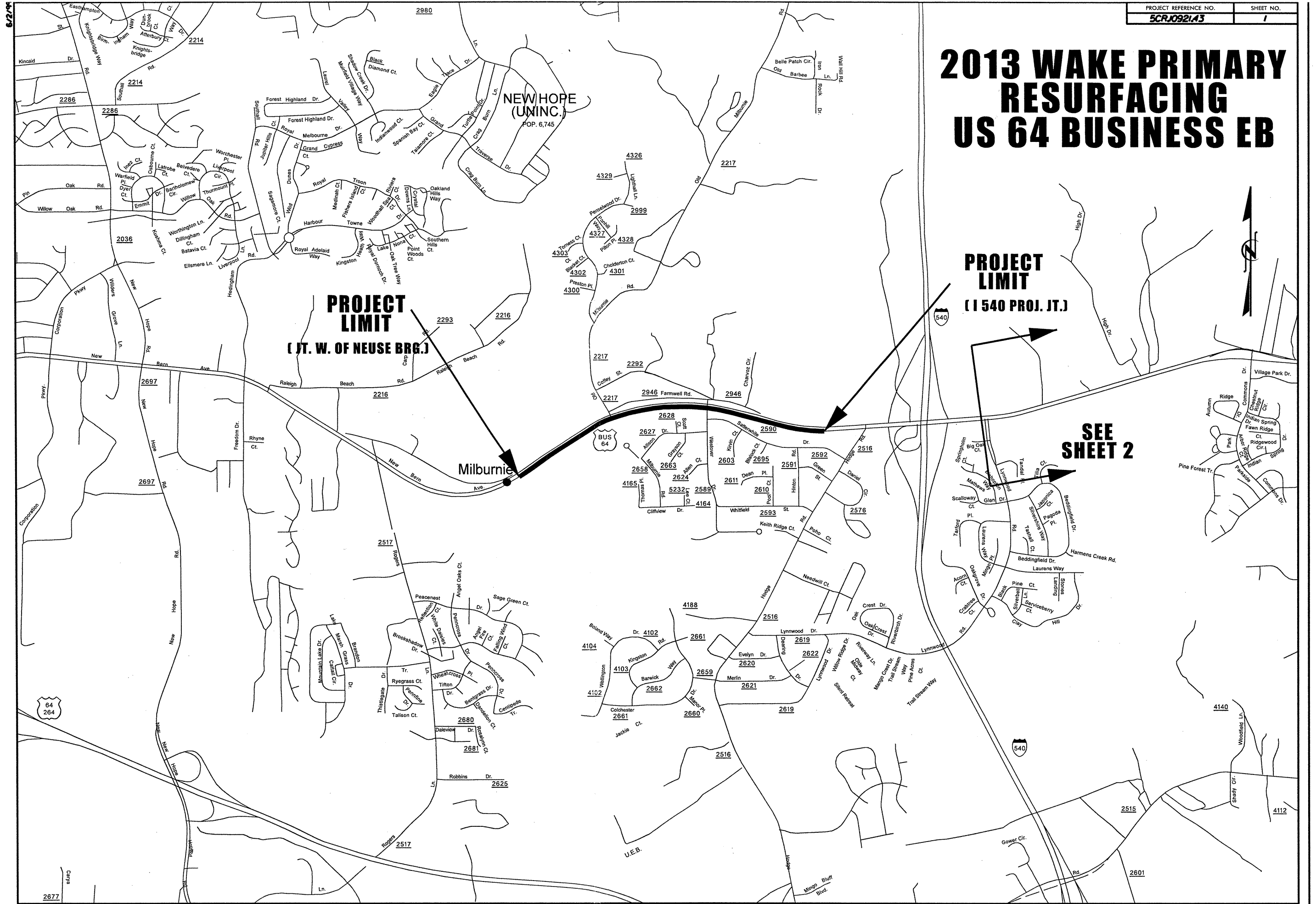


2013 WAKE PRIMARY RESURFACING US 64 BUSINESS EB



PROJECT LIMIT
(1540 PROJ. JT.)

SEE SHEET 2



PROJECT LIMIT
(JT. W. OF NEUSE BRG.)

Milburnie

NEW HOPE (UNINC.)
POP. 6,745

6294

64
264

2677

4112

2601

2515

U.E.B.

Mingo Bluff Blvd.

Gower Cir.

Bhady Cir.

Woodfield Ln.

4140

I 85

I 85

BUS 64

4300

4302

4303

4327

4328

4329

4301

4302

4303

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4301

4302

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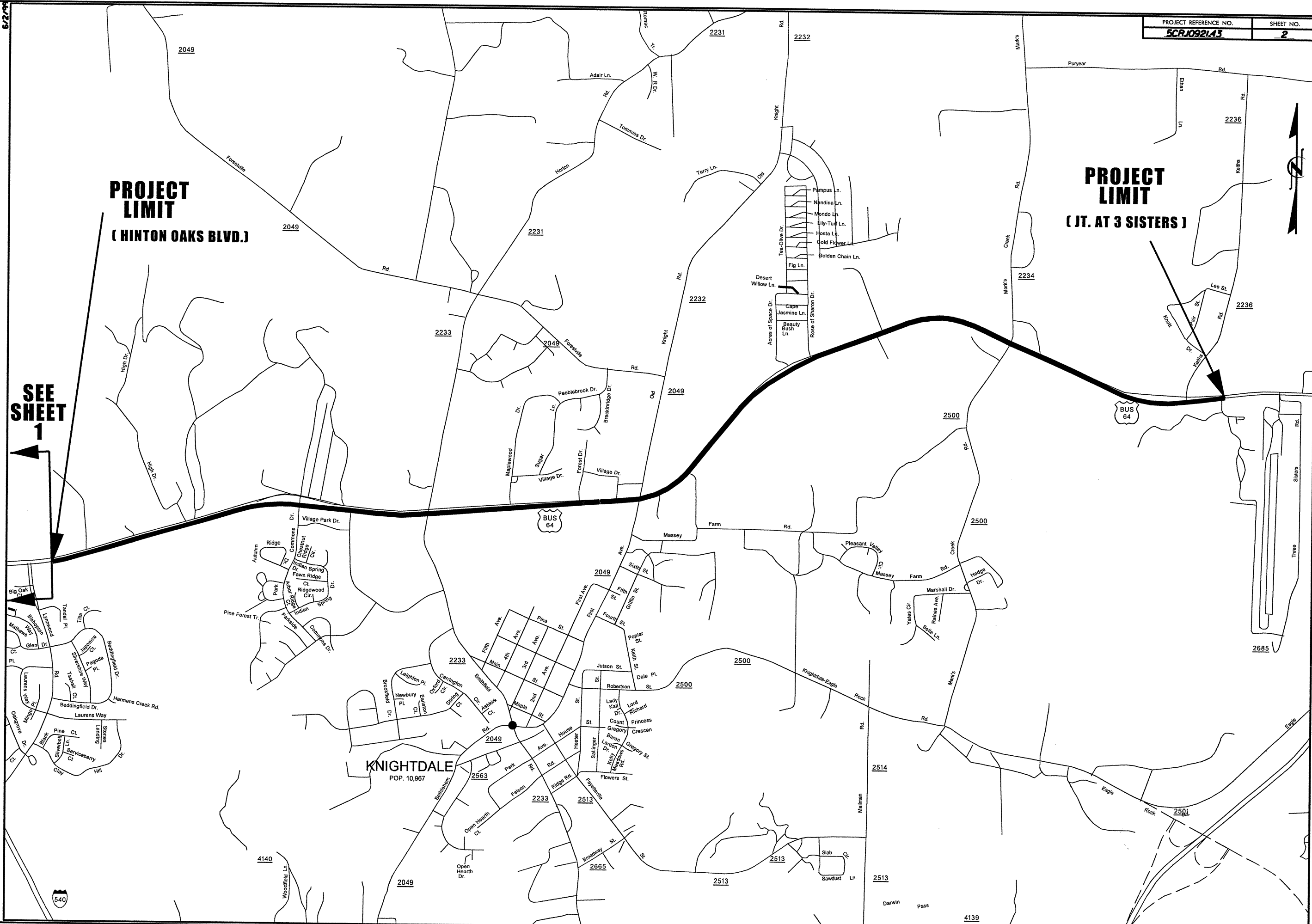
4329

6/2/99

PROJECT LIMIT
(HINTON OAKS BLVD.)

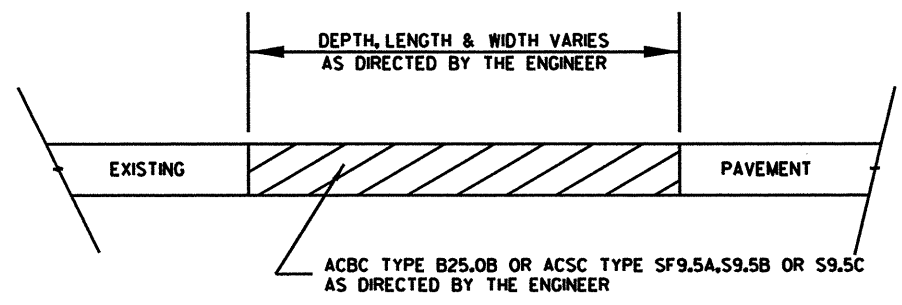
PROJECT LIMIT
(JT. AT 3 SISTERS)

SEE SHEET 1



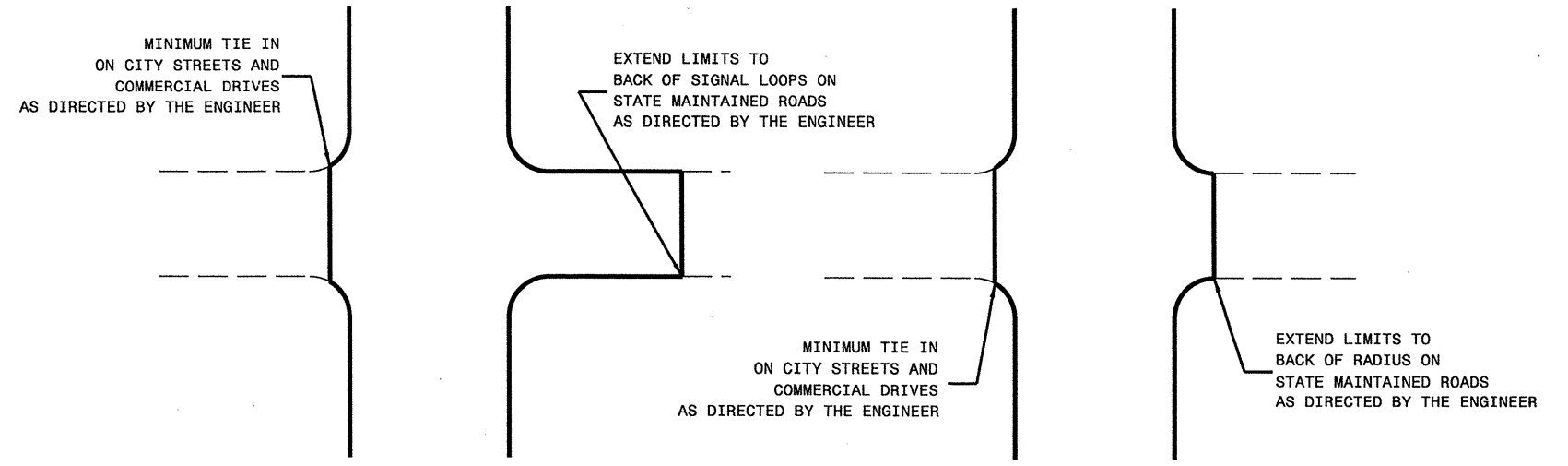
PAVEMENT SCHEDULE

(C)	PROP. APPROX. 2" ASPH. CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
(S)	SHOULDER GRADING BY CONTRACTOR
(U)	EXISTING PAVEMENT
(V)	MILL 2" IN DEPTH



PATCHING EXISTING PAVEMENT

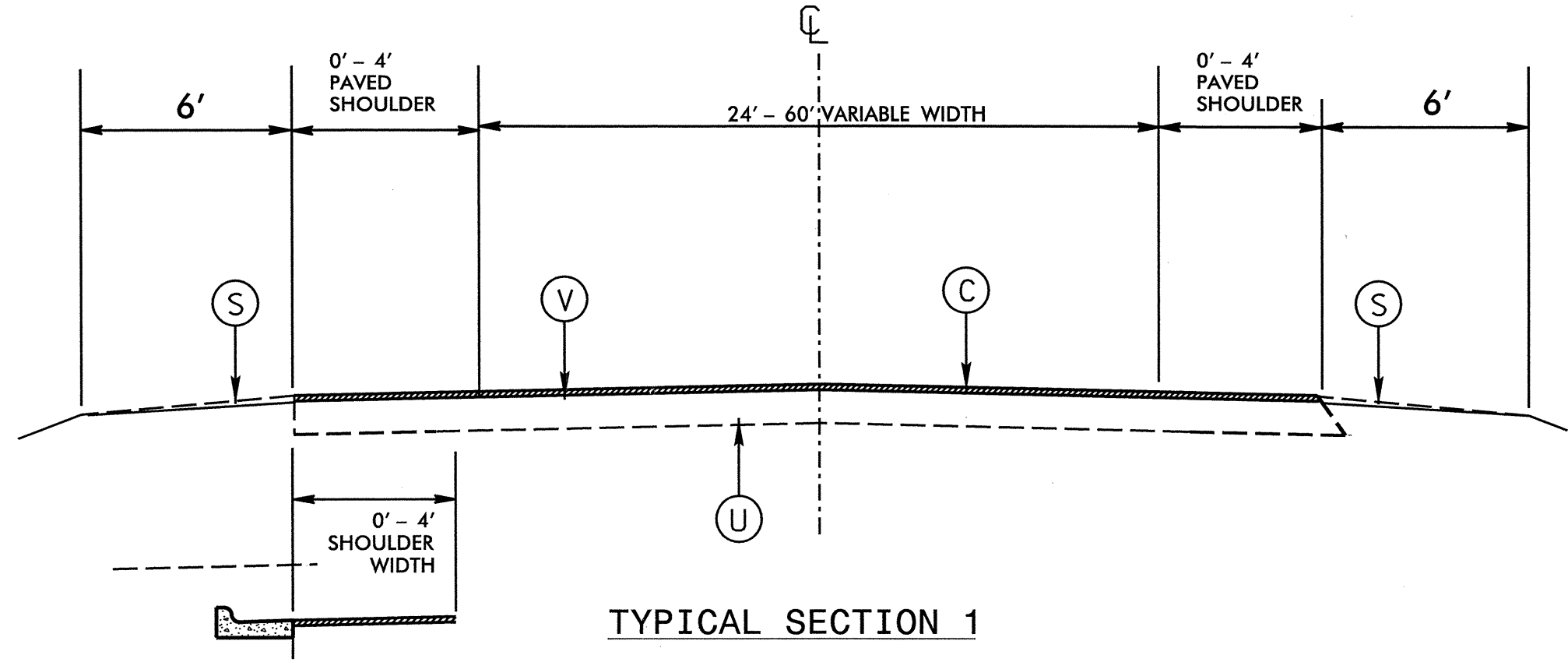
ALL UNPAVED S.R. ROADS TO BE RESURFACED 50' FROM EDGE OF PAVEMENT OF MAIN PROJECT
 ALL PAVED S.R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII, OR AS DIRECTED BY THE ENGINEER.
 EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE TABLE OF QUANTITIES.
 BRIDGES TO BE RESURFACED AT LOCATIONS AND TO DEPTH AS DIRECTED BY THE ENGINEER.



DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES

DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

EASTBOUND LANES



TYPICAL SECTION 1

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

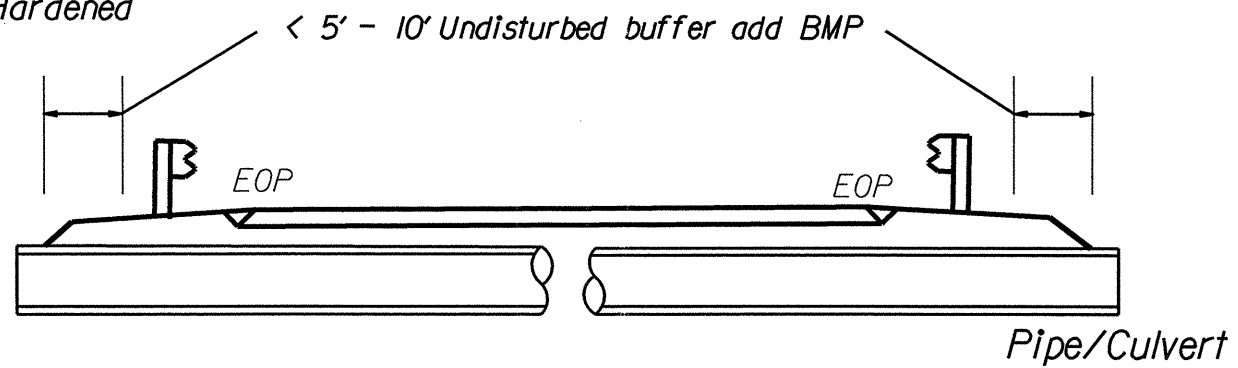
SOIL STABILIZATION TIMEFRAMES

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HOW ZONES.

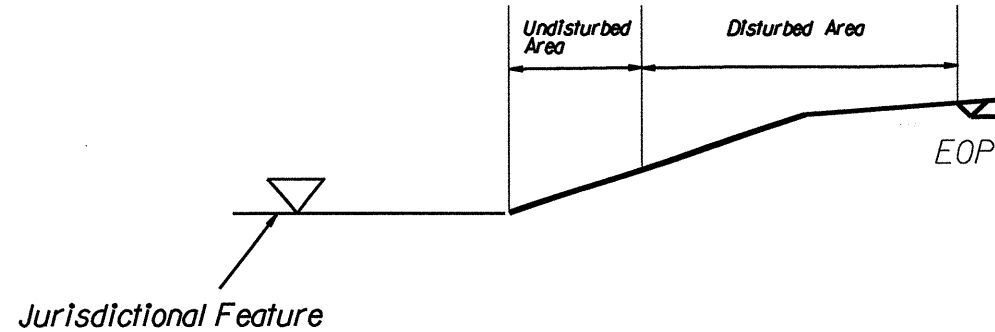
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle, Silt Fence or Hardened Aggregate.

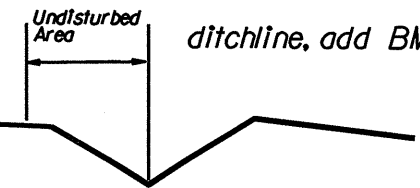
EROSION CONTROL DETAIL



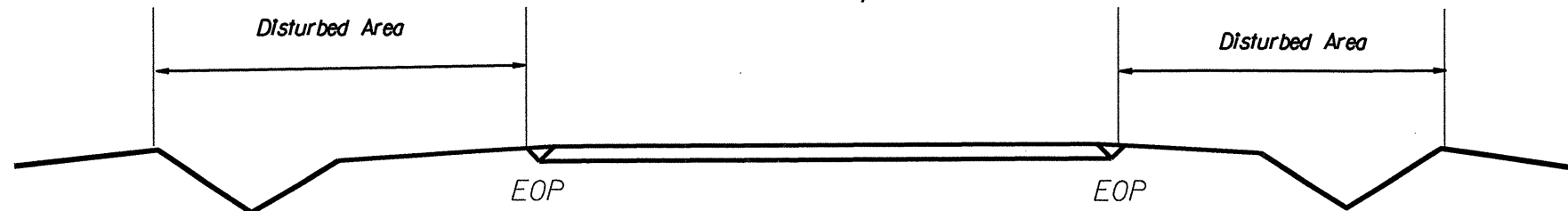
< 5' - 10' Undisturbed buffer from jurisdictional feature add BMP



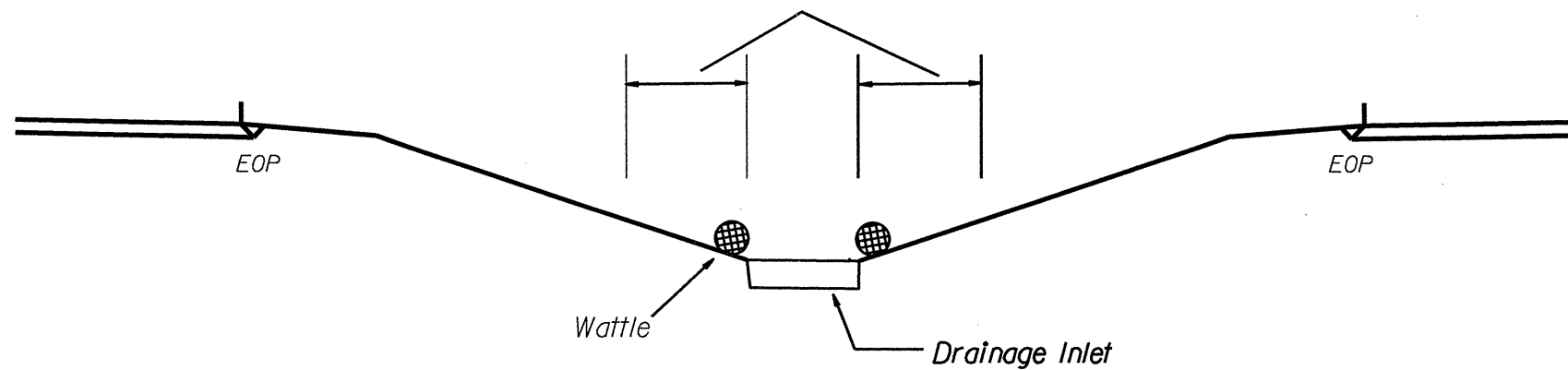
< 5' - 10' Undisturbed buffer from ditchline, add BMP



Use BMP's if shoulders and/or frontslopes and/or ditchline and/or backslopes are disturbed

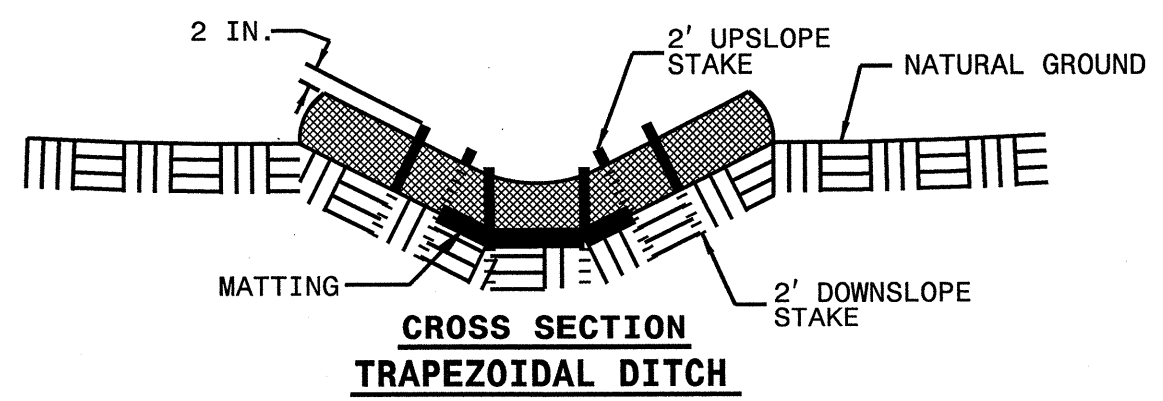
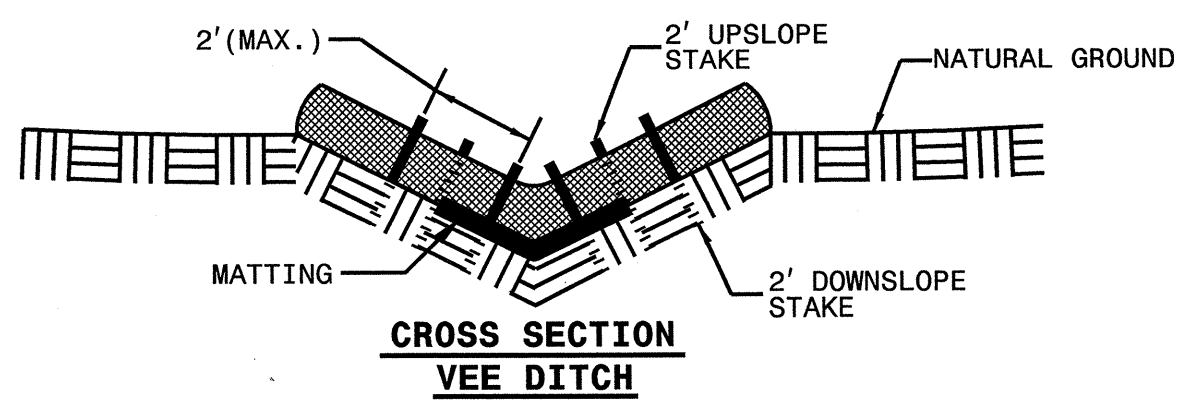
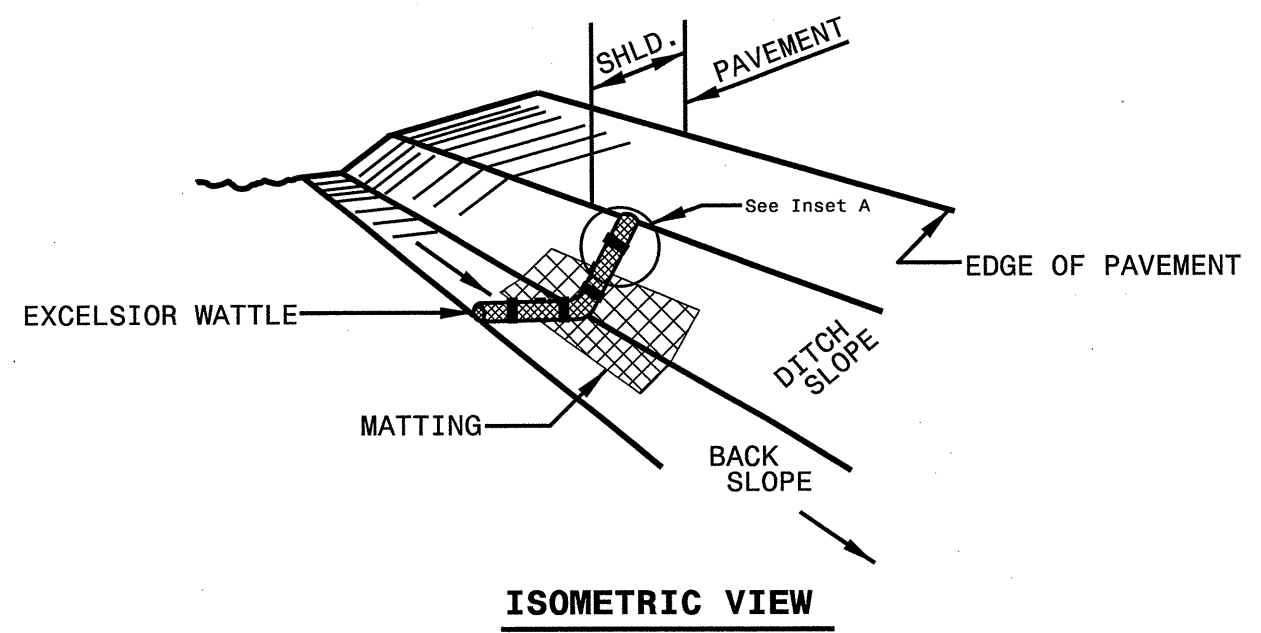


< 5' - 10' Undisturbed buffer from inlet, add wattle

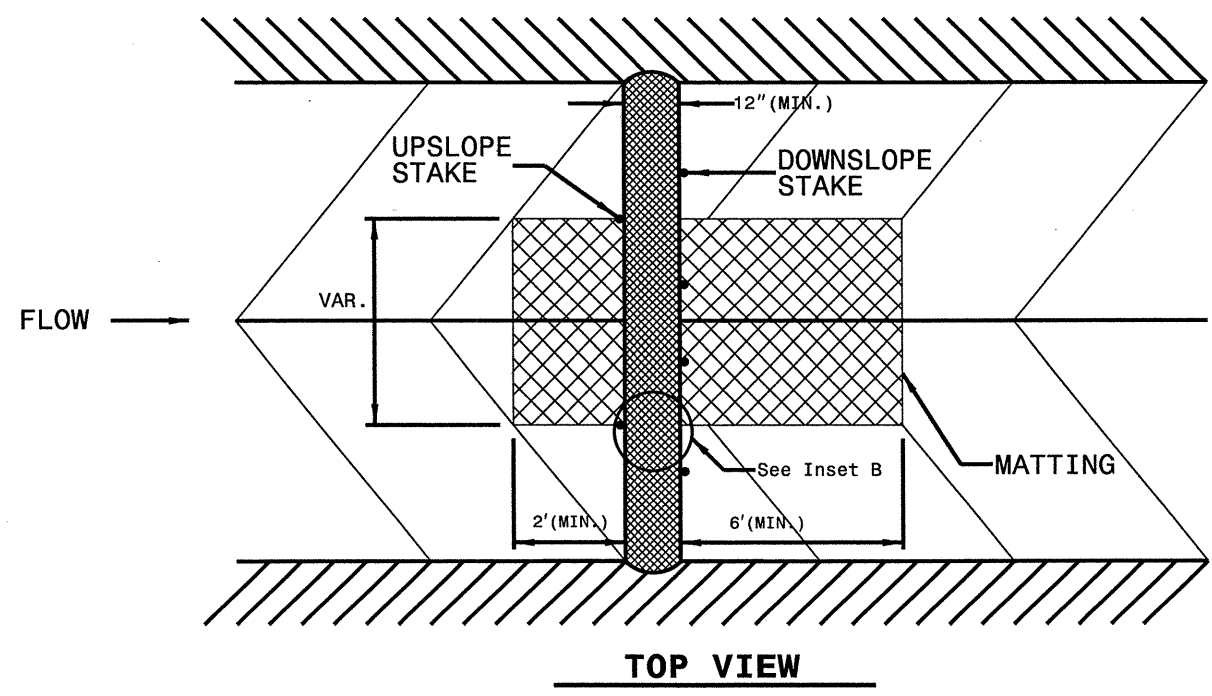
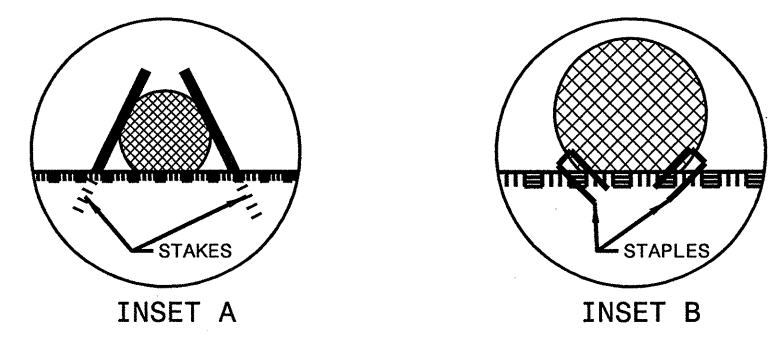


NOT TO SCALE

WATTLE DETAIL



- NOTES:
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
 - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
 - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
 - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
 - PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
 - INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
 - INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



PROJECT NO.	SHEET NO.	TOTAL NO.
5CR.10921.43	7	

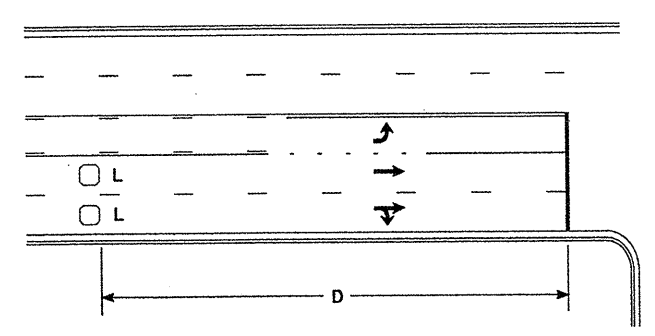
SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	BORROW CY	SHOULDER GRADING SMI	INCIDENTAL STONE BASE TONS	2" MILLING SY	SURFACE COURSE, S9.5C TONS	ASPHALT BINDER FOR PLANT MIX TON	PATCHING EXISTING PAVEMENT TONS	ADJUST MANHOLES EA	ADJUST METER OR VALVE BOX EA	PORTABLE LIGHTING LS	TEMPORARY SILT FENCE LF	WATTLE LF	SEED & MULCHING AC	INDUCTIVE LOOP LF
5CR.10921.43	Wake	1	US 64 BUS EB	NEUSE RV. TO JT NEAR 3 SISTERS RD (EXCLUDING SECTION AT I-540 PROJECT)	1	NO	5.3	32	889	8.90	445	124,038	15,345	905	1,325	4	1	1	647	1,620	6.47	3,870
TOTAL FOR PROJ NO. 5CR.10921.43							5.3		889	8.90	445	124,038	15,345	905	1,325	4	1	1	647	1,620	6.47	3,870
GRAND TOTAL							5.3		889	8.90	445	124,038	15,345	905	1,325	4	1	1	647	1,620	6.47	3,870

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	LENGTH	WIDTH	4399000000-N	4510000000-N	4685000000-E		4686000000-E		4695000000-E	4710000000-E	4721000000-E	4725000000-E						4905000000-N
							TEMPORARY TRAFFIC CONTROL LS	LAW ENFORCEMENT HR	4" X 90 M WHITE THERMO LF	4" X 90 M YELLOW THERMO LF	4" X 120 M WHITE THERMO LF	4" X 120 M YELLOW THERMO LF	8" X 90 M WHITE THERMO LF	24" X 120 M WHITE THERMO LF	THERMO MSG ONLY 120 M EA	THERMO LT ARROW 90 M EA	THERMO RT ARROW 90 M EA	THERMO STR ARROW 90 M EA	THERMO STR & RT ARROW 90 M EA	THERMO LT STR RT ARROW 90 M EA	THERMO MERGE ARROW 90 M EA	SNOW PLOWABLE MARKERS EA
5CR.10921.43	Wake	1	US 64 BUS EB	NEUSE RV. TO JT NEAR 3 SISTERS RD (EXCLUDING SECTION AT I-540 PROJECT)	5.3	32	1.00	36	22,555	27,027	14,715	400	445	600	8	46	37	63	6	1	3	935
TOTAL FOR PROJ NO. 5CR.10921.43							5.3	36	22,555	27,027	14,715	400	445	600	8	46	37	63	6	1	3	935
GRAND TOTAL							5.3	36	22,555	27,027	14,715	400	445	600	8	46	37	63	6	1	3	935

High Speed Detection [≥40 mph (64 km/hr)]

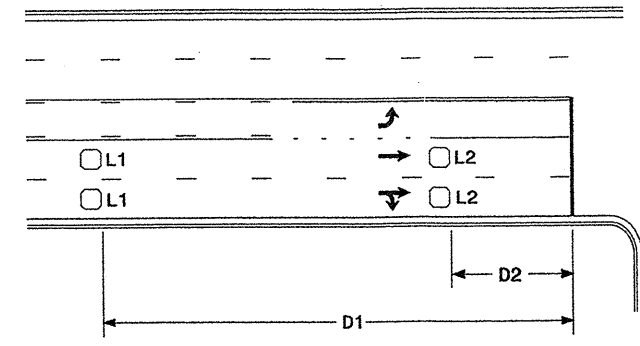


Speed Limit mph (km/hr)	D ft (m)
40 (64)	250 (75)
45 (72)	300 (90)
50 (80)	355 (110)
55 (88)	420 (130)

L = 6ft X 6ft (1.8m X 1.8m)
Wired in series for TS1
Controllers
Wired separately for TS2,
170, and 2070L Controllers

Volume Density Operation

OR

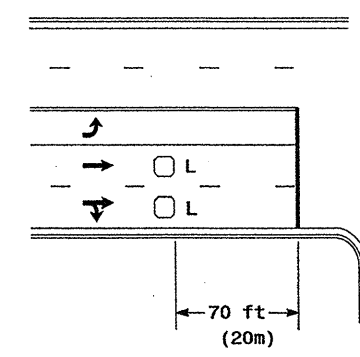


Speed Limit mph (km/hr)	D1 ft (m)	D2 ft (m)
40 (64)	250 (75)	80 (25)
45 (72)	300 (90)	90 (27)
50 (80)	355 (110)	100 (30)
55 (88)	420 (130)	110 (35)

L1 = 6ft X 6ft
(1.8m X 1.8m)
Wired in series
L2 = 6ft X 6ft
(1.8m X 1.8m)
Wired in series

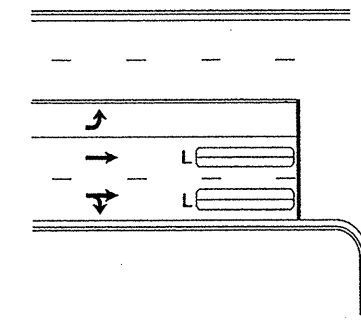
"Stretch" Operation

Low Speed Detection [≤35 mph (56 km/hr)]



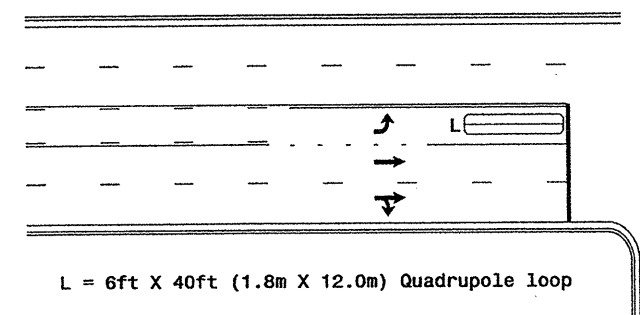
L = 6ft X 6ft (1.8m X 1.8m)
Wired in series

OR



L = 6ft X 40ft (1.8m X 12.0m)
Quadrupole loop, wired separately

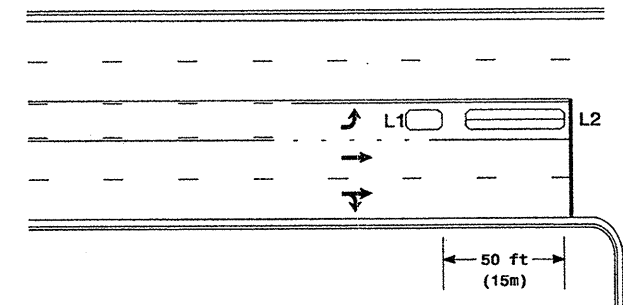
Left Turn Lane Detection



L = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

Presence Loop Detection

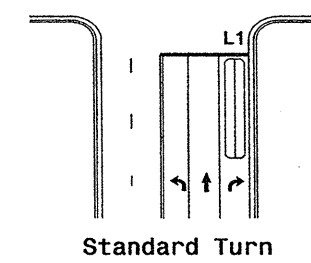
OR



L1 = 6ft X 15ft (1.8m X 4.6m) Queue detector
L2 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

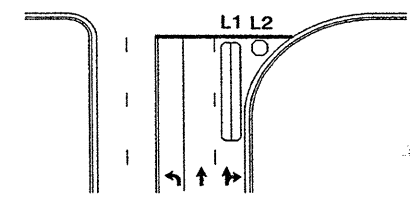
Queue Loop Detection

Right Turn Lane Detection

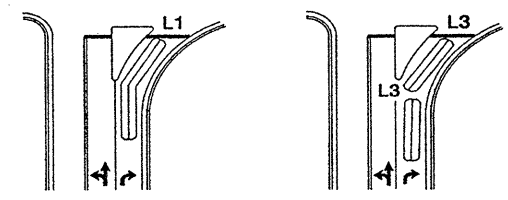


Standard Turn

L1 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop
L2 = 6ft X 6ft (1.8m X 1.8m) [Minimum] Presence loop
Wired separately
L3 = 6ft X 20ft (1.8m X 6.0m) Quadrupole loop
Wired in series

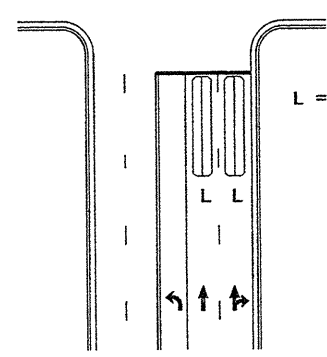


Wide Radius Turn



Channelized Turn

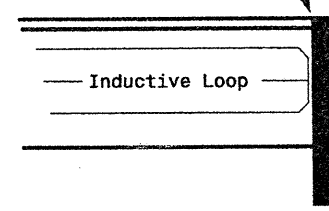
Side Street Detection



L = 6ft X 40ft (1.8m X 12.0m)
Quadrupole loop
Wired to separate
detectors/channels

Presence Loop Placement at Stop Lines

Locate loop slightly
behind leading
edge of stop line



Note:
Loop may be located in advance
of stop line when stop line is
greater than 15' (4.5m) from edge
of intersecting roadway; or, when
loop detects a permissive or
protected/permissive left turn.

Recommended Number of Turns

Single 6' X 6' (1.8m X 1.8m)
loop (wired separately):

Length of Lead-in ft (m)	Number of Turns
< 250 (75)	3
250-375 (75-115)	4
375-525 (115-160)	5
> 525 (160)	6

Quadrupole loops: Use 2-4-2 turns

6' X 15' (1.8m X 4.6m) Loops:
Lead-in < 150' (45 m), use 2 turns
Lead-in > 150' (45 m), use 3 turns

19-DEC-2006 14:29
15-01-01-15- turn loop schematic 2006.dgn
pjl/alexander

122 N. McDowell St., Raleigh, NC 27603

Typical Loop Locations

PLAN DATE: June 2006 REVIEWED BY:

PREPARED BY: P L Alexander REVIEWED BY:

SCALE: N/A

REVISIONS: *Revise pavement markings*

INIT. DATE: *PL* 12/19/06

SIGNATURE: *P L Alexander* DATE: *12/19/06*

SIG. INVENTORY NO.