TIP PROJECT: R-2533CC

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

METRIC

STATE PROJECT REFERENCE NO.	SHEET NO.
R-2533CC	TCP-1

PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION

CABARRUS COUNTY

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES 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
1115.01	FLASHING ARROW PANELS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY - DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - INTERCHANGES
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
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N.C.D.O.T. WORK ZONE TRAFFIC CONTROL REVIEW AND CONTACT PERSONNEL

J. S. BOURNE, P.E.	*STATE TRAFFIC MANAGEMENT ENGINEER*
J. S. KITE, P.E.	*TRAFFIC CONTROL PROJECT ENGINEER*
J. D. KUSE, P.E.	*TRAFFIC CONTROL PROJECT DESIGN ENGINEER*
R.M. GARRETT	*TRAFFIC CONTROL DESIGN ENGINEER*

PLAN PREPARED IN THE OFFICE OF
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS
CHARLOTTE, NC 704.573.3003

APPROVED: Tim Arey
DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PROGRESSIVE DESIGN GROUP, INC.

TIM AREY, P.E. — *PRINCIPAL*
PROJECT MANAGER
LARRY ASHLEY — *DESIGN ENGINEER*

PROJ. REFERENCE NO.: R-2533CC | SHEET NO.: TCP-2

METRIC

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS, OR RESULT IN DUPLICATE, OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES, AS DIRECTED BY THE ENGINEER.

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.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
1. -L-REV (NC 49)	MONDAY-FRIDAY 6:00AM-9:00AM AND 4:00PM-6:00PM
2. -Y1REV- (NC 73)	MONDAY-FRIDAY 6:00AM-9:00AM AND 4:00PM-6:00PM

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

ROAD NAME

-L-REV (NC 49), -Y1REV- (NC 73)

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00AM DECEMBER 31st TO 9:00AM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 9:00AM THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00AM THURSDAY AND 9:00AM MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00AM FRIDAY TO 9:00AM TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00AM THE DAY BEFORE INDEPENDENCE DAY AND 9:00AM THE DAY AFTER INDEPENDENCE DAY.

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00AM THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00AM THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00AM FRIDAY AND 9:00AM TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00AM TUESDAY TO 9:00AM MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00AM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00AM THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
9. FOR MAJOR EVENTS AT LOWES MOTOR SPEEDWAY, BETWEEN THE HOURS OF 6:00AM THE MONDAY OF THE WEEK OF THE MAJOR EVENTS AT LOWES MOTOR SPEEDWAY AND 9:00AM THE FOLLOWING MONDAY AFTER THE WEEK OF THE MAJOR EVENTS AT LOWES MOTOR SPEEDWAY.

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
1. -L-REV (NC 49)	DAILY, 6:00AM-1:00AM	30 MINUTES, REMOVING -Y1REV- BRIDGE
		30 MINUTES, HANGING -Y1REV- GIRDERS

D) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

E) 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, OR AS DIRECTED BY THE ENGINEER.

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 5 M 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 OR A LANE CLOSURE IS INSTALLED.

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 1.5 M 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.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 3 M 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.

PROJECT NOTES

H) 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.

I) DO NOT WORK SIMULTANEOUSLY WITHIN 5 M ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

J) 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 AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 50 MM ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 75 MM ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

K) DO NOT EXCEED A DIFFERENCE OF 50 MM IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 40 MM. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

L) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

M) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 12 M FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

N) PROVIDE PERMANENT SIGNING.

O) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS. PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

P) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION. COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

Q) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

R) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

S) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRAFFIC CONTROL PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY 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.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

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

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

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

T) PROTECT THE APPROACH END OF MOVABLE/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.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS:

POSTED SPEED LIMIT	MINIMUM OFFSET
40 OR LESS	4.6 M
45 - 50	6 M
55	7.6 M
60 MPH or HIGHER	9 M

TRAFFIC CONTROL DEVICES

U) SPACE CHANNELIZING DEVICES IN WORK AREAS EQUAL IN METERS TO 2/3rds THE POSTED SPEED LIMIT (MPH), EXCEPT 3 M ON-CENTER IN RADII, AND 1 M OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED, REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.

V) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

W) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES, DRUMS, PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 150 M CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

X) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS SHOWN IN THE PAVEMENT MARKING PLAN.

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

ROAD NAME	MARKING	MARKER
-L- LINE	PAINT	TEMPORARY RAISED
-Y- LINES	PAINT	TEMPORARY RAISED

Z) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

AA) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

BB) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

CC) TRACE THE PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO INSTALLATION. PLACE DRUMS TO DELINEATE ANY PROPOSED MONOLITHIC ISLANDS BEFORE INSTALLATION.

TEMPORARY / FINAL SIGNALS

DD) SHIFT AND REVISE ALL SIGNAL HEADS AS SHOWN ON THE SIGNAL PLANS.

MISCELLANEOUS

EE) POLICE MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS, AS DIRECTED BY THE ENGINEER.

FF) ALL WHEELCHAIR RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING SHOWN ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE SIGNING AND DELINEATION UNIT.

LOCAL NOTE

1) MAINTAIN DRAINAGE DURING CONSTRUCTION SO THAT WATER DOES NOT POND ON OPEN TRAVEL LANES.

APPROVED: [signature] DATE: 2-25-11

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 30864 DAVID W. BISSETTE

PROJECT NOTES

SCALE:	NONE
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

SYMBOL	DESCRIPTION	PAY ITEM QUANTITY		TOTAL
	TEMPORARY PAVEMENT MARKINGS			
	PAINT(100MM)			
PA	WHITE EDGELINE (2X)	29390M		
PB	YELLOW EDGELINE (2X)	3800M		
PC	3 M. WHITE SKIP (2X)	110M		
PD	0.5 M. WHITE MINISKIP (2X)	253M		
PE	WHITE SOLID LANE LINE (2X)	1138M		
PI	YELLOW DOUBLE CENTER (2X)	27192M		
			TOTAL	61883M
	PAINT(200MM)			
PR	WHITE GORELINE (2X)	1800M		
PS	WHITE DIAGONAL (2X)	94M		
			TOTAL	1894M
	PAINT(600MM)			
P4	WHITE STOPBAR (2X)	196M		
			TOTAL	196M
	PAINT MARKING SYMBOLS			
QA	LEFT TURN ARROW (1X)	16EA		
QB	RIGHT TURN ARROW (1X)	12EA		
QC	STRAIGHT ARROW (1X)	17EA		
QD	COMBO.STRAIGHT/LEFT (1X)	3EA		
QE	COMBO.STRAIGHT/RIGHT (1X)	7EA		
			TOTAL	55EA
	MARKERS			
	TEMPORARY RAISED PAVEMENT MARKERS			
MH	YELLOW & YELLOW	727EA		
MI	CRYSTAL & RED	18EA		
MM	CRYSTAL & CRYSTAL	149EA		
			TOTAL	894EA

NOTE: FOR EACH PAINT PAVEMENT MARKING ITEM, 1X IMPLIES A SINGLE APPLICATION, 2X IMPLIES TWO APPLICATIONS, AND 3X IMPLIES THREE

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

TEMPORARY PAVEMENT MARKING SCHEDULE

SCALE:	
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

METRIC

TEMPORARY SHORING NO. 1

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 200+36.00± -L-, 3.3 M LEFT OF -L-, TO STATION 200+44.00±, 3.3 M LEFT OF -L-.

USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 19 KN/M^3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 10 KN/M^3
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 KN/M^2

USE A TEMPORARY MSE WALL FROM STATION 200+36.00± -L-, 3.3 M LEFT OF -L-, TO STATION 200+44.00±, 3.3 M LEFT OF -L-.

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 200+36.00± -L-, 3.3 M LEFT OF -L-, TO STATION 200+44.00± -L-, 3.3 M LEFT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 2

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 200+60.00± -L-, 3.3 M LEFT OF -L-, TO STATION 200+70.00±, 3.3 M LEFT OF -L-.

USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 19 KN/M^3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 10 KN/M^3
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 KN/M^2

USE A TEMPORARY MSE WALL FROM STATION 200+60.00± -L-, 3.3 M LEFT OF -L-, TO STATION 200+70.00±, 3.3 M LEFT OF -L-.

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 200+60.00± -L-, 3.3 M LEFT OF -L-, TO STATION 200+70.00± -L-, 3.3 M LEFT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 3

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 200+36.00± -L-, 1.0 M LEFT OF -L-, TO STATION 200+44.00±, 1.0 M LEFT OF -L-.

USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 19 KN/M^3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 10 KN/M^3
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 KN/M^2

USE A TEMPORARY MSE WALL FROM STATION 200+36.00± -L-, 1.0 M LEFT OF -L-, TO STATION 200+44.00±, 1.0 M LEFT OF -L-.

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 200+36.00± -L-, 1.0 M LEFT OF -L-, TO STATION 200+44.00±- L-, 1.0 M LEFT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 4

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 200+60.00± -L-, 1.0 M LEFT OF -L-, TO STATION 200+70.00±, 1.0 M LEFT OF -L-.

USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 19 KN/M^3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 10 KN/M^3
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 KN/M^2

USE A TEMPORARY MSE WALL FROM STATION 200+60.00± -L-, 1.0 M LEFT OF -L-, TO STATION 200+70.00±, 1.0 M LEFT OF -L-.

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 200+60.00± -L-, 1.0 M LEFT OF -L-, TO STATION 200+70.00±, 1.0 M LEFT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

APPROVED:__________ DATE:______

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023480 ENGINEER JOHN S. W. FARGHER, III
10-4-10

TEMPORARY SHORING NOTES

SCALE: NONE	DIVISION OF HIGHWAYS, STATE OF NORTH CAROLINA, DEPARTMENT OF TRANSPORTATION, WORK ZONE TRAFFIC CONTROL	REVISIONS
DATE:		
DWG. BY:		
DESIGN BY:		
REVIEWED BY:		CADD FILE

TEMPORARY SHORING NO. 5

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

DO NOT USE STANDARD TEMPORARY SHORING FROM STATION 212+15.00± -L-, 4.5 M LEFT OF -L-, TO STATION 212+45.00± -L-, 4.5 M LEFT OF -L-.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 212+15.00± -L-, 4.5 M LEFT OF -L-, TO STATION 212+45.00±, 4.5 M LEFT OF -L-.

USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 19 KN/M^3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 10 KN/M^3
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 KN/M^2

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR TEMPORARY SHORING FROM STATION 212+15.00± -L-, 4.5 M LEFT OF -L-, TO STATION 212+45.00± -L-, 4.5 M LEFT OF -L-. THE TEMPORARY SHORING PROVISION DOES NOT APPLY TO ANCHORED TEMPORARY SHORING. FOR ANCHORED TEMPORARY SHORING, SEE ANCHORED TEMPORARY SHORING PROVISION. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 212+15.00± -L-, 4.5 M LEFT OF -L-, TO STATION 212+45.00±, 4.5 M LEFT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 6

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

DO NOT USE STANDARD TEMPORARY SHORING FROM STATION 212+15.00± -L-, 1 M RIGHT OF -L-, TO STATION 212+45.00± -L-, 1 M RIGHT OF -L-.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 212+15.00± -L-, 1 M RIGHT OF -L-, TO STATION 212+45.00±, 1 M RIGHT OF -L-.

USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 19 KN/M^3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 10 KN/M^3
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 KN/M^2

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR TEMPORARY SHORING FROM STATION 212+15.00± -L-, 1 M RIGHT OF -L-, TO STATION 212+45.00± -L-, 1 M RIGHT OF -L-. FOR ANCHORED TEMPORARY SHORING, SEE ANCHORED TEMPORARY SHORING PROVISION. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 212+15.00± -L-, 1 M RIGHT OF -L-, TO STATION 212+45.00±, 1 M RIGHT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 7

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

DO NOT USE STANDARD TEMPORARY SHORING FROM STATION 13+64.00± -Y1REV-, 1.6 M LEFT OF NC 73 EOP, TO STATION 13+94.00± -Y1REV-, 1.6 M LEFT OF NC 73 EOP.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 13+64.00± -Y1REV-, 1.6 M LEFT OF NC 73 EOP, TO STATION 13+94.00± -Y1REV-, 1.6 M LEFT OF NC 73 EOP.

USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 19 KN/M^3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 10 KN/M^3
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 KN/M^2

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR TEMPORARY SHORING FROM STATION 13+64.00± -Y1REV-, 1.6 M LEFT OF NC 73 EOP, TO STATION 13+94.00± -Y1REV-, 1.6 M LEFT OF NC 73 EOP. FOR ANCHORED TEMPORARY SHORING, SEE ANCHORED TEMPORARY SHORING PROVISION. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 13+64.00± -Y1REV-, 1.6 M LEFT OF NC 73 EOP, TO STATION 13+94.00± -Y1REV-, 1.6 M LEFT OF NC 73 EOP. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

APPROVED: ____________ DATE: ______

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023480 1-5-11 ENGINEER JOHN S. W. FARGHER, II

TEMPORARY SHORING NOTES

SCALE:	NONE	REVISIONS
DATE:		
DWG. BY:		
DESIGN BY:		
REVIEWED BY:		CADD FILE

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

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PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-2A3

TEMPORARY SHORING NO. 8

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

DO NOT USE STANDARD TEMPORARY SHORING FROM STATION 14+17.00± -Y1REV-, 1.6 M LEFT OF NC 73 EOP, TO STATION 14+78.00± -Y1REV-, 1.6 M LEFT OF NC 73 EOP.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 14+17.00± -Y1REV-, 1.6 M LEFT OF NC 73 EOP, TO STATION 14+78.00± -Y1REV-, 1.6 M LEFT OF NC 73 EOP.

USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 19 KN/M^3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 10 KN/M^3
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 KN/M^2

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR TEMPORARY SHORING FROM STATION 14+17.00± -Y1REV-, 1.6 M LEFT OF NC 73 EOP, TO STATION 14+78.00± -Y1REV-, 1.6 M LEFT OF NC 73 EOP. FOR ANCHORED TEMPORARY SHORING, SEE ANCHORED TEMPORARY SHORING PROVISION. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 14+17.00± -Y1REV-, 1.6 M LEFT OF NC 73 EOP, TO STATION 14+78.00± -Y1REV-, 1.6 M LEFT OF NC 73 EOP. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 9

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 219+28.00± -L-, 4.3 M LEFT OF -L-, TO STATION 219+52.00± -L-, 4.3 M LEFT OF -L-.

USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 19 KN/M^3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 10 KN/M^3
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 KN/M^2

USE A TEMPORARY MSE WALL FROM STATION 219+28.00± -L-, 4.3 M LEFT OF -L-, TO STATION 219+52.00± -L-, 4.3 M LEFT OF -L-.

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 219+28.00± -L-, 4.3 M LEFT OF -L-, TO STATION 219+52.00± -L-, 4.3 M LEFT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 10

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 219+28.00± -L-, 3.3 M LEFT OF -L-, TO STATION 219+52.00± -L-, 3.3 M LEFT OF -L-.

USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 19 KN/M^3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 10 KN/M^3
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 KN/M^2

USE A TEMPORARY MSE WALL FROM STATION 219+28.00± -L-, 3.3 M LEFT OF -L-, TO STATION 219+52.00± -L-, 3.3 M LEFT OF -L-.

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 219+28.00± -L-, 3.3 M LEFT OF -L-, TO STATION 219+52.00± -L-, 3.3 M LEFT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

APPROVED:_____ DATE:_____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023480 ENGINEER JOHN W. FARGHER

TEMPORARY SHORING NOTES

SCALE:	NONE
DATE:	
DWG. BY:	
DESIGN BY:	
REVIEWED BY:	

REVISIONS

CADD FILE

TEMPORARY SHORING NO. 11

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

DO NOT USE STANDARD TEMPORARY SHORING FROM STATION 12+44.00± -Y1REV-, 13.3 M RIGHT TO 7.0 M RIGHT OF -Y1REV-, TO STATION 12+52.00± -Y1REV-, 13.3 M RIGHT TO 7.0 M RIGHT OF -Y1REV-.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 12+44.00± -Y1REV-, 13.3 M RIGHT TO 7.0 M RIGHT OF -Y1REV-, TO STATION 2+52.00± -Y1REV-, 13.3 M RIGHT TO 7.0 M RIGHT OF -Y1REV-.

USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 19 KN/M^3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 10 KN/M^3
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 KN/M^2

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR TEMPORARY SHORING FROM STATION 12+44.00± -Y1REV-, 13.3 M RIGHT TO 7.0 M RIGHT OF -Y1REV-, TO STATION 12+52.00± -Y1REV-, 13.3 M RIGHT TO 7.0 M RIGHT OF -Y1REV-. FOR ANCHORED TEMPORARY SHORING, SEE ANCHORED TEMPORARY SHORING PROVISION. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 12+44.00± -Y1REV-, 13.3 M RIGHT TO 7.0 M RIGHT OF -Y1REV-, TO STATION 12+52.00± -Y1REV-, 13.3 M RIGHT TO 7.0 M RIGHT OF -Y1REV-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 12

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 12+52.00± -Y1REV-, 7.0 M RT OF -Y1REV-, TO STATION 12+70.00± -Y1REV-, 7.0 M RT OF -Y1REV-.

USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 19 KN/M^3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 10 KN/M^3
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 KN/M^2

USE A TEMPORARY MSE WALL FROM STATION 12+52.00± -Y1REV-, 7.0 M RT OF -Y1REV-, TO STATION 12+70.00± -Y1REV-, 7.0 M RT OF -Y1REV-.

TEMPORARY SHORING NO. 12 (CONT'D)

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 12+52.00± -Y1REV-, 7.0 M RT OF -Y1REV-, TO STATION 12+70.00± -Y1REV-, 7.0 M RT OF -Y1REV-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 13

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

DO NOT USE STANDARD TEMPORARY SHORING FROM STATION 12+70.00± -Y1REV-, 7.0 M RIGHT TO 14.0 M RIGHT OF -Y1REV-, TO STATION 12+82.00± -Y1REV-, 7.0 M RIGHT TO 14.0 M RIGHT OF -Y1REV-.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 12+70.00± -Y1REV-, 7.0 M RIGHT TO 14.0 M RIGHT OF -Y1REV-, TO STATION 12+82.00± -Y1REV-, 7.0 M RIGHT TO 14.0 M RIGHT OF -Y1REV-.

USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 19 KN/M^3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 10 KN/M^3
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 KN/M^2

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR TEMPORARY SHORING FROM STATION 12+70.00± -Y1REV-, 7.0 M RIGHT TO 14.0 M RIGHT OF -Y1REV-, TO STATION 12+82.00± -Y1REV-, 7.0 M RIGHT TO 14.0 M RIGHT OF -Y1REV-. FOR ANCHORED TEMPORARY SHORING, SEE ANCHORED TEMPORARY SHORING PROVISION. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 12+70.00± -Y1REV-, 7.0 M RIGHT TO 14.0 M RIGHT OF -Y1REV-, TO STATION 12+82.00± -Y1REV-, 7.0 M RIGHT TO 14.0 M RIGHT OF -Y1REV-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 14

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

DO NOT USE STANDARD TEMPORARY SHORING FROM STATION 221+50.00± -LREV-, 3.0 M LEFT TO STATION 221+88.00± -LREV-, 3.0 M LEFT.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 221+50.00± -LREV-, 3.0 M LEFT TO STATION 221+88.00± -LREV-, 3.0 M LEFT.

USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 19 KN/M^3
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 10 KN/M^3
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 KN/M^2

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR TEMPORARY SHORING FROM STATION 221+50.00± -LREV-, 3.0 M LEFT TO STATION 221+88.00± -LREV-, 3.0 M LEFT -LREV-. FOR ANCHORED TEMPORARY SHORING, SEE ANCHORED TEMPORARY SHORING PROVISION. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 221+50.00± -LREV-, 3.0 M LEFT TO STATION 221+88.00± -LREV-, 3.0 M LEFT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

APPROVED: DATE:

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023480 ENGINEER JOHN S. W. FARG
2-3-11

TEMPORARY SHORING NOTES

SCALE: NONE
DATE:
DWG. BY:
DESIGN BY:
REVIEWED BY:

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

REVISIONS

CADD FILE

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PHASE I

STEP 1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ON ALL ROADWAYS WITHIN THE PROJECT LIMITS AS SHOWN ON SHEET TCP-53. SEE GENERAL NOTE M.

STEP 2: BEGIN CONSTRUCTION ON THE FOLLOWING UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS SHOWN ON SHEETS TCP-4 THRU TCP-17. UTILIZE ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9 WHEN REQUIRED: (SEE LOCAL NOTE 1)

- -XOVER1-: FROM STA. 10+57+/- TO STA. 14+35+/-. TIE TO THE EDGE AND ELEVATION OF EXISTING NC 49.
- -XOVER2-: FROM STA. 10+00+/- TO STA. 13+26+/- INCLUDING THE -L- LEFT SIDE TEMPORARY WIDENING FROM STA. 209+55+/- -L- UP TO STA. 10+00+/- -XOVER2-. TIE TO THE EDGE AND ELEVATION OF EXISTING NC 49.
- -L-REV LEFT SIDE: FROM STA. 213+48/- TO STA. 0+00+/- RAMP B.
- -L-REV RIGHT SIDE: FROM STA. 200+16+/- TO STA.215+20+/-.
  FROM STA. 215+60+/- TO STA. 217+60+/-.
  FROM STA. 222+40+/- TO STA. 230+15+/-.
  INSTALL TEMPORARY -L-REV MEDIAN DRIVEWAY CONNECTIONS AS SHOWN ON SHEETS TCP-9 THRU TCP-12.
- -L-REV BOTH SIDES: FROM STA. 230+15+/- TO STA. 234+00+/-.
- RAMP A: FROM STA. 5+60+/- RAMP A TO STA. 227+80+/- -LREV-.
- RAMP B: FROM EXISTING -Y1-REV INTERSECTION TO STA. 0+00+/- RAMP B.
- RAMP D: FROM STA. 4+00+/- RAMP D TO STA. 229+22+/- -LREV-.
- LOOP D: FROM STA. 0+25+/- TO STA. 2+42+/-.
- -SER1-: STA. 9+36+/- TO THE -L-REV INTERSECTION.
- -Y16-REV: FROM STA. 11+60+/- TO STA. 13+29+/- INCLUDING THE PROPOSED BOX CULVERT AT STA. 12+10+/- -Y16-REV. TIE TO THE EDGE AND ELEVATION OF EXISTING -Y16- AT STA. 11+60+/-.
- -Y14-REV: FROM STA. 10+03+/- TO STA. 11+00+/-. TIE TO THE EDGE AND ELEVATION OF EXISTING -Y14- AT STA. 10+03+/-.

BEGIN CONSTRUCTION OR INSTALLATION OF THE FOLLOWING. UTILIZE ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9 WHEN REQUIRED:

- STAGE I OF -L-REV BOX CULVERT AT STA. 200+60+/-: INSTALL TEMPORARY GUARDRAIL AND TEMPORARY SHORING IN THE LOCATIONS SHOWN ON SHEET TCP-8. REMOVE THE WING WALLS OFF OF THE SOUTH END OF THE EXISTING BOX CULVERT AND BEGIN CONSTRUCTION ON STAGE I OF THE PROPOSED BOX CULVERT.
- STAGE I OF -L-REV BOX CULVERT AT STA. 212+25+/-: INSTALL TEMPORARY GUARDRAIL AND TEMPORARY SHORING IN THE LOCATIONS SHOWN ON SHEET TCP-11. REMOVE THE WING WALLS OFF OF THE SOUTH END OF THE EXISTING BOX CULVERT AND BEGIN CONSTRUCTION ON STAGE I OF THE PROPOSED BOX CULVERT.
- STAGE I OF THE PROPOSED BOX CULVERT AT STA. 6+10+/- RAMP A AS SHOWN ON SHEET TCP-14.

CONSTRUCT OR INSTALL THE FOLLOWING. UTILIZE ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9 WHEN REQUIRED:

- REMOVE THE EXISTING 375mm RCP UNDER EXISTING RADCLIFF ROAD AND INSTALL THE TEMPORARY 1500mm CSP IN THE SAME LOCATION USING ALTERNATING LANE CLOSURES AS SHOWN ON SHEET TCP-14.
- CLOSE EXISTING RAMP A (ONLY BETWEEN THE HOURS OF 12:01AM UNTIL 6:00AM) WITH DRUMS AND TYPE III BARRICADES AND INSTALL THE TEMPORARY 1400mm CSP UNDER EXISTING RAMP A AND THE TEMPORARY 450mm CSP UNDER EXISTING RAMP A AS SHOWN ON SHEETS TCP-14 AND TCP-15.
- INSTALL THE TEMPORARY 1350mm RCP UNDER PROPOSED -L-REV NORTHBOUND LANES AS SHOWN ON SHEET TCP-15. INSTALL THE REMAINDER OF THE PROPOSED STORMWATER NETWORK UPSTREAM OF THE TEMPORARY 1350mm RCP AND DIVERT THE STORMWATER INTO THE THE TEMPORARY DIVERSION NETWORK SHOWN ON SHEET TCP-5.
- CONSTRUCT 4′ TEMPORARY PAVEMENT WIDENING UP TO THE EDGE AND ELEVATION OF THE EXISTING -Y1-REV SHOULDER (NORTH SIDE) FROM STA. 13+05+/- TO THE EXISTING -Y1-REV BRIDGE DECK AND FROM THE EXISTING -Y1-REV BRIDGE DECK TO STA. 15+45+/-. PLACE PORTABLE CONCRETE BARRIER ON THE TEMPORARY PAVEMENT FROM STA. 13+10+/- -Y1-REV TO THE EXISTING -Y1-REV BRIDGE DECK AND FROM THE EXISTING -Y1-REV BRIDGE DECK TO STA. 15+38+/- AS SHOWN ON SHEETS TCP-14 AND TCP-15. INSTALL TEMPORARY SHORING BEHIND THE PORTABLE CONCRETE BARRIER FROM STA. 13+64+/- TO STA. 13+94+/- AND FROM STA. 14+17+/- TO STA. 14+78+/- AS SHOWN ON SHEET TCP-15. INSTALL TEMPORARY GUARDRAIL ALONG EXISTING RAMP A FROM STA. 13+50+/- -Y1-REV TYING TO THE EXISTING GUARDRAIL AT STA. 221+83+/- -L-REV AND ALONG EXISTING RAMP D FROM THE THE EXISTING GUARDRAIL AT STA. 221+67+/- -L-REV TO STA. 15+18+/- -Y1-REV. BEGIN EXCAVATION FOR AND CONSTRUCTION OF THE PROPOSED END BENT PILES AND CENTER PIERS FOR THE PROPOSED -Y1-REV BRIDGE OVER -L-REV.
- -TEMP1-: FROM THE EDGE AND ELEVATION OF EXISTING RAMP A TO THE EDGE AND ELEVATION OF EXISTING -Y1-REV INCLUDING THE TEMPORARY 450mm CSP AS SHOWN ON SHEET TCP-14.
- -TEMP2-: FROM THE EDGE AND ELEVATION OF EXISTING RAMP D TO THE EDGE AND ELEVATION OF EXISTING -Y1-REV AS SHOWN ON SHEET TCP-15.
- TEMPORARY WIDENING ALONG EXISTING RADCLIFF ROAD, EXISTING LOOP A/RAMP A AND ALONG EXISTING LOOP D/RAMP D AS SHOWN ON SHEETS TCP-14 AND TCP-15.

INSTALL AND COVER THE -Y2-REV (NORTH DR.) OFF SITE DETOUR SIGNING SHOWN ON SHEET TCP-51.

INTERMEDIATE CONTRACT TIME: THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED OF PHASE I STEP 3 IN 28 CONSECUTIVE CALENDAR DAYS. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES)

STEP 3: UNCOVER THE -Y2-REV (NORTH DR.) OFF SITE DETOUR SIGNING AND CLOSE -Y2-REV TO TRAFFIC. CONSTRUCT PROPOSED -Y2-REV, INSTALL PAINT PAVEMENT MARKINGS AND MARKERS BACK TO THE ORIGINAL PATTERN, AND RE-OPEN -Y2-REV TO TRAFFIC AS SHOWN ON SHEET TCP-16.

STEP 4: INSTALL AND COVER THE -Y3- (N. SKYLAND DR.) OFF SITE DETOUR SIGNING SHOWN ON SHEET TCP-50.

INTERMEDIATE CONTRACT TIME: THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED OF PHASE I STEP 5 IN 28 CONSECUTIVE CALENDAR DAYS. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES)

STEP 5: UNCOVER THE -Y3- (N. SKYLAND DR.) OFF SITE DETOUR SIGNING AND CLOSE -Y3- TO TRAFFIC. CONSTRUCT PROPOSED -Y3-, INSTALL PAINT PAVEMENT MARKINGS AND MARKERS BACK TO THE ORIGINAL PATTERN, AND RE-OPEN -Y3- TO TRAFFIC AS SHOWN ON SHEET TCP-16.

PHASE II

STEP 1: UTILIZING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9, INSTALL PAINT PAVEMENT MARKINGS AND MARKERS ON -TEMP1-, THE TEMPORARY LOOP A WIDENING, THE TEMPORARY EXISTING RADCLIFF ROAD WIDENING, AND -TEMP2- AND OPEN -TEMP1-, THE TEMPORARY LOOP A WIDENING, THE TEMPORARY EXISTING RADCLIFF ROAD WIDENING, AND -TEMP2- TO TRAFFIC AS SHOWN ON SHEETS TCP-20 AND TCP-21. CLOSE THE ORIGINAL RAMP CONNECTORS ON THE NORTH SIDE OF -Y1-REV AS SHOWN ON SHEETS TCP-20 AND TCP-21. RELOCATE THE TEMPORARY GUARDRAIL ALONG EXISTING LOOP A TO THE LOCATION SHOWN ON SHEET TCP-21.

INSTALL THE PROPOSED 1800mm RCP UNDER -Y1-REV UP TO THE FACE OF THE -Y1-REV TEMPORARY SHORING AS SHOWN ON SHEET TCP-21. ALLOW ENOUGH ROOM TO EXTEND THE PROPOSED 1800mm RCP TO IT'S FINAL JUNCTION BOX LOCATION IN PHASE IV AS SHOWN ON SHEET TCP-47.

BEGIN CONSTRUCTION ON ANY REMAINING SUBSTRUCTURE OR SUPERSTRUCTURE ITEMS FOR THE -Y1-REV BRIDGE OVER -L-REV AS SHOWN ON SHEET TCP-21.

BEGIN CONSTRUCTION ON STAGE II OF THE PROPOSED BOX CULVERT AT STA. 12+60+/- -Y1-REV AS SHOWN ON SHEET TCP-20.

STEP 2: UTILIZING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9, WEDGE EXISTING -Y1-REV UP TO THE PROPOSED ELEVATION FROM STA. 9+80+/- TO STA. 11+00+/- AND FROM STA. 17+80+/- TO STA. 19+48+/- AS SHOWN ON SHEETS TCP-20 AND TCP-22.

UTILIZING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9, INSTALL TEMPORARY GUARDRAIL ON THE NORTH SIDE OF -Y1-REV FROM STA. 12+45+/- -Y1-REV TO EXISTING RADCLIFF DRIVE AS SHOWN ON SHEET TCP-20. BEGIN INSTALLATION ON STAGE II OF THE PROPOSED BOX CULVERT AT STA. 12+65+/- -Y1-REV.

STEP 3: BEGIN CONSTRUCTION ON THE FOLLOWING UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS SHOWN ON SHEETS TCP-20 THRU TCP-22. UTILIZE ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9 WHEN REQUIRED:

- -Y1-REV: FROM STA. 9+80+/- TO STA. 12+50+/- AS SHOWN ON SHEET TCP-20.
  FROM STA. 13+00+/- TO STA. 15+50+/- AS SHOWN ON SHEETS TCP-20 AND TCP-21.
  FROM STA. 16+00+/- TO STA. 19+48+/- AS SHOWN ON SHEETS TCP-21 AND TCP-22.
- RAMP A: FROM STA. 6+04+/- TO THE -Y1-REV INTERSECTION AS SHOWN ON SHEET TCP-20.

BEGIN CONSTRUCTION OR INSTALLATION OF THE FOLLOWING. UTILIZE ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9 WHEN REQUIRED:

- WEDGE EXISTING -Y1-REV UP TO THE PROPOSED ELEVATION FROM STA. 11+90+/- TO STA. 12+65+/- AS SHOWN ON SHEET TCP-20.
- TEMPORARY PAVEMENT ALONG -Y1-REV (RIGHT SIDE) FROM STA. 11+28+/- -Y1-REV TO STA. 13+80+/- -Y1-REV AS SHOWN ON SHEETS TCP-20 AND TCP-21.
- TEMPORARY TRAFFIC SIGNAL AT THE -Y1-REV/RAMP D INTERSECTION FOR THE TRAFFIC PATTERN SHOWN ON SHEET TCP-40. COVER TRAFFIC SIGNALS.

STEP 4: UTILIZING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9, CONSTRUCT PROPOSED -Y- (EMPIRE DR.), INSTALL PAINT PAVEMENT MARKINGS AND MARKERS BACK TO THE ORIGINAL PATTERN, AND RE-OPEN -Y- TO TRAFFIC AS SHOWN ON SHEET TCP-19.

INTERMEDIATE CONTRACT TIME: THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED OF PHASE II STEP 5 IN 120 CONSECUTIVE CALENDAR DAYS. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES)

STEP 5: CLOSE THE EXISTING FOOD LION DRIVEWAY USING TYPE III BARRICADES. ACCESS TO FOOD LION SHALL BE MAINTAINED THROUGH THE EXISTING DRIVEWAY CONNECTION TO NC 73. INSTALL THE PROPOSED BOX CULVERT UNDER THE EXISTING FOOD LION DRIVEWAY AND COMPLETE CONSTRUCTION ON THE PROPOSED FOOD LION DRIVEWAY CONNECTION TO -L-REV UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS SHOWN ON SHEET TCP-19. INSTALL PAINT PAVEMENT MARKINGS AND MARKERS BACK TO THE ORIGINAL PATTERN AND RE-OPEN THE FOOD LION DRIVEWAY TO TRAFFIC AS SHOWN ON SHEET TCP-19.

STEP 6: COMPLETE CONSTRUCTION ON -Y14-REV FROM STA. 10+03+/- TO STA. 11+00+/- UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.

INSTALL AND COVER THE -Y15-REV OFF SITE DETOUR SIGNING SHOWN ON SHEET TCP-52.

INTERMEDIATE CONTRACT TIME: THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED OF PHASE II STEP 7 IN 21 CONSECUTIVE CALENDAR DAYS. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES)

STEP 7: UNCOVER THE -Y15-REV OFF SITE DETOUR SIGNING AND CLOSE -Y15-REV TO TRAFFIC. CONSTRUCT PROPOSED -Y14-REV FROM STA. 11+00+/- TO STA. 11+90+/- AND CONSTRUCT PROPOSED -Y15-REV FROM STA. 10+46+/- TO STA. 11+90+/- UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS SHOWN ON SHEETS TCP-21 AND TCP-23. INSTALL PAINT PAVEMENT MARKINGS AND MARKERS ON -Y14-REV AND -Y15-REV AS SHOWN ON SHEET TCP-40 AND OPEN -Y14-REV AND -Y15-REV TO THE PATTERN SHOWN ON SHEET TCP-40.

PHASE III

STEP 1: COMPLETE CONSTRUCTION ON -Y16-REV FROM STA. 11+60+/- TO STA. 13+29+/- INCLUDING THE PROPOSED BOX CULVERT AT STA. 12+10+/- -Y16-REV. INSTALL PAINT PAVEMENT MARKINGS AND MARKERS ON -Y16-REV FROM STA. 10+94+/- -Y16-REV TO THE EXISTING -Y1-REV INTERSECTION AS SHOWN ON SHEET TCP-39 AND SHIFT TRAFFIC TO PROPOSED -Y16-REV. CONSTRUCT REMAINING SECTION OF RAMP A FROM STA. 5+60+/- TO STA. 6+04 UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS SHOWN ON SHEET TCP-39.

STEP 2: COMPLETE INSTALLATION OF THE FOLLOWING:

- STAGE I OF -L-REV BOX CULVERT AT STA. 200+60+/-.
- STAGE I OF -L-REV BOX CULVERT AT STA. 212+25+/-.

COMPLETE CONSTRUCTION ON THE FOLLOWING UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE:

- -XOVER1-: FROM STA. 10+57+/- TO STA. 14+35+/-.
- -XOVER2-: FROM STA. 10+00+/- TO STA. 13+26+/-.
- RAMP A: FROM THE EXISTING -Y1-REV INTERSECTION TO STA. 227+80+/- -LREV-.
- RAMP B: FROM THE EXISTING -Y1-REV INTERSECTION TO STA. 0+00+/- RAMP B.
- -L-REV LEFT SIDE: FROM STA. 213+48/- TO STA. 0+00+/- RAMP B.

INSTALL TEMPORARY GUARDRAIL ALONG THE LEFT SIDE OF NB -L-REV FROM STA. 14+00+/- -XOVER1- TO STA. 202+00+/- -L-REV AND FROM STA. 211+60+/- -LREV TO STA. 213+60+/- -L-REV AS SHOWN ON SHEETS TCP-30, TCP-31 AND TCP-33.

INSTALL TEMPORARY -L-REV MEDIAN DRIVEWAY CONNECTIONS AS SHOWN ON SHEETS TCP-31 THRU TCP-33.

APPROVED: Tim Arey DATE: 12/21/10

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 025465 TIM AREY

PHASING

SCALE:	
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS, STATE OF NORTH CAROLINA, DEPARTMENT OF TRANSPORTATION, WORK ZONE TRAFFIC CONTROL UNIT

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PHASE III (CONTINUED)

STEP 3: UTILIZING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9, WHEN REQUIRED, INSTALL PAINT PAVEMENT MARKINGS AND MARKERS ON -L-REV (RIGHT SIDE) FROM STA. 202+00+/- TO STA. 215+00+/-, ON RAMP A FROM STA. 0+00+/- TO THE -Y1-REV INTERSECTION, AND ON RAMP B FROM STA. 216+00+/- -L- TO THE -Y1-REV INTERSECTION AS SHOWN ON SHEETS TCP-26, TCP-27, TCP-29, TCP-30, TCP-31, TCP-32, TCP-33, TCP-34, TCP-35 AND TCP-37.

STEP 4: UTILIZING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9, WHEN REQUIRED, WORK IN A CONTINUOUS MANNER TO COMPLETE THE FOLLOWING:

INSTALL PAINT PAVEMENT MARKINGS AND MARKERS ON -L-REV TIE-INS AT STA. 10+90+/- -XOVER1- AND AT STA. 216+44+/- -L-REV FOR THE NB DIRECTION AND SHIFT NB -L-REV TRAFFIC TO THE PATTERN SHOWN ON SHEETS TCP-29 THRU TCP-34.

INSTALL PAINT PAVEMENT MARKINGS AND MARKERS ON -L-REV TIE-INS AT STA. 10+57+/- -XOVER1- AND AT STA. 216+82+/- -L-REV FOR THE SB DIRECTION AND SHIFT SB -L-REV TRAFFIC TO THE PATTERN SHOWN ON SHEETS TCP-29 THRU TCP-34.

INSTALL PAINT PAVEMENT MARKINGS AND MARKERS ON -Y1-REV FROM STA. 11+00+/- TO STA. 13+80+/- AS SHOWN ON SHEETS TCP-36 AND TCP-39, INSTALL THE REMAINING PAINT PAVEMENT MARKINGS AND MARKERS ON THE RAMP A AND RAMP B TIE IN AREAS WITH -L-REV, AND PLACE -Y1-REV, RAMP A, AND RAMP B TRAFFIC IN THE PATTERN SHOWN ON SHEETS TCP-34, TCP-35, TCP-36, TCP-37 AND TCP-39. CLOSE THE EXISTING RAMPS AND LOOPS WEST OF -L-REV AS SHOWN ON SHEETS TCP-35, TCP-36 AND TCP-39. INSTALL PORTABLE CONCRETE BARRIER AND A TEMPORARY CRASH CUSHION ALONG THE SOUTH SIDE OF PROPOSED RAMP A FROM STA. 5+90+/- RAMP A TO STA. 6+77+/- RAMP A AS SHOWN ON SHEET TCP-36. INSTALL TEMPORARY GUARDRAIL ALONG THE NORTH SIDE OF NC 73 FROM STA. 13+40+/- -Y1-REV TO STA. 6+77+/- RAMP A. TIE THE TEMPORARY GUARDRAIL TO THE EXISTING PORTABLE CONCRETE BARRIER AT STA. 13+40+/- -Y1-REV AND TUCK THE TEMPORARY GUARDRAIL BEHIND THE PORTABLE CONCRETE BARRIER AT STA. 6+77+/- RAMP A SUCH THAT THE APPROACH END OF THE TEMPORARY GUARDRAIL CAN NOT BE IMPACTED BY AN ERRANT VEHICLE.

STEP 5: BEGIN CONSTRUCTION OR INSTALLATION OF THE FOLLOWING. UTILIZE ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9 WHEN REQUIRED:
- STAGE II OF -L-REV BOX CULVERT AT STA. 200+60+/-.
- STAGE II OF -L-REV BOX CULVERT AT STA. 212+25+/-.

BEGIN CONSTRUCTION ON THE FOLLOWING UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE UTILIZE ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9 WHEN REQUIRED.
- -L-REV (LEFT SIDE) UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM STA. 200+16+/- TO STA. 213+70+/- AS SHOWN ON SHEETS TCP-30 THRU TCP-33.
- -Y1-REV: FROM STA. 12+50+/- TO STA. 13+00+/- AS SHOWN ON SHEET TCP-39. INSTALL TEMPORARY SHORING FROM STA. 12+64+/- -Y1-REV TO STA. 12+82+/- -Y1-REV AS SHOWN ON SHEET TCP-39 IN CONJUNCTION WITH THE FILLING MATERIAL CONSTRUCTION ALONG -Y1-REV.

COMPLETE CONSTRUCTION ON THE FOLLOWING UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE:
- -L-REV RIGHT SIDE: FROM STA. 222+40+/- TO THE -Y3- INTERSECTION.
- RAMP D: FROM STA. 4+00+/- RAMP D TO STA. 229+22+/- -LREV-.
- LOOP D: FROM STA. 0+25+/- TO THE -Y1-REV INTERSECTION.
- TEMPORARY CONNECTOR ALONG EXISTING LOOP D/RAMP D.

COMPLETE INSTALLATION OF THE TEMPORARY TRAFFIC SIGNAL AT THE -Y1-REV/RAMP D INTERSECTION.

STEP 6: UTILIZING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9 WHEN REQUIRED, INSTALL PAINT PAVEMENT MARKINGS AND MARKERS ON LOOP D FROM THE -L-REV INTERSECTION TO THE -Y1-REV INTERSECTION AND ON RAMP D FROM THE -Y1-REV INTERSECTION TO THE -Y3- INTERSECTION AS SHOWN ON SHEETS TCP-36, TCP-37, TCP-38, AND TCP-40.

STEP 7: UTILIZING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9, WHEN REQUIRED, WORK IN A CONTINUOUS MANNER TO COMPLETE THE FOLLOWING:

INSTALL PAINT PAVEMENT MARKINGS AND MARKERS ON -Y1-REV FROM STA. 15+41+/- TO STA. 17+52+/- AS SHOWN ON SHEET TCP-40. INSTALL REMAINING PAINT PAVEMENT MARKINGS AND MARKERS ON THE RAMP D AND LOOP D TIE IN AREAS WITH -L-REV, ACTIVATE THE TRAFFIC SIGNAL AT THE -Y1-REV/RAMP D INTERSECTION, AND PLACE -Y1-REV, RAMP D, AND LOOP D TRAFFIC IN THE PATTERN SHOWN ON SHEETS TCP-36, TCP-37, TCP-38, AND TCP-40. CLOSE THE ORIGINAL RAMPS AND LOOPS EAST OF -L-REV AS SHOWN ON SHEETS TCP-35, TCP-36, AND TCP-40.

BEGIN CONSTRUCTION OR INSTALLATION OF THE FOLLOWING. UTILIZE ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9 WHEN REQUIRED:
- STAGE I OF -L-REV BOX CULVERT AT STA. 219+40+/-: INSTALL TEMPORARY GUARDRAIL AND TEMPORARY SHORING IN THE LOCATIONS SHOWN ON SHEET TCP-35 AND REMOVE A PORTION OF THE EXISTING BOX CULVERT RIGHT OF EXISTING -L-REV AT STA. 219+40+/- -L-REV. BEGIN CONSTRUCTION ON STAGE I OF THE PROPOSED BOX CULVERT AS SHOWN ON SHEET TCP-35.
- -L-REV (RIGHT SIDE) UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM STA. 218+60+/- TO STA. 221+20+/- AS SHOWN ON SHEETS TCP-35 AND TCP-36.
- -XOVER3-: FROM STA. 10+00+/- TO STA. 13+00+/- AS SHOWN ON SHEETS TCP-35 AND TCP-36.
- -Y1-REV: FROM STA. 15+50+/- TO STA. 16+00+/- UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS SHOWN ON SHEET TCP-40.

PHASE IV

STEP 1: COMPLETE CONSTRUCTION ON -Y1-REV (LEFT SIDE) FROM STA. 9+80+/- TO STA. 19+47+/- UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE INCLUDING THE PROPOSED -Y1-REV BRIDGE OVER -L-REV.

STEP 2: UTILIZING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9, INSTALL PAINT PAVEMENT MARKINGS AND MARKERS ON -Y1-REV FROM STA. 9+80+/- TO STA. 19+47+/- AS SHOWN ON SHEETS TCP-46, TCP-47, AND TCP-48. UTILIZE TEMPORARY RAISED PAVEMENT MARKERS ON THE -Y1-REV BRIDGE DECK. (SEE SHEET TCP-47)

STEP 3: UTILIZING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9, WHEN REQUIRED, WORK IN A CONTINUOUS MANNER TO COMPLETE THE FOLLOWING:
- INSTALL REMAINING PAINT PAVEMENT MARKINGS AND MARKERS ON -Y1-REV.
- ADJUST PAVEMENT MARKINGS ON RAMP A, RAMP B, RAMP D, LOOP D, -Y14-REV, AND -Y16-REV.
- REVISE THE TEMPORARY TRAFFIC SIGNAL ACCORDING TO THE TRAFFIC SIGNAL PLANS AT THE -Y1-REV/RAMP D INTERSECTION TO THE TRAFFIC PATTERN SHOWN ON SHEETS TCP-47 AND TCP-48, AND PLACE -Y1-REV, RAMP A, RAMP D, LOOP D, -Y14-REV, AND -Y16-REV TRAFFIC IN THE PATTERN SHOWN ON SHEETS TCP-46, TCP-47, AND TCP-48. INSTALL TEMPORARY GUARDRAIL ALONG THE EAST SIDE OF PROPOSED RAMP B FROM STA. 4+29+/- RAMP B UP TO STA. 12+50+/- -Y1-REV. INSTALL PORTABLE CONCRETE BARRIER ALONG THE RIGHT SIDE OF -Y1-REV FROM STA. 12+50+/- -Y1-REV TO STA. 13+65+/- -Y1-REV AS SHOWN ON SHEETS TCP-46 AND TCP-47. TUCK THE PORTABLE CONCRETE BARRIER BEHIND THE TEMPORARY GUARDRAIL AT STA. 12+50+/- -Y1-REV SUCH THAT THE APPROACH END OF THE PORTABLE CONCRETE BARRIER CAN NOT BE IMPACTED BY AN ERRANT VEHICLE.

STEP 4: REMOVE THE EXISTING -Y1-REV ALIGNMENT AND BRIDGE OVER -L-REV AND BEGIN CONSTRUCTION ON -L-REV (RIGHT SIDE) UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM STA. 221+20+/- TO STA. 222+72+/- AS SHOWN ON SHEET TCP-36.

BEGIN CONSTRUCTION ON STAGE III OF THE PROPOSED BOX CULVERT AT STA. 12+60+/- -Y1-REV AS SHOWN ON SHEET TCP-46.

INSTALL THE REMAINING PIECES OF THE PROPOSED STORMWATER NETWORK THAT RUNS UNDER THE PROPOSED -Y1-REV BRIDGE FROM THE 1800mm RCP THAT TIES INTO STRUCTURE NO. 61 DOWN TO THE OUTLET AT STRUCTURE NO. 59 AS SHOWN ON SHEETS TCP-45 AND TCP-47. PLACE THE STORMWATER INTO THE PROPOSED NETWORK AND REMOVE OR PLUG ALL TEMPORARY PIPES IN ACCORDANCE WITH THE ROADWAY PLANS.

BEGIN CONSTRUCTION ON ALL REMAINING SECTIONS OF -Y1-REV (RIGHT SIDE) UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS SHOWN ON SHEETS TCP-46, TCP-47, AND TCP-48.

PHASE V

STEP 1: COMPLETE CONSTRUCTION ON ALL BOX CULVERTS AND ALL ROADWAYS UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.

STEP 2: PLACE THE FINAL LAYER OF SURFACE COURSE, FINAL PAVEMENT MARKINGS, AND PERMANENT RAISED MARKERS ON ALL AREAS OF -L-REV (LEFT SIDE) THAT ARE AWAY FROM TRAFFIC. (SEE ROADWAY AND PAVEMENT MARKING PLANS)

STEP 3: UTILIZING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9 WHEN REQUIRED, SHIFT SB -L-REV TRAFFIC ONTO THE OUTSIDE LANE OF SB -L-REV FROM THE BEGINNING OF THE PROJECT TO STA. 231+00+/- -L-REV.

STEP 4: UTILIZING ROADWAY STANDARD DRAWING NO. 1101.02, SHEETS 1, 2 AND 4 OF 9, WHEN REQUIRED, WORK IN A CONTINUOUS MANNER TO COMPLETE THE FOLLOWING:

PLACE THE FINAL LAYER OF SURFACE COURSE, FINAL PAVEMENT MARKINGS, AND PERMANENT RAISED MARKERS ON THE ENTIRE LENGTH OF PROPOSED -L-REV (RIGHT SIDE). RELOCATE STOP BARS AND ADJUST MARKINGS TO THE FINAL TRAFFIC PATTERN ON ALL -Y- LINES RIGHT OF -L-REV FROM THE BEGINNING TO THE END OF THE PROJECT.

SHIFT NB -L-REV TRAFFIC INTO THE FINAL PATTERN FROM THE BEGINNING TO THE END OF THE PROJECT AS SHOWN ON THE PAVEMENT AND MARKINGS PLANS.

STEP 5: UTILIZING ROADWAY STANDARD DRAWING NO. 1101.02, SHEETS 1, 2 AND 4 OF 9, WHEN REQUIRED, WORK IN A CONTINUOUS MANNER TO COMPLETE THE FOLLOWING:

PLACE THE FINAL LAYER OF SURFACE COURSE, FINAL PAVEMENT MARKINGS, AND PERMANENT RAISED MARKERS ON THE REMAINING AREAS OF -L-REV (LEFT SIDE) THAT WERE NOT ADDRESSED IN STEP 3.

SHIFT SB -L-REV TRAFFIC INTO THE FINAL PATTERN FROM THE BEGINNING TO THE END OF THE PROJECT AS SHOWN ON THE PAVEMENT AND MARKINGS PLANS.

STEP 6: UTILIZING ROADWAY STANDARD DRAWING NO. 1101.02, SHEETS 1, 2 AND 4 OF 9, PLACE THE FINAL LAYER OF SURFACE COURSE, FINAL PAVEMENT MARKINGS, AND PERMANENT RAISED MARKERS ON ALL REMAINING ROADWAYS WITHIN THE PROJECT LIMITS AND OPEN ALL ROADWAYS TO THE FINAL TRAFFIC PATTERN. (SEE PAVEMENT AND MARKINGS PLANS)

STEP 7: REMOVE ALL TRAFFIC CONTROL DEVICES.

APPROVED: Tim Arey DATE: 12/21/10

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 025465 TIM AREY

PHASING

SCALE:	
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

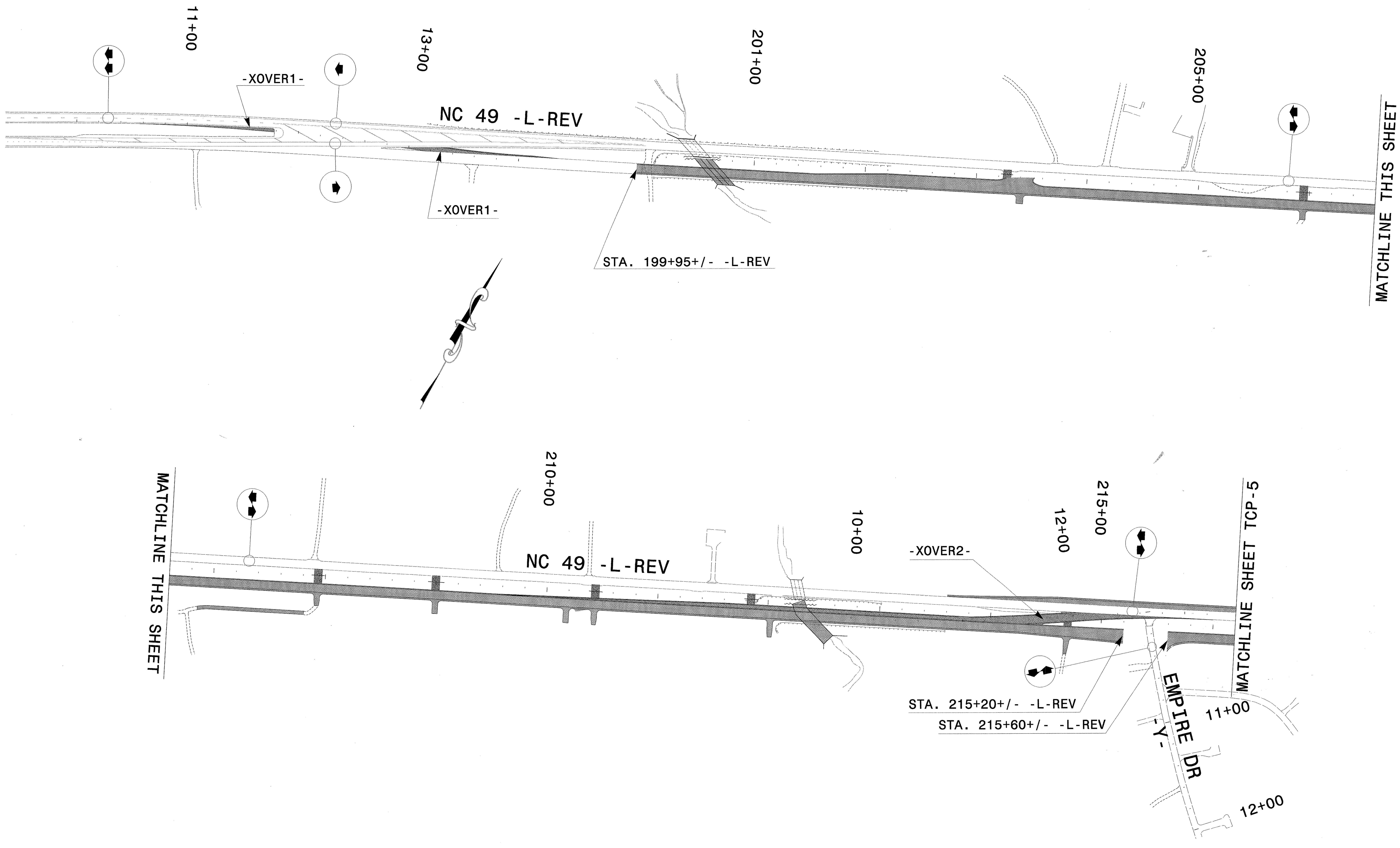
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

METRIC

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-4



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APPROVED: Tim Arey DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE I OVERVIEW

SCALE:	1:2000
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

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PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-5

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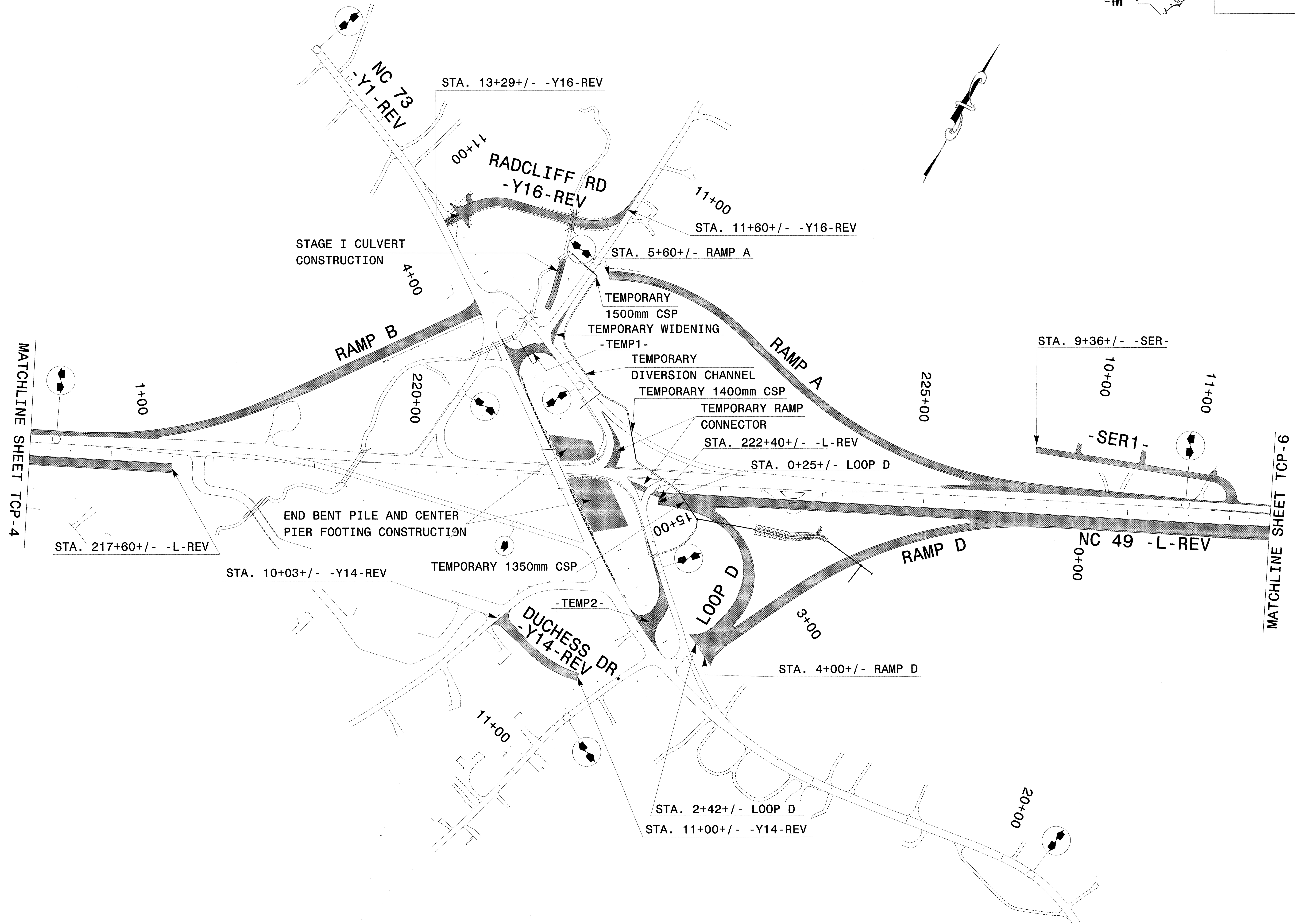

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PHASE I OVERVIEW

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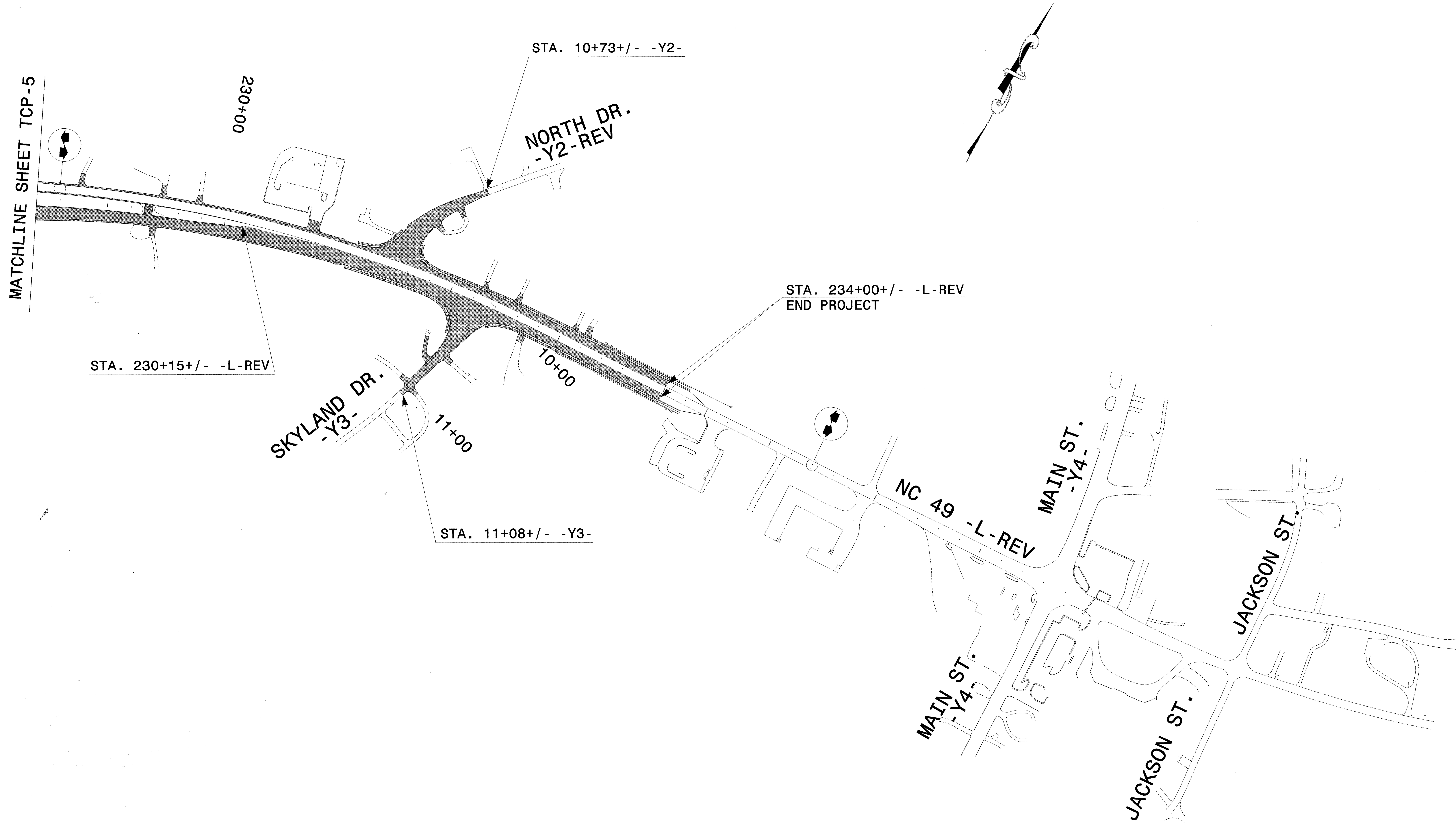
PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-6

METRIC



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PHASE I OVERVIEW

SCALE:	1:2000
DATE:	12/10
DWG. BY:	LDA
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REVIEWED BY:	TMA

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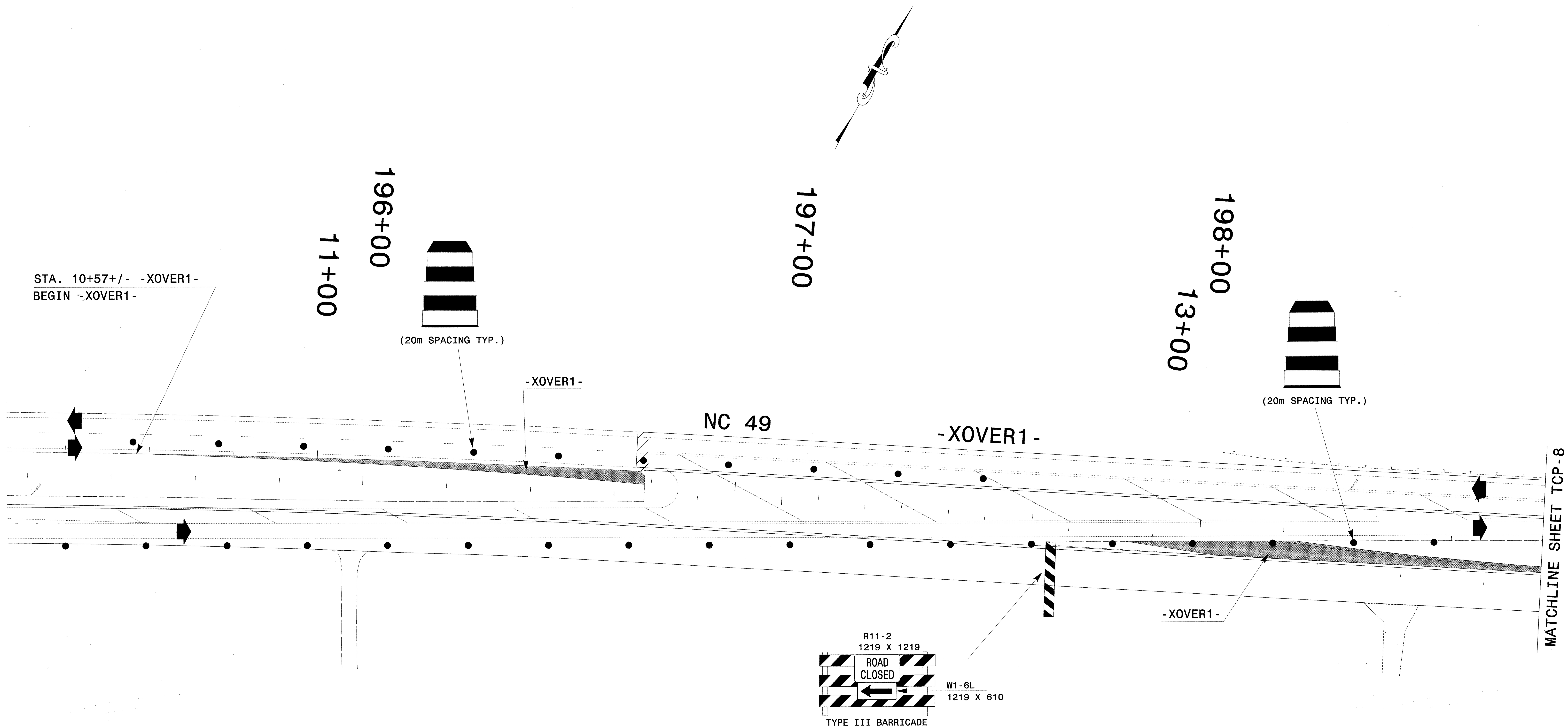
METRIC

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-7



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APPROVED: Tim Arey DATE: 12/21/10

SEAL

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PHASE I DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

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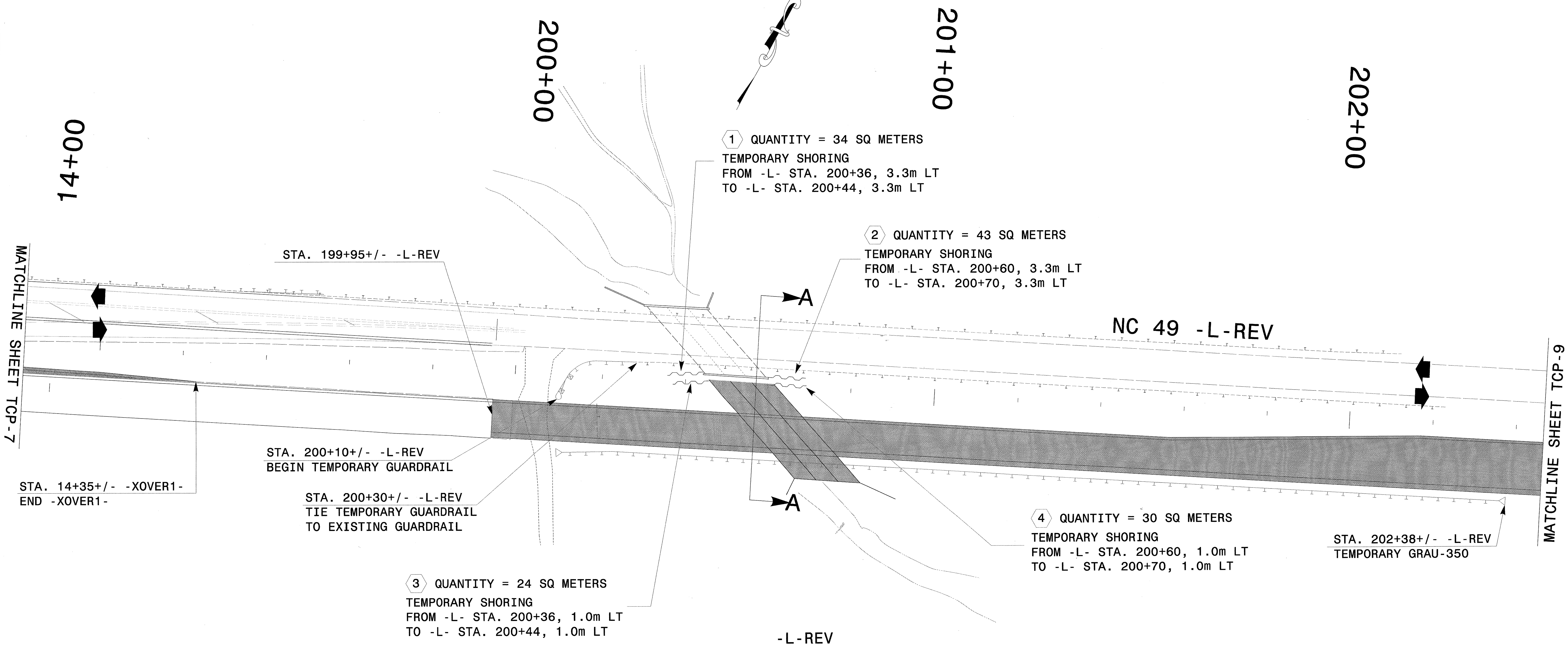
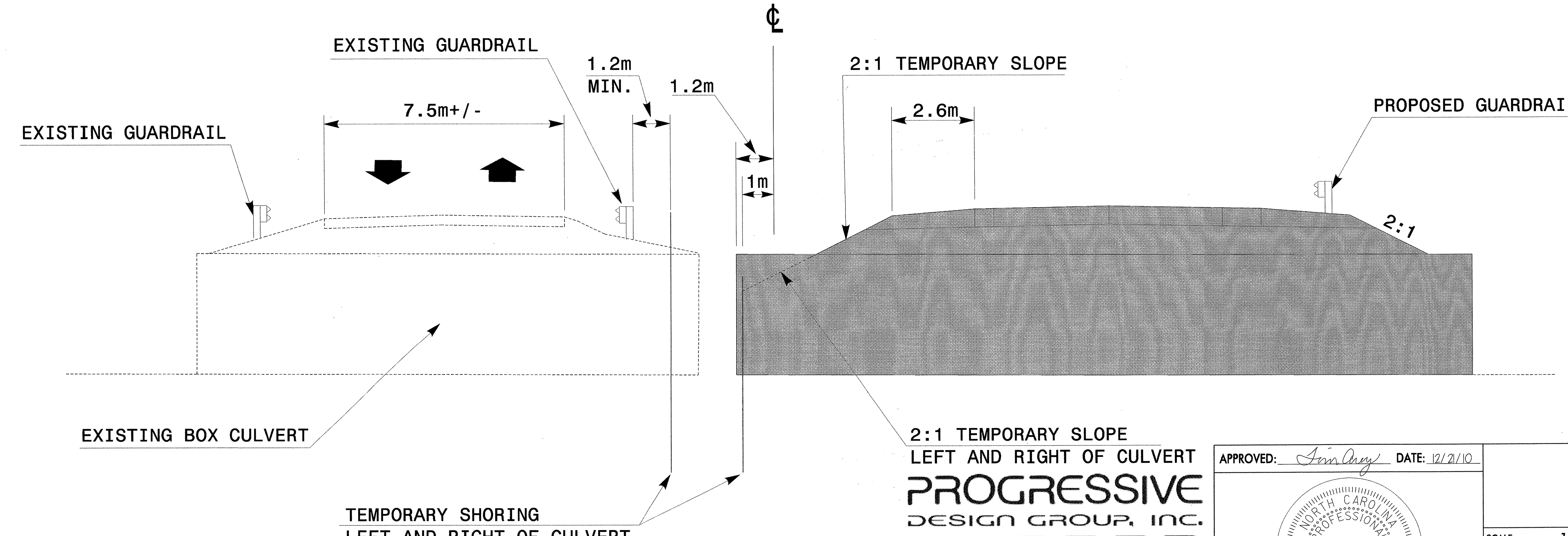
CADD FILE

METRIC

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-8





SECTION A-A
STA. 200+60+/- -L-REV

LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/21/10

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 025465 TIM AREY

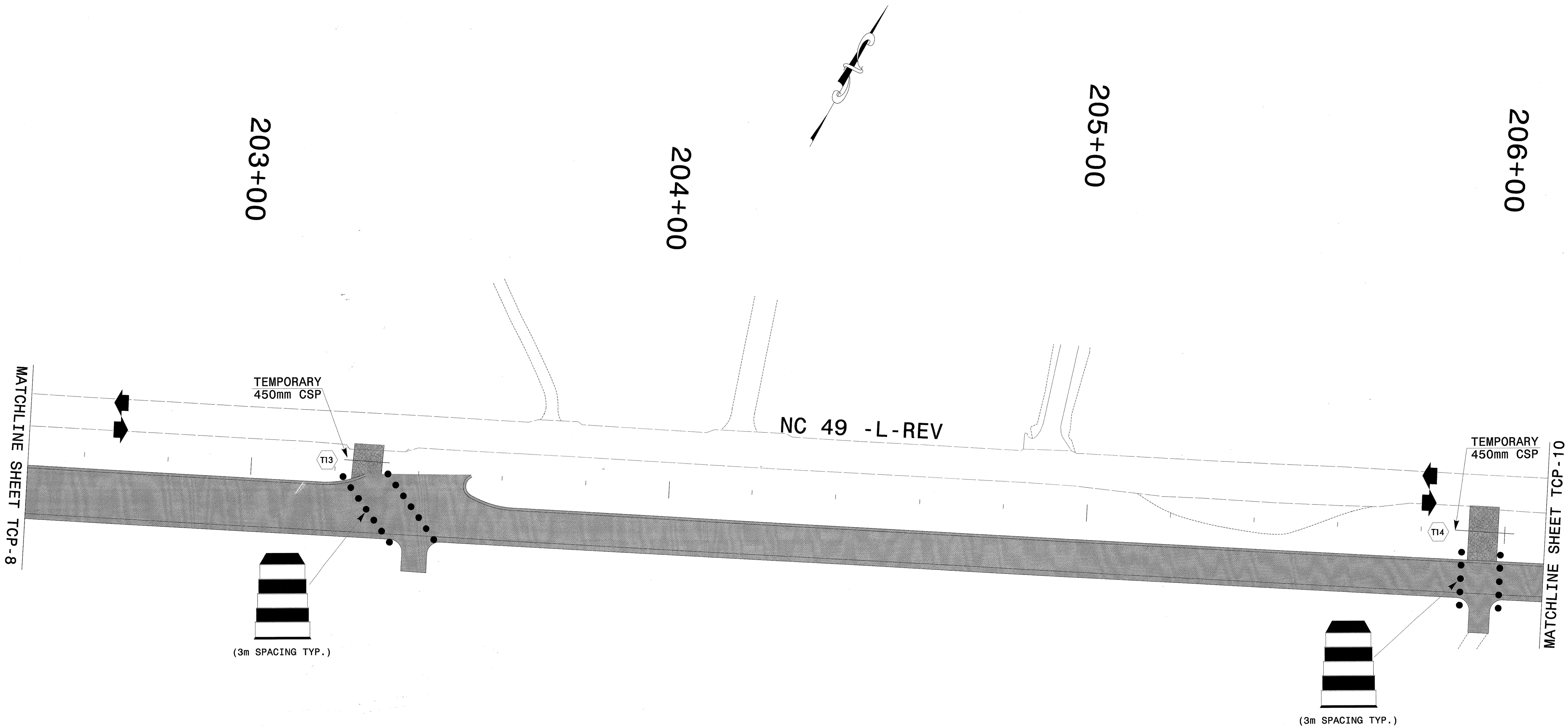
PHASE I DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS, STATE OF NORTH CAROLINA, DEPARTMENT OF TRANSPORTATION, WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE



LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/21/10

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE I DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

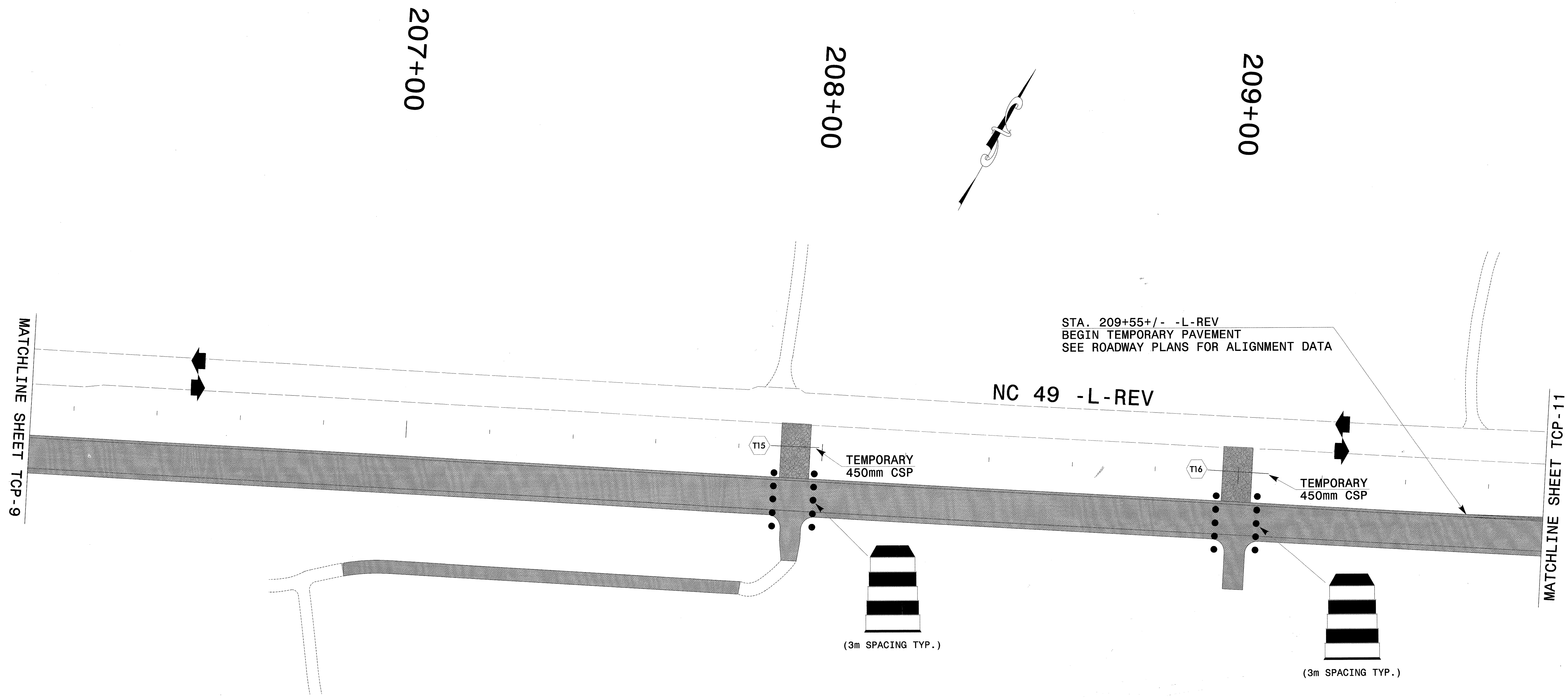
DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-10

METRIC



LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
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APPROVED: Tim Arey DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE I DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

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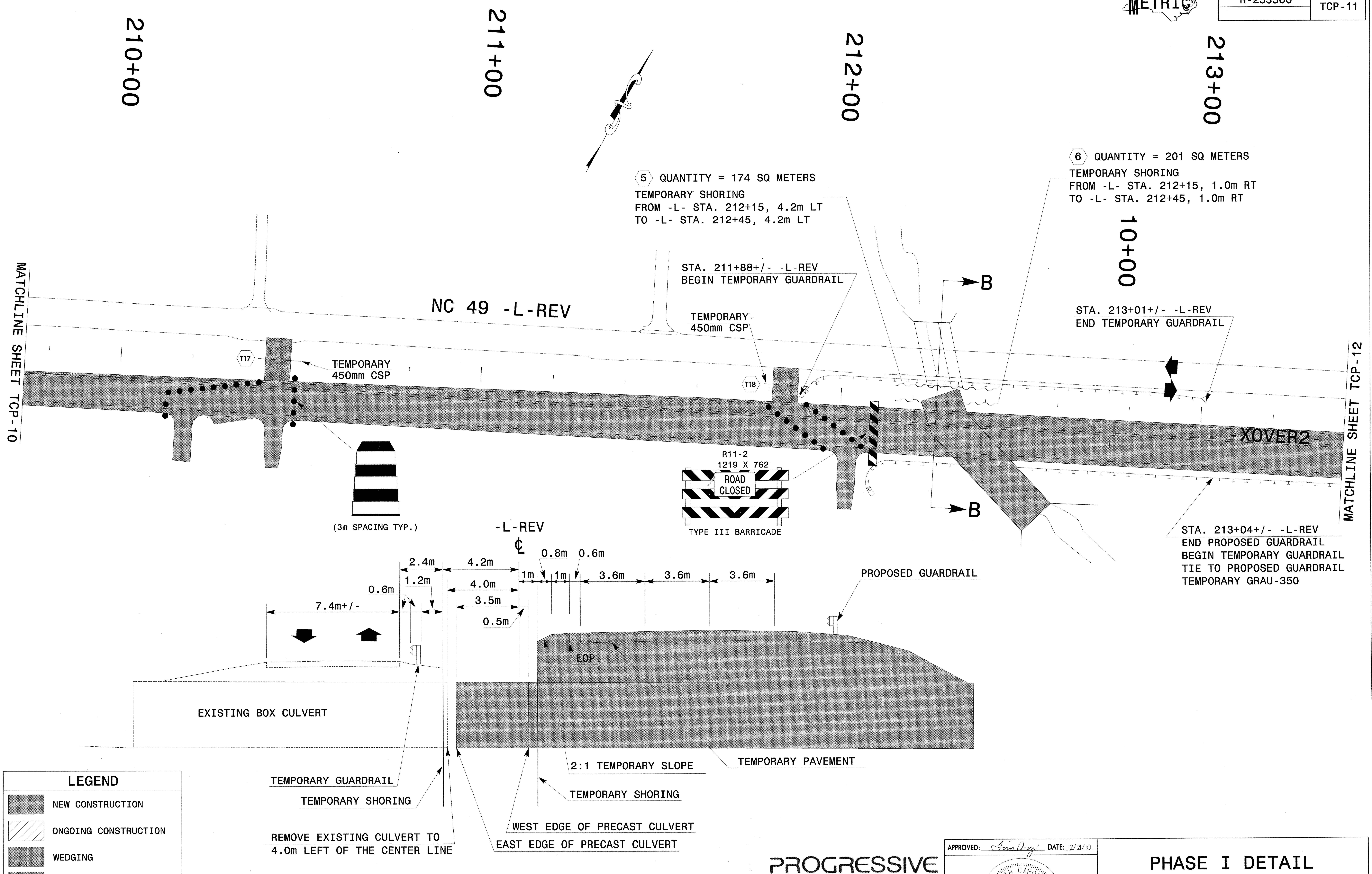
PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-11

METRIC



SECTION B-B

STA. 212+25+/- -L-REV

PROGRESSIVE DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE I DETAIL

SCALE:	
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-12

METRIC

214+00

215+00

216+00

217+00

12+00

R11-2
1219 X 762
ROAD CLOSED
W1-6R
1219 X 610
TYPE III BARRICADE

(10m SPACING TYP.)

(36m SPACING TYP.)

R11-2
1219 X 762
ROAD CLOSED
TYPE III BARRICADE

STA. 213+48+/- -L-REV

TEMPORARY
450mm CSP

NC 49 -L-REV

STA. 13+26+/- -XOVER2-
END -XOVER2-

STA. 0+00 RAMP B

MATCHLINE SHEET TCP-11

T19

T20

TEMPORARY
450mm CSP

STA. 213+60+/- -L-REV
END TEMPORARY GUARDRAIL
TEMPORARY GRAU-350

STA. 215+20+/- -L-REV

EMPIRE DR. -Y-

STA. 215+60+/- -L-REV

(10m SPACING TYP.)

MATCHLINE SHEET TCP-13

LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE
DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: [signature] DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM A. REY

PHASE I DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA NORTH CAROLINA DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-13

METRIC

RAMP B

1+00

2+00

3+00

218+00

220+00

R11-2
1219 X 762
ROAD CLOSED
TYPE III BARRICADE

(36m SPACING TYP.)

NC 49 -L-REV

MATCHLINE SHEET TCP-12

MATCHLINE A-A SHEET TCP-14

MATCHLINE B-B SHEET TCP-15

STA. 217+60+/- -L-REV

(3m SPACING TYP.)

R11-2
1219 X 762
ROAD CLOSED
TYPE III BARRICADE

LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: _____ DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM ARE

PHASE I DETAIL

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DATE:	12/10
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DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-14

METRIC

MATCHLINE THIS SHEET

STA. 11+00+/- -Y16-REV

MATCHLINE THIS SHEET

STA. 11+60+/- -Y16-REV

R11-2
1219 X 762
ROAD CLOSED
TYPE III BARRICADE

W1-6L
1219 X 610

(3m SPACING TYP.)

RAMP A

R11-2
1219 X 762
ROAD CLOSED
TYPE III BARRICADE

STA. 5+60+/- RAMP A

13+00

EXISTING RADCLIFF RD

T12

TEMPORARY 1500mm CSP
REMOVE EXISTING 375mm RCP

TEMPORARY 450mm CSP

STA. 13+50+/- -Y1-REV
BEGIN TEMPORARY GUARDRAIL

TEMPORARY DIVERSION CHANNEL

TEMPORARY PAVEMENT

EXISTING RAMP A

40m

5m

T10

-Y16-REV RADCLIFF RD

12+00

STAGE I CULVERT
CONSTRUCTION

R11-2
1219 X 762
ROAD CLOSED
TYPE III BARRICADE

(3m SPACING TYP.)

R11-2
1219 X 762
ROAD CLOSED
TYPE III BARRICADE

-TEMP1-

T11

TEMPORARY 450mm CSP

MATCHLINE C-C SHEET TCP-15

11+00

R11-2
1219 X 762
ROAD CLOSED
TYPE III BARRICADE

TEMPORARY
450mm CSP

T21

NC 73 -Y1-REV

STA. 13+29+/- -Y16-REV

STA. 13+10+/- -Y1-REV
BEGIN 4' TEMPORARY PAVEMENT
SHOULDER WIDENING
BEGIN PORTABLE CONCRETE BARRIER

TEMPORARY CRASH CUSHION

(3m SPACING TYP.)

RAMP B

MATCHLINE A-A SHEET TCP-13

4+00

LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/2/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

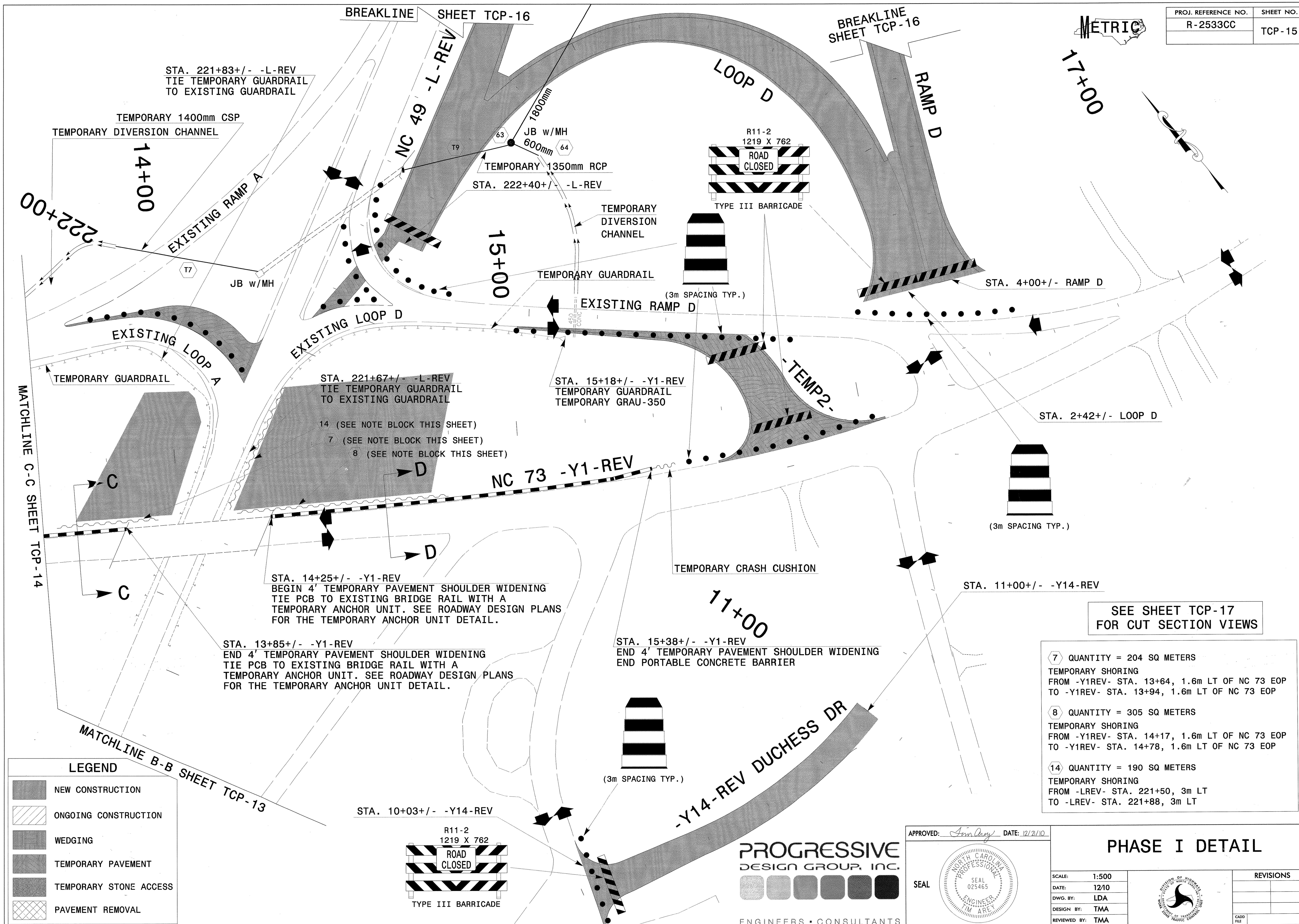
PHASE I DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE


PROJ. REFERENCE NO.
R-2533CC
SHEET NO.
TCP-15
METRIC
BREAKLINE
SHEET TCP-16
BREAKLINE
SHEET TCP-16
NC 49 -L-REV
LOOP D
RAMP D
17+00
STA. 221+83+/- -L-REV
TIE TEMPORARY GUARDRAIL
TO EXISTING GUARDRAIL
TEMPORARY 1400mm CSP
TEMPORARY DIVERSION CHANNEL
14+00
222+00
EXISTING RAMP A
T7
JB w/MH
1800mm
63
JB w/MH
600mm
64
T9
TEMPORARY 1350mm RCP
STA. 222+40+/- -L-REV
TEMPORARY
DIVERSION
CHANNEL
15+00
R11-2
1219 X 762
ROAD
CLOSED
TYPE III BARRICADE
TEMPORARY GUARDRAIL
(3m SPACING TYP.)
EXISTING RAMP D
450
CONC
STA. 4+00+/- RAMP D
EXISTING LOOP D
EXISTING LOOP A
TEMPORARY GUARDRAIL
STA. 221+67+/- -L-REV
TIE TEMPORARY GUARDRAIL
TO EXISTING GUARDRAIL
14 (SEE NOTE BLOCK THIS SHEET)
7 (SEE NOTE BLOCK THIS SHEET)
8 (SEE NOTE BLOCK THIS SHEET)
STA. 15+18+/- -Y1-REV
TEMPORARY GUARDRAIL
TEMPORARY GRAU-350
-TEMP2-
STA. 2+42+/- LOOP D
MATCHLINE C-C SHEET TCP-14
C
C
D
D
NC 73 -Y1-REV
(3m SPACING TYP.)
TEMPORARY CRASH CUSHION
STA. 14+25+/- -Y1-REV
BEGIN 4′ TEMPORARY PAVEMENT SHOULDER WIDENING
TIE PCB TO EXISTING BRIDGE RAIL WITH A
TEMPORARY ANCHOR UNIT. SEE ROADWAY DESIGN PLANS
FOR THE TEMPORARY ANCHOR UNIT DETAIL.
11+00
STA. 11+00+/- -Y14-REV
SEE SHEET TCP-17
FOR CUT SECTION VIEWS
STA. 13+85+/- -Y1-REV
END 4′ TEMPORARY PAVEMENT SHOULDER WIDENING
TIE PCB TO EXISTING BRIDGE RAIL WITH A
TEMPORARY ANCHOR UNIT. SEE ROADWAY DESIGN PLANS
FOR THE TEMPORARY ANCHOR UNIT DETAIL.
STA. 15+38+/- -Y1-REV
END 4′ TEMPORARY PAVEMENT SHOULDER WIDENING
END PORTABLE CONCRETE BARRIER
MATCHLINE B-B SHEET TCP-13
(3m SPACING TYP.)
-Y14-REV DUCHESS DR
STA. 10+03+/- -Y14-REV
R11-2
1219 X 762
ROAD
CLOSED
TYPE III BARRICADE
LEGEND
NEW CONSTRUCTION
ONGOING CONSTRUCTION
WEDGING
TEMPORARY PAVEMENT
TEMPORARY STONE ACCESS
PAVEMENT REMOVAL
PROGRESSIVE
DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

7 QUANTITY = 204 SQ METERS
TEMPORARY SHORING
FROM -Y1REV- STA. 13+64, 1.6m LT OF NC 73 EOP
TO -Y1REV- STA. 13+94, 1.6m LT OF NC 73 EOP

8 QUANTITY = 305 SQ METERS
TEMPORARY SHORING
FROM -Y1REV- STA. 14+17, 1.6m LT OF NC 73 EOP
TO -Y1REV- STA. 14+78, 1.6m LT OF NC 73 EOP

14 QUANTITY = 190 SQ METERS
TEMPORARY SHORING
FROM -LREV- STA. 221+50, 3m LT
TO -LREV- STA. 221+88, 3m LT

APPROVED: Tim Arey DATE: 12/21/10

SEAL

PHASE I DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-16

METRIC

DETOUR -Y2-REV TRAFFIC ONTO OFFSITE DETOUR AND CONSTRUCT -Y2-REV. SEE TCP-51 FOR OFFSITE DETOUR SIGNING AND DEVICES.

231+00

233+00

STA. 10+52+/- -Y2-
TIE TO EXISTING MARKINGS

NORTH DR.
-Y2-REV

STA. 11+48+/- -Y2-REV

STA. 230+80+/- -L-REV
TIE TO EXISTING MARKINGS

STA. 232+44+/- -L-REV

STA. 232+25+/- -L-REV

STA. 234+00+/- -L-REV
TIE TO EXISTING MARKINGS
END PROJECT

-L-REV

PA
PI MH
P4
3.3m

BREAKLINE

SHEET TCP-15

STA. 231+48+/- -L-REV

STA. 231+33+/- -L-REV

STA. 10+07+/- -Y3-

10+00

E

STA. 10+90+/- -Y3-
TIE TO EXISTING MARKINGS

-Y3-
SKYLAND DR

STA. 11+00+/- -Y3-

11+00

DETOUR -Y3- TRAFFIC ONTO OFFSITE DETOUR AND CONSTRUCT -Y3-. SEE TCP-50 FOR OFFSITE DETOUR SIGNING AND DEVICES.

SEE SHEET TCP-17
FOR CUT SECTION VIEWS

LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

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SEAL
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM ARY

PHASE I DETAIL

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DESIGN BY:	TMA
REVIEWED BY:	TMA

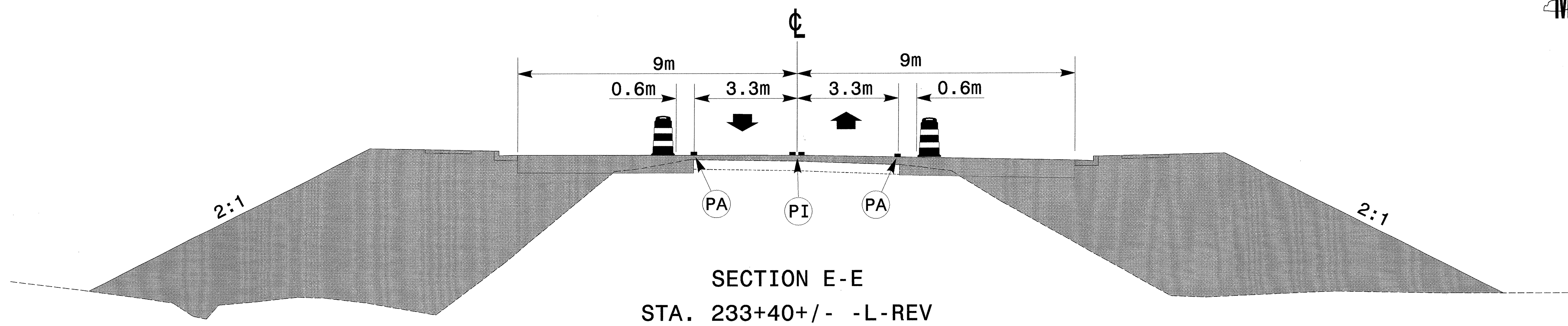
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

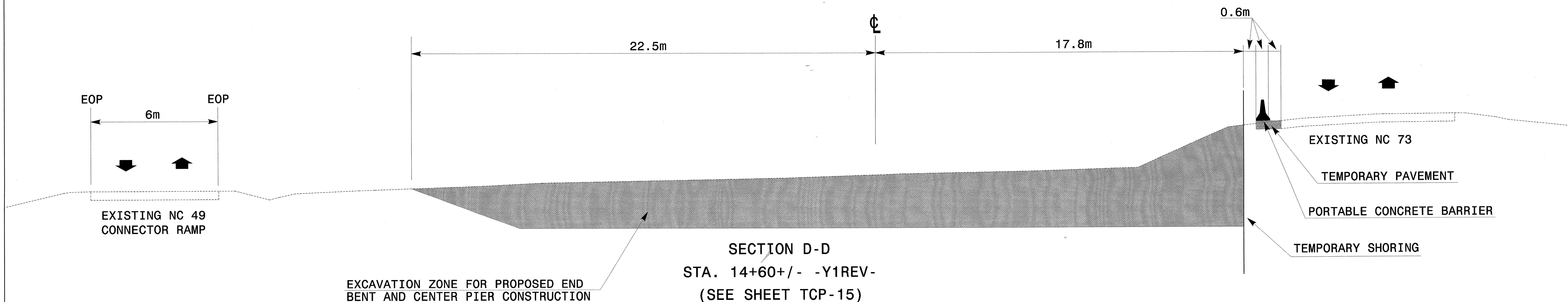
CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-17

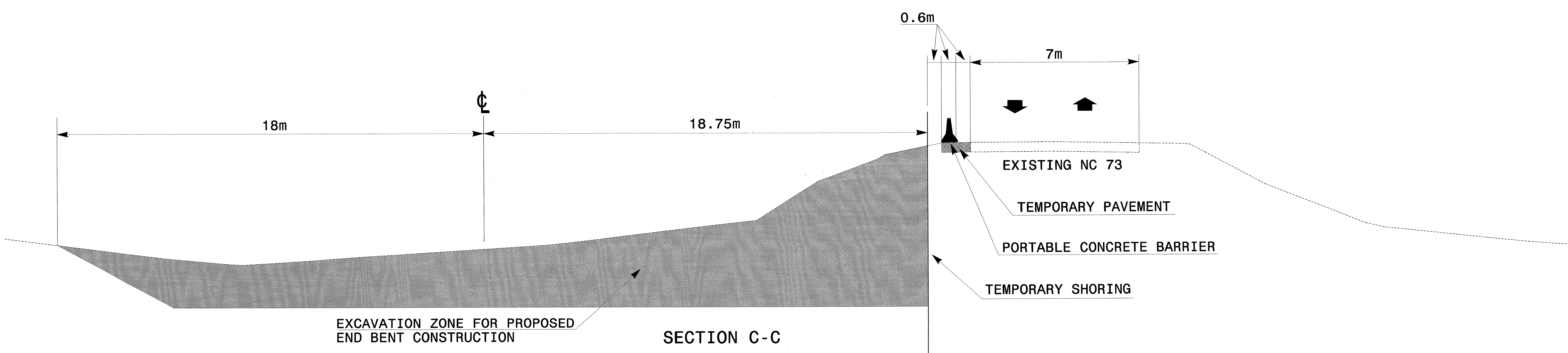
METRIC



SECTION E-E
STA. 233+40+/- -L-REV
(SEE SHEET TCP-16)



SECTION D-D
STA. 14+60+/- -Y1REV-
(SEE SHEET TCP-15)



SECTION C-C
STA. 13+70+/- -Y1REV-
(SEE SHEET TCP-15)

PROGRESSIVE
DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/21/10

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE I SECTIONS

SCALE:	NONE
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

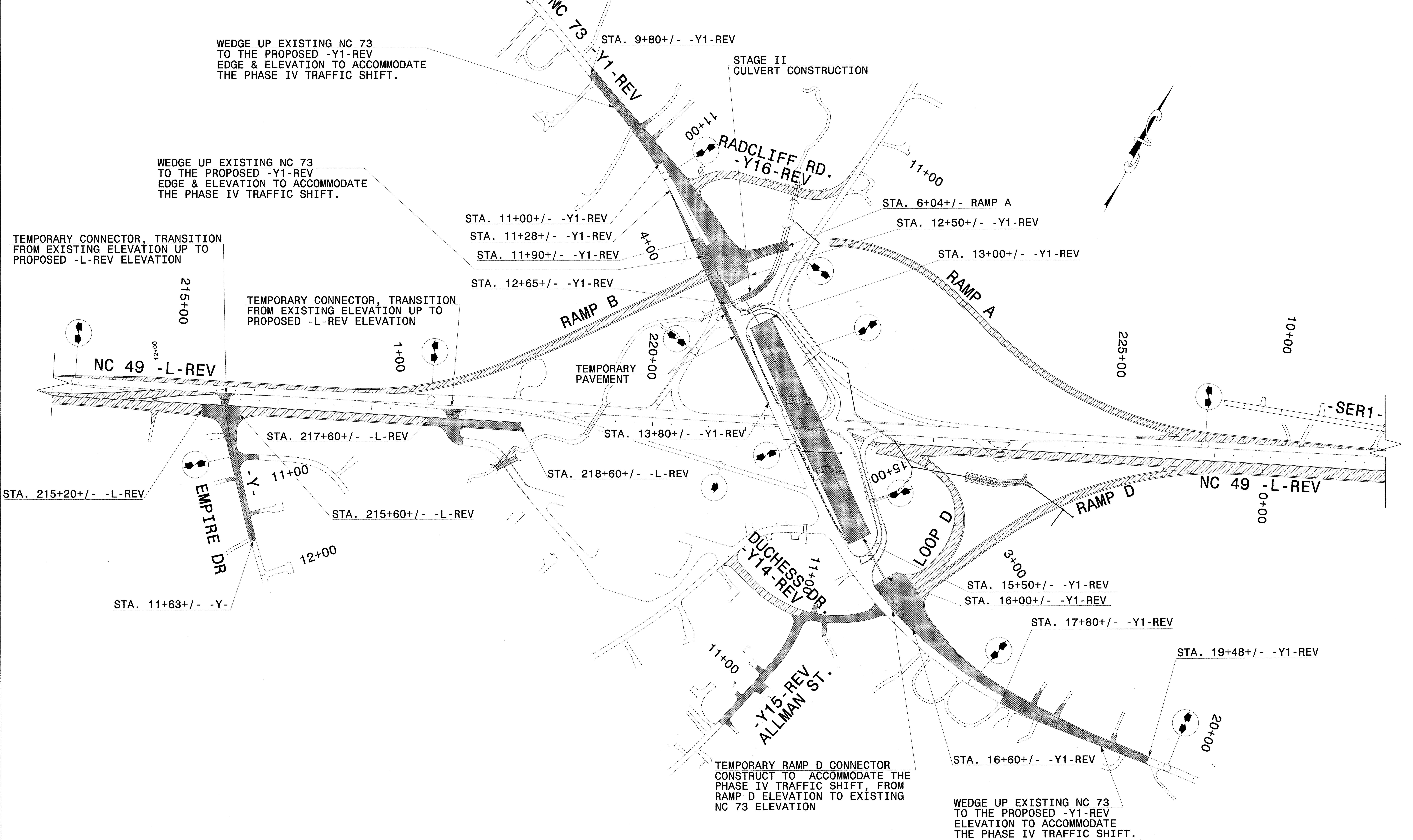
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-18

METRIC



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ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/21/10

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 025465 TIM AREY

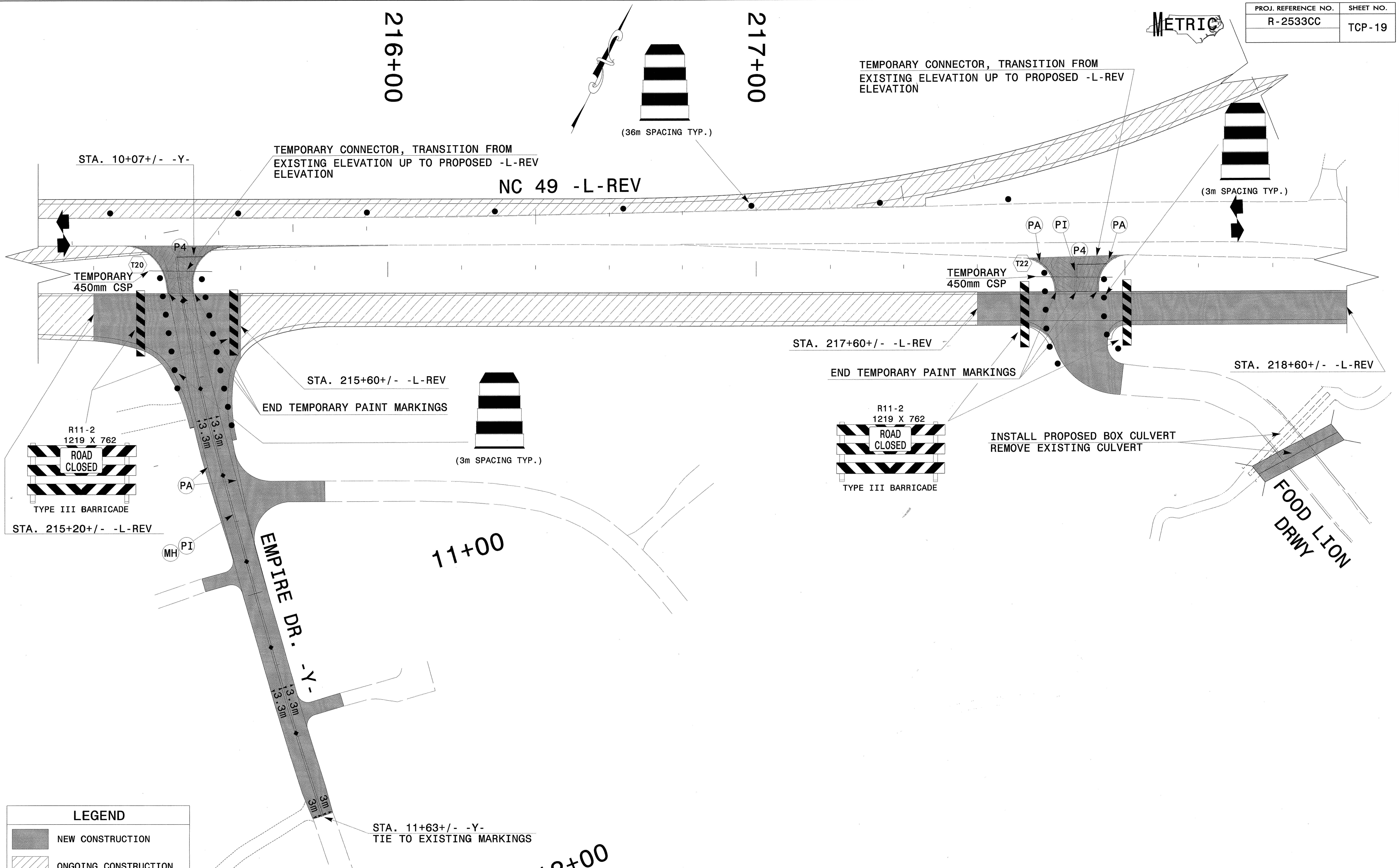
PHASE II OVERVIEW

SCALE:	1:2000
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE



LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

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SEAL
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE II DETAIL

SCALE:	1:500
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DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-20

METRIC

LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

MATCHLINE THIS SHEET

MATCHLINE THIS SHEET

-Y16- RADCLIFF DR

EXISTING RADCLIFF DR

R11-2
1219 X 762
ROAD CLOSED
TYPE III BARRICADE

RAMP A

(10m SPACING TYP.)

T12

13+00

12+00

STA. 6+04+/- RAMP A

END TEMPORARY GUARDRAIL
TEMPORARY GRAU-350

STOP
R1-1
30 x 30

STAGE II
CULVERT CONSTRUCTION

STA. 13+00+/- -Y1-REV

RAMP A

R11-2
1219 X 762
ROAD CLOSED
TYPE III BARRICADE

STA. 12+50+/- -Y1-REV

11+00

(3m SPACING TYP.)

(10m SPACING TYP.)

NC 73 -Y1-REV

F

F

G

G

H

H

3.6m
3.6m

P4
PI
QB
PA
3.6m
4.8m
T11
QB
P4

-TEMP1-

MATCHLINE SHEET TCP-21

STA. 9+80+/- -Y1-REV
BEGIN WEDGING

WEDGE UP EXISTING NC 73
TO THE PROPOSED -Y1-REV
ELEVATION TO ACCOMMODATE
THE PHASE IV TRAFFIC SHIFT.

STA. 11+00+/- -Y1-REV
END WEDGING

STA. 11+28+/- -Y1-REV
BEGIN TEMPORARY PAVEMENT

STA. 11+90+/- -Y1-REV
BEGIN WEDGING

WEDGE UP EXISTING NC 73 TO THE
PROPOSED -Y1-REV/RAMPA/RAMPB
ELEVATION TO ACCOMMODATE THE
PHASE IV TRAFFIC SHIFT.

STA. 12+45+/- -Y1-REV
BEGIN TEMPORARY GUARDRAIL
TEMPORARY GRAU-350

RAMP B

STA. 13+10+/- -Y1-REV
PORTABLE CONCRETE BARRIER
TEMPORARY CRASH CUSHION

STA. 10+08+/- -TEMP1-

STA. 12+65+/- -Y1-REV
END WEDGING

SEE SHEET TCP-24
FOR CUT SECTION VIEWS

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/2/10

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM ARE

PHASE II DETAIL

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REVISIONS

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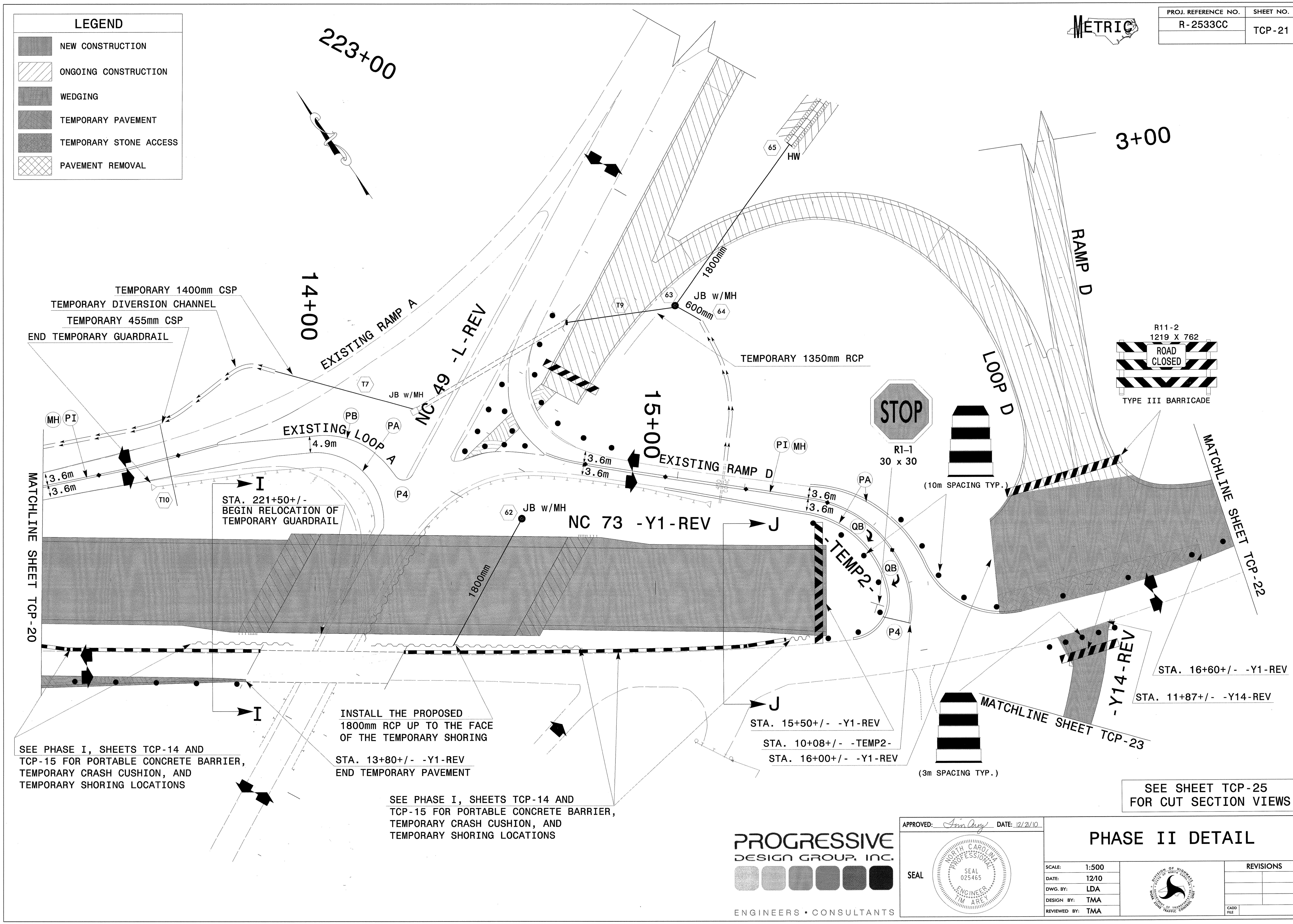
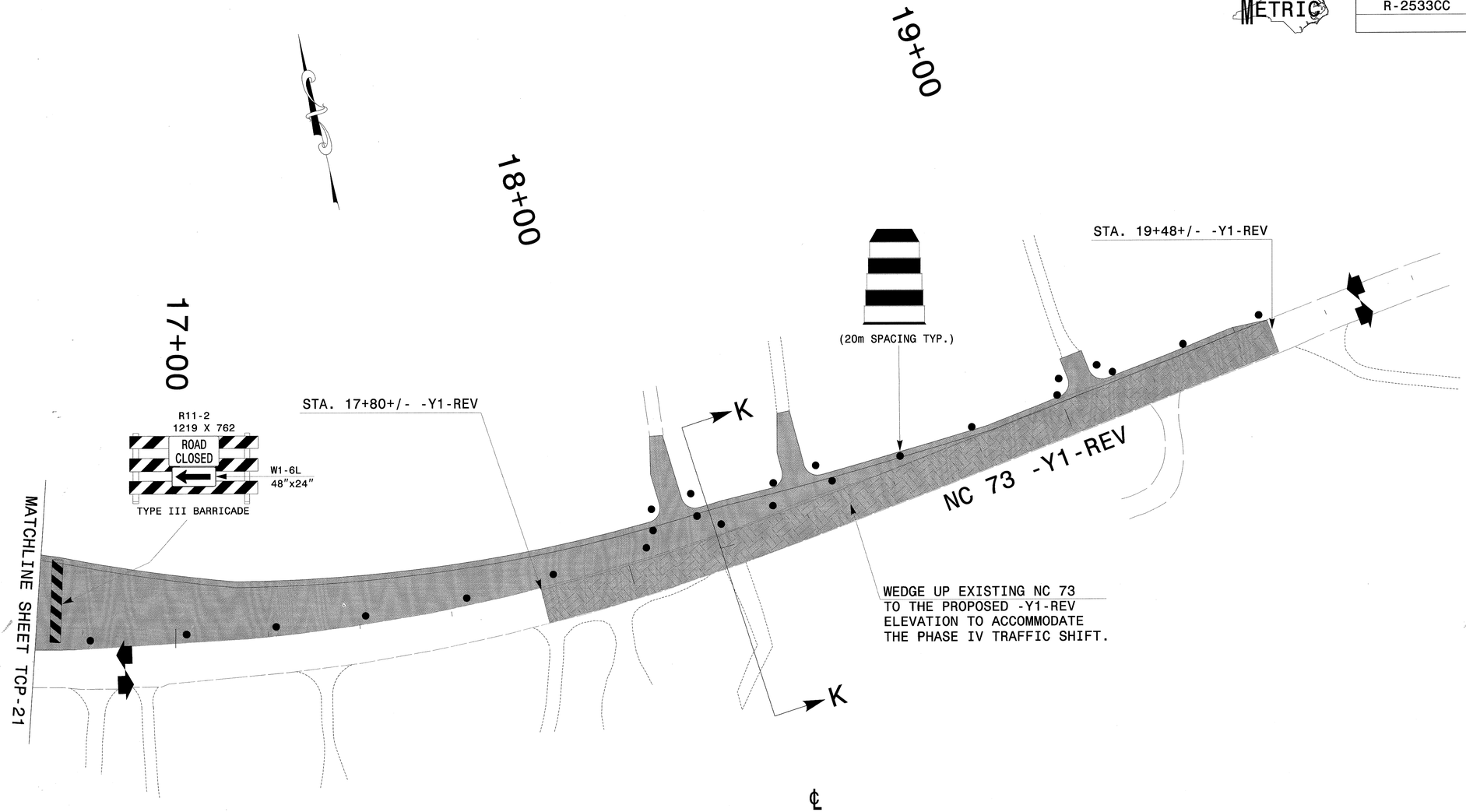
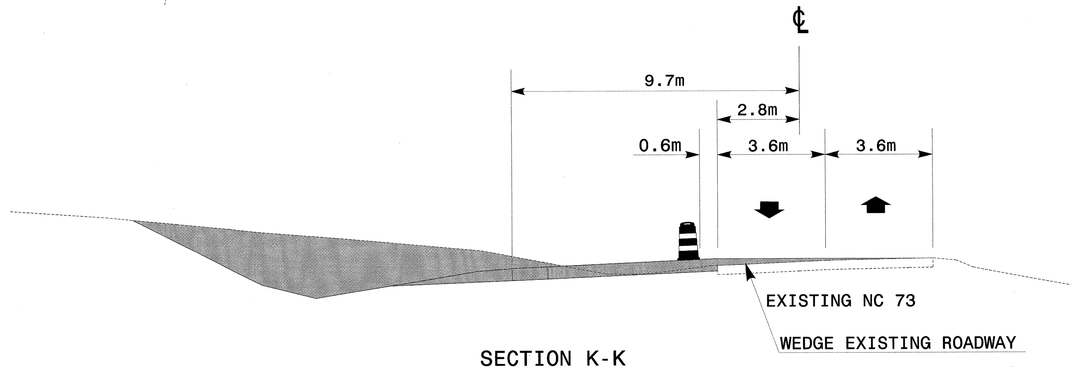


LEGEND
NEW CONSTRUCTION
ONGOING CONSTRUCTION
WEDGING
TEMPORARY PAVEMENT
TEMPORARY STONE ACCESS
PAVEMENT REMOVAL
METRIC
PROJ. REFERENCE NO.
R-2533CC
SHEET NO.
TCP-21
223+00
14+00
15+00
3+00
EXISTING RAMP A
NC 49 -L-REV
EXISTING LOOP A
EXISTING RAMP D
RAMP D
LOOP D
NC 73 -Y1-REV
-TEMP2-
-Y14-REV
TEMPORARY 1400mm CSP
TEMPORARY DIVERSION CHANNEL
TEMPORARY 455mm CSP
END TEMPORARY GUARDRAIL
TEMPORARY 1350mm RCP
JB w/MH
1800mm
600mm
HW
65
63
64
62
T7
T9
T10
MH
PI
PB
PA
P4
QB
3.6m
4.9m
STA. 221+50+/-
BEGIN RELOCATION OF
TEMPORARY GUARDRAIL
I
J
MATCHLINE SHEET TCP-20
MATCHLINE SHEET TCP-22
MATCHLINE SHEET TCP-23
STOP
R1-1
30 x 30
(10m SPACING TYP.)
(3m SPACING TYP.)
R11-2
1219 X 762
ROAD CLOSED
TYPE III BARRICADE
INSTALL THE PROPOSED
1800mm RCP UP TO THE FACE
OF THE TEMPORARY SHORING
STA. 13+80+/- -Y1-REV
END TEMPORARY PAVEMENT
SEE PHASE I, SHEETS TCP-14 AND
TCP-15 FOR PORTABLE CONCRETE BARRIER,
TEMPORARY CRASH CUSHION, AND
TEMPORARY SHORING LOCATIONS
SEE PHASE I, SHEETS TCP-14 AND
TCP-15 FOR PORTABLE CONCRETE BARRIER,
TEMPORARY CRASH CUSHION, AND
TEMPORARY SHORING LOCATIONS
STA. 15+50+/- -Y1-REV
STA. 10+08+/- -TEMP2-
STA. 16+00+/- -Y1-REV
STA. 16+60+/- -Y1-REV
STA. 11+87+/- -Y14-REV
SEE SHEET TCP-25
FOR CUT SECTION VIEWS
PROGRESSIVE
DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS
APPROVED:
DATE: 12/21/10
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY
PHASE II DETAIL
SCALE: 1:500
DATE: 12/10
DWG. BY: LDA
DESIGN BY: TMA
REVIEWED BY: TMA
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT
REVISIONS
CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-22

METRIC





SECTION K-K
STA. 18+20 -Y1-REV

LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: [signature] DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE II DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

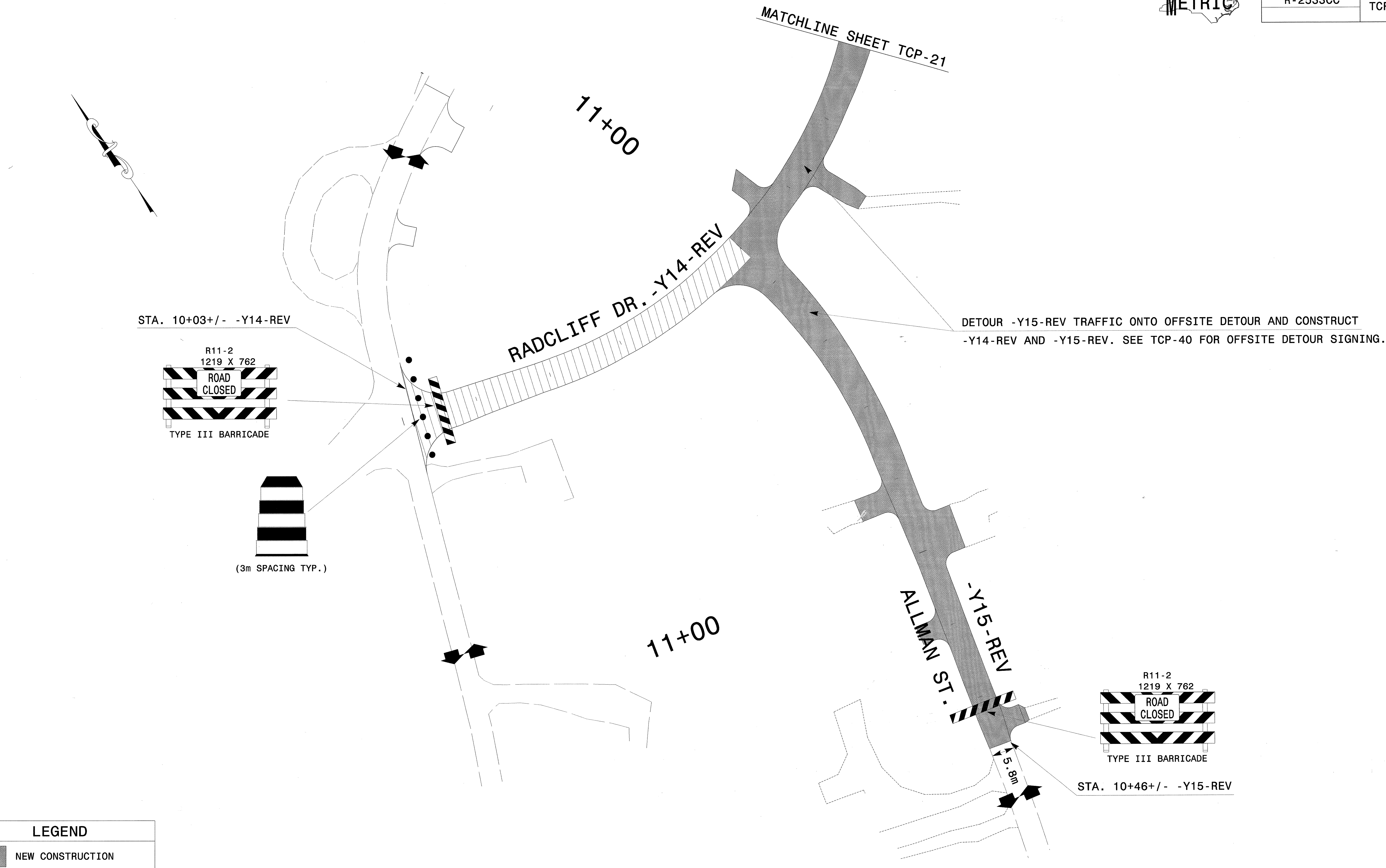
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

METRIC

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-23



LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE II DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

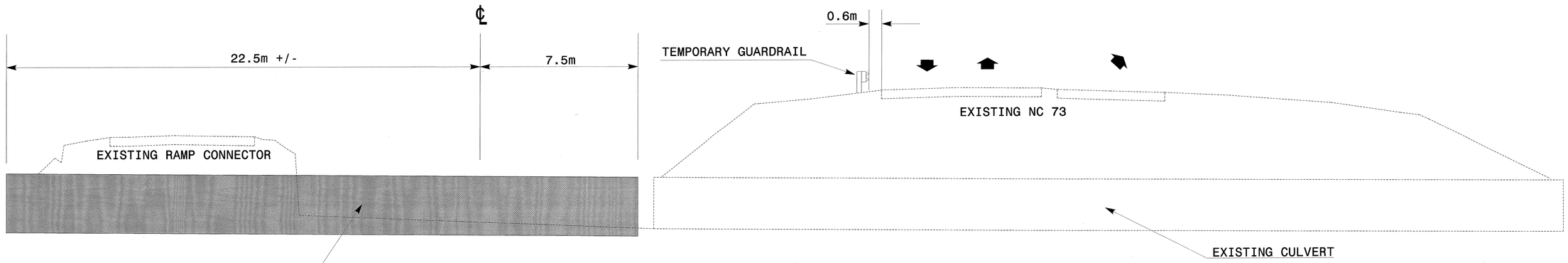
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

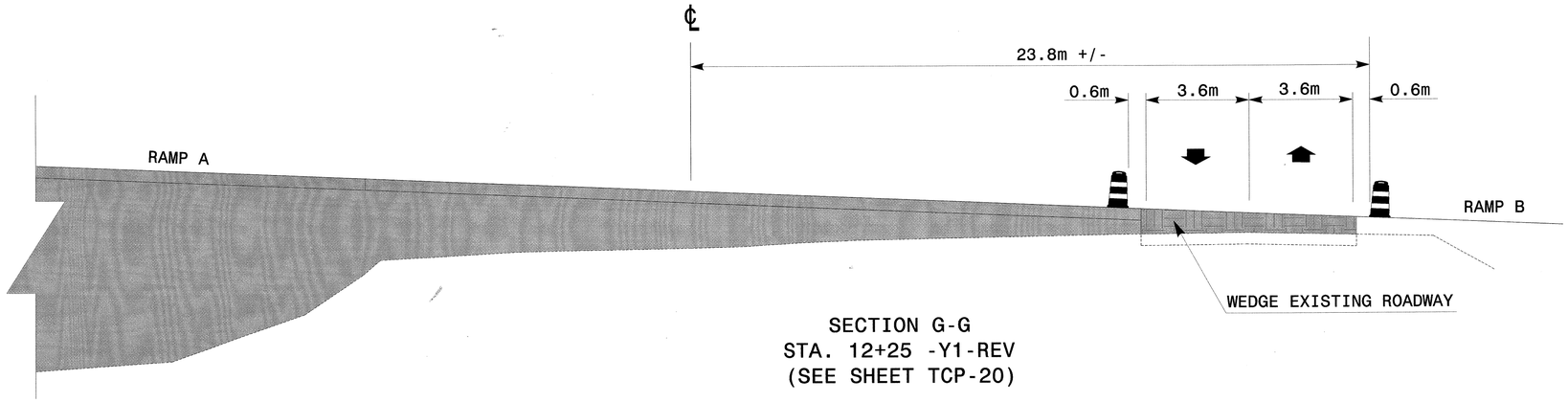
CADD FILE

METRIC

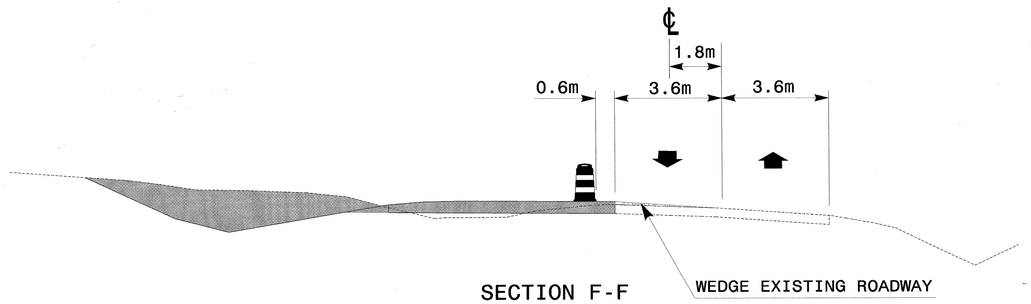
PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-24



SECTION H-H
STA. 12+60 -Y1-REV
(SEE SHEET TCP-20)



SECTION G-G
STA. 12+25 -Y1-REV
(SEE SHEET TCP-20)



SECTION F-F
STA. 10+80 -Y1-REV
(SEE SHEET TCP-20)

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: [signature] DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM ARE

PHASE II SECTIONS

SCALE:	
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

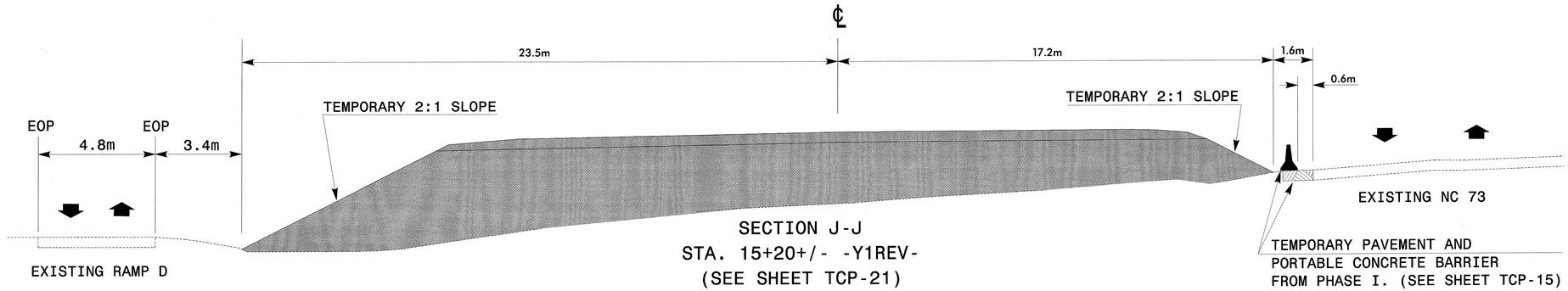
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL

REVISIONS

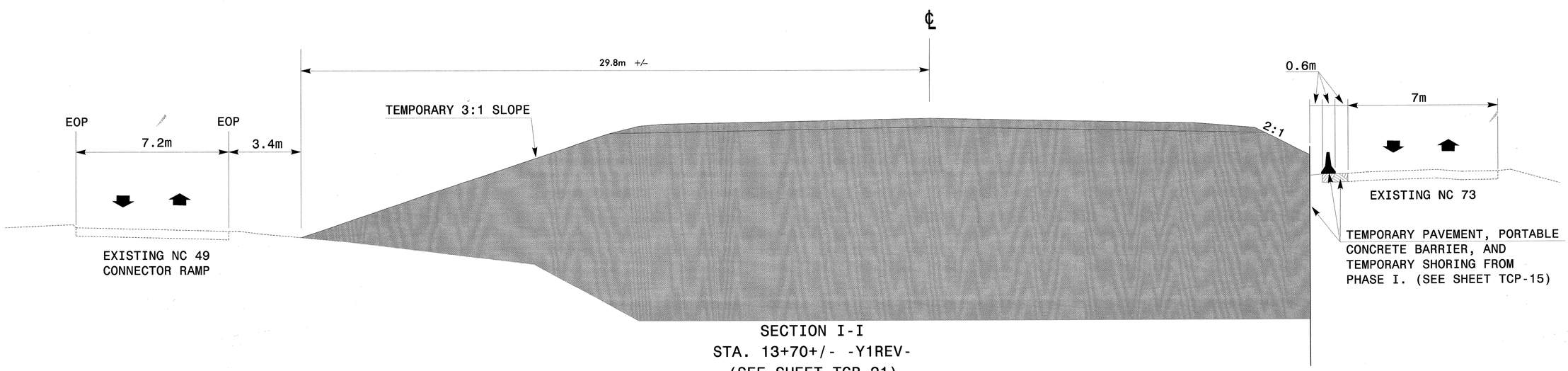
CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-25

METRIC



SECTION J-J
STA. 15+20+/- -Y1REV-
(SEE SHEET TCP-21)



SECTION I-I
STA. 13+70+/- -Y1REV-
(SEE SHEET TCP-21)

PROGRESSIVE DESIGN GROUP, INC.
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APPROVED: Tim Arey DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM ARey

PHASE II SECTIONS

SCALE:	NONE
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

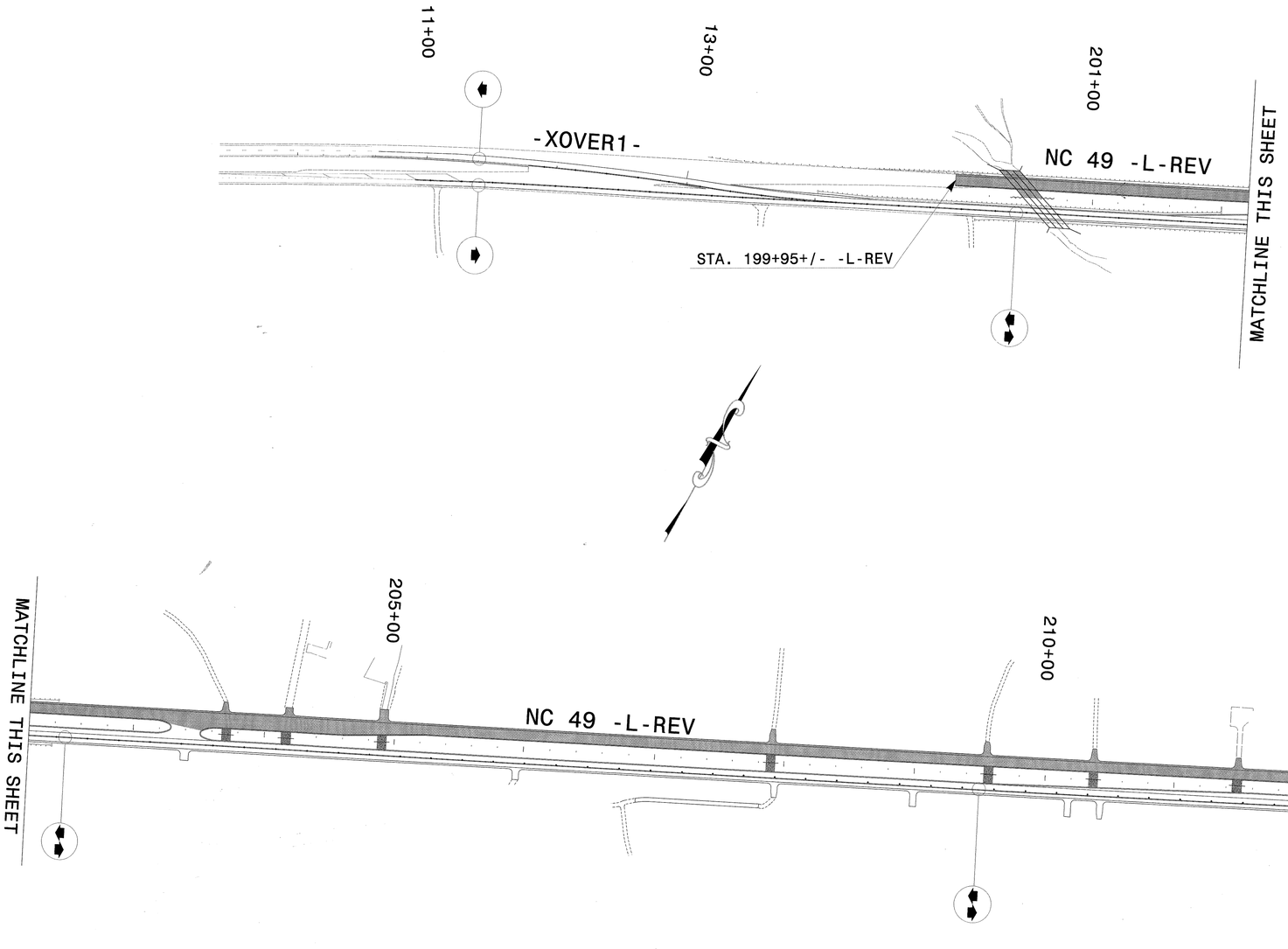
DIVISION OF HIGHWAYS - NORTH CAROLINA DEPARTMENT OF TRANSPORTATION - WORK ZONE TRAFFIC CONTROL

REVISIONS

CADD FILE

METRIC

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-26



PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/2/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE III OVERVIEW

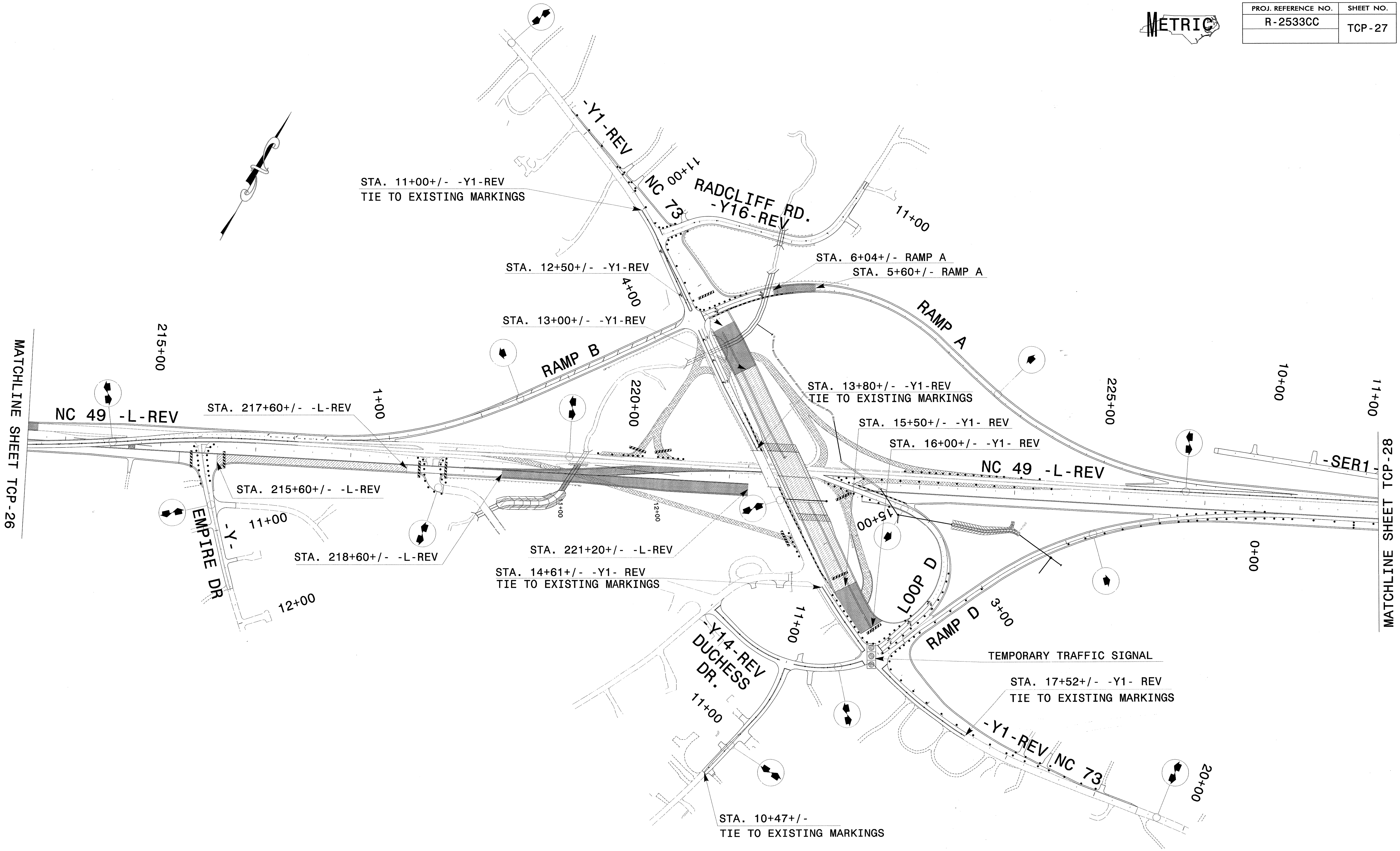
SCALE:	1:2000
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RURAL SIGNAL TRAFFIC CONTROL

REVISIONS	
CADD FILE	

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-27

METRIC



PROGRESSIVE
DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/21/10

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE III OVERVIEW

SCALE:	1:2000
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

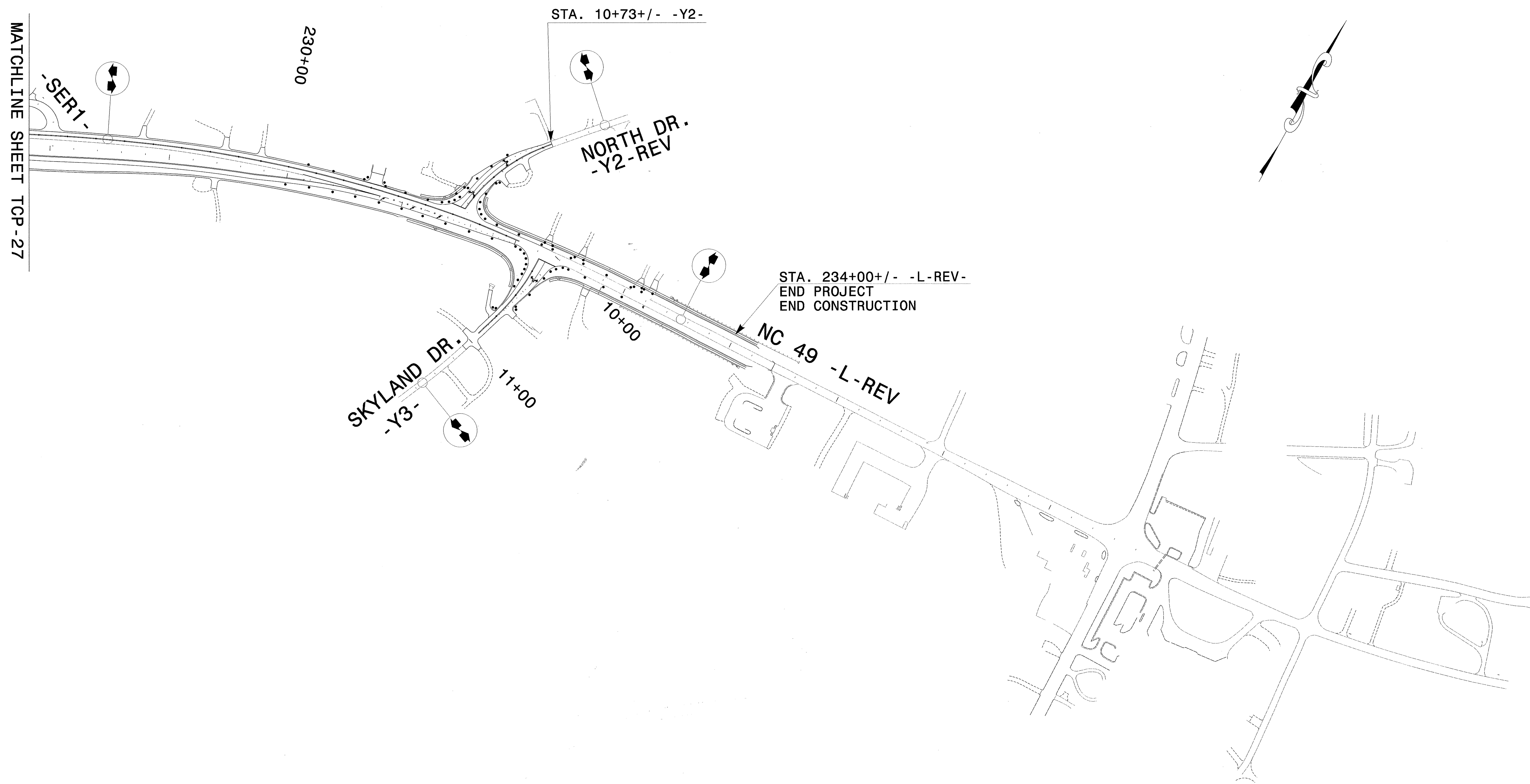
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

METRIC

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-28



PROGRESSIVE
DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE III OVERVIEW

SCALE:	1:2000
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-29

METRIC

195+00

196+00

11+00

197+00

12+00

STA. 10+57+/- -XOVER1-
TIE TO EXISTING MARKINGS

-XOVER1-

(20m SPACING TYP.)

PB

PA

PI

MH

NC 49

3.6m

4.2m

4.2m

3.6m

3.6m

STA. 10+90+/- -XOVER1-
TIE TO EXISTING MARKINGS

150m

W6-3
1219 X 1219

MATCHLINE SHEET TCP-30

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE III DETAIL

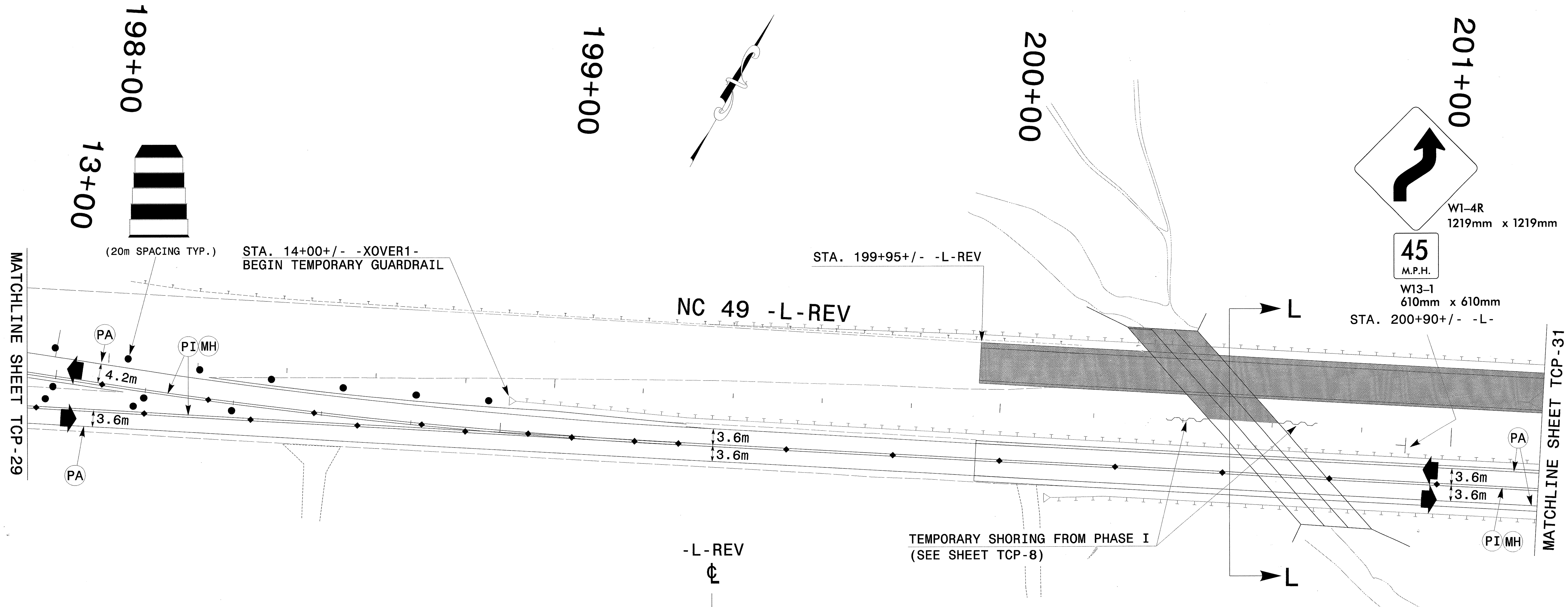
SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

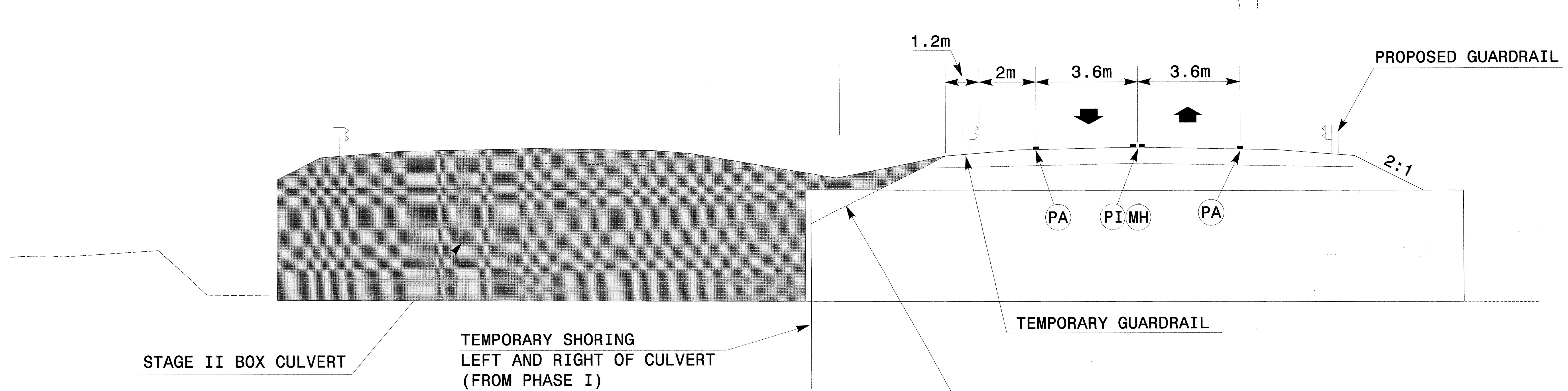
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL

REVISIONS	
CADD FILE	

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-30

METRIC





SECTION L-L

STA. 200+60+/- -L-REV

LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: [signature] DATE: 12/21/10

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 025465 TIM AREY

PHASE III DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

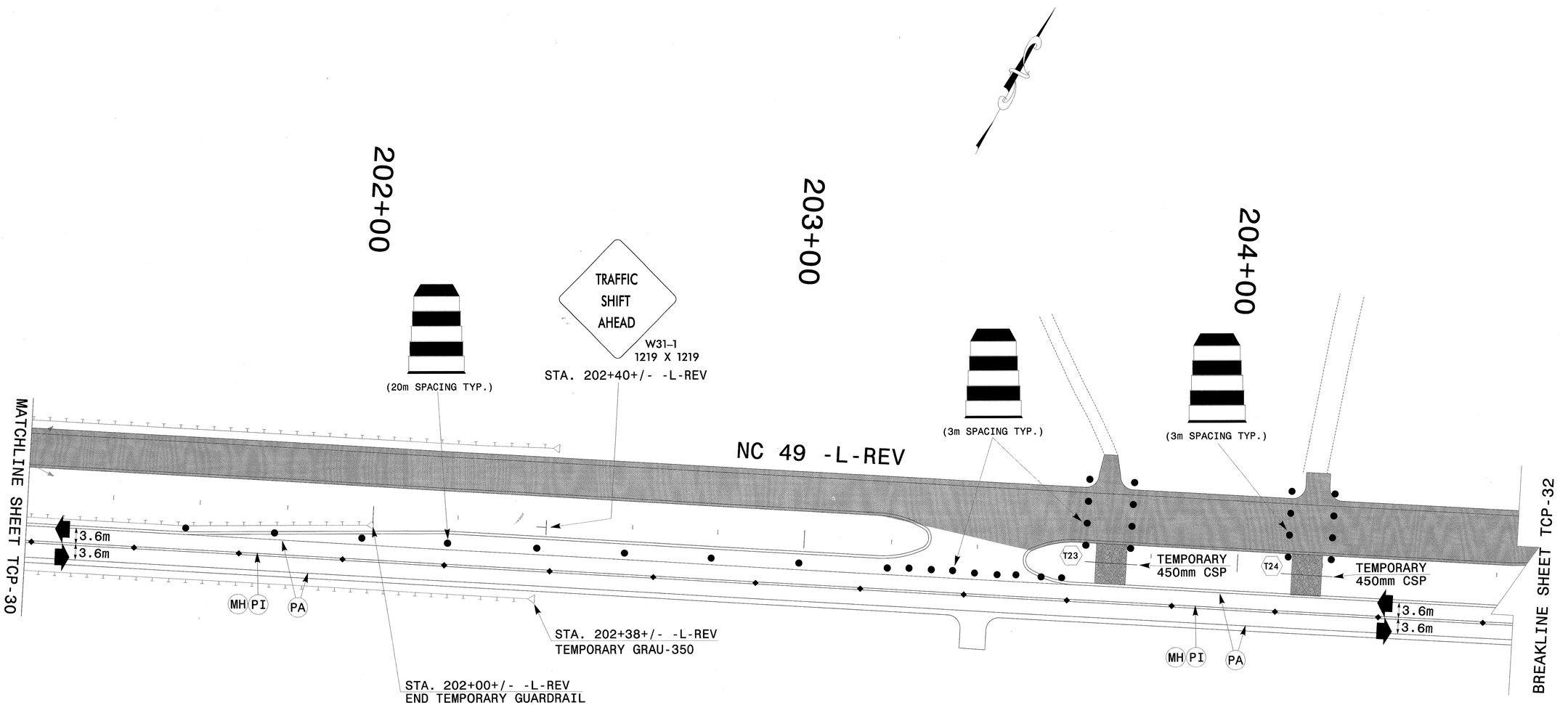
DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-31

METRIC



LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: [signature] DATE: 12/2/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE III DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-32

METRIC

208+00

209+00

210+00

211+00

(3m SPACING TYP.)

(3m SPACING TYP.)

(3m SPACING TYP.)

NC 49 -L-REV

BREAKLINE SHEET TCP-31

SHEET TCP-33

T25 TEMPORARY 450mm CSP

T26 TEMPORARY 450mm CSP

T27 TEMPORARY 450mm CSP

3.6m
3.6m

MH PI PA

PI PA MH

3.6m
3.6m

TRAFFIC SHIFT AHEAD

W31-1
1219 X 1219

STA. 209+75+/- -L-REV

LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE III DETAIL

SCALE:	
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

REVISIONS

CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-33

METRIC

212+00

213+00

214+00

10+00

12+00

STA. 211+60+/- -L-REV
BEGIN TEMPORARY GUARDRAIL

MATCHLINE SHEET TCP-32

TEMPORARY
450mm CSP

T28

M

TEMPORARY SHORING FROM PHASE I
(SEE SHEET TCP-11)

NC 49 -L-REV

STA. 213+60+/- -L-REV
END TEMPORARY GUARDRAIL
TEMPORARY GRAU-350

STA. 213+70+/- -L-REV

R11-2
1219 X 762
ROAD CLOSED
W1-6L
1219 X 610
TYPE III BARRICADE

(10m SPACING TYP.)

3.6m
3.6m

MH PI PA

3.6m
3.6m
3.6m

-XOVER2-

T19

PI MH PA

3.6m
3.6m

MATCHLINE SHEET TCP-34

STA. 211+25+/- -L-

W1-4L
1219mm x 1219mm

45
M.P.H.

W13-1
610mm x 610mm

STA. 213+04+/- -L-REV
END PROPOSED GUARDRAIL
BEGIN TEMPORARY GUARDRAIL
TIE TO PROPOSED GUARDRAIL

STA. 213+60+/- -L-REV
END TEMPORARY GUARDRAIL
TEMPORARY GRAU-350

(10m SPACING TYP.)

R11-2
1219 X 762
ROAD CLOSED
W1-6L
1219 X 610
TYPE III BARRICADE

-L-REV
℄

0.8m 0.6m
1m 1m 3.6m 3.6m 3.6m
0.6m

PROPOSED GUARDRAIL

2:1 TEMPORARY SLOPE

EOP

PA PI MH PA

STAGE II BOX CULVERT

EAST EDGE OF PRECAST CULVERT

WEST EDGE OF PRECAST CULVERT

TEMPORARY GUARDRAIL

TEMPORARY SHORING
(FROM PHASE I)

SECTION M-M
STA. 212+25+/- -L-REV

LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE
DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: [signature] DATE: 12/21/10

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM ARE

PHASE III DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

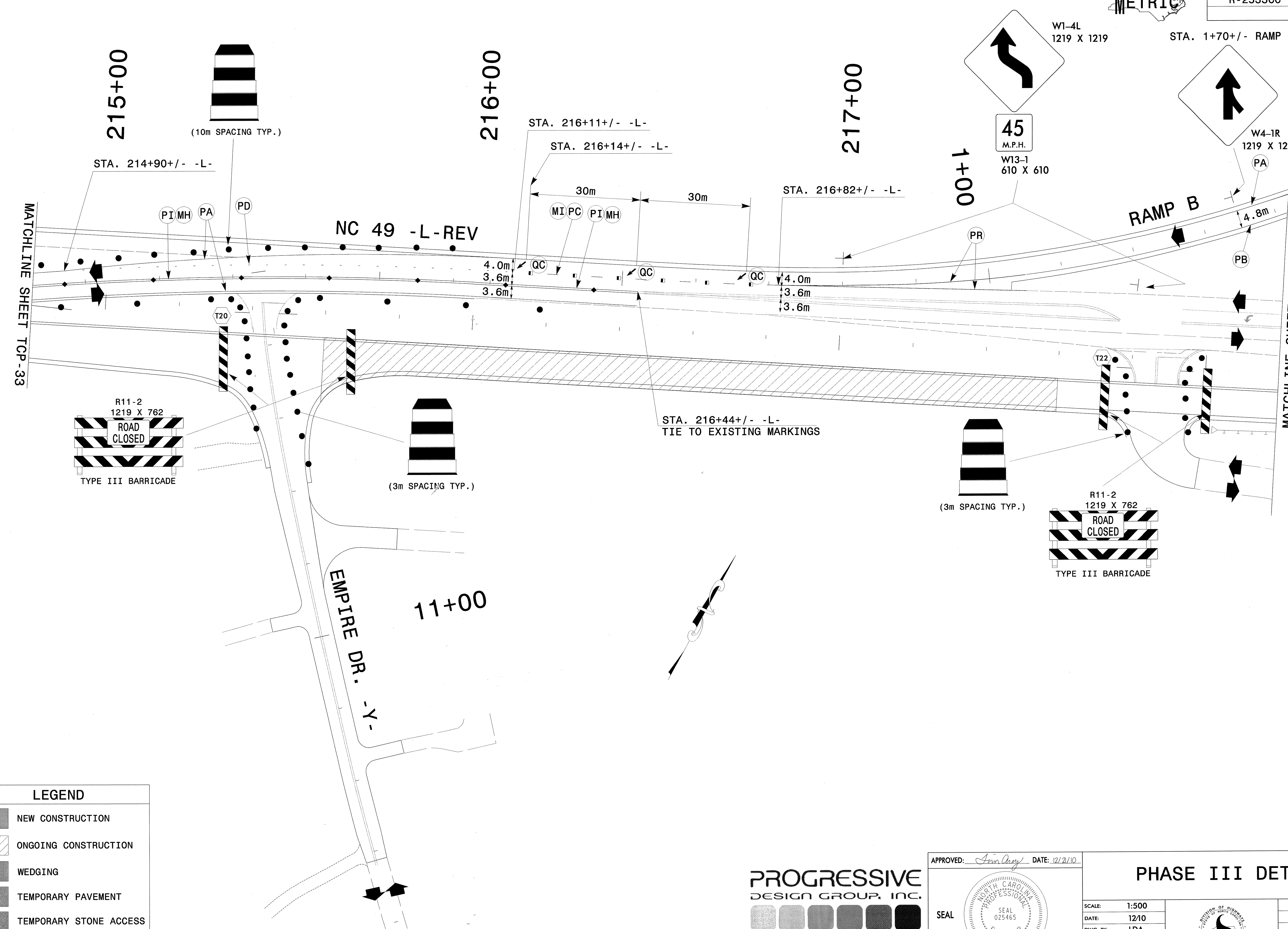
DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · TRAFFIC CONTROL

REVISIONS

CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-34

METRIC



LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE III DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

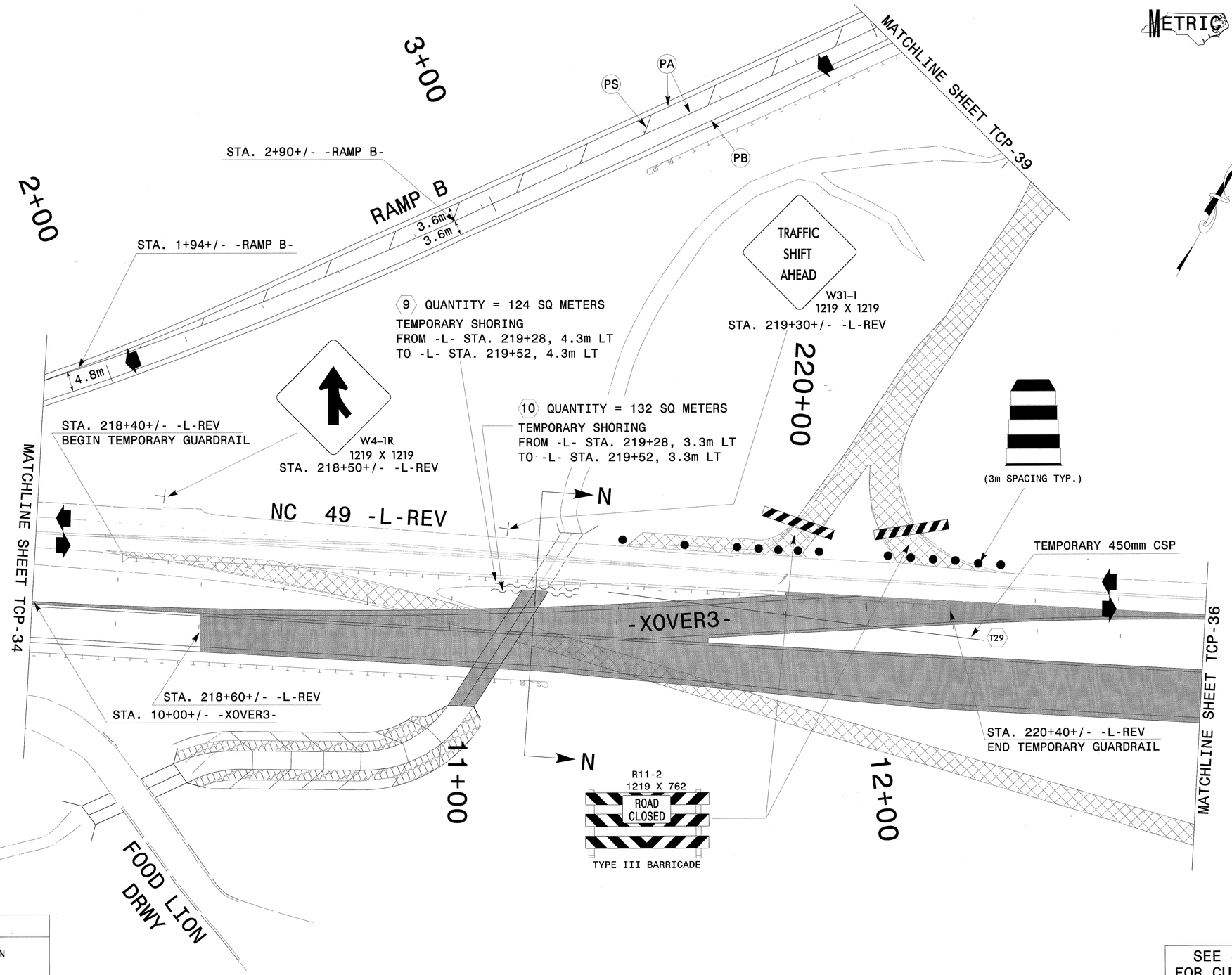
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-35

METRIC



LEGEND
NEW CONSTRUCTION
ONGOING CONSTRUCTION
WEDGING
TEMPORARY PAVEMENT
TEMPORARY STONE ACCESS
PAVEMENT REMOVAL

SEE SHEET TCP-41
FOR CUT SECTION VIEWS

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: [signature] DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE III DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

METRIC

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-36

MATCHLINE SHEET TCP-39

STA. 14+25+/- -Y1-REV
TIE TEMPORARY GUARDRAIL TO EXISTING BRIDGE RAIL WITH A TEMPORARY ANCHOR UNIT. SEE ROADWAY DESIGN PLANS FOR THE TEMPORARY ANCHOR UNIT DETAIL.

TEMPORARY DIVERSION CHANNEL

2m

MH PI PD PA

TEMPORARY GUARDRAIL

STA. 13+40+/- -Y1-REV
TIE TEMPORARY GUARDRAIL TO PORTABLE CONCRETE BARRIER INSTALLED IN PHASE I

13.6m
13.6m

STA. 13+80+/- -Y1-REV
TIE TO EXISTING MARKINGS

NC 73 -Y1-REV

(3m SPACING TYP.)

TEMPORARY 1400mm CSP

R11-2
1219 X 762
ROAD CLOSED
TYPE III BARRICADE

14+00

223+00

T7

TEMPORARY CRASH CUSHION

STA. 222+35+/- -L-REV
BEGIN PORTABLE CONCRETE BARRIER
SET PCB AT 2m OFF OF EDGE LINE

R11-2
1219 X 762
ROAD CLOSED
W1-6L
48"x24"
TYPE III BARRICADE

(3m SPACING TYP.)

PR

NC 49 -L-REV

MATCHLINE SHEET TCP-37

MATCHLINE SHEET TCP-35

1800mm

62

JB w/MH

STA. 221+20+/- -L-REV

STA. 13+20+/- -XOVER3-

TEMPORARY
1350mm RCP

T9

63

JB w/MH

64

600mm

PB

PA

15+00

STA. 222+87+/- -L-REV
END PORTABLE CONCRETE BARRIER

1800mm

65

HW

LOOP D

STA. 1+20+/- -LOOP D-

STA. 222+40+/- -L-REV

PD

PB

SEE PHASE I, SHEETS TCP-14 AND TCP-15 FOR PORTABLE CONCRETE BARRIER, AND TEMPORARY SHORING LOCATIONS

R11-2
1219 X 762
ROAD CLOSED
TYPE III BARRICADE

MATCHLINE SHEET TCP-40

MATCHLINE SHEET TCP-40

LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/2/10

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE III DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

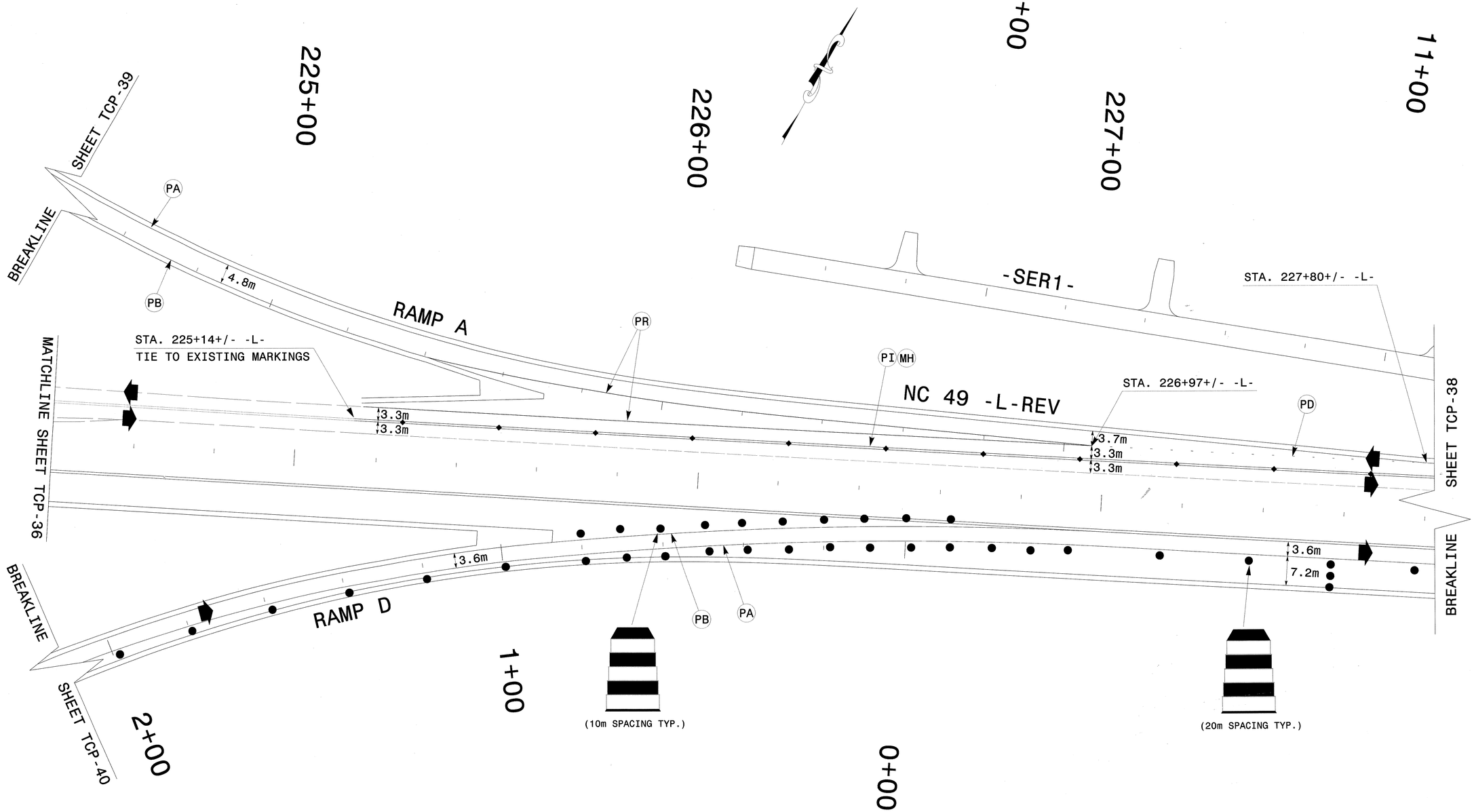
DIVISION OF HIGHWAYS, STATE OF NORTH CAROLINA, WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-37

METRIC



LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: [signature] DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE III DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-38

METRIC

230+00

231+00

11+00

233+00

10+00

STA. 10+52+/- -Y2-REV
TIE TO EXISTING MARKINGS

-Y2-REV

NORTH DR.

STOP
R1-1
762 X 762

STA. 232+03+/- -L-REV
TIE TO EXISTING MARKINGS

STA. 10+08+/- -Y3-

(20m SPACING TYP.)

NC 49 -L- REV

STA. 11+45+/- -Y2-REV

BREAKLINE

SHEET TCP-37

STA. 230+81+/- -L-

STA. 231+36+/- -L-

(20m SPACING TYP.)

STOP
R1-1
762 X 762

STA. 10+91+/- -Y3-

-Y3-

SKYLAND DR.

PR PI MH PA QA QB QC PC MI PD PE P4

3.6m 6.6m

LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Day DATE: 12/2/10

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

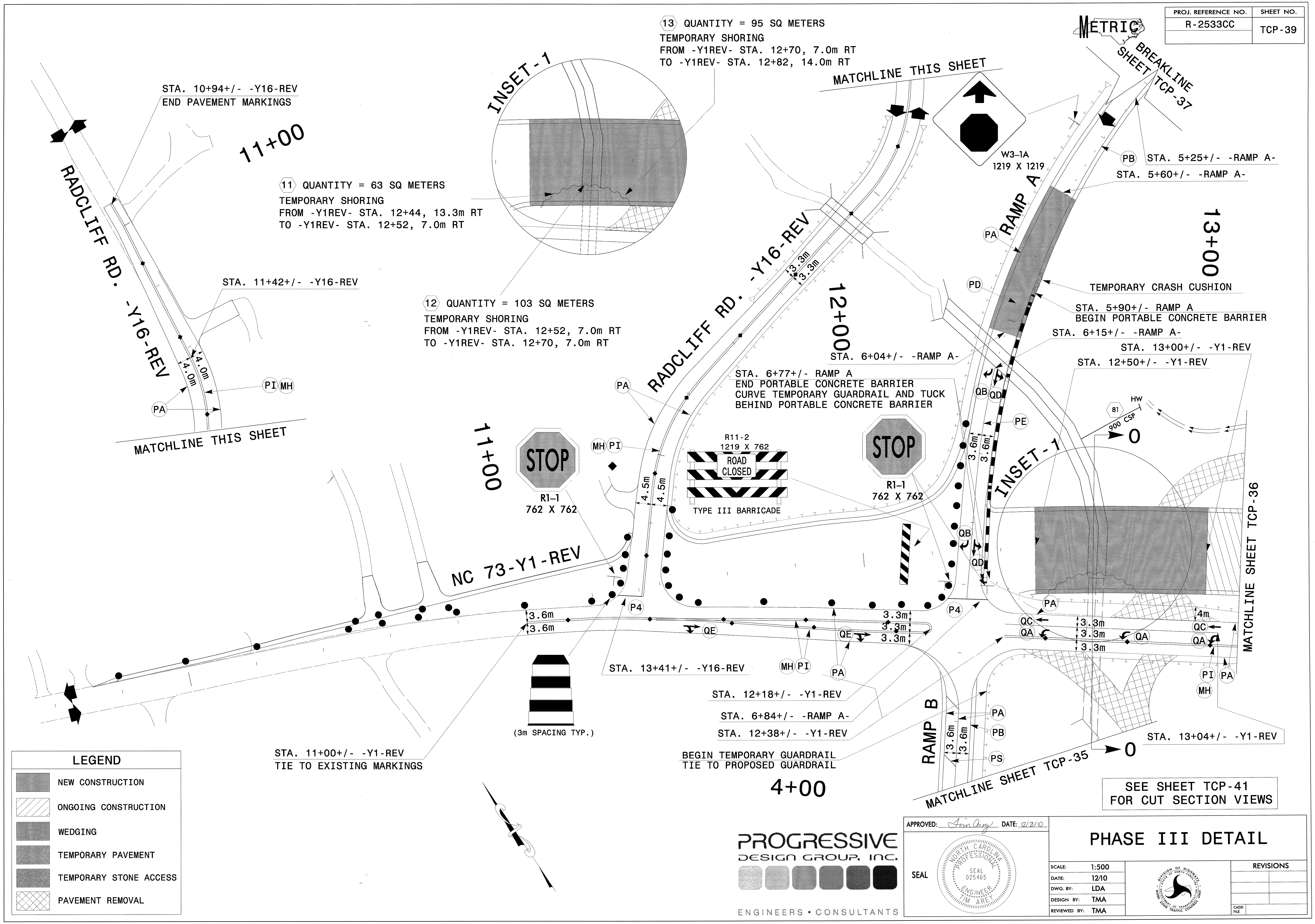
PHASE III DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE


PROJ. REFERENCE NO. R-2533CC
SHEET NO. TCP-39
METRIC
BREAKLINE SHEET TCP-37
MATCHLINE THIS SHEET
STA. 10+94+/- -Y16-REV
END PAVEMENT MARKINGS
11+00
RADCLIFF RD. -Y16-REV
11 QUANTITY = 63 SQ METERS
TEMPORARY SHORING
FROM -Y1REV- STA. 12+44, 13.3m RT
TO -Y1REV- STA. 12+52, 7.0m RT
INSET-1
13 QUANTITY = 95 SQ METERS
TEMPORARY SHORING
FROM -Y1REV- STA. 12+70, 7.0m RT
TO -Y1REV- STA. 12+82, 14.0m RT
W3-1A
1219 X 1219
STA. 5+25+/- -RAMP A-
STA. 5+60+/- -RAMP A-
RAMP A
13+00
TEMPORARY CRASH CUSHION
STA. 5+90+/- RAMP A
BEGIN PORTABLE CONCRETE BARRIER
STA. 6+15+/- -RAMP A-
STA. 13+00+/- -Y1-REV
STA. 12+50+/- -Y1-REV
STA. 11+42+/- -Y16-REV
4.0m
4.0m
PI MH
PA
12 QUANTITY = 103 SQ METERS
TEMPORARY SHORING
FROM -Y1REV- STA. 12+52, 7.0m RT
TO -Y1REV- STA. 12+70, 7.0m RT
3.3m
3.3m
12+00
STA. 6+04+/- -RAMP A-
STA. 6+77+/- RAMP A
END PORTABLE CONCRETE BARRIER
CURVE TEMPORARY GUARDRAIL AND TUCK
BEHIND PORTABLE CONCRETE BARRIER
PD
QB QD
PE
81
HW
900 CSP
0
STOP
R1-1
762 X 762
R11-2
1219 X 762
ROAD CLOSED
TYPE III BARRICADE
4.5m
4.5m
3.6m
3.6m
NC 73-Y1-REV
P4
QE
QC QA
3.3m
4m
MATCHLINE SHEET TCP-36
STA. 13+41+/- -Y16-REV
MH PI
PA
PI PA MH
STA. 12+18+/- -Y1-REV
STA. 6+84+/- -RAMP A-
STA. 12+38+/- -Y1-REV
BEGIN TEMPORARY GUARDRAIL
TIE TO PROPOSED GUARDRAIL
RAMP B
PB
PS
STA. 13+04+/- -Y1-REV
(3m SPACING TYP.)
STA. 11+00+/- -Y1-REV
TIE TO EXISTING MARKINGS
4+00
MATCHLINE SHEET TCP-35
SEE SHEET TCP-41
FOR CUT SECTION VIEWS
LEGEND
NEW CONSTRUCTION
ONGOING CONSTRUCTION
WEDGING
TEMPORARY PAVEMENT
TEMPORARY STONE ACCESS
PAVEMENT REMOVAL
PROGRESSIVE
DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS
APPROVED: DATE: 12/21/10
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY
PHASE III DETAIL
SCALE: 1:500
DATE: 12/10
DWG. BY: LDA
DESIGN BY: TMA
REVIEWED BY: TMA
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT
REVISIONS
CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-40

METRIC

STA. 15+41+/- -Y1- REV
TIE TO EXISTING MARKINGS

MATCHLINE SHEET TCP-36

-Y1-REV

STA. 15+50+/- -Y1- REV

STA. 1+94+/- -LOOP D-

STA. 16+00+/- -Y1- REV

R11-2
1219 X 762
ROAD CLOSED
TYPE III BARRICADE

MATCHLINE SHEET TCP-36

BREAKLINE

SHEET TCP-37

LOOP D

RAMP D

3+00

17+00

DUCHESS DR.

STA. 10+06+/- -Y14-REV

STOP
R1-1
762 X 762

(3m SPACING TYP.)

11+00

DUCHESS DR.

-Y14-REV

3.8m
3.8m

STA. 16+17+/- -Y1-REV

STA. 11+86+/- -Y15-REV

3.6m
3.6m

(3m SPACING TYP.)

STA. 2+66+/- -LOOP D-

STA. 11+07+/- -Y14-REV

STA. 10+92+/- -Y14-REV

STA. 11+82+/- -Y14-REV

TEMPORARY TRAFFIC SIGNAL

STA. 16+41+/- -Y1-REV

NC 73 -Y1-REV

(20m SPACING TYP.)

STOP
R1-1
762 X 762

ST EXT (SR 2660)

ALLMAN

-Y15-REV

3.6m
3.6m

STA. 10+47+/- -Y15-REV
TIE TO EXISTING MARKINGS

STA. 17+52+/- -Y1- REV
TIE TO EXISTING MARKINGS

LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/2/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE III DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

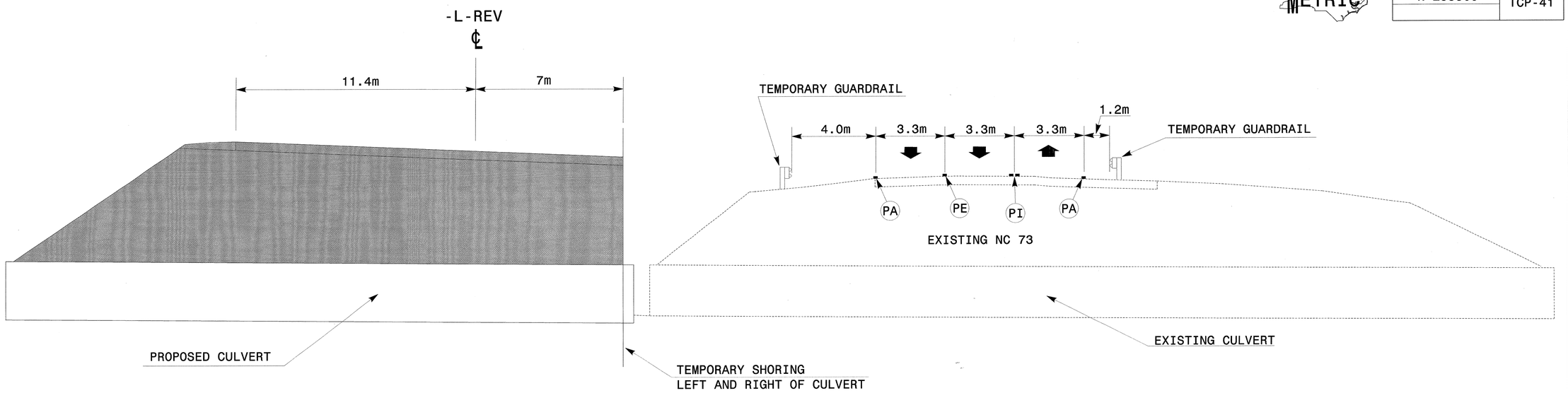
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL UNIT

REVISIONS

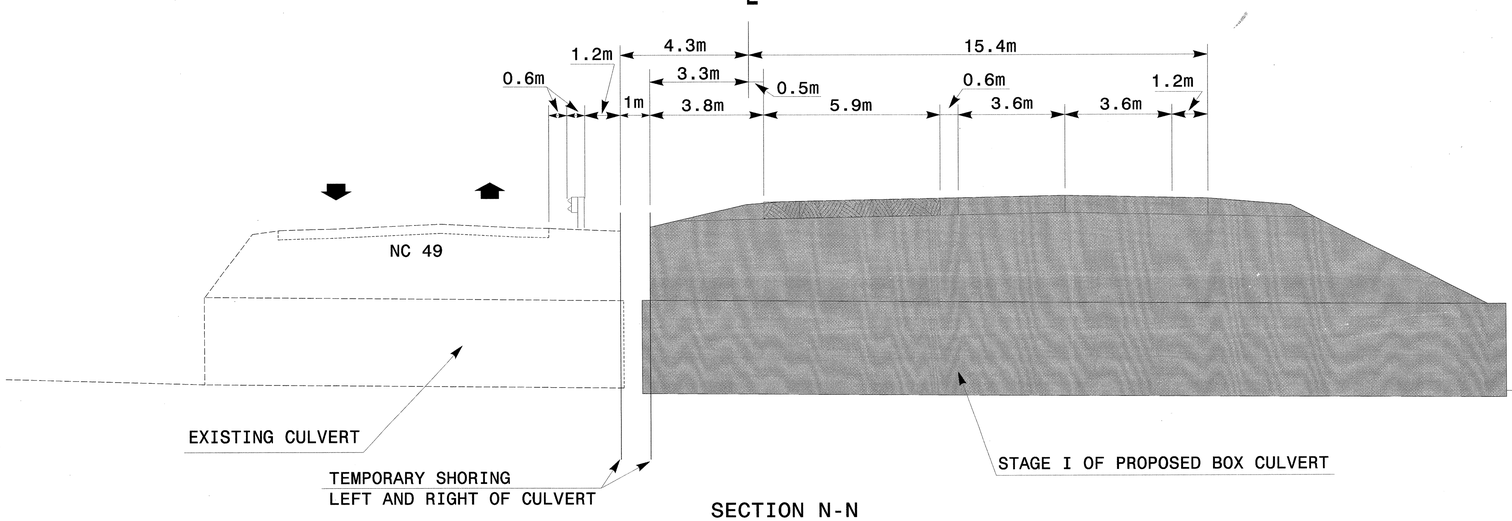
CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-41

METRIC



SECTION O-O
STA. 12+70+/- -Y1-REV
(SEE SHEET TCP-39)



SECTION N-N
STA. 219+40+/- -L-REV
(SEE SHEET TCP-35)

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APPROVED: [signature] DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM ARELL

PHASE III SECTIONS

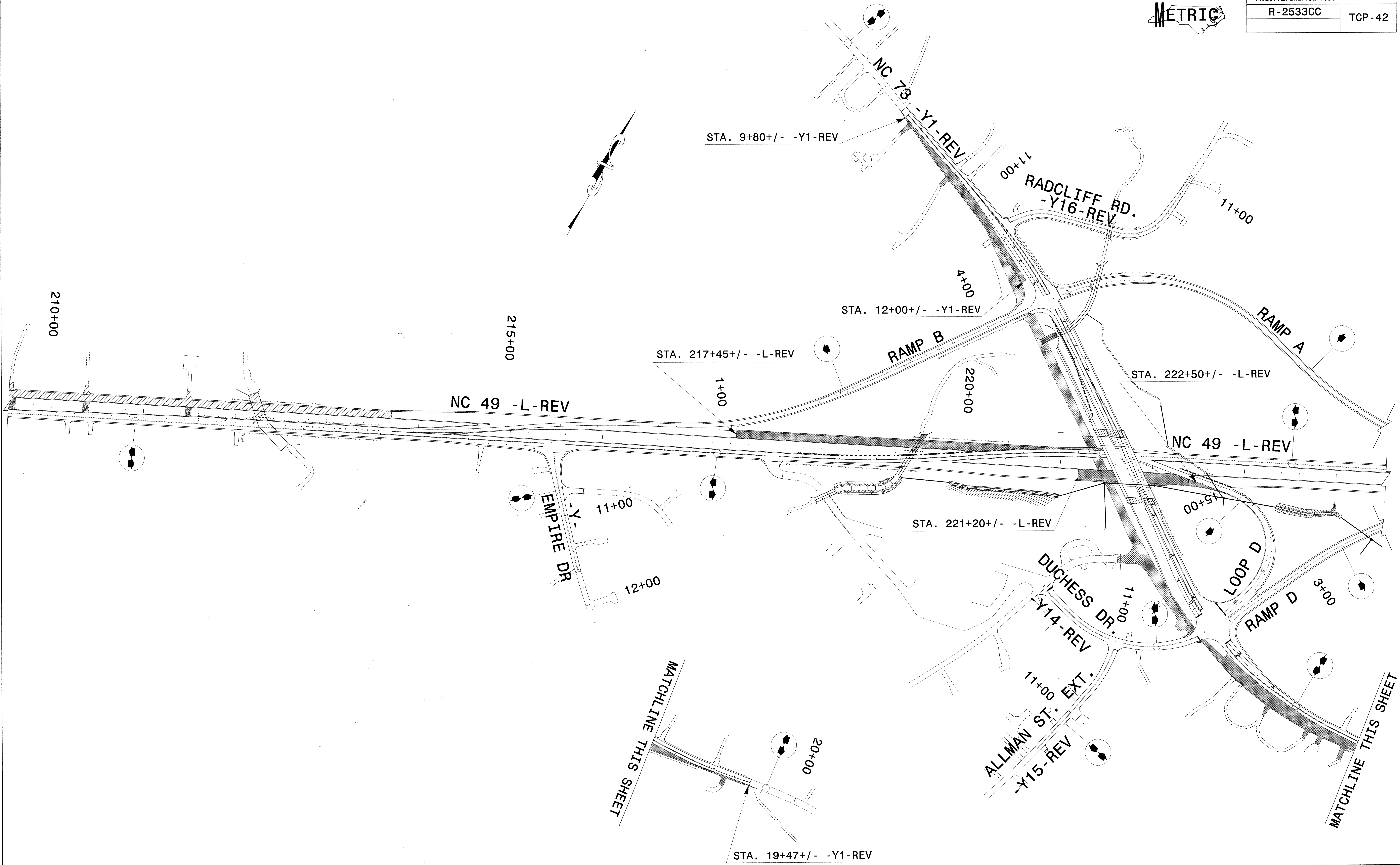
SCALE:	NONE
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · HOME OF THE TRAFFIC CONTROL

REVISIONS	
CADD FILE	

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-42

METRIC



PROGRESSIVE
DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE IV OVERVIEW

SCALE:	1:2000
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

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REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-43

METRIC

210+00

211+00

212+00

213+00

10+00

NC 49 -L-REV

T26

T27

T28

3.6m
3.6m

3.6m
3.6m
3.6m

QC

QC

QC

PD

MI

PC

PI

MH

PA

3.6m
3.6m
3.6m

TEMPORARY SHORING FROM PHASE I
(SEE SHEET TCP-11)

MATCHLINE SHEET TCP-44

STA. 209+55+/- -L-REV
TIE TO EXISTING MARKINGS

STA. 212+65+/- -L-REV

STA. 10+00+/- -XOVER2-
TIE TO EXISTING MARKINGS

STA. 213+04+/- -L-REV
END PROPOSED GUARDRAIL
BEGIN TEMPORARY GUARDRAIL
TIE TO PROPOSED GUARDRAIL

LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE IV DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

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REVISIONS	
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PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-44

METRIC

214+00

STA. 214+60+/- -L-REV

W4-1R
1219 X 1219

12+00

215+00

R11-2
1219 X 762
ROAD CLOSED

W1-6L
1219 X 610

TYPE III BARRICADE

(10m SPACING TYP.)

13+00

216+00

W4-1R
1219 X 1219

STA. 215+40+/- -L-REV

STA. 213+70+/- -L-REV

MATCHLINE SHEET TCP-43

NC 49 -L-REV

T19

PA

PC

MI

PI

MH

PR

PE

QB

P4

3.6m

STA. 213+60+/- -L-REV
END TEMPORARY GUARDRAIL
TEMPORARY GRAU-350

STA. 213+71+/- -L-REV

STA. 214+25+/- -L-REV

STA. 215+16+/- -L-REV

STA. 215+37+/- -L-REV

STA. 215+60+/- -L-REV

STA. 10+31+/- -Y-

MATCHLINE SHEET TCP-45

STA. 216+70+/- -L-

STOP

R1-1
30 x 30

W1-4L
1219 X 1219

45
M.P.H.

W13-1
610 X 610

STA. 11+00+/- -Y-

11+00

EMPIRE DR -Y-

LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

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APPROVED: Tim Arey DATE: 12/21/10

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

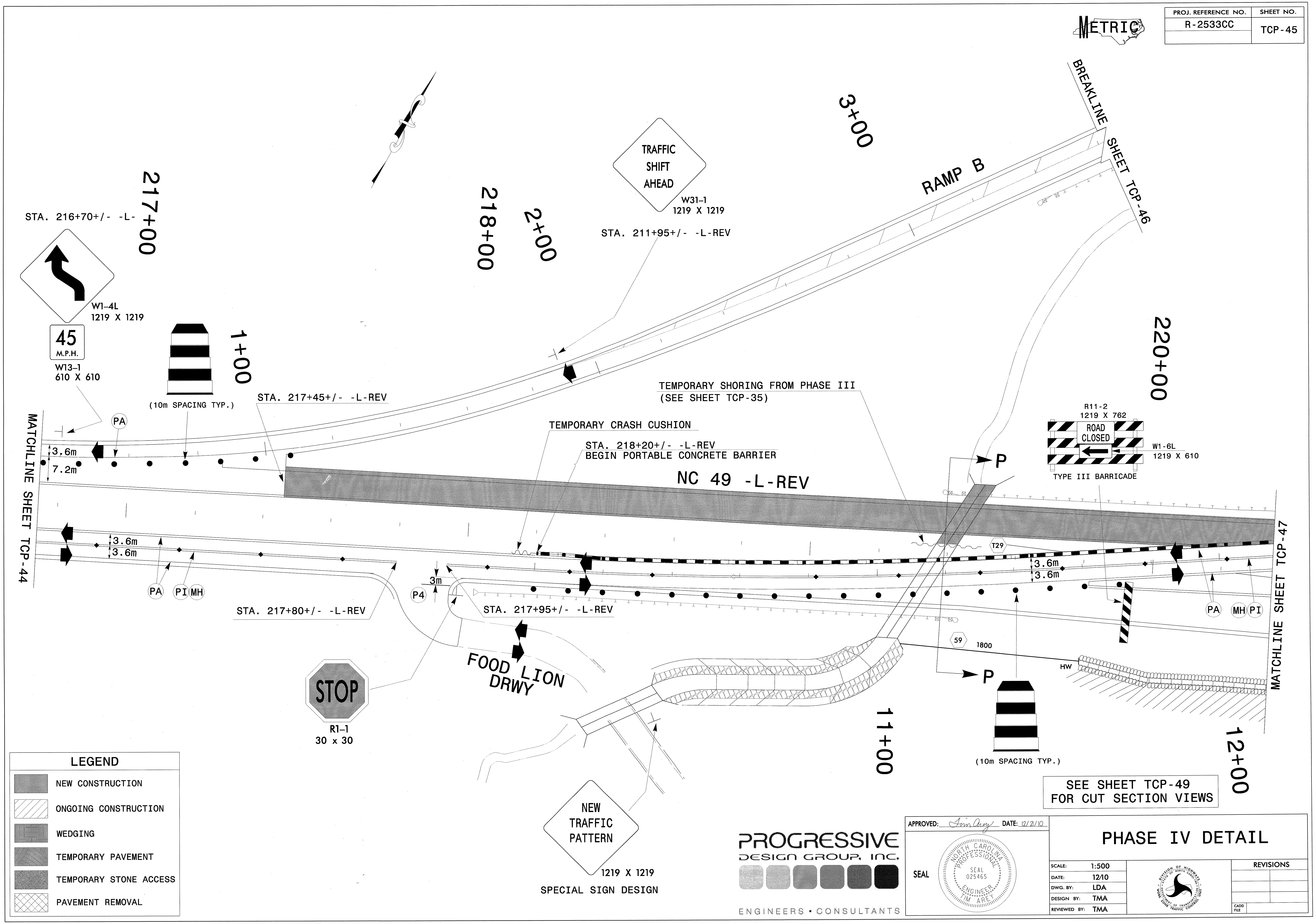
PHASE IV DETAIL

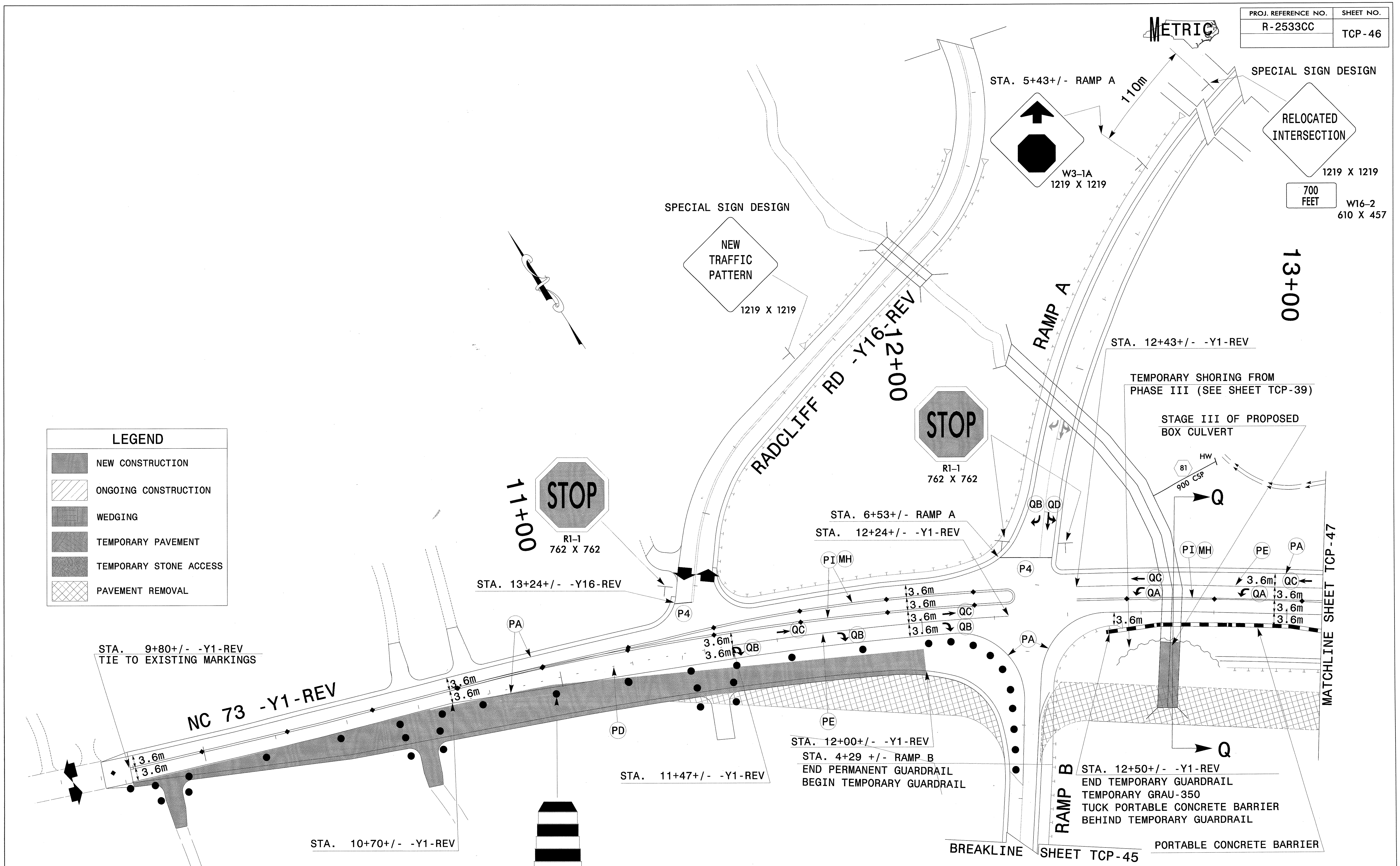
SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE


METRIC
PROJ. REFERENCE NO.
R-2533CC
SHEET NO.
TCP-45
BREAKLINE
SHEET TCP-46
RAMP B
3+00
TRAFFIC SHIFT AHEAD
W31-1
1219 X 1219
STA. 211+95+/- -L-REV
217+00
218+00
2+00
STA. 216+70+/- -L-
W1-4L
1219 X 1219
45 M.P.H.
W13-1
610 X 610
1+00
(10m SPACING TYP.)
STA. 217+45+/- -L-REV
220+00
TEMPORARY SHORING FROM PHASE III
(SEE SHEET TCP-35)
TEMPORARY CRASH CUSHION
STA. 218+20+/- -L-REV
BEGIN PORTABLE CONCRETE BARRIER
R11-2
1219 X 762
ROAD CLOSED
W1-6L
1219 X 610
TYPE III BARRICADE
P
NC 49 -L-REV
MATCHLINE SHEET TCP-44
PA
3.6m
7.2m
3.6m
3.6m
PA
PI
MH
T29
3.6m
3.6m
3m
P4
STA. 217+80+/- -L-REV
STA. 217+95+/- -L-REV
FOOD LION DRWY
59
1800
HW
P
PA
MH
PI
MATCHLINE SHEET TCP-47
STOP
R1-1
30 x 30
11+00
(10m SPACING TYP.)
12+00
SEE SHEET TCP-49
FOR CUT SECTION VIEWS
LEGEND
NEW CONSTRUCTION
ONGOING CONSTRUCTION
WEDGING
TEMPORARY PAVEMENT
TEMPORARY STONE ACCESS
PAVEMENT REMOVAL
NEW TRAFFIC PATTERN
1219 X 1219
SPECIAL SIGN DESIGN
PROGRESSIVE
DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS
APPROVED: Tim Arey DATE: 12/21/10
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY
PHASE IV DETAIL
SCALE: 1:500
DATE: 12/10
DWG. BY: LDA
DESIGN BY: TMA
REVIEWED BY: TMA
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT
REVISIONS
CADD FILE



PROGRESSIVE
DESIGN GROUP, INC.
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APPROVED: Tim Arey DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

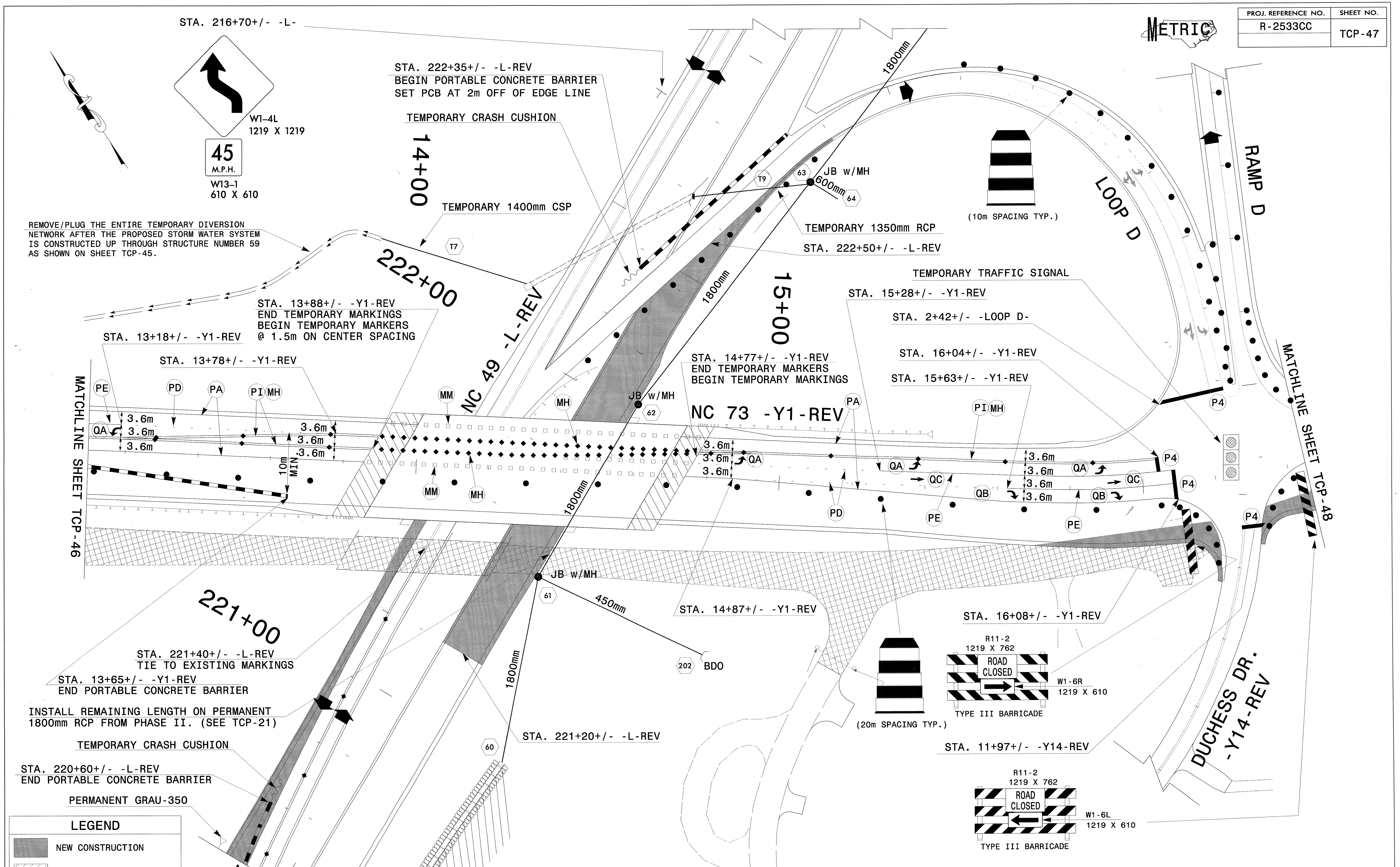
PHASE IV DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE


PROJ. REFERENCE NO. R-2533CC
SHEET NO. TCP-47
METRIC
STA. 216+70+/- -L-
W1-4L
1219 X 1219
45
M.P.H.
W13-1
610 X 610
STA. 222+35+/- -L-REV
BEGIN PORTABLE CONCRETE BARRIER
SET PCB AT 2m OFF OF EDGE LINE
TEMPORARY CRASH CUSHION
14+00
TEMPORARY 1400mm CSP
T7
T9
63
64
JB w/MH
600mm
1800mm
TEMPORARY 1350mm RCP
STA. 222+50+/- -L-REV
(10m SPACING TYP.)
LOOP D
RAMP D
REMOVE/PLUG THE ENTIRE TEMPORARY DIVERSION NETWORK AFTER THE PROPOSED STORM WATER SYSTEM IS CONSTRUCTED UP THROUGH STRUCTURE NUMBER 59 AS SHOWN ON SHEET TCP-45.
222+00
NC 49 -L-REV
15+00
STA. 13+88+/- -Y1-REV
END TEMPORARY MARKINGS
BEGIN TEMPORARY MARKERS
@ 1.5m ON CENTER SPACING
STA. 13+18+/- -Y1-REV
STA. 13+78+/- -Y1-REV
TEMPORARY TRAFFIC SIGNAL
STA. 15+28+/- -Y1-REV
STA. 2+42+/- -LOOP D-
STA. 16+04+/- -Y1-REV
STA. 15+63+/- -Y1-REV
STA. 14+77+/- -Y1-REV
END TEMPORARY MARKERS
BEGIN TEMPORARY MARKINGS
NC 73 -Y1-REV
MATCHLINE SHEET TCP-46
MATCHLINE SHEET TCP-48
MATCHLINE SHEET TCP-45
PE
PD
PA
PI
MH
MM
QA
QB
QC
P4
3.6m
10m MIN
JB w/MH
62
61
450mm
202
BDO
60
221+00
STA. 14+87+/- -Y1-REV
STA. 16+08+/- -Y1-REV
R11-2
1219 X 762
ROAD CLOSED
W1-6R
1219 X 610
TYPE III BARRICADE
(20m SPACING TYP.)
STA. 221+40+/- -L-REV
TIE TO EXISTING MARKINGS
STA. 13+65+/- -Y1-REV
END PORTABLE CONCRETE BARRIER
INSTALL REMAINING LENGTH ON PERMANENT 1800mm RCP FROM PHASE II. (SEE TCP-21)
TEMPORARY CRASH CUSHION
STA. 220+60+/- -L-REV
END PORTABLE CONCRETE BARRIER
PERMANENT GRAU-350
STA. 221+20+/- -L-REV
STA. 11+97+/- -Y14-REV
DUCHESS DR. -Y14-REV
R11-2
1219 X 762
ROAD CLOSED
W1-6L
1219 X 610
TYPE III BARRICADE
LEGEND
NEW CONSTRUCTION
ONGOING CONSTRUCTION
WEDGING
TEMPORARY PAVEMENT
TEMPORARY STONE ACCESS
PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/21/10

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE IV DETAIL

SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

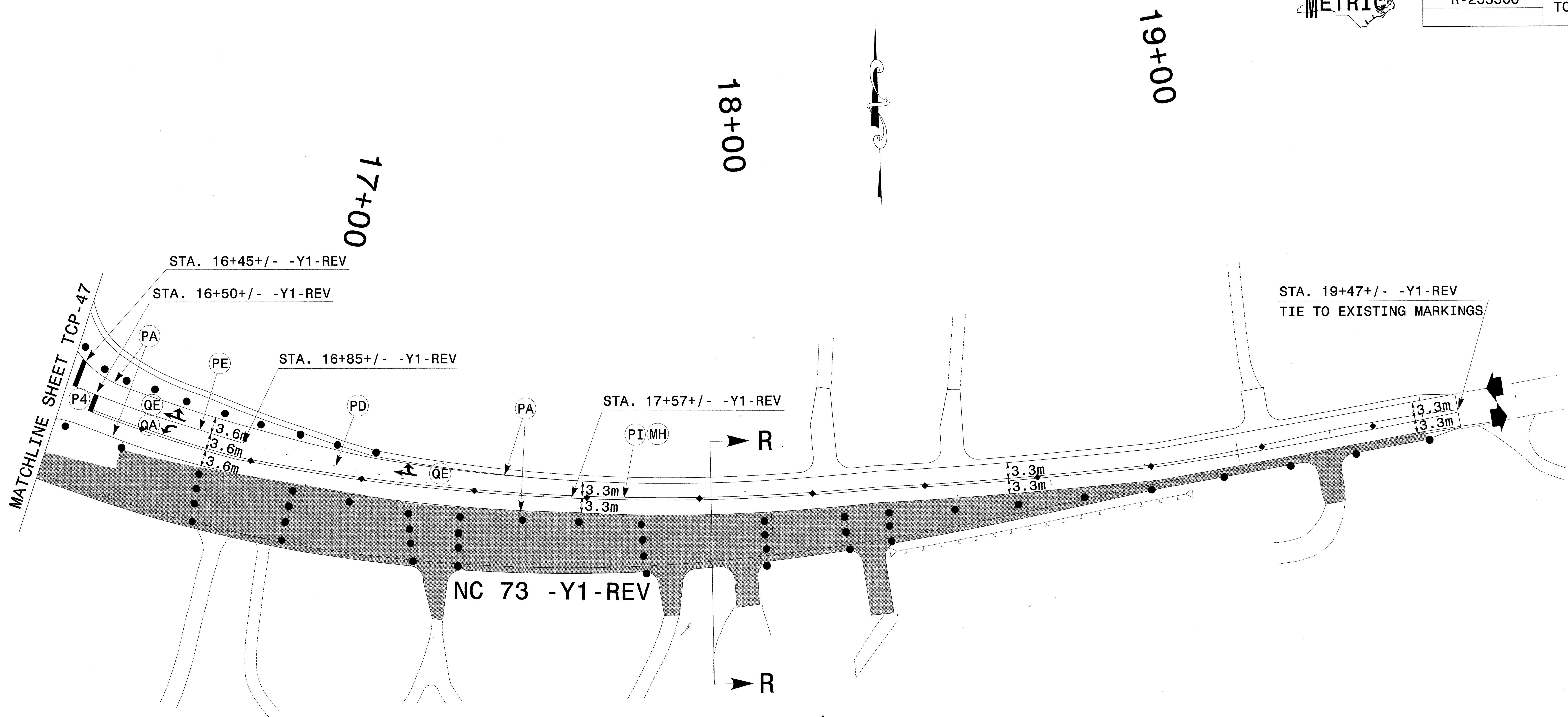
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

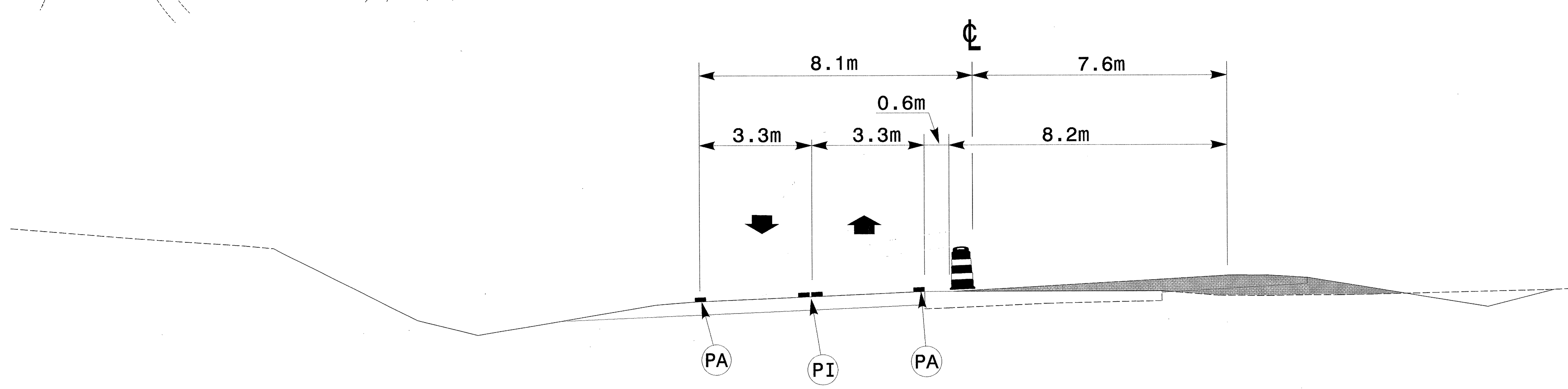
REVISIONS

CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-48

METRIC





SECTION R-R
STA. 17+90 -Y1-REV

LEGEND

- NEW CONSTRUCTION
- ONGOING CONSTRUCTION
- WEDGING
- TEMPORARY PAVEMENT
- TEMPORARY STONE ACCESS
- PAVEMENT REMOVAL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/21/10

SEAL: NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PHASE IV DETAIL

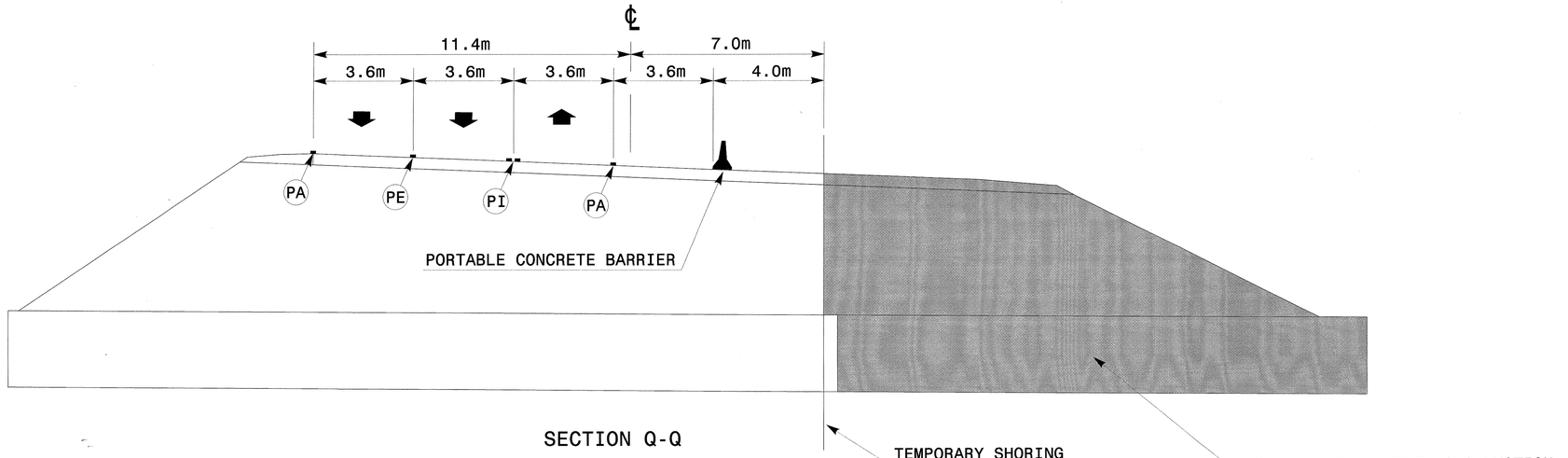
SCALE:	1:500
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL UNIT

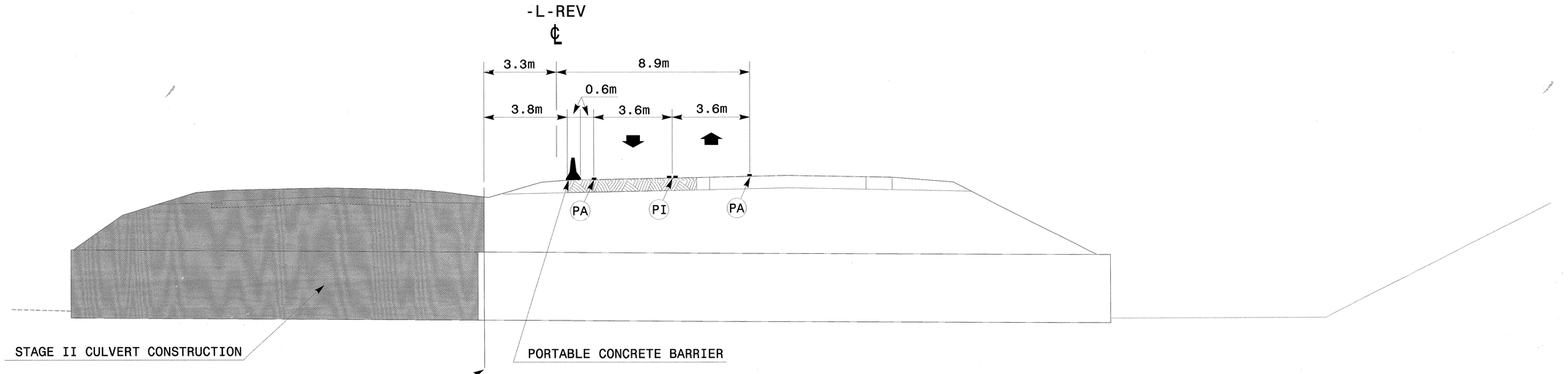
REVISIONS

CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-49



SECTION Q-Q
STA. 12+70+/- -Y1-REV
(SEE SHEET TCP-46)



SECTION P-P
STA. 219+40+/- -L-REV
(SEE SHEET TCP-45)

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: _____ DATE: 12/2/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER IN AREA

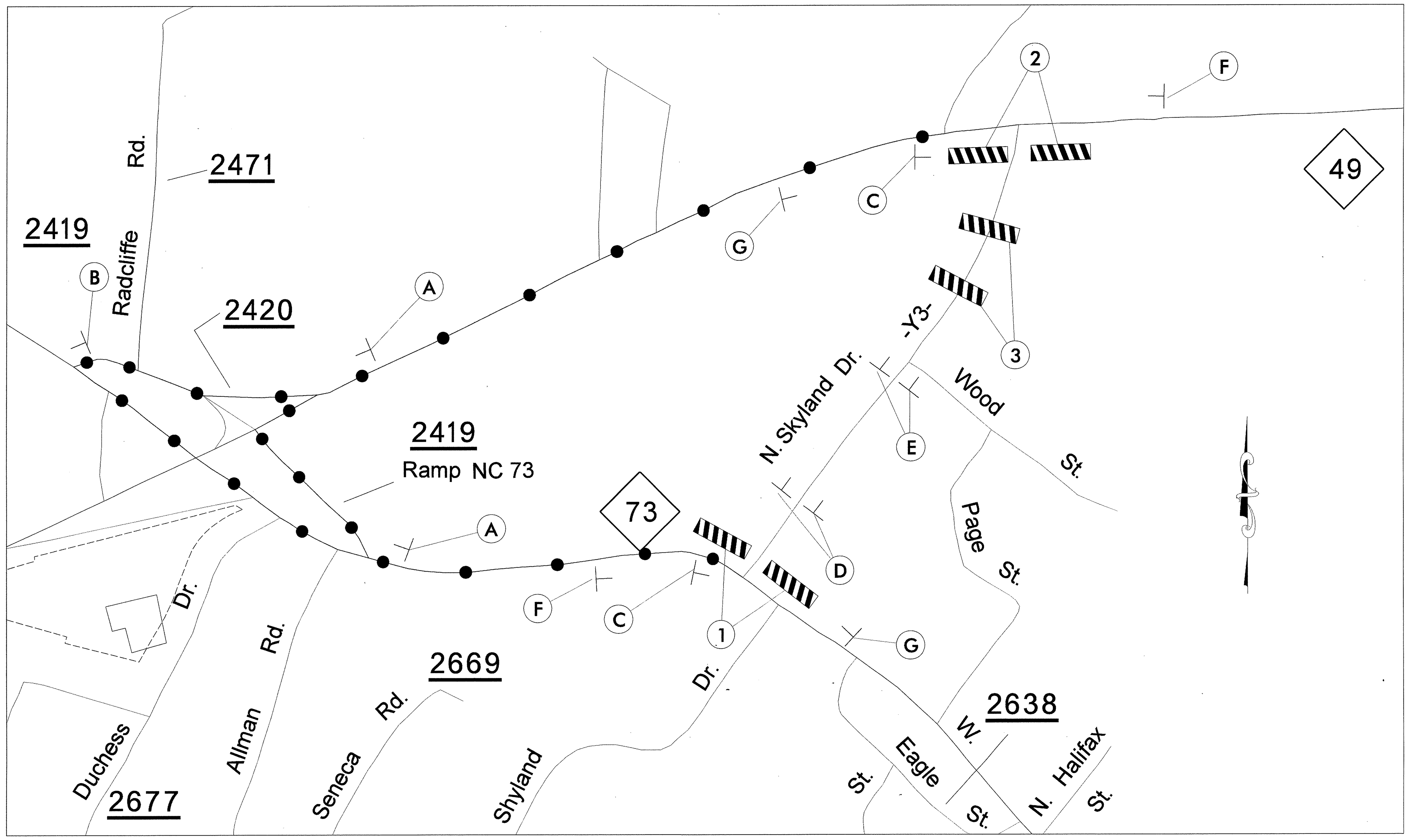
PHASE IV SECTIONS

SCALE:	NONE
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL UNIT

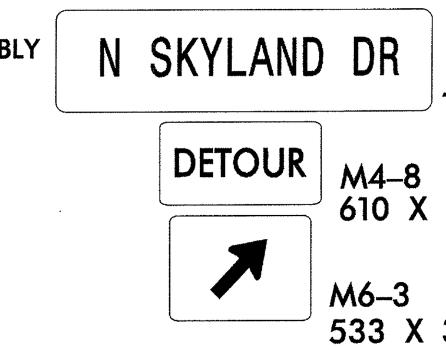
REVISIONS

CADD FILE



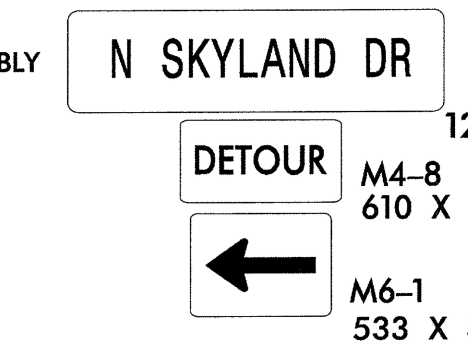
OFFSITE DETOUR ROUTE

SIGN ASSEMBLY (A)



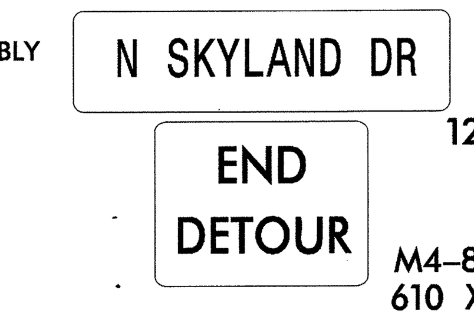
1200 X 450
M4-8
610 X 305
M6-3
533 X 381

SIGN ASSEMBLY (B)



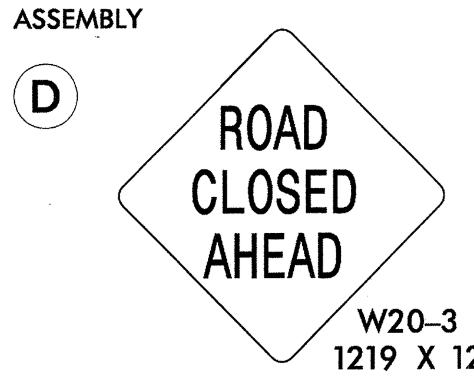
1200 X 450
M4-8
610 X 305
M6-1
533 X 381

SIGN ASSEMBLY (C)



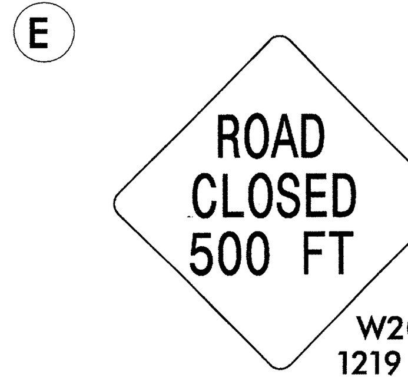
1200 X 450
M4-8 A
610 X 457

SIGN ASSEMBLY (D)



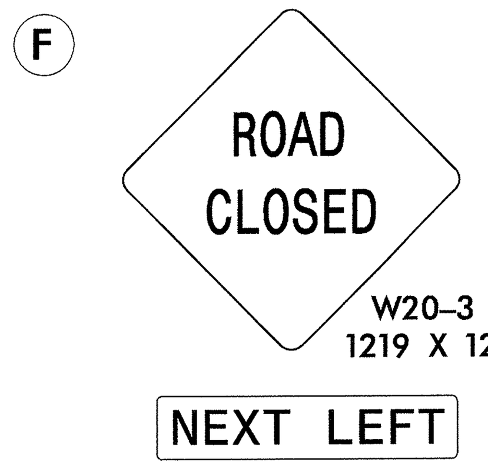
W20-3
1219 X 1219

SIGN ASSEMBLY (E)



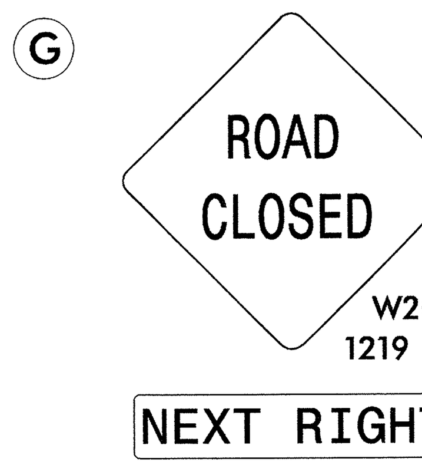
W20-3
1219 X 1219

SIGN ASSEMBLY (F)



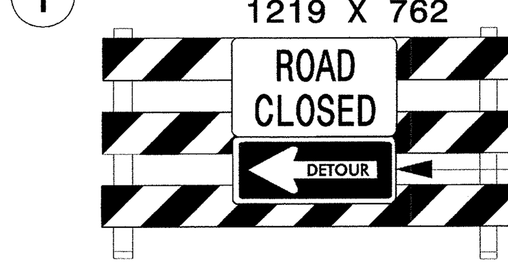
W20-3
1219 X 1219
SP-4L
1066 X 305

SIGN ASSEMBLY (G)



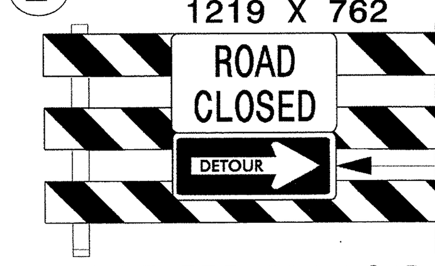
W20-3
1219 X 1219
SP-4R
1066 X 305

(1)
R11-2
1219 X 762



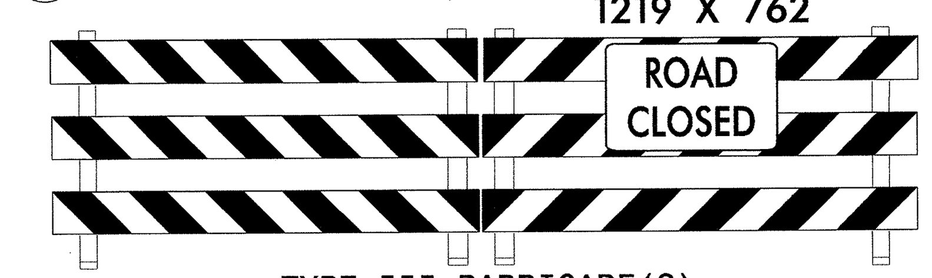
M4-10L
1219 X 457
TYPE III BARRICADE

(2)
R11-2
1219 X 762



M4-10R
1219 X 457
TYPE III BARRICADE

(3)
R11-2
1219 X 762



TYPE III BARRICADE(S)

SIGN NUMBER: name
TYPE: D
QUANTITY: 5
BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

SIGN WIDTH: 1200mm
HEIGHT: 450mm
TOTAL AREA: 0.5 Sq.m
MAJ. COPY SERIES: C
ROUTE MARKERS:

BORDER TYPE: FLUSH
RECESS: 11mm
WIDTH: 15mm
RADII: 35mm
ARROW TYPES:

NO. Z BARS:
LENGTH:
MAT'L: 1.6 mm ALUMINUM

DESIGN BY: TMA
PROJECT ID: R-2533CC
CHECKED BY: TMA
DIV: 10
STD #:
DATE: Jun 01, 2009

LETTER POSITIONS

N		S	K	Y	L	A	N	D		D	R	
164	220	320	393	458	536	593	671	749	805	905	981	873

Letter positions are to the lower left corners

BORDER
R=35mm
TH=15mm
IN=11mm

Panel Style: construction_guide.ssm
M.U.T.C.D.: 2003 Edition

USE NOTES: 2,5

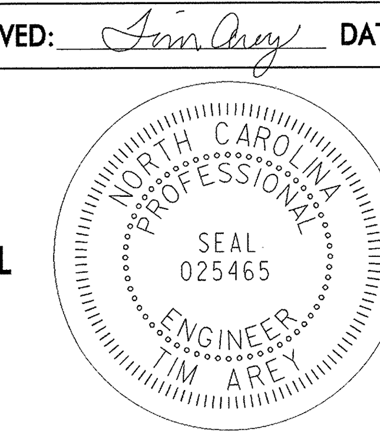
1. Legend and border shall be direct applied encapsulated lens reflective sheeting.
2. Legend and border shall be direct applied non-reflective sheeting.
3. Shields shall be encapsulated lens reflective sheeting on 0.8mm aluminum and demountable.
4. Background shall be encapsulated lens reflective sheeting.
5. Background shall be Type VII, VIII, or IX (prismatic) fluorescent orange retroreflective sheeting.
6. Center arrows vertically on sign.

NORTH CAROLINA D.O.T. SIGN DETAIL

PROGRESSIVE
DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/21/10

SEAL



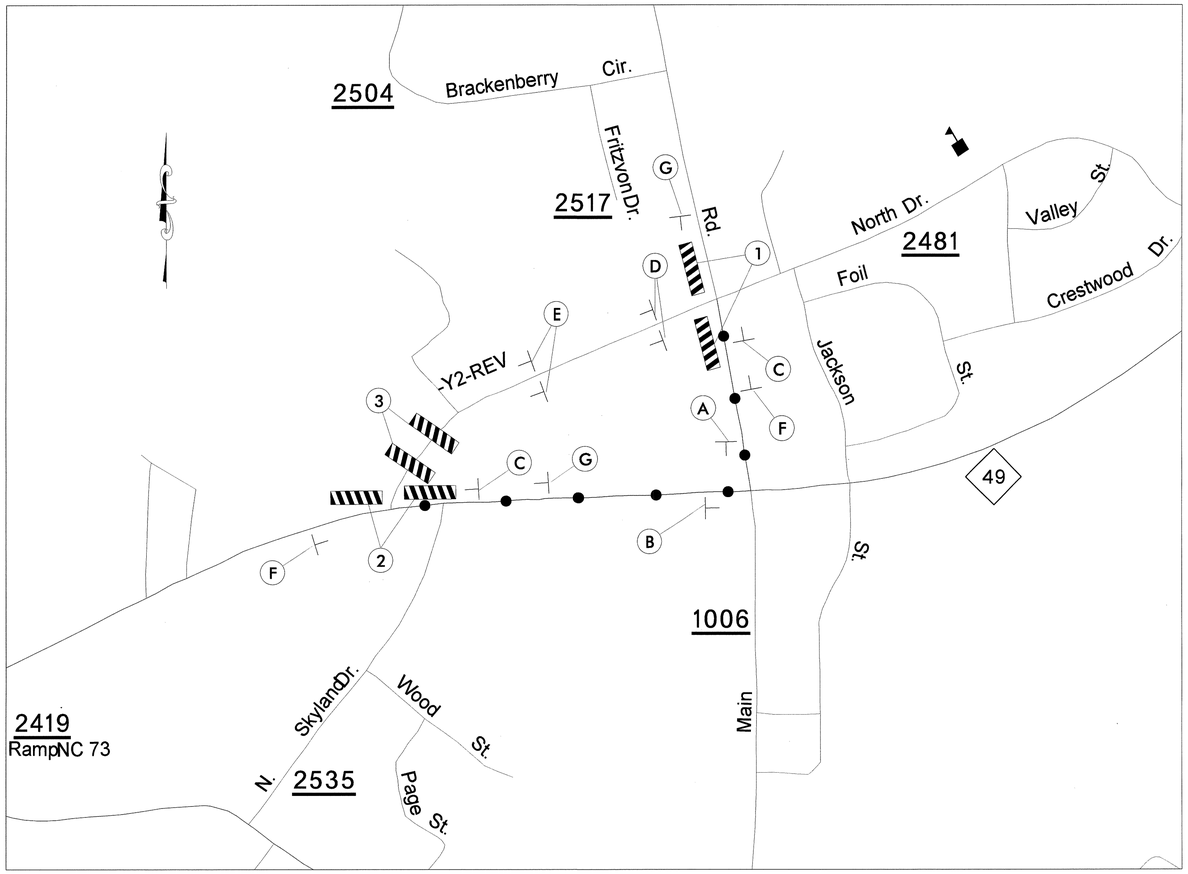
-Y3- OFFSITE DETOUR

SCALE:
DATE: 12/10
DWG. BY: LDA
DESIGN BY: TMA
REVIEWED BY: TMA

REVISIONS

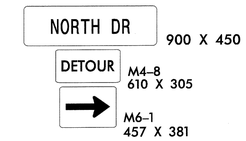
CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-51

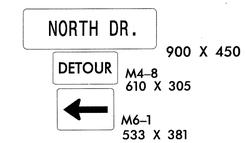


OFFSITE DETOUR ROUTE

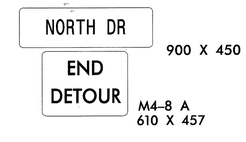
SIGN ASSEMBLY (A)



SIGN ASSEMBLY (B)



SIGN ASSEMBLY (C)



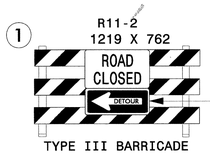
SIGN ASSEMBLY (D)

SIGN ASSEMBLY (E)

SIGN ASSEMBLY (F)

SIGN ASSEMBLY (G)

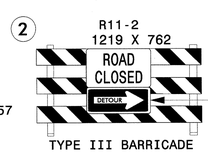
(1)



M4-10L
1219 X 457

TYPE III BARRICADE

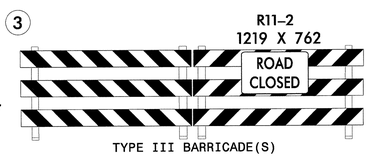
(2)



M4-10R
1219 X 457

TYPE III BARRICADE

(3)



TYPE III BARRICADE(S)

SIGN NUMBER: name
TYPE: D
QUANTITY: 4
BACKG COLOR: Fluorescent Orange
COPY COLOR: Black
SIGN WIDTH: 900mm
HEIGHT: 450mm
TOTAL AREA: 0.4 Sq.m
MAJ. COPY SERIES: C
ROUTE MARKERS:
BORDER TYPE: FLUSH
RECESS: 11mm
WIDTH: 15mm
RADII: 35mm
ARROW TYPES:
NO. Z BARS:
LENGTH:
MAT'L: 1.6 mm ALUMINUM

LETTER POSITIONS

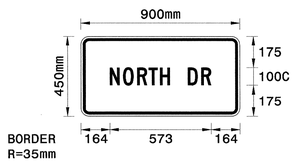
N	O	R	T	H		D	R	
164	240	319	384	449	505	605	681	573

Letter positions are to the lower left corners

USE NOTES: 2,5

1. Legend and border shall be direct applied encapsulated lens reflective sheeting.
2. Legend and border shall be direct applied non-reflective sheeting.
3. Shields shall be encapsulated lens reflective sheeting on 0.8mm aluminum and demountable.
4. Background shall be encapsulated lens reflective sheeting.
5. Background shall be Type VII, VIII, or IX (prismatic) fluorescent orange retroreflective sheeting.
6. Center arrows vertically on sign.

DESIGN BY: TMA
PROJECT ID: R-2533CC
CHECKED BY: TMA
DIV: 10
STD #:
DATE: Jun 01, 2009



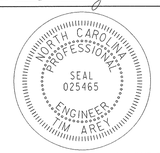
Panel Style: construction_guide.ssm
M.U.T.C.D.: 2003 Edition

NORTH CAROLINA D.O.T. SIGN DETAIL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 12/21/10

SEAL



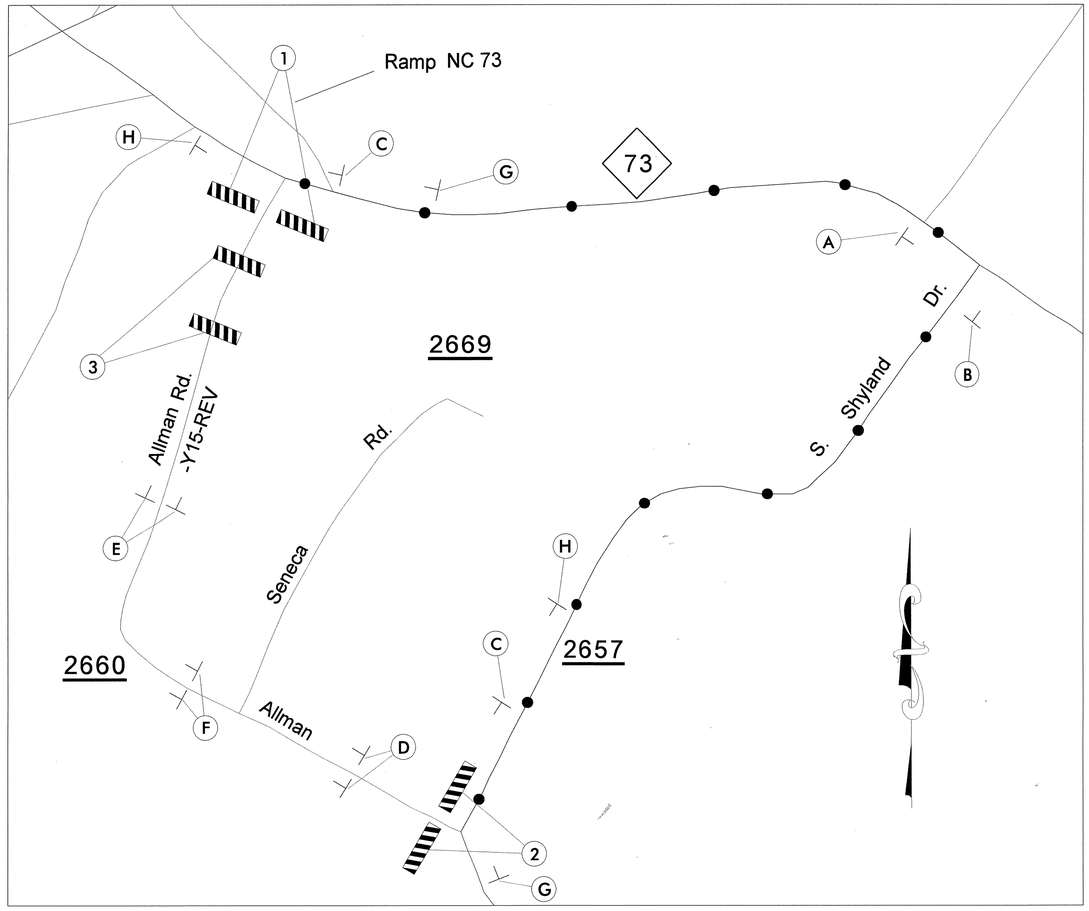
-Y2-REV OFFSITE DETOUR

SCALE:	
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS — STATE OF NORTH CAROLINA — DEPARTMENT OF TRANSPORTATION — WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-52



OFFSITE DETOUR ROUTE

SIGN ASSEMBLY A

ALLMAN RD. 900 X 450
DETOUR M4-8 610 X 305
M6-1 457 X 381

SIGN ASSEMBLY B

ALLMAN RD. 900 X 450
DETOUR M4-8 610 X 305
M6-1 533 X 381

SIGN ASSEMBLY C

ALLMAN RD. 900 X 450
END DETOUR M4-8 A 610 X 457

SIGN ASSEMBLY D

ROAD CLOSED AHEAD W20-3 1219 X 1219

SIGN ASSEMBLY E

ROAD CLOSED 500 FT W20-3 1219 X 1219

SIGN ASSEMBLY F

ROAD CLOSED 1000 FT W20-3 1219 X 1219

SIGN ASSEMBLY G

ROAD CLOSED W20-3 1219 X 1219
NEXT LEFT SP-4L 1066 X 305

SIGN ASSEMBLY H

ROAD CLOSED W20-3 1219 X 1219
NEXT RIGHT SP-4R 1066 X 305

1 R11-2 1219 X 762
ROAD CLOSED
DETOUR M4-10L 1219 X 457
TYPE III BARRICADE

2 R11-2 1219 X 762
ROAD CLOSED
DETOUR M4-10R 1219 X 457
TYPE III BARRICADE

3 R11-2 1219 X 762
ROAD CLOSED
TYPE III BARRICADE(S)

SIGN NUMBER: name
TYPE: D
QUANTITY: 4
BACKG COLOR: Fluorescent Orange
COPY COLOR: Black
SIGN WIDTH: 900mm
HEIGHT: 450mm
TOTAL AREA: 0.4 Sq.m
MAJ. COPY SERIES: C
ROUTE MARKERS:
BORDER TYPE: FLUSH
RECESS: 11mm
WIDTH: 15mm
RADII: 35mm
ARROW TYPES:
NO. Z BARS:
LENGTH:
MAT'L: 1.6 mm ALUMINUM

LETTER POSITIONS

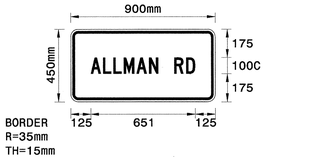
A L L M A N R D
125 203 268 333 413 491 547 647 720 651

Letter positions are to the lower left corners

USE NOTES: 2,5

1. Legend and border shall be direct applied encapsulated lens reflective sheeting.
2. Legend and border shall be direct applied non-reflective sheeting.
3. Shields shall be encapsulated lens reflective sheeting on 0.8mm aluminum and demountable.
4. Background shall be encapsulated lens reflective sheeting.
5. Background shall be Type VII, VIII, or IX (prismatic) fluorescent orange retroreflective sheeting.
6. Center arrows vertically on sign.

DESIGN BY: TMA
PROJECT ID: R-2533CC
CHECKED BY: TMA
DIV: 10
STD #:
DATE: Jun 01, 2009



Panel Style: construction_guide.ssm
M.U.T.C.D.: 2003 Edition

NORTH CAROLINA D.O.T. SIGN DETAIL

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: [signature] DATE: 12/2/10

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM ARE

-Y15-REV OFFSITE DETOUR

SCALE:	
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

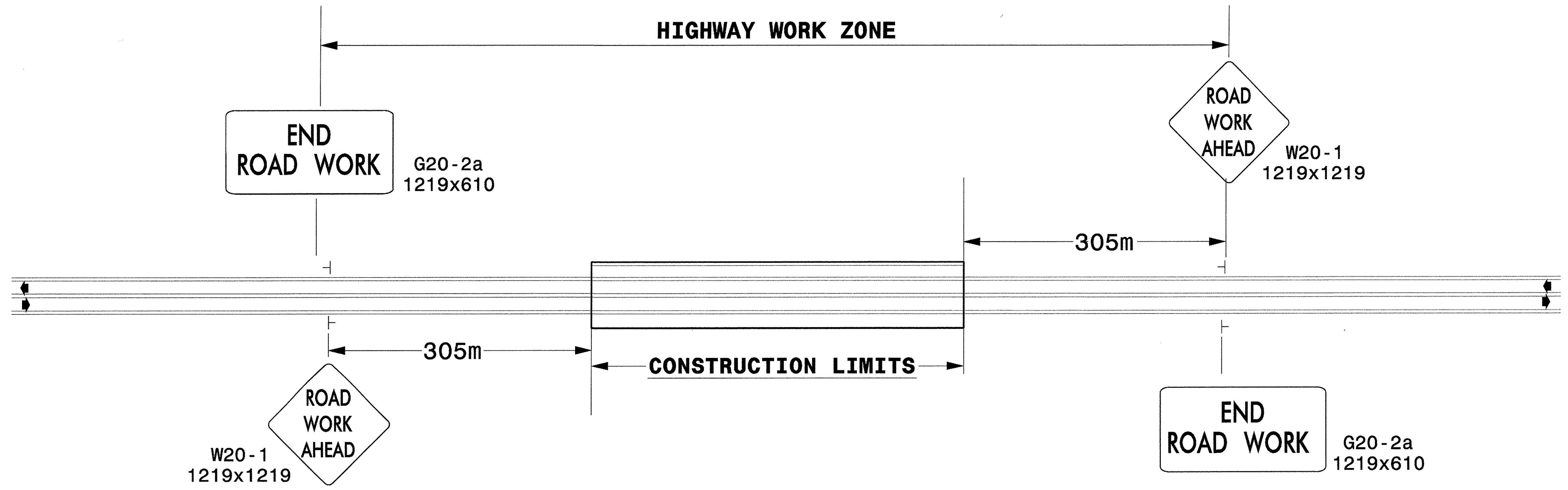
REVISIONS

CADD FILE

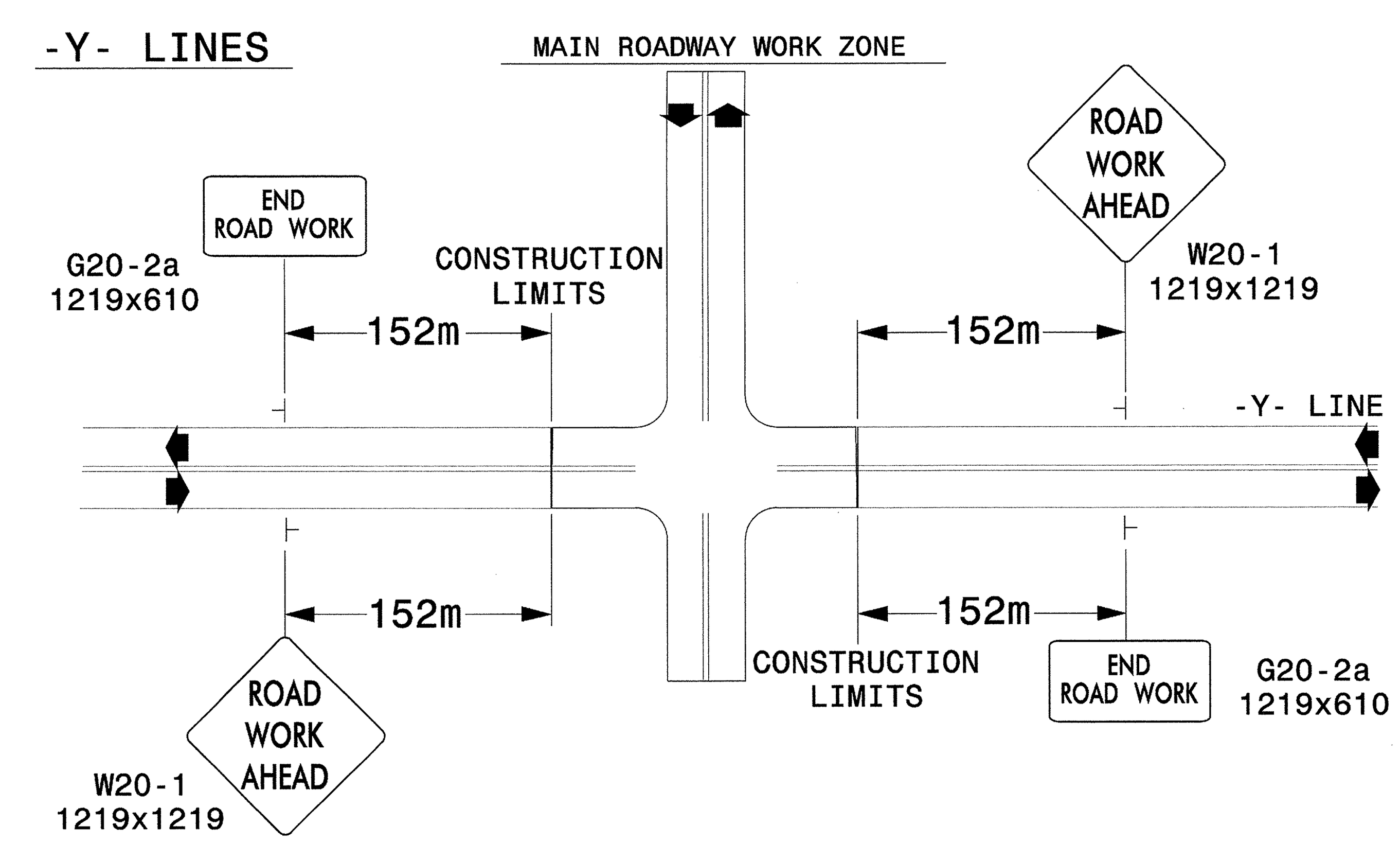
METRIC

PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-53

TWO-WAY UNDIVIDED ** (L-LINES)



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



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.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 1.4Kg STEEL U-CHANNEL POST OR 90mm X 90mm WOOD POST FOR ALL WORK ZONE SIGNS. 1.4Kg 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 1.4Kg STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 1.4Kg 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.
- ** 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

├ STATIONARY SIGN

DIRECTION OF TRAFFIC FLOW

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

DETAIL DRAWING FOR
TWO-WAY UNDIVIDED
WORK ZONE WARNING SIGNS

SHEET 1 OF 1

APPROVED: Tim Arey DATE: 12/21/10

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

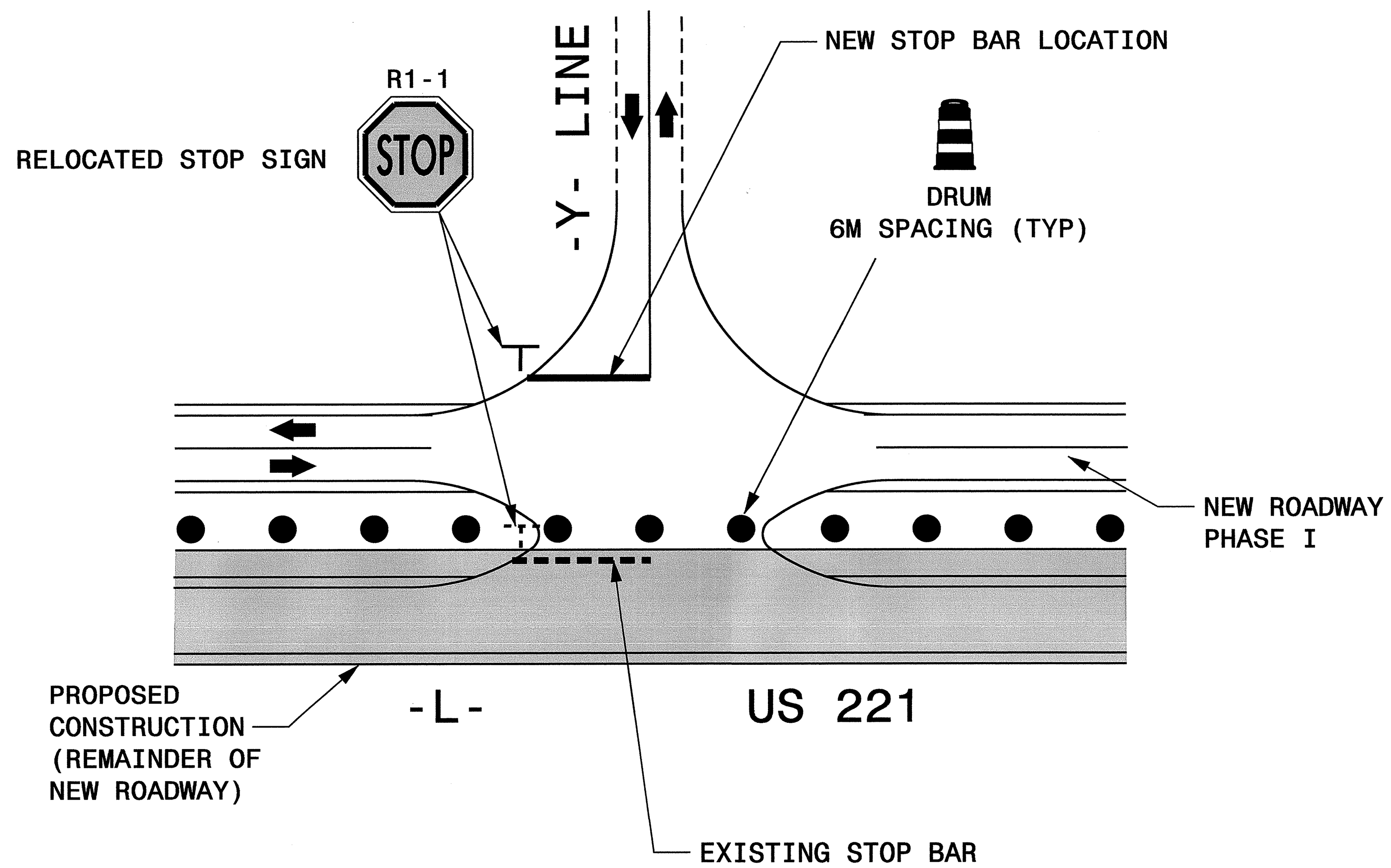
DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS

SCALE:	NONE
DATE:	12/10
DWG. BY:	
DESIGN BY:	
REVIEWED BY:	

REVISIONS	
7-98	10/01
10-98	03/04
01/01	11/04
CADD FILE	

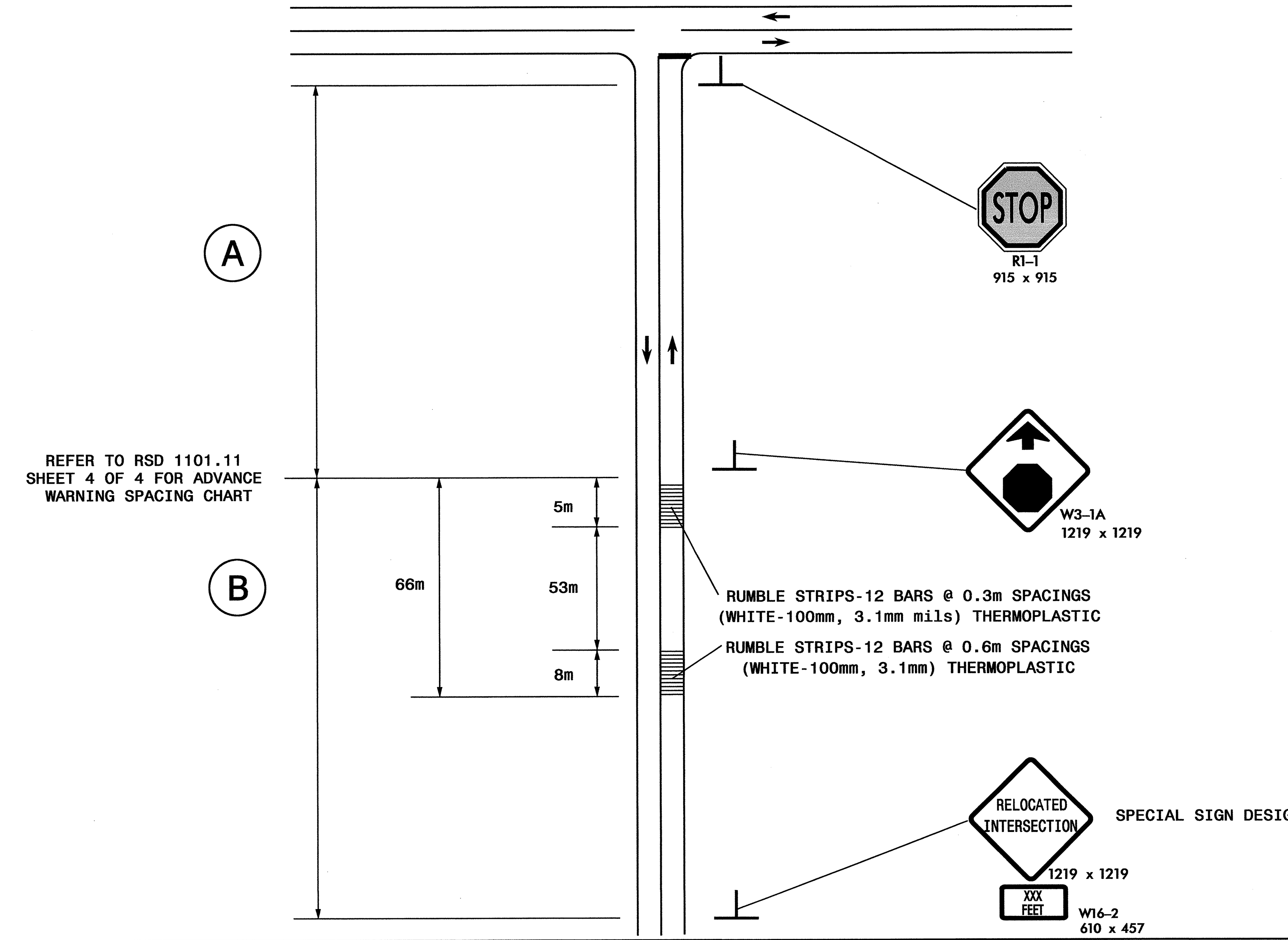
PROJ. REFERENCE NO.	SHEET NO.
R-2533CC	TCP-54

DETAIL 1



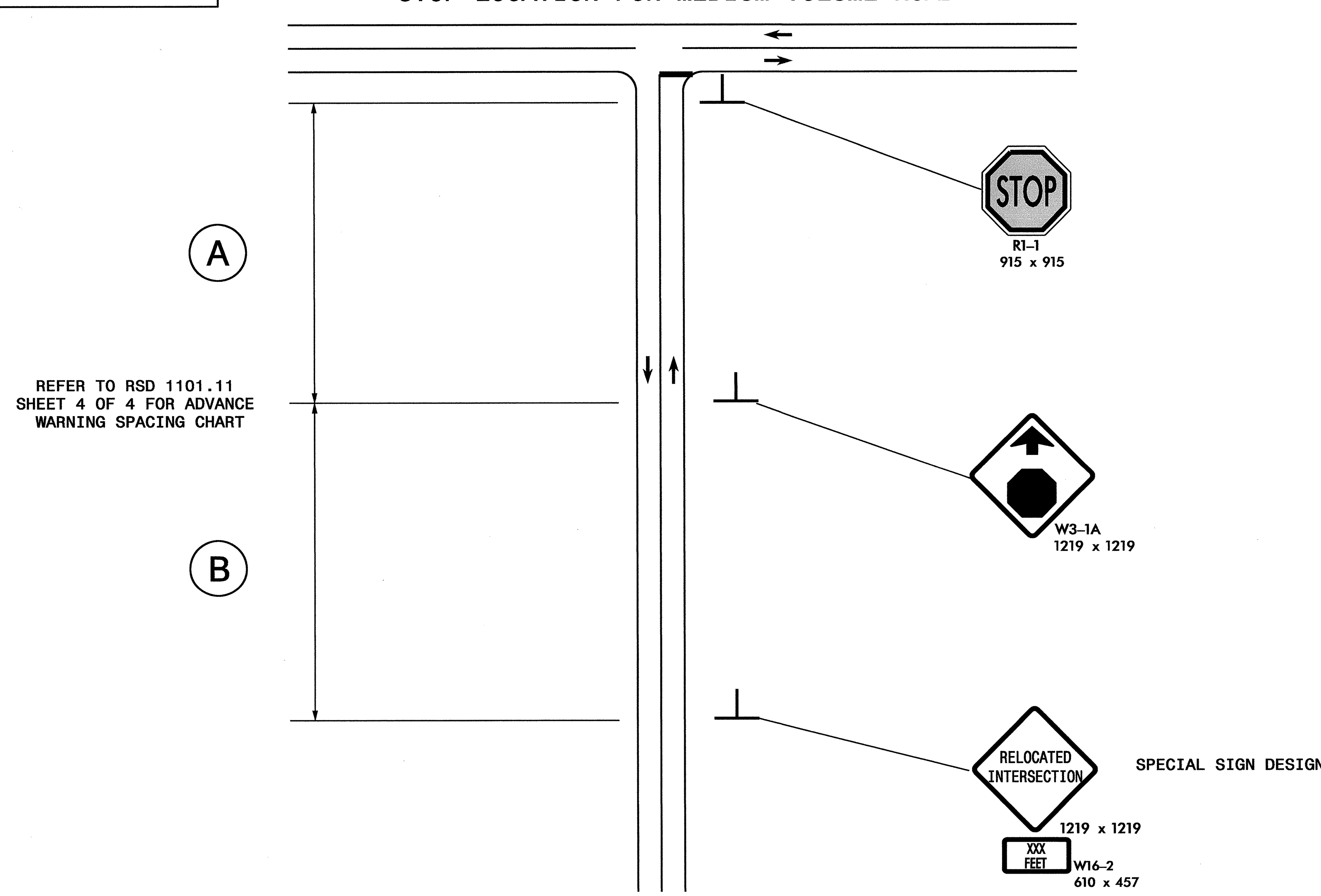
DETAIL 2

TRAFFIC CONTROL TREATMENT FOR NEW STOP LOCATION FOR MEDIUM TO HIGH VOLUME ROAD



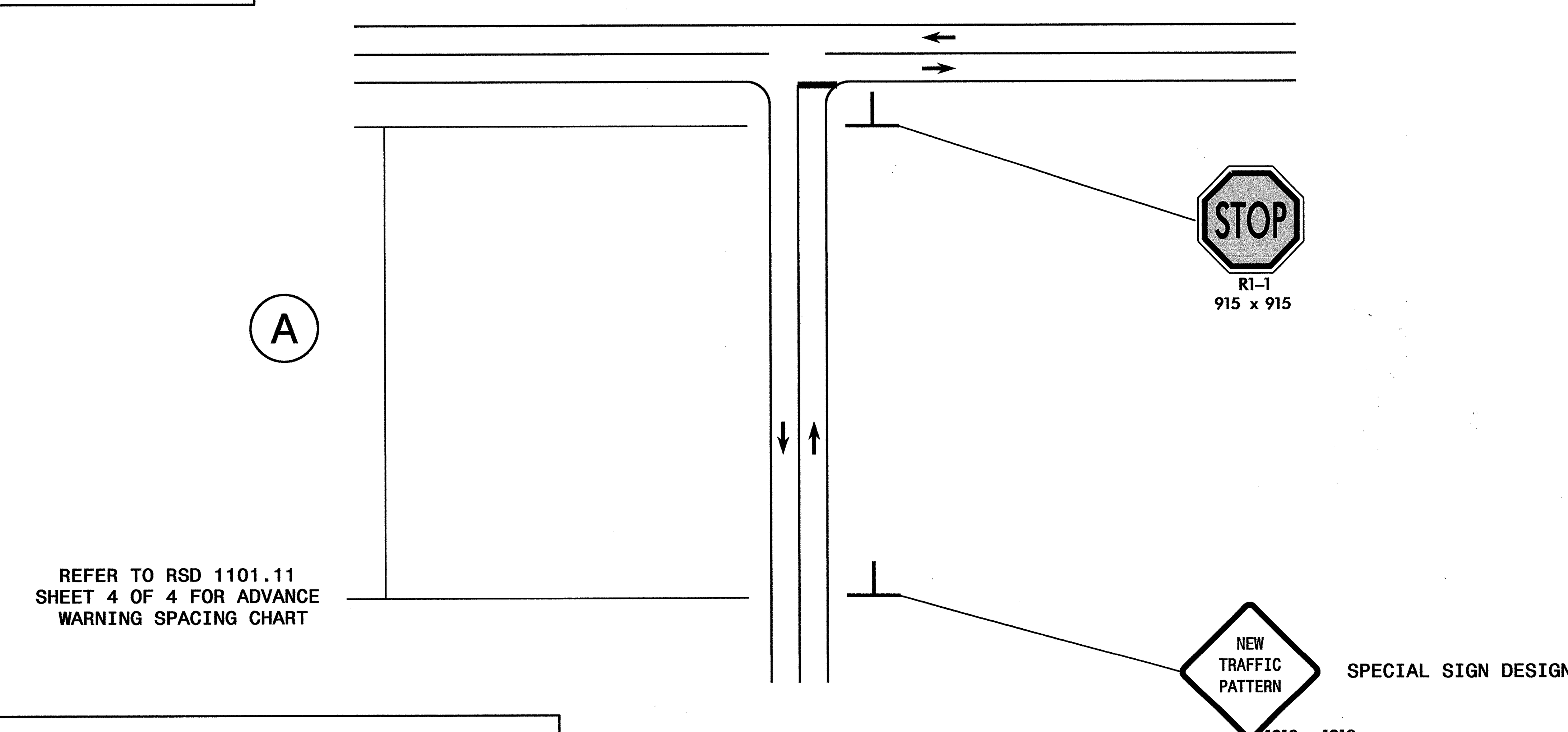
DETAIL 3

TRAFFIC CONTROL TREATMENT FOR NEW STOP LOCATION FOR MEDIUM VOLUME ROAD



DETAIL 4

TRAFFIC CONTROL TREATMENT FOR NEW STOP LOCATION FOR LOW VOLUME ROAD



TO BE USED AT THE FOLLOWING -Y- LINES:

-Y-, FOOD LION DRWY,
-Y2-REV, -Y3-, -SER1-,
-Y14-REV, -Y15-REV,
-Y16-REV

NOTE: MAY ADD CHANGEABLE MESSAGE SIGN IN ADVANCE OF "NEW TRAFFIC PATTERN" SIGN FOR ADDITIONAL ADVANCE WARNING.

APPROVED: [signature] DATE: 2-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 30864 ENGINEER DAVID W. BISSETTE

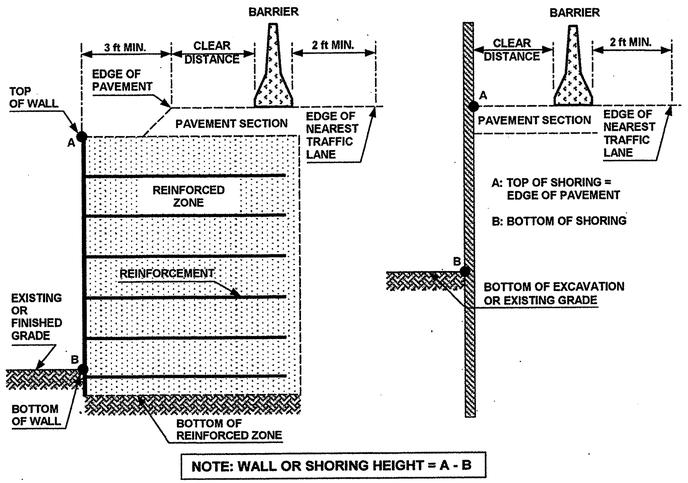
TRAFFIC CONTROL FOR NEW STOP LOCATIONS FOR -Y- LINES

SCALE:	
DATE:	12/10
DWG. BY:	LDA
DESIGN BY:	TMA
REVIEWED BY:	TMA

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE



NOTE: WALL OR SHORING HEIGHT = A - B

FIGURE A

NOTES

1- REFER TO THE TRAFFIC CONTROL PLANS FOR SHORING LOCATIONS AND SOIL PARAMETERS.

2- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR MORE INFORMATION ABOUT TEMPORARY SHORING, MEASUREMENT AND PAYMENT.

3- PROVIDE PORTABLE CONCRETE BARRIER TO PROTECT TEMPORARY SHORING IF SHORING IS LOCATED WITHIN THE CLEAR ZONE AS DEFINED IN THE AASHTO ROADSIDE DESIGN GUIDE. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).

4- BASED ON THE CLEAR DISTANCE, OFFSET, DESIGN SPEED AND PAVEMENT TYPE, CHOOSE AN UNANCHORED PCB, ANCHORED PCB OR AN OREGON BARRIER FROM THE TABLE SHOWN IN FIGURE B. FOR TRAFFIC LANES AND PORTABLE CONCRETE BARRIER LOCATED ABOVE AND BEHIND TEMPORARY SHORING, THE FOLLOWING ARE DEFINED AS:

CLEAR DISTANCE - HORIZONTAL DISTANCE FROM THE BACK FACE OF THE BARRIER TO THE EDGE OF PAVEMENT FOR TEMPORARY MSE WALL OR TO THE FACE OF NON-ANCHORED TEMPORARY SHORING AS SHOWN IN FIGURE A.

OFFSET - HORIZONTAL DISTANCE FROM THE FRONT FACE OF THE BARRIER TO CENTERLINE OF THE FURTHEST TRAFFIC LANE AS SHOWN IN FIGURE B FOR 3 TRAFFIC LANES.

5- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET AN UNANCHORED PCB AGAINST THE TRAFFIC SIDE OF THE SHORING AND DESIGN SHORING FOR TRAFFIC IMPACT OR USE THE "SURCHARGE CASE WITH TRAFFIC IMPACT" FOR THE STANDARD TEMPORARY SHORING. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).

6- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.

7- USE OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH DETAIL DRAWING AND SPECIAL PROVISION OBTAINED FROM: WORK ZONE TRAFFIC CONTROL UNIT WEB PAGE.

8- UNLESS NOTED OTHERWISE ON THE PLANS, SET PORTABLE CONCRETE BARRIER WITH A MINIMUM DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A.

9- FOR PORTABLE CONCRETE BARRIER ABOVE AND BEHIND TEMPORARY MSE WALLS, PROVIDE A MINIMUM DISTANCE OF 3 FT BETWEEN THE EDGE OF PAVEMENT AND THE WALL FACE AS SHOWN IN FIGURE A. IF THESE MINIMUM REQUIRED DISTANCES ARE NOT AVAILABLE, CONTACT THE ENGINEER.

10- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS. BARRIER DEFLECTIONS AND RESULTING MINIMUM REQUIRED CLEAR DISTANCES MIGHT VARY SIGNIFICANTLY FOR LARGER HEAVIER VEHICLES, RUNS OF BARRIER LESS THAN 200' IN LENGTH AND WET OR DRY PAVEMENT.

MINIMUM REQUIRED CLEAR DISTANCE, inches

Barrier Type	Pavement Type	Offset * ft	Design Speed, mph					
			<30	31-40	41-50	51-60	61-70	71-80
Unanchored PCB	Asphalt	<8	24	26	29	32	36	40
		8-14	26	28	31	35	38	42
		14-20	27	29	34	36	39	43
		20-26	28	31	35	38	40	44
		26-32	29	32	36	39	42	45
		32-38	30	34	38	41	43	46
		38-44	31	34	41	43	45	48
		44-50	31	35	41	43	46	49
		50-56	32	36	42	44	47	50
		>56	32	36	42	45	47	51
	Concrete	<8	17	18	21	22	25	26
		8-14	19	20	23	25	26	29
		14-20	22	22	24	26	28	31
		20-26	23	24	26	27	30	34
		26-32	24	25	27	28	32	35
		32-38	24	26	27	30	33	36
		38-44	25	26	28	30	34	37
		44-50	26	26	28	32	35	37
		50-56	26	26	28	32	35	38
		>56	26	27	29	32	36	38
Anchored PCB or Oregon Barrier	Asphalt	All Offsets	24 for All Design Speeds					
Anchored PCB or Oregon Barrier	Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds					

* See Figure Below

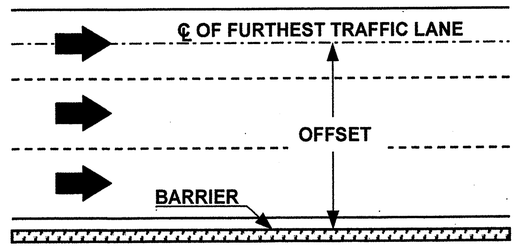


FIGURE B

APPROVED:_____ DATE:_____

SEAL 028380 ENGINEER JOSEPH C. KAY

Sept 10, 2010

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

PORTABLE CONCRETE BARRIER
AT
TEMPORARY SHORING LOCATIONS