

PROJECT NO.	SHEET NO.
AFE-F004	1
▲ CONTROL NO.	F0004
▲ CONTROL NO.	
■ CONTROL NO.	

STATE OF NEBRASKA  
DEPARTMENT OF ROADS  
PLANS FOR CONSTRUCTION  
**SECONDARY RETAINING  
WALL CONSTRUCTION**  
**US-283 OVER I-80**  
DAWSON COUNTY

THE 2007 EDITION OF THE NEBRASKA STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS APPLY TO THIS PROJECT.

THE WORK ON THIS PROJECT CONSISTS OF GROUPS

1-GRADING

▲ GROUPS 1 ARE INCLUDED  
IN THE LETTING OF SEPTEMBER 5, 2013

▲ GROUPS \_\_\_\_\_ ARE INCLUDED  
IN THE LETTING OF \_\_\_\_\_

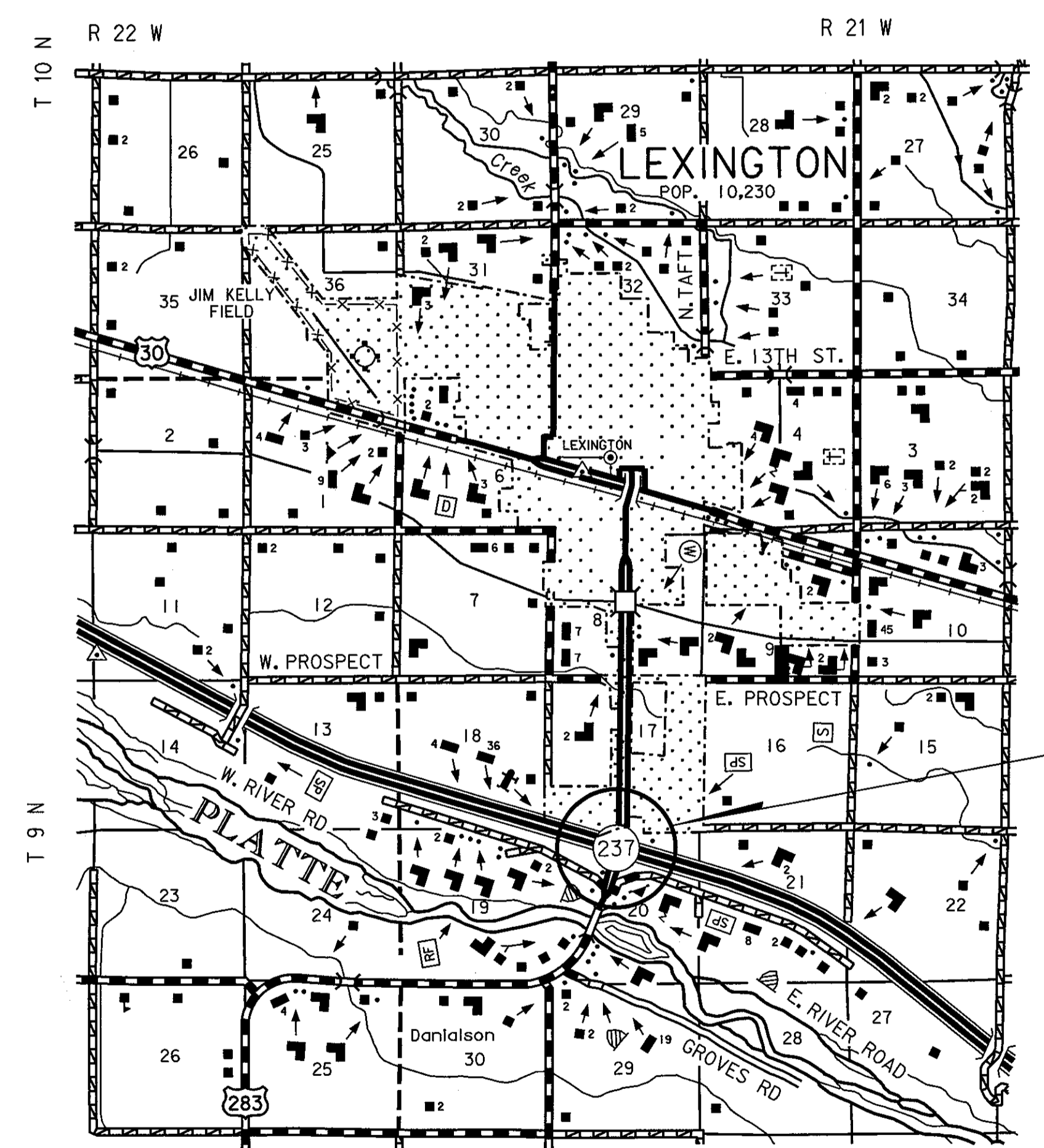
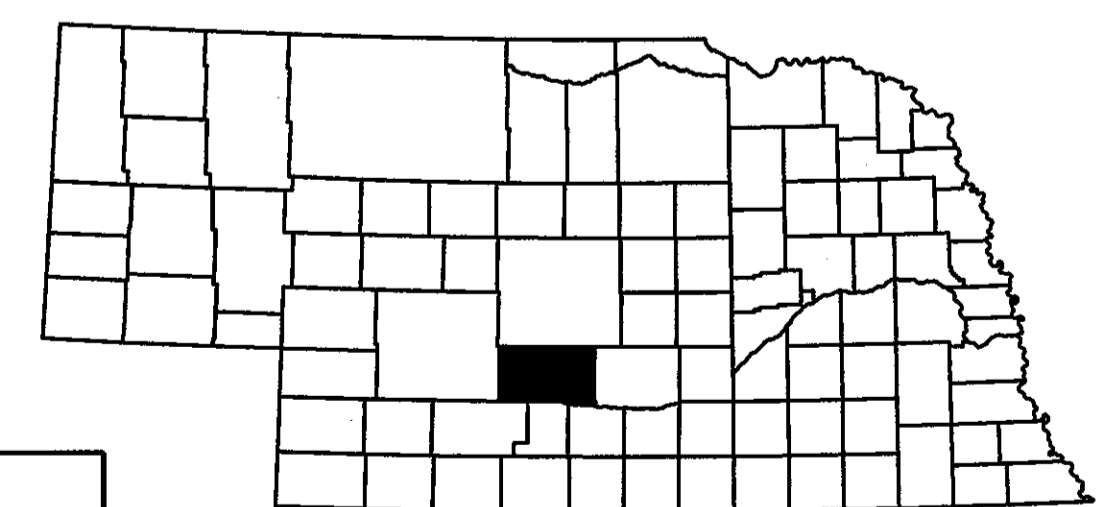
■ GROUPS \_\_\_\_\_ ARE INCLUDED  
IN THE LETTING OF \_\_\_\_\_

DESIGN DESIGNATION

MAINTENANCE TRAFFIC

YEAR: 2010

ADT: 16,150



**INDEX OF SHEETS**

SHEET NO.

1	TITLE PAGE & SUMMARY OF QUANTITIES
2 - 3	TYPICAL TRAFFIC CONTROL PLAN--LANE CLOSURE PLAN FOR MULTILANE ROADWAYS
4 - 5	SPECIAL PLAN 1 SECONDARY CONCRETE RETAINING WALL REF. POST NO. 237+22

STANDARD PLANS

920-R5 (2 SHEETS) TRAFFIC CONTROL, CONSTRUCTION AND MAINTENANCE

**SUMMARY OF QUANTITIES**

**GRADING ITEMS  
GROUP 1**

ITEM	QUANTITY	UNITS
BARRICADE, TYPE II	800.000	BDAY
BARRICADE, TYPE III	60.000	BDAY
SIGN DAY	72.000	EACH
FLASHING ARROW PANEL	20.000	DAY
MOBILIZATION	1.000	LS
CLASS 478D-4000 CONCRETE FOR RETAINING WALL	11.500	CY
EPOXY COATED REINFORCING STEEL FOR RETAINING WALL	1,741.000	LB

**CONVENTIONAL SIGNS**

FENCE R.O.W. OR WIRE	
GUARDRAIL	
TRAVELED WAY	
DIKE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
MAILBOX	
RAILROAD TRACKS	
MARSH	
TREE - CONIFEROUS	
TREE - DECIDUOUS	

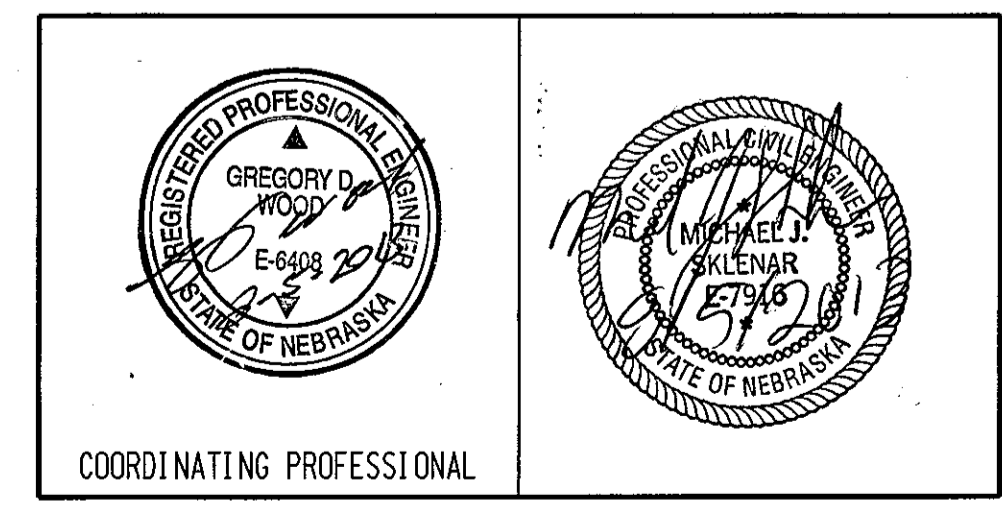
**R.O.W. LEGEND**

NEW CONTROLLED ACCESS	
PREVIOUS CONTROLLED ACCESS	
LIMITS OF CONSTRUCTION	
PREVIOUS R.O.W.	
NEW R.O.W.	
EXISTING PERMANENT EASEMENT	
TEMPORARY EASEMENT	
EXCESS TAKING	
PERMANENT EASEMENT	
EXISTING RAILROAD EASEMENT	
NEW RAILROAD PERMANENT EASEMENT	
NEW RAILROAD TEMPORARY EASEMENT	

REFERENCE POST NO. 237+22 (I-80)

EXCEPTIONS: FROM STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

TOTAL NET LENGTH OF PROJECT: \_\_\_\_\_ FEET \_\_\_\_\_ MILES



CONSTRUCTION DIVISION

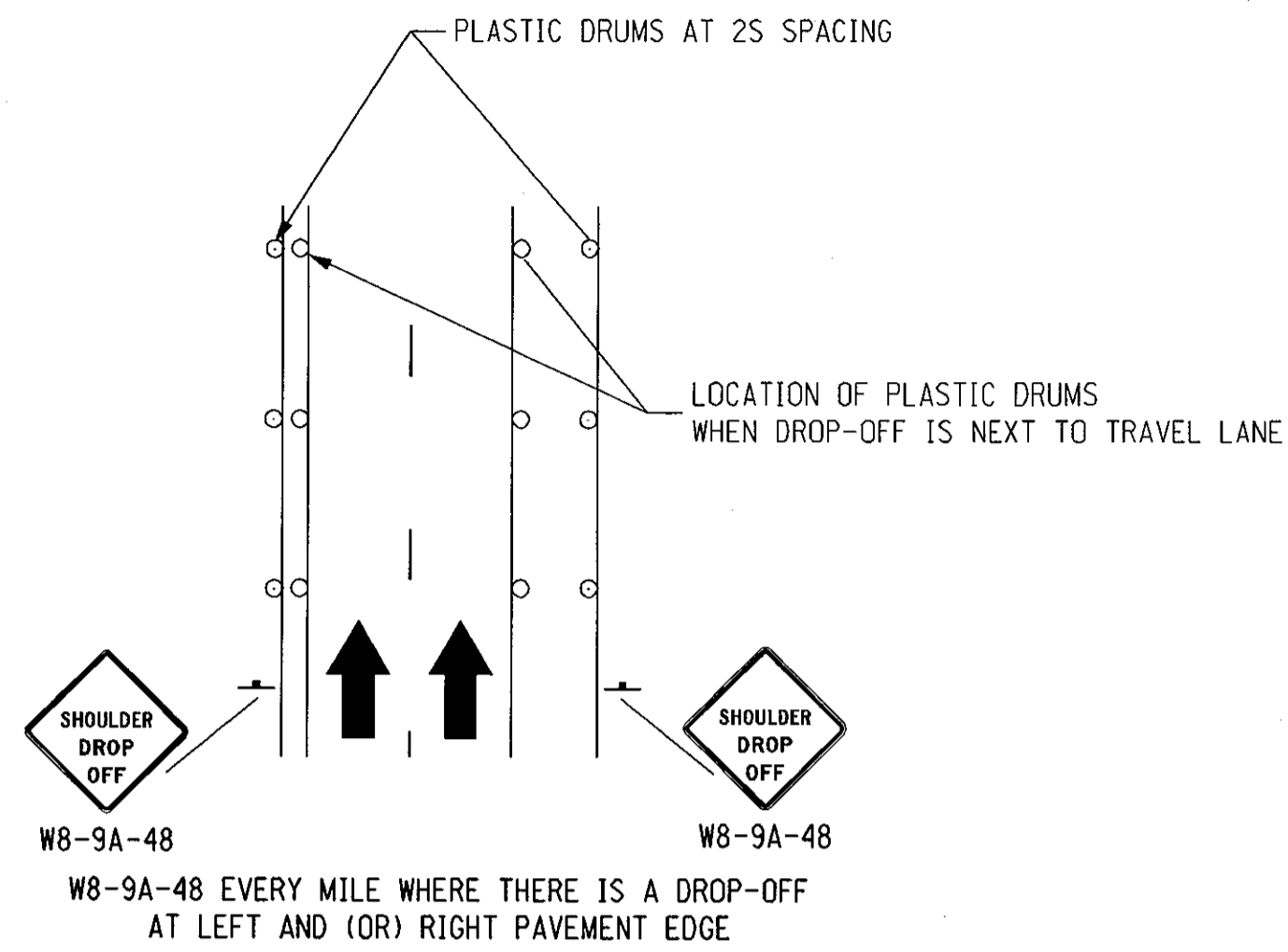
Computer: DRCONSTRUCTIO

User: dorTTO05

Date: 01-AUG-2013 10:40

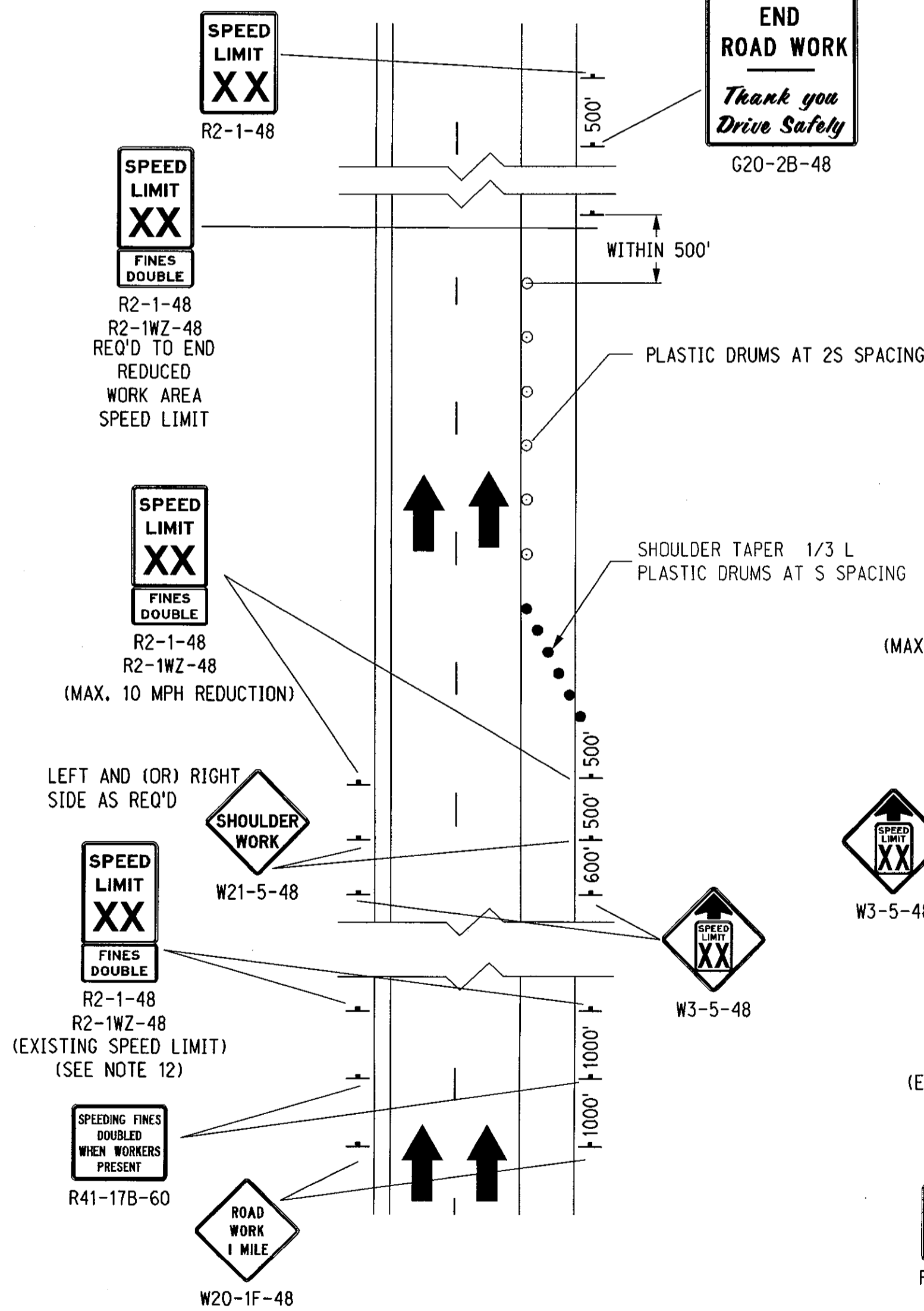
File: F004psetH1e.dgn  
Scale: 1:100

### SHOULDER DROP-OFF

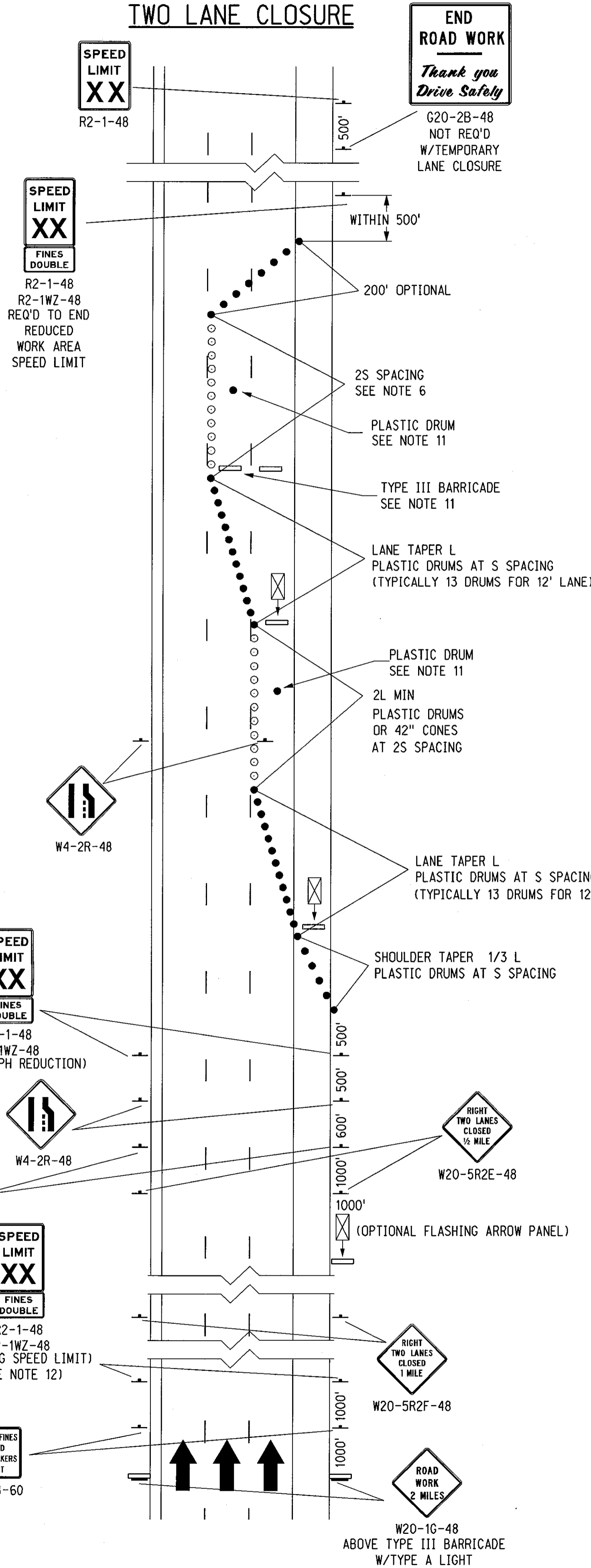


### SHOULDER CLOSURE

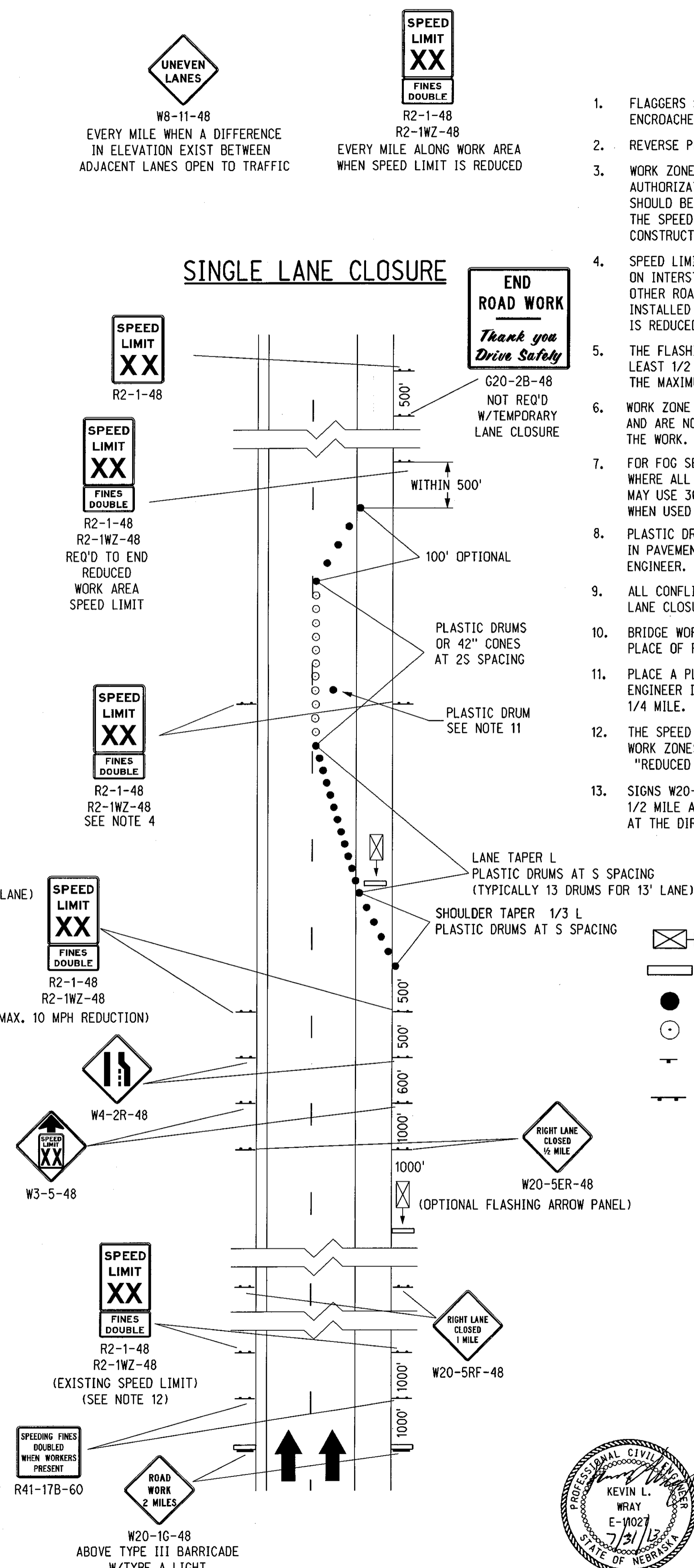
FOR USE ON ROADWAYS W/8' AND WIDER PAVED SHOULDER



### TWO LANE CLOSURE



### SINGLE LANE CLOSURE



UNEVEN LANES W8-11-48

EVERY MILE WHEN A DIFFERENCE IN ELEVATION EXIST BETWEEN ADJACENT LANES OPEN TO TRAFFIC

SPEED LIMIT XX FINES DOUBLE R2-1-48 R2-1WZ-48

EVERY MILE ALONG WORK AREA WHEN SPEED LIMIT IS REDUCED

### NOTES

1. FLAGGERS SHALL BE PROVIDED WHENEVER THE CONTRACTORS OPERATION ENCRONES ON THE OPEN LANE.
2. REVERSE PROCEDURE FOR LEFT LANE CLOSURE.
3. WORK ZONE SPEED LIMITS SHALL NOT BE INSTALLED W/O A SPEED ZONE AUTHORIZATION COMPLETED BY THE DEPARTMENT. REDUCED SPEED ZONING SHOULD BE KEPT TO A MINIMUM AS MUCH AS PRACTICABLE. WHEN USED THE SPEED SHALL NOT BE REDUCED MORE THAN 10 MPH FROM THE PRE-CONSTRUCTION SPEED LIMIT, UNLESS APPROVED BY THE TRAFFIC ENGINEER.
4. SPEED LIMIT SIGNS R2-1 AND R2-5A SHALL BE 48" X 60" WHEN USED ON INTERSTATES OR FREEWAYS. 30" X 36" SIGNS MAY BE USED ON ALL OTHER ROADWAYS. SPEED LIMIT SIGNS (IF REQ'D FOR WORK) SHALL BE INSTALLED EVERY MILE THRU THE WORK AREA, WHEN THE SPEED LIMIT IS REDUCED.
5. THE FLASHING ARROW PANELS FOR TAPERS SHOULD BE VISIBLE FOR AT LEAST 1/2 MILE AND, IF NECESSARY, SHOULD BE RELOCATED TO PROVIDE THE MAXIMUM VISIBILITY.
6. WORK ZONE SPEED LIMITS SHOWN ARE TYPICAL APPLICATIONS ONLY, AND ARE NOT TO BE ASSUMED AS THE SPEED LIMITS REQ'D FOR THE WORK.
7. FOR FOG SEALS, SLURRY SEALS, ARMOR COATS, CRACK AND JOINT SEALING WHERE ALL LANES OF TRAFFIC WILL BE REOPENED BEFORE NIGHT, THE CONTRACTOR MAY USE 36" OR 42" CONES IN PLACE OF PLASTIC DRUMS ALONG THE WORK AREA. WHEN USED 36" CONES SHALL BE CONSIDERED SUBSIDIARY TO THE WORK.
8. PLASTIC DRUMS SHALL BE REQUIRED TO BE PLACED IN FRONT OF LANE EXCAVATIONS IN PAVEMENT AND SLAB REPAIR, AND OTHER WORK ACTIVITIES AS DIRECTED BY THE ENGINEER. PLASTIC DRUMS SHALL BE REQUIRED FOR ALL TAPERS AND LANE SHIFTS.
9. ALL CONFLICTING PAVEMENT MARKINGS ARE REQ'D TO BE REMOVED IF THE LANE CLOSURE IS TO REMAIN IN PLACE LONGER THAN 72 HOURS.
10. BRIDGE WORK OR OTHER APPROPRIATE ADVANCE SIGN MAY BE USED IN PLACE OF ROAD WORK.
11. PLACE A PLASTIC DRUM OR TYPE III BARRICADE AS DIRECTED BY THE ENGINEER IN THE CENTER OF THE CLOSED LANE(S) APPROXIMATELY EVERY 1/4 MILE.
12. THE SPEED LIMIT SIGN SHOWN FOLLOWING THE "FINES FOR SPEEDING DOUBLED IN WORK ZONES WHEN WORKERS PRESENT" SIGN IS NOT REQUIRED IF A "REDUCED SPEED AHEAD" OR OTHER SPEED LIMIT SIGN IS LOCATED WITHIN 1/2 MILE.
13. SIGNS W20-5E, W20-5RF AND W20-1G MAY BE REDUCED TO 1500 FT, 1/2 MILE AND 1 MILE SPACING RESPECTIVELY IN LOW VOLUME AREA AT THE DIRECTION OF THE ENGINEER.

### LEGEND

- FLASHING ARROW PANEL
- TYPE III BARRICADE
- REFLECTORIZED PLASTIC DRUM
- REFLECTORIZED PLASTIC DRUM OR 42" REFLECTORIZED CONE
- SINGLE POST SIGN
- DOUBLE POST SIGN

### TAPER FORMULA

$L = S \times W$  FOR SPEEDS OF 45 MPH OR MORE.

$L = \frac{WS^2}{60}$  FOR SPEEDS OF 40 MPH OR LESS.

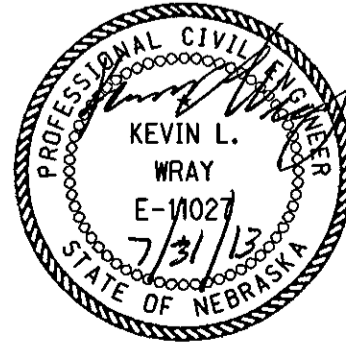
WHERE:

- L = MINIMUM LENGTH OF TAPER.
- S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.
- W = WIDTH OF OFFSET (LANE WIDTH).

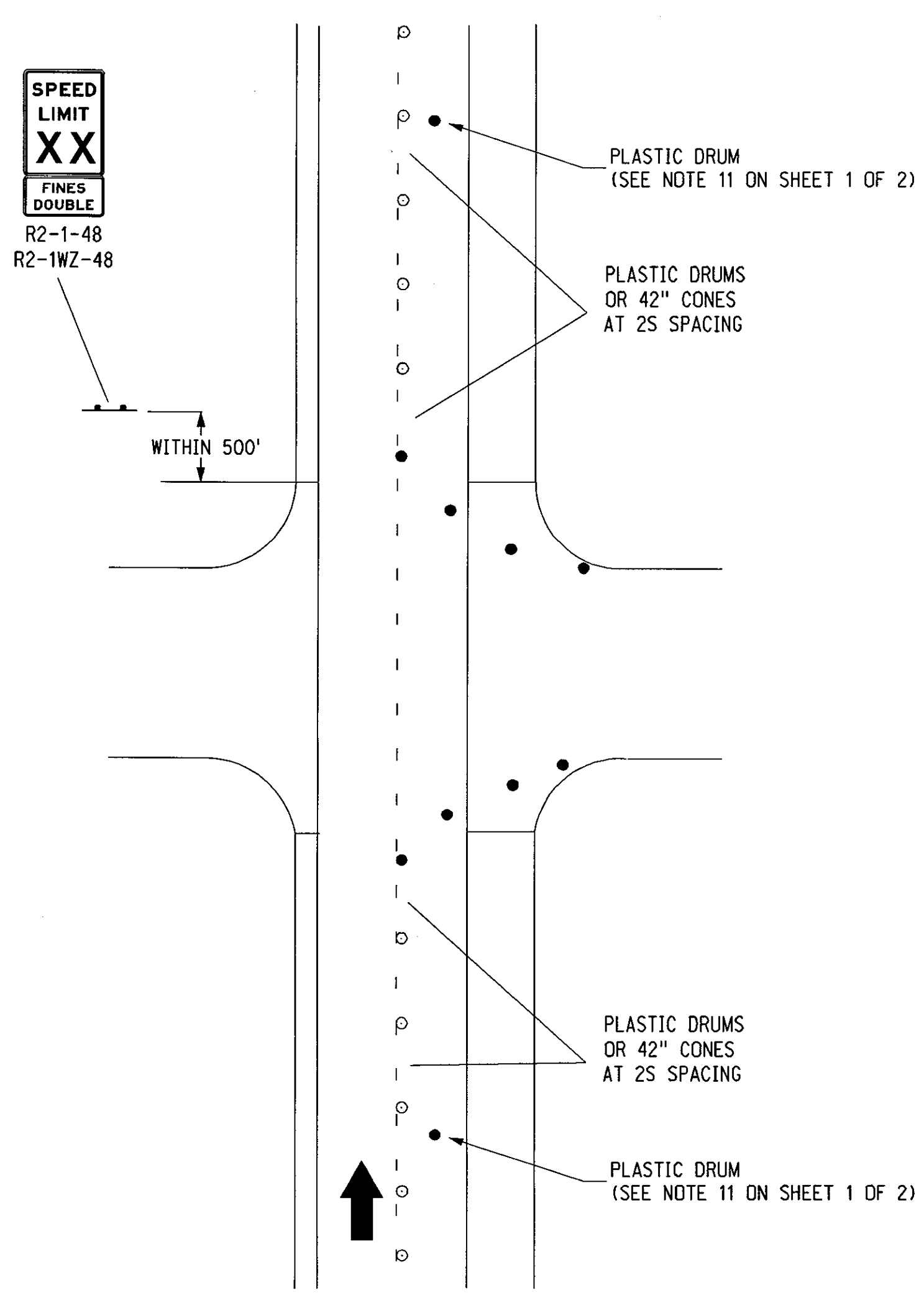
### NEBRASKA DEPARTMENT OF ROADS TRAFFIC ENGINEERING DIVISION

#### TYPICAL TRAFFIC CONTROL PLAN

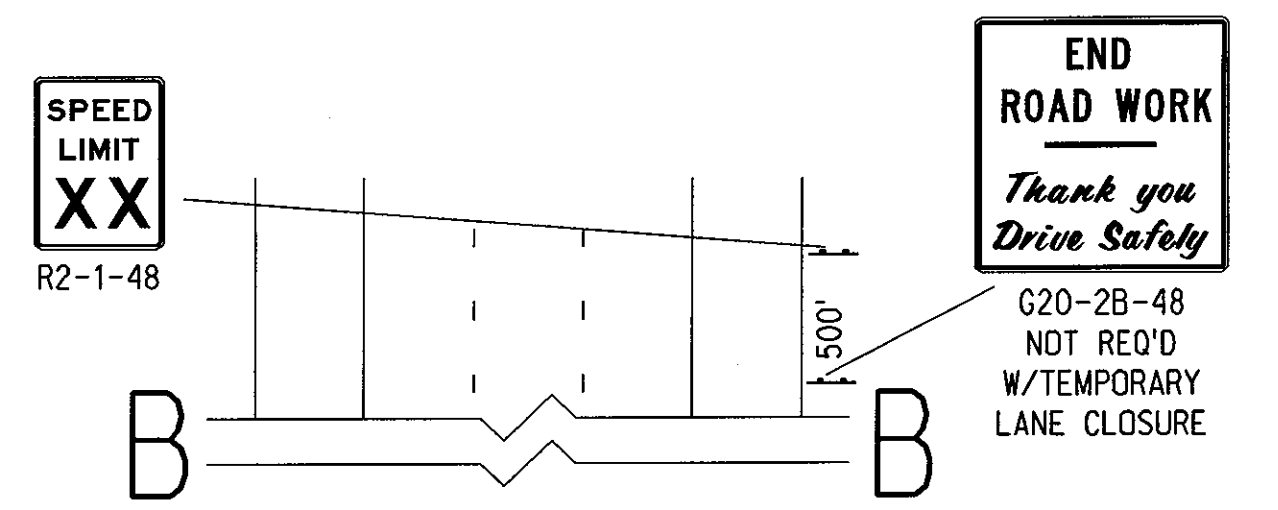
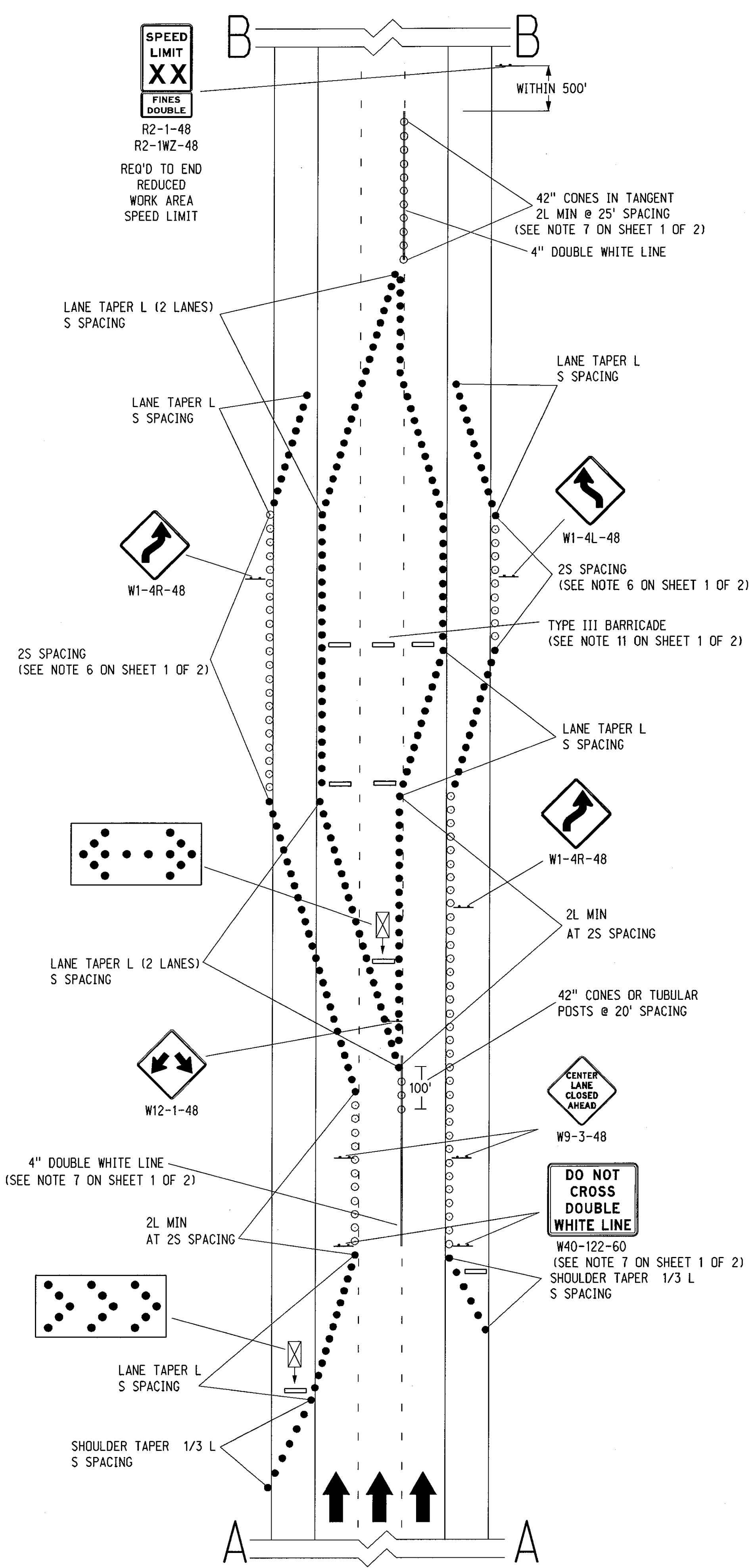
DESIGNED	TJF	LANE CLOSURE PLAN	1/2
REVIEWED		FOR MULTILANE ROADWAYS	
APPROVED	DATE DRAWN	TRAFFIC ENGINEER	DATE
	12/12		



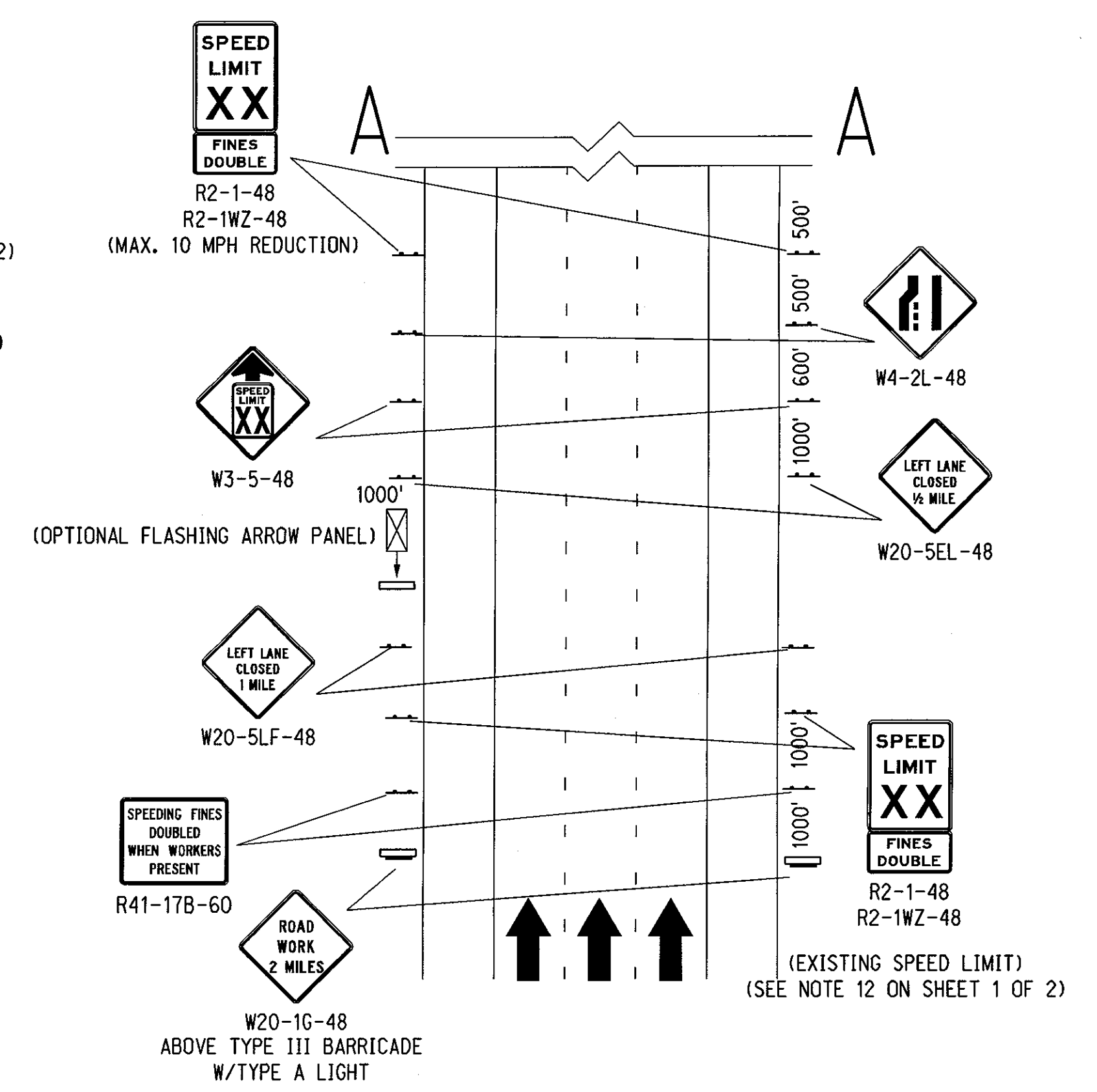
**SIDE ROAD ENTRY WITHIN LANE CLOSURE**



- LEGEND**
- FLASHING ARROW PANEL
  - TYPE III BARRICADE
  - REFLECTORIZED PLASTIC DRUM
  - REFLECTORIZED PLASTIC DRUM OR 42" REFLECTORIZED CONE
  - SINGLE POST SIGN
  - DOUBLE POST SIGN



**CENTER LANE CLOSURE**



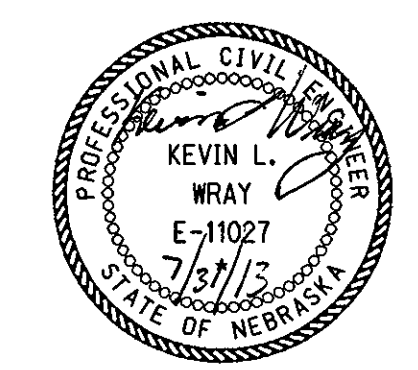
**TAPER FORMULA**

$L = S \times W$  FOR SPEEDS OF 45 MPH OR MORE.

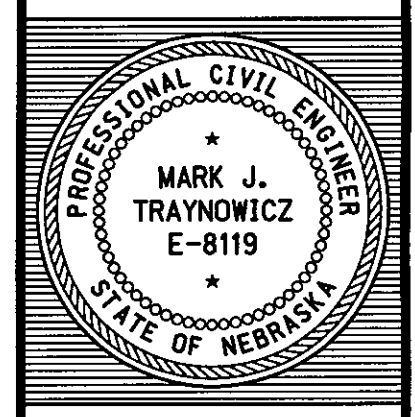
$L = \frac{WS^2}{60}$  FOR SPEEDS OF 40 MPH OR LESS.

WHERE:

- L = MINIMUM LENGTH OF TAPER.
- S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.
- W = WIDTH OF OFFSET (LANE WIDTH).



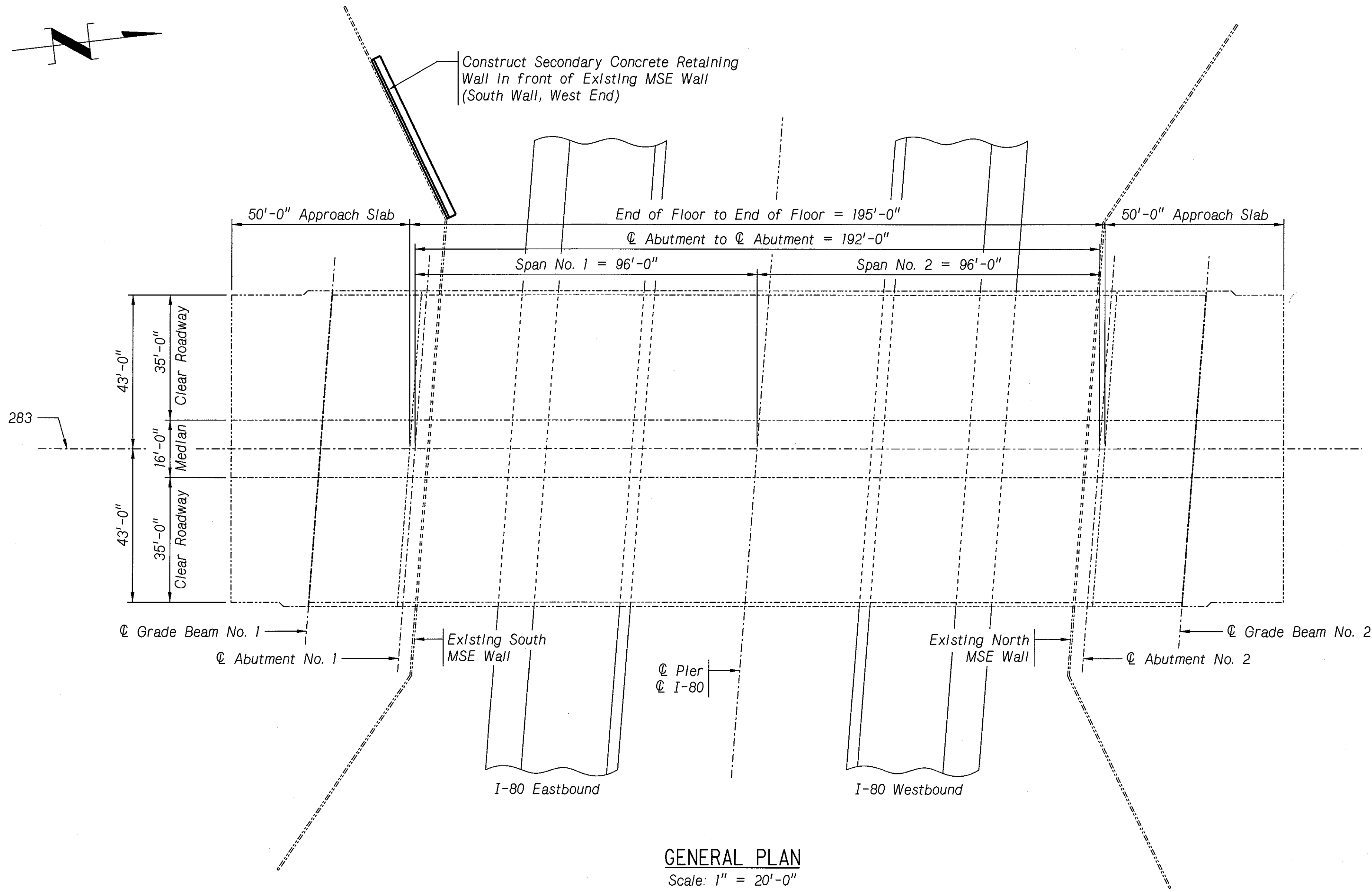
NEBRASKA DEPARTMENT OF ROADS TRAFFIC ENGINEERING DIVISION			
TYPICAL TRAFFIC CONTROL PLAN			
DESIGNED	TJF	LANE CLOSURE PLAN	2/2
REVIEWED		FOR MULTILANE ROADWAYS	
APPROVED	DATE DRAWN	TRAFFIC ENGINEER	DATE
	12/12		



BRIDGE ENGINEER

COUNTY DAWSON  
 HWY. NO. I-80  
 REF. POST. 237.22  
 STA. --  
 DESIGNED BY DEPT.  
 NEDOR  
 Nebraska  
 Department of Roads  
 CHAD S. PACKARD  
 E-10838  
 STATE OF NEBRASKA

LOCATION U.S.-283 OVER I-80  
 SKEW  
 ROADWAY  
 DESIGN LIVE LOAD  
 CHECKED BY KTL  
 DATE JULY 2013  
 GENERAL PLAN  
 SECONDARY CONCRETE RETAINING WALL  
 BRIDGE DIVISION



- NOTES -

Before ordering any materials, the Contractor shall make a detailed field inspection of the structure verifying all dimensions and reporting to the Engineer any discrepancies between the field measurements and those shown on the plans.

All materials removed shall become the property of the Contractor and shall be removed from the project site.

The existing structure was built under project 283-2(103), dated June, 1995. Plans are available from the Bridge Division upon request.

The State does not guarantee that these repair plans or the As-built plans depict the actual site conditions and shall not be liable for any discrepancies.

Dimensions shown are obtained from the existing As-built Plans. The engineer shall establish control points from the existing structure as needed.

All materials, equipment, tools, labor and Incidentals necessary to complete the work, that are not paid for directly, shall be considered subsidiary to other items for which payment is made.

Concrete shall be Class "47BD", with a 28-day strength of 4000 psi.

Chamfer all exposed edges of concrete.

The minimum clearance, measured from the face of the concrete to the surface of any reinforcing bar, shall be 2", except where otherwise noted.

All reinforcing steel shall be epoxy coated and conform to the requirements of ASTM A615/A615M, Grade 60 steel.

Field bend and/or clip reinforcing bars as needed to maintain minimum clearance. Touch-up clipped ends or damaged areas of epoxy coated bars with epoxy coating.

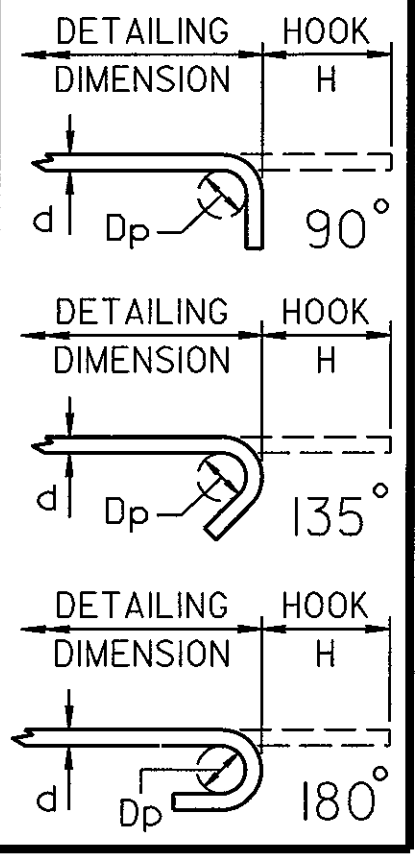
Damage to existing structures, consequent to the contractors operations, shall be repaired at the contractor's expense, under the direction of the Engineer.

- QUANTITIES -

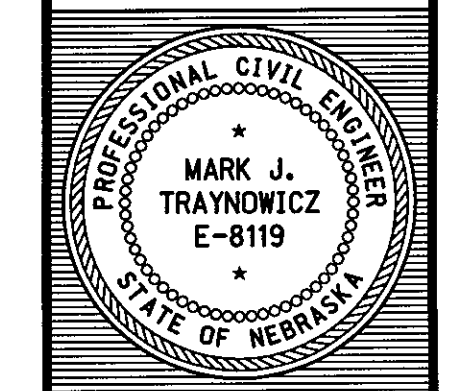
CLASS 47BD-4000 CONCRETE FOR RETAINING WALL \_\_\_\_\_ 11.5 CY

EPOXY COATED REINFORCING STEEL FOR RETAINING WALL \_\_\_\_\_ 1741 LB

BILL OF BARS					BENDING DIAGRAMS		HOOK LENGTH		PIN DIAMETER		DETAILING DIMENSION		
MARK	NO.	LENGTH	TYPE	WEIGHT (LBS.)	ALL DIMENSIONS ARE IN INCHES, OUT TO OUT & NOT TO SCALE		STIRRUPS AND TIES		PRIMARY STRESS		STIRRUP & TIES		
							BAR SIZE	HOOK H	BAR SIZE	Dp	BAR SIZE	Dp	
W501	50	8'-0"	501	417		90°	4"	4	3"	3	1 1/2"		
W502	50	7'-10"	502	409		135°	4 1/2"	4 1/2"	5	3 3/4"	4	2"	
W503	18	48'-9"	STR.	915		5'-7"	5 1/2"	6	4 1/2"	6	4 1/2"	6	4 1/2"
						2'-3"	8"	7	5 1/4"	8	6"	7	5 1/4"
						9"	8	9"	9	9 1/2"	8	6"	
						10 1/2"	10	10 1/2"	10	11"			
							11	12"	11	12"			
							d = BAR SIZE Dp = PIN DIAMETER						

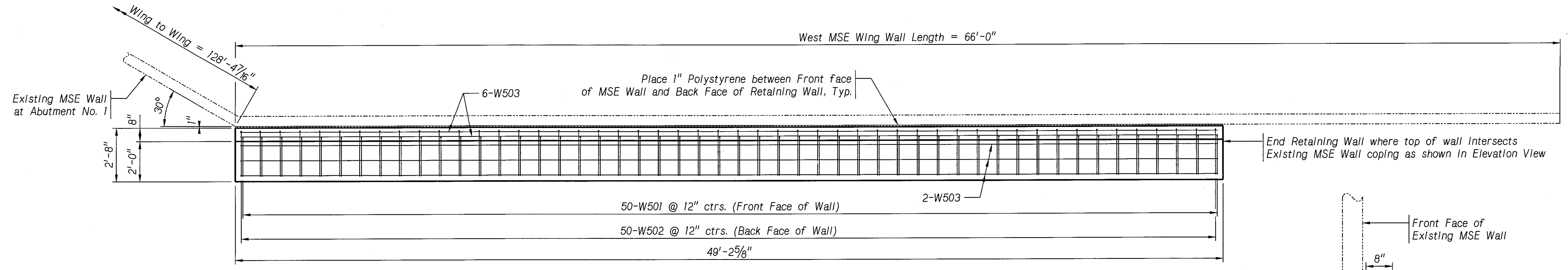
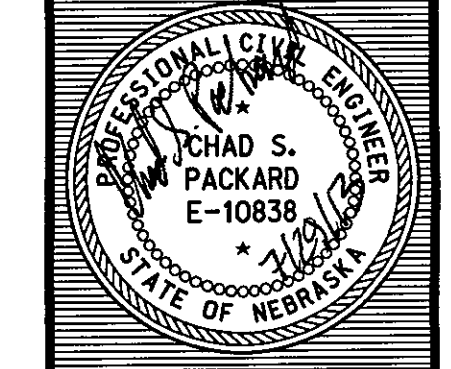
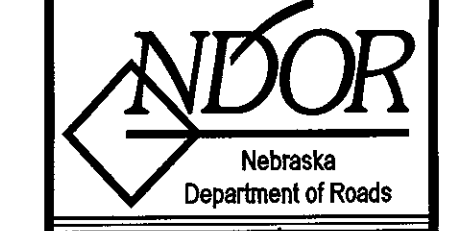


File: Lexington Retaining Wall.dgn Date: 29-JUL-2013 09:35  
 User: dor2039  
 Computer: DRBRIDGE97

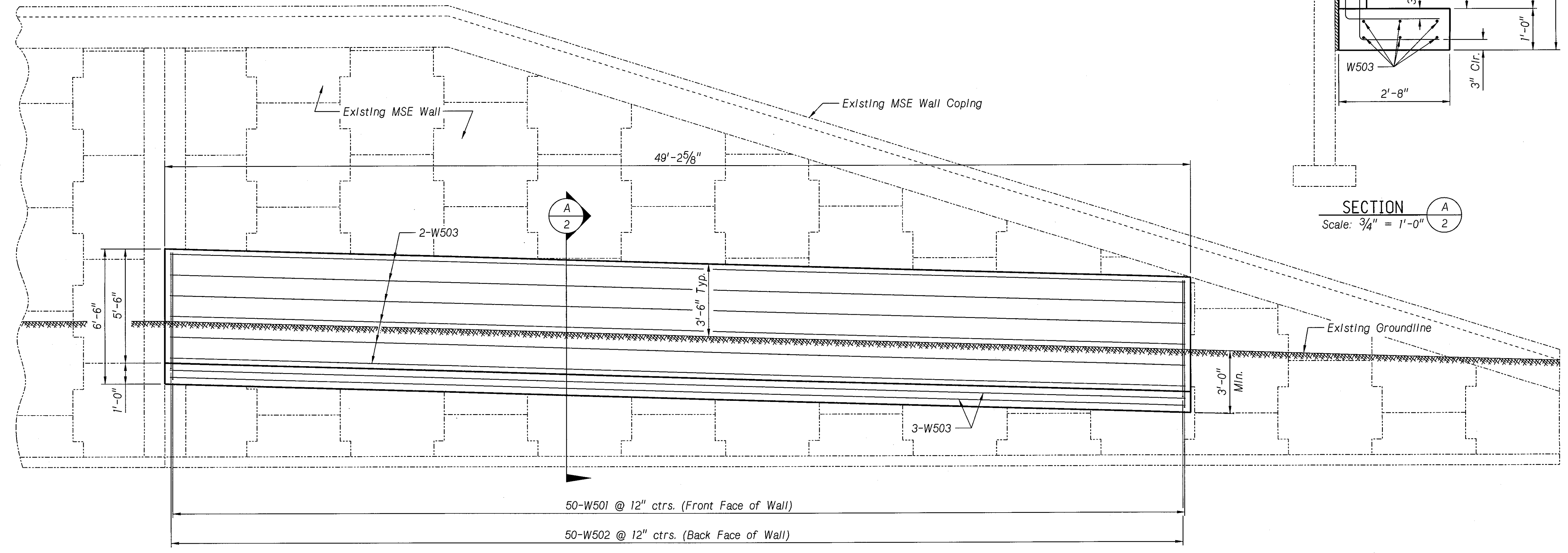


LOCATION U.S.-283 OVER I-80  
SKEW ROADWAY  
DESIGN LIVE LOAD  
COUNTY DAWSON  
HWY. NO. I-80  
REF. POST. 237.22  
STA. --  
DESIGNED BY DEPT.  
DETAILED BY BRP  
CHECKED BY KTL  
DATE JULY 2013

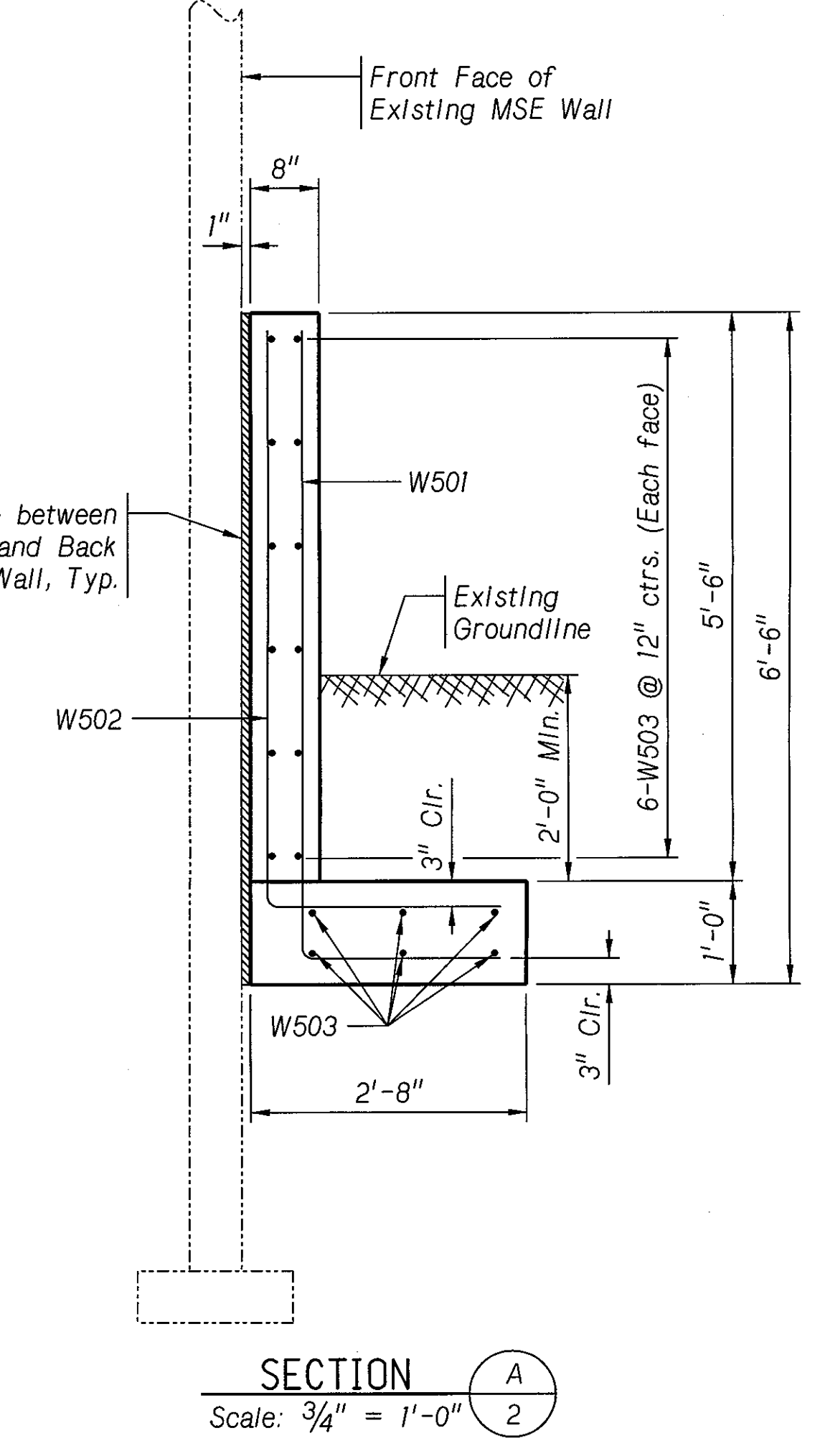
SECONDARY CONCRETE RETAINING WALL  
DETAILS  
STATE OF NEBRASKA - DEPARTMENT OF ROADS - BRIDGE DIVISION



PLAN OF CONCRETE RETAINING WALL  
Scale: 3/4" = 1'-0"



ELEVATION OF CONCRETE RETAINING WALL  
Scale: 3/4" = 1'-0"



SECTION A-A  
Scale: 3/4" = 1'-0"

File: Lexington Retaining Wall.dgn Date: 29-JUL-2013 09:35 User: dor2039 Computer: DBRIDGE97