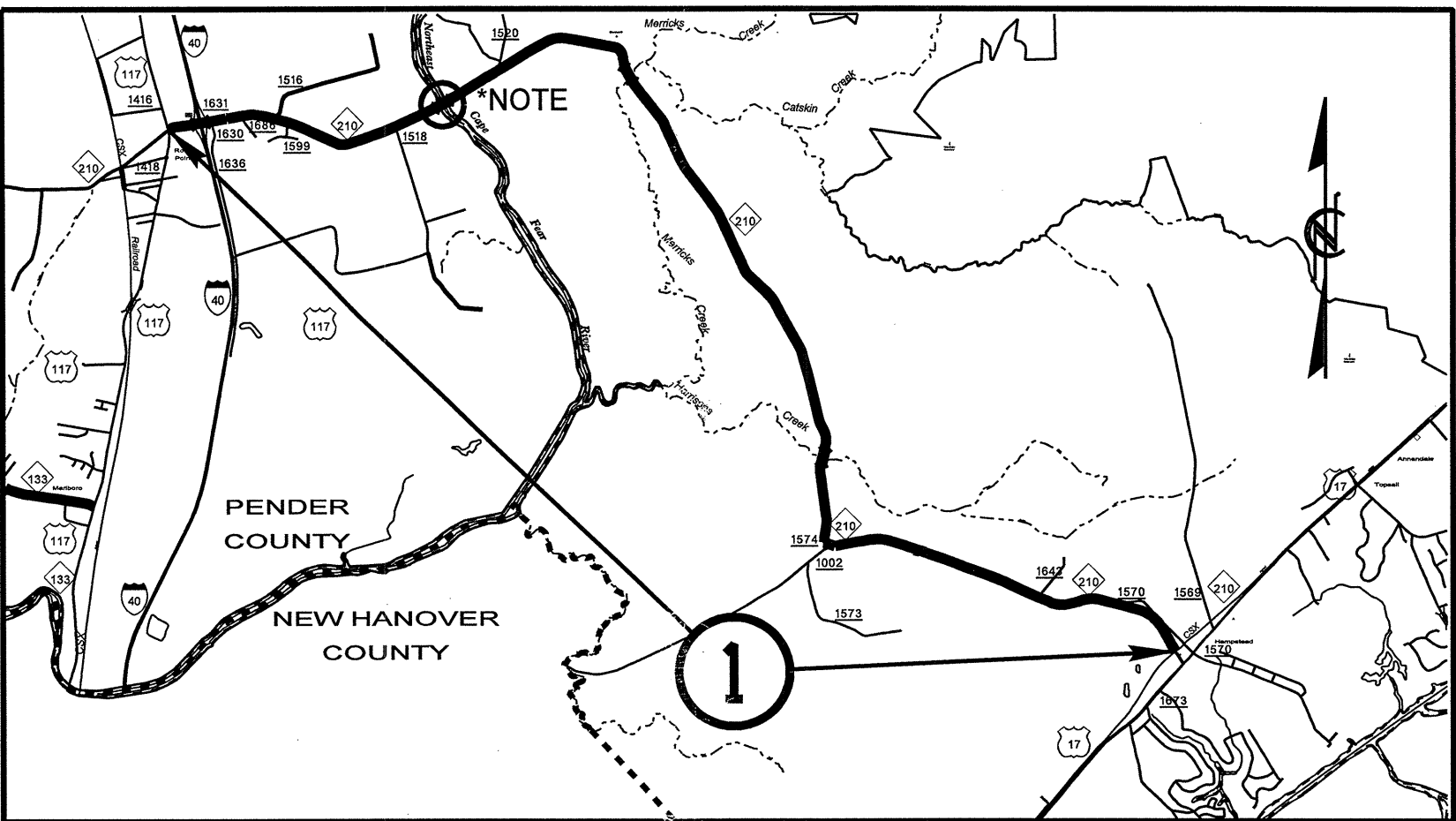
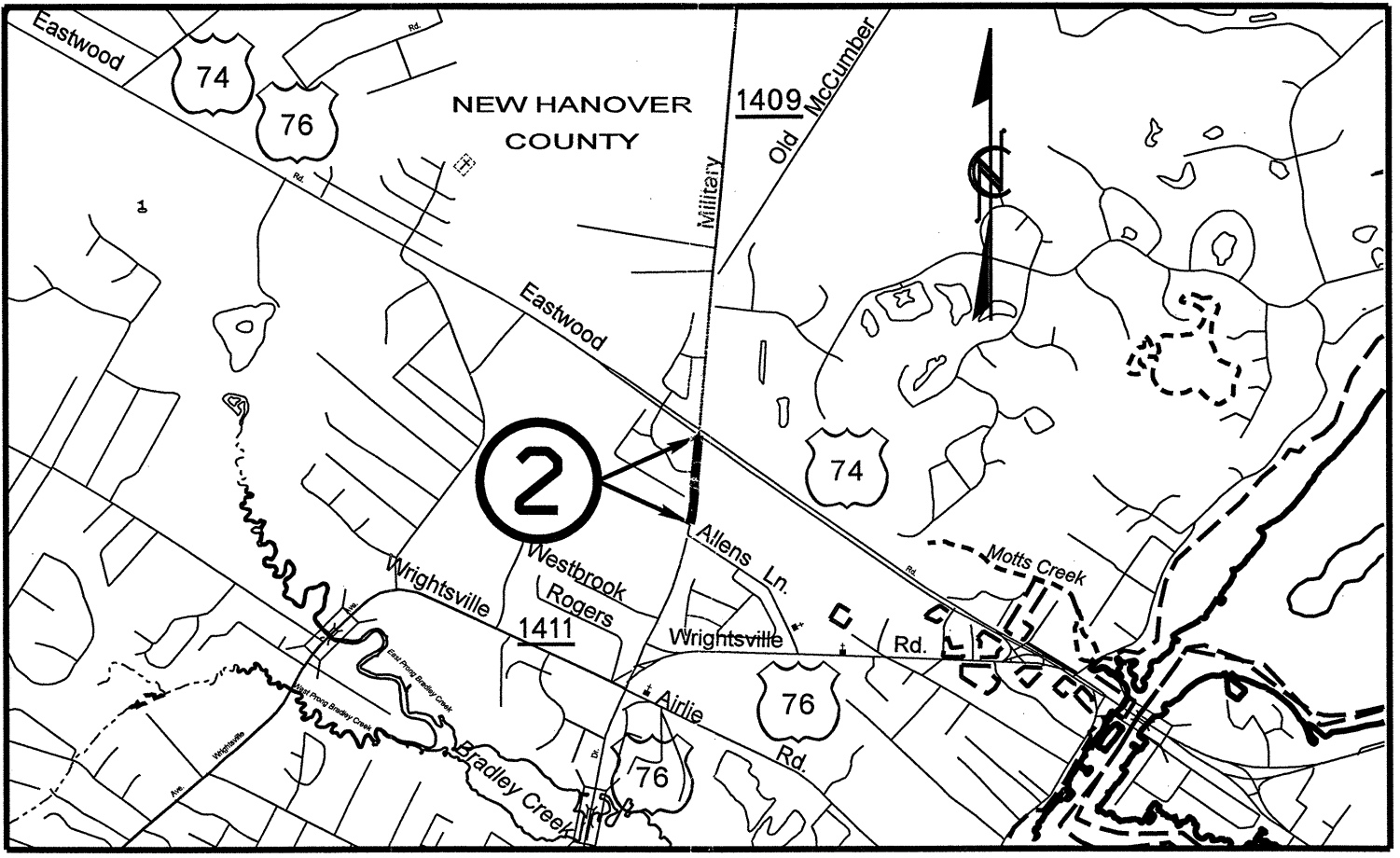


| | |
|--|-----------------------|
| PROJECT REFERENCE NO. 3CR1071146 ETC | SHEET NO. 1 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |



NOT TO SCALE
 *NOTE: EXCLUDE MP 2.42 TO MP 3.03 (LIMITS OF TIP NO. B-4223 AT LANES FERRY BRIDGE)
 EXCLUDE MP 0.045 TO 0.17 (NEW PAVEMENT AT I-40)

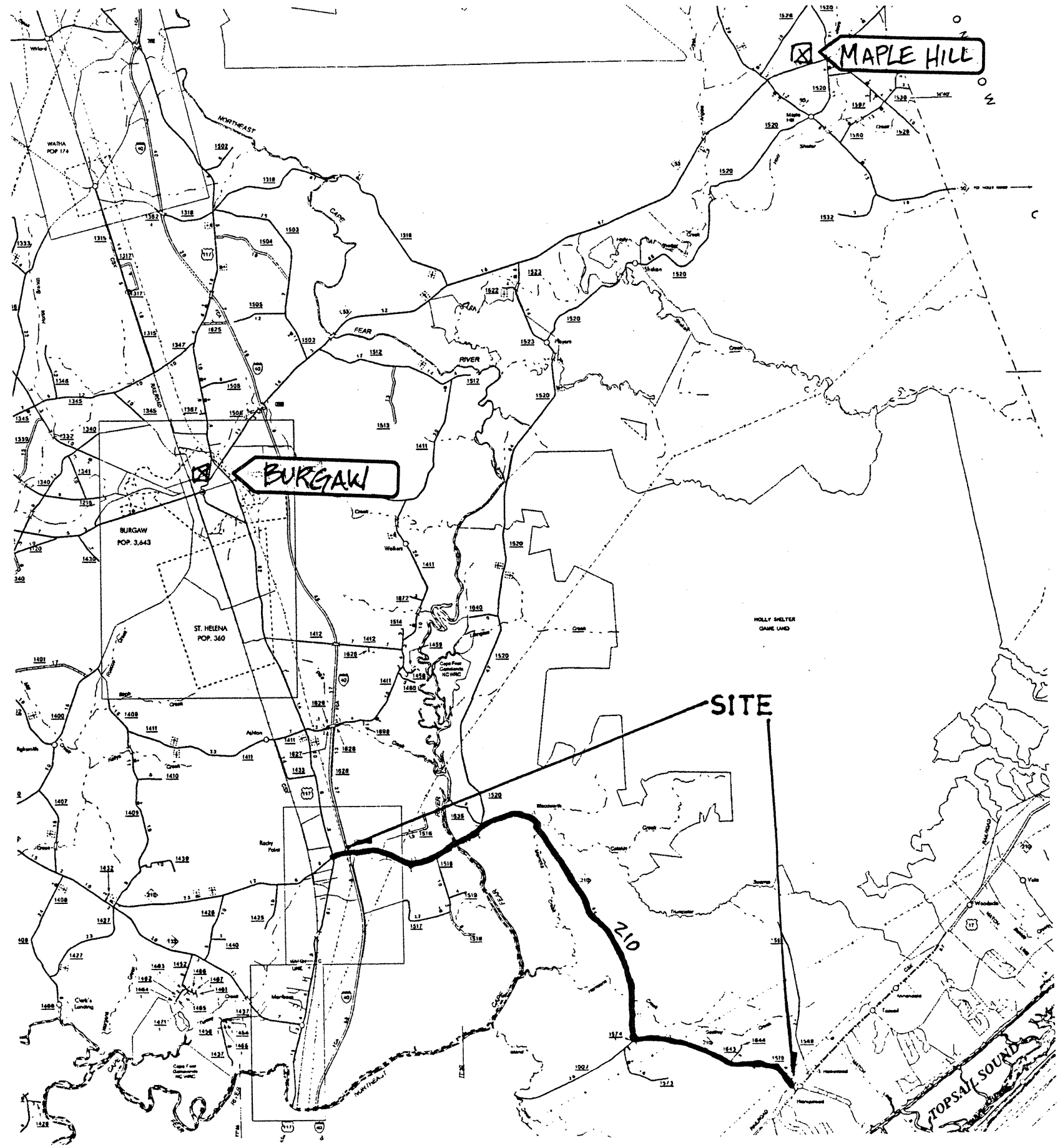


NOT TO SCALE

REVISIONS

8/17/99

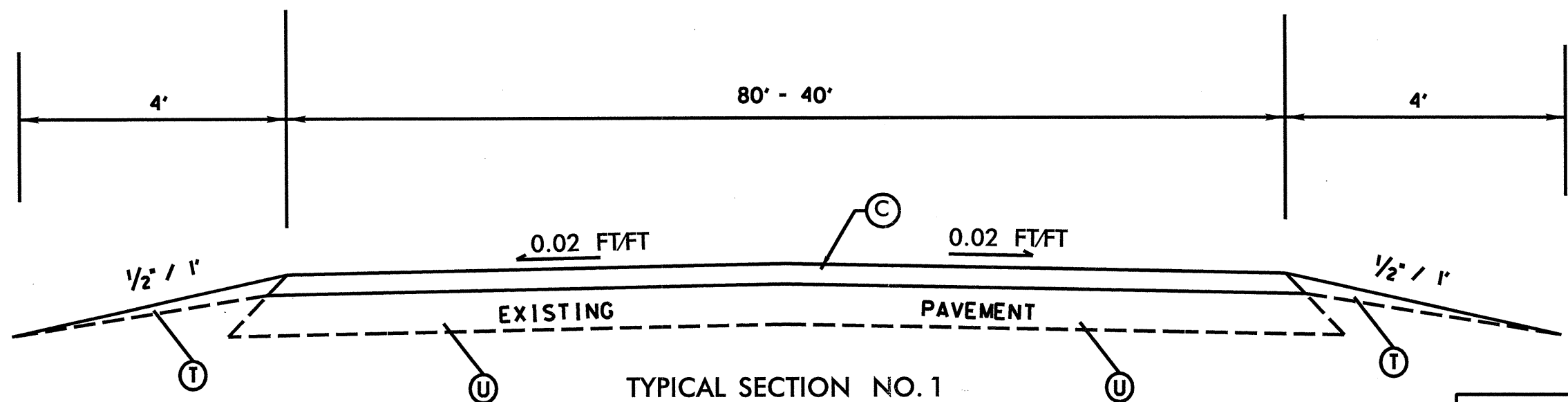
| | |
|-------------------------|---------------------|
| 301.10711.46 etc 2 | |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |



REVISIONS

19-JUN-2001 08:36
 c:\pdy\ddc\y\p\2007\210\2007_resurf_pt\der\dgn\nc210_2007_rdy_tup.dgn

8.672-44

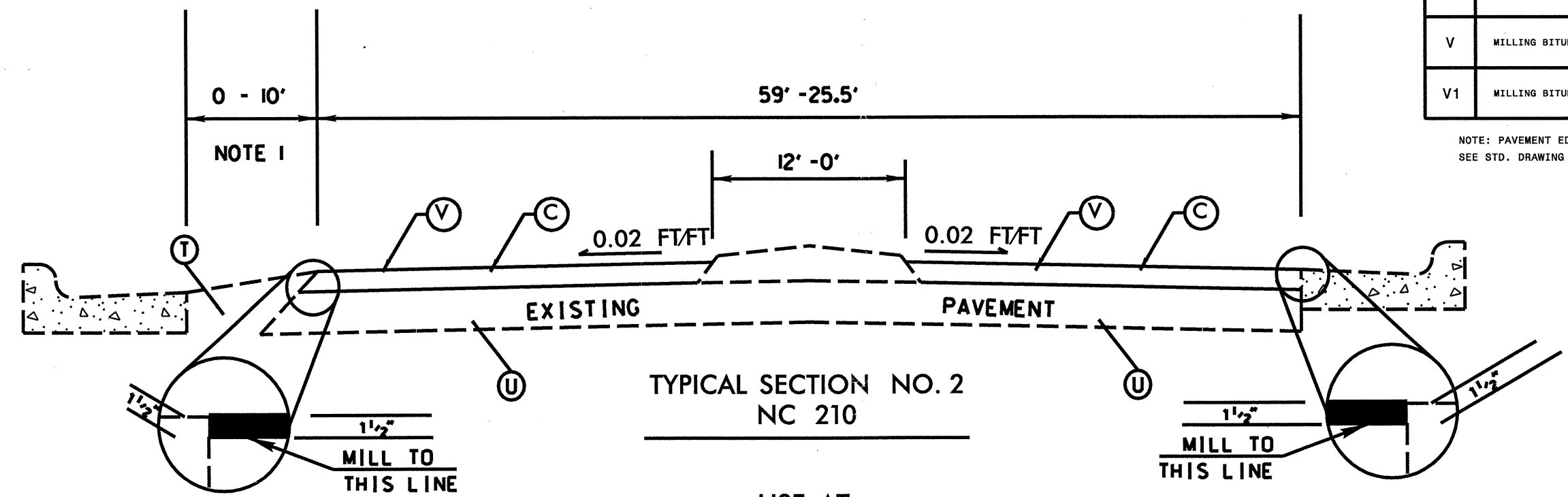


TYPICAL SECTION NO. 1
NC 210

USE AT:
MP 0.00 TO MP 0.045

| PAVEMENT SCHEDULE | |
|-------------------|--|
| C | PROP. APPROX. 1 1/2" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. |
| D | PROP. APPROX. 2 1/2" DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD. |
| T | EARTH MATERIAL. |
| U | EXISTING PAVEMENT. |
| V | MILLING BITUMINOUS PAVEMENT. 1 1/2" DEPTH. |
| V1 | MILLING BITUMINOUS PAVEMENT. 4" DEPTH. |

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE STD. DRAWING 1205.01, SHEET 2 OF 2, TABLE 1 FOR EDGE LINE OFFSETS.



TYPICAL SECTION NO. 2
NC 210

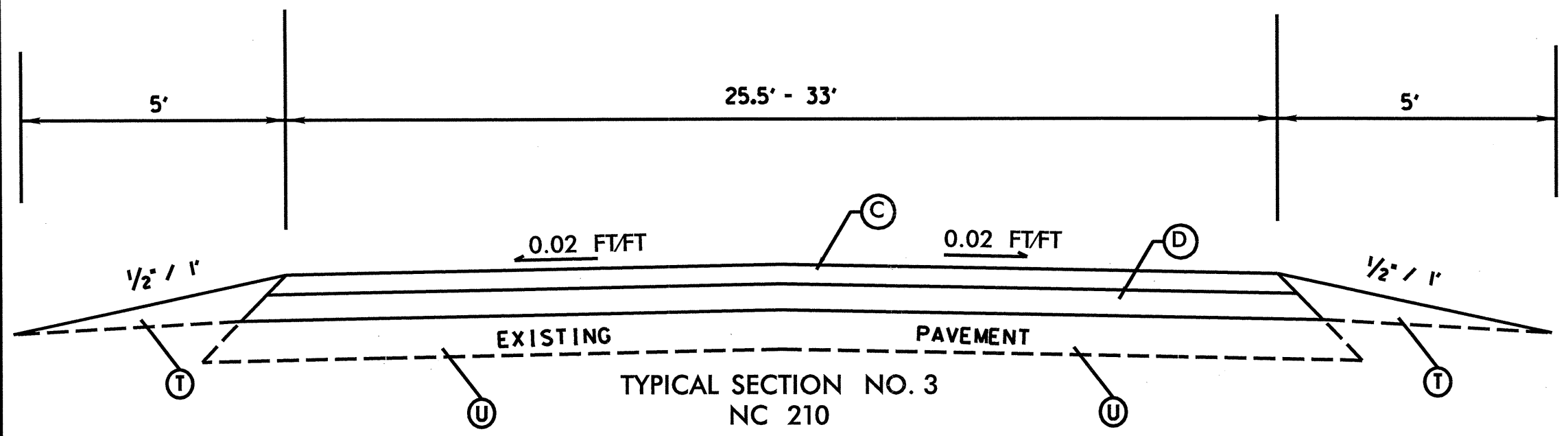
USE AT:
SEAM WEST OF I-40 TO END OF GUARDRAIL EAST OF I-40,
MERRICKS CREEK BRIDGE,
AND HARRISON CREEK BRIDGE.

NOTE 1: EARTH SHOULDERS VICINTY OF I-40 BOTH SIDES.

REVISIONS

*****SYSTEMS*****

| | |
|---|-----------------------|
| PROJECT REFERENCE NO. 3CR1071146 ETC. | SHEET NO. 4 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

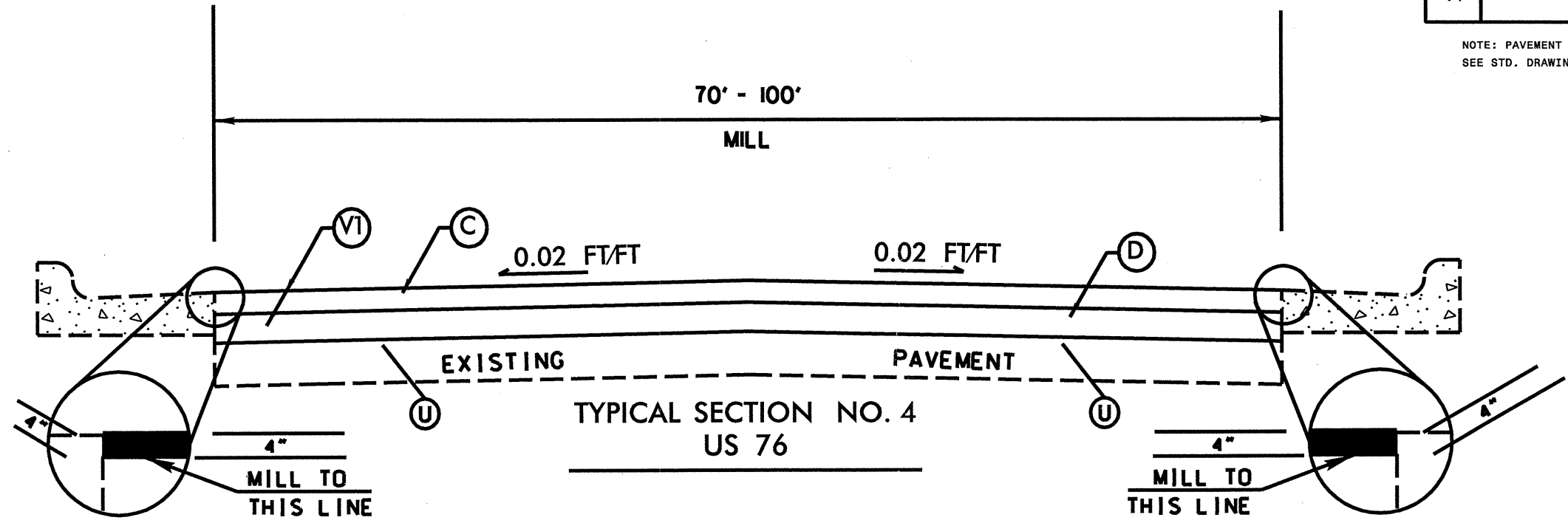


TYPICAL SECTION NO. 3
NC 210

USE AT:
MP 0.47 TO 0.2 MILES WEST OF US 17
EXCLUDE MP 2.42 TO MP 3.03
(LIMITS OF TIP NO. B-4223
AT LANES FERRY BRIDGE)

| PAVEMENT SCHEDULE | |
|-------------------|--|
| C | PROP. APPROX. 1 1/2" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. |
| D | PROP. APPROX. 2 1/2" DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD. |
| T | EARTH MATERIAL. |
| U | EXISTING PAVEMENT. |
| V | MILLING BITUMINOUS PAVEMENT. 1 1/2" DEPTH. |
| V1 | MILLING BITUMINOUS PAVEMENT. 4" DEPTH. |

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE STD. DRAWING 1205.01, SHEET 2 OF 2, TABLE 1 FOR EDGE LINE OFFSETS.



TYPICAL SECTION NO. 4
US 76

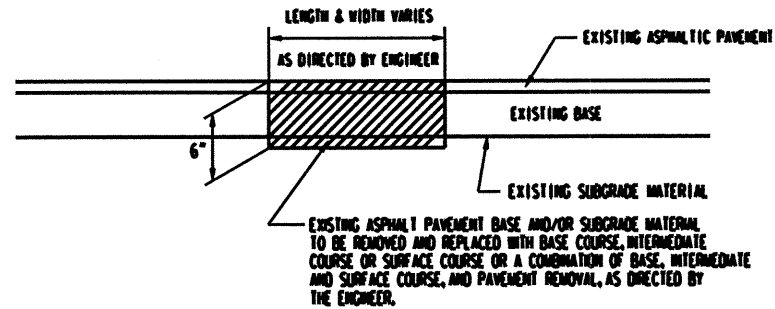
REVISIONS

8/17/99

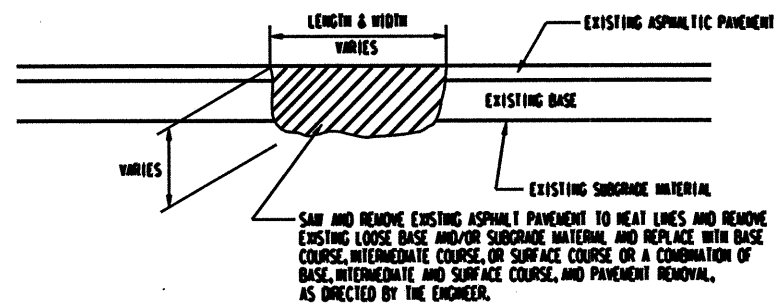
*****SYTIME*****
*****DGN*****
*****DATE*****

| | |
|---|-----------------------|
| PROJECT REFERENCE NO. 3CR1071146 ETC. | SHEET NO. 5 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

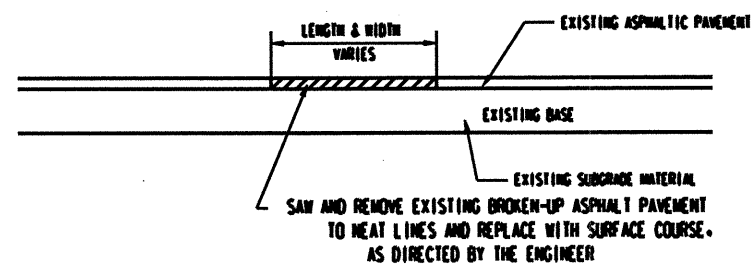
DETAILS OF REPAIRING EXISTING PAVEMENT PRIOR TO RESURFACING FOR FULL DEPTH AND MILLING



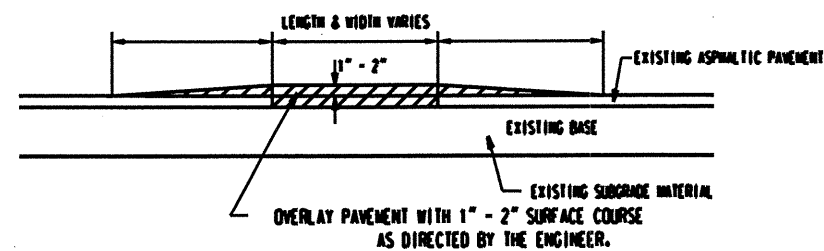
DETAIL NO. 1



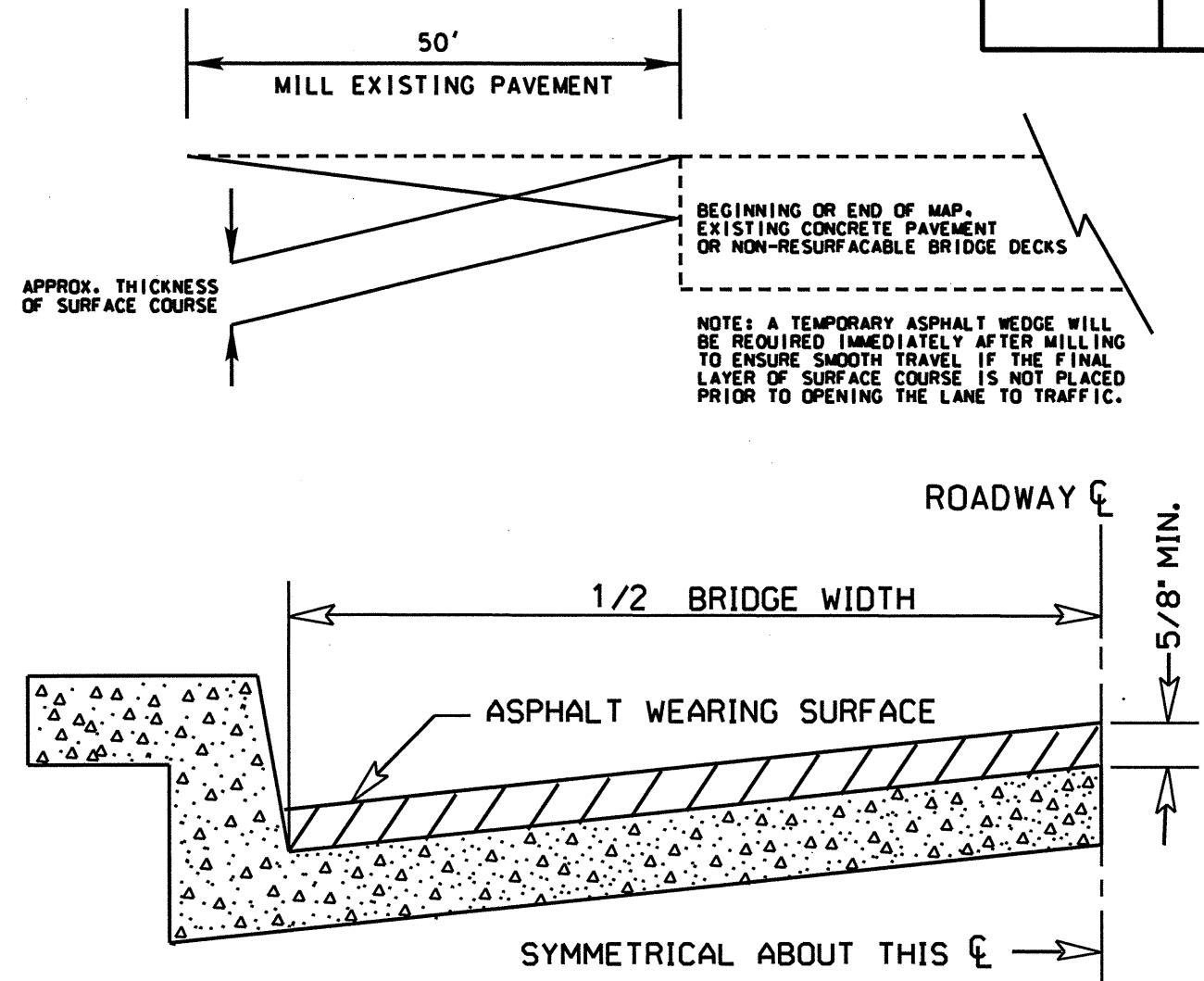
DETAIL NO. 2



DETAIL NO. 3



DETAIL NO. 4



BRIDGE HALF TYPICAL SECTION

FOR BRIDGES WITH FLOOR DRAINS, CARE SHALL BE EXERCISED IN PLACING THE WEARING SURFACE AROUND FLOOR DRAINS SO AS NOT TO HINDER EFFECTIVE DRAINAGE. ALL DRAINS SHALL BE LEFT OPEN.

THE PROPOSED WEARING SURFACE SHALL VARY IN THICKNESS AS NECESSARY TO PROVIDE A SMOOTH RIDING SURFACE. A THICKNESS OF NOT LESS THAN 5/8" SHALL BE PROVIDED. THE MAXIMUM THICKNESS SHALL PREFERABLY BE 1-1/2" UNLESS IT IS IMPRACTICAL TO PROVIDE A SMOOTH RIDING SURFACE OTHERWISE.

REVISIONS

| | | |
|--------------|-----------|-----------|
| PROJECT NO. | SHEET NO. | TOTAL NO. |
| 3CR.10711.46 | 6 | |
| 3CR.10651.46 | | |

SUMMARY OF QUANTITIES

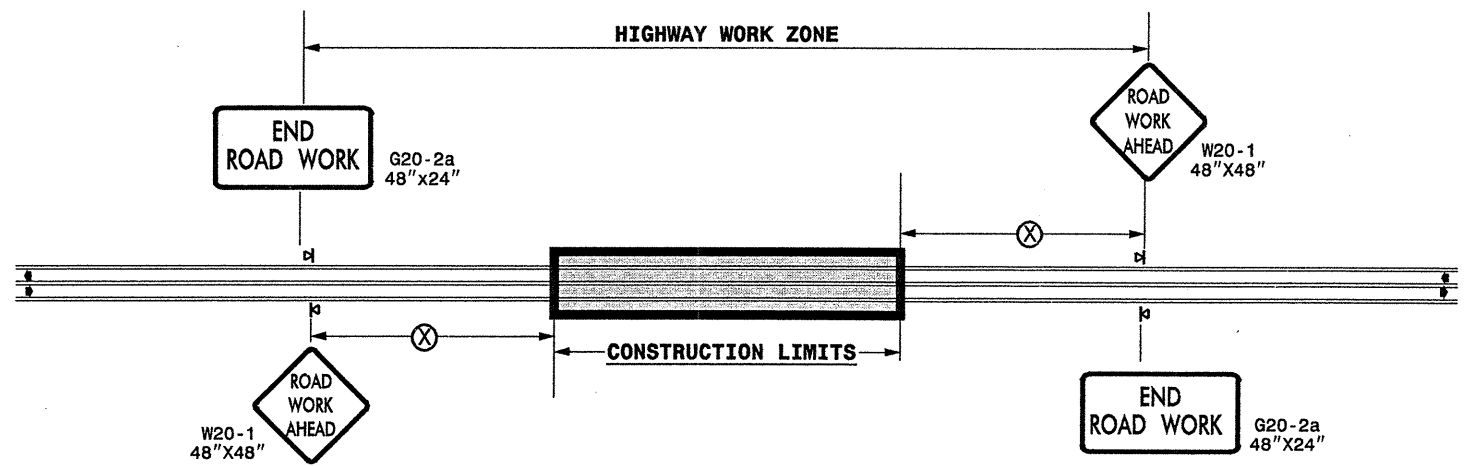
| PROJECT NO. | COUNTY | MAP NO. | ROUTE | DESCRIPTION | TYP | LENGTH MI | WIDTH FT | BORROW EXCAVATION CY | INCIDENTAL STONE BASE TONS | SHOULDER RECONST. SMI | 1 1/2" MILLING SY | 4" MILLING SY | INCIDENTAL MILLING SY | ACIC, I19.0C TONS | ACSC, S9.5C TONS | PG 64-22 PLANT MIX TONS | PG 70-22 PLANT MIX TONS | PATCH (MILL) TON | PATCH (FULL DEPTH) TONS | PORTABLE LIGHTING LS | TEMP. SILT FENCE LF | STONE FOR EROSION CONTROL, CLASS B TON | SEDIMENT CONTROL STONE TON | TEMP. MULCHING ACR | 1/4" HARDWARE CLOTH LF | SEED & MULCH AC | SEED FOR REPAIR SEEDING LB | FERTILIZER FOR REPAIR SEEDING TON | INDUCTIVE LOOP SAWCUT LF | |
|---------------------------------|------------|---------|--------|--|-----|-----------|----------|----------------------|----------------------------|-----------------------|-------------------|---------------|-----------------------|-------------------|------------------|-------------------------|-------------------------|------------------|-------------------------|----------------------|---------------------|--|----------------------------|--------------------|------------------------|-----------------|----------------------------|-----------------------------------|--------------------------|-----|
| 3CR.10711.46 | Pender | 1 | NC 210 | MP 0.00 TO MP 0.045 (WIDTH 80' - 40') | 1 | 0.045 | 60 | | 4 | 0.09 | | | | | 153 | | 9 | | | | 5 | 1 | 1 | 0.05 | 2 | 0.09 | 2 | | | |
| | | " | " | SEAM WEST OF I-40 TO END GUARDRAIL EAST OF I-40 (59'-32') | 2 | 0.24 | 52.5 | | 19 | | 7392 | | | | 716 | | 43 | | | | | | | | | | | | | |
| | | " | " | MP 0.47 TO MP 0.58 (33' - 25.5') | 3 | 0.11 | 29 | 72 | 9 | 0.22 | | | | 309 | 182 | 15 | 11 | | | | 11 | 3 | 3 | 0.11 | 6 | 0.21 | 6 | | | |
| | | " | " | MP 0.58 TO 0.2 WEST OF US 17 MERRICKS AND HARRISON CREEK (25.5' - 39') | 3 | 12.15 | 25.5 | 7898 | 972 | 24.3 | | | | 30030 | 17,644 | 1,411 | 1,059 | 180 | 20 | | 1,215 | 304 | 304 | 12.15 | 608 | 22.96 | 608 | 3 | | |
| | | " | " | | 2 | 0.16 | 32 | | | | 3379 | | | | 279 | | 17 | | | | | | | | | | | | | |
| TOTAL FOR MAP NO. 1 | | | | | | | 12.705 | | | | 10771 | | | 30339 | 18,974 | 1,426 | 1,139 | 180 | 20 | | 1,231 | 308 | 308 | 12.31 | 616 | 23.26 | 616 | 3 | | |
| TOTAL FOR PROJ NO. 3CR.10711.46 | | | | | | | 12.705 | | 7970 | 1004 | 24.61 | 10771 | | 30339 | 18,974 | 1,426 | 1,139 | 180 | 20 | | 1,231 | 308 | 308 | 12.31 | 616 | 23.26 | 616 | 3 | | |
| 3CR.10651.46 | NewHanover | 2 | US 76 | FROM US 74 0.16 MILES SOUTH (125.5' - 69.5') | 4 | 0.16 | 83.5 | | | | | 7817 | 350 | 1115 | 657 | 52 | 39 | | 25 | 1 | | | | | | | | | 700 | |
| TOTAL FOR PROJ NO. 3CR.10651.46 | | | | | | | 0.16 | | 0 | 0 | 0 | 7817 | 350 | 1115 | 657 | 52 | 39 | | 25 | 1 | | | | | | | | | 700 | |
| GRAND TOTAL | | | | | | | 12.865 | | 7970 | 1004 | 24.61 | 10771 | 7817 | 350 | 31454 | 19,631 | 1,478 | 1,178 | 180 | 45 | 1 | 1,231 | 308 | 308 | 12.31 | 616 | 23.26 | 616 | 3 | 700 |

| | | |
|--------------|-----------|-----------|
| PROJECT NO. | SHEET NO. | TOTAL NO. |
| 3CR.10711.46 | 7 | |
| 3CR.10651.46 | | |

THERMOPLASTIC AND PAINT QUANTITIES

| PROJECT NO | COUNTY | MAP NO | ROUTE | DESCRIPTION | 4685000000-E | | 4686000000-E | | 4695000000-E | | 4710000000-E | | 4725000000-E | | | 4810000000-E | | 4820000000-E | | 4835000000-E | | 4845000000-N | | | 4905000000-N | |
|--|------------|--------|--------|---|---------------------------|-----------------------------|----------------------------|---------------------------|-----------------------------|-------------------------|-------------------------------|-------------------------|--------------------------|-------------------------------|-------------------|--------------------|-------------------|--------------------|-------------------|-------------------------|-------------------|--------------------|-------------------------|--------------------------------|--------------------------------|------------|
| | | | | | 4" X 90 M WHITE THERMO LF | 4" X 120 M YELLOW THERMO LF | 4" X 120 M WHITE THERMO LF | 8" X 90 M WHITE THERMO LF | 24" X 120 M WHITE THERMO LF | THERMO RT ARROW 90 M EA | THERMO STR & LT ARROW 90 M EA | THERMO LT ARROW 90 M EA | THERMO STR ARROW 90 M EA | THERMO STR & RT ARROW 90 M EA | 4" WHITE PAINT LF | 4" YELLOW PAINT LF | 8" WHITE PAINT LF | 24" WHITE PAINT LF | PAINT RT ARROW EA | PAINT STR & LT ARROW EA | PAINT LT ARROW EA | PAINT STR ARROW EA | PAINT STR & RT ARROW EA | SNOW PLOWABLE MARKERS (Y/Y) EA | SNOW PLOWABLE MARKERS (C/R) EA | |
| 3CR.10711.46 | Pender | 1 | NC 210 | MP 0.00 TO MP 0.045 (WIDTH 80' - 40') | 484 | 473 | | | 50 | | 3 | 3 | | | | | | | 3 | 3 | | | 6 | 6 | | |
| | | " | " | SEAM WEST OF I-40 TO END GUARDRAIL EAST OF I-40 (59'-32') | 2,582 | 1,584 | | 800 | 80 | | 6 | | 6 | 12 | | 2,582 | 1,584 | 800 | 78 | 6 | | 6 | 12 | | 32 | |
| | | " | " | MP 0.47 TO MP 0.58 (33' - 25.5') | 1,184 | 726 | | | | | | | | | | 1,184 | 726 | | | | | | | | 7 | |
| | | " | " | MP 0.58 TO 0.2 WEST OF US 17 | 130,734 | 80,190 | | | | | | | | | | 130,734 | 80,190 | | | | | | | | 802 | |
| | | " | " | MERRICKS AND HARRISON CREEK (25.5' - 39') | 1,722 | 1,738 | | | | | | | | | | 1,722 | 1,738 | | | | | | | | 11 | |
| TOTAL FOR MAP NO. 1 | | | | | 136,706 | 84,711 | | 800 | 130 | | 9 | 3 | 6 | 12 | | 136,222 | 84,238 | 800 | 78 | 9 | 3 | 6 | 12 | | 826 | 38 |
| TOTAL FOR PROJ NO. 3CR.10711.46 | | | | | 136,706 | 84,711 | | 800 | 130 | | 9 | 3 | 6 | 12 | | 136,222 | 84,238 | 800 | 78 | 9 | 3 | 6 | 12 | | 826 | 38 |
| | | | | | 84,711 | | | | | | 30 | | | 220,460 | | | | 30 | | | | | | | | |
| 3CR.10651.46 | NewHanover | 2 | US 76 | FROM US 74 0.16 MILES SOUTH (125.5' - 69.5') | | 1,825 | 1,313 | 35 | 50 | | 7 | | 15 | 9 | 1 | 1,313 | 1,825 | 35 | 50 | 7 | | 15 | 9 | 1 | 28 | 68 |
| | | | | | | 1,825 | 1,313 | 35 | 50 | | 7 | | 15 | 9 | 1 | 1,313 | 1,825 | 35 | 50 | 7 | | 15 | 9 | 1 | 28 | 68 |
| TOTAL FOR PROJ NO. 3CR.10651.46 | | | | | | 3,138 | | | | | | | 32 | | | 3,138 | | | | | | 32 | | | | |
| GRAND TOTAL | | | | | 136,706 | 86,536 | 1,313 | 835 | 180 | | 16 | 3 | 21 | 21 | 1 | 137,535 | 86,063 | 835 | 128 | 16 | 3 | 21 | 21 | 1 | 854 | 106 |
| | | | | | 87,849 | | | | | | 62 | | | 223,598 | | | | 62 | | | | | 960 | | | |

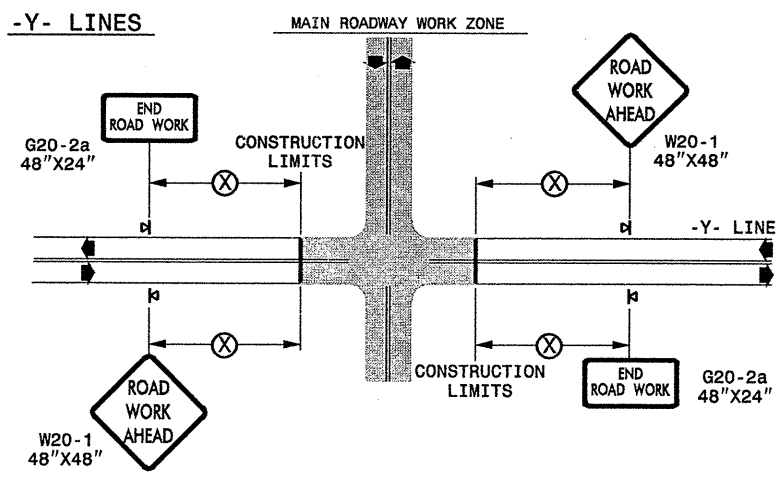
TWO-WAY UNDIVIDED ** (L-LINES)



| POSTED SPEED LIMIT (M.P.H.) | RECOMMENDED MINIMUM SIGN SPACING |
|-----------------------------|----------------------------------|
| ≤ 50 | 500' |
| ≥ 55 | 1000' |

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)



DETAIL DRAWING
FOR TWO-WAY UNDIVIDED
WORK ZONE WARNING SIGNS

GENERAL NOTES


- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE PORTABLE WORK ZONE SIGNS ONLY WITH PORTABLE WORK ZONE SIGN STANDS SPECIFICALLY DESIGNED FOR ONE ANOTHER. PORTABLE WORK ZONE SIGNS MAY BE ROLL UP OR APPROVED COMPOSITE.
- PROVIDE PORTABLE WORK ZONE SIGN STANDS, PORTABLE SIGNS AND SIGN SHEETING WHICH ARE LISTED ON THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S APPROVED PRODUCT LIST OR ACCEPTED AS TRAFFIC QUALIFIED BY THE TRAFFIC CONTROL UNIT.
- ** TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

LEGEND

◀ PORTABLE SIGN

➡ DIRECTION OF TRAFFIC FLOW

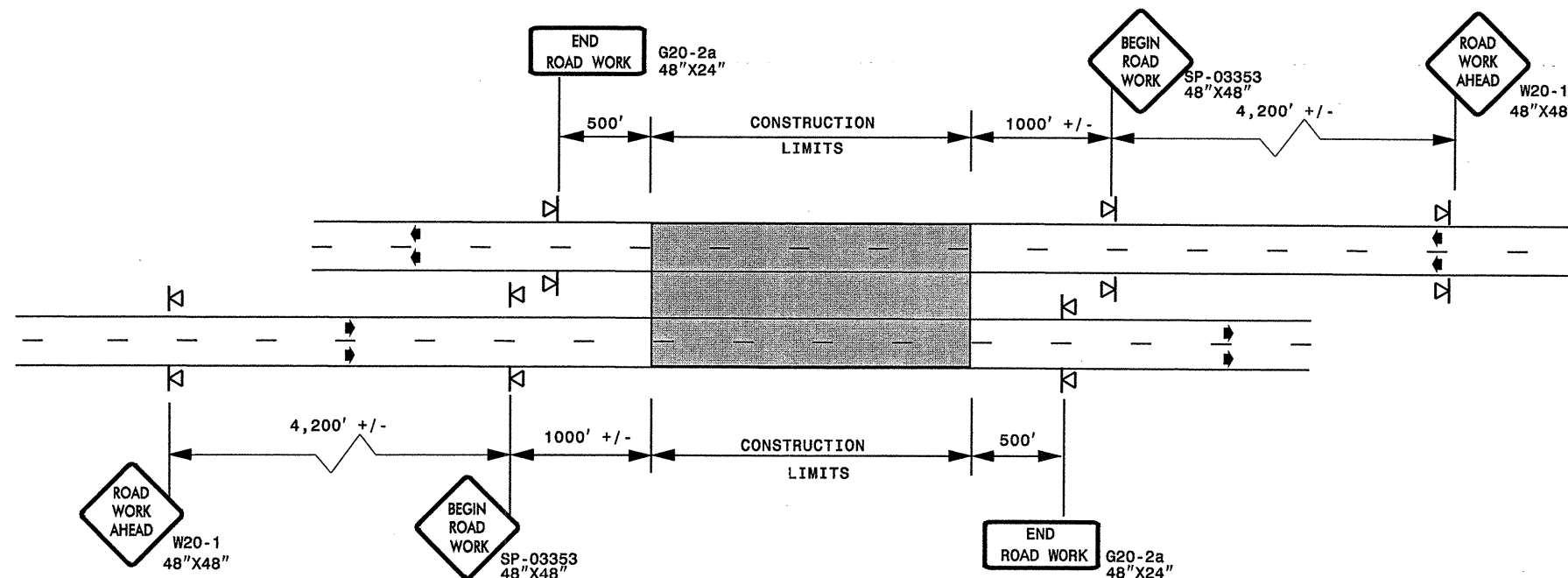
SHEET 1 OF 1

| APPROVED: _____ | DATE: _____ | DETAIL DRAWING FOR TWO-WAY UNDIVIDED ADVANCED WORK ZONE WARNING SIGNS | | | | | | | | | |
|-----------------|--------------------|---|--|-----------|--|------|-------|-------|-------|-------|-------|
| SEAL | SCALE: NONE |  | | | | | | | | | |
| | DATE: _____ | | | | | | | | | | |
| | DESIGN BY: _____ | | | | | | | | | | |
| | REVIEWED BY: _____ | | | | | | | | | | |
| | | <table border="1"> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <td>7-98</td> <td>10/01</td> </tr> <tr> <td>10-98</td> <td>03/04</td> </tr> <tr> <td>01/01</td> <td>11/04</td> </tr> </table> | | REVISIONS | | 7-98 | 10/01 | 10-98 | 03/04 | 01/01 | 11/04 |
| REVISIONS | | | | | | | | | | | |
| 7-98 | 10/01 | | | | | | | | | | |
| 10-98 | 03/04 | | | | | | | | | | |
| 01/01 | 11/04 | | | | | | | | | | |

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 pss/more AT WZTCC206427

ADVANCED WORK ZONE WARNING SIGNING FOR FREEWAYS (4 LANES OR GREATER)

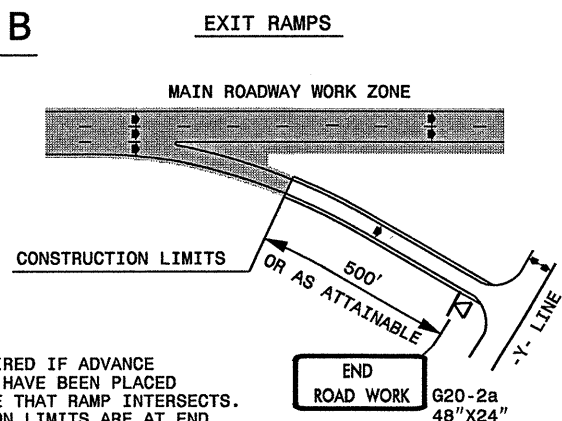
DETAIL A



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

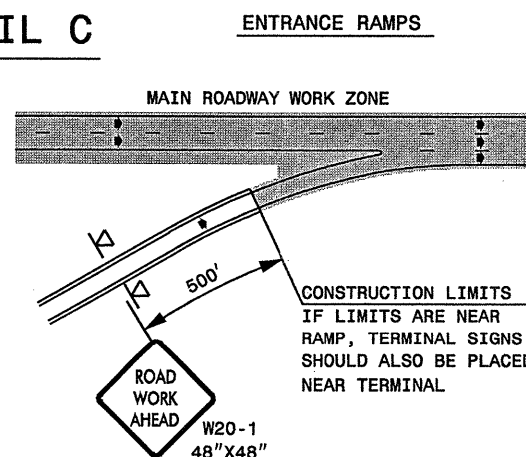
ROADWAYS INTERSECTING ALONG FREEWAY WORK ZONE (Y-LINES)

DETAIL B



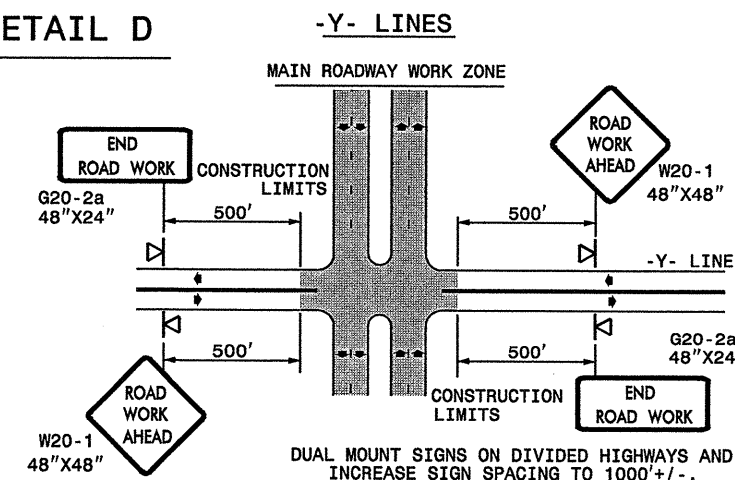
NOTE:
SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

DETAIL C



CONSTRUCTION LIMITS IF LIMITS ARE NEAR RAMP, TERMINAL SIGNS SHOULD ALSO BE PLACED NEAR TERMINAL

DETAIL D



**DETAIL DRAWING
FOR FREEWAYS
WORK ZONE WARNING SIGNS
(SHORT-DURATION LANE CLOSURES)**

GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE PORTABLE WORK ZONE SIGNS ONLY WITH PORTABLE WORK ZONE SIGN STANDS SPECIFICALLY DESIGNED FOR ONE ANOTHER. PORTABLE WORK ZONE SIGNS MAY BE ROLL UP OR APPROVED COMPOSITE.
- PROVIDE PORTABLE WORK ZONE SIGN STANDS, PORTABLE SIGNS AND SIGN SHEETING WHICH ARE LISTED ON THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S APPROVED PRODUCT LIST OR ACCEPTED AS TRAFFIC QUALIFIED BY THE TRAFFIC CONTROL UNIT.
- ** TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

LEGEND

◀ PORTABLE SIGN

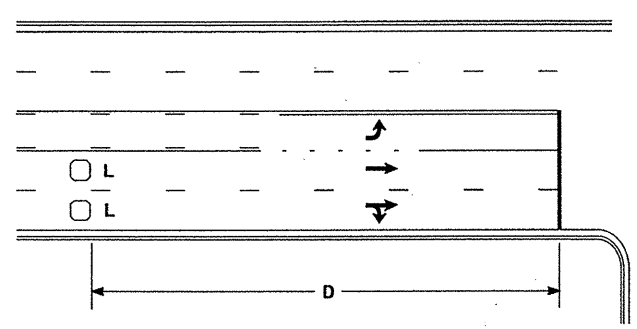
➡ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1

| APPROVED: _____ DATE: _____ | DETAIL DRAWING FOR FREEWAYS WORK ZONE WARNING SIGNS | | | | | | | | | |
|-----------------------------|--|---|-----------|--|------|-------|-------|-------|-------|-------|
| SEAL | SCALE: NONE | <table border="1"> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <td>7-98</td> <td>10/01</td> </tr> <tr> <td>10-98</td> <td>03/04</td> </tr> <tr> <td>01/01</td> <td>11/04</td> </tr> </table> | REVISIONS | | 7-98 | 10/01 | 10-98 | 03/04 | 01/01 | 11/04 |
| | REVISIONS | | | | | | | | | |
| | 7-98 | | 10/01 | | | | | | | |
| | 10-98 | | 03/04 | | | | | | | |
| 01/01 | 11/04 | | | | | | | | | |
| DATE: _____ | | | | | | | | | | |
| DWG. BY: _____ | | | | | | | | | | |
| DESIGN BY: _____ | | | | | | | | | | |
| REVIEWED BY: _____ | <table border="1"> <tr> <td>CADD FILE</td> </tr> </table> | CADD FILE | | | | | | | | |
| CADD FILE | | | | | | | | | | |

12-JUL-2007 17:54 \\001\DFS\ROOT\GROUPS\WZ\TCCC\design\group4\resur\facimg\resur\facimg2006\dlv03\3or1065146\etn\whampndrnc20us76\3CR1065146\Free4lanesgreatJuly2006.dgn psey@more AT WZTC206427

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

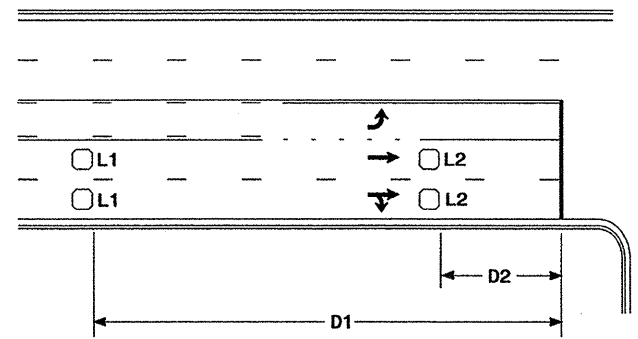


| Speed Limit mph (km/hr) | D ft (m) |
|----------------------------|-------------|
| 40 (64) | 250 (75) |
| 45 (72) | 300 (90) |
| 50 (80) | 355 (110) |
| 55 (88) | 420 (130) |

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

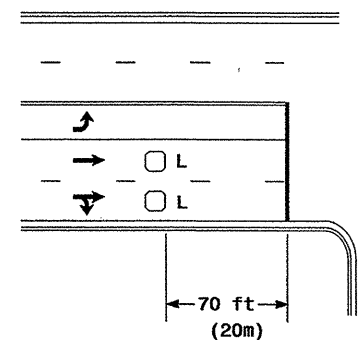


| Speed Limit mph (km/hr) | D1 ft (m) | D2 ft (m) |
|----------------------------|--------------|--------------|
| 40 (64) | 250 (75) | 80 (25) |
| 45 (72) | 300 (90) | 90 (27) |
| 50 (80) | 355 (110) | 100 (30) |
| 55 (88) | 420 (130) | 110 (35) |

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

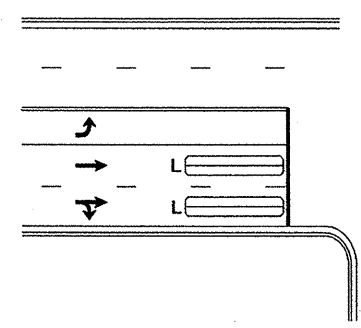
"Stretch" Operation

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



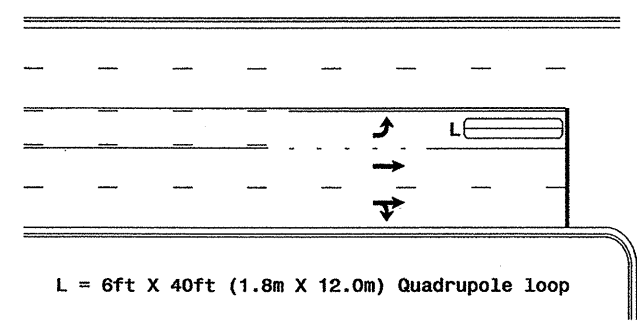
L = 6ft X 6ft (1.8m X 1.8m)
Wired in series

OR



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

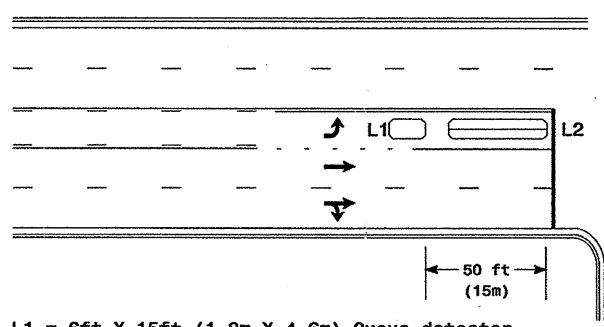
Left Turn Lane Detection



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

Presence Loop Detection

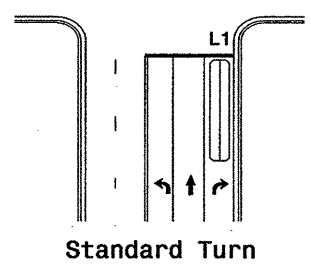
OR



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

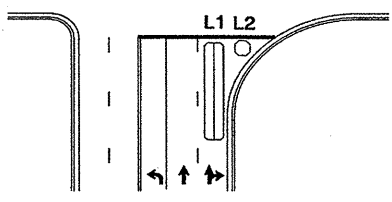
Queue Loop Detection

Right Turn Lane Detection

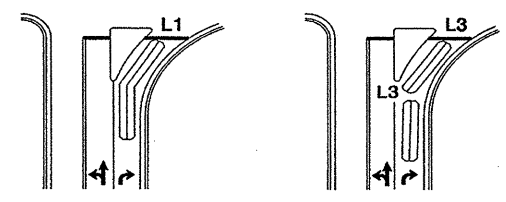


Standard Turn

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

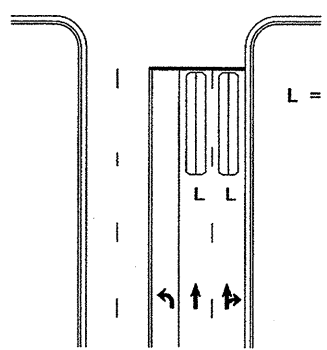


Wide Radius Turn



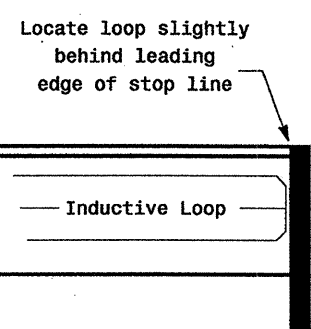
Channelized Turn

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

Typical Loop Locations

| | |
|------------------------------|---------------|
| PLAN DATE: June 2006 | REVIEWED BY: |
| PREPARED BY: P. L. Alexander | REVIEWED BY: |
| SCALE: N/A | DATE: 12/1/06 |
| SIGNATURE: [Signature] | DATE: [Date] |