STATE OF VERMONT
AGENCY OF TRANSPORTATION

Date AUG 13 1985

Cooley Asphalt Paving
Contractor

Wilfred A Lafreniere
Signature

President
Title

Susan C Crompton
Transportation Secretary's Signature

CONTRACT PLANS

THESE PLANS DO NOT REFLECT CHANGES MADE ON THE PROJECT.

PROPOSED IMPROVEMENT

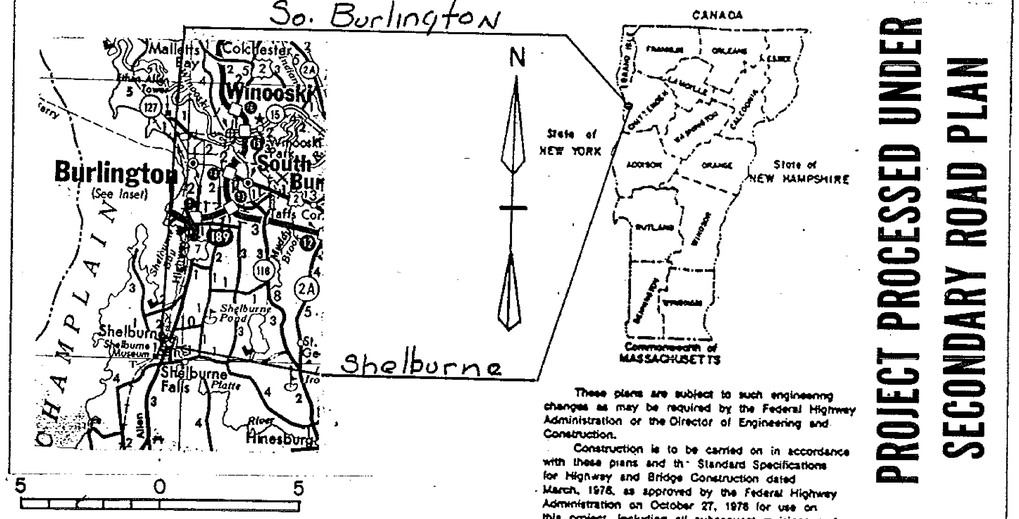
RESURFACING PROJECT

TOWN OF: SHELBURNE - So. BURLINGTON

COUNTY OF: Chittenden

ROUTE NO: US Route 7

ROUTE CLASS:



5 0 5

1 INCH REPRESENTS 5 MILES

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 Frank E Aldrich DATE JUN 13 1985.
DIRECTOR OF ENGINEERING AND CONSTRUCTION

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____ DATE _____
DIVISION ADMINISTRATOR

PROJECT NO. F019-4(18)S
HMA 2624

SHEET 1 OF 29 SHEETS

SEE SHEET 2+2A FOR INDEX

INDEX OF SHEETS

SHELBURNE HMA 2624

So. BURLINGTON - F019-4(18)S

PROJECT SHELBURNE - So. BURLINGTON

NO. F019-4(18)S HMA 2624

SHEET 2 OF 29 SHEETS

INDEX OF SHEETS

PROJECT SHELBURNE - So. BURLINGTON

NO. F 019-4(18)S
HMA 2624

SHEET 2A OF 29 SHEETS

PROJECT LENGTHS AND ITEM QUANTITIES

ITEM DESCRIPTION	LENGTH	WIDTH	OVERLAY DEPTH	COLD PLANING BIT. CONC. PAVT.	GRAVEL SHOULDERS OPTION	GRAVEL SHOULDERS	EMULSIFIED ASPHALT	BITUMINOUS CONCRETE PAVEMENT	CHANGE ELEV. OF CB, DI, OR MI	ALL PURPOSE EXC. RENTAL, TYPE I	POWER BROOM RENTAL	UNIFORMED TRAFFIC OFFICERS	FLAGPERSONS	MOBILLIZATION	TEMPORARY PAVEMENT MARKING YELLOW	TEMP. PAVEMENT MKG. WHITE	REMARKS
ITEM NUMBER				210.10	402.10	402.11	404.65	406.25	604.40	608.25	608.30	630.10	630.15	635.10	646.36	646.35	
UNIT	FEET	FT	INCH	S.Y.	CY	TON	CWT	TON	EA	HR	HR	HR	HR	LS	LF	LF	
LOCATION																	
HMA 2624					215	376	27	1870	1	10	10	75	75	.48	16000	11810	
F019-4(18)S				39646			53	5610	25	10	10	275	275	.52	29370	7000	
TOTALS				39646	215	376	80	7480	26	20	20	350	350	1	45370	18810	

COMPOSITE PROJECT SHELBURNE-SO. BURLINGTON NUMBER F019-4(18)S HMA 2624 SHEET 3 OF 29

PROJECT LENGTHS AND ITEM QUANTITIES

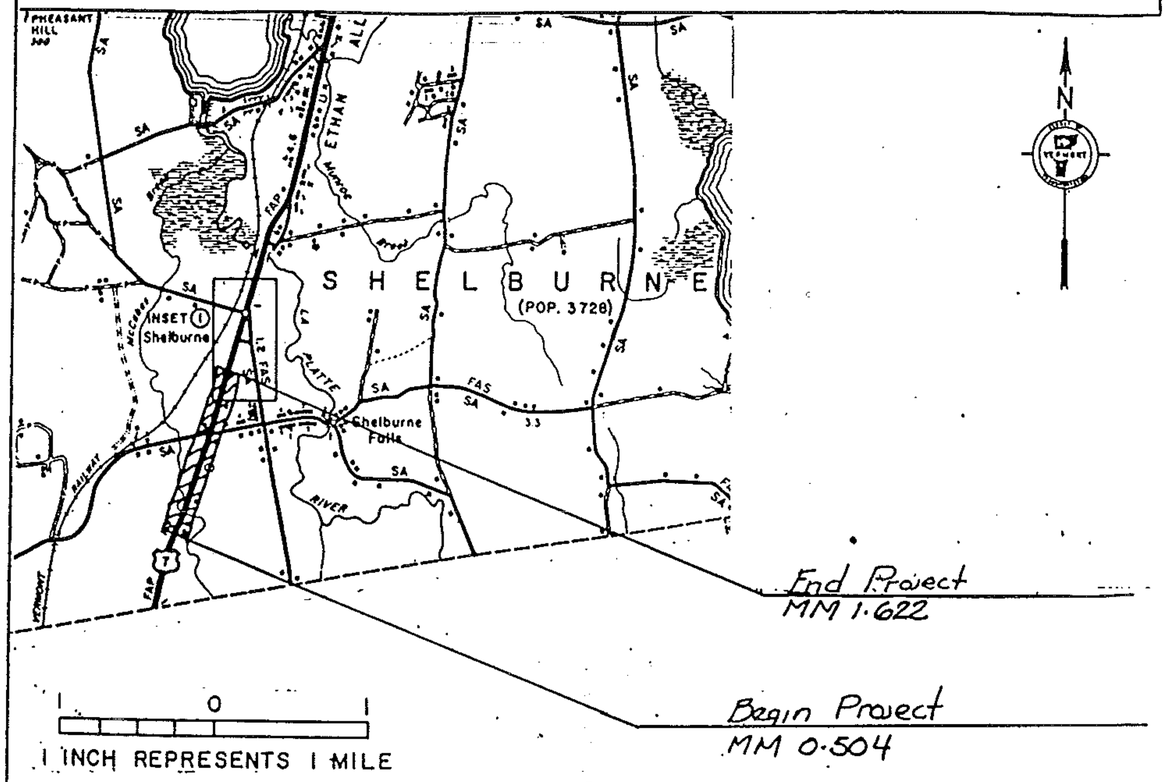
ITEM DESCRIPTION	PAINTED CURB	DURABLE 4" REFLECTORIZED WHITE LINE	DURABLE 4" REFLECTORIZED YELLOW LINE	DURABLE 24" STOP BAR	DURABLE ARROW MARKINGS	DURABLE LETTER MARKINGS	TEMPORARY 24" STOP BAR	TEMPORARY ARROW MARKINGS	TOPSOIL	TRAFFIC SIGNS, TYPE A	TRAFFIC SIGN POST TYPE A REMOVING SIGNS	
ITEM NO	646.21	646.60	646.61	646.64	646.65	646.66	646.77	646.78	653.10	675.20	675.35	675.53	
UNIT	LF.	LF	LF.	LF.	EA.	EA.	LF	EA.	CY	SF	LB	EA.	
LOCATION													
HMA 2624									100				
F019-4(18)S	2710	15500	14700	340	51	13	680	52	50	56	300	3	
TOTALS	2710	15500	14700	340	51	13	680	52	150	56	300	3	

COMPOSITE PROJECT SHELBURNE - So. BURLINGTON NO. HMA 2624 - F019-4(18)S

PROJECT LENGTHS AND ITEM QUANTITIES

ITEM DESCRIPTION	ERECTING SALVAGED SIGNS, TYPE A	(MOD.) TRAFFIC CONTROL SIGNAL	VEHICLE LOOP DETECTOR										
ITEM NO	675.60	678.15	678.22										
UNIT	SF	EA.	LF.										
LOCATION													
HMA 2624													
F019-4(18)S	16	1	165										
TOTALS	16	1	165										

PROJECT DESCRIPTION AND LOCATION



In Shelburne, beginning at a point on US Route 7 at MM 0.504, and extending northerly for 1.118 miles to MM 1.622

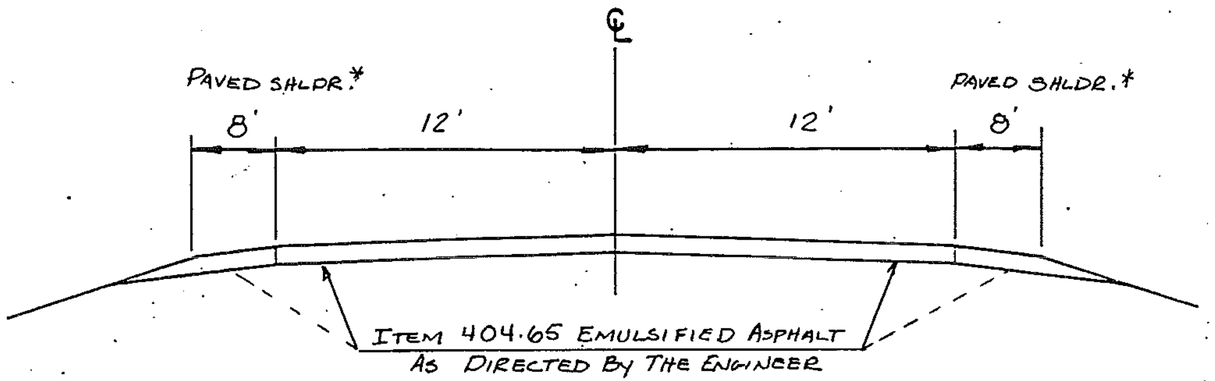
PROJECT SHELBURNE

NO. HMA 2624

SHEET 4 OF 29 SHEETS

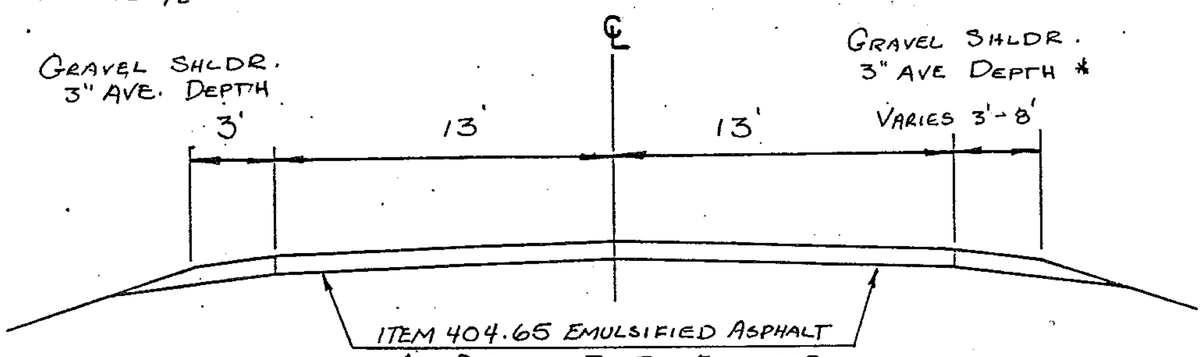
TYPICAL SECTIONS & DESIGN DATA

ITEM 406.25 BITUMINOUS CONCRETE PAVEMENT
LEVELING COURSE, TYPE III OR IV (164 TONS/LANE)
AS DIRECTED BY THE ENGINEER
1½" WEARING COURSE (± 1/4") TYPE III, 12' WIDE/LANE



MM 0.504 - MM 0.900
MM 1.540 - MM 1.622

* PAVED SHLDR WILL BE TAPERED FROM FULL DEPTH TO ½"



ITEM 406.25 BITUMINOUS CONCRETE
LEVELING COURSE, TYPE III OR IV (177 TONS/MILE)
AS DIRECTED BY THE ENGINEER
1½" WEARING COURSE (± ¼") TYPE III, 13' WIDE EA. LANE.
* GRAVEL SHOULDERS TO BE MATCHED TO PAVEMENT EDGE.

1982 ADT = 9200 MM 0.900 ~ MM 1.540

PROJECT SHELBURNE

NO. HMA 2624
SHEET 5 OF 29 SHEETS

PROJECT LENGTHS AND ITEM QUANTITIES

ITEM DESCRIPTION	LENGTH	WIDTH	OVERLAY DEPTH	TOPSOIL	GRAVEL SHOULDERS	GRAVEL SHOULDERS	EMULSIFIED ASPHALT	BITUMINOUS CONCRETE PAVEMENT	CHANGE ELEV. OF CB, DI, OR MH	ALL PURPOSE EXC. RENTAL, TYPE I	PORTE BROOM RENTAL	ENFORCED TRAFFIC OFFICERS	FLAGPERSONS	MOBILIZATION	TEMPORARY PAVEMENT MARKING YELLOW	TEMP. PAVEMENT MKG. WHITE	
ITEM NUMBER				653.10	402.10	402.11	404.65	406.25	604.40	608.25	608.30	630.10	630.15	635.10	646.36	646.35	REMARKS
UNIT	FEET	FT	INCH	cy.	CY	TON	CWT	TON	EA	HR	HR	HR	HR	LS	LF		
LOCATION																	
MM 0.504 ~ 0.900	2091	24	1.5				12	671/65									8' PAVED SHLDR. 164 T/M LEVEL.
MM 0.900 ~ 1.540	3379	26					12	814/113									3' GRAVEL SHLDR. 177 T/M LEVEL.
MM 1.540 ~ 1.622	434	24					2	139/13									8' PAVED SHLDR 164 T/M LEVEL.
PROJECT EST.				100	210	376	1	50	1	10	9	73	73		15917	11806	
ROUNDING					5	9	—	5			1	2	2		83	4	
TOTALS	5904			100	215	376	27	1870	1	10	10	75	75	.48	16000	11810	

PROJECT SHELBURNE NUMBER HMA 2624 SHEET 6 OF 29

PROJECT Shelburne ROUTE US 7 PROJECT NUMBER HMA 2624

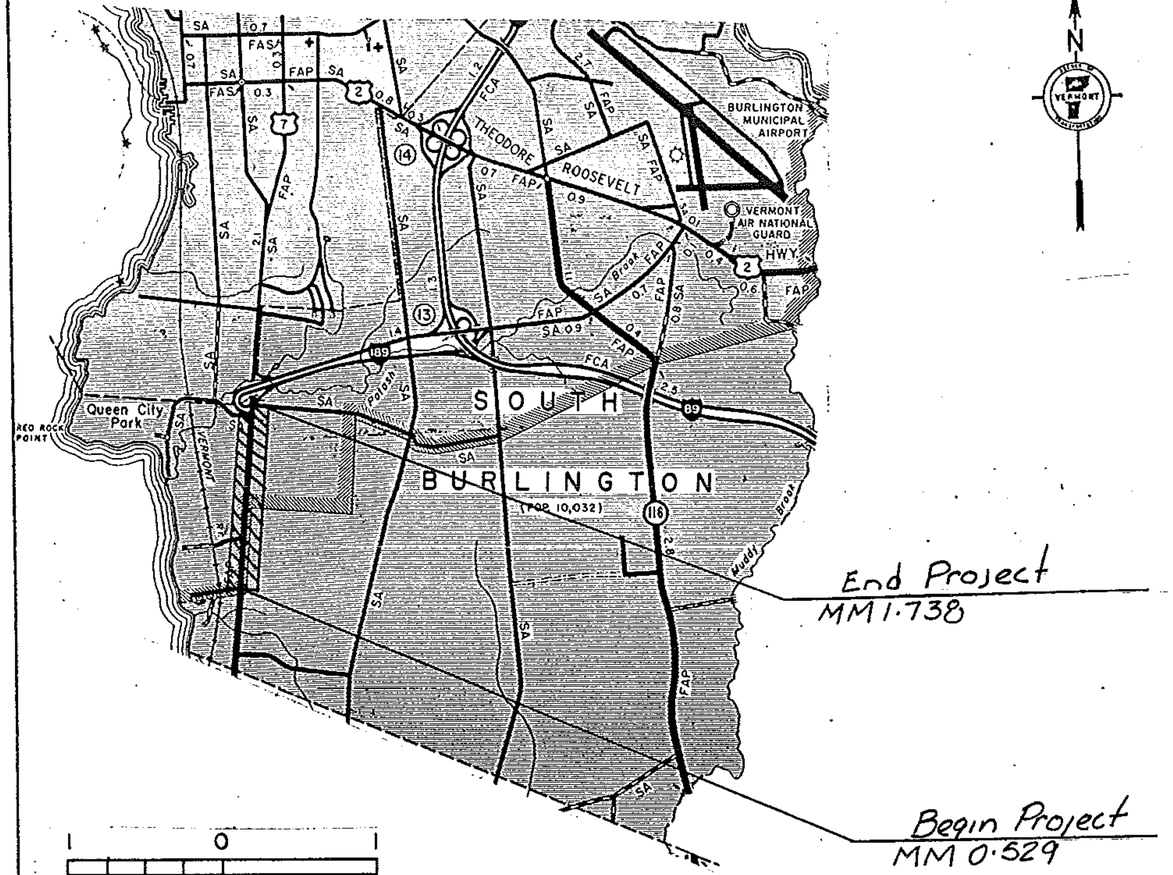
TEMPORARY 4" REFLECTORIZED YELLOW LINE

MILE	MILE	LT	RT	QUANTITY LT	QUANTITY CL	QUANTITY RT	TOTAL
0,504	0,70	Dash			259		259
0,70	0,78	Dash	Solid	106		422	528
0,78	0,81	Solid	Solid	158		158	316
0,81	0,96	Solid	Dash	792		198	990
0,96	1,622	Solid	Solid	3495		3495	6990
							9083
	3 TH's @ 40'					-	240
	3 X 40 X 2 =						8843
Assume 80%		& Lost Due to	Leveling				
	0,80 X 8843					+	7074
							15,917
					Rounding		83
					Total		16,000LF

TEMPORARY 4" REFLECTORIZED WHITE LINE

0,504	1,622	Solid	Solid	5903	5903	11,806
					ROUNDING	4
					TOTAL	11810

PROJECT DESCRIPTION AND LOCATION



In the city of So. Burlington, beginning at a point on US Route 7 at M.M. 0.529 and extending Northerly to M.M. 1.738.

PROJECT So. BURLINGTON

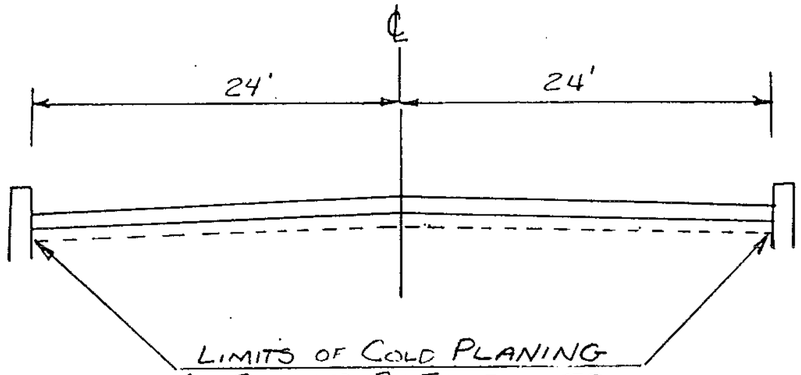
NO. F019-4(18)S

SHEET 8 OF 29 SHEETS

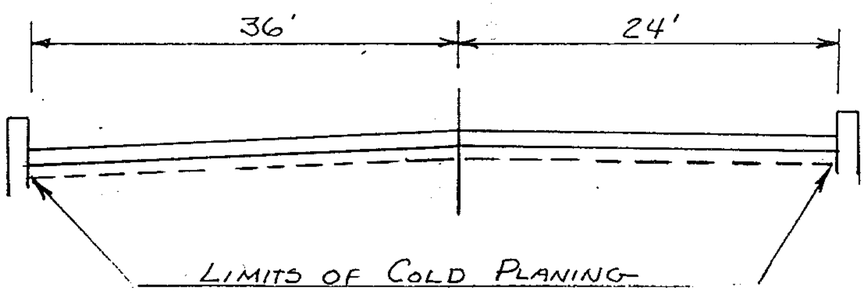
TYPICAL SECTIONS & DESIGN DATA

MM 0.529 - MM 0.943

ITEM 201.10 COLD PLANING - BITUMINOUS PAVEMENT - 1"
ITEM 406.25 BITUMINOUS CONCRETE PAVEMENT
1" BINDER TYPE III OR TYPE IV - AS DIRECTED BY THE ENGINEER
1 1/2" WEARING COURSE (± 1/4") TYPE III



MM 0.943 - MM 1.738



ITEM 201.10 COLD PLANING - BITUMINOUS PAVEMENT 1"
ITEM 406.25 BITUMINOUS CONCRETE PAVEMENT
1" BINDER TYPE III OR TYPE IV - AS DIRECTED BY THE ENGINEER
1 1/2" WEARING COURSE (± 1/4") TYPE III

TRAFFIC DATA -
EST-1985 ADT = 25340
V = 35

PROJECT So. BURLINGTON

NO. F019-4(18)S
SHEET 9 OF 29 SHEETS

PROJECT LENGTHS AND ITEM QUANTITIES

ITEM DESCRIPTION	LENGTH	WIDTH	OVERLAY DEPTH	COLD PLANING BIT. CONC. PAVT.	GRAVEL SHOULDERS	GRAVEL SHOULDERS	EMULSIFIED ASPHALT	BITUMINOUS CONCRETE PAVEMENT	CHANGE ELEV. OF CB, DI, OR MH	ALL PURPOSE EXC. RENTAL, TYPE I	POWER BROOM RENTAL, TYPE I	UNIFORMED TRAFFIC OFFICERS	FLAGPERSONS	MOBILIZATION	TEMPORARY PAVEMENT MARKING	TEMP. PAVEMENT MKG. WHITE	
ITEM NUMBER				210.10	402.10	402.11	404.65	406.25	604.40	608.25	608.30	630.10	630.15	635.10	646.36	646.35	REMARKS
UNIT	FEET	FT	INCH	S.Y.	CY	TON	CWT	TON	EA	HR	HR	HR	HR	L.S	LF	LF	
LOCATION																	
MM 0.529~0.943	2186	48	1½	11,659			15	972/648									1" BINDER
MM 0.943~1.738	4198	60	1½	27,987			35	2332/1555									1" BINDER
PROJECT EST							2	100	25	10	10	275	275		29370	7000	
ROUNDING							1	3									
TOTALS	6384			39,646			53	5610	25	10	10	275	275	.52	29370	7000	

PROJECT So. BURLINGTON NUMBER F019-4(18)S SHEET 10 OF 29

PROJECT LENGTHS AND ITEM QUANTITIES

ITEM DESCRIPTION	PAINTED CURB	DURABLE 4" REFLECTORIZED WHITE LINE	DURABLE 4" REFLECTORIZED YELLOW LINE	DURABLE 24" STOP BAR	DURABLE ARROW MARKINGS	DURABLE LETTER MARKINGS	TEMPORARY 24" STOP BAR	TEMPORARY ARROW MARKINGS	TOPSOIL	TRAFFIC SIGNS, TYPE A	TRAFFIC SIGN POST TYPE A REMOVING SIGNS	
ITEM NO	646.21	646.60	646.61	646.64	646.65	646.66	646.77	646.78	653.10	675.20	675.35	675.53	
UNIT	LF.	LF	LF	LF.	EA.	EA.	LF	EA.	CY	SF	LB	EA.	
LOCATION													
PROJECT EST.	2710	15500	14700	340	51	13	680	52	50	56	300	3	
TOTAL	2710	15500	14700	340	51	13	680	52	50	56	300	3	

PROJECT LENGTHS AND ITEM QUANTITIES

ITEM DESCRIPTION	ERECTING SALVAGED SIGNS, TYPE A (MOD.)	TRAFFIC CONTROL SIGNAL VEHICLE LOOP DETECTOR	
ITEM NO	675.60	678.15	678.22
UNIT	SF	EA.	LF.
LOCATION			
PROJECT EST.	16	1	165
TOTAL	16	1	165

PROJECT So. BURLINGTON NO. F019-4(18)S SHEET 10B OF 29

NOTE: 1) PRIOR TO GRINDING OPERATION THE CONTRACTOR SHALL MARK THE LOCATION OF THE LOOP LEAD-IN WHERE IT PASSES THROUGH THE CURB FOR FUTURE REFERENCE IN LOOP INSTALLATION AND SHALL DISCONNECT THE LOOP FROM THE AMPLIFIER TO PREVENT DAMAGE TO THE CONTROLLER. THE CONTROLLER SHALL BE SET TO RECALL WHILE THE LOOP IS INOPERABLE, PAYMENT SHALL BE SUBSIDIARY TO ITEM 678.22. SEE ADDITIONAL NOTES ON PAGE 15.

NOTE:
1) DUE TO THE COMPLEXITY OF THE DRIVES ALONG THIS PROJECT, NOT ALL DRIVES ARE SHOWN ON THESE PLANS, HOWEVER, THE CONTRACTOR SHALL PAINT ALL CURB RADII AS SHOWN IN THE DETAIL ON THIS SHEET.
2) DURABLE 4" WHITE EDGE LINE TO BE USED THROUGHOUT, ONE FOOT (1') FROM CURB UNLESS SHOWN OTHERWISE.
3) LANE DIMENSION SHOWN INDICATE DISTANCE TO CENTER OF PAVEMENT MARKINGS. CURB-SIDE LANE WIDTHS ARE TO EDGE LINES. SEE DETAIL SHEET FOR SPECIFICS.
4) SIGN DESIGNATIONS AS FOLLOWS: N=NEW, R=REMOVE, S=REMOVE & SALVAGE
5) TEMPORARY PAVEMENT MARKING TRANSLANE NOT LISTED ON THE PLAN SHEETS, SEE NOTES ON SHEET IS FOR QUANTITIES AND DETAILS.

DURABLE 4" YELLOW LINE
DBL - FROM BEGINNING TO BEGIN OF SLANE AS SHOWN
DBL - THROUGH TRANSITION AREA BETWEEN HOLMES RD & IMPERIALER TAPER AS SHOWN.
CENTER TURN LANE LINE - L+R, AS SHOWN, BEGIN AT THE END OF TRANSITION AREA, NORTH TO END OF SHT.
DASHED CTR TURN LANE LINE - L+R, AS SHOWN, BEGIN AT THE END OF TRANSITION AREA, NORTH TO END OF SHT.

DURABLE 4" WHITE LINE
DASHED LANE LINE - NORTH & SOUTHBOUND (TAPER AS SHOWN)
EDGE LINE ——— NORTH & SOUTHBOUND (1' FROM CURB) AS SHOWN CURB RADII AT HOLMES RD & IMPERIALER.

PAINTED CURB
ALL DRIVES (SEE DETAIL)
SOUTHBOUND EMERGENCY TRANSITION AREA AS SHOWN

DATUM
VERTICAL _____
HORIZONTAL _____

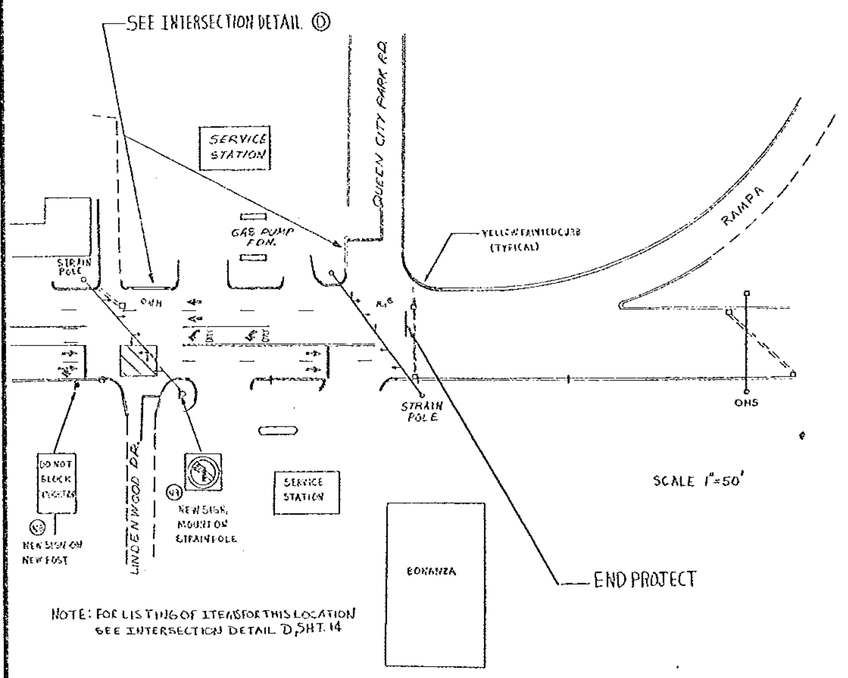
SURVEYED BY _____ DATE _____
DRAWN BY _____ DATE _____
TRACED BY Dan DATE 5/80
SOUTH BURLINGTON
STATE PROJ. 8118A NO FOM-4(18)S
SHEET 11 OF 29

DATUM
VERTICAL _____
HORIZONTAL _____

SURVEYED BY _____ DATE _____
DRAWN BY _____ DATE _____
TRACED BY TSP DATE 9/85

SOUTH BURLINGTON
FROU. 11'11A NO. FOIT - 4(18)S

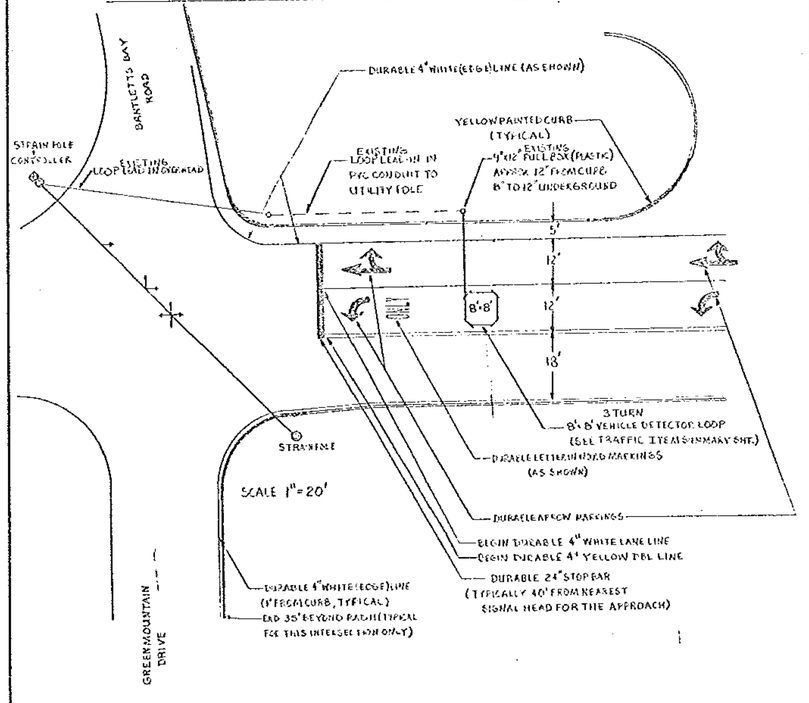
SHEET 12 OF 29



NOTE: FOR LISTING OF ITEMS FOR THIS LOCATION SEE INTERSECTION DETAIL D, SHT. 14

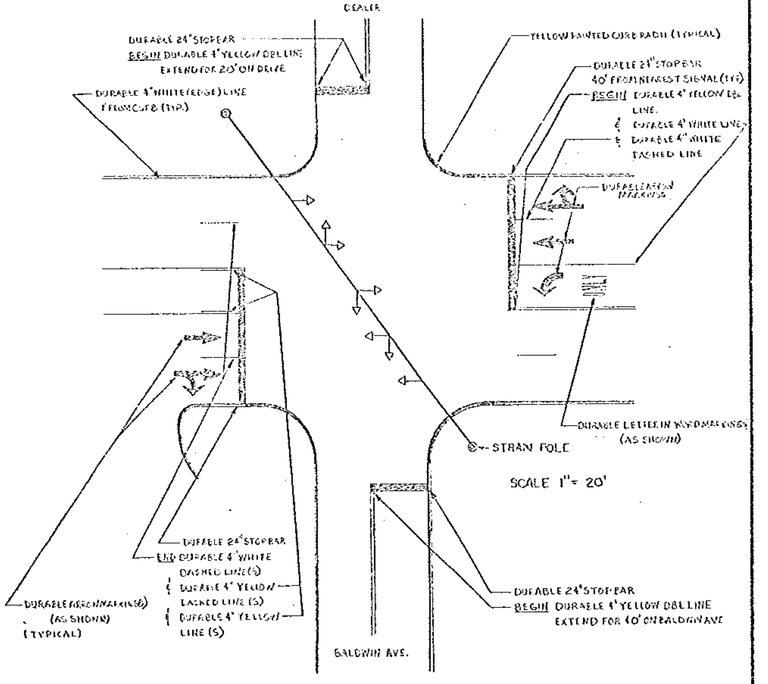
DETAIL Ⓐ

BARTLETTS BAY RD. & GREEN MOUNTAIN DR.



DETAIL Ⓑ

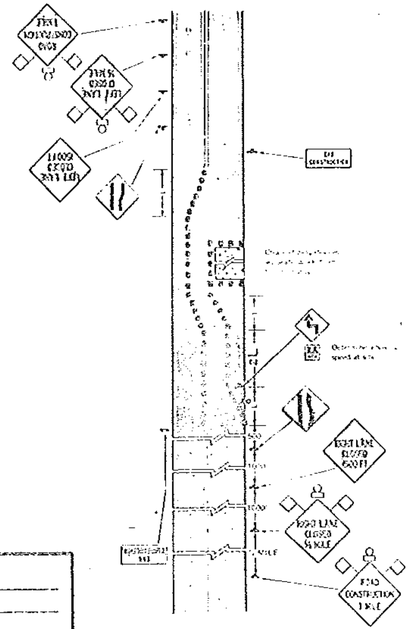
BALDWIN AVE. & DRIVE TO AUTO DLR.



TYPICAL MAJOR MAINTENANCE/CONSTRUCTION OPERATION

4-LANE UNDIVIDED ROADWAY, WHERE HALF THE ROADWAY IS CLOSED.

SEE STANDARD SHEET EB FOR ADDITIONAL DETAILS & NOTES.



NOTES:

1. Taper Formula:
   L = WS² for speeds of 45 or more.
   L = WS/30 for speeds of 40 or less.

   Where:
   L = Minimum length of taper.
   S = Numerical value of posted speed limit prior to work or 85 percentile speed
   W = Width of offset.
2. The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit.
3. Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable. Temporary markings shall be used as necessary.
4. Warning lights should be used to mark channelizing devices at night as needed.
5. Flashing warning lights and/or flags may be used to call attention to the early warning signs.

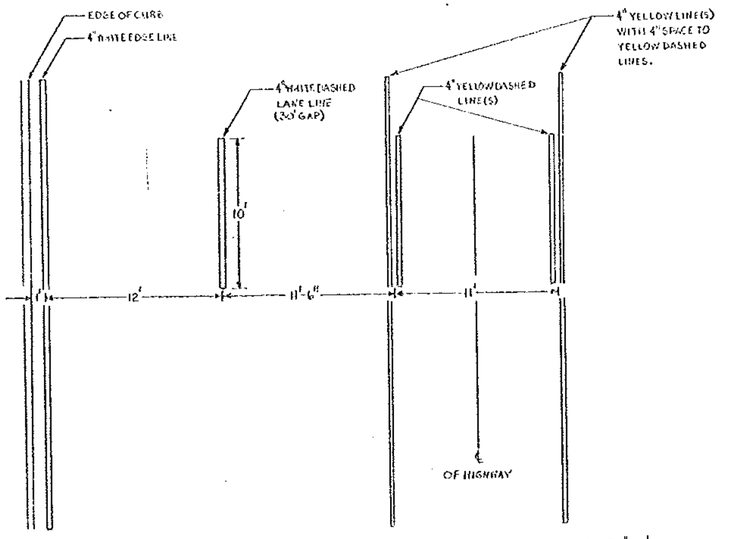
KEY
- Channelizing Devices
- Arrow Panel (Optional)
- Flashing Warning Light (Optional)

NOT TO SCALE

DATUM
VERTICAL _____
HORIZONTAL _____

PAVEMENT MARKING TYPICALS

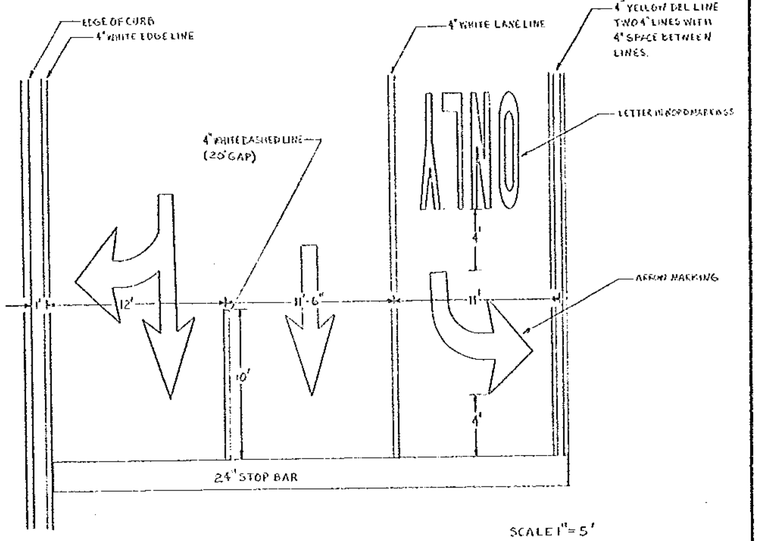
FOR LETTER & ARROW SPECIFICATIONS, SEE STD. E-50



SCALE 1"=5'

FIVE LANE, WITH DUAL LEFT TURN CENTER LANE

(ONE THRU DIRECTION SHOWN)



SCALE 1"=5'

FIVE LANE, WITH SEPARATE LEFT TURN LANE

(ONE DIRECTION APPROACH SHOWN)

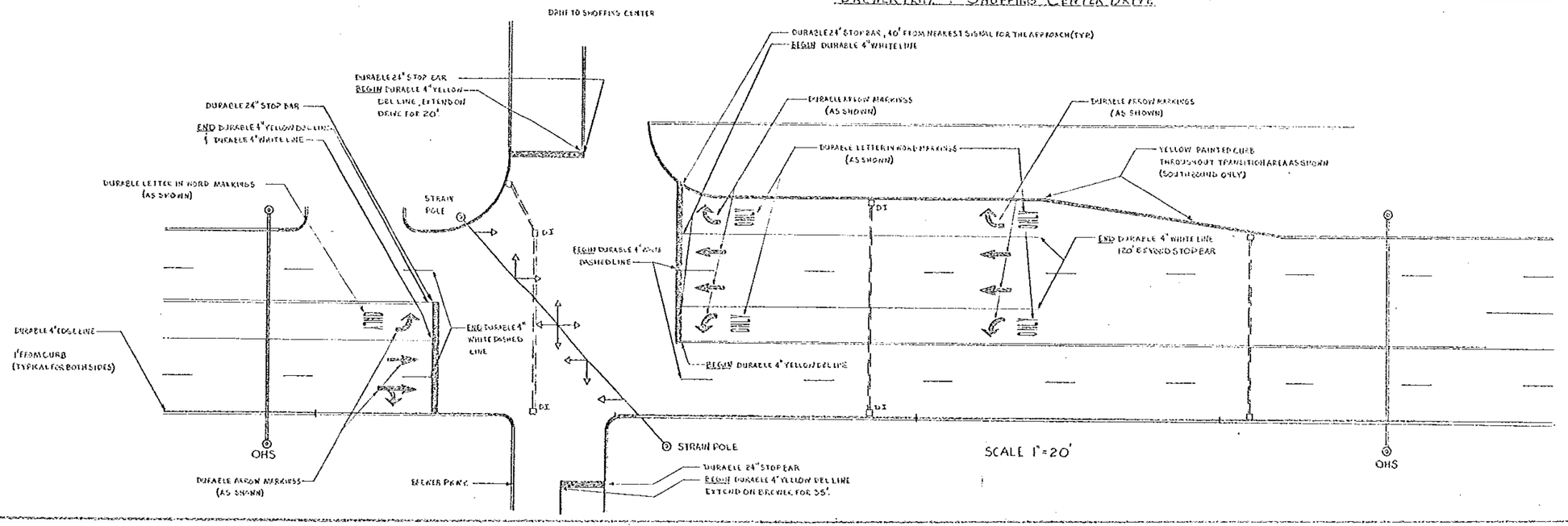
SURVEYED BY _____ DATE _____
DRAWN BY _____ DATE _____
TRACED BY DSP DATE 5/86

SOUTH BURLINGTON
PROJ. NO. FOS-4(18)S

SHEET 13 OF 29

BREWER PKWY. & SHOPPING CENTER DRIVE

DETAIL ©



LINDENWOOD DRIVE & QUEEN CITY PARK RD.

DETAIL Ⓓ

TRAFFIC SIGNAL CONTROL (MOD)
MODIFY EXISTING SIGNALS SYSTEM AT LINDENWOOD DR. & QUEEN CITY PARK INTERSECTION AS NOTED ON THIS SHEET AND SHEET #10.

DURABLE 4" YELLOW LINE
DBL LINE - 40' NORTH OF SIGNAL AT LINDENWOOD NORTH FOR 125'
DBL LINE - ON LINDENWOOD DRIVE FOR 25' & QCP RD. FOR 35'

DURABLE 4" WHITE LINE
LANE LINE - 40' NORTH OF SIGNAL AT LINDENWOOD NORTH FOR 60'
EDGE LINE - SOUTHBOUND & NORTHBOUND 1' FROM CURB AROUND CURB RADII AT LINDENWOOD & QCP RD.
DASHED LANE LINE - SOUTH & NORTHBOUND THRU LANES AS SHOWN
SOLID LINE IN "NO STOPPING" AREA, SEE DETAIL BELOW

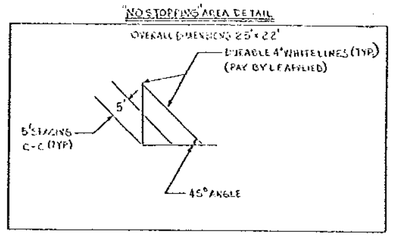
DURABLE ARROW MARKING
SOUTHBOUND THRU LANES SOUTH OF LINDENWOOD DR., AS SHOWN
SOUTHBOUND THRU LANES NORTH OF LINDENWOOD DR., AS SHOWN
NORTHBOUND THRU & LT LANES NORTH OF LINDENWOOD DR., AS SHOWN

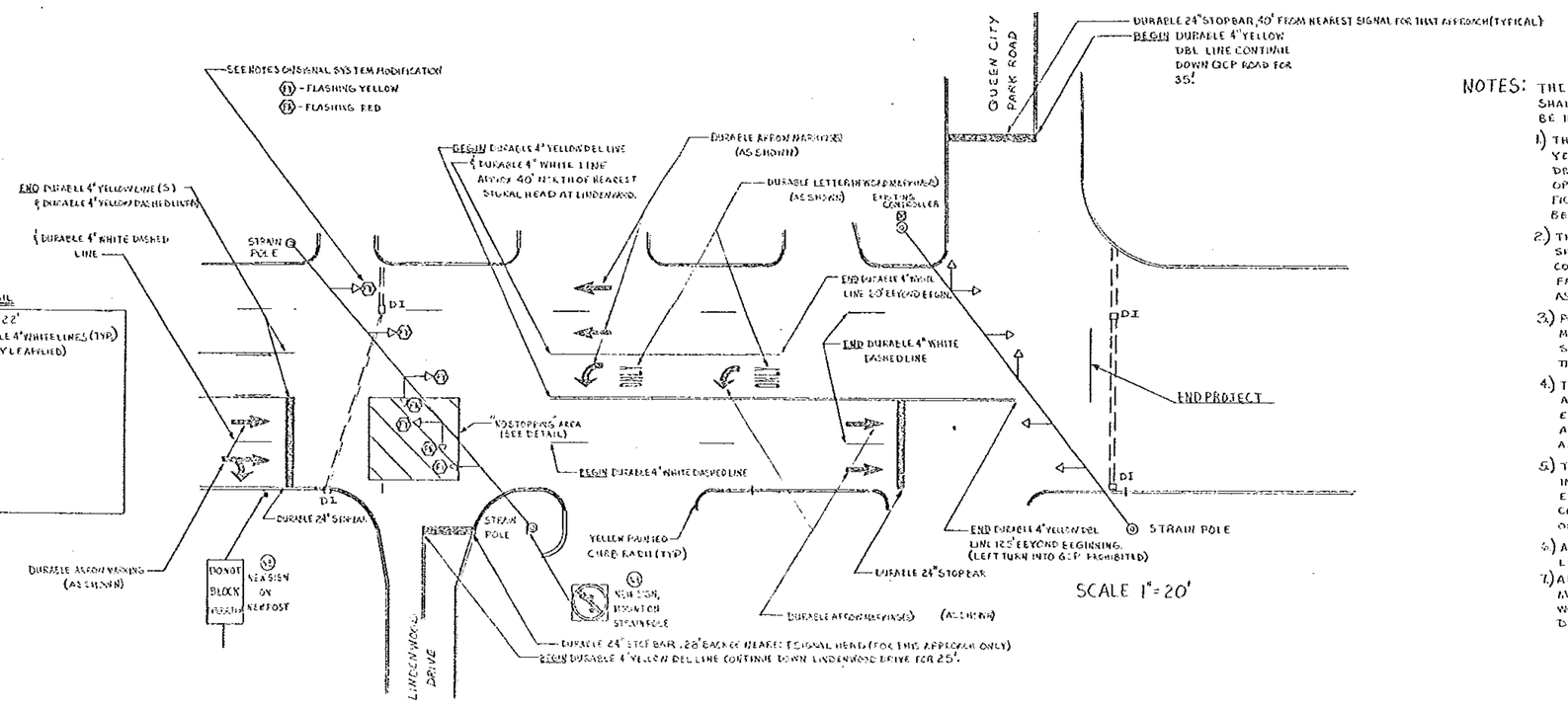
DURABLE LETTER IN WORD MARKINGS
SOUTHBOUND LT LANE AS SHOWN

DURABLE 24" STOP BAR
NORTHBOUND THRU LANES NORTH OF LINDENWOOD ON LINDENWOOD DR. (SEE SPECIAL PLACEMENT) & ON QCP ROAD.

PAINTED CURB
ALL DRIVES (SEE DETAIL)

"NO STOPPING" AREA DETAIL





NOTES: THE SIGNAL SYSTEM AT LINDENWOOD DRIVE AND QUEEN CITY PARK ROAD SHALL BE MODIFIED AS LISTED BELOW. ALL WORK, MATERIALS, ETC. SHALL BE INCLUDED IN THE ITEM 67815 (MOD), TRAFFIC CONTROL SIGNALS, MODIFIED.

1) THE (8) SIGNAL HEADS AT LINDENWOOD DRIVE SHALL BE SET TO FLASHING YELLOW OPERATION AND THE SIGNAL HEADS THAT CONTROL LINDENWOOD DRIVE SHALL BE SET TO FLASHING RED OPERATION. SUCH FLASHING OPERATION SHALL CONFORM TO THE REQUIREMENTS IN STANDARD SPECIFICATION 752.07, EXCEPT THAT THE EXISTING SIGNAL HEADS SHALL BE RETAINED.

2) THE CABINET FOR THE FLASHER UNIT SHALL BE ALUMINUM AND SHALL BE MOUNTED ON THE SAME STRAIN POLE AS THE EXISTING CONTROLLER CABINET AT QCP ROAD. ALL WIRES WHEN REMOVED FROM THE EXISTING CONTROLLER SHALL BE APPROPRIATELY MARKED SO AS TO FACILITATE REATTACHMENT AT A FUTURE DATE.

3) POWER FOR THE FLASHER UNIT SHALL BE THROUGH THE SAME METER AS POWER FOR THE EXISTING CONTROLLER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND UTILITY COSTS FOR THE MODIFICATION OF THE SYSTEM.

4) THE FLASHER SHALL CONSIST OF A 1 CIRCUIT FLASHER UNIT, IN AN ALUMINUM CABINET WITH ALL FILTERS, WIRING, CONNECTORS, ETC. IN ORDER TO PROVIDE A FUNCTIONING FLASHING OPERATION AT LINDENWOOD. (REFER TO STANDARD SPECIFICATIONS 752.06 AND 752.07 FOR ADDITIONAL DETAILS)

5) THE SIGNAL OPERATION AT QUEEN CITY PARK ROAD SHALL REMAIN IN CONTINUOUS OPERATION WITH EXISTING CYCLE LENGTHS, PHASING, ETC. FOR QUEEN CITY PARK ROAD REMAINING UNCHANGED, HOWEVER THE CONTROLLER SHALL BE ADJUSTED TO ACCOUNT FOR THE ELIMINATION OF LINDENWOOD DRIVE PHASING.

6) ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND ALL STATE AND LOCAL CODES.

7) ALL WORK SHALL BE DONE IN SUCH A MANNER AS WITH ONLY MINOR MODIFICATION THE SIGNALS AT LINDENWOOD CAN BE PUT BACK INTO WORKING ORDER AT SOME FUTURE DATE.

DATUM
VERTICAL _____
HORIZONTAL _____

SURVEYED BY _____ DATE _____
DRAWN BY _____ DATE _____
TRACED BY DSP DATE 4/05

SOUTH BURLINGTON
PROJ. NO. FAU-4(10)
SHEET 14 OF 29

COMPOSITE SHEET - TRAFFIC ITEM SUMMARY - TRAFFIC SIGN SUMMARY SHEET - NOTES AND DETAILS

MILEMARKER, STATION, OR SIGN NUMBER	LEGEND	TYPE	SIGN DIMENSIONS	EXISTING SIGNS TO BE SALVAGED: REMOVE (EA)	RETAIN (EA)	NEW AND SALVAGED SIGNS (S.F.): NEW "A"	SALVAGED "A"	NEW "B"	SALV. "B"	EXISTING POSTS: RETAIN	DRILL	SALV.	NEW POSTS: NUMBER OF POSTS	TYPE "A" (FLANGED CHANNEL): 2 OLB/FT	2.5 LB/FT	3 OLB/FT	TYPE "C" (ALUMINUM): 3"Ø . 3"□	4"Ø	4"Ø MOD	TYPE "B" (BREAKAWAY): POST SIZE	WEIGHT	FIG SIZE 24"	FIG SIZE 30"	REMARKS	FOR SIGN DETAIL SEE: PLAN SHEET NUMBER	STD. SHEET NUMBER
R1		A	NOT APPLICABLE	1																				POST REMOVAL INCIDENTARY TO SIGN REMOVAL	11	
R2		A	NOT APPLICABLE	1																				AS ABOVE	11	
S1		A	48" x 48"	1	*		16						2		*									MODIFICATION TO EXISTING POSTS, REMOVAL OF OLD POST SHALL BE INCIDENTARY TO SIGN REMOVAL	11	
N1		A	48" x 48"			16							2		*									COLOR, MATERIAL & TEXT PER STD E-15A	SEE BELOW	
N2		A	24" x 12"			2																				E15
N3		A	24" x 36"			6							1		*											E15
N4		A	24" x 12"			2																				E15
N5		A	24" x 36"			6							1		*											E15
N6		A	24" x 36"			6																				E15
N7		A	24" x 36"			6							1		*											E15
N8		A	24" x 30"			5							1		*											E15
N9		A	30" x 30"			6.3																				E15
TOTALS	COLUMN																							BIB FACE TO INCLUDE HARDWARE, ETC. FOR MOUNTING OF SIGN ON STRAINT POLE.		E15C
	PROJECT			3		553	16																			

TRAFFIC ITEM SUMMARY

ITEM NUMBER	ITEM	UNIT	SHT # 11	#12	#13	#14	#15	UNIT	TOTAL
646.21	PAINTED CURBS	LF	1090'	1380'	(SEE 14)	240'		LF	2710'
646.35	TEMPORARY 4" WHITE LINE	LF	2250'	4100'	(SEE 14)	650'		LF	7000'
646.36	TEMPORARY 4" YELLOW LINE	LF	15230'	12400'	(")	740'		LF	29,370'
646.60	DURABLE 4" WHITE LINE	LF	6730'	8050'	(SEE 14)	720'		LF	15,500'
646.61	DURABLE 4" YELLOW LINE	LF	1630'	6100'	(")	370'		LF	14,700'
646.63	DURABLE 24" STOP BAR	LF	25'	255'	(")	60'		LF	340'
646.65	DURABLE ARROW MARKING	EA	9	36	(")	6		EA	51
646.66	DURABLE LETTER WORD MARKINGS	EA	3	8	(")	2		EA	13
646.77	TEMPORARY 24" STOP BAR	LF	50'	510'	(")	120'		LF	680'
646.78	TEMPORARY ARROW MARKING	EA	6	36	(")	10		EA	52
675.20	TRAFFIC SIGNS, TYPE A	SF					56[1]	SF	56[1]
675.53	REMOVING SIGNS	EA					3	EA	3
675.60	ERECTING SALVAGED SIGNS, TYPE A	SF					16[1]	SF	16[1]
678.15 (MOD.)	TRAFFIC SIGNAL CONTROL (MODIFIED)	EA			(1)	1		EA	1
678.22	VEHICLE LOOP DETECTOR	LF	165'					LF	165'
675.35	TRAFFIC SIGN POSTS, TYPE A	LB					300" EST.	LB	300" EST.

NOTE: TEMPORARY MARKINGS, EXCEPT EDGE LINES & LETTERING AND MARKINGS, SHALL BE APPLIED AFTER COLD PLANING & BINDER COURSE(S). ONLY ONE SET OF TEMPORARY MARKINGS ARE NECESSARY FOR EACH APPROACH (THOSE NEAREST THE STOP BAR). TEMPORARY QUANTITIES REFLECT TWO (2) APPLICATIONS OF EACH ITEM, UNLESS AS NOTED ABOVE.

VEHICLE LOOP DETECTOR QUANTITY REFLECTS 2 APPLICATIONS, IN THE EVENT A TEMPORARY LOOP INSTALLATION IS NEEDED BETWEEN PAVEMENT COURSES AFTER COLD PLANING.

NOTES AND DETAILS

VEHICLE DETECTOR LOOPS (BARTLETT EAST INTERSECTION ONLY)

ALL LOOPS SHALL BE INSTALLED IN THREE LANES (UNLESS OTHERWISE NOTED)

ALL LOOP WIRES SHALL BE INSTALLED IN TUBING ("SIGNAL DUCT", "DETECTOR-DUCT" OR APPROVED EQUIVALENT) THE TUBING ENDS SHALL BE SEALED USING LOOP SEALANT PRIOR TO INSTALLATION IN THE SAW CUT.

LOOP LEAD-IN CABLE SHALL MEET IMSA SPECIFICATION #39.

ALL LOOPS SHALL BE PLACED IN THE BASE COURSE AND PAVED OVER BY THE FINAL COURSE. THE SAW SLOT SHALL BE SEALED USING AN APPROVED SEALANT AND ALLOWED TO CURE SUFFICIENTLY PRIOR TO PLACEMENT OF THE TOP COURSE.

LOOP SEALANT SHALL BE APPLIED USING A PRESSURE SYSTEM (3M OR APPROVED EQUIVALENT).

THE LOOP WIRES SHALL BE HELD IN PLACE DURING INSTALLATION BY SHORT STRIPS OF POLYETHYLENE FOAM SEALENT BACKERS THE STRIPS SHALL BE ABOUT 2" LONG AND PLACED EVERY 2'. THEY ARE TO REMAIN IN PLACE WHEN THE SLOT IS SEALED.

TRAFFIC SHALL BE CONTROLLED BY A UNIFORM TRAFFIC OFFICER(S) WHENEVER THE SIGNALS ARE NOT WORKING CORRECTLY.

IF THE LOOP LEAD-INS ARE DISCONNECTED OR NOT WORKING AFTER ACTIVATION THE APPROPRIATE PHASE(S) SHALL BE SET TO RECALL OR TRAFFIC SHALL BE CONTROLLED BY A UNIFORM TRAFFIC OFFICER AT ALL TIMES.

DURING THE INSTALLATION OF THE LOOPS, THE CONTRACTOR, IN THE PRESENCE OF THE ENGINEER, SHALL METER THE LOOPS BY TEST INSTRUMENTS CAPABLE OF MEASURING ELECTRICAL VALUES OF THE INSTALLED LOOP WIRES AND LEAD-INS. THE VALUES TO BE MEASURED ARE: INDUCED AC VOLTAGE, INDUCTANCE IN MICROHENRIES, HIGH-LOW "Q" INDICATION, LEAKAGE RESISTANCE IN MEGOHMS, AND THE RESISTANCE OF THE CONDUCTORS IN OHMS.

AN ACCEPTABLE LOOP INSTALLATION SHALL BE DEFINED AS FOLLOWS:

INDUCED VOLTAGE - NO DEFLECTION ON THE POINTER OF A VOLT METER.

INDUCTANCE - THE INDUCTANCE READING ON THE LOOP TESTER IS APPROXIMATELY THE CALCULATED VALUE OR, WITH THE APPROVAL OF THE ENGINEER, IN BETWEEN POINTS and 200 MH.

LOOP Q - DEFLECTION OF THE POINTER TO THE UPPER SIDE OF THE SCALE.

LEAKAGE TO GROUND - DEFLECTION OF THE POINTER TO ABOVE 1 MEGOHMS.

LOOP RESISTANCE - THE RESISTANCE READING ON AN OHM METER IS APPROXIMATELY THE CALCULATED VALUE.

ANY UNUSUAL READING ON THE ABOVE SHALL BE CORRECTED BEFORE SEALING THE LOOP

CALCULATED INDUCTANCE AT THE PULLBOX IS 115 MICROHENRIES.

A LOOP INSTALLATION SHALL BE UNACCEPTABLE IF:

THE INDUCTANCE READING IS BELOW 90 MH OR ABOVE 250 MH.

LEAKAGE TO GROUND - DEFLECTION OF THE POINTER TO BELOW 1 MEGOHMS.

THE LOOP RESISTANCE IS 502 MORE THAN CALCULATED.

AFTER THE LOOPS AND LEAD-INS HAVE BEEN TESTED TO THE SATISFACTION OF THE ENGINEER, THE SAW SLOT SHALL BE SEALED.

THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TEST EQUIPMENT TO PERFORM THE ABOVE TESTS. THE COST OF PROVIDING THE EQUIPMENT AND DOING THE TESTS OF EACH LOOP SHALL BE SUBSIDIARY TO VEHICLE DETECTOR LOOPS (678.22). IF UNACCEPTABLE READINGS ARE ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY TRAFFIC DESIGN PRIOR TO COMPLETION OF THE LOOP INSTALLATION.

THE VEHICLE DETECTOR LOOP SHALL BE REPLACED AS SOON AS POSSIBLE AND MAY BE INSTALLED IN THE GROUND OUTSIDE OF THE TEMPORARY PAVING IF NECESSARY. THE QUANTITY FOR VEHICLE LOOP DETECTOR (ITEM 678.22) REFLECTS TWO APPLICATIONS OF THE LOOP DETECTOR, IN THE EVENT THAT THE TEMPORARY INSTALLATION IS USED. THE WIRES FROM THE TEMPORARY LOOP SHALL BE APPROPRIATELY MARKED SO AS NOT TO CAUSE CONFUSION AT A LATER DATE.

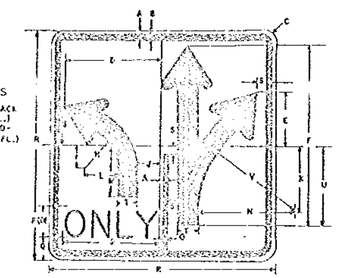
2) TRAFFIC CONTROL SHALL BE SUBSIDIARY TO OTHER ITEMS. SEE SHT. 13 FOR ADDITIONAL INFORMATION ON TRAFFIC CONTROL.

3) THE ITEM 678.15, TRAFFIC SIGNAL CONTROL (MOD.) SHALL CONSIST OF ALL LABOR, MATERIALS, ETC., NECESSARY FOR THE MODIFICATION OF THE SIGNAL SYSTEM AT THE LINDENWOOD & QUEEN CITY TANK ROAD INTERSECTION(S) AS OUTLINED ON THE PLANS.

4) ITEMS FOR TEMPORARY MARKINGS ARE LISTED ON THE PLAN SHEETS, HOWEVER PLACEMENT OF TEMPORARY MARKINGS SHALL BE AS SHOWN FOR PERMANENT PAVEMENT MARKINGS. SEE THE ADDITIONAL NOTES REGARDING APPLICATION AND QUANTITY ESTIMATES UNDER TRAFFIC ITEM SUMMARY SECTION ON THIS SHEET.

5) THE NEW LANE SIGN, N1, SHALL MEET THE COLOR, MATERIAL AND TEXT REQUIREMENTS OF STD. E-15A.

SIGN (M) DETAIL



DIMENSIONS (INCHES)											
LETTERS	A	B	C	D	E	F	G	H	I	J	K
	3/4	1 1/4	3	30 5/8	11	35 5/8	8	9 1/4	4 1/4	4 3/8	3 5/8

DIMENSIONS (INCHES)											
LETTERS	L	M	N	O	P	Q	R	S	T	U	V
	7 1/4	10 3/8	20 1/2	1 1/4	8	4 7/8	48	2	4	33 3/4	23 1/4

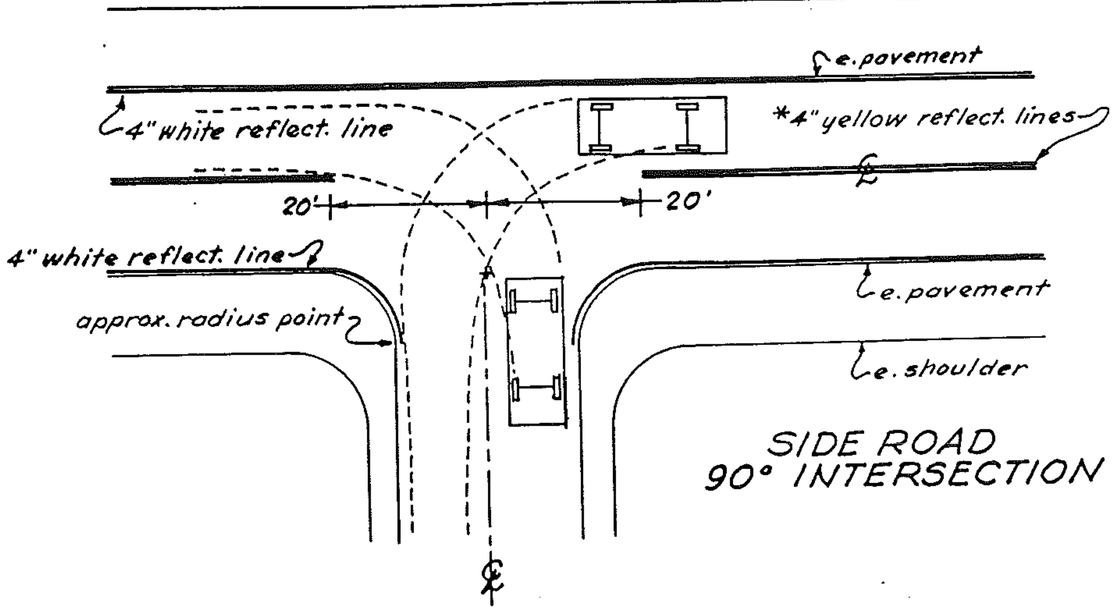
SURVEYED BY _____ DATE _____
DRAWN BY _____ DATE _____
TRACED BY _____ DATE 7/11

SOUTH BARTLETT
PROJ. NO. [illegible]-4(00)
SHEET 15 OF 27

BY_____ DATE 3/4/82
CHKD. BY_____ DATE_____

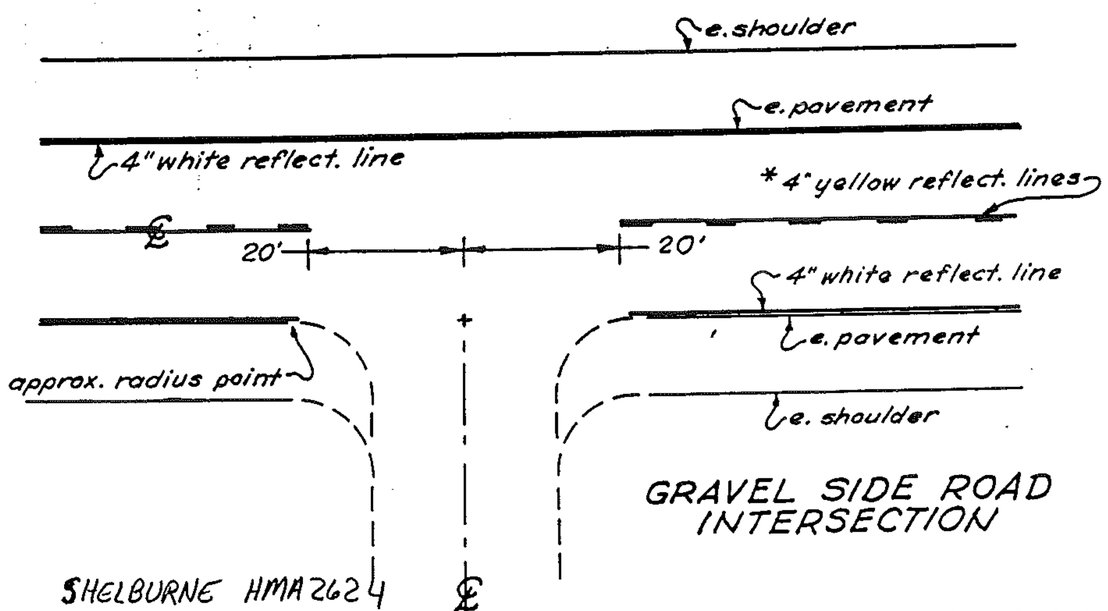
SUBJECT MAINLINE PAVEMENT MARKING AT INTERSECTING SIDE ROAD

SHEET NO._____ OF_____
JOB NO._____



SIDE ROAD
90° INTERSECTION

* 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.



GRAVEL SIDE ROAD
INTERSECTION

SHELBURNE HMA 2624

PROJECT: So. BURLINGTON F019-4(18)S

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

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.

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 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. 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. THE TAPE SHALL BE THE TYPE THAT IS REMOVABLE INTACT AND NOT SEPERATE AT ANY TIME.

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 PAVEMENT MARKINGS SHALL BE COMPLETED FOR THE ENTIRE PROJECT BY THE CONTRACTOR AS DETAILED ON THE PLANS OR DIRECTED BY THE RESIDENT ENGINEER.

REVISED
01/12/85