

GENERAL NOTES:

ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" 1990 AND ITS LATEST REVISIONS, AND AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" 16th EDITION AND ITS LATEST REVISIONS.

DESIGN IS FOR HS-25 LOADING APPLIED IN ACCORDANCE WITH THE PROVISIONS OF AASHTO STANDARD SPECIFICATIONS.

ANY REFERENCE TO "LEFT" AND/OR "RIGHT" ON THE PLANS OR IN THE NOTES REFER TO THE DIRECTION OF STATIONING AND NOT THE DIRECTION OF TRAFFIC.

FIELD CONNECTIONS SHALL BE MADE WITH $7/8"$ ϕ , AASHTO M164M, TYPE 3 BOLTS, EXCEPT IN AREAS OF PAINTED STEEL, WHERE TYPE 1 GALVANIZED BOLTS SHALL BE USED. HOLES SHALL BE $15/16"$ ϕ DIAMETER. CONNECTIONS NOT DESIGNED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STATE FOR APPROVAL.

WHERE CONNECTIONS ARE NOT DETAILED ON THE VAOT PLANS, THEY SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.

ALL WELDING AND DIMENSIONAL TOLERANCES OF WELDED MEMBERS SHALL CONFORM TO THE LATEST ANSI/AASHTO/AWS BRIDGE WELDING CODE AND ITS LATEST REVISIONS.

ANY FORM BRACKET HOLES (IF REQUIRED) IN FASCIA GIRDERS SHALL BE FILLED WITH BUTTONHEAD OR HEX-HEAD BOLTS, TYPE 3. FORM BRACKETS SHALL BE DESIGNED BY THE CONTRACTOR - FLEMING BRACKETS OF SIMILAR FALSEWORK SHALL BE SPACED AT A MAXIMUM OF FOUR (4) FEET.

ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE CONCRETE REINFORCING STEEL INSTITUTE.

REINFORCEMENT PLACING TOLERANCES SHALL BE:
SPACING +/- 1"
CLEARING +/- 1/4"

MINIMUM COVER FOR REINFORCING STEEL (EXCEPT IN THE DECK) SHALL BE 2" IN BACK FACES OF SUBSTRUCTURES AGAINST EARTH, 4" IN PIER COLUMNS AND CAP BEAMS, AND 3" ELSEWHERE, UNLESS OTHERWISE SHOWN.

FLAME CUTTING OF EPOXY COATED REINFORCING STEEL SHALL NOT BE PERMITTED.

ALL EXPOSED EDGES OF CONCRETE IN THE SUBSTRUCTURE AND THE SUPERSTRUCTURE SHALL BE CHAMFERED 1" x 1", UNLESS OTHERWISE SHOWN.

ABUTMENT CONCRETE (ABOVE THE ADJACENT BRIDGE SEAT ELEVATIONS) SHALL NOT BE PLACED UNTIL GIRDERS HAVE BEEN ERECTED, BEAM PROFILES HAVE BEEN TAKEN, AND FINAL FINISH GRADE OF DECK IS ESTABLISHED BY THE ENGINEER.

IN ALL HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS, SHEAR KEYS SHALL BE FORMED AS SHOWN IN THE TYPICAL BRIDGE DETAILS, BRIDGE SHEET BR-15, AND THEY SHALL BE CONTINUED UP TO 3" FROM EACH END OF THE JOINT. THE UPWARD KEY SHALL BE PLACED INTEGRAL WITH THE CONCRETE BELOW THE JOINT.

HORIZONTAL AND VERTICAL CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF JOINT.

POLYURETHANE JOINT SEALER SHALL BE USED IN CURB CONSTRUCTION JOINTS OR AT FIXED CURB JOINTS AS DIRECTED BY THE ENGINEER, IN ACCORDANCE WITH THE CURB JOINT DETAIL SHOWN IN THE TYPICAL BRIDGE DETAILS, BRIDGE SHEET BR-15.

THE COST OF INSTALLING PVC WATERSTOPS, AS SHOWN IN THE PLANS, SHALL BE SUBSIDIARY ITEM 501.25, "CONCRETE CLASS B (HPC-B). THE TYPE OF PVC WATERSTOP TO BE USED SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL.

TEMPORARY EROSION CONTROL MEASURES SHALL INCLUDE PLACEMENT OF SILT FENCE, HAY BALES AND EROSION CONTROL MATTING AROUND WINGWALLS, ABUTMENTS AND PIERS WHERE EXCAVATION AND BACKFILL IS PERFORMED, AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL CALL "DIG-SAFE" PRIOR TO PERFORMING ANY EXCAVATION, IN ACCORDANCE WITH DIG-SAFE'S RULES OF NOTIFICATION. THE COST OF COORDINATING WITH DIG-SAFE AND THE FOLLOWING UTILITY COMPANIES SHALL BE SUBSIDIARY TO ITEM 635.10, "MOBILIZATION", VERIZON, GREEN MOUNTAIN POWER CORP. AND NOVA CABLE. THE COST OF ANY EXPLORATORY EXCAVATION BY THE CONTRACTOR TO ASCERTAIN UTILITY LOCATIONS SHALL BE PAID FOR UNDER ITEM 204.20, "TRENCH EXCAVATION OF EARTH" IN ACCORDANCE WITH THE SPECIAL PROVISIONS. ANY DAMAGE TO UTILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED IMMEDIATELY AS DIRECTED BY THE RESPECTIVE UTILITY COMPANY TO THE ENGINEER AT THE CONTRACTOR'S OWN EXPENSE.

WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF DECK BETWEEN DRIP NOTCHES.

JOINTS AND SCORE MARKS SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

STONE FILL SHALL BE PLACED IN FRONT OF THE ABUTMENTS BEFORE SUPERSTRUCTURE STEEL IS PLACED.

ALL STRUCTURAL STEEL SHALL CONFORM TO AASHTO DESIGNATION M270, GRADE 50W, EXCEPT AS NOTED IN THE PLANS.

ALL STRUCTURAL STEEL SHALL CONFORM TO AASHTO M270 GR 50W (UNPAINTED). ALL STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).

AFTER SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF BEAMS SHALL BE TAKEN AS DIRECTED BY THE ENGINEER FOR USE IN COMPARING TO DESIGN BEAM PROFILES.

ANY HOLES IN FASCIA BEAMS OR FASCIA GIRDER WEBS NOT OTHERWISE FILLED SHALL BE FILLED WITH BUTTON HEAD OF HEX HEAD BOLTS.

SHALL BE CLASS A QC/QA "QC/QA," CURB CONCRETE.
DECK CONCRETE AND APPROACH SLAB CONCRETE SHALL BE CONCRETE CLASS A*. CURB CONCRETE SHALL BE CONCRETE CLASS A* (HPC-A) CONCRETE. ALL OTHER CONCRETE SHALL BE CONCRETE CLASS B* (HPC-B).

SURFACES OF BRIDGE SEATS UNDER BEARING DEVICES SHALL BE LEVEL WITH A CONSTRUCTION TOLERANCE OF 0.005 RADIAN. OTHER BRIDGE SEAT AREAS SHALL BE SLOPED 1/2" PER FOOT. ABUTMENT SEATS SHALL BE SLOPED FULL WIDTH TOWARD CENTER SPAN. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE SMOOTH STEEL TROWEL FINISHED.

HORIZONTAL AND VERTICAL CONCRETE CONSTRUCTION JOINTS (NOT TO SCALE) SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF JOINT.

ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 68 DEGREES F.

BORINGS INDICATED ON THESE PLANS HAVE BEEN MADE FOR DESIGN PURPOSES ONLY AND DO NOT WARRANT ACTUAL SUB-SURFACE CONDITIONS.

DRILLED SHAFT

1. DRILLED SHAFT FOUNDATION SHALL HAVE A MINIMUM 3.0 FACTOR OF SAFETY WITH RESPECT TO BEARING CAPACITY FAILURE.
2. DRILLED SHAFTS FOUNDED IN SCHIST BEDROCK ARE DESIGNED FOR A MAXIMUM ALLOWABLE BEARING PRESSURE OF 40 TSF.
3. DRILLED SHAFT BEARING ON BEDROCK SHALL BE SOCKETED INTO BEDROCK A MINIMUM OF ONE SHAFT DIAMETER.
4. DRILLED SHAFTS FOUNDED IN SOIL ARE DESIGNED FOR A MAXIMUM ALLOWABLE END BEARING PRESSURE OF 10 TSF AND SIDE FRICTION RESISTANCE WHERE $B = 1.5 - 0.135z^{0.05}$ WHERE $B (1.2 > B \geq 0.25)$
5. THE DRILLED SHAFT SHOULD BE ADVANCED WITH STEEL CASING TO MAINTAIN SIDEWALL INTEGRITY AND TO MITIGATE THE POTENTIAL FOR SOIL COLLAPSE INTO THE SHAFT EXCAVATION. THE CASING SHALL BE REMOVED FROM THE SHAFT EXCAVATION WHILE A STATIC HEAD OF CONCRETE IS MAINTAINED WITHIN THE CASING TO PREVENT GRANULAR TILL SOIL AND COARSE RIVER SEDIMENTS FROM COLLAPSING INTO THE SHAFT AND CREATING INCLUSION. CASING REMOVAL MUST ALSO BE PERFORMED IN A MANNER THAT AVOIDS THE TENDENCY FOR LIFTING OF CONCRETE UPON CASING REMOVAL, WHICH MAY RESULT IN VOIDS OR INCLUSIONS OF SOIL IN THE SHAFT.
6. THE BOTTOM OF THE DRILLED SHAFTS SHOULD BE CAREFULLY CLEANED PRIOR TO PLACING CONCRETE.
7. THE CONTRACTOR SHALL ENSURE THAT THE CONCRETE FLOWS AROUND AND FULLY SURROUNDS THE CAGE. CONCRETE SHOULD BE A SPECIAL DESIGN HAVING HIGH SLUMP. THE CASING USED FOR SHAFT EXCAVATION SHOULD NOT BE PULLED UNTIL THE EXCAVATION HAS BEEN COMPLETELY BACKFILLED WITH CONCRETE OR UNTIL A SUFFICIENT HEAD OF CONCRETE EXISTS TO PREVENT VOIDS OR INCLUSIONS OF SOIL IN THE SHAFT.

FOUNDATION

1. SPREAD FOOTING SHALL BE CONSTRUCTED ON A 1'-6" THICK MAT OF GRANULAR BACKFILL FOR STRUCTURES, ITEM 204.30.
2. GRANULAR BACKFILL SHALL BE COMPACTED TO 95 PERCENT OF MAXIMUM DRY DENSITY.

STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of	SEARSBURG	Bridge No.	25B
Highway No.	VT. RTE. 9	Log Sta.	
		Surv. Sta.	

VT. RTE. 9 OVER DEERFIELD RIVER

GENERAL NOTES

Designed By	D. VIEM	Drawn by	K. DETRICK
Checked By	M. OLSTAD	Bridge Design Supervisor	M. OLSTAD
Date	12/2001	Date	12/2001
PROJECT	SEARSBURG - WILMINGTON	PROJECT NO.	NHF 010-1081

I.G.C. Info.

Bridge Sheet No. BR3

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