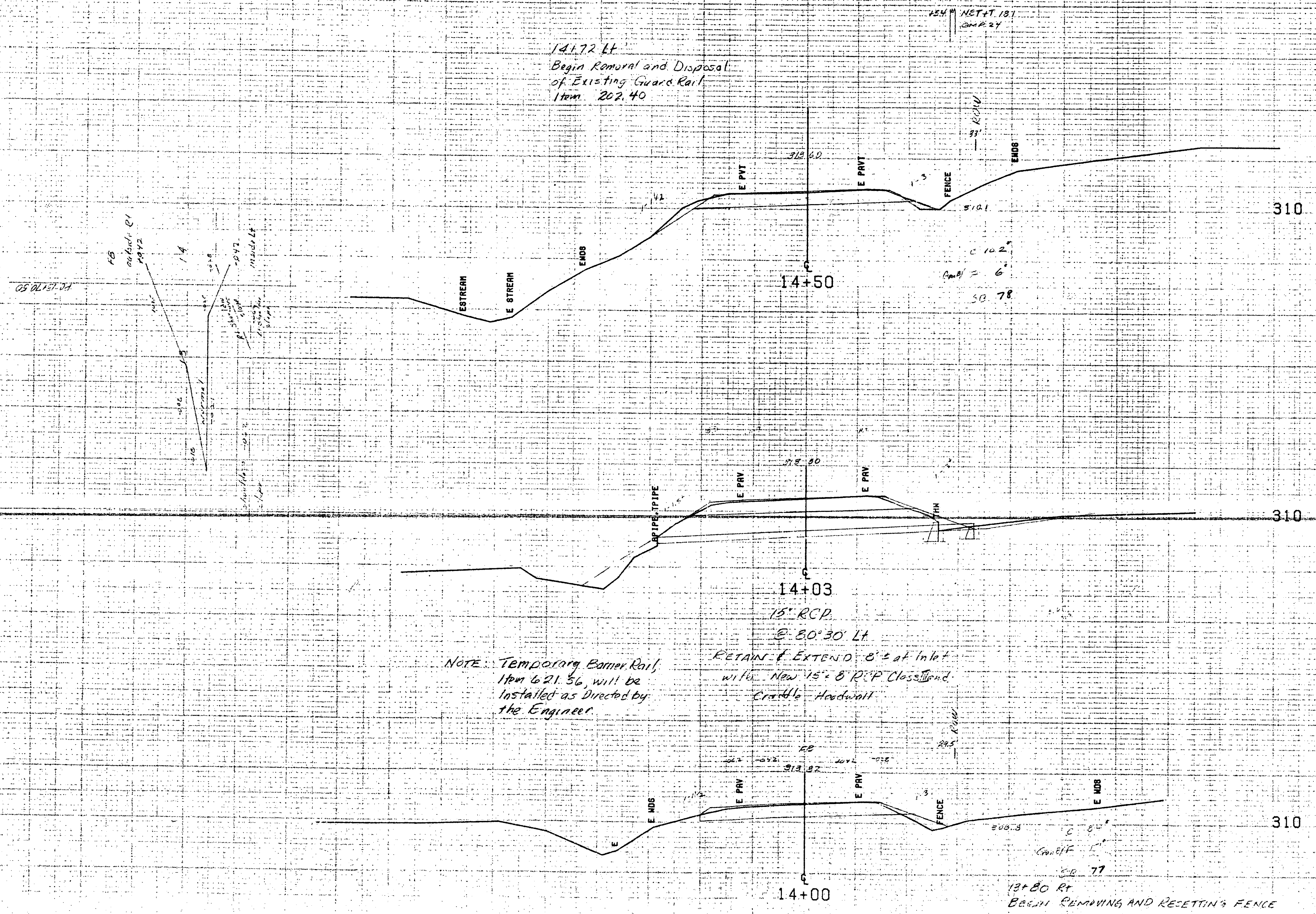
Note: All Embankment will be Granular
 Borrow, Item 203.32 unless
 labeled otherwise.

102 Curb Sign

13+00-
 M.M. 1.05
 Begin Common Excavation, Item 203.13
 Begin Subbase of Gravel, Item 301.15
 Begin 5" Plant Mixed Base Course Item 303.25
 Begin 1 3/4" Course of Bituminous Concrete Pavement, Type D, Item 406.25

Note: All Material Excavated will be Disposed of
 Off the Site or as Directed by the Engineer.
 Two Way Traffic Will Be Maintained During
 The Hours of Darkness.





NOTE: Temporary Barrier Rail,
Item 621.56, will be
installed as Directed by
the Engineer.

FROM STA.	14+00	TO STA.	14+50
PROJECT NAME	JERICHO RIVER		
NO.	RS0224(3)	PLOTTED	01/17/84
SURVEYED BY	BEARD	JAN	1984
SHEET	27 OF 40	SHEETS	

SCALE 1" = 10 FEET

* NOTE: All Elevation and dimensions shown on Sheet Key Sections may be revised at the discretion of the Engineer.

15+50L ~ 17+50L
 All Stone Fill to be excavated and disposed of prior to excavating for Rock Borrow Sheet Key.
 Excavation to be paid as Common Excavation, Item 203.15

170
 170
 0409
 0100

Rock Borrow Item 203.33

STRUCTURE EXCAV. LIMITS OF ITEM 204.25

12.0 5.0 Si & St MTW to 1g St

CMPF

14.58

15.18 24' 50"

15+50

15+25 RI
 Begin Gravel Backfill for Slope Stabilization, Item 203.35

15+25 RI 17+49 RI

15+25 RI 17+49 RI

15+25 RI Underdrain Flushing Basin, Item 605.95

15+25 RI 17+49 RI

15+25 RI 17+49 RI

15+25 RI 17+49 RI

15+25 RI 17+49 RI

15+25 RI 17+49 RI

15+25 RI 17+49 RI

15+25 RI 17+49 RI

15+25 RI 17+49 RI

15+25 RI 17+49 RI

15+25 RI 17+49 RI

15+25 RI 17+49 RI

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15+25 RI 17+49 RI

15+25 RI 17+49 RI

15+25 RI 17+49 RI

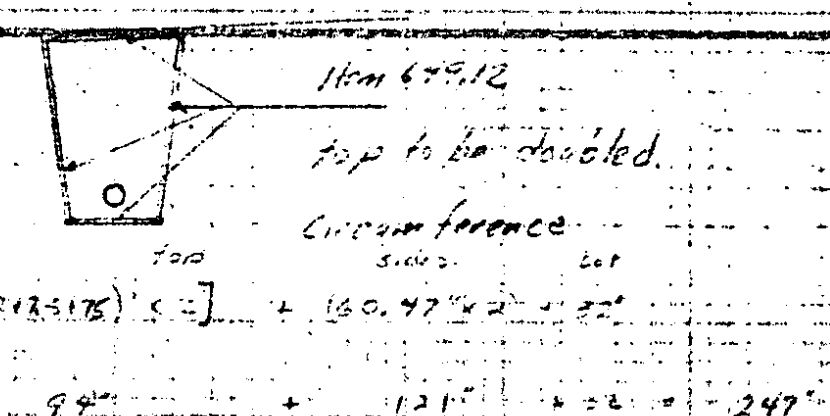
15+25 RI 17+49 RI

15+25 RI 17+49 RI

15+25 RI 17+49 RI

15+25 RI 17+49 RI

DETAIL FOR Item 649.12 with Underdrain



Struct Exc 201
 RB 405
 Filter B 17

15+50 Lt
 Begin Filter Fabric Material Type II, Item 649.12

Rock Borrow Item 203.33

LIMITS OF STRUCTURE EXCAV. Item 204.25

15+00

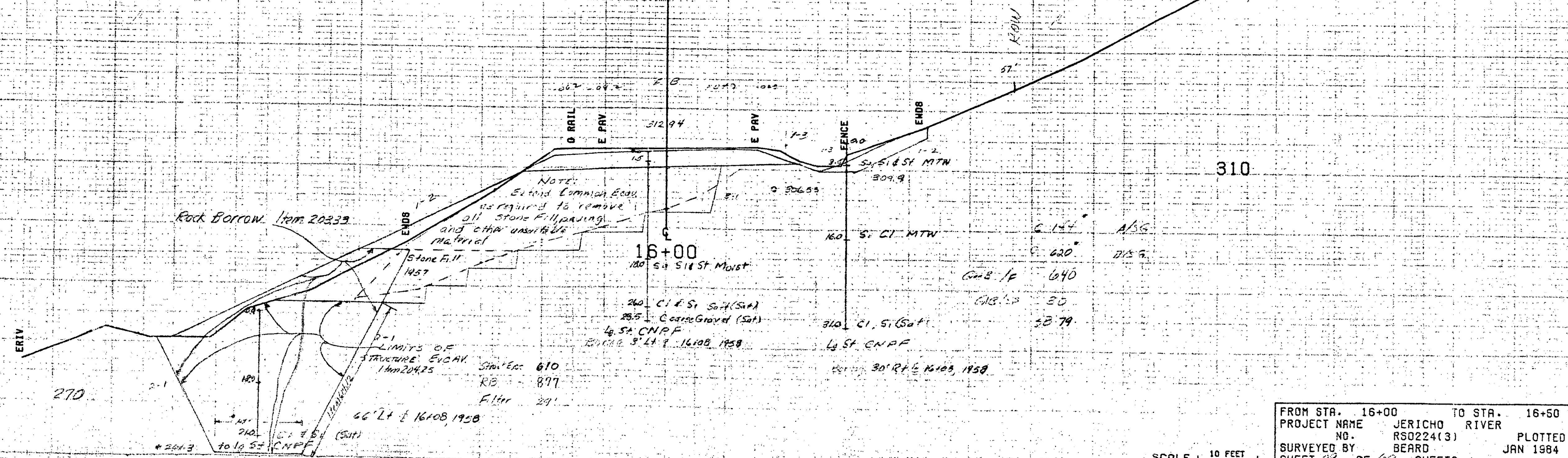
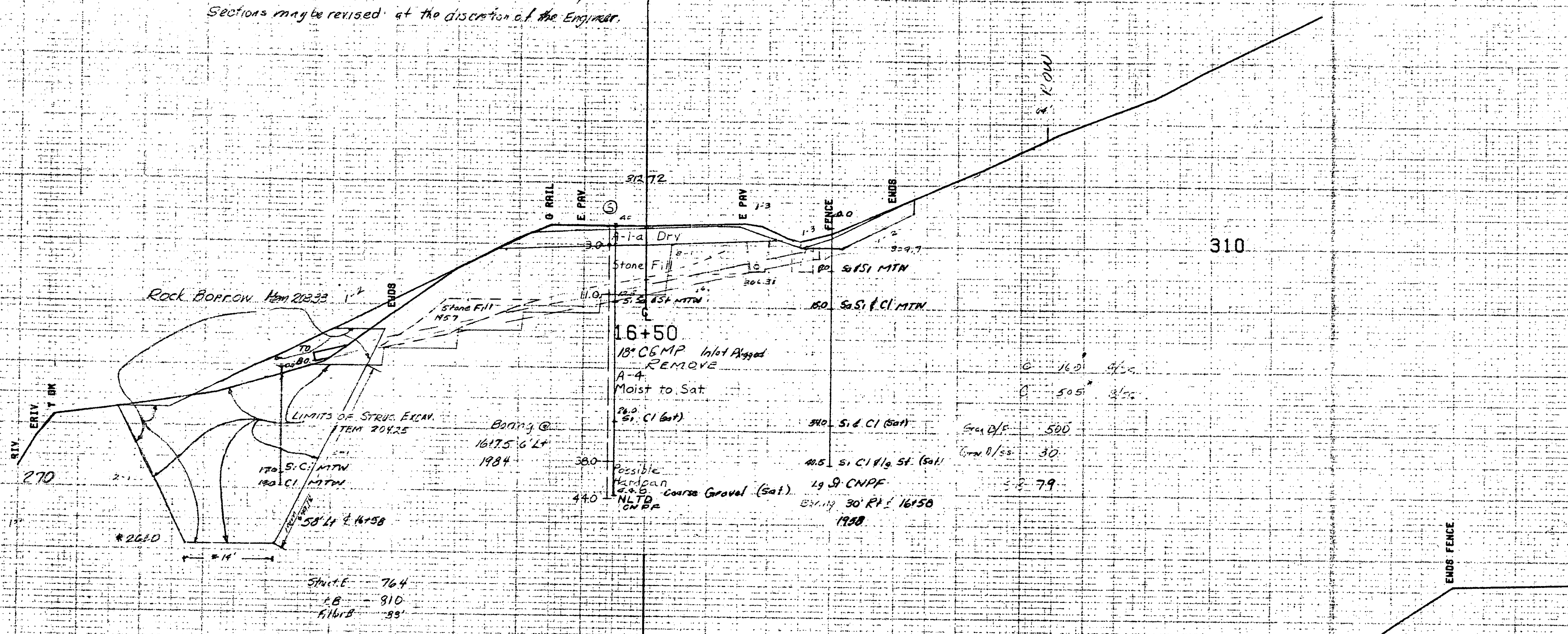
14+75 Lt
 Begin Rock Borrow, Item 203.33
 Begin Structure Excavation, Item 204.25

Struct Exc 38
 RB 106

FROM STA. 15+00 TO STA. 15+50
 PROJECT NAME JERICHO RIVER
 NO. RS0224(3) PLOTTED 01/17/84
 SURVEYED BY BEARD JAN 1984
 SHEET 52 OF 60 SHEETS

SCALE 10 FEET

* Note: All Elevations and Dimensions shown on Sheet Key.
 Sections may be revised at the discretion of the Engineer.



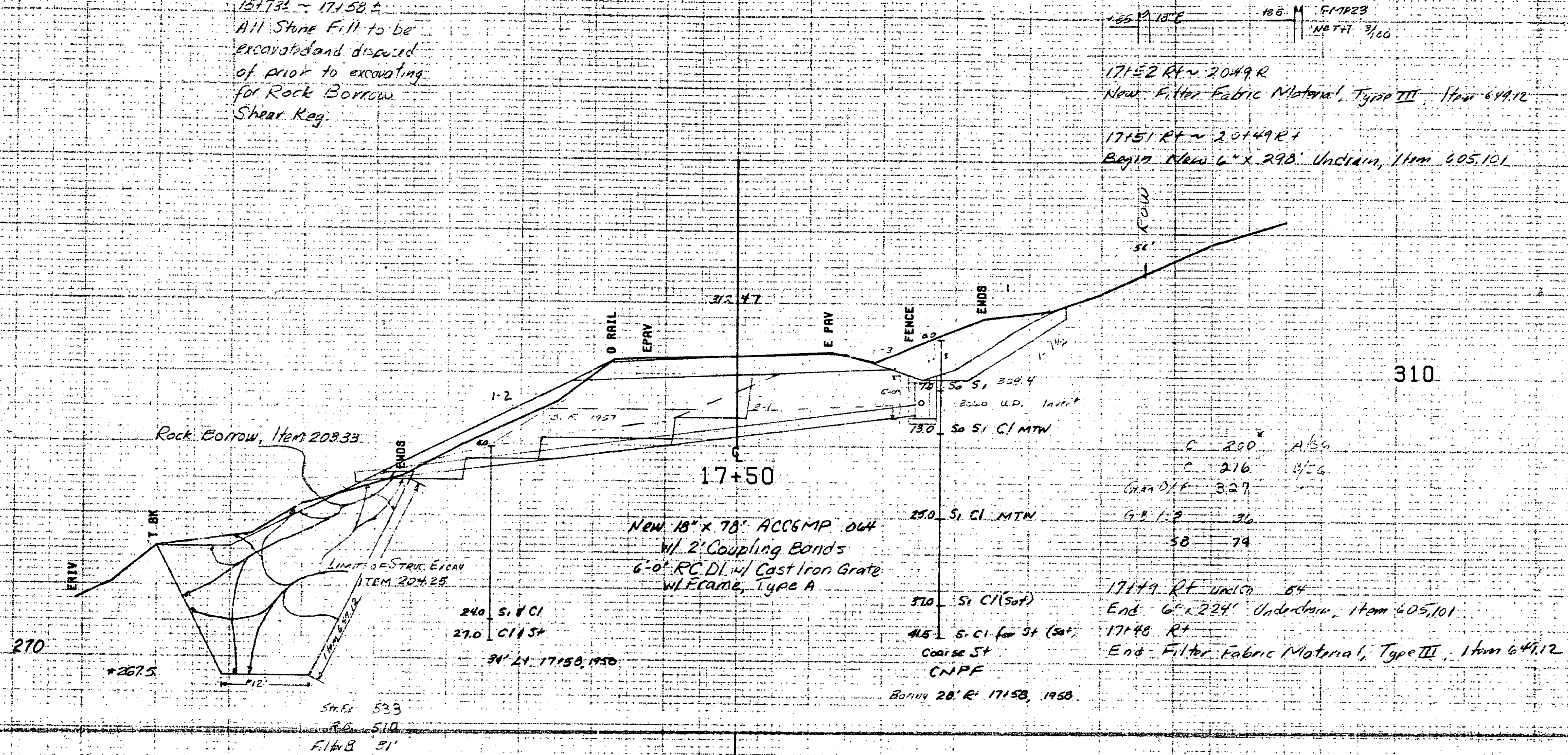
FROM STA. 16+00 TO STA. 16+50
 PROJECT NAME JERICHO RIVER
 NO. RS0224(3) PLOTTED 01/17/84
 SURVEYED BY BEARD JAN 1984
 SHEET 29 OF 60 SHEETS

SCALE 10 FEET

* NOTE: All Elevations and Dimensions shown on Shear Key
Sections may be revised at the discretion of the Engineer.

171732 ~ 171584
All Stone Fill to be excavated and disposed of prior to excavating for Rock Borrow Shear Key.

17152 RT ~ 2049 R
New Filter Fabric Material, Type III Item 64912
17151 RT ~ 2049 R
Begin New 6" x 298 Underdrain, Item 605101



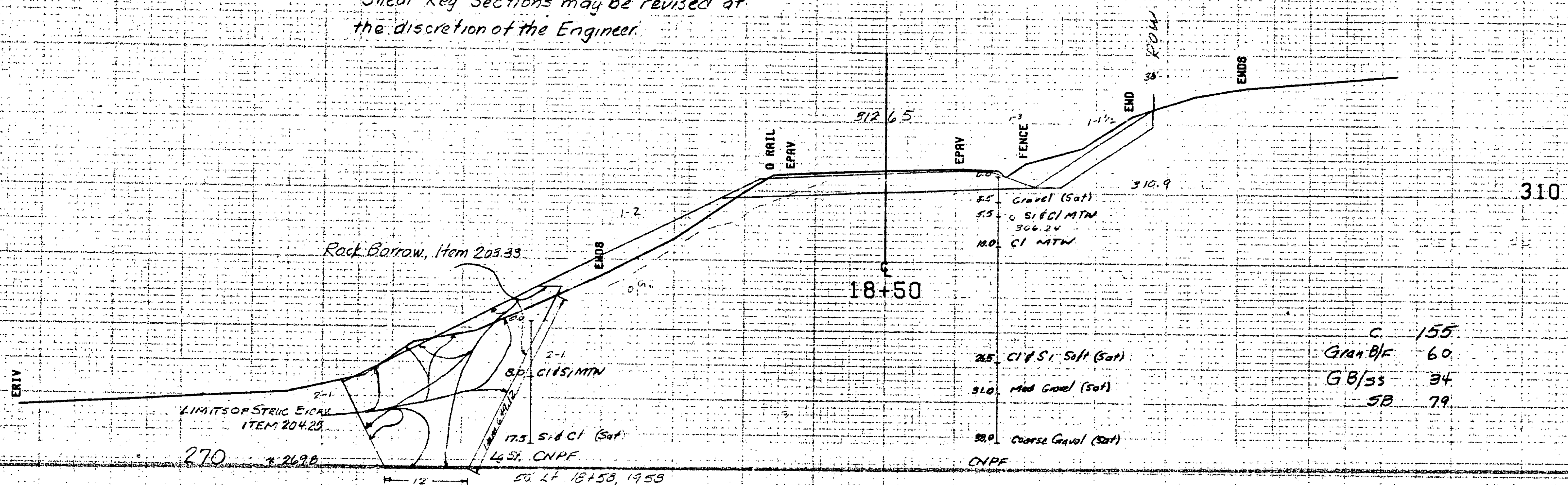
C	200	A/S
C	216	B/S
Guo R/F	327	
G.L.	32	
	38	79

17149 RT Underdrain 6"
End 6" x 224' Underdrain, Item 605101
17148 RT
End Filter Fabric Material, Type III, Item 64912

St. E. 996
R.B. 957
F.L.B. 42'

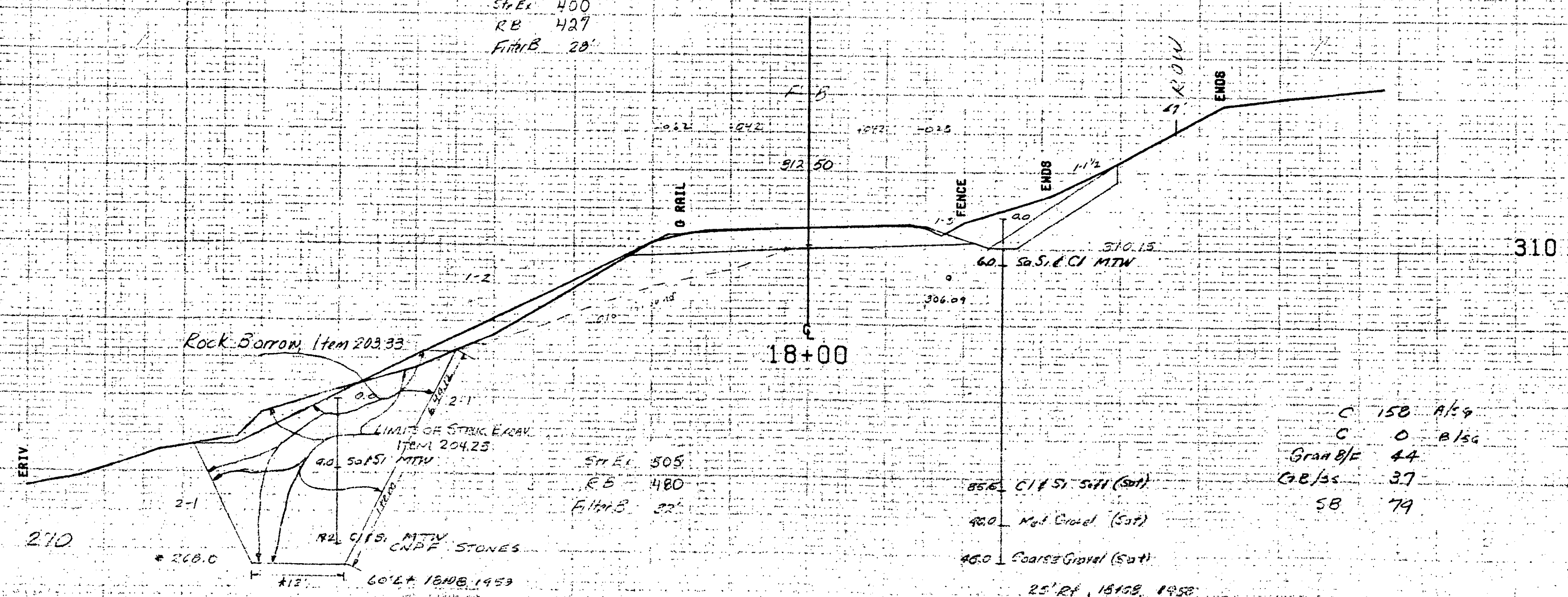
SCALE 10 FEET

* Note: All Elevations and Dimensions Shown on Shear Key Sections may be revised at the discretion of the Engineer.



C	155
Gran B/c	60
GB/SS	34
SB	79

St. El. 400
R.B. 427
Fill H. 20'

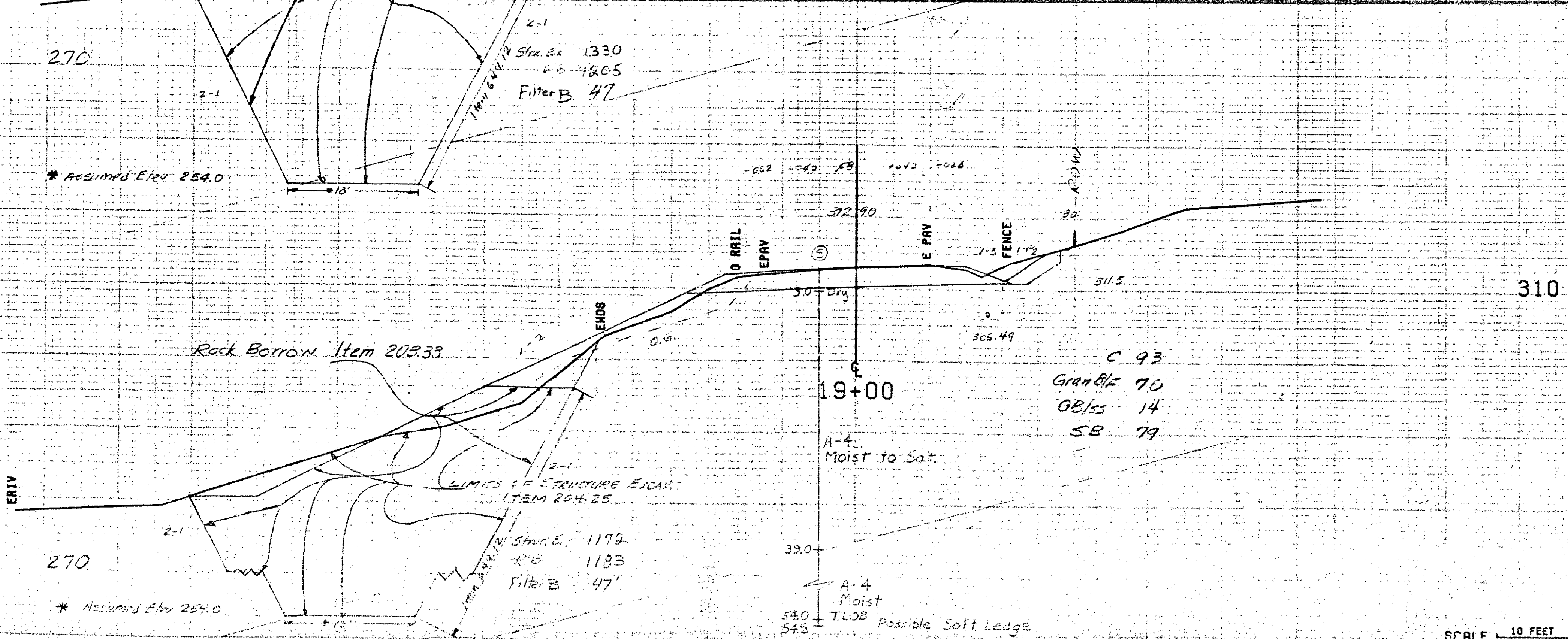
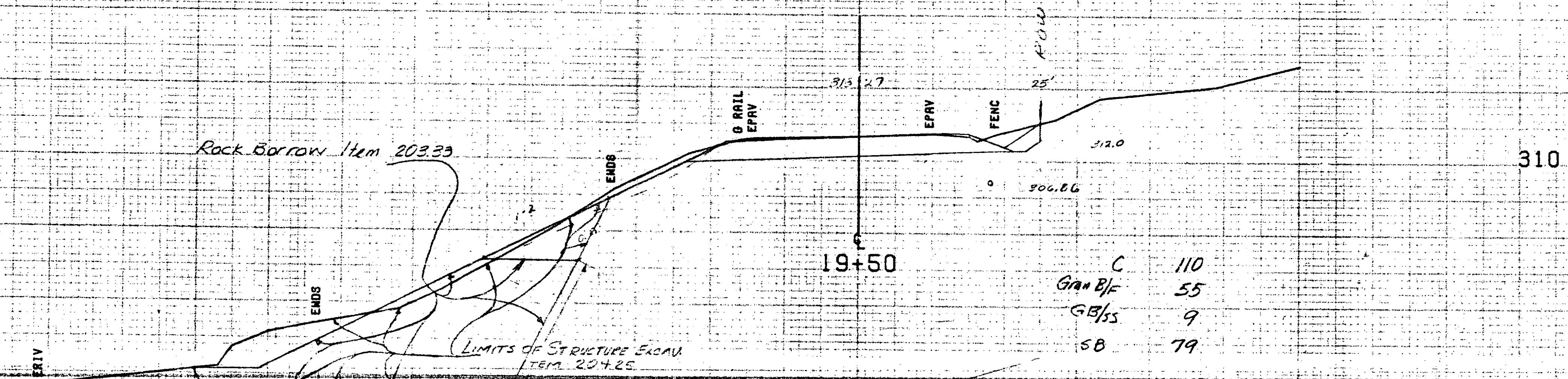


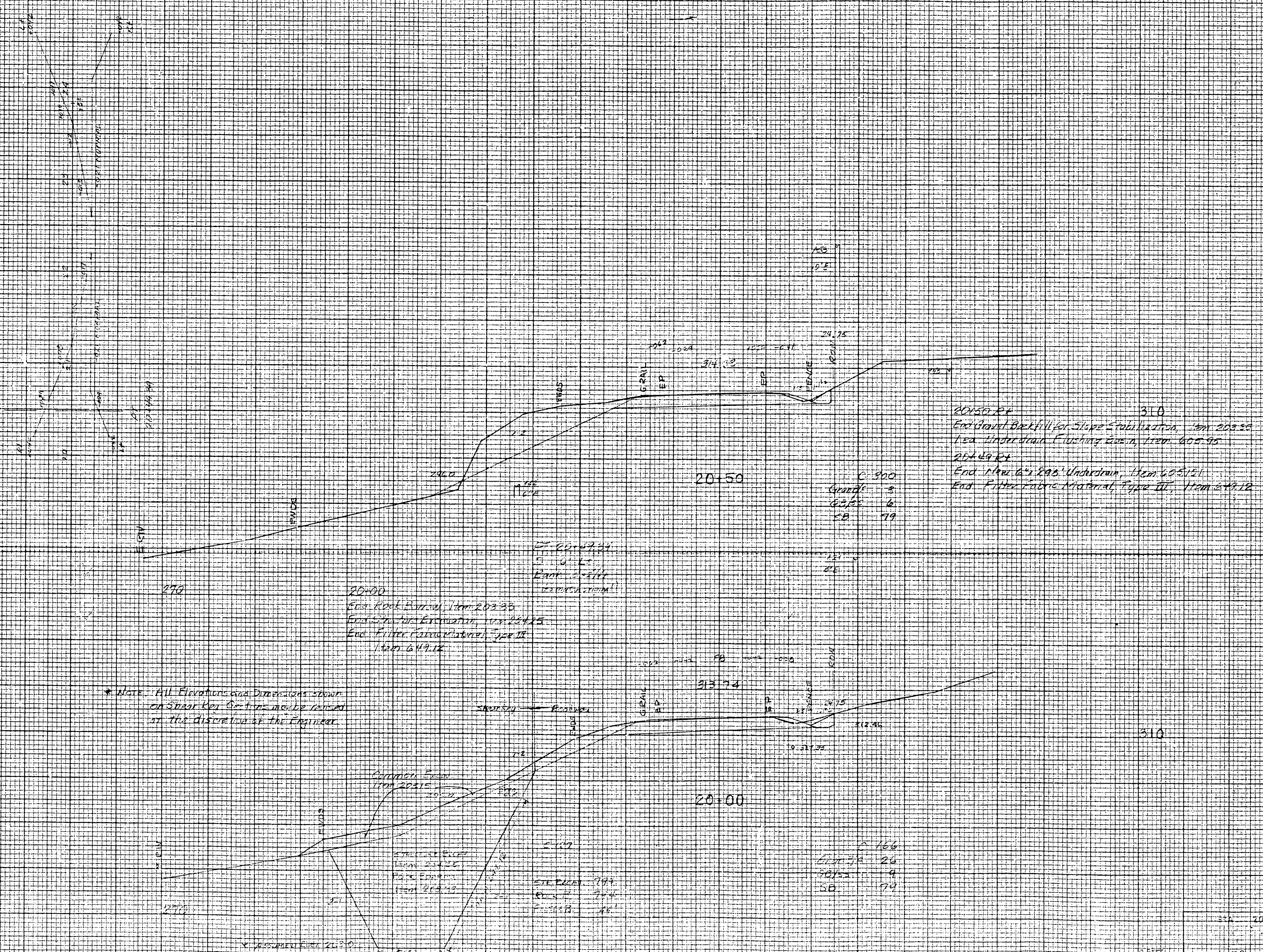
C	150	A/59
C	0	B/50
Gran B/c	44	
GB/SS	37	
SB	79	

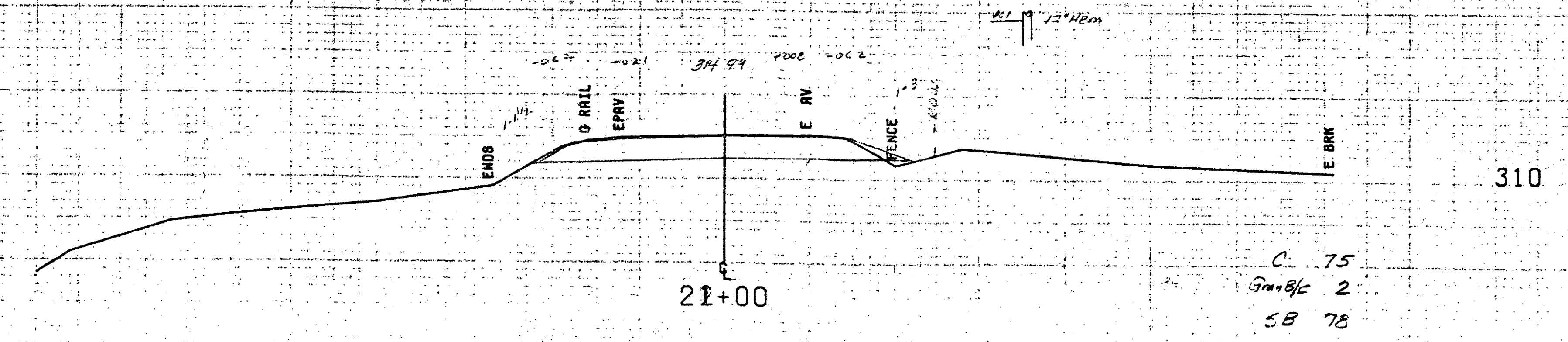
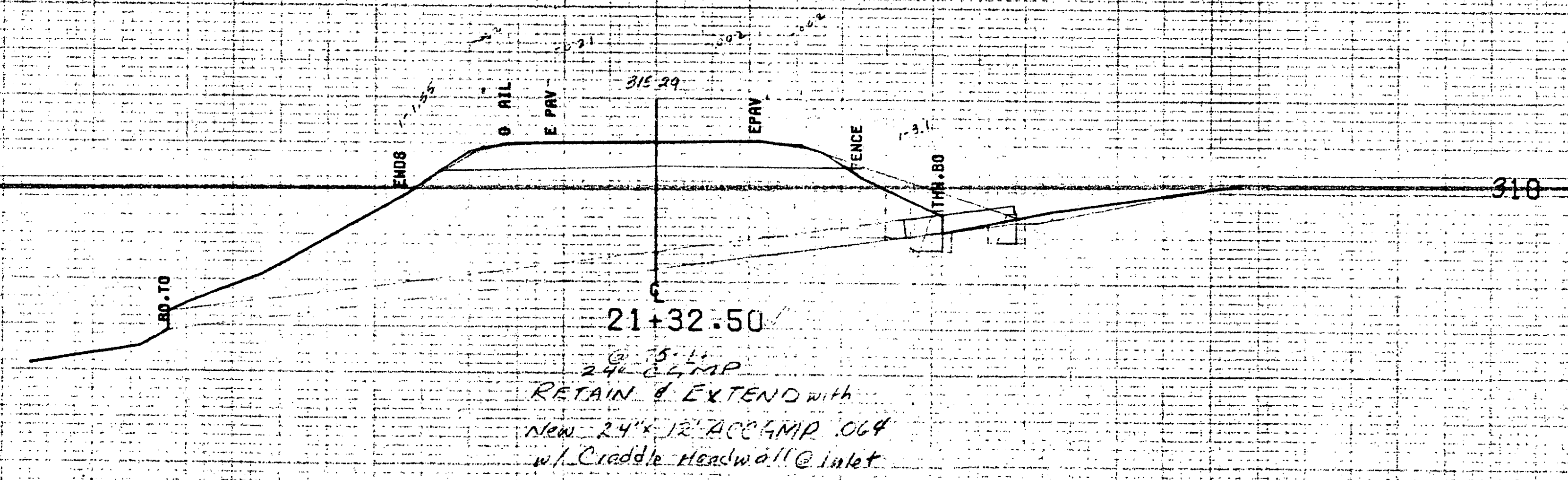
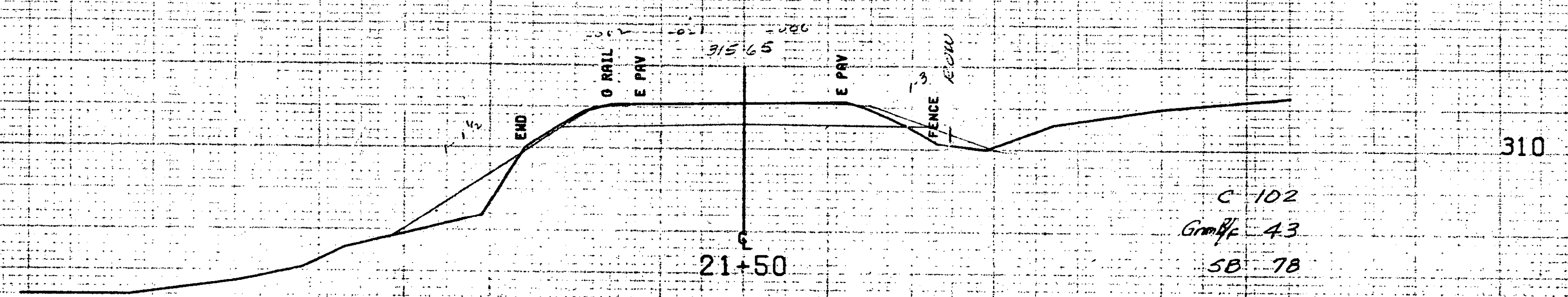
St. El. 505
R.B. 480
Fill H. 22'

Note: All Elevations and Dimensions shown on Shear Key Sections may be revised at the discretion of the Engineer

19+70 LI
 END UNCLASSIFIED CHANNEL
 EXCAVATION ITEM 203.27

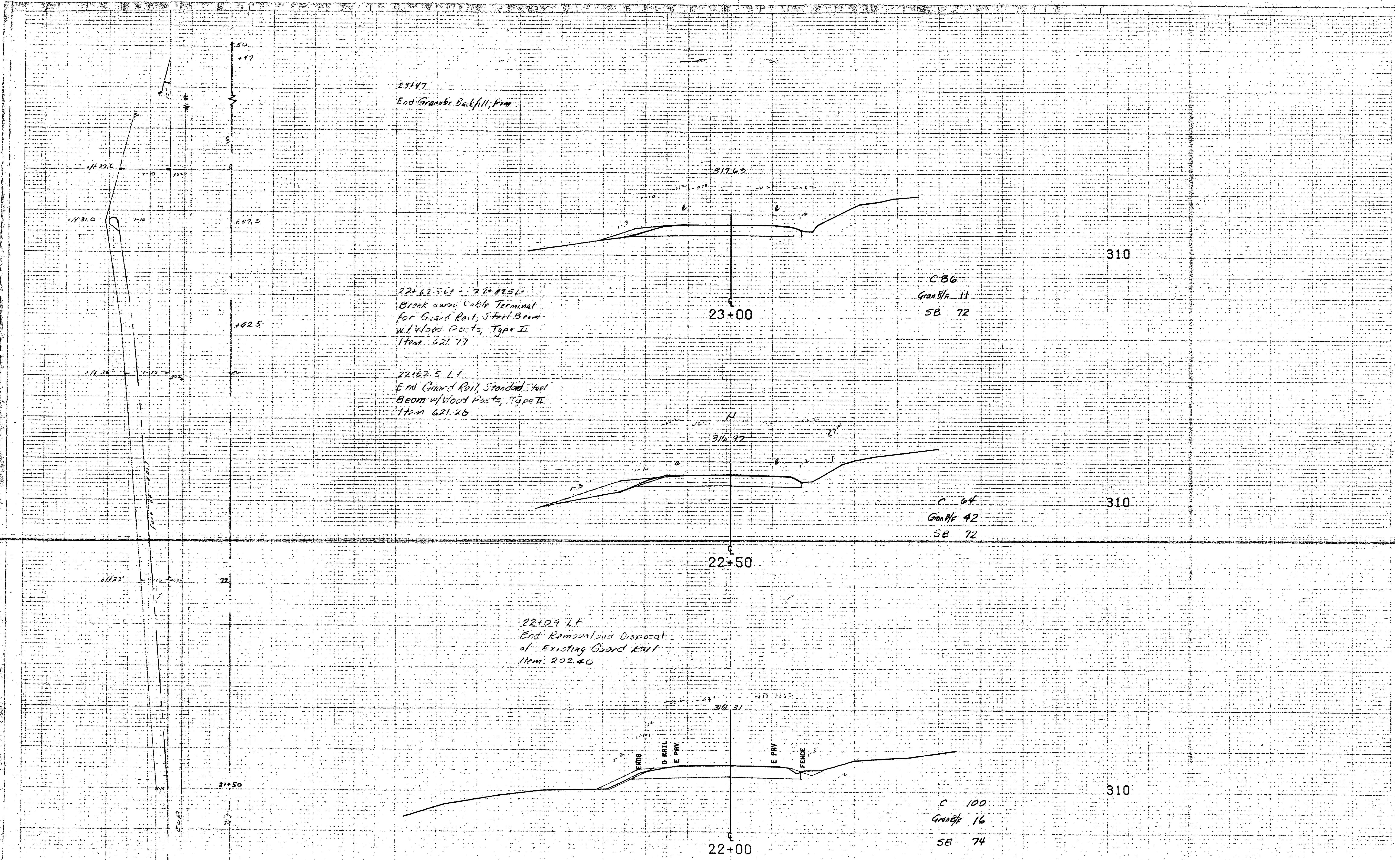






FROM STA. 21+00 TO STA. 21+50
 PROJECT NAME JERICHO R VER
 NO. R50224(3) PLOTTED 01/17/84
 SURVEYED BY BEARD JAN 1984
 SHEET 52 OF 60 SHEETS

SCALE 10 FEET



23+00
End Granber Backfill, Item

22+50
22+62.5 Lt - 22+87.5 Lt
Break away Cable Terminal
for Guard Rail, Steel Beam
w/ Wood Posts, Type II
Item 621.77

22+50
22+62.5 Lt
End Guard Rail, Standard Steel
Beam w/ Wood Posts, Type II
Item 621.26

22+00
22+09 Lt
End Removal and Disposal
of Existing Guard Rail
Item 202.40

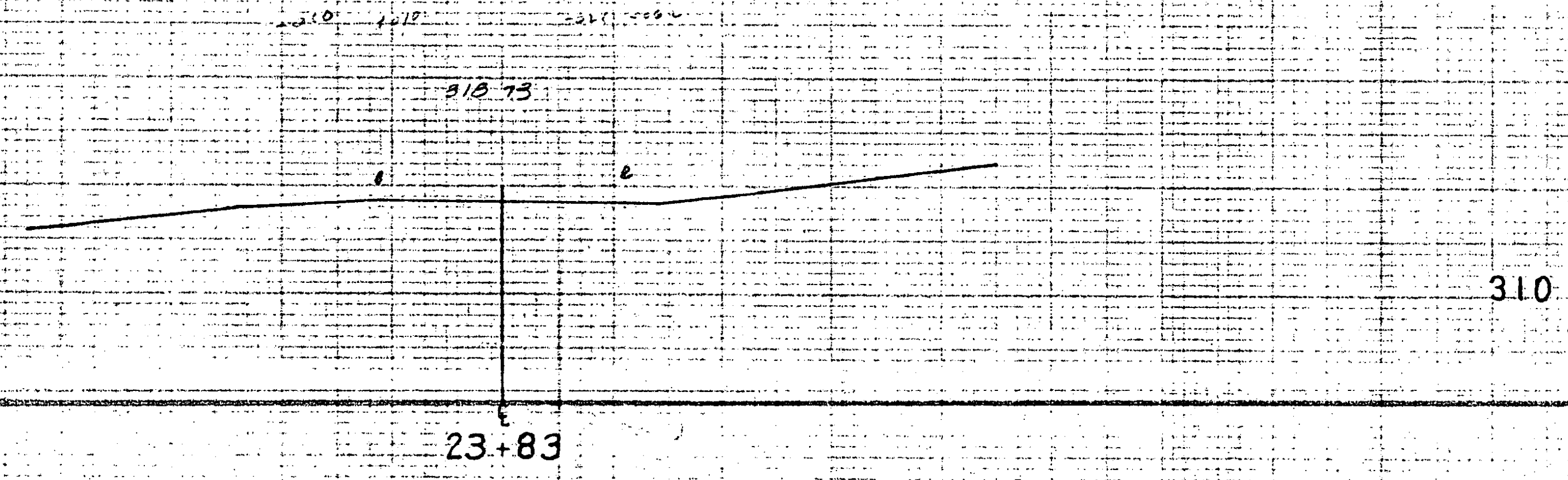
C.B.G.
Gran Bk. 11
SB 72

C 64
Gran Bk 42
SB 72

C 100
Gran Bk 16
SB 74

FROM STA. 22+00 TO STA. 23+00
PROJECT NAME JERICO RI'ER
R0224(3) PLOTTE 01/17/84
SU VE ED BY BEARD J N. 984
SHEE 35 OF 40 SHEETS

SCALE 10 FEET



23+50
 MM 0.858
 End Common Excavation, Item 203.15
 End Subbase of Gravel, Item 301.15
 End 5" Plant Mixed Base Course, Item 303.25
 End 1.5" Course of Bituminous Concrete Pavement, Type II, Item 406.25

