



SCHULTZ

January 5, 2015

I, the undersigned Secretary of W. M. SCHULTZ CONSTRUCTION, INC., a Corporation (the "Corporation") of New York;

RESOLVED, that William M. Schultz, President of the Corporation is authorized to execute any and all documents pertaining to Contract Documents on behalf of the Corporation for the Contract # Castleton BRF 015-2 (10), for the State of Vermont, Agency of Transportation located in the Town of Castleton, Rutland County, Vermont.

Suzanne Schultz, Secretary
W.M. Schultz Construction, Inc.
A Corporation Formed Under the Laws of NY

Corporate Address:

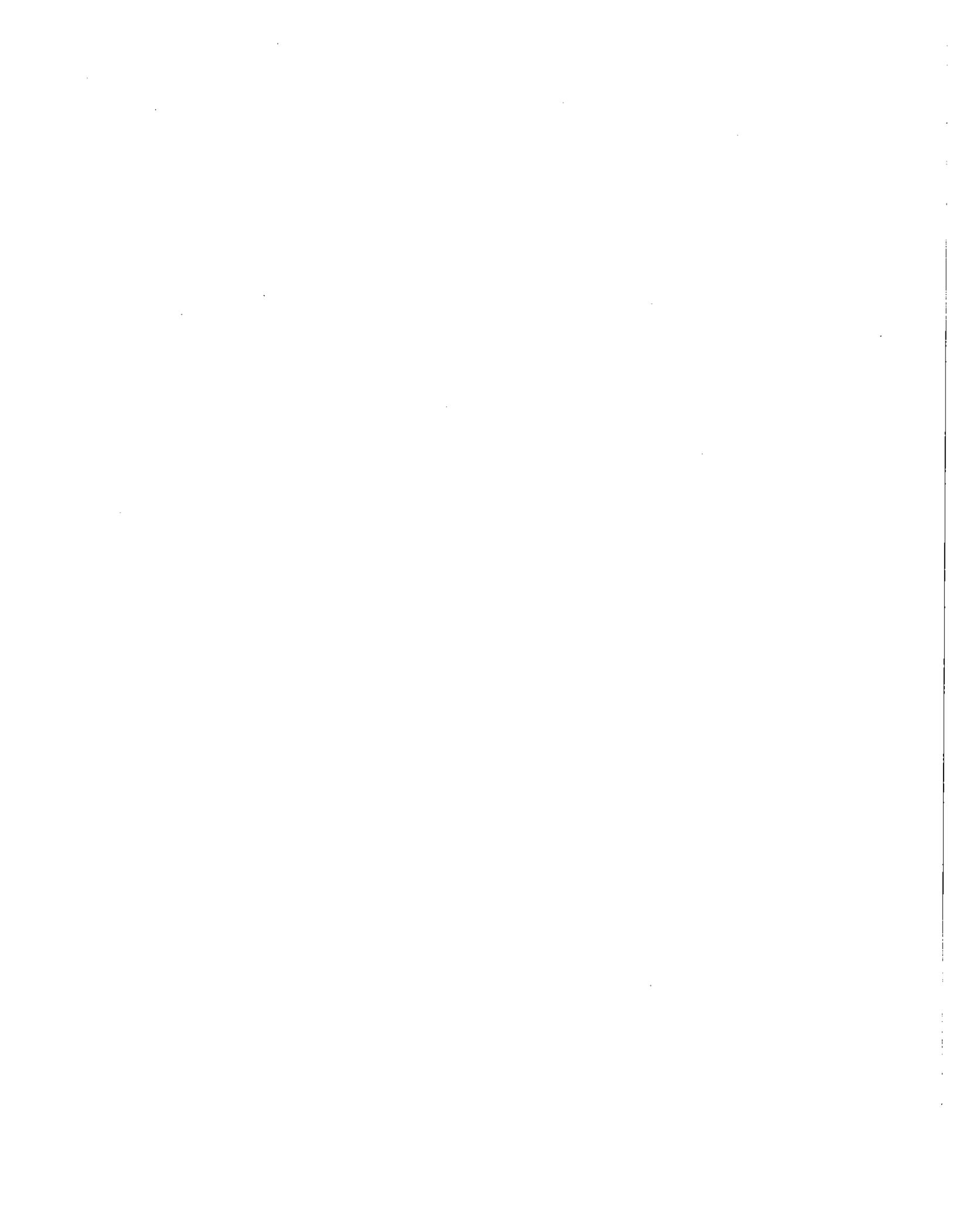
831 Route 67
Curtis Industrial Park
PO Box 2620
Ballston Spa, New York 12020
Phone: 518.885.0060 Fax: 518.885.0744

State of Incorporation:

State of New York

Date of Incorporation:

October 26, 2000



STATE OF VERMONT
CONTRACT BOND

Bond No. 837057969

KNOW ALL MEN BY THESE PRESENTS, That we

W.M Schultz Construction, Incorporated
831 State Route 67, Curtis Industrial Park
Ballston Spa, NY 12020

as Principal, and

as Surety, are held and firmly bound unto the State of Vermont, as Oblige, in the penal sum of Two Million One Hundred Fifty Four Thousand Twenty Nine Dollars and Fifty Cents (\$2,154,029.50), good and lawful money of the United States of America, for the payment of which, well and truly to be made, we bind ourselves, our heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above bounden Principal has entered into a certain written contract with the above named Oblige, the State of Vermont dated the 12th day of JANUARY A.D. 2015 for the construction of a certain project in the State of Vermont known as Castleton BRF 015-2 (10) which contract is hereby referred to and made a part hereof as fully and to the same extent as if set forth at length herein:

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION IS SUCH that, if the above bounden Principal and his subcontractors and his or their agents and servants shall well and truly keep, do and perform, each and every, all and singular the matters and things in said contract set forth and specified to be by the said Principal kept, done and performed at the time and in the manner in said contract specified and shall pay over, make good and reimburse the State of Vermont all loss or losses and damage or damages which the above named Oblige, the State of Vermont, may sustain by reason of failure or default on the part of the Principal or his subcontractors, or his or their agents and servants, to fully carry out the terms of said contract, then this obligation shall be void; otherwise, to be and remain in full force and effect.

In Witness Whereof we hereunto set our hands and seals this 30th day of December A.D. 2014.

In Presence of (TWO WITNESSES REQUIRED)

[Signature]
[Signature]
as to Principal

W. M. Schultz Construction, Inc.
Name of Corporation, Co-partnership or Individual

[Signature] L.S.
Authorized Signature

William M. Schultz, President
Title

(TWO WITNESSES REQUIRED)

[Signature]
J. Columbus
[Signature]
K. Ritchie
K. Ritchie
as to Surety.

Liberty Mutual Insurance Company
Bonding Company

[Signature] L.S.
Authorized Signature

Timothy M. Tyrrell, Attorney-in-Fact
Title

Compliance Bond

Bond No. 837057969

CONTRACT BOND

W.M Schultz Construction, Incorporated

831 State Route 67, Curtis Industrial Park
Ballston Spa, NY 12020
Principal

Liberty Mutual Insurance Company

175 Berkeley Street, Boston, Massachusetts 02117
Surety.

and

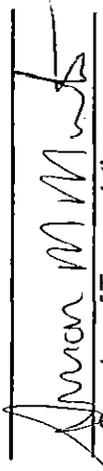
STATE OF VERMONT

Obligee.

Date 1/12 2015

Amount \$2,154,029.50

Approved 1/12 2015



Secretary of Transportation
or Duly Authorized Agent

STATE OF VERMONT
CONTRACT BOND

Bond No. 837057969

KNOW ALL MEN BY THESE PRESENTS, That we

W.M Schultz Construction, Incorporated
831 State Route 67, Curtis Industrial Park
Ballston Spa, NY 12020

as Principal, and **Liberty Mutual Insurance Company**
175 Berkeley Street
Boston, Massachusetts 02117

As Surety, are held and firmly bounden, unto the Secretary of Transportation for the State of Vermont, and his successors in office, as Obligee, in the penal sum of Two Million One Hundred Fifty Four Thousand Twenty Nine Dollars and Fifty Cents (\$2,154,029.50), good and lawful money of the United States of America, for the payment of which, well and truly to be made, we bind ourselves, our heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above bounden Principal has entered into a certain written contract with the State of Vermont, dated the 12th day of JANUARY A.D. 2015 for the construction of a certain project in the State of Vermont known Castleton BRP 015-2 (10) which contract is hereby referred to and made a part hereof as fully and to the same extent as if set forth at length herein:

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION IS SUCH that, if the above bounden, Principal shall pay, settle, liquidate and discharge the claims of all creditors for material, merchandise, labor, rent, hire of vehicles, power shovels, rollers, concrete mixers, tools and other appliances, professional services, premiums and other services used or employed in carrying out the terms of said contract between said Principal and the State of Vermont, and shall pay all taxes, both State and municipal, and contributions to the Vermont Commissioner of Employment and Training, accruing during the term of performance of said contract, this agreement to make such payment being in compliance with the requirements of 19 Vermont Statutes Annotated, Section 10(9), as amended, to furnish security there under, and being in fact such security, then this obligation shall be void; otherwise, to be and remain in full force and effect.

In Witness Whereof we hereunto set our hands and seals this 30th day of December A.D. 2014.

In Presence of (TWO WITNESSES REQUIRED)

[Signature]
[Signature]
as to Principal

W. M. Schultz Construction, Inc.
Name of Corporation, Co-partnership or Individual
[Signature] L.S.
Authorized Signature

William M. Schultz, President
Title

(TWO WITNESSES REQUIRED)

[Signature]
[Signature]
J. Columbus
K. Ritchie
as to Surety.

Liberty Mutual Insurance Company
Bonding Company
[Signature] L.S.
Authorized Signature

Timothy M. Tyrrell, Attorney-in-Fact
Title

Labor & Materials Bond
Bond No. 837057969

CONTRACT BOND

W.M Schultz Construction, Incorporated
831 State Route 67, Curtis Industrial Park
Ballston Spa, NY 12020
Principal

Liberty Mutual Insurance Company

175 Berkeley Street, Boston, Massachusetts 02117
Surety.

and

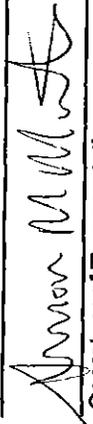
STATE OF VERMONT

Obligee.

Date 1/12 2015

Amount \$2,154,029.50

Approved 1/12 2014 15


Secretary of Transportation
or Duly Authorized Agent

SCHEDULE OF INSURANCE RATES ON EXTRA WORK
 APPLICABLE TO THE Castleton BRP 015-2 (10) PROJECT

To the Secretary of Transportation, Montpelier, Vermont

In connection with the contract for the above project, I/we submit herewith the following classification of work and the rates of insurance applicable to extra work performed and accepted on said project:

WORKER'S COMPENSATION

Classification No. 5213 Rate \$13.94 per \$100 of payroll
 Classification No. 5222 Rate \$10.78 per \$100 of payroll
 Classification No. _____ Rate _____
 Classification No. _____ Rate _____

GENERAL LIABILITY

Classification No. Construction Operations Rate \$39.668 per \$1,000 of payroll
 Classification No. Umbrella Liability Rate \$16.837 per \$1,000 of payroll
 Classification No. _____ Rate _____
 Classification No. _____ Rate _____

AUTOMOBILE LIABILITY

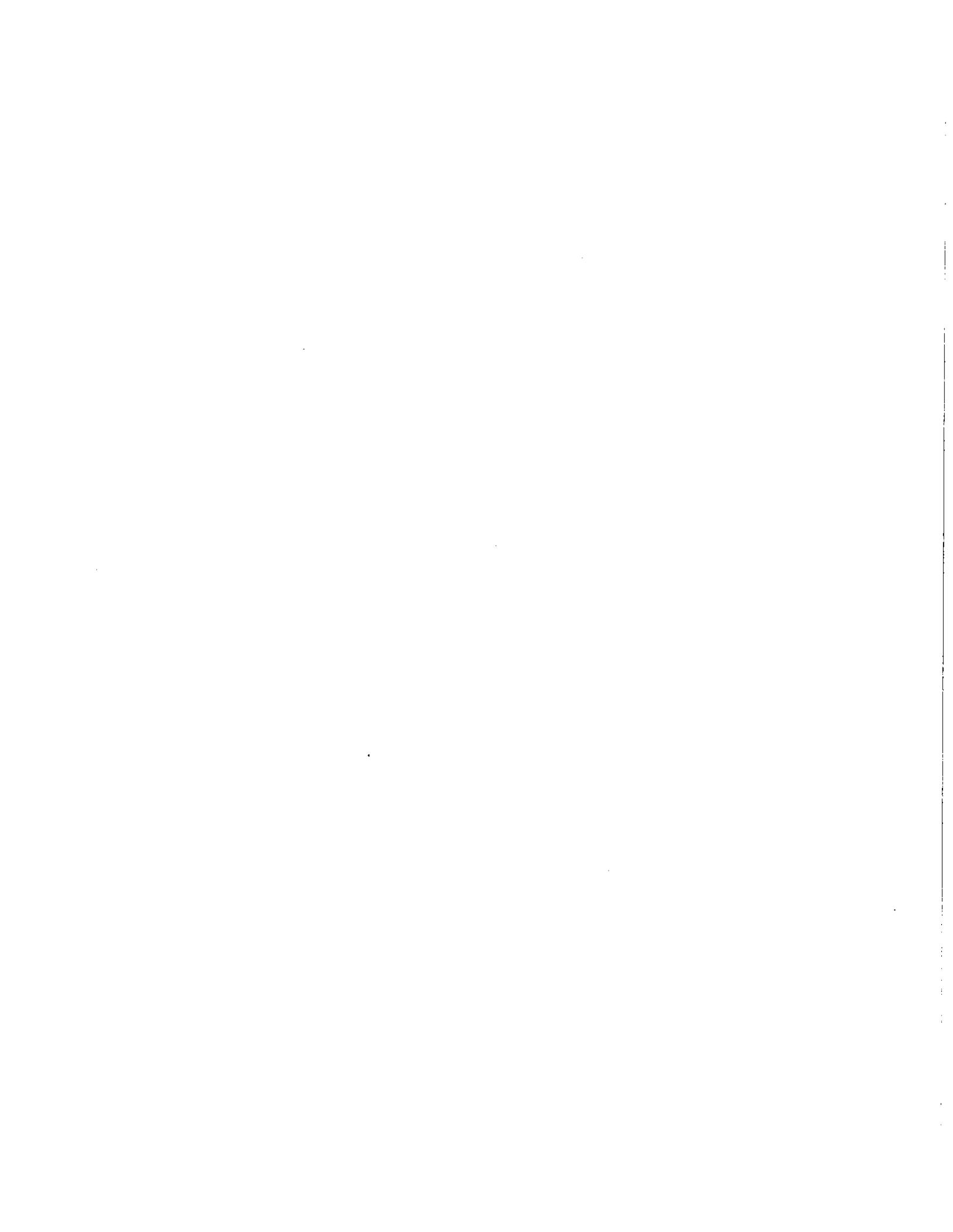
Classification No. Light Truck Rate \$1,083
 Classification No. Heavy Truck Rate \$953
 Classification No. Extra Heavy Truck/Tractor Rate \$2,750
 Classification No. Trailer Rate \$186
 *Federal Social Security Act Rate 7.65%
 *Federal Unemployment Insurance Rate 0.6% (Net)
 *Vermont Unemployment Compensation Act Rate 7.3%

All items of insurance as above on extra work performed and accepted shall be allowed on the final estimate as per the Vermont Standard Specifications For Construction.

January 5, 2015
 Date

W.M. Schultz Construction, Inc.
 Name of Corporation, Co-Partnership or Individual
William M. Schultz - President
 Name and Title of Individual Signing the Contract
Ballston Spa, New York
 Town or City, State

*MUST BE FILLED IN





State of Vermont
Agency of Transportation
Contract Administration
One National Life Drive
Montpelier, VT 05633-5001
www.aot.state.vt.us/conadmin

[phone] 802-828-2641
[fax] 802-828-5545
[ttd] 800-253-0191

CA-95

TO: CONTRACT ADMINISTRATION
MONTPELIER, VERMONT

RE: Castleton BRP 015-2 (10)

I hereby certify that I have received and have in my possession a copy of the STANDARD SPECIFICATIONS FOR CONSTRUCTION, dated 2011.

Respectfully,

W.M. Schultz Construction, Inc.

Name of Corporation, Co-Partnership or Individual

William M. Schultz

Name of Individual Signing the Contract

W.M. Schultz - president

Signature of Individual Signing the Contract

President

Title of Individual Signing the Contract

(Street) 831 Route 67, Curtis Ind. Park, Building 28A

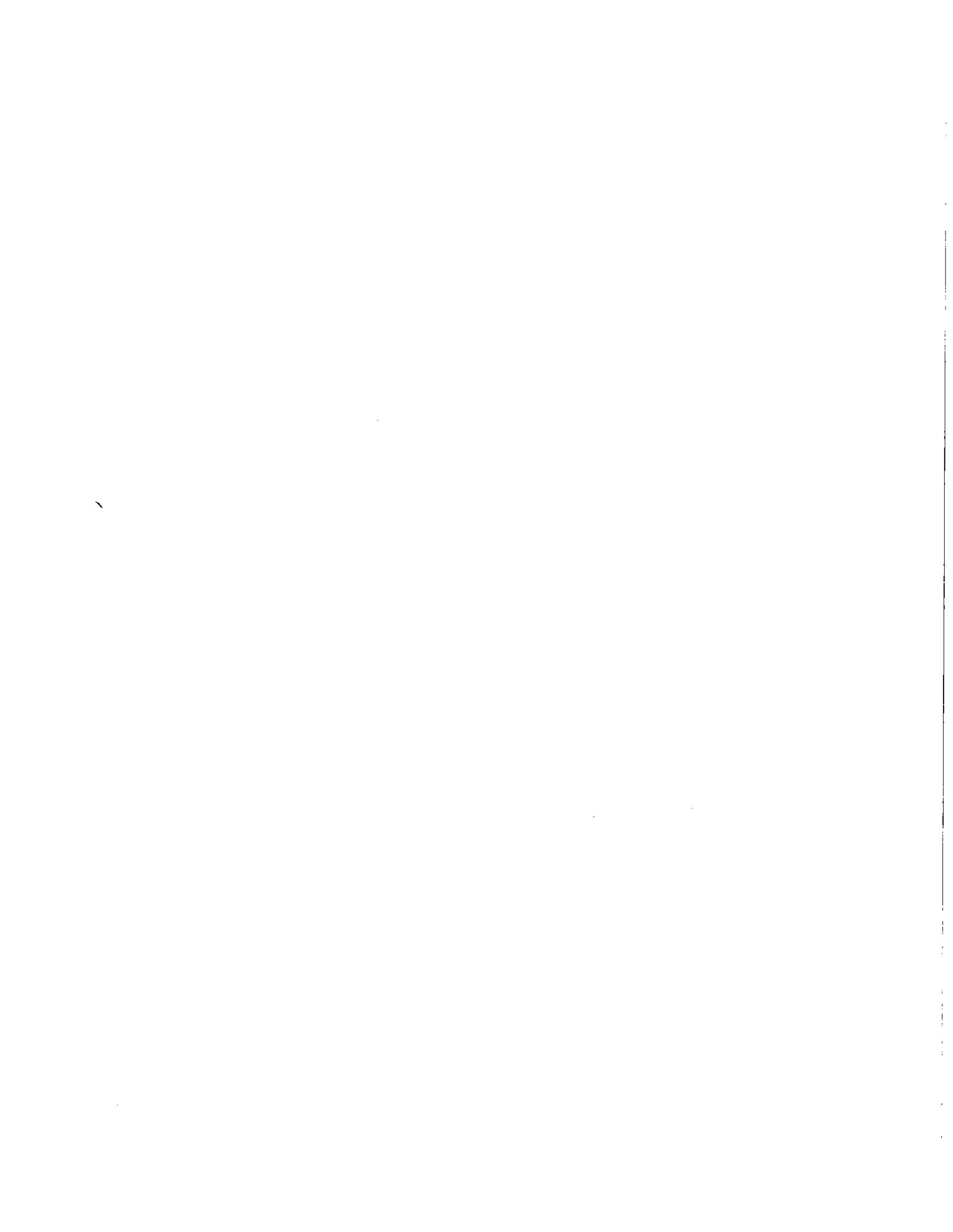
(Town or City) Ballston Spa

(State) New York

(Date) January 5, 2015

To be filled
in completely
by Contractor

To be filled
in completely
by Contractor





CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
12/30/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Arthur J Gallagher Risk Management Services, Inc. 677 Broadway 4th Floor Albany NY 12207	CONTACT NAME: PHONE (A/C, No, Ext): 518-463-3181		FAX (A/C, No): 518-463-5048
	E-MAIL ADDRESS:		
INSURED W. M. Schultz Construction, Inc. 831 State Route 67 P.O. Box 2620 Ballston Spa NY 12020-8620	INSURER(S) AFFORDING COVERAGE		NAIC #
	INSURER A : CHARTER OAK FIRE INS CO		25615
	INSURER B : TRAVELERS PROP CAS CO OF AMER		25674
	INSURER C : PHOENIX INS CO		25623
	INSURER D : GUARDIAN LIFE INS CO OF AMER		64246
	INSURER E :		
INSURER F :			

COVERAGES CERTIFICATE NUMBER: 1740466815 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> PD Ded. \$1,000 GENL AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC	Y		CO-9B317557	6/30/2014	6/30/2015	EACH OCCURRENCE	\$1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$300,000
							MED EXP (Any one person)	\$10,000
							PERSONAL & ADV INJURY	\$1,000,000
							GENERAL AGGREGATE	\$2,000,000
							PRODUCTS - COMPROP AGG	\$2,000,000
								\$
B	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS	Y		810-9B317557	6/30/2014	6/30/2015	COMBINED SINGLE LIMIT (Ea accident)	\$1,000,000
							BODILY INJURY (Per person)	\$
							BODILY INJURY (Per accident)	\$
							PROPERTY DAMAGE (Per accident)	\$
								\$
B	UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$10,000	Y		CUP-9B317557	6/30/2014	6/30/2015	EACH OCCURRENCE	\$10,000,000
							AGGREGATE	\$10,000,000
								\$
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory In NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A	UB-9B317557	6/30/2014	6/30/2015	<input checked="" type="checkbox"/> WC STATUTORY LIMITS	OTHER
							E.L EACH ACCIDENT	\$1,000,000
							E.L DISEASE - EA EMPLOYEE	\$1,000,000
							E.L DISEASE - POLICY LIMIT	\$1,000,000
D	Disability			00018028-003	6/30/2014	6/30/2015	Statutory	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, If more space is required)

Certificate Holder, State of Vermont and its officers and employees are Additional Insureds as Required by Written Contract for General Liability, Automobile Liability and Umbrella/Excess Liability. Thirty (30) Days Written Notice of Cancellation, Non-Renewal or Policy Changes to the Certificate Holder.
Project: Castleton BRF 015-2 (10)

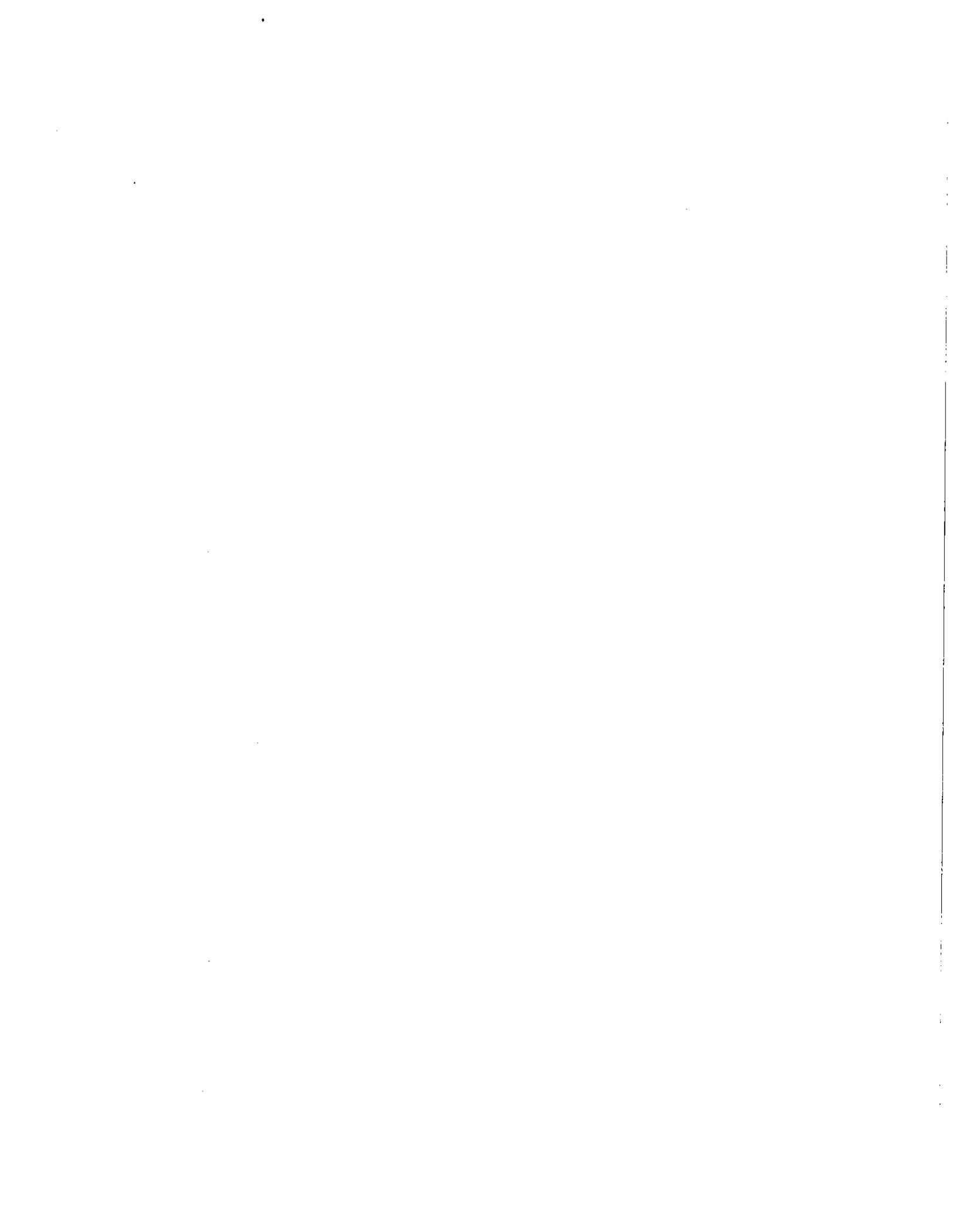
CERTIFICATE HOLDER

CANCELLATION

State of Vermont Agency of Transportation
 Contract Administration
 One National Life Drive
 Montpelier VT 05633-5001

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE





CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
12/30/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Arthur J. Gallagher & Co, Inc. 677 Broadway, 4th Floor Albany, NY 12207	CONTACT NAME: PHONE (A/C, No, Ext): 518-463-3181 FAX (A/C, No): 518-463-5048 E-MAIL ADDRESS: ADDRESS: INSURER(S) AFFORDING COVERAGE NAIC # INSURER A: Travelers Indemnity Company INSURER B: INSURER C: INSURER D: INSURER E: INSURER F:
INSURED See Attached	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSR	WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY			SPS-7E023208	12/30/14	12/30/15	EACH OCCURRENCE \$ 2,000,000
	<input type="checkbox"/> COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence) \$
	<input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR						MED EXP (Any one person) \$
	<input checked="" type="checkbox"/> Railroad Protective						PERSONAL & ADV INJURY \$
GENL AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC							GENERAL AGGREGATE \$ 6,000,000
AUTOMOBILE LIABILITY							PRODUCTS - COM/OP AGG \$
<input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS							COMBINED SINGLE LIMIT (Ea accident) \$
<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE							BODILY INJURY (Per person) \$
<input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$							BODILY INJURY (Per accident) \$
WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory In NH) If yes, describe under DESCRIPTION OF OPERATIONS below							PROPERTY DAMAGE (Per accident) \$
							EACH OCCURRENCE \$
							AGGREGATE \$
							WC STATUTORY LIMITS OTHER
							E.L. EACH ACCIDENT \$
							E.L. DISEASE - EA EMPLOYEE \$
							E.L. DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
 Castleton BR# 015-2 (10)
 Contractor: W.M. Schultz Construction, Inc., P.O. Box 2620, Ballston Spa, NY 12020
 Thirty (30) Days Written Notice of Cancellation, Non-Renewal & Policy Changes to the Certificate Holder

CERTIFICATE HOLDER State of Vermont Agency of Transportation Contract Administration One National Life Drive Montpelier, VT 05633-5001	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE
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SUPPLEMENT TO CERTIFICATE OF INSURANCE

DATE
12/30/2014

NAME OF INSURED: W. M. Schultz Construction, Inc.

Additional Description of Operations/Remarks from Page 1:

Named Insured:
Clarendon and Pittsfield Railroad Company
State of Vermont Agency of Transportation
118 Post Road
Rutland, VT 05701

Additional Information:



THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 6704277

American Fire and Casualty Company
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Charles C. Leach; David Bauer; Patrick J. Clyne; Robert Crandall; Sherri J. Gray; Timothy M. Tyrrell

all of the city of Albany, state of NY each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 8th day of September, 2014.



American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: David M. Carey
David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 8th day of September, 2014, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.



COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Plymouth Twp., Montgomery County
My Commission Expires March 28, 2017
Member Pennsylvania Association of Notaries

By: Teresa Pastella
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

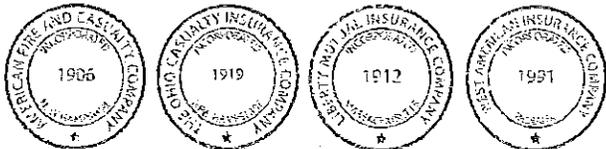
ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Gregory W. Davenport, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 30th day of December, 2014.



By: Gregory W. Davenport
Gregory W. Davenport, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.



THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 6704276

American Fire and Casualty Company
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Charles C. Leach; David Bauer; Patrick J. Clyne; Robert Crandall; Sherri J. Gray; Timothy M. Tyrrell

all of the city of Albany, state of NY each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 8th day of September, 2014.



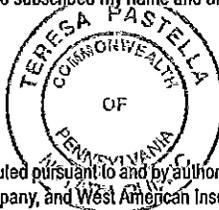
American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: David M. Carey
David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 8th day of September, 2014, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.



Notarial Seal
Teresa Pastella, Notary Public
Plymouth Twp., Montgomery County
My Commission Expires March 26, 2017
Member, Pennsylvania Association of Notaries

By: Teresa Pastella
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Gregory W. Davenport, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

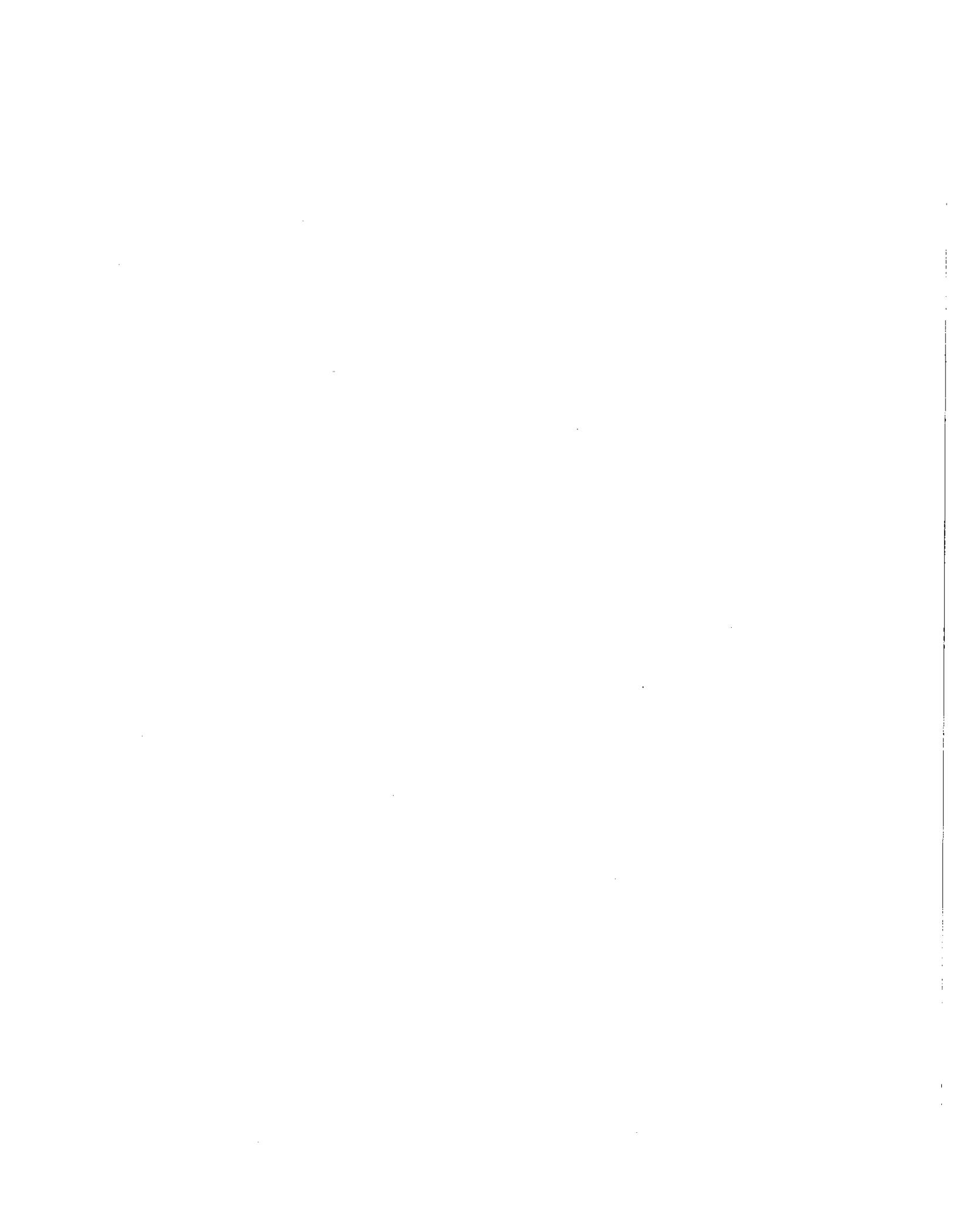
IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 30th day of December, 2014.



By: Gregory W. Davenport
Gregory W. Davenport, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.



**Liberty Mutual Insurance Company
Boston, MA 02117**

**ATTORNEY-IN-FACT JUSTIFICATION
PRINCIPAL'S ACKNOWLEDGMENT - IF A CORPORATION**

State of New York,
County of Albany)^{5a}

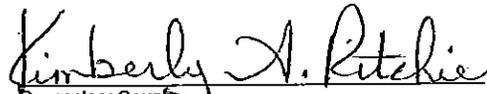
On this 30th day of December, 2014, before me personally appeared William M. Schultz, to me known, who, being by me duly sworn, deposes and says: That he/she resides in Ballston Lake, New York; that he/she is the President of W. M. Schultz Construction, Inc., the corporation described in and which executed the within instrument; that he/she knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he/she signed his/her name thereto by like order.

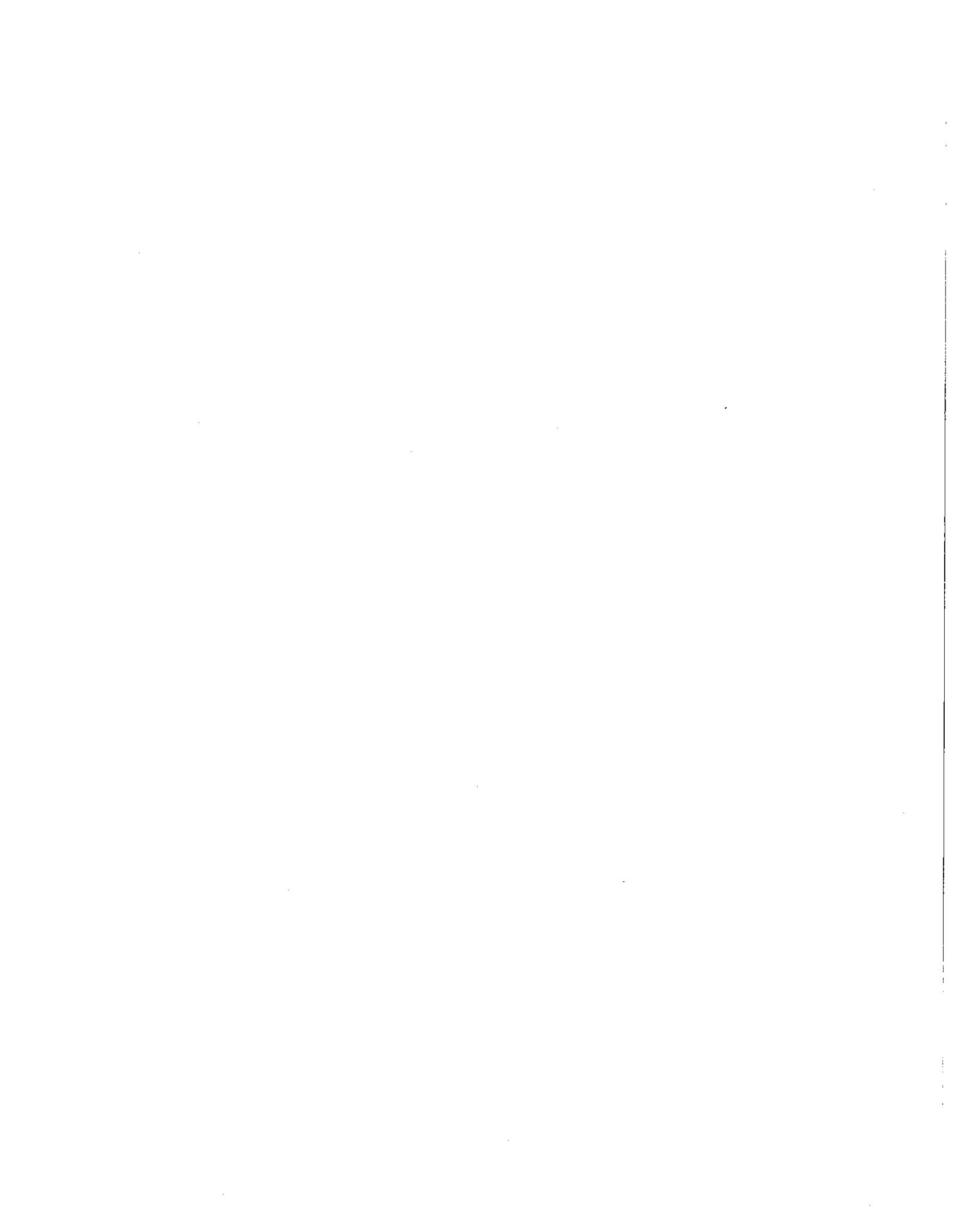

Rensselaer County
Comm. Exp. 01/04/2018

SURETY COMPANY'S ACKNOWLEDGMENT

State of New York,
County of Albany)^{5a}

On this 30th day of December, 2014, before me personally appeared Timothy M. Tyrrell; to me known, who, being by me duly sworn, did depose and say: That he/she resides in the City of Albany, New York; that he/she is Attorney-in-Fact of Liberty Mutual Insurance Company, Boston, Massachusetts, a corporation, created, organized and existing under and by virtue of the laws of the State of Massachusetts, upon oath did say that the corporate seal affixed to the attached instrument is the seal of the said Company; that the seal was affixed and the said instrument was executed by the authority of its Board of Directors; and he did also acknowledge that he executed the said instrument as the free act and deed of said Company.


Rensselaer County
Comm. Exp. 01/04/2018





LIBERTY MUTUAL INSURANCE COMPANY
 FINANCIAL STATEMENT — DECEMBER 31, 2013

Assets	Liabilities
Cash and Bank Deposits	Unearned Premiums
\$1,118,180,550	\$5,940,431,054
*Bonds — U.S Government	Reserve for Claims and Claims Expense.....
1,888,225,943	17,305,063,560
*Other Bonds	Funds Held Under Reinsurance Treaties.....
12,039,490,815	212,659,311
*Stocks.....	Reserve for Dividends to Policyholders.....
9,030,962,112	1,226,236
Real Estate.....	Additional Statutory Reserve
251,301,907	63,348,980
Agents' Balances or Uncollected Premiums.....	Reserve for Commissions, Taxes and
4,781,042,931	Other Liabilities
Accrued Interest and Rents.....	<u>5,826,683,629</u>
149,855,386	Total.....
Other Admitted Assets.....	\$29,349,412,770
<u>15,216,749,451</u>	Special Surplus Funds.....
Total Admitted Assets.....	\$55,686,852
<u>\$44,475,809,095</u>	Capital Stock.....
	11,250,000
	Paid in Surplus.....
	7,898,288,167
	Unassigned Surplus.....
	7,161,171,306
	Surplus to Policyholders
	<u>15,126,396,325</u>
	Total Liabilities and Surplus
	<u>\$44,475,809,095</u>



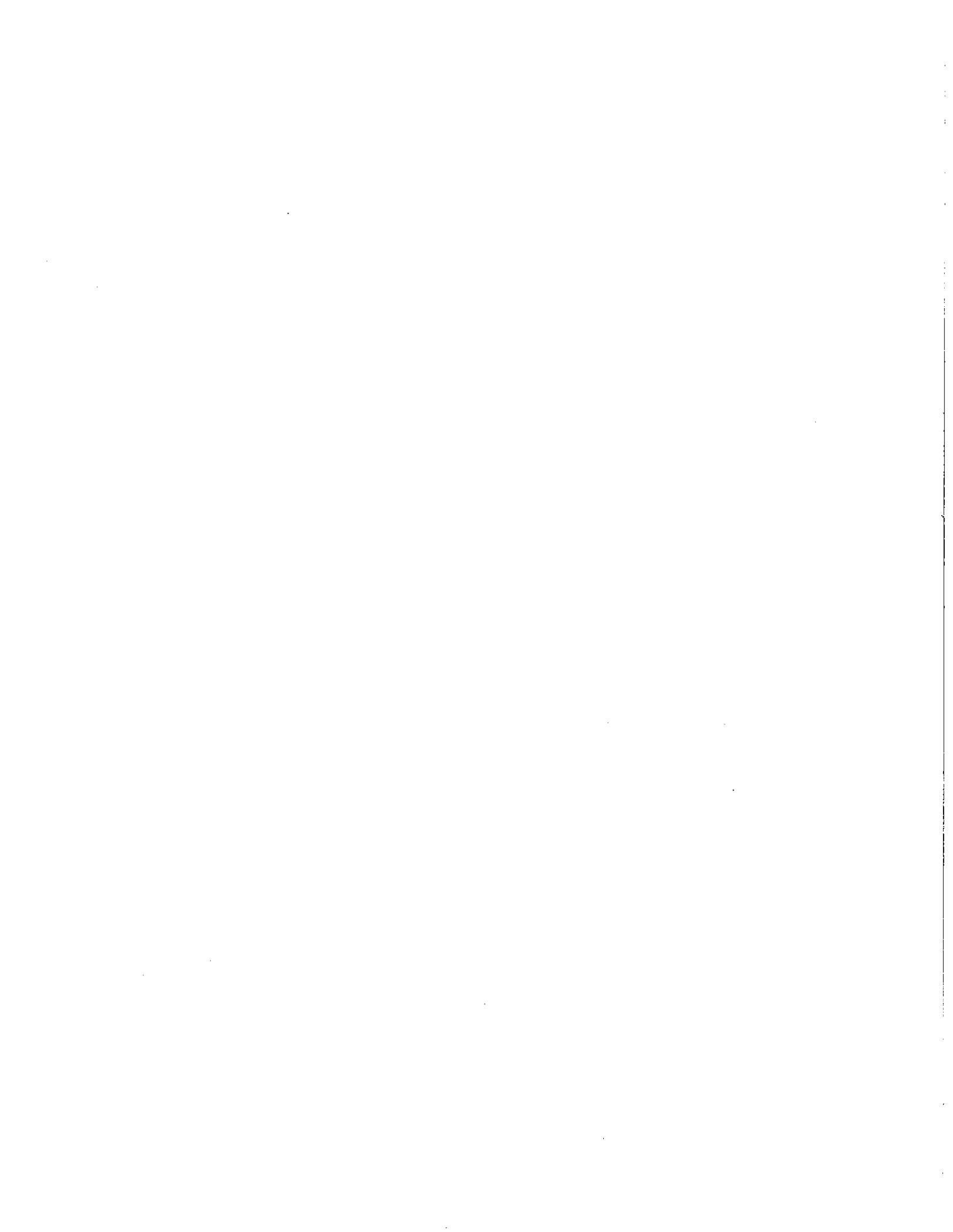
* Bonds are stated at amortized or investment value; Stocks at Association Market Values.
 The foregoing financial information is taken from Liberty Mutual Insurance Company's financial statement filed with the state of Massachusetts Department of Insurance.

I, TIM MIKOLAJEWSKI, Assistant Secretary of Liberty Mutual Insurance Company, do hereby certify that the foregoing is a true, and correct statement of the Assets and Liabilities of said Corporation, as of December 31, 2013, to the best of my knowledge and belief.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation at Seattle, Washington, this 20th day of March, 2014.

T. Mikolajewski

Assistant Secretary

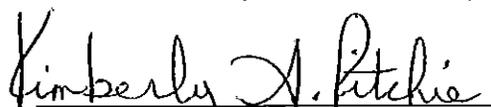


**Liberty Mutual Insurance Company
Boston, MA 02117**

**ATTORNEY-IN-FACT JUSTIFICATION
PRINCIPAL'S ACKNOWLEDGMENT - IF A CORPORATION**

State of New York,
County of Albany) ³⁸

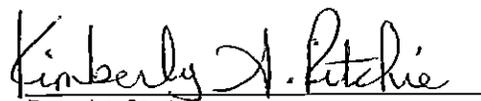
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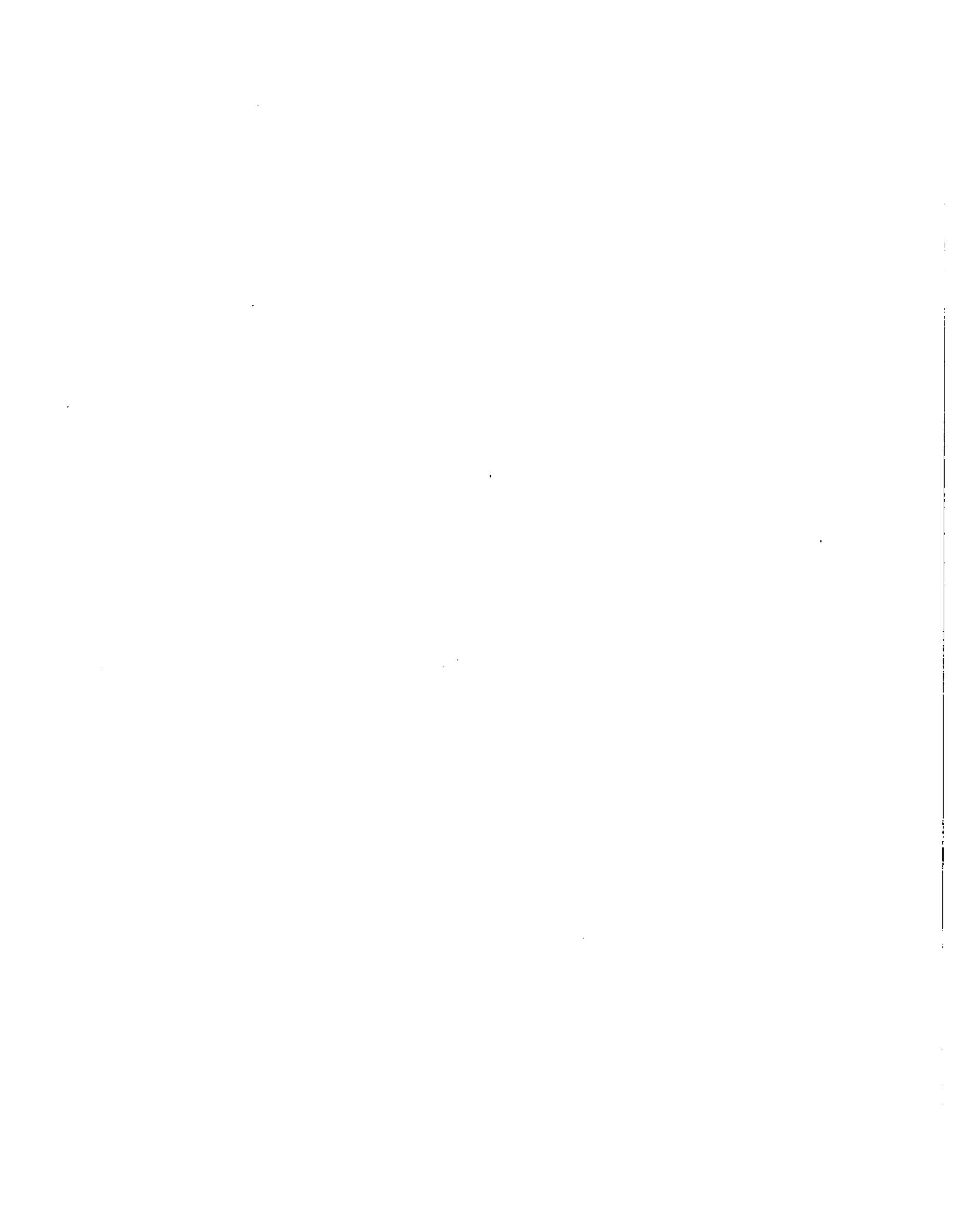

Rensselaer County
Comm. Exp. 01/04/2018

SURETY COMPANY'S ACKNOWLEDGMENT

State of New York,
County of Albany) ³⁸

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Rensselaer County
Comm. Exp. 01/04/2018





LIBERTY MUTUAL INSURANCE COMPANY
 FINANCIAL STATEMENT — DECEMBER 31, 2013

Assets	Liabilities
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149,855,386	Total
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	Surplus to Policyholders
	<u>15,126,396,325</u>
	Total Liabilities and Surplus
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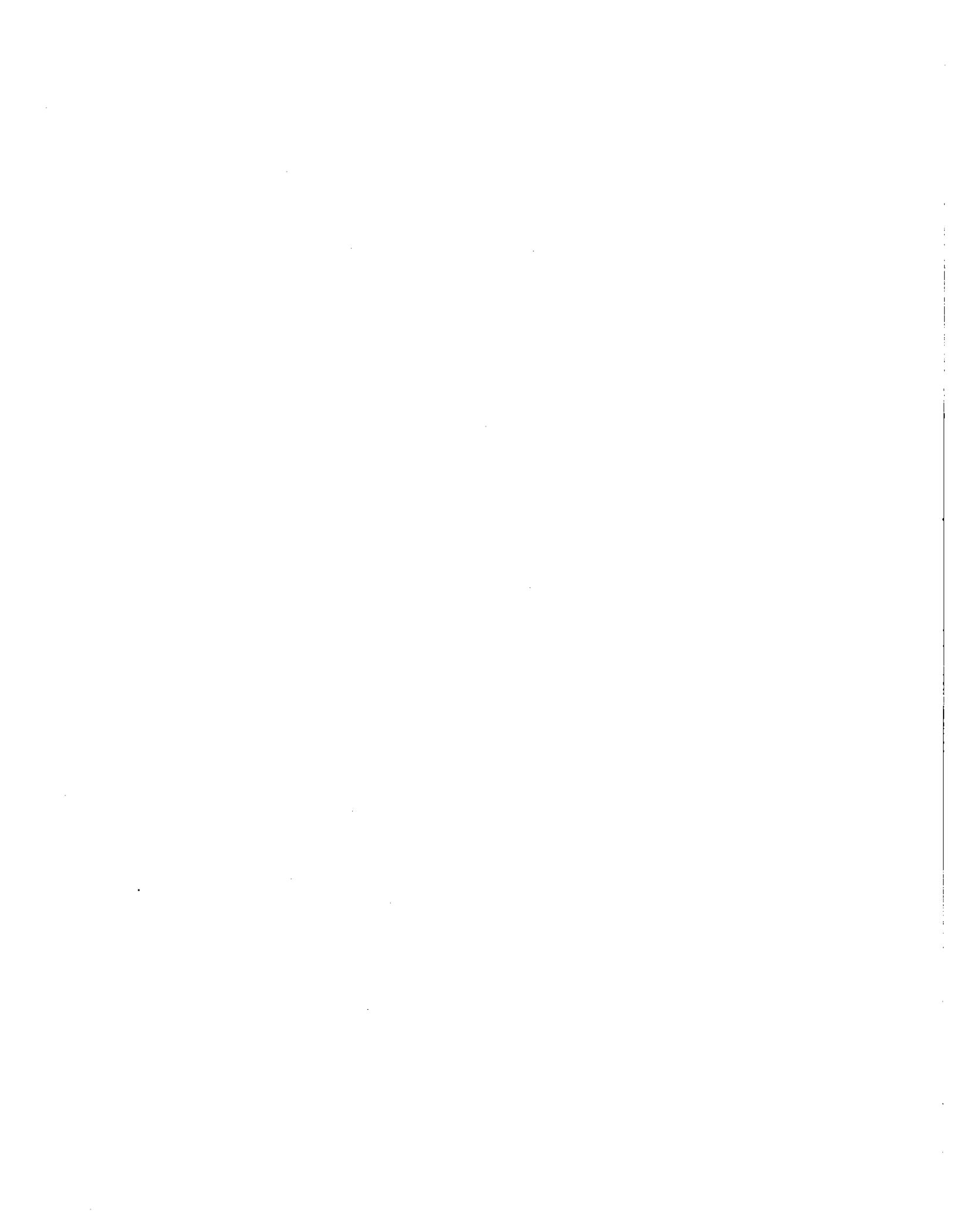
* Bonds are stated at amortized or investment value; Stocks at Association Market Values.
 The foregoing financial information is taken from Liberty Mutual Insurance Company's financial statement filed with the state of Massachusetts Department of Insurance.

I, TIM MIKOLAJEWSKI, Assistant Secretary of Liberty Mutual Insurance Company, do hereby certify that the foregoing is a true, and correct statement of the Assets and Liabilities of said Corporation, as of December 31, 2013, to the best of my knowledge and belief.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation at Seattle, Washington, this 20th day of March, 2014.

T. Mikolajewski

Assistant Secretary



VERMONT

CA-111-A

Project
Castleton BRF 015-2 (10)

VERMONT
AGENCY OF TRANSPORTATION
2011 Standard Specifications for Construction

CONTRACT AGREEMENT

W.M Schultz Construction, Incorporated
831 State Route 67, Curtis Industrial Park
Ballston Spa, NY 12020

Required Contract Provisions for Federal-Aid Construction
Standard Federal EEO Specifications
Vermont Agency of Transportation Contractor Workforce Reporting Requirements
Workers' Compensation; State Contracts Compliance Requirement
General Special Provisions dated July 2, 2013
Bulletin 3.5 Attachment C: Standard State Provisions for Contracts and Grants
Special Provisions
Vermont Minimum Labor & Truck Rates
Disadvantaged Business Enterprise (DBE) Policy Contract Requirements
US Department of Labor Davis – Bacon Wage Rates
Asphalt Price Adjustment Provisions dated April 6, 2010
Section 520 - Membrane Waterproofing, Spray Applied dated August 6, 2013
Construction General Permit (CGP) 3-9020 (Ameded 2008) Authorization of Notice of Intent #7170-9020.A
dated May 30, 2014
NYSDOT Certificate of Insurance for Highway Work Permit (PERM 17) (04\07)
NYSDOT Highway Work Permit Application for Non-Utility Work (PERM 33) (8\01)
Washington County (NY) Department of Public Works Work Permit Application
NYSDOT Work Zone Traffic Control TAST-C7 dated March 2008
Certification for Federal-Aid Contracts
Contractor's EEO Certification
Contract CA-111-B Form
Schedule of Items
Contractor's Signature Page

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety; Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.
3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.
4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140; the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:
 - a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.
 - b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."
2. **EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.
3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:
 - a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
 - b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

- c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.
 - d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
 - e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.
4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.
- a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.
 - b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals; the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.
 - c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.
5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:
- a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
 - b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
 - c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
 - d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.
6. **Training and Promotion:**
- a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

- b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).
 - c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.
 - d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.
7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:
- a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.
 - b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.
 - c. The contractor is to obtain information as to the referral practices and policies of the labor union, except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.
 - d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.
8. **Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.
9. **Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.
- a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.
 - b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.
10. **Assurance Required by 49 CFR 26.13(b):**
- a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

- b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. **Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

- a. The records kept by the contractor shall document the following:

- (1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;
- (2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and
- (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

- b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

- a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

- b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
- (i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (ii) The classification is utilized in the area by the construction industry; and
 - (iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

- c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

- a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.
- b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

- (2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;
 - (ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
 - (iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.
- (4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.
- c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job-site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. **Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. **Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. **Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.
8. **Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.
9. **Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.
10. **Certification of eligibility.**
 - a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
 - b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
 - c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. **Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
2. **Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.
3. **Withholding for unpaid wages and liquidated damages.** The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.
4. **Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).
 - a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:
 - (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
 - (2) the prime contractor remains responsible for the quality of the work of the leased employees;
 - (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
 - (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.
 - B "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.
2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.
3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.
4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.
5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).
3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.
- d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
- f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
- g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.
- h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.
- i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

- j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

- a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:
- (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;
 - (2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and
 - (4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.
- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.
- h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

- 1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.
- Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

- 1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:
 - a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

- b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.
3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:
 - a. To the extent that qualified persons regularly residing in the area are not available.
 - b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.
 - c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.
2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.
3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.
4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.
5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.
6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS
(EXECUTIVE ORDER 11246)

1. As used in these specifications:

- a. "Covered Area" means the geographical area described in the solicitation from which this contract resulted.
- b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority.
- c. "Employer Identification Number" means the Federal Social Security Number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

A Minority Group Member is:

...American Indian or Alaskan Native

consisting of all persons having origins in any of the original people of North American and who maintain cultural identification through tribal affiliations or community recognition.

...Black

consisting of all persons having origins in any of the Black racial groups of Africa.

...Asian or Pacific Islander

consisting of all persons having origins in any of the original people of the Far East, Southeast Asia, the Indian Sub-Continent or the Pacific Islands. This area includes China, India, Japan, Korea, the Philippines and Samoa.

...Hispanic

consisting of all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin.

...Cape Verde an

consisting of all persons having origins in the Cape Verde Islands.

...Portuguese

consisting of all persons of Portuguese, Brazilian or other Portuguese culture or origin.

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000.00 the provisions of these specifications and the notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in the Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or subcontract participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or subcontractor's failure to make good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in Paragraphs 7a through p of these specifications. The goals set for the Contractor in the solicitation from which this contract resulted are expressed as percentages in the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the Contractor has a collective bargaining agreement to refer either minority or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available and maintain a record of the organizations' responses.

- c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
- d. Provide immediate written notifications to the Regional Director when the union or unions, with which the Contractor has a collective bargaining agreement, have not referred to the Contractor a minority person or woman sent by the Contractor or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under Paragraph 7b above.
- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction is performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, Supervisors etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, and providing written notification to, and discussing the Contractor's EEO policy with, other Contractors and subcontractors with whom the Contractor anticipates doing business.
- i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notifications to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.
 - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
 - l. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 - m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the EEO policy and Contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (Paragraph 7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under Paragraph 7a through p of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's, and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's non-compliance.
9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is under-utilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex or national origin.
11. The Contractor shall not enter into any subcontract with any person for firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, terminations and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in Paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14. The Contractor shall designate a responsible official to monitor all employment-related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application or requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

**NOTICE OF REQUIREMENTS FOR AFFIRMATIVE ACTION TO ENSURE EQUAL
EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)**

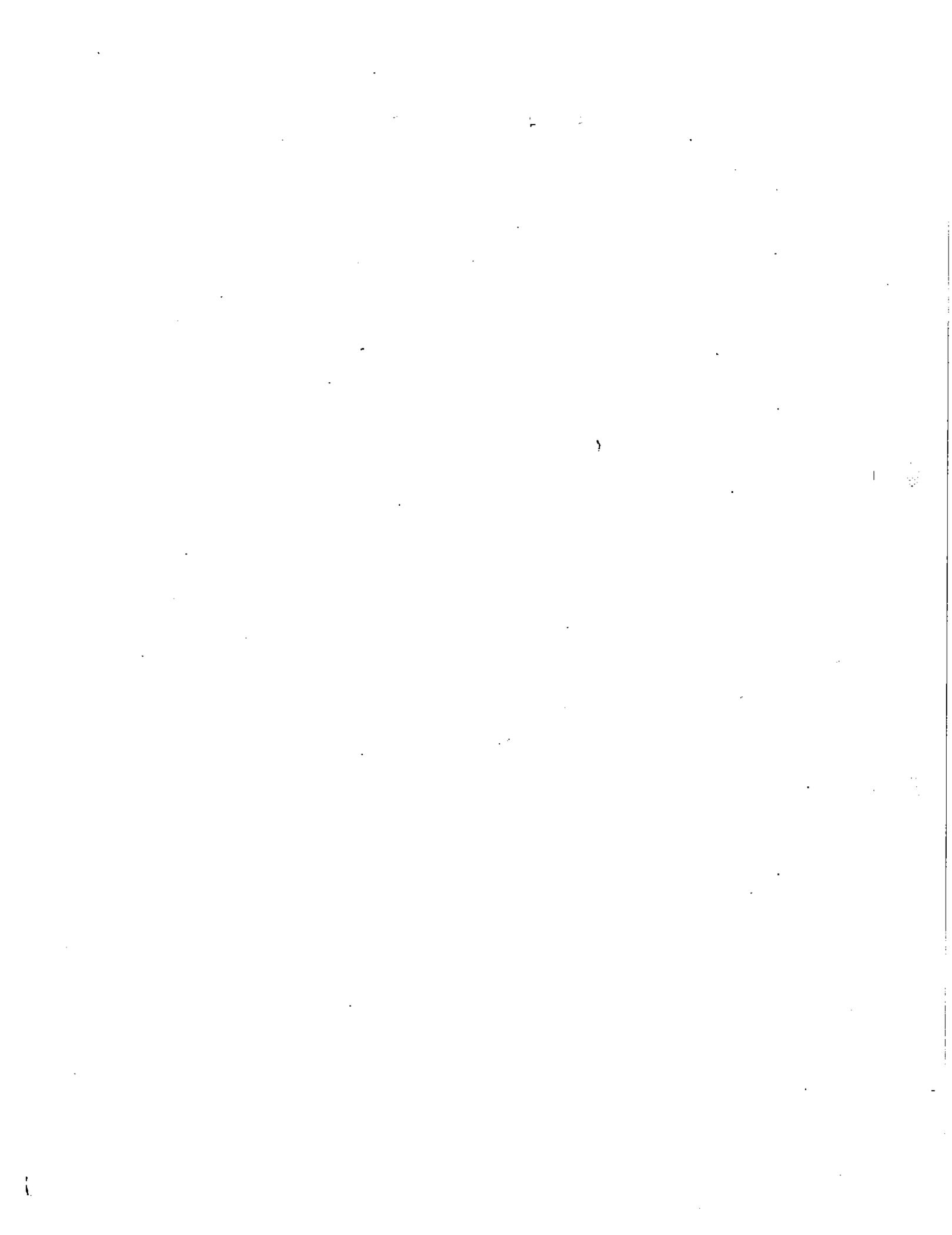
1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Economic Areas	Timetables	Goals for Minority participation for each trade (%)	Goals for Female Participation in each trade (%)
Entire State of Vermont:			
<u>Vermont</u> 003 Burlington, VT Non-SMSA Counties NH Coos; NH Grafton; NH Sullivan; VT Addison; VT Caledonia; VT Chittenden; VT Essex; VT Franklin; VT Grand Isle; VT Lamoille; VT Orange; VT Orleans; VT Rutland; VT Washington; VT Windsor	Indefinite	0.8	6.9
<u>Connecticut (Mass)</u> 006 Hartford - New Haven Springfield, CT-MA Non-SMSA Counties CT Litchfield; CT Windham; MA Franklin; NH Cheshire; VT Windham	Indefinite	5.9	
<u>New York</u> 007 Albany - Schenectady - Troy, NY Non-SMSA Counties NY Clinton; NY Columbia; NY Essex; NY Fulton; NY Greene; NY Hamilton; NY Schoharie; NY Warren; NY Washington; VT Bennington	Indefinite	2.6	

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulation in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3 (a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

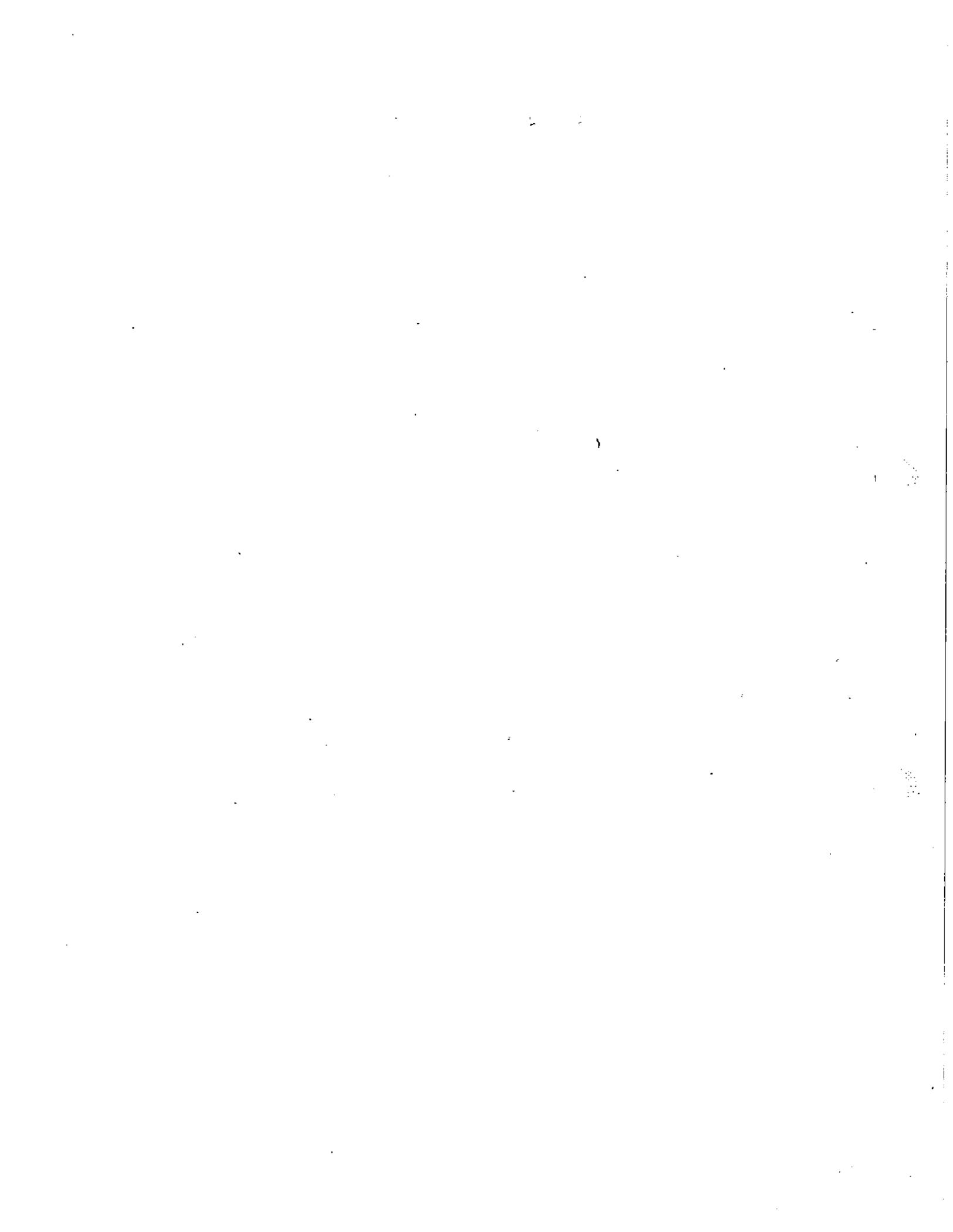
3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten working days of award of any construction subcontract in excess of \$10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notifications shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; and the geographical area in which the subcontract is to be performed.
4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is (insert description of the geographical areas where the contract is to be performed giving the state, county and city, if any)



**VERMONT AGENCY OF TRANSPORTATION
CONTRACTOR WORKFORCE REPORTING REQUIREMENTS**

The Contractor/Subcontractor shall submit to the State Resident Engineer assigned to this project, monthly and cumulative workforce information, on reporting forms provided herein. The monthly and cumulative workforce information shall be listed by construction trade category with the percentage of minority and female project hours in each category indicated. Failure to provide this information to the Resident Engineer on a monthly basis will result in suspension of bi-weekly progress payments, or part thereof due under the contract, until such time as the Contractor or Subcontractor demonstrates compliance with these contract terms.

Note: In lieu of using the reporting forms provided herein, the Contractor may use U.S. Department of Labor form CC-257, "Monthly Employment Utilization Report".



**INSTRUCTIONS FOR FILING
MONTHLY EMPLOYMENT UTILIZATION REPORT**

1. **PROJECT NAME AND NUMBER**
Complete project name and number as assigned by the Vermont Agency of Transportation.
2. **CONTRACTOR'S NAME AND ADDRESS**
Indicate the name and address of the *PRIME CONTRACTOR* with a construction contract funded in whole or in part with Federal funds.
3. **CURRENT GOALS**
See section of contract regarding requirement for Affirmative Action (Executive Order 11246).
4. **REPORTING PERIOD**
Monthly, beginning with the effective date of the contract.
5. **CONSTRUCTION TRADE CLASSIFICATION**
Indicate only those classifications used on this contract.
6. **TOTAL NUMBER – ALL WORK HOURS OF EMPLOYEES BY TRADE**
Indicate the total number of hours (male and female *combined*) worked by employees in each trade classification.
7. **BLACK,/HISPANIC/ASIAN/AMERICAN INDIAN/WHITE CATEGORIES**
Indicate the total number of hours (male and female *separated*) worked by each specified ethnic group of employees in each classification.
8. **PERCENTAGE OF TOTAL WORK HOURS - MINORITY**
Indicate the PERCENTAGE of total minority work hours (male and female *MINORITIES combined*) of all work hours (the sum of the BLACK, HISPANIC, ASIAN, and AMERICAN INDIAN columns divided by the sum of TOTAL NUMBER OF ALL WORK HOURS - just one figure for each construction trade.)
9. **PERCENTAGE OF TOTAL WORK HOURS - FEMALE**
Divide the TOTAL NUMBER – ALL WORK HOURS OF EMPLOYEES BY TRADE for each classification by the total number of females reported in BLACK, HISPANIC, ASIAN, AMERICAN INDIAN and WHITE for each classification.
10. **TOTAL NUMBER OF EMPLOYEES**
Indicate the total number of male employees and the total number of female employees working in each classification in the contractor's work force during the reporting period.
11. **TOTAL NUMBER OF MINORITY EMPLOYEES**
Indicate the total number of male *MINORITY* employees and the total number of female *MINORITY (non-white)* employees working in each classification in the contractor's work force during the reporting period.
12. **COMPLETE THE FORM: SIGNATURE, TITLE, PHONE NUMBER, DATE, PAGE ____ OF ____.**
13. **AT THE END OF EACH MONTH, SUBMIT** the completed Monthly Employment Utilization Report Form to the State Resident Engineer on the project site. One of these forms should be completed for each month of the contract.



CONTRACTOR CUMULATIVE MONTHLY EMPLOYMENT UTILIZATION REPORT
 (Include ALL SUBCONTRACTORS)

Vermont Agency of Transportation
 Office of Civil Rights and Labor Compliance

PROJECT NAME AND NUMBER: _____

CURRENT GOALS	REPORTING PERIOD
MINORITY: _____	FROM: _____
FEMALE: 6.9%	TO: _____

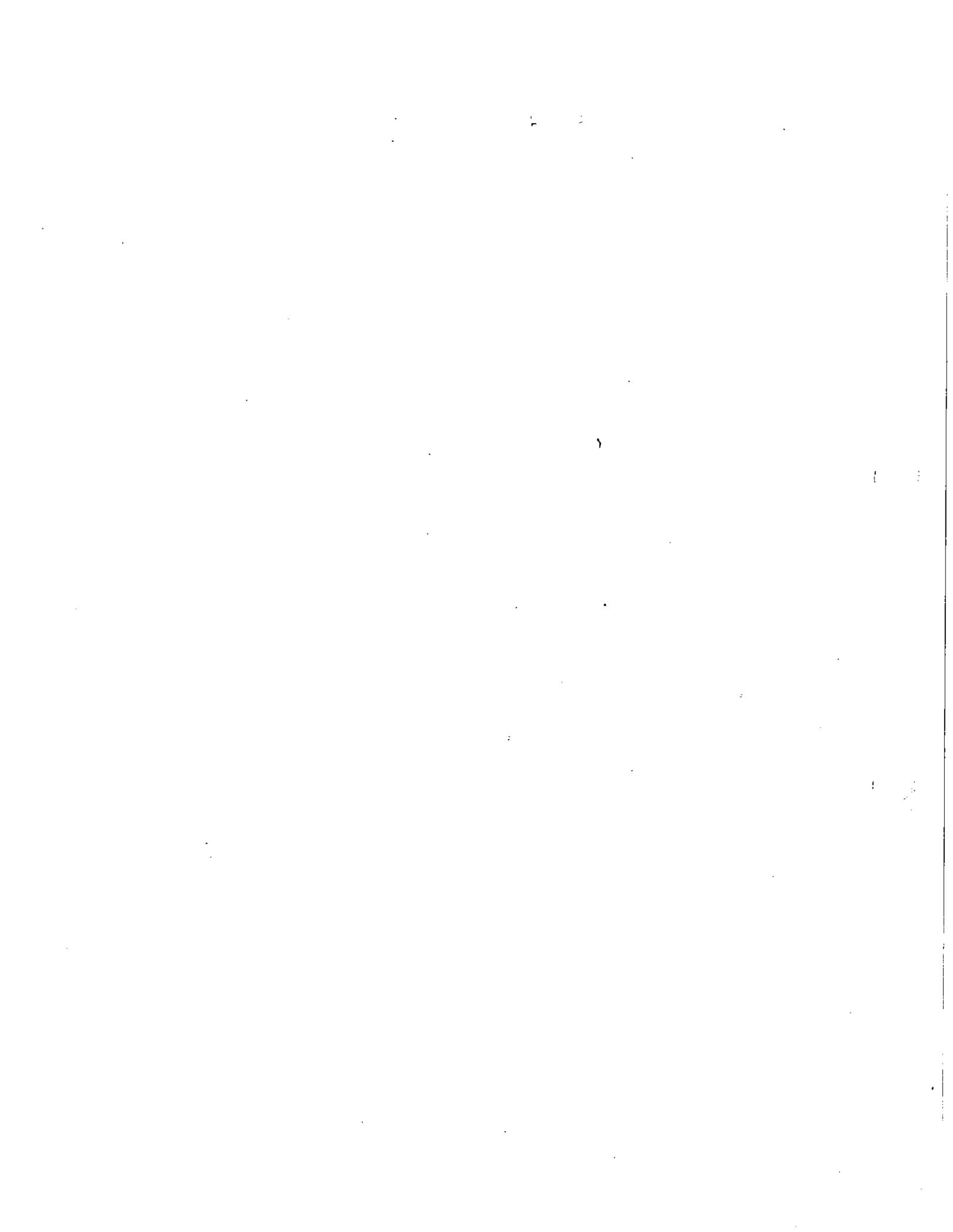
CONTRACTOR'S NAME AND ADDRESS: _____

CONSTRUCTION TRADE CLASSIFICATION	TOTAL NUMBER - ALL WORK HOURS OF EMPLOYEES BY TRADE	BLACK (NOT OF HISPANIC ORIGIN)		HISPANIC		ASIAN OR PACIFIC ISLANDERS		AMERICAN INDIAN OR ALASKAN NATIVE		WHITE (NOT OF HISPANIC ORIGIN)		PERCENTAGE OF TOTAL WORK HOURS BY MINORITY & FEMALE	TOTAL NUMBER OF EMPLOYEES		TOTAL NUMBER OF MINORITY EMPLOYEES	
		M	F	M	F	M	F	M	F	M	F					
TOTALS												%			%	
COMPANY OFFICIAL'S SIGNATURE AND TITLE																
TELEPHONE NUMBER																
DATE SIGNED																
PAGE _____ OF _____																

**INSTRUCTIONS FOR FILING
CUMULATIVE MONTHLY EMPLOYMENT UTILIZATION REPORT**

[Using the Monthly Employment Utilization Reports collected from the subcontractors on the job, COMBINE all the Information to complete the CUMULATIVE Monthly Employment Utilization Report Form and submit to the State Resident Engineer on the project each month.]

1. **PROJECT NAME AND NUMBER**
Complete project name and number as assigned by the Vermont Agency of Transportation.
2. **CONTRACTOR'S NAME AND ADDRESS**
Indicate the name and address of the *PRIME CONTRACTOR* with a construction contract funded in whole or in part with Federal funds.
3. **CURRENT GOALS**
See section of contract regarding requirement for Affirmative Action (Executive Order 11246).
4. **REPORTING PERIOD**
Monthly, beginning with the effective date of the contract.
5. **CONSTRUCTION TRADE CLASSIFICATION**
Indicate only those classifications used on this contract.
6. **TOTAL NUMBER – ALL WORK HOURS OF EMPLOYEES BY TRADE**
Indicate the total number of hours (male and female *combined*) worked by employees in each trade classification.
7. **BLACK,/HISPANIC/ASIAN/AMERICAN INDIAN/WHITE CATEGORIES**
Indicate the total number of hours (male and female *separated*) worked by each specified ethnic group of employees in each classification.
8. **PERCENTAGE OF TOTAL WORK HOURS - MINORITY**
Indicate the PERCENTAGE of total minority work hours (male and female *MINORITIES combined*) of all work hours (the sum of the BLACK, HISPANIC, ASIAN, and AMERICAN INDIAN columns divided by the sum of TOTAL NUMBER OF ALL WORK HOURS - just one figure for each construction trade.)
9. **PERCENTAGE OF TOTAL WORK HOURS - FEMALE**
Divide the TOTAL NUMBER – ALL WORK HOURS OF EMPLOYEES BY TRADE for each classification by the total number of females reported in BLACK, HISPANIC, ASIAN, AMERICAN INDIAN and WHITE for each classification.
10. **TOTAL NUMBER OF EMPLOYEES**
Indicate the total number of male employees and the total number of female employees working in each classification in the contractor's work force during the reporting period.
11. **TOTAL NUMBER OF MINORITY EMPLOYEES**
Indicate the total number of male *MINORITY* employees and the total number of female *MINORITY (non-white)* employees working in each classification in the contractor's work force during the reporting period.
12. **COMPLETE THE FORM: SIGNATURE, TITLE, PHONE NUMBER, DATE, PAGE ____ OF ____.**
13. **AT THE END OF EACH MONTH, SUBMIT** the completed CUMULATIVE Monthly Employment Utilization Report Form to the State Resident Engineer on the project site. One of these forms should be completed for each month of the contract.



- (3) Hauling or operation of said vehicles or equipment over any permanent course of any bituminous pavement or any structure during active construction will not be permitted.
 - (4) No loads of any category will be permitted on a concrete pavement or concrete structure prior to expiration of the curing period and until the concrete reaches its specified 28-day compressive strength.
 - (5) Notwithstanding those restrictions above, the Contractor shall be responsible for any and all damages incurred to any public roadway as defined in Title 23 due to the use of any equipment or vehicles related to project activities.
8. 105.26 OPENING WASTE, BORROW, AND STAGING AREAS, part (f), is hereby corrected by deleting punctuation "." at the end of the paragraph.

SECTION 108 - PROSECUTION AND PROGRESS

9. 108.09 TEMPORARY SUSPENSION OF THE WORK, part (d) Seasonal Closure, is hereby modified by deleting the phrase "of the Engineer, and only under such conditions as specified therein" and replacing it with the phrase "from the Regional Construction Engineer" in the first sentence.
10. 108.09 TEMPORARY SUSPENSION OF THE WORK, part (d) Seasonal Closure, is hereby further modified by adding the following:
- Permission will only be granted for work which will result in a direct benefit to the State or the traveling public. Items which may be considered as a benefit include but are not limited to shorter Contract duration, a cost savings, increased safety for the traveling public, and an ability to ensure the quality of work. The Contractor shall request permission in writing, detailing what Contract items may be affected, a schedule of work, and the benefits to the State or traveling public.
11. 108.11 DETERMINATION OF EXTENSION OF CONTRACT TIME FOR COMPLETION, part (b) Determination of Contract Completion Date Extension, subpart (8), is hereby modified by deleting the phrase ", delays in submittals, errors in submittals, and the Contractor's means and methods of construction".
12. 108.11 DETERMINATION OF EXTENSION OF CONTRACT TIME FOR COMPLETION, part (b) Determination of Contract Completion Date Extension, subpart (9), is hereby modified by deleting the phrase ", including but not limited to the Contractor's means and methods of construction".
13. 108.11 DETERMINATION OF EXTENSION OF CONTRACT TIME FOR COMPLETION, part (b) Determination of Contract Completion Date Extension, subpart (11), is hereby modified by being deleted in its entirety.
14. 108.11 DETERMINATION OF EXTENSION OF CONTRACT TIME FOR COMPLETION, part (b) Determination of Contract Completion Date Extension, subpart (13), is hereby modified by adding the following as the first sentence:

Industry-wide material or supply shortages not reasonably anticipated by the Contractor at the time the Contract was entered.

15. 108.11 DETERMINATION OF EXTENSION OF CONTRACT TIME FOR COMPLETION, part (b) Determination of Contract Completion Date Extension, subpart (13), is hereby further modified by changing the word "Delay" to the word "Delays" at the beginning of the second sentence.

SECTION 109 - MEASUREMENT AND PAYMENT

16. SECTION 109 - MEASUREMENT AND PAYMENT, is hereby corrected by deleting pages 1-141 and 1-142 in their entirety.

SECTION 203 - EXCAVATION AND EMBANKMENTS

17. 203.01 DESCRIPTION, is hereby modified by adding the phrase "performing test borings for the purpose of determining areas of roadway and embankment subsurface voids;" after the phrase "trimming and shaping of slopes;" in the first sentence of the first paragraph.

18. 203.01 DESCRIPTION, is hereby further modified by adding the following new part (1):

(1) Test Borings. Test Borings shall consist of an investigative and planned approach to determining areas of roadway and embankment subsurface voids and repairing bored areas.

19. 203.02 MATERIALS, is hereby modified by adding the following to the Subsection listing:

PVC Plastic Pipe.....710.06

20. 203.02 MATERIALS, is hereby further modified by adding the following paragraphs:

Concrete for backfilling subsurface voids shall meet the requirements of Controlled Density (Flowable) Fill of Section 541.

Bituminous concrete pavement shall conform to the requirements of Section 406 or 490, as applicable for the Contract, with the exception that the mix design submittal and plant inspection requirements set forth in Section 406 or 490 will not apply.

21. 203.03 GENERAL CONSTRUCTION REQUIREMENTS, is hereby modified by adding the following as the eighth paragraph:

Prior to the construction of Test Borings and the placement of Controlled Density (Flowable) Fill, the Contractor shall submit to the Engineer site-specific plans, detailing the schedule of work (for these two items), type and location of drilling, sleeve installation, pumping system, confirmatory boring operation, method of filling bore hole (with or without voids being encountered), and repair of the roadway section (sand, gravel, and pavement).

22. 203.11 EMBANKMENTS, is hereby modified by adding the following new part (e):

(e) Test Borings. Test borings shall be performed at the approximate locations indicated in the Plans and/or as directed by the Engineer.

When used adjacent to culverts, test borings shall extend to a depth equal to the bottom of the culvert using casing advanced drilling methods. Alternate drilling equipment that provides a suitably clean, open hole may be submitted to the Engineer for approval.

If void(s) are encountered, Controlled Density (Flowable) Fill shall be placed to completely fill the void(s). Confirmatory borings shall be performed in these locations as directed by the Engineer.

The roadway surface at boring hole locations shall be backfilled and then patched using Bituminous Concrete Pavement.

23. 203.13 METHOD OF MEASUREMENT, is hereby modified by adding the following new part (e):

(e) Test Borings. The quantity of Test Borings to be measured for payment will be the number of meters (linear feet) of test boring performed in the complete and accepted work.

24. 203.14 BASIS OF PAYMENT, is hereby modified by adding the phrase "and Test Borings" after the phrase "Shoulder Berm Removal" in the first sentence of the first paragraph.

25. 203.14 BASIS OF PAYMENT, is hereby further modified by adding the phrase "submitting site-specific plans as required, performing test borings, installing sleeves, backfilling, patching with bituminous concrete pavement," after the phrase "work specified," in the second sentence of the first paragraph.

26. 203.14 BASIS OF PAYMENT, is hereby corrected by adding a period at the end of the sixth paragraph.

27. 203.14 BASIS OF PAYMENT, is hereby still further modified by adding the following paragraph and pay item:

Filling of subsurface voids encountered in performing Test Borings will be paid for under Contract item 541.45.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
203.45 Test Borings	Meter (Linear Foot)

SECTION 310 - RECLAIMED STABILIZED BASE

28. 310.04 CONSTRUCTION, is hereby modified by deleting the phrase "or dust control" after the word "stabilizing" in the third paragraph.

29. 310.04 CONSTRUCTION, is hereby further modified by adding the following sentence to the third paragraph:

When a dust control agent is not exclusively specified on the Plans, water and/or Calcium Chloride shall be used as that agent to meet all requirements of this Section.

30. 310.10 BASIS OF PAYMENT, is hereby modified by adding the following as the fourth paragraph:

Calcium Chloride used for dust control after the reclamation will not be paid for directly, but will be considered incidental to the Reclaimed Stabilized Base item.

SECTION 406 - MARSHALL BITUMINOUS CONCRETE PAVEMENT

31. 406.03 COMPOSITION OF MIXTURE, part (f) Boxed Samples, is hereby corrected by adding the word "Engineer" to the end of the second (last) sentence.
32. 406.16 SURFACE TOLERANCE, is hereby modified by adding the phrase ", with the exception of all limited access highway on and off ramps," after the phrase "miscellaneous mix" in the second (last) sentence of the sixth (last) paragraph.

SECTION 490 - SUPERPAVE BITUMINOUS CONCRETE PAVEMENT

33. 490.14 COMPACTION, part (c) Coring Protocol, is hereby corrected by deleting text "0" and replacing it with text ")" in the first sentence of the seventh paragraph.
34. 490.16 SURFACE TOLERANCE, is hereby modified by adding the phrase ", with the exception of all limited access highway on and off ramps," after the phrase "miscellaneous mix" in the second (last) sentence of the sixth (last) paragraph.

SECTION 501 - HPC STRUCTURAL CONCRETE

35. 501.03 CLASSIFICATION AND PROPORTIONING, TABLE 501.03A (Metric), is hereby modified by deleting the fourth column (with header "Max. Slump (mm)") in its entirety and replacing it with the following:

Max. ⁷ Slump (mm)

N/A

36. 501.03 CLASSIFICATION AND PROPORTIONING, TABLE 501.03A (Metric), is hereby further modified by adding the following footnote:

⁷ The mix shall not exhibit segregation at the slump/spread used at placement. If the Engineer suspects there is segregation, the Engineer will require a slump/spread test be performed by the Contractor to visually observe the characteristics of the mix. If in the opinion of the Engineer the mix does exhibit segregation, the load will be rejected and subsequent load(s) shall be tested, at a minimum of 3 loads or until the problem is corrected.

If the Contractor needs a concrete with a slump greater than 200 mm, the Contractor shall propose to the Engineer to use an SCC mix, which shall be submitted to the Engineer for review and acceptance.

37. 501.03 CLASSIFICATION AND PROPORTIONING, TABLE 501.03A (English), is hereby modified by deleting the fourth column (with header "Max. Slump (in)") in its entirety and replacing it with the following:

Max. ⁷ Slump (mm)

N/A

38. 501.03 CLASSIFICATION AND PROPORTIONING, TABLE 501.03A (English), is hereby corrected by deleting text "700 mm" and replacing it with text "28 inches" in footnote 4.

39. 501.03 CLASSIFICATION AND PROPORTIONING, TABLE 501.03A (English), is hereby further modified by adding the following footnote:

⁷ The mix shall not exhibit segregation at the slump/spread used at placement. If the Engineer suspects there is segregation, the Engineer will require a slump/spread test be performed by the Contractor to visually observe the characteristics of the mix. If in the opinion of the Engineer the mix does exhibit segregation, the load will be rejected and subsequent load(s) shall be tested, at a minimum of 3 loads or until the problem is corrected.

If the Contractor needs a concrete with a slump greater than 8 inches, the Contractor shall propose to the Engineer to use an SCC mix, which shall be submitted to the Engineer for review and acceptance.

40. 501.03 CLASSIFICATION AND PROPORTIONING, is hereby corrected by deleting the phrase "1716 Barre-Montpelier Rd., Berlin, Vermont 05602" and replacing it with the phrase "2178 Airport Road Unit B, Berlin, Vermont 05641" in the second sentence of the ninth paragraph (beginning "A minimum of thirty (30)...").

41. 501.11 DEPOSITING CONCRETE UNDERWATER, part (a) General, subpart (1), is hereby corrected by deleting the phrase "1716 Barre-Montpelier Rd., Berlin, Vermont 05602" and replacing it with the phrase "2178 Airport Road Unit B, Berlin, Vermont 05641" in the second sentence of the second paragraph.

SECTION 505 - PILING

42. 505.09 BASIS OF PAYMENT, is hereby modified by adding the following pay item:

<u>Pay Item</u>	<u>Pay Unit</u>
505.12 Steel Piling, HP 250 x 85 (HP 10 x 57)	Meter (Linear Foot)

SECTION 506 - STRUCTURAL STEEL

43. 506.19 BOLTING AND CONNECTIONS, part (c), Installation, is hereby modified by deleting the tenth paragraph (Beginning "Bolts shall be tightened...") in its entirety and replacing it with the following:

Bolts shall be tightened to develop a tension not less than 5 percent in excess of the minimum bolt tension specified in Table 506.19A. Bolts shall not be tightened to more than the maximum tension specified in Table 506.19A.

44. 506.19 BOLTING AND CONNECTIONS, part (c) Installation, is hereby further modified by deleting subparts (1) Calibrated Wrench Method, (2) Turn of the Nut Method, and (3) Torque Method in their entirety.
45. 506.19 BOLTING AND CONNECTIONS, part (c) Installation, subpart (4) Tension Control Assembly Method, is hereby modified by being re-designated as part (1).
46. 506.19 BOLTING AND CONNECTIONS, part (c) Installation, subpart (5) Direct Tension Indicator Method, is hereby modified by being re-designated as part (2).
47. 506.19 BOLTING AND CONNECTIONS, part (c) Installation, is hereby still further modified by deleting TABLE 506.19B (including associated paragraphs) in its entirety.
48. 506.19 BOLTING AND CONNECTIONS, part (d) Acceptance of Bolt Tensioning, is hereby modified by deleting the second and third sentences of the first paragraph.
49. 506.19 BOLTING AND CONNECTIONS, part (d) Acceptance of Bolt Tensioning, is hereby further modified by deleting the fourth, fifth, ninth, eleventh, and twelfth paragraphs in their entirety.

SECTION 507 - REINFORCING STEEL

50. 507.01 DESCRIPTION, is hereby modified by adding the phrase "of the level specified" after the phrase "bar reinforcement".
51. 507.01 DESCRIPTION, is hereby further modified by adding the following paragraphs:

Levels and associated types of reinforcing steel are specified as follows:

- (a) Level I (Limited Corrosion Resistance). Level I reinforcing includes plain, low alloy, and epoxy coated reinforcing steel.
- (b) Level II (Improved Corrosion Resistance). Level II reinforcing includes stainless clad and dual-coated reinforcing steel.
- (c) Level III (Exceptional Corrosion Resistance). Level III reinforcing includes solid stainless reinforcing steel.

The location, level, and when specified, type of reinforcing shall be as indicated in the Plans. Reinforcing supplied shall meet the requirements of the level specified or any higher level. Only one type of reinforcing steel shall be used for each level for the Contract work, unless permitted in writing by the Engineer.

- 52. 507.02 MATERIALS, is hereby modified by deleting the sixth (final) entry in the Subsection listing.
- 53. 507.03 FABRICATION AND SHIPMENT, part (a) General, is hereby modified by adding the phrase "deformed bar" after the phrase "shall be" in the first paragraph.
- 54. 507.03 FABRICATION AND SHIPMENT, part (a) General, is hereby corrected by deleting punctuation "." and replacing it with punctuation "." at the end of the first paragraph.
- 55. 507.04 PROTECTION OF MATERIAL, is hereby modified by adding the following as the second sentence in the first paragraph:

When multiple levels of reinforcing steel are used on a project, they shall be stored separately, including during transport in order that there is no direct contact between the bars.
- 56. 507.04 PROTECTION OF MATERIAL, is hereby further modified by deleting the phrase "The epoxy coating" and replacing it with the word "Coatings" in the third sentence of the third paragraph.
- 57. 507.04 PROTECTION OF MATERIAL, is hereby still further modified by deleting the phrase "as required for damaged areas" and replacing it with the phrase "per the coating manufacturer's recommendations and to the satisfaction of the Engineer" in the third sentence of the fifth (last) paragraph.
- 58. 507.04 PROTECTION OF MATERIAL, is hereby still further modified by adding the following paragraph:

All ends of Level II reinforcement where the mild steel core is exposed shall be capped in accordance with one of the following:

- (a) Heat-shrink cap applied in accordance with the cap manufacturer's instructions.
- (b) Neoprene cap adhered with silicone or epoxy sealant.
- (c) Stainless steel cap epoxied in place.
- (d) Stainless steel seal weld.

59. 507.05 PLACING AND FASTENING REINFORCING STEEL, is hereby modified by deleting the sixth paragraph in its entirety and replacing it with the following:

Tie wires and supports used for installation of reinforcement shall be composed of the same material as any steel being contacted or shall be plastic. When forms are to be removed in their entirety, uncoated steel chairs equipped with snug-fitting, high-density, polyethylene tips which provide 3 mm (1/4 inch) clearance between the metal and any exposed surface may be used.

60. 507.10 METHOD OF MEASUREMENT, is hereby modified by deleting the phrase ", Epoxy Coated Reinforcing Steel, and Galvanized Reinforcing Steel" and replacing it with the phrase "of the type and size specified" in the first paragraph.
61. 507.10 METHOD OF MEASUREMENT, is hereby further modified by adding the phrase "of the type specified" at the end of the second paragraph (beginning "The quantity of Drilling and Grouting Dowels...").
62. 507.11 BASIS OF PAYMENT, is hereby modified by deleting the following pay items:

<u>Pay Item</u>	<u>Pay Unit</u>
507.15 Reinforcing Steel	Kilogram (Pound)
507.17 Epoxy Coated Reinforcing Steel	Kilogram (Pound)
507.18 Galvanized Reinforcing Steel	Kilogram (Pound)

63. 507.11 BASIS OF PAYMENT, is hereby further modified by adding the following pay items:

<u>Pay Item</u>	<u>Pay Unit</u>
507.11 Reinforcing Steel, Level I	Kilogram (Pound)
507.12 Reinforcing Steel, Level II	Kilogram (Pound)
507.13 Reinforcing Steel, Level III	Kilogram (Pound)

SECTION 516 - EXPANSION DEVICES

64. 516.01 DESCRIPTION, is hereby modified by adding the phrase ", or partially removing and modifying," after the word "installing".
65. 516.05A PARTIAL REMOVAL AND MODIFICATION, is hereby made a new Subsection of the Standard Specifications as follows:

516.05A PARTIAL REMOVAL AND MODIFICATION. The Contractor shall partially remove and modify the existing bridge joint at the locations indicated in the Plans and as directed by the Engineer.

Steel for new joint plates shall meet the requirements of Subsection 714.02.

The Contractor shall remove and dispose of existing joint plates, drain troughs, and associated hardware.

The Contractor shall grind existing steel plates and/or shoulder concrete to the configuration shown on the Plans. The final surface shall be to the satisfaction of the Engineer.

66. 516.06 METHOD OF MEASUREMENT, is hereby modified by adding the following paragraph:

The quantity of Partial Removal and Modification of Bridge Joint to be measured for payment will be the number of meters (linear feet) of bridge joint removed and modified in the complete and accepted work, measured along its centerline.

67. 516.07 BASIS OF PAYMENT, is hereby modified by adding the following paragraph and pay item:

The accepted quantity of Partial Removal and Modification of Bridge Joint will be paid for at the Contract unit price per meter (linear foot). Payment will be full compensation for partially removing and modifying the existing joint as specified and as detailed in the Plans, and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
516.20 Partial Removal and Modification of Bridge Joint	Meter (Linear Foot)

SECTION 525 - BRIDGE RAILINGS

68. 525.02 MATERIALS, is hereby modified by adding the following as the third entry in the Subsection listing:

Structural Steel.....714.02

69. 525.06 INSTALLATION, part (a) General, is hereby modified by adding the following as the sixth (last) paragraph:

Concrete railing shall receive an aesthetic finish in accordance with Subsection 501.16. Cracks in concrete railing shall be repaired by a method approved by the Engineer. Cracks in concrete greater than 0.25 mm (0.01 inch) may be cause for rejection.

70. 525.08 BASIS OF PAYMENT, is hereby modified by adding the phrase "for furnishing all forms, joint filler, admixtures, trial batches, and connection plates for approach railing terminal connectors; for satisfactory completion of any necessary repairs, surface finishing, and curing;" after the phrase "for all work necessary for verifying and adjusting post height and/or bolt spacing of existing posts;" in the second (last) sentence of the third paragraph.

71. 525.08 BASIS OF PAYMENT, is hereby further modified by adding the following pay item:

<u>Pay Item</u>	<u>Pay Unit</u>
525.45 Bridge Railing, Galvanized Steel Tubing/ Concrete Combination	Meter (Linear Foot)

SECTION 531 - BRIDGE BEARING DEVICES

72. 531.04 FABRICATION, part (b) Surface Protection, is hereby corrected by deleting punctuation ", ." at the end of the paragraph and replacing it with punctuation ".".

SECTION 540 - PRECAST CONCRETE

73. 540.02 MATERIALS, is hereby modified by deleting the fourteenth entry (beginning "Coated Bar Reinforcement...") in the Subsection listing.
74. 540.02 MATERIALS, is hereby further modified by adding the following as the twenty-eighth entry in the Subsection listing:

Sheet Membrane Waterproofing, Preformed Sheet.....726.11

75. 540.07 FABRICATION, part (e) Placing Concrete, is hereby modified by deleting the phrase "done with care" and replacing it with the phrase "performed in accordance with Subsection 501.10(f)" in the third (last) sentence.
76. 540.10 INSTALLATION, is hereby modified by adding the following new part (c):

- (c) Sheet Membrane Waterproofing. A reinforced asphalt, synthetic resin, or coal-tar based preformed sheet membrane shall be placed over the joints of precast concrete units in accordance with the Contract Documents. All work performed shall be in accordance with the manufacturer's recommendations.

Material for membrane shall meet the requirements of Subsection 726.11.

Waterproofing shall not be performed in wet weather or when the temperature is below 5°C (40°F), without the authorization of the Engineer.

The concrete surfaces that are to be waterproofed shall be reasonably smooth and free from projections or holes and shall be cleaned of dust and loose material. The surfaces shall be visibly dry prior to and during application of the membrane system.

77. 540.14 BASIS OF PAYMENT, is hereby modified by adding the following paragraph:

Furnishing and placing preformed sheet membrane waterproofing, including primer, mastic, polyurethane membrane sealant, and surface preparation, is considered incidental to the work for Precast Concrete Structure.

SECTION 541 - STRUCTURAL CONCRETE

78. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (Metric), is hereby modified by deleting footnote designation "*" in the first and fourth entries of the third row (for "Class A" concrete).
79. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (Metric), is hereby further modified by deleting footnote "*" and associated text (beginning "* When this class of concrete...").

80. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (Metric), is hereby still further modified by deleting the fourth (with header "Range in Slump (mm)") and fifth (with header "Air Cont. (%)") columns in their entirety and replacing them with the following:

Range* in Slump (mm)	Air Content (%)
---	7.0 ± 1.5
---	7.0 ± 1.5
---	7.0 ± 1.5
---	5.5 ± 1.5
---	5.5 ± 1.5
---	7.0 ± 1.5

81. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (Metric), is hereby still further modified by adding the following footnote:

* The mix shall not exhibit segregation at the slump/spread used at placement. If the Engineer suspects there is segregation, the Engineer will require a slump/spread test be performed by the Contractor to visually observe the characteristics of the mix. If in the opinion of the Engineer the mix does exhibit segregation, the load will be rejected and subsequent load(s) shall be tested, at a minimum of 3 loads or until the problem is corrected.

If the Contractor needs a concrete with a slump greater than 200 mm, the Contractor shall propose to the Engineer to use an SCC mix, which shall be submitted to the Engineer for review and acceptance.

82. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (English), is hereby modified by deleting footnote designation "*" in the first and fourth entries of the third row (for "Class A" concrete).
83. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (English), is hereby further modified by deleting footnote "*" and associated text (beginning "* When this class of concrete...").

84. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (English), is hereby still further modified by deleting the fourth (with header "Range in Slump (in.)") and fifth (with header "Air Cont. (%)") columns in their entirety and replacing them with the following:

Range* in Slump (mm)	Air Content (%)
---	7.0 ± 1.5
---	7.0 ± 1.5
---	7.0 ± 1.5
---	5.5 ± 1.5
---	5.5 ± 1.5
---	7.0 ± 1.5

85. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (English), is hereby still further modified by adding the following footnote:

* The mix shall not exhibit segregation at the slump/spread used at placement. If the Engineer suspects there is segregation, the Engineer will require a slump/spread test be performed by the Contractor to visually observe the characteristics of the mix. If in the opinion of the Engineer the mix does exhibit segregation, the load will be rejected and subsequent load(s) shall be tested, at a minimum of 3 loads or until the problem is corrected.

If the Contractor needs a concrete with a slump greater than 8 inches, the Contractor shall propose to the Engineer to use an SCC mix, which shall be submitted to the Engineer for review and acceptance.

86. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (Metric) is hereby modified by adding the following as the eighth (bottom) row with the included footnotes:

Controlled Density (Flowable) Fill	To be designed ***	To be designed ****	To be designed *****	10 min.	704.01 (Fine Aggregate)	0.85 max. *****	---
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- *** A mineral admixture may be used to replace a portion of the cement.
- **** The minimum amount of water shall be used to produce the desirable flow for the intended use without showing segregation.
- ***** The slump (flowability) shall be such that material is able to completely fill the voids or area as needed without segregation.
- *****A minimum of 3 cylinders per test age required to constitute a test. If average strength at 28 days exceeds 115% of max. strength, then payment for Contract item 541.45 will be 85% of the Contract bid price.

87. 541.03 CLASSIFICATION AND PROPORTIONING, TABLE 541.03A (English) is hereby modified by adding the following as the eighth (bottom) row with the included footnotes:

Controlled Density (Flowable) Fill	To be designed ***	To be designed ****	To be designed *****	10 min.	704.01 (Fine Aggregate)	125 max. *****	---
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*** A mineral admixture may be used to replace a portion of the cement.

**** The minimum amount of water shall be used to produce the desirable flow for the intended use without showing segregation.

***** The slump (flowability) shall be such that material is able to completely fill the voids or area as needed without segregation.

*****A minimum of 3 cylinders per test age required to constitute a test. If average strength at 28 days exceeds 115% of max. strength, then payment for Contract item 541.45 will be 85% of the Contract bid price.

88. 541.10 PLACING CONCRETE, part (c) Placement Limitations, is hereby modified by adding the following paragraphs:

Flowable fill shall be applied to voids and other locations as specified in the Contract Documents and as directed by the Engineer. Flowable fill shall be able to completely fill the existing voids.

If voids are discovered, the Engineer may direct the Contractor to submit a plan for filling the remaining voids. This work, including preparing and submitting the plan and filling any remaining voids, will be at the Contractor's expense.

89. 541.11 DEPOSITING CONCRETE UNDERWATER, part (a) General, subpart (1), is hereby corrected by deleting the phrase "1716 Barre-Montpelier Rd., Berlin, Vermont 05602" and replacing it with the phrase "2178 Airport Road Unit B, Berlin, Vermont 05641" in the second sentence of the second paragraph.

90. 541.19 METHOD OF MEASUREMENT, is hereby modified by deleting the phrase "or LW" and replacing it with the phrase "LW, or Flowable Fill" in the first sentence of the first paragraph.

91. 541.20 BASIS OF PAYMENT, is hereby modified by adding the following pay item:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
541.45 Controlled Density (Flowable) Fill	Cubic Meter (Cubic Yard)

SECTION 580 - STRUCTURAL CONCRETE REPAIR

92. 580.02 MATERIALS, is hereby modified by adding the following to the Subsection listing:

Polymer Concrete Repair Material.....780.05

93. 580.03 PROPORTIONING AND MIXING, is hereby modified by deleting the last sentence of the first paragraph in its entirety and replacing it with the following:

The product shall not be extended with sand or gravel, except for Rapid Setting Concrete Repair Material with Coarse Aggregate and Polymer Concrete Repair Material when mixed with approved aggregates in conformance with the manufacturer's recommendations.

94. 580.04 SURFACE PREPARATION FOR REPAIRS, OVERLAYS AND MEMBRANES, is hereby modified by adding the word "abrasive" after the phrase "shall be" and before the phrase "blast cleaned" in the first sentence of the third paragraph.

95. 580.04 SURFACE PREPARATION FOR REPAIRS, OVERLAYS AND MEMBRANES, is hereby further modified by adding the phrase ", or Polymer Concrete Repair Material," after the word "Aggregate" in the sixth paragraph.

96. 580.08 METHOD OF MEASUREMENT, is hereby modified by deleting the phrase "and not for new patches, which will be the responsibility of the Contractor" and replacing it with the phrase ", with no deductions made for areas of new patches" in the second sentence of the ninth paragraph.

97. 580.08 METHOD OF MEASUREMENT, is hereby further modified by adding the phrase ", and Polymer Concrete Repair Material" after the word "Aggregate" in the first sentence of the tenth paragraph.

98. 580.09 BASIS OF PAYMENT, is hereby modified by adding the phrase ", and Polymer Concrete Repair Material" after the word "Aggregate" in the seventh paragraph.

99. 580.09 BASIS OF PAYMENT, is hereby further modified by adding the following pay item:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
580.21 Polymer Concrete Repair Material	Cubic Meter (Cubic Yard)

SECTION 601 - CULVERTS AND STORM DRAINS

100. 601.02 MATERIALS, is hereby modified by adding the following as the sixth entry in the Subsection listing:

Corrugated Polypropylene Pipe.....710.07

101. 601.07 JOINING PIPE, is hereby modified by adding the following new part (d) as follows:

(d) Corrugated Polypropylene Pipe. Corrugated Polypropylene pipe shall be joined by a system designed and approved by the pipe manufacturer. Couplings and fittings shall provide sufficient longitudinal strength to preserve pipe alignment and prevent separation at the joints.

102. 601.11 BASIS OF PAYMENT, is hereby modified by changing the end of the pay item number range for CPEP Elbow from 601.5999 to 601.5899.

103. 601.11 BASIS OF PAYMENT, is hereby further modified by adding the following pay items:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
601.2800 to 601.2999 CPPP(SL)	Meter (Linear Foot)
601.5900 to 601.5999 CPPP Elbow	Each
601.7100 to 601.7199 CPPPES	Each

SECTION 608 - EQUIPMENT RENTAL

104. 608.02 GENERAL REQUIREMENTS, is hereby modified by adding the following new part (i):

(i) Truck-Mounted Attenuator, Advanced Warning Vehicle/Protection Vehicle (AWV/PV). Truck-Mounted Attenuator, AWV/PV shall consist of a Truck-Mounted Attenuator meeting the requirements of Subsection 608.02(h) and be equipped with a Changeable Message Sign in accordance with the MUTCD. The Changeable Message Sign shall be mounted so as to be clearly visible to the traveling public and shall be capable of being controlled from inside the cab of the vehicle, with capable controls including but not limited to turning the sign on and off, changing between preset messages, and inserting new messages when approved by the Engineer. Phases of signing shall have the ability to change automatically when required.

105. 608.04 BASIS OF PAYMENT, is hereby modified by changing the word "item" to "items" and by adding the phrase "and Truck-Mounted Attenuator, AWV/PV" after the phrase "Truck-Mounted Attenuator" in the second (last) paragraph.

106. 608.04 BASIS OF PAYMENT, is hereby further modified by adding the following pay item:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
608.50 Truck-Mounted Attenuator, AWV/PV	Hour

SECTION 613 - STONE FILL, RIPRAP, AND SLOPE PAVING

107. 613.02 MATERIALS, is hereby modified by adding the following to the Subsection listing:

Rock Fill for Gabions.....	706.06
Gabion Baskets.....	712.04

108. 613.04 PLACING, is hereby modified by adding the following new part (d):

- (d) Rock Fill for Gabions. The furnishing and installing of gabion baskets shall be performed in accordance with the manufacturer's recommendations.

The Contractor should expect to perform some manual stone placement to minimize voids and to create a neat, flat vertical surface of gabions.

109. 613.05 METHOD OF MEASUREMENT, is hereby modified by adding the following paragraph:

The quantity of Gabion Wall to be measured for payment will be the number of cubic meters (cubic yards) of Rock Fill for Gabions placed in the complete and accepted work.

110. 613.06 BASIS OF PAYMENT, is hereby modified by adding the phrase "and Gabion Wall" after the word "specified" in the first sentence of the first paragraph.

111. 613.06 BASIS OF PAYMENT, is hereby modified by adding the phrase ", including gabion baskets," after the word "material" in the third (last) sentence of the first paragraph.

112. 613.06 BASIS OF PAYMENT, is hereby still further modified by adding the phrase "or rock" after the word "stone" in the first sentence of the second paragraph.

113. 613.06 BASIS OF PAYMENT, is hereby still further modified by adding the following paragraph:

Geotextile fabric and bedding material for Gabion Wall will be paid for under the appropriate Contract items.

114. 613.06 BASIS OF PAYMENT, is hereby still further modified by adding the following pay item:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
613.25 Gabion Wall	Cubic Meter (Cubic Yard)

SECTION 616 - CURBS AND GUTTERS

115. 616.05 REPOINTING GRANITE BRIDGE CURB, is hereby made a new Subsection of the Standard Specifications as follows:

616.05 REPOINTING GRANITE BRIDGE CURB. The existing mortar bed and vertical curb joints shall be repointed as shown on the Plans. Mortar shall meet the requirements of Subsection 707.01.

116. 616.14 METHOD OF MEASUREMENT, is hereby modified by adding the following as the second paragraph:

The quantity of Repointing Granite Bridge Curb to be measured for payment will be the number of liters (gallons) of mortar applied in the completed and accepted work, measured to the nearest liter (gallon).

117. 616.14 METHOD OF MEASUREMENT, is hereby corrected by changing the word "portland" to "Portland" in the fifth (last) paragraph.

118. 616.15 BASIS OF PAYMENT, is hereby modified by adding the following as the second paragraph:

The accepted quantity of Repointing Granite Bridge Curb will be paid for at the Contract unit price per liter (gallon). Payment will be full compensation for furnishing, transporting, handling, and placing the material specified and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

119. 616.15 BASIS OF PAYMENT, is hereby corrected by changing the word "portland" to "Portland" in the fourth paragraph.

120. 616.15 BASIS OF PAYMENT, is hereby further modified by adding the following pay item:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
616.225 Repointing Granite Bridge Curb	Liter (Gallon)

SECTION 621 - TRAFFIC BARRIERS

121. 621.01 DESCRIPTION, is hereby modified by adding the phrase "repairing," after the phrase "removing,".

122. 621.02 MATERIALS, is hereby modified by adding the following as the fifth entry in the Subsection listing:

Wire Rope or Cable.....713.03

123. 621.13 REPLACEMENT, ADJUSTMENT, REMOVAL, AND DISPOSAL OF GUARDRAIL OR GUIDE POSTS, is hereby modified by deleting the phrase "post assemblies and panel units" and replacing it with the phrase "guardrail components" in the second sentence of the first paragraph.

124. 621.13 REPLACEMENT, ADJUSTMENT, REMOVAL, AND DISPOSAL OF GUARDRAIL OR GUIDE POSTS, is hereby further modified by deleting the phrase "post assembly replacement or guardrail beam replacement occur" and replacing it with the phrase "guardrail component replacement occurs" in the fourth paragraph.

125. 621.13 REPLACEMENT, ADJUSTMENT, REMOVAL, AND DISPOSAL OF GUARDRAIL OR GUIDE POSTS, is hereby still further modified by adding the following as the sixth and seventh paragraphs:

Offset blocks designated for replacement shall be replaced in-kind. Materials shall be in conformance with the applicable requirements of Subsection 728.01 for either wood, steel, or alternative blockouts.

Cable guardrail repair shall be performed in accordance with VTrans Standard Drawing G-6 and as directed by the Engineer.

126. 621.14 METHOD OF MEASUREMENT, is hereby modified by adding the following as the fourth and fifth paragraphs of the Subsection text:

The quantities of Cable Guardrail J-Bolt, Galvanized and Cable Guardrail Splice Unit to be measured for payment will be the number of units installed in the complete and accepted work.

The quantity of Replacement of Guardrail Cable to be measured for payment will be the number of meters (linear feet) installed in the complete and accepted work.

127. 621.14 METHOD OF MEASUREMENT, is hereby further modified by adding the following as the eighth paragraph of the Subsection text:

The quantities of Steel Beam Guardrail Delineator and Steel Beam Guardrail Offset Block to be measured for payment will be the number of each component replaced in the complete and accepted work.

128. 621.15 BASIS OF PAYMENT, is hereby modified by adding the following as the second, third, and fourth paragraphs of the Subsection text:

The accepted quantities of Cable Guardrail J-Bolt, Galvanized and Cable Guardrail Splice Unit will be paid for at the Contract unit price for each.

The accepted quantity of Replacement of Cable Guardrail will be paid for at the Contract unit price per meter (linear foot).

The accepted quantities of Steel Beam Guardrail Delineator and Steel Beam Guardrail Offset Block will be paid for at the Contract unit price for each.

129. 621.15 BASIS OF PAYMENT, is hereby further modified by adding the phrase "removing and disposing of damaged guardrail component(s)," after the phrase "specified," in the first sentence of the tenth paragraph.

130. 621.15 BASIS OF PAYMENT, is hereby still further modified by adding the following pay items:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
621.173 Cable Guardrail J-Bolt, Galvanized	Each
621.174 Cable Guardrail Splice Unit	Each
621.175 Replacement of Guardrail Cable	Meter (Linear Foot)
621.218 Steel Beam Guardrail Delineator	Each
621.219 Steel Beam Guardrail Offset Block	Each
621.70 Guardrail Approach Section, Galvanized Type I	Each
621.71 Guardrail Approach Section, Galvanized Type II	Each
621.726 Guardrail Approach Section, Galvanized 3 Rail Box Beam w/Curb	Each
621.735 Guardrail Approach Section, Steel Beam	Each
621.736 Guardrail Approach Section, Steel Beam w/2.4 m (8 feet) Posts	Each
621.737 Guardrail Approach Section, Galvanized HD Steel Beam	Each
621.738 Guardrail Approach Section, Galvanized HD Steel Beam w/2.4 m (8 feet) Posts	Each
621.748 Guardrail Approach Section to Concrete Combination Bridge Railing, TL-3	Each

SECTION 630 - UNIFORMED TRAFFIC OFFICERS AND FLAGGERS

131. 630.03 CLOTHING AND EQUIPMENT, part (b) For Flaggers, subpart (1), is hereby modified by replacing the phrase "ANSI 107-1999" with the phrase "ANSI 107-2004" in the first sentence.

132. 630.03 CLOTHING AND EQUIPMENT, part (d) For All Traffic Control Personnel, subpart (2), is hereby modified by deleting the word "The" and replacing it with the phrase "When deemed necessary by the Engineer, or when noted in the Plans, the" at the beginning of the first sentence.

SECTION 641 - TRAFFIC CONTROL

133. 641.02 GENERAL CONSTRUCTION REQUIREMENTS, is hereby modified by adding the phrase "implement that plan or" after the phrase "the Contractor may" in the first sentence of the fourth paragraph.

134. 641.02 GENERAL CONSTRUCTION REQUIREMENTS, is hereby further modified by adding the following as the second sentence of the fourth paragraph:

When the Contractor will implement an Agency-designed traffic control plan, written certification shall be submitted to the Engineer indicating that traffic control will be performed in accordance with the Agency design.

135. 641.02 GENERAL CONSTRUCTION REQUIREMENTS, is hereby still further modified by changing the word "This" to the word "An" in the third sentence of the fourth paragraph.

136. 641.02 GENERAL CONSTRUCTION REQUIREMENTS, is hereby still further modified by adding the following paragraph:

When the Contract Documents specify that a site-specific traffic control plan be submitted by the Contractor, Construction Drawings shall be submitted in accordance with Section 105. The submitted site-specific plan shall include, for each phase of construction requiring a significant change in temporary traffic control, a narrative description of the proposed temporary traffic control for each phase (including pedestrian accommodations where appropriate) and the major work activities to be completed in each phase; and a layout for each phase of construction showing existing lane configurations, existing traffic control devices (signs, signals, and pavement markings), driveways, ramps, and highway intersections; and the location of all proposed temporary traffic control devices, flaggers, and UTO's. All pertinent dimensions, such as taper lengths, sign spacing, temporary lane widths, and distance(s) from existing traffic control devices shall be labeled.

SECTION 646 - RETROREFLECTIVE PAVEMENT MARKINGS

137. 646.02 MATERIALS, is hereby modified by deleting the Subsection listing in its entirety and replacing it with the following:

Polyurea Pavement Markings.....	708.08(a)
Low VOC Chlorinated Rubber Traffic Paint.....	708.08(b)
Low VOC Acetone Based Traffic Paint.....	708.08(b)
Epoxy Paint.....	708.08(c)
Waterborne Traffic Paint.....	708.08(d)
Methyl-methacrylate Paint.....	708.08(e)
Glass Beads.....	708.09(a)
Premium Optics.....	708.09(b)
Wet Recoverable and Wet Reflective Optics.....	708.09(c)
Thermoplastic Pavement Markings, Type A.....	708.10(a)
Thermoplastic Pavement Markings, Type B.....	708.10(b)
Raised Pavement Markers, Type I.....	708.11
Pavement Marking Tape, Type A.....	708.12(a)
Pavement Marking Tape, Type B.....	708.12(b)
Pavement Marking Tape, Type C.....	708.12(c)
Pavement Marking Tape, Type D.....	708.12(d)
Line Striping Targets.....	708.13(a)
Raised Pavement Markers, Type II.....	708.13(b)

Temporary Pavement Marking Tape.....	708.13(c)
Pavement Marking Mask.....	708.13(d)

138. 646.04 APPLICATION OF MARKINGS, GENERAL, part (c) Weather Limitations, subpart (2), is hereby modified by being deleted in its entirety and replaced as follows:

(2) At the time of application of durable pavement markings, the pavement surface and ambient air temperatures shall be as per the manufacturer's specified application temperatures. If the manufacturer's recommendations are unavailable, the pavement surface and ambient air temperatures shall be a minimum of 10°C (50°F).

139. 646.06 PAINT PAVEMENT MARKINGS, is hereby modified by being re-named WATERBORNE AND LOW VOC CHLORINATED RUBBER AND ACETONE BASED PAINT PAVEMENT MARKINGS.

140. 646.06 WATERBORNE AND LOW VOC CHLORINATED RUBBER AND ACETONE BASED PAINT PAVEMENT MARKINGS, is hereby modified by changing the word "Retroflective" to "Retroreflective" in the first sentence of the first paragraph.

141. 646.06 WATERBORNE AND LOW VOC CHLORINATED RUBBER AND ACETONE BASED PAINT PAVEMENT MARKINGS, is hereby further modified by deleting the phrase "shall have a dry film thickness of 380 ±25 µm (15 ±1 mil) for paint, unless otherwise specified, and" in the third (last) sentence of the first paragraph.

142. 646.06 WATERBORNE AND LOW VOC CHLORINATED RUBBER AND ACETONE BASED PAINT PAVEMENT MARKINGS, is hereby still further modified by adding the following as the third paragraph:

The markings shall be applied at a rate to create a uniform wet film thickness of 558.8 µm (22 mils) with an allowable range of ±50.8 µm (±2 mils) unless otherwise specified in the Contract Documents. Minimum application rates are 1.7 square meters per liter (70 square feet per gallon) with glass beads applied at a rate of 960 grams per liter (8.0 lb per gallon) of paint. The Contractor shall provide the Engineer and the Materials and Research Section with the optic drop on rates of all optic materials.

143. 646.06 WATERBORNE AND LOW VOC CHLORINATED RUBBER AND ACETONE BASED PAINT PAVEMENT MARKINGS, is hereby still further modified by deleting the fifth and sixth (last) paragraphs in their entirety.

144. 646.07 DURABLE PAVEMENT MARKINGS, is hereby modified by changing punctuation at the end of the third sentence of the first paragraph from ":" to ".".

145. 646.07 DURABLE PAVEMENT MARKINGS, is hereby further modified by adding the following at the end of the first paragraph:

The Contractor shall select optics that conform with Subsections 708.09(a), 708.09(b), and 708.09(c). The Contractor shall provide the Engineer and the Materials and Research Section with the optic drop on rates of all optic materials. The Contractor shall construct an evaluation section as directed by the Engineer for the purpose of collecting pavement marking retroreflectivity measurements. Measurements shall be performed in accordance with ASTM D7585, as specified in Table 646.07A. All measurements shall be collected by the Contractor in the presence of the Engineer in accordance with Section 6.4 of ASTM D7585, with the exception of skip lines, which should follow Section 6.3 of ASTM D7585. The Contractor shall provide to the Engineer the annual manufacturer calibration certificate for the testing device. The device shall be field calibrated daily, prior to testing.

TABLE 646.07A - EVALUATION SECTION CRITERIA

PAVEMENT MARKING TYPE	EVALUATION SECTION(S) REQUIRED	EVALUATION SECTION LENGTH m (feet)	MEASUREMENTS REQUIRED
Long Lines	1/3.2 km (2 miles)	120 (400)	20
Skip Lines	1/3.2 km (2 miles)	120 (400)	20 (2 per skip line)

For long lines and skip lines, if the average retroreflectivity as determined in accordance with ASTM D7585 fails to meet the minimum retroreflectivity requirements, or if 25% of the individual tests fail to meet the minimum retroreflectivity requirements, the entire length represented by the evaluation section shall be re-marked and re-tested until in compliance, at no additional cost to the Agency.

146. 646.07 DURABLE PAVEMENT MARKINGS, part (a) Pavement Marking Tape, Type I, is hereby modified by being deleted in its entirety and replaced as follows:

- (a) Pavement Marking Tape, Type A. Type A tape for pavement markings is classified as high performance or high durable, and non-removable. Type A tape shall conform to the requirements of Subsection 708.12(a).

Type A tapes, when used as a final durable marking, shall be applied only by being inlaid in the bituminous pavement during the rolling operation or in a recess as defined in Subsection 646.09, and shall be applied in accordance with the manufacturer's requirements. Initial dry retroreflectivity minimums shall be 300 mcdl/lx/m² for yellow markings and 400 mcdl/lx/m² for white markings.

147. 646.07 DURABLE PAVEMENT MARKINGS, part (b) Epoxy Paint, is hereby modified by being re-designated as part (e).
148. 646.07 DURABLE PAVEMENT MARKINGS, part (c) Thermoplastic, is hereby modified by being re-designated as part (f) Extruded Thermoplastic.

149. 646.07 DURABLE PAVEMENT MARKINGS, part (d) Polyurea Paint, is hereby modified by being re-designated as part (h).
150. 646.07 DURABLE PAVEMENT MARKINGS, part (e) Methyl-methacrylate Paint, is hereby modified by being re-designated as part (i).
151. 646.07 DURABLE PAVEMENT MARKINGS, is hereby further modified by adding the following new parts (b), (c), and (d):

- (b) Pavement Marking Tape, Type B. Type B tape for pavement markings is classified as non-removable, used in long line applications. Type B tape shall conform to the requirements of Subsection 708.12(b).

Type B tapes, when used as a final durable marking, shall be applied only by being inlaid in the bituminous pavement during the rolling operation or in a recess as defined in Subsection 646.09, and shall be applied in accordance with the manufacturer's requirements. Initial dry retroreflectivity minimums shall be 300 mcdl/lx/m² for yellow markings and 400 mcdl/lx/m² for white markings.

- (c) Pavement Marking Tape, Type C. Type C tape for pavement markings is classified as non-removable, used in intersection applications. Type C tape shall conform to the requirements of Subsection 708.12(c).

Type C tapes, when used as a final durable marking, shall be applied only by being inlaid in the bituminous pavement during the rolling operation or in a recess as defined in Subsection 646.09, and shall be applied in accordance with the manufacturer's requirements.

- (d) Pavement Marking Tape, Type D. Type D tape for pavement markings is classified as non-removable, used for symbols and legends applications. Type D tape shall conform to the requirements of Subsection 708.12(d).

Type D tapes, when used as a final durable marking, shall be applied only by being inlaid in the bituminous pavement during the rolling operation or in a recess as defined in Subsection 646.09, and shall be applied in accordance with the manufacturer's requirements. Initial dry retroreflectivity minimums shall be 300 mcdl/lx/m² for yellow markings and 400 mcdl/lx/m² for white markings.

152. 646.07 DURABLE PAVEMENT MARKINGS, part (e) Epoxy Paint, is hereby modified by deleting the fifth (last) sentence in its entirety.
153. 646.07 DURABLE PAVEMENT MARKINGS, part (e) Epoxy Paint, is hereby further modified by adding the following sentences:

Epoxy paint shall be applied at a rate to create a uniform wet film thickness of 558.8 µm (22 mils) with an allowable range of ±50.8 µm (±2 mils) unless otherwise specified in the Contract Documents. Minimum application rates are 1.7 square meters per liter (70 square feet per gallon). Initial dry retroreflectivity minimums shall be 300 mcdl/lx/m² for yellow markings and 400 mcdl/lx/m² for white markings.

154. 646.07 DURABLE PAVEMENT MARKINGS, part (f) Extruded Thermoplastic, is hereby modified by replacing the phrase "708.10" with the phrase "708.10(a)" at the end of the first paragraph.
155. 646.07 DURABLE PAVEMENT MARKINGS, part (f) Extruded Thermoplastic, is hereby further modified by adding the following as the third paragraph:

Thermoplastic markings shall be applied at a rate to create a uniform wet film thickness of 2667 μm (105 mils) with an allowable range of $\pm 127 \mu\text{m}$ (± 5 mils) unless otherwise specified in the Contract Documents. Minimum application rates are 0.36 square meters per liter (15 square feet per gallon).
156. 646.07 DURABLE PAVEMENT MARKINGS, part (f) Extruded Thermoplastic, subpart (1) Thermoplastic Application Equipment, a. Mobile Applicator Equipment, is hereby modified by deleting the phrase ", between 2.4 and 2.5 mm (96 and 100 mils)" and replacing it with the phrase "and 2667 μm (105 mils) with an allowable range of $\pm 127 \mu\text{m}$ (± 5 mils)" in the second sentence of the second paragraph.
157. 646.07 DURABLE PAVEMENT MARKINGS, part (f) Extruded Thermoplastic, subpart (1) Thermoplastic Application Equipment, b. Portable Applicator Equipment, is hereby modified by deleting the phrase "between 2 and 2.5 mm (80 and 100 mils)" and replacing it with the phrase "and 2667 μm (105 mils) with an allowable range of $\pm 127 \mu\text{m}$ (± 5 mils)" in the fourth sentence.
158. 646.07 DURABLE PAVEMENT MARKINGS, part (f) Extruded Thermoplastic, subpart (2) Application Requirements, b. Thermoplastic Composition, is hereby modified by replacing the phrase "708.10" with the phrase "708.10(a)".
159. 646.07 DURABLE PAVEMENT MARKINGS, part (f) Extruded Thermoplastic, subpart (2) Application Requirements, d. Extruded Markings, is hereby modified by deleting the phrase "2.4 and 2.5 mm (96 and 100 mils)" and replacing it with the phrase "2.54 and 2.794 mm (100 and 110 mils)".
160. 646.07 DURABLE PAVEMENT MARKINGS, part (f) Extruded Thermoplastic, subpart (2) Application Requirements, e. Beads, is hereby modified by being re-named Optics.
161. 646.07 DURABLE PAVEMENT MARKINGS, part (f) Extruded Thermoplastic, subpart (2) Application Requirements, e. Optics, subpart 1., is hereby modified by adding the phrase "shall be" after the phrase "Type I".
162. 646.07 DURABLE PAVEMENT MARKINGS, part (f) Extruded Thermoplastic, subpart (2) Application Requirements, e. Optics, subpart 1., is hereby further modified by adding the phrase "intermix of the" after the phrase "incorporated into the".
163. 646.07 DURABLE PAVEMENT MARKINGS, part (f) Extruded Thermoplastic, subpart (2) Application Requirements, e. Optics, subpart 1., is hereby still further modified by deleting the numbers "28" and "30" and replacing them with the numbers "30" and "40", respectively.
164. 646.07 DURABLE PAVEMENT MARKINGS, part (f) Extruded Thermoplastic, subpart (2) Application Requirements, e. Optics, subpart 2., is hereby modified by being deleted in its entirety and replaced as follows:

2. Initial dry retroreflectivity minimums shall be 300 mcdl/lx/m² for yellow markings and 400 mcdl/lx/m² for white markings.

165. 646.07 DURABLE PAVEMENT MARKINGS, is hereby still further modified by adding the following new part (g):

(g) Preformed Thermoplastic. Approved preformed thermoplastic marking materials shall be one of the preformed thermoplastic markings listed on the Approved Products List on file with the Agency's Materials and Research Section under Subsection 708.10(b).

166. 646.07 DURABLE PAVEMENT MARKINGS, part (h) Polyurea Paint, is hereby modified by deleting the second sentence in its entirety.

167. 646.07 DURABLE PAVEMENT MARKINGS, part (h) Polyurea Paint, is hereby further modified by adding the following sentences:

Polyurea paint shall be applied at a rate to create a uniform wet film thickness of 558.8 µm (22 mils) with an allowable range of ±50.8 µm (±2 mils) unless otherwise specified in the Contract Documents. Minimum application rates are 1.7 square meters per liter (70 square feet per gallon). Initial dry retroreflectivity minimums for surface-applied polyurea shall be 300 mcdl/lx/m² for yellow markings and 400 mcdl/lx/m² for white markings. Initial dry retroreflectivity minimums for recessed polyurea shall be 600 mcdl/lx/m² for yellow markings and 800 mcdl/lx/m² for white markings.

168. 646.07 DURABLE PAVEMENT MARKINGS, part (i) Methyl-methacrylate Paint, is hereby modified by deleting the second sentence in its entirety.

169. 646.07 DURABLE PAVEMENT MARKINGS, part (i) Methyl-methacrylate Paint, is hereby further modified by adding new subpart (l) as follows:

(l) Application Requirements.

a. Spray Applied Markings. All spray applied markings shall be applied at a rate to create a uniform wet film thickness of 762 µm (30 mils) with an allowable range of ±50.8 µm (±2 mils) unless otherwise specified in the Contract Documents. Minimum application rates are 1.4 square meters per liter (55 square feet per gallon). Initial dry retroreflectivity minimums for surface spray applied methyl-methacrylate shall be 300 mcdl/lx/m² for yellow markings and 400 mcdl/lx/m² for white markings. Initial dry retroreflectivity minimums for recessed methyl-methacrylate shall be 300 mcdl/lx/m² for yellow markings and 400 mcdl/lx/m² for white markings.

b. Extruded Markings. All extruded markings shall be applied at a rate to create a uniform wet film thickness of 2286 µm (90 mils) with an allowable range of ±127 µm (±5 mils) unless otherwise specified in the Contract Documents. Minimum application rates are 0.45 square meters per liter (18.3 square feet per gallon). Initial dry retroreflectivity minimums shall be 300 mcdl/lx/m² for yellow markings and 400 mcdl/lx/m² for white markings.

- c. Structured Markings. All structured markings shall be applied at a rate to create a uniform wet film thickness as per the manufacturer's recommendations unless otherwise specified in the Contract Documents. Initial dry retroreflectivity minimums shall be 300 mcdl/lx/m² for yellow markings and 400 mcdl/lx/m² for white markings.
170. 646.08 TEMPORARY PAVEMENT MARKINGS, is hereby modified by deleting the phrase "Type II" (first entry) and replacing it with the phrase "Temporary Pavement Marking" in the first sentence.
171. 646.08 TEMPORARY PAVEMENT MARKINGS, part (a) Pavement Marking Tape, Type II, is hereby modified by being re-named Temporary Pavement Marking Tape.
172. 646.08 TEMPORARY PAVEMENT MARKINGS, part (a) Temporary Pavement Marking Tape, is hereby modified by deleting the first sentence in its entirety and replacing it as follows:
- This tape for pavement markings is classified as temporary and is removable.
173. 646.08 TEMPORARY PAVEMENT MARKINGS, part (a) Temporary Pavement Marking Tape, second sentence, is hereby modified by deleting the phrase "Type II" and replacing it with the word "The" and by deleting the phrase "Subsection 708.12(b)" and replacing it with the phrase "Subsection 708.13(c)".
174. 646.08 TEMPORARY PAVEMENT MARKINGS, part (b) Pavement Marking Mask, is hereby modified by deleting the phrase "Subsection 708.12(c)" and replacing it with the phrase "Subsection 708.13(d)" in the second sentence.
175. 646.08 TEMPORARY PAVEMENT MARKINGS, part (c) Raised Pavement Markers, Type II, is hereby modified by adding the following sentence to the second (last) paragraph:
- They shall conform to the requirements of Subsection 708.13(b) and shall be installed in accordance with the manufacturer's requirements.
176. 646.08 TEMPORARY PAVEMENT MARKINGS, part (d) Line Striping Targets, is hereby modified by adding the word "fluorescent" before the word "orange" and by deleting the number "III" and replacing it with the phrase "VIII or IX" in the first sentence of the fifth (last) paragraph.
177. 646.08 TEMPORARY PAVEMENT MARKINGS, part (d) Line Striping Targets, is hereby further modified by adding the following paragraph:
- Line striping targets shall conform to the requirements of Subsection 708.13(a) and shall be installed in accordance with the manufacturer's requirements.
178. 646.09 OTHER RELATED MARKINGS, part (a) Pavement Marking Recess, is hereby modified by deleting the phrase "provided is 125% of the material marking thickness" and replacing it with the phrase "meets the requirements of Table 646.09A" in the first sentence.

179. 646.09 OTHER RELATED MARKINGS, part (a) Pavement Marking Recess, is hereby further modified by deleting the last sentence in its entirety.
180. 646.09 OTHER RELATED MARKINGS, part (a) Pavement Marking Recess, is hereby still further modified by adding the following paragraphs and Table:

The bottom of the recess shall have a smooth, flat finished surface. The use of gang stacked Diamond cutting blades is required for asphalt pavement surfaces. The spacers between blade cuts shall be such that there will be less than a 254 μm (10 mil) rise in the finished groove between the blades.

Recesses shall be clean, dry, and free of laitance, oil, dirt, grease, paint, or other foreign contaminants prior to application of the pavement markings. The Contractor shall re-clean grooves, as necessary, prior to application of any primer or permanent markings. Depth plates shall be provided by the Contractor to assure that desired groove depth is achieved.

TABLE 646.09A - PAVEMENT MARKING RECESS DEPTH

MARKING MATERIAL	STANDARD GLASS BEAD RECESS DEPTH μm (mils)	PREMIUM OPTIC RECESS DEPTH μm (mils)
Permanent Waterborne Paint	762-1016 (30-40)	762-1016 (30-40)
Spray Applied Methyl-methacrylate	1016-1270 (40-50)	1778-2286 (70-90)
Extruded Methyl-methacrylate	2540-2794 (100-110)	2540-2794 (100-110)*
Structured Methyl-methacrylate	As recommended by manufacturer	As recommended by manufacturer*
Thermoplastic	2540-2794 (100-110)	2540-2794 (100-110)*
Polyurea	762-1270 (30-50)	1778-2286 (70-90)
Epoxy	762-1270 (30-50)	1778-2286 (70-90)
Permanent Tape	As recommended by manufacturer	As recommended by manufacturer
*Thermoplastic and Methyl-methacrylate with wet recoverable or wet reflective elements shall have a recess depth of 3048-3302 μm (120-130 mils).		

181. 646.14 BASIS OF PAYMENT, part (a) Paint Pavement Markings, is hereby modified by adding the following pay item ranges:

646.200 to 646.209	100 mm (4 inch) White Line	Meter (Linear Foot)
646.2110 to 646.2119	100 mm (4 inch) Yellow Line	Meter (Linear Foot)
646.2140 to 646.2149	150 mm (6 inch) White Line	Meter (Linear Foot)
646.2150 to 646.2159	150 mm (6 inch) Yellow Line	Meter (Linear Foot)
646.221 to 646.229	200 mm (8 inch) White Line	Meter (Linear Foot)
646.231 to 646.239	200 mm (8 inch) Yellow Line	Meter (Linear Foot)
646.241 to 646.249	300 mm (12 inch) White Line	Meter (Linear Foot)
646.251 to 646.259	300 mm (12 inch) Yellow Line	Meter (Linear Foot)
646.261 to 646.269	600 mm (24 inch) Stop Bar	Meter (Linear Foot)
646.300 to 646.309	Letter or Symbol	Each
646.311 to 646.319	Crosswalk Marking	Meter (Linear Foot)
646.321 to 646.329	Railroad Crossing Symbol	Each

SECTION 653 - EROSION PREVENTION AND SEDIMENT CONTROL MEASURES

182. 653.15 BIOTECHNICAL SLOPE PROTECTION, part (a) Erosion Logs, is hereby modified by being deleted in its entirety and replaced with the following:

- (a) Erosion Logs. Erosion logs shall be installed to intercept water flow and collect sediment and associated pollutants by settling and filtering. Erosion logs may be placed over bare or mulched soils or rolled erosion control products; around inlet and outlets; as check dams in unvegetated ditches, slope interrupters on steep slopes, and perimeter control; and along stream banks as a base for plantings. Some types of erosion logs (typically those with a heavier filtering medium such as compost) can be used in applications where underlying conditions are unsuitable (frozen ground, paved surfaces, sensitive plantings areas, etc.) for trenching.

Prior to placing erosion logs, the ground surface shall be properly graded and compacted and free of depressions or obstructions such as tree roots, protruding stones, or other foreign matter.

Erosion logs shall be installed in accordance with the manufacturer's installation guidelines, staking pattern guide, and details based upon the intended use on the construction site.

The Contractor shall remove accumulated sediment when it has reached 1/2 of the effective height of the log, or as directed by the Engineer. Alternatively, a new erosion log may be placed on top of and slightly behind the original one creating more sediment storage capacity. Erosion logs shall be maintained until disturbed area above the device has been permanently stabilized and construction activity has ceased.

When used as a temporary erosion prevention and sediment control measure, erosion logs may be cut open and left in place, but only if the fill material and netting are 100% biodegradable and the material is spread or graded flat so as to not cause concentration of future surface runoff.

SECTION 656 - PLANTING TREES, SHRUBS, AND VINES

183. 656.02 MATERIALS, is hereby modified by deleting the first entry in the Subsection listing (for "Barrier Fence") in its entirety.
184. 656.02 MATERIALS, is hereby further modified by adding the following as the second paragraph (directly below the Subsection listing):
- Barrier Fence shall meet the requirements of Section 653.

SECTION 677 - OVERHEAD TRAFFIC SIGN SUPPORTS

185. 677.01 DESCRIPTION, is hereby modified by adding the phrase "and removing and disposing of existing overhead traffic sign supports," after the phrase "supports,".
186. 677.03 GENERAL, is hereby modified by adding the following paragraph:
- Where existing overhead traffic sign supports are to be removed, the Contractor shall remove and dispose of the entire sign assembly, including concrete footings, to a depth of 450 mm (18 inches) below existing grade. Areas of ground disturbance shall be restored to the satisfaction of the Engineer.
187. 677.05 METHOD OF MEASUREMENT, is hereby modified by adding the following paragraph:
- The quantity of Remove Existing Overhead Sign Assembly of the type specified to be measured for payment will be the number of each assembly removed in the complete and accepted work.
188. 677.06 BASIS OF PAYMENT, is hereby modified by adding the following paragraphs and pay items:

The accepted quantity of Remove Existing Overhead Sign Assembly of the type specified will be paid for at the Contract unit price per each. Payment will be full compensation for removing and disposing of assembly components, including concrete footings; for performing any excavation necessary; for restoring areas of ground disturbance; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Costs associated with providing traffic control and/or flaggers for performing the work will be paid under the appropriate Contract item(s).

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
677.30 Remove Existing Overhead Sign Assembly, Cantilever	Each
677.35 Remove Existing Overhead Sign Assembly, Multi-Support	Each

SECTION 678 - TRAFFIC CONTROL SIGNALS

189. 678.01 DESCRIPTION, is hereby modified by adding the phrase ", and removing existing traffic control systems" after the word "system" in the first paragraph.

190. 678.02 MATERIALS, is hereby corrected by deleting "convers" and replacing it with the word "covers" in the second sentence of the last paragraph of the Subsection text.

191. 678.11 INSTALLATION, sixteenth paragraph, part (a), is hereby modified by adding the following as the third sentence:

The Contractor shall remove any equipment to be salvaged or reused in such a manner that the equipment is not damaged.

192. 678.13 METHOD OF MEASUREMENT, is hereby modified by adding the following paragraph:

The quantity of Removal of Existing Traffic Control Signal System to be measured for payment will be for each traffic control signal system removed in the complete and accepted work.

193. 678.14 BASIS OF PAYMENT, is hereby modified by adding the phrase "all removal, disposal, and salvage and/or reuse of existing system equipment and components," after the phrase "Electrical Wiring," in the second sentence of the first paragraph.

194. 678.14 BASIS OF PAYMENT, is hereby further modified by adding the following paragraph and pay item:

The accepted quantity of Removal of Existing Traffic Control Signal System will be paid for at the Contract unit price per each. Payment will be full compensation for removing and handling the existing traffic control signal system components as specified in the Contract Documents and for furnishing all labor, materials, tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
678.45 Removal of Existing Traffic Control Signal System	Each

SECTION 700 GENERAL

195. 700.01 GENERAL STATEMENT, is hereby corrected by deleting punctuation ".,." at the end of the first sentence of the fourth paragraph and replacing it with punctuation ".".

196. 700.02 MATERIALS CERTIFICATIONS, part (a) General, is hereby modified by deleting subpart (3) in its entirety.

197. 700.02 MATERIALS CERTIFICATIONS, part (a) General, is hereby further modified by adding the following as the seventh paragraph:

All certifications shall be forwarded to the Vermont Agency of Transportation Materials and Research Section.

SECTION 708 - PAINTS, STAINS, AND TRAFFIC MARKING MATERIALS

198. 708.01 GENERAL REQUIREMENTS, part (c) Sampling, Testing, and Certification, subpart (2) Testing, is hereby modified by adding the following sentence:

All other materials may be required to be tested on a cold weather AASHTO National Transportation Product Evaluation Program (NTPEP) pavement marking test deck.

199. 708.08 PAINT FOR PAVEMENT MARKINGS, part (b) Low VOC Traffic Paint, is hereby modified by adding the following as the first paragraph:

Ready-mixed Low VOC Chlorinated Rubber Traffic Paint shall consist of 100% chlorinated rubber type, fast drying traffic paint that shall contain properly formulated pigment and vehicle to give the desired results.

200. 708.08 PAINT FOR PAVEMENT MARKINGS, part (b) Low VOC Traffic Paint, subpart (1) Materials, is hereby modified by adding the following new subpart d.:

- d. The paint shall contain a maximum of 0.005% w/w (50 ppm w/w) lead. The EPA Method 1311 (TCLP) extract of the paint shall not contain amounts of cadmium, mercury, hexavalent chromium, or other toxic heavy metals in excess of the limits specified in SW-846.

201. 708.08 PAINT FOR PAVEMENT MARKINGS, part (b) Low VOC Traffic Paint, subpart (2) Composition, is hereby modified by deleting the phrase "and shall be a 100% acrylic binder" in the first sentence.

202. 708.08 PAINT FOR PAVEMENT MARKINGS, part (b) Low VOC Traffic Paint, subpart (2) Composition, is hereby further modified by deleting the phrase "Table 708.08A" and replacing it with the phrase "the following:" in the second sentence.

203. 708.08 PAINT FOR PAVEMENT MARKINGS, part (b) Low VOC Traffic Paint, subpart (2) Composition, is hereby still further modified by deleting TABLE 708.08A in its entirety and replacing it with the following:

TABLE 708.08A - LOW VOC CHLORINATED RUBBER TRAFFIC PAINT COMPOSITION

PERFORMANCE CHARACTERISTIC	WHITE	YELLOW/BLUE/ GREEN
Pigment Content, % by Mass (Weight) (ASTM D3723)	55% min. 59% max.	55% min 59% max.
Vehicle Content, % by Mass (Weight)	38% min. 42% max.	38% min. 42% max.
VOC Content, Mass (Weight) per Unit Volume (ASTM D3960)	150 g/L (1.25 lb/gal) max.	150 g/L (1.25 lb/gal) max.
Lead Content, %	0.005% max.	0.005% max.
Yellow Pigment	N/A	Yellow #65 or #75
Titanium Dioxide, Rutile Type II, (ASTM D1394)	120 g/L (1.00 lb/gal) max.	25 g/L (0.21 lb/gal) max.
Total Non-Volatile Content, % by Mass (Weight) (ASTM D2369)	70.0% min.	69.0% min.
Density, (ASTM D1475)	1.50 ± 0.04 kg/L (12.5 ± 0.33) lb/gal	1.46 ± 0.04 kg/L (12.2 +/- 0.33 lb/gal)
Close Cup Flash Point (ASTM D 3278)	4°C (39 °F) min.	4°C (39°F) min.

TABLE 708.08B - LOW VOC ACETONE BASED TRAFFIC PAINT COMPOSITION

PERFORMANCE CHARACTERISTIC	WHITE	YELLOW/BLUE/ GREEN
Pigment Content, % by Mass (Weight) (ASTM D3723)	53% min. 57% max.	51% min. 56% max.
Vehicle Content, % by Mass (Weight)	37% min. 42% max.	37% min. 42% max.
VOC Content, Mass (Weight) per Unit Volume (ASTM D3960)	150 g/L (1.25 lb/gal) max.	150 g/L (1.25 lb/gal) max.
Lead Content, %	0.005% max.	0.005% max.
Yellow Pigment	N/A	Yellow #65 or #75
Titanium Dioxide, Rutile Type II, (ASTM D1394)	120 g/L (1.00 lb/gal) max.	25 g/L (0.21 lb/gal) max.
Total Non-Volatile Content, % by Mass (Weight) (ASTM D2369)	70.0% min.	69.0% min.
Density, (ASTM D1475)	1.415 ± 0.04 kg/L (11.8 ± 0.33) lb/gal	1.367 ± 0.04 kg/L (11.4 +/- 0.33 lb/gal)
Close Cup Flash Point (ASTM D 3278)	-20°C (-4°F) min.	-20°C (-4°F) min.

204. 708.08 PAINT FOR PAVEMENT MARKINGS, part (b) Low VOC Traffic Paint, subpart (3) Laboratory Tests, subpart a. Viscosity, is hereby modified by being deleted in its entirety and replaced as follows:

a. Viscosity.

1. Chlorinated Rubber Traffic Paint. The paint viscosity shall not be less than 74 nor more than 90 Krebs units at 25°C (77°F) when tested according to ASTM D562.
2. Acetone Based Traffic Paint. The paint viscosity shall not be less than 70 nor more than 88 Krebs units at 25°C (77°F) when tested according to ASTM D562.

205. 708.08 PAINT FOR PAVEMENT MARKINGS, part (b) Low VOC Traffic Paint, subpart (4) Sampling and Testing, subpart a. Sampling Size, is hereby modified by being deleted the phrase "per batch of each type and color of traffic paint" and replacing it with the phrase "of each traffic paint per batch," in the first sentence.
206. 708.08 PAINT FOR PAVEMENT MARKINGS, part (b) Low VOC Traffic Paint, subpart (4) Sampling and Testing, subpart c. Sample Delivery, is hereby modified by deleting the first paragraph in its entirety and replacing it as follows:
- All samples shall be delivered to the Research and Testing Engineer, Vermont Agency of Transportation, Materials and Research Section, Barre-Montpelier Road, Montpelier, VT 05633.
207. 708.08 PAINT FOR PAVEMENT MARKINGS, part (d) Waterborne Traffic Paint, subpart (3) Laboratory Tests, d. Drying Time (No Pick Up Time), is hereby modified by deleting the phrase "380 microns" and replacing it with the phrase "381 μm ".
208. 708.08 PAINT FOR PAVEMENT MARKINGS, part (d) Waterborne Traffic Paint, subpart (3) Laboratory Tests, e. No Track Time (Field Test), is hereby modified by deleting the phrase "508 microns" and replacing it with the phrase "508 μm " in the second sentence.
209. 708.08 PAINT FOR PAVEMENT MARKINGS, part (d) Waterborne Traffic Paint, subpart (4) Sampling and Testing, c. Sample Delivery, is hereby corrected by deleting the phrase "1716 Barre-Montpelier Road, Berlin, VT 05602" and replacing it with the phrase "2178 Airport Road Unit B, Berlin, Vermont 05641" in the first paragraph.
210. 708.09 GLASS BEADS, is hereby modified by being re-named OPTICS.
211. 708.09 OPTICS, is hereby modified by adding new part (a) heading Glass Beads.
212. 708.09 OPTICS, part (a) Properties, is hereby modified by being re-designated as subpart (1) under part (a) heading Glass Beads.
213. 708.09 OPTICS, part (b) Certification, is hereby modified by being re-designated as subpart (2) under part (a) heading Glass Beads.
214. 708.09 OPTICS, is hereby further modified by adding the following new parts (b) and (c):
- (b) Premium Optics. Approved premium optics shall be one of the premium optics listed on the Approved Products List on file with the Agency's Materials and Research Section.
- (c) Wet Recoverable and Wet Reflective Optics. Approved wet recoverable and wet reflective optics shall be one of the wet recoverable and wet reflective optics listed on the Approved Products List on file with the Agency's Materials and Research Section.

215. 708.10 THERMOPLASTIC PAVEMENT MARKINGS, is hereby modified by being deleted in its entirety and replaced as follows:

708.10 THERMOPLASTIC PAVEMENT MARKINGS.

- (a) Thermoplastic Pavement Markings, Type A. Type A Thermoplastic Pavement Markings shall be one of the Thermoplastic Pavement Markings on the Approved Products List on file with the Agency's Materials and Research Section. These markings shall be used in long line applications or as specified in the Contract Documents. Thermoplastic composition shall comply with Table 708.10A.

TABLE 708.10A - THERMOPLASTIC PAVEMENT MARKING COMPOSITION
(by mass (weight))

Binder	18% Minimum
Filler	40% Maximum
Glass Beads	30 ±5-40%

- (b) Thermoplastic Pavement Markings, Type B. Type B Thermoplastic Pavement Markings shall be one of the Preformed Thermoplastic Pavement Markings on the Approved Products List on file with the Agency's Materials and Research Section. These markings shall be used in intersection applications for legends, stopbars, or symbols or as specified in the Contract Documents.
216. 708.11 RAISED PAVEMENT MARKERS, is hereby modified by being re-named RAISED PAVEMENT MARKERS, TYPE I.
217. 708.12 PAVEMENT MARKING TAPE, is hereby modified by deleting parts (a) Pavement Marking Tape, Type I, (b) Pavement Marking Tape, Type II, and (c) Pavement Marking Mask in their entirety and replacing them as follows:
- (a) Pavement Marking Tape, Type A. Type A Pavement Marking Tape shall be one of the non-removable permanent pavement marking tapes on the Approved Products List on file with the Agency's Materials and Research Section that exhibit high adhesion, high durability, and high retroreflectivity. These markings shall be used in high AADT locations in long line applications as specified in the Contract Documents.
- (b) Pavement Marking Tape, Type B. Type B Pavement Marking Tape shall be one of the non-removable pavement marking tapes on the Approved Products List on file with the Agency's Materials and Research Section. These markings shall be used in lower AADT locations in long line applications as specified in the Contract Documents.
- (c) Pavement Marking Tape, Type C. Type C Pavement Marking Tape shall be one of the non-removable pavement marking tapes on the Approved Products List on file with the Agency's Materials and Research Section. These markings shall be used at intersection locations only as specified in the Contract Documents.

218. 708.12 PAVEMENT MARKING TAPE, is hereby further modified by adding the following new part (d):

(d) Pavement Marking Tape, Type D. Type D Pavement Marking Tape for legends and symbols shall be one of the non-removable pavement marking tapes on the Approved Products List on file with the Agency's Materials and Research Section. These markings shall be used for preformed traffic markings made of the same material as that of an approved permanent Type A, B, or C tape.

219. 708.13 PREFORMED TRAFFIC MARKINGS AND SYMBOLS, is hereby modified by being deleted in its entirety and replaced as follows:

708.13 TEMPORARY DELINEATION SYSTEMS.

(a) Line Striping Targets. Line Striping Targets shall be one of the Line Striping Targets on the Approved Products List on file with the Agency's Materials and Research Section.

(b) Raised Pavement Markers, Type II. Acceptable Raised Pavement Markers shall be one of the Raised Pavement Markers on the Approved Products List on file with the Agency's Materials and Research Section.

(c) Temporary Pavement Marking Tape. Pavement Marking Tape shall be one of the removable pavement marking tapes on the Approved Products List on file with the Agency's Materials and Research Section.

(d) Pavement Marking Mask. Pavement Marking Mask shall be one of the Masking Marking Tapes on the Approved Products List on file with the Agency's Materials and Research Section.

220. 708.14 LINE STRIPING TARGETS, is hereby modified by being deleted in its entirety.

SECTION 710 - CULVERTS, STROM DRAINS, AND SEWER PIPES, NONMETAL

221. 710.03 CORRUGATED POLYETHYLENE PIPE, is hereby modified by adding the following as the last sentence:

In order to maintain approval status, polyethylene pipe manufacturers must participate in, and maintain compliance with, the AASHTO National Transportation Product Evaluation Program (NTPEP), which audits producers of the pipe.

222. 710.07 CORRUGATED POLYPROPYLENE PIPE, is hereby made a new Subsection of the Standard Specifications as follows:

223. 710.07 CORRUGATED POLYPROPYLENE PIPE. Corrugated polypropylene pipe and fittings shall conform to the latest revisions of AASHTO M 330, Type S. Acceptable corrugated polypropylene pipe shall be one of the corrugated polypropylene pipe products on the Approved Products List on file with the Agency's Materials and Research Section. In order to maintain approval status, polypropylene pipe manufacturers must participate in, and maintain compliance with, the AASHTO National Transportation Product Evaluation Program (NTPEP), which audits producers of the pipe.

SECTION 712 - CRIBBING MATERIALS

224. 712.04 GABION BASKETS, part (a) Wire for Gabion Baskets, is hereby modified by changing the word "shall" to the word "may" and by adding the phrase "or welded panels" after the phrase "woven wire mesh" in the first sentence of the first paragraph.

225. 712.04 GABION BASKETS, part (a) Wire for Gabion Baskets, is hereby further modified by adding the following as the third sentence of the first paragraph:

Welded panels shall be coated by hot dip galvanizing after fabrication.

226. 712.04 GABION BASKETS, part (b) PVC Coating for Gabion Baskets, is hereby modified by adding the following new subpart (7):

- (7) Punch Test. The mesh shall achieve satisfactory performance on the Punch Test, as described in ASTM A975 13.1.4. This requirement applies to both woven and welded gabion baskets.

SECTION 713 - REINFORCING STEEL, WELDED WIRE REINFORCEMENT, AND REINFORCING STRAND

227. 713.01 BAR REINFORCEMENT, is hereby modified by deleting the phrase "conforming to AASHTO M 31M/M 31, including supplementary requirements" and replacing it with the phrase ", unless otherwise specified in the Contract Documents" in the first paragraph.

228. 713.01 BAR REINFORCEMENT, is hereby further modified by adding the following new parts (a)-(f) and associated paragraphs:

- (a) Plain Reinforcing Steel. Plain reinforcing steel shall conform to AASHTO M 31M/M 31, including supplementary requirements.
- (b) Low Alloy Reinforcing Steel. Low alloy reinforcing steel shall conform to ASTM A 706/A 706M.
- (c) Epoxy Coated Reinforcing Steel. Epoxy coated reinforcing steel shall have an electrostatically applied organic epoxy protective coating, which has been prequalified, fabricated, tested, and installed in accordance with AASHTO M 284M/M 284.
- (d) Stainless Clad Reinforcing Steel. Stainless clad reinforcing steel shall meet the requirements of AASHTO M 329M/M 329.
- (e) Dual-Coated Reinforcing Steel. Dual-coated reinforcing steel shall meet the requirements of ASTM A 1055/A 1055M.
- (f) Solid Stainless Reinforcing Steel. Solid stainless reinforcing steel shall meet the requirements of ASTM A 955/A 955M with one of the following UNS designations: S24100, S30400, S31603, S31653, S32101, S32201, S32205, or S32304. Different designations shall not be mixed within the same project.

Where no core steel requirements are specified in the above specifications, the steel core of the bar reinforcement shall meet the requirements of plain reinforcing steel.

Certification. A Type D Certification shall be furnished in accordance with Subsection 700.02. Certification for Epoxy Coated Reinforcing Steel shall include the coating and coating process.

229. 713.07 COATED BAR REINFORCEMENT, is hereby modified by being deleted in its entirety.

SECTION 714 - STRUCTURAL STEEL

230. 714.08 ANCHOR BOLTS, BEARING DEVICES, is hereby corrected by deleting ".F" and replacing it with "F" in the first sentence of the first paragraph.
231. 714.08 ANCHOR BOLTS, BEARING DEVICES, is hereby further corrected by deleting punctuation ".,," and replacing it with punctuation "." at the end of the second sentence of the first paragraph.

SECTION 726 - PROTECTIVE COATINGS AND WATERPROOFING MATERIALS

232. 726.10 CONCRETE STAINING AND SEALING SYSTEMS, is hereby made a new Subsection of the Standard Specifications as follows:

726.10 CONCRETE STAINING AND SEALING SYSTEMS. Approved Concrete Staining and Sealing Systems shall be one of the Concrete Staining and Sealing Systems on the Approved Products List on file with the Agency's Materials and Research Section.

233. 726.11 SHEET MEMBRANE WATERPROOFING, PREFORMED SHEET, is hereby made a new Subsection of the Standard Specifications as follows:

726.11 SHEET MEMBRANE WATERPROOFING, PREFORMED SHEET. Approved Preformed Sheet Membrane Waterproofing Systems shall be one of the Preformed Sheet Membrane Waterproofing Systems on the Approved Products List on file with the Agency's Materials and Research Section.

SECTION 731 - BEARING PADS FOR STRUCTURES

234. 731.03 ELASTOMERIC MATERIAL, is hereby modified by deleting the second and third paragraphs in their entirety and replacing them with the following:

Unless noted otherwise, elastomer shall have a design hardness of 50 points and a design shear modulus of 0.8 MPa (110 psi).

Testing of elastomeric material shall be waived for bearings that will be encased in concrete in the final work. All other bearings shall be tested in accordance with the following table:

TABLE 731.03A - REQUIRED TESTS

Material Property	Test Method	Required Result
Hardness	ASTM D 2240	design hardness +/- 5 points
	or	
Shear Modulus	ASTM D 412 with AASTHO M 251 Section 8.8.4	design shear modulus +/- 15%
Low Temperature Brittleness	ASTM D 746 Procedure B	Pass Grade 4 test
Shear Bond Strength	AASHTO M 251 Annex A2 or Appendix X2	Pass
Min Tensile Strength	ASTM D 412	15.6 MPa (2250 psi)
Min Ultimate Elongation	ASTM D 412	(650 - 5 X design hardness)%

SECTION 755 - LANDSCAPING MATERIALS

235. 755.17 EROSION LOGS, is hereby modified by being deleted in its entirety and replaced with the following:

Erosion logs are available in varying diameters. The Contractor shall follow the manufacturer's recommendations for the material type and size based on the intended use.

Erosion logs shall be composed of weed-seed-free coir, straw, excelsior, compost, or other biodegradable filtering medium encased in a photo-degradable and/or biodegradable netting or mesh.

Netting shall have openings of 13 to 25 mm (1/2 to 1 inch), with the exception of compost filled logs which should be 3 to 10 mm (1/8 to 3/8 inch) or as recommended by the manufacturer and accepted by the Engineer.

Anchors for erosion logs shall be wooden stakes, U-shaped wire or earth anchors, or rebar stakes; the size and length shall be as recommended by the manufacturer.

Compost shall meet the requirements of Table 755.05A, with the exception that particle size shall be 99% < 50 mm (2 inches) and maximum 30% < 10 mm (3/8 inch).

SECTION 780 - CONCRETE REPAIR MATERIALS

236. 780.05 POLYMER CONCRETE REPAIR MATERIAL, is hereby made a new Subsection of the Standard Specifications as follows:

780.05 POLYMER CONCRETE REPAIR MATERIAL. Approved Polymer Concrete Repair Materials shall be one of the Polymer Concrete Repair Materials on the Approved Products List on file with the Agency's Materials and Research Section.

ATTACHMENT C: STANDARD STATE PROVISIONS FOR CONTRACTS AND GRANTS

1. **Entire Agreement:** This Agreement, whether in the form of a Contract, State Funded Grant, or Federally Funded Grant, represents the entire agreement between the parties on the subject matter. All prior agreements, representations, statements, negotiations, and understandings shall have no effect.
2. **Applicable Law:** This Agreement will be governed by the laws of the State of Vermont.
3. **Definitions:** For purposes of this Attachment, "Party" shall mean the Contractor, Grantee or Subrecipient, with whom the State of Vermont is executing this Agreement and consistent with the form of the Agreement.
4. **Appropriations:** If this Agreement extends into more than one fiscal year of the State (July 1 to June 30), and if appropriations are insufficient to support this Agreement, the State may cancel at the end of the fiscal year, or otherwise upon the expiration of existing appropriation authority. In the case that this Agreement is a Grant that is funded in whole or in part by federal funds, and in the event federal funds become unavailable or reduced, the State may suspend or cancel this Grant immediately, and the State shall have no obligation to pay Subrecipient from State revenues.
5. **No Employee Benefits For Party:** The Party understands that the State will not provide any individual retirement benefits, group life insurance, group health and dental insurance, vacation or sick leave, workers compensation or other benefits or services available to State employees, nor will the state withhold any state or federal taxes except as required under applicable tax laws, which shall be determined in advance of execution of the Agreement. The Party understands that all tax returns required by the Internal Revenue Code and the State of Vermont, including but not limited to income, withholding, sales and use, and rooms and meals, must be filed by the Party, and information as to Agreement income will be provided by the State of Vermont to the Internal Revenue Service and the Vermont Department of Taxes.
6. **Independence, Liability:** The Party will act in an independent capacity and not as officers or employees of the State.

The Party shall defend the State and its officers and employees against all claims or suits arising in whole or in part from any act or omission of the Party or of any agent of the Party. The State shall notify the Party in the event of any such claim or suit, and the Party shall immediately retain counsel and otherwise provide a complete defense against the entire claim or suit.

After a final judgment or settlement the Party may request recoupment of specific defense costs and may file suit in Washington Superior Court requesting recoupment. The Party shall be entitled to recoup costs only upon a showing that such costs were entirely unrelated to the defense of any claim arising from an act or omission of the Party.

The Party shall indemnify the State and its officers and employees in the event that the State, its officers or employees become legally obligated to pay any damages or losses arising from any act or omission of the Party.

7. **Insurance:** Before commencing work on this Agreement the Party must provide certificates of insurance to show that the following minimum coverages are in effect. It is the responsibility of the Party to maintain current certificates of insurance on file with the state through the term of the Agreement. No warranty is made that the coverages and limits listed

herein are adequate to cover and protect the interests of the Party for the Party's operations. These are solely minimums that have been established to protect the interests of the State.

Workers Compensation: With respect to all operations performed, the Party shall carry workers' compensation insurance in accordance with the laws of the State of Vermont.

General Liability and Property Damage: With respect to all operations performed under the contract, the Party shall carry general liability insurance having all major divisions of coverage including, but not limited to:

Premises - Operations
Products and Completed Operations
Personal Injury Liability
Contractual Liability

The policy shall be on an occurrence form and limits shall not be less than:

\$1,000,000 Per Occurrence
\$1,000,000 General Aggregate
\$1,000,000 Products/Completed Operations Aggregate
\$ 50,000 Fire/ Legal/Liability

Party shall name the State of Vermont and its officers and employees as additional insureds for liability arising out of this Agreement.

Automotive Liability: The Party shall carry automotive liability insurance covering all motor vehicles, including hired and non-owned coverage, used in connection with the Agreement. Limits of coverage shall not be less than: \$1,000,000 combined single limit.

Party shall name the State of Vermont and its officers and employees as additional insureds for liability arising out of this Agreement.

8. **Reliance by the State on Representations:** All payments by the State under this Agreement will be made in reliance upon the accuracy of all prior representations by the Party, including but not limited to bills, invoices, progress reports and other proofs of work.
9. **Requirement to Have a Single Audit:** In the case that this Agreement is a Grant that is funded in whole or in part by federal funds, the Subrecipient will complete the Subrecipient Annual Report annually within 45 days after its fiscal year end, informing the State of Vermont whether or not a Single Audit is required for the prior fiscal year. If a Single Audit is required, the Subrecipient will submit a copy of the audit report to the granting Party within 9 months. If a single audit is not required, only the Subrecipient Annual Report is required.

For fiscal years ending before December 25, 2015, a Single Audit is required if the subrecipient expends \$500,000 or more in federal assistance during its fiscal year and must be conducted in accordance with OMB Circular A-133. For fiscal years ending on or after December 25, 2015, a Single Audit is required if the subrecipient expends \$750,000 or more in federal assistance during its fiscal year and must be conducted in accordance with 2 CFR Chapter I, Chapter II, Part 200, Subpart F. The Subrecipient Annual Report is required to be submitted within 45 days, whether or not a Single Audit is required.

10. **Records Available for Audit:** The Party shall maintain all records pertaining to performance under this agreement. "Records" means any written or recorded information, regardless of physical form or characteristics, which is produced or acquired by the Party in

the performance of this agreement. Records produced or acquired in a machine readable electronic format shall be maintained in that format. The records described shall be made available at reasonable times during the period of the Agreement and for three years thereafter or for any period required by law for inspection by any authorized representatives of the State or Federal Government. If any litigation, claim, or audit is started before the expiration of the three year period, the records shall be retained until all litigation, claims or audit findings involving the records have been resolved.

11. Fair Employment Practices and Americans with Disabilities Act: Party agrees to comply with the requirement of Title 21V.S.A. Chapter 5, Subchapter 6, relating to fair employment practices, to the full extent applicable. Party shall also ensure, to the full extent required by the Americans with Disabilities Act of 1990, as amended, that qualified individuals with disabilities receive equitable access to the services, programs, and activities provided by the Party under this Agreement. Party further agrees to include this provision in all subcontracts.

12. Set Off: The State may set off any sums which the Party owes the State against any sums due the Party under this Agreement; provided, however, that any set off of amounts due the State of Vermont as taxes shall be in accordance with the procedures more specifically provided hereinafter.

13. Taxes Due to the State:

- a. Party understands and acknowledges responsibility, if applicable, for compliance with State tax laws, including income tax withholding for employees performing services within the State, payment of use tax on property used within the State, corporate and/or personal income tax on income earned within the State.
- b. Party certifies under the pains and penalties of perjury that, as of the date the Agreement is signed, the Party is in good standing with respect to, or in full compliance with, a plan to pay any and all taxes due the State of Vermont.
- c. Party understands that final payment under this Agreement may be withheld if the Commissioner of Taxes determines that the Party is not in good standing with respect to or in full compliance with a plan to pay any and all taxes due to the State of Vermont.
- d. Party also understands the State may set off taxes (and related penalties, interest and fees) due to the State of Vermont, but only if the Party has failed to make an appeal within the time allowed by law, or an appeal has been taken and finally determined and the Party has no further legal recourse to contest the amounts due.

14. Child Support: (Applicable if the Party is a natural person, not a corporation or partnership.) Party states that, as of the date the Agreement is signed, he/she:

- a. is not under any obligation to pay child support; or
- b. is under such an obligation and is in good standing with respect to that obligation; or
- c. has agreed to a payment plan with the Vermont Office of Child Support Services and is in full compliance with that plan.

Party makes this statement with regard to support owed to any and all children residing in Vermont. In addition, if the Party is a resident of Vermont, Party makes this statement

with regard to support owed to any and all children residing in any other state or territory of the United States.

- 15. Sub-Agreements:** Party shall not assign, subcontract or subgrant the performance of this Agreement or any portion thereof to any other Party without the prior written approval of the State. Party also agrees to include in all subcontract or subgrant agreements a tax certification in accordance with paragraph 13 above.
- 16. No Gifts or Gratuities:** Party shall not give title or possession of any thing of substantial value (including property, currency, travel and/or education programs) to any officer or employee of the State during the term of this Agreement.
- 17. Copies:** All written reports prepared under this Agreement will be printed using both sides of the paper.
- 18. Certification Regarding Debarment:** Party certifies under pains and penalties of perjury that, as of the date that this Agreement is signed, neither Party nor Party's principals (officers, directors, owners, or partners) are presently debarred, suspended, proposed for debarment, declared ineligible or excluded from participation in federal programs, or programs supported in whole or in part by federal funds.

Party further certifies under pains and penalties of perjury that, as of the date that this Agreement is signed, Party is not presently debarred, suspended, nor named on the State's debarment list at: <http://bgs.vermont.gov/purchasing/debarment>
- 19. Certification Regarding Use of State Funds:** In the case that Party is an employer and this Agreement is a State Funded Grant in excess of \$1,001, Party certifies that none of these State funds will be used to interfere with or restrain the exercise of Party's employee's rights with respect to unionization.

(End of Standard Provisions)

Special Provisions for: Castleton BRF 015-2(10)

1. LABOR SUPPLY. Available workers for this Contract may be obtained from Manager, Employment & Training, Rutland, VT. The latest edition of the DBE Registry can be obtained from the Office of Civil Rights and Labor's Webpage at the following address: www.aot.state.vt.us/CivilRights/default.htm. Contractors that do not have access to the internet may obtain a copy from the Office of Contract Administration upon request.
2. CONTRACT COMPLETION DATE. This Contract shall be completed on or before September 25, 2015.
3. NOTICE TO BIDDERS. U.S. Department of Labor Davis-Bacon wage rates are applicable to this Contract. Copies of the applicable rates are included in this proposal.
4. CONTACT WITH THE AGENCY. From the time of advertising until the actual bid opening for this Contract, all prospective Contractors, subcontractors, and suppliers shall direct all inquiries related to this project solely to the Agency's Office of Contract Administration at (802) 828-2641. This number may also be accessed via the Agency's TTY/TDD Telecommunications Relay Service at 1-800-253-0191.

The deadline for submitting inquiries related to this project to the Office of Contract Administration is 4:30 p.m. Eastern Standard Time on November 26, 2014. No exceptions will be made to this requirement.

5. NOTICE TO BIDDERS. The Contractor is hereby notified that in the absence of the Engineer, the Agency's Safety Officer and the Agency's Hazardous Materials and Waste Coordinator shall each have the authority to suspend work when they determine that a serious safety or environmental violation exists on the job site. The period of time work is suspended due to a serious safety or environmental violation will not be justification for an extension of time.
6. STANDARD SPECIFICATIONS. The provisions of the 2011 STANDARD SPECIFICATIONS FOR CONSTRUCTION, as modified herein, shall apply to this Contract.
7. SUPPLEMENTAL SPECIFICATIONS AND CONTRACT REQUIREMENTS. The Contractor's attention is directed to the following specifications and contract requirements included in the Proposal form and effective for this Contract:

Required Contract Provisions for Federal-Aid Construction
Standard Federal EEO Specifications
VT Agency of Transportation Contractor Workforce Reporting Requirements
Workers' Compensation; State Contracts Compliance Requirement
General Special Provisions dated May 6, 2014
Bulletin 3.5 Attachment C: Standard State Provisions for Contracts and Grants
Vermont Minimum Labor & Truck Rates
Disadvantaged Business Enterprise (DBE) Policy Contract Requirements
U.S. Department of Labor Davis-Bacon Wage Rates
Asphalt Price Adjustment Provisions dated April 6, 2010
Section 520 - Membrane Waterproofing, Spray Applied dated August 6, 2013
Construction General Permit (CGP) 3-9020 (Amended 2008) Authorization of Notice of Intent #7170-9020.A dated May 30, 2014
NYSDOT Certificate of Insurance for Highway Work Permit (PERM 17) (04/07)
NYSDOT Highway Work Permit Application for Non-Utility Work (PERM 33) (8/01)
Washington County (NY) Department of Public Works Work Permit Application
NYSDOT Work Zone Traffic Control TAST-C7 dated March 2008

Certification for Federal-Aid Contracts
Contractor's EEO Certification Form
Debarment & Non-Collusion Affidavit

8. NOTICE TO BIDDERS - CONTRACT INSURANCE REQUIREMENTS. The Contractor is hereby notified that in the event of a discrepancy between the stated insurance requirements of Bulletin 3.5 Attachment C: Standard State Provisions for Contracts and Grants and those of Subsection 103.04 of the Standard Specifications for Construction, the requirements of Subsection 103.04 of the Standard Specifications for Construction shall govern.
9. NOTICE TO BIDDERS - ADDITIONAL CONTRACT REQUIREMENT. For construction and transportation projects over \$250,000.00, a payroll process by which during every pay period the Contractor collects from the subcontractors or independent contractors a list of all workers who were on the jobsite during the pay period, the work performed by those workers on the jobsite, and a daily census of the jobsite. This information, including confirmation that Contractors, subcontractors, and independent contractors have the appropriate workers' compensation coverage for all workers at the jobsite, and similar information for the subcontractors regarding their subcontractors shall also be provided to the Department of Labor and to the Department of Banking, Insurance, Securities, and Health Care Administration, upon request, and shall be available to the public.
10. NOTICE TO BIDDERS - RE-DESIGNATION OF VTRANS OFFICIALS. The Contractor is hereby notified of the following re-designation of VTrans officials as referenced in the Contract Documents:

Where in the Contract Documents it reads:	It shall be read as and shall mean:
Director of Program Development	Chief Engineer
Assistant Director of Program Development	Deputy Chief Engineer
Roadway, Traffic, and Safety Engineer; Roadway Program Manager; Highway Safety & Design Engineer; Structures Engineer; Structures Program Manager	Director of Project Delivery Bureau
Chief of Local Transportation Facilities	Director of Municipal Assistance Bureau
Construction Engineer; Materials and Research Engineer	Director of Construction and Materials Bureau
Director of Operations	Director of Maintenance and Operations Bureau

11. NOTICE TO BIDDERS - INCENTIVE/DISINCENTIVE (I/D). The Agency's intent is to have both the bridge closure period (BCP) and lowering of rail work be as short in duration as possible. To encourage the Contractor to provide a maximum effort to complete the Identified Work for I/D within the periods as defined below, the Agency is willing to pay an incentive.

(a) Dates.

- (1) VT Route 30/Bridge No. 93 (Roadway). The allowable BCP is twenty-eight (28) consecutive calendar days between July 5, 2015 and August 15, 2015, exclusive. The twenty-eight (28) consecutive calendar day BCP is herein defined as the Roadway I/D period. During the Roadway I/D period, the Contractor will be allowed to work on Bridge No. 93 24 hours per day, 7 days per week, including holiday periods, as restricted in Special Provision No. 17 RAILROAD SPECIAL PROVISIONS.

Night work will be allowed during the Roadway I/D period. See Special Provision Nos. 12 NOTICE TO BIDDERS - REQUIREMENTS FOR NIGHTTIME WORK and 13 NOTICE TO BIDDERS - NIGHTTIME WORK RESTRICTIONS for additional information and requirements.

- (2) Lowering of Rail (Railroad). The allowable lowering of rail work period is fourteen (14) consecutive calendar days between the end calendar day of the BCP and twenty-eight (28) calendar days thereafter. The fourteen (14) consecutive calendar day lowering of rail work period is herein defined as the Railroad I/D period. During the Railroad I/D period, the Contractor will be allowed to work on the railroad 24 hours per day, 7 days per week, including holiday periods, as restricted in Special Provision No. 17 RAILROAD SPECIAL PROVISIONS.

Night work will be allowed during the Railroad I/D period. See Special Provision Nos. 12 NOTICE TO BIDDERS - REQUIREMENTS FOR NIGHTTIME WORK and 13 NOTICE TO BIDDERS - NIGHTTIME WORK RESTRICTIONS for additional information and requirements.

Upon any Contractor's receipt of the VAOT Contract award letter, the Contractor shall submit to the VAOT Construction Section for review and approval a certified letter indicating the BEGIN CONSTRUCTION DATES for the BCP and the lowering of rail work. This letter shall be received by the Construction Section a minimum of forty-two (42) calendar days prior to the BEGIN CONSTRUCTION DATE for the BCP indicated in the letter. The BEGIN CONSTRUCTION DATES shall be determined by the Contractor.

The I/D periods as established above for this Contract are absolutely fixed and will not be changed for any Act of God, omission, improper action, direction of the Engineer, or any other reason unless done so by the Secretary and only under extreme conditions as determined by the Secretary.

Revised December 9, 2014

There shall be a pre-closure coordination meeting held on site one (1) week prior to the BCP with all subcontractors, the Contractor's superintendent, the Engineer, the Project Manager, the Town of Castleton, the Town of Poultney, the Railroad, the Construction Structures Engineer, and the design consultant to discuss durations of work, types of night work, work sequencing, etc. The Contractor shall be responsible for setting this meeting up and making appropriate contacts. In addition, weekly meetings between the Contractor, Engineer, and other pertinent parties as determined by the Engineer shall be held to discuss the project progress and future construction activities, and current CPM progress schedules and narratives.

There shall be a coordination meeting held on site one (1) week prior to the lowering of rail work period with all subcontractors, the Contractor's superintendent, the Engineer, the Project Manager, the Town of Castleton, the Railroad, the Construction Structures Engineer, and the design consultant to discuss durations of work, types of night work, work sequencing, etc. The Contractor shall be responsible for setting this meeting up and making appropriate contacts. In addition, weekly meetings between the Contractor, Engineer, and other pertinent parties as determined by the Engineer shall be held to discuss the project progress and future construction activities, and current CPM progress schedules and narratives.

(b) Identified Work.

- (1) VT Route 30/Bridge No. 93 (Roadway). All work required to open new Bridge No. 93 to two-way traffic including:
 - a. Prestressed Concrete Next D Beam superstructure installed and joints cured;
 - b. Spray applied membrane installed;
 - c. Bridge railing installed; and
 - d. Paving and line striping completed.

Beginning two (2) weeks prior to the BCP, the Contractor is allowed to maintain alternating one-way traffic during working hours; two-lane two-way traffic shall be restored during non-working hours. Up to a maximum two week period following the end of the BCP, the Contractor shall maintain a minimum of one-lane, two-way traffic during working hours and two-lane, two-way traffic during non-working hours. Wherever one-lane, two-way traffic is maintained by the Contractor, the traveling public shall not be delayed more than 10 minutes unless otherwise directed by the Engineer. A temporary bridge will not be allowed at any time during construction of this project.

Work that may be completed up to two (2) weeks prior to the BCP includes preparation for bridge closure (i.e. construction of access road to rail), temporary railroad crossing, and installation of the permanent steel sheet piling that can be installed without removing or impacting the existing bridge. Work that may be completed two (2) weeks after the BCP includes seeding and mulching, installation of traffic signs, and removal of all temporary construction detour and bridge closure signs.

(2) Lowering of Rail (Railroad). All work required to lower the rail to achieve 21'-2 $\frac{1}{4}$ " vertical clearance including:

- (1) Tracks lowered;
- (2) Cross ties replaced as directed by the Engineer;
- (3) Ballast removed and replaced;
- (4) Existing horizontal alignment matched; and
- (5) Tracks lined and tamped.

(c) Pay Schedule.

(1) VT Route 30/Bridge No. 93 (Roadway). The Contractor will receive a lump sum compensation of forty thousand dollars (\$40,000) for completing the Identified Work before the end of the Roadway I/D period.

In addition, the Contractor will be compensated at a rate of twenty-three thousand dollars (\$23,000) per day that the Identified Work is completed prior to the end of the Roadway I/D period, up to a maximum total payment as specified herein. A partial day incentive payment will be made for the day the Identified Work is completed, as prorated by the Engineer.

The maximum amount payable under the incentive clause shall be eighty-six thousand dollars (\$86,000) (including the lump sum payment).

For each day after the end of the Roadway I/D period (allowable BCP) that the Identified Work remains uncompleted, the Contractor will be assessed a disincentive at a rate of twenty-three thousand dollars (\$23,000) per day. A partial day disincentive amount will be assessed for the day the Identified Work is completed, as prorated by the Engineer. There shall be no maximum on the disincentive amount.

This assessed disincentive is separate from, and will be imposed in addition to, any imposed Railroad disincentive, and/or liquidated damages which may be imposed for failure to complete the Contract on time.

(2) Lowering of Rail (Railroad). The Contractor will be compensated at a rate of three thousand dollars (\$3,000) per day that the Identified Work is completed prior to the end of the Railroad I/D period, up to a maximum total payment as specified herein. A partial day incentive payment will be made for the day the Identified Work is completed, as prorated by the Engineer.

The maximum amount payable under the incentive clause shall be fifteen thousand dollars (\$15,000).

For each day after the end of the Railroad I/D period that the Identified Work remains uncompleted, the Contractor will be assessed a disincentive at a rate of three thousand dollars (\$3,000) per day. A partial day disincentive amount will be assessed for the day the Identified Work is completed, as prorated by the Engineer. There shall be no maximum on the disincentive amount.

This assessed disincentive is separate from, and will be imposed in addition to, any imposed Roadway disincentive, and and/or liquidated damages which may be imposed for failure to complete the Contract on time.

- (d) Underruns and Overruns. The proposal indicates an estimated quantity for each Contract pay item. The fact that the actual amounts used in the construction of this project may vary from the estimate will not be a basis or cause for changing any of the conditions for I/D.

The Agency recognizes that additional work beyond the work indicated in the Plans is always possible in any construction contract. The Agency is willing to pay for necessary additional work in accordance with the terms and requirements of the Contract and the Standard Specifications for Construction, however, the Contractor shall absorb any resulting construction time within the original project and CPM Schedules, and there will be no adjustments or changes to the I/D dates or I/D conditions.

- (e) Payment. Payment will be made as specified in Section 900.

12. NOTICE TO BIDDERS - REQUIREMENTS FOR NIGHTTIME WORK. The Contractor is hereby notified that night work will be allowed within the bridge closure period. For the purposes of this Contract, "night" shall mean from the hours of 7:00 p.m. until 5:00 a.m. of the following day. The Engineer may abbreviate this time period as necessary for safety considerations.

Night work shall be performed in accordance with the National Cooperative Highway Research Program (NCHRP) Report 476 - "Guidelines for Design and Operation of Nighttime Traffic Control for Highway Maintenance and Construction". A copy of this guideline specification may be downloaded from the following website: http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_476.pdf.

Prior to beginning night work, the Contractor shall design a lighting system and present it to the Engineer for approval. The Contractor shall not perform any night work or activities within the project limits until the lighting system has been fully approved and is in place on the project.

The designed lighting system shall be mobile, shall be mounted separately from other construction equipment, shall illuminate the entire work area to daylight intensity with minimal glare, and shall be a surrounding design that minimizes shadows in the work area as much as possible.

All costs associated with the lighting system will be considered incidental to Contract item 641.10.

13. NOTICE TO BIDDERS - NIGHTTIME WORK RESTRICTIONS. The Contractor is hereby notified that during the bridge closure period, no work shall be performed between the hours of 9:00 p.m. and 5:00 a.m. that creates a noise level exceeding 75 decibels. The decibel level shall be measured from the point of activity to the nearest occupied residence.

Construction activities expected to reach this noise threshold include pneumatic hammers, hoe-ram, and similar impact type equipment.

The Contractor shall provide the Engineer, for the duration of the nighttime work, with a sound level meter capable of measuring this noise criteria during the bridge closure period.

Sound level meters shall be Rion NL-20, CESVA SC-160, Extech 407780 or an approved equal capable of meeting IEC60651: 1979 Type 2 and IEC60804: 1985 Type 2 Standards.

The cost for providing this equipment and meeting the specified noise level criteria will not be paid for separately, but will be considered incidental to all other Contract items.

14. NOTICE TO BIDDERS. All temporary construction signs shall meet the following requirements:

- A. Where sign installations are not protected by guardrail or other approved traffic barriers, all sign stands and post installations shall meet National Cooperative Highway Research Program (NCHRP) Report 350 or the AASHTO Manual for Assessing Safety Hardware (MASH). The appropriate resource shall be determined as described in the MASH publication. No sign posts shall extend over the top of the sign installed on said post(s). When anchors are installed, stub shall not be greater than 100 mm (4 inches) above existing ground.
- B. As a minimum, roll up sign material shall have ASTM D 4956 Type VI fluorescent orange retroreflective sheeting.
- C. All post-mounted signs and solid substrate portable signs shall have ASTM D 4956 Type VII, Type VIII, or Type IX fluorescent orange retroreflective sheeting.
- D. All retroreflective sheeting on traffic cones, barricades, and drums shall be at a minimum ASTM D 4956 Type III sheeting.
- E. All stationary signs shall be mounted on two 4.5 kg/m (3 lb/ft) flanged channel posts or 51 mm (2 inch) square steel inserted in 57 mm (2 1/4") galvanized square steel anchors. No sign posts shall extend over the top edge of sign installed on said posts.
- F. Prior to placing temporary work zone signs on the project, the Contractor must furnish for the Engineer's approval a detail for temporary work zone signs on steel posts showing stubs projecting a maximum of 100 mm (4 inches) above ground level and bolts for sign post.
- G. Construction signs shall be installed so as to not interfere with nor obstruct the view of existing traffic control devices, stopping sight distance, and corner sight distance from drives and town highways.

- H. Speed zones, if used, should be a maximum of 16 kph (10 mph) below existing posted speeds. Temporary speed limit certificates must be approved by the Chief Engineer.
15. NOTICE TO BIDDERS. All retroreflective sheeting on permanent signs (signs to remain after the project is completed) shall be at a minimum ASTM D 4956 Type III sheeting, unless otherwise shown on the Plans.
16. UTILITIES. Existing aerial facilities owned by the Telephone Operating Company of Vermont (d/b/a FairPoint Communications), Green Mountain Power Corporation, Comcast Communications, Level 3 Communications and Sovernet will be adjusted, as necessary, by employees or agents of the above companies in accordance with the approximate aerial utility relocation route shown on the Plans.

Existing underground facilities, along the Clarendon and Pittsford Railroad, owned by First Light Communications will be adjusted, as necessary, by employees or agents of the above company in accordance with the approximate underground utility relocation route shown on the Plans.

Existing underground, municipal water facilities owned by Castleton Fire District #3 will not require adjustment. The Contractor is cautioned to protect these facilities from damage.

Existing underground, municipal sewer facilities owned by the Town of Castleton will not require adjustment. The Contractor is cautioned to protect these facilities from damage. The Contractor shall pay particular attention to the Town owned sewer mains passing under the Clarendon and Pittsford Railroad. Exploratory excavation may be necessary to protect this facility from damage.

The Contractor shall be responsible for pumping sewage from the existing manhole at plan station 66+80 LT directly to the sewer treatment plant in the event that the sewer mains passing under the Clarendon and Pittsford Railroad are damaged during construction. Damage to these sewer mains shall be repaired to the satisfaction of the Engineer and the Town of Castleton at the Contractor's expense.

Insulation board shall be installed by the Contractor over the Town owned sewer lines where the sewer lines pass under the Clarendon and Pittsford Railroad, as detailed in the Plans. Payment for this work shall be included under Contract item 622.10.

Existing sewer manholes owned by the Town of Castleton may require adjustments to match the new finished grade elevation. Necessary elevation adjustments to the Town owned sewer manholes will be performed by the Contractor in accordance with Contract item 604.42.

Prior to the closure of the existing bridge the Town of Castleton will need to remove sludge from their storage facilities so as to have adequate retention available during the bridge closure period. The Contractor shall notify the Town of Castleton at least 6 weeks prior to the bridge closure to provide ample opportunity for this task to be completed.

Contacts for the above listed utility companies are:

Green Mountain Power:	David Birmingham	- (802)287-4402 Ext. 181
FairPoint Communications:	Andy Rice	- (802)747-1074
Comcast Communications:	Steven Marshall	- (802)776-1626
Level 3 Communications:	Mike Reilly	- (802)846-1666
Sovernet:	Mark Tessier	- (802)770-4617
First Light:	William Gray	- (802)373-4319
Castleton Fire District #3:	Rick Hall	- (802)468-2999
Castleton Sewer Dept.:	Ed Tracy	- (802)468-5315

The Contractor is advised that exploratory excavation to locate existing underground facilities may be necessary to protect these facilities from damage. Where approved by the Engineer, these utilities shall be located and/or exposed by methods such as air/vacuum excavation and/or hand digging to determine their exact location. This exploratory work shall be classified as Trench Excavation of Earth, Exploratory and payment will be made under Contract item 204.22.

Employees or agents of the above listed companies are to be allowed free and full access within the project limits with the tools, materials, and equipment necessary to install, operate, maintain, place, replace, relocate, and remove their facilities.

There will be no extra compensation paid to the Contractor for any inconvenience caused by working around and with the companies or their facilities.

Vermont Statutes Annotated, Title 30, Chapter 86 ("Dig Safe") requires notice to Dig Safe before starting excavation activities. The Contractor must telephone Dig Safe at 811 at least 48 hours (excluding Saturdays, Sundays and legal holidays) before, but not more than 30 days before, starting excavation activities at any location. In addition, before excavation and/or pavement grinding in or on the state highway right-of-way, the Contractor must contact the Agency's District Transportation Administrator to obtain/verify the location of Agency's underground utility facilities or to confirm the absence of such facilities.

Should the Contractor desire additional adjustments of the utility facilities for his/her convenience, proper arrangements shall be made in conformance with Subsection 105.07 of the Standard Specifications for Construction.

All Contractors, subcontractors or material suppliers involved in any project-related activity shall comply with all applicable codes and regulations related to working around live electrical lines; including, but not limited to maintaining the required minimum clear distance from an electrical utility facility. The Contractor's Competent Safety Officer shall be well versed in OSHA and VOSHA regulations, and shall be capable of implementing a plan to conform to these regulations during prosecution of work.

17. RAILROAD SPECIAL PROVISIONS.

INDEMNIFICATION; RAILROAD PROTECTIVE LIABILITY INSURANCE. All Contractors hired by the State pursuant to this project will be required to indemnify and save harmless the Clarendon and Pittsford Railroad Company (Railroad) and the State, their successors and assigns, and their agents and employees, against all loss, cost, damage and expense, including (but not limited to) damage to Railroad property, or the property of others, injury or death to Railroad employees or to others due directly in any way to the work done by the Contractor while working within the Railroad right-of-way during the construction of this project. In this connection, the State will require its Contractors to secure policies of insurance in the name of the Railroad and the State providing railroad protective liability coverage of \$2,000,000.00 per occurrence and \$6,000,000.00 in the aggregate for the Railroad, all as specified by 23 C.F.R. Part 646 ("Railroads"), Subpart A ("Railroad-Highway Insurance Protection") and the 2011 edition of the Vermont Agency of Transportation's *Standard Specifications for Construction*, Subsection 103.04(d) Railroad Protective Liability Insurance. Named insureds shall be Clarendon and Pittsford Railroad Company and the State of Vermont.

ADDITIONAL INSURANCE. All Contractors hired by the State for the project will be required to secure Contractor's Liability Protection Insurance providing bodily injury and property damage liability coverage that meets or exceeds the minimum amounts specified in the 2011 edition of the Vermont Agency of Transportation's *Standard Specifications for Construction*, Subsection 103.04(b).

GENERAL STATEMENT OF CONDITIONS CAUSING RAILROAD HAZARDSSCOPE

Provisions for safeguards to the property and operations of Railroad during construction by the State's Contractor.

GENERAL

The Contractor shall notify the Railroad and receive a permit from the Railroad at least fifteen (15) days in advance of starting work and/or locating equipment on the Railroad right-of-way and leasehold.

Equipment of the Contractor to be adjacent to the tracks shall be in first-class conditions so as to fully prevent any failure that would cause delay in the operation of trains or damage to Railroad facilities. Equipment shall not be placed or put in operation adjacent to a track without first obtaining permission of the Railroad.

The Contractor's work shall be performed in such a manner that the tracks, traffic, and appurtenances of the Railroad will be safeguarded. The Contractor shall ascertain and comply with the requirements of the Railroad relative to the Contractor's work on or adjacent to Railroad premises and shall keep the tracks clear of obstructions.

The Contractor will contact the Railroad to provide flaggers, inspection, signal maintainer, and other protective services as necessary for protection of railway traffic and property and for those engaged on the work during the period when the nature of the construction operations is such as to make it necessary. The character and extent of these services shall be as determined by the Railroad as the work progresses and as approved by the State's Resident Engineer.

These services will be paid for under Contract item 900.650 Special Provision (Maintenance of Railroad Traffic)(N.A.B.I.) at the rates specified herein.

The Contractor shall reimburse the Railroad for all necessary flagging and inspection services required by these specifications. Final settlement with the Contractor shall be contingent on certification that the Railroad has been reimbursed.

The Contractor will install, maintain and remove any temporary crossings, if required, at the expense of the Contractor.

NOTE: The Contractor must anticipate unscheduled trains.

If at any time a delay of normal train service is caused by the Contractor, the Railroad shall assess the Contractor an agreed to and/or stipulated prorated charge calculated at the rate of One Thousand and no/100 Dollars (\$1,000) for the first hour or fraction thereof, and increasing by Five Hundred and no/100 Dollars (\$500) per hour for each additional hour (i.e. additional \$1,500 for the second hour or fraction thereof, additional \$2,000 for the third hour or fraction thereof, etc.), to cover any and all damages resulting from the delay. This time will begin fifteen (15) minutes after the scheduled time for the train to arrive at the work site and end at the time the train is allowed to pass. Payment will be due only upon satisfactory evidence that the delay actually occurred.

HAZARDS. For emergency use only, immediately call 1-877-533-6913.

An operating track shall be considered fouled and subject to hazard when any object or operation is brought closer than twenty-five (25) feet to the centerline of the tracks.

A signal line or communication line shall be considered fouled and subject to hazard when any object is brought closer than four (4) feet to any wire of the line. An electrical supply line shall be considered fouled and subject to hazard when any object is brought closer than ten (10) feet to any wire of the line.

Cranes, trucks, power shovels or any other equipment shall be considered as fouling a track, signal line, communication or electric supply line when working in such a position that failure of equipment with or without lead could foul the track, signal line, communication or electric supply line. None of these or similar operations shall be carried on during the approach or passing of a train.

In the construction of staging, falsework or forms, the Contractor shall maintain a minimum vertical clearance of twenty-two (22) feet above the top of high rail and a minimum side clearance of twenty-five (25) feet from the centerline of track during the approach or passing of a train.

Note: Utilities are located within the general project area. Refer to the Plans and associated special provisions include in the Contract Documents.

PERIODS DURING WHICH THE STATE'S CONTRACTOR SHALL HAVE EXCLUSIVE AND UNINTERRUPTED ACCESS TO RAILROAD RIGHT-OF-WAY

Railroad grants the State and/or the State's Contractor right of entrance to the Railroad right-of-way so that the project fieldwork may be completed between June 28, 2015 through September 26, 2015. The temporary rights shall include exclusive and uninterrupted occupancy of the Railroad right-of-way to access the project during the following time segments:

- Monday to Thursday 9:00 AM through 5:00 PM
- Friday 9:00 AM through 7:00 PM
- Saturday 12:00 PM through 5:00 PM
- Sunday 7:30 AM through 4:00 PM

The Contractor is hereby advised that the Railroad's operating schedule is subject to revision. It is not the intention of the Railroad to interrupt any defined occupancy period events during the Contract period but from time to time it may be necessary to allow passage of a train(s). The Contractor will receive verbal notice communicated by the assigned railroad flag person at least sixty minutes prior to the train's arrival. The Contractor shall allow train passage and shall not be reimbursed for any incurred expense.

PERIODS DURING WHICH THE STATE'S CONTRACTOR SHALL HAVE NON-EXCLUSIVE AND INTERRUPTIBLE ACCESS TO RAILROAD RIGHT-OF-WAY

Railroad grants the State and/or the State's Contractor right of entrance to the Railroad right-of-way so that the project fieldwork may be completed between June 28, 2015 through September 26, 2015. The State's Contractor must confirm temporary work windows with the Railroad prior to scheduling the work. Temporary work windows shall be non-exclusive and interruptible occupancy of the Railroad right-of-way to access the project during the following time segments:

- Monday to Thursday 5:00 PM through 9:00 AM
- Friday 7:00 PM through 9:00 AM
- Saturday 5:00 PM through 12:00 PM
- Sunday 5:00 PM through 7:30 AM

While additional periods of exclusive and non-exclusive track occupancy may be available, the Railroad does not make any representations to the State as to such availability. The Contractor is hereby advised that the Railroad's operating schedule is periodically subject to revision at any time. As such, the specified non-exclusive and interruptible occupancy intervals will be subject to revision.

VERMONT RAIL SYSTEM FLAGGING SERVICE RATES

- (a) Contractor shall request flag person services at least ten days prior to mobilization date.
- (b) Flag person time begins and ends at assigned Vermont Rail System (VRS) Terminal.

(c) Cancellation or modification of flagging services assignment must be submitted in writing and received by VRS at least twenty-four hours prior to start of assigned time.

(d) Week Day Rates (Monday through Friday):

(1) Regular (up to eight hours/day): \$60.00 per hour

(2) Overtime (after eight hours): \$70.00 per hour

(3) Hourly rates include all associated expenses

(e) Weekend (Saturday through Sunday) and Holiday Rates:

(1) Per each hour employed: \$70.00 per hour

(2) Hourly rate includes all associated expenses

18. HIGHWAY PARKING RESTRICTIONS. Only such trucks and equipment as are necessary for the construction of this project will be permitted to stop or park on the shoulders or right-of-way of the highway trucks or equipment so stopped or parked shall be at least 1.2 m (4 feet) from the edge of the thru traffic lanes. Parking or stopping on the traveled portion of the roadway will not be permitted unless authorized by the Engineer to meet field conditions.

Private automobiles of workers will not be permitted to stop or park on the shoulders or right-of-way of the highway.

Each of the Contractor's trucks or equipment used for the construction of this project and permitted to park or stop as provided above shall be equipped with flashing light signals on the front and rear and the signals shall be operating at all times when parked or stopped on the highway unless otherwise authorized by the Engineer.

The flashing light signals shall be visibly distinct from and physically separate from the hazard warning system required by Federal and State motor vehicle laws and regulations. At least one of these flashing light signals shall be visible to traffic approaching from any angle at all times.

Qualified traffic control personnel shall be employed whenever the Contractor's vehicles or equipment (including that which belongs to the individual workers) enter or leave the traffic flow. All movement, in or out of the traffic flow, shall be with the flow of traffic.

19. SPECIAL CONSTRUCTION REQUIREMENTS.

A. Unless otherwise permitted in writing by the Engineer, and except as otherwise allowed under Special Provision No. 11(a), the Contractor shall not work during the holiday periods for Memorial Day, July Fourth, and Labor Day. The Engineer shall give a written order designating the time of observance of these holidays and of any additional holidays required by the season, anticipated traffic, and local custom. As specified in Subsection 105.14, and except as otherwise allowed under Special Provision No. 11(a), construction operations shall not be performed on any Sunday without the specific authorization of the Engineer.

Designated holiday periods shall begin at 12:00 noon on the day before the weekend or holiday, whichever applies, and shall end at 7:00 a.m. on the day after the holiday or the weekend, as appropriate.

- B. The Contractor shall maintain a safe access to all drives and intersecting side roads at all times during the construction of this project.
- C. Two-way radios shall be provided by the Contractor when requested by the Engineer for use by traffic control personnel. All costs for furnishing and using two-way radios will not be paid for directly, but will be considered incidental to Contract item 641.10.
- D. The Contractor shall have available on the project the current editions of the Manual on Uniform Traffic Control Devices (MUTCD) and the Standard Highway Signs and Markings (SHSM) Book. Information for obtaining these publications may be found at: <http://mutcd.fhwa.dot.gov/index.htm>.

ASPHALT PRICE ADJUSTMENT

- 20. SUPPLEMENTAL SPECIFICATION - ASPHALT PRICE ADJUSTMENT, dated April 6, 2010, is hereby made a new Subsection of the Specifications, superseding all previous editions and their modifications.
- 21. SUPPLEMENTAL SPECIFICATION - ASPHALT PRICE ADJUSTMENT, dated April 6, 2010, GENERAL REQUIREMENTS AND CONDITIONS, part (b) text, is hereby modified by being deleted in its entirety and replaced with text "NOT USED".

The index price for asphalt cement is \$629.00 per ton.

In addition to materials produced under Contract pay item(s) as allowed in GENERAL REQUIREMENTS AND CONDITIONS, part (a) of the Supplemental Specification, asphalt cement produced under Contract items 900.675 Special Provision (Hand-Placed Bituminous Concrete Material, Drives) and 900.680 Special Provision (Bituminous Concrete Pavement, Small Quantity) will be included for adjustment.

The tonnage of Special Provision (Hand-Placed Bituminous Concrete Material, Drives) placed will be utilized in the adjustment calculation.

If an emulsified asphaltic liquid is used in the Contract work under any Contract item subject to the Asphalt Price Adjustment provisions and that liquid is not included in the table under subpart (5) of PRICE ADJUSTMENT PROCEDURES of the Supplemental Specification, the ACEA as defined in subpart (5) for that liquid will be that as determined by averaging Contractor certified test results for the project.

SECTION 108 - PROSECUTION AND PROGRESS

22. 108.11 DETERMINATION OF EXTENSION OF CONTRACT TIME FOR COMPLETION, part (b) Determination of Contract Completion Date Extension, is hereby modified by adding new subpart (11) as follows:

(11) The days from April 15th to December 1st, inclusive, on which the weather or condition of the ground caused suspension of the work.

23. 108.12 FAILURE TO COMPLETE WORK ON TIME, part (c) Liquidated Damages; General; Days Charged, is hereby modified by deleting the DAILY CHARGE FOR LIQUIDATED DAMAGES FOR EACH WORKING DAY OF DELAY table in its entirety and replacing it with a new table as follows:

DAILY CHARGE FOR LIQUIDATED DAMAGES
FOR EACH WORKING DAY OF DELAY

Original Contract Amount		
From More Than (\$)	To And Including (\$)	Daily Charge Per Day of Delay (\$)
0	500,000	1,200.00
500,000	1,000,000	1,300.00
1,000,000	1,500,000	1,400.00
1,500,000	3,000,000	1,800.00
3,000,000	5,000,000	2,300.00
5,000,000	10,000,000	3,500.00
10,000,000	20,000,000	5,900.00
20,000,000+	-----	10,700.00

SECTION 490 - SUPERPAVE BITUMINOUS CONCRETE PAVEMENT

24. 490.03 COMPOSITION OF MIXTURE, part (b) Design Criteria, TABLE 490.03B - DESIGN CRITERIA is hereby modified by deleting the fourth row (for "Dust Proportion") in its entirety and replacing it with the following:

Dust Proportion (Filler/Asphalt Ratio)	0.60 - 1.20 (Wet Sieve) (Dry Sieve for Production - Types IS and IIS: 0.50 - 1.20 Types IIIS, IVS, and VS: 0.50 - 1.00)
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25. 490.03 COMPOSITION OF MIXTURE, part (b) Design Criteria, TABLE 490.03B - DESIGN CRITERIA is hereby further modified by deleting the sixth row (for "Voids in Mineral Aggregate") in its entirety and replacing it with the following:

Voids in Mineral Aggregate (VMA)%	12.5 min.	13.5 min.	14.5 min.	15.5 min.	16.5 min.	17.5 min.
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26. 490.03 COMPOSITION OF MIXTURE, part (b) Design Criteria, TABLE 490.03B - DESIGN CRITERIA is hereby still further modified by deleting the ninth row (for "Voids Filled With Asphalt") in its entirety.

27. 490.03 COMPOSITION OF MIXTURE, part (b) Design Criteria, TABLE 490.03B - DESIGN CRITERIA is hereby still further modified by deleting footnotes (3), (4), and (5) in their entirety.
28. 490.03 COMPOSITION OF MIXTURE, part (b) Design Criteria, is hereby modified by deleting the heading "Voids Filled With Asphalt (VFA)" and the equation " $VFA = 100 \times ((VMA - V_a)/VMA)$ " in the second paragraph.
29. 490.03 COMPOSITION OF MIXTURE, part (c) Mix Design, is hereby modified by deleting the phrase ", and a single percentage for VFA" in the first sentence of the third paragraph.
30. 490.03 COMPOSITION OF MIXTURE, part (d) Control of Mixtures, TABLE 490.03C - PRODUCTION TESTING TOLERANCES is hereby modified by deleting the seventh (last) row (for "VFA") in its entirety.
31. 490.03 COMPOSITION OF MIXTURE, part (d) Control of Mixtures, TABLE 490.03C - PRODUCTION TESTING TOLERANCES is hereby further modified by deleting footnote 2 in its entirety.

SECTION 501 - HPC STRUCTURAL CONCRETE

32. 501.02 MATERIALS, is hereby modified by adding the following:

Where a shrinkage admixture will be used in placing concrete as allowed by the Contract Documents, the following requirements shall be met:

A shrinkage compensating admixture shall be added during the initial concrete mixing phase or as recommended by the chemical manufacturer product representative. The shrinkage compensating admixture shall be one of the products listed below. The final dosage rate will be determined by the product representative and the concrete producer. The dosage rate volume is computed into the final water/cementitious ratio.

Manufacturer: Sika Construction Product Division

Product name: - Sika Control 40

Tel.: 1-800-933-7452

Website: <http://www.sikaconstruction.com/tds-cpd-SikaControl40-us.pdf>

Manufacturer: The Euclid Chemical Company

Product name: Eucon SRA

Tel.: 1-800-321-7628

Website: <http://www.euclidchemical.com/fileshare/ProductFiles/techdata/euconsra.pdf>

Manufacturer: BASF (Master Builders)

Product name: Tetraguard AS20

Tel.: 1-800-628-9900

Website: <http://www.basf-admixtures.com/NR/rdonlyres/84C7EC12-F527-44FD-A8B9-3A007609FF76/0/TETRAGUARD AS20 DS307.pdf>

Manufacturer: Grace Construction Products

Product name: Eclipse Plus

Tel.: 1-877-423-6491

Website: <http://www.na.graceconstruction.com/concrete/download/EC-13B 2.pdf>

SECTION 507 - REINFORCING STEEL

33. GENERAL SPECIAL PROVISIONS FOR ALL PROJECTS dated May 6, 2014 SECTION 507 - REINFORCING STEEL, Provision No. 58, is hereby modified by being deleted in its entirety and being replaced as follows:

507.04 PROTECTION OF MATERIAL, is hereby still further modified by adding the following paragraph:

Ends of Level II reinforcing steel where the mild steel is exposed shall be repaired in the following manner:

- (a) Cut ends of dual-coated reinforcing steel shall be coated with a two-part epoxy patching material as specified by the coating manufacturer. The materials and procedures shall be approved by the Engineer prior to the repairs being performed.
- (b) Cut ends of stainless clad reinforcing steel shall be epoxied and capped in accordance with the manufacturer's recommendations with either stainless steel caps or plastic caps. Caps shall be sealed to prevent the intrusion of moisture.

SECTION 652 - EROSION PREVENTION & SEDIMENT CONTROL PLAN

34. SECTION 652 - EROSION PREVENTION & SEDIMENT CONTROL PLAN, is hereby made a new Section of the Specifications as follows:

35. 652.01 DESCRIPTION. This work shall consist of designing, furnishing, and submitting for acceptance modifications to the Contract Erosion Prevention & Sediment Control Plan (hereinto known as the EPSC Plan), becoming a co-permittee with the Agency of Transportation, State of Vermont on associated permits, monitoring the EPSC Plan using an On-Site Plan Coordinator, and maintaining the erosion prevention and sediment control measures to ensure the effectiveness of the EPSC Plan.

36. 652.02 MATERIALS. Materials required for the field work maintenance of the EPSC Plan shall meet all requirements of the appropriate Section of the VAOT Standard Specifications for Construction.

Materials including manuals, checklists, forms, and other supporting documentation necessary to meet the requirements of these provisions and maintain compliance with associated permits shall be made available to the Engineer by the Contractor and maintained on site by the Contractor. Supporting documents associated with the requirements of General Permit 3-9020 are available upon request to ANR or from the ANR Stormwater web page. The VTrans Erosion Prevention and Sediment Control Plan Contractor Checklist and Low Risk Site Inspection Form are available from the VTrans Construction Environmental Engineer.

37. 652.03 QUALIFICATIONS. Modifications to the EPSC Plan shall be prepared and signed by a Licensed Professional Civil Engineer registered in the State of Vermont or a qualified professional in erosion prevention and sediment control, certified by CPESC, Inc. or equivalent, hereinafter called the "Preparer."

38. 652.04 EROSION PREVENTION & SEDIMENT CONTROL PLAN. The EPSC Plan, developed using a combination of structural, non-structural, and vegetative practices to adequately prevent erosion and control sedimentation, and meeting the requirements of the VTrans Erosion Prevention & Sediment Control Plan Designer Checklist (Non-Jurisdictional and Low Risk) or the Vermont Standards & Specifications for Erosion Prevention & Sediment Control based on area of disturbance and risk, has been included in the Contract Documents.

The Contractor shall use the EPSC Plan included in the Contract and, at the onset of construction as well as throughout the duration of the project, modify it to describe changing conditions and illustrate how the criteria of the determined risk will be upheld. For Non-Jurisdictional and Low Risk projects, the Contractor shall use the VTrans Erosion Prevention and Sediment Control Plan Contractor Checklist. For Moderate Risk projects, the Contractor shall modify the Contract EPSC Plan in accordance with the General Permit 3-9020 Parts 4 through 6. If a modification to the EPSC Plan at a Low or Moderate Risk project alters any criteria of the determined risk, an updated Risk Evaluation shall be prepared.

The Contractor may use the Agency's EPSC Plan sheet(s) as a basis for necessary modifications; however, if necessary to convey the sequential nature and phases of construction activities and associated erosion prevention and sediment control measures, several plan sheets showing successive site conditions are recommended.

All work shown in the EPSC Plan shall be included in the Contractor's CPM Progress Schedule, as required by Subsection 108.03.

39. 652.05 SUBMITTALS. Three sets of the modified EPSC Plan as well as the updated Risk Evaluation, stamped and signed by the Preparer, shall be submitted to the Construction Engineer as Construction Drawings in accordance with Section 105. Submittals shall occur after award of the Contract but not later than the Pre-Construction Conference to allow time for review by the Agency. An Acceptance Memo or comments will be provided to the Contractor within 10 working days.

The Contractor shall respond to comments as soon as possible, but not more than 10 days after the date of VTrans initial correspondence. Agency review time for response to comments will be completed within an additional 10 working days. Modifications or additions to the EPSC Plan will not be considered as an acceptable delay of the work under Subsection 108.11.

All subsequent modifications to the EPSC Plan and updates to the Risk Evaluation will be reviewed and forwarded to the ANR by the Agency as appropriate.

Construction activities for EPSC Plan modifications that do not require authorization from the ANR shall commence only after the EPSC Plan has been accepted by the Agency. Construction activities for EPSC Plan modifications that do require authorization from the ANR shall commence only after that authorization has been granted.

40. 652.06 MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN. The Contractor shall designate a person (On-Site Plan Coordinator) who is directly responsible for the on-site implementation of the EPSC Plan. This person shall generally be on-site on a daily basis during active construction and have the authority to halt construction activities if necessary. The On-Site Plan Coordinator shall have demonstrated experience in construction practices as they relate to erosion prevention and sediment control as well as a general understanding of State and Federal environmental regulations and permits pertaining to the National Pollutant Discharge Elimination System Construction Program. The On-Site Plan Coordinator shall be proficient at reading and interpreting engineering and EPSC plans. Preference will be given to a Licensed Professional Civil Engineer registered in the State of Vermont or a qualified professional in erosion prevention and sediment control, certified by CPESC, Inc. or equivalent. The qualifications of the On-Site Plan Coordinator shall be included in the EPSC Plan. The Engineer, if not satisfied with the performance of this individual, may at any time request a replacement. }

During active construction and periods of inactivity, the On-Site Plan Coordinator shall be responsible for inspections and reporting.

- (a) Active Construction. Inspections shall occur once every seven calendar days and within 24 hours of the end of a storm event that results in a discharge of stormwater from the site. During the winter construction season (October 15th to April 15th, inclusive), inspections at all sites shall occur daily.

For Non-Jurisdictional and Low Risk projects, inspections shall be conducted using the Agency's EPSC Plan Inspection Report (Non-Jurisdictional and Low Risk Projects).

For Moderate Risk projects, inspections shall be conducted using the General Permit 3-9020 Inspection Report for Moderate Risk Projects referenced in the Permit and available upon award of the Contract.

Immediate action shall be taken to correct the discharges of sediment, including halting or reducing construction activities as necessary, until the discharge and/or the condition is fully corrected. Corrective actions shall be recorded on the monitoring reports and shown on the EPSC Plan. Each report shall be signed by the On-Site Plan Coordinator.

- (b) Inactive Construction. Periods such as shutdown during the winter season shall require inspection and reporting of erosion prevention and sediment control measures. The Contractor shall contact the Engineer prior to conducting any inspections. The inspections shall be conducted at least once every 30 days and within 24 hours of any storm or significant snow melt event that may cause stormwater runoff to leave the construction site. The Contractor shall provide, within 24 hours, the necessary personnel, equipment, and materials to repair or correct any deficiencies identified during inspection. All deficiencies and corrective measures taken shall be documented on the reports.

Copies of all reports shall be submitted to the Engineer within 24 hours of inspection or when corrective measures were taken. Copies of all reports shall be kept on site in the Contractor's project files.

41. 652.07 MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN. This work shall consist of providing all labor and equipment necessary for field maintenance of erosion prevention and sediment control items in the Contract, and providing materials and labor necessary for installing, monitoring, maintaining and, where necessary, removing additional measures needed to correct deficiencies that develop during construction that lessen the performance of the EPSC Plan. Erosion prevention and sediment control measures shall be maintained by the Contractor and removed when authorized by the Engineer. The Contractor shall establish vegetation in all areas disturbed during removal of the erosion prevention and sediment control measures.

Any maintenance required due to the failure of the Contractor to follow the EPSC Plan in its accepted form shall be performed at no additional cost to the Agency.

42. 652.08 METHOD OF MEASUREMENT. The quantity of EPSC Plan to be measured for payment will be on a lump sum basis in the complete and accepted work.

The quantity of Monitoring EPSC Plan will be measured to the nearest 1/4 hour for the actual number of authorized hours spent monitoring, reviewing, and reporting on the construction site(s), including waste, borrow and staging areas or other support activities, as it relates to the EPSC Plan. Travel time and other time not spent at the construction site(s) or time not authorized will not be measured for payment (i.e. travel expenses, clerical staff time, copying, miscellaneous expenses, overhead, etc.).

The quantity of Maintenance of EPSC Plan will be on a lump unit basis for all such field maintenance provided for in the Contract, excluding waste, borrow and staging areas or other support activities.

43. 652.09 BASIS OF PAYMENT. The accepted quantity of EPSC Plan will be paid for at the Contract lump sum price. Payment will be full compensation for the initial preparation of modifications, submittals, and all incidentals necessary to complete the work. Subsequent modifications to the EPSC Plan during Construction will be considered incidental to Contract item 652.10.

Partial payments will be made as follows:

- (a) The first payment of 50 percent of the lump sum price for the EPSC Plan will be paid for upon acceptance of the EPSC Plan for the entire project.
- (b) The second payment of 35 percent of the lump sum price for the EPSC Plan will be made on the first estimate following the completion of 50 percent of the project.
- (c) The third payment of 15 percent of the lump sum price for the EPSC Plan will be made when the project is substantially complete.

The accepted quantity of Monitoring EPSC Plan will be paid for at the Contract unit price per hour. Payment will be full compensation for performing the work specified. Payment will not be made unless a report for the monitoring is submitted to and accepted by the Engineer.

The accepted quantity of Maintenance of EPSC Plan will be paid for as specified for force account work in Subsection 109.06. Payments will be drawn against the Contract Lump Unit amount. To provide a common proposal for all bidders, the Agency has entered an amount in the proposal to become part of the Contractor's total bid. Maintenance related to material supply and disposal areas shall be performed in accordance with Subsection 105.29.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
652.10 EPSC Plan	Lump Sum
652.20 Monitoring EPSC Plan	Hour
652.30 Maintenance of EPSC Plan (N.A.B.I.)	Lump Unit

SECTION 690 - FUEL PRICE ADJUSTMENT

44. In addition to materials produced under Contract pay item(s) included in Table 1 Pay Item Fuel Usage Factors and Quantity Thresholds as allowed under this Section, fuel usage under Contract item 900.680 Special Provision (Bituminous Concrete Pavement, Small Quantity) will be included for adjustment, utilizing the Fuel Usage Factors for item 490.30 in Table 1.
45. SECTION 690 - FUEL PRICE ADJUSTMENT is hereby made a new Section of the Specifications as follows:
46. 690.01 GENERAL REQUIREMENTS AND CONDITIONS
- (a) This specification contains price adjustment provisions for fuel used on Vermont Agency of Transportation (Agency) construction projects. This price adjustment clause is being inserted in this Contract to provide for either additional compensation to the Contractor or a payment to the Agency, depending upon an increase or decrease in the average price of diesel fuel or gasoline during the construction of this project.
 - (b) These provisions apply to this Contract only as specified herein through the fuel usage factors set forth in Table 1. No further fuel price adjustments will be allowed under this Contract.
 - (c) It is understood by the Contractor that a price adjustment increase may cause the Agency to decrease the quantities of the Contract pay items subject to adjustment under these provisions. Provisions providing for decreased quantities and item cancellation in this paragraph are separate and take precedence, notwithstanding any other provisions of this Contract.
 - (d) No price adjustment will be paid for work performed after the Contract Completion Date, as modified by Change Order, if applicable.
 - (e) Price Adjustment, Fuel will be determined for a pay item if each of the following criteria is met:
 - (1) the pay item is included in the original awarded Contract;

- (2) the original awarded Contract bid quantity for the pay item equals or exceeds the quantity threshold indicated in Table 1.
- (f) Any increase in the total Contract amount due to fuel price adjustment will not be justification for an extension of time under Subsection 108.11.

In such cases that estimated quantities are used to determine estimated fuel price adjustments throughout the duration of the Contract, reconciliation of those estimated adjustments will be made upon the determination of actual final quantities and final adjustments to the total final quantity made by prorating those estimated adjustments over the applicable fuel price adjustment periods previously paid. Reconciliation of any fuel price adjustment will only be performed in those instances where the actual final quantity differs by more than five percent from the total estimated quantity. Payments owed to either the Contractor or VTrans will not be subject to any applicable interest claims.

47. 690.02 PRICE ADJUSTMENT PROCEDURES

- (a) Prior to advertising for bids, Index Prices for both a gallon of diesel fuel and a gallon of gasoline will be established by the Agency using retail prices reported by the Energy Information Administration (EIA) for the New England Region. The Index Prices will be set monthly using the first EIA posting falling either on or after the 1st calendar day of that month. The Contract Index Prices will be the most recent Index Prices set by the Agency at the time of advertising for bids. These prices are included below and will be the base from which price adjustments are computed.

The index price (retail) for gasoline is \$3.12 per gallon. The index price (retail) for diesel fuel is \$3.69 per gallon.

- (b) For the duration of the Contract, Posted Prices for both a gallon of diesel fuel and a gallon of gasoline will be established monthly by the Agency. The Posted Prices will be established in the same manner as the Index Prices.
- (c) A Price Adjustment will be paid or credited for diesel fuel and/or gasoline only when the Posted Price of diesel fuel and/or gasoline increases or decreases 5 percent or more over its respective Index Price.
- (d) Payment for Price Adjustment, Fuel will be based upon the quantity of fuel incorporated in the work as determined by the fuel usage factors in Table 1 of this specification for both diesel fuel and gasoline, multiplied by the algebraic difference between the Posted Price and the Index Price for either diesel fuel or gasoline, respectively.
- (e) Payment for Price Adjustment, Fuel shall be computed as follows:

PA = Price Adjustment (LU in \$)
 IPD = Index Price, Diesel Fuel (\$/gallon)
 IPG = Index Price, Gasoline (\$/gallon)
 PPD = Posted Price, Diesel Fuel (\$/gallon)
 PPG = Posted Price, Gasoline (\$/gallon)

FUFD = Fuel Usage Factor, Diesel Fuel (gallon/unit)

FUEG = Fuel Usage Factor, Gasoline (gallon/unit)

For PPD/IPD ≤ 0.95 or ≥ 1.05 and PPG/IPG > 0.95 and < 1.05 :

PA = FUFD X Pay Item Quantity X (PPD - IPD)

For PPD/IPD > 0.95 and < 1.05 and PPG/IPG ≤ 0.95 or ≥ 1.05 :

PA = FUEG X Pay Item Quantity X (PPG - IPG)

For PPD/IPD and PPG/IPG ≤ 0.95 or ≥ 1.05 :

PA = [FUFD X (PPD - IPD) + FUEG X (PPG - IPG)] X Pay Item Quantity

- (f) The Contract bid prices for the applicable pay items will be paid under the Contract. The price adjustment, when such adjustment is required as specified in part (c) of this Subsection, will be made subsequent to the month in which the applicable Contract work was performed and will be entered on the next bi-weekly estimate.
- (g) Payment for Price Adjustment, Fuel shall be debited or credited against the Contract price (Lump Unit) bid for Price Adjustment, Fuel.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
690.50 Price Adjustment, Fuel (N.A.B.I.)	Lump Unit

Table 1
Pay Item Fuel Usage Factors and Quantity Thresholds

Work Category	Pay Item No.	Usage Factor Units		Diesel Fuel (FUF D)		Gasoline (FUF G)		Quantity Threshold	
		Metric	English	Metric	English	Metric	English	Metric	English
Excavation	203.15	GAL/CM	GAL/CY	0.38	0.29	0.2	0.15	2,500	3,000
	203.16	GAL/CM	GAL/CY	0.51	0.39	0.24	0.18	2,000	2,500
	204.25	GAL/CM	GAL/CY	0.46	0.35	0.21	0.16	2,000	2,500
	208.30	GAL/CM	GAL/CY	0.46	0.35	0.21	0.16	1,500	2,000
	208.35	GAL/CM	GAL/CY	0.51	0.39	0.24	0.18	1,500	2,000
Borrow	203.30	GAL/CM	GAL/CY	0.38	0.29	0.20	0.15	2,500	3,000
	203.31	GAL/CM	GAL/CY	0.38	0.29	0.20	0.15	2,500	3,000
	203.32	GAL/CM	GAL/CY	0.38	0.29	0.20	0.15	2,500	3,000
Granular Backfill For Structures	204.30	GAL/CM	GAL/CY	1.31	1.00	0.21	0.16	1,200	1,500
Cold Planing, Bituminous Pavement	210.10	GAL/SM	GAL/SY	0.16	0.12	0	0	11,000	15,000
Subbase	301.25	GAL/CM	GAL/CY	1.11	0.85	0.73	0.56	750	1,000
	301.35	GAL/CM	GAL/CY	1.11	0.85	0.73	0.56	750	1,000
Reclaimed Stabilized Base	310.20	GAL/SM	GAL/SY	0.05	0.04	0	0	30,000	35,000
Pavement	406.25	GAL/T	GAL/TON	3.37	3.06	0.95	0.86	450	500
	406.27	GAL/T	GAL/TON	3.37	3.06	0.95	0.86	450	500
	490.30	GAL/T	GAL/TON	3.37	3.06	0.95	0.86	450	500
Concrete	501.32	GAL/CM	GAL/CY	0.98	0.75	0.33	0.25	750	1,000
	501.33	GAL/CM	GAL/CY	0.98	0.75	0.33	0.25	750	1,000
	501.34	GAL/CM	GAL/CY	0.98	0.75	0.33	0.25	750	1,000
Stone Fill	613.10	GAL/CM	GAL/CY	0.51	0.39	0.24	0.18	1,500	2,000
	613.11	GAL/CM	GAL/CY	0.51	0.39	0.24	0.18	1,500	2,000
	613.12	GAL/CM	GAL/CY	0.51	0.39	0.24	0.18	1,500	2,000
	613.13	GAL/CM	GAL/CY	0.51	0.39	0.24	0.18	1,500	2,000
Guardrail	621.20	GAL/M	GAL/LF	0.59	0.18	0.16	0.05	1,500	5,000
	621.205	GAL/M	GAL/LF	0.59	0.18	0.16	0.05	1,500	5,000
	621.21	GAL/M	GAL/LF	0.59	0.18	0.16	0.05	1,500	5,000
	621.215	GAL/M	GAL/LF	0.59	0.18	0.16	0.05	1,500	5,000

SECTION 900 - SPECIAL PROVISION ITEMSEXCAVATION FOR LOWERING RAIL

48. DESCRIPTION. This work shall consist of excavating and grading railway(s) as shown on the Plans or as directed by the Engineer.

The work under this Section shall be performed in accordance with these provisions, the Plans and Section 203 of the Standard Specifications.

49. METHOD OF MEASUREMENT. The quantity Special Provision (Excavation for Lowering Rail) to be measured for payment will be the number of cubic meters (cubic yards) of material removed from the areas shown on the Plans or as directed by the Engineer. The quantity will be measured in its original position by cross-sections and computed by the method of average end areas. When impractical, other acceptable methods involving three-dimensional measurement may be used to determine the quantity. The limits shall not exceed those shown on the Plans or authorized in writing by the Engineer. The method of mass centers for computing volumes will be allowed only when the method has been used in the original design computations. Excavation requiring more than one handling prior to final placement in embankments will not be measured for payment for the additional handling unless specifically stated in the Contract.

50. BASIS OF PAYMENT. The accepted quantity of Special Provision (Excavation for Lowering Rail) will be paid for at the Contract unit price per cubic meter (cubic yard). Payment will be full compensation for performing the work specified, including any drilling and blasting required, and for furnishing all labor, materials, tools, equipment, and incidentals necessary to complete the work.

No added compensation will be made for any special manipulation or delay resulting in the drying or wetting of soils necessary to obtain the required compaction. The entire cost of such manipulation and delay will be considered included in the Contract unit price for the excavation Contract item involved.

Compensation for the construction of embankments, as defined in Subsection 203.11, shall be considered incidental to the various excavation items. Water added to embankment material to aid in compaction will not be paid for directly but will be considered incidental to the Contract items involved.

All work and material required to grade, loam, seed, and mulch waste areas, borrow pits, and haul roads, as specified, to eliminate unsightly conditions and prevent erosion will not be paid for directly but will be considered incidental to the various types of excavation and borrow.

Material used for backfilling voids created by the removal of unsuitable material below subgrade and on slopes will be paid for at the Contract unit price per cubic meter (cubic yard) for the particular Contract item used in making the backfill. If the particular Contract item required for backfill is not included in the Contract, a Change Order/Supplemental Agreement for this Contract item will be negotiated.

The work specified in Subsection 203.12 will not be paid for directly but will be considered as incidental work pertaining to the excavation and borrow Contract items.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.608 Special Provision (Excavation for Lowering Rail)	Cubic Yard

HIGH PERFORMANCE CONCRETE, RAPID SET

51. DESCRIPTION. This work shall consist of designing, furnishing, and placing a high early strength, high performance, Portland cement concrete at the locations indicated in the Plans and as directed by the Engineer.

The work under this Section shall be performed in accordance with these provisions, the Plans, and Section 501 of the Standard Specifications.

52. MATERIALS. Materials shall meet the requirements of Subsection 501.02 and the following:

High Early Strength Portland Cement.....701.04

53. MIX DESIGN SUBMISSION CRITERIA. Concrete shall meet the following requirements:

(a) The mix shall be classified as conventional or self-consolidating concrete (SCC) mix. If the intended slump is greater than 9 inches then it shall be classified as SCC mix.

(b) Compressive Strength.

28 day compressive strength - 5000 psi

In addition to this requirement, the Contractor shall be aware that a minimum compressive strength of 4000 psi, as determined by field cured test cylinders, shall be achieved prior to allowing traffic on the structure.

(c) Permeability. 56 Day Permeability - 2500 coulombs (The permeability may be tested prior to 56 days but results must still be 2500 coulombs or less). Test shall be performed in accordance with subsection 510.04 b(6) (f).

(d) Slump/Spread. The mix shall not exhibit segregation at the slump /spread being used.

(1) For SCC mix the visual stability index (VSI) shall be equal to or less than 1.

(e) Alkali-Silica Reactivity (ASR). Test shall be performed in accordance with Subsections 510.04 b(6) (g) and 510.04 b(7).

(f) The mix shall contain shrinkage-compensating admixture such that there will be no separation of concrete from adjacent precast units. The Contractor shall include results for the unrestrained shrinkage test method, ASTM C 157. The maximum shrinkage allowed shall be 0.04%.

(g) A proprietary concrete mix design meeting the same performance requirements may also be considered for use.

54. SUBMITTALS. A minimum of fourteen (14) calendar days prior to placement (or prior to the pre-placement meeting, if one is required), the Contractor shall submit the mix design for approval. The mix design shall be submitted to the Agency's Materials and Research Laboratory, attention Structural Concrete Engineer. Concrete under this provision shall not be placed until the mix design has been approved.

(a) Trial Batch. A maximum of seven (7) days prior to the first placement, the Contractor shall produce and place a 2 cubic yard trial batch at a location agreed upon by the Contractor and the Engineer. The purpose of this trial batch is to show that the mix is capable of producing the wet test results within the specified ranges. The Engineer shall be given a minimum of seven (7) days notice prior to the trial batch pour. The trial batch shall be poured in the presence of the Engineer and the Structural Concrete Engineer. The trial batch shall be produced, and poured, in the same manner and time frames that will occur during construction. The Contractor shall provide qualified personnel to test slump, air content, and unit weight of the trial batch.

(b) Mix Acceptance Criteria. The placed concrete will be tested for all mix design criteria as listed above with the exception of permeability, shrinkage, and ASR. If the mix falls outside of any of the above listed ranges for the tested criteria, it shall be subject to rejection.

55. CURING CONCRETE. The method of wet curing used shall meet the requirements of Subsection 501.17. Concrete shall be wet cured as follows:

Flange Connection - 3 days
Abutment Closure Pour - 24 hours
Approach Slab Closure Pour - 24 hours
Pile Cavities - 24 hours

56. LOADING OF CONCRETE. After the concrete has been placed and the finishing operations concluded, it shall not be walked on or disturbed in any manner, including the removal of forms, for a minimum period of 12 hours.

The concrete shall obtain a strength of 4000 psi prior to any vehicular loading.

A portable compression testing machine shall be provided by the Contractor and available on-site for cylinder testing. All testing and equipment shall conform to ASTM C 39 and performed by a qualified individual. This compression machine must be calibrated in accordance with the provisions of Section 5, ASTM C 39.

57. METHOD OF MEASUREMENT. The quantity of Special Provision (High Performance Concrete, Rapid Set) to be measured for payment will be the number of cubic meters (cubic yards) of concrete placed in the complete and accepted work, as determined by the prismatic method using dimensions shown on the Plans or as directed by the Engineer, including the volume of precast concrete stay-in-place forms, but excluding the volume of steel or other stay-in-place forms and form filling materials. No deductions will be made for the volume of concrete displaced by steel reinforcement, structural steel, expansion joint material, scuppers, weep holes, conduits, tops of piles, scoring, chamfers or corners, inset panels of 38 mm (1 1/2 inches) or less in depth, or any pipe less than 200 mm (8 inches) in diameter.

58. BASIS OF PAYMENT. The accepted quantity of Special Provision (High Performance Concrete, Rapid Set) will be paid for at the Contract unit price per cubic meter (cubic yard). Payment will be full compensation for performing the work specified, including designing the mix, satisfactory finishing and curing, and for furnishing all forms, materials, including joint filler and bond breaker, labor, tools, admixtures, equipment, including automatic temperature recording units, trial batches, and incidentals necessary to complete the work.

The cost of heating materials and protecting the concrete against cold weather, and any additional cost for cement, will not be paid for separately but will be considered incidental to Special Provision (High Performance Concrete, Rapid Set).

The cost of furnishing testing facilities and supplies at the batch plant and the setting of inserts, bench marks, and bridge plaques furnished by the Agency will not be paid for separately but will be considered incidental to Special Provision (High Performance Concrete, Rapid Set).

Costs for all materials, labor, and incidentals for steel or other stay-in-place forms and form filling materials will not be paid for separately, but will be considered incidental to Special Provision (High Performance Concrete, Rapid Set).

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.608 Special Provision (High Performance Concrete, Rapid Set) (FPQ)	Cubic Yard

RAILROAD BALLAST

59. DESCRIPTION. This work shall consist of furnishing and installing railroad ballast and geotextile under railroad ballast as shown on the Plans and as directed by the Engineer.

60. MATERIALS.

(a) Ballast. Ballast shall meet the requirements of Chapter 1 Roadway and Ballast, Sections 2.3 "Materials" and 2.4 "Property Requirements", of the AREMA Manual. The ballast shall be Size No. 4 or larger as defined in Table 1-2-2 in Chapter 1, Section 2.4.4 "Gradations" of the AREMA Manual, and shall be limited to crushed granites, trap rocks, or quartzites, and shall contain no carbonates or slags.

- (b) Geotextile. Geotextile shall meet the requirements of Section 649 for Geotextile Under Railroad Ballast.

61. CONSTRUCTION REQUIREMENTS.

- (a) Production and Handling. Production and handling shall meet the requirements of AREMA Chapter 1, Section 2.5.
- (b) Sampling and Testing. Sampling and testing shall meet the requirements of AREMA Chapter 1, Section 2.8.
- (c) Installation. Installation shall be performed in accordance with Chapter 5 - Track, Section 4.1 "Specifications for Track Construction" of the AREMA Manual. Railroad ballast shall be installed and tamped in the cribs and shoulders to the depths shown on the Plans.
- (d) Grading. Grading shall meet the requirements of AREMA Chapter 1, Section 2.6.

62. METHOD OF MEASUREMENT. The quantity of Special Provision (Railroad Ballast) to be measured for payment will be the number of cubic meters (cubic yards) placed in the complete and accepted work, as determined by vehicle loads using three-dimensional measurement. All loads designated shall be leveled at the point of delivery as directed by the Engineer. A load ticket shall be furnished to the Engineer for each load delivered to the job site.

63. BASIS OF PAYMENT. The accepted quantity of Special Provision (Railroad Ballast) will be paid for at the Contract unit price per cubic meter (cubic yard). Payment will be full compensation for furnishing, transporting, handling, testing, placing, and tamping the materials specified, including ballast and geotextile, and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.608 Special Provision (Railroad Ballast)	Cubic Yard

PRESTRESSED CONCRETE NEXT D BEAMS

64. DESCRIPTION. This work shall consist of manufacturing, transporting, and erecting precast prestressed concrete members.

The work under this Section shall be performed in accordance with these provisions, the Plans, and Section 510 of the Standard Specifications.

65. DESIGN AND DRAWINGS. All design details shall be in accordance with the AASHTO LRFD Bridge Design Specifications, the AASHTO LRFD Bridge Construction Specifications, and PCI Northeast's NEXT D Standards dated January, 2010.

66. METHOD OF MEASUREMENT. The quantity of Special Provision (Prestressed Concrete Next D Beams) to be measured for payment will be the number of meters (linear feet) of the specified type used in the complete and accepted work.

67. BASIS OF PAYMENT. The accepted quantity of Special Provision (Prestressed Concrete Next D Beams) will be paid for at the Contract unit price per meter (linear foot) for the type specified. Payment will be full compensation for detailing, fabricating, repairing, quality control testing, transporting, handling, and installing the materials specified, including the concrete, reinforcement, prestressing steel, transverse ties, enclosures for prestressing steel, anchorages, mortar, anchor rods, any other material contained within or attached to the members, for furnishing and implementing the erection plan, and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Any grouting work for other than shear keys, such as fairing out unevenness between adjacent units and filling leveling screw holes, transverse anchor recesses, and dowel holes, is considered incidental to the work for Special Provision (Prestressed Concrete Next D Beams).

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.640 Special Provision (Prestressed Concrete D Beams) (NEXT 28 D)	Linear Foot

REMOVE AND RESET RAILROAD TRACKS

68. DESCRIPTION. This work shall consist of removing and resetting existing rail, crossties, tie plates, and other track materials as shown on the Plans and as directed by the Engineer. The work shall include furnishing all labor, materials, and equipment for removing and resetting the existing rail and crossties, including but not limited to re-installing existing rail anchors, joint bars, and tie plates. The Contractor shall supply new joint bar bolts, washers, nuts, and track spikes; and joint bars and rail anchors if the existing hardware is not suitable for re-installation. Any existing crossties found to be unsound shall be replaced with new crossties as directed by the Engineer. Existing crossties to be reused shall have all spike holes plugged immediately after removal from track using tight fitting treated tie plugs.

This work shall also consist of surfacing and aligning track beyond the limits of rail removal and resetting as necessary to achieve adequate superelevation and profile, as determined by the Engineer in coordination with the Railroad.

69. MATERIALS. Unless otherwise specified, all new materials shall conform to the requirements of the AREMA Manual as follows:

- (a) Rail, joint bars, track bolts, nuts, and washers shall meet the requirements of Chapter 4 - Rail, Part 1 "Design" and Part 2 "Specifications". The Contractor shall supply all new track bolts, nuts, and washers for the joint bars.
- (b) Tie plates shall meet the requirements of Chapter 5, Part 1 "Tie Plates".
- (c) Track spikes shall meet the requirements of Chapter 5 - Track, Part 2 "Track Spikes". The Contractor shall supply all new track spikes consisting of 6" track cut spikes.

- (d) Rail anchors shall meet the requirements of Chapter 5 - Track, Part 7 "Rail Anchors". The Contractor shall supply all new rail anchors of the same type as the existing if the existing hardware is not suitable for re-installation. Use of a type different from the existing is acceptable if approved by the Railroad.
- (e) Crossties shall meet the requirements of Chapter 30 - Ties, Part 3 "Solid Sawn Ties". The dimension of crossties shall be as shown in the Plans. Crossties shall be 80% oak and 20% mixed hardwood from any of the following species: hard maple, birch, cherry, or beech. All crossties shall have nail plate anti-splitting devices applied at the end of each tie. Anti-splitting devices shall be manufactured from a minimum 18 gauge galvanized steel conforming to ASTM A525. The plate shall be at least six (6) inches by seven (7) inches for use with seven (7) by nine (9) inch ties.

Ties shall be preservative treated in accordance with Chapter 30 - Parts 3.6 and 3.7 using a coal tar creosote mixture.

- (f) Tie plugs shall meet the requirements of Chapter 7, Article 7-1-29.

70. CONSTRUCTION REQUIREMENTS.

- (a) Track construction shall meet the requirements of Chapter 5, - Sections 4 and 5 of the AREMA Manual.
- (b) Track shall be raised and ballast shall be installed and tamped in the cribs and shoulders as required to align the track to the existing profile.
- (c) As directed by the Engineer, defective crossties, track spikes, rail anchors, joint bars, tie plates, and shim plates shall be removed and replaced.
- (d) Existing rail and crossties shall be removed within the limits shown in the Plans and stockpiled and protected from damage due to construction operations.
- (e) All track hardware removed that will not be reset, and any waste material, shall become the property of the Contractor and shall be remove from the site at the Contractor's expense.
- (f) The track shall be re-tamped after rail has been installed and rail has been back in service for 4 or 5 days. The track shall be monitored for an additional 30 days and, if necessary as directed by the Engineer, re-tamped.

71. METHOD OF MEASUREMENT. The quantity of Special Provision (Remove and Reset Railroad Tracks) to be measured for payment will be the number of meters (linear feet) of track removed, reset, and realigned within the limits shown in the Plans in the complete and accepted work.

72. BASIS OF PAYMENT. The accepted quantity of Special Provision (Remove and Reset Railroad Tracks) will be paid for at the Contract unit price per meter (linear foot). Payment will be full compensation for supplying new rail hardware and crossties; removing, handling, and resetting rails, crossties, and rail hardware; realigning and tamping track; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Surfacing and aligning of track to provide adequate superelevation and profile beyond the limits of rail removal and replacement shown in the Plans, and removing inside bridge guardrail and additional rail outside the limits shown in the Plans due to required excavation limits or rail splice locations will not be paid separately but will be considered incidental to Special Provision (Remove and Reset Railroad Tracks).

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.640 Special Provision (Remove and Reset Railroad Tracks)	Linear Foot

CRITICAL PATH METHOD (CPM) SCHEDULE

73. DESCRIPTION. This work shall consist of preparing, submitting, and modifying Critical Path Method (CPM) construction schedule(s) for the Contract work as specified herein and as directed by the Engineer.

The Contractor is advised that its schedule and narrative, as specified herein, will be used by the Engineer to monitor project progress, plan the level-of-effort by its own work forces and consultants, and as a critical decision making tool. Accordingly, the Contractor shall ensure that it complies fully with the requirements specified herein and that its schedule(s) are both timely and accurate throughout the life of the project.

74. SUBMITTALS.

- (a) Within ten (10) working days after the award of the Contract, the Contractor shall submit to the Engineer sufficient information that the CPM software it proposes to use on the Contract is fully capable of producing the specified schedules required by the Contract. The software used must be MS Project or be compatible with MS Project.

The Engineer shall notify the Contractor in writing, within seven (7) working days after the receipt of the Contractor's notification on the software, if there are any objections to the CPM software selected.

- (b) No more than thirty (30) days after the award of the Contract, and no less than ten (10) calendar days prior to the start of work, the Contractor shall submit to the Engineer for acceptance a baseline construction schedule and narrative meeting the following requirements:

(1) Baseline Schedule Requirements.

- a. Define a complete and logical plan that can realistically be accomplished for executing the work defined in the Contract.
- b. Include sufficient activities for adequate project planning for subcontractor, third party, vendor, and supplier activities. These activities shall include Working Drawing submissions as well as provide for adequate review times.
- c. Clearly show the critical path using the longest path definition and other critical elements of work.
- d. Include a unique identification number for each schedule activity.

Clearly and uniquely define each activity description. Do not use descriptions referring to a percent complete of a multi-element task.

- e. Define the duration of each activity.
 1. Limit the maximum duration of any activity to fifteen (15) days unless otherwise accepted by the Engineer.
 2. When the project contains a road closure period, the work within the closure period shall be broken down by hours instead of days. The maximum duration of each activity within the closure period shall be limited to twelve (12) hours.
- f. Clearly identify the relationships tying activities together.
- g. Do not have open-ended activities except for one start and one finish activity.
- h. Do not have any constrained activities unless the Engineer accepts such constraints.
- i. Include milestones to define significant contractual events such as Notice to Proceed, Interim Completion(s), road closures, road openings, Substantial Completion(s), and/or others as necessary.

(2) Baseline Narrative Requirements.

- a. The construction philosophy supporting the approach to the work outlined in the baseline schedule. Address the reasons for the sequencing of work and describe any limited resources, potential conflicts, and/or other items that may affect the schedule and how they may be resolved.
- b. Provide information on assumed resources, crew sizes, working hours, equipment, etc.

- c. The justification for activities with durations exceeding fourteen (14) working days or exceeding twelve (12) hours for those activities falling within a road closure period.
 - d. The justification for constraints used.
 - e. The approach used to apply relationships between activities.
 - f. The project critical path and challenges that may arise associated with the critical path.
- (c) The Contractor shall submit one hard copy and one electronic copy of an updated construction schedule each month during the life of the Contract up to Substantial Completion.
- (1) Schedule Updates. Schedule updates shall include the following:
- a. Actual start and finish dates for completed activities.
 - b. Actual start dates, percent complete, and remaining duration for activities in progress.
 - c. Projected sequences of activities for future work.
 - d. Revised relationships and durations for unfinished activities, if warranted.
 - e. A well defined critical path.
 - f. A narrative describing the following:
 - 1. Work performed during the previous monthly period.
 - 2. Problems or delays that have been experienced to date, the party responsible for the problems or delays, and the Contractor's plan to resolve the problems or bring the delayed activities back on schedule.
 - 3. Differences between the work performed and the work planned for the period, including explanations for the deviations.
 - 4. The current critical path of the project, explaining any changes since the last update and the impacts of these changes.
 - 5. Potential problems that may be encountered during the next monthly period. Identify all potential problems the Agency may be party to and explain what action the Agency needs to take and the date by which time the action needs to be taken to avoid the problem.

- (d) The Contractor shall participate in progress meetings at the request of the Engineer to review and discuss updated schedule information including any activity delay, remedies, coordination requirements, change orders, potential delays, and other relevant issues.

Projects with short duration road closures of fourteen (14) calendar days or less are of particular importance as the project float will be limited. The Contractor shall promptly inform the Engineer of any schedule delays or changes that occur during one of these periods.

When the Engineer requests a meeting the Contractor shall:

- (1) Make available the project manager, scheduler, and appropriate field personnel.
- (2) Make and record an action item list that describes who is responsible for resolving existing or pending issues and the date by which the issue needs to be resolved to avoid Contract delays.
- (3) Submit a revised schedule update if necessary.

The Engineer will review the Contractor's schedule submittals and provide comments and disposition, either accepting the schedule or requiring revision and resubmittal of the schedule. The Engineer's comments may address work that has been omitted, unacceptable durations for items of work, or Contract violations. The planning, execution of the work, and the accuracy of their representation in the Contract Progress Schedule shall remain the sole responsibility of the Contractor.

The Contractor shall not be relieved of its responsibility for satisfactorily completing the work within the Contract time due to its failure to submit an acceptable project schedule. Additionally, the Contractor shall not withhold monthly or requested schedule submissions in the event that the Engineer does not provide formal review comments. The Contractor is to provide monthly updates regardless of any outstanding issues.

Failure to provide schedule updates as required under this Specification will result in a written notification from the Engineer. Upon receipt of this notification the Contractor has two (2) weeks to provide an updated schedule as required. Failure to provide an updated schedule will result in withholding of full Contract quantity payments until an updated schedule is received.

75. PROJECT FLOAT. Float belongs to the project and is a shared commodity between the Agency and the Contractor, and is not for the exclusive use or benefit of either party. The float may be claimed by whichever party first demonstrates a need for it.
76. METHOD OF MEASUREMENT. The quantity of Special Provision (CPM Schedule) to be measured for payment will be on a lump sum basis for providing project schedules and narratives in the complete and accepted work.

77. BASIS OF PAYMENT. The accepted quantity of Special Provision (CPM Schedule) will be paid for at the Contract lump sum price. Payment will be full compensation for initial preparation, submittals, modifications, resubmittals, and all incidentals necessary to complete the work. Subsequent modifications to the CPM Schedule during construction will be considered incidental to Special Provision (CPM Schedule).

Partial payments will be made as follows:

- (a) The first 25% of the Contract lump sum price will be paid upon the approval of the baseline schedule and narrative.
- (b) The remaining 75% of the Contract lump sum price will be pro-rated in equal amounts on a monthly basis. The time used for pro-rating will be equal to the number of months from approval of the baseline schedule to the anticipated Contract Completion Date.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.645 Special Provision (CPM Schedule)	Lump Sum

INCENTIVE/DISINCENTIVE (I/D)

78. INCENTIVE/DISINCENTIVE (I/D), is hereby made a new Section of the Specifications as follows:

The payment of monies for performance under the Incentive/Disincentive (I/D) specifications contained in these Special Provisions shall be as follows:

- 1. For the incentive payment as described in part (c) of Special Provision No. 11, the Contractor will be paid in the next bi-weekly estimate in which the Contractor has satisfactorily met the requirements of I/D.
- 2. For the assessed disincentive as described in part (c) of Special Provision No. 11, the Engineer will deduct the amount due the Agency from the monies due the Contractor on the next bi-weekly estimate.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.650 Special Provision (Incentive/Disincentive) (Railroad) (N.A.B.I.)	Lump Unit
900.650 Special Provision (Incentive/Disincentive) (Roadway) (N.A.B.I.)	Lump Unit

LOCAL ROADWAY MAINTENANCE

79. DESCRIPTION. This work shall consist of maintaining the pre-closure conditions along the detour route on Main Street, College Street, and York Street as designated in the Plans, including maintenance of line striping and roadway. The pavement maintenance shall consist of performing all necessary repair work, including pothole repairs, raveling repairs, and other repairs as directed by the Engineer.

The work under this Section shall be performed in accordance with these provisions, the Plans, and the applicable provisions of the Standard Specifications.

80. GENERAL REQUIREMENTS. The Engineer, Contractor, and a Town of Poultney Representative shall conduct pre- and post-closure surveys using video, pictures, and hand-written notes to document the roadway condition prior to and following the bridge closure period (BCP) designated in the Contract Documents.

The pre-closure survey shall occur a minimum of seven (7) calendar days prior to the beginning of the BCP. The Contractor shall provide the pre-closure survey in writing, and on a DVD if video is included, to the Engineer and Town of Poultney Representative a maximum of five (5) calendar days following performance of the pre-closure survey.

The post-closure survey shall occur a maximum of five (5) calendar days following the end of the BCP. The Contractor shall provide the post-closure survey in writing, and on a DVD if video is included, to the Engineer and Town of Poultney Representative a maximum of two (2) calendar days following performance of the post-closure survey.

The Engineer and Town of Poultney Representative will monitor the condition of the detour route on Main Street, College Street, and York Street. Any work required during and after the BCP shall be performed by the Contractor within two (2) calendar days of being notified by the Engineer.

81. MATERIALS. Materials for roadway maintenance of the detour route shall meet all applicable requirements of the appropriate Sections of the Standard Specifications, including but not limited to Subsections 104.04 and 105.01, and Sections 404, 406, 417, 490, 646, 702, 704, and 708.

82. METHOD OF MEASUREMENT. The quantity of Special Provision (Local Roadway Maintenance)(N.A.B.I.) to be measured for payment will be on a lump unit basis in the complete and accepted work for performing local roadway maintenance along the designated detour streets.

83. BASIS OF PAYMENT. Payment for Special Provision (Local Roadway Maintenance)(N.A.B.I.) will be as follows:

- (a) A lump unit of ten thousand dollars (\$10,000) has been included in the bid proposal for local roadway maintenance. Payment will be for reimbursing the Contractor for all actual field maintenance work agreed upon and approved by the Engineer and Town of Poultney Representative, and subsequently completed by the Contractor at the agreed upon price for completing the work.

Prior to receiving approval from the Engineer and the Town of Poultney Representative to perform the work, the Contractor shall provide the Engineer with an itemized invoice for the work to be completed and all supporting documentation used by the Contractor in determining the cost of the work, including material, labor, and equipment costs. Once the work is completed and accepted by the Engineer and the Town of Poultney Representative, the Contractor will be reimbursed for the work at the previously agreed upon price shown on the itemized invoice.

- (b) The lump unit will be adjusted to the actual amount paid to the Contractor for maintaining the designated detour streets in the pre-closure survey condition during the BCP.

No additional payment will be made under this Contract item. All costs for performing the pre- and post-closure surveys, providing written surveys, and a DVD as required, to the Engineer and Town of Poultney Representative, and other coordination required for reviewing roadway conditions will be considered incidental to all Contract items.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.650 Special Provision (Local Roadway Maintenance) (N.A.B.I.)	Lump Unit

MAINTENANCE OF RAILROAD TRAFFIC

- 84. DESCRIPTION. This work shall consist of maintaining railroad traffic and coordinating with the Agency and the Railroad for inspection and review of the Contractor's work in conjunction with construction operations to be performed within the Railroad right-of-way, in accordance with the Contract Documents and as directed by the Engineer.
- 85. GENERAL REQUIREMENTS. When, as stipulated in the Contract Documents, or in the opinion of the Engineer and the Chief Engineering Officer of the Railroad, the construction work would cause hazard to the safe operation of trains and other facilities of the Railroad, including signal and communication lines, the Railroad will furnish the necessary qualified employees to protect their trains and other facilities.

Protection services will be required whenever the Contractor is performing work over, under, or adjacent to the railroad tracks or right-of-way such as excavation, sheeting, shoring, erection, or removal of forms; handling material; using equipment which by swinging or by failure could foul the track; and when any other type of work being performed, in the opinion of the Railroad, requires such service.

The Contractor is advised that although the cost for protective services will be paid for on a lump sum basis by the Agency, the Contractor shall be required to plan, coordinate, and organize the work effort in a way that shall absolutely minimize the use and number of railroad protective personnel required. The Agency and a Railroad representative will review and approve all Contractor work schedules prior to the commencement of work and prior to the assignment of protective personnel. Misuse of these protective services by the Contractor due to inadequate work procedures will not be allowed and shall be sufficient cause for the Agency to require the Contractor to bear all inappropriate costs.

Railroad train crews necessary for the operation of Contractor scheduled work trains or Contractor owned or leased locomotive equipment shall not be paid by the Agency under this Section; all such costs will be considered incidental to the Contractor's work and therefore shall be entirely borne by the Contractor.

All existing signs, markers, and other informational indicators associated with the operations of the Agency or the Railroad that are removed by the Contractor in the performance of this work shall be preserved and reinstalled as soon as possible. Reinstallation shall precede any train operation at the same locations as they are removed. Any sign, marker, or other information indicator that is damaged by the Contractor's operations shall be considered a charge against the Contractor and shall be paid for by the Contractor or deducted from any monies due or that may become due the Contractor under this Contract.

Railroad traffic shall be maintained at all times with safety and continuity, and the Contractor shall conduct all operations on or over the railroad right-of-way fully within the rules, regulations, and requirements of the Agency and the Railroad. The Contractor shall be responsible for becoming acquainted with such requirements as the Railroad and/or Agency demands.

Existing train operations may include, but are not limited to, the following:

- (a) Regularly scheduled passenger trains.
- (b) Regularly scheduled freight trains.
- (c) Other unscheduled trains or equipment being moved by the various Railroads.

86. SUBMITTALS.

- (a) At the preconstruction meeting, the Contractor shall submit for approval by the Agency a detailed description of proposed methods for accomplishing the construction work required under the Contract, to include methods for protecting Railroad traffic. Approval by the Agency shall not serve in any way to relieve the Contractor of complete responsibility for the adequacy and safety of the proposed methods.
- (b) Prior to beginning work, the Contractor shall submit for the approval of the Engineer a detailed description of the procedure(s) for work to be performed over, under, within, or adjacent to the Railroad right-of-way. Work shall not proceed until the proposed procedure(s) have been approved by the Agency.

87. CONSTRUCTION REQUIREMENTS. The Contractor shall obtain verification of the time and schedule of track occupancy from the Railroad before proceeding with any construction or demolition work over, under, within, or adjacent to the Railroad right-of-way.

All work to be done under, upon, or over the Railroad right-of-way shall be performed by the Contractor in a manner satisfactory to the Engineer and shall be performed at such times and in such manner as to not interfere with the movement of trains or traffic upon the tracks. The Contractor shall use all necessary care and precaution to avoid accidents, delay, or interference with the trains or other property.

The Contractor shall give notice to the Railroad at least fifteen (15) days prior to the commencement of any work, or any portion of the work, over or adjacent to the Railroad right-of-way, so that necessary arrangements can be made promptly by the Railroad to protect railroad traffic.

The Contractor shall conduct the work and handle equipment and materials so that no part of any equipment should foul an operated track or wire line without the written permission of the Railroad. When it is noted that the work will foul an operating track, the Contractor shall give the Railroad written notice fifteen (15) days in advance so that, if approved, arrangements can be made for proper protection of the railroad.

Cranes, shovels, or any other equipment shall be considered to be fouling the track when located in such position that failure of same, with or without load, brings the equipment within the fouling limit.

Equipment of the Contractor to be used adjacent to the tracks shall be in first-class condition so as to fully prevent failures of defective equipment that might cause delay in the operation of trains or damage to Railroad facilities. The Contractor's equipment shall not be placed or put into operation adjacent to tracks without first obtaining permission from the Railroad. Under no circumstance shall any equipment or materials be placed or stored within 25 feet from the centerline of the track, unless otherwise directed.

Materials and equipment belonging to the Contractor shall not be stored adjacent to tracks without first obtaining permission from the Railroad. The Agency and/or Railroad will not be liable for damage to such materials and equipment from any cause. The Contractor shall keep the tracks adjacent to the site clear of all refuse and debris and shall leave the property in the condition existing before the start of construction operations.

The Contractor shall consult with the Railroad to determine the type of protection required to ensure safety and continuity of Railroad traffic incidental to the particular methods of operation and equipment to be used in the work. Any Construction Inspectors, track foremen or track watchmen, signalmen, or other employees deemed necessary for protective services by the Railroad, or its duly authorized representative to ensure the safety of trains contingent upon the Contractor's operations, shall be obtained from the Railroad by the Contractor.

The providing of such watchmen and other precautionary measures shall not, however, relieve the Contractor from liability for payment of damages caused by the Contractor's operations.

88. FLAGGING AND PROTECTIVE SERVICES. The Contractor shall make all arrangements with the Agency and the Railroad, as applicable, for railroad employees required for flagging and protective services.

Railroad flaggers shall be furnished in accordance with Section 630.

89. METHOD OF MEASUREMENT. The quantity of Special Provision (Maintenance of Railroad Traffic) (N.A.B.I.) to be measured for payment will be on a lump unit basis for the specified railroad flagging and protective services provided.

90. BASIS OF PAYMENT. Payment for Special Provision (Maintenance of Railroad Traffic) (N.A.B.I.) will be as follows:

- (a) A lump unit of forty thousand dollars (\$40,000) has been included in the bid proposal for flagging and protective services. Payment will be for reimbursing the Contractor for the actual invoice amounts paid to the Railroad by the Contractor for flagging and protective services. The Contractor shall submit four copies of paid receipted itemized bills from the Railroad for the flagging and protective services charges to the Agency for review and approval. The Contractor's overhead will not be reimbursed.
- (b) The lump unit will be adjusted to the actual amount paid to the Railroad for flagging and protective services, after review and approval of paid invoices.

No additional payment will be made under this Contract item. All other costs for coordination and maintenance of rail traffic in accordance with these provisions will be considered incidental to Special Provision (Maintenance of Railroad Traffic) (N.A.B.I.).

If the Contract is not completed within the specified time limit for completion of the Contract (or authorized extended time), no payment will be made for any costs incurred beyond the specified time of completion.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.650 Special Provision (Maintenance of Railroad Traffic) (N.A.B.I.)	Lump Unit

BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY

91. DESCRIPTION. This work shall consist of constructing one or more courses of bituminous mixture on a prepared foundation in accordance with these specifications and the specific requirements of the type of surface being placed, and in reasonably close conformity with the lines, grades, thicknesses, and typical cross sections shown on the Plans or established by the Engineer.

The work under this Section shall be performed in accordance with these provisions, the Plans, and the appropriate provisions of Section 406 or Section 490 of the Standard Specifications.

92. MATERIALS. Materials shall meet the requirements of the following Subsections:

- Performance-Graded Asphalt Binder.....702.02
- Emulsified Asphalt, RS-1H or CRS-1H.....702.04
- Aggregate for Marshall Bituminous Concrete Pavement...704.10(a)
- Aggregate for Superpave Bituminous Concrete Pavement..704.10(b)

Aggregate shall meet requirements relating to Section 406 or 490, where so specified.

The grade of PG asphalt binder used to produce bituminous concrete pavement shall be 58-28. Substitutions will be accepted based on availability where the upper end temperature value is greater than 58°C (136°F) and/or the lower end temperature value is less than -28°C (-18°F).

93. DESIGN MIX TYPES. Design mix types may be substituted based on mix availability. Allowable mix type substitutions will be accepted on a one to one thickness relationship, except as listed in Tables A and B below.

TABLE A - ALLOWABLE 40 MM (1½") MIX TYPE IVS SUBSTITUTIONS

Design ESALs (millions)	Design	Allowable Substitution	
		490.30 Superpave Bituminous Concrete Pavement	406.25 Bituminous Concrete Pavement*
< 0.3	TYPE IVS	TYPE III	TYPE III
0.3 to < 10	TYPE IVS	TYPE III	-

*Per Section 406.

TABLE B - ALLOWABLE 90 MM (3½") MIX TYPE IIS SUBSTITUTIONS

Design ESALs (millions)	Design	Allowable Substitution	
		490.30 Superpave Bituminous Concrete Pavement	406.25 Bituminous Concrete Pavement*
< 0.3	TYPE IIS	TYPE I	TYPE I
0.3 to < 10	TYPE IIS	TYPE I	-

*Per Section 406

94. COMPOSITION OF MIXTURE.

- (a) Gradation. Gradation shall meet the requirements of Section 406 or 490, as appropriate.
- (b) Design Criteria. Design Criteria shall meet the requirements of Section 406 or 490, as appropriate.
- (c) Mix Design. Standard mix design will be in accordance with Subsection 490.03 with an n value of 65 gyrations. Allowable substitutions based on pre-existing approved mix designs and/or n values for intended Contract suppliers are listed in Table C below. A request for substitutions must be submitted in writing to the Engineer a minimum of 10 working days prior to production. Any substitutions from the standard mix design or mix types as detailed in the Plans shall not result in any increase in cost to the Agency.

TABLE C - ALLOWABLE SPECIFICATION SUBSTITUTIONS

Design ESALs (millions)	Acceptable Specification Substitution		
	Superpave Bituminous Concrete Pavement (Gyrations)	Bituminous Concrete Pavement* (75 Blow)	Med. Duty Bituminous Concrete Pavement* (50 Blow)
< 0.3	50	✓	✓
0.3 to < 10	65 ¹	✓	-

¹Standard mix design specification.

*Per Section 406

(d) Quality Acceptance.

- (1) General. Acceptance sampling and testing will be conducted in accordance with the Agency's Quality Assurance Program as approved by FHWA. Bituminous concrete mixtures designated under these specifications will be sampled a minimum of once per day of production or 500 metric tons (sublot), or other sublot size deemed appropriate, and evaluated by the Agency for each mix type (each mix design) in accordance with the following acceptance guidelines.
 - (2) Acceptance Guidelines. Temperature of the bituminous mixture shall be tested using the Verified Thermometer test method and PG Asphalt Binder content determined from the batch slip. Gradation shall be tested in accordance with AASHTO T 30. Mixture volumetric properties (air voids and VMA) shall be calculated in accordance with Subsections 406.03(b) or 490.03(b), as appropriate.
 - (3) Non-Compliant Material.
 - a. Rejection by Contractor. The Contractor may, prior to sampling, elect to remove any defective material and replace it with new material at no expense to the Agency. Any such new material will be sampled, tested, and evaluated for acceptance.
 - b. For any non-compliant material outside the production testing tolerances contained in the applicable Table 406.03C or 490.03C, the representative material (sublot) shall be assessed a mixture pay adjustment factor, PF(mix), of (-0.200).
- (e) Boxed Samples. If Agency plant inspectors are not available for daily testing and inspection functions, then box samples will be taken by the Engineer at the project site to afford verification of mixture volumetrics/properties. Boxed samples will be processed and results reported to the Engineer within ten working days of being received at the Agency Central Laboratory in Berlin, Vermont. Gradation shall be tested in accordance with AASHTO T 30. Maximum Specific Gravity shall be tested in accordance with AASHTO T 209. Boxed samples will be assessed a mixture pay adjustment factor of 0.000.

95. COMPACTION. Special Provision (Bituminous Concrete Pavement, Small Quantity) will be analyzed for density according to the procedure specified below.

The density of the compacted pavement shall be at least 92.0%, but not more than 97.0%, of the corresponding daily average maximum specific gravity for each mix type (each mix design) of bituminous mix placed during each day, or placed per bridge for any bridge project. For material that falls outside of this range, payment will be made by adjusting the daily production totals in accordance with Table D:

TABLE D - DENSITY PAY FACTORS

AVERAGE DENSITY	DENSITY PAY FACTOR, PF(d)
89.0% - 90.4%	- 0.150
90.5% - 91.9%	0.100
92.0% - 93.4%	0.000
93.5% - 95.4%	0.150
95.5% - 97.0%	0.000
97.1% - 98.5%	- 0.100

When the Contract allows for a pay adjustment for mat density and the Agency elects to not take cores of any pavement course, the Density Pay Factor (PF(d)) will be considered equal to 0.000.

Bridges with a length equal to, or greater than, six meters (20 feet) will be cored for analyzing density of the bridge deck pavement. The minimum number of cores (taken from the center of the travel lane) shall be two, or as directed by the Engineer. Bridges with a length less than six meters (20 feet) will not be cored. Bridge decks or approaches will not be cored within three meters (10 feet) of a bridge or construction joint.

Bridge deck core areas shall be repaired with hot bituminous mix to the satisfaction of the Engineer at no additional cost to the Agency.

The cores taken for acceptance testing will be the final cores taken for determination of densities.

When the Contract does not allow for a pay adjustment for mat density the Contractor shall, prior to performing any construction operations, submit to the Engineer for approval the proposed rolling pattern and compaction equipment to be used on the project. Random investigative cores will be taken by Agency personnel on the first day's production of any pavement course, with the exception of the leveling course, to verify effectiveness of the proposed rolling pattern and equipment.

Pending results of the investigative cores, necessary adjustments to the proposed rolling pattern and/or equipment shall be made by the Contractor to achieve densities as directed by the Engineer.

96. METHOD OF MEASUREMENT. The quantity of Special Provision (Bituminous Concrete Pavement, Small Quantity) to be measured for payment will be the number of metric tons (tons) for a lot of mixture (each type) complete in place in the accepted work (Q) as determined from the weigh tickets.

The quantities of all applicable Pay Adjustments calculated for the project will be determined as specified below.

When applicable, and when the mixture pay factor, PF(mix), for a lot of Special Provision (Bituminous Concrete Pavement, Small Quantity) is less than 0.000, the measured quantity of Special Provision (Bituminous Concrete Pavement, Small Quantity) placed will be multiplied by such pay factor to determine a Mixture Pay Adjustment, (PA(mix)), to the accepted tonnage placed (Q) for that lot based on the Contract bid price (B), as follows:

$$PA(mix) = PF(mix) \times Q \times B$$

When applicable, and when the density pay factor, PF(d), for a lot of Special Provision (Bituminous Concrete Pavement, Small Quantity) is less than 0.000, the measured quantity of Special Provision (Bituminous Concrete Pavement, Small Quantity) placed that day, or placed per bridge for any bridge project, will be multiplied by such pay factor to determine a Mat Density Pay Adjustment, (PA(d)), to the accepted tonnage placed (Q) for that lot based on the Contract bid price (B), as follows:

$$PA(d) = PF(d) \times Q \times B$$

97. BASIS OF PAYMENT. The measured quantity of Special Provision (Bituminous Concrete Pavement, Small Quantity) will be paid for at the Contract unit price per metric ton (ton). Payment shall be full compensation for furnishing, mixing, hauling, and placing the material specified and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Payment for Pay Adjustments shall be debited against the Contract prices (Lump Units) bid for the Pay Adjustment items.

The cost of repairing bridge deck core areas will not be paid for separately, but will be considered incidental to Special Provision (Bituminous Concrete Pavement, Small Quantity).

The costs of furnishing testing facilities and supplies at the plant will be considered included in the Contract unit price of Special Provision (Bituminous Concrete Pavement, Small Quantity).

The costs of obtaining, furnishing, transporting, and providing the straightedges required by Subsection 406.16 or Subsection 490.16, as appropriate, will be paid for under the appropriate Section 631 pay item included in the Contract.

The costs associated with obtaining samples for acceptance testing will be incidental to the cost of Special Provision (Bituminous Concrete Pavement, Small Quantity).

When not specified as items in the Contract, the costs of cleaning and filling joints and cracks, sweeping and cleaning existing paved surfaces, the emulsified asphalt applied to tack these surfaces, and tacking of manholes, curbing, gutters, and other contact surfaces will not be paid for directly, but will be incidental to Special Provision (Bituminous Concrete Pavement, Small Quantity).

Special Provision (Bituminous Concrete Pavement, Small Quantity) mixture approved by the Engineer for use in correcting deficiencies in the base course constructed as part of the Contract will not be paid for as Special Provision (Bituminous Concrete Pavement, Small Quantity), but will be incidental to the Contract item for the specified type of base course.

Special Provision (Bituminous Concrete Pavement, Small Quantity) mixture used to correct deficiencies in an existing pavement or to adjust the grade of a bituminous concrete surface completed under the Contract will be paid for at the Contract unit price for Special Provision (Bituminous Concrete Pavement, Small Quantity).

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.650 Special Provision (Mat Density Pay Adjustment, Small Quantity) (N.A.B.I.)	Lump Unit
900.650 Special Provision (Mixture Pay Adjustment) (N.A.B.I.)	Lump Unit
900.680 Special Provision (Bituminous Concrete Pavement, Small Quantity)	Ton

HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES

98. DESCRIPTION. This work shall consist of the placement of one or more courses of bituminous concrete material by hand (non-mechanical) methods on a prepared foundation in conformance with the Plans or as directed by the Engineer.

The work under this Section shall be performed in accordance with these provisions, the Plans and Section 406 or Section 490 of the Standard Specifications, as appropriate.

99. GENERAL. This work will include only that bituminous concrete material placed by hand methods as required at public and/or private drives and permitted drives (such as field drives for agriculture) measured from the outside edge of shoulder to outside limit of drive, within the project limits as identified on the Plans or as directed by the Engineer. Bituminous concrete material placed by mechanical methods at these locations is excluded.

All other bituminous materials placed within the project limits, whether by hand or mechanical methods, shall be paid under the appropriate Contract pay item for bituminous mix or as otherwise specified in the Contract Documents.

100. MATERIALS. Materials shall meet the requirements of the following Subsections:

Subbase, RAP.....	301.02
Aggregate Shoulders, RAP.....	402.02
Performance-Graded Asphalt Binder.....	702.02
Emulsified Asphalt.....	702.04
Crushed Gravel for Subbase.....	704.05
Aggregate for Surface Course and Shoulders.....	704.12

Bituminous concrete material of the type specified in the Contract or as specified by the Engineer shall meet the requirements of Section 406 or Section 490, as applicable. For the purpose of this Section, bituminous concrete material to be used shall be of the type specified in the Contract or, by default, of a matching material to that adjacent material placed by mechanical methods.

101. CONSTRUCTION REQUIREMENTS. The existing surface and/or bed (subbase) upon which the bituminous concrete material is to be placed shall be compacted to the line, grade, and shape shown on the Plans or as directed by the Engineer. All vegetation and soft, yielding, or unsuitable material shall be excavated and replaced with properly compacted material meeting the requirements of Section 301 for Subbase of Crushed Gravel, Fine Graded. Crushed RAP generated from the project may be substituted for Subbase of Crushed Gravel, Fine Graded.

The existing edge of pavement shall be saw cut to provide a vertical edge for placing the hand-placed bituminous concrete material.

Emulsified asphalt shall be applied uniformly and completely to all vertical and horizontal surfaces to be paved. All surfaces shall be free of moisture, dust, and debris prior to applying emulsified asphalt.

If cross slope allows, as determined by the Engineer, existing paved drives shall be cold planed the entire drive width to the depth of the wearing course, not to exceed 50 mm (2 inches). Unless the drive is to be paved that day, all cold planed vertical edges shall have temporary fillets placed the same day cold planning takes place.

All existing paved drives shall have all temporary fillets removed; any existing joints, cracks, and holes cleaned; all vertical and horizontal surfaces to be paved coated with emulsified asphalt; all holes filled with bituminous concrete material compacted to the level of the existing surface; and be thoroughly cleaned and dried prior to any hand-placed bituminous concrete material being placed.

Hand-Placed bituminous concrete material shall be rolled with a 1 metric ton (1 ton) mechanical roller with steel drums, or approved equal, until compacted to the satisfaction of the Engineer.

102. METHOD OF MEASUREMENT. The quantity of Special Provision (Hand-Placed Bituminous Concrete Material, Drives) to be measured for payment will be the number of square meters (square yards) complete in place in the accepted work.

Hand-placed bituminous concrete material placed less than 12.5 mm ($\frac{1}{2}$ inch) thick will not be measured for payment.

When any portion or all of Special Provision (Hand-Placed Bituminous Concrete Material, Drives) is removed from the project under any provisions of the Contract or as directed by the Engineer, no payment will be made for the removal, disposal, or replacement of said material.

103. BASIS OF PAYMENT. The measured quantity of Special Provision (Hand-Placed Bituminous Concrete Material, Drives) will be paid for at the Contract unit price per square meter (square yard). Payment shall be full compensation for furnishing, mixing, hauling, placing, compacting, and finishing the material specified and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Emulsified asphalt used as specified and backfill material meeting the requirements specified in the Plans will be considered incidental to Special Provision (Hand-Placed Bituminous Concrete Material, Drives).

When not specified for payment under separate Contract item(s), the costs of placing subbase material, cleaning existing paved surfaces, including power equipment, and for filling joints, cracks, and holes will not be paid for directly, but will be considered incidental to Special Provision (Hand-Placed Bituminous Concrete Material, Drives).

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.675 Special Provision (Hand-Placed Bituminous Concrete Material, Drives)	Square Yard

ADDITIONAL SPECIAL PROVISIONS

CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURE

104. DESCRIPTION. This work shall consist of manufacturing, transporting, handling, and erecting precast concrete structure components fabricated by the Contractor at a location other than a Precast Concrete Institute (PCI) or National Precast Concrete Association (NPCA) certified precast concrete facility.
105. MATERIALS. Materials shall meet the requirements of Subsections 501.02, 507.02, and 540.02.
- (a) Concrete. Concrete shall meet the requirements of Subsection 540.05, with the exception that the requirements of part (a) do not apply. In lieu of a mix meeting the requirements of Subsection 540.05, the Contractor may provide a mix meeting the requirements of Section 501 for Concrete, High Performance Class A or Concrete, High Performance Class B, provided that the design strength as shown in the Plans as well as that required for lifting and handling is met.
106. GENERAL FABRICATION REQUIREMENTS. Unless noted otherwise herein, Contractor-fabricated Precast Concrete (CFPC) produced and paid under this Special Provision shall meet the requirements of Sections 501, 507, and 540.

107. SUBMITTALS. As soon as practical after award of the Contract, all required information shall be prepared and submitted.

A complete copy of the structural design calculations for the CFPC shall be submitted as Construction Drawings in accordance with Section 105. The design calculations shall substantiate that the proposed precast concrete satisfies the design parameters of the Contract. The applicable design code will be the latest edition of the AASHTO LRFD Bridge Design Specifications unless indicated otherwise in the Contract Documents.

Fabrication Drawings for the precast concrete shall be submitted in accordance with Section 105, with an additional copy to the Composite Materials Engineer. In addition to the requirements for Fabrication Drawings in Section 105, the following shall be included:

- (a) Dimensions and tolerances of the precast concrete to be fabricated.
- (b) The concrete mix design, including but not limited to the following:
 - (1) Batch weights specifying dry or saturated surface dry.
 - (2) Material names and sources.
 - (3) Aggregate properties and date tested.
 - (4) Chemical and physical properties of cementitious material.
 - (5) Admixture names and sources.
 - (6) Lab data that shall include, but not be limited to:
 - a. Slump.
 - b. Air Content.
 - c. Temperature.
 - d. Ratio of Water/Cementitious Material.
 - e. Cylinder breaks for 3, 7, and 28 days cured in the same manner as the piece to be fabricated.
 - f. 56-day Rapid Chloride Ion Permeability - AASHTO T 277 test data. The results shall be the average from testing 3 specimens, but the individual specimen results shall also be included. Testing shall be performed by an independent laboratory accredited by AMRL in this test method.
 - g. Alkali-Silica Reactivity (ASR) - AASHTO T 303 data from testing of both the fine and coarse aggregates. Testing shall be performed by an independent laboratory accredited by AMRL in this test method.

- (7) Alkali-Silica Reactivity (ASR). If potentially reactive aggregates are to be used in a mix design, then proposed mitigation method(s) and test results must be provided. The AASHTO T 303 test must be run again with the proposed mitigation method(s) and using the proposed job cementitious material proportioning. The proposed mitigation method(s) shall reduce expansion to below 0.10%.

If a mix design, including the testing results, has been submitted and approved within a 12 month period, it may be used in lieu of submitting an additional mix design. However, if any change in the material sources, properties, or proportions has occurred, then a new mix design with lab test data will be required regardless of previous approval.

The requirements for testing in Subsections 540.04(b)(6)f, 540.04(b)(6)g, and 540.04(b)(7) above shall be waived if the submitted mix design has a minimum proportion of the cementitious material content of that allowed for use in High Performance Concrete in Section 501.

The mix design shall be approved by the Composite Materials Engineer prior to fabrication.

- (c) The sources and properties of the materials proposed for use.
- (d) The placement of reinforcing steel, welded wire fabric, mechanical bar connectors, and inserts.
- (e) The type of surface finish and how the finish will be obtained. Include details of potential repair procedures.
- (f) The curing method, detailing sequence, and duration.
- (g) The minimum required concrete strength for design strength and form removal.
- (h) The design of the lifting attachments.
- (i) Transportation, handling, and storage details.
- (j) The installation procedures, including a detailed grouting procedure.
- (k) A Quality Control Plan that identifies a Quality Control Manager and provides previous experience for work of this nature. A Description of Quality Control Processes addressing but not limited to:
 - (1) Concrete production including batching, delivery, and placement.
 - (2) Formwork.
 - (3) Reinforcing.
 - (4) Concrete finishing.
 - (5) Concrete cure.

(6) Shipping/Installation procedures.

108. INSPECTION. Materials furnished and the work performed herein shall be inspected by the Agency. The Agency will test all concrete incorporated into the work in accordance with Section 501. The inspector shall have the authority to reject any material or work that does not meet the requirements of the Specifications. Advance notification of at least two (2) weeks shall be provided by the Contractor to the Agency's Engineer and the Composite Materials Engineer concerning the proposed intention to commence work. A minimum of five (5) working days notification shall be provided by the Contractor to the Agency's Engineer and the Composite Materials Engineer to confirm the fabrication start date.

Prior to placing any precast concrete elements produced under these Specifications, all materials shall have all applicable certifications approved in accordance with Subsection 700.02.

109. FABRICATION.

- (a) Pre-Production Meeting. Unless the Engineer deems, in writing, that a pre-production meeting is unnecessary, then a pre-production meeting shall be held a minimum of seven (7) calendar days prior to beginning concrete placement. The pre-production meeting shall be attended by, as a minimum but not limited to, the Crew Supervisor, Contractor Project Manager, Concrete Producer, Resident Engineer, Project Manager, and Composite Materials Engineer.
- (b) Placing Concrete. Concrete placement shall be in accordance with Subsection 501.10 and as specified herein. Concrete shall not be deposited in the forms until the appropriate Agency representative has approved placement of the reinforcement, conduits, and anchorages.
- (c) Repairs/Patching. CFPC structure components that contain minor defects caused by manufacture or handling may be repaired at the manufacturing site. Minor defects are defined as holes, honeycombing, or spalls which are 150 mm (6 inches) or less in diameter and that do not penetrate deeper than 25 mm (1 inch) into the concrete. Surface voids or "bugholes" that are less than 16 mm (5/8 inch) in diameter and less than 6 mm (1/4 inch) deep need not be repaired. Repairs shall be made using a material from the Agency's Approved Products List for overhead and vertical concrete repair. The repair material shall be cured as specified by the manufacturer. Repairs shall be approved by the Engineer.
- (d) Cracking. Cracks less than 0.25 mm (0.01 inch) in width shall be sealed by a method approved by the Engineer. Cracks in excess of 0.25 mm (0.01 inch) may be cause for rejection. At the Engineer's discretion, cracked CFPC structure components shall be repaired or replaced at the Contractor's expense.

- (e) Dimensional Tolerances. All tolerances shall be in accordance with the latest editions of both PCI MNL 116 *Manual for Quality Control for Plants and Production of Precast and Prestressed Concrete Products* and PCI MNL 135 *Tolerance Manual for Precast and Prestressed Concrete Construction*, or with the National Precast Concrete Association (NPCA) *Quality Control Manual for Precast Concrete*, unless otherwise noted in the Contract Documents or as approved by the Engineer.
- (f) Marking. The date of manufacture, the production lot number, and the piece mark shall be clearly marked on each individual piece of precast concrete. The mark shall be in a location that will not be visible in the finished product.

110. HANDLING, STORAGE, AND SHIPPING. Each CFPC structure shall be handled, stored, and shipped in such a manner as to minimize chipping, cracks, fractures, discoloration, and excessive bending stresses. A unit damaged by handling, storage, or shipping shall be replaced at the Contractor's expense.

A CFPC structure shall not be installed until the respective unit has been inspected. This inspection shall verify that the pieces are free from defects, and that all specification requirements, including but not limited to those for compressive strength and tolerance requirements, have been achieved. In addition, a CFPC structure will not be considered for shipment until the completion of the cure period and the required strength has been attained as demonstrated by field-cured cylinder breaks.

111. INSTALLATION METHODS, EQUIPMENT, AND ERECTION. Cranes, lifting devices, and other equipment for CFPC structure erection shall be of adequate design and capacity to safely erect, align, and secure all members and components in their final positions without damage. The Contractor is solely responsible for the methods and equipment employed for the erection of the CFPC structure components.

Construction Drawings for CFPC structure component erection shall be submitted in accordance with Section 105. The erection plan shall include the necessary computations to indicate the magnitude of stress in the units during erection and to demonstrate that all of the erection equipment has adequate capacity for the work to be performed, and provisions for all stages of construction, including temporary stoppages.

Post tensioning shall comply with Subsection 540.12.

Submittal of the erection plan is for the Agency's documentation only and shall in no way be construed as approval of the proposed method of erection. The Contractor shall follow the erection plan as submitted.

112. GROUT.

- (a) Unless otherwise noted grout shall be used to fill shear keys, leveling screw voids, transverse tie anchor recesses, dowel holes, and for fairing joints as detailed in the Contract Documents or as ordered by the Engineer.

Grout shall be Mortar, Type IV. Acceptable grout materials shall be those included on the Approved Products List on file with the Agency's Materials and Research Section. Additional aggregates shall not be added to the material during field mixing.

The Contractor, with written permission from the Engineer, has the option to use ready-mixed mortar for the grouting process. The Contractor shall prepare and submit for approval the mix design for the grout. The maximum quantity that may be delivered in a single load is one cubic meter (1.25 cubic yards), which shall be delivered and placed within the time limits specified by the manufacturer.

For testing, 6 neat 50 mm (2 inch) cubes shall be molded and cured in accordance with AASHTO T 106 (ASTM C 109). The average compressive strength of 3 cubes shall be a minimum of 7 MPa (1000 psi) at 3 days and a minimum of 35 Mpa (5000 psi) at 28 days.

- (b) The surface to be grouted shall be thoroughly cleaned, wetted, and free of all standing water. The grout shall be mixed using a mechanical mixer according to the manufacturer's recommendations and shall be readily pourable so that it completely fills the shape of the shear keys or holes, depending on the product being installed. The placement of grout shall be continuous so as to produce a monolithic key absent of any voids or cold joints.
- (c) All exposed grout shall be cured for a period of not less than three days by the wetted burlap method in accordance with Section 501. Curing shall commence as soon as practical after grout placement.

113. METHOD OF MEASUREMENT. The quantity of Special Provision (Contractor-Fabricated Precast Concrete Structure) of the type and size specified to be measured for payment shall be on a lump sum basis. The lump sum shall include all of the CFPC structure components in the complete and accepted work for each location specified in the Contract.

114. BASIS OF PAYMENT. The accepted quantity of Special Provision (Contractor-Fabricated Precast Concrete Structure) of the type and size specified will be paid for at the Contract lump sum price. Payment shall be full compensation for designing, detailing, fabricating, repairing, transporting, handling, and erecting the materials specified, for furnishing and implementing the erection plan, and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Any grouting work, such as fairing out unevenness between adjacent precast concrete structure components and filling leveling screw holes, shear keys, transverse anchor recesses, and dowel holes, is considered incidental to the work for Special Provision (Contractor-Fabricated Precast Concrete Structure).

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.645 Special Provision (Contractor-Fabricated Precast Concrete Structure) (Abutment No. 1)	Lump Sum
900.645 Special Provision (Contractor-Fabricated Precast Concrete Structure) (Abutment No. 2)	Lump Sum
900.645 Special Provision (Contractor-Fabricated Precast Concrete Structure) (Approach Slab No. 1)	Lump Sum
900.645 Special Provision (Contractor-Fabricated Precast Concrete Structure) (Approach Slab No. 2)	Lump Sum

Minimum Labor and Truck Rates
Under Title 19, Vermont Statutes
Annotated Section 18, as amended

April 3, 1997
Sheet 1 of 1

**STATE OF VERMONT
AGENCY OF TRANSPORTATION
MONTPELIER**

FOR OTHER THAN FEDERAL-AID. In accordance with the provisions of Title 19, VSA, Section 18, the following minimum rate for labor shall apply to this project:

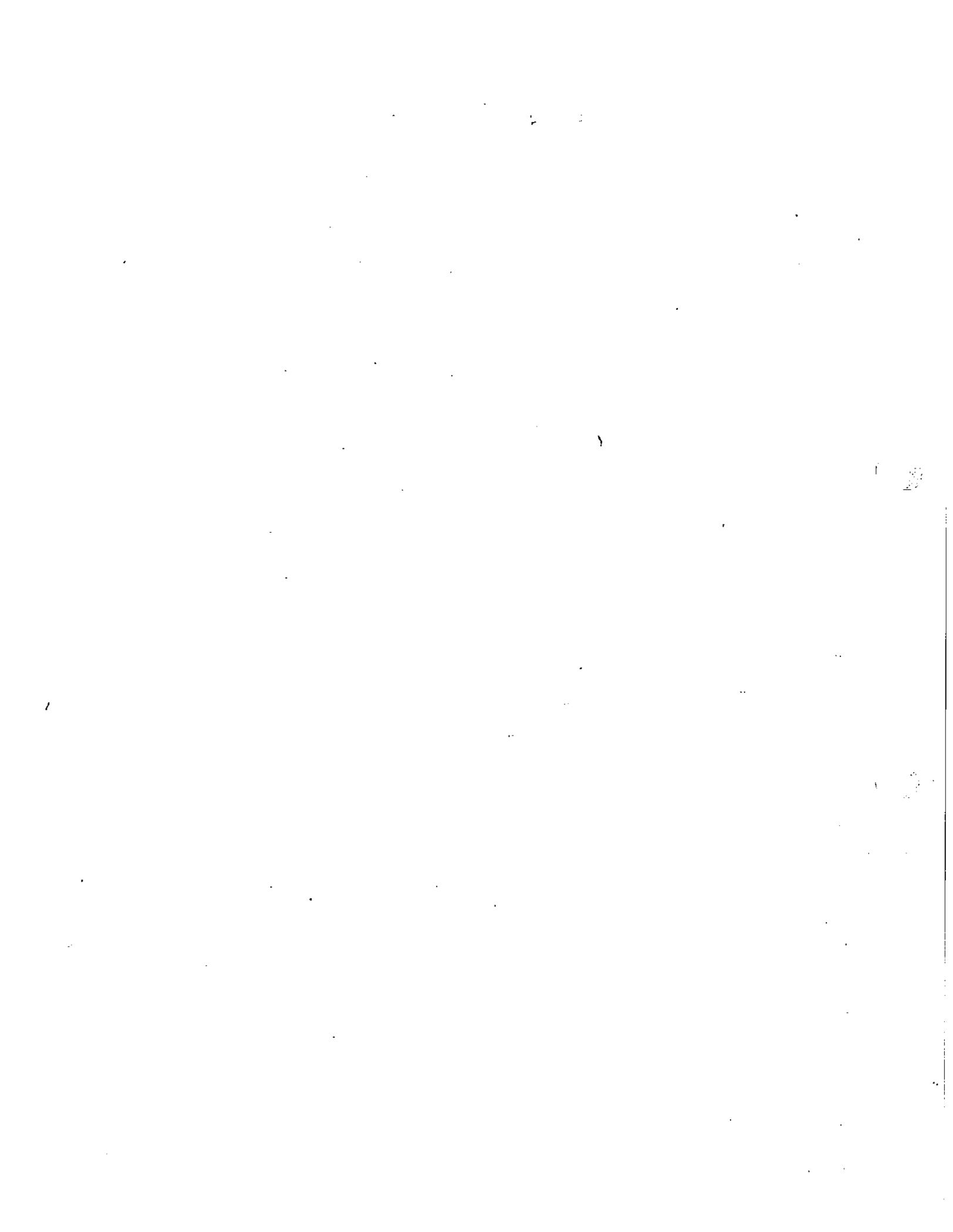
The minimum wage for common labor will not be less than the State or Federal minimum wage, whichever is higher.

ON FEDERAL-AID PROJECTS ONLY.

The minimum rates for labor for Federal-Aid Projects shall be those set in the Wage Determination Decision of the U.S. Secretary of Labor for each project in accordance with the Federal-Aid Highway Act of 1956. When such wage rates are required they shall be included in the proposal. In the event these rates are lower than the Vermont rates, the Vermont rates shall prevail.

TRUCK RATES. In accordance with the provisions of Title 19, VSA, Section 18, the following minimum rates for trucks shall apply to this project:

<u>Trucks, not Including Driver Water Level Body Capacity</u>	<u>Minimum Rates Per YD per Hr.</u>
Trucks, Equipment Loaded	\$1.65



State of Vermont
Agency of Transportation

March 2011
CA-110

DISADVANTAGED BUSINESS ENTERPRISE (DBE) POLICY CONTRACT REQUIREMENTS

Disadvantaged Business Enterprise (DBE) Policy. It shall be the policy of the Vermont Agency of Transportation (VTrans) to ensure nondiscriminatory opportunity for Disadvantaged Business Enterprises (DBEs) to participate in the performance of all contracts and subcontracts financed with Federal funds as specified by the regulations of the United States Department of Transportation (USDOT), Federal Highway Administration and as set forth below.

1. **Policy.** It is the policy of USDOT that DBEs as defined in 49 Code of Federal Regulation (CFR) Part 26 shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal funds. Consequently, the DBE requirements of 49 CFR Part 26 and 23 CFR, Chapter 1, Part 230, Subpart b apply to this contract.
2. **DBE Obligation.** The State and its Contractors agree to ensure that DBEs as defined in 49 CFR Part 26, have the maximum opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds. Each subcontract the prime contractor signs with a subcontractor must include this assurance: *The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of USDOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as VTrans deems appropriate.*
3. **Sanctions for Noncompliance.** The Contractor is hereby advised that failure of the Contractor, or any Subcontractor performing work under this contract, to carry out the requirements set forth in paragraphs 1 and 2 above shall constitute a breach of contract and after the notification of the Vermont Agency of Transportation, Secretary of Transportation, may result in termination of this contract by the State or such remedy as the State deems necessary.
4. **Inclusion in Subcontracts.** The Contractor shall insert in each of its subcontracts this Disadvantaged Business Enterprise (DBE) Policy and also a clause requiring its subcontractors to include this same Policy in any lower tier subcontracts which they may enter into, together with a clause requiring the inclusion of the Policy in any further subcontract that may in turn be made. This Policy shall not be incorporated by reference.

Disadvantaged Business Enterprise (DBE) Program Goals. The Vermont Agency of Transportation (VTrans) is required to set an overall DBE goal for participation in all transportation related Federal-aid projects. The goal is determined following guidelines set forth in 49 CFR 26.45, and based on the availability of ready, willing and able DBEs who submitted bids and quotes for transportation related projects, compared as a percentage of all available contractors who submitted bids and quotes for transportation related projects during the same time period. The DBE goal may be adjusted to take into account other factors impacting DBE utilization, in an effort to narrowly tailor the overall DBE goal. The detailed goal setting methodology and current overall DBE goal may be viewed on the VTrans website at: <http://www.aot.state.vt.us/CivilRights/DBEGoals.htm> .

VTrans currently utilizes a race/gender neutral policy to fulfill its overall DBE goals, and relies on the voluntary participation of contractors to utilize certified DBEs on every project sufficient to obtain the Agency's overall DBE goal. In order for this practice to continue, contractors must be proactive and solicit bids and quotes from certified DBEs for use when submitting their own bids, and employ certified DBEs when participating on transportation related projects. Otherwise, VTrans may have to implement specified contract goals on projects to ensure the overall DBE goals are met. VTrans may include specific DBE contract goals in certain cases to ensure DBE participation, if failure to obtain the project DBE goal would negatively impact the Agency's overall DBE goal because of the size of the contract.

Disadvantaged Business Enterprise (DBE) Definition. A DBE is defined as a business that is owned and controlled by one or more socially and economically disadvantaged person(s). For the purposes of this definition:

- (1) "Socially and economically disadvantaged person" means an individual who is a citizen or lawful permanent resident of the United States and who is a Woman, Black, Hispanic, Portuguese, Native American, Asian American, or a member of another group, or an individual found to be disadvantaged by the Small Business Administration pursuant to Section 3 of the Small Business Act.
- (2) "Owned and controlled" means a business which is:
 - a. A sole proprietorship legitimately owned and controlled by an individual who is a disadvantaged person.
 - b. A partnership, joint venture or limited liability company in which at least 51% of the beneficial ownership interests legitimately is held by a disadvantaged person(s).
 - c. A corporation or other entity in which at least 51% of the voting interest and 51% of the beneficial ownership interests legitimately are held by a disadvantaged person(s).

The disadvantaged group owner(s) or stockholder(s) must possess control over management, interest in capital, and interest in earnings commensurate with percentage of ownership. Disadvantaged participation in a joint venture must also be based on the sharing of real earnings, as above. If the disadvantaged group ownership interests are real, substantial and continuing and not created solely to meet the requirements of the program, a firm is considered a bona fide DBE.

Certified DBE Directory. The current Vermont Unified Disadvantaged Business Enterprise (DBE) Directory is available online at: <http://www.aot.state.vt.us/CivilRights/DBEDirectory.htm>. This directory contains all currently certified DBEs available for work in Vermont, and is updated continuously. Only firms listed in this directory are eligible for DBE credit on Vermont Federal-aid projects. If you have questions about DBE certification, or do not have access to the Internet, please call the DBE Program Manager at (802) 828-5858 for assistance.

Counting DBE Participation Towards Project Goals. In order for payments made to DBE contractors to be counted toward DBE goals, the DBE contractors must perform a commercially useful function (CUF). The DBE must be responsible for execution of the work of the contract and must carry out its responsibilities by actually performing, managing, and supervising the work involved, consistent with standard industry practices.

This means that:

- The DBE must also be responsible for ordering its own materials and supplies, determining quantity and quality, negotiating price, installing (where applicable) and paying for the material itself;
- The DBE must perform work commensurate with the amount of its contract;
- The DBE's contribution cannot be that of an extra participant or a conduit through which funds are passed in order to obtain the appearance of DBE participation;
- The DBE must exercise responsibility for at least fifty percent of the total cost of its contract with its own workforce;
- None of the DBE's work can be subcontracted back to the prime contractor, nor can the DBE employ the prime's or other subcontractor's supervisors currently working on the project;
- The DBE's labor force must be separate and apart from that of the prime contractor or other subcontractors on the project. Transferring crews between primes, subcontractors, and DBE contractors is not acceptable;
- The DBE owner must hold necessary professional or craft license(s) or certification(s) for the type of work he/she performs on the project;
- The DBE may rent or lease, at competitive rates, equipment needed on the project from customary leasing sources or from other subcontractors on the project.

Allowable credit for payments made to DBEs for work performed. A contractor may take credit for payments made to a certified DBE that satisfies CUF requirements at the following rate:

- A DBE Prime Contractor: Count 100% of the value of the work performed by own forces, equipment and materials towards the DBE goals.
- An approved DBE subcontractor: Count 100% of the value of work performed by the DBE's own forces, equipment and materials, excluding the following:
 - The cost of materials/supplies purchased from a non-DBE Prime Contractor.
 - The value of work provided by non-DBE lower tier subcontractors, including non-DBE trucking to deliver asphalt to a DBE contractor.
- A DBE owner-operator of construction equipment: Count 100% of expenditures committed.
- A DBE manufacturer: Count 100% of expenditures committed. The manufacturer must be a firm that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by the Contractor.
- A regular DBE dealer/supplier: Count 60% of expenditures committed. A regular dealer/supplier is defined as a firm that owns, operates, or maintains a store, warehouse or other establishment, in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. A person may be a dealer in such bulk items as petroleum products, steel, cement, gravel, stone or asphalt without owning, operating or maintaining a place of business, if the person both owns and operates distribution equipment for the products, by the means of a long term agreement, and not by a contract by contract basis.
- A DBE broker: Count for DBE credit only the fees or commissions charged for assistance in the procurement, and, fees and transportation charges for the delivery of materials or supplies required at the job site, but not the cost of materials procured. A broker is defined as any person(s) or firm who arranges or expedites transactions for materials or supplies, and does not take physical possession of the materials or supplies at their place of business for resale.
- A DBE renter of construction equipment to a contractor: Count 20% of expenditures committed, with or without operator.

- A bona fide DBE service provider: Count 100% of reasonable fees or commissions. Eligible services include professional, technical, consultant, or managerial, services and assistance in the procurement of essential personnel, facilities, equipment, materials or supplies required for the performance of the contract. Eligible services also include agencies providing bonding and insurance specifically required for the performance of the contract.
- A trucking, hauling or delivery operation: Count 100% of expenditures committed when trucks are owned, operated, licensed and insured by the DBE and used on the contract and, if applicable, includes the cost of the materials and supplies. 100% of expenditures committed when the DBE leases trucks from another DBE firm including an owner-operator. 100% of reasonable fees, or commissions, the DBE receives as a result of a lease arrangement for trucks from a non-DBE, including an owner-operator.
- Any combination of the above.

Removal of Approved DBE From Transportation Related Project. Contractors may not terminate for convenience, any approved DBE subcontractor and perform the work with their own forces, without prior written consent from the VTrans DBE Program Manager or VTrans Chief of Civil Rights.

Federal-aid projects which specify a DBE contract goal. The provisions of the Vermont Agency of Transportation Supplemental Specification – Disadvantaged Business Enterprise (DBE) Utilization (CA 160) shall apply to all VTrans Federal-aid projects which specify a DBE contract goal.

Compliance With Prompt Payment Statute. In accordance with Vermont's Prompt Payment Act and VTrans Standard Specifications for Construction, Section 107.01(g), the Contractor shall fully comply with the provisions of 9 V.S.A. Chapter 102, also referred to as Act No. 74 of 1991 or the Prompt Payment Act, as amended.

Subcontractor Payments. In accordance with VTrans Standard Specifications for Construction, Section 107.01(h), on all federal-aid and state funded contracts, the Contractor, during the life of the Contract and on a monthly basis, shall submit electronically, a listing of payments to subcontractors on the form specified by the State and made available at: <http://apps.vtrans.vermont.gov/dbef/>. Electronic reports shall be filed with the Agency Office of Civil Rights by an authorized representative and received in the Agency Office of Civil Rights on or before the tenth working day after month end. Contractors without access to the internet shall obtain and submit manual reports to the Agency Office of Civil Rights. Manual reports shall be signed by an authorized representative, sent to the Agency Office of Civil Rights, and postmarked on or before the tenth working day after month end. There shall be no direct compensation allowed the Contractor for this work, but the cost thereof shall be included in the general cost of the work. In accordance with 9 V.S.A. Section 4003, notwithstanding any contrary agreement, payments made to subcontractors after seven days from receipt of a corresponding progress payment by the State to the Contractor, or seven days after receipt of a subcontractor's invoice, whichever is later, violate this agreement. Violations shall be reported to the Agency Office of Civil Rights for review. Failure to resolve disputes in a timely manner may result in a complaint made to the Agency Pre-qualification Committee. In this Committee's judgment, appropriate penalties may be involved for failure to comply with this specification. Penalties may include suspension, reduction or revocation of the Contractor's pre-qualification rating. This clause shall be included in the prime Contractor's Contract made with all if its subcontractors.

OPERATOR: Bulldozer.....	\$ 19.18	2.56
OPERATOR: Cold Planer/Milling Machine.....	\$ 15.56	0.00
OPERATOR: Crane.....	\$ 20.00	2.13
OPERATOR: Excavator.....	\$ 17.01	1.36
OPERATOR: Grader/Blade.....	\$ 18.44	3.50
OPERATOR: Loader.....	\$ 24.52	9.86
OPERATOR: Mechanic.....	\$ 20.45	0.00
OPERATOR: Paver.....	\$ 16.02	3.94
OPERATOR: Pounder.....	\$ 18.11	0.00
OPERATOR: Roller excluding Asphalt.....	\$ 15.12	4.08
OPERATOR: Screed.....	\$ 17.09	4.44
OPERATOR: Sweeper.....	\$ 24.44	12.24
PAINTER (Parking Lot and Highway Striping Only).....	\$ 17.08	3.40
TRUCK DRIVER, Includes all axles including Dump Trucks.....	\$ 14.60	3.21
TRUCK DRIVER: Distributor Truck.....	\$ 17.89	0.00
TRUCK DRIVER: Semi/Trailer Truck.....	\$ 14.72	4.39

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters, PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted

because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

SUPPLEMENTAL SPECIFICATION
ASPHALT PRICE ADJUSTMENT

GENERAL REQUIREMENTS AND CONDITIONS

- (a) This specification contains price adjustment provisions for asphalt cement and emulsified asphalt used on Vermont Agency of Transportation (Agency) construction projects and produced under Sections 303, 404, 406, 415, and 490 of the Standard Specifications, or as otherwise designated in the Contract Documents. This price adjustment clause is being inserted in this Contract to provide for either additional compensation to the Contractor or a payment to the Agency, depending upon an increase or decrease in the average price of asphalt cement during the construction of this project.
- (b) Emulsified asphalt shall be subjected to a correction factor of 0.45, applied to the quantity of material supplied. This corrected quantity shall be used for Asphalt Price Adjustment as specified and computed herein.
- (c) These provisions apply to this Contract only as specified in the procedures provided herein. No further asphalt cement and/or emulsified asphalt price adjustments will be allowed under this Contract.
- (d) It is understood by the Contractor that a price adjustment increase may cause the Agency to decrease the quantities of the Contract pay items subject to adjustment under these provisions. Provisions providing for decreased quantities and item cancellation in this paragraph are separate and take precedence, notwithstanding any other provisions of this Contract.
- (e) No price adjustment will be allowed beyond the Contract Completion Date or any applicable interim completion dates.
- (f) Any increase in the total Contract amount due to price adjustment under these provisions will not be justification for an extension of time under Subsection 108.11.
- (g) The Contractor hereby agrees that its bid prices for this Contract include no allowances for any contingencies to cover increased costs for which adjustment is provided herein.

PRICE ADJUSTMENT PROCEDURES

- (1) Prior to advertising for bids, an Index Price for asphalt cement will be established by the Agency upon consideration of the New York State DOT average monthly price for asphalt cement, or other monthly index deemed appropriate by the Director of Finance and Administration. The Index Price will be set monthly on or about the last day of the month. The Contract Index Price will be the most recent Index Price set by the Agency at the time of advertising for bids. This price will be as specified in the Special Provisions and will be the base from which price adjustments are computed.
- (2) For the duration of the Contract, Posted Prices for a metric ton (ton) of asphalt cement will be established monthly by the Agency. The Posted Prices will be established in the same manner as the Index Price.

- (3) A Price Adjustment will be paid or credited for asphalt cement only when the Posted Price of asphalt cement increases or decreases over its respective Index Price.
- (4) The Price Adjustment will be based upon the quantity of asphalt cement (QAC) and quantity of emulsified asphalt (QEA) incorporated in the work, determined as follows:
 - a. Batch Plants. QAC is determined using the cumulative actual binder content for each applicable item as reported on the batch ticket, excluding any percent of asphalt cement from Recycled Asphalt Pavement (RAP).
 - b. Drum-Mix Plants. QAC is determined based upon the metric tons (tons) of mix placed, multiplied by the actual binder content reported on the demand tickets, as verified by Agency personnel. In the event of multiple binder contents, the accepted quantity of mix at each binder content shall be determined, and the total QAC used shall be calculated accordingly. The accumulated asphalt cement total on the plant automation may be checked and verified by Agency personnel for each mix.
 - c. Emulsified Asphalt. QEA is as determined in accordance with Subsection 404.11.

(5) The Price Adjustment to be paid shall be computed as follows:

$$PA = [(QAC + (ACEA \times 0.001 \times QEA)) \times (PP - IP)] \text{ [Metric]}$$

$$PA = [(QAC + (ACEA \times 0.05 \times QEA)) \times (PP - IP)] \text{ [English]}$$

where:

- PA = Price Adjustment (LU in \$)
- IP = Index Price (\$/metric ton) or (\$/ton)
- PP = Posted Price on date of work (\$/metric ton) or (\$/ton)
- QAC = Quantity of Asphalt Cement (metric tons) or (tons)
- QEA = Quantity of Emulsified Asphalt (kilograms) or (CWT)
- ACEA = Asphalt Content of Emulsified Asphalt as follows:

Emulsified Asphalt Type	ACEA
CSS-1h	0.57
MS-1	0.55
RS-1	0.55
CRS-1p	0.63
CSS-1h Fog	0.28

- (6) The Contract bid prices for the applicable pay items will be paid separately under the Contract. The price adjustment will be calculated and paid in the same bi-weekly estimate as the applicable Contract work.
- (7) Payments for Price Adjustment, Asphalt Cement shall be debited or credited against the Contract price (Lump Unit) bid for Price Adjustment, Asphalt Cement.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
406.50 Price Adjustment, Asphalt Cement (N.A.B.I.)	Lump Unit

SECTION 520 - MEMBRANE WATERPROOFING, SPRAY APPLIED

520.01 DESCRIPTION. This work shall consist of furnishing and installing a spray applied membrane waterproofing system. The system shall incorporate a primer, the waterproofing membrane, tack coat, and any required aggregate.

520.02 MATERIALS. The materials shall consist of an approved spray applied membrane waterproofing system listed on the Approved Products List on file with the Agency's Materials and Research Section.

520.03 SUBMITTALS. The following information shall be provided by the Contractor to the Engineer prior to application of the membrane system:

- (a) Material Safety Data Sheets (MSDS) and Material Detail Sheets prepared by the membrane manufacturer, provided a minimum of seven (7) days prior to the scheduled commencement of work.
- (b) Written certification from the manufacturer regarding the Applicator's qualifications and references for a minimum of three (3) spray applied membrane projects completed by the Applicator within the last five (5) years, provided a minimum of seven (7) days prior to the application of any system component. The certification shall apply only to the named individual(s) performing the application.

520.04 WEATHER LIMITATIONS. Waterproofing shall not be done in rainy weather or when the temperature is below 5°C (40°F) without the authorization of the Engineer.

520.05 SURFACE PREPARATION. Concrete surfaces that are to receive the membrane waterproofing shall meet SSPC SP13/NACE No. 6 Surface Preparation of Concrete. Metal surfaces shall meet SSPC SP10/NACE No. 2 Near White Blast Cleaning.

520.06 CONSTRUCTION DETAILS.

- (a) General. All work performed shall be in accordance with the manufacturer's recommendations.

The manufacturer shall have a competent technical representative with necessary equipment to perform the quality control testing at the job site during all phases of preparation and installation. The technical representative will be responsible for performing all quality control testing required during membrane application (as described below). The technical representative will present all quality-control testing equipment to the Engineer to verify calibration dates and demonstrate their competency to perform quality control testing.

Personnel exposed to primers and membranes shall be protected in accordance with the MSDS.

All components of the membrane system shall be stored in accordance with the Material Detail Sheets.

All installation shall be performed in accordance with the Material Detail Sheets and manufacturer's recommendations.

Where traffic will be driving directly on the membrane surface, an aggregate wearing surface shall be adhered to the top membrane coat. Unless otherwise specified, the aggregate shall be broadcast at 1.22 - 2.44 kg/m² (0.25 - 0.50 lb/ft²) to achieve adequate uniform coverage.

Where bituminous concrete pavement will be applied to the membrane surface, a tack coat compatible with the membrane system shall be used between the membrane and the bituminous concrete pavement. The surface preparation and tack coat shall be applied per the manufacturer's recommendations.

(b) Quality Control Testing.

- (1) Substrate Moisture Content and Temperature. The surface moisture content and surface temperature shall be measured prior to applying the primer and membrane. The moisture content and temperature shall be within the limits indicated on the Material Detail Sheets. One test shall be performed for every 165 square meters (200 square yards) of deck area or three tests per bridge deck, whichever is greater.
- (2) Primer Adhesion. After the substrate has been prepared to the satisfaction of the Engineer, the adhesion of the primer to the substrate shall be tested in accordance with ASTM D 4541. Tests shall be conducted after the primer has sufficiently cured as determined by the technical representative. One test shall be performed for every 165 square meters (200 square yards) of deck area or three tests per bridge deck, whichever is greater. The Engineer may require additional test(s) where deficient adhesion is suspected. A minimum of 1 MPa (150 psi) adhesion strength to Portland cement concrete is required. The primer shall consist of one coat with an overall coverage rate of 3.0-4.3 m²/l (125-175 ft²/gal) unless otherwise recommended in the manufacturer's written instructions.
- (3) Membrane Thickness. The wet-film thickness of each course of membrane shall be measured using a standard comb-type thickness gauge, or the dry-film thickness of each course of membrane shall be measured in accordance with SSPC-PA2. Alternative methods for measuring thickness shall be submitted to the Engineer for approval. The measured thickness of each course of the membrane and the entire thickness of the finished membrane shall be greater than or equal to the depth documented in the Crack Bridging Test (ASTM C 836).
- (4) Membrane Pin Holes. Test for pin holes in the cured membrane system over the entire application area in accordance with ASTM D 4787. The test shall be conducted at voltages recommended by the manufacturer to prevent damage to the membrane.

- (5) Membrane Adhesion. The adhesion of the membrane system to the substrate shall be tested in accordance with ASTM D 4541. Tests shall be conducted after the membrane has sufficiently cured as determined by the technical representative. One test shall be performed for every 165 square meters (200 square yards) of deck area or three tests per bridge deck, whichever is greater. The Engineer may require additional test where deficient adhesion is suspected. A minimum of 1 MPa (150 psi) adhesion strength to Portland cement concrete is required.

The Contractor shall repair and/or correct any deficiencies in the membrane system and substrate noted during quality-control testing as recommended by the manufacturer's representative to the satisfaction of Engineer at no additional cost to the State.

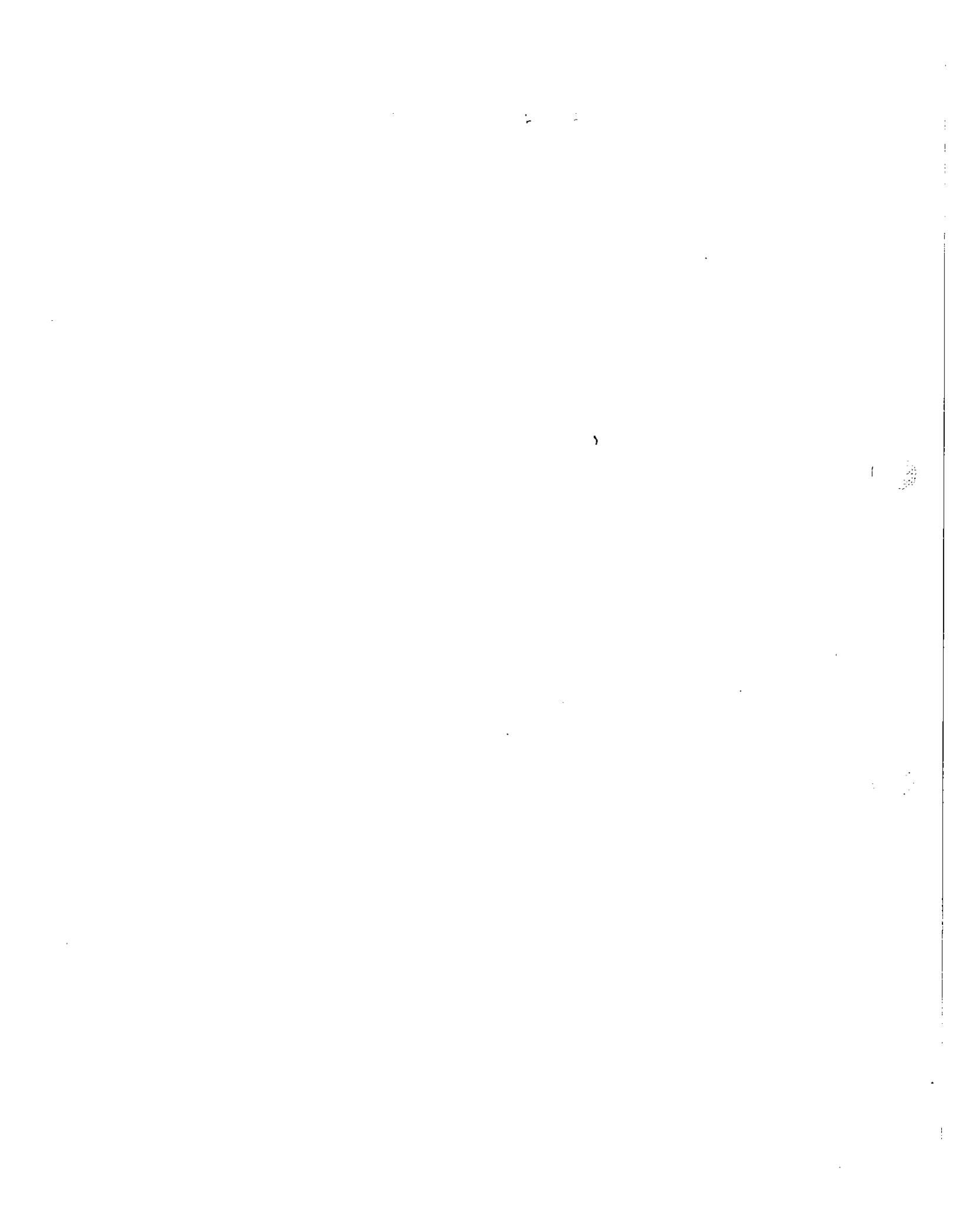
520.06 PROTECTION OF EXPOSED SURFACES. The Contractor shall exercise care in the application of the waterproofing materials to prevent surfaces not receiving treatment from being spattered or marred. Particular reference is made to the face of curbs, copings, finished surfaces, substructure exposed surfaces, and outside faces of the bridge. Any material that spatters on these surfaces shall be removed and the surfaces cleaned to the satisfaction of the Engineer.

520.07 METHOD OF MEASUREMENT. The quantity of Membrane Waterproofing, Spray Applied to be measured for payment will be the number of square meters (square yards) used in the complete and accepted work. Measurement will be based on the horizontal distance between the face of the curbs, plus vertical surfaces as shown on the Plans, and the horizontal length of the membrane installed.

520.08 BASIS OF PAYMENT. The accepted quantity of Membrane Waterproofing, Spray Applied will be paid for at the Contract unit price per square meter (square yard). Payment will be full compensation for furnishing, transporting, handling, and placing the waterproofing system specified, including surface preparation, submittals, and quality control testing, and for furnishing all labor, tools, materials, equipment, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
520.10 Membrane Waterproofing, Spray Applied	Square Meter (Square Yard)





Vermont Department of Environmental Conservation
Watershed Management Division
Main Building, Second Floor
One National Life Drive
Montpelier, VT 05620-3522

Agency of Natural Resources

[phone] 802-828-1535

The Notice of Intent for the discharge of stormwater runoff from Low Risk Construction Activity under Construction General Permit (CGP) 3-9020 (Amended 2008) has been authorized. Enclosed are four documents that you will need to maintain compliance with this authorization.

1. Authorized Notice of Intent (NOI)

The authorized NOI for Low Risk Projects is valid for two years from the date of the authorization. If the project will proceed past the automatic termination date, you must reapply for coverage under this or another construction stormwater permit before that time.

2. Notice of Authorization for Posting

The notice of Authorization, which details the authorization and conditions you selected in completion of Appendix A to the CGP, must be posted in a location visible to the public in accordance with Subpart 4.5.C of the CGP. In accordance with subpart 5.1 of the CGP, the project risk score must be re-evaluated prior to any major changes to the construction plan.

3. Low Risk Site Handbook for Erosion Prevention and Sediment Control

Please provide the Principal Operator with the low risk site handbook. This handbook details the practices that must be implemented throughout the construction project to prevent erosion and the discharge of sediment from the construction site. Some practices must be in place before construction begins, so please review the entire handbook before starting the project.

4. Notice of Addition of Co-Permittee

This form must be submitted for every new landowner or principal operator who joins the project, in accordance with Subpart 7.2 of the CGP.

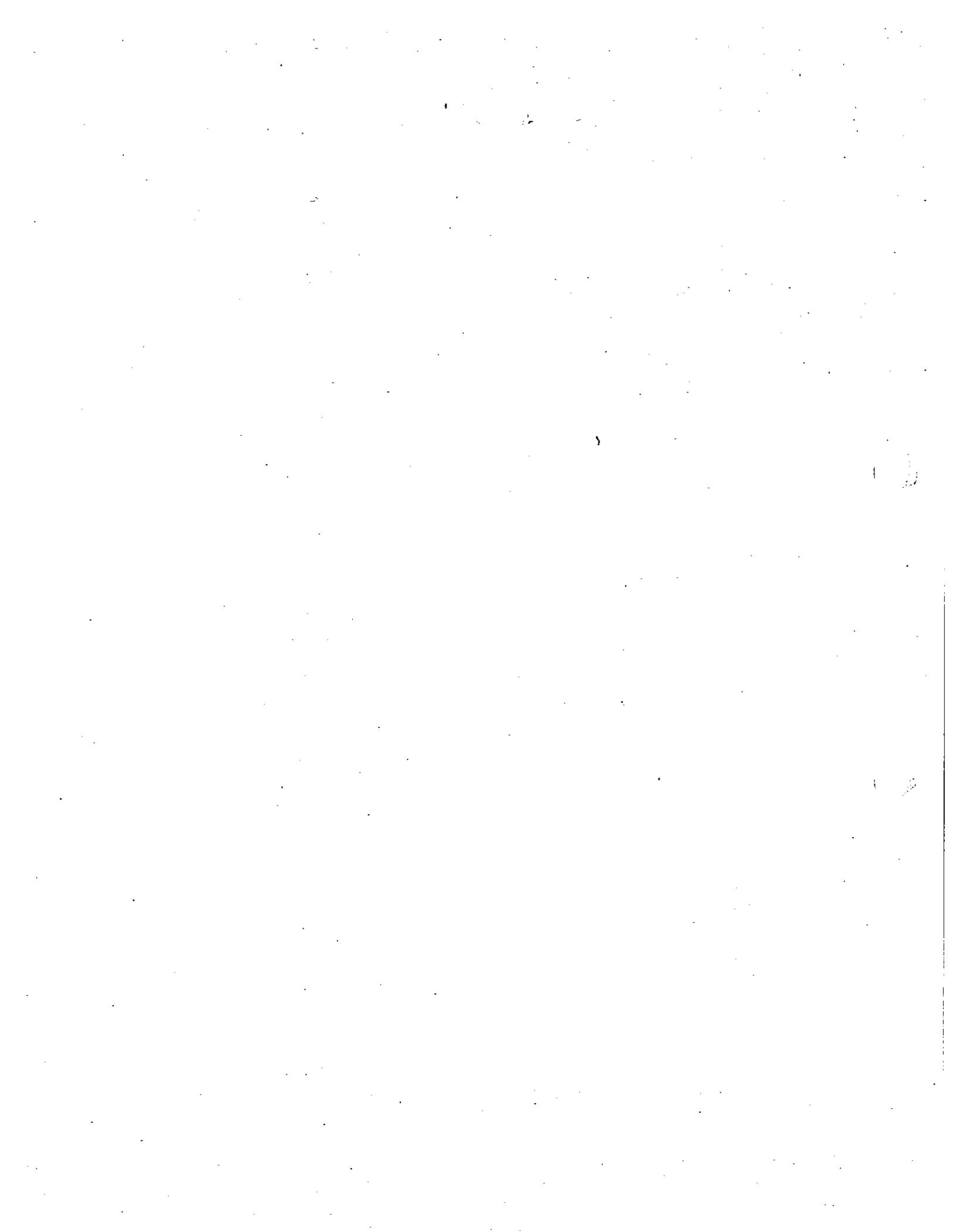
The CGP, copies of pertinent forms, and an electronic version of the Low Risk Site Handbook for Erosion Prevention and Sediment Control are available on the stormwater website at:

http://www.vtwaterquality.org/stormwater/htm/sw_cgp.htm. If you have any questions related to your authorization, please contact the appropriate analyst in the Stormwater District where your project is located. Use our District Look-up Tool for details.

Sincerely,

Stormwater Management Program

Cc: Co-Permittee/Application Preparer/Designer (if applicable)



Notice of Intent (NOI)for Stormwater Discharges Associated with
Construction Activity on**Low Risk Sites**

Under Vermont Construction General Permit 3-9020

For Department Use Only
NOI Number: 7170-9020.A

Submission of this completed Notice of Intent (NOI) constitutes notice that the entity in Section A intends to be authorized to discharge pollutants to waters of the State, from the project identified in Section C, under Vermont's Construction General Permit (CGP). Submission of the NOI constitutes notice that the party identified in Section A of this form has read, understands, and meets the eligibility conditions of the CGP; has determined that the project qualifies for coverage as a Low Risk project in conformance with Appendix A of the CGP; agrees to comply with all applicable terms and conditions of the CGP; understands that continued authorization under the CGP is contingent on maintaining eligibility for coverage; and that all applicable practices in the Low Risk Site Handbook for Erosion Prevention and Sediment Control must be implemented and maintained for the duration of construction activities. In order to be granted coverage, all information required on this form must be provided and an application fee of \$50 payable to the State of Vermont must be submitted.

A. Landowner Information

1a. Name: VTrans 1b. Contact (if applicable): James Brady

Mailing Address
a. Street/P.O. Box: One National Life Drive

b. City/Town: Montpelier c. State: Vermont d. Zip: 05633

3. Contact Information
a. Phone: 802-828-3978 b. Fax: _____ c. Email: james.brady@state.vt.us

B. Principal Operator Information (if known)

1. Name: TBD

2. Mailing Address
a. Street/P.O. Box: _____

b. City/Town: _____ c. State: Vermont d. Zip: _____

3. Contact Information
a. Phone: _____ b. Fax: _____ c. Email: _____

C. Application Preparer Information (if applicable)

1a. Name: James Brady 1b. Contact (if applicable): _____

2. Mailing Address: 1 National Life Drive
a. Street/P.O. Box: _____

b. City/Town: Montpelier c. State: Vermont d. Zip: 05633

3. Contact Information
a. Phone: 802-828-3978 b. Fax: _____ c. Email: james.brady@state.vt.us

See Filing Directions for Low Risk Projects

D: Project Information

1. Project Name: Castleton BRF 015-2(10)

2a. Is this project part of a Common Plan of Development¹? Yes No

2b. If Yes, Name of Development: _____

3a. Does this project have any previously issued or pending stormwater discharge permits? Yes No

3b. If Yes, Prior NOI Number(s): 7170-9020

4. Location Address

a. Street: VT Route 30 b. City/Town: Castleton

c. Latitude: 43 ° 36 ' 16 " d. Longitude: 73 ° 12 ' 34 " e. County: Rutland

Use DEC's Waterbody Identification (WBID) ArcGIS webpage ([click here](#)) to answer questions 5 and 6 below.

5. Name of receiving water(s)²: Wetland adjacent to the Castleton River 6. Include a topographic location map.

7. Project Type: Residential Commercial Industrial Other: Transportation

8. Total Area of Disturbance: 1.7 acres 9. Description of construction activities to be permitted (below):

This project is located in the county of Rutland, town of Castleton, on VT Route 30 at Bridge No. 93 over the Clarendon and Pittsford Railroad, approximately 0.3 miles south of the intersection of VT 30 and VT 4A. Work to be performed will include the removal and replacement of Bridge No. 93 on the existing alignment with associated roadway and rail work.

E. Public Notice Requirement

You must provide a copy of this complete NOI form to the municipal clerk for posting in the municipality in which the project is located. If the project and the related discharge(s) are located in different municipalities, then the completed NOI must be filed with the municipal clerk in each municipality. The municipal clerk must post the completed NOI. In order to be considered complete, you must include the date of posting.

Date of Posting at Municipal Office(s): 05/01/2014

Information for the Municipal Clerk regarding posting instructions can be found on Page 4 of this NOI.

F. Certification Relating to the Accuracy of the Information Submitted

I hereby certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I also certify that the applicable practices in The Low Risk Site Handbook for Erosion Prevention and Sediment Control will be implemented for the duration of the project for which this NOI is submitted.

Landowner Name: State of Vermont Title: Environmental Specialist

Signature: _____ Date: 2014.05.01 10:12:48 -04'00'

Principal Operator: _____ Title: _____
(if known)

Signature: _____ Date: _____

Application Preparer: James Brady Title: Environmental Specialist
(if applicable)

Signature: _____ Date: 2014.05.01 10:13:45 -04'00'

¹ "Common Plan of Development" is defined within the CGP 3-9020, Appendix C - Definitions, page A-12

² "Waters of the State" (i.e. receiving water) is defined within the CGP 3-9020, Appendix C - Definitions, page A-16

For Department Use Only

VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION AUTHORIZATION TO DISCHARGE

A determination has been made that the proposed construction activities qualify for coverage under General Permit 3-9020 (amended 2008) as a Low Risk project. Subject to the conditions of General Permit 3-9020 (amended 2008) the applicant is hereby authorized to discharge stormwater runoff from a construction site as described in this Notice of Intent Number 7170 -9020. A.

Dated this 30th day of May, 20 14

David K. Mears, Commissioner Department of Environmental Conservation

By: _____

Padraic Monks

Padraic Monks, Program Manager
Stormwater Program

PUBLIC COMMENT

Public comments concerning this Notice of Intent to discharge under CGP 3-9020 (amended 2008) are invited and must be submitted within 10 days of receipt of this Notice by the Municipal Clerk. Comments should address how the application complies or does not comply with the terms and conditions of CGP 3-9020 (amended 2008). A letter of interest should be filed by those persons who elect not to file comments but who wish to be notified if the comment period is extended or reopened for any reason. All written comments received within the time frame described above will be considered by the Department of Environmental Conservation in its final ruling to grant or deny authorization to discharge under CGP 3-9020 (amended 2008). Send written comments to:

Vermont Department of Environmental Conservation
Watershed Management Division, Stormwater Program
1 National Life Drive, Main Building Second Floor
Montpelier, VT 05620-3522

Please cite the NOI number in any correspondence.

APPEALS

Renewable Energy Projects – Right to Appeal to Public Service Board

If this decision relates to a renewable energy plant for which a certificate of public good is required under 30 V.S.A. §248, any appeal of this decision must be filed with the Vermont Public Service Board pursuant to 10 V.S.A. §8506. This section does not apply to a facility that is subject to 10 V.S.A. §1004 (dams before the Federal Energy Regulatory Commission), 10 V.S.A. §1006 (certification of hydroelectric projects) or 10 V.S.A. Chapter 43 (dams). Any appeal under this section must be filed with the clerk of the Public Service Board within 30 days of the date of this decision. For further information, see the Public Service Board website at <http://psb.vermont.gov> or call (802) 828-2358. The address for the Public Service Board is 112 State Street Montpelier, Vermont 05620-2701.

All Other Projects – Right to Appeal to Environmental Court

Pursuant to 10 V.S.A. Chapter 220, any appeal of this decision must be filed with the clerk of the Environmental Court within 30 days of the date of the decision. The Notice of Appeal must specify the parties taking the appeal and the statutory provision under which each party claims party status; must designate the act or decision appealed from; must name the Environmental Court; and must be signed by the appellant or their attorney. In addition, the appeal must give the address or location and description of the property, project or facility with which the appeal is concerned and the name of the applicant or any permit involved in the appeal. The appellant must also serve a copy of the Notice of Appeal in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings. For further information, see the Vermont Rules for Environmental Court Proceedings, available online at www.vermontjudiciary.org or call (802) 828-1660. The address for the Environmental Court is 2418 Airport Road, Suite 1, Barre, Vermont 05641.

A copy of CGP 3-9020 (amended 2008) may be obtained by calling (802) 828-1535; by visiting the Department at the above address between the hours of 7:45 am and 4:30 pm; or by download from the Watershed Management Division's Web site at: www.vtwaterquality.org.

INFORMATION FOR MUNICIPAL CLERK

10 V.S.A. Chapter 47 §1263(b) provides for the public notice of an applicant's intent to discharge stormwater runoff associated with construction activity. Please post this notice and instruction sheet in a conspicuous place for 10 days from the date received. If you have any questions, contact the Watershed Management Division of the Department of Environmental Conservation at (802) 828-1535.

Submit this form and the \$50 fee to:

Vermont Department of Environmental Conservation
Watershed Management Division, Stormwater Program
1 National Life Drive, Main Building Second Floor
Montpelier, VT 05620-3522

Notice of Authorization

Under Vermont Construction General Permit 3-9020
For Low Risk Projects



Project Name: Castleton BRF 015-2(10)	Notice of Intent Number: 7170-9020.A
Permittee Name: Vermont Agency of Transportation	Date of Authorization: May 30, 2014
	Date of Expiration: May 30, 2016
The project listed above has received authorization under General Permit 3-9020 to discharge stormwater from the following construction activities: Removal and replacement of Bridge #93 on existing alignment with associated roadway and rail work.	
This authorization includes the following requirements: <ol style="list-style-type: none">1. Implementation of erosion prevention and sediment control practices required by the Low Risk Site Handbook for Erosion Prevention and Sediment Control.2. All areas of disturbance must have temporary or final stabilization within 7 days of the initial disturbance. After this time, all disturbed soil must be stabilized at the end of each work day. Between October 15 and April 15 all disturbed soil must be stabilized at the end of each work day. The following exceptions apply:<ol style="list-style-type: none">a. Stabilization is not required if work is to continue in the area within the next 24 hours and there is no precipitation forecast for the next 24 hours.b. Stabilization is not required if the work is occurring in a self-contained excavation (i.e. no outlet) with a depth of 2 feet or greater (e.g. house foundation excavation, utility trenches).3. No more than 2 acres of land may be disturbed at any one time.4. Inspections shall be conducted at least once every (7) calendar days and within twenty-four (24) hours of the end of a storm event resulting in discharge of Stormwater from construction site.5. If there is a discharge of visibly discolored stormwater from the construction site or from the construction site to waters of the State, the permittee shall take immediate corrective action.6. If, after completing corrective action, there continues to be a discharge of sediment from the construction site to waters of the State, the permittee shall notify DEC by submitting a report within 72 hours of the discharge.	
To request information on this authorization, or to report compliance concerns, please contact: Vermont DEC, Watershed Management Division Main Building, Second Floor One National Life Drive Montpelier, VT 05620-3522 (802) 828-1535 [See next page for posting requirements]	

Permittee Directions for Posting:

This notice shall be placed near the construction entrance at a location visible to the public. If displaying near the main entrance is infeasible, the notice shall be posted in a local public building such as the town hall or public library. For linear projects, the notice shall be posted at a publicly accessible location near the active part of the construction project (e.g., where a pipeline project crosses a public road).

**Notice of Addition
Of Owners or Operators To Coverage
Under Vermont Construction General Permit 3-9020**



Submission of this completed form constitutes notice that the entity in Section C seeks to be added as a co-permittee to an existing authorization to discharge under Vermont's Stormwater Construction General Permit (CGP) from the project identified in Section A. All landowners and persons who meet the definition of Principal Operator (Subparts 2.1B, 3.1B of the CGP) and who were not included on the original NOI must submit a Notice of Addition form.

A. Project Information

1. Project Name: _____ 2. Notice of Intent Number: _____

B. Original Permittee Information

1. Name: _____

2. Mailing Address:

a. Street/PO Box: _____

b. City/Town: _____ c. State: _____ d. Zip: _____

3. Contact Information

a. Phone: _____ b. Fax: _____ c. Email: _____

C. New Co-Permittee Information

Check one or both: New Landowner New Principal Operator

1. Name: _____

2. Business Name: _____

3. Mailing Address:

a. Street/PO Box: _____

b. City/Town: _____ c. State: _____ d. Zip: _____

4. Contact Information

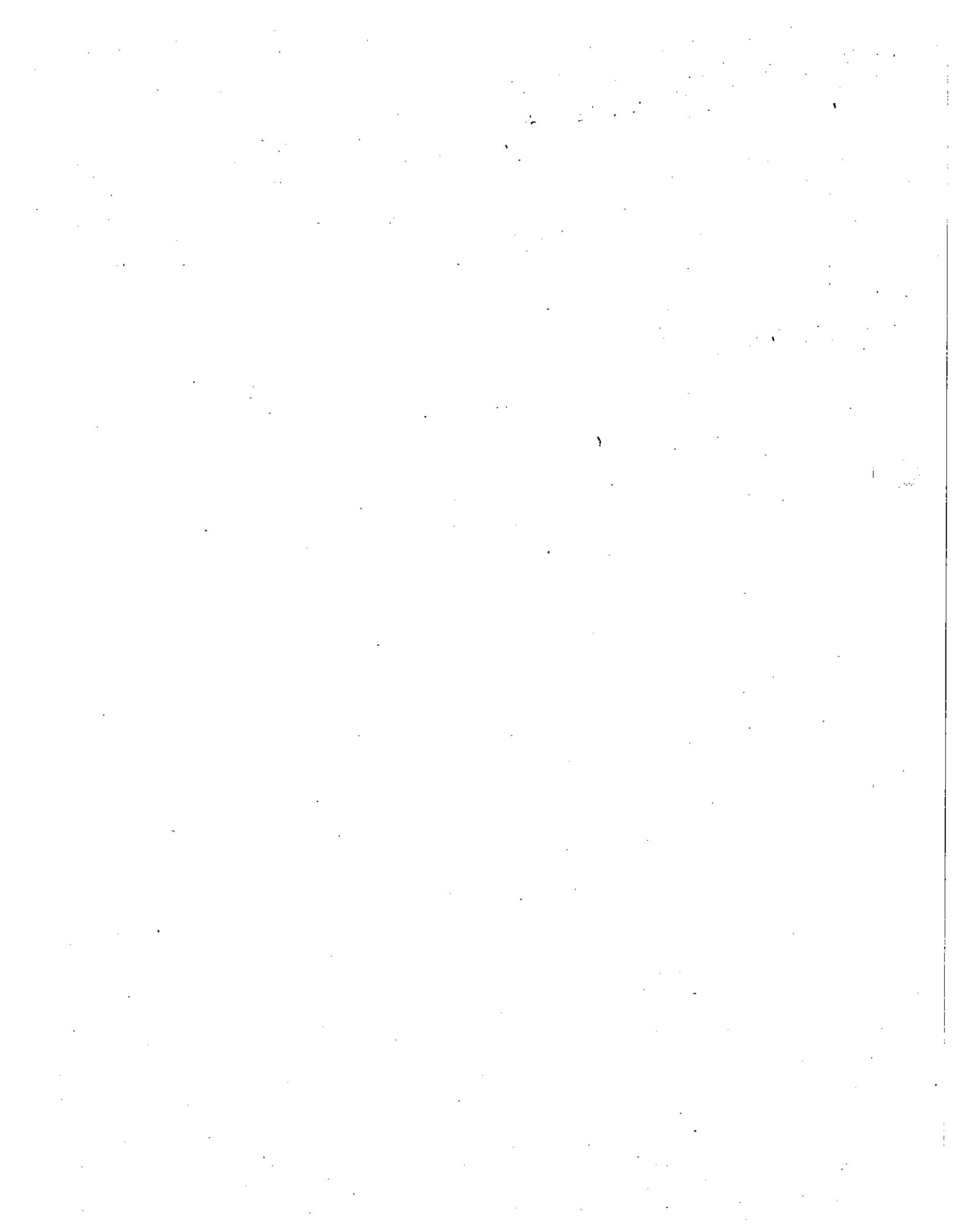
a. Phone: _____ b. Fax: _____ c. Email: _____

D. Request for Addition as Co-Permittee

I hereby request that the entity in Section C be added as co-permittee to the existing authorization to discharge stormwater from construction activities stated in Section A. In requesting co-permittee status, I hereby certify under the penalty of law that I have read, understand, and meet the eligibility conditions of the CGP; that I agree to comply with all applicable terms and conditions of the CGP; that I understand that continued authorization under the CGP is contingent on maintaining eligibility for coverage, and that the applicable practices in the authorized Erosion Prevention and Sediment Control Plan must be implemented and maintained for the duration of the construction activities. I agree to comply with all applicable terms and conditions of the General Permit 3-9020.

Signature: _____ Date: _____

Submit Original Form to:
VT DEC, Watershed Management Division
1 National Life Drive, Main 2
Montpelier, VT, 05620-3522





NYS DOT ACCOUNT NUMBER

**CERTIFICATE OF INSURANCE FOR HIGHWAY WORK PERMIT
TO BE PREPARED BY INSURANCE AGENCY OR INSURANCE COMPANY**

THIS CERTIFICATE OF INSURANCE WILL SUPERSEDE ALL OTHER CERTIFICATES OF INSURANCE NOW ON FILE WITH THE NYSDOT AND MUST BE IN EFFECT FOR THE FULL TERM OF THE PERMIT. EXPIRATION OF, OR LACK OF, LIABILITY INSURANCE AUTOMATICALLY INVALIDATES THE PERMIT.

Highway Work Permits: Used for installing and/or maintaining facilities on State right-of-way -- coverage in such case shall be written as a protective liability insurance policy and shall also include completed operations liability insurance with respect to liability imposed by laws arising between the date and final cessation of the work pursuant to the Highway Work Permit and the date of final acceptance of such work by the State. Questions 1-6 are to be filled in by permit applicant. The rest of the form is for insurance agent or broker to fill in and agree to.

1. NAME OF PERMIT APPLICANT

(The Legal Name of the Business Entity, i.e., Corporation, Partnership or individuals. NOTE: If DBA, also provide Name of Legal Entity and Copy of "Certificate of Conducting Business under an Assumed Name" that was filed in County Clerk's Office.)

2. FEIN Number _____

(Federal Employee Identification Number, also known as the IRS Tax Identification Number.)

3. PHYSICAL ADDRESS OF PERMIT APPLICANT

(Provide street address of principal place of business; may attach additional PERM 17 ATTACHMENT sheet listing physical addresses of branch offices (page (4)), if application for permits will be for those locations.)
 PLEASE CHECK HERE IF THIS IS A CHANGE OF ADDRESS

4. MAILING ADDRESS OF PERMIT APPLICANT

(If different than above) PLEASE CHECK HERE IF THIS IS A CHANGE OF ADDRESS

5. TELEPHONE NUMBER OF PERMIT APPLICANT

6. NAME OF PERMIT APPLICANT CONTACT PERSON

7. 7a. PROTECTIVE LIABILITY POLICY NUMBER

(See Policy requirements in A or B on reverse) Binders, and unassigned policy numbers are only valid for 30 days.

7b. EFFECTIVE DATE _____ EXPIRATION DATE _____

PLEASE CHECK HERE AND SIGN BELOW IF COVERAGE IS CONTINUOUS UNTIL CANCELLED
Insurer agrees to notify NYSDOT at least 30 days prior to the expiration or cancellation of said policy.

(Authorized Signature of Insurance Agent or Broker is Required to indicate agreement to notify NYSDOT)

8. Submit to the New York State Department of Transportation Regional Office where the permit work will occur. If the permit work occurs in multiple Regions submit this form to one Region and the New York State Department of Transportation will coordinate its acceptance. See Page 3 for a Regional listing with addresses.

REVERSE SIDE MUST BE COMPLETED

PERM 17 (04/07) REVERSE

In accordance with NYS Department of Transportation requirements, the subscriber hereby certifies that a PROTECTIVE LIABILITY insurance policy has been issued on behalf of the Permit Applicant:

- A. HIGHWAY WORK PERMIT; for the protection of the people of the State of New York, all municipal subdivisions thereof, and the Commissioner and NYS Department of Transportation, the NYS Thruway Authority, the State Bridge Authority and their officials, officers, and employees as named insureds, (and no other co-insureds), covering bodily injury (including death) with minimum limits of \$500,000 each occurrence and covering property damage with minimum limits of \$100,000 each accident and minimum aggregate annual limits of \$500,000, against actions resulting from use of a Highway Permit by the Permittee or by a person acting by, through or for the Permittee, including omissions and supervisory acts of any of the named insureds; or
- B. MAJOR COMMERCIAL HIGHWAY WORK PERMIT; for the protection of the people of the State of New York, all municipal subdivisions thereof, and the Commissioner and NYS Department of Transportation, the NYS Thruway Authority, the State Bridge Authority and their officials, officers, and employees as named insureds, (and no other co-insureds), for Major Commercial Highway Work Permits – covering bodily injury (including death) with minimum limits of \$1,000,000 each occurrence and covering property damage with minimum limits of \$200,000 each accident and minimum aggregate annual limits of \$1,000,000, against actions resulting from use of a Highway Permit by the Permittee or by a person acting by, through or for the Permittee, including omissions and supervisory acts of any of the named insureds.

The subscriber certifies and agrees that such insurance policy contains an endorsement that said policy shall not be cancelled until thirty (30) days written cancellation notice has been given the NYS Department of Transportation. Any cancellation notice shall indicate the permit applicant's name, permit account number (obtain from permit applicant), address, and policy number. Notice of reinstatement must be made by a reinstatement notice or a completed Certificate of Insurance (PERM 17) and sent to the NYS Department of Transportation. In addition, the subscriber further certifies and agrees that the insurance policy referred to herein shall not be changed or cancelled unless all work authorized has been completed and accepted by the NYS Department of Transportation.

This certificate is furnished in accordance with the rules and regulations of the NYS Department of Transportation pertaining to Highway Permits.

A Certificate of Insurance (PERM 17) is the only acceptable proof of insurance. PLEASE DO NOT SEND ACCORD FORMS, INSURANCE CARDS. Altered certificates will NOT be accepted. Updates and changes may be made by submitting a new Certificate of Insurance (PERM 17); the most recent form will supersede all previous Certificates of Insurance (PERM 17) on file with the NYS Department of Transportation.

Name of Insurance Company (please print)

Authorized Signature of Insurance Agent or Broker

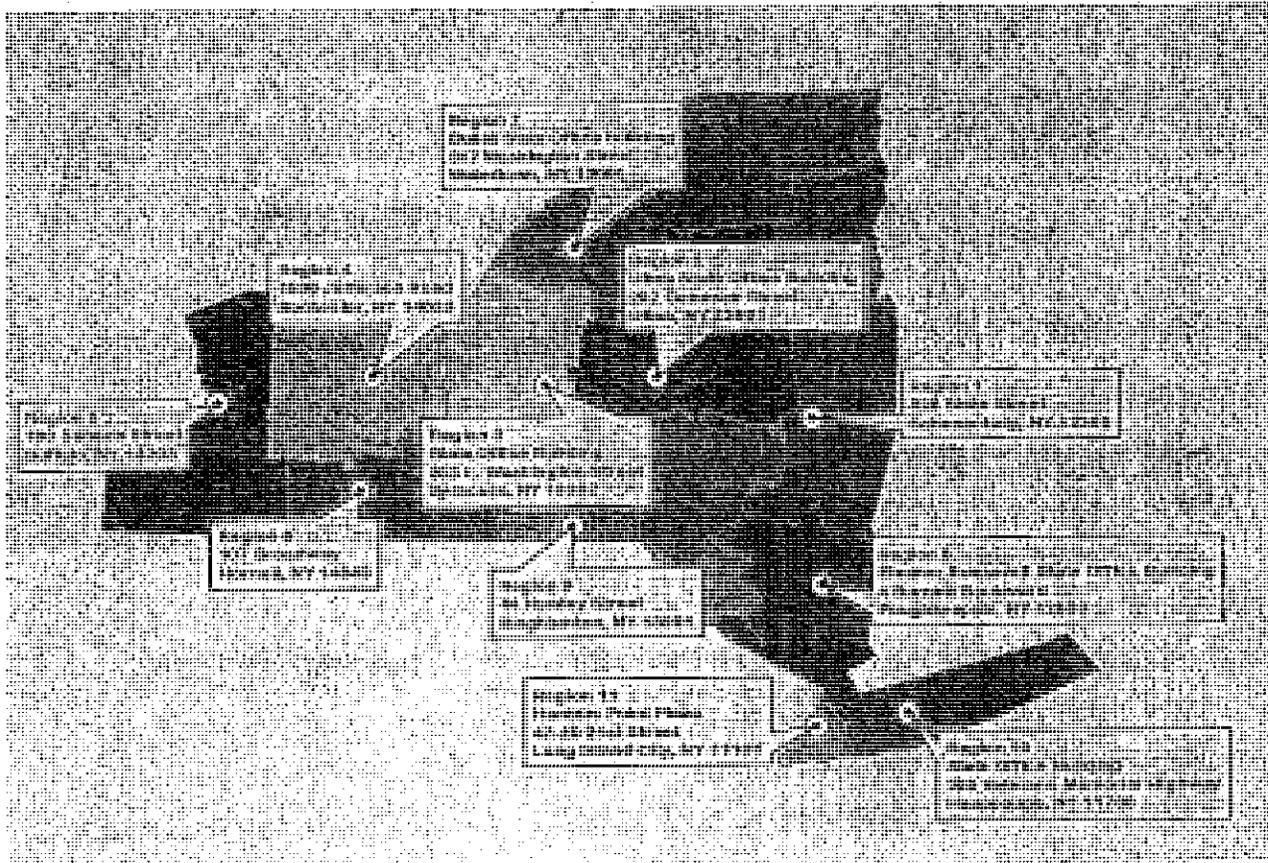
Address of Insurance Company (please print)

Authorized Name of Insurance Agent or Broker (please print)

Telephone No. of Insurance Company

Address of Insurance Agent (please print)

Telephone No. of Insurance Agent



Region	Address	Fax	Counties
1	NYSDOT Region 1, Highway Work Permits 328 State Street Schenectady, NY 12305	518-388-0379	Albany, Essex, Greene, Rensselaer, Saratoga, Schenectady, Warren, Washington
2	NYSDOT Region 2, Highway Work Permits 207 Genesee Street Utica, NY 13501	315-793-2522	Fulton, Hamilton, Herkimer, Madison, Montgomery, Oneida
3	NYSDOT Region 3 Private Development and Mitigation Section System Operations 333 E. Washington Street Syracuse, NY 13202	315-428-4311	Cayuga, Cortland, Onondaga, Oswego, Seneca, Tompkins
4	NYSDOT Region 4, Highway Work Permits 1530 Jefferson Road Rochester, NY 14623	585-272-3474	Genesee, Livingston, Monroe, Ontario, Orleans, Wyoming, Wayne
5	NYSDOT Region 5, Highway Work Permits 100 Seneca Street Buffalo, NY 14203	716-847-3815	Cattaraugus, Chautauqua, Erie, Niagara
6	NYSDOT Region 6, Highway Work Permits 107 Broadway Hornell, NY 14843	607-324-2663	Allegany, Chemung, Schuyler, Steuben, Tioga, Yates
7	NYSDOT Region 7, Highway Work Permits 317 Washington Street Watertown, NY 13601	315-785-2438	Clinton, Franklin, Jefferson, Lewis, St. Lawrence
8	NYSDOT Region 8, Highway Work Permits 4 Burnett Boulevard Poughkeepsie, NY 12603	845-575-6126	Columbia, Dutchess, Orange, Putnam, Rockland, Ulster, Westchester
9	NYSDOT Region 9, Highway Work Permits 44 Hawley Street Binghamton, NY 13901	607-721-8057	Broome, Chenango, Delaware, Otsego, Schoharie, Sullivan
10	NYSDOT Region 10, Highway Work Permits 250 Veteran's Memorial Highway Hauppauge, NY 11788	631-952-4967	Nassau, Suffolk

**ATTACHMENT TO
CERTIFICATE OF INSURANCE FOR HIGHWAY WORK PERMIT**
THIS FORM MUST BE SUBMITTED WITH THE APPROPRIATE CERTIFICATE OF INSURANCE (PERM 17)
TO BE PREPARED BY INSURANCE AGENCY OR INSURANCE COMPANY

1. NAME OF PERMIT APPLICANT _____

2. FEIN Number _____

3. Consider the Certificate of Insurance (PERM 17) as PAGE 1, this ATTACHMENT is PAGE _____ of _____ TOTAL PAGES

4. BRANCH OFFICES - Additional locations also listed and covered by the same insurance policy indicated on page one of the Certificate of Insurance (PERM 17), in which the insured has a physical place of business and the vehicles are dispatched from while operating under a NYS Department of Transportation permit:

NAME OR DESIGNATION OF BRANCH OFFICE: _____

DOES THIS BRANCH HAVE A NYSDOT ACCOUNT NO.? YES NO. IF YES, PLEASE PROVIDE _____

BRANCH OFFICE PHYSICAL ADDRESS: _____

BRANCH OFFICE MAILING ADDRESS: _____

TELEPHONE NUMBER OF BRANCH OFFICE: _____

CONTACT PERSON: _____

NAME OR DESIGNATION OF BRANCH OFFICE: _____

DOES THIS BRANCH HAVE A NYSDOT ACCOUNT NO.? YES NO. IF YES, PLEASE PROVIDE _____

BRANCH OFFICE PHYSICAL ADDRESS: _____

BRANCH OFFICE MAILING ADDRESS: _____

TELEPHONE NUMBER OF BRANCH OFFICE: _____

CONTACT PERSON: _____

NAME OR DESIGNATION OF BRANCH OFFICE: _____

DOES THIS BRANCH HAVE A NYSDOT ACCOUNT NO.? YES NO. IF YES, PLEASE PROVIDE _____

BRANCH OFFICE PHYSICAL ADDRESS: _____

BRANCH OFFICE MAILING ADDRESS: _____

TELEPHONE NUMBER OF BRANCH OFFICE: _____

CONTACT PERSON: _____

(Additional sheets may be attached if necessary)

State of New York
Department of Transportation

Form PERM 33 (8/01)

Highway Work Permit Application for Non-Utility Work

Instructions and Form

Submit three copies (photocopies acceptable)

INSTRUCTIONS FOR COMPLETING THE APPLICATION FOR HIGHWAY WORK PERMIT – NON-UTILITY

FRONT OF APPLICATION

An Applicant may not have all pertinent information at the time of completing the application form since certain information relative to fees, insurance and guarantee deposits may be contingent upon determinations to be made by the Department. In such cases, the information may be left blank and remittance withheld until the information is determined by the Department.

Please complete the following:

- Permittee's name and address. For more than one applicant, also fill in the joint applicant's name and address.
- Federal Identification Number of the company or individual Social Security Number.
- Applicant's telephone number. A telephone number where applicant can be contacted concerning the application. Please include area code.
- Project Identification No. and Highway Work Permit No. will be completed by the issuing office.
- Name of Contact person and their telephone number in case of emergency.
- If Highway Work Permit is to be returned to someone other than the applicant, complete this section.
- Estimate the cost of work being performed in the State highway right-of-way and place this figure on the blank line.
- Indicate anticipated duration of work to be performed with starting date and ending date on this line.
- You may provide your own insurance, purchase insurance through the Department, if available, or provide an Undertaking (for Utilities and Municipalities only). If you choose to provide your own insurance, a PERM 17 will be necessary. The PERM 17 may be obtained at the office you obtained this form from. It must be completed by your insurance company and accompany the permit application upon submission. The Policy number and expiration date of the PERM 17 should be shown on this line.
- Give a brief description of the proposed work that is to be done under this permit
- Plans and specifications should accompany this application for any work that involves construction within the State highway right-of-way. Place a check mark on the lines for plans and specifications if they are attached.
- Location of the project should be identified by: State Route; State Highway Number, if known; State Highway reference markers and Town and County in which work area is located.
- SEQR requirements: This may be required for larger projects – Contact the Regional Office of the Department of Transportation to determine if these requirements are necessary.
- Signature of applicant (permittee) and date.
- Signature of second applicant, if any, and date.

BACK OF APPLICATION

- Check type of work that will be performed.
- In the appropriate column indicate:
 - Manner in which insurance coverage is furnished the Department, i.e., PERM 17 (P17) or Under-Taking (UT) or Insurance Fee (IF), if available (N/A means the Department's insurance is not available).
- Indicate total amount of permit fee and insurance fee, if applicable.
- Indicate check number of Guarantee Deposit or Bond Number, if required. This will be determined by the Department upon submission of application.

Shaded areas will be completed by the Department of Transportation.

Remove the application form from the back of this packet and submit 3 copies to the Department for approval.

**RESPONSIBILITIES OF PERMITTEE
PURSUANT TO NON-UTILITY HIGHWAY WORK PERMITS**

FAILURE TO OBTAIN A PERMIT OR FAILURE TO COMPLY WITH THE TERMS OF A PERMIT MAY RESULT IN THE DEPARTMENT HALTING THE ACTIVITY FOR WHICH A PERMIT IS REQUIRED UNTIL ADEQUATE CORRECTIONS HAVE BEEN MADE.

PROTECTIVE LIABILITY INSURANCE COVERAGE

Permittee must have protective liability insurance coverage in accordance with Department requirements. See "Certificate of Insurance for Highway Permits" (Form PERM 17, NYSDOT).

Expiration of, or lack of, liability insurance automatically terminates the permit. Insurance coverage may be provided by furnishing the Department with one of the following:

1. A completed Certificate of Insurance for Highway Permits (Form PERM 17, NYSDOT).
2. Purchase the Department Blanket Policy for Highway Work Permits from the Department, if available. N/A shown on the Application in the insurance column means Department insurance coverage is not available for that type of project.
3. Provide an Undertaking. Undertakings are limited to Public Service Corporations and government units.

COMPENSATION INSURANCE AND DISABILITY COVERAGE

The permittee is required to have compensation insurance and disability coverage as noted in the provisions of the Worker's Compensation Law and Acts amendatory thereof for the entire period of the permit, or the permit is invalid.

NOTIFICATION

The following should be notified at the appropriate time as shown below:

1. Commissioner of Transportation, through Regional Office, one week prior to commencing work.
2. Area gas distributors 72 hours prior to any blasting.
3. Utility companies with facilities in work areas before starting work, in accordance with Industrial Code 53 (permission from utility company must be obtained before commencing work affecting utilities' facilities).
4. New York State Department of Transportation, Regional Signal Maintenance Shop, 3 days prior to starting work.
5. New York State Department of Transportation Regional Office at conclusion of work and return original copy of permit to Resident Engineer.

Permit Notification for Annual Permits: Notify by telephone, the Regional or Resident Engineer's Office in advance, when work is to be performed.

SITE CARE AND RESTORATION

An Undertaking, a bond or a certified check in an amount designated by the Department of Transportation may be required by the Regional Office, before a permit is issued, to guarantee restoration of the site to its original condition. If the Department is obliged to restore the site to its original condition, the costs to the Department will be deducted from the amount of the permittee's guarantee deposit at the conclusion of the work. Costs in excess of the Bond/guarantee deposit on file will be billed directly to the permittee.

The permittee is responsible for traffic protection and maintenance including adequate use of signs and barriers during work and evening hours. Anyone working within the State highway right-of-way will wear high visibility apparel (orange/yellow) and hard hat.

No unnecessary obstruction is to be left on the pavement or the State highway right-of-way or in such a position as to block warning signs during non-working hours.

No work shall be done to obstruct drainage or divert creeks, water courses or sluices onto the State highway right-of-way.

All false work must be removed and all excavations must be filled in and restored to the satisfaction of the Regional Maintenance Engineer.

COSTS INCURRED BY ISSUANCE OF THIS PERMIT

All costs beyond the limits of the protective liability insurance, surety deposits, etc. are the responsibility of the permittee. The State shall be held free of any costs incurred by the issuance of this permit, direct or indirect.

SUBMITTING WORK PLANS

The applicant will submit work plans and/or a map as required by the Department. This shall include such details as measurements of driveways with relation to nearest property corner, positions of guys supporting poles and a schedule of the number of poles and feet of excavation necessary for completion of the work on the State right-of-way. A description of the proposed method of construction will be included.

Plan work with future adjustments in mind, as any relocation, replacement or removal of the installation authorized by this permit and made necessary by future highway maintenance, reconstruction or new construction, will be the responsibility of the permittee.

Driveway plans should be prepared in accordance with the POLICY AND STANDARDS FOR ENTRANCES TO STATE HIGHWAYS.

The permittee must coordinate the work with any state construction being conducted.

TRAFFIC MAINTENANCE

A plan detailing how the permittee intends to maintain and protect traffic shall be submitted with work plans. Traffic shall be maintained on the highway in a safe manner during working and non-working hours until construction is completed. The permittee is responsible for traffic protection and maintenance, including adequate use of signs, barriers, and flag persons during working and non-working hours until construction is completed.

All sketches will be stamped with "MAINTENANCE OF TRAFFIC SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES."

COST OF INSPECTION AND SUPERVISION

Prior to issuance of the Highway Work Permit, the permittee may be required to sign an INSPECTION PAYMENT AGREEMENT FOR HIGHWAY WORK PERMITS (FORM PERM 50) agreeing to the payment of inspection charges and/or PAYMENT OF AGREEMENT FOR HIGHWAY WORK PERMITS DESIGN REVIEW (FORM PERM 51) for Department employees. Inspection charges will be based on number of work days. Design Review charges will be based on number of work hours.

SCOPE

Areas Covered: Permits issued are for highways, bridges and culverts over which the New York State Department of Transportation has jurisdiction. (Local governments issue permits for highways under their jurisdiction.)

Legal: The privilege granted by the permit does not authorize any infringement of federal, state or local laws or regulations, is limited to the extent of the authority of this Department in the promises and is transferable and assignable only with the written consent of the Commissioner of Transportation.

Commissioner's Reservation: The Commissioner of Transportation reserves the right to modify fees and to revoke or annul the permit at any time, at his discretion without a hearing or the necessity of showing cause.

Locations: Work locations must be approved by the Department.

Maintenance: Property owners having access to a state highway shall be fully responsible for the maintenance of their driveway in accordance with POLICY AND STANDARDS FOR ENTRANCES TO STATE HIGHWAYS.

Work Commencement: The Permittee shall have a copy of the permit available at the site during the construction period. Work should start within 30 days from validation date of permit or said permit may be revoked.

COMPLETION OF PROJECT

Upon completion of the work within the state highway right-of-way authorized by the work permit, the person and his or its successors in interest, shall be responsible for the maintenance and repair of such work or portion of such work as set forth within the Terms and Conditions of the Highway Work Permit.

STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION
HIGHWAY WORK PERMIT APPLICATION FOR NON-UTILITY WORK

Application is hereby made for a highway work permit:

For Joint application, name and address of Second Applicant below:

Name _____

Name _____

Address _____

Address _____

City _____ State _____ Zip _____

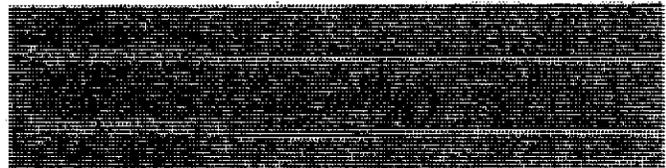
City _____ State _____ Zip _____

Federal I.D. No. or Social Security No. _____

Applicant Telephone No. _____

Contact person in case of emergency _____

Telephone No. of contact person _____



RETURN PERMIT TO (if different from above):

RETURN OF DEPOSIT/BOND TO (Complete only if different from permittee):

Name _____

Name _____

Address _____

Address _____

City _____ State _____ Zip _____

City _____ State _____ Zip _____

1. Estimated cost of work being performed in state highway right-of-way \$ _____

2. Anticipated duration of work: From _____ 20, _____ thru _____, 20 _____, to apply to the operation(s) checked on the reverse side.

3. Protective Liability Insurance covered by Policy No. _____; expires on _____ 20 _____

4. A \$20.00 fee will be charged for checks returned by the bank.

PROPOSED WORK (Brief description): _____

ATTACHED: Plans _____ Specifications _____ LOCATION: State Route _____ State Highway _____

between Reference Marker _____ and Reference Marker _____

Town of: _____ County of: _____

SEQR REQUIREMENTS (Check appropriate item):

Exempt Ministerial Type 11 EIS or DEIS Lead Agency _____

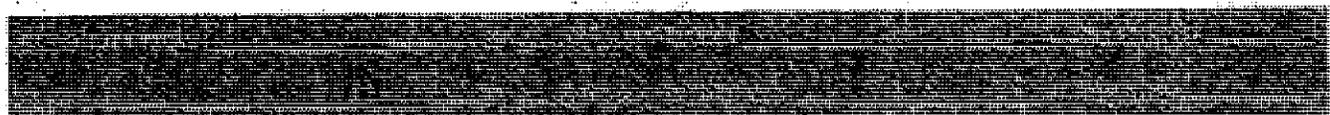
If project is identified to be ministerial, exempt, or TYPE 11, no further action is required.

If project is determined to be other than ministerial, exempt, or TYPE 11, refer to M.A.P.7.12-2, Appendix A SEQR REQUIREMENTS FOR HIGHWAY WORK PERMITS.

Acceptance of the requested permit subjects the permittee to the restrictions, regulations and obligations stated on this application and on the permit.

Applicant Signature _____ Date _____ 20 _____

Second Applicant Signature _____ Date _____ 20 _____



CHECK TYPE OF OPERATION	Permit Fee	Insurance Fee	Perm 17 or Under Taking	Total Amount of Fee and/or Insurance
5. <input type="checkbox"/> Single job – Permit issued for each job				
a. <input type="checkbox"/> Driveway or roadway				
1. <input type="checkbox"/> Residential	\$ 15	\$ 25		
2. <input type="checkbox"/> Commercial – Minor	550	175		
a. <input type="checkbox"/> Home Business	100	75		
3. <input type="checkbox"/> Commercial – Major – (Less than 100,000 square feet Gross Building Area)	1400	N/A		
4. <input type="checkbox"/> Commercial – Major – (100,000 square feet Gross Building Area and Greater)	Actual cost with Minimum of \$2000 upon permit app.	N/A		
5. <input type="checkbox"/> Subdivision Street	900	N/A		
6. <input type="checkbox"/> Temporary access road or street	200	150		
b. <input type="checkbox"/> Improvement				
1. <input type="checkbox"/> Residential	15	25		
2. <input type="checkbox"/> Commercial	1			
Check additional description below:				
a. <input type="checkbox"/> Install sidewalk, curb paving, stabilized shoulder, drainage, etc.	200	150		
b. <input type="checkbox"/> Grade, seed, improve land contour, clear land of brush, etc.	100	75		
c. <input type="checkbox"/> Resurface existing roadway or driveway	50	50		
d. <input type="checkbox"/> Annual resurfacing of residential and commercial roadways or driveways.				
1. <input type="checkbox"/> Per County	150	N/A		
2. <input type="checkbox"/> Per Region	400	N/A		
c. <input type="checkbox"/> Tree Work				
1. <input type="checkbox"/> Residential	15	25		
2. <input type="checkbox"/> Commercial (not required for pruning if utility has annual maintenance permit)	25	50		
Check additional description below:				
a. <input type="checkbox"/> Removal or planting				
b. <input type="checkbox"/> Pruning, applying chemicals to stumps, etc.				
3. <input type="checkbox"/> Vegetation control for advertising signs	150/sign	75		
d. <input type="checkbox"/> Miscellaneous Construction				
1. <input type="checkbox"/> Beautifying ROW – (for Civic Groups only)	NC	25		
2. <input type="checkbox"/> Temporary signs, banners, holiday decorations				
a. <input type="checkbox"/> Not-for-profit organizations	NC	25		
b. <input type="checkbox"/> Organizations other than not-for-profit	25	25		
3. <input type="checkbox"/> Traffic control signals	500	175		
4. <input type="checkbox"/> Warning and entrance signs	25	50		
5. <input type="checkbox"/> Miscellaneous – Requiring substantial review	400	175		
6. <input type="checkbox"/> Miscellaneous	25	50		
6. <input type="checkbox"/> Encroachment caused by D.O.T. acquisition of property	25	50		
7. <input type="checkbox"/> Compulsory permit required for work performed at the request of D.O.T.				
a. <input type="checkbox"/> Building demolition or moving requested by D.O.T.	NC	25		
1. <input type="checkbox"/> Demolition 2. <input type="checkbox"/> Moving				
b. <input type="checkbox"/> Improvement to meet Department standards	NC	25		
8. <input type="checkbox"/> Miscellaneous	25	25		
9. <input type="checkbox"/> Adopt a Highway	NC	N/A		

Guarantee Deposit Check Number or Bond Number _____

WORK PERMIT APPLICATION
(UNDER SECTION 136 OF THE HIGHWAY LAW)

INSTRUCTIONS

- a) Check type of work permit applying for:
- b) Fill in County Route # and Town, Description of work location
- c) Fill in Name, mailing Address, Phone and/or fax, email
- d) LANDOWNER – Sign and Date
- e) Return completed application to address listed below

New Driveway Entrance

- *Place wood stake with owners name along edge of road (visible from road) at proposed centerline of new driveway*
 - *Contact County when staked, County will inspect for sight distance and drainage*
 - *County will specify and size driveway culverts*
 - *Owner to purchase and have delivered to site the "County Specified" culvert*
 - *County will install*
- f) County will return *executed* Work Permit (with Special Conditions listed) to Owner by mail

Mail or Fax to:

Washington County
Department of Public Works
383 Broadway • Fort Edward • New York • 12828
(518) 746-2440 phone
(518) 746-2441 fax



Washington County
 Department of Public Works
 383 Broadway • Fort Edward • New York • 12828
 (518) 746-2440 phone
 (518) 746-2441 fax

PERMIT NO. _____
 EXPIRATION DATE _____

complete below

complete below

WORK PERMIT APPLICATION
 (UNDER SECTION 136 OF THE HIGHWAY LAW)

please check one

- 1. Repair or install sewer pipe
- 2. Repair or install water main pipe
- 3. Repair or install gas pipe
- 4. Move buildings
- 5. Driveway
- 6. Set new poles
- 7. Bury Cable
- 8. Other _____

Name: _____
 Address: _____

 Phone: _____
 Fax: _____
 e-mail: _____

COUNTY ROUTE: _____ LOCATION DESCRIPTION: _____
 (nearest intersection, side of road, etc)

WORK TO BE PERFORMED BETWEEN (dates) _____ - _____

SIGNATURE: _____ DATE: _____
 & AUTHORIZATION _____

complete below

PERMIT: (UNDER SECTION 136 OF THE HIGHWAY LAW)

Permission is hereby granted to _____ to proceed as set forth and represented in the forgoing application, and at the particular location described therein, in accordance with the requirements specified and pursuant to the conditions and regulations whether general or special which are hereafter set forth; all forming a part hereof; to wit:

CONDITIONS AND REGULATIONS

- 1) This permit shall not be assigned or transferred without written consent of the County Superintendent of Public Works.
- 2) The work authorized by this permit shall be performed in a manner satisfactory to the County Superintendent of Public Works.
- 3) Traffic shall be maintained by the applicant on the said section of highway while the work is in progress and until its final completion.
- 4) The said Permittee shall be responsible for all damages resulting in bodily injury, including death and/or property damage liability due to activities of the Permittee, its employees in connection with any act or omission hereunder: and does hereby expressly agree to indemnify and save harmless the County of Washington from any and all responsibility and liability arising out of, or resulting from, any act or omission hereunder.
- 5) The said Permittee hereby certifies that all persons concerned with the actual work under this permit are duly covered by Worker's Compensation Insurance as required by provisions of Chapter 41 of the laws of 1914 and acts amendatory thereof.
- 6) The said County Superintendent of Public Works reserves the right to revoke or annul this permit at any time, should the said Permittee fail to comply with the terms and conditions upon which it was granted.
- 7) It is understood that should future reconstruction or use of the highway make changes necessary in the proposed facilities covered by this application and permit, the Permittee shall, upon reasonable notice from the Superintendent of Public Works, make such changes at its own expenses within such time as may be agreed upon.
- 8) Any gas pipe lines which are laid under this permit shall be placed at least _____ feet below and in such a manner as in no way to interfere with the pavement, shoulders, or drainage ditches of the highway.
- 9) Any electric lines which are constructed under this permit shall be constructed in accordance with the provisions of the National Electric Safety Code.
- 10) Upon the completion of the work authorized by this permit, the highway shall be left in a neat and orderly, and as good condition as before commencement of work.
- 11) Provide all necessary barricades, lighting, and flagmen to safeguard vehicle and pedestrian traffic.

SPECIAL CONDITIONS: (office use only)

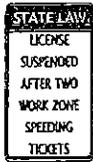
DATE: _____
 Foreman Initials _____ Suggested Size _____

SIGNATURE: _____
 Superintendent of Public Works

RURAL HIGHWAY

TAST-C7

Speed Limit (mph)	Buffer Space (feet)	Taper Lengths (L) based on 12 ft lane shifts (feet)	Shoulder Taper (L/3) (feet)
30	200	180	60
35	250	245	80
40	305	320	110
45	360	540	180
50	425	600	200
55	495	660	220



OR



NYR9-11
24x42in.

NYR9-12
24x36in.

State Law sign to be placed 300 to 500 FT in advance of initial warning sign.

80 ft. Roll Ahead distance is required when using a Barrier vehicle.



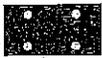
W21-5
36x36in.



W20-1
36x36in.



Work area



Arrow panel (caution mode)

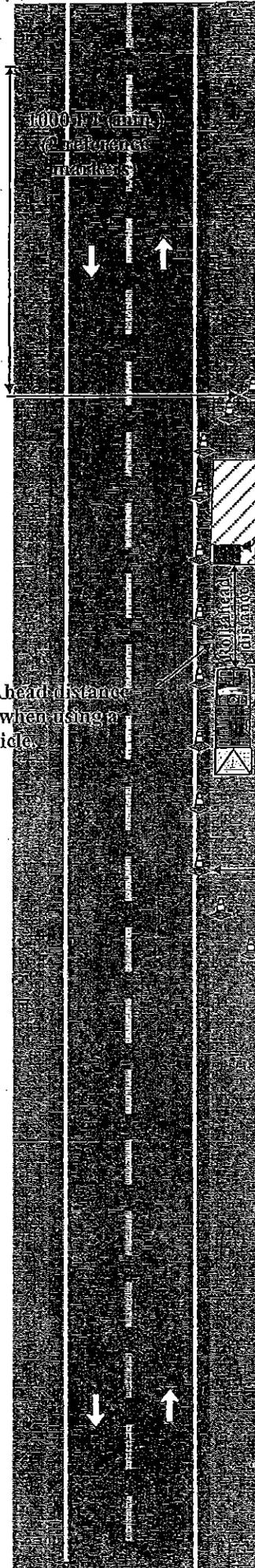


Warning flags- optional (minimum 18x18)



Barrier vehicle with attenuator

NYSDOT
WORK ZONE TRAFFIC CONTROL
 FOR
 SHORT-TERM STATIONARY
 OPERATION INVOLVING
 SHOULDER CLOSURE
 ON
 RURAL
 TWO-LANE CONVENTIONAL
 HIGHWAY
 MARCH 2008 TAST-C7



Cone spacing not to exceed 40 FT. (1 Skip Line)

80 FT (2 Skip lines)

Spotter recommended

Buffer space

If the Buffer space cannot be obtained, a Barrier vehicle is required. Barrier vehicle SHALL NOT encroach into travel lane.

L/3

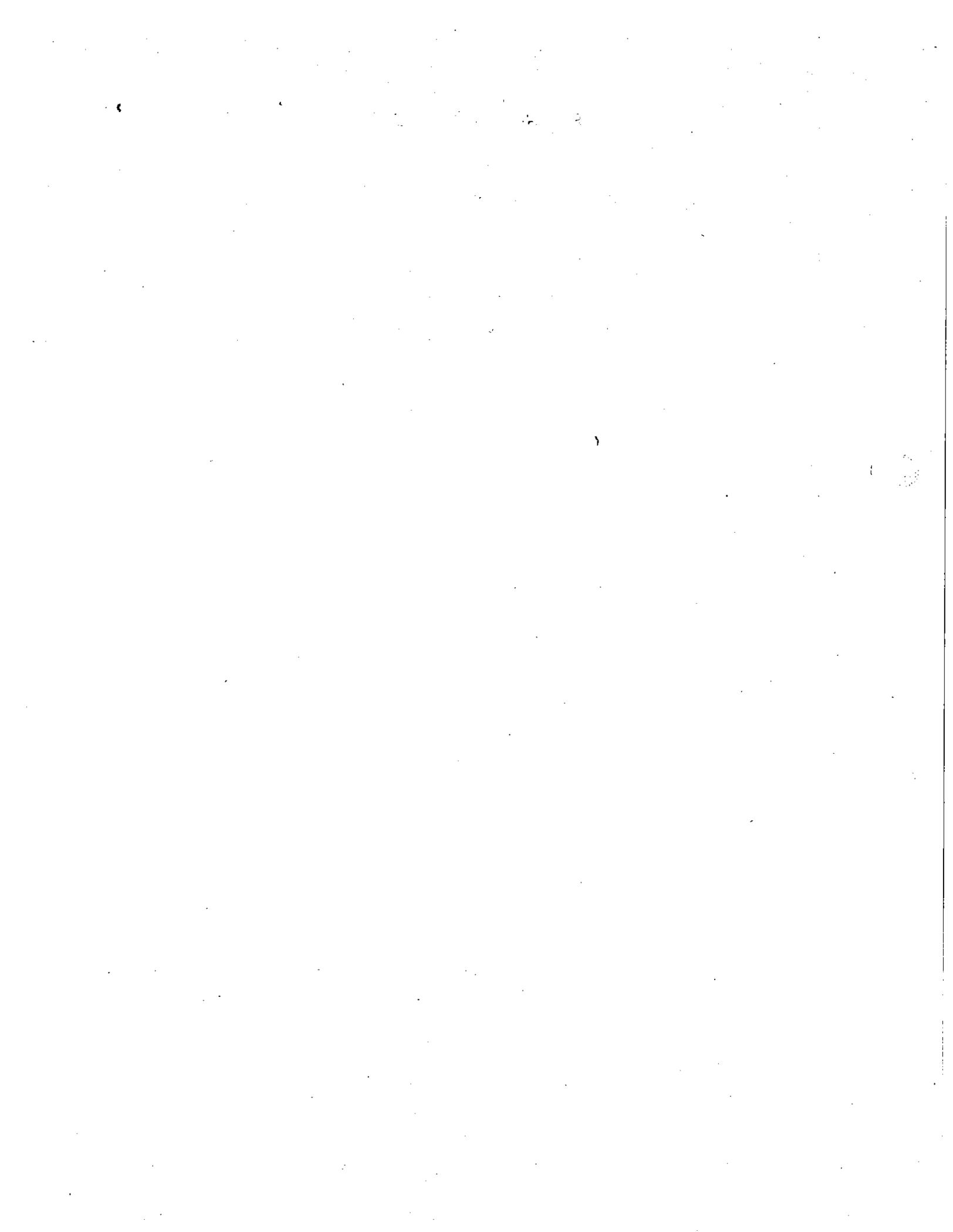
500 FT (min.) (1 reference marker)



500 FT (min.) (1 reference marker)



NOT TO SCALE



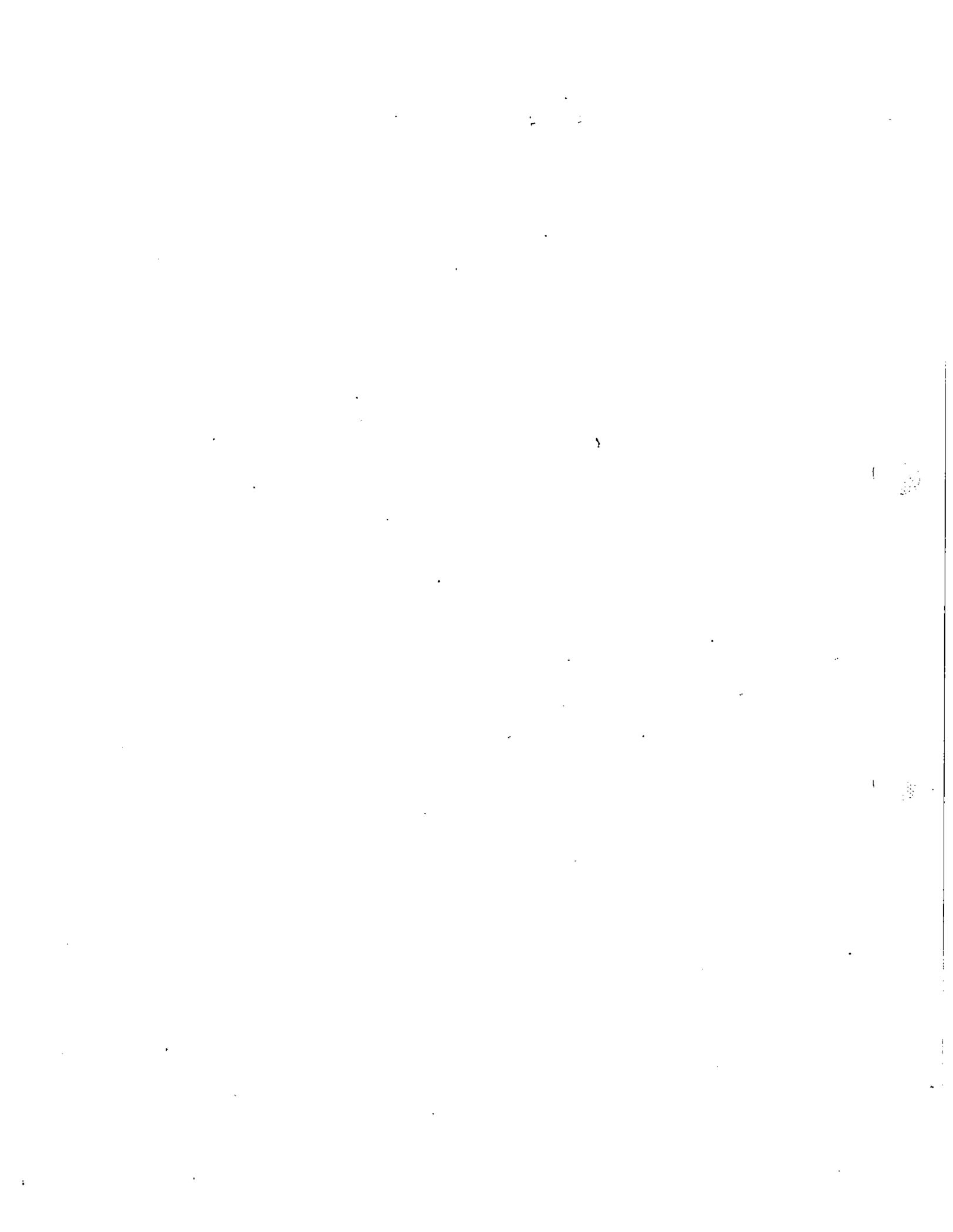
CERTIFICATION FOR FEDERAL-AID CONTRACTS

The prospective bidder, by signing and submitting this bid proposal, certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person or influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered to. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such sub-recipients shall certify and disclose accordingly.



State of Vermont
Agency of Transportation
CONTRACTORS EEO CERTIFICATION FORM

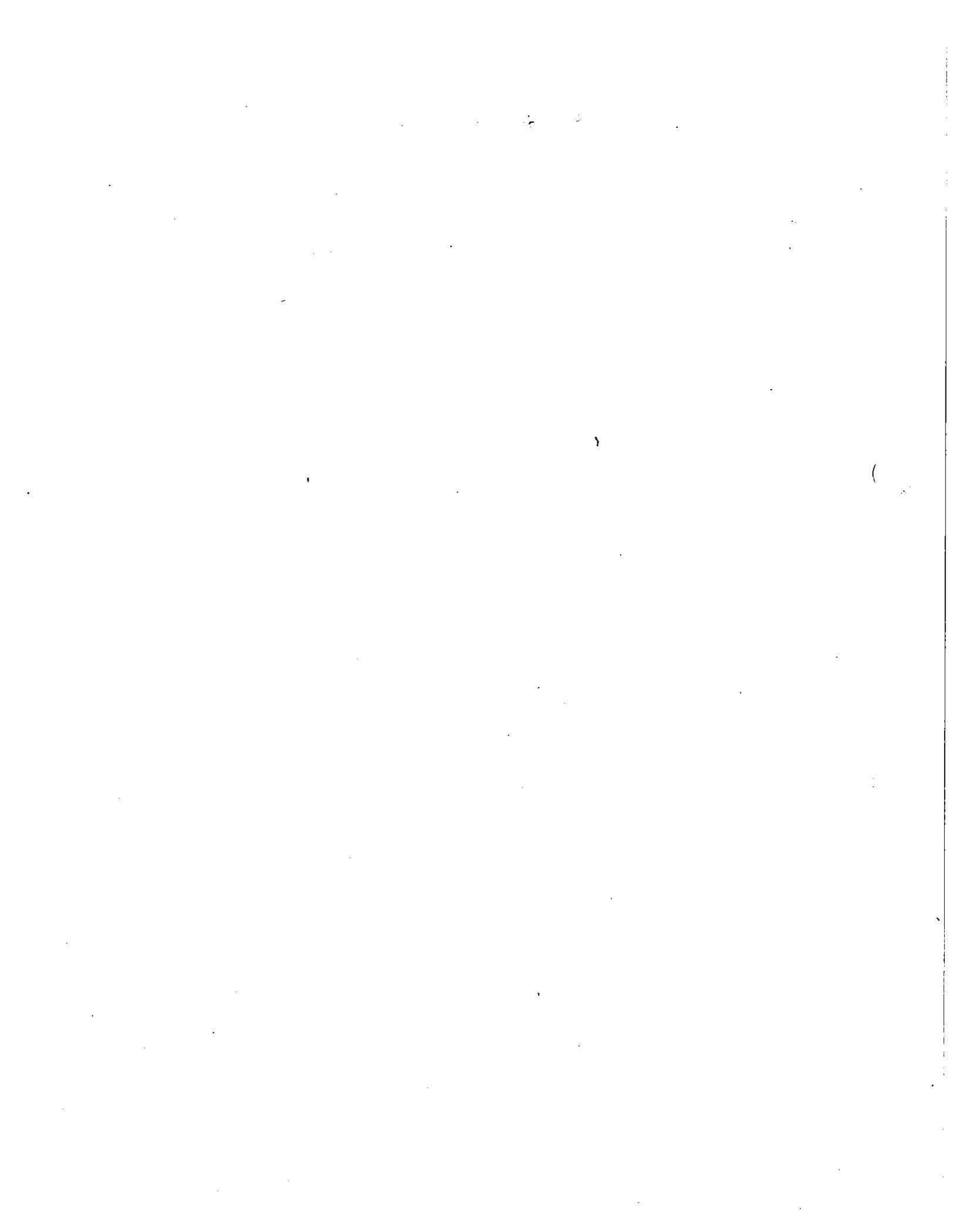
Certification with regard to the Performance of Previous Contracts of Subcontractors subject to the Equal Employment Opportunity Clause and the filing of Required Reports.

The bidder, hereby certifies that he/she has participated in a previous contract or subcontract subject to the equal opportunity clause as required by Executive Orders 10925, 11114, or 11246 as amended, and that he/she has, filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the Presidents committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

W.M. Schultz Construction Company	William M. Schultz By	President Title
--------------------------------------	--------------------------	--------------------

NOTE: The above certification is required by the Equal Employment Opportunity regulations of the Secretary of Labor(41 CFR 60-1.7(b)(1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5 (Generally only contracts or subcontracts of \$10,000 or under are exempt.) Currently, Standard Form 100(EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b)(1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration, or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.



CONSTRUCTION CONTRACT

1. Parties. This is a construction contract made this 12th day of JANUARY, 2015 between the State of Vermont, by its Agency of Transportation (hereafter called "State" or "Agency"), and W.M Schultz Construction, Incorporated of 831 State Route 67, Curtis Industrial Park, Ballston Spa, NY 12020, a corporation, incorporated under the laws of the State of New York, its successors and assigns, (hereafter called Contractor).

2. Subject Matter. The Contractor, in consideration of the payment or payments specified in this Contract and agreed to by State, hereby agrees to furnish all the materials and to perform all the work and labor in the improvement of a certain project in the Town of Castleton, County of Rutland, State of Vermont, being approximately 385 Feet in length, at the unit prices bid by Contractor for the respective estimated quantities, aggregating approximately the sum of Two Million One Hundred Fifty Four Thousand Twenty Nine Dollars and Fifty Cents (\$2,154,029.50), and such other items, as are mentioned in the original Proposal. The original Proposal and prices named, together with the Standard Specifications for Construction ("Specifications") as are listed in the Schedule of Prices, are made a part of this Contract. Also, the drawings of the roadway prepared by the Agency, as verified by the Agency are made a part this Contract. The project is situated as follows:

Castleton BRF 015-2 (10): LOCATED IN THE COUNTY OF RUTLAND, TOWN OF CASTLETON, ON VT ROUTE 30; BRIDGE NO. 93 OVER THE CLARENDON AND PITTSFORD RAILROAD; APPROXIMATELY 0.3 MILES SOUTH OF INTERSECTION OF VT ROUTE 30 AND VT ROUTE 4A.

The construction consists of: WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES THE REMOVAL AND REPLACEMENT OF BRIDGE NO. 93 ON THE EXISTING ALIGNMENT, WITH ASSOCIATED ROADWAY AND RAIL WORK.

3. Labor and Material; Specifications. The Contractor shall perform all the work and labor in the best and most workmanlike manner. The materials and labor shall be in strict and entire conformity, in every respect, with the Specifications and drawings and shall be subject to the inspection and approval of the Agency. If any of the material or labor shall be rejected by the Agency as defective or unsuitable, then the Contractor shall remove and replace the defective or unsuitable materials with other approved materials and do the labor anew, to the satisfaction and approval of the Agency, at the cost and expense of the Contractor. The Standard Specifications for Construction, approved and adopted by the Agency in 2011 are incorporated herein, and made a part of this Contract.

4. Time for Performance; Liquidated Damages. The Contractor shall furnish the materials and perform the labor in every respect to the satisfaction and approval of the Agency, on or before September 25, 2015 after written notice has been given by the Engineer to begin work. In case of the failure on the part of the Contractor, for any reason, except as provided in this Contract, to complete the furnishing of the materials and performing the work on or before September 25, 2015 the State shall deduct from any moneys due or which may become due the Contractor, or if no moneys shall be due, the State shall have the right to recover the amount of liquidated damages as provided in the Specifications for each and every day elapsing between the time stipulated for the completion and the actual date of completion, in accordance with the terms of the Contract. Any such deductions or sums to be recovered are not penalties but liquidated damages. However, the Agency at its discretion, shall make allowance over the period specified for the completion of the work, for causes over which the Contractor has no control and which must delay the completion of the work, in such case, the Contractor shall become liable for liquidated damages for delays beginning from the date on which the extended period shall expire.

5. Extra Work or Materials; Claims. The Contractor understands and agrees that the Agency will not allow any claim for extra work or materials, not specifically provided in this Contract. The Contractor shall not do any work or furnish any materials not covered by these Specifications and Contract, unless such work is ordered in writing by the Agency. In no event shall the Contractor incur any liability by reason of any verbal directions or instructions that he may be given by the Agency. The State will not be liable for any materials furnished or used or for any work or labor done, unless the materials, work or labor are required of the Contractor on written order furnished by the Agency. Any such work or material which may be done or furnished by the Contractor without such written order first being given by the Agency shall be at the Contractor's own risk, cost and expense. The Contractor agrees that without such written order the Contractor shall make no claim for compensation for work or materials so done or furnished.

6. Assignment; Subcontracting. The Contractor shall not assign this Contract or any part of this Contract, or any right to any moneys to be paid the Contractor under this Contract, without the prior written approval of the Agency. The Contractor shall not subcontract any part of the work to be done or materials furnished under the Contract without the written approval of the Agency.

7. Acceptance of Final Payment; Release. The Contractor's acceptance of the final payment shall be considered as a release in full of all claims against the State of Vermont arising out of, or by reason of the work done and materials furnished under this Contract.

8. Bonds. The Bonds given by the Contractor, a Compliance Bond in a sum equal to one-hundred (100) per centum, and a Labor and Materials Bond in the sum equal to one-hundred (100) per centum of the total contract price of the work to be done, to secure a proper compliance with the terms and provisions of this Contract, are attached to and made a part of this Contract.

9. Dispute Resolution; Exclusivity of Administrative Remedies. All questions or disputes arising between the parties hereto respecting any matter pertaining to this Contract or any part of this Contract, or any breach of this Contract shall be referred to the Secretary of Transportation, whose decision and award shall be final, binding and conclusive upon all parties, subject to the right of appeal to the Transportation Board under 19 V.S.A. § 5(d) (4). All other rights or rights of action at law or in equity under and by virtue of this Contract and all matters connected with and relating to this Contract are hereby expressly waived.

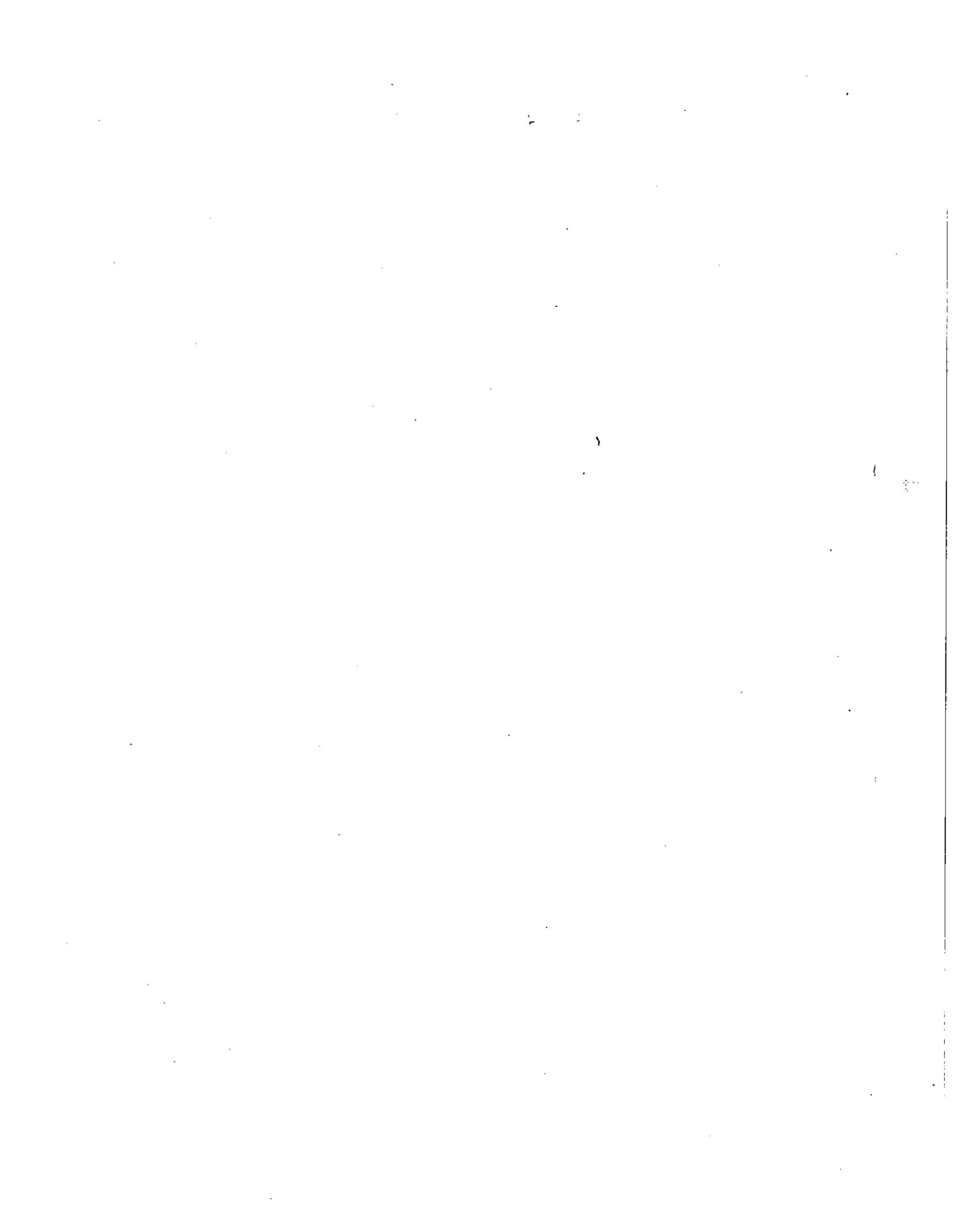
10. Compensation for Contract Work. The Contractor agrees to receive the prices set forth in the following Schedule of Prices as full compensation for furnishing all the materials and labor which may be required in the prosecution and completion of the whole of the work to be done under this Contract and in all respects to complete this Contract to the satisfaction of the Agency.

CONTRACT SCHEDULE

CONTRACT ID: 12B138

PROJECT(S): CASTLETON BRP 015-2(10)

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0005	201.10 CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	1.000 LS	26,500.00000		26,500.00	
0010	203.15 COMMON EXCAVATION	1,750.000 CY	15.00000		26,250.00	
0015	203.31 SAND BORROW	350.000 CY	30.00000		10,500.00	
0020	203.32 GRANULAR BORROW	190.000 CY	30.00000		5,700.00	
0025	204.22 TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A. B.I.)	1.000 CY	75.00000		75.00	
0030	204.25 STRUCTURE EXCAVATION	12.000 CY	100.00000		1,200.00	
0035	204.30 GRANULAR BACKFILL FOR STRUCTURES	150.000 CY	40.00000		6,000.00	
0040	210.10 COLD PLANING, BITUMINOUS PAVEMENT	230.000 SY	5.50000		1,265.00	
0045	301.35 SUBBASE OF DENSE GRADED CRUSHED STONE	1,120.000 CY	40.00000		44,800.00	
0050	402.10 AGGREGATE SHOULDERS, IN PLACE	75.000 CY	65.00000		4,875.00	
0055	404.65 EMULSIFIED ASPHALT	16.000 CWT	60.00000		960.00	

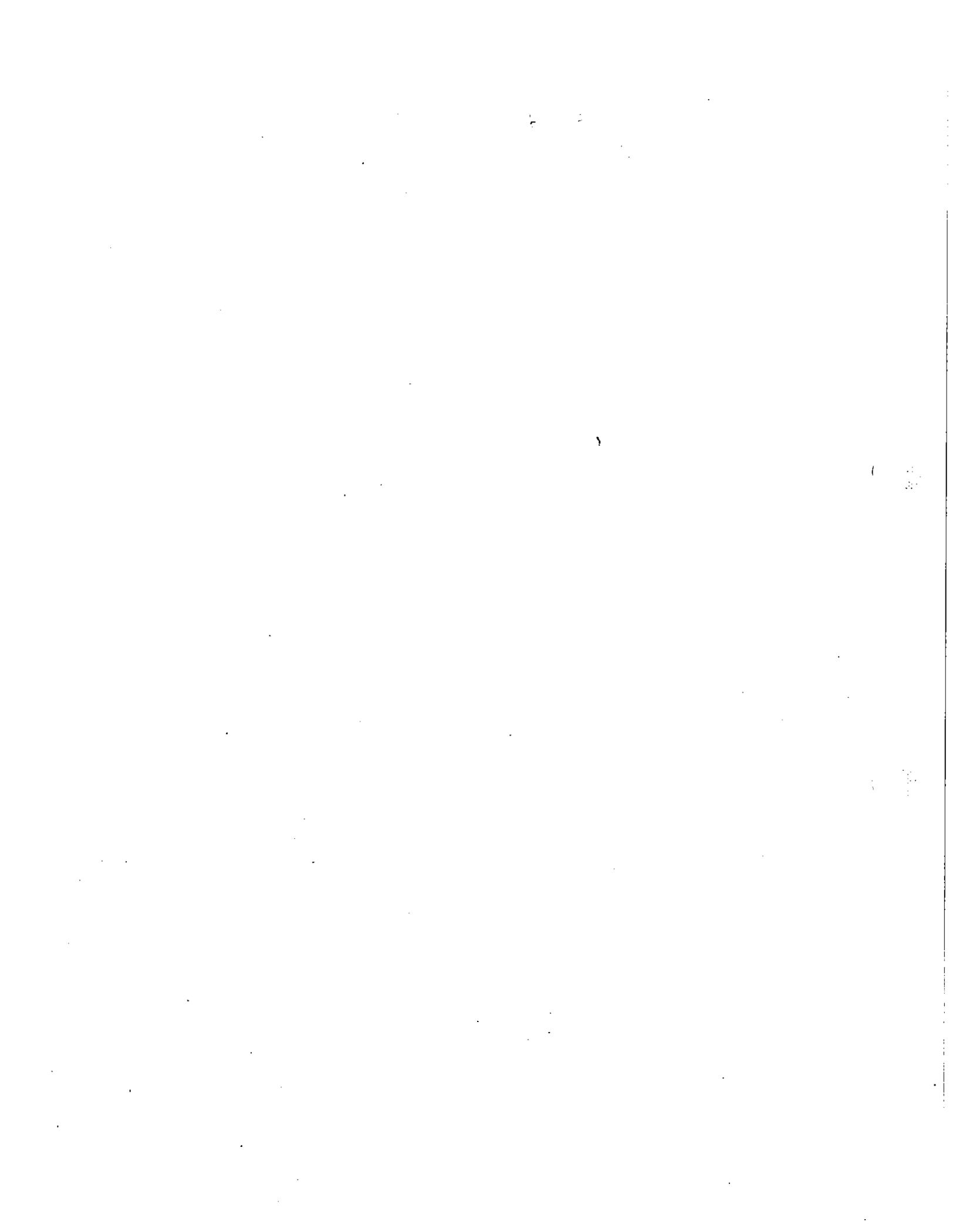


CONTRACT SCHEDULE

CONTRACT ID: 12B138

PROJECT(S): CASTLETON BRF 015-2(10)

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0060	406.50 PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	1.000 LU	1.00000		1.00	
0065	504.10 FURNISHING EQUIPMENT FOR DRIVING PILING	1.000 LS	75,000.00000		75,000.00	
0070	505.155 STEEL PILING, HP 12 X 63	900.000 LF	60.00000		54,000.00	
0075	505.35 PERMANENT STEEL SHEET PILING (MIN. SECTION MODULUS = 31.0 IN3/FT)	7,300.000 SF	26.00000		189,800.00	
0080	505.45 DYNAMIC PILE LOADING TEST	3.000 EACH	3,700.00000		11,100.00	
0085	514.10 WATER REPELLENT, SILANE	10.000 GAL	50.00000		500.00	
0090	516.10 BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	66.000 LF	138.00000		9,108.00	
0095	520.10 MEMBRANE WATERPROOFING, SPRAY APPLIED	265.000 SY	62.00000		16,430.00	
0100	524.11 JOINT SEALER, HOT POURED	68.000 LF	22.50000		1,530.00	
0105	525.33 BRIDGE RAILING, GALVANIZED 2 RAIL BOX BEAM	141.000 LF	115.00000		16,215.00	
0110	529.10 REMOVAL OF BRIDGE PAVEMENT	335.000 SY	5.00000		1,675.00	

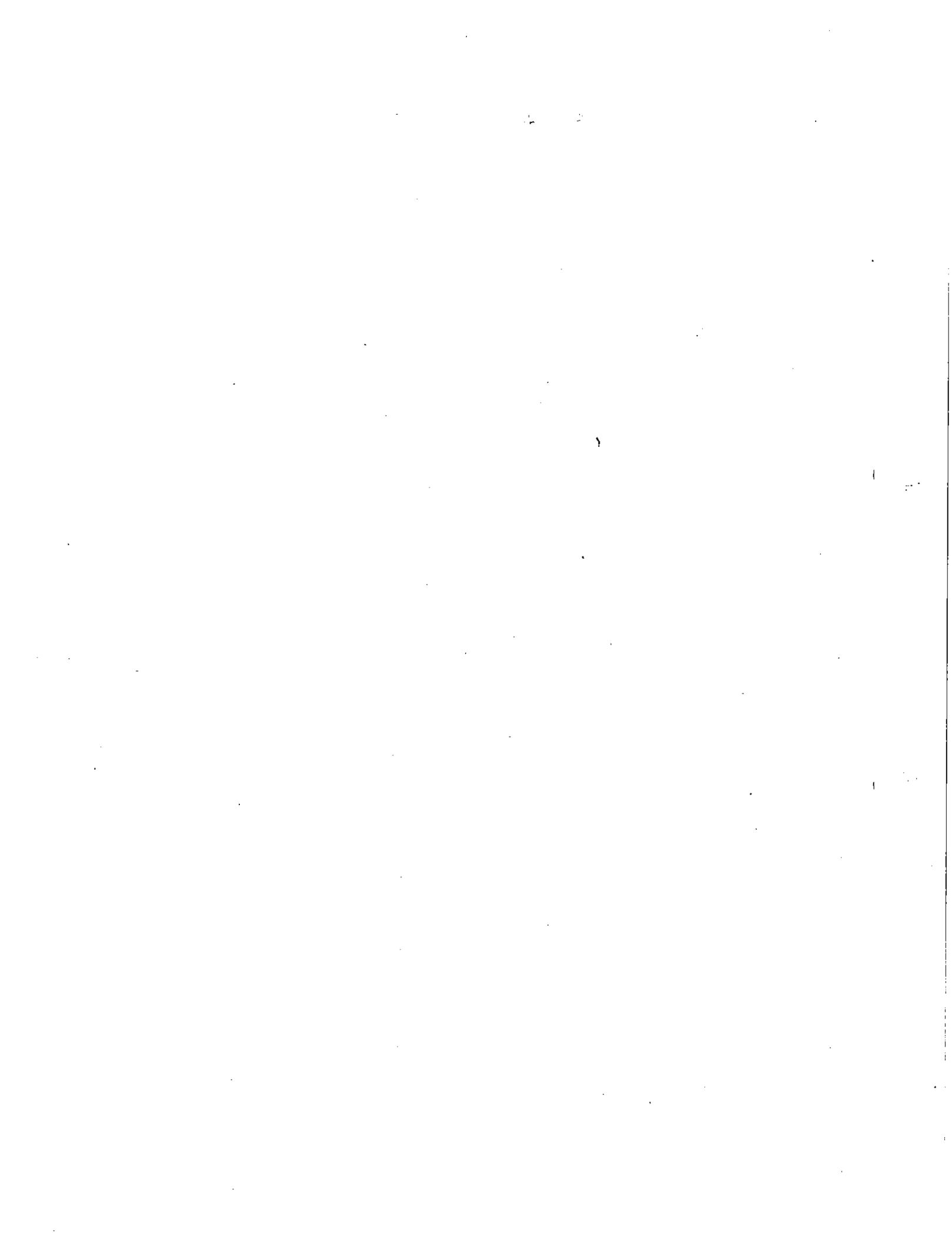


CONTRACT SCHEDULE

CONTRACT ID: 12B138

PROJECT(S): CASTLETON BRP 015-2(10)

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0115	529.15 REMOVAL OF STRUCTURE (3,085 SF - EST.)	1.000 EACH	167,000.00000		167,000.00	
0120	531.17 BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	16.000 EACH	300.00000		4,800.00	
0125	540.10 PRECAST CONCRETE STRUCTURE (ABUTMENT NO. 1)	1.000 LS	125,000.00000		125,000.00	
0130	540.10 PRECAST CONCRETE STRUCTURE (ABUTMENT NO. 2)	1.000 LS	125,000.00000		125,000.00	
0135	540.10 PRECAST CONCRETE STRUCTURE (APPROACH SLAB NO. 1)	1.000 LS	50,000.00000		50,000.00	
0140	540.10 PRECAST CONCRETE STRUCTURE (APPROACH SLAB NO. 2)	1.000 LS	50,000.00000		50,000.00	
0145	604.42 CHANGING ELEVATION OF SEWER MANHOLES	1.000 EACH	750.00000		750.00	
0150	609.10 DUST CONTROL WITH WATER	1.000 MGAL	1.00000		1.00	
0155	613.10 STONE FILL, TYPE I	865.000 CY	40.00000		34,600.00	
0160	616.26 PRECAST REINFORCED CONCRETE CURB, TYPE B	155.000 LF	30.00000		4,650.00	
0165	620.75 SNOW BARRIER	104.000 LF	46.00000		4,784.00	

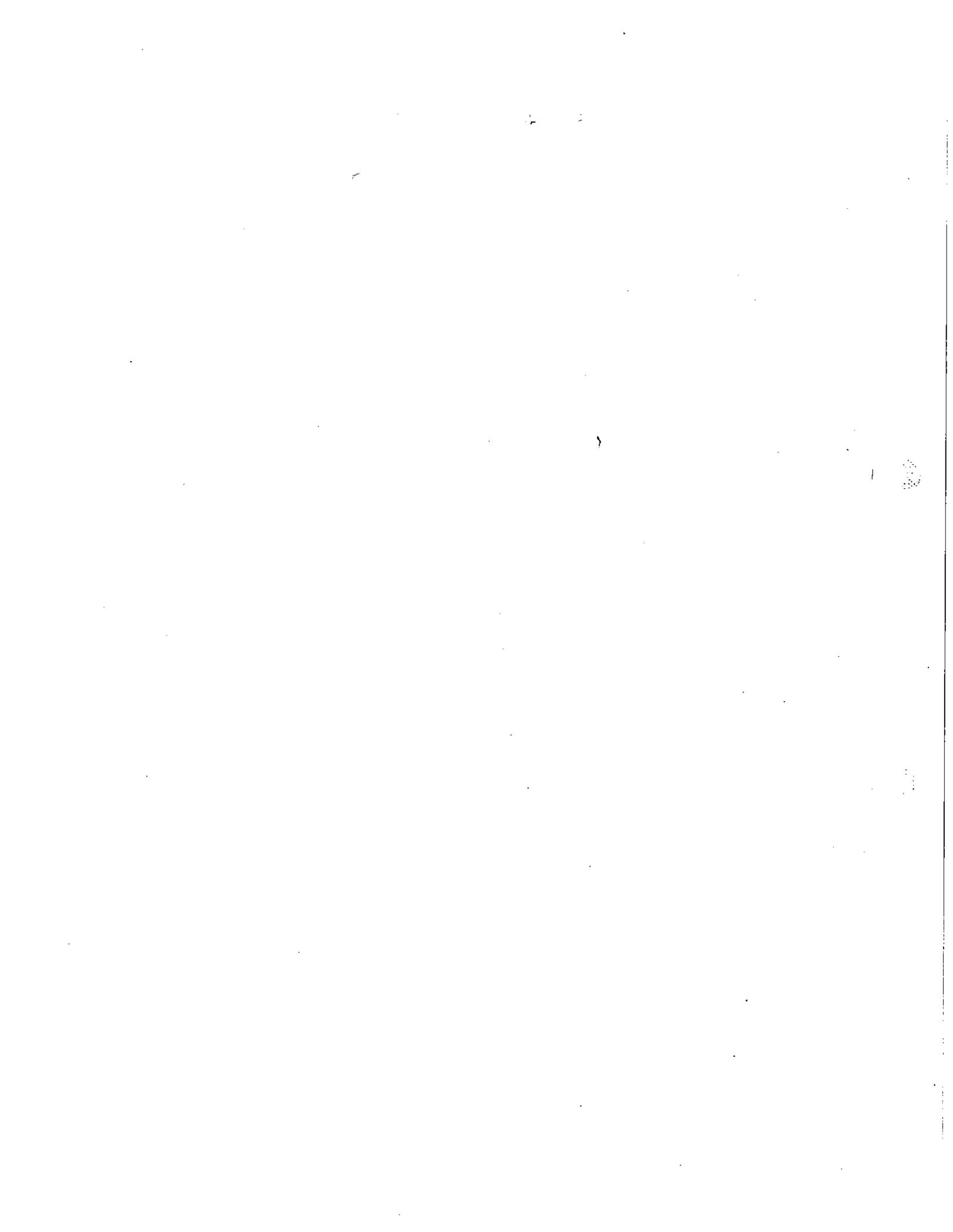


CONTRACT SCHEDULE

CONTRACT ID: 12B138

PROJECT(S): CASTLETON BRF 015-2(10)

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0170	621.20 STEEL BEAM GUARDRAIL, GALVANIZED	LF 330.000	21.00000		6,930.00	
0175	621.205 STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS	LF 175.000	23.00000		4,025.00	
0180	621.60 ANCHOR FOR STEEL BEAM RAIL	EACH 4.000	775.00000		3,100.00	
0185	621.72 GUARDRAIL APPROACH SECTION, GALVANIZED 2 RAIL BOX BEAM	EACH 4.000	4,800.00000		19,200.00	
0190	621.75 REMOVE AND RESET GUARDRAIL	LF 57.000	10.00000		570.00	
0195	621.80 REMOVAL AND DISPOSAL OF GUARDRAIL	LF 480.000	2.00000		960.00	
0200	622.10 INSULATION BOARD	MFBM 2.000	1,000.00000		2,000.00	
0205	630.15 FLAGGERS	HR 480.000	30.00000		14,400.00	
0210	631.10 FIELD OFFICE, ENGINEERS	LS 1.000	20,000.00000		20,000.00	
0215	631.16 TESTING EQUIPMENT, CONCRETE	LS 1.000	1,000.00000		1,000.00	
0220	631.17 TESTING EQUIPMENT, BITUMINOUS	LS 1.000	1,000.00000		1,000.00	

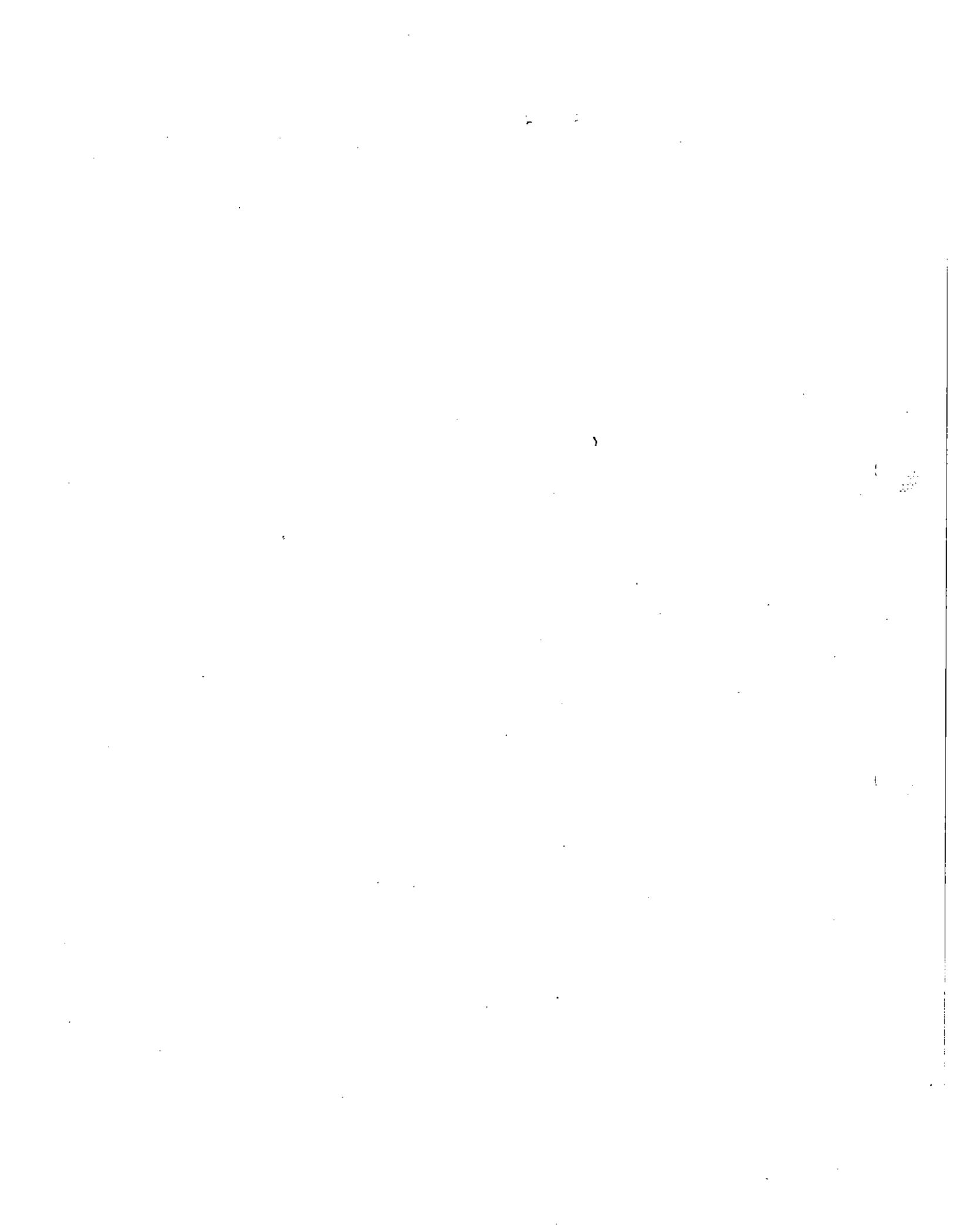


CONTRACT SCHEDULE

CONTRACT ID: 12B138

PROJECT(S): CASTLETON BRP 015-2(10)

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0225	631.26 FIELD OFFICE TELEPHONE (N.A.B.I.)	DL 3,000.000	1.00000		3,000.00	
0230	635.11 MOBILIZATION/DEMOBILIZATION	LS 1.000	100,000.00000		100,000.00	
0235	641.10 TRAFFIC CONTROL	LS 1.000	25,000.00000		25,000.00	
0240	641.15 PORTABLE CHANGEABLE MESSAGE SIGN	EACH 2.000	3,000.00000		6,000.00	
0245	646.20 4 INCH WHITE LINE	LF 1,090.000	0.60000		654.00	
0250	646.21 4 INCH YELLOW LINE	LF 1,090.000	0.60000		654.00	
0255	649.31 GEOTEXTILE UNDER STONE FILL	SY 2,175.000	2.00000		4,350.00	
0260	649.51 GEOTEXTILE FOR SILT FENCE	SY 1,390.000	10.00000		13,900.00	
0265	651.15 SEED	LB 6.750	30.00000		202.50	
0270	651.18 FERTILIZER	LB 50.000	2.50000		125.00	
0275	651.20 AGRICULTURAL LIMESTONE	TON 0.250	2,100.00000		525.00	

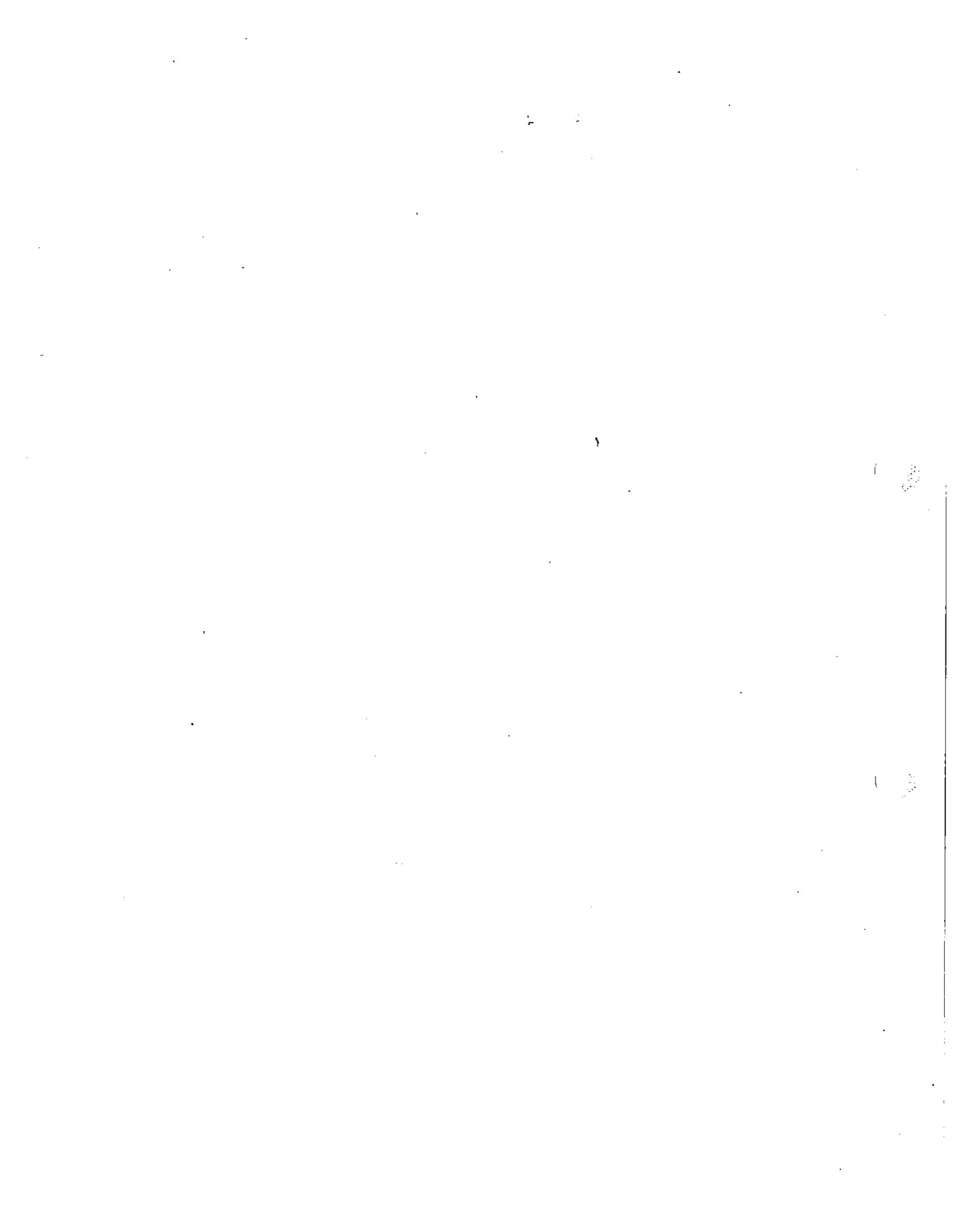


CONTRACT SCHEDULE

CONTRACT ID: 12B138

PROJECT(S): CASTLETON BRP 015-2(10)

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0280	651.25 HAY MULCH	0.250 TON	2,000.00000		500.00	
0285	651.35 TOPSOIL	70.000 CY	56.00000		3,920.00	
0290	651.40 GRUBBING MATERIAL	1,075.000 SY	9.00000		9,675.00	
0295	652.10 EPSC PLAN	1.000 LS	3,000.00000		3,000.00	
0300	652.20 MONITORING EPSC PLAN	160.000 HR	1.00000		160.00	
0305	652.30 MAINTENANCE OF EPSC PLAN (N.A.B.I.)	1.000 LU	5,000.00000		5,000.00	
0310	653.20 TEMPORARY EROSION MATTING	515.000 SY	3.00000		1,545.00	
0315	653.35 VEHICLE TRACKING PAD	30.000 CY	60.00000		1,800.00	
0320	653.55 PROJECT DEMARCATION FENCE	2,900.000 LF	1.50000		4,350.00	
0325	675.20 TRAFFIC SIGNS, TYPE A	18.000 SF	14.00000		252.00	
0330	675.341 SQUARE TUBE SIGN POST AND ANCHOR	60.000 LF	10.00000		600.00	

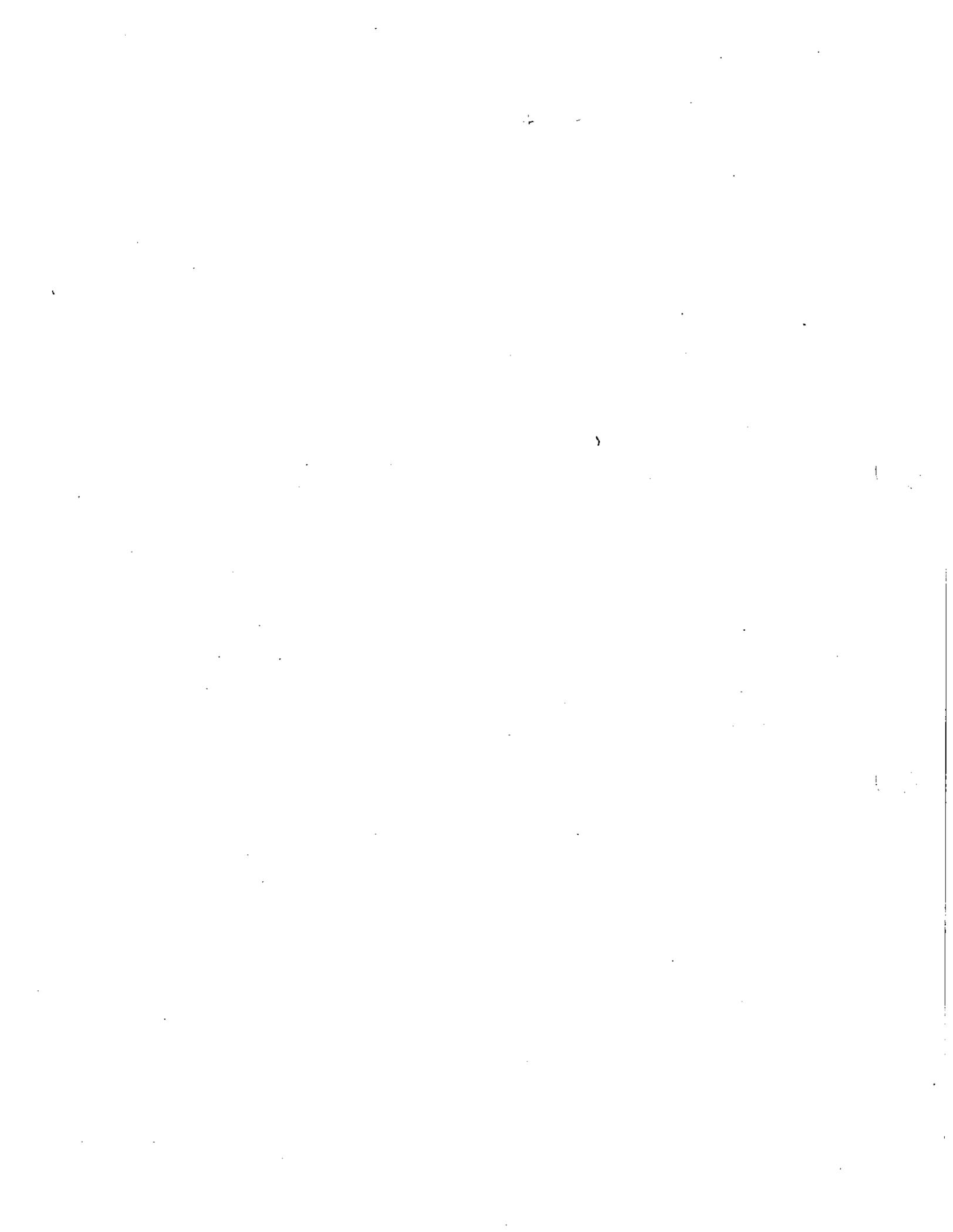


CONTRACT SCHEDULE

CONTRACT ID: 12B138

PROJECT(S): CASTLETON BRP 015-2(10)

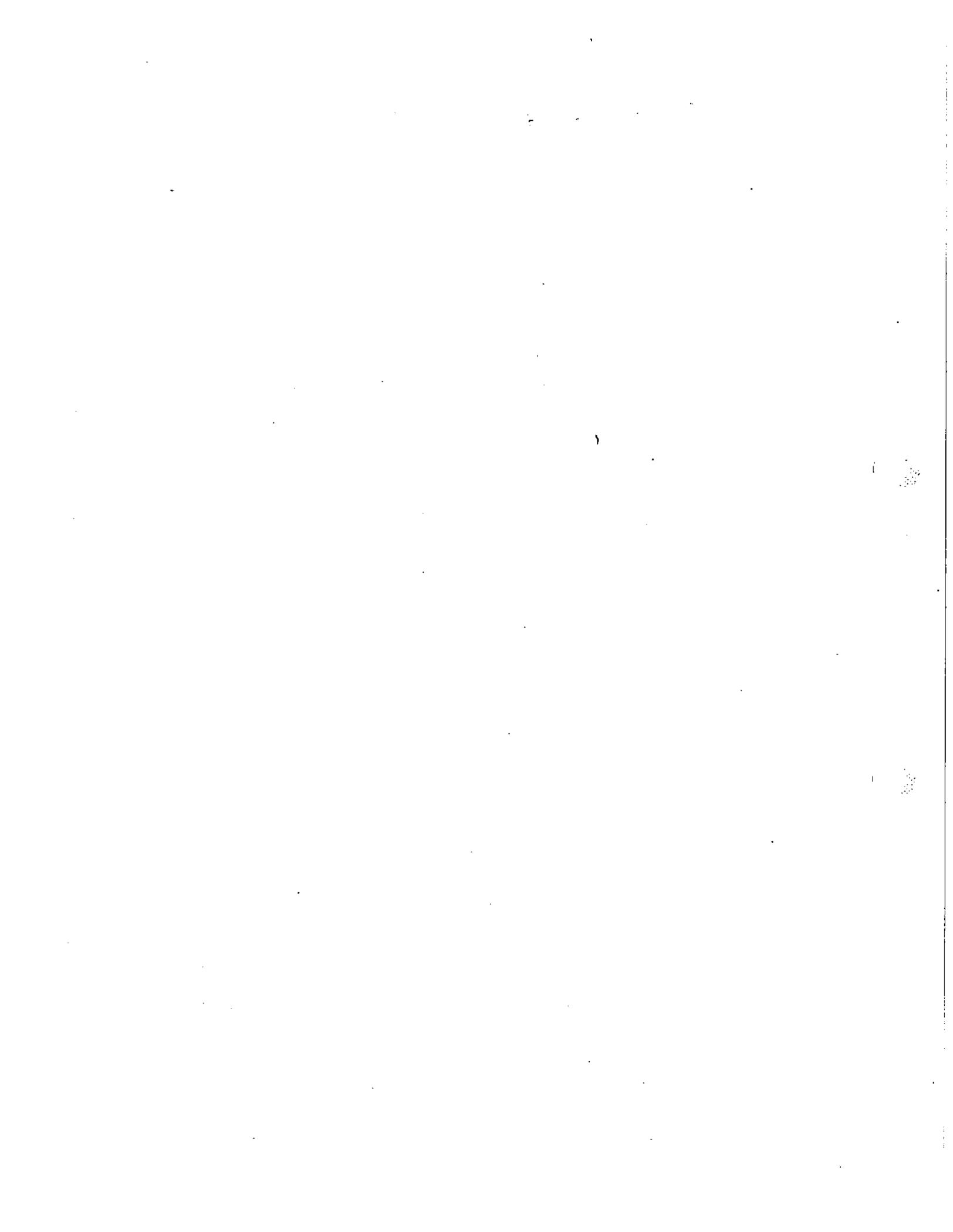
LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0335	690.50 PRICE ADJUSTMENT, FUEL (N.A.B.I.)	1.000 LU	1.00000		1.00	
0340	900.608 SPECIAL PROVISION (EXCAVATION FOR LOWERING RAIL)	2,300.000 CY	35.00000		80,500.00	
0345	900.608 SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)	27.000 CY	3,000.00000		81,000.00	
0350	900.608 SPECIAL PROVISION (RAILROAD BALLAST)	560.000 CY	62.00000		34,720.00	
0355	900.640 SPECIAL PROVISION (PRESTRESSED CONCRETE NEXT D BEAMS) (NEXT 28 D)	281.000 LF	1,250.00000		351,250.00	
0360	900.640 SPECIAL PROVISION (REMOVE AND RESET RAILROAD TRACKS)	1,131.000 LF	128.00000		144,768.00	
0365	900.645 SPECIAL PROVISION (CPM SCHEDULE)	1.000 LS	2,500.00000		2,500.00	
0370	900.650 SPECIAL PROVISION (INCENTIVE/DISINCENTIVE) (ROADWAY) (N.A.B.I.)	1.000 LU	1.00000		1.00	
0375	900.650 SPECIAL PROVISION (INCENTIVE/DISINCENTIVE) (RAILROAD) (N.A.B.I.)	1.000 LU	1.00000		1.00	
0380	900.650 SPECIAL PROVISION (LOCAL ROADWAY MAINTENANCE) (N.A.B.I.)	1.000 LU	10,000.00000		10,000.00	
0385	900.650 SPECIAL PROVISION (MAINTENANCE OF RAILROAD TRAFFIC) (N.A.B.I.)	1.000 LU	40,000.00000		40,000.00	

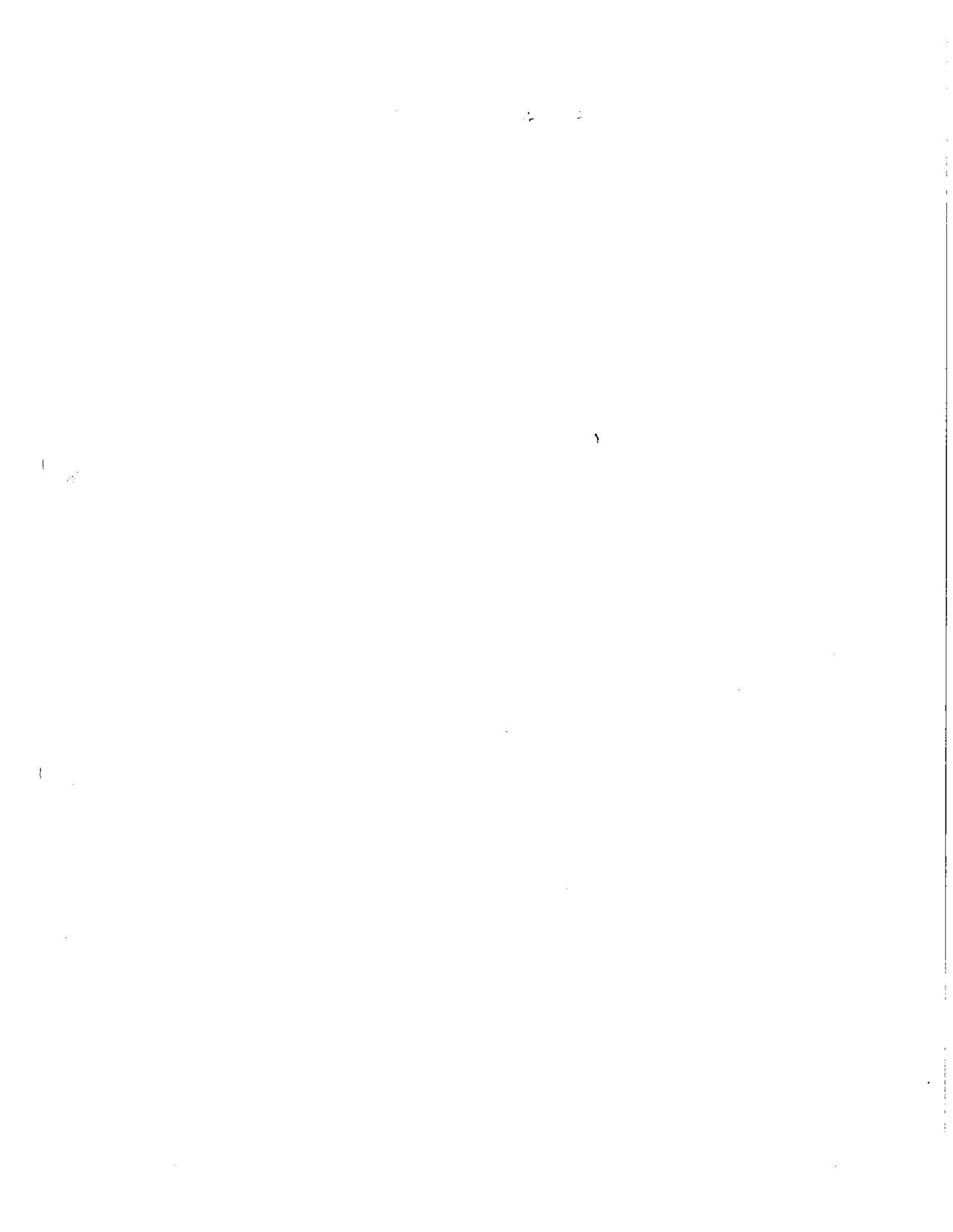


CONTRACT ID: 12B138

PROJECT(S): CASTLETON BR 015-2(10)

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0390	900.650 SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY) (N.A.B.I.)	LU 1.000	1.00000		1.00	
0395	900.650 SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT) (N. A.B.I.)	LU 1.000	1.00000		1.00	
0400	900.675 SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES)	SY 45.000	80.00000		3,600.00	
0405	900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	TON 660.000	117.00000		77,220.00	
TOTAL BID					2,154,029.50	





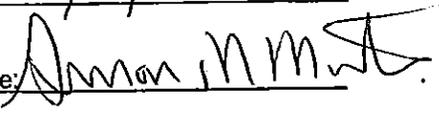
Project Name & Number: Castleton BRF 015-2 (10)

EMPLOYER IDENTIFICATION NUMBER _____

WE THE UNDERSIGNED PARTIES AGREE TO BE BOUND BY THIS CONTRACT

By the State of Vermont:

Date: 1/12/15

Signature: 

Name: ~~Brian R. Searles~~/Susan M. Minter/Chris Cole

Agency: Transportation

By the Contractor: W.M. Schultz Construction, Inc.

Date: January 5, 2015

Signature: 

Name: William M. Schultz

Title: President