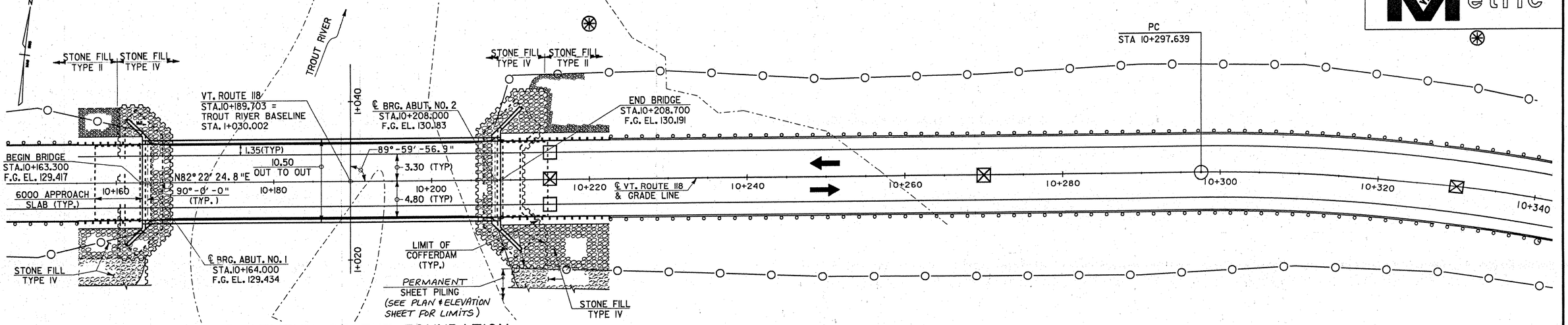


SURCHARGE TREATMENT OF THE FOUNDATION

1. LIMITS OF SURCHARGE:
FULL HEIGHT SURCHARGE FILL SHALL BE PLACED BETWEEN STATIONS 10+208.000 TO 10+270.000 AND LEFT IN PLACE FOR THE DURATION STATED IN NOTE 3 BELOW.

THE REMAINDER OF THE ROADWAY EMBANKMENT WILL NOT REQUIRE SURCHARGE LOADING, BUT THE EMBANKMENT MUST BE CONSTRUCTED TO AT LEAST THE ELEVATION OF THE BOTTOM OF THE SAND LAYER AND BE LEFT IN PLACE FOR 90 DAYS PRIOR TO PAVING.

2. SURCHARGE CROSS SECTION:
THE FINAL EMBANKMENT AND STONE FILL SHALL BE PLACED TO THE BOTTOM OF THE ROADWAY SAND COURSE PER THE CONTRACT CROSS SECTIONS. SURCHARGE MATERIAL SHALL BE PLACED ABOVE THIS LEVEL TO THE LEVEL OF THE FINAL ROADWAY ELEVATION AT CENTERLINE AND GRADED AT A 2% NORMAL CROSS SLOPE (SEE SECTION THIS SHEET). THE COFFERDAM AT ABUTMENT 2 MAY NEED TO BE EXTENDED ABOVE THE EXISTING GROUND IN ORDER TO ATTAIN FULL SURCHARGE AT STATION 10+208.000 (SEE SECTION THIS SHEET). COSTS ASSOCIATED WITH INCREASING THE COFFERDAM HEIGHT OR RETAINING THE SURCHARGE AT ABUTMENT 2 SHALL BE INCLUDED IN THE COFFERDAM ITEM AT THAT LOCATION.

3. DURATION OF THE SURCHARGE LOAD:
SURCHARGE LOADING SHALL BE MAINTAINED FOR 142 DAYS OR UNTIL THE IN-SITU GEOTECHNICAL INSTRUMENTATION INDICATES THAT THE SETTLEMENT HAS REACHED THE ANTICIPATED SETTLEMENT SHOWN IN NOTE 4. THE CONTRACTOR MAY, AT HIS OPTION, CONSTRUCT THE SURCHARGE 1.5 METERS HIGHER THAN THE CROSS SECTION SPECIFIED AND MAINTAIN THIS LOAD FOR 92 DAYS; HOWEVER, NO ADDITIONAL PAYMENT SHALL BE MADE FOR PROVIDING, PLACING, OR REMOVING THE ADDITIONAL SURCHARGE MATERIAL.

4. MAGNITUDE OF SETTLEMENT:
THE MAXIMUM AMOUNT OF SETTLEMENT IS ANTICIPATED TO BE 0.2 METERS. IT IS ANTICIPATED THAT 80% OF THIS SETTLEMENT WILL OCCUR DURING THE SURCHARGE PERIOD STATED ABOVE. THE SURCHARGE PERIOD MAY CEASE AFTER 0.16 METERS OF SETTLEMENT HAS OCCURRED.

5. MONITORING/SETTLEMENT INSTRUMENTATION:
REGUARDLESS OF WHETHER OR NOT SURCHARGE IS USED, THE SETTLEMENT OF THE FOUNDATION WILL BE MONITORED USING TYPE I AND VIBRATING WIRE SETTLEMENT PLATFORMS INSTALLED ON THE NATURAL GRADE, AS WELL AS WITH THE USE OF PIEZOMETERS INSTALLED AT 4.5 METERS BELOW THE GROUND SURFACE. THE DESIGNATED LOCATIONS FOR THESE ITEMS ARE SHOWN ABOVE. BOTH SETTLEMENT PLATFORMS SHALL MEET THE GUIDELINES SPECIFIED IN STANDARD SHEETS L-1M AND L-2M RESPECTIVELY AND SECTION 623 OF THE SPECIAL PROVISIONS.

PORE PRESSURES SHALL BE MONITORED DAILY DURING FILL PLACEMENT AND IMMEDIATELY FOLLOWING THE COMPLETION OF EACH VERTICAL INCREMENT OF 0.6 METERS. RECORDS OF PIEZOMETER READINGS ALONG WITH FILL ELEVATIONS AT EACH PIEZOMETER LOCATION SHALL BE RECORDED WHENEVER THE MEASUREMENTS ARE MADE AND GIVEN TO THE ENGINEER ON A WEEKLY BASIS. IF PORES PRESSURES EXCEED 58.6 kPA, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY AND EMBANKMENT CONSTRUCTION HALTED UNTIL EXCESS PORE PRESSURES HAVE DISSIPATED BELOW 58.6 kPA OR, THE ENGINEER CAN EVALUATE THE STABILITY OF THE SLOPE USING THE APPROPRIATE MEANS.

FOR DETAILS OF SETTLEMENT PLATFORM, TYPE I, SEE STANDARD SHEET L-1M, FOR VIBRATING WIRE SETTLEMENT PLATFORM, SEE STANDARD SHEET L-2M.

THE FOLLOWING SETTLEMENT PLATFORM READINGS SHALL BE RECORDED AND PROVIDED TO THE ENGINEER: (FILL ELEVATIONS SHALL BE RECORDED WHENEVER READINGS ARE TAKEN)

a. INITIAL READINGS AT ALL SETTLEMENT PLATFORMS BEFORE ANY EMBANKMENT OR SURCHARGE LOAD IS APPLIED.
b. SETTLEMENT PLATFORM, TYPE I: SETTLEMENT READINGS SHALL BE TAKEN ONCE A DAY DURING EMBANKMENT OR SURCHARGE PLACEMENT OPERATIONS.
c. SETTLEMENT PLATFORM, VIBRATING WIRE: SETTLEMENT READINGS SHALL BE TAKEN FOR EVERY 600 TO 900 mm OF EMBANKMENT PLACED DURING SURCHARGE OPERATION.
d. UPON COMPLETION OF SURCHARGE PLACEMENT OPERATIONS, SETTLEMENT PLATFORM READINGS SHALL BE TAKEN ONCE EVERY OTHER DAY FOR THE DURATION OF THE SURCHARGE TREATMENT. (TYPICAL FOR BOTH TYPES).

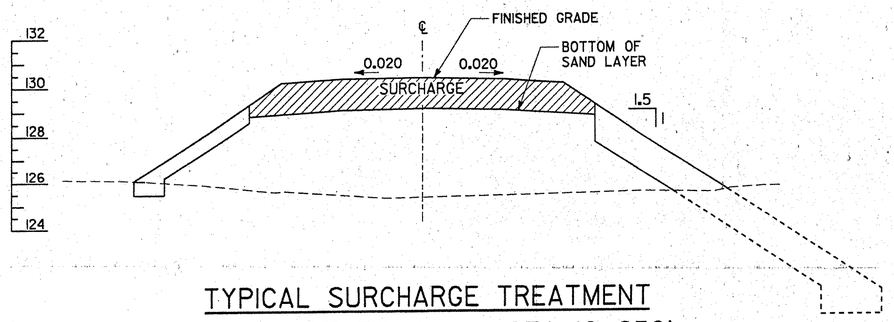
6. DRIVING PILES:
STEEL PILES FOR THE ABUTMENT 2 FOUNDATION SHALL NOT BE DRIVEN UNTIL 80% OF THE MAXIMUM ANTICIPATED SETTLEMENT STATED IN NOTE 4 IS REACHED.

GEOTECHNICAL INSTRUMENTATION

THIS WORK CONSISTS OF THE FURNISHING, INSTALLING, MAINTAINING SETTLEMENT PLATFORMS AND COLLECTING DATA. THIS INSTRUMENTATION WILL FOLLOW THE GUIDELINES SPECIFIED IN SECTION 623 OF THE SPECIAL PROVISIONS.

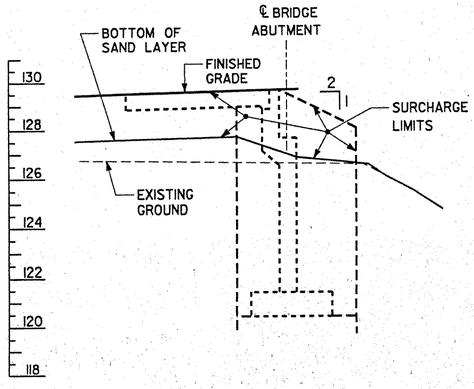
SETTLEMENT INSTRUMENTATION PLAN

0 5 10 20
SCALE: 1:250



TYPICAL SURCHARGE TREATMENT SECTION AT ROADWAY (STA 10+250)

NOT TO SCALE



TYPICAL SURCHARGE TREATMENT SECTION AT ABUTMENT 2

NOT TO SCALE

SETTLEMENT PLATFORM, TYPE I - LOCATION

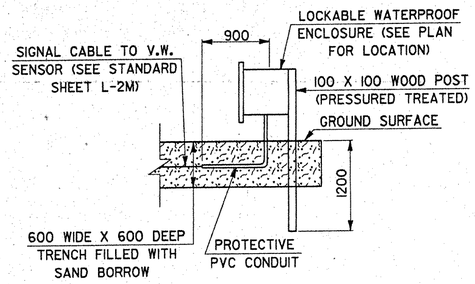
STATION	OFFSET
10+215	3.30 m Lt.
10+215	3.30 m Rt.

SETTLEMENT PLATFORM, VIBRATING WIRE & PIEZOMETER - LOCATION

STATION	OFFSET
10+215	CENTERLINE
10+270	CENTERLINE
10+330	CENTERLINE

LEGEND

- ☐ SETTLEMENT PLATFORM, TYPE I
- ☒ SETTLEMENT PLATFORM, VIBRATING WIRE, & APPROXIMATE PIEZOMETER LOCATION
- ⊛ APPROXIMATE READOUT BOX LOCATION STA 10+330, 19.000 LT AND STA 10+220, 19.000 LT PROTECT READOUT BOXES WITH BOLLARDS (SEE STANDARD SHEET L-2M). COST INCIDENTAL TO ITEM 623.23



READOUT BOX DETAIL

NOT TO SCALE

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
SETTLEMENT INSTRUMENTATION PLAN	
Designed By S. JOHNSON	Drawn By S. DELIA
Checked By S. JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. y:\J91\4562\zf184spl.dgn	IPAR\zf184spl.J
Bridge Sheet No. BR4	Sheet 43 of 140

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