

STATE OF VERMONT
 AGENCY OF TRANSPORTATION

Date JUN 17 1985

KEITH Construction Inc.
 Contractor

A. Keith Hayes
 Signature
Vice president
 Title



CONTRACT PLANS

THESE PLANS DO NOT REFLECT
 CHANGES MADE ON THE PROJECT.

PROPOSED IMPROVEMENT

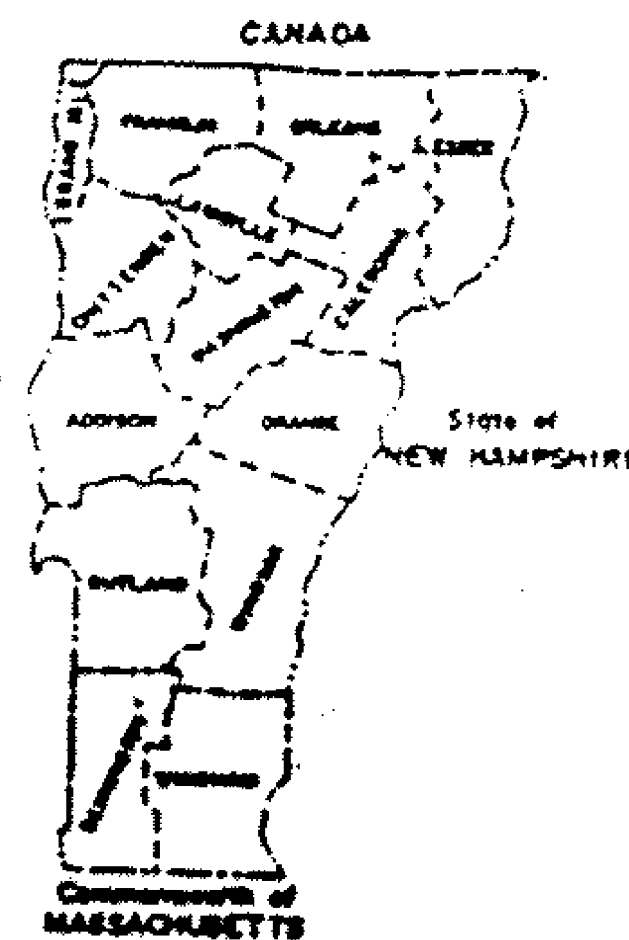
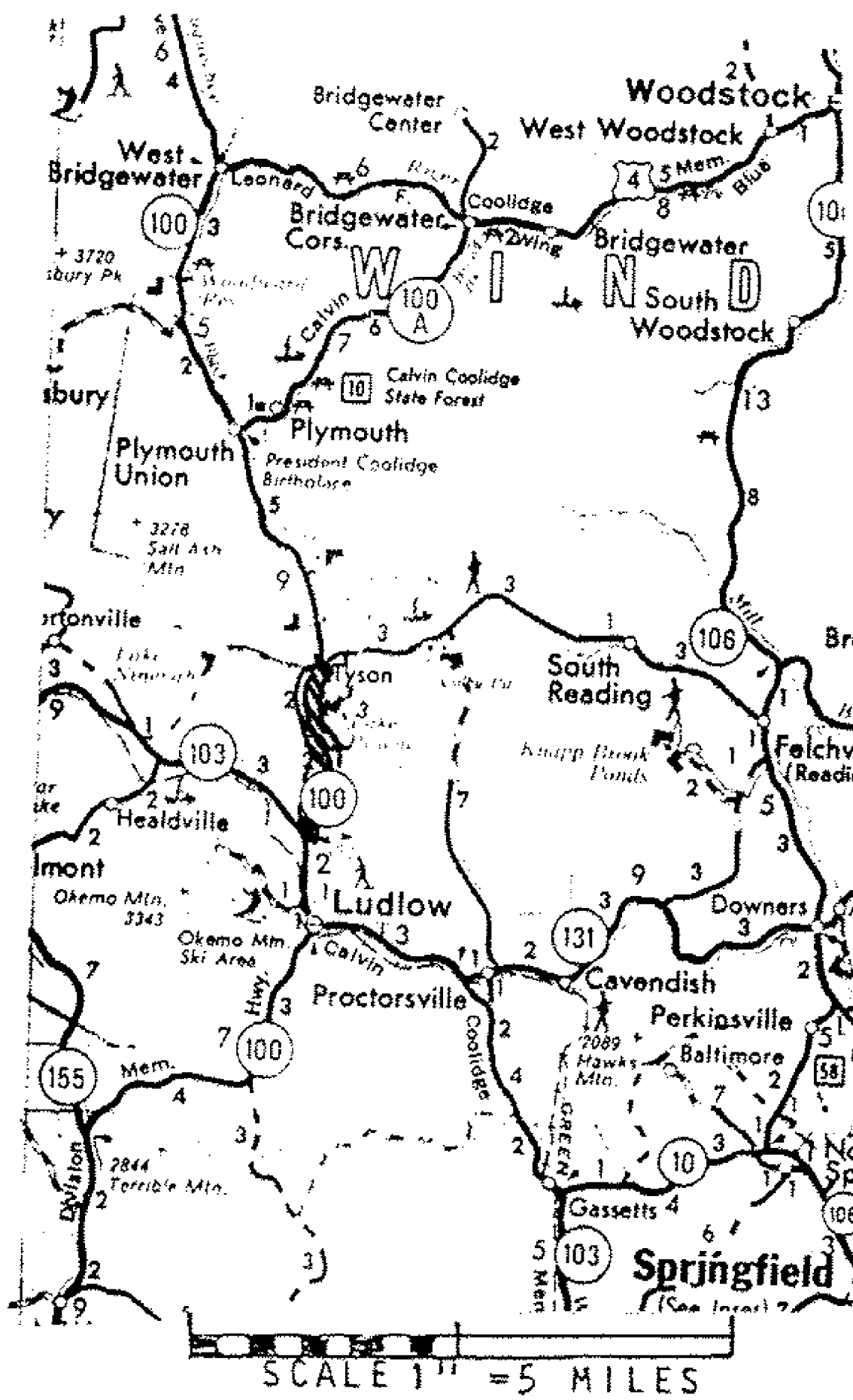
Arthur G. Bull RESURFACING PROJECT
 Transportation Secretary's
 Signature

TOWN OF: LUDLOW* LUDLOW-PLYMOUTH

COUNTY OF: WINDSOR

ROUTE NO: VT-100

ROUTE CLASS: FAP



PROJECT PROCESSED UNDER
 SECONDARY ROAD PLAN

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.

SUBMITTED BY ORDER OF THE STATE TRANSPORTATION BOARD
 APPROVED Frank E. Hollenbeck DATE _____
 DIRECTOR OF ENGINEERING AND CONSTRUCTION
 DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 APPROVED _____ DATE _____
 DIVISION ADMINISTRATOR

PROJECT NO. F 013-3(3)S-
HMA 2631
 SHEET 1 OF 21 SHEETS

SEE SHEET 2 FOR INDEX

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LUDLOW VT-100 F 013-3(3)S

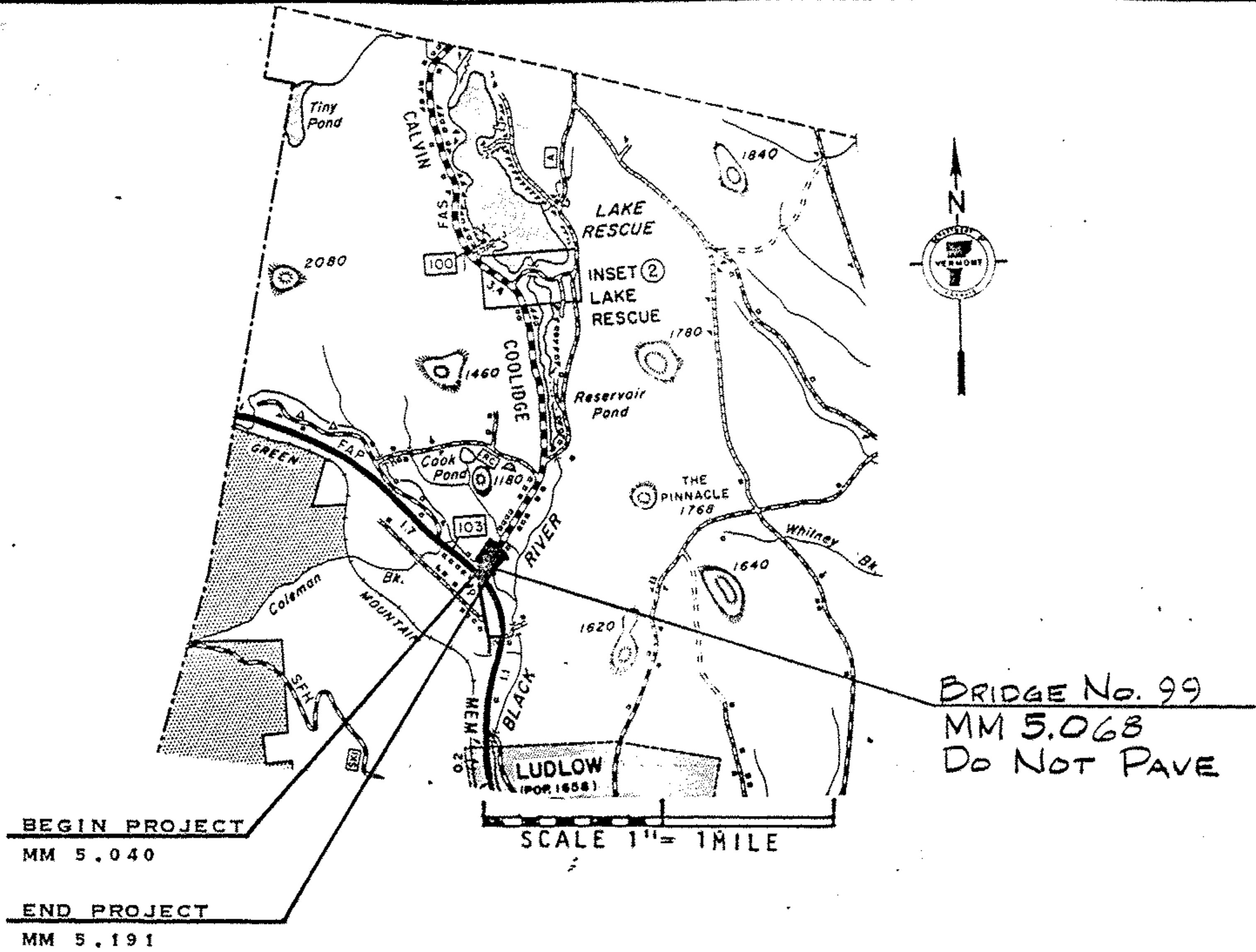
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LUDLOW-PLYMOUTH VT-100 HMA 2631

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PROJECT DESCRIPTION AND LOCATION



VT-100 BEGINNING AT THE JUNCTION OF VT 103 AND VT 100 AT MM 5.040
AND EXTENDING NORTHERLY 0.151 MILE TO MM 5.191

LENGTH OF PROJECT
0.151 MILES
797 FEET

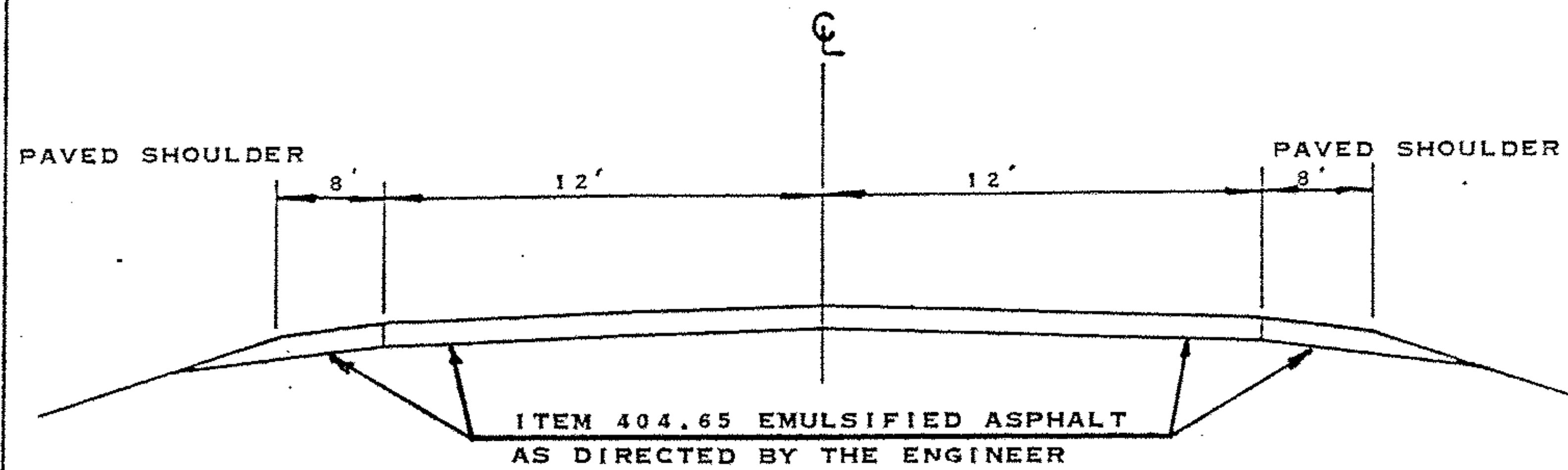
PROJECT LUDLOW

NO. E-013-3(3)S

SHEET 4 OF 21 SHEETS

TYPICAL SECTIONS & DESIGN DATA

ITEM 406.25 BITUMINOUS CONCRETE PAVEMENT
LEVELING COURSE TYPE III OR IV (273 TONS/MILE)
AS DIRECTED BY THE ENGINEER
3/4" WEARING COURSE ($\pm 1/4$) TYPE IV



LUDLOW
MM 5.040 MM 5.191

1982 ADT 2060
V 50

Note: Topsoil, Item 653.10 to be applied as directed by the Engineer.
Seed, Fertilizer, Limestone and Mulch Items to be applied as required,
payment to be subsidiary to the Topsoil item.

PROJECT LUDLOW

NO. F 013-3(3)S

SHEET 5 OF 21 SHEETS

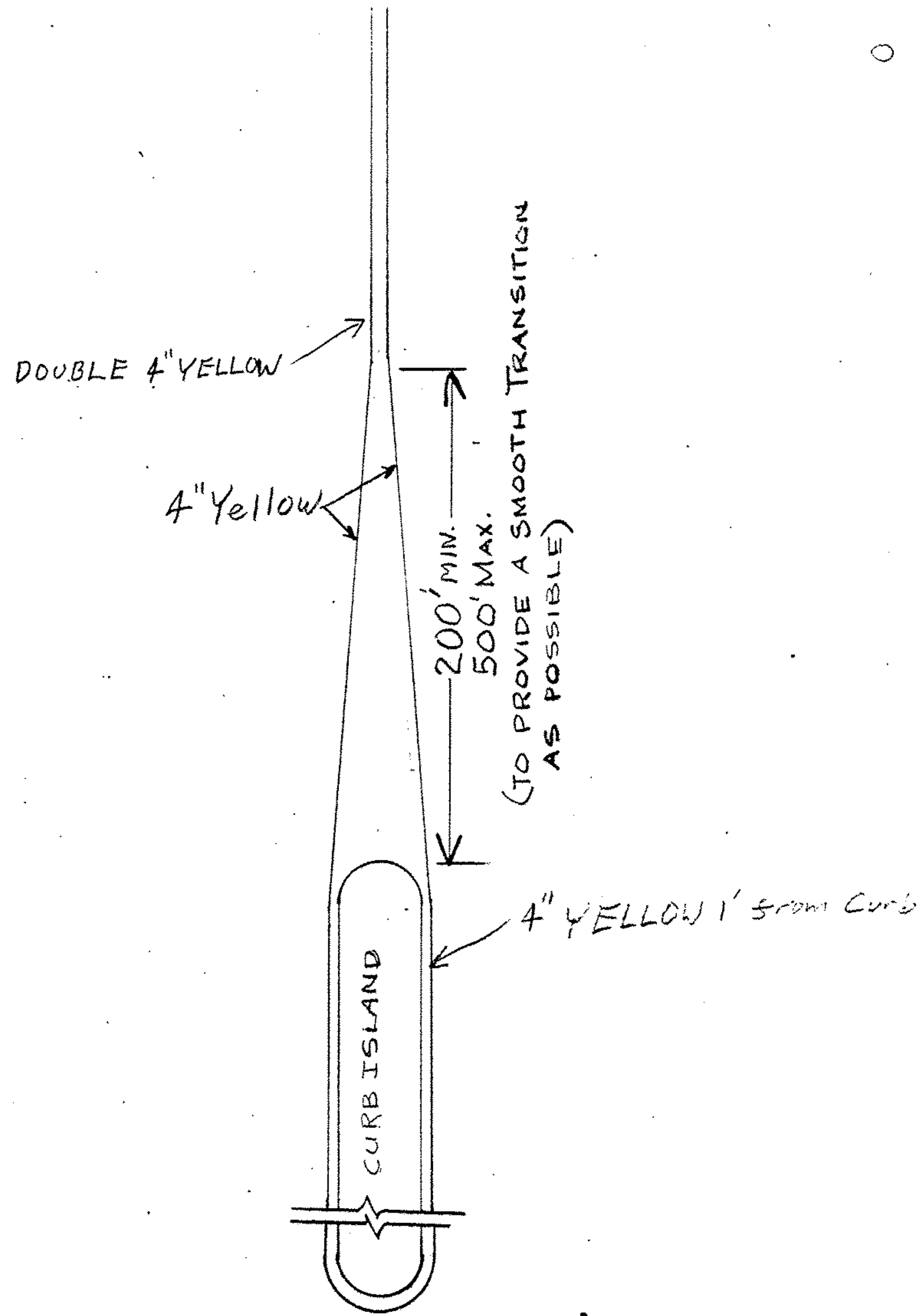
PROJECT LENGTHS AND ITEM QUANTITIES

ITEM DESCRIPTION
 PAINTED CLBB 64.6.21
 DURABLE 2 1/2" STOP BAR WITHIN LENGTH
 DURABLE LETTER IN WORD MARKING 64.6.64
 DURABLE 2 1/2" STOP BAR 64.6.66
 DURABLE LETTER IN WORD MARKING 64.6.66

ITEM NUMBER	UNIT	FEET	FT	REMARKS
MM 5.040-5.049		104		
MM 5.041		24		
MM 5.042			4	STOP
TOTAL		104	24	4

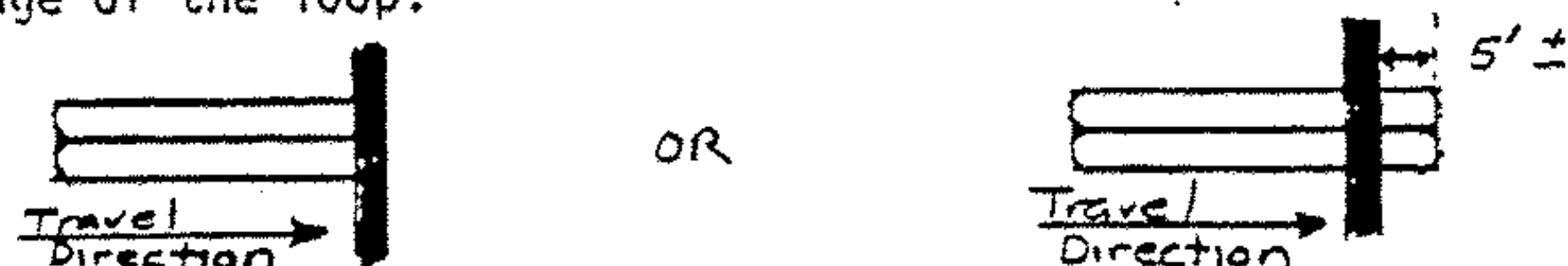
PROJECT LUDLOW NUMBER F 013-3(3)S SHEET 6A OF 21

DETAILS



APPLICATION NOTES

1. Edge lines shall be placed 1'-0" from curb.
2. Lane widths based on available roadway width. Preference shall be given to thru lanes with a preferred width of 12'. Left and right turn lanes may be between 10'-12' in width.
3. Exclusive turn lanes (left or right) - Turn lane lanes shall be solid and extend back from the stopbar an adequate distance to store turning vehicles. Generally, the lane line will extend back to the point of full lane width. The edge line taper rate should be 15:1 (minimum). In urban areas an 80' minimum is required. In both rural and urban areas a 200' taper is desirable. An estimate of length required can be determined by dividing the average hourly turning volume by the number of cycles per hour. Multiply the result by 25' per vehicle and then multiply by 1.5 to 2.0. Existing geometry may restrict turn lane length.
4. Turn arrows shall be placed at the begin and end of the left or right turn lane and in the middle if the lane length exceeds 200'.
5. Turn arrows placed at the end of the lane with the stop bar shall be placed with a 4' gap between the stop bar and arrow.
6. There shall be a 4' gap between turn arrows and word markings.
7. When word markings are used at the beginning of a turn lane the markings shall begin at the start of the solid white lane line.
8. The word marking STOP shall be placed with a 4' gap between the marking and the stop bar.
9. Gore markings shown are only approximate. Marking shall be as detailed on Standard Sheet E-50.
10. Stopbars shall be located no closer than 40' from the nearest signal face and no further than 120' from the furthest face. At intersections where there are existing vehicle detector loops, care should be taken in locating the stop bar. In most cases the stopbar should be at or just behind the front edge of the loop.



If loop locations are not known, contact either the Maintenance Division or Traffic Design for information.

11. Dotted line extensions (lane lines and/or centerline) may be used at some intersections to emphasize turning paths.

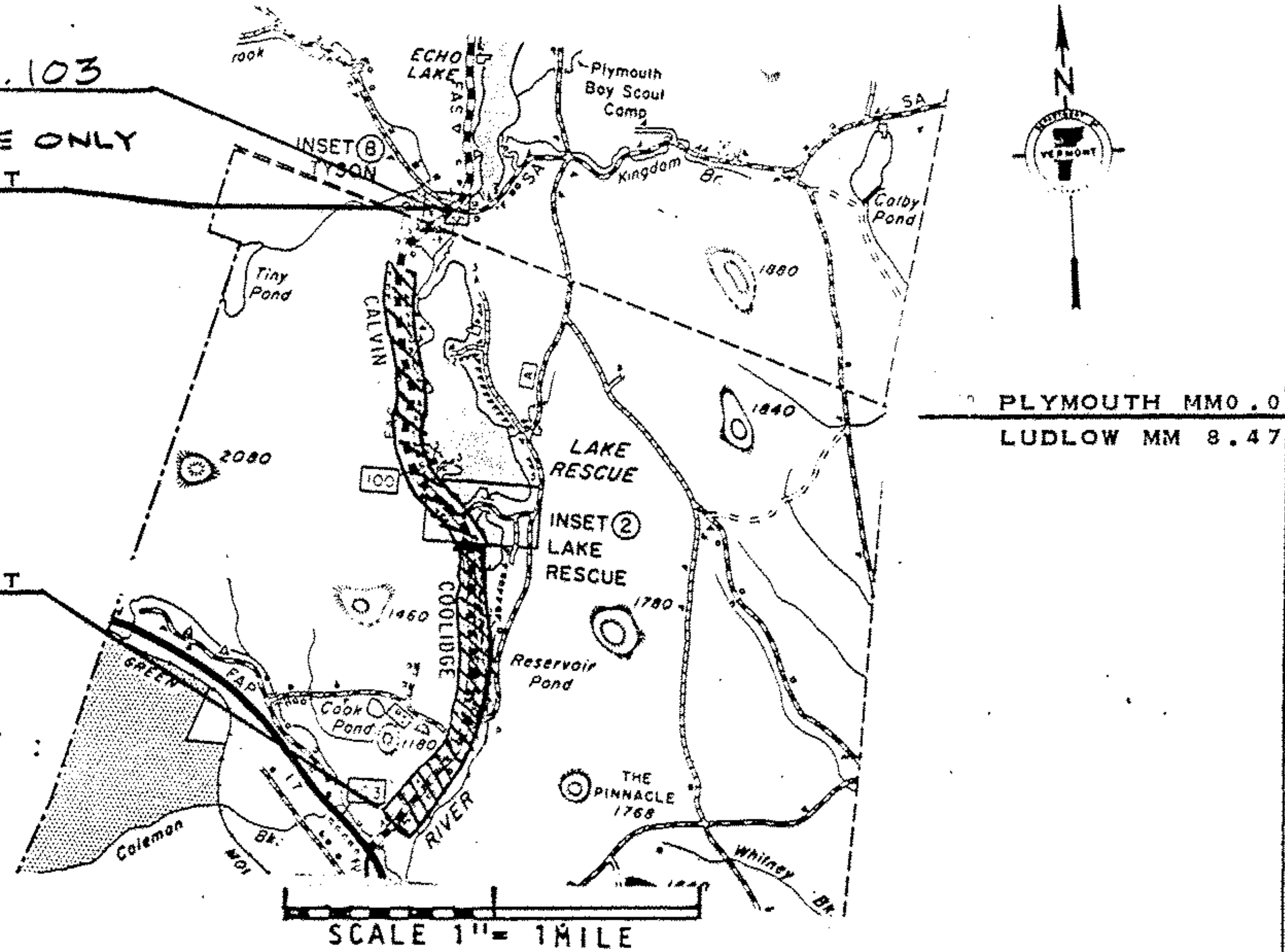
Revision - 11/84

Note 3 revised
Notes 10&11 added

PROJECT DESCRIPTION AND LOCATION

BRIDGE No. 103
 MM 0.081
 TOP COURSE ONLY
 END PROJECT
 MM 0.438
 PLYMOUTH

BEGIN PROJECT
 MM 5.191



VT 100 BEGINNING IN THE TOWN OF LUDLOW AT MM 5.191 AND EXTENDING
 3.418 MILES TO MM 0.138 IN THE TOWN OF PLYMOUTH

LENGTH OF PROJECT
 3,418 MILES
 18047 FEET

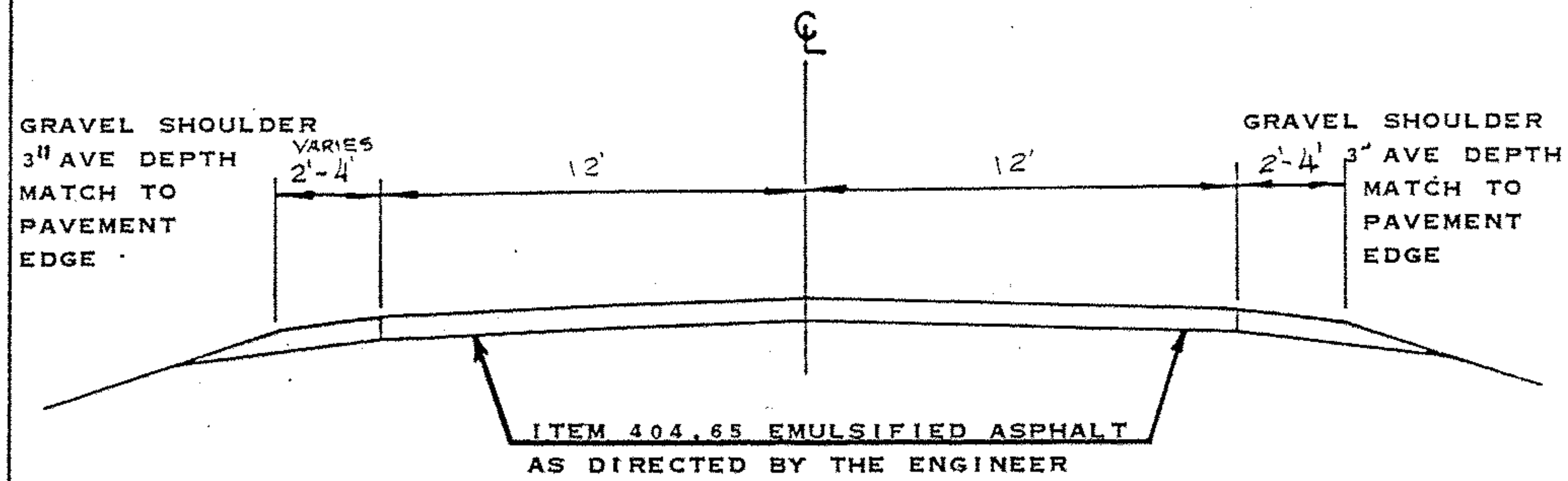
PROJECT LUDLOW_PLYMOUTH

NO. HMA 2631

SHEET 10 OF 21 SHEETS

TYPICAL SECTIONS & DESIGN DATA

ITEM 406.25 BITUMINOUS CONCRETE PAVEMENT
 LEVELING COURSE TYPE III OR IV (273 TONS/MILE)
 AS DIRECTED BY THE ENGINEER
 3/4" WEARING COURSE (±1/4) TYPE IV



LUDLOW
 MM 5.191 MM 8.840

1982 ADT 2060
 V 50

Note: Topsoil, Item 653.10 to be applied as directed by the Engineer.
 Seed, Fertilizer, Limestone and Mulch Items to be applied as required,
 payment to be subsidiary to the Topsoil item.

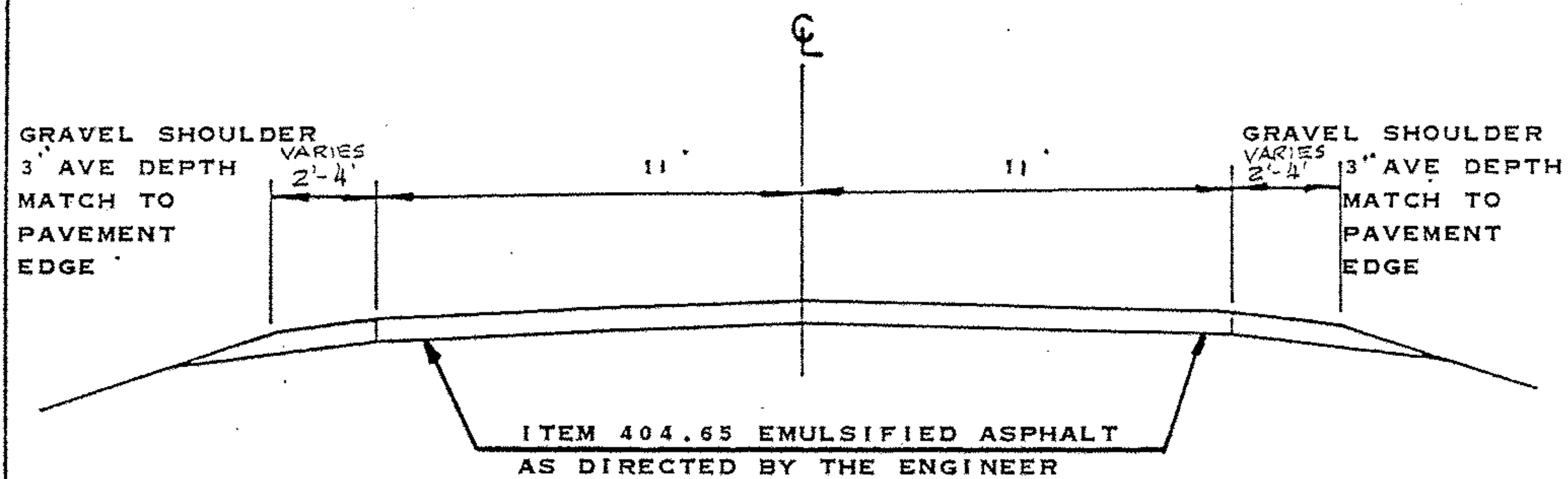
PROJECT LUDLOW -PLYMOUTH

NO. HMA 2631

SHEET 11 OF 21 SHEETS

TYPICAL SECTIONS & DESIGN DATA

ITEM 406.25 BITUMINOUS CONCRETE PAVEMENT
LEVELING COURSE TYPE III OT IV (250 TONS/MILE)
AS DIRECTED BY THE ENGINEER
3/4" WEARING COURSE (1/4) TYPE IV



LUDLOW
MM 6.840 MM 0.138

1982 ADT 1580
V 50

Note: Topsoil, Item 653.10 to be applied as directed by the Engineer.
Seed, Fertilizer, Limestone and Mulch Items to be applied as required,
payment to be subsidiary to the Topsoil item.

PROJECT LUDLOW - PLYMOUTH

NO. HMA 2631

SHEET IIA OF 21 SHEETS

PROJECT: PLYMOUTH-LUDLOW ROUTE VT 100 PROJECT No. HMA 2631

TEMPORARY 4" REFLECTORIZED YELLOW LINE

PMP

LUDLOW

PLYMOUTH

MILE	MILE	LT	RT	QUANTITY LT	QUANTITY CL	QUANTITY RT	TOTAL
5.191	6.33	SOLID	SOLID	6014		6014	12,028
6.33	6.45	SOLID	DASH	634		158	792
6.45	7.83	SOLID	SOLID	7,286		7,286	14,572
7.83	7.97	SOLID	DASH	739		185	924
7.97	8.00	SOLID	SOLID	153		159	316
8.00	8.13	DASH	SOLID	172		686	858
8.13	8.47	SOLID	SOLID	1795		1795	3,590
TOWN LINE							
0.00	0.138	SOLID	SOLID	729		729	1458
							34,538
4 TH'S @ 80' EA. =				320 LF			-320
							34,218
ASSUME 50% LOST DUE TO LEVELING							= 17,109
TOTAL							51,327
DURABLE LETTER IN WORD MARKINGS EA							
5.23	LT	STOP AHEAD		9 EA	0	0	9 EA
		See Detail Sheet					Total = 9 EA
TEMPORARY 4" REFLECTORIZED WHITE LINE							
5.191	8.47	SOLID	SOLID	17,313		17,313	34,626
TOWN LINE							
0.00	0.138	SOLID	SOLID	729		729	1458
							TOTAL = 36,084

- 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.

GORE AREA
(GORE AREAS TO INCLUDE 8' CHANNELIZING LINE AND DASHED LINE)
PER STANDARD SHEET E-50

- B. EDGE LINES

WHEN 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.

- C. TEMPORARY MARKINGS MAY CONSIST OF PAINT, TAPE OR RAISED PAVEMENT MARKERS (RPM'S). THE TAPE SHALL BE A RETRO-REFLECTIVE FILM ON A CONFORMABLE METALLIC 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. TEMPORARY TAPE MARKINGS WILL BE OFFSET AND REMOVED WHEN PROJECT IS FINISHED AND FINAL CENTERLINE PAINTED. THE TAPE SHALL BE THE TYPE THAT IS REMOVABLE INTACT AND NOT SEPERATE AT ANY TIME. THE RPM'S SHALL HAVE A SELF-ADHESIVE BACKING EASILY REMOVED BEFORE PAVING AND SHALL CONFORM TO THE FOLLOWING LAYOUT PATTERN:

NO PASSING BARRIER
NO RPM'S ALLOWED.

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

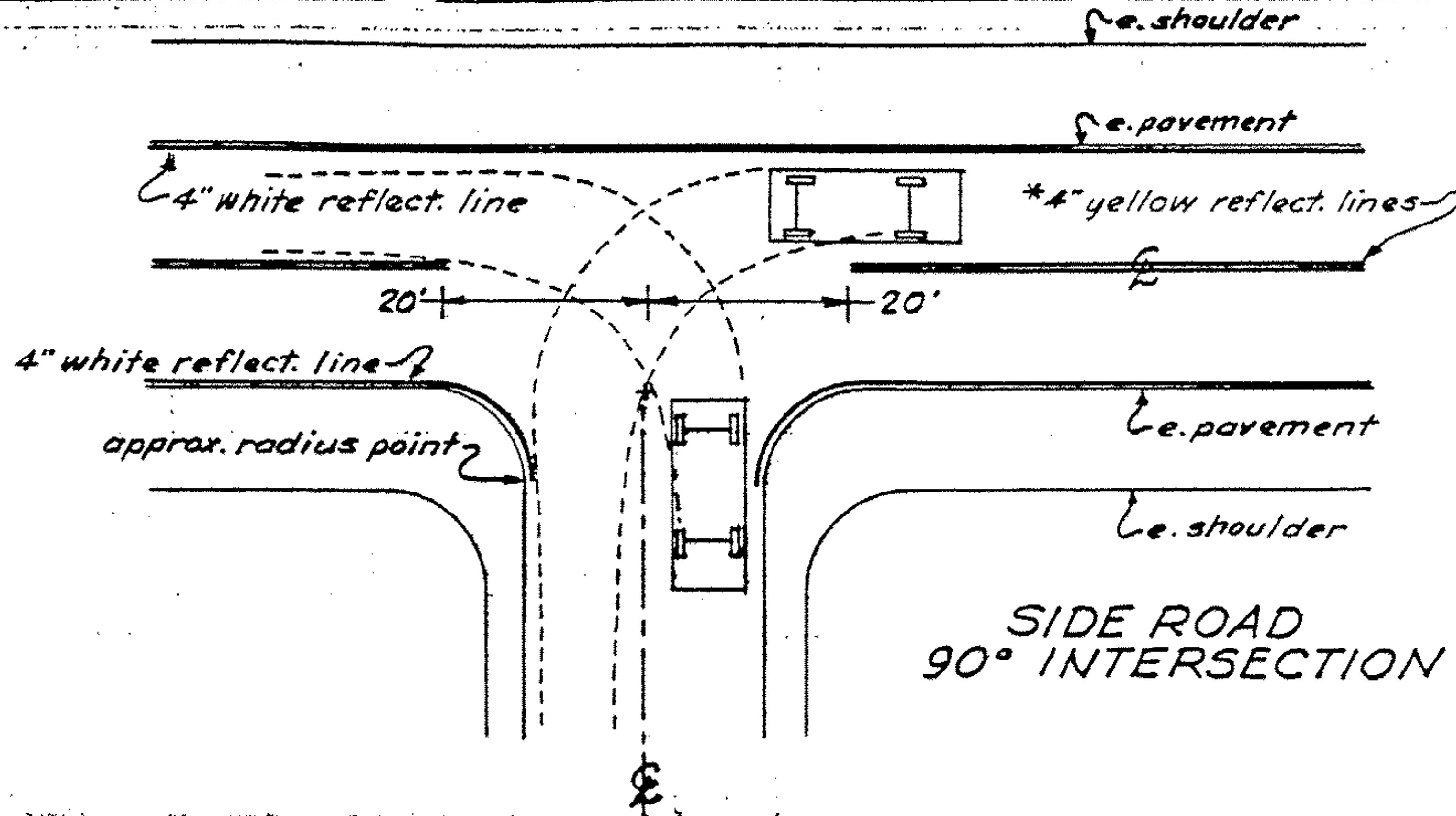
- D. WHEN PAINT IS USED FOR TEMPORARY MARKING, AN ALTERNATE MATERIAL SUCH AS TAPE OR RPM'S SHALL BE ON HAND IN THE EVENT RAIN PREVENTS THE PAINT APPLICATION FROM BEING COMPLETED. ALL PAINT SHALL BE REFLECTORIZED.
- E. PAYMENT FOR PAINT AND TAPE SHALL BE COMPUTED ON A LINEAR FOOT BASIS AS IF PAINT WAS 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).
- F. PRIOR TO ACCEPTANCE, THE PAVEMENT MARKINGS SHALL BE COMPLETED FOR THE ENTIRE PROJECT BY THE CONTRACTOR AS DETAILED ON THE PLANS OR DIRECTED BY THE RESIDENT ENGINEER.

REVISED
02/11/85

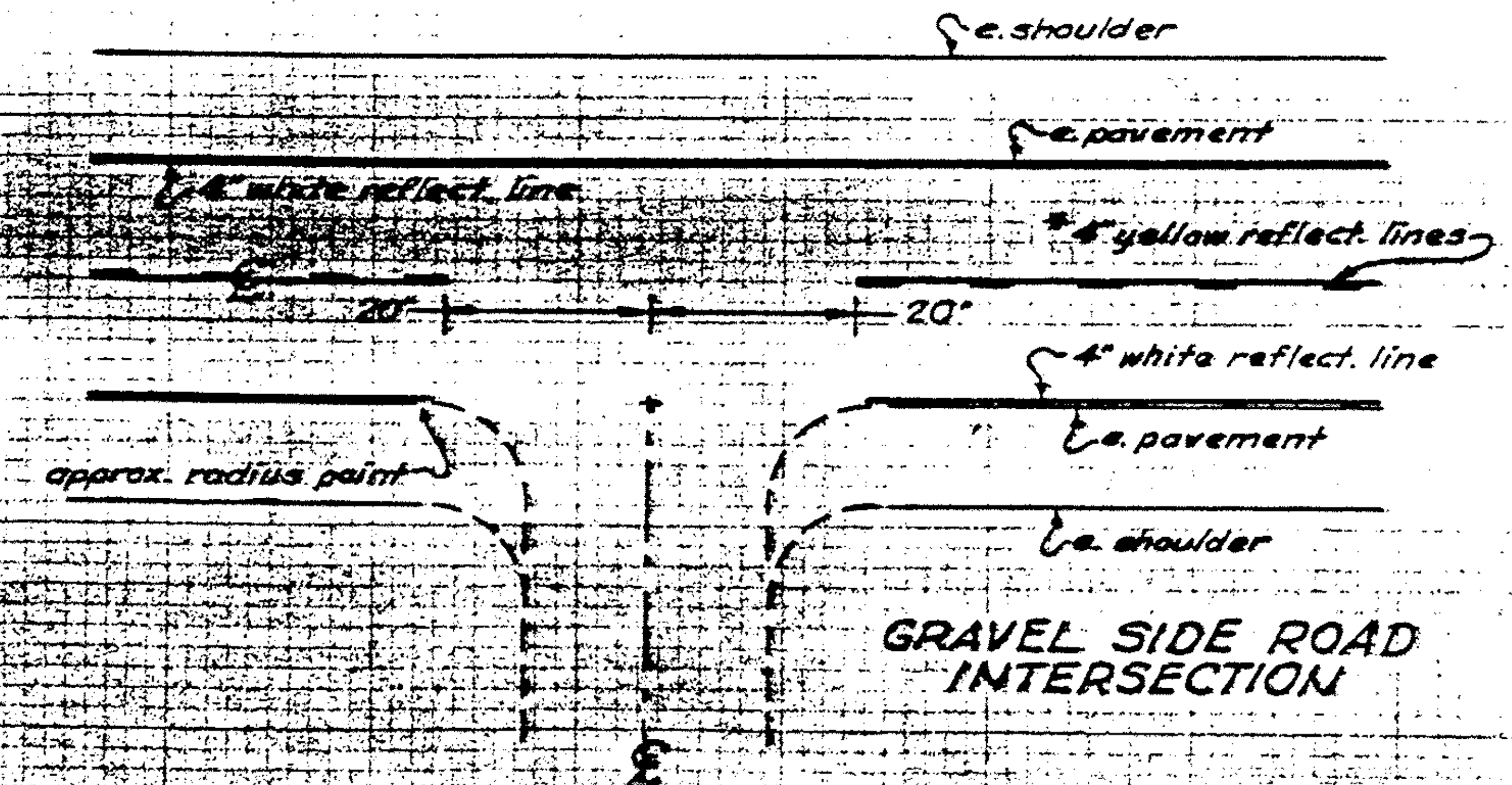
Ludlow * Ludlow Plymouth

FOI3-3(3)S HMA 2631

SHEET 15 OF 21

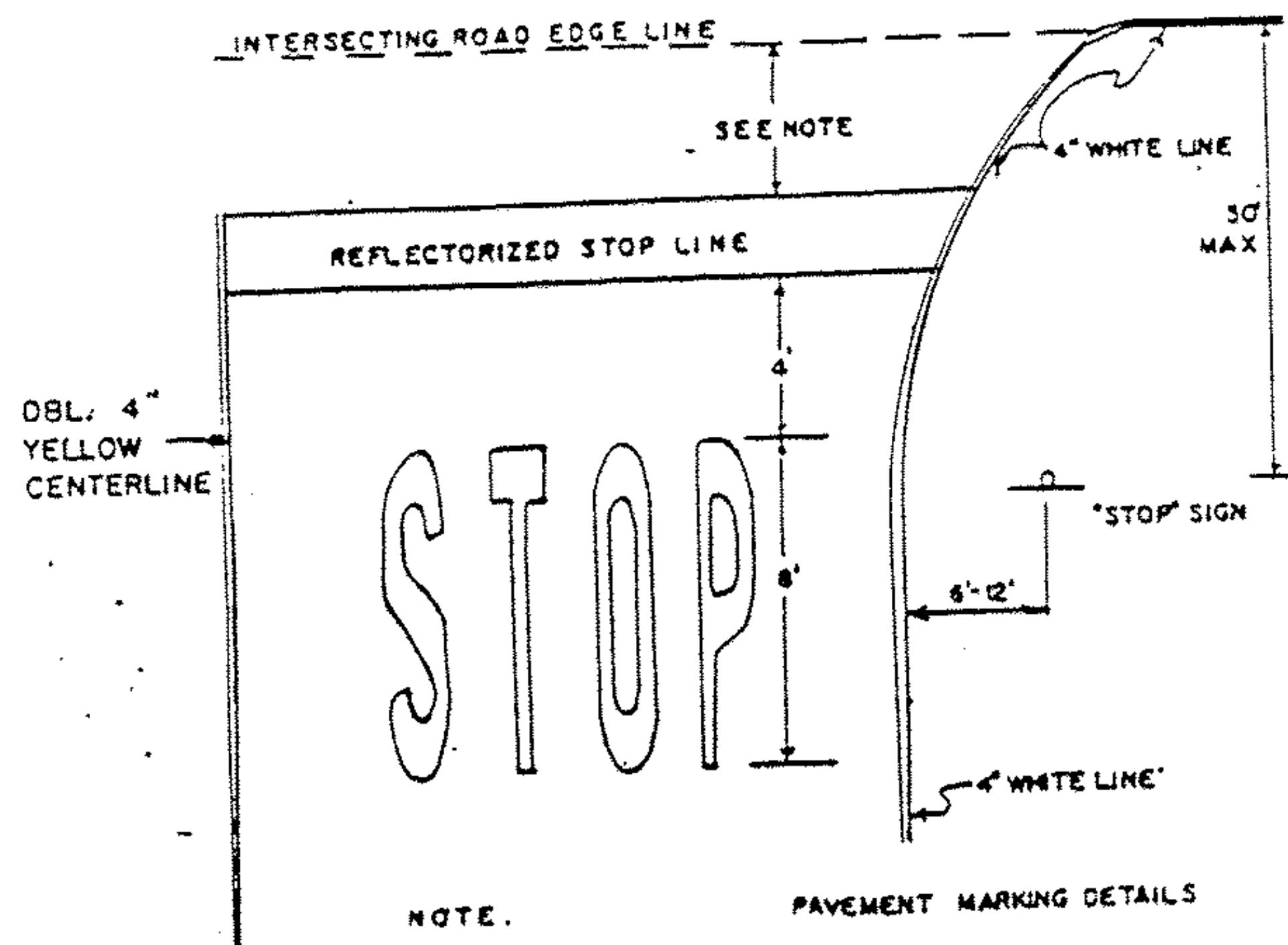


*Centerline treatment shall consist of a minimum of 400 feet of solid line in advance of the intersection and shall be paired with either a solid or dashed line depending on sight distance availability in the opposing lane.



STOP BAR DETAILS

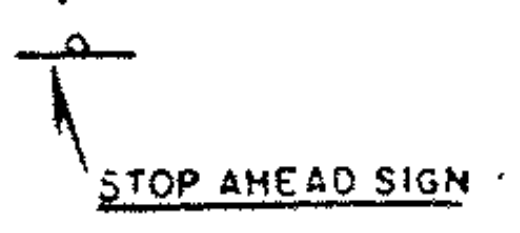
13.



NOTE.
 PAVEMENT MARKING DETAILS
 1. THE STOP LINE SHOULD BE PLACED AT THE DESIRED STOPPING POINT. IN NO CASE MORE THAN 30 FEET OR LESS THAN 4' FROM THE NEAREST EDGE OF THE INTERSECTING ROADWAY, OR EDGE OF CROSSWALK.

AHEAD

NOTE:
 SEE STANDARD E-50
 FOR LETTERING DETAIL.



STOP

LUDLOW * LUDLOW-PLYMOUTH
 FO13-3(3)S HMA 2631