

WBS 37840

TIP PROJECT:

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**PLAN FOR PROPOSED  
TRAFFIC CONTROL, MARKING & DELINEATION  
McDOWELL COUNTY**

STATE PROJECT REFERENCE NO.	SHEET NO.
37840	TCP-1

**LEGEND**

- GENERAL**
- DIRECTION OF TRAFFIC FLOW
  - NORTH ARROW
  - PROPOSED PVMT.    EXIST. PVMT.
  - WORK AREA
  - REMOVAL OF EXISTING PAVEMENT
- TRAFFIC CONTROL DEVICES**
- TYPE I BARRICADE
  - TYPE II BARRICADE
  - TYPE III BARRICADE
  - CONE
  - DRUM
  - FLASHING ARROW PANEL (TYPE C)
  - TYPE 'B' WARNING LIGHT
  - STATIONARY SIGN
  - PORTABLE SIGN
  - STATIONARY OR PORTABLE SIGN
  - WARNING FLAGS
  - CRASH CUSHION
  - CHANGEABLE MESSAGE SIGN
  - TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
  - POLICE
  - FLAGGER
  - PORTABLE TRAFFIC SIGNAL
- PAVEMENT MARKINGS**
- CRYSTAL/CRYSTAL PAVEMENT MARKER
  - YELLOW/YELLOW PAVEMENT MARKER
  - CRYSTAL/RED PAVEMENT MARKER
  - PAVEMENT MARKING SYMBOLS

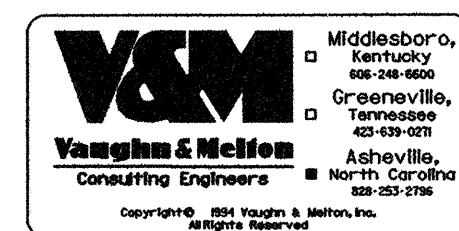
**ROADWAY STANDARD DRAWINGS**

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - ROADWAY DESIGN UNIT-N.C. DEPARTMENT OF TRANSPORTATION-RALEIGH, N.C., DATED JULY 2006 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION - REFLECTIVE END TREATMENT
1170.01	PORTABLE CONCRETE BARRIER
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1250.01	PAVEMENT MARKER SPACING
1253.01	SNOWPLOWABLE RAISED PAVEMENT MARKERS
1261.01	GUARDRAIL AND BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

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PM-7	FINAL PAVEMENT MARKING PLAN, DETAILS 3-M & 3-N



SCALE: NONE  
DATE: JUNE 06  
DWG. BY: SF  
DESIGN BY: LDB  
REVIEWED BY: RMS

APPROVED:   
DATE: 7-2-17-2006



PLAN PREPARED FOR: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL UNIT

L. D. BROWN, P.E.    TRAFFIC CONTROL PROJECT ENGINEER  
R. M. SCHULER, P.E.    TRAFFIC CONTROL PROJECT DESIGN ENGINEER  
S. FEDERATION    TRAFFIC CONTROL DESIGN ENGINEER / TECHNICIAN



# PROJECT NOTES

## GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

- A) ADAPT THE TRAFFIC CONTROL PLANS, WHEN DIRECTED BY THE ENGINEER, TO MEET FIELD CONDITIONS TO PROVIDE SAFE AND EFFICIENT TRAFFIC MOVEMENT. CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE, OR RESULT IN DUPLICATE, OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES.

### TIME RESTRICTIONS

- B) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
1. -L- (US 70)	MONDAY - FRIDAY: 7:00 AM TO 9:00 AM 2:30 PM TO 4:00 PM
2. -Y- (JOHN ROACH RD.)	MONDAY - FRIDAY: 7:00 AM TO 9:00 AM 2:30 PM TO 4:00 PM

- C) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME
1. -L- (US 70)
2. -Y- (JOHN ROACH RD.)

### HOLIDAY

- FOR NEW YEAR'S DAY, BETWEEN THE HOURS OF 2:30 PM DECEMBER 31ST TO 9:00 AM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A SATURDAY OR A SUNDAY, THEN UNTIL 9:00 AM THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 2:30 PM THURSDAY AND 9:00 AM MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 AM FRIDAY TO 9:00 AM TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 2:30 PM THE DAY BEFORE INDEPENDENCE DAY AND 9:00 AM THE DAY AFTER INDEPENDENCE DAY.  
  
IF INDEPENDENCE DAY IS ON A SATURDAY OR SUNDAY, THEN BETWEEN THE HOURS OF 6:00 AM THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 AM THE TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 2:30 PM FRIDAY TO 9:00 AM TUESDAY.
- FOR THANKSGIVING, BETWEEN THE HOURS OF 2:30 PM TUESDAY TO 9:00 AM MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 2:30 PM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 AM THE FOLLOWING MONDAY AFTER THE WEEK OF CHRISTMAS.
- FOR THE MOUNTAIN GLORY FESTIVAL, BETWEEN THE HOURS OF 6:00 AM AND 11:00 PM THE SECOND SATURDAY OF OCTOBER.

- D) DO NOT STOP TRAFFIC FOR MORE THAN 10 MINUTES AS FOLLOWS:

ROAD NAME	OPERATION
US 70	SHIFTING TRAFFIC

- E) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR OTHERWISE DIRECTED BY THE ENGINEER.

- F) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED.

### LANE AND SHOULDER CLOSURE REQUIREMENTS

- G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 40 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- H) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- I) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- J) DO NOT WORK SIMULTANEOUSLY, ON BOTH SIDES OF AN OPEN TRAVELWAY, WITHIN THE SAME LOCATION, ON A TWO-LANE, TWO-WAY ROAD.

### PAVEMENT EDGE DROP OFF REQUIREMENTS

- K) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS A DROP-OFF AS FOLLOWS:  
  
BACKFILL DROP-OFFS THAT EXCEED 2" ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.  
  
BACKFILL DROP-OFFS THAT EXCEED 3" ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.  
  
BACKFILL WITH ABC OR SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.
- L) DO NOT EXCEED A DIFFERENCE OF 1 1/2" IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT IN ADVANCE AND A MINIMUM OF ONCE EVERY MILE THROUGHOUT THE EVEN AREA.

### TRAFFIC PATTERN ALTERATIONS

- M) NOTIFY THE ENGINEER TWENTY ONE (21) CALANDER DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATIONS.

### SIGNING

- N) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 100 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.  
  
WHEN NO WORK IS BEING CONDUCTED FOR A PERIOD LONGER THAN ONE WEEK, REMOVE OR COVER ALL ADVANCE WORK ZONE WARNING SIGNS, AS DIRECTED BY THE ENGINEER, AT NO COST TO THE DEPARTMENT.
- O) PROVIDE PERMANENT SIGNING.
- P) INSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

### TRAFFIC BARRIER

- Q) INSTALL PORTABLE CONCRETE BARRIER ACCORDING TO THE TRAFFIC CONTROL PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE PORTABLE CONCRETE BARRIER IS INSTALLED AT ANY LOCATION, PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

ONCE PORTABLE CONCRETE BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE PORTABLE CONCRETE BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE PORTABLE CONCRETE BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS, BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

- R) PROTECT THE APPROACH END OF PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED IMPACT ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

OFFSET THE APPROACH END OF THE PORTABLE CONCRETE BARRIER A MINIMUM OF 40' FROM ONCOMING TRAFFIC OR PROTECT AT ALL TIMES BY A TEMPORARY CRASH CUSHION.

INSTALL PORTABLE CONCRETE BARRIER WITH THE TRAFFIC FLOW, BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE PORTABLE CONCRETE BARRIER AGAINST THE TRAFFIC FLOW, BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP CLOSED THE SECTION OF THE ROADWAY UNTIL THE BARRIER CAN BE PLACED OR AFTER BARRIER IS REMOVED.

### TRAFFIC CONTROL DEVICES

- S) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT. ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT.

### PAVEMENT MARKINGS AND MARKERS

- T) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
US70	THERMOPLASTIC	NONE

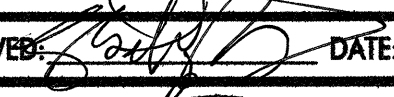

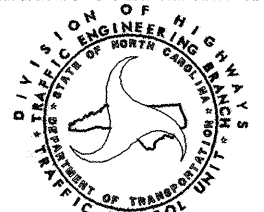
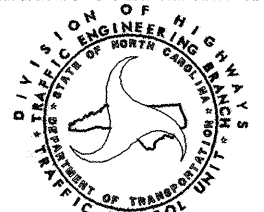
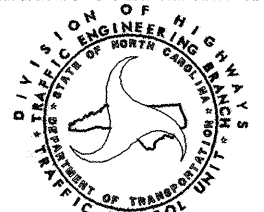

- U) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
US70	PAINT	NONE

- V) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

- W) REPLACE ANY PAVEMENT MARKINGS THAT HAVE BEEN DAMAGED BY THE END OF EACH DAY'S OPERATION.

- X) PLACE AT LEAST TWO APPLICATIONS OF PAINT ON NEW ASPHALT WITH TEMPORARY TRAFFIC PATTERNS WHICH WILL REMAIN IN PLACE OVER THREE (3) MONTHS. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON AMPL DRYING TIME, AS DETERMINED BY THE ENGINEER.

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# PROJECT PHASING

## PHASE I

\* STEP 1:  
ERECT WORK ZONE ADVANCE WARNING SIGNS USING DETAIL DRAWINGS FOR WORK ZONE SIGNS. (SEE TCP-11)

\* STEP 2:  
USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, AND FLAGGERS, CONSTRUCT CATCH BASIN AND OUTLET (STRUCTURE 4) AT -L- STA. 42+60+/-, PLACE PORTABLE CONCRETE BARRIER (PCB)  
- ON THE NORTH SIDE OF US70 FROM STA.42+72 NORTHSIDE -L- TO STA.43+72 NORTHSIDE -L- (SEE DETAIL 1-C, TCP-5).

NOTE: AS FIELD CONDITIONS ALLOW, USE INCIDENTAL STONE AS NEEDED TO MAINTAIN TRAFFIC ON SITE DURING PHASE I, STEP 2 IN LIEU OF TEMPORARY LANE CLOSURES

USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, AND FLAGGERS, CONSTRUCT PROPOSED UP TO, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM:

- STA.10+80.46 NORTHSIDE -L- TO STA.36+33.11 NORTHSIDE -L- (PROPOSED CONST. WESTBOUND). (SEE DETAILS 1-A & 1-B, TCP-4).

USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, AND FLAGGERS, CONSTRUCT -Y- FROM:

- STA.10+76.28 EASTSIDE -Y- TO STA.11+61.60 EASTSIDE -Y- (PROPOSED CONST. NORTHBOUND). (SEE DETAIL 1-D, TCP-5). INSTALL TYPE III BARRICADES AT BOTH ENDS OF CONSTRUCTION LIMITS PER DETAIL 1-D, TCP-5.

NOTE: WORK ON THE CULVERT EXTENSION @ STA.43+15.57 NORTHSIDE -L- MUST BE COMPLETED IN A CONTINUOUS MANNER

\* STEP 3:  
USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, AND FLAGGERS, PLACE TEMPORARY PAVEMENT MARKINGS (DOUBLE YELLOW-PAINT) FROM STA.10+80.46 -L- TO STA.36+33.11 -L-, AS DIRECTED BY ENGINEER. (SEE DETAIL 3-A, PM-2) AND MAINTAIN EXISTING TRAFFIC PATTERN ON -L-.

USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, AND FLAGGERS, BEGIN CONSTRUCTION ON ALL DRAINAGE ON THE PROJECT EXCEPT FOR THE FOLLOWING:

- CULVERT EXTENSION @ STA.43+15.57 SOUTHSIDE -L- .

NOTE: COMPLETE WORK REQUIRED FOR CROSS PIPE INSTALLATION AT:

- STA.41+10 +/- -L-
- STA.42+67 +/- -L-
- STA.56+30 +/- -L-
- STA.11+02 +/- -Y-
- WATER LINE CROSSINGS AT
- STA.33+50 +/- -L-
- STA.56+30 +/- -L-
- STA.11+29 +/- -Y-
- SEWER LINE BENEATH CULVERT EXTENTION AT
- STA.43+15.57 +/- -L-

BETWEEN THE HOURS OF 7:00 PM AND 6:00 AM. SEE INTERMEDIATE CONTRACT TIMES AND SPECIAL PROVISIONS.

USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, AND FLAGGERS, CONSTRUCT PROPOSED UP TO, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM:

- STA.10+80.46 SOUTHSIDE -L- TO STA.36+33.11 SOUTHSIDE -L- (PROPOSED CONST. EASTBOUND). (SEE DETAILS 1-G & 1-H, TCP-6).

USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, AND FLAGGERS, PLACE TEMPORARY PAVEMENT MARKINGS (TAPE) FROM STA.10+00 -Y- TO STA.11+40 -Y-, (SEE DETAIL 3-B, PM-2) AND

## PHASE I (CONTINUED)

USING ROADWAY STANDARD NO. 1101.03, SHEET 1 OF 9, DETOUR EXISTING TRAFFIC ONTO NEWLY CONSTRUCTED -Y- SOUTHBOUND EXIT FROM STA.10+76.28 EASTSIDE -Y- TO STA.11+61.60 EASTSIDE -Y-, AND CLOSE WESTSIDE -Y- (SOUTHBOUND EXIT) FROM:

- STA.10+76.28 WESTSIDE -Y- TO STA.11+61.60 WESTSIDE -Y- INSTALL TYPE III BARRICADES AT BOTH ENDS OF CONSTRUCTION LIMITS (SEE DETAIL 1-E, TCP-5).

\* STEP 4:  
USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, AND FLAGGERS, PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) FROM STA.10+80.46 -L- TO STA.33+33.11 -L-, PLACE TEMPORARY PAVEMENT MARKINGS FROM STA. 33+33.11 -L- TO STA. 36+33.11 -L-, AND MAINTAIN TRAFFIC IN 2-LANE, 2-WAY PATTERN (SEE DETAILS 3-E & 3-F, PM-3).

USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, AND FLAGGERS, CONSTRUCT -Y- FROM:

- STA.10+76.28 WESTSIDE -Y- TO STA.11+61.60 WESTSIDE -Y- (PROPOSED CONST. SOUTHBOUND) (SEE DETAIL 1-E, TCP-5).

USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, AND FLAGGERS, CONSTRUCT PROPOSED UP TO, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM:

- STA.36+33.11 NORTHSIDE -L- TO STA.42+69 NORTHSIDE -L- (PROPOSED CONST. AND OVERLAY WESTBOUND) (SEE DETAIL 1-I, TCP-7).
- STA.44+00 NORTHSIDE -L- TO STA.59+21.57 NORTHSIDE -L- (PROPOSED CONST. AND OVERLAY WESTBOUND). (SEE DETAILS 1-I & 1-J, TCP-7).

NOTE: WORK ON THE CULVERT EXTENSION @ STA.43+15.57 NORTHSIDE -L- (PHASE I, STEP 3) MUST BE COMPLETED BEFORE PROCEEDING WITH PHASE I, STEP 5.

\* STEP 5:  
USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, AND FLAGGERS, PLACE TEMPORARY PAVEMENT MARKINGS (DOUBLE YELLOW-PAINT AND WHITE LANE LINE-PAINT) FROM STA.36+33.11 -L- TO STA.59+21.57 -L- AS DIRECTED BY ENGINEER. (SEE DETAILS 3-C & 3-D, PM-2, 3-G & 3-H, PM-4) AND MAINTAIN EXISTING TRAFFIC PATTERN ON -L-.

REMOVE TYPE III BARRICADES AND DETOUR SIGNING FOR -Y-, AND USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, AND FLAGGERS PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) FROM STA.10+00 -Y- TO STA.11+30 -Y-, AND OPEN -Y- TO PROPOSED TRAFFIC PATTERN. (SEE DETAIL 1-K, TCP-8 & DETAIL 3-C, PM-2).

USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, AND FLAGGERS, CLOSE THE EXISTING NORTHBOUND (MOST EASTERLY) SCHOOL ENTRANCE (JOHN ROACH ROAD). INSTALL TYPE III BARRICADES AT BOTH ENDS OF THE EXISTING NORTHBOUND (MOST EASTERLY) SCHOOL ENTRANCE (JOHN ROACH ROAD). (SEE DETAIL 1-K, TCP-8).

USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, AND FLAGGERS, REMOVE PORTABLE CONCRETE BARRIER (PCB)

- ON THE NORTH SIDE OF US70 FROM STA.42+72 NORTHSIDE -L- TO STA.43+72.

\* STEP 6:  
USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, AND FLAGGERS, CONSTRUCT PROPOSED UP TO, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM:

- STA.42+69 NORTHSIDE -L- TO STA.44+00 NORTHSIDE -L- (PROPOSED CONST. AND OVERLAY WESTBOUND). (SEE DETAIL 1-K, TCP-8, & DETAIL 3-D, PM-2).

SCARIFY AND REMOVE THE EXISTING NORTHBOUND (MOST EASTERLY) SCHOOL ENTRANCE (JOHN ROACH ROAD). (SEE DETAIL 1-K, TCP-8).

## PHASE I (CONTINUED)

NOTE: WORK IN A CONTINUOUS MANNER TO COMPLETE STEP 7. IMPLEMENT PHASE II, STEP 1 IN CONJUNCTION WITH STEP 7, AS DEEMED NECESSARY BY THE ENGINEER AND TO INSURE MAINTENANCE OF TRAFFIC.

\* STEP 7:  
USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, AND FLAGGERS, PLACE WEDGING/OVERLAY ON EXISTING EASTBOUND (SOUTHSIDE) -L- UP TO, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM:

- STA.36+33.11 SOUTHSIDE -L- TO STA.59+21.57 SOUTHSIDE -L- (PROPOSED WEDGING/OVERLAY EASTBOUND) (SEE DETAILS 1-M & 1-N, TCP-9).

## PHASE II

NOTE: WORK IN A CONTINUOUS MANNER TO COMPLETE STEPS 1 & 2

\* STEP 1:  
USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, AND FLAGGERS, PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) FROM STA.33+33.11 -L- TO STA.59+21.57 -L-, (SEE DETAILS 3-I & 3-J, PM-5).

\* STEP 2:  
USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, AND FLAGGERS, RESET PORTABLE CONCRETE BARRIERS (PCB).

- ON THE SOUTHSIDE OF US 70 FROM STA. 42+85 SOUTHSIDE -L- TO STA. 43+40 SOUTHSIDE -L- (SEE DETAIL 2-A, TCP-10).


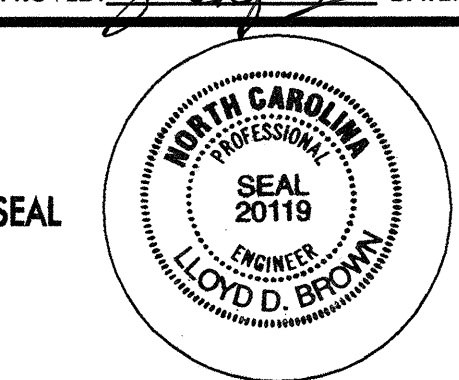
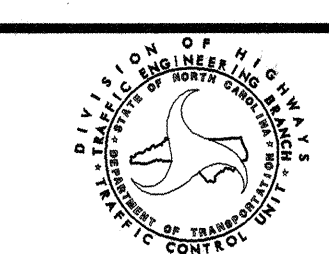
\* STEP 3:  
UTILIZING NEW TRAFFIC PATTERN NOTED IN STEP 1 (PHASE II) AND DRUMS AND TEMPORARY PAVEMENT MARKINGS (PAINT) AS SHOWN ON PM-5, CONSTRUCT PROPOSED UP TO, BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM:

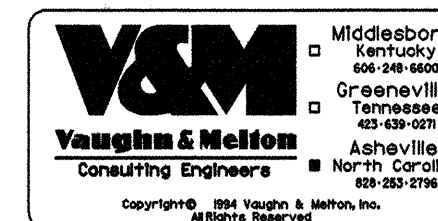
- STA.36+33.11 SOUTHSIDE -L- TO STA.59+21.57 SOUTHSIDE -L- INCLUDING CULVERT EXTENSION AT STA.43+15.57 SOUTHSIDE -L- (SEE DETAILS 2-A & 2-B, TCP-10).

## PHASE III

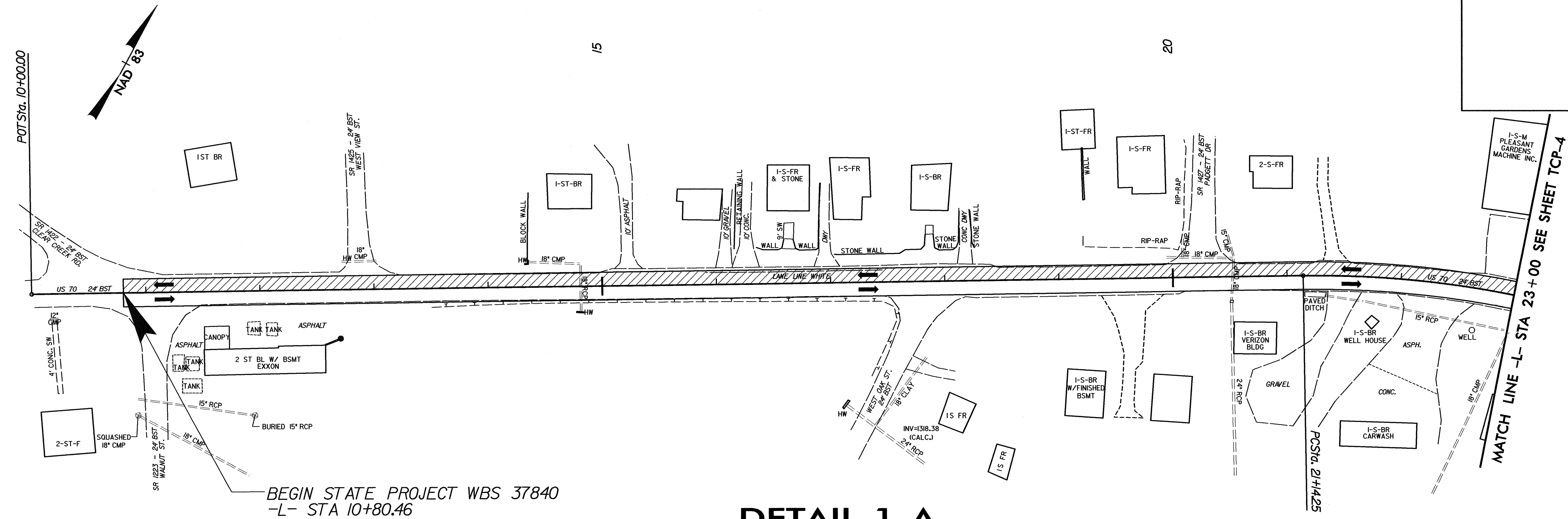
\* STEP 1  
REMOVE TYPE III BARRICADES AND DETOUR SIGNING FOR - L-. MAINTAIN 2-LANE 2-WAY TRAFFIC.

\* STEP 2  
USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 9, PLACE THE FINAL LAYER OF SURFACE COURSE AND THE FINAL PAVEMENT MARKINGS (THERMOPLASTIC), ON THE ENTIRE PROJECT. (SEE DETAILS 3-K & 3-L, PM-6 AND DETAILS 3-M & 3-N, PM-7).

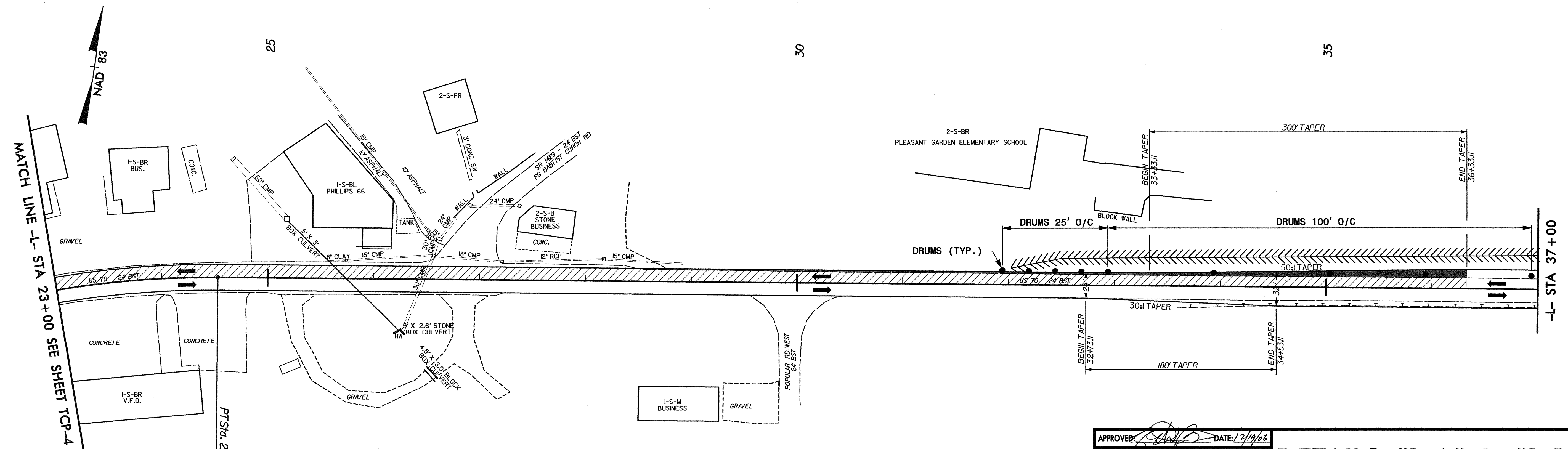
APPROVED:  DATE: 12/19/01	<b>PHASING</b>	
	SCALE: NONE	
	DATE: JUNE 06	
	DWG. BY: SF	
	DESIGN BY: LDB	
REVIEWED BY: RMS	REVISIONS	CADD FILE: MA13038RTCP03.DGN



PROJECT REFERENCE NO.	SHEET NO.
37840	TCP-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



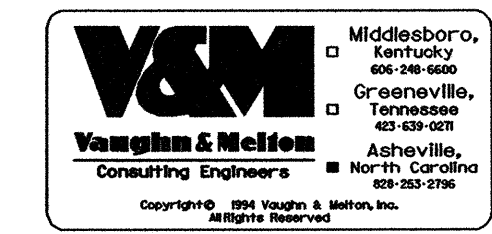
**DETAIL 1-A**



**DETAIL 1-B**

**LEGEND**

	WEDGING / OVERLAY
	PROP. CONSTRUCTION
	TEMP. CONSTRUCTION

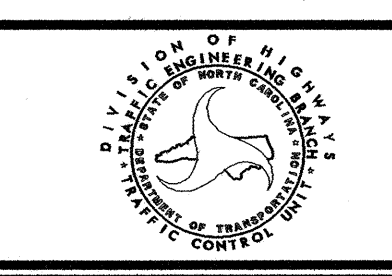


APPROVED: *[Signature]* DATE: 12/19/06

SEAL

**DETAILS "1-A" & "1-B"**

SCALE: 1" = 50'  
 DATE: JUNE 06  
 DWG. BY: SF  
 DESIGN BY: LDB  
 REVIEWED BY: RMS

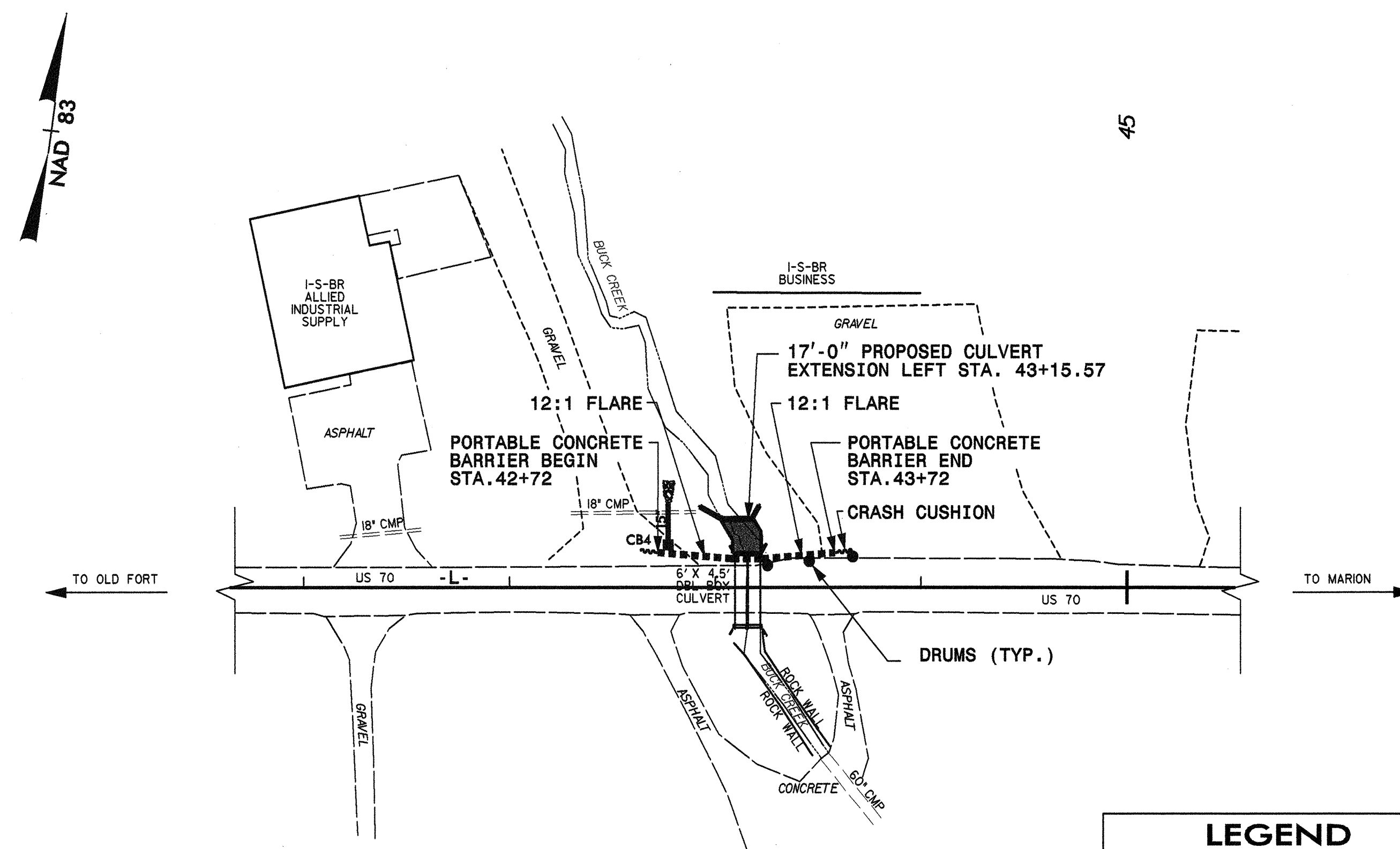


REVISIONS	

CADD FILE: MA130387TCP04.DGN

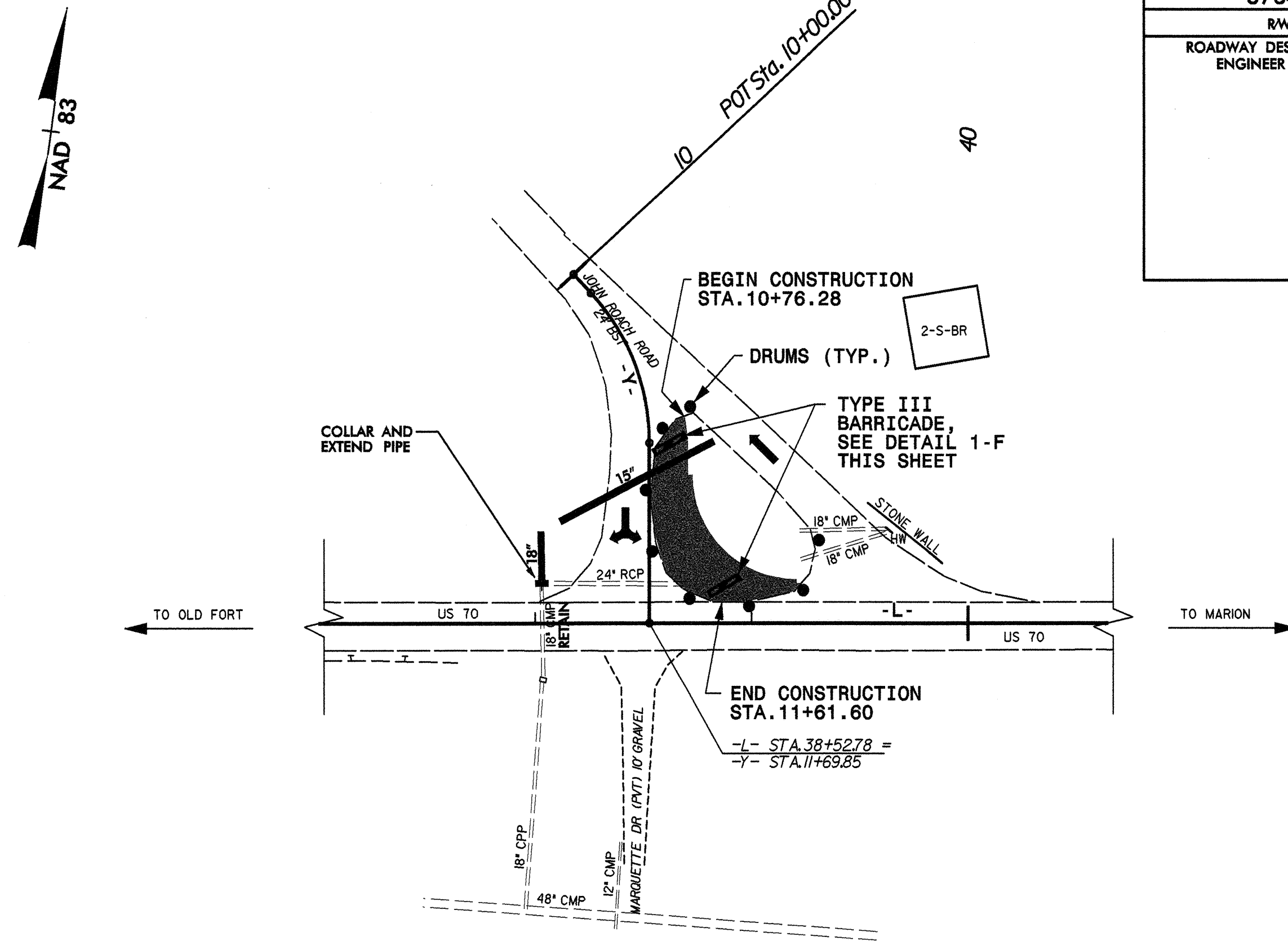


PROJECT REFERENCE NO. <b>37840</b>	SHEET NO. <b>TCP-5</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

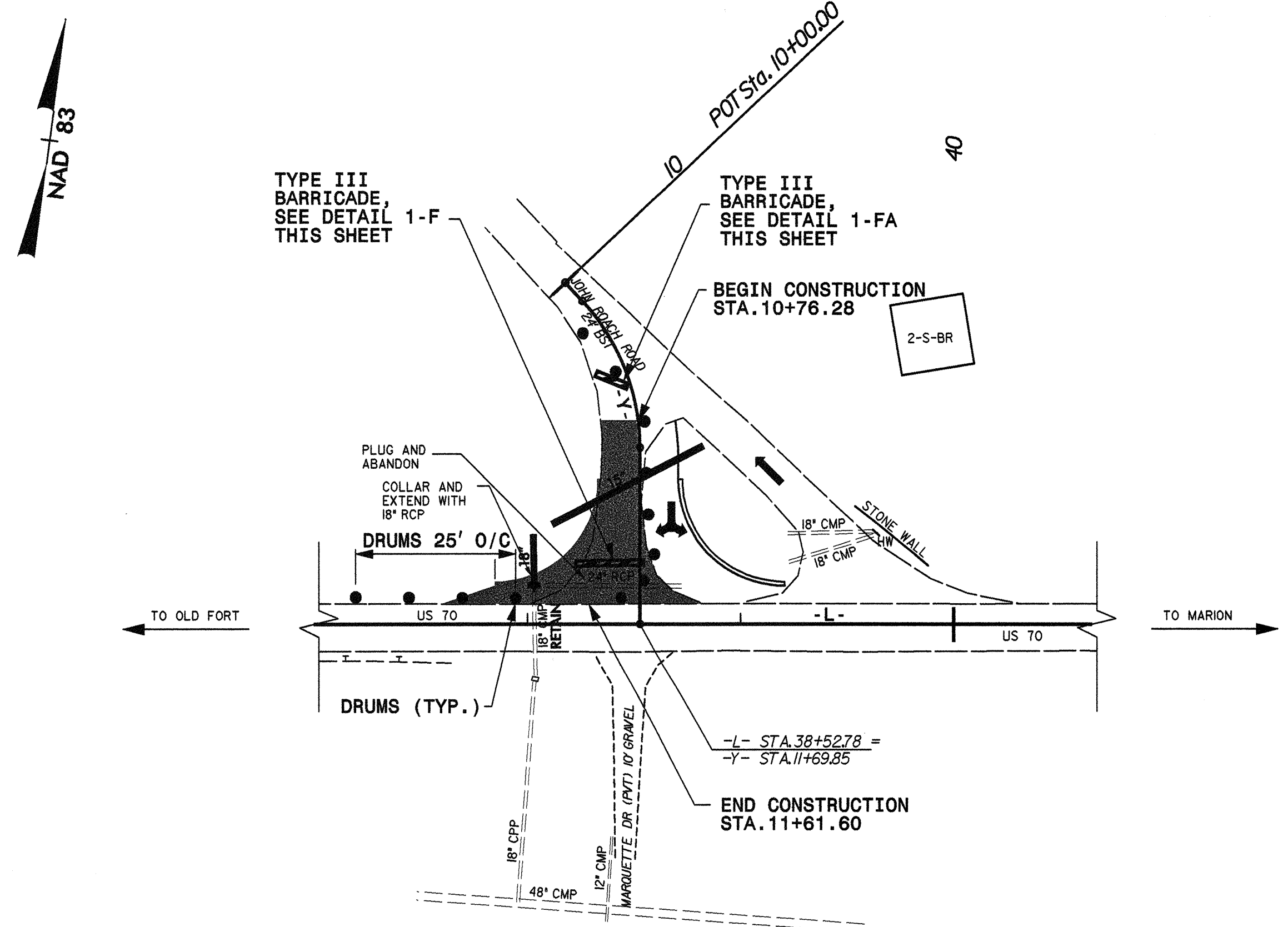


**DETAIL 1-C**

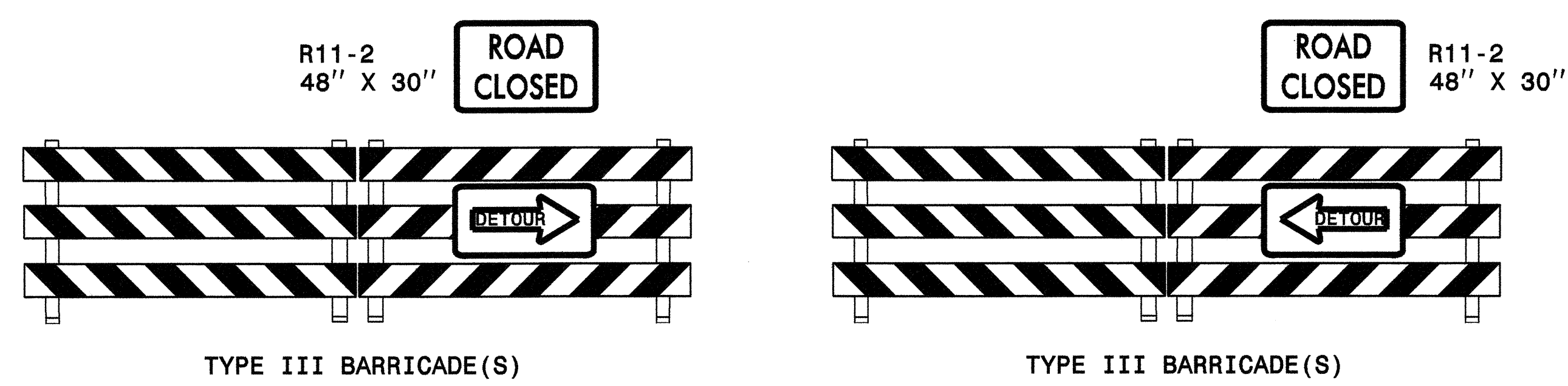
LEGEND	
	WEDGING / OVERLAY
	PROP. CONSTRUCTION
	TEMP. CONSTRUCTION



**DETAIL 1-D**

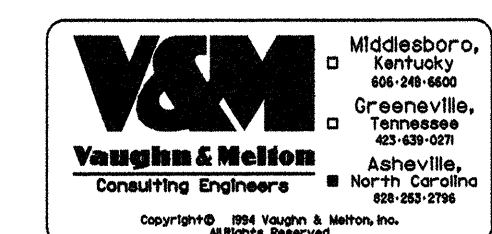


**DETAIL 1-E**



**DETAIL 1-F**

**DETAIL 1-FA**



APPROVED: *[Signature]* DATE: 12/19/06

SEAL

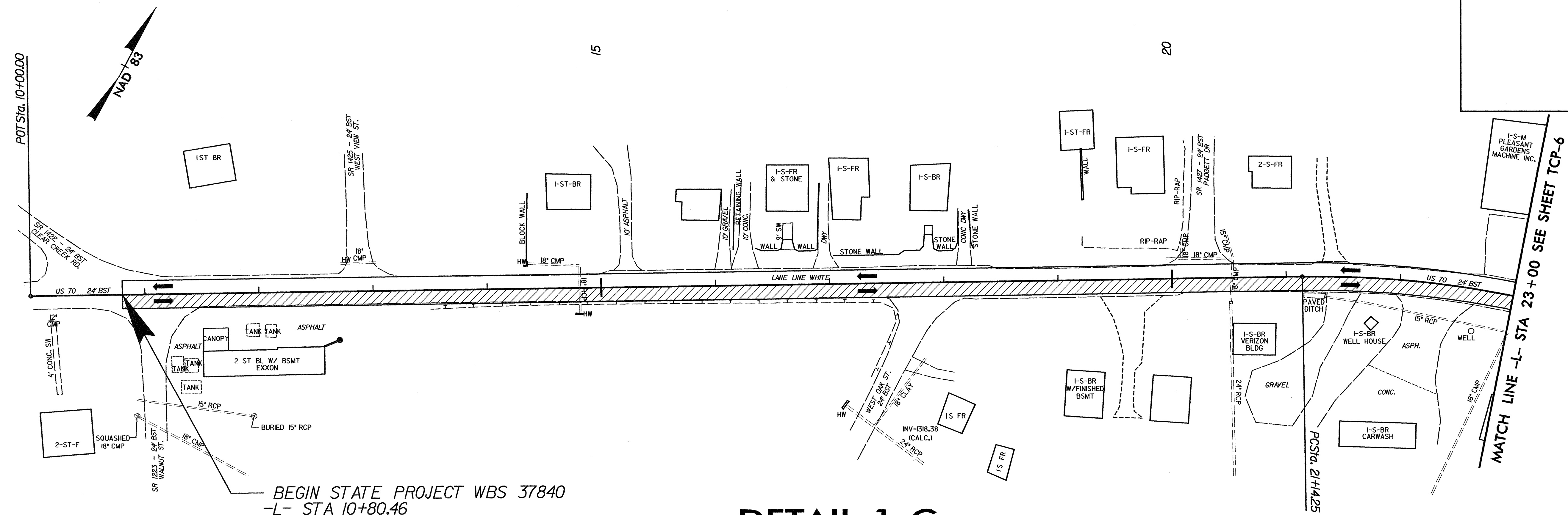
**DETAILS "1-C", "1-D", "1-E" & "1-F"**

SCALE: NONE  
DATE: JUNE 06  
DWG. BY: SF  
DESIGN BY: LDB  
REVIEWED BY: RMS

REVISIONS	

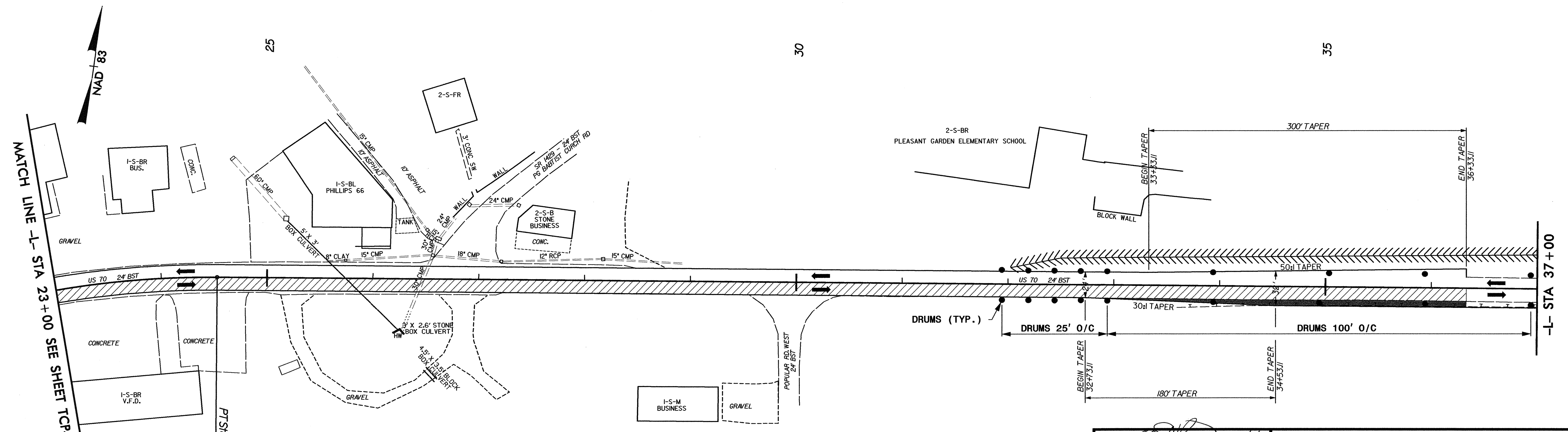
CADD FILE: MA13038RTP05.DGN

PROJECT REFERENCE NO. <b>37840</b>	SHEET NO. <b>TCP-6</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



BEGIN STATE PROJECT WBS 37840  
-L- STA 10+80.46

**DETAIL 1-G**



**LEGEND**

	WEDGING / OVERLAY
	PROP. CONSTRUCTION
	TEMP. CONSTRUCTION

**DETAIL 1-H**

APPROVED: *[Signature]* DATE: 12/10/06

**DETAILS "1-G" & "1-H"**

SCALE: 1" = 50'

DATE: JUNE 06

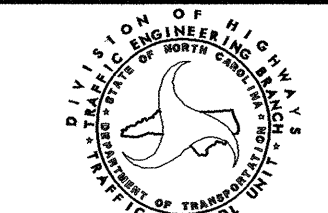
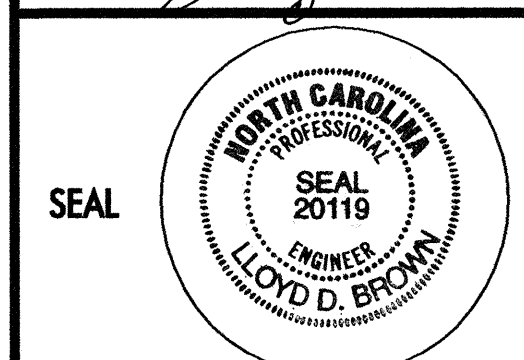
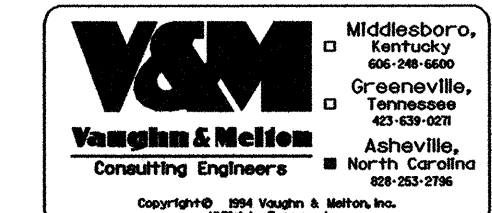
DWG. BY: SF

DESIGN BY: LDB

REVIEWED BY: RMS

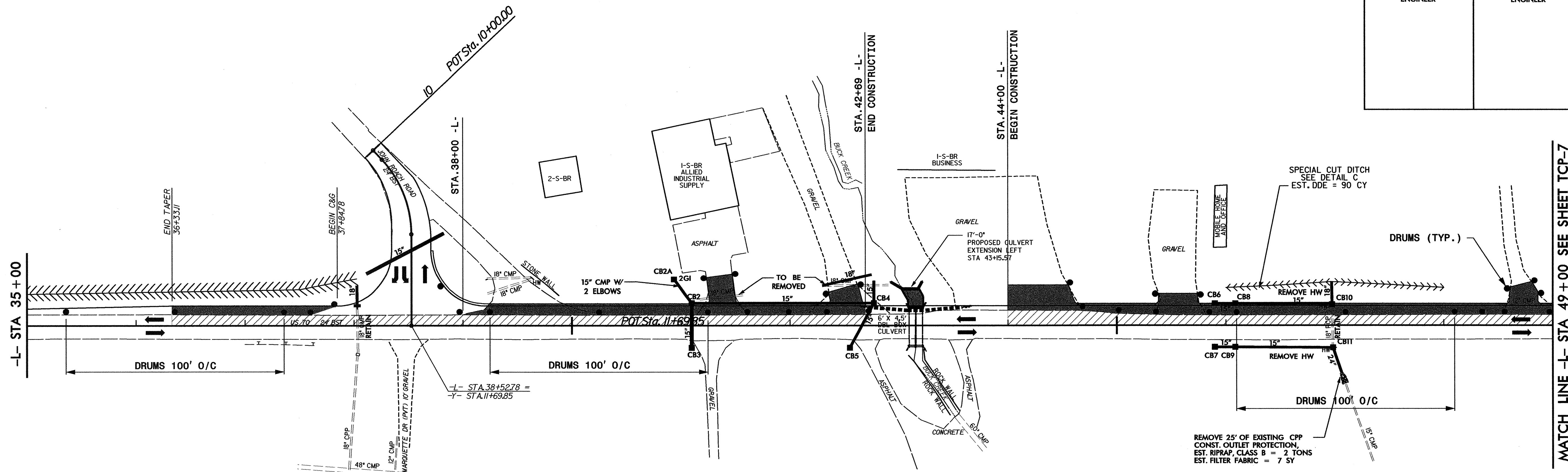
REVISIONS


CADD FILE: MA13038RTCP06.DGN

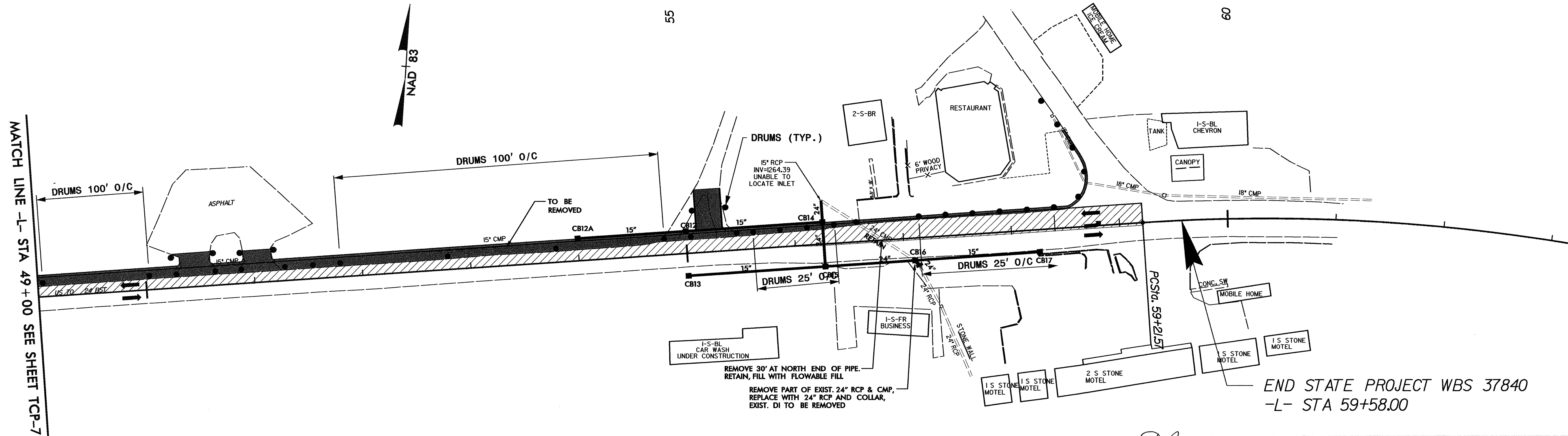




PROJECT REFERENCE NO. <b>37840</b>	SHEET NO. <b>TCP-7</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



**DETAIL 1-I**



**DETAIL 1-J**

**LEGEND**

	WEDGING / OVERLAY
	PROP. CONSTRUCTION
	TEMP. CONSTRUCTION

APPROVED: DATE: 12/19/06

SEAL:

**DETAILS "1-I" & "1-J"**

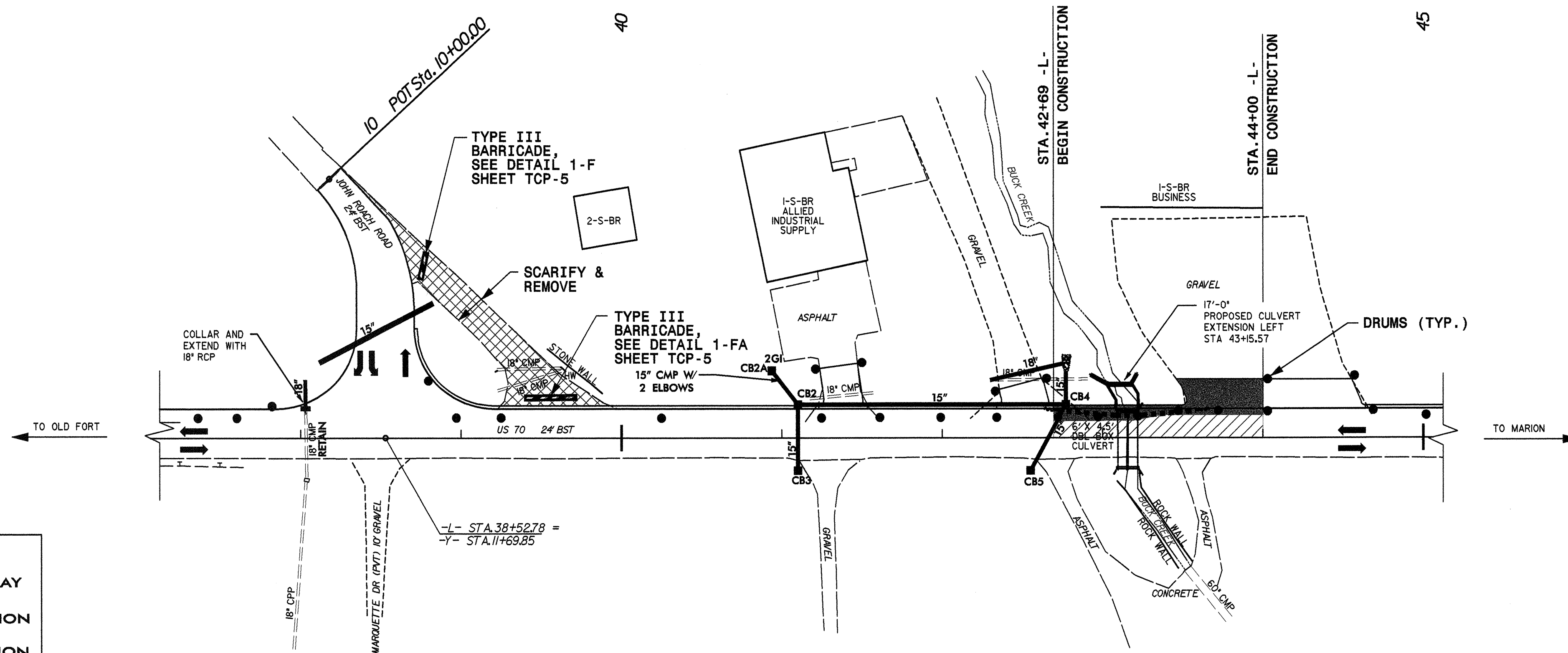
SCALE: NONE		REVISIONS
DATE: JUNE 06		
DWG. BY: SF		
DESIGN BY: LDB		
REVIEWED BY: RMS		

**V&M**  
Vaughan & Melton  
Consulting Engineers

Middleboro, Kentucky  
Greeneville, Tennessee  
Asheville, North Carolina

CADD FILE: MA13038RTCP07.DGN

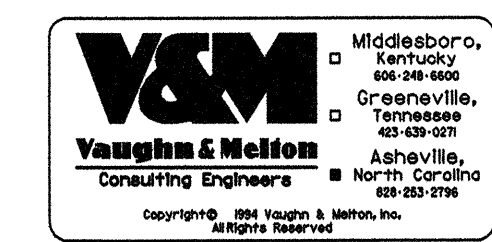
PROJECT REFERENCE NO. <b>37840</b>	SHEET NO. <b>TCP-8</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



**LEGEND**

	WEDGING / OVERLAY
	PROP. CONSTRUCTION
	TEMP. CONSTRUCTION

**DETAIL 1-K**

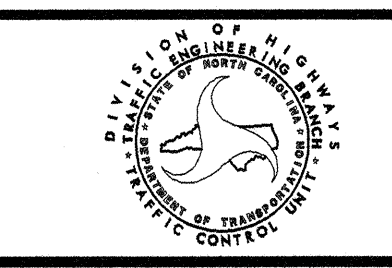


APPROVED: *[Signature]* DATE: 12/19/06

SEAL

**DETAILS "1-K" & "1-L"**

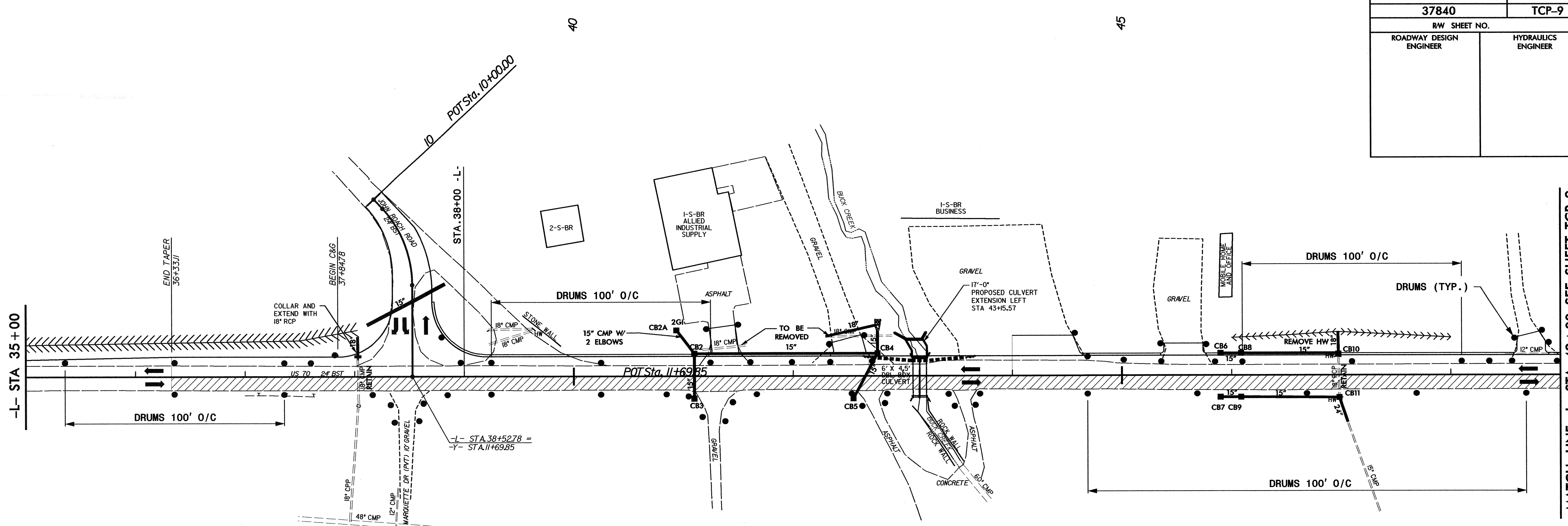
SCALE: NONE  
 DATE: JUNE 06  
 DWG. BY: SF  
 DESIGN BY: LDB  
 REVIEWED BY: RMS



REVISIONS

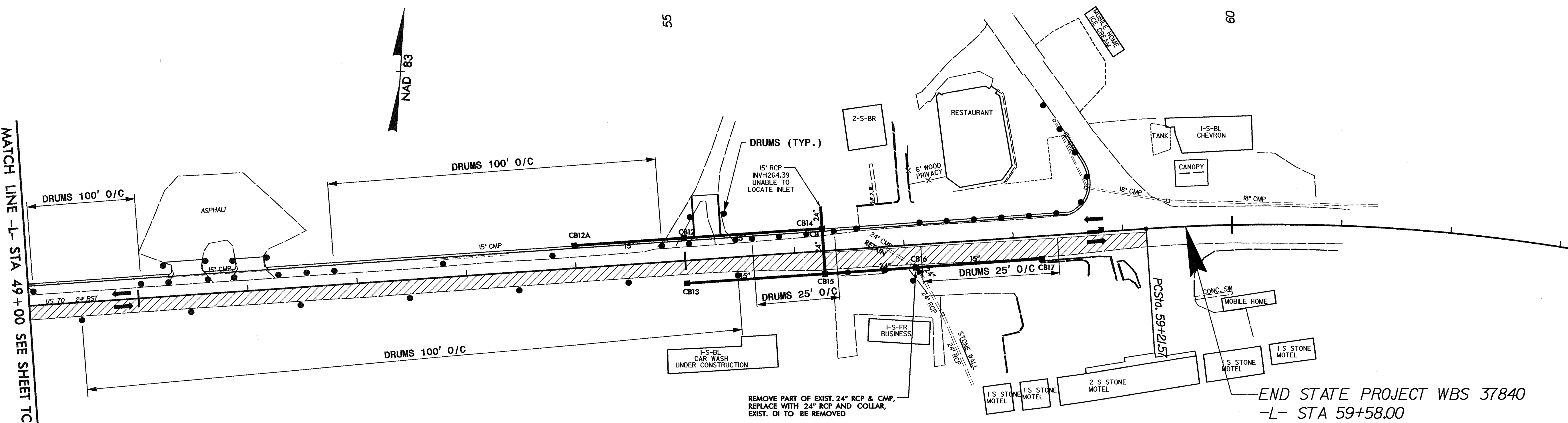


PROJECT REFERENCE NO. <b>37840</b>	SHEET NO. <b>TCP-9</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



**DETAIL 1-M**

MATCH LINE -L- STA 49+00 SEE SHEET TCP-9



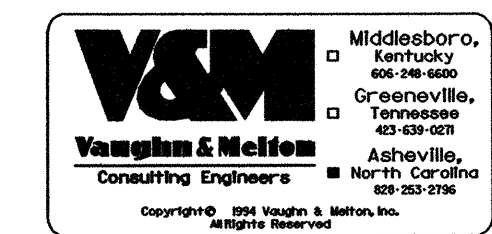
**DETAIL 1-N**

MATCH LINE -L- STA 49+00 SEE SHEET TCP-9

END STATE PROJECT WBS 37840  
-L- STA 59+58.00

**LEGEND**

	WEDGING / OVERLAY
	PROP. CONSTRUCTION
	TEMP. CONSTRUCTION



APPROVED: DATE: 12/19/16

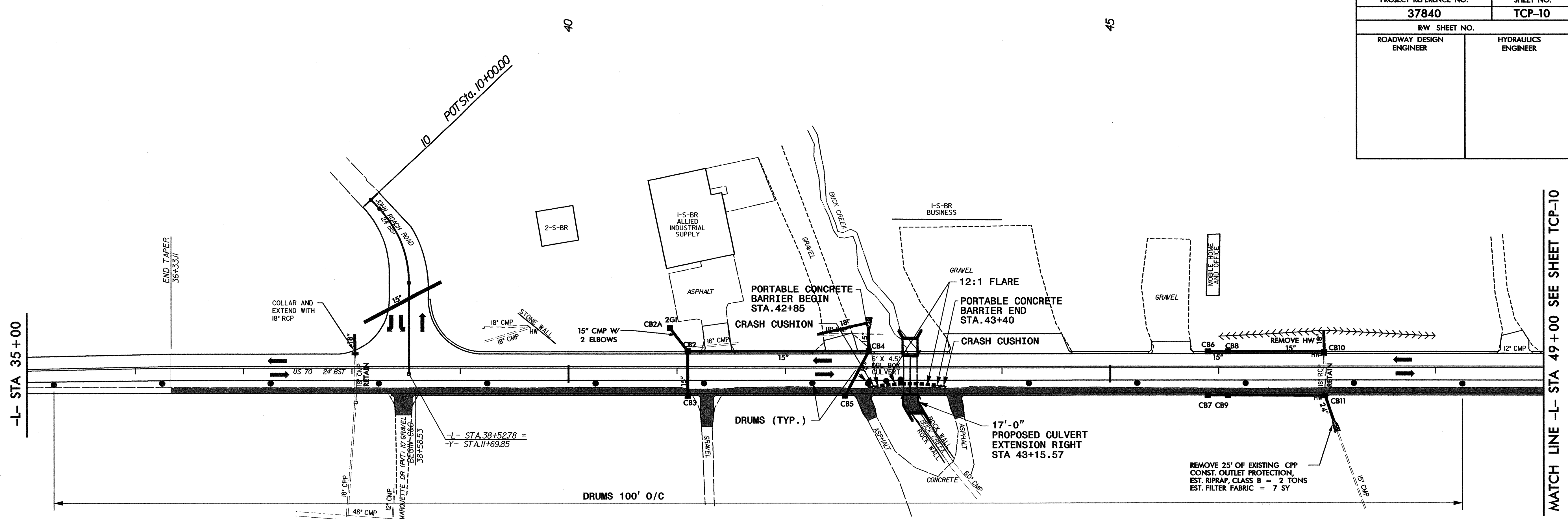
SEAL

**DETAILS "1-M" & "1-N"**

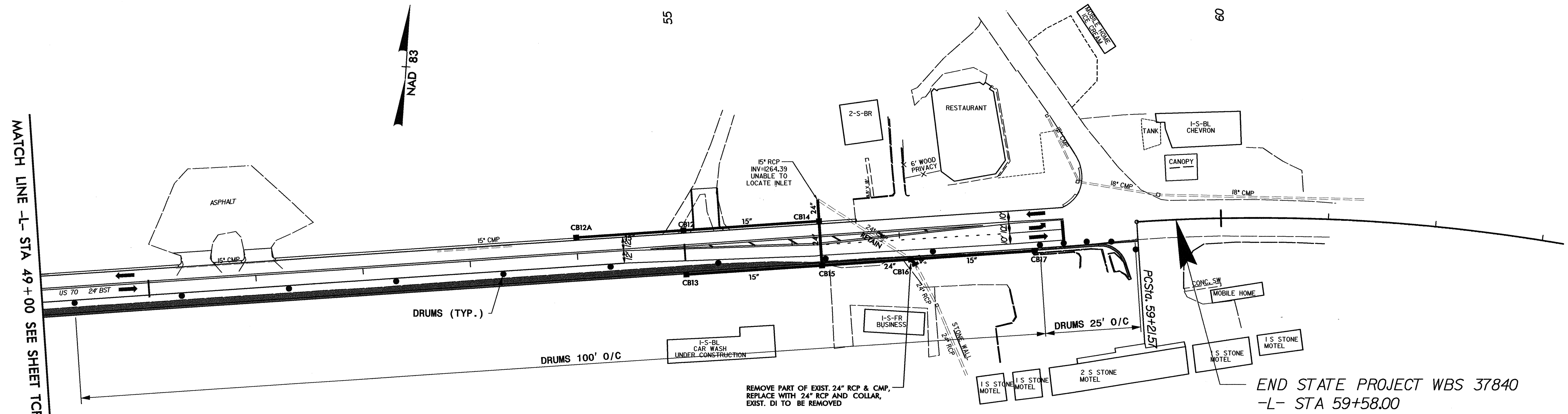
SCALE: NONE		REVISIONS
DATE: JUNE 06		
DESIGN BY: SF		
DESIGNED BY: LDB		
REVIEWED BY: RMS		

CADD FILE: MA13038RTCP09.DGN

PROJECT REFERENCE NO. <b>37840</b>		SHEET NO. <b>TCP-10</b>
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	



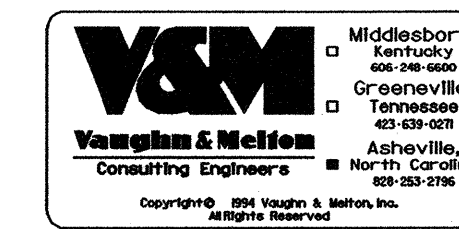
**DETAIL 2-A**



**DETAIL 2-B**

**LEGEND**

	WEDGING / OVERLAY
	PROP. CONSTRUCTION
	TEMP. CONSTRUCTION



APPROVED: *[Signature]* DATE: 12/1/16

SEAL

**DETAILS "2-A" & "2-B"**

SCALE: NONE  
DATE: JUNE 06  
DWG. BY: SF  
DESIGN BY: LDB  
REVIEWED BY: RMS


REVISIONS

CADD FILE: MA13038RTCP10.DGN



# TWO LANE, TWO WAY WORK ZONE (L-LINES)

FURNISHED BY THE DEPARTMENT

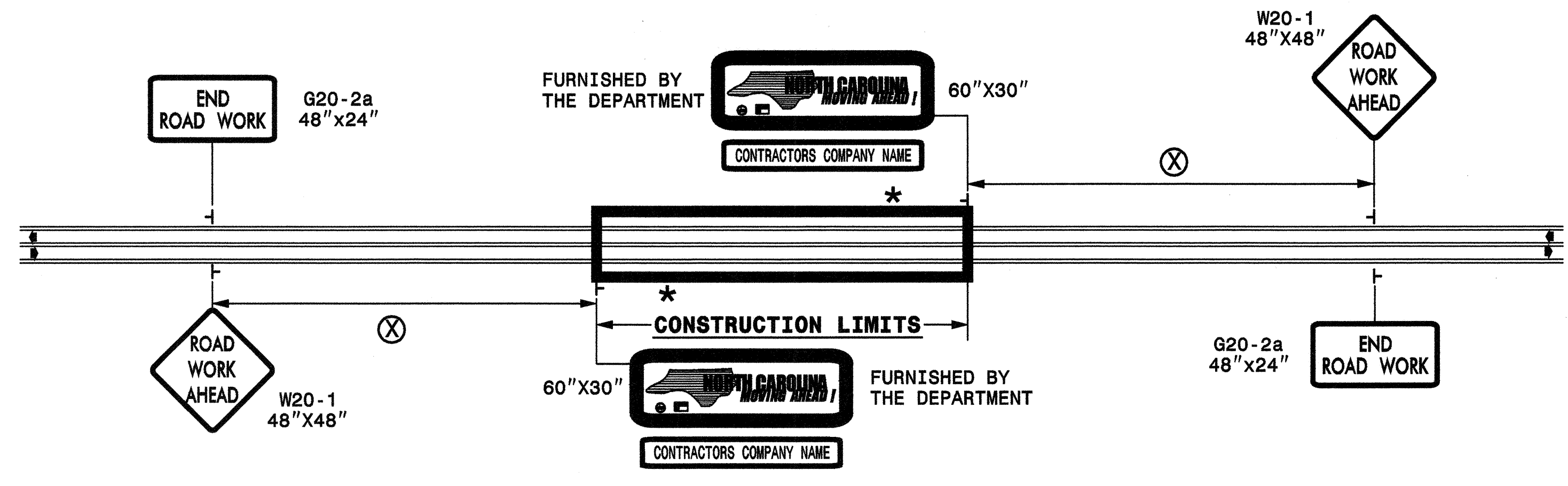


60" X 30"

---

CONTRACTORS COMPANY NAME

60" Max. X 12"



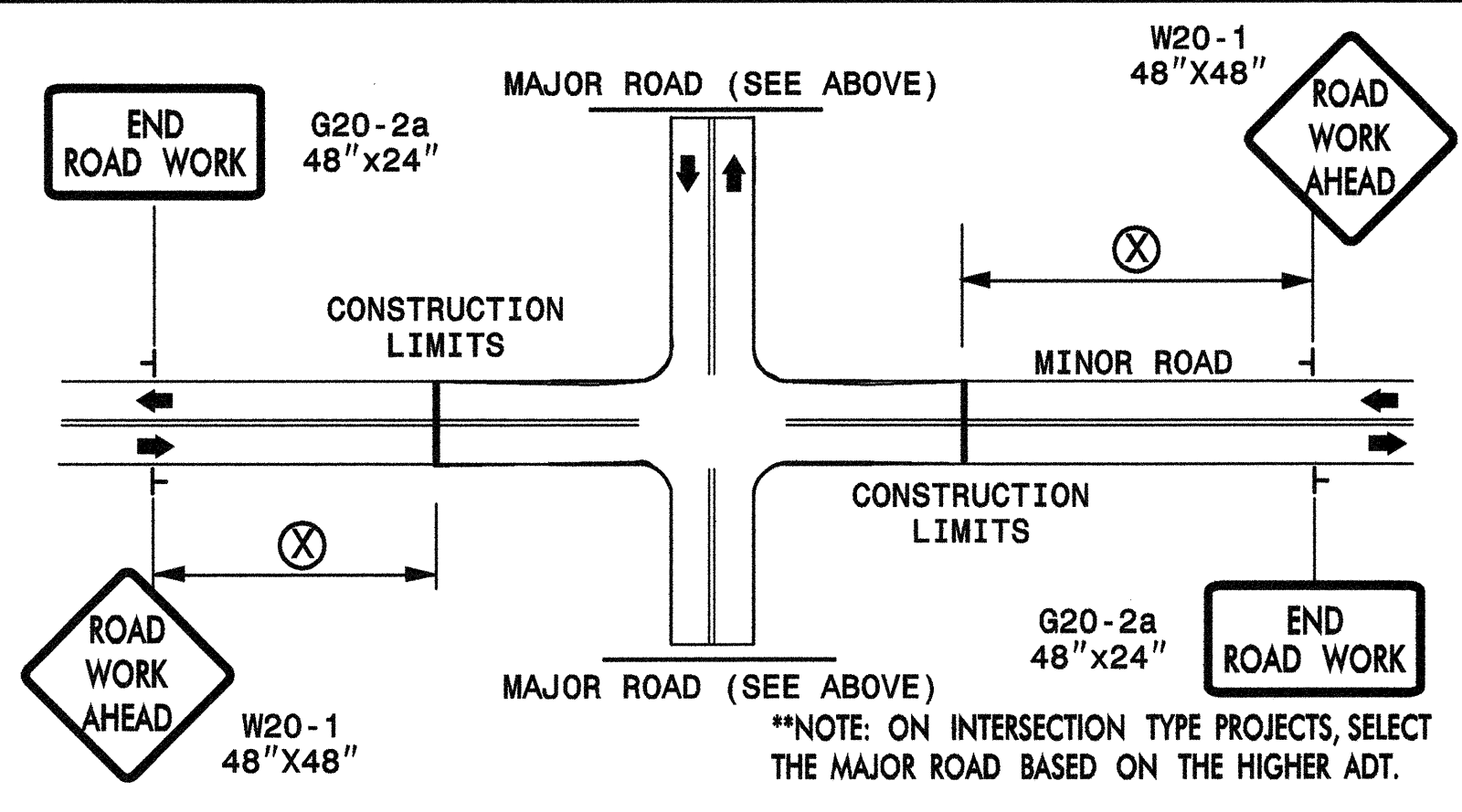
POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING
P.S.L. ≤ 50	⊗
P.S.L. ≥ 55	350'
	500'

**\* ROAD WORK NEXT XX MILES** G20-1A 60"x24"

THIS SIGN TO BE USED ON PROJECTS LONGER THAN 2 MILES. THE NUMBER DISPLAYED ON THE SIGN IS TO BE A WHOLE NUMBER ROUNDED UP TO THE NEXT MILE. IT'S TO BE LOCATED 1,500 FEET INSIDE OF THE CONSTRUCTION LIMITS.

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

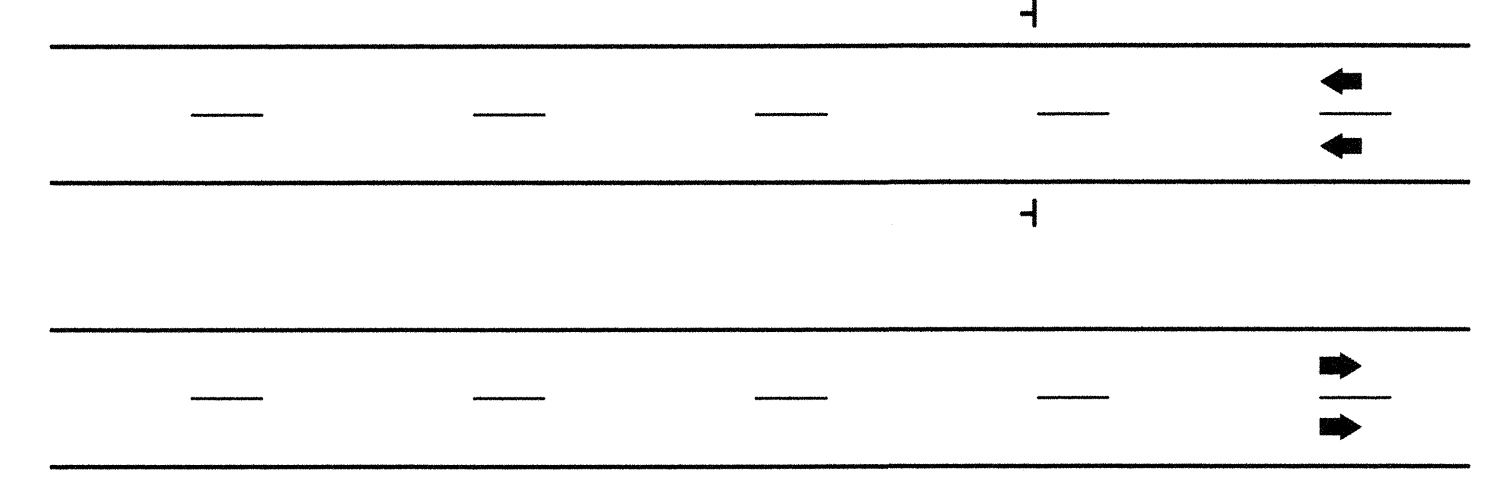
# INTERSECTIONS (-Y- LINES)



# FREEWAYS / INTERSTATES

DUAL MOUNT "ROAD WORK AHEAD" SIGNS 1,000' IN ADVANCE OF PROJECT LIMITS

DUAL MOUNT "MOVING AHEAD" SIGNS 500' IN ADVANCE OF PROJECT LIMITS



DETAIL DRAWING FOR ADVANCE  
 WARNING WORK ZONE SIGNS

## GENERAL NOTES

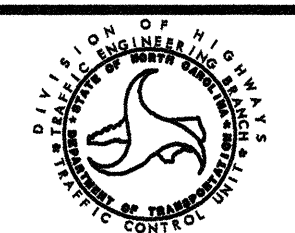
- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED. 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.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.

**LEGEND**

⊥ STATIONARY SIGN

◀ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1

APPROVED: _____	DATE: _____	<b>ADVANCE WARNING WORK ZONE SIGNS FOR "MOVING AHEAD"</b>	
SEAL	SCALE: NONE		REVISIONS
	DATE: 07/03		11/04
	DWG. BY: JSK		12/04
	DESIGN BY: JSK		
	REVIEWED BY: SK		

