

US CUSTOMARY UNITS

D262846

F.A. PROJECT NO PLANS

PROPOSAL

Proposal Description:

Routes 404 and 250 Pavement Rehabilitation
(2.3 miles)(pavement, drainage, curbs and
signs), Town of Webster.

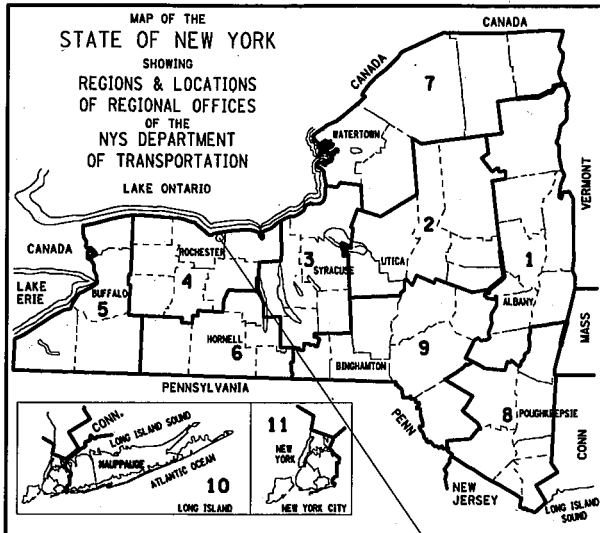
Letting of 4/9/2015 @ 10:30 A.M.

Submitted in accordance with Standard
Specifications officially adopted May 1, 2008 and the
Highway Law.

Book 2 of 4

IMPORTANT BIDDER INFORMATION

- 1. Familiarize Yourself with the Standard Specifications.** NYSDOT currently uses Standard Specification books dated May 4, 2006 (Metric) and May 1, 2008 (U.S. Customary). These may be accessed at: www.dot.ny.gov/main/business-center/engineering/specifications.
- 2. Upcoming Projects/ Letting Results/Contract Documents.** Advertisements are available at: www.dot.ny.gov/doing-business/opportunities/const-highway and Letting Results are at: www.dot.ny.gov/doing-business/opportunities/const-notice. Contract documents may be accessed at: www.dot.ny.gov/doing-business/opportunities/const-notice.
- 3. Procurement Lobbying Law.** www.dot.ny.gov/main/business-center/contractors/contractors-repository/lobbylaw.pdf. NYS Finance Law restricts communication with NYSDOT personnel on procurements and contact can only be made with designated persons. Contact with non-designated persons or other involved Agencies will be considered a serious matter and may result in disqualification. Contacts are: Maria Tamarkin, Construction Letting & Award Unit, (518) 457-8403; the Assistant Director/Director, Contract Management Bureau, (518) 457-2124. Project related technical questions or comments must be submitted through the Contract Documents tab of the Department's website at: www.dot.ny.gov/doing-business/opportunities/const-notice.
- 4. D/M/WBE Goals.** www.dot.ny.gov/main/business-center/contractors/construction-division/construction-civil-rights/ebo. Projects may have one goal for participation by Disadvantaged Business Enterprises (DBE) when Federally funded, or two separate goals for participation by Minority Business Enterprises (MBEs) and Women's Business Enterprises (WBE), when Non-Federally funded. If the project has (a) D/M/WBE goal(s), you must document your good faith efforts to obtain D/M/WBE participation. Solicitation of D/M/WBEs must begin prior to the submission of your bid. For projects with goals, the Pre-Award Utilization Package must be submitted to the Office of Construction within 7 calendar days after Letting, in accordance with §102-12 *D/M/WBE Utilization*, using the current version of NYSDOT approved Civil Rights reporting software.
- 5. Bonds.** Statutes require that a low bidder file both a Performance Bond and a Labor and Material Bond for the full amount of the contract. Arrangements should be made with a Surety prior to submitting a bid. Failure to secure bonding could result in the loss of your bid deposit. See §103-03 *Contract Bonds*.
- 6. Bid Security.** Every bid must be accompanied by a bid bond, certified check or bank cashier's check payable to the State of New York. Bid Express bids must include an electronic bid bond. Bonds must be on form CONR 391 and in the sum of 25% of the total bid. Checks must be in the amount specified in the proposal.
- 7. New York State Can Help You Secure Surety Bonding.** The NYS Surety Bond Assistance Program (NYSBAP) provides technical and financial assistance to help New York State small business or MWBE contractors secure surety bonding. Contractors may be eligible to receive a guarantee of up to 30% to secure a surety bond line, bid bond or a performance and payment bond on State projects. Training is also available to contractors requiring technical support on how to become bond-ready. For more information visit esd.ny.gov/BusinessPrograms/BondingAssistance.html or contact Ms. Huey-Min Chuang at Empire State Development at 212-803-3238 or BAP@esd.ny.gov.
- 8. Do Not Alter the Bid Proposal Unless Directed to Do So by Amendment.** Unauthorized alterations could lead to your bid being declared informal. See §102-05 *Proposal Submission*.
- 9. The Contractor is responsible for ensuring that all Amendments have been incorporated into its bid.** Amendments are posted at: www.dot.ny.gov/doing-business/opportunities/const-notice.
- 10. Bid on All Items and Sign the Bid.** If it is your intent to bid "0", use the numeric symbol. Leaving blank spaces can render your bid informal. See §102-05 *Proposal Submission*.
- 11. Bids Should Be Submitted through Bid Express or in a Sealed Envelope prominently labeled "BID ENCLOSED", addressed to NYSDOT, Contract Management Bureau, 50 Wolf Road, First Floor, Suite 1CM, Albany NY 12232 and delivered during normal business hours(Monday through Friday, 7:00 am to 4:00 pm). Clearly identify the Contractor Name, Address, Federal Identification Number, Project Number and Project Description on the envelope.** The same Federal Identification number should be used on both the envelope and the Planholders List. Low bidders must have a current NYS Vendor Responsibility Questionnaire For-Profit Construction (CCA-2) on file or submit one within 10 days of receipt of the contract. Questionnaires are available at: www.dot.ny.gov/bids-and-lettings/construction-contractors/general-info. Please call (518) 457-2421 if a reasonable accommodation is needed to participate in the Letting.



PROJECT LOCATION

ROUTE 404 AND 250 IN THE VILLAGE OF WEBSTER

RM 404 4303 5095 TO RM 404 4303 5106

RM 250 4301 1115 TO RM 250 4301 1130

PROJECT LOCATION

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATIONASPHALT CONCRETE RESURFACING ON ROUTES 404 AND 250
VILLAGE OF WEBSTER
MONROE COUNTYPIN 4404.16
D262846

STANDARD SHEETS

402-01, 604-02, 608-01, 608-03, 608-04, 608-05, 608-06, 609-01,
609-02, 609-03, 619-02, 619-04, 619-10, 619-11, 619-12, 619-20,
619-21, 619-21, 619-30, 619-31, 619-41, 619-45, 619-50, 619-51,
619-60, 619-61, 619-63, 619-64, 624-01, 645-01, 645-02, 645-03,
646-11, 655-03, 655-04, 680-14, 685-01

MAINTENANCE JURISDICTION

THE MAINTENANCE JURISDICTION OF ALL FEATURES WITHIN THE PROJECT LIMITS WILL REVERT TO PRE-CONSTRUCTION CONDITIONS INCLUDING ALL DRAINAGE STRUCTURES TO BE ALTERED WHICH WILL REMAIN UNDER THE MAINTENANCE JURISDICTION OF THE VILLAGE OF WEBSTER AS PER STATE HIGHWAY LAW SECTION 46.

RECOMMENDED BY

	01/22/15
REGIONAL DESIGN ENGINEER	DATE
	1/22/15
REGIONAL CONSTRUCTION ENGINEER	DATE
	1-21-15
REGIONAL DIRECTOR OF OPERATIONS	DATE
	1/21/15
REGIONAL TRAFFIC ENGINEER	DATE

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

APPROVED BY

	1/22/15
REGIONAL DIRECTOR	DATE

THE LATEST REVISIONS OF THE STANDARD SHEETS MAINTAINED BY THE DEPARTMENT, WHICH ARE CURRENT ON THE DATE OF ADVERTISEMENT FOR BIDS, SHALL BE CONSIDERED TO BE IN EFFECT. ALL PAY ITEMS AND WORK CONTAINED IN THE CONTRACT AND ANY ADDITIONAL PAY ITEMS AND WORK ENCOUNTERED DURING THE COURSE OF THE CONTRACT SHALL BE SUBJECT TO THE APPLICABLE STANDARD SHEET(S) UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.

ALL WORK CONTEMPLATED UNDER THIS CONTRACT IS TO BE COVERED BY AND IN CONFORMITY WITH THE STANDARD SPECIFICATIONS (US CUSTOMARY) OF MAY 1, 2008, EXCEPT AS MODIFIED ON THESE PLANS AND IN THE ITEMIZED PROPOSAL.

CONTRACT HAS BEEN DESIGNED IN ACCORDANCE WITH NYS DOT POLICIES
AND GUIDELINES AND THE FINAL DESIGN APPROVAL DOCUMENT ON 10/16/2014

ASPHALT CONCRETE RESURFACING

ROUTES 404 AND 250: VILLAGE OF WEBSTER

COUNTY: MONROE

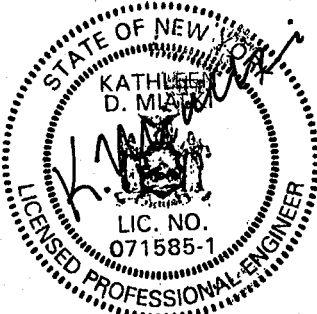
PIN 4404.16

AFFIX SEAL:
ON: 01/21/15

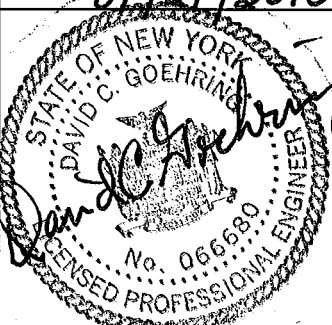


SIGNS

AFFIX SEAL:
ON: 01/21/2015



AFFIX SEAL:
ON: 01/21/2015



SIGNALS

ALTERED BY:
ON:

CONTRACTOR'S NAME _____
AWARD DATE _____
COMPLETION DATE _____
FINAL ACCEPTANCE DATE _____
REGIONAL DIRECTOR _____
ENGINEER IN CHARGE _____

AS-BUILT REVISIONS
DESCRIPTION OF ALTERATIONS:

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

ALL DIMENSIONS ARE IN FT UNLESS OTHERWISE NOTED

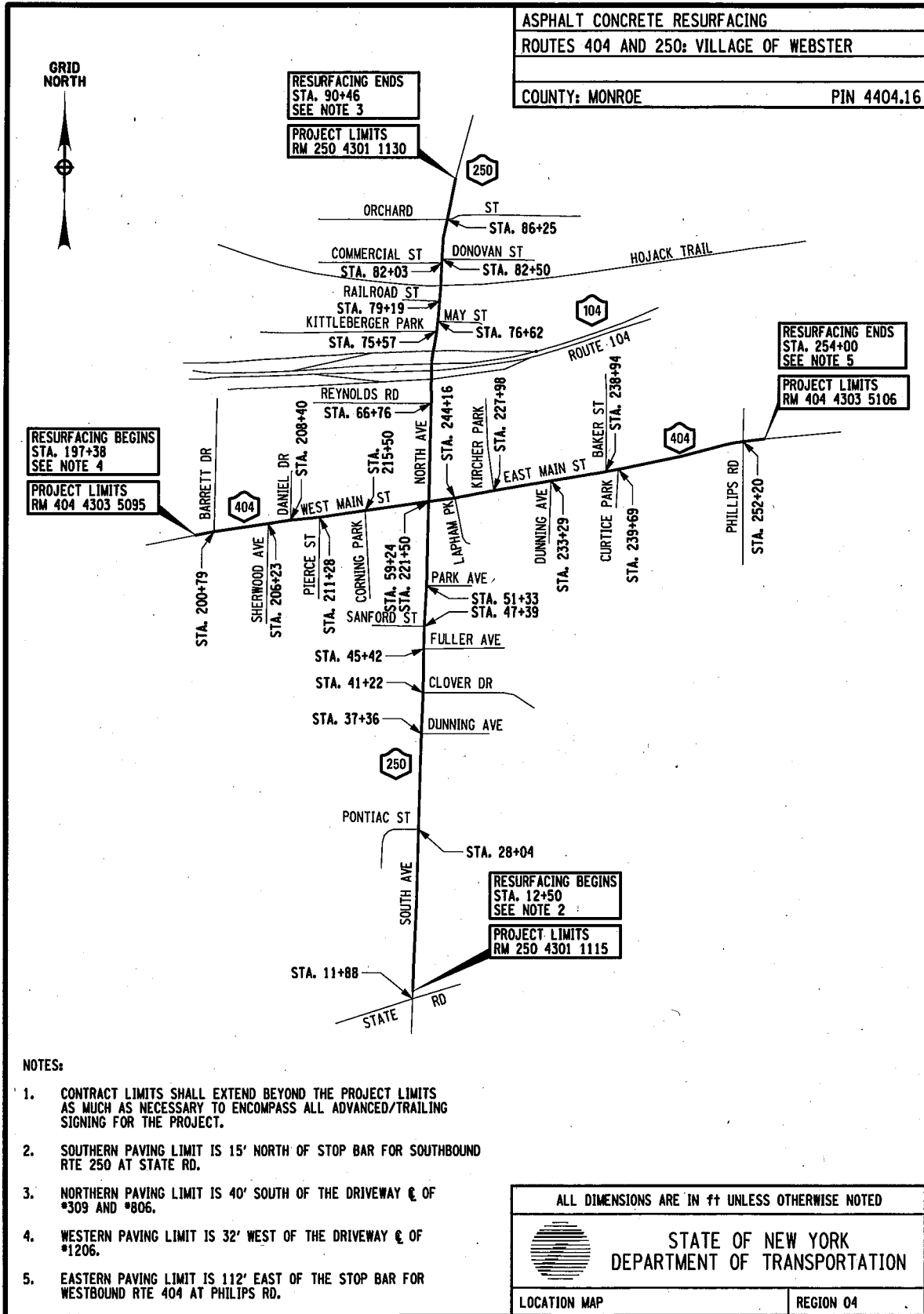


STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

PROFESSIONAL SEAL SHEET

REGION 04

FILE NAME = 440416.cph-sep-dm
DATE/TIME = 20-JAN-2015 16:29
USER = jrescchio



FILE NAME = 440416_cph_loc.mxd
 DATE/TIME = 21-JAN-2015 12:43
 USER = jresaccho

REQUIRED CONTRACT PROVISIONS

ARRA Reporting & Record Keeping Requirements

D/M/WBE Utilization

EEO Goals

D/M/WBE Goals

Form CONR 9k

Electronic Bidding

Federal Aid Contract Provisions

Percentage Bid Items

List of Additional Insured

Railroad Insurance

New York State Uniform Contracting Questionnaire

NOTE: This form was developed for repetitive use throughout all contract proposals and may identify items not applicable to this specific project.

GOALS FOR DISADVANTAGED/MINORITY/WOMEN'S BUSINESS ENTERPRISE (D/M/WBE) PARTICIPATION

The Department has established the following utilization goal(s) for this contract, expressed as a percentage of the total contract bid amount. For clarification of Disadvantaged Business Enterprise (DBE) Utilization, Minority Business Enterprise (MBE) Utilization or Women's Business Enterprise (WBE) Utilization requirements refer to §102-12 *D/M/WBE Utilization* of the Standard Specifications.

Disadvantaged Business Enterprise (DBE) Utilization Goal 5 % (Federal-Aid Only)

Minority Business Enterprise (MBE) Utilization Goal % (Non Federal-Aid Only)

Women's Business Enterprise (WBE) Utilization Goal % (Non Federal-Aid Only)

Directories and/or Information related to the current certification status of Disadvantaged Business Enterprises can be obtained from the NYS Unified Certification Program website at:
<http://biznet.nysucp.net>

Direct questions concerning Disadvantaged Business Enterprise Utilization to:

NYS Department of Transportation
Office of Construction
50 Wolf Road Pod 51
Albany, New York 12232
(518) 457-6472

Direct questions concerning Disadvantaged Business Enterprise Certification to:

NYS Department of Transportation
Contract Audit Bureau
DBE Certification
50 Wolf Road, 6th Floor
Avenue F, 1st Street
Albany, New York 12232
(518) 457-3180

Directories and/or information related to the current certification status of Minority and Women's Business Enterprises, can be obtained by contacting the:

NYS Department of Economic Development
Division of Minority and Women's Business Development
633 Third Avenue
New York, NY 10017
(212) 803-2414
email: mwbecertification@esd.ny.gov
<http://esd.ny.gov/MWBE/directorySearch.html>

SUPPLEMENTAL INFORMATION AVAILABLE TO BIDDERS

The information checked in the "Digital" column on this form is available at the Contract Documents tab within the Construction Contracting section of the [Business Center](#) on the Department's web site. The information checked in the "Inspection Only" column on this form is available at the Regional Office having jurisdiction for this project, as identified in the advertisement for bids, for inspection and review prior to the letting date. The bidder's signature on this proposal certifies that they have made themselves aware of the availability of the information indicated below:

THERE IS NO SUPPLEMENTAL INFORMATION AVAILABLE FOR THIS CONTRACT:



INFORMATION	Digital ¹	Inspection Only
1. Asbestos Information		
a. Asbestos Blanket Variances	☐	☐
b. Asbestos Report	☐	☐
2. CADD Information		
a. MicroStation DGN	☐	☐
b. InRoads DTM and XML format	☐	☐
c. InRoads ALG and XML format	☐	☐
3. Cross Sections in ADOBE PDF format	☐	☐
4. Quantity Information		
a. Quantity Work-ups – All	☐	☐
b. Quantity Work-ups – Partial (specify)	☐	☐
5. Record Plans	☐	☐
6. Rock Cores (available for inspection only)	☐	☐
7. Sign Face Layouts in ADOBE PDF format	☒	☐
8. Stormwater Pollution Prevention Plan (SWPPP)	☐	☐
9. Subsurface Information		
a. Subsurface Exploration Logs	☐	☐
b. Undisturbed Sample Logs	☐	☐
c. Laboratory Test Data from Soil Samples	☐	☐
d. Tabulated Results of Probing	☐	☐
e. Tabulated Depth to Bedrock	☐	☐
f. Rock Core Evaluation Logs	☐	☐
g. Compression Test Data from Rock Samples	☐	☐
h. Rock Outcrop Maps	☐	☐
i. Granular Materials Resource Survey Reports	☐	☐
j. Terrain Reconnaissance Reports	☐	☐
10. Subsurface Information - Other Information		
a. Subsurface information from outside sources	☐	☐
b. Source Information - Granular Material and aggregates	☐	☐
c. Special Subsurface Reports	☐	☐
11. Anticipated Construction Schedule	☐	☐
12. Special Reports or Other Information:	☐	☐
a. Design Approval Document	☐	☐
b. Wetland Compensation Report	☐	☐
c. Survey Control Report	☐	☐
13. Route 404 & 250 Striping Plans	☒	☐
14. Ground Mounted Sign Plans	☒	☐
15. Route 250/104 Traffic Signal Plans	☒	☐
16. Survey Baseline Ties, Control Point Data, DTM, ALG	☒	☐

¹ – All digital material is provided in ADOBE (pdf) format, unless noted above.

NYSDOT Electronic Bidding - Transport Expedite and Bid Express

Expedite allows bidders to receive electronic proposal bid item information from the Department's web site and Bid Express to produce an electronic bid. Bidders need to enter unit prices only in the Schedule of Items. Expedite is provided free of charge, and can be used on almost any Windows-compatible PC. It integrates with many existing electronic bid preparation software packages, and has import/export capability for use with database and spreadsheet programs. Benefits may include:

- Bid data import takes seconds allowing users of computer systems that collect item data minimal time to construct bid files from "item libraries".
- Expedite calculates item and overall bid totals on-the-fly, as estimators work through the list, and alerts estimators if an item is accidentally omitted.
- Electronic files of item bid data will be posted to the NYSDOT website to coincide with advertising and contract document sale dates.
- Amended item bid data will be posted as soon as it is available. When it is downloaded, recognition of changes are automatic.
- The Department processes electronic bids much faster than paper bids decreasing the time needed for verification.

Bid Express allows secure, encrypted bid submittal over the internet. It integrates with Expedite and includes electronic bid bond verification. Bid Express is a fee-based service. Benefits may include:

- Real-time bid submittal from any location.
- No concerns about driving bids to Albany or mail services arriving after the deadline.
- Ability to submit a "safety bid" early while continuing to solicit better quotes from subs and suppliers and to overwrite the safety bid with a new bid right up to the submission deadline.
- As data accumulates on Bid Express, there is the ability to search and analyze bids on prior contracts for specific work items, by specific competitors, etc.
- Able to solicit and receive quotes from subcontractors through the Small Business Network on Bid Express.
- Contractors who use Bid Express do not submit a paper bid.

First time electronic bidders should:

- Allow at least five business days to obtain a digital ID and password for bidding through Bid Express.
- Follow the procedures in "Expedite Instructions", which are posted at <http://www.dot.ny.gov/bids-and-lettings/construction-contractors/electronic-bid-system>
- Enter the Agency as NYSDOT.
- Use the appropriate Federal-ID and firm name. Federal-ID must be in the format 12-3456789. Joint ventures must create a new digital ID and send an authenticated copy of evidence of the authority of the agent or attorney-in-fact for the joint venturers to act on behalf of all joint venturers to the Contract Management Bureau prior to the Letting.

All electronic bidders should:

- Enter prices for all bid items in the Schedule of Items.

NYSDOT Electronic Bidding - Transport Expedite and Bid Express

- Enter days for the B portion(s) of A + B bids on the Proposal Sites folder (if applicable).
- Enter the required info in the JURAT and Disclosure of Lobbying Activity folders.
- Complete the Contract Document Bid-Ability Survey (optional).
- Enter the required info in the Bid Bond folder if submitting bid through Bid Express and click Verify to verify the bid bond.
- All folders should be green if submitting bid through Bid Express. Submitting a bid through Bid Express with any red folders could lead to your bid being declared informal.

Paper Bid Documents: NYSDOT recommends and encourages contractors to bid electronically with Bid Express because of its many advantages, but contractors are not required to bid electronically. If NYSDOT receives both a Bid Express bid and a paper bid from the same contractor, the Bid Express bid will prevail.

Bidders who do not use Bid Express are encouraged to submit an electronic bid file on a disk/CD included with their paper bid. NYSDOT will not accept electronic bids on disk/CD without a paper bid. If there is any discrepancy between an electronic file and the paper bid, the paper bid will prevail.

When submitting an electronic bid file with your paper bid, include only one file per bid. The disk/CD must be labeled with the following information:

- Firm name
- Letting date
- D number
- A statement as to whether the paper bid does or does not include any handwritten changes from the electronic bid file. Do not mix partial printouts with differing date-time groups.

Amendments: Contractors are solely responsible for recognizing and responding to changes by amendment. If an amendment involves changes to item bid data, an amended Expedite file will be posted to the Department's website and to Bid Express. This file must be applied to your electronic bid. If there is any discrepancy in the itemized proposals published in paper and electronic formats, in either the contract pay items or quantities, the Department will evaluate the bids based only on that portion that is common to all formats. For example, if an item is missing from any format, the bids will be evaluated excluding that item and if item quantities are different in any format, the bids will be evaluated using the lowest item quantity.

Please notify the Department at 888-664-9343 or 518-485-8111 if you find any such discrepancies. However, not all amendments will involve changes to item bid data.

For assistance:

- Bid Express Help Desk (888) 352-2439 or (352) 381-4888
- NYSDOT Information Technology Division Help Desk (888) 664-9343 or (518) 485-8111
- Third-party Software - Contact the vendor of the software. The Department is neither authorized nor able to assist with any software package.

Last Update: February 2, 2012

00850
L05/7/09

REQUIRED CONTRACT PROVISIONS FOR FEDERAL AID CONTRACTS

FHWA-1273 -- Revised May 1, 2012

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

A. 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

REQUIRED CONTRACT PROVISIONS FOR FEDERAL AID CONTRACTS

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

REQUIRED CONTRACT PROVISIONS FOR FEDERAL AID CONTRACTS

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

REQUIRED CONTRACT PROVISIONS FOR FEDERAL AID CONTRACTS

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

REQUIRED CONTRACT PROVISIONS FOR FEDERAL AID CONTRACTS

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.

REQUIRED CONTRACT PROVISIONS FOR FEDERAL AID CONTRACTS

(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.

REQUIRED CONTRACT PROVISIONS FOR FEDERAL AID CONTRACTS

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.

REQUIRED CONTRACT PROVISIONS FOR FEDERAL AID CONTRACTS

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:

REQUIRED CONTRACT PROVISIONS FOR FEDERAL AID CONTRACTS

"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.

REQUIRED CONTRACT PROVISIONS FOR FEDERAL AID CONTRACTS

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

REQUIRED CONTRACT PROVISIONS FOR FEDERAL AID CONTRACTS

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.

2. 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.

P.I.N. 4404.16**LIST OF ADDITIONAL INSURED PARTIES**

Insurance must be provided for the following additional parties:

1. State of New York / New York State Department of Transportation
2. Village of Webster, Town of Webster, Monroe County
3. Monroe County Water Authority, Village of Webster DPW, Rochester Gas & Electric – Gas, Frontier Telephone

Notes:

1. Coverage must also be provided for any consultant inspecting engineer or inspector (and their agents) working for or on the project.
2. The above listing supplements Section 107-06 INSURANCE of the Standard Specifications.

New York State Uniform Contracting Questionnaire (CCA-2)

In accordance with §103-01 of the Standard Specifications, the NYS Department of Transportation requires that a review of a firm's responsibility be performed prior to the award of a contract or approval of a subcontract. A **New York State Uniform Contracting Questionnaire (CCA-2)** is the primary tool used to perform this review. A completed CCA-2 must be on file with NYSDOT to be considered for the award of a contract or for the approval of a subcontract. An approved CCA-2 covers NYSDOT work for 12 months from date of receipt.

Any low bidder who does not have a completed CCA-2 on file within ten days of receipt of a contract for execution may be subject to the forfeiture of the amount of the bid deposit pursuant to §103-02 of the Standard Specifications.

There are three CCA-2 options available on the NYSDOT website <https://www.dot.ny.gov/bids-and-lettings/construction-contractors/general-info>: online filing (VendRep), a Rich Text fillable form, and an Adobe Acrobat fillable form. No previous versions of the form will be accepted.

If a firm chooses to file online at http://osc.state.ny.us/vendrep/popups/vendor_construction.htm (site of the Office of the New York State Comptroller's VendRep repository), please note that the online VendRep System is only a repository of information with the Office of the State Comptroller (OSC). Although there is a certification completed in VendRep, it is only an electronic signature. This certification does NOT mean the CCA-2 has been reviewed and approved by any Agency. The firm **must** notify vendorresponsibility@dot.ny.gov by sending an e-mail stating that the online filing has been completed. This notification will initiate the review process. The firm cannot begin work for NYSDOT until a responsibility determination has been made by the Contract Management Bureau.

If choosing one of the other options, a firm **must print out and MAIL** its original, notarized CCA-2 to NYSDOT's Contract Management Bureau. Whichever format is used, all Attachments must be completed. A firm may use its own spreadsheets, but must provide all of the information requested. Either of the following may be substituted for an Attachment C: the firm's corporate balance sheet (including any Accountant's Notes or Reports referenced), or a copy of the Schedule L filed with its IRS Form 1120. Once all of the completed paperwork has been received, the approval process will begin. All responsibility checks must be completed by NYSDOT before a firm is approved to begin work.

Questions regarding the CCA-2 may be directed to the Contract Management Bureau, Vendor Responsibility Unit at (518) 457-1564.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

01250
L09/04/14

ERRATA to 2008 STANDARD SPECIFICATIONS

Make the following change to the *Standard Specifications of May 1, 2008* :

(Issued with Prop Makeup for 9/4/08)

Page 5, insert, in numerical sequence, the following:

“Section 625 - Survey Operations, Row Markers, and Permanent Survey Markers.....609”

Page 12, insert, in numerical sequence, the following:

“SECTION 726 - DETECTABLE WARNING UNITS.....	1005
726-01 Surface-Applied Detectable Warning Units.....	1005
726-02 Embedded Detectable Warning Units.....	1006
SECTION 727 - PAVEMENT MARKING MATERIALS.....	1006
727-01 Extruded Thermoplastic.....	1006
727-02 Removable Raised Pavement Markers.....	1008
727-03 Epoxy Paint.....	1009
727-04 Permanent Pavement Tape.....	1011
727-05 Glass Beads for Pavement Markings.....	1012
727-06 Removable Pavement Tape.....	1013
727-07 Removable Wet-Night Reflective Tape.....	1015
727-08 Permanent Wet-Night Reflective Tape.....	1016
727-09 Traffic Paint.....	1018”

Make the following change to the *Standard Specifications of May 1, 2008* :

(Issued with Prop Makeup for 1/8/09)

Page 530, Section 608-3.01 Concrete Sidewalks and Driveways, third paragraph, first sentence,

Delete "When using fiber reinforcement it shall be added to the concrete at a rate of 2 pounds of fibers per cubic yard of concrete".

And **replace** with "When using fiber reinforcement it shall be added to the concrete at a rate of 1.5 pounds of fibers per cubic yard of concrete".

Page 606, Section 623-5 Basis of Payment, **delete** the M from all item numbers.

Page 911, TABLE 715-01-1 Charpy V-Notch Impact Requirements, **replace** the column entries of ENERGY with 15, 15¹, 15¹, 15¹, 20¹, 20

Make the following change to the *Standard Specifications of May 1, 2008* :

(Issued with Prop Makeup for 5/7/09)

Page 143, Section 201-3.02, second paragraph, first sentence, **replace** “15 feet” with “16 feet”

Page 147, Section 202-3.01, third from the last paragraph, first sentence, **replace** “3 feet” with “42 inches”

Page 148, Section 202-3.02F, third paragraph, first sentence, **replace** “3 feet” with “42 inches”

Page 153, Section 202-3.09, fourth paragraph, **replace** the second sentence with “If excavation support is necessary to support structures or other improvements, or if the alternatives of laying back slopes or benching are not available, the support system shall be as indicated in the contract documents.”

Page 157, Section 203-1.09, last line, **replace** “Analysis” with “Science”

Page 157, Section 203-1.15, last line, **replace** “below 32°F.” with “32°F or less.”

ERRATA to 2008 STANDARD SPECIFICATIONS

Page 158, *replace* Section 203-1.17 with the following:

“203-1.17 Cleaning Culverts, Closed Drainage Systems, Drainage Structures and

Manholes. This work shall consist of cleaning and keeping clean, existing culverts, closed drainage systems, drainage structures and manholes indicated in the contract documents or where directed by the Engineer, for the duration of the contract.”

Page 161, Section 203-3.02, second paragraph, *replace* “Analysis” with “Science”

Page 163, Section 203-3.05C, *replace* “215 feet” with “212 feet” throughout

Page 163, Section 203-3.05C, *replace* “a Scaled Distance of 30 feet” with “a Scaled Distance of 30” throughout

Page 163, Section 203-3.05C, between the two equations, *replace* “AND” with “OR”

Page 167, Section 203-3.12B.2., fourth paragraph, first sentence, *replace* “CFR” with “PLI”

Page 168, Figure 203-3 Vibratory Compactors - 800 is missing on the vertical axis of the Figure.

Page 171, Section 203-3.14C, *replace* “Select Granular Subgrade, §203-2.202E,” with “Select Granular Subgrade, §203-2.02E,”

Page 176, Section 203-5, Pay Item list, in numerical sequence *add* the following:

“203.22	Sand Backfill (screenings)	Cubic Yard
203.23	Sand Backfill (Type 1B)	Cubic Yard
203.24	Sand Backfill (Type 1A)	Cubic Yard”

Page 176, Section 203-5, Pay Item list, item 203.51, under Pay Unit, *replace* “Foot” with “Linear Foot”

Page 182, Section 205-3.02A1.&2., 3.02B, *delete* “0.25 millimeter and 0.15 millimeter”

Page 183, Section 205-3.03, third paragraph, third sentence, *delete* “10°C”

Page 184, Section 205-3.04, first paragraph, fifth sentence, *replace* “0.3 meters” with “one foot”

Page 184, Section 205-3.04, first paragraph, third sentence form the end, *replace* “EIC” with “the Engineer”

Page 186, Section 205-5, Note at the end, *replace* “nnn” with “nn”

Page 192, Section 209-2.04, first paragraph, *delete* the second sentence “Strawbale shall be §713-19 Straw.”

Page 198, Sections 209-4.01,.02,.09,.10,.11, *replace* “square feet or square foot” with “square yard”

Page 215, Section 307-3.11, fourth sentence *replace* “0.02 gallons/square yard” with “of 0.2 gal/sy”

Page 218, Section 308-3.07, first paragraph, third sentence *replace* “nine metric tons” with “10 tons”

Page 270, Section 407-4, Volume equation, *replace* “ 0.00045” with “0.00025”

Page 500, Section 605-2.02, second paragraph, *replace* “Soil Control Procedure (SCP)” with “Geotechnical Control Procedure (GCP)”

Page 602, Section 620-2.05, third paragraph, *replace* “Soil Control Procedure (SCP)” with “Geotechnical Control

ERRATA to 2008 STANDARD SPECIFICATIONS

Procedure (GCP)”

Page 603, Figure 620-1 under Medium Stone Size, **replace** “6 inch” with “4 inch”

Page 603, table following Figure 620-1 entitled Approximate Shape, **add** “Figure 620-2” to title

Page 605, Section 620-3.06, last word, **replace** “water” with “weather”

Page 606, Section 623-3, **replace** with the following:

“623-3 CONSTRUCTION DETAILS. Screened gravel, crushed gravel, crushed stone or crushed slag shall be placed as shown on the plans or as directed by the Engineer.”

Page 606, Section 623-5, all Payment Item Numbers, **delete** “M”

Page 609, Section 624-5, all Payment Item Numbers, **delete** “M”, and **replace** “624.020611” with “624.020610”

Page 773, Table 703-2, under Material Designation, 5th and 6th row, **replace** “12.5mm” with “1/2 inch”

Page 774, Table 703-4, at Size Designation 4 and Screen Size 2 in, **replace** “0.15” with “0-15”

Page 780, Section 703-09, under Method of Measurement, **replace** “metric tons” with “tons”

Page 1048, Section 732-09, Material and Fabrication Requirements, first sentence, **replace** “15 3/4 inches” with “16 inches”

On page 1047, under **732-04 SAMPLERS**, replace **MATERIAL REQUIREMENTS** with the following:

“MATERIAL REQUIREMENTS. Samplers shall be equipped with a ball check in the head section and have a minimum inside length of 20 inches. Samplers shall conform to the following sizes:

Sampler Diameter (Inches)	Outside Diameter (Inches)	Cutting Shoe Opening (Inches)
2	2	1 ³ / ₈
2½	2½	1 ⁷ / ₈
3	3	2 ³ / ₈
3½	3½	2 ⁷ / ₈

On page 1048, under **732-10 BOULDER AND ROCK CORE BOXES**, replace the **first paragraph** under **MATERIAL AND FABRICATION REQUIREMENTS** with the following:

“MATERIAL AND FABRICATION REQUIREMENTS. Boxes shall be fabricated of white pine, Grade No. 2 common or better, 1 inch stock (finished ¾ inch) thickness or an approved equal material and conform to the overall box dimensions given below:

Core Box Size	Length (Inches)	Width (Inches)	Height (Inches)
“AX”	61½	9 ⁵ / ₈	2 ³ / ₄
“BX”	61½	10¾	3¼
“NX”	61½	10 ⁷ / ₈	3¾
“HX”	61½	11 ¹ / ₈	4 ⁵ / ₈

Core rows shall be separated by wooden or tempered hardboard, 1/8 inch thick strips recessed to 3/8 inch depth and glued with waterproof glue at the bottom and ends of the box.”

Page 1049, Section 732-12, Material Requirements, **replace** with the following:

“MATERIAL REQUIREMENTS.

Cement. The material shall meet the requirements of §701-01 Portland Cement Type 1 or 2.

ERRATA to 2008 STANDARD SPECIFICATIONS

Water. The water for the mix shall conform to the requirements of §712-01 Water.

Bentonite Powder. There are no material requirements for the bentonite, except it shall be supplied in powder form from a reputable manufacturer and pass a No. 200 sieve."

Make the following change to the *Standard Specifications of May 1, 2008* :

(Issued with Prop Makeup for 9/3/09)

Page 656, Table 645-1 Wind Load Criteria, row 1 column 4 and 5, **replace** "140 ft." with "14.0 ft".

Page 657, Table 645-2 Allowable Sign Areas, under Wooden Post Sections with Embedment of 6.0 ft., **replace** "3.5 x 3.5" with "3.5 x 5.5".

Page 661, Payment Item 645.8XXXXX Type B Sign Posts, under YY Section, **replace** 01 to 08 with "01 S3x5.7, 02 W6x9, 03 W6x12, 04 W8x15, 05 W10x19, 06 W10x22, 07 W12x26, 08 W14x34"

Make the following change to the *Standard Specifications of May 1, 2008* :

(Issued with Prop Makeup for 1/7/10)

Page 386, Section 565-2.03, Second line, **replace** with the following:

"Type M.R. Bearings 716-06.01 or 716-07.01"

Page 609, Section 624-5, Payment Item Numbers 624.020101 and 624.020601 under Pay Unit, **replace** "Metric Ton" with "Ton"

Make the following change to the *Standard Specifications of May 1, 2008* :

(Issued with Prop Makeup for 5/6/10)

Page 218, Section 308-3.07, **Page 608**, Section 624-4.01, **Page 641**, Sections 638-4 and 638-5, **Page 780**, Section 703-09, Method of Measurement, **replace** "metric ton" with "ton"

Page 769, Table 702-9, under Tact Coat Material Designations, **replace** 702-9000, 702-9001, 702-9002, 702-9003, 702-9004 with 702-9001, 702-9002, 702-9003, 702-9004, 702-9005 respectively.

Page 770, Table 702-10, **replace** Note 1 with XX = 01, 02, 03, 04, or 05

Make the following change to the *Standard Specifications of May 1, 2008* :

(Issued with Prop Makeup for 9/2/10)

Page 702, Section 663-3.23 Hydrostatic Testing, last sentence, **replace** "1035 kPa" with "150 psi"

Page 702, Section 663-4.01 Water Pipe, **replace** "0.1 m" with "1/2 foot"

Make the following change to the *Standard Specifications of May 1, 2008* :

(Issued with Prop Makeup for 1/6/11)

Page 520, Section 606-5, under Payment Item Numbers, **delete** Item 606.36.

Make the following change to the *Standard Specifications of May 1, 2008* :

(Issued with Prop Makeup for 5/5/11)

Page 289, Section 501-2.04 C Mobile Concrete Mixing Units, **replace** Tolerances for Water and Admixtures with the following, "Admixtures $\pm 3\%$, Water $\pm 1\%$ "

ERRATA to 2008 STANDARD SPECIFICATIONS

Page 524, Section 607-2 Materials, Steel and Iron Posts, Rails, Braces and Fittings for Chain-Link Fence, **replace** “710-10.03” with “710-10”

Make the following change to the *Standard Specifications of May 1, 2008* :

(Issued with Prop Makeup for 9/1/11) No Errata

Make the following change to the *Standard Specifications of May 1, 2008* :

(Issued with Prop Makeup for 1/12/12)

Page 517, Table 606-2 under Heavy Post Blocked Out Corrugated Beam and Payment Factor 1.8, **replace** 3’ 1” with 3’ 1 1/2”

Make the following change to the *Standard Specifications of May 1, 2008* :

(Issued with Prop Makeup for 5/3/12) No Errata

Make the following change to the *Standard Specifications of May 1, 2008* :

(Issued with Prop Makeup for 9/6/12)

Section 102-01, Region 1, **delete** Columbia under Counties, **replace** Address with 50 Wolf Road, Albany, NY 12232, (518) 457-3522

Section 102-01, Region 8, **add** Columbia under Counties

Make the following change to the *Standard Specifications of May 1, 2008* :

(Issued with Prop Makeup for 1/10/13)

All Pages, All Sections, in all places where it occurs **replace** “Select Structural Fill” with “Select Structure Fill”

Page 503, Section 606-2 under the material list **replace** “704-05 Precast Concrete Median Barrier” with “704-05 Precast Concrete Barrier”

Make the following change to the *Standard Specifications of May 1, 2008* :

(Issued with Prop Makeup for 5/2/13) No Errata

Make the following change to the *Standard Specifications of May 1, 2008* :

(Issued with Prop Makeup for 9/5/13)

All Sections form 200 to 799, **replace** “Maintenance and Protection of Traffic” with “Work Zone Traffic Control”.

Section 644-3.05, 5th paragraph, 1st sentence, **replace** “Table 555-1” with “Table 555-4”.

Section 645-2.03 A, in parentheses, **replace** “3 feet” with “39 inches”.

Section 649-5, under pay items, **replace** “Audible Road Delineators” with “Audible Roadway Delineators”.

Section 670-3.01, last paragraph, 1st sentence, **replace** “General Specifications for Street Lighting Facilities” contained in the latest publication of “City of New York SPECIFICATIONS For Use With State of New York Department of Transportation Construction Contracts.” with “The latest version of Division of Street Lighting Specifications”.

Table 702-6 Polymer Modified Asphalt Emulsions, for All Other Polymer Modified Emulsions, under Test Requirements **delete** “Softening Point, °F” and under Minimum **delete** “140”

ERRATA to 2008 STANDARD SPECIFICATIONS

Table 718-06-1 Testing Requirements for HP Concrete, for Creep under Acceptance Criteria, **replace** “414/psi” with “414/ksi”

Make the following change to the *Standard Specifications of May 1, 2008*:
(Issued with Prop Makeup for 1/9/14)

Section 554-5, under pay items, **replace** “554.3004” with “554.3005”.

Section 571-3.06 Paint Removal Waste Transport, last bullets under A. and B, **delete** “from each individual site (BIN)”

Section 736-01 under **BASIS OF ACCEPTANCE**, second sentence, **delete** “or which do not conform to the approved shop drawings”

Make the following change to the *Standard Specifications of May 1, 2008* :
(Issued with Prop Makeup for 5/8/14) No Errata

Make the following change to the *Standard Specifications of May 1, 2008* :
(Issued with Prop Makeup for 9/4/14)

Section 556-3.01A, third sentence, **replace** “§557-3.16” with “§557-3.17”

Section 606-2.03 Fasteners, **replace** “Bolts ASTM F1554 Grade 36” with “Bolts ASTM A307 Grade A”.

Section 710-20 Splices and Post Bolts, **replace** “Bolts ASTM F1554 Grade 36” with “Bolts ASTM A307 Grade A”

Section 713-01 under **MATERIAL REQUIREMENTS C.2.** at the end of the third bullet, **add** “and have the following gradation:”

Make the following change to the *Standard Specifications of May 1, 2008* :
(Issued with Prop Makeup for 1/8/15)

Section 209-3.01A. Inspection and Maintenance, last bullet in the third paragraph, **replace** “§203-3.08 Disposal of Surplus Excavated Materials” with “§107-10 Managing Surplus Material and Waste”

Section 209-5, under pay units, items 209.160101 to 209.160107, **replace** “Foot” with “Each”.

Section 709-10, under Material Requirements, under the first bullet, **replace** “70%” with “7%”.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Make the following changes to the Standard Specifications of May 1, 2008:

Page 1 through 3, **Delete** Table of Contents for Section 100 and **Replace** it with the following:

TABLE OF CONTENTS

SECTION 101 - ABBREVIATIONS AND DEFINITIONS OF TERMS	1
101-01 ABBREVIATIONS OF TERMS.	1
101-02 DEFINITIONS OF TERMS.	3
 SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS	 13
102-01 LOCATION OF REGIONAL OFFICES.	13
102-02 EXAMINING THE CONTRACT DOCUMENTS AND THE WORK SITE.	13
102-03 COOPERATION BETWEEN CONTRACTORS.	15
102-04 PROPOSAL CONTENT.	15
102-05 PROPOSAL SUBMISSION.	16
102-06 BID DEPOSIT.	17
102-07 MODIFICATION OR WITHDRAWAL OF PROPOSAL.	17
102-08 SAMPLE APPENDIX A - STANDARD CLAUSES FOR ALL NEW YORK STATE CONTRACTS.	18
102-09 VACANT	24
102-10 LABOR AND EMPLOYMENT.	24
102-11 EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS.	26
102-12 D/M/WBE UTILIZATION.	31
102-13 STATE AND LOCAL SALES TAX EXEMPTION.	38
102-14 FORM OF CONTRACT AND BID BOND.	38
102-15 SAMPLE FORM OF BID BOND.	39
102-16 SAMPLE CONTRACT PAY ITEM FORMAT.	41
102-17 SAMPLE FORM OF ITEMIZED PROPOSAL/JURAT.	42
 SECTION 103 CONTRACT AWARD AND EXECUTION	 49
103-01 CONTRACT AWARD.	49
103-02 EXECUTION OF CONTRACT.	49
103-03 CONTRACT BONDS.	50
103-04 CANCELING AWARD.	50
103-05 PARTNERING.	50
103-06 SAMPLE FORM OF CONTRACT AGREEMENT.	51
103-07 SAMPLE FORM OF FAITHFUL PERFORMANCE BOND.	59
103-08 SAMPLE FORM OF LABOR AND MATERIAL BOND.	62
 SECTION 104 - SCOPE OF WORK	 64
104-01 WORK REQUIRED.	64
104-02 CHANGES, CONTINGENCIES, EXTRA WORK AND DEDUCTIONS.	64
104-03 DIFFERING SITE CONDITIONS.	64
104-04 SIGNIFICANT CHANGES IN THE CHARACTER OF WORK.	65
104-05 SUSPENSIONS OF WORK DIRECTED BY THE ENGINEER.	67
104-06 NOTICE AND RECORDKEEPING.	68
104-07 SITE HOUSEKEEPING.	70
104-08 MAINTAINING TRAFFIC.	70
104-09 CONTRACTOR'S RETENTION OF RECORDS.	70
104-10 VALUE ENGINEERING CHANGE PROPOSAL (VECP).	71

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

SECTION 105 - CONTROL OF WORK	78
105-01 ENGINEER'S AUTHORITY.	78
105-02 CHARACTER OF WORKERS.	78
105-03 METHODS AND EQUIPMENT.	79
105-04 CONTRACT DOCUMENTS	80
105-05 VENDOR RESPONSIBILITY.	80
105-06 COOPERATION WITH UTILITIES AND OTHER CONTRACTORS.	81
105-07 TERMINATION.	81
105-08 REMOVAL OF UNACCEPTABLE AND UNAUTHORIZED WORK.	82
105-09 WORK AFFECTING RAILROADS.	83
105-10 SURVEY AND STAKEOUT.	86
105-11 INSPECTION.	87
105-12 LOAD RESTRICTIONS.	88
105-13 WORK ZONE TRAFFIC CONTROL FOR MOBILE OPERATIONS.	88
105-14 DISPUTED WORK AND DISPUTE RESOLUTION.	88
105-15 FURNISHING RIGHT OF WAY.	94
105-16 SHOP DRAWING APPROVAL.	95
105-17 CONTRACT RECORDS.	95
105-18 MANUFACTURER WARRANTIES AND GUARANTEES.	95
105-19 CONTRACTOR WARRANTIES.	95
105-20 OPENING HIGHWAY TO TRAFFIC PRIOR TO CONTRACT FINAL ACCEPTANCE.	96
105-21 CIVIL RIGHTS MONITORING AND REPORTING.	96
 SECTION 106 - CONTROL OF MATERIAL	 100
106-01 SOURCES OF SUPPLY.	100
106-02 QUALITY REQUIREMENTS.	101
106-03 PLANT INSPECTED MATERIALS.	102
106-04 MATERIAL CERTIFICATION AND APPROVED LIST.	103
106-05 RECYCLED MATERIALS.	104
106-06 STORAGE AND HANDLING OF MATERIALS.	104
106-07 BASIS FOR MEASUREMENT.	104
106-08 REJECTED MATERIALS.	104
106-09 EQUIVALENTS.	104
106-10 QUALITY ASSURANCE.	104
106-11 BUY AMERICA.	105
 SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC	 107
107-01 LAWS, RULES, REGULATIONS AND PERMITS.	107
107-02 PATENTED DEVICES, MATERIALS AND PROCESSES.	108
107-03 FEDERAL AID PARTICIPATION.	108
107-04 PUBLIC NOTICES.	108
107-05 SAFETY AND HEALTH REQUIREMENTS.	108
107-06 INSURANCE.	121
107-07 PROTECTION OF UNDERGROUND FACILITIES.	126
107-08 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE.	128
107-09 DAMAGE.	129
107-10 MANAGING SURPLUS MATERIAL AND WASTE.	131
107-11 AIR QUALITY PROTECTION.	134
107-12 WATER QUALITY PROTECTION.	135

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

SECTION 108 - PROSECUTION AND PROGRESS	137
108-01 PROGRESS SCHEDULE.	137
108-02 COMPLETION DATE.	139
108-03 FAILURE TO COMPLETE WORK ON TIME.	140
108-04 DELAY PROVISIONS	141
108-05 SUBLETTING OR ASSIGNING THE CONTRACT.	143
108-06 COMMENCEMENT OF ACTIONS ON STATE PUBLIC WORKS CONTRACTS.	145
108-07 SEASONAL SHUT-DOWN.	146
 SECTION 109 MEASUREMENT AND PAYMENT	 146
109-01 MEASURING QUANTITIES.	146
109-02 COMPENSATION FOR ALTERED QUANTITIES.	146
109-03 SCOPE OF PAYMENT.	147
109-04 PARTIAL PAYMENTS.	147
109-05 EXTRA WORK AND TIME RELATED COMPENSATION.	148
109-06 CONTRACT PAYMENTS.	158
109-07 PROMPT PAYMENTS BY THE CONTRACTOR.	159
109-08 ELIMINATED MATERIALS.	159
109-09 FINAL ACCEPTANCE AND FINAL AGREEMENT.	160
109-10 UNCOMPLETED WORK AGREEMENTS.	161

This page intentionally left blank

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Page 15 through 141, **Delete** Section 100 in its entirety and **Replace** it with the following:

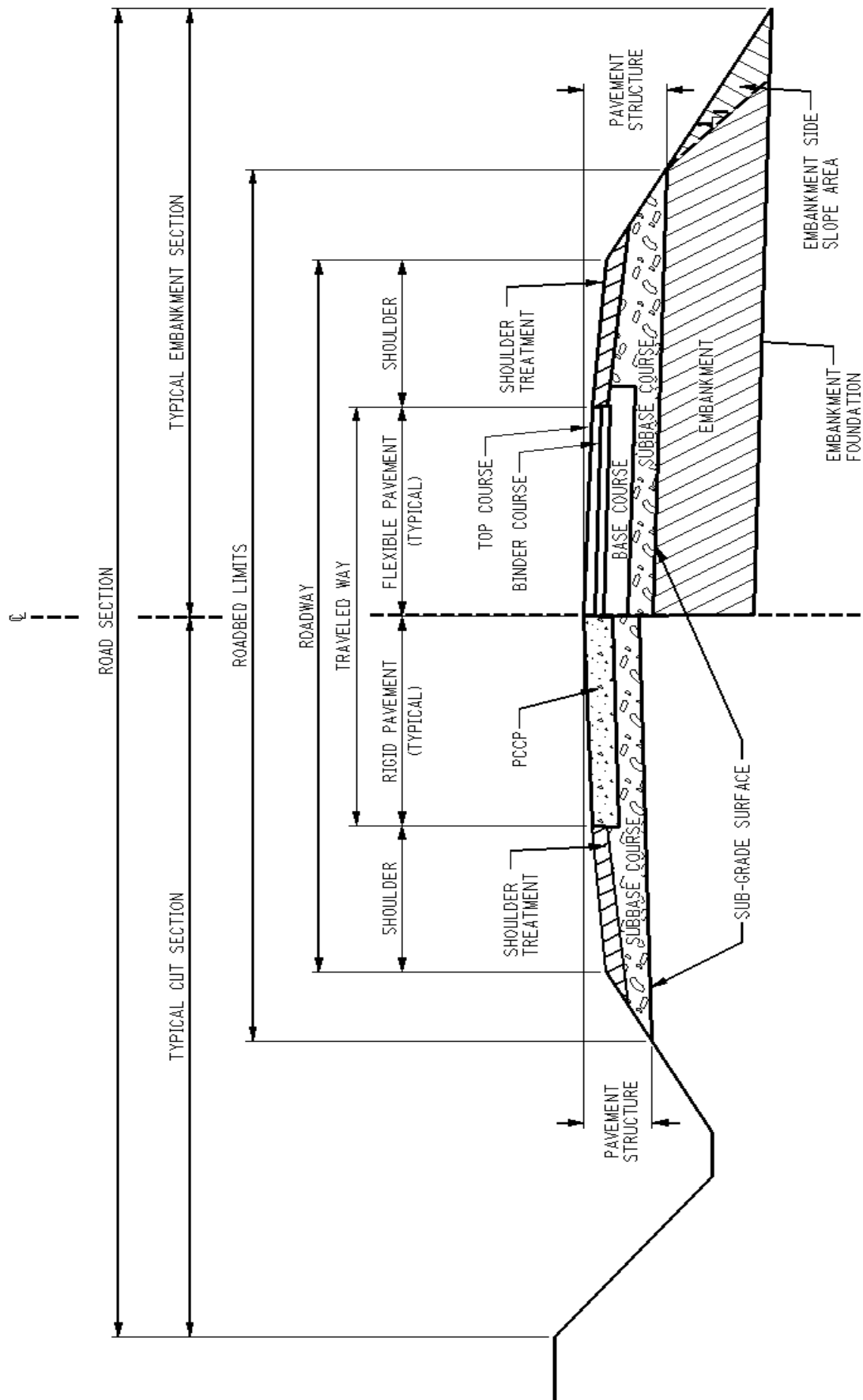
SECTION 101 - ABBREVIATIONS AND DEFINITIONS OF TERMS

Wherever in these specifications or in other contract documents the following terms or pronouns in place of them are used, the intent and meaning shall be interpreted as follows:

101-01 ABBREVIATIONS OF TERMS. Wherever the following abbreviations are used in these specifications or on the plans, they are to be construed the same as the respective expressions represented. Some of these abbreviations may be acronyms and some may appear with periods.

AASHTO	- American Association of State Highway and Transportation Officials
AISI	- American Iron and Steel Institute
ANSI	- American National Standards Institute, Inc
AREA	- American Railway Engineering and Maintenance-of-Way Association
ASME	- American Society of Mechanical Engineers
ASTM	- American Society for Testing and Materials
AWPA	- American Wood-Preservers Association
AWWA	- American Water Works Association
CADD	- Computer Aided Design and Drafting
CPM	- Critical Path Method
CFR	- Code of Federal Regulations
CRU	- Contract Review Unit
DCEC	- Deputy Chief Engineer for Construction
DCED	- Deputy Chief Engineer for Design
DCES	- Deputy Chief Engineer for Structures Design and Construction
DCETS	- Deputy Chief Engineer for Technical Services
EPA	- U.S. Environmental Protection Agency
FHWA	- Federal Highway Administration
HMA	- Hot Mix Asphalt
MASH	- Manual for Assessing Safety Hardware
MM	- Materials Method
MP	- Materials Procedure
MSDS	- Material Safety Data Sheet
MURK	- Manual for Uniform Record Keeping
MUTCD	- Manual of Uniform Traffic Control Devices
NEC	- National Electric Code
NEMA	- National Electrical Manufacturers Association
NYCRR	- Official Compilation of Codes, Rules and Regulations of the State of New York
NYSDEC	- New York State Department of Conservation
NYSDOL	- New York State Department of Labor
NYSTA	- New York State Thruway Authority and/or the New York State Canal Corporation
OSHA	- Occupational Safety and Health Administration, US Department of Labor
PCCM	- New York State Prestressed Concrete Construction Manual
PCC	- Portland Cement Concrete
PCCP	- Painting Contractor Certification Program
RME	- Regional Materials Engineer
SCM	- New York State Steel Construction Manual
SSPC	- Steel Structures Painting Council
USCG	- United States Coast Guard
UL	- Underwriters' Laboratories
USACE	- U.S. Army Corps of Engineers
USC	- United States Code
VECP	- Value Engineering Change Proposal
WMA	- Warm Mix Asphalt

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7



REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

101-02 DEFINITIONS OF TERMS. Wherever the following terms are used in these specifications or on the plans, they are to be construed the same as the respective definitions represented.

A+B Bidding. A+B Bidding is an time-related form of bidding used by the Department for contracts that are time sensitive, either in overall contract duration, or the duration of a task or tasks. The total contract bid price consists of the amount bid that will be paid for the work (the “A portion”), plus the number of days for completion of the specified work multiplied by the user cost specified in the contract documents, (the “B portion”).

Addenda. Separate publication(s) containing supplemental additions, deletions, and modifications to the provisions of the Standard Specifications which are in effect on the date of advertisement for receipt of bids.

Advertisement. The public announcement, as required by law, inviting bids for work to be performed or materials to be furnished.

Amendment. A formal alteration by addition, deletion or modification of a proposed contract, issued prior to the opening of bids.

Approved List. List of materials, equipment, Manufacturers, Fabricators or Material Suppliers approved by the Materials Bureau under a particular specification. The Approved Lists are published periodically and are available from the Materials Bureau or on the Department web site.

Award. The decision of the Department to accept the proposal of the lowest responsible bidder for the work, subject to the execution and approval of a satisfactory contract therefore and bond to secure the performance thereof and to such other conditions as may be specified or otherwise required by law.

Base Line Data. The relevant contract specific information and engineering data used to develop the contract plans and proposal. The relevant information and data will be listed as available on Form CONR-9 *Supplemental Information Available to Bidders* included in the contract proposal.

Bid Deposit. The security furnished by the bidder with their proposal for a contract, as guarantee the bidder will enter into a contract for the work if their proposal is accepted.

Bidder. An individual, firm or corporation formally submitting a proposal for the work contemplated acting directly or through a duly authorized representative.

Bridge. The term “bridge” shall apply to any structure whether single or multiple span construction with a clear span in excess of 20 feet when measurement is made horizontally along the center line of roadway from face to face of abutments or sidewalls immediately below the copings or fillets; or, if there are no copings or fillets, at 6 inches below the bridge seats or immediately under the top slab, in the case of frame structures. In the case of arches, the span shall be measured from spring line to spring line. All measurements shall include the widths of intervening piers or division walls, as well as the width of copings or fillets.

Calendar Day. Every day shown on the calendar. The calendar day begins at 12:00AM (Midnight).

CFR. Code of Federal Regulations published by the U.S. Office of the Federal Register, written TT CFR PPP.SS. TT refers to the Title, PPP refers to the Part and SS refers to the section. For example: 29 CFR 1926.1 refers to Title 29, Code of Federal Regulations, Part 1926, Section 1. Code of Federal Regulations are available on the internet at <http://www.gpoaccess.gov/cfr/index.html>

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Change Order. Written order issued by the Department covering contingencies, extra work, deductions, increases or decreases and additions, alterations or omissions to the plans or specifications. A Change Order is referred to as an Order on Contract in State Highway Law.

Chief Engineer. The Chief Engineer of the New York State Department of Transportation.

Closed Drainage System. A collection system of enclosed channels for stormwater runoff which carries water to a discharge point. Typically has drainage structures for inlet(s) and may include intermediate drainage structures at junction points.

Commissioner. The Commissioner of the New York State Department of Transportation.

Comptroller. The head of the New York State Office of the State Comptroller.

Contemporaneous Period Analysis Method. A technique for evaluating schedule delays or time savings. The analysis period for the purpose of these provisions shall be the period covered in each regular progress schedule submission, as they coincide with contract payments to the Contractor.

Contract. A binding agreement between the Department and a contractor to complete a specified scope of work. The contract includes, but is not limited to an executed contract agreement, a set of contract documents and contract bonds.

Contract Agreement. The agreement covering the performance of the work and furnishing of labor and materials in the construction of the work in conformance with the requirements of the contract documents. A sample of the standard agreement is shown in §103-06 *Sample Form of Contract Agreement*.

Contract Bond. The approved form of security, executed by the Contractor and its Surety or Sureties, guaranteeing complete execution of the contract and all supplemental agreements pertaining thereto and the payment of all legal debts pertaining to the construction of the contract.

Contract Documents. The contract documents shall include the advertisement for proposals; the contract proposal, including Special Notes and Special Specifications contained therein; the Contractor's proposal; the Disadvantaged/Minority/Women's Business Enterprise (D/M/WBE) participation goals; the equal employment opportunity (EEO) participation goals; the contract agreement; the Base Line Data; Standard Specifications, including all addenda thereto identified in the contract proposal; the Standard Sheets; the plans; any amendments to the contract proposal or the contract plans issued prior to the date of receipt of proposals; and all provisions required by law to be inserted in the contract whether actually inserted or not.

Whenever separate publications other than Standard Sheets are referenced in the Contract Documents it shall mean those, as amended, which are current on the date of advertisement for bids.

Contract Limits. The limits shown in the contract documents, in which all work occurs, including advanced signing and detours covered under an individual contract. The Contractor shall be responsible for the highway within the contract limits. For contracts with multiple sites, this may be defined as a single larger limit if the sites are in close proximity, or as multiple sets of contract limits if the sites are widely separated. On-site contract work cannot be conducted outside the contract limits. If the contract limits are not specified in the contract documents, the contract limits shall be the limits within which all work is performed, including advanced signing and detours included in the contract documents.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Contract Pay Item. A specifically described unit of work for which a price is provided in the contract.

The basic format of a standard specification contract pay item number is a three digit root number, a decimal point, and then either a two, four, or six digit extension number (XXX.XX, XXX.XXXX, or XXX.XXXXXX). The three digit root number denotes the standard specifications section to which the contract pay item relates (i.e. 564 – Structural Steel).

The format of a special specification contract pay item is the same as the standard specification contract pay item number, but a two digit origin code number (that was previously shown as a prefix) is added as a suffix. The special specifications will be contained in the contract proposal. The origin code number (RR) denotes the NYSDOT Region, Office, or Group that originated the special specification. Regardless of the length of the extension number, the suffix is always in the seventh and eighth decimal place after decimal point. For special specification contract pay item numbers with only a two or four digit extension number, blank spaces, hyphens or lowercase “b”s are used to bridge the space between the end of the extension number and the origin code number (XXX.XX---RR or XXX.XXXX--RR or XXX.XXXXXXRR or XXX.XXbbbbRR or XXX.XXXXbbRR or XXX.XX RR or XXX.XXXX RR).

Contract Payments. Payments to the Contractor for work satisfactorily performed, in accordance with §109-06 *Contract Payments*.

Contractor. The individual, firm, or corporation undertaking the execution of the work under the terms of the contract and acting directly or through his, her, their, or its agents or employees.

Contractor Work Day. A calendar day scheduled for active prosecution of the work.

Critical Path. In the Progress Schedule the critical activities shall be those activities being on the longest path. In a project network diagram, the series of activities which determines the earliest completion of the project.

Critical Path Method (CPM). A network analysis technique used to predict project duration by analyzing which sequence of activities (which path) has the least amount of scheduling flexibility (the least amount of float). A scheduling technique utilizing activities, durations, and interrelationships/dependencies (logic), such that all activities are interrelated with logic ties from the beginning of the project to the completion of the project. Early dates are calculated by means of a forward pass using a specified start date. Late dates are calculated by means of a backward pass starting from a specified completion date (usually the early finish date calculated by the forward pass).

Culvert. An enclosed channel open at both ends carrying water from a stream or water course through an artificial barrier such as a roadway embankment. The term “culvert” shall apply to any structure whether of single or multiple span construction with an interior width of 20 feet or less when measurement is made horizontally along the center line of roadway from face to face of abutments or sidewalls immediately below the copings or fillets, or, if there are no copings or fillets, at points 6 inches below the bridge seats or immediately under the top slab in the case of frame structures.

In the case of arches, the span shall be measured from spring line to spring line. All measurements shall include the widths of intervening piers or division walls, as well as the widths of copings or fillets.

Day. A calendar day unless otherwise defined or modified.

Department. The New York State Department of Transportation, including staff and managers who have been delegated certain contractual and technical authority by the Commissioner. The Department maintains a web site at www.dot.state.ny.us.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Departmental Geotechnical Engineer. The Regional Geotechnical Engineer or his/her authorized representative, or a Geotechnical Engineer of the Geotechnical Engineering Bureau acting at the request of the Regional Geotechnical Engineer.

Departmental Engineering Geologist. An Engineering Geologist of the Geotechnical Engineering Bureau authorized by the Director of Geotechnical Engineering Bureau to perform the duties required under these specifications.

Drainage Structure. A structure that collects and/or redirects stormwater runoff, including catchbasins, manholes, leaching basins and similar structures, but not structures for sanitary sewers.

Employee. Any person working on the project mentioned in the contract documents, and who is under the direction or control, or receives compensation from the Contractor or Subcontractor.

Engineer OR Engineer-In-Charge. The Engineer representing the Department of Transportation having direct supervision of the execution of the contract under the direction of the Regional Director.

Equipment. All machinery and equipment, together with the necessary supplies for upkeep and maintenance, and also tools and apparatus necessary for the proper construction and acceptable completion of the work.

Erosion and Sediment Control. Erosion and sediment control is any action taken or item used as part of a contract or as a separate action to minimize the destructive effects of wind and water on surface soil. The use and placement of berms and dams, rolled erosion control products, grasses, sod, mulches, slope drains, sediment basins and drainage systems may be temporary and used throughout construction, or permanent and installed for the anticipated life of the facility.

Extra Work. Work not provided for in the contract as awarded but found essential to the satisfactory completion of the contract within its intended scope.

Fabricator. A Fabricator assembles, constructs or otherwise substantially alters materials or supplies into assemblies, components or finished items for inclusion into the work prior to resale.

Federal-Aid. Joint cooperative construction or reconstruction of State highways and bridges or grade crossing elimination work with monies contributed to the State by the Federal Government under Title 23, United States Code, Highways, and amendments thereto.

Federal-Aid Project. An identification applied to federally aided work for the purpose of the records of the FHWA. Federal-Aid contracts are denoted "F.A. Project" on the proposal cover and on the title page.

Field Change Payment (FCP). A contract contingency that allows for the timely payment of authorized extra work that is necessary to fulfill the intent of the plans and specifications without the preparation of a change order during construction. An FCP change order is processed only to the Regional Construction Engineer level for approval, and payments are made under the contract pay item for the quantity completed at the appropriate unit price.

Final Agreement. Agreement between the New York State Department of Transportation and the Contractor, stating the net increase or decrease of the cost of work completed from the total cost of work originally authorized under the contract. All contract payments will be made prior to the issuance of the Final Agreement.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Geotechnical Engineering Bureau. The Department's Geotechnical Engineering Bureau has the responsibility for providing all Geotechnical Engineering Services including laboratory testing of earthwork materials.

Highway. The whole strip of land bounded by the right of way lines.

Incentive/Disincentive (I/D). Predetermined adjustment to the total contract amount for each day or portion thereof that the work is completed ahead of or behind a specific milestone, phase or contract completion date.

Inspector. The Department of Transportation representative assigned to inspect methods and materials relating to work both on and off the site of the contract.

Land Surveyor. A Land Surveyor licensed or otherwise authorized to practice surveying under Article 145 and registered or otherwise authorized under Article 130 of the New York State Education Law.

Landscape Development. Landscape development is any development or item used as part of a project or as a separate action through the use, placement and management of land and elements for aesthetic enhancement, such as decorative surfaces and wall faces, benches, waste receptacles, tables, etc., and plant materials consistent with a specific landscape architectural design plan.

Landscaping. Landscaping is the use and placement of plant materials (trees, shrubs, vines and certain ground covers) consistent with a landscape architectural design plan. Planting vegetation for screening and erosion control purposes does not constitute landscaping.

Lane Rental. An amount identified as the value of a lane or lanes to be occupied by the Contractor in performance of the contract. The total amount bid for lane rental is the total value that can be used by the Contractor in performance of the contract. If additional value is used by the Contractor, that amount will be deducted from the payments to be made to the Contractor.

Laying Length of Pipe. Feet (laying length) of pipe shall be measured by multiplying the number of whole units by the nominal length of each unit and adding thereto the length of any fractional units incorporated in the work. The nominal length of a unit or fractional unit shall be the inside measured length from butt end to butt end and exclusive of the bell or groove on the female end.

Major Item. Any contract pay item for which the original unit bid price multiplied by the original item quantity exceeds the following minimum major item value based on total contract bid price.

Total Contract Bid Price	Major Item Value
≤ \$1,333,333	\$20,000
> \$1,333,333 - \$66,500,000	1.5% of the total contract bid price
> \$66,500,000	\$1,000,000

NOTE: The total contract bid price shall not include the value of any Field Change Payment item. For contracts subject to A+B Bidding, the total contract bid price will include only the "A" portion of the bid. For contracts containing Incentive/Disincentive provisions, Lane Rental provisions, or any similar provisions, the total contract bid price will exclude any incentive/disincentive, lane rental, or similar items.

Manual for Uniform Record Keeping on Construction Contracts (MURK). Manual(s) containing uniform contract record keeping forms and procedures to be followed by the Engineer, current on the date of contract award. MURK Part 1A is the Contract Administration Manual (CAM), Part 1B is the Construction Inspection Manual (CIM), Part 1C is the Safety and Health Program Manual, and

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Part 2A is the Materials Inspection Manual (MIM). The MURK manuals are guidance documents, and are not a part of the contract documents.

Manual of Uniform Traffic Control Devices (MUTCD). *National Uniform Traffic Control Devices and Appendixes.* The Manual of Traffic Control Devices prescribes standards for the design, location, use and operation of traffic control devices.

Manufacturer. A Manufacturer operates or maintains a factory or establishment that produces, on the premises, materials or supplies of the general character described by the specifications.

Material. Any approved material acceptable to the Commissioner and conforming to the requirements of the specifications.

Material Supplier. A Material Supplier, also known as a regular dealer, is 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 to the public in the usual course of business. A Material Supplier is a firm that engages in, as its principal business, and in its own name, the purchase and sale of the products in question. A Material Supplier who deals in bulk items such as steel, cement, gravel, stone and petroleum products need not keep such products in stock, if it owns or operates distribution equipment. Packagers, brokers, manufacturer's representatives or other persons who arrange or expedite transactions are not Material Suppliers.

Materials Bureau. The Department's Materials Bureau has a responsibility in the quality assurance program for materials to be used on the contract and maintains a testing facility in Albany, New York.

Materials Details. That information, unique to a particular product, that is necessary to adequately identify it or to describe the proper handling, installation, or use of that product.

Minor Item. Any contract pay item that does not meet the definition of a Major Item.

NCHRP 350. National Cooperative Highway Research Program Report 350 *Recommended Procedures for the Safety Performance Evaluation of Highway Features*. NCHRP 350 presents procedures for the evaluation of roadside safety features and appurtenances, by vehicle crash testing or in-service evaluation.

Near. When used in reference to an underground facility, within 15 feet of the outside perimeter or diameter of an underground facility or its encasement.

NYCRR. Official Compilation of Codes, Rules and Regulations of the State of New York, written TT NYCRR PPP. TT refers to the Title, and PPP refers to the Part of the official compilation.

Office. Any of the Offices within the Engineering Division of the New York State Department of Transportation. Current Offices are Construction, Design, Environment, Right of Way, Structures and Technical Services.

One-Call Notification System. Organization(s) whose purpose is to establish and carry out procedures to protect underground facilities from damage due to excavation and demolition, including receiving notices of intent to perform excavation and/or demolition and transmit the notices to the operators of underground facilities in the specified area.

Order on Contract. Written order issued by the Commissioner covering contingencies, extra work, deductions, increases or decreases and additions, alterations or omissions to the plans or specifications. An order-on-contract is referred to as a change order in these specifications.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Owner/Operator. A single individual who owns and operates a vehicle or other piece of equipment as an independent contractor and does not have any employees. An individual who rents or leases a vehicle or other piece of equipment without a property interest is not an Owner/Operator. The Owner/Operator is responsible for all costs incurred in the ownership and operation of the vehicle/equipment including, but not limited to: licensing/registration, insurance, taxes, permits, repairs and fuel. Payments to the Owner/Operator are for both the vehicle/equipment and an operator, and may be made on a time, distance, load or other basis.

Partial Payments. Payments made to the Contractor in accordance with §109-04 *Partial Payments*, upon application, for materials provided prior to installation of such material in the permanent work.

Payment Limit. A payment limit defines the boundary beyond which no quantities will be measured for payment. Whenever payment limits are indicated, only the work which is actually directed and completed within these limits will be measured for payment.

Payment Line. Defines the line from which the work quantity will be measured. Whenever payment lines are indicated, quantities representing work completed will be measured from these lines only. No other lines or locations will be used to measure quantities.

Plans. The official contract drawings and applicable standard sheets, which show the location, character, dimensions and details of the work to be performed.

Prestressed Concrete Construction Manual (PCCM). The Prestressed Concrete Construction Manual published by the Office of Structures. The Prestressed Concrete Construction Manual is a mandatory supplement to the contract documents for contracts which include Prestressed Concrete Units (Structural).

Professional Engineer. A Professional Engineer licensed or otherwise authorized to practice engineering under Article 145 and registered or otherwise authorized under Article 130 of the New York State Education Law.

Professional Service. A Professional Service is specialized technical work provided to the Contractor for a fee or other basis not generally accounted for through labor, materials and equipment billing. Professional Services primarily provide technical expertise and produce deliverables such as reports, test results, evaluations, recommendations, data or information. Professional Services include, but are not limited to, professional engineering, professional surveying, environmental services, CPM scheduling, and laboratory testing.

Project. The construction work to be performed under one or more construction contracts to complete an undertaking.

Project Limits. The limits in which the improvements associated with a specific project have been designed.

Proposal. The offer of the bidder for the work, when executed and submitted on the prescribed form.

Proposal Form. The approved form on which the Department requires formal bids to be prepared and submitted for the work.

Reasonable Close Conformity. Reasonable close conformity means compliance with reasonable and customary manufacturing and construction tolerances where working tolerances are not specified. Where working tolerances are specified, reasonable close conformity means compliance with such tolerances.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Without detracting from the complete and absolute discretion of the Engineer to insist upon such tolerances, the Engineer may accept variations beyond such tolerances as reasonable close conformity where they will not materially affect the value or utility of the work and the interests of the State.

Region. One of eleven geographical subdivisions of the State used to designate or identify the location of the proposed work.

Regional Director. The Director, acting through the Commissioner, who is delegated the authority and responsibility to execute the total Department prescribed work plans for his/her respective region.

Right of way or R.O.W. A general term denoting land, property or interest therein, usually in a strip, acquired for or devoted to a highway.

Roadbed. The graded portions of a highway within top and side slopes, prepared as a foundation for the pavement structure and shoulders.

Roadside. A general term including: the area between the outside edge of shoulder and the right of way boundary; the median area between inside shoulders of divided highways; and areas within interchanges.

Roadway. The portion of a highway included between the outside edges of the shoulders.

Road Section. That portion of a highway included between the top of the slope in cut and the bottom of slope in fill.

Samples. Physical examples of materials, equipment or workmanship submitted to the Engineer by the Contractor, or taken by the Engineer, in order to establish a standard which the Contractor is required to meet.

Shop Drawings. Drawings, diagrams, illustrations, test data, performance charts, catalog cuts, brochures and other data prepared by the Contractor, Subcontractor, Manufacturer, Fabricator or Material Supplier for submission to the Department as an illustration of a portion of the work.

Shoulder. The portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of base and surface courses.

Site. The specific area adjacent to and including the area upon which construction work is to be performed. Generally such area may be considered as defined by the right of way or property made available to the Contractor for construction operations.

Special Notes. Special directions, provisions, or requirements peculiar to the contract under consideration.

Specifications. The body of directions, requirements, etc., contained in this present volume, together with all special specifications and documents of any description and agreements made (or to be made), pertaining to the methods (or manner) of performing the work or to the quantities and quality as shown by the test records of accepted materials to be furnished under a contract.

Within these specifications there are two formats for numbering. One is used for the specification sections and subsections portion and the other for contract pay items. (See definition - Contract Pay Item.)

A specification section is written using the word Section xxx *Section Title* (e.g., Section 564 *Structural Steel*) and subsections are written with a subsection symbol, the core section number, a dash, another and may include a decimal (e.g., §107-05 *Safety and Health Requirements* or §608-3.03E.2.).

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Standard Sheets. The standard drawings, issued by the Department, approved for repetitive use, showing details to be used where appropriate. Applicable standard sheets are referenced on the Contract Plan Title Sheet, and comprise a part of the Contract Documents. Standard sheets are available on the NYSDOT web site in both Adobe Acrobat (pdf) and Bentley Systems MicroStation (dgn) formats. The effective date for Standard Sheets will be the letting date for which the project was advertised.

State. When used, means the State of New York, represented by the Department of Transportation through the Commissioner of Transportation.

Steel Construction Manual (SCM). The Steel Construction Manual published by the Office of Structures. The Steel Construction Manual is a mandatory supplement to the contract documents for contracts which include contract pay items which require the Contractor to furnish or rehabilitate structural metals.

Structures. Bridges, culverts, retaining walls, cribbing, manholes, drainage structures, endwalls, buildings, sewers, service pipes, underdrains, foundation drains and other features which may be encountered in the work and not otherwise classed herein.

Subcontractor. Any individual, firm or corporation to whom the Contractor, with the written consent of the Department, sublets any part of the contract.

Superintendent. The Contractor's authorized English speaking representative responsible for and in charge of the Work. The Superintendent shall be authorized to receive all communications from the Engineer.

Surety. The corporate body bound with and for the Contractor, guaranteeing the full and complete performance of the contract, and for the payment of all debts pertaining to the work.

Test. Methods adopted by the Commissioner to ascertain the quality, character and acceptability of materials and processes utilized in performing the contract.

Tolerance Zone. When used in reference to an underground utility, the tolerance zone shall be a distance of 2 feet on either side of the designated centerline, plus one-half of the utility diameter, if the utility diameter is known.

Traveled Way. Portion of the roadway for the movement of vehicles, exclusive of the shoulders. Through traveled way is the portion of the roadway for the movement of vehicles, exclusive of shoulders and auxiliary lanes.

Utility. Person, corporation, municipality or public authority engaged in the distribution of electricity, gases, petroleum products, water, steam, the collection of wastewater, the operation of traffic control systems, or the provision of telecommunication service. For the purposes of these Specifications, the term Utility will apply to organizations that operate utilities owned by others.

Work. Work shall be understood to mean the furnishing of all labor, materials, equipment, and other incidentals necessary or convenient to the successful completion of the contract and the carrying out of all the duties and obligations imposed by the contract.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Work Day. A calendar day on which State offices are open to the public for business. State recognized public holidays are not work days.

New York State Public Holidays	
New Years Day	January 1
Martin Luther King Day	3rd Monday in January
President's Day	3rd Monday in February
Memorial Day	Last Monday in May
Independence Day	July 4
Labor Day	1st Monday in September
Columbus Day	2nd Monday in October
Veteran's Day	November 11
Thanksgiving Day	4th Thursday in November
Christmas Day	December 25

Work Service. A Work Service is specialized work consisting of less than an entire contract pay item, provided to the Contractor for a fee or other basis not generally accounted for through labor, materials and equipment billing. A Work Service is limited to an aggregate of 10 work days per calendar year on site. The use of a Work Service firm for more than 10 work days per calendar year may require Subcontractor and other approvals, as may be appropriate, submittal of certified payrolls, and submittal of civil rights data starting after 10 work days. A Work Service may include, but are not limited to: concrete pumping, welding, fuel supply delivery, vehicle towing called out for the public, and crane lifting operations.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS

102-01 LOCATION OF REGIONAL OFFICES. The Regional Offices and counties covered are located as follows:

Region Number	Including Counties:			Regional Office Address
1	Albany Rensselaer Warren	Essex Saratoga Washington	Greene Schenectady	50 Wolf Road Albany, N.Y. 12232 (518) 457-3522
2	Fulton Madison	Hamilton Montgomery	Herkimer Oneida	207 Genesee Street Utica, N.Y. 13501 (315) 793-2447
3	Cayuga Oswego	Cortland Seneca	Onondaga Tompkins	333 E. Washington St. Syracuse, N.Y. 13202 (315) 428-4351
4	Genesee Ontario Wayne	Livingston Orleans	Monroe Wyoming	1530 Jefferson Road Rochester, N.Y. 14623 (585) 272-3310
5	Cattaraugus Niagara	Chautauqua	Erie	100 Seneca Street Buffalo, N.Y. 14203 (716) 847-3238
6	Allegany Steuben	Chemung Yates	Schuyler	107 Broadway Street Hornell, N.Y. 14843 (607) 324-8404
7	Clinton Lewis	Franklin St. Lawrence	Jefferson	317 Washington Street Watertown, N.Y. 13601 (315) 785-2333
8	Columbia Putnam Westchester	Dutchess Rockland	Orange Ulster	4 Burnett Boulevard Poughkeepsie, N.Y. 12603 (845) 431-5750
9	Broome Otsego Tioga	Chenango Schoharie	Delaware Sullivan	4 Hawley Street Binghamton, N.Y. 13901 (607) 721-8116
10	Nassau	Suffolk		250 Veterans Memorial Highway Hauppauge, N.Y. 11788 (631) 952-6632
11	Bronx Richmond	Kings Queens	New York	1 Hunters Point Plaza 47-40 21st Street Long Island City, N.Y. 11101 (718) 482-4526

102-02 EXAMINING THE CONTRACT DOCUMENTS AND THE WORK SITE. Information on construction contracting opportunities, including letting schedules, contract documents, detailed plans of the work, contract proposals, supplemental information available to bidders, amendments, and other information are available on the Construction Opportunities > Contract Documents page of the Department's Business Center web site at: www.dot.ny.gov/business for free download. Standard sheets are available on the Engineering > CADD Info > Drawings page of the Department's Business Center web site at: www.dot.ny.gov/business for free download.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

The attention of persons intending to make proposals is specifically called to Article 3 *Examination of Documents and Site* of the contract agreement wherein the bidder agrees that it has examined the contract documents and the site of the work and has fully informed itself from personal examination of the same regarding the quantities, character, location and other conditions affecting the work to be performed including the existence of poles, wires, pipes, ducts, conduits, and other facilities and structures of municipal and other public service corporations on, over or under the site. Particular attention is called to contract plans and the contract proposal, which contains special notes and special specifications, which may contain contract requirements at variance with standard specifications and standard sheets and may include information concerning the existence of poles, wires, pipes, ducts, conduits, and other facilities and structures of municipal and other Utilities on, over or under the site.

All inquiries prior to the receipt of bids regarding any discrepancy, error, or omission; or regarding the intent or meaning of the contract documents; shall be directed only through the website at: www.dot.ny.gov/business. Responses will be provided to Bidders through the website.

The Bidder agrees that its proposed contract prices include all costs arising solely from existing conditions shown, or specified in the contract documents including the Base Line Data, and/or readily observable from a site inspection during the bidding period available under this contract, and/or generally recognized as inherent in the nature of the work. The Bidder shall take no advantage of any apparent error or omission in the contract documents.

A. Base Line Data. The Department will make available relevant project specific information and engineering data that were used to develop the contract documents. The material will be listed as available on a form in the contract proposal entitled "Supplemental Information Available to Bidders". The supplemental information could include, for example, earthwork cross section sheets, various subsurface information, record plans, special reports and other pertinent project data. The information or data listed as available on the form can be accessed by the Contractor for inspection or reproduction at the Regional Office where the work is located. This material will be the Base Line Data and together with other contract documents will be used to determine changes to the work. Base Line Data will be consistently provided in all Department projects.

B. Contract Document Components. The following components of the contract documents complement one another in the declining order of precedence listed below. The intent of the contract documents is to include all items/aspects of the work that are necessary for the proper initiation, execution, and completion of the work.

1. Plans.
2. Proposal - Special Notes.
3. Proposal - Special Specifications.
4. Standard Specifications.
5. Standard Sheets.
6. Base Line Data.

C. Subsurface Information. Boring logs and other subsurface information made available for the inspection of bidders were obtained with reasonable care and recorded in good faith by the Department. The subsurface information shown was obtained for State design and estimate purposes. It is made available to bidders so that they may have access to the same information available to the State. It is presented in good faith, but as with all subsurface information it represents only a small fraction of the total volume of material at the site.

The soil and rock descriptions shown are as determined by a visual inspection of the samples from the various explorations unless otherwise noted. The observed water levels and/or water conditions indicated thereon are as recorded at the time of the exploration. These levels and/or conditions may vary considerably, with time, according to the prevailing climate, rainfall and other factors. Interpolation between data points may not be indicative of the actual material to be encountered.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

The locations of utilities or other underground man-made features were ascertained with reasonable care and recorded in good faith from various sources, including the records of municipal and other public service corporations, and therefore the location of known utilities may only be approximate. Subsurface utility quality level designations shown in the contract documents are defined in accordance with §107-07E. *Quality Level Designations*.

102-03 COOPERATION BETWEEN CONTRACTORS. The Department reserves the right to let other contracts in connection with this work. The Contractor acknowledges that, from the contract documents and Base Line Data, it has been informed of such other contracts in the work area. The Contractor has carefully reviewed the contract documents and all other pertinent information made available by the Department that relate to the nature and scheduling of these other contracts that may be awarded and will submit a progress schedule that takes into account the need to coordinate its work with those other contractors. The Contractor shall coordinate its work with the work of these other contractors. There may be other contractors, subcontractors, utilities, or employees of the Department and its authorized representatives working at or adjacent to the work site during the performance of the contract by the Contractor. The Contractor may not have exclusive access to or occupancy of the territory within or adjacent to the limits of the contract. To the extent indicated in the Base Line Data and contract documents, the Department may also require that certain facilities and areas be used concurrently by the Contractor and others. Consistent with that indicated in the Base Line Data and contract documents, the Department will advise the Contractor of the schedules of others. The Contractor should anticipate that its work may be interrupted or delayed from time to time due to the concurrent activities of others.

The Contractor shall cooperate with other Contractors and Utilities and coordinate and arrange the sequence of its work to conform with the work operations of other parties indicated in the Base Line Data. Cooperation and adjustments with the Contractors already engaged and to be engaged upon the site is essential to properly coordinate the construction efforts of all contractors, Utilities, and Subcontractors engaged in the work within and adjacent to the construction area of this contract.

In the event that utility facility adjustments are to be made by a Utility's forces in connection with and during the life of the contract, the Contractor will be required to cooperate with the Utilities and to coordinate and arrange the sequence of its work to conform with the progressive operations of the Utility's work or proposed work.

102-04 PROPOSAL CONTENT. Each proposal shall specify the correct gross sum, in the manner hereafter described for which the work will be performed according to the plans and specifications and any amendment to the specifications if the same are issued prior to the date of receipt of the proposal, together with a unit price for each of the specified separate items. The Bidder's attention is directed to the fact that it cannot exceed three (3) decimal positions in the cents column under unit bid price.

A. Fixed Price Items. Some of the contract pay items may be designated as Fixed Price Items, for which the unit prices are fixed, and published in the proposal. These contract pay items can be identified in the Itemized Proposal by the words, "Fixed Price: See Specification and §102-04" appearing beneath the description of the item, and preprinted entries in the "Unit Price" and "Bid Amount" columns. The bidder shall not change these entries. Should the amount shown be altered, the altered figures will be disregarded and the preprinted price and amount will be used to determine the total amount bid for the contract.

Fixed Price Items generally indicate the price that will be paid for certain work. These have been prepared taking into account the cost of all labor, materials, and equipment necessary to complete the work including an allowance for overhead and profit. Actual payments made under Fixed Price Items will be in accordance with the provisions of the specification for that item.

B. Dollars-Cents Items. Some of the contract pay items may be designated as Dollars-Cents Items, for which the unit prices are fixed at \$1.00. These contract pay items have preprinted entries in the "Est of Quantities", "Unit Price" and "Bid Amount" columns. The bidder shall not change these

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

entries. Should the amount shown be altered, the altered figures will be disregarded and the preprinted price and amount will be used to determine the total amount bid for the contract.

Dollars-Cents Items generally indicate an estimate of payments, with actual payments to be based on actual costs. Actual payments made under Dollars-Cents Items will be based on the provisions of the specification for that item.

C. Minimum/Maximum Bid Items. Some of the contract pay items may be designated as Minimum Price Items or Maximum Price Items. These contract pay items can be identified in the Itemized Proposal by the words "Minimum Bid____" or "Maximum Bid____" appearing beneath the description of the item. The price bid for Minimum Price Items shall not be less than the minimum price published in the Itemized Proposal, but it may exceed that price. The price bid for Maximum Price Items shall be less than, or equal to, the maximum price published in the Itemized Proposal. If a bid is less than the Minimum Price, or more than the Maximum Price, published in the Itemized Proposal, the Department will substitute the appropriate minimum (or maximum) price and make the necessary adjustments to determine the total amount bid.

D. A+B Bidding. Some contracts may use A+B bidding. The contract proposal specifies the maximum number of consecutive calendar days for each stage or phase of work subject to A+B Bidding, referred to as B-portion work, in the Special Note entitled *Description of B-Portion Work*. The Bidder shall enter the number of consecutive calendar days bid for each phase or stage of work subject to A+B bidding individually in the space provided in the Itemized Proposal. If a Bid shows time for completion of B-portion work in excess of the maximum number of consecutive calendar days allowed, the Department will substitute the maximum time allowed and make the necessary adjustments to determine the total amount bid.

E. Percentage Bid Items. Some of the contract pay items may be designated as Percentage Items. These contract pay items will contain a number in the "Est of Quantities" column of the Itemized Proposal. This number represents the number of dollars correlating to a percentage bid of 100%. The "Bid Amount" will be determined by the product of the percentage bid under the "Unit Price", expressed as a decimal, multiplied by the quantity of dollars shown in the "Estimate of Quantities" column.

The Bidder shall enter a percentage bid in decimal form under the "Unit Price." For example, a bid of 10.5 percent would be entered under the "Unit Price" as 0.105. A bid of one hundred percent would be entered as 1.000. Percentage bid items may be bid only as whole percentages and tenths of percentages.

If a bid is expressed to hundredths of a percent (e.g., 10.65%), the Department will disregard the hundredths portion (i.e., the 0.05) and make the necessary adjustments to determine the total amount bid based on the expressed whole plus tenths percentage (e.g. 10.6% or 0.106).

102-05 PROPOSAL SUBMISSION. The deadline for submitting a proposal is found in the published notice calling for proposals. Any proposal received after the time specified in the published notice, as modified by any Amendment, will not be accepted. Any proposal which does not contain prices opposite each of the items for which there is a quantity exhibited in the itemized proposal, or which shall in any manner fail to conform to the conditions of the published notice inviting proposals, may be deemed informal. All blank spaces in the proposal form shall be filled in as noted, and no change shall be made in the wording of the proposal or in the items mentioned therein. If the proposal is made by an individual, the individual's address shall be given. If the proposal is made by a corporation, the names and addresses of the president, secretary and treasurer shall be given. If the proposal is made by a partnership, the names and addresses of the partners shall be given.

Amendments will be provided via electronic means on the Department website. Persons or firms that obtain contract documents from sources other than the Department bear the sole responsibility for obtaining any Amendments issued by the Department.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Hard copy proposals submitted by the Bidder shall be prepared on the proposal form prepared by the Department for that individual contract, including all updates issued via amendment. Bidders shall use dark permanent ink in completing hard copies of the proposal form, and ensure the form is clear and legible. Proposals that are illegible or that contain any omission, erasures, non-permanent ink, alterations, additions, or items not called for in the itemized proposal or that contain irregularities of any kind, may be rejected as informal. The Bidder is encouraged to submit an electronic bid file with their paper bid, however, electronic bid files on disk will not be accepted without a paper bid. If there is any discrepancy between the paper bid and the electronic file, the paper bid will prevail. The Bidder shall sign in the space provided in the proposal form, with its signature. An officer of a corporation or a member of a partnership signing for the bidder shall place his or her signature and title after the word "By" under the name of the Contractor. The same procedure shall apply to the proposal of a joint venture by two or more bidders with each party of the joint venture submitting a separate signature page. If the signature is by an agent or attorney-in-fact for the joint venturers, then the proposal shall be accompanied by an authenticated copy of the evidence of its authority to act on behalf of all of the joint venturers.

Proposals submitted via the Internet by the Bidder using Bid Express shall be prepared using the electronic file(s) prepared by the Department for that individual contract, including all updates issued via amendment. The Bidder shall submit and digitally sign the electronic bid. For joint ventures submitted electronically, an authenticated copy of the evidence of the authority of the agent or attorney-in-fact for the joint venturers to act on behalf of all of the joint venturers must be submitted to the Contract Management Bureau prior to the Letting.

If a Bidder submits both a electronic bid via the Internet using Bid Express and a paper bid, the Bid Express bid will rule, and the paper bid will be regarded as informal.

102-06 BID DEPOSIT. THE BIDDER MUST SUBMIT A BID SECURITY WITH EACH BID. Every proposal shall be accompanied by (1) a bid bond or (2) a certified check payable to the New York State Department of Transportation or (3) a bank cashier's check payable to the New York State Department of Transportation. If the Bidder elects to submit a bid bond, it shall be on the Department's Bid Bond Form (CONR 391, a sample of which is included in §102-15, *Sample Form of Bid Bond*) that already contains language representing 25% of the total bid. If the Bidder elects to submit a certified check or bank cashier's check for a bid deposit, it shall be in the amount specified in the bid proposal. The retention and disposition of such bid bond or certified check or bank cashier's check by the Department shall be pursuant to and in conformity with §38(2) of the Highway Law, as amended.

102-07 MODIFICATION OR WITHDRAWAL OF PROPOSAL. Permission will not be given to modify or explain by e-mail, telephone, letter or otherwise, any proposal or bid after it has been deposited with the Department. No proposal shall be withdrawn or canceled before the time designated for opening such proposals publicly except upon such conditions as the Commissioner may deem to be necessary.

No proposal shall be withdrawn or canceled after the time designated for opening such proposals publicly, except to exercise the option as provided herein. Any bidder or its duly authorized agent who is physically present at the letting and who has submitted proposals on more than one project of any one letting may, at its option and upon written request to an authorized Department representative at the letting, withdraw any or all of its additional proposals after the person who opens and reads the bids has announced that such bidder has submitted the lowest proposal on a project for which bids have last been read. When this option is exercised, the proposals for other projects in the letting will be returned to the bidder unopened or, if the bid was submitted electronically, the Department will delete the bid(s) and the bid will not be made public. No returned proposals will be considered after the bidder has exercised its privilege to withdraw the same. Any bidder exercising the privilege of so withdrawing its bid or bids waives all claims that may arise should it be found that its opened proposal is informal or for any other reason is unacceptable to the Department. The Department will open and read proposals in the order in which they are drawn and not in the order in which the projects are advertised.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

102-08 SAMPLE APPENDIX A - STANDARD CLAUSES FOR ALL NEW YORK STATE CONTRACTS.. The parties to the attached contract, license, lease, amendment or other agreement of any kind (hereinafter, "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract (the word "Contractor" herein refers to any party other than the State, whether a contractor, licensor, licensee, lessor, lessee or any other party):

1. EXECUTORY CLAUSE. In accordance with Section 41 of the State Finance Law, the State shall have no liability under this contract to the Contractor or to anyone else beyond funds appropriated and available for this contract.

2. NON-ASSIGNMENT CLAUSE. In accordance with Section 138 of the State Finance Law, this contract may not be assigned by the Contractor or its right, title or interest therein assigned, transferred, conveyed, sublet or otherwise disposed of without the State's previous written consent, and attempts to do so are null and void. Notwithstanding the foregoing, such prior written consent of an assignment of a contract let pursuant to Article XI of the State Finance Law may be waived at the discretion of the contracting agency and with the concurrence of the State Comptroller where the original contract was subject to the State Comptroller's approval, where the assignment is due to a reorganization, merger or consolidation of the Contractor's business entity or enterprise. The State retains its right to approve an assignment and to require that any Contractor demonstrate its responsibility to do business with the State. The Contractor may, however, assign its right to receive payments without the State's prior written consent unless this contract concerns Certificates of Participation pursuant to Article 5-A of the State Finance Law.

3. COMPTROLLER'S APPROVAL. In accordance with Section 112 of the State Finance Law (or, if this contract is with the State University or City University of New York, Section 355 or Section 6218 of the Education Law), if this contract exceeds \$50,000 (or the minimum thresholds agreed to by the Office of the State Comptroller for certain S.U.N.Y. and C.U.N.Y. contracts), or if this is an amendment for any amount to a contract which, as so amended, exceeds said statutory amount, or if, by this contract, the State agrees to give something other than money when the value or reasonably estimated value of such consideration exceeds \$10,000, it shall not be valid, effective or binding upon the State until it has been approved by the State Comptroller and filed in his office. Comptroller's approval of contracts let by the Office of General Services is required when such contracts exceed \$85,000 (State Finance Law Section 163.6.a). However, such pre-approval shall not be required for any contract established as a centralized contract through the Office of General Services or for a purchase order or other transaction issued under such centralized contract.

4. WORKERS' COMPENSATION BENEFITS. In accordance with Section 142 of the State Finance Law, this contract shall be void and of no force and effect unless the Contractor shall provide and maintain coverage during the life of this contract for the benefit of such employees as are required to be covered by the provisions of the Workers' Compensation Law.

5. NON-DISCRIMINATION REQUIREMENTS. To the extent required by Article 15 of the Executive Law (also known as the Human Rights Law) and all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex (including gender identity or expression), national origin, sexual orientation, military status, age, disability, predisposing genetic characteristics, marital status or domestic violence victim status. Furthermore, in accordance with Section 220-e of the Labor Law, if this is a contract for the construction, alteration or repair of any public building or public work or for the manufacture, sale or distribution of materials, equipment or supplies, and to the extent that this contract shall be performed within the State of New York, Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, disability, sex, or national origin: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

against or intimidate any employee hired for the performance of work under this contract. If this is a building service contract as defined in Section 230 of the Labor Law, then, in accordance with Section 239 thereof, Contractor agrees that neither it nor its subcontractors shall by reason of race, creed, color, national origin, age, sex or disability: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. Contractor is subject to fines of \$50.00 per person per day for any violation of Section 220-e or Section 239 as well as possible termination of this contract and forfeiture of all moneys due hereunder for a second or subsequent violation.

6. WAGE AND HOURS PROVISIONS. If this is a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 thereof, neither Contractor's employees nor the employees of its Subcontractors may be required or permitted to work more than the number of hours or days stated in said statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department. Furthermore, Contractor and its Subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in accordance with the Labor Law. Additionally, effective April 28, 2008, if this is a public work contract covered by Article 8 of the Labor Law, the Contractor understands and agrees that the filing of payrolls in a manner consistent with Subdivision 3-a of Section 220 of the Labor Law shall be a condition precedent to payment by the State of any State approved sums due and owing for work done upon the project.

7. NON-COLLUSIVE BIDDING CERTIFICATION. In accordance with Section 139-d of the State Finance Law, if this contract was awarded based upon the submission of bids, Contractor affirms, under penalty of perjury, that its bid was arrived at independently and without collusion aimed at restricting competition. Contractor further affirms that, at the time Contractor submitted its bid, an authorized and responsible person executed and delivered to the State a non-collusive bidding certification on Contractor's behalf.

8. INTERNATIONAL BOYCOTT PROHIBITION. In accordance with Section 220-f of the Labor Law and Section 139-h of the State Finance Law, if this contract exceeds \$5,000, the Contractor agrees, as a material condition of the contract, that neither the Contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated, is participating, or shall participate in an international boycott in violation of the Federal Export Administration Act of 1979 (50 USC App. Sections 2401 et seq.) or regulations thereunder. If such Contractor, or any of the aforesaid affiliates of Contractor, is convicted or is otherwise found to have violated said laws or regulations upon the final determination of the United States Commerce Department or any other appropriate agency of the United States subsequent to the contract's execution, such contract, amendment or modification thereto shall be rendered forfeit and void. The Contractor shall so notify the State Comptroller within five (5) business days of such conviction, determination or disposition of appeal (2 NYCRR 105.4).

9. SET-OFF RIGHTS. The State shall have all of its common law, equitable and statutory rights of set-off. These rights shall include, but not be limited to, the State's option to withhold for the purposes of set-off any moneys due to the Contractor under this contract up to any amounts due and owing to the State with regard to this contract, any other contract with any State department or agency, including any contract for a term commencing prior to the term of this contract, plus any amounts due and owing to the State for any other reason including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto. The State shall exercise its set-off rights in accordance with normal State practices including, in cases of set-off pursuant to an audit, the finalization of such audit by the State agency, its representatives, or the State Comptroller.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

10. RECORDS. The Contractor shall establish and maintain complete and accurate books, records, documents, accounts and other evidence directly pertinent to performance under this contract (hereinafter, collectively, "the Records"). The Records must be kept for the balance of the calendar year in which they were made and for six (6) additional years thereafter. The State Comptroller, the Attorney General and any other person or entity authorized to conduct an examination, as well as the agency or agencies involved in this contract, shall have access to the Records during normal business hours at an office of the Contractor within the State of New York or, if no such office is available, at a mutually agreeable and reasonable venue within the State, for the term specified above for the purposes of inspection, auditing and copying. The State shall take reasonable steps to protect from public disclosure any of the Records which are exempt from disclosure under Section 87 of the Public Officers Law (the "Statute") provided that: (i) the Contractor shall timely inform an appropriate State official, in writing, that said records should not be disclosed; and (ii) said records shall be sufficiently identified; and (iii) designation of said records as exempt under the Statute is reasonable. Nothing contained herein shall diminish, or in any way adversely affect, the State's right to discovery in any pending or future litigation.

11. IDENTIFYING INFORMATION AND PRIVACY NOTIFICATION.

(a) Identification Number(s). Every invoice or New York State Claim for Payment submitted to a New York State agency by a payee, for payment for the sale of goods or services or for transactions (e.g., leases, easements, licenses, etc.) related to real or personal property must include the payee's identification number. The number is any or all of the following: (i) the payee's Federal employer identification number, (ii) the payee's Federal social security number, and/or (iii) the payee's Vendor Identification Number assigned by the Statewide Financial System. Failure to include such number or numbers may delay payment. Where the payee does not have such number or numbers, the payee, on its invoice or Claim for Payment, must give the reason or reasons why the payee does not have such number or numbers.

(b) Privacy Notification. (1) The authority to request the above personal information from a seller of goods or services or a lessor of real or personal property, and the authority to maintain such information, is found in Section 5 of the State Tax Law. Disclosure of this information by the seller or lessor to the State is mandatory. The principal purpose for which the information is collected is to enable the State to identify individuals, businesses and others who have been delinquent in filing tax returns or may have understated their tax liabilities and to generally identify persons affected by the taxes administered by the Commissioner of Taxation and Finance. The information will be used for tax administration purposes and for any other purpose authorized by law. (2) The personal information is requested by the purchasing unit of the agency contracting to purchase the goods or services or lease the real or personal property covered by this contract or lease. The information is maintained in the Statewide Financial System by the Vendor Management Unit within the Bureau of State Expenditures, Office of the State Comptroller, 110 State Street, Albany, New York 12236.

12. EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITIES AND WOMEN. In accordance with Section 312 of the Executive Law and 5 NYCRR 143, if this contract is: (i) a written agreement or purchase order instrument, providing for a total expenditure in excess of \$25,000.00, whereby a contracting agency is committed to expend or does expend funds in return for labor, services, supplies, equipment, materials or any combination of the foregoing, to be performed for, or rendered or furnished to the contracting agency; or (ii) a written agreement in excess of \$100,000.00 whereby a contracting agency is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon; or (iii) a written agreement in excess of \$100,000.00 whereby the owner of a State assisted housing project is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon for such project, then the following shall apply and by signing this agreement the Contractor certifies and affirms that it is Contractor's equal employment opportunity policy that:

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

(a) The Contractor will not discriminate against employees or applicants for employment because of race, creed, color, national origin, sex, age, disability or marital status, shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on State contracts and will undertake or continue existing programs of affirmative action to ensure that minority group members and women are afforded equal employment opportunities without discrimination. Affirmative action shall mean recruitment, employment, job assignment, promotion, upgradings, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation;

(b) At the request of the contracting agency, the Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein; and

(c) The Contractor shall state, in all solicitations or advertisements for employees, that, in the performance of the State contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.

Contractor will include the provisions of "a", "b", and "c" above, in every subcontract over \$25,000.00 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work") except where the Work is for the beneficial use of the Contractor. Section 312 does not apply to: (i) work, goods or services unrelated to this contract; or (ii) employment outside New York State. The State shall consider compliance by a Contractor or Subcontractor with the requirements of any Federal law concerning equal employment opportunity which effectuates the purpose of this section. The contracting agency shall determine whether the imposition of the requirements of the provisions hereof duplicate or conflict with any such Federal law and if such duplication or conflict exists, the contracting agency shall waive the applicability of Section 312 to the extent of such duplication or conflict. Contractor will comply with all duly promulgated and lawful rules and regulations of the Department of Economic Development's Division of Minority and Women's Business Development pertaining hereto.

13. CONFLICTING TERMS. In the event of a conflict between the terms of the contract (including any and all attachments thereto and amendments thereof) and the terms of this Appendix A, the terms of this Appendix A shall control.

14. GOVERNING LAW. This contract shall be governed by the laws of the State of New York except where the Federal supremacy clause requires otherwise.

15. LATE PAYMENT. Timeliness of payment and any interest to be paid to Contractor for late payment shall be governed by Article 11-A of the State Finance Law to the extent required by law.

16. NO ARBITRATION. Disputes involving this contract, including the breach or alleged breach thereof, may not be submitted to binding arbitration (except where statutorily authorized), but must, instead, be heard in a court of competent jurisdiction of the State of New York.

17. SERVICE OF PROCESS. In addition to the methods of service allowed by the State Civil Practice Law & Rules ("CPLR"), Contractor hereby consents to service of process upon it by registered or certified mail, return receipt requested. Service hereunder shall be complete upon Contractor's actual

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

receipt of process or upon the State's receipt of the return thereof by the United States Postal Service as refused or undeliverable. Contractor must promptly notify the State, in writing, of each and every change of address to which service of process can be made. Service by the State to the last known address shall be sufficient. Contractor will have thirty (30) calendar days after service hereunder is complete in which to respond.

18. PROHIBITION ON PURCHASE OF TROPICAL HARDWOODS. The Contractor certifies and warrants that all wood products to be used under this contract award will be in accordance with, but not limited to, the specifications and provisions of Section 165 of the State Finance Law, (Use of Tropical Hardwoods) which prohibits purchase and use of tropical hardwoods, unless specifically exempted, by the State or any governmental agency or political subdivision or public benefit corporation. Qualification for an exemption under this law will be the responsibility of the contractor to establish to meet with the approval of the State.

In addition, when any portion of this contract involving the use of woods, whether supply or installation, is to be performed by any Subcontractor, the prime Contractor will indicate and certify in the submitted bid proposal that the Subcontractor has been informed and is in compliance with specifications and provisions regarding use of tropical hardwoods as detailed in §165 State Finance Law. Any such use must meet with the approval of the State; otherwise, the bid may not be considered responsive. Under bidder certifications, proof of qualification for exemption will be the responsibility of the Contractor to meet with the approval of the State.

19. MACBRIDE FAIR EMPLOYMENT PRINCIPLES (APPLICABLE ONLY IN NON-FEDERAL AID NEW YORK STATE CONTRACTS). In accordance with the MacBride Fair Employment Principles (Chapter 807 of the Laws of 1992), the Contractor hereby stipulates that the Contractor either (a) has no business operations in Northern Ireland, or (b) shall take lawful steps in good faith to conduct any business operations in Northern Ireland in accordance with the MacBride Fair Employment Principles (as described in Section 165 of the New York State Finance Law), and shall permit independent monitoring of compliance with such principles.

20. OMNIBUS PROCUREMENT ACT OF 1992 (APPLICABLE ONLY IN NON-FEDERAL AID NEW YORK STATE CONTRACTS). It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority and women-owned business enterprises as bidders, subcontractors and suppliers on its procurement contracts.

Information on the availability of New York State subcontractors and suppliers is available from:

NYS Department of Economic Development
Division for Small Business
Albany, New York 12245
Telephone: 518-292-5100
Fax: 518-292-5884
e-mail: opa@esd.ny.gov

A directory of certified minority and women-owned business enterprises is available from:

NYS Department of Economic Development
Division of Minority and Women's Business Development
633 Third Avenue
New York, NY 10017
212-803-2414
e-mail: mwbecertification@esd.ny.gov

<https://ny.newnycontracts.com/FrontEnd/VendorSearchPublic.asp>

The Omnibus Procurement Act of 1992 requires that by signing this bid proposal or contract, as applicable, Contractors certify that whenever the total bid amount is greater than \$1 million:

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

- (a) The Contractor has made reasonable efforts to encourage the participation of New York State Business Enterprises as suppliers and subcontractors, including certified minority and women-owned business enterprises, on this project, and has retained the documentation of these efforts to be provided upon request to the State;
- (b) The Contractor has complied with the Federal Equal Opportunity Act of 1972 (P.L. 92-261), as amended;
- (c) The Contractor agrees to make reasonable efforts to provide notification to New York State residents of employment opportunities on this project through listing any such positions with the Job Service Division of the New York State Department of Labor, or providing such notification in such manner as is consistent with existing collective bargaining contracts or agreements. The Contractor agrees to document these efforts and to provide said documentation to the State upon request; and
- (d) The Contractor acknowledges notice that the State may seek to obtain offset credits from foreign countries as a result of this contract and agrees to cooperate with the State in these efforts.

21. RECIPROCITY AND SANCTIONS PROVISIONS (APPLICABLE ONLY IN NON-FEDERAL AID NEW YORK STATE CONTRACTS). Bidders are hereby notified that if their principal place of business is located in a country, nation, province, state or political subdivision that penalizes New York State vendors, and if the goods or services they offer will be substantially produced or performed outside New York State, the Omnibus Procurement Act 1994 and 2000 amendments (Chapter 684 and Chapter 383, respectively) require that they be denied contracts which they would otherwise obtain. NOTE: As of May 15, 2002, the list of discriminatory jurisdictions subject to this provision includes the states of South Carolina, Alaska, West Virginia, Wyoming, Louisiana and Hawaii. Contact NYS Department of Economic Development for a current list of jurisdictions subject to this provision.

22. COMPLIANCE WITH NEW YORK STATE INFORMATION SECURITY BREACH AND NOTIFICATION ACT. Contractor shall comply with the provisions of the New York State Information Security Breach and Notification Act (General Business Law Section 899-aa; State Technology Law Section 208).

23. COMPLIANCE WITH CONSULTANT DISCLOSURE LAW. If this is a contract for consulting services, defined for purposes of this requirement to include analysis, evaluation, research, training, data processing, computer programming, engineering, environmental, health, and mental health services, accounting, auditing, paralegal, legal or similar services, then, in accordance with Section 163 (4-g) of the State Finance Law (as amended by Chapter 10 of the Laws of 2006), the Contractor shall timely, accurately and properly comply with the requirement to submit an annual employment report for the contract to the agency that awarded the contract, the Department of Civil Service and the State Comptroller.

24. PROCUREMENT LOBBYING. To the extent this agreement is a "procurement contract" as defined by State Finance Law Sections 139-j and 139-k, by signing this agreement the contractor certifies and affirms that all disclosures made in accordance with State Finance Law Sections 139-j and 139-k are complete, true and accurate. In the event such certification is found to be intentionally false or intentionally incomplete, the State may terminate the agreement by providing written notification to the Contractor in accordance with the terms of the agreement.

25. CERTIFICATION OF REGISTRATION TO COLLECT SALES AND COMPENSATING USE TAX BY CERTAIN STATE CONTRACTORS, AFFILIATES AND SUBCONTRACTORS. To the extent this agreement is a contract as defined by Tax Law Section 5-a, if the contractor fails to make the

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

certification required by Tax Law Section 5-a or if during the term of the contract, the Department of Taxation and Finance or the covered agency, as defined by Tax Law 5-a, discovers that the certification, made under penalty of perjury, is false, then such failure to file or false certification shall be a material breach of this contract and this contract may be terminated, by providing written notification to the Contractor in accordance with the terms of the agreement, if the covered agency determines that such action is in the best interest of the State.

26. IRAN DIVESTMENT ACT. By entering into this Agreement, Contractor certifies in accordance with State Finance Law §165-a that it is not on the “Entities Determined to be Non-Responsive Bidders/Offerers pursuant to the New York State Iran Divestment Act of 2012” (“Prohibited Entities List”) posted at: <http://www.ogs.ny.gov/about/regs/docs/ListofEntities.pdf>.

Contractor further certifies that it will not utilize on this Contract any subcontractor that is identified on the Prohibited Entities List. Contractor agrees that should it seek to renew or extend this Contract, it must provide the same certification at the time the Contract is renewed or extended. Contractor also agrees that any proposed Assignee of this Contract will be required to certify that it is not on the Prohibited Entities List before the contract assignment will be approved by the State.

During the term of the Contract, should the state agency receive information that a person (as defined in State Finance Law §165-a) is in violation of the above-referenced certifications, the state agency will review such information and offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its engagement in the investment activity which is in violation of the Act within 90 days after the determination of such violation, then the state agency shall take such action as may be appropriate and provided for by law, rule, or contract, including, but not limited to, imposing sanctions, seeking compliance, recovering damages, or declaring the Contractor in default.

The state agency reserves the right to reject any bid, request for assignment, renewal or extension for an entity that appears on the Prohibited Entities List prior to the award, assignment, renewal or extension of a contract, and to pursue a responsibility review with respect to any entity that is awarded a contract and appears on the Prohibited Entities list after contract award.

102-09 VACANT.

102-10 LABOR AND EMPLOYMENT. The provisions of NYS Labor Law, as amended, and referred to in §102-08, *Standard Clauses for All New York State Contracts*, shall be applicable. On contracts financed with Federal-Aid, any provisions of NYS Labor Law that are in conflict with mandatory Federal-Aid construction contract compliance requirements, as contained in 23 CFR 635.117 are superseded. Any provisions of NYS Labor Law that are not in conflict with mandatory Federal-Aid construction contract compliance requirements, or the Davis-Bacon Act, but are more restrictive, shall apply.

The Contractor shall directly employ those members of its own organization. Employee leasing and other similar arrangements under which workers are employed by another organization are not permitted.

No procedures or requirement shall be imposed by any state which will operate to discriminate against the employment of labor from any other state, possession or territory of the United States, in the construction of a Federal-Aid project. The selection of labor to be employed by the Contractor on any Federal-Aid project shall be of its choosing.

The Contractor shall not use convict labor unless performed by convicts who are on parole, supervised release, or probation for construction, maintenance or any other purpose at the site or within the contract limits from the time of contract award until contract final acceptance by the Department.

A. Wages. The Department will identify in the contract proposal whether the NYS Department of Labor (NYSDOL) has determined the work under the contract to be prevailing wage eligible, and if so, provide the Prevailing Rate Case (PRC) number. The PRC number is found on NYSDOL Form PW-200. The Contractor shall ensure that workers are paid the appropriate wages and supplemental (fringe) benefits. If the contract is prevailing wage eligible, all on-site work shall be paid prevailing

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

wages. When both State and Federal prevailing wages apply, the Contractor shall pay the higher of the wages, and the higher of the combination of the wages and supplemental (fringe) benefits. The Contractor shall obtain periodic wage rate schedule updates from the NYSDOL. Wage rate amendments and supplements are available on the NYSDOL web site at www.labor.ny.gov. All changes or clarification of labor classification(s) and applicability of prevailing wage rates shall be obtained in writing from the Office of the Director, NYSDOL Bureau of Public Work. The Contractor shall include the cost of changes in wage rate schedules and supplements (fringes) over the contract duration in the contract bid prices.

B. Overtime Dispensation. All bidders, in submitting their bids, should base their bids and work progression on the assumption that Overtime Dispensation pursuant to Article 8 of the New York State Labor Law, for any workers, laborers, and mechanics to work more than 8 hours in any one calendar day or more than 5 days in any one week will not be granted for any operation for the contract duration. Regardless of approval or disapproval of overtime by the NYSDOL, no adjustment will be made in any bid prices.

Subsequent to award, where the contract proposal has imposed specific scheduling and/or phasing requirements or where it is determined by the Department to be in the best interest of the public, the Department may process, for approval by the NYSDOL, requests for overtime dispensation on certain specific operations.

The Contractor shall submit requests for overtime dispensation to the Department on Form PW-30, Application for Dispensation for Hours, which will be provided by the Engineer upon request. The Department will review applications for overtime dispensation submitted by the Contractor associated with contracts subject to (A+B) Bidding, Incentive/Disincentive (I/D) or Lane Rental work favorably, but the application should not request more than 60 hours per week. The 60 hours per week may be either 6 - 10 hour days or 5 - 12 hour days. Overtime dispensations will be supported by the Department to advance Department goals and priorities, subject to specific circumstances and conditions associated with each contract.

The Department cannot guarantee that the NYSDOL will grant dispensation from restrictions pursuant to the provisions of Article 8 of the State Labor Law, however with the Department's certification, it is anticipated that they will act favorably, provided that the Contractor is in compliance with Labor Law requirements at the time of application.

C. Payrolls. The Contractor shall provide the Engineer, each week, a certified payroll and statement of compliance with respect to the wages paid each of its employees subject to prevailing wage requirements and a certified payroll from each Subcontractor engaged on work during the preceding weekly payroll period. If the Contractor or Subcontractor does not maintain a place of business in New York State and the amount of the contract exceeds \$25,000., payroll records and certifications shall be kept on the worksite.

Certified payrolls shall contain for each employee, name, race, gender, home address, an individually identifying number (e.g. the last 4 digits of the employee's social security number), work class, hours worked, wage rate, supplemental (fringe) benefits paid or provided, payroll taxes, withholdings and actual wages paid. Certified payrolls shall not include full social security numbers of employees. Certified payrolls shall be submitted on Form WH-347 or Form HC-231-1 for Federal-Aid contracts and on HC-231-1 for non Federal-Aid contracts. At the Contractor's option, other payroll formats, which supply the required data and certifications, may be used. Each payroll submitted shall be accompanied by a Statement of Compliance signed by the Contractor.

Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to NYSDOL or USDOL for purposes of an investigation or audit of compliance with prevailing wage requirements. Contractors may require subcontractors to provide addresses and social security numbers to the Contractor for its own records, without weekly submission to the Department.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

D. Training. An apprentice is defined as an individual who is enrolled in an apprenticeship training program that is registered with the NYS Department of Labor. A list of approved programs is available from the NYS Department of Labor at www.labor.ny.gov/apprenticeship/sponsor/index.asp.

A trainee is defined as an individual who is enrolled in an On-the-Job Training (OJT) program that is approved by the Federal Highway Administration (FHWA).

A number of sources to obtain training for apprentices/trainees are available. These include:

- A NYSDOL-approved apprenticeship program sponsored by a union or a temporary project level agreement with a union which has a NYSDOL approved apprenticeship program.
- A NYSDOL-approved apprenticeship program sponsored by a contractor.
- A NYSDOL-approved apprenticeship program sponsored by a contractor signatory with an apprenticeship sponsor consortium for certain services.
- An FHWA-approved OJT program (where applicable).

Approved OJT Programs are currently limited to apprenticeable occupations as determined by NYSDOL or USDOL.

Training under Training Special Provisions, if required, will be shown in the contract documents. In order to fulfill training requirements required under Training Special Provisions and/or §102-11 *Equal Employment Opportunity Requirements*, training should begin as early as possible during a construction contract. The Department recommends that all bidders have an approved apprenticeship or OJT program prior to bidding.

The Contractor shall furnish the apprentice/trainee a copy of the program to be followed in providing the training. The Contractor shall provide each apprentice/trainee with a certification showing the type and length of training satisfactorily completed.

When training is required under Training Special Provisions and/or §102-11 *Equal Employment Opportunity Requirements*, the Contractor shall designate to the Engineer, at the preconstruction meeting, a person (or persons) from its existing workforce as the Trainer and Training Coordinator for any apprentice(s)/ trainee(s).

The Trainer shall:

1. Be located on the contract site generally on a daily basis; and
2. Be responsible for the day-to-day supervision and training of persons on the contract; and
3. Be responsible for the preparation and submission of a monthly training progress report, after consultation with designated apprentices/trainees.

The Training Coordinator shall:

1. Be knowledgeable about the contract and the Apprenticeship/OJT programs to be used; and
2. Be responsible for ensuring on-the-job orientation of apprentice/trainees; and
3. Be responsible for ensuring meaningful and effective training for the duration of training.

102-11 EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS. The Department seeks to ensure nondiscrimination in employment under all Department contracts. The Contractor shall comply with the following Equal Employment Opportunity (EEO) requirements. *Goals for Equal Opportunity Employment Participation* are listed in the required contract provisions section of the contract proposal. The covered area is the county or counties in which the work is located.

For Federal-Aid contracts, Equal Employment Opportunity provisions are also found on Form FHWA 1273 *Required Contract Provisions Federal-Aid Construction Contracts*, or Form FHWA 1316 *Required Contract Provisions Appalachian Development Highway System and Local Access Roads Construction Contracts*, one of which is incorporated in the required contract provisions section of the contract proposal.

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 of requirements for the hiring of local

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

A. Statutory Authority. The Federal statutory authority for Equal Employment Opportunity provisions is contained in 23 U.S.C. 140(a), and Executive Order 11246. State statutory authority is contained in Section 85 of the Highway Law, Section 428 of the Transportation Law, and NYS Executive Law Articles 15 and 15-A. Regulations have been promulgated under 23 CFR 230, 41 CFR 60, 49 CFR 21, and 5 NYCRR 140-145. .

B. Definitions.

1. For Federal-Aid contracts, a minority group member is defined under this subsection as someone who is, and can demonstrate membership in, one of the following groups:

- a. Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
- b. Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
- c. Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
- d. American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. For non Federal-Aid contracts, a minority group member is defined under this subsection as a United States citizen or permanent resident alien who is, and can demonstrate membership in, one of the following groups:

- a. Black persons having origins in any of the Black African racial groups;
- b. Hispanic persons of Mexican, Puerto Rican, Dominican, Cuban, Central or South American descent of either Indian or Hispanic origin, regardless of race;
- c. Asian and Pacific Islander persons having origins in any of the Far East countries, South East Asia, the Indian subcontinent, or the Pacific Islands;
- d. Native American or Alaskan native persons having origins in any of the original peoples of North America.

C. Employment Goals. An employment goal(s) for minorities and a separate goal for women are presented in the contract documents. The Contractor shall provide equal employment opportunity and shall take affirmative action for all minority groups, both male and female; and women, both minority and non-minority. If the Contractor performs work outside of the covered area, it shall apply the goals established for the county where the work is actually performed. The Department will monitor the Contractor's attainments towards EEO goals in accordance with §105-21 *Civil Rights Monitoring and Reporting*.

The goals set for the contract are expressed as percentages of 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 in meeting its goals in each trade. The hours of minority and female

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

employment and training shall 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 contracts. The transfer of minority or female employees, apprentices, or trainees from contractor to contractor or from contract to contract for the sole purpose of meeting the Contractor's goals is a violation of the contract.

D. Contractor Obligations. The Contractor shall comply with all provisions of Federal Executive Order 11246 and the provisions of State and Federal laws and regulations. The Contractor shall furnish all information and reports required by Executive Order 11246 and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the Department and the U.S. Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders. The Contractor shall develop and implement an EEO policy in accordance with Form FHWA 1273 *Required Contract Provisions Federal-Aid Construction Contracts* for Federal-Aid contracts and in accordance with §102-08 *Standard Clauses for All New York State Contracts* for non Federal-Aid contracts.

1. Non-Discrimination. The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age, disability or marital status. The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, sexual orientation, military status, sex, disability, predisposing genetic characteristics, marital status, or domestic violence victim status and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest. Such actions shall include, but not be limited to the following: 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. The Contractor shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Department setting forth the provisions of this non-discrimination clause.

The Contractor shall state in all solicitations or advertisements for employees that, in the performance of the contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of age, race, creed, color, national origin, sexual orientation, military status, sex, disability, predisposing genetic characteristics, marital status, or domestic violence victim status.

The Contractor shall not use the goals or affirmative action requirements to discriminate against any person because of age, race, creed, color, national origin, sexual orientation, military status, sex, disability, predisposing genetic characteristics, marital status, or domestic violence victim status.

2. Solicitations. The Contractor shall state in all solicitations or advertisements for employees placed by or on behalf of the Contractor, that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, age, disability or marital status.

3. Collective Bargaining Agreements. The contractor shall send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments to equal employment opportunities, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union, or

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

representative will not discriminate on the basis of race, creed, color, national origin, sex age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein.

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 minorities or women shall excuse the Contractor's obligations.

4. Complaints of Alleged Discrimination. The Contractor shall promptly investigate all complaints of alleged discrimination made to the Contractor in connection with its obligations under this contract, shall attempt to resolve such complaints, and shall take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, corrective action shall include such other persons. Upon completion of each investigation, the Contractor shall inform every complainant of all available avenues of appeal.

5. Non-Compliance. In the event of the contractor's non-compliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further contracts in accordance with procedures authorized in Executive Order 11246, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246, or by rule, regulation, or order of the U.S. Secretary of Labor, or as otherwise provided by law.

6. Subcontracts/Purchase Orders. The Contractor shall include the provisions of §102-11D *Contractor Obligations* in every subcontract or purchase order, so that such provisions will be binding upon each subcontractor or vendor. In the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Department, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

E. Affirmative Action Steps. The Contractor shall take specific affirmative actions to promote 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:

- 1.** 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, shall assign two or more women to each construction contract. The Contractor shall specifically ensure that all forepersons, superintendents, and other onsite 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.
- 2.** 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.
- 3.** 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

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

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 therefore, along with whatever additional actions the Contractor may have taken.

4. Provide immediate written notification to the Department when the union or unions with which the Contractor has a collective bargaining agreement has 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.

5. 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 either the NYS Department of Labor or the US Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under E.2. above.

6. 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 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 work is performed.

7. 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 onsite supervisory personnel such as superintendents, forepersons, etc., prior to the initiation of construction work at any contract 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.

8. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other contractors and Subcontractors with whom the Contractor does or anticipates doing business.

9. 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 notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

10. 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 the Contractor's work force.

11. Validate all tests and other selection requirements in accordance with state and Federal laws, rules and regulations.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

12. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities. Encourage these employees to seek or to prepare for promotional opportunities through appropriate training, etc.

13. Ensure that seniority practices, labor 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 the Contractor's obligations under these specifications are being carried out.

14. 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.

15. 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.

16. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

F. Associations. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations. 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 one or more of its obligations, provided that the Contractor actively participates in the group, makes every effort to ensure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the benefits of the program are 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 noncompliance.

G. Hometown Plans (Federal-Aid Contracts Only). If a Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the USDOL 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 participating in Hometown Plans shall be able to demonstrate their participation and document their compliance with the provision of the Hometown Plan. Each Contractor participating in an approved plan is individually required to comply with its obligation 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 toward a goal in an approved plan does not excuse any covered Contractor's failure to take good faith efforts to achieve the Plan goals and timetables.

102-12 D/M/WBE UTILIZATION. D/M/WBE is a general term that refers to a Disadvantaged Business Enterprise (DBE), a Minority Business Enterprise (MBE) or a Women's Business Enterprise (WBE). The DBE program applies to Federal-Aid contracts, and the MBE/WBE (M/WBE) program applies to non Federal-Aid contracts. The Department seeks to:

- Ensure nondiscrimination in award and administration of Department contracts;
- Ensure that only firms that fully meet D/M/WBE eligibility standards are permitted to participate in the Department's D/M/WBE programs;

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

- Help remove barriers to the participation of D/M/WBEs in the performance of Department contracts;
- Create a level playing field on which D/M/WBEs can fairly compete for Department contracts; and
- Assist in the development of firms that can compete successfully in the construction industry outside the D/M/WBE programs.

The parties to this contract shall take all necessary and reasonable steps in accordance with the laws, rules and regulations cited in this subsection to promote the objectives outlined above. The Contractor shall comply with the applicable laws, rules and regulations and the D/M/WBE Program requirements stated below. The Contractor or Subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of Department contracts. The Contractor shall carry out the applicable requirements of 49 CFR 26 in the award and administration of Federal-Aid 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 Department deems appropriate. The Contractor shall not use the requirements of these specifications to discriminate against any qualified company or group of companies. These requirements shall be made a part of all subcontracts and agreements entered into as a result of this contract.

A. Statutory Authority.

1. Disadvantaged Business Enterprise (DBE) Program. The Federal statutory authority for the DBE Program is contained in the Surface Transportation Assistance Act of 1982 (Public Law 97-424, §105(f)), the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17, §106(c)), the Intermodal Surface Transportation Efficiency Act of 1991, and the Transportation Equity Act of the 21st Century. New York State has enacted Section 85 of the Highway Law and Section 428 of the Transportation Law. Regulations have been promulgated under 49 CFR 21, 49 CFR 26 and 17 NYCRR 35.

2. Minority/Women's Business Enterprise (M/WBE) Program. The State statutory authority for the M/WBE Program is contained in Section 85 of the Highway Law, Section 428 of the Transportation Law, and Executive Law Article 15-A. Regulations have been promulgated under 5 NYCRR 140-145. The parties to this contract shall comply with these laws, rules and regulations and the M/WBE Program requirements stated below.

B. D/M/WBE Goal(s). Federal-aid contracts have a single DBE goal. Non Federal-Aid contracts have two separate and distinct goals, one for MBEs and one for WBEs, which cannot be combined. The Department will monitor the Contractor's attainments towards D/M/WBE goals in accordance with §105-21 *Civil Rights Monitoring and Reporting*.

1. Established Goal(s). The Department may have established contract utilization goal(s) for D/M/WBEs, which are expressed as a percentage of the total contract price. The goal(s) are stated in the proposal and remain in effect throughout the life of the contract. In executing the contract or bid documents the Bidder declares that it subscribes to the utilization goal(s) and shall meet the goal(s) or demonstrate that it could not meet them despite its best efforts. Failure to provide commitments to meet the established goal(s) for the contract or failure to meet the good faith efforts may be grounds for rejection of the bid as non-responsive.

2. Zero Percent Goal(s). When the Department has established zero goal(s) for participation by D/M/WBEs and the Bidder proposes the use of a Subcontractor, the purchase of materials, the use of a Service or the use of Trucking at any time during the life of the contract, the Contractor shall promote the objectives outlined in this subsection by providing opportunities for

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

D/M/WBEs to participate in these areas, with such participation to be credited towards the race-neutral component of the Department's D/M/WBE Programs.

C. Eligibility. DBEs are eligible to be used to meet the goal on Federal-aid contracts. MBEs and WBEs are eligible to be used to meet the goal on non Federal-Aid contracts. The programs are separate, and eligibility in one program does not provide eligibility in the other.

1. DBE Eligibility. Only those DBE firms that are certified under the New York State Unified Certification Program are eligible to be used for goal attainment. DBE certification is not an endorsement of the quality or performance of the business but simply an acknowledgment of the firm's status as a DBE. A business directory is available on the NYS Unified Certification Program website at <http://biznet.nysucp.net>.

2. M/WBE Eligibility. Only those M/WBE firms that are certified by the NYS Department of Economic Development are eligible to be used for goal attainment. M/WBE certification is not an endorsement of the quality or performance of the business but simply an acknowledgment of the firm's status as an M/WBE. The participation of a firm that is certified as an MBE cannot be counted toward a WBE goal, and the participation of a firm that is certified as a WBE cannot be counted toward an MBE goal. The participation of a firm that is certified as both an MBE and a WBE will only be counted toward one goal, and cannot be divided between the two goals. A business directory is available on the Empire State Development website at www.esd.ny.gov/MWBE.html.

Additionally, the Contractor is encouraged to contact the Division of Minority and Woman Business Development {(518) 292-5250; (212) 803-2414; or (716) 846-8200} to discuss additional methods of maximizing participation by M/WBEs on the contract.

D. Counting D/M/WBE Participation Towards the D/M/WBE Goal(s). The value of the work performed by a D/M/WBE, including that of a D/M/WBE prime contractor, with its own equipment, with its own forces, and under its own supervision will be counted toward the goal(s), provided the utilization is a commercially useful function. A D/M/WBE prime contractor shall still provide opportunities for participation by other D/M/WBEs. Work performed by D/M/WBEs on the contract will be counted as set forth below. If the Department determines that some or all of a D/M/WBE's work does not constitute a commercially useful function, only the portion of the work considered to be a commercially useful function will be credited toward the goal(s).

1. Subcontractors. 100% of the value of the work performed by a D/M/WBE Subcontractor will be counted toward the D/M/WBE goal(s), including the cost of materials and supplies purchased by the D/M/WBE, except the cost of supplies or equipment rented or leased from the Contractor or its affiliates will not be counted.

2. Manufacturers/Fabricators. 100% of the expenditure to a D/M/WBE Manufacturer or Fabricator will be counted toward the D/M/WBE goal(s). Manufacturers or Fabricators may provide materials to the Contractor, a Subcontractor, or other firm working on the contract for installation.

3. Material Suppliers. 60% of the expenditure to a DBE Material Supplier will be counted toward the DBE goal. 100% of the expenditure to an M/WBE Material Supplier will be counted toward the M/WBE goals. Packagers, brokers, manufacturer's representatives, or other persons who arrange or expedite transactions are not Material Suppliers. Material Suppliers may provide materials to the Contractor, a Subcontractor, or other firm working on the contract for installation.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

4. *Brokers/Manufacturer's Representatives.* 100% of the expenditures for fees or commissions charged for assistance in the procurement of, or fees for transportation charges for the delivery of, materials or supplies provided by a D/M/WBE Broker/Manufacturer's Representative will be counted toward the D/M/WBE goal(s), provided they are determined by the Department to be reasonable and not excessive as compared with fees customarily allowed for similar services. The cost of the materials and supplies themselves will not be counted. Brokers may supply materials to the Contractor, Subcontractor, or other firm working on the contract.

5. *Services.* 100% of the expenditure for fees charged by a D/M/WBE for providing a bona fide service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of the contract will be counted toward the D/M/WBE goal(s), provided the fee is reasonable and not excessive as compared with fees customarily allowed for similar services.

6. *Trucking Operations.* A D/M/WBE trucking firm shall own and operate at least one registered, insured, and fully operational truck used on the contract and shall be responsible for the management and supervision of the trucking operation for which it is responsible, and the arrangement cannot be contrived solely for the purpose of meeting the D/M/WBE goal(s). The D/M/WBE trucking firm shall control the day-to-day D/M/WBE trucking operations, and shall be responsible for: (1) Negotiating and executing rental/leasing agreements; (2) Controlling the work force; (3) Coordinating the daily trucking needs with the Contractor or Subcontractor; and (4) Scheduling and dispatching trucks.

a. D/M/WBE Owned/Leased Trucks. 100% of the value of the trucking operations the D/M/WBE provides on the contract using trucks it owns or leases on a long-term basis that are registered, insured, and operated by the D/M/WBE using drivers it employs, will be counted toward the D/M/WBE goal(s). A lease shall indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks shall display the name and identification number of the DBE.

b. Other D/M/WBE Trucks. The D/M/WBE may obtain trucks from another D/M/WBE, including an owner/operator. 100% of the value of the trucking operations that the other D/M/WBE provides will also be counted toward the D/M/WBE goal(s).

c. Non-D/M/WBE Trucks. The D/M/WBE may obtain trucks from a non-D/M/WBE, including an owner-operator. Only the value of the fee or commission that the D/M/WBE receives as a result of the arrangement with the non-D/M/WBE will be counted toward the D/M/WBE goal(s).

7. *Equipment Rental.* 100% of the expenditure to a D/M/WBE for equipment rental will be counted toward the D/M/WBE goal(s). The Contractor shall have a written rental agreement with the firm that rents the equipment.

E. *Conditions of Participation.* D/M/WBE participation will be counted toward meeting the D/M/WBE contract goal(s), subject to the following conditions:

1. *Commercially Useful Function.* A D/M/WBE is considered to perform a commercially useful function when it is responsible for the execution of a distinct element of work on a contract and carries out its responsibilities by actually performing, managing, and supervising the work involved in accordance with normal industry practice. Regardless of whether an arrangement

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

between the Contractor and the D/M/WBE represent standard industry practice, if the arrangement erodes the ownership, control or independence of the D/M/WBE or in any other way does not meet the commercially useful function requirement, the Contractor will receive no credit toward the goal(s) and may be required to backfill the participation. A D/M/WBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction or contract through which funds are passed in order to obtain the appearance of D/M/WBE participation.

A DBE may present evidence to rebut a determination by the Department that the DBE is not performing a commercially useful function. Commercially useful function determinations by the Department are subject to review by the Federal Highway Administration (FHWA) but the determination may not be administratively appealed to USDOT. An M/WBE may rebut a determination by the Department that the M/WBE is not performing a commercially useful function to the NYS Department of Economic Development.

2. Work Force. The D/M/WBE must employ a work force, (including administrative and clerical) separate and apart from that employed by the Contractor, other Subcontractors on the contract, or their affiliates. This does not preclude the employment by the D/M/WBE of an individual that has been previously employed by another firm involved in the contract, provided that the individual was independently recruited by the D/M/WBE in accordance with customary industry practice. The routine transfer of work crews from another employer to the D/M/WBE shall not be allowed.

3. Supervision. All work performed by the D/M/WBE must be controlled and supervised by the D/M/WBE without duplication of supervisory personnel from the Contractor, other Subcontractors on the contract, or their affiliates. This does not preclude routine communication between the supervisory personnel of the D/M/WBE and other supervisors necessary to coordinate the contract work.

4. Equipment. D/M/WBE Subcontractors may supplement their equipment by renting or leasing additional equipment in accordance with customary industry practice. The D/M/WBE shall obtain approval of the Department prior to renting equipment from the Contractor or its affiliates, and shall provide documentation to the Department demonstrating that similar equipment and terms could not be obtained at a lower cost from other customary sources of equipment. The required documentation shall include, but not be limited to, copies of the rental or leasing agreements, and the names, addresses, and terms quoted by other sources of equipment.

F. Requests For Waiver. A potential bidder, defined as one who has purchased the contract documents, may request a waiver of all or part of a contract's D/M/WBE goal(s) by submitting a written request to the Office of Construction Civil Rights Unit. The request shall be submitted no later than 17 calendar days prior to the contract letting, in order to allow sufficient time for a review and issuance of an amendment of the established goal(s), if necessary, in accordance with the Department's schedule for contract amendments. The request should contain sufficient justification as to why the goal(s) should be waived or reduced, and should at least address the following factors: the potential Bidder's method of accomplishing the work, the subcontracting opportunities associated with the proposed method, and the availability of certified D/M/WBEs for the work to be subcontracted.

G. Good Faith Efforts. To determine whether a bidder that has failed to meet the D/M/WBE contract goal(s) may receive the contract, the Department will decide whether the efforts the Bidder made to obtain D/M/WBE participation were "good faith efforts" to meet the goal(s). Efforts to obtain D/M/WBE participation that are merely pro forma are not good faith efforts, nor are efforts

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

that, even if they are sincerely motivated, given all relevant circumstances, they could not reasonably be expected to produce a level of D/M/WBE participation sufficient to meet the goal(s).

In order to award a contract to a bidder that has failed to meet the D/M/WBE contract goal(s), the Department will determine that the Bidder's good faith efforts were those that, given all relevant circumstances, a bidder actively and aggressively seeking to meet the goal(s) would make.

When a contract is awarded with D/M/WBE commitment(s) that is less than the contract goal(s), the Contractor shall continue good faith efforts. The Contractor shall periodically review items that are available for D/M/WBE participation, typically before the beginning of a new construction season and when significant new items of work are added to the contract, and conduct additional D/M/WBE solicitation.

In order to evaluate the Bidder's good faith efforts, the Department will consider the quality, quantity, and intensity of the different kinds of efforts that the Bidder has made. Below is a list of the types of actions which the Department will consider as part of the Bidder's good faith efforts to obtain D/M/WBE participation. It is not a mandatory checklist, nor is it intended to be exhaustive or exclusive.

- 1.** Securing participation by certified D/M/WBE firms for work that they are listed to perform that is in the contract. Only DBEs certified by the NYS Unified Certification Program (NYSUCP) shall be used to fulfill the established goal on Federal-Aid contracts. Only M/WBEs certified by the NYS Department of Economic Development shall be used to fulfill the established goal(s) on non Federal-Aid contracts.
- 2.** Soliciting through reasonable and available means the interest of certified D/M/WBEs who have the capability to perform the work of the contract. The Bidder shall solicit this interest within sufficient time to allow the D/M/WBEs to respond to the solicitation. The Bidder shall verify that D/M/WBEs received the solicitation by following up the initial solicitation with at least one additional solicitation via a different media. The Bidder shall keep records of efforts to solicit and negotiate with D/M/WBEs as evidence of good-faith efforts, using the *Solicitation Log* as a continuing record.
- 3.** Soliciting, at a minimum, certified D/M/WBEs in the appropriate geographic area:
 - For all work, soliciting certified D/M/WBEs within 75 miles of the contract location.
 - For trucking operations and equipment rental, soliciting certified D/M/WBEs within 75 miles of the contract location.
 - For work such as guide rail, fencing, landscaping, work zone traffic control, survey, signs, permanent highway lighting, traffic signals, and intelligent transportation systems (ITS); soliciting certified D/M/WBEs within 150 miles of the contract location.
 - For work such as pavement markings, manufacturers, fabricators, material suppliers, brokers, and services; soliciting certified D/M/WBEs within 300 miles of the contract location, or on an upstate or downstate basis.
- 4.** Selecting portions of the work to be performed by D/M/WBEs in order to increase the likelihood that the D/M/WBE goal(s) will be achieved. This includes, where appropriate, either breaking down operations or combining like or related operations into logistically and economically feasible units to facilitate D/M/WBE participation, even when the Contractor might prefer to perform these work items with its own forces.
- 5.** Providing interested D/M/WBEs with adequate information on where and how to obtain the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

6. *a. Negotiating in good faith with interested D/M/WBEs.* It is the Bidder's responsibility to make a portion of the work available to D/M/WBE Subcontractors and material suppliers and to select those portions of the work or material needs consistent with the available D/M/WBE Subcontractors and material suppliers, so as to facilitate D/M/WBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of D/M/WBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for D/M/WBEs to perform the work.
- b. Additional Costs.* The fact that there may be some additional costs involved in finding and using D/M/WBEs is not in itself sufficient reason for a bidder's failure to meet the contract D/M/WBE goal(s), as long as such costs are reasonable. The ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the Bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from D/M/WBEs if the price difference is excessive or unreasonable.
7. Not rejecting D/M/WBEs as unqualified without sound reasons based on a thorough investigation of their capabilities.
8. Making efforts to assist interested D/M/WBEs in obtaining bonding, lines of credit or insurance as required by the Department.
9. Making efforts to assist interested D/M/WBEs in obtaining necessary equipment, supplies, materials, or related assistance.
10. Where available, effectively using the services of available minority/women focused media, trade associations, and contractor groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of D/M/WBEs.

H. D/M/WBE Pre-Award Utilization Package. Within 7 calendar days after bid letting, the Apparent Low Bidder shall submit a complete D/M/WBE Pre-Award Utilization Package, as outlined below, to the Office of Construction using the Department approved civil rights reporting software.

Apparent Low Bidders that do not have access to the Department approved civil rights reporting software shall contact the Office of Construction for guidance on submission of the Utilization Package. As soon as practicable, but not later than prior to the first contract payment, the Contractor shall enter all current utilization data into the Department approved civil rights reporting software.

For each D/M/WBE Subcontractor, the Apparent Low Bidder shall indicate the contract pay item number(s) of the work to be performed. The Apparent Low Bidder shall explain, in writing, the scope of work to be performed by the D/M/WBE for any item which is not completely performed by the D/M/WBE Subcontractor. This does not include items for which the Contractor is performing less than the total contract quantity for that item.

For each D/M/WBE Manufacturer, Fabricator, Material Supplier, or Broker, the Apparent Low Bidder shall indicate the contract pay item number(s) of the material to be manufactured, fabricated, supplied, or otherwise provided. If the material, equipment or service does not correspond to a specific contract pay item, the Apparent Low Bidder shall use a contract pay item(s) to which the activity relates.

For each D/M/WBE Service, the Apparent Low Bidder shall indicate the contract pay item number(s) of the service to be provided. If the equipment or service does not correspond to a specific Department contract pay item, the Apparent Low Bidder shall use a contract pay item(s) to which the activity relates.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

For each D/M/WBE Trucking Operation, the Apparent Low Bidder shall indicate the contract pay item number(s) for which the trucking operations are to be performed. If the trucking operation does not correspond to a specific contract pay item, the Apparent Low Bidder shall use a contract pay item(s) to which the activity relates. The Apparent Low Bidder shall indicate the type of trucking operation to be performed, the number of trucks owned/leased, the number of trucks working on-site or off-site, rate per hour/ton/load/etc., duration or amount, and total dollar value of the proposed D/M/WBE commitment. The Apparent Low Bidder shall provide copies of all lease agreements utilized by the D/M/WBE.

If the Apparent Low Bidder has met or exceeded the established D/M/WBE goal(s) for the contract utilizing certified D/M/WBEs it is not necessary to submit documentation of good faith efforts.

If the Apparent Low Bidder has not met the D/M/WBE goal(s), it shall submit the *Solicitation Log*, together with other documentation that substantiates good faith efforts. Such documentation shall include, at a minimum, all envelopes of solicitation inquiries that were returned as undeliverable and quotations submitted by D/M/WBEs that are not included in the *D/M/WBE Schedule of Utilization* with an explanation for the Bidder's action in each case.

After contract award, the Contractor shall promptly execute subcontracts, agreements, or purchase orders, as appropriate, with each D/M/WBE for the type and amount of work identified in the approved *D/M/WBE Utilization Worksheet*.

I. Bidder's Failure to Comply. The Department's acceptance of the Apparent Low Bidder's proposal is conditioned upon the Apparent Low Bidder's fulfillment of the D/M/WBE utilization requirements. If the Apparent Low Bidder fails to submit a complete D/M/WBE utilization package within 7 calendar days after the bid opening and/or fails to attain the D/M/WBE utilization goal(s) and to satisfactorily document its good faith efforts, the bid may be declared incomplete and the deposit may be subject to forfeiture pursuant to §103-02 *Execution of Contract*. The Apparent Low Bidder, upon receipt of written notification of its failure to comply with the D/M/WBE utilization requirements shall have 5 work days to carry out the corrective action(s) described in the notification.

If the Department determines that the Apparent Low Bidder has failed to meet the good faith effort requirements, the Department will, before awarding the contract, provide the Apparent Low Bidder an opportunity for administrative reconsideration by an official who did not take part in the original determination that the Apparent Low Bidder failed to meet the goal(s) or make adequate good faith efforts to do so. As part of this reconsideration, the Apparent Low Bidder shall have the opportunity to provide written documentation or argument and to meet in person with the Department's reconsideration official concerning the issue of whether it met the goal(s) or made adequate good faith efforts to do so. The Department will send the Apparent Low Bidder a written decision on reconsideration, explaining the basis for finding that the Apparent Low Bidder did or did not meet the goal(s) or make adequate good faith efforts to do so.

102-13 STATE AND LOCAL SALES TAX EXEMPTION. In accordance with Section 1115 of the Tax Law, in connection with capital improvement contracts all tangible personal property which will become an integral component of a structure, building or real property of the State, or any of its political subdivisions, is exempt from State and local retail sales tax and compensating use tax.

102-14 FORM OF CONTRACT AND BID BOND. The form of contract and bid bond, if given, shall be that provided by the Department.

All of the following sections which have the word "Sample" in the title are samples of the contract documents executed by the Contractor as a part of the bidding and/or award process. The executed bid documents control and have precedence over the samples presented herein.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

102-15 SAMPLE FORM OF BID BOND.

KNOW ALL PERSONS BY THESE PRESENTS, That _____
(Name of Contractor)

(Address)
(hereinafter called the "Principal") and the _____
a corporation created and existing under the laws of the State of _____, having its principal office
in the City of _____ (hereinafter called the "Surety"), are held and firmly bound unto The People
of the State of New York (hereinafter called the "State"), in the full just sum of [Twenty-Five Percent
(25%) of Attached Bid], good and lawful money of the United States of America, for the payment of
which said sum of money, well and truly to be made and done, the said Principal binds themselves
(himself/herself, itself), their (his/her, its) heirs, executors and administrators, successors and assigns, and
the said Surety binds itself, its successors and assigns jointly and severally, firmly by these presents:

WHEREAS, the said Principal has submitted to the Commissioner of Transportation of the State of
New York, a proposal for _____
(Project Description), and

WHEREAS, under the terms of the Laws of the State of New York as above indicated, the said
Principal has filed or intends to file this bond to guarantee that the Principal will execute all required
contract proposal documents and furnish such faithful performance or other bonds as may be required by
law in accordance with the terms of the Principal's said proposal.

NOW, THEREFORE, the condition of the foregoing obligation is such, that if the said Principal shall
promptly execute and submit, and the Commissioner of Transportation shall accept, all required contract
proposal documents including such faithful performance bond or other bonds as may be required by law
in accordance with the terms of the Principal's said proposal, then this obligation shall be null and void,
otherwise to remain in full force and virtue.

IN TESTIMONY WHEREOF, the said Principal has hereunto set his/her (their, its) hand and the said
Surety has caused this instrument to be signed by its authorized officer, the day and year above written.

Signed and delivered this ____ day of _____ 20____ in the presence of:

(Company)

(Signature)) Principal

(Title)

(Company)

By _____) Surety
(Signature)

(Title of Authorized Officer)

(The Surety Company shall append a single copy of a statement of its financial condition and a copy of
the resolution authorizing the execution of Bonds by officers of the Company to the bond(s).)

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

(Acknowledgment of principal, unless it be a corporation)

STATE OF NEW YORK ss. :

COUNTY OF _____

On this _____ day of _____ 20 ____, before me personally came _____ to me known and known to me to be the person described in and who executed the foregoing instrument and acknowledged that he/she executed the same.

Notary Public**(Acknowledgment of principal, if a corporation)**

STATE OF NEW YORK ss. :

COUNTY _____

On this _____ day of _____ 20 ____, before me personally came _____ to me known and known to me to be the person, who being by me duly sworn, did depose and say that he/she resides in _____ that he/she is the _____ of _____ the corporation described in and which executed the foregoing instrument; and that he/she signed his/her name thereto by order of the Board of Directors of said Corporation.

Notary Public**(Acknowledgment of Surety Company)**

STATE OF NEW YORK ss. :

COUNTY OF _____

On this _____ day of _____ 20 ____, before me personally came _____ to me known and known to me to be the person, who being by me duly sworn, did depose and say that he/she resides in _____. that he/she is the _____ of _____ the corporation described in the foregoing instrument; and that he/she signed his/her name thereto by order of the Board of Directors of said Corporation.

Notary Public

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

102-16 SAMPLE CONTRACT PAY ITEM FORMAT.

LN # ITEM DESCRIPTION	EST OF QUANTITIES AND UNITS	UNIT PRICE		BID AMOUNT	
		DOLLARS	CENTS	DOLLARS	CENTS
0002 ITEM: 201.06 LUMP SUM CLEARING AND GRUBBING	NEC LUMP SUM				
0012 ITEM: 203.03 CUBIC YARDS EMBANKMENT IN PLACE	14521.00 PER CUBIC YARD				
0064 ITEM: 402.195911 QUALITY UNITS PLANT PRODUCTION QUALITY ADJUSTMENT TO 402.195901	123.00 PER QUALITY UNIT	55.000		6765.00	
FIXED PRICE: SEE SPECIFICATION AND SUBSECTION 102-03.					
0248 ITEM: 637.2101 10 LUMP SUM PORTABLE CELLULAR DIGITAL TELEPHONE (HANDS FREE)/(RADIO EQUI PMENT)(FIXED PRICE)	NEC LUMP SUM	7200.000		7200.00	
FIXED PRICE: SEE SPECIFICATION AND SUBSECTION 102-03.					
0406 ITEM: 697.0201 DOLLARS AND CENTS FIELD CHANGE PAYMENT (FCP)	510000.00 PER DOLLARS AND CENTS	1.000		510000.00	
FIXED PRICE: SEE SPECIFICATION AND SUBSECTION 102-03.					
0414 ITEM: 699.040001 MOBILIZATION	NEC LUMP SUM				
MUST NOT EXCEED 4% OF SUBTOTAL SHOWN ABOVE. SEE SPECIFICATION FOR THIS ITEM.					
PLEASE BE SURE A BID IS ENTERED FOR EACH ITEM, EXCEPT AS DIRECTED FOR OPTIONAL ITEMS.				\$ _____	

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7**102-17 SAMPLE FORM OF ITEMIZED PROPOSAL/JURAT.****ITEMIZED PROPOSAL****To the State Department of Transportation:**

In submitting this bid the undersigned declares to be the only person or persons interested in the said bid; that it is made without any connection with any person making another bid for the same contract; that the bid is in all respects fair and without collusion, fraud or mental reservation; and that no official of the State, or any person in the employ of the State is directly or indirectly interested in said bid or in the supplies or work to which it relates, or in any portion of the profits thereof.

The undersigned also hereby declares to have carefully examined the plans, specifications and form of contract, and to have personally inspected the actual location of the work together with the local sources of supply, to be satisfied as to all the quantities and conditions, and understands that in signing this proposal waives all right to plead any misunderstanding regarding the same.

The undersigned further understands and agrees to furnish and provide for the respective item price bid all the necessary material, machinery, implements, tools, labor services and other items of whatever nature, and to do and perform all the work necessary under the aforesaid conditions, to complete the improvement of the aforementioned project in accordance with the plans and specifications for said improvement, which plans and specifications it is agreed are a part of this proposal, and to accept in full compensation therefore the amount of the summation of the products of the approximate quantities multiplied by the unit prices bid. This summation will hereinafter be referred to as the gross sum bid.

The undersigned further agrees to accept the aforesaid unit bid prices as compensations for any additions or deductions caused by variation in quantities due to more accurate measurement, and for use in the computation of the value of the work performed for monthly estimates. The undersigned further agrees that should the bidder challenge any administrative action of the Department regarding the award of the Contract, such special proceeding shall be brought in Supreme Court, Albany County, and in no other location.

The undersigned further agrees that at any time during the progress of work the State adds, alters or omits portions of the work it shall so perform such work and accept compensation in accordance with the Standard Specifications.

The undersigned further understands and agrees not to start any work until the contract agreement is signed by the Commissioner or the Commissioner's duly authorized representative. If the undersigned voluntarily undertakes to start work, other than that expressly prohibited herein prior to approval of the contract by the State Comptroller, the undersigned does so entirely at its own risk and without obligation or responsibility on the part of the State unless and until the awarded contract becomes effective pursuant to Section 112 of the State Finance Law; and hereby agrees and warrants that, as a prerequisite to the start of any such voluntary work, accepts, assumes and undertakes all of the provisions of this proposal and of the plans and specifications of the proposed contract, including all of the provisions and responsibilities thereof relative to (1) damage, indemnification and holding the State harmless as set forth in said contract documents, and (2) actually furnishing in advance of any contract operations, the required insurance policies of each and every kind and amount as called for in said contract documents, particularly with relation to workers' compensation and liability insurance policies as set forth in the related specifications; and also agrees and warrants that all of such policies will be in force and effect on the date of the start of any such contract operations, whether or not the contract has been awarded as aforesaid. In no event shall the undersigned start any contract work which involves a disturbance within the State right of way prior to award of the contract by the Comptroller.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7**Bid Deposit**

Accompanying this proposal is a bid bond, certified check or bank cashier's check for the specified amount of deposit required. In the event this proposal is accepted by the Department of Transportation and the undersigned shall fail to execute the contract and in all respects comply with the provisions of Section 38 of the Highway Law, as amended, the moneys represented by such bid bond, certified check or bank cashier's check shall be regarded as liquidated damages and shall be forfeited and become the property of the State of New York; otherwise to be returned to the depositor in accordance with the provisions of said Section 38 of the Highway Law, as amended.

On acceptance of this proposal for said work the undersigned does or do hereby bind herself/himself or itself/themselves to enter into written contract, within ten days of date of notice of award, with the said Department of Transportation, and to comply in all respects with §38(6) of the Highway Law, as amended, in relation to security for the faithful performance of the terms of said contract.

Non-Collusive Bidding Certifications (NYS Finance Law §139-D)

1. Every bid hereafter made to the state or any public department, agency or official thereof, where competitive bidding is required by statute, rule or regulation, for work or services performed or to be performed or goods sold or to be sold, shall contain the following statement subscribed by the bidder and affirmed by such bidder as true under the penalties of perjury:

(a) By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of his knowledge and belief:

(1) The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;

(2) Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and

(3) No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

(b) A bid shall not be considered for award nor shall any award be made where (a)(1)(2) and (3) above have not been complied with; provided however, that if in any case the bidder cannot make the foregoing certification, the bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefore. Where (a)(1)(2) and (3) above have not been complied with, the bid shall not be considered for award nor shall any award be made unless the head of the purchasing unit of the state, public department or agency to which the bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

The fact that a bidder (a) has published price lists, rates, or tariffs covering items being procured, (b) has informed prospective customers of proposed or pending publication of new or revised price lists for such items or (c) has sold the same items to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning of subparagraph 1.(a).

2. Any bid hereafter made to the state or any public department, agency or official thereof by a corporate bidder for work or services performed or to be performed or goods sold or to be sold, where competitive bidding is required by statute, rule or regulation, and where such bid contains the certification referred to in subdivision one of this section, shall be deemed to have been authorized by the board of directors of the bidder and such authorization shall be deemed to include the signing and submission of the bid and the inclusion therein of the certificate as to non collusion as the act and deed of the corporation.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7**Non-Collusive Bidding Certification (49 CFR 29)**

The Contractor to whom the above identified contract is to be awarded does hereby tender to the New York State Department of Transportation this sworn statement pursuant to Section 112(c) of Title 23 U.S. Code *Highways* and does hereby certify, in conformance with said 23 USC 112(c) that the said Contractor has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the above identified contract.

The signatory to this proposal, being duly sworn, certifies that, EXCEPT AS NOTED BELOW, its company and any person associated therewith in then capacity of owner, partner, director, officer, or major stockholder (five percent or more ownership):

- 1) is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency;
- 2) has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within the past three years;
- 3) does not have a proposed debarment pending; and
- 4) has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent Jurisdiction in any matter involving fraud or official misconduct within the past three years.

EXCEPTIONS - List any relevant information, attaching additional sheets if necessary. (Exceptions will not necessarily result in disapproval, but will be considered in determining responsibility. For any exception noted, indicate below to whom it applies, the initiating agency, and dates of action. Providing false information may result in criminal prosecution or administrative sanctions.)

Lobbying Activity Certification [For Federal-Aid Contracts Only]

The prospective participant certifies, by signing and submitting this bid or proposal, 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 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.

(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. (See Exhibit 1 annexed hereto)

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 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 subrecipients shall certify and disclose accordingly.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7**False Claims Certification (31 USC §3729, NYS Finance Law Article 13)**

Under the Federal False Claims Act, 31 US Code §3729, any person or entity who knowingly presents, or causes to be presented to the Federal Government, a false or fraudulent claim for payment or approval is liable to the United State Government for a civil penalty of not less than \$5,000 and not more than \$10,000, plus three times the amount of damages the Government sustains.

Under the New York State False Claims Act, NYS Finance Law Article 13, any person or entity who knowingly presents or causes to be presented to the State of New York or Local Governments within the State of New York, a false or fraudulent claim for payment or approval is liable to the Government for a civil penalty of not less than \$6,000 and not more than \$12,000, plus three times the amount of damages the Government sustains.

“Knowingly” is defined as: (1) actual knowledge; (2) acting in deliberate ignorance of the truth or falsity of information; or (3) acting in reckless disregard of the truth or falsity of information; no proof of specific intent to defraud is required.

The Contractor to whom the above-identified contract is to be awarded does hereby certify to New York State Department of Transportation that it understands the prohibitions under the Federal and New York State False Claims Acts, and that it has not and will not submit or caused to be submitted any fraudulent claims in the submission of this bid or in connection with the above-identified contract. The Contractor further certifies that it understands retaliatory actions, against employees and officers who initiate a *Qui Tam* (public) action on behalf of the government or cooperate in the investigation of a false claim, are prohibited and are subject to an assessment of damages and penalties, under the provisions of the Federal and New York State False Claims Acts.

UNITED STATES DEPARTMENT OF TRANSPORTATION HOTLINE

Persons with knowledge of bid collusion (i.e., contractors, suppliers, work persons, etc.), or other questionable contract related practices (inadequate materials, poor workmanship, theft of materials, etc.), are encouraged to report such activities by calling the U.S. DOT HOTLINE. The HOTLINE number is 1-800-424-9071 and calls will be answered from 8:00 A.M. to 5:00 P.M. EST, Monday through Friday.

This HOTLINE is under the direction of the U.S. DOT's Inspector General. All information will be treated confidentially and the caller's anonymity will be respected.

NEW YORK STATE INSPECTOR GENERAL HOTLINE

Reports of New York State Governmental Misconduct may be made in strict confidence to the New York State Inspector General on the Toll Free Statewide HOTLINE or by writing to the Office of the State Inspector General. The Toll-Free Statewide HOTLINE telephone number is 1-800-367-4448 and calls will be answered between 9:00 A.M. and 5:00 P.M., Monday through Friday. The address of the Office of the Inspector General is P.O. Box 9, One Commerce Plaza, Albany, New York 12260.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

**CONTRACTOR MUST COMPLETE THE FORM BELOW
OFFERER DISCLOSURE OF PRIOR NON-RESPONSIBILITY DETERMINATIONS**

1. Has any Governmental Entity made a finding of non-responsibility regarding the individual or entity seeking to enter into the Procurement Contract in the previous four years? (Please circle):

No Yes

If yes, please answer questions 2-4. If no, skip to question 5.

2. Was the basis for the finding of non-responsibility due to a violation of State Finance Law §139-j (Please circle):

No Yes

3. Was the basis for the finding of non-responsibility due to the intentional provision of false or incomplete information to a Governmental Entity? (Please circle):

No Yes

4. If you answered yes to any of the above questions, please provide details regarding the finding of non-responsibility below.

Governmental Entity: __

Date of Finding of Non-responsibility: __

Basis of Finding of Non-Responsibility: ____

(Add additional pages as necessary)

5. Has any Governmental Entity or other governmental agency terminated or withheld a Procurement Contract with the individual or entity seeking to enter into the Procurement Contract due to the intentional provision of false or incomplete information? (Please circle):

No Yes

6. If yes, please provide details below.

Governmental Entity: __

Date of Termination or Withholding of Contract: ____

Basis of Termination or Withholding: _

(Add additional pages as necessary)

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7**BY EXECUTING THIS PROPOSAL, THE CONTRACTOR AGREES TO:**

1. Perform all work listed in accordance with the Contract Documents including all amendments, (found at <https://www.dot.ny.gov/doing-business/opportunities/const-notice>) , at the unit prices bid; subject to the Changed Conditions provisions if applicable;
2. All the terms and conditions of the non-collusive bidding certifications required by §139-d of the State Finance Law;
3. Certification of Specialty Items category selected, if contained in this proposal;
4. Certification of any other clauses required by this proposal and contained herein.
5. For Federal-Aid contracts only, Certification, under penalty of perjury, as to the current history regarding suspensions, debarments, voluntary exclusions, determinations of ineligibility, indictments, convictions or civil judgments required by *FHWA Form 1273 "Required Contract Provisions Federal-Aid Construction Contracts- Section X - Compliance with Governmentwide Suspension and Debarment Requirement"* under 2 CFR Part 180..
6. Certifies that all information provided to the Department with respect to the requirements contained in State Finance Laws §139j and §139k is complete, true and accurate.
7. Affirm, under penalty of perjury, that all the responses provided to the Department with respect to its submitted Form CCA-2 *New York State Vendor Responsibility Questionnaire For-Profit Construction*, are complete, true, and accurate, and further affirms and acknowledges that it must remain a responsible contractor throughout the duration of the contract, in accordance with §105-05 *Vendor Responsibility*.

Dated _____, 20____

Legal Name of person, firm or corporation

By _____
Signature (Title)

(Acknowledgment of individual contractor)

STATE OF NEW YORK

County of _____ ss.:

On this _____ day of _____ 20____, before me personally came _____
to me known and known to me to be the person described in and who executed the foregoing instrument,
and acknowledged that she/he executed the same.

Notary Public

(Acknowledgment of co-partnership contractor)

STATE OF NEW YORK

County of _____ ss.:

On this _____ day of _____ 20____, before me personally came _____
to me known and known to me to be the person who executed the foregoing instrument, who being by me
duly sworn, did for himself/herself depose and say that he/she is a member of the partnership of
_____, consisting of himself/herself and _____,
and that he/she executed the foregoing instrument in the firm name of _____,
and that he/she had authority to sign same, and did duly acknowledge to me that she/he executed the same
as the act and deed of said firm for the uses and purposes mentioned therein.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Notary Public

(Acknowledgment of contractor, if a corporation)

STATE OF NEW YORK

County of ss.:

On this _____ day of _____ 20____, before me personally came _____
to me known and known to me to be the person, who being duly sworn, did depose and say that she/he
resides in _____, that she/he is the _____, of the
_____, the corporation described in and which executed the foregoing instrument;
and that she/he signed her/his name thereto by order of the Board of Directors of said Corporation.

Notary Public

(Acknowledgment of contractor, if a Joint Venture)

A bidder that is a Joint Venture shall include a separate, signed and notarized copy of the acknowledgment page for each party in the joint venture.

Please Complete Information Requested Below:

The P.O. address of the bidder is:

_____ (Street) Federal Identification No _____

_____ Contact Person _____

_____ Phone No. () _____

City, State and Zip Code

If a Partnership

Name	Address

If a Corporation

Name	Address
_____, President	_____
_____, Secretary	_____
_____, Treasurer	_____

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

SECTION 103 CONTRACT AWARD AND EXECUTION

103-01 CONTRACT AWARD. The contract award will be made only to the lowest responsible bidder as will best promote the public interest as provided by Section 38 of the Highway Law. The lowest bid will be determined by the Commissioner on the basis of gross sum for which the entire work will be performed, arrived at by a correct computation of all contract pay items specified in the proposal, at the unit prices stated in the proposal. If there is any discrepancy between the hard copy and electronic format of itemized proposals published by the Department, in either the contract pay items or quantities, the Department will evaluate the bids based only on that portion that is common to all formats. The Department reserves the right to reject any or all bids in the best interest of the State pursuant to Section 38 (4) of the Highway Law.

The Department reserves the right to reject any proposal deemed non-responsive, or any contractor deemed non-responsive, and then, pursuant to Section 38 of the Highway Law, award to other than the low bidder, or waive minor informalities if, in its opinion, the best interest of the State will thereby be promoted.

The Commissioner reserves the right to reject any proposal in which any of the bid prices are unbalanced to the potential detriment of the Department. An unbalanced bid is considered to be one containing lump sum or unit bid prices which do not reflect reasonable actual costs plus a reasonable proportionate share of the bidder's anticipated profit, overhead costs, and other indirect costs which are anticipated for the performance of the work in question.

In accordance with Section 140 of the State Finance Law, whenever a bid deposit is required, a bidder may withdraw its bid if no award of the contract is made within 45 days after the receipt of the bids, and upon such withdrawal, its deposit will be returned. The notice of withdrawal shall be made in writing and addressed to the Contract Management Bureau.

As a condition of award, the Contractor shall submit a completed Form CCA-2, *New York State Vendor Responsibility Questionnaire - For Profit Construction* to the Contract Management Bureau. If requested by the Department, the bidder shall present additional evidence of ownership, corporate structure, ability and financial standing, as well as a statement as to equipment. Contracting corporations which are chartered in states other than New York, as well as individuals or firms doing business under fictitious names, shall register with the NYS Department of State, authorizing them to conduct business in New York State prior to contract award.

Contract award of a joint venture proposal will place upon the joint venture participants complete liability, jointly and individually, for contract performance.

A. A+B Bidding. For contracts subject to A+B Bidding, the lowest bid will be determined by the Commissioner on the basis of the gross sum, which will be arrived at by a correct computation of all contract pay items specified in the proposal at the unit prices stated in the proposal (A portion), plus the total number of calendar days proposed by the bidder to complete the portion of work to which the incentive/disincentive is applicable, times the unit cost (B portion).

B. Structural Painting. For contracts containing structural paint removal and painting work in accordance with §105-03B. *Structural Painting*, as a condition of award, if the Apparent Low Bidder is not SSPC certified or currently approved by the Department in lieu of SSPC certification, the Apparent Low Bidder shall submit a written notice to the Office of Contract Management, within 7 calendar days after bid letting, identifying the certified or approved firm that will perform structural paint removal operations and painting work. This shall not relieve the Contractor from complying with the requirements of §108-05 *Subletting or Assigning the Contract* regarding limitations on subcontracting.

103-02 EXECUTION OF CONTRACT. The person or persons whose proposal is accepted shall execute the contract and comply in all respects with the statutory provisions relating to the contract within ten days of the date of the delivery of the contract form. A sample of the standard contract agreement is

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

shown in §103-06 *Sample Form of Contract Agreement*. In case of failure or refusal on the part of the bidder to deliver the duly executed contract to the Department within the ten day period herein mentioned, the amount of the deposit made may be forfeited and paid to the New York State Department of Transportation.

All of the following sections which have the word "Sample" in the title are samples of the contract documents executed by the Contractor as a part of contract award. The executed contract documents control and have precedence over the samples presented herein.

103-03 CONTRACT BONDS. The Contractor shall provide the State with a Faithful Performance Bond and a Labor and Material Bond from sufficient sureties listed on the US Department of the Treasury listing of Approved Sureties (Treasury Department Circular 570) and licensed to do business in New York State, and with a minimum rating by A.M. Best of (A-) in the "Best's Key Rating Guide." Treasury Department Circular 570 can be found on the US Department of the Treasury website at www.fms.treas.gov/c570/index.html. The Contractor shall procure and deliver bonds to the State and maintain them at its own expense and without expense to the State. The Surety or Sureties shall append a statement of its financial condition and a copy of the resolution authorizing the execution of Bonds by officers of the Company to the bond(s).

A. Faithful Performance Bond. The Contractor shall provide a bond in the form prescribed by the Commissioner, shown in §103-07 *Sample Form of Faithful Performance Bond*, with sufficient sureties, approved by said Commissioner, guaranteeing that the Contractor will perform the work in accordance with the terms of the contract documents, and that it will commence and complete the work within the time prescribed in the contract, and that it will provide against direct or indirect damages that shall be suffered or claimed on account of such construction or improvement, during the time thereof, until the final agreement is signed by the Contractor. The amount of the Faithful Performance Bond shall be 100% of the amount of the total contract bid price.

B. Labor And Material Bond. The Contractor shall provide a bond in the form prescribed by the Commissioner, shown in §103-08 *Sample Form of Labor and Material Bond*, with sufficient sureties, approved by said Commissioner, guaranteeing prompt payment of monies due all persons supplying the Contractor or Subcontractor with labor and materials employed and used in carrying out the contract, which bond shall inure to the benefit of the persons supplying such labor and materials, until the final agreement is signed by the Contractor. The amount of the Labor and Material Bond shall be 100% of the amount of the total contract bid price.

103-04 CANCELING AWARD. The Department reserves the right to reject all proposals and advertise for new proposals, or proceed to do the work otherwise, if, in its opinion, the best interest of the State will thereby be promoted.

103-05 PARTNERING. It is the Department's policy to use the principles of partnering to guide the management of construction contracts and the construction program, within the parameters covered by the laws, regulations and other policies that govern work in the public sector.

The partnering principles are intended to promote quality through continuous improvement at all stages of construction. The goal of the Department is to complete each contract in the most efficient, timely, safe, and cost effective manner, to the mutual benefit of the Contractor and the Department, meaning a quality contract delivered on time, within budget, and without significant disputes.

Partnering is defined as those actions taken to include all parties with an appropriate and vested interest in the management of a transportation project such that it is completed in the most efficient, timely, safe, and cost effective manner for the mutual benefit of all concerned. Those actions include, but are not limited to, communication, organization, establishing goals, continuous improvement, problem identification, conflict resolution, and managing change. Interested parties may include, but are not limited to, the Department, the Contractor, Subcontractors, Fabricators, Material Suppliers, the

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

community within which the project is constructed, the community served by the project, Federal, State and local government or other public agencies, and utilities.

None of the actions identified as part of, or taken in the course of partnering shall be construed to alter, modify, delete or waive any of the provisions or requirements of the Department's Specifications or any applicable laws or regulations.

The Department with the Contractor will manage each contract in a cooperative manner utilizing the following principles of partnering:

- establish communications with all involved parties early in the partnering process;
- establish a relationship of shared trust, equity, and commitment;
- develop strategies for identifying mutual goals;
- develop strategies for timely communications and decision making;
- establish process for timely response to changes or variations in field conditions;
- solve potential problems, at the lowest level, before they create a negative impact;
- encourage the use of products, technology and processes that provide a demonstrated level of improved quality; and
- develop a plan for periodic joint evaluation based on mutually agreed goals.

The specifications are to be implemented in an equitable fashion that recognizes the problems that are inherent in construction, addresses the different-than-expected field conditions, resolves disputes in open communications manner, and makes contract adjustments in a timely, and fair manner consistent with the terms of the contract. These specifications are intended to fairly allocate risk, resulting in a balanced contractual approach to risk-sharing. The Department will provide information relevant to preparation of a bid for the contract, and in connection with submission of its bid, the Contractor has the right to rely on information provided by the Department in the contract documents.

A. Formal Partnering. Generally, an item for formal partnering will be included in the contract proposal for large, more complex contracts. In addition, the Department will accept requests by successful low bidders to incorporate formal partnering on any contract that requires coordination and cooperation with third parties such as Subcontractors, suppliers, utility companies and railroads, or as otherwise desired by the Contractor.

B. Informal Partnering. The Department is willing to informally partner with the Contractor on all other contracts. Informal partnering is defined as the application of partnering principles to the management of the contract by the mutual agreement of the interested parties. Although the principles of partnering are to be applied, there is no fixed organization or structure adopted for that purpose.

103-06 SAMPLE FORM OF CONTRACT AGREEMENT.

STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION AGREEMENT

Contract No.

County(ies)

THIS AGREEMENT, made by and between THE PEOPLE OF THE STATE OF NEW YORK, hereinafter referred to as "State", acting by and through the Department of Transportation, pursuant to the Highway Law, and

- ☐ an individual conducting business as
- ☐ a partnership, consisting of

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

- ☐ a corporation organized and existing under the laws of the State of _____
- ☐ a limited liability company (LLC), organized under the laws of the State of _____,

the location of whose principal office is _____ hereinafter called the "Contractor".

WITNESSETH: That the State and the Contractor, for the consideration hereinafter named agree as follows:

ARTICLE 1. WORK TO BE DONE. The Contractor shall (a) furnish all the materials, appliances, tools and labor of every kind required, and construct and complete in the most substantial and skillful manner, the construction, improvement or reconstruction of the project on or before the completion date of _____, 20 ____ as further described in Article 4, and as generally identified and shown on the contract plans entitled:

Contract Description

F.A. PROJ. NO. _____

In the County(ies) listed above which constitutes Contract D _____

in accordance with the "Standard Specifications" of the New York State Department of Transportation, which contain the information for bidders; proposal form, contract agreement, and bonds; and payment Items; and (b) do everything required by the Contract and/or Contract Documents as defined herein.

The Contractor further agrees their bid proposal is not based upon the assumption that any specifications, traffic restrictions, scheduling or phasing/staging requirements will be waived; an extension of Contract Completion Date will be granted; a labor dispensation will be granted; substitution of non-approved products, alternatives or claimed functional equivalents for specified construction materials and methods will be allowed; or any Value Engineering Change Proposals will be approved.

ARTICLE 2. DOCUMENTS FORMING THE CONTRACT. The Contract (and Contract Documents) shall be deemed to include the advertisement for proposals; the contract proposal, including Special Notes and Special Specifications contained therein; the contractor's proposal; the Equal Employment Opportunity (EEO) participation goals; the Disadvantaged/Minority/Women's Business Enterprise (D/M/WBE) participation goals; the contract agreement; the base line data; the "Standard Specifications" including all addenda thereto identified in the contract proposal; the Standard Sheets; the plans; any amendments issued prior to the date of proposal submission, and all provisions required by law to be inserted in the contract whether actually inserted or not. Whenever separate publications are referenced in the Contract Documents it shall mean those, as amended, which are current on the date of advertisement for bids.

ARTICLE 3. EXAMINATION OF DOCUMENTS AND SITE. The Contractor agrees that before making its proposal it carefully examined the contract documents, together with the site of the proposed work, as well as its surrounding territory, and is informed regarding all of the conditions affecting the work to be done and labor and materials to be furnished for the completion of this contract, including the existence of poles, wires, pipes and other facilities and structures of municipal and other public service corporations on, over or under the site, except latent conditions that meet the requirements of §104-03 *Differing Site Conditions*, and that its information was secured by personal and other investigation and research.

ARTICLE 4. DATE OF COMPLETION. The Contractor further agrees that it will begin the work herein embraced within ten days of the effective date hereof, unless the consent of the State, in writing, is given to begin at a later date, and that it will prosecute the same so that it shall be entirely completed and performed on or before the completion date shown in Article 1.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

No extension beyond the date of completion fixed by the terms of this contract shall be effective unless in writing signed by the State. Such extension shall be for such time and upon such terms and conditions as shall be fixed by the State, which may include the assessment of liquidated damages and a charge for engineering and inspection expenses actually incurred upon the work, including engineering and inspection expenses incurred upon the work by railroad companies on contracts for grade crossing elimination. Notice of application for such extension shall be filed with the Regional Director of the Region within which the highway under construction is located at least fifteen days prior to the date of completion fixed by the terms of this agreement.

ARTICLE 5. ALTERATIONS AND OMISSIONS. The said work shall be performed in accordance with the true intent and meaning of the contract documents without any further expense of any nature whatsoever to the State other than the consideration named in this agreement.

The State reserves the right, at any time during the progress of the work, to alter the plans or omit any portion of the work as it may deem reasonably necessary for the public interest- making allowances for additions and deductions with compensation made in accordance with the Standard Specifications, for this work without constituting grounds for any claim by the contractor for allowance for damages or for loss of anticipated profits, or for any variations between the approximate quantities and the quantities of the work as done.

ARTICLE 6. NO COLLUSION OR FRAUD. The Contractor hereby agrees that the only person or persons interested as principal or principals in the bid or proposal submitted by the Contractor for this contract are named therein, and that no person other than those mentioned therein has any interest in the above mentioned proposal or in securing of the award, and that this contract has been secured without any connection with any person or persons other than those named, and that the proposal is in all respects fair and was prepared and the contract was secured without collusion or fraud and that neither any officer nor employee of the Department of Transportation has or shall have a financial interest in the performance of the contract or in the supplies, work or business to which it relates, or in any portion of the profits thereof. (See also §139-a and §139-b of the State Finance Law referred to in the Standard Specifications which are made a part of this contract.)

ARTICLE 7. CONTRACT PAYMENTS. As the work progresses in accordance with the contract and in a manner that is satisfactory to the State, the State hereby agrees to make payments to the Contractor therefore, based upon the proposal attached hereto and made a part hereof, as follows: The State shall once in each month and on such days as it may fix, determine the quantity of work completed and of material which has actually been put in place in accordance with the terms and conditions of the contract, during the preceding month, and compute the value thereof and pay to the Contractor the monies due as provided in §38(7) of the Highway Law. No monthly payment shall be rendered unless the value of the work completed equals 5% of the contract amount or \$1,000, whichever is the lesser. Semimonthly payments may be rendered provided (a) the value of the work performed in two successive weeks is more than \$50,000 or (b) the Commissioner of Transportation deems it to be in the best interests of the State to do so. The Contractor shall not hold any retainage from any Subcontractor.

ARTICLE 8. NO PAYMENT DUE TO CONTRACTOR'S NON-COMPLIANCE. It is further agreed that so long as any lawful or proper direction concerning the work or material given by the Commissioner of Transportation, or his/her representative, shall remain uncomplied with, the Contractor shall not be entitled to have said contract payment processed, nor shall any contract payment(s) be processed for work done or material furnished until such lawful or proper direction aforesaid has been fully and satisfactorily complied with.

ARTICLE 9. FINAL ACCEPTANCE OF WORK. When in the opinion of the Regional Director a Contractor has fully performed the work under the contract, the Regional Director shall recommend to the Commissioner of Transportation the acceptance of the work so completed. If the Commissioner accepts

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

the recommendation of the Regional Director, he/she shall thereupon by letter notify the Contractor, with copies to other interested parties, of such acceptance. Prior to the final acceptance of the work by the Commissioner or his/her designee, the contract work may be inspected, accepted and approved by other agencies and/or municipalities who will have jurisdiction of the work after final acceptance.

Final acceptance shall be final and conclusive except for defects not readily ascertainable by the Department, actual or constructive, fraud, gross mistakes amounting to fraud or other errors which the Contractor knew or should have known about as well as the Department's rights under any warranty or guarantee. Final acceptance may be revoked by the Department at any time prior to the issuance of the final check by the Comptroller upon the Department's discovery of such defects, mistakes, fraud or errors in the work.

ARTICLE 10. FINAL PAYMENT. After the final acceptance of the work, the Engineer shall prepare a final agreement of the work performed and the materials placed and shall determine the value of such work and materials under and according to the terms of the contract. This final agreement shall be certified, as to its correctness, by the Engineer. Upon approval of such final agreement by the Regional Director, it shall be submitted to the Commissioner for final approval. The right, however, is hereby reserved to the Commissioner to reject the whole or any portion of the final agreement, should the said certificate of the Engineer be found or known to be inconsistent with the terms of the agreement or otherwise improperly given. All certificates upon which partial payments may have been made shall be subject to correction in the final certificate or final agreement.

ARTICLE 11. RIGHT TO SUSPEND WORK AND CANCEL CONTRACT. It is further mutually agreed that if at any time during the prosecution of the work the Commissioner of Transportation shall determine that the work upon the contract is not being performed according to the contract or for the best interest of the State, the execution of the work by the Contractor may be temporarily suspended by the Commissioner of Transportation, who may then proceed with the work under his/her own direction in such manner as will accord with the contract specifications and be for the best interests of the State; or he/she may terminate the Contractor's employment under the contract while it is in progress, and thereupon proceed with the work, in affirmance of the contract, by contract negotiated or publicly let, by the use of his/her own forces, by calling upon the surety to complete the work in accordance with the plans and specifications or by a combination of any such methods; or he/she may cancel the contract and either readvertise or relet as provided in Section 38 of the Highway Law, or complete the work under its own direction in such a manner as will accord with the contract specifications and be for the interests of the State; any excess in the cost of completing the contract beyond the price for which it was originally awarded shall be charged to and paid by the Contractor failing to perform the work or its surety; all in pursuance of the provisions of Section 40 of the Highway Law.

Whenever the State determines to suspend or stop work under the contract, a written notice sent by mail to the Contractor at its address and to the sureties at their respective addresses, shall be sufficient notice of its action in the premises.

ARTICLE 12. DETERMINATION AS TO VARIANCES. In any case of any ambiguity in the plans, specifications or maps, or between any of them, the matter must be immediately submitted to the Commissioner, who shall adjust the same, and his/her decision in relation thereto shall be final and conclusive upon the parties.

ARTICLE 13. SUCCESSORS AND ASSIGNS. This agreement shall bind the successors, assigns and representatives of the parties hereto.

ARTICLE 14. INTERNATIONAL BOYCOTT PROHIBITION. In accordance with §139-h of State Finance Law, the Contractor hereby promises, asserts and represents that neither the Contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated, is participating or shall participate in an international boycott in violation of the provisions of the United States Export

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Administration Act of 1969, as amended, or the United States Export Administration Act of 1979, or the effective Regulations of the United States Department of Commerce promulgated under either act.

It is understood further that the State in awarding a contract does so in material reliance upon the promise and representation made by the Contractor in the forgoing paragraph and that such contract shall be rendered forfeit and void by the State Comptroller if subsequent to the bid execution date, the Contractor or such owned or affiliated person, firm, partnership or corporation has been convicted of a violation of the aforesaid Acts or Regulations or has been found upon final determination of the United States Commerce Department or any other appropriate agency of the United States to have violated such Acts or Regulations.

The Contractor agrees to and shall notify the Commissioner of Transportation, the Director of the Contract Management Bureau and State Expenditures in the Office of the State Comptroller of any such conviction or final determination of violation within five (5) days thereof.

ARTICLE 15. WRITTEN NOTICES.

1. All notices permitted or required hereunder shall be in writing and shall be transmitted either:
 - a. via certified or registered United States mail, return receipt requested;
 - b. by facsimile transmission;
 - c. by personal delivery;
 - d. by expedited delivery service; or
 - e. by e-mail.

Such notices shall be addressed to the individuals or titles named in the contract documents, or which are designated by the Contractor or the State at the pre-construction meeting, or which are designated by the State or the Contractor from time to time during the course of the Contract pursuant to Paragraph 3 herein.

2. Any such notice shall be deemed to have been given either at the time of personal delivery or, in the case of expedited delivery service or certified or registered United States mail, as of the date of first attempted delivery at the address and in the manner provided herein, or in the case of facsimile transmission or email, upon receipt.

3. The parties may, from time to time, specify any new or different address in the United States as their address for purpose of receiving notice under this Agreement by giving fifteen (15) days written notice to the other party sent in accordance herewith. The parties agree to mutually designate individuals as their respective representatives for the purposes of receiving notices under this Agreement. Additional individuals may be designated in writing by the parties for purposes of implementation and administration/billing, resolving issues and problems and/or for dispute resolution.

ARTICLE 16. CONTRACT PAYMENTS. The Contractor shall provide complete and accurate information and supporting documentation required by the Contract, the Agency and the Office of the State Comptroller (OSC). Payment will only be rendered electronically, unless payment by paper check is expressly authorized by the Commissioner, in the Commissioner's sole discretion, due to extenuating circumstances. Such electronic payment will be made in accordance with ordinary State procedures and practices from the Statewide Financial System (SFS). The Contractor shall comply with OSC procedures to authorize electronic payments. Authorization forms are available at OSC's website at www.osc.state.ny.us/epay/index.htm, by e-mail at epunit@osc.state.ny.us, or by telephone at 855-233-8363. A Contractor that has not previously performed work for New York State will be provided a SFS Vendor ID. After obtaining a SFS Vendor ID, the Contractor shall contact the OSC Vendor Management Unit at www.osc.state.ny.us/vendor_management/index.htm to set up an eSupplier account, in order to track and manage payments. The Contractor will not receive payment under this Contract if it does not comply with the State Comptroller's electronic payment procedures, except where the Commissioner has expressly authorized payment by paper check as set forth above.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

ARTICLE 17. SUPPLEMENTAL TITLE VI PROVISIONS (CIVIL RIGHTS ACT). During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (herein after referred to as the "Contractor") agree as follows:

- (1) Compliance with Regulations. The Contractor shall comply with the Regulation relative to nondiscrimination in federally-assisted programs of the Department of Transportation of the United States 49 Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- (2) Nondiscrimination. The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, national origin, sex, age, and disability/handicap, or income status in the selection and retention of Subcontractors, including procurements of materials and leases of equipment. The Contractor shall not participate either directly or indirectly in the discrimination prohibited by 49 CFR 21.5, including employment practices when the contract covers a program set forth in 49 CFR 21 Appendix B.
- (3) Solicitations for Subcontractors, Including Procurements of Materials and Equipment. In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential Subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this contract and 49 CFR 21 relative to nondiscrimination on the grounds of race, color, or national origin, sex, age, and disability/handicap.
- (4) Information and Reports. The Contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information and its facilities as may be determined by NYSDOT or the FHWA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the Contractor shall so certify to NYSDOT, or the FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.
- (5) Sanctions for Noncompliance. In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, NYSDOT shall impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to: (a.) withholding of payments to the Contractor under the contract until the contractor complies, and/or (b.) cancellation, termination or suspension of the contract, in whole or in part.
- (6) Incorporation of Provisions: The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

The Contractor shall take such action with respect to any subcontract or procurement as NYSDOT or the FHWA may direct as a means of enforcing such provisions, including sanctions for noncompliance, provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation by a subcontractor or supplier as a result of such direction, the Contractor may request NYSDOT to enter into such litigation to protect the interests of NYSDOT; and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

[Appendix A, Standard Clauses for All NYS Contracts inserted here]

IN WITNESS WHEREOF, This agreement has been executed by the State, acting by and through the Commissioner of Transportation, and the Contractor or his appointed representative, who has executed this agreement on the day and year written below.

[Contractor Firm Name]

Printed Name, Title)

Signature

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7Agency Certification(s)

The New York State Department of Transportation has undertaken an affirmative review of the proposed contractor's responsibility in accordance with the standards outlined Comptroller's Bulletin G-221, and based upon such review, has reasonable assurance that the proposed contractor is responsible.

All information provided with respect to the requirements contained in state Finance Laws 139J and 139K is complete, true and accurate. All requirements for state Finance Laws 139J and 139K have been met and the appropriate documentation is attached.

"In addition to the acceptance of this contract, I also certify that original copies of this signature page will be attached to all other exact copies of this contract."

Department of Transportation

Recommended by:

Approved by:

Date

ATTORNEY GENERAL:**FOR STATE COMPTROLLER:**

Approved _____

Approved _____

THIS CONTRACT IS NOT TO BE EXECUTED OR BECOME EFFECTIVE UNTIL IT SHALL FIRST BE APPROVED BY THE STATE COMPTROLLER AND FILED IN HIS OFFICE. (Section 112, State Finance Law.)

(Acknowledgment of contractor, if a Joint Venture)

A Joint Venture shall include a separate, signed and notarized copy of the acknowledgment page for each party in the joint venture.

(Acknowledgment of individual contractor)

STATE OF NEW YORK ss. :

COUNTY OF _____

On this ____ day of _____ 20 ____, before me personally came _____ to me known and known to me to be the person described in and who executed the foregoing instrument, and acknowledged that he/she executed the same.

Notary Public

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

(Acknowledgment of co-partnership contractor)

STATE OF NEW YORK ss. :
COUNTY OF _____

On this ____ day of _____ 20 ____, before me personally came _____ to me known and known to me to be the person who executed the foregoing instrument, who, being duly sworn by me, did for himself/herself depose and say that he/she is a member of the firm of _____, consisting of himself/herself and _____ and that he/she executed the foregoing instrument and that he/she had authority to sign same, and he/she did duly acknowledge to me that he/she executed the same as the act and deed of said firm for the uses and purposes mentioned therein.

Notary Public

(Acknowledgment of contractor, if a corporation)

STATE OF NEW YORK ss. :
COUNTY OF _____

On this ____ day of _____ 20 ____, before me personally came _____ to me known, and known to me to be the person who being duly sworn, did depose and say that he/she resides in _____ that he/she is the _____ of _____ the corporation described in and which executed the foregoing instrument; and that he/she signed his/her name thereto by order of the Board of Directors of said Corporation.

Notary Public

(Acknowledgment of contractor, if a limited liability company)

STATE OF NEW YORK ss.:
COUNTY OF _____

On this ____ day of _____ 20 ____, before me personally came _____ to me known, and known to me to be the person who being duly sworn, did depose and say that he/she resides in _____; that he/she is the duly authorized member of the limited liability company described in and which executed the foregoing instrument; and that he/she executed the foregoing instrument on behalf of the limited liability company for the purposes set forth therein as the act and deed of said limited liability company.

Notary Public

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

103-07 SAMPLE FORM OF FAITHFUL PERFORMANCE BOND.

KNOW ALL PERSONS BY THESE PRESENTS, that (Name of Contractor)
(Address)

(hereinafter called the "Principal") and _____
a corporation created and existing under the laws of the State of _____ having its principal office in the City of _____ (hereinafter called the "Surety") are held and firmly bound unto the People of the State of New York (hereinafter called the "State"), by and through its Department of Transportation (hereinafter called the "Department"), in the full and just sum of [*Total Contract Bid Price or "A Portion" of Total Contract Bid Price (\$.....)*] good and lawful money of the United States of America, to the payment of which said sum of money, well and truly to be made and done the said Principal binds itself, its heirs, executors, administrators or assignees and the said Surety binds itself, its successors or assigns, jointly and severally, firmly by these presents:

WHEREAS, said Principal has entered into a certain written contract on the ____ day of _____, 20____, with the Department of Transportation, 50 Wolf Road, Albany, New York 12232.

(Project Description)

FA Project Number _____

In the county(ies) listed above, which constitutes Contract D _____

NOW, THEREFORE, the condition of this obligation is such that if the said Principal shall well, truly and faithfully perform the work in accordance with the terms of the contract and as said contract may be modified or amended, and with the plans and specifications, and will commence and complete the work within the time prescribed in the contract, and shall protect the said State against, and pay any excess of cost as provided in said contract, and all amounts, damages, costs and judgments which may be recovered against said State or its officers or agents of which the said State may be called upon to pay to any person or corporation by reason of any damages, direct or indirect, arising or growing out of the doing of said work, or the repair or maintenance thereof, or suffered or claimed on account of said public works contract during the time thereof or the manner of doing the same, or the neglect of the said Principal, or its agents, or servants, or the improper performance of the said work by the said Principal, or its agents, or servants, or from any other cause, then this obligation shall be null and void, otherwise to remain in full force and virtue.

In the event of a failure of performance of the contract by the Principal, which shall include, but not be limited to, any breach or default of the contract by the Principal, or in case said contract is forfeited by the Principal in the manner provided for in the contract and the said Surety, for value received, hereby stipulates and agrees, if requested to do so by the State, has the option to either remedy the default, or breach or forfeiture of the Principal or take charge and fully perform and complete the work, mentioned and described in said contract and specifications, pursuant to the terms, conditions and covenants thereof and as may be amended, at its own expense. The procedure by which the Surety undertakes to discharge its obligations under the bond shall be subject to the advance written approval of the Department. If the Surety completes the contract, it shall be paid for the actual items of work performed in accordance with the Principal's contract terms and prices. In this event the Surety assumes the rights and obligations of the Principal.

It shall be the duty of the Surety to give unequivocal notice in writing to the Department, within forty-five (45) days after receipt of written notice from the Department to the Surety, of the Surety's election to remedy default(s) or breach(es) or forfeiture(s) promptly or to perform and fully complete the contract promptly as provided herein, time being of the essence of this bond. In said notice of election, the Surety shall state the date on which the remedy or performance shall commence. During the period between the Department's notice and Surety's performance of the contract or remedy of the default, breach or forfeiture, the Surety shall be liable for and agrees to pay any and all reasonable and necessary costs as determined by the Department to maintain the contract site safe and convenient to the public.

It shall also be the duty of the Surety to give prompt notice in writing to the Department upon the completion of the remedy and/or correction of each breach or default or completion of the contract. The

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Surety shall not assert solvency of its Principal or its Principals denial of default as justification for its failure to give notice of election or for its failure to promptly remedy the breach or default or to complete the contract.

In the event the Surety shall fail to exercise either option or to act promptly then the Department shall give ten (10) days notice of such failure, both to Principal and Surety, and after the expiration of the 10 days the Department may cause the work to be completed pursuant to Section 40 of the Highway Law, and the Surety and the Principal shall be jointly and severally liable for the amount of excess cost of completing the contract work beyond the amounts remaining for this contract adjusted for the work actually performed. When the cost of completion of performance by the Obligee is estimated, the Principal and Surety shall pay, free from all liens and encumbrances, the State determined estimated completion costs above the funds remaining for this contract, to the Department within 30 days of receipt of the estimate. Adjustment of the Department's estimated completion cost will be made upon the Department's final acceptance of the work and appropriate refunds, if any, will be promptly made to the Surety. Any actual costs in excess of the estimated price shall be paid to the Department promptly on demand. Additionally, Principal and Surety shall be liable for any applicable liquidated and/or engineering costs or damages.

In addition, the said Principal and Surety further agree, as part of this obligation, to pay all damages of any kind to person or property that may result from a failure in any respect to perform and complete said contract including, but not limited to costs necessary to protect the traveling public or to avoid inconvenience to the traveling public, (liquidated damages as provided above) all repair and replacement costs necessary to rectify construction errors, architectural and engineering costs and fees, all consultant fees, all testing and laboratory fees, and all interest, legal fees and litigation costs incurred by the Department.

And the said Surety thereby stipulates and agrees that no change, extension, alteration, deduction or addition in or to the terms of the said contract or the plans or specifications accompanying the same, shall in any way affect the obligations of said Surety of its bond.

IN TESTIMONY WHEREOF, the said Principal has hereunto set his/her (their/its) hand and the said Surety has caused this instrument to be signed by its authorized officer, the day and year above written.

Signed and delivered this ____ day of _____, 20____, in the presence of:

[Contractor Firm Name]

Printed Name, Title)

Signature

SURETY

(Company)

Printed Name, Title of Authorized Officer

By: _____

(Signature)

(The Surety Company shall append a single copy of a statement of its financial condition and a copy of the resolution authorizing the execution of Bonds by officers of the Company to the bond(s).)

State Of New York Office of the Attorney General

I hereby approve the foregoing contract and bond as to form and manner of execution.

Attorney General

Date

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

(Acknowledgment of principal, unless it be a corporation)

STATE OF NEW YORK ss. :
 COUNTY OF _____

On this ____ day of _____ 20 ____, before me personally came _____
 to me known and known to me to be the person described in and who executed the foregoing instrument
 and acknowledged that he/she executed the same.

 Notary Public

(Acknowledgment of principal, if a corporation)

STATE OF NEW YORK ss. :
 COUNTY _____

On this ____ day of _____ 20 ____, before me personally came _____
 to me known and known to me to be the person, who being by me duly sworn, did depose and say that
 he/she resides in _____ that he/she is the _____ of
 _____ the corporation described in and which executed the foregoing
 instrument; and that he/she signed his/her name thereto by order of the Board of Directors of said
 Corporation.

 Notary Public

(Acknowledgment of contractor, if a limited liability company)

STATE OF NEW YORK ss.:
 COUNTY OF _____

On this ____ day of _____ 20 ____, before me personally came _____
 to me known, and known to me to be the person who being duly sworn, did depose and say that he/she
 resides in _____; that he/she is the duly authorized member of the limited
 liability company described in and which executed the foregoing instrument; and that he/she executed the
 foregoing instrument on behalf of the limited liability company for the purposes set forth therein as the
 act and deed of said limited liability company.

 Notary Public

(Acknowledgment of Surety Company)

STATE OF NEW YORK ss. :
 COUNTY OF _____

On this ____ day of _____ 20 ____, before me personally came _____
 to me known and known to me to be the person, who being by me duly sworn, did depose and say that
 he/she resides in _____, that he/she is the _____ of the
 _____ the corporation described in the foregoing instrument; and that
 he/she signed his/her name thereto by order of the Board of Directors of said corporation.

 Notary Public

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

103-08 SAMPLE FORM OF LABOR AND MATERIAL BOND.

KNOW ALL PERSONS BY THESE PRESENTS, that (Name of Contractor)

(Contractor Address)

(hereinafter called the "Principal") and the _____
a corporation created and existing under the laws of the State of _____ having its principal
office in the City of _____ (hereinafter called the "Surety"), are held and firmly
bound unto the People of the State of New York (hereinafter called the "State") by and through its
Department of Transportation (hereinafter called the "Department"), in the full and just sum of [*Total
Contract Bid Price or the "A Portion" of Total Contract Bid Price (\$.....)*] good and lawful money
of the United States of America, for payment of which said sum of money, well and truly to be made and
done, the said Principal binds itself, its heirs, executors and administrators, successors and assigns, and
the said Surety binds itself, its successors and assigns jointly and severally, firmly by these presents:

WHEREAS, said Principal has entered into a certain written contract, on the ____ day of
_____, 20____ with the Department of Transportation, 50 Wolf Road, Albany, New York 12232.

(Project Description)

FA Project Number _____

In the county(ies) listed above which constitutes Contract _____

NOW, THEREFORE, the condition of this obligation is such, that if the said Principal shall
promptly pay all monies due to all persons furnishing labor or materials to it or its Subcontractors in the
prosecution of the work provided for in said contract, then this obligation shall be void, otherwise to
remain in full force and effect;

Provided, however, that the Comptroller of the State of New York having required the said Principal
to furnish this bond in order to comply with the provisions of Section 137 of the State Finance Law, all
rights and remedies on this bond shall inure solely to such persons and shall be determined in accordance
with the provisions, conditions and limitations of said Section to the same extent as if they were copied at
length herein; and

Further, provided, that the place of trial of any action on this bond shall be in the county in which the
said contract was to be performed, or if said contract was to be performed in more than one county then in
any such county, and not elsewhere.

IN TESTIMONY WHEREOF, the said Principal has hereunto set his/her (their, its) hand and the
said Surety has caused this instrument to be signed by its authorized officer, the day and year above
written.

Signed and delivered _____ day of _____ 20____ in the presence of

[Contractor Firm Name]

Printed Name, Title)

Signature

SURETY

(Company)

By: _____
(Signature)

Printed Name, Title of Authorized Officer

(The Surety Company shall append a single copy of a statement of its financial condition and a copy of
the resolution authorizing the execution of Bonds by officers of the Company to the bond(s).)

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

(Acknowledgment of principal, unless it be a corporation)

STATE OF NEW YORK ss. :
 COUNTY OF _____

On this ____ day of _____ 20 ___, before me personally came _____
 to me known and known to me to be the person described in and who executed the foregoing instrument
 and acknowledged that he/she executed the same.

 Notary Public

(Acknowledgment of principal, if a corporation)

STATE OF NEW YORK ss. :
 COUNTY _____

On this ____ day of _____ 20 ___, before me personally came _____
 to me known and known to me to be the person, who being by me duly sworn, did depose and say that
 he/she resides in _____ that he/she is the _____ of
 _____ the corporation described in and which executed the foregoing
 instrument; and that he/she signed his/her name thereto by order of the Board of Directors of said
 Corporation.

 Notary Public

(Acknowledgment of contractor, if a limited liability company)

STATE OF NEW YORK ss.:
 COUNTY OF _____

On this ____ day of _____ 20 ___, before me personally came _____
 to me known, and known to me to be the person who being duly sworn, did depose and say that he/she
 resides in _____; that he/she is the duly authorized member of the limited
 liability company described in and which executed the foregoing instrument; and that he/she executed the
 foregoing instrument on behalf of the limited liability company for the purposes set forth therein as the
 act and deed of said limited liability company.

 Notary Public

(Acknowledgment of Surety Company)

STATE OF NEW YORK ss. :
 COUNTY OF _____

On this ____ day of _____ 20 ___, before me personally came _____
 to me known and known to me to be the person, who being by me duly sworn, did depose and say that
 he/she resides in _____. that he/she is the _____ of the
 _____ the corporation described in the foregoing instrument; and that
 he/she signed his/her name thereto by order of the Board of Directors of said Corporation.

 Notary Public

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

SECTION 104 - SCOPE OF WORK

104-01 WORK REQUIRED. The Contractor shall begin work within ten days of the date of the contract award notification by the Department, unless written consent of the Department is given to begin at a later date. Contract awards are posted by the Office of the State Comptroller on www.openbooknewyork.com. The Contractor shall perform all work enumerated under the terms of the contract and shall protect all adjoining properties, utility facilities and existing highway facilities within the right of way. The Contractor shall repair and/or replace any property, utility facility or highway facility damaged or destroyed by it or its employees through construction operations, within and adjacent to the right of way.

As soon as possible after the contract has been awarded, the Contractor shall contact the Regional Construction Engineer to schedule a preconstruction meeting. A preconstruction meeting is held with the Contractor and interested parties involved in the contract to discuss the contract scope, work plan and schedule and review administrative procedures necessary to begin work. A Contractor Principal, the Superintendent, Safety Officer, and others as appropriate typically attend. A separate Civil Rights meeting is frequently scheduled and conducted by the Regional Compliance Specialist (RCS) with the Contractor's Civil Rights representatives and others as required. The Regional Construction Engineer may waive a part of a preconstruction meeting for a Contractor with multiple contract awards.

The Contractor shall coordinate the work of its Subcontractors, Manufacturers, Fabricators and Material Suppliers. Their operations shall be arranged and conducted so that delays will be avoided. Where the work of the Contractor, or Subcontractors, overlaps or dovetails with that of other Contractors, materials shall be delivered and operations shall be conducted so as to carry on the work continuously in an efficient and workmanlike manner.

During the life of this contract, Utilities may make changes in their facilities. These changes may be made by the Utility employees or by contract within the limits of or adjacent to this contract and may be temporary and/or permanent.

Delays or oversights on the part of the Contractor, Subcontractors or Utilities in properly completing any work, thereby requiring the removal and replacement of work already in place, will not be the basis for a claim of extra compensation. Such work will be performed at the cost and expense of the responsible Contractor, Subcontractor or Utility. Reference is made to General Obligations Law §11-102 which concerns the interference and/or delay of the Contractor's progress of work by Utilities.

104-02 CHANGES, CONTINGENCIES, EXTRA WORK AND DEDUCTIONS. The provisions of Article 5, *Alterations and Omissions* of the contract agreement shall apply. Whenever the Department determines that from any unforeseen cause the terms of any contract should be altered to provide for changes, contingencies, extra work, or the deletion of work, a change order may be issued to the Contractor. Upon direction by the Department, the Contractor shall then promptly proceed with the Work in accordance with the pertinent specifications. Such changes in quantities and alterations shall not invalidate the contract nor release the Surety, and the Contractor shall perform the Work as altered.

No instructions, either written or verbal from any Department employee or agent shall be construed as an order for changes until receipt by the Contractor of written notification that a change order has been approved by the Department and filed by the Office of the State Comptroller (OSC), or written notification from the Engineer that changes in the work are eligible and authorized for payment in accord with Section 697 *Field Change Payment*. The Contractor may proceed with the work in advance of the approved change order if the Contractor has received an approved *Authorization of Extra Work*.

104-03 DIFFERING SITE CONDITIONS. In accordance with 23 CFR 635.109(a)(1):

During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

conditions shall promptly notify the other party of the specific differing site conditions before the site is further disturbed and before the affected work is performed.

Upon written notification, the Engineer will investigate the site conditions, and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding anticipated profits, will be made and the contract modified in writing accordingly. The Engineer will notify the Contractor, of the determination whether or not an adjustment to the contract is warranted.

No contract adjustment which results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice.

The Department will administer the above Federal regulations as follows:

During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, the party discovering such conditions shall promptly notify the other party of the specific differing site conditions before the site is further disturbed and before the affected work is performed, with subsequent written notice to be provided later. The Contractor shall comply with the notice and recordkeeping provisions of §104-06 *Notice and Recordkeeping*.

The Contractor or the State, as the case may be, must make written notice to the other party of the existence of apparent subsurface or latent physical conditions if that party wishes to adjust the contract price or time of performance, including direct costs and/or time related compensation, if applicable. Such notice shall be given within 15 calendar days of the time at which the party had knowledge, or should have had knowledge of the differing site condition. The Department will have no liability and no adjustment will be made for any damages which accrued more than 15 calendar days prior to the filing of such a notice with the Engineer.

Upon written notice, the Engineer will investigate the site conditions, and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of the work, an adjustment, excluding anticipated profits, will be made to the contract. The Engineer will make an initial response in writing to the Contractor, within 21 calendar days, with a determination whether or not an adjustment to the contract is warranted. Situations requiring examination of the site or input from other Department personnel may require additional time to resolve. No contract adjustment will be allowed unless the Contractor has provided the required written notice, or written notice was provided to the Contractor by the State.

If an agreement on an adjusted price has not been reached before the work begins, the Contractor shall keep daily records and make reports of all labor, material and equipment used in connection with such work and the cost thereof as specified in §109-05C. *Force Account Reports*. Compensation for increased costs of the work resulting from the differing site conditions will be made in accordance with §109-05 *Extra Work and Time Related Compensation*. Compensation for time related costs, if any, will be made in accordance with §109-05D. *Time Related Dispute Compensation*.

104-04 SIGNIFICANT CHANGES IN THE CHARACTER OF WORK. In accordance with 23 CFR 635.109(a)(3):

The Engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the Surety, and the Contractor agrees to perform the work as altered.

If the alterations or changes in quantities significantly change the character of work under the contract, whether such alterations or changes are in themselves significant changes in the character of work, or by affecting other work cause such other work to become significantly different in character, an adjustment, excluding anticipated profits, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made by the Department, either for or against the Contractor, in such amount as determined to be fair and equitable.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for as provided elsewhere in the contract.

The term "significant change" shall be construed to apply only to the following circumstances: when the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction; or when a Major Item of work, as defined elsewhere in the contract, is increased in excess of 125 percent, or decreased below 75 percent of the original contract quantity. Any allowance for a change in unit price shall apply only to that portion of work in excess of 125 percent of the original contract item quantity, or in the case of a decrease below 75 percent, to the actual amount of work performed.

The Department will administer the above Federal regulations as follows:

The Department may make, in writing, at any time during the work, any necessary changes in quantities and alterations to the work in order to satisfactorily complete the project. If the Contractor or the Department discovers a change that constitutes a significant change in the character of work as defined below, the party discovering the change shall promptly provide the other party written notice of the significant change in the character of work before additional work is performed. The Contractor shall comply with notice and recordkeeping provisions of §104-06 *Notice and Recordkeeping*.

The Contractor or the State, as the case may be, must make written notice to the other party of the existence of an apparent significant change in the character of work if that party wishes to adjust the contract price or time of performance, including direct costs and/or time related compensation, if applicable. Such notice shall be given within 15 calendar days of the time at which the party had knowledge, or should have had knowledge of an event, matter or occasion which results in a significant change in the character of work. The Department will have no liability and no adjustment will be made for any damages which accrued more than 15 calendar days prior to the filing of such a notice with the Engineer.

Upon written notice, the Engineer will investigate the changes and if it is determined that the alterations or changes in quantities significantly change the character of work, whether such alterations or changes are in themselves significant changes in the character of work, or by affecting other work, cause such other work to become significantly different in character, an adjustment, excluding anticipated profits, will be made to the contract. The Engineer will make an initial response in writing to the Contractor, within 21 calendar days, with a determination whether or not an adjustment to the contract is warranted. Situations requiring examination of the site or input from other Department personnel may require additional time to resolve. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made by the Department, either for or against the Contractor, in such amount as determined to be fair and equitable. No contract adjustment will be allowed unless the Contractor has provided the required written notice, or written notice was provided to the Contractor by the State.

If an agreement on an adjusted price has not been reached before the work begins, the Contractor shall keep daily records and make reports of all labor, material and equipment used in connection with such work and the cost thereof as specified in §109-05C. *Force Account Reports*.

Compensation for increased costs of the work resulting from significant changes in the character of work will be made in accordance with §109-05 *Extra Work and Time Related Compensation*. Compensation for time related costs, if any, will be made in accordance with §109-05D. *Time Related Dispute Compensation*.

A. Character of Work. The term "significant change" shall be construed to apply only when the character of the work differs materially in kind or nature from that involved or included in the original proposed construction.

B. Major Items. The term "significant change" shall be construed to apply to Major Items (as defined in §101-02 *Definitions of Terms*) only when the quantity of a Major Item is more than 125%, or is less than 75% of the original contract quantity. Any allowance for a change in the unit price shall apply only to that portion of work in excess of 125% of the original contract item quantity, or to

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

the actual amount of work performed if the quantity decreases below 75% of the original contract item quantity. The Contractor or the State, as the case may be, must make written notice to the other party of the "significant change" in the quantity of a major item if that party wishes to adjust the contract price or time of performance. Knowledge of a "significant change" in quantity could result from receipt of a change order (approved or unapproved), a letter directing a change in the contract work, review of plan details and estimates, review of work completed or progress payment quantities, or a combination of the above. Payment for major items will be limited in accordance with §109-02 *Payment for Altered Quantities*.

C. Minor Items. The term 'significant change' shall be construed to apply to Minor Items (as defined in §101-02 *Definitions of Terms*) only when extra work both (1) increases the quantity of a Minor Item to more than 200% of the original contract quantity and (2) results in an increase of more than \$5,000 from the original contract amount. Any allowance for a change in the unit price shall apply only to that portion of work both in excess of 200% of the original contract item quantity, and in excess of \$5,000 greater than the original contract amount.

D. Composite Items. Composite items, for the purposes of this subsection, consist of rock and non-rock components, and are limited to unclassified excavation and trench and culvert excavation identified on the Earthwork Summary Sheets. The term "significant change" shall be construed to apply only if the composite item is a Major Item, any individual component of the composite is less than 75% or more than 125% of the quantity stated in the Earthwork Summary Sheet used by the Department in preparing the contract, and the reasonable costs of the composite item either increases or decreases as a result of the change. The adjustment in payment shall be based on variance in quantity of the individual components from the quantity stated in the Earthwork Summary Sheet. For contracts containing Major Items of unclassified excavation and/or trench and culvert excavation, the Contractor shall submit, at the request of the Engineer, its price breakdown of the bid price of the composite item for the rock and non-rock components.

E. Fixed Quantity Items. Certain items of work may be "fixed quantity" items, and payment will be restricted to the quantity stated in the Estimate of Quantities. The term "significant change" shall be construed to apply to fixed quantity items only if, during the progress of the work, the quantity of work is found to be less than 75% or more than 125% of the quantity stated in the Estimate of Quantities.

F. Lump Sum Items. Certain items of work may be Lump Sum items, wherein a single bid amount is intended to provide payment for all necessary work during the execution of the contract. The term "significant change" shall be construed to apply to lump sum items only to the extent that changes in other contract work items result in a significant change in the character of work required to complete "Lump Sum" items of work.

104-05 SUSPENSIONS OF WORK DIRECTED BY THE ENGINEER. In accordance with 23 CFR 635.109(a)(2):

If the performance of all or any portion of the work is suspended or delayed by the Engineer in writing for an unreasonable period of time (not originally anticipated, not customary, or not inherent to the construction industry) and the Contractor believes that it is due additional compensation and/or contract time is due as a result of such suspension or delay, the Contractor shall submit to the Engineer in writing a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.

Upon receipt, the Engineer will evaluate the Contractor's request. If the Engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by circumstances beyond the control of and not the fault of the Contractor, its Suppliers or subcontractors at any approved tier, and not caused by weather, the Engineer will make an

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

adjustment (excluding profit) and modify the contract in writing accordingly. The Contractor will be notified of the Engineer's determination whether or not an adjustment to the contract is warranted. No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided or excluded under any other term or condition of this contract. No contract adjustment will be allowed unless the Contractor has provided the required written request for adjustment within the time prescribed.

The Department will administer the above Federal regulations as follows:

During the progress of the work, the Engineer may direct the Contractor in writing to suspend work due to circumstances beyond the Contractor's control. If the performance of all or any portion of the work is suspended or delayed by the Engineer for an unreasonable period of time (not originally anticipated, not customary, or not inherent to the construction industry) and the Contractor believes that it is due additional compensation and/or additional time to perform the work as a result of such suspension or delay, the Contractor shall keep daily records of all labor, material and equipment idled or used in connection with such work and the cost thereof in accordance with the recordkeeping provisions of §104-06 *Notice and Recordkeeping*.

The Contractor shall submit a request for contract adjustment within seven (7) calendar days of receipt of the notice from the Engineer to resume work. This request shall set forth the reasons and support for such adjustment. Upon receipt, the Engineer will evaluate the Contractor's request for contract adjustment, and if it is determined that the cost and/or time required for the performance of the contract has increased as a result of a suspension of work directed by the Engineer and the suspension was caused by circumstances beyond the control of and not the fault of the Contractor, its Subcontractors, Manufacturers, Fabricators or Material Suppliers and not caused by weather, an adjustment, excluding profits, will be made to the contract. The Engineer will notify the Contractor of the determination whether or not an adjustment to the contract is warranted. No contract adjustment will be made to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided for or excluded under any other term or condition of this contract. No contract adjustment will be allowed unless the Contractor has provided the required written notice, or written notice was provided to the Contractor by the State.

Compensation for increased costs of the work resulting from a Suspension of Work Directed by the Engineer will be made in accordance with §109-05 *Extra Work and Time Related Compensation*. Compensation for time related costs, if any, will be made in accordance with §109-05D. *Time Related Dispute Compensation*.

104-06 NOTICE AND RECORDKEEPING. The Contractor shall provide the Engineer written notice of its contentions regarding Differing Site Conditions, Significant Changes in the Character of Work, Suspensions of Work Directed by the Engineer, disputed work, time related disputes or any other dispute. The notification and recordkeeping provisions in this Contract shall be strictly complied with for disputes of any nature and are a condition precedent to any recovery. Timely notice and recordkeeping affords the Department the opportunity to initiate measures that will mitigate damages to all parties and/or to agree to terms and conditions for timely payment for any eligible added costs.

A. Written Notice Requirements.

1. Differing Site Conditions. The Contractor shall provide written notice of its contentions to the Engineer, or the Engineer will provide written notice of the Department's contentions to the Contractor, within 15 calendar days after the appropriate party knew or should have known of any dispute regarding Differing Site Conditions.

2. Significant Changes in the Character of Work. The Contractor shall provide written notice of its contentions to the Engineer, or the Engineer will provide written notice of the Department's contentions to the Contractor, within 15 calendar days after the appropriate party

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

knew or should have known of any dispute regarding Significant Changes in the Character of Work.

3. Suspensions of Work Directed By The Engineer. The Contractor shall provide written notice of its contentions to the Engineer within 7 calendar days of receipt of a notice to resume work.

4. Disputed Work. The Contractor shall provide written notice of its contentions to the Engineer within 15 calendar days of receipt of a direction to complete work that the Contractor believes is not contract work, any direction of the Engineer that the Contractor believes exceeds the requirements of the provisions of the contract.

5. Time Related Dispute. The Contractor shall provide written notice of its contentions to the Engineer within 15 calendar days of the occurrence of any event which affects the scheduled time of performance, if the Contractor believes that it is or will be entitled to additional compensation for time related disputes, whether due to delay, extra work, disputed work, breach of contract or other causes.

After submitting the required notice, the Contractor shall follow the dispute process set forth in §105-14, Disputed Work and Dispute Resolution.

B. Recordkeeping Requirements. If an agreement on an adjusted price has not been reached before the work begins, the Contractor shall keep and submit records for each operation and location sufficient to support any additional costs, in accordance with §109-05C. *Force Account Report.*

1. Differing Site Conditions. If an agreement on an adjusted price has not been reached before the work begins, the Contractor shall keep and submit daily records to document all labor, material and equipment used for disputed work in accordance with §109-05C.1. *Daily Summary.*

2. Significant Changes in the Character of Work. If an agreement on an adjusted price has not been reached before the work begins, the Contractor shall keep and submit daily records to document all labor, material and equipment used for disputed work in accordance with §109-05C.1. *Daily Summary.*

3. Suspensions of Work Directed By The Engineer. The Contractor shall keep and submit daily records to document all labor, material and equipment used in accordance with §109-05C.1. *Daily Summary*, beginning upon receipt of a notice of Suspension of Work from the Department.

4. Disputed Work. During the progress of any disputed work for which an agreement on an adjusted price has not been reached, the Contractor shall keep and submit daily records of all labor, material and equipment used for disputed work in accordance with §109-05C.1. *Daily Summary.*

5. Time Related Disputes. If the Contractor is claiming time related damages, the Contractor shall keep and submit daily records of all labor, material and equipment for each operation and location affected by the delay in accordance with §109-05C.1. *Daily Summary.* Other records shall, as far as practicable, be sufficient to support any costs claimed under §109-05D.1. *Time Related Dispute Compensation.*

For the duration of the time related dispute, the Contractor shall prepare and submit weekly reports to the Engineer setting forth the following:

- a. Potential effect on the Contractor's schedule.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

- b. Identification of all operations that have been, are, or may be delayed.
- c. Explanation of how the Department's acts or omissions are affecting or delaying operations.

C. Failure to Comply. Failure of the Contractor to provide such written notice in a timely fashion will be grounds for denial of the dispute and the Department does not have to show prejudice to its interest before such denial is made. In the event the Contractor fails to provide the required written notice within the required time limits, or fails to maintain and submit the records specified above, any claim for compensation shall be deemed waived, notwithstanding the fact that the Department may have had actual notice of the facts and circumstances comprising such dispute and is not prejudiced by such failure of notice or recordkeeping.

104-07 SITE HOUSEKEEPING. The contract site shall be cleaned up at the close of each work day, and be left in an orderly condition. Waste and debris shall be removed from the work site and surrounding areas cleaned of debris or waste generated from the work site. Containers shall be provided for the collection and separation of waste, and garbage and other waste shall be disposed of at frequent and regular intervals. Any salvaged material not specified to be disposed of otherwise, shall become the property of the Contractor and shall be removed from the site.

104-08 MAINTAINING TRAFFIC. The Contractor shall maintain and protect traffic in accordance with the requirements of the MUTCD and the contract documents.

A. Closing of Highway. The legal closing of a highway to public travel in the manner provided by Section 104 of the Highway Law will be done by the Commissioner or by the County Superintendent of Highways when requested by the Department. Not all highways are legally closed during highway construction operations.

When a highway is legally closed and public travel diverted therefrom, adequate warning, danger and direction signs and lights shall be erected and maintained by the Contractor to properly protect and direct public travel by day and by night. Suitable barricades shall also be erected at the ends of such closed sections of highways and large signs displayed indicating such closure. All signs, barricades and other traffic control devices used shall conform to the MUTCD.

B. Use of Restricted Highway. With the award of a contract the Commissioner will, unless otherwise specified, designate the section of highway under contract a "Restricted Highway" pursuant to Section 104A of the Highway Law and Section 1625 of the Vehicle and Traffic Law. Pursuant to these legal sections, the Commissioner has the authority to (1) establish maximum and minimum speed limits at which vehicles may proceed along any such Restricted Highway; (2) establish weight and dimension limits of vehicles; (3) regulate the use of such Restricted Highway by pedestrians, equestrians, and animals; (4) regulate parking, standing, stopping, and backing of vehicles; (5) control persons and equipment engaged in work on such highway. When used on such Restricted Highways, all traffic control devices shall be considered as official traffic control devices and shall conform to the MUTCD.

The Commissioner will therefore cause signs indicating such restrictions to be placed at such points as deemed necessary for the safe use of the Restricted Highway. The traveling public and Contractor must observe and comply with these restrictions, as posted, except that the Contractor may be allowed greater latitude with respect to size and weight of construction equipment.

Construction Equipment or vehicles shall be operated on the Restricted Highway as provided under §105-12 *Load Restrictions*.

104-09 CONTRACTOR'S RETENTION OF RECORDS. The Contractor shall retain all records for six years following the date of approval of the contract final agreement by the Office of the State Comptroller. Required records shall include all payrolls, accounts, details that comprise its total cost

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

pursuant to any of the provisions under §104-02 *Changes, Contingencies, Extra Work and Deductions*, records maintained pursuant to §105-14 *Disputed Work and Dispute Resolution* and §109-05 *Extra Work and Time Related Compensation*, papers, maps, photographs, or other documentary materials, regardless of physical form or characteristics, made or received by the Contractor in connection with the contract. Legible copies, including microfilm copies, are acceptable, provided they are so arranged, identified, and indexed that any individual document, or component of the records, can be located with reasonable facility.

The Contractor shall make such records available to the Department for review and audit upon request, if deemed necessary by the Department. In case all or a part of such records are not made so available, the Contractor understands and agrees that any items not supported by reason of such unavailability of the records shall be disallowed, or if payment therefore has already been made, the Contractor shall, upon demand in writing by the Commissioner, refund to the Department the amount so disallowed.

104-10 VALUE ENGINEERING CHANGE PROPOSAL (VECP).

A. Purpose and Scope. The purpose of a Value Engineering Change Proposal (VECP) is to encourage the use of the Contractor's ingenuity and experience in arriving at alternative construction designs, methods, and procedures that result in a lower direct cost to accomplish a contract requirement. It is the intent of this provision to share with the Contractor any substantial direct cost savings which may be generated as a result of a VECP offered by the Contractor and approved by the Department. A VECP is a Contractor-initiated change request. If approved, the changes and payments will be authorized through the change order process. Before a VECP can be implemented, it must pass through three approval processes: conceptual approval, formal approval, and change order approval. To expedite the review process, the Contractor has the option of jointly submitting the conceptual VECP and the formal VECP for simultaneous review. If the VECP receives formal approval, as part of the change order process the Contractor may request that the Department consider granting advanced authorization of extra work.

The VECP should produce direct cost savings to the Department and the public without, in the sole judgment of the Department, impairing essential functions and characteristics of the facility including but not limited to service life, economy of operation, ease of maintenance, desired appearance, and safety. The Contractor, when developing a VECP, shall address the designer's objectives, environmental permit requirements and regulations, commitments made to the public to mitigate the impact of construction, and other such concerns.

The "direct cost savings" is the difference of the "construction savings" generated by implementing the VECP minus reasonable "design costs" associated with the VECP. The "construction savings" is the difference between what it would cost to complete all the contract work without implementing the VECP and the cost to complete all the contract work if the VECP is implemented. This includes any changes to quantities or unit prices across the entire contract if affected by the VECP. If the estimated cost to complete all the contract work without implementing the VECP differs from the contract bid amount for the work, supporting documentation to explain the variance shall be provided. Reimbursable "design costs" are specific to engineering changes (examples: design changes, plan sheet revisions, and quantity estimating). Expenditures toward proposal preparation (examples: scheduling, documentation, cost analysis, material research, etc.) are not reimbursable.

Indirect cost savings (time, user delay, railroad force account costs, inspection costs, etc.), although considered when reviewing the merits of the VECP, are not reimbursed. A VECP may alter the progress schedule and milestone dates, which in turn could affect time-related contract provisions.

Proposals that reduce the time to complete the contract, and only result in indirect cost savings, may be accepted based on the mutual benefit derived. These proposals will be evaluated in accordance with §104-10F. *Time Savings*.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

B. Submittal of Conceptual VECP. A conceptual proposal is required for all VECP. It should outline the general technical concepts associated with the VECP and the estimated direct cost savings which may result. Upon review by the Department, one of the following actions will be taken:

- Conceptual approval and a request for the Contractor to submit a formal VECP.
- Request for additional information
- Rejection of the VECP

The Contractor shall submit an original and three copies of the conceptual VECP to the Engineer along with any additional information requested by the Department. The conceptual VECP should contain sufficient information for concept review and evaluation, including the following as a minimum:

1. Conceptual VECP Summary. A summary of the VECP identified as "Conceptual VECP" which includes:

- a. Short title (description) of the VECP (10 or less words).
- b. Contract information (Contract D number, PIN, contract description, contractor, federal aid number if applicable, letting date, Region, and county).
- c. Original total contract bid price.
- d. Estimated contract cost. This may be different from the original total contract bid price due to addition or alteration of work (i.e., the estimated cost to complete the work if the VECP is not implemented). The Engineer must concur with the estimated contract cost.
- e. Estimated contract cost if the VECP is implemented (excludes VECP design cost and any VECP construction savings reimbursement).
- f. Estimated VECP construction savings (Item d. minus Item e.).
- g. Estimated VECP design cost (Not all VECP will have design cost).
- h. Estimated direct cost savings due to the VECP (Item f. minus Item g.).
- i. Fifty percent of the estimated direct cost savings (This should equal the overall savings to the State).
- j. Estimated total adjusted contract cost if VECP is implemented (includes VECP savings and design cost reimbursements).
- k. The type of VECP (either "Cost Savings" or "Time Savings Only").
- l. Date by which the authorization of extra work (change order) must be granted. (If time sensitive, requests for advance authorization of extra work per §104-02 *Changes, Contingencies, Extra Work and Deductions* will be considered.)
- m. Identification of any new or existing contract pay items requiring agreed prices.
- n. Identification of any materials with long lead times (to order, fabricate, deliver, etc.) that may require purchase authorization from the Engineer prior to formal approval/disapproval of the VECP, or may delay the implementation of the VECP. Identify any date by which authorization to order these materials must be received without affecting the progress schedule.
- o. A basic description of the VECP and associated benefits and impacts (progress schedule, environmental, maintenance & protection of traffic, quality, etc.).

2. Conceptual Plans. Conceptual plan drawings.

3. Design Criteria. If the VECP proposes design changes, supporting technical design criteria shall be provided.

4. Schedules.

- a. The most recently approved baseline progress schedule.
- b. The most recently approved construction progress schedule update.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

c. A draft, proposed, revised progress schedule illustrating the impacts of the VECP. The schedule shall identify: (1) the time required to develop a formal VECP; (2) the time required to order, fabricate, and deliver materials with long lead times; (3) the time required to obtain any environmental permits or other required approvals; (4) any anticipated progress schedule changes (contract completion date, milestone dates, task durations, etc.); (5) the latest date by which authorization of the VECP extra work must be granted without affecting the schedule. The draft progress schedule should provide a sufficient level of detail upon which the reasonableness of the VECP can be determined.

Should the Department find that insufficient time is available for review and processing, it may reject the VECP solely on such basis. If the Department fails to respond to the VECP by the date specified, the Contractor will consider the VECP rejected and will have no basis for a dispute against the State as a result thereof. The Department may accept a VECP that requires a contract time extension if sufficient cost savings are anticipated.

5. Estimate of costs. The conceptual VECP estimate of costs should include sufficient information to determine the reasonableness of the VECP. If the proposal requires the ordering of materials, the Contractor needs to provide documentation from the suppliers to justify the cost of the materials.

6. Previous Use or Testing. A description of any previous use or testing of the VECP on another Department contract or elsewhere, the conditions and results therewith. The Contractor shall submit the technical aspects of the VECP in sufficient detail so the Department can determine the suitability of the VECP from an engineering perspective. If the technology is new, test information shall be provided to the Department's satisfaction. If a similar VECP was previously submitted on another Department contract, indicate the date, contract number, and the action taken by the Department.

C. Submittal of Formal VECP. Upon notification by the Engineer that the conceptual VECP is approved and a formal VECP is necessary, the Contractor will submit to the Engineer an original and three copies of the following materials and information for each formal VECP along with any additional information requested by the Department:

1. Formal VECP Summary. A summary of the VECP, identified as "Formal VECP", which follows the conceptual VECP summary format and information requirements (Information and estimates may have changed since the conceptual VECP).

2. Complete Plans and Specifications. Complete plans and specifications, which meet Department standards, showing the proposed changes relative to the original contract features and requirements. The Department requires a Professional Engineer's stamp and signature on any significant engineering changes.

3. Field Change Sheets. Field change sheets and/or shop drawings. If the VECP results in a field change, and those items affected require the submission of shop drawings, the shop drawings will not be accepted unless accompanied by corresponding field change sheets. Documents shall be developed in compliance with Department requirements. The Department requires a Professional Engineer's stamp and signature on any significant engineering changes.

4. Schedules. The same information requirements as for the conceptual VECP apply, except that a formal , proposed, revised progress schedule in accordance with §108-01 *Progress Schedule* is required.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

5. Cost Analysis. A complete cost analysis indicating quantity changes, unit price changes, and new contract pay items. As a minimum it shall include:

- a. An itemized comparison of estimated costs to complete all the contract work with implementing the VECP and without implementing the VECP.
- b. Proposed unit prices for any new contract pay items introduced by the VECP and appropriate documentation for review under the Agreed Price process.
- c. Proposed unit prices for any existing contract pay items for which agreed prices are sought due to a significant change in character of work (quantity or complexity), see §104-04 *Significant Changes in the Character of Work*. Appropriate documentation for review under the Agreed Price process is required.
- d. The cost of any items with long lead times (e.g., materials ordered) required after conceptual approval and before final approval shall be identified.

6. Differences. Full descriptions of the difference between the existing contract requirements and the proposed changes, and the comparative advantages and disadvantages of each, including considerations of service life, economy of operation, ease of maintenance, traffic flow, safety, desired appearance, progress schedule, and any increase/reduction of environmental impacts.

7. Technical Presentation. The Contractor may be required to conduct a technical presentation as part of the review process.

8. Cost Documentation. All formal VECP costs submitted shall be supported by documentation as required by §109-05 *Extra Work and Time Related Compensation*.

The Department will not formally approve any VECP until all required VECP documentation has been submitted and is acceptable to the Department.

A formal VECP may be submitted concurrently with the conceptual VECP, however, the Contractor assumes any costs associated with the formal VECP at its own risk. Reimbursable costs will be considered only if the conceptual VECP is approved. Clearly identify whether a VECP is being submitted for conceptual approval, formal approval, or both.

Once a formal VECP has been approved, the VECP will then be submitted as an order-on-contract and processed accordingly. If time sensitive, requests for advanced authorization of extra work per §104-02 *Changes, Contingencies, Extra Work and Deductions* will be considered, but only after formal VECP approval. The Contractor is responsible for submitting all appropriate information to the Engineer in a timely manner.

D. Conditions. The Contractor shall not base any bid prices on the anticipated approval of a VECP and should recognize that any VECP may be rejected. The following terms and conditions apply to VECP:

1. A VECP will only be considered after the contract is awarded.
2. A VECP applies only to the contract for which it was submitted. One VECP shall not be submitted for multiple contracts. Approval or disapproval of a VECP on one contract does not guarantee approval or disapproval on another contract.
3. The VECP becomes the property of the Department and will contain no restrictions imposed by the Contractor on its use or disclosure. The Department will have the right to use, duplicate, and disclose in whole or in part any data necessary for the utilization of the VECP. The Department retains the right to utilize any accepted or rejected VECP or part thereof on any other project without any obligation to the Contractor.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

- 4.** Approval of the conceptual VECP in no way obligates the Department to approve the formal VECP. The Contractor will have no claim against the Department as a result of the rejection of any such conceptual or formal VECP except as otherwise provided in §104-10E.4.
- 5.** When the Department is in the process of making design and specification revisions and a Contractor submits a VECP with similar revisions, the Department will reject the VECP and proceed without any obligation to the Contractor.
- 6.** A VECP will be considered only if reasonable, cost-effective options are not provided in the contract documents.
- 7.** The Department will be the sole judge as to whether a VECP qualifies for consideration and evaluation. It may reject any VECP that requires excessive time or costs for design review, evaluation, and/or investigations. The Department will be the sole judge in determining if the proposed VECP will result in a sufficient amount of direct or indirect cost savings to offset the Department's effort to review the VECP.
- 8.** A VECP shall be consistent with the Department's design policies and basic design criteria, provide the same service life or more, facilitate economy of operations, ease of maintenance, and achieve the desired appearance and safety.
- 9.** A VECP will not be allowed that changes the type and/or thickness of the pavement structure and material, or solely substitutes one material for another. Examples of materials that may fall into this inappropriate substitution situation are drainage pipes, bridge coatings, pavement markings, etc. The simple elimination of work does not necessarily constitute a VECP, however, a VECP which introduces a simple material substitution, or elimination of work, may be considered if it is accompanied by a design change or change in the construction method. A simple material substitution which introduces a new material to the Department may be also considered.
- 10.** The VECP will not be experimental in nature, but will have been proven to the Department's satisfaction under similar or acceptable conditions on another Department contract or at another location acceptable to the Department.
- 11.** If the Department requires any additional information to evaluate the VECP, this information shall be provided in a timely manner. Unless otherwise mutually agreed upon, failure to do so will result in the rejection of the VECP. An incomplete or a poor quality VECP which hinders the Department's review may also result in the rejection of the VECP.
- 12.** The Contractor shall encourage submissions of VECP from an approved subcontractor, provided that reimbursement is made by the Department to the Contractor and that the terms of payment to the Subcontractor are satisfactorily negotiated and accepted before the VECP is submitted to the Department. Subcontractors may not submit a VECP except through the Contractor.
- 13.** A VECP approved by the Department is considered to be a revision to the contract documents and progress schedule. Consequently, if unsatisfactory results are being achieved or adjustments are necessary during implementation of a VECP, the rejection of work, removal of work, addition of work, or revision of work shall be evaluated in accordance with the Standard Specifications.
- 14.** All contract pay items and quantities referenced in the VECP construction savings analysis shall be Department-approved contract provisions. Any extra work, inclusion of an omission of work, or other field changes shall be authorized prior to use in VECP savings calculations.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

15. No work related to a VECP will be performed under force account. Agreed prices must be reached for any contract pay items related to the VECP before the VECP is approved. If the Contractor is deemed to have taken reasonable diligence in determining the work involved but if during the construction of VECP work a significant change in the character of work occurs, the Department may consider new agreed prices.

16. The Contractor will receive written notification from the Department when the VECP is approved. Material orders placed prior to VECP approval shall be submitted at the Contractor's risk.

17. Once a VECP has been approved, the VECP will then be submitted as a change order and processed accordingly. If time sensitive, requests for advanced authorization of extra work in accordance with §104-02 *Changes, Contingencies, Extra Work and Deductions* will be considered, but only after formal VECP approval. The Contractor is responsible for submitting all appropriate information to the Engineer in a timely manner.

E. Payment. If the VECP is accepted by the Department, the changes and payments will be authorized through a change order. Reimbursement to the Contractor will be made as follows:

1. A VECP introduces two individual payments, one for VECP construction savings, and one for VECP design cost. The contract pay item changes along with the VECP construction savings and design cost reimbursements to the Contractor should be submitted in one change order.

2. The Department will pay to the Contractor 50% of the VECP construction savings. The VECP construction savings is the difference between the actual contract costs with the VECP implemented and a detailed estimate of what it would have cost to complete the contract work without implementing the VECP, based on final construction. If final construction savings differs from the amount estimated in the formal VECP, an adjustment may be made and included in another change order. The VECP construction savings reimbursement to the Contractor will not be paid until the VECP work has been completed (progress payments on the completed VECP work are allowed). The Department may withhold all or a portion of the payment for the Contractor's share of the VECP construction savings until the final contract accounting. In the event that at final contract accountings the implementation of VECP actually results in no construction savings, then the Contractor will receive no VECP construction savings payment. The Department is the sole judge in deciding the construction savings due to the implementation of the VECP. The Department will withhold VECP construction savings reimbursement until the Contractor supplies all required VECP documents.

3. If a design cost is submitted for a VECP, the Department will pay to the Contractor a 50% share of the Contractor's reasonable cost for design incurred after conceptual VECP approval. If the design cost submitted for Department approval is deemed unreasonable, only 50% of the design cost deemed to be reasonable will be reimbursed. Not every VECP will have a design cost associated with it. The Department is the sole judge in determining the reasonableness of the design cost. Reimbursable design costs are for engineering changes. Preparation and submission of the proposal (e.g., savings analysis, progress scheduling, etc.) are not considered design costs and are not reimbursable. Reimbursable VECP design may be performed by a consultant or directly by the Contractor. The Contractor shall not be charged for, nor can the Contractor claim, any VECP design performed by the Department.

The design cost shall be submitted as a lump sum item with supporting documentation. The supporting documentation shall include itemized direct salary costs (rates & hours), overhead (only for consultant design), and direct non-salary costs. Payment for direct salary costs and

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

overhead will be limited to the current Department reimbursement policies for Consultant Engineering agreements.

For consultant design, reasonable overhead on the direct technical salaries will be reimbursed. For Contractor design, overhead is not reimbursable for direct salary costs. Overhead shall not be charged for direct non-salary costs whether incurred by the Contractor or by a consultant. Payment for direct non-salary costs will be made at actual cost paid. Although for certain direct non-salary costs (lodging, meals, mileage) there are prevailing maximum rates established by the State Comptroller which the reimbursement rates shall not exceed.

The subtotal of direct salary costs, overhead, and direct non-salary costs shall be considered a "professional service fee" and reimbursed in accordance with §109-05B.3. *Service Charges*. A maximum 5% for the Contractor's contract supervision and overhead is allowed, in addition to any overhead submitted for consultant direct salary costs. All design costs are subject to audit. Additional supporting documentation (receipts, time sheets, etc.) shall be supplied in a timely manner if requested by the Department.

In the case of a formal VECP being jointly submitted with the conceptual VECP, the Department will pay to the Contractor a 50% share of the Contractor's reasonable cost for design specific to the development of the formal VECP (nothing toward the conceptual VECP) if the conceptual VECP is approved.

4. In the event of the Department's conceptual approval of a direct cost savings VECP, and the Contractor is directed to proceed with the VECP implementation steps and final approval is not reached, regardless of whether due to the actions of the Department or the Contractor, 50% of the total reasonable design costs will still be reimbursed to the Contractor. If "advance" written approval was given to proceed with the work, procure materials, and begin fabrication; and rejection occurs, the work and fabrication costs will be reimbursed in accordance with §109-05 *Extra Work and Time Related Compensation*. Only those materials not incorporated and unique to the contract (i.e., not restockable) will be evaluated for payment.

5. There will be no reimbursement for any costs incurred for the conceptual VECP or prior preparations.

6. If more than one VECP is approved for a contract, construction savings and design costs shall be tracked separately for each VECP.

7. When multiple submittals of information for a VECP are required to satisfy the information needs of the conceptual or formal VECP procedure, and contract timing will be negatively impacted before review and subsequent approval can be given by the Department, then the VECP may be rejected. In such cases, there will be no claim by the Contractor for design costs or loss of anticipated savings and/or profits.

8. VECP payments only involve direct savings or costs. Indirect savings or costs (time, user delay, contract delay, etc.) are not included in VECP payment calculations. The calculations of VECP payments are independent from the payments or penalties for contract time related issues. If a VECP revises the progress schedule, the contract milestones upon which time related provisions are based may be affected. Time savings resulting from a VECP may be realized in a time related contract provision. Conversely, if a VECP negatively affects a progress schedule, time related contract provisions may be negatively affected.

F. Time Savings. The Department will consider proposals that result in time savings and at the same time may increase the cost of the contract. The Department will be the sole judge as to whether the benefits of completing the contract or a phase before the scheduled completion date or milestone offsets any increase in cost. These submittals, while not constituting a Value Engineering Change

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Proposal, will be reviewed using the VECP approval process. In addition to information required in §104-10 B. *Submittal of Conceptual VECP* and §104-10 C. *Submittal of Formal VECP*, the Contractor shall provide the Department the anticipated amount of time to be saved and sufficient information to enable the Department to calculate and evaluate the cost benefit of the savings in user delay. Time savings generated by the VECP may be claimed under an existing time related contract provision. If the time savings VECP increases the cost of the contract, the additional cost shall not be subtracted from any time related contract provision payments.

G. Significant Changes. The description of what will be considered a "significant change" associated with a VECP are identified in §104-04 *Significant Changes in the Character of Work*. Once a VECP is approved, any future significant change is no longer based on the original contract bid conditions (quantity, nature or kind of a material involved), but rather on the conditions as adjusted by the VECP (adjusted quantities, anticipated site conditions and materials, etc.). Any item that was identified as a Major Item in the original contract documents is still considered a Major Item, regardless of the change in quantity or price due to the VECP.

All significant changes shall be agreed upon prior to formal VECP approval. If after formal VECP approval, an unforeseen change in the VECP work causes a significant change in the character of work, quantities and prices may be adjusted and the VECP savings shall be adjusted accordingly.

SECTION 105 - CONTROL OF WORK

105-01 ENGINEER'S AUTHORITY. The Engineer will make all decisions for the Department regarding the quality and acceptability of materials furnished, work performed, work progress, and contract interpretation. All communications by the Contractor with the Department, written or verbal, shall be in English. All references to costs, charges, prices, etc. shall be in United States dollars. Unless directed otherwise, the Contractor shall direct all communications with the Department through the Engineer. When communications are directed to persons or units other than the Engineer, a clear copy, including all attachments, shall be sent to the Engineer.

The Engineer may stop by written order any work or any part of the work under the contract if the methods or conditions are such that 1) unsatisfactory work might result; or 2) if improper material(s) or procedure(s) are being used; or 3) if the Contractor fails to comply with any requirement or provision of the contract documents or with any State or Federal law or regulation; or 4) conditions are considered to be sufficiently deficient as to seriously affect the safety of the public or the workers employed; or 5) non-conformance with the work zone traffic control provisions is causing serious disruptions to traffic operations. The Contractor will not be entitled to any additional monetary compensation for such a work stoppage. Any work completed in violation of a written stop order will not be paid for even if subsequently determined to be acceptable.

105-02 CHARACTER OF WORKERS. The Contractor shall give its constant attention to the work while it is in progress or it shall place it in charge of a competent and reliable English speaking Superintendent, who shall have authority to act for the Contractor and who shall be acceptable to the Engineer.

The Contractor shall, at all times, employ sufficient workers to progress the work to completion in the manner and time specified. All workers shall have sufficient skill and experience to properly perform the work assigned them. All workers engaged on special or skilled work shall have had sufficient experience in such work to properly and satisfactorily perform it and operate the equipment involved. Any person employed by the Contractor whom the Engineer may deem unruly, disorderly, incompetent or unfit to perform the work shall be at once discharged, and shall not be again employed. In case of a disagreement with the Contractor regarding the discharge of such employees, the matter may be reviewed by the Deputy Chief Engineer, Construction (DCEC).

No Contractor employee may use, distribute, dispense, possess or manufacture any alcoholic beverages, illegal drugs or any other intoxicating substance on a contract site. Contractor's written policy

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

shall require that employees not report to work under the influence of drugs or alcohol, nor be impaired or unable to function at the workplace as a result of consuming alcohol or other intoxicants. While prescription drugs are not prohibited, they should not render an employee unfit for duty. Contractor employees that are suspected of using drugs or alcohol, or who are suspected to be under the influence of such substances, shall be reported to the Engineer. Contractor employees who are under the influence of drugs or alcohol may be deemed incompetent, and are subject to dismissal.

Whenever the Contractor or its superintendent is not present on any part of the work where it may be desired to give directions, orders will be given by the Engineer or his/her representative and shall be received and obeyed by the foreperson who may have charge of the particular work in reference to which the orders are given. All forepersons shall speak English.

105-03 METHODS AND EQUIPMENT. Where particular methods or equipment are specifically required, the Contractor may apply in writing to the Regional Director to use alternate methods and equipment to provide the same results. Such alternates may be used only after favorable recommendation by the Regional Director and the written approval of the Deputy Chief Engineer, Construction (DCEC). When, in the opinion of the Regional Director, satisfactory results are not being obtained using the Contractor's alternate methods and equipment, the methods and/or equipment shall be immediately modified to produce satisfactory results.

The Contractor may use the most efficient equipment that is consistent with conditions at the time of use. It is anticipated that seasonal or weather conditions combined with the nature of the terrain will often require the use of lighter and smaller equipment than might be used under optimum conditions.

A. Earthwork. Construction operations requiring soil compaction shall not be performed from November 1st thru April 1st except with an approved Winter Earthwork submittal in accordance with §203-3.01 A. *Winter Earthwork Submittal*. In all work incorporated into the final product, the Contractor shall not place material that is frozen, or place fill material on frozen ground regardless of the date.

B. Structural Painting. Structural paint removal operations and painting work shall include work primarily shown in Section 570 *Paint Removal Operations*, Section 573 *Structural Steel Painting: Field Applied – Total Removal*, and overcoating work under Section 574 *Structural Steel Painting: Overcoating and Localized*, but not including localized painting. Structural paint removal operations and painting work shall not include: bridge superstructure removal and other structural demolition work under Section 202 *Removal of Structures and Obstructions*; paint removal that is incidental to the main work under an item; localized paint removal from structural steel necessary for safe progress of other work on the structural steel; and containment for localized steel repair and painting.

Contractors and/or Subcontractors performing structural paint removal operations and painting work shall be certified in accordance with the following requirements of the Painting Contractor Certification Program (PCCP), of the Steel Structures Painting Council (SSPC):

- QP-1, Standard Procedure for Evaluating Qualifications of Painting Contractors: Field Application to Complex Industrial Structures;
- QP-2, Standard Procedure for Evaluating Qualifications of Painting Contractors To Remove Hazardous Paint.

In lieu of SSPC/PCCP certification, the Contractor shall submit documentation to the Office of Technical Services that demonstrates that it has established equivalent processes and procedures conforming to the standards set forth in the procedures for SSPC/PCCP QP-1 and QP-2, including an internal audit at least annually. The documentation shall be reviewed, evaluated, and approved by a Professional Engineer experienced in structural painting operations selected by the Contractor and approved by the Department. The cost for the review and approval shall be paid by the Contractor. The review and approval process will take a minimum of 90 days.

The completed evaluation shall include an opportunity for Department comments on prior performance, a maximum qualification period of 2 years, a process for appeal by the applicant,

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

evaluation criteria which would lead to suspension or revocation, a process for recordkeeping by the reviewing Professional Engineer, and a process for requalification.

105-04 CONTRACT DOCUMENTS

A. Interpretation Of Contract Documents. In case of any difference in the interpretation of the plans, special provisions, specifications, special specifications, standard sheets, or between them, the Contractor shall immediately submit the matter to the Engineer. The Engineer will consult with other Department personnel, as necessary, and provide the Contractor with an interpretation in a timely manner.

The detail plans and specifications for the contract have been prepared with care and are intended to show as clearly as is practicable the work required to be done. The Contractor shall realize, however, that construction details can not always be accurately anticipated and that in executing the work, field conditions may require reasonable modifications in the details of plans and quantities of work involved. Contract work shall be carried out to meet these field conditions to the satisfaction of the Engineer and in accordance with his/her instructions and the contract documents.

In the event the Contractor discovers an error or omission in the contract documents, it shall immediately notify the Engineer. The Engineer will then make such corrections and interpretations as may be deemed necessary for fulfilling the intent of the contract documents.

B. Reasonable Close Conformity With Contract Documents. All work performed and all materials furnished shall be in reasonable close conformity with the lines, grades, cross sections, dimensions and materials requirements, including tolerances, shown in the contract documents.

Plan dimensions and contract specification values are to be considered as the target value to be strived for and complied with as the design value from which any deviations are allowed. It is the intent of the specifications that the materials and work quality shall be uniform in character and shall conform as nearly as realistically possible to the prescribed target value or to the middle portion of the tolerance range. The purpose of the tolerance range is to accommodate occasional minor variations from the median zone that are unavoidable for practical reasons. When a maximum or minimum value is specified, the production and processing of the material and the performance of the work shall be so controlled that material or work will not be preponderantly of borderline quality or dimension.

In the event the Engineer finds the materials or the finished product in which the materials are used not within reasonable close conformity with the plans and specifications, but that reasonably acceptable work has been produced, the Engineer shall then make a determination if the work shall be accepted and remain in place. In this event, the Engineer will document the basis of acceptance by contract modification which will provide for an appropriate adjustment in the contract price for such work or materials as he/she deems necessary to conform to his/her determination based on engineering judgment.

In the event the Engineer finds the materials or the finished product in which the materials are used or the work performed are not in reasonable close conformity with the plans and specifications, and have resulted in an inferior or unsatisfactory product, the work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor.

105-05 VENDOR RESPONSIBILITY. The Contractor shall at all times during the contract term remain responsible. The Contractor agrees, if requested by the Commissioner of Transportation or his or her designee, to present evidence of its continuing legal authority to do business in New York State, integrity, experience, ability, prior performance, and organizational and financial capacity.

In addition to any and all other suspension rights provided elsewhere in this Contract, the Commissioner of Transportation or his or her designee, in his or her sole discretion, reserves the right to suspend any or all activities under this Contract, at any time, when he or she discovers information that calls into question the responsibility of the Contractor. In the event of such suspension, the Contractor

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

will be given written notice outlining the particulars of such suspension. Upon issuance of such notice, the Contractor must comply with the terms of the suspension order. Contract activity may resume at such time as the Commissioner of Transportation or his or her designee issues a written notice authorizing a resumption of performance under the Contract.

In addition to any and all other termination rights provided elsewhere in this Contract, upon written notice to the Contractor and a reasonable opportunity to be heard with appropriate Department officials or staff, the Contract may be terminated by the Commissioner of Transportation or his or her designee at the Contractor's expense where the Contractor is determined by the Commissioner of Transportation or his or her designee to be non-responsible. In such event, the Commissioner of Transportation or his or her designee may complete the contractual requirements in any manner he or she may deem advisable and pursue available legal or equitable remedies for breach.

105-06 COOPERATION WITH UTILITIES AND OTHER CONTRACTORS. The Contractor shall cooperate with Utilities and other contractors and coordinate and arrange the sequence of its work to conform with the operations of the work of other parties indicated in the Base Line Data. Delays and interferences to the Contractor's performance caused by activities of other Department contractors, which delays and/or interferences could not reasonably have been anticipated from the contract documents, may entitle the Contractor to an appropriate extension of time and/or time related damages.

The Contractor is responsible for cooperation and adjustments with the contractors already engaged and to be engaged upon the site to properly coordinate the construction efforts of all contractors, utilities, and subcontractors engaged in the work within and adjacent to the contract site. In the event that utility facility adjustments are to be made by a Utility's forces in connection with and during the life of the contract, the Contractor shall cooperate with the Utilities and coordinate and arrange the sequence of its work to conform with the progressive operations of the Utility's work underway or to be put underway.

In case of interference between the operations of the Utilities and contractors, the Department will adjust as necessary the schedule of each contractor and the sequence of work necessary to expedite the completion of the entire project. If it becomes necessary, coordination and access problems will be resolved by the Department.

If any part of the Contractor's work depends on the work of any other contractor and/or the Department for proper execution and/or results, that would render its work unsuitable for proper execution and/or results, the Contractor shall promptly notify the Department of any discrepancies and/or defects in said other work prior to proceeding with its own work.

105-07 TERMINATION. The provisions of Article 11 *Right to Suspend Work and Cancel Contract* of the contract agreement and Section 40 of the Highway Law shall apply.

A. Termination for Cause. If the Commissioner of Transportation shall determine that the work upon the Contract is not being performed according to the Contract, he/she may terminate the Contractor's employment under the Contract and proceed with the contract work by contract negotiated or publicly let, or by the use of the Department's own forces, or by calling upon the Surety to complete the work in accordance with the plans and specifications, or by a combination of any such methods; or, he/she may cancel the contract and either re-advertise and re-let as provided in Section 38 of the Highway Law, or complete the work under his/her own direction in such manner as will accord with the contract specifications and be for the best interests of the State. Any excess in the cost of completing the Contract beyond the price for which it was originally awarded shall be charged to and paid by the Contractor failing to perform the work or by the Contractor's Surety, pursuant to the terms and conditions of the Faithful Performance Bond.

B. Termination for Convenience. The Commissioner may, by written notice, terminate the contract or any portion thereof if he or she determines that termination would be in the best interests of the Department or of the State of New York. Reasons for termination may include, but are not limited to executive orders of the President relating to the prosecution of war or national defense,

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

national emergency which creates a serious shortage of materials, orders from duly constituted authorities relating to energy conservation, and restraining orders or injunctions obtained by third-party citizen action resulting from national or local laws or regulations, or where the issuance of such order or injunction is primarily caused by acts or omissions of persons or agencies other than the Contractor, or where the orderly progression of a project is interfered with or delayed by acts or omissions of persons or agencies other than the Contractor. The Contractor specifically understands that the issuance of such notice by the Commissioner shall be conclusive as to its necessity.

When the contract, or any portion thereof is terminated, for any of the above mentioned reasons, before completion of all items of work in the contract, payment will be made for the actual numbers of units or items of work completed at the contract unit price, or as mutually agreed for items of work partially completed, but no claim for loss of anticipated profits on uncompleted work shall be made by the Contractor nor shall the State of New York be liable for the loss of anticipated profits for such uncompleted work.

In such cases of termination, reimbursement for organization of the work (when not otherwise included in the contract) and moving equipment to and from the contract site will be considered where the volume of work completed is too small to compensate the Contractor for these expenses under the contract unit prices, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained by the Contractor for the work, that have been inspected, tested and accepted by the Engineer, and that are not incorporated in the work, shall be returned to the Manufacturer, Fabricator, or Material Supplier whenever it is possible to do so at nominal or no cost. Where the Contractor returns such materials to its Manufacturer, Fabricator, or Material Supplier, the State will pay the Contractor the actual documented costs connected with returning such materials to the extent such costs are reasonable as determined by the Department. In the event the Contractor is unable to return such material at reasonable or no cost, and provides documentation satisfactory to the Department that such material can not be economically returned, the State will be responsible for all such material and will either direct the manner of disposition or purchase such material from the Contractor at actual cost as shown by receipted bills and actual cost records to the extent such costs are reasonable as determined by the Department, at such points of delivery as may be designated by the Engineer.

Termination of a contract or a portion thereof for the convenience of the State shall not relieve the Contractor of its responsibilities for the completed work, nor shall it relieve its surety of its obligation for and concerning any just claims arising out of the work performed.

105-08 REMOVAL OF UNACCEPTABLE AND UNAUTHORIZED WORK. All work which does not conform to the requirements of the contract shall be considered unacceptable unless otherwise determined acceptable under the provisions in §105-04B *Reasonable Close Conformity with Contract Documents*.

The Department may direct the Contractor to remove any portion of the work performed under this contract for inspection or for any other purpose. If such inspection shows that the work was constructed in accordance with the terms of the contract, payment shall be made to the Contractor for such removal and subsequent replacement at a fair and reasonable price for the work performed. No payment will be made for such removal or for replacement of the work to satisfactory condition if such inspection shows that the work was not constructed in accordance with the contract requirements. No payment will be made for the removal or replacement of any work which may itself be satisfactory, but the removal of which is necessary for the replacement of unsatisfactory work. No payment shall be made in such removal and replacement situations if work was done or materials furnished without inspection by an authorized Department representative.

The above paragraph shall not apply to concrete foundation for pavement or portland cement concrete pavement rejected as a result of core tests. Work so rejected shall be removed and replaced at no additional cost to the State.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

All work shall be in satisfactory condition at the time of contract acceptance. Any work done or materials used without inspection by an authorized Department representative may be ordered removed and replaced at the Contractor's expense.

Unacceptable work, whether caused by poor work, defective materials, damage through carelessness or any other cause found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner irrespective of the presence of, or lack of, a Department Inspector or representative. This clause shall have full effect regardless of the fact that the defective work may have been done or the defective materials used with the full knowledge of the Inspector. The fact that the Inspector or Engineer may have previously overlooked such defective work shall not constitute an acceptance of any part of it.

105-09 WORK AFFECTING RAILROADS. Requirements and procedures for operations on or adjacent to railway facilities are found in a Special Note entitled *Special Provisions for Protection of Railway Interests*.

A. Railroad Workplace Safety. All work within the railroad right of way shall be conducted in accordance with 49 CFR Part 214 *Railroad Workplace Safety* and the railroad's safety rules. Procedures for compliance with 49 CFR Part 214 shall be addressed within the Project Safety and Health Plan.

B. Railroad Clearances. No temporary bridge, falsework, staging or obstructions shall be erected over the track or tracks where the vertical underclearance is less than 22 feet over top of rail until the existing bridge warnings have been relocated or new or temporary bridge warnings are installed by the railroad company or companies affected and are in service.

An operated track, catenary or electrical facility is fouled when any object is brought closer than the clearances set forth by the railroad company. Vehicles or construction equipment shall be considered to be fouling the track when located in such a position that failure of same with or without load brings the equipment within the fouling limit. The Contractor shall conduct its work and handle its equipment such that no part of any material or equipment shall foul an operated track, catenary, electrical facility, or signal facility without written permission of the chief engineer of the railroad company or companies affected.

Information on required railroad clearances may be found in the contract documents in a Special Note entitled *Special Provisions for Protection of Railway Interests*. If fouling distances are provided by Special Note, the Contractor need not contact the railroad to verify fouling distances. If information on required railroad clearances is not provided in the contract documents, the Contractor shall contact the railroad facility owner prior to operation of any equipment or vehicles within 20 feet of the centerline of a track; within 15 feet of a catenary, electrical wire or other electrical facility; or within 15 feet of a signal wire or other signal facility to establish the fouling limits for that facility.

C. Supervision and Railroad Approval. All work on any contract affecting a railroad company's property, right of way facilities, including temporary track detour, shall be carried out under the joint supervision of the Department and the railroad company or companies in a manner satisfactory to both agencies.

Information on required railroad notice and approvals may be found in the contract documents in a Special Note entitled *Special Provisions for Protection of Railway Interests*. If notice and approval provisions are provided by Special Note, the Contractor shall provide the railroad written notice as required therein. If notice and approval provisions are not provided in the contract documents, the Contractor shall provide written notice to the railroad facility owner a minimum of 21 work days, or other shorter time required by the railroad, prior to start of work.

The Contractor shall obtain prior approval from the railroad company to use a railroad service road to access a site, and shall be responsible for any associated permit application and fees. The Contractor shall obtain the written approval of the chief engineer of the railroad company or

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

companies affected in respect to the details and methods to be employed in constructing any structures, track detours, falsework, removal of structures, allowable track clearances, and any or all other details that may in any manner affect the operation or maintenance of any or all railroad facilities. The requirement that written approval shall be obtained from the chief engineer of the railroad company shall be complied with before the Contractor starts work. The Contractor shall include in its unit prices bid for this work all the costs of these requirements including any expense occasioned by delay or interruption of its work by reason of the operation or maintenance of the railroad facilities. Approval by the chief engineer of the railroad company or companies affected does not absolve the Contractor from any liability resulting from its contractual operations.

D. Coordination of Work. The Contractor shall coordinate with the railroad company or railroad companies in carrying out railroad force account work. When the work of the Contractor or Subcontractor dovetails with the railroad force account work, the materials shall be delivered and the operations conducted so as to carry on the work continuously in an efficient and skillful order. Delays or oversight on the part of the Contractor or Subcontractors in getting any or all of their work done in the proper manner, thereby requiring removal and replacement of work already in place will not be the basis for a claim for extra compensation. Such work shall be done at the cost and expense of the responsible Contractor or Subcontractor.

E. Railroad Employees. When, in the opinion of the chief engineer of the railroad company or companies, the Contractor's normal operations in progressing its contract are such that an operated track is or might be fouled or railroad traffic endangered, the railroad company or companies will employ protective labor, when found necessary for railroad operations. Unless an item for railroad protection is included in the contract, payment for the services described above shall be made to the railroad company directly by the State pursuant to the terms of a State-Railroad agreement negotiated for the contract. When an item for railroad protection is included in the contract, the Contractor shall pay for such services.

All services for protective labor and similar protective service occasioned by the operation of the Contractor, except as noted in the preceding paragraph shall be at the sole expense of the Contractor and the Contractor shall include all such costs in its unit bid prices for such protection.

The Contractor shall, at its own expense, carry compensation and other insurance for protective labor furnished by the railroad company or companies.

It is agreed that the furnishing of any protective labor shall not relieve the Contractor from any liability of payment for any damage caused by its operations.

F. Protection of Railroad Service and Facilities. The Contractor shall take special care and vigilance to avoid damage to the trains, tracks or other facilities of the railroad company and shall conduct its work so as not to interfere with the movement of trains or other operations of the railroad company. Whenever work may affect the safety or movement of trains, the method of doing the work shall be submitted to the chief engineer of the railroad company affected for approval. No work affecting safety or movement of trains shall be commenced or prosecuted until written approval of the chief engineer of the railroad company is received. The approval of the chief engineer of the railroad will not release the Contractor from any responsibility for any damages to the railroad company caused by the acts of the Contractor or its employees and Subcontractors. If, during the carrying out of the contract work, the trains, tracks or other facilities of the railroad company are endangered, the Contractor shall immediately do such work as directed by the Engineer to restore safe conditions and, upon failure of the Contractor to carry out such orders immediately, the railroad company may, with the approval of the Engineer, take whatever steps are necessary to restore safe conditions. The cost and expense to the railroad company of restoring safe conditions or of any damage to the railroad company's trains, tracks or other facilities caused by the Contractor's operations shall, when approved by the Engineer, be considered a charge against the Contractor and shall be paid for by it, or upon its failure or refusal to pay such charge within a reasonable time after the railroad company submits the

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

bill to it, the amount thereof may be deducted from any monies due or that may become due to it under its contract, and any such sum so deducted may be paid to the railroad company after an audit by the State of the items of such cost and expense.

In performing construction operations both on and off railroad right of way areas, the Contractor shall prevent the fouling of railroad track ballast with earth, mud, silt, or other foreign matter. To prevent fouling of the ballast, it may be necessary for the Contractor to construct temporary erosion control measures or sheeting or provide other precautionary measures that are required.

Where, in the opinion of the railroad company, demolition work, concreting or hauling along or across tracks will result in ballast becoming fouled, the Contractor shall take preventive measures to protect the entire ballast section by nailing canvas, plywood or similar material to the ties in the entire area to be affected. The protective material shall remain in place until there is no further possibility of fouling the ballast and then shall be removed by the Contractor.

The work required to protect the railroad track ballast shall be performed by and at the expense of the Contractor and under the supervision of and to the satisfaction of the chief engineer of the railroad company or its authorized representative. The railroad company will assume no responsibility for the adequacy of the work.

In the event that the railroad track ballast does become fouled after the aforementioned protective measures are taken, the railroad company, with its own forces, shall remove and replace the fouled ballast with clean ballast. The charges for this work will be billed by the railroad company against the Contractor.

G. Lifting. All lifting operations shall be conducted in accordance with §107-05(P) *Lifting*. In addition, equipment used for the erection or removal of structures over railroad facilities shall have a minimum lifting capacity of 150% of the lift weight (operational capacity limited to 66²/₃% of the tipping load).

H. Use of Explosives. Blasting shall be conducted in such a manner as not to endanger facilities or operation of the railroad. The Contractor shall furnish, while blasting, at its own cost and expense, watch persons and other protection necessary to protect the public and railroad. The Contractor's attention is directed to §107-05 *Safety and Health Requirements*, with regard to blasting.

I. Foundations. Foundations may be extended or lowered if deemed necessary by the DCES and the chief engineer of the railroad company or companies affected, only if such change is ordered by the DCES.

J. Communications and Signals. The cost of all changes in communication and signal facilities necessary to complete the contract work will be paid for by the State. The cost of all changes in communication and signal facilities made for the convenience of the Contractor shall be paid for by the Contractor.

K. Contractor's Private Grade Crossing. If the Contractor elects, and the railroad company or companies approve, to have a private grade crossing at the site of the work installed for its own use, it shall make a formal request to the railroad company or companies for such a crossing. A regulatory hearing is required for crossings of Amtrak, Metro-North, and Long Island Railroad routes. After it has entered into an agreement with the railroad company or companies pertaining to the size and type of crossing, the payment of the cost for installing, and removing the crossing, the obtaining of the necessary insurance for the protection of the railroad company or companies, and the agreement as to the required protection to railroad traffic when the crossing is in use, the railroad company or companies will install and remove the temporary crossing at the sole expense of the Contractor.

L. Sidetrack Facilities. When sidetrack facilities are required by the Contractor, it shall at its sole cost and expense, make the necessary arrangements for the use of existing sidings, tracks not in

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

service or the construction of new sidings. The Contractor shall restore any and all existing sidings and tracks used for sidetrack facilities to the condition existing prior to use by the Contractor. The construction location and use of all sidetrack facilities are to be subject to the approval of the chief engineer of the railroad company affected.

The railroad company may move the Contractor's cars, placed on existing sidings, at any time, to permit the placing of cars for said railroad company's business.

When any turnouts from the main tracks are approved by the railroad company such turnouts will be furnished, installed and removed by the railroad company at the expense of the Contractor. Any signal work and derails necessary for sidetrack facilities will be furnished, installed and removed by the railroad company at the Contractor's expense.

M. Railroad Use of Completed Work. The railroad company affected may, prior to the completion of the work to be performed under contract and the acceptance thereof, enter upon and use any portion of said work without any compensation whatever to the Contractor for such use, and without any compensation or payment whatever to the Contractor for any delay in the work caused by such use. The taking possession and use shall not be deemed an acceptance of the work so taken and used or any part thereof.

N. Work Trains and Railroad Equipment. If the Contractor elects to use work trains or any railroad equipment which operates on the tracks of the railroad company, the operation of such trains and equipment is subject to any requirements determined by the chief engineer of the railroad company or companies affected. The cost of the services of any railroad employees required by the railroad company to operate such trains or equipment shall be paid by the Contractor, including the cost of necessary flaggers.

O. Operation of Railroad. The Contractor shall make every possible effort to reduce to a minimum the length of time that railroad company will have to operate over any track detour, and to this end it shall continue full operation throughout the winter months, if directed by the D.C.E.S. on any and all works necessary to permit the railroad company to restore its tracks in their permanent location as quickly as possible. The Contractor shall conduct its work so that schedule speed can be maintained by the railroad at all times.

105-10 SURVEY AND STAKEOUT. Prior to the start of construction work, all right of way markers, property line markers and survey control markers located in or adjacent to areas which may be disturbed during construction shall be properly protected and tied to fixed reference points or located from established contract control. Upon completion of the work, all right of way or property line markers or survey markers that have been disturbed by the Contractor, shall be reset under the direction of a Land Surveyor. Field location notes shall be recorded and made available to the Engineer upon request at no additional cost to the State.

All survey control and boundary location work shall be performed in accordance with the Department's *Land Surveying Standards and Procedures Manual* under the direction of a Land Surveyor.

All survey work performed for quality control by the Contractor and for quality assurance by the Department should both utilize: (1) similar levels of measurement precision and methods to perform positional measurements, (2) the same control network from which measurements are made, and (3) the same survey measurement procedures to ensure consistency of results.

Terrain features are measured and positioned by various methods relative to the contract control network established for each contract. The precision with which an instrument or equipment positions a point is related to the quality of the method by which measurements are made, and the ability to duplicate the same measurement. The local accuracy of a located point is the closeness of the measured or computed value to a standard or accepted value (actual spatial position on the earth). Positional tolerance is the allowable spatial difference between making measurements by two different methods or by the same method at separate times, all of which have the same level of precision.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Horizontal coordinates and vertical elevations of existing features provided as part of the contract are located in the field based on accuracies achievable for each positional point relative to the contract control. Positional accuracies are directly related to the strength of the contract control network, the methods used to make the measurements, the precision of the instruments used to measure to the feature, and how definable the feature is which is being located. Point feature locations represent a single position (for example: property line marker, sign post, utility pole, or fire hydrant) and can be re-identified or verified in the field to within a small variation (high confidence level) from where they were initially positioned. Linear feature locations define the alignment of that feature. That alignment can be verified to within a specific tolerance depending on the spacing or frequency at which the points were originally measured to define that alignment. Straight or uniformly curved linear features (for example: curbline, edge of roadway, or edge of sidewalk) which can be easily defined in the field should have a relatively small positional variation from their designed location when compared to a verified field location. Irregular shaped or not as clearly defined linear features (for example: break lines, ditchlines, treelines, or environmental area perimeters) which are sometimes difficult to define or delineate precisely in the field, could have a larger variation from where they were initially positioned when compared to a field-verified location.

Digital terrain model (DTM) surfaces, when provided by the Department, are made up of a combination of point and linear features. The precision of a data collection instrument does not necessarily indicate what positional tolerance should be expected of any feature verified from an existing DTM. The location or elevation of a feature selected from a DTM surface can, at best, be determined by interpolating the horizontal position or elevation between previously located points. The verification of any specific elevation on the DTM surface is directly related to: (1) the spacing of collected data or breaklines used to produce that surface; (2) the uniformity of the surface being measured; (3) the steepness of the slope of that surface; and (4) how obscured the surface is from the measuring technique used to originally locate the surface. Standardized procedures for determining the spacing/frequency of point and linear features (including break lines), are critical to providing consistent results. Department standardized procedures for determining feature locations are described in both the *Land Surveying Standards and Procedures Manual* and the *Specifications for Photogrammetric Stereocompilation*.

Verification of the positional tolerance of the DTM surface elevation requires a comparison of the original collected point data with recollected point data measured at the same horizontal locations. Field comparisons to interpolated DTM surfaces or recreated surface information (from other information sources) shall not be used for verification of the positional tolerance of a feature. Comparisons of re-measured point data can only be made with the original collected point data, not to interpolated positions. Measurements for verification of DTM point data shall also be made from the same contract control network, and by instruments capable of an equal or greater precision.

105-11 INSPECTION. Department Inspectors are authorized to inspect all work done and materials furnished, including all or any part of the work and the preparation, fabrication or manufacture of the materials to be used. Department Inspectors may be Department employees, or agents acting for the Department. Department Inspectors are not authorized to either alter or waive the provisions of these specifications or the contract, or to issue instructions contrary to the plans and specifications, without written approval of the Engineer, or act as a foreperson for the Contractor. Department Inspectors have the authority to reject unacceptable work or materials.

The Department inspections and tests are for the sole benefit of the Department and do not (1) relieve the Contractor of the responsibility for providing adequate quality control measures; (2) relieve the Contractor of responsibility for damage to or loss of the material before acceptance; (3) constitute or imply acceptance; or (4) affect the continuing rights of the Department after acceptance of the completed work under Article 9 *Final Acceptance of Work* of the contract agreement.

The Engineer and the Inspector shall be allowed full work access and shall be furnished with necessary information and assistance by the Contractor to make a complete and detailed inspection. The Contractor shall carry out the provisions of the contract at all times, regardless of whether an authorized inspector is present or not. Any work or item that is, at any time, found to be out of specification or not in

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

compliance with the plans shall remain the responsibility of the Contractor and shall be subject to such corrective measures that are approved in writing by the Engineer.

The Contractor shall transmit a copy of any audit or inspection report conducted by SSPC, OSHA, or EPA of the contract site to the Engineer within seven days of receiving such a report. If the Contractor has been disciplined by SSPC or placed on warning, probation, suspended or revoked status from the Painting Contractor Certification Program (PCCP) during the past 24 months, the Contractor shall provide a written explanation of the cause for such action, the corrective measures enacted, and the Contractor's current PCCP status.

105-12 LOAD RESTRICTIONS. Construction equipment or vehicles delivering materials or traveling to a site from outside the contract limits shall have all required permits issued through the established Department vehicle permit system in accordance with Section 385 of the Vehicle and Traffic Law (or 23 USC, Section 127 for Federal Aid Projects on the Interstate System). The permit will indicate the limits within which such equipment with over-legal gross weights or axle loadings may operate, the frequency of such passages and all other limiting factors.

Construction equipment or vehicles operating within the contract limits having gross weights or axle loadings within the legal limits Section 385 of the Vehicle and Traffic Law (or 23 USC, Section 127 for Federal Aid Projects on the Interstate System) may operate without specific approval.

Prior to the use of construction equipment or vehicles with over-legal gross weights or axle loadings on any structure, on any new pavement or on any resurfaced pavement within the contract limits, the Contractor shall submit a written request to the Engineer. This request shall be accompanied, upon request, by an appropriate analysis performed by a Professional Engineer, including the pertinent equipment data, and shall demonstrate that the operations will not result in detrimental effects on the highway or structure.

Use of over-weight construction equipment or vehicles within the contract limits other than listed above shall be subject to the approval of the Engineer. If it is determined that the use of construction equipment or vehicles is having a detrimental effect or will result in detrimental effects on the finished work, the Engineer will so notify the Contractor to modify or cease the operations.

105-13 WORK ZONE TRAFFIC CONTROL FOR MOBILE OPERATIONS. For contracts that involve mobile operations, but do not include separate contract pay items for work zone traffic control, a work zone traffic control sequence shall be provided by the Contractor in accordance with the MUTCD. When last following vehicle and/or trailing vehicles are required by these provisions, they shall meet the requirements of Section 619 *Work Zone Traffic Control* for Shadow Vehicles. No separate payment will be made for this work, the cost shall be included in prices bid for the various contract items.

105-14 DISPUTED WORK AND DISPUTE RESOLUTION. The term "dispute" shall mean a disagreement between the Contractor and the Department concerning a matter of contract performance or contract compensation. Dispute resolution may involve adjustments in compensation, adjustment of contract pay items, the addition of new contract pay items to the contract, and/or extension of time for performance. The Contractor shall continue the work during the pendency of the dispute.

It is the goal of the Department to resolve disputes that may arise under the contract in a timely, just and fair manner consistent with the terms of the contract. The dispute resolution process may be undertaken at any time from the contract award to the issuance of the final payment by the Office of the State Comptroller. The dispute resolution process recognizes and will take into consideration the risks and controls inherent in construction which the Contractor or the Department have agreed to assume pursuant to the terms of the contract. The Contractor is encouraged, when initiating a dispute, to provide information concerning measures that may be taken to mitigate the damages.

Disputes of any nature shall be made in strict accordance with the contract provisions, including the notice and recordkeeping provisions of §104-06 *Notice and Recordkeeping*. The Department reserves the right to modify specifications or delete portions of the work being disputed in order to mitigate damages.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

A. Disputed Work. If the Contractor is of the opinion that any work directed by the Engineer to be completed as contract work is extra work and not contract work, or that any order of the Engineer exceeds the requirements of the provisions of the contract, the Contractor shall provide the Department written notice and maintain records in accordance with §104-06 *Notice and Recordkeeping*. After submitting the required notice, the Contractor shall complete its dispute submission in accordance with §105-14E. *Required Content of Dispute Submission*.

1. Determined to Be Contract Work. If the Department determines that the disputed work is contract work and not extra work, or that the direction given to the Contractor and protested was proper, the Department will direct the Contractor to continue the disputed work and the Contractor shall promptly comply. The Contractor's right to further pursue a dispute for extra compensation or damages will not be affected in any way by the Contractor complying with the directions of the Department to proceed with the work, provided the Contractor continues to keep and submit daily records to document all labor, material and equipment used for disputed work in accordance with §109-05C.1. *Daily Summary* to the Engineer.

2. Determined to Be Extra Work. If the Department, determines that the disputed work is extra work and not contract work, or that a direction given to the Contractor and protested was not proper, then a contract adjustment will be made. Compensation will be made for such work in accordance with §109-05 *Extra Work and Time Related Compensation*. The Contractor shall continue to maintain force account records until receipt of the change order approved by the Office of the State Comptroller. Documented, additional, actual and reasonable costs incurred by the Contractor pursuant to following a written order to perform work (that was subsequently contained in a change order which was disapproved) will be considered reimbursable. Eligibility for additional compensation shall cease upon notification of the disapproval of a change order.

B. Time Related Disputes. The term "time related dispute" shall mean any dispute arising from any event which affects the scheduled time of performance. This paragraph is intended to cover all such events which include major deductions or increases to quantities of work, suspension of work and cancellation of contract, and termination, as well as actions, forces or factors, such as "delay", "disruption", or "interference."

If the Contractor believes that it is or will be entitled to additional compensation for time related disputes, whether due to delay, extra work, disputed work, breach of contract, or other causes, the Contractor shall comply with the notice and recordkeeping provisions of §104-06 *Notice and Recordkeeping*. The Department will have no liability and no adjustment will be made for any damages which accrued more than 15 calendar days prior to the filing of written notice with the Engineer. The primary tool used to evaluate the time of performance is the Contractor's progress schedule. Department approval of a schedule or a revised schedule does not entitle the Contractor to a time extension or any time related damages. Compensation will be made for such work in accordance with §109-05D. *Time Related Dispute Compensation*.

C. Acceleration Disputes. The Contractor may not dispute costs associated with acceleration of the work unless the Department has given prior express written direction to the Contractor to accelerate its effort. The Contractor shall always have the basic obligation to complete the work in the time frames set forth in the contract. Lack of express written direction on the part of the Department shall never be construed as approval.

If the Contractor does accelerate its work efforts pursuant to written direction from the Department, compensation will be made in accordance with §109-05E. *Acceleration Compensation*. The Department, in determining whether or not any compensation is warranted, will evaluate the facts and circumstances which led to the acceleration to determine whether they were in the Contractor's control.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

D. Review Time Periods for Disputes. After providing written notice, the Contractor shall, as soon as the information is available or ascertainable, provide the Engineer with a summary of its dispute contentions in accordance with §105-14E. *Required Content of Dispute Submission*, in sufficient detail so that the Engineer may make a determination. The Engineer will make an initial response, in writing, within 21 calendar days after the Contractor provides the dispute submission.

If a dispute is not resolved by the Engineer to the satisfaction of the Contractor, within 10 work days of receipt of the Engineer's written decision or the Engineer fails to reply within 21 calendar days, the Contractor shall notify the Regional Director, in writing, with a copy to the Engineer, of its contentions relative to the dispute.

If the dispute is not resolved by the Regional Director to the satisfaction of the Contractor, within 15 calendar days of receipt of the Regional Director's written decision or the Regional Director fails to reply within 30 calendar days, the Contractor shall notify the Commissioner, in writing, with copies to the Engineer and the Regional Director, of its contentions relative to the dispute, indicating the substance of previous communication on the issue with the Engineer and the Regional Director and its rebuttal of their previous findings.

1. Disputes to the Commissioner Up to \$50,000. For all disputes to the Commissioner of \$50,000 or less, the Department will respond in writing within 45 calendar days of receipt of the dispute. If any additional documentation supporting the dispute, or relating to the subject matter of the dispute is required, the Department may request said documentation in writing within 30 calendar days of receipt of the dispute. The Contractor will provide such information within 30 calendar days of the request unless another time period is agreed to. The Department's written response to the additionally documented dispute will be submitted to the Contractor within 15 calendar days after receipt of said additional documentation or within a period of time no greater than that taken by the Contractor in producing said additional documentation, whichever is greater. If the Contractor disputes the Department's written response, or the Department fails to respond within the time prescribed, the Contractor may so notify the Department in writing within 15 calendar days of receipt of the Department's response, or within 15 calendar days of the Department's failure to respond. Upon the Contractor's request, the Department shall schedule a meeting or conference. By agreement between the Department and the Contractor, such time periods may be modified.

2. Disputes to the Commissioner Over \$50,000 to \$250,000. For all disputes to the Commissioner over \$50,000 and less than or equal to \$250,000, the Department will respond in writing within 60 calendar days of receipt of the dispute. If any additional documentation supporting the dispute, or relating to the subject matter of the dispute is required, the Department may request said documentation in writing within 30 calendar days of receipt of the dispute. The Contractor shall provide such information within 30 calendar days of the request unless another time period is agreed to. The Department's written response to the additionally documented dispute will be submitted to the Contractor within 30 calendar days after receipt of said additional documentation, or within a period of time no greater than that taken by the Contractor in producing said additional documentation, whichever is greater. If the Contractor disputes the Department's written response, or the Department fails to respond within the time prescribed, the Contractor may so notify the Department in writing within 15 calendar days of receipt of the Department's response, or within 15 calendar days of the Department's failure to respond. Upon the Contractor's request, the Department will schedule a meeting or conference and notify the Contractor within 30 calendar days of the scheduled date. By agreement between the Department and the Contractor, such time periods may be modified.

3. Disputes to the Commissioner over \$250,000 or of Undetermined Value. For disputes to the Commissioner over \$250,000 or that have an undetermined value, the Department will respond in writing within 90 calendar days of receipt of the dispute. If any additional

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

documentation supporting the dispute, or relating to the subject matter of the dispute, is required, the Department may request said documentation in writing within 30 calendar days of receipt of the dispute. The Contractor shall provide such information within 30 calendar days unless another time period is agreed to. The Department's written response to the additionally documented dispute will be submitted to the Contractor within 60 calendar days after receipt of the said additional documentation, or within a period of time no greater than that taken by the Contractor in producing said additional documentation, whichever is greater. If the Contractor disputes the Department's written response, or the Department fails to respond within the time prescribed, the Contractor may so notify the Department in writing within 30 calendar days after the receipt of the Department's response, or within 30 calendar days of the Department's failure to respond. Upon the Contractor's request, the Department will schedule a meeting or conference and notify the Contractor within 30 calendar days of the scheduled date. By agreement between the Department and the Contractor, such times periods may be modified.

E. Required Content of Dispute Submission. All disputes shall be submitted in writing to the Engineer, and shall be in sufficient detail to enable the Engineer to ascertain the basis and the amount of each dispute. If requested and as a minimum, the following information shall be provided when such information is ascertainable by the Contractor:

1. General.

- a. The date on which actions resulting in the dispute occurred or conditions resulting in the dispute became evident.
- b. A copy of the notice of dispute for the specific dispute by the Contractor.
- c. To the extent known, the name, function, and activity of each Department official, or employee or agent, involved in, or knowledgeable about facts that gave rise to such dispute.
- d. The name, function, and activity of each Contractor or Subcontractor official, or employee, involved in, or knowledgeable about facts that gave rise to such dispute.
- e. The identification of any pertinent documents, and the substance of any material communication relating to such dispute.
- f. A statement as to whether the additional compensation or extension of time if requested is based on the provisions of the contract or is an alleged breach of contract.
- g. If an extension of time is also requested, the specific days for which it is sought and the basis for such request as determined by an analysis of the construction progress schedule.

2. Time Related Dispute Submissions.

- a. A description of the operations that were delayed, the reasons for the delay, how they were delayed, including the report of all scheduling experts or other consultants, if any.
- b. The documented process of establishing, maintaining and updating the progress schedule, showing when the delay occurred and how it affected the schedule, in accordance with §108-01 *Progress Schedule* or a CPM specification, if applicable.
- c. The amount of additional compensation sought in accordance with §109-05D. *Time Related Dispute Compensation*.

3. Acceleration Dispute and Disputed Work Submissions.

- a. A detailed factual statement of the dispute providing all necessary dates, locations and items of work affected by the dispute.
- b. The specific provisions of the contract which support the dispute and a statement of the reasons why such provisions support the dispute.
- c. The amount of additional compensation sought and a breakdown of that amount shall conform to the requirements of §109-05B. *Force Account Work* except for acceleration

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

disputes which shall conform to the requirements and categories specified in §109-05D.
Time Related Dispute Compensation.

F. Required Certification of Disputes Over \$50,000. When submitting any dispute over \$50,000, the Contractor shall certify in writing, under oath and in accordance with the formalities required by the contract, as to the following:

1. That supporting data is accurate and complete to the Contractor's best knowledge and belief;
2. That the amount of the dispute is based on sound engineering principles, is supported by sound mathematical and cost accounting principles and the dispute itself is in accordance with the terms of the contract, and accurately reflects what the Contractor in good faith believes to be the Department's liability;
3. That the dispute and the amount of the dispute is in full compliance with the Federal False Claims Act, 31 U.S. Code Section 3729, and New York State False Claims Act, NYS Finance Law Article XIII; and that the Contractor acknowledges that a violation of these acts by a court of proper competent jurisdiction, such violating Contractor shall be subject to liability for a civil penalty, plus up to three times the damage the State sustains by such violation.
4. The certification shall be executed by:
 - a. The Contractor, if the Contractor is an individual.
 - b. A senior company official in charge at the Contractor's plant or location involved or an officer or general partner of the Contractor having overall responsibility for the conduct of the Contractor's affairs, if the Contractor is not an individual.

G. Auditing of Records. A Contractor who has filed a dispute, or Subcontractor, Manufacturer, Fabricator or Material Supplier on whose behalf a dispute has been filed, shall have the following records available for audit at any time following the filing of such dispute, and shall cooperate with the auditors, whether or not such dispute is part of a suit pending in the courts of this State. The audit may be performed by employees of the Department or by an independent auditor appointed by the Department, and may begin on 15 days notice to the Contractor, Subcontractor, Manufacturer, Fabricator or Material Supplier as is appropriate. The Contractor, Subcontractor, Manufacturer, Fabricator or Material Supplier shall cooperate with the auditors. The Department will maintain the audit, its backup, reports, schedules and conclusions as confidential material. Failure to maintain and retain sufficient records shall constitute a waiver of that portion of such dispute that cannot be verified and shall bar recovery there under. In the event the Contractor fails to substantially furnish the required reports and accounting records, such failure shall constitute a waiver of the dispute for payment other than for payment at contract unit prices for the work performed. The Contractor will be allowed to review the audit findings and will be allowed 30 calendar days to respond to any items disallowed by the audit.

Without limiting the generality of the foregoing, the auditors shall have available to them and the Contractor agrees to provide access to and true copies of the original, in whatever format the records are created/maintained, of the following documents:

1. All documents related to the preparation of the Contractor's bid including the final calculations on which the bid was based.
2. All documents which relate to each and every dispute together with all documents which support the amount of damages as to each dispute.
3. Daily time sheets, superintendent diaries or log sheets and foreperson's daily reports.
4. Union agreements and reports, if any.
5. Insurance policies, welfare and benefits records or plans for union and non-union personnel.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

6. Payroll register, Individual employee earnings records and Payroll tax returns.
7. Material invoices, purchase orders, and all material and supply acquisition contracts.
8. Material cost distribution work sheet.
9. Equipment records (list of company equipment, rates, depreciation schedules, daily equipment reports or logs, fueling logs or records, equipment lease purchase agreements, and equipment purchase invoices).
10. Depreciation records on all company equipment whether such records are maintained by the company involved, its accountant, or others.
11. If a source other than depreciation records is used to develop costs for the Contractor's internal purposes in establishing the actual cost of owning and operating equipment, all such other source documents.
12. Vendor rental agreements, subcontractor invoices, agreements and back charge records.
13. Subcontractor payment certificates.
14. Canceled checks (payroll and vendors).
15. Job cost ledger or report and Job payroll ledger.
16. General ledger, general journal (if used), and all subsidiary ledgers and journals together with all supporting documentation pertinent to entries made in these ledgers and journals.
17. Cash receipts, cash disbursements journal, purchase journal, petty cash journal and supporting vouchers.
18. Audited and unaudited financial statements for all years during operations on this contract.
19. Documents which reflect the Contractor's actual overhead during the years contract work was performed.
20. Work sheets used to prepare the dispute establishing the cost components for items of the dispute including, but not limited to, labor, benefits and insurance, materials, equipment, subcontractors, and all documents which establish the time periods, individuals involved, the hours and the rates for the individuals.

H. Contract Closeout Process. A dispute, or a portion thereof, that has been previously submitted to the Department which remains unresolved to the satisfaction of the Contractor, may be submitted for Department review in connection with the closeout process. The records made, and recommendations or actions of a facilitator, a Dispute Review Board, or any other dispute resolution method, shall be off the record, non-binding, confidential, and may not be used in any future litigation.

1. Contract Closeout Meeting. If requested by the Contractor, the Department will schedule a contract closeout meeting with the Office of Construction in Albany. The contract closeout meeting process involves meeting(s) with the Contractor and its representatives and Department personnel to amicably resolve all remaining disputes of the Contract. In lieu of pursuing the closeout meeting process, the Contractor may elect to utilize the Gatekeeper process.

2. Gatekeeper. The Chief Engineer of the Department of Transportation is the Gatekeeper. The Contractor may submit a single request per contract to the Department to have the Gatekeeper identify an alternate dispute resolution process to be used for unresolved dispute(s) in the contract closeout process. The Contractor shall provide to the Gatekeeper a brief description of the contract work and identify the Contractor's preferred method of dispute resolution. The Contractor shall document to the Gatekeeper that (a) the unresolved dispute involves unique, unusual or complex construction, engineering or legal issues; (b) the unresolved dispute has a monetary value in excess of \$50,000 and (c) the Contractor has demonstrated a clear commitment to active participation in partnering during the conduct of this contract.

Upon conclusion of the review, the Gatekeeper will advise the Contractor how it should proceed with processing such dispute(s) in an attempt to resolve the matter. The Gatekeeper will advise the Contractor to proceed to one of the following: (1) a contract closeout meeting with the

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Office of Construction, (2) a facilitated contract closeout meeting with the Office of Construction or to (3) a Dispute Review Board (DRB). The decision of the Gatekeeper shall be final and shall not be subject to review under Article 78 of the New York Civil Practice Law and Rules. The expenses of the facilitator, a DRB, or any other method shall be equally shared by the Department and the Contractor.

a. Facilitated Closeout Meeting. A facilitator may be used to assist in resolving disputes arising out of the performance of the contract. The facilitator shall consist of one person, agreed to by the Department and the Contractor, who is knowledgeable in public works construction matters and who shall try to bring the parties to a mutually agreeable resolution of the disputes.

b. Dispute Review Board. A Dispute Review Board (DRB) may be established to assist in resolving disputes arising out of the performance of the contract. The DRB shall consist of one or three persons, agreed to by the Department and the Contractor, who are knowledgeable in public works construction matters. For a one person DRB, the person must be mutually acceptable to the Department and the Contractor. For a DRB of three persons, one will be selected by the Department, one will be selected by the Contractor and one will be mutually selected by the Department and the Contractor. The DRB will make a recommendation as to the resolution of the disputes.

3. Claims. If any dispute, or portion thereof, remains unresolved following the meeting(s) or conference(s) and the payment of the final agreement, the Contractor may file a claim in the New York State Court of Claims in accordance with law and the provisions of the Contract.

105-15 FURNISHING RIGHT OF WAY. The Department will secure all rights of way in advance of construction. Any exception will be indicated prior to the award of the contract. The Contractor shall not enter upon any parcel until the proper rights of entry have been obtained.

The Contractor's attention is directed to the fact that Permanent Easements (P.E.), Temporary Easements (T.E.) and Temporary Occupancies (T.O.) are obtained by the Department for specific construction purposes. Contractors should not anticipate unlimited usage of such areas and shall confine construction activities to such purposes as are specifically described in the ROW appropriation maps and/or as shown on the plans unless separate agreements are made between the Contractor and the landowner permitting other usage of such areas. Such limitations and related costs shall be reflected in the bid prices.

Releases may be used for contract work outside of the existing right of way that minimizes the construction impacts on a property owner and is not essential for construction. A release is not used for property rights acquired by the Contractor, including rental of property for equipment staging, office space or material storage. Work performed under a release may include: plantings; unsound and hazardous tree removal; minor grading; and reconnection or minor work on private driveways, walkways and utilities as a result of work within the right of way.

The Department will secure all releases prior to the Contractor performing contract work on private parcels. The Contractor may not secure releases for contract work. If a release cannot be obtained, the work will be removed from the contract.

The Engineer will coordinate with the property owner to determine the disposition of any surplus material or waste in accordance with §107-10 *Managing Surplus Material and Waste*.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

105-16 SHOP DRAWING APPROVAL. Approval by the Department of shop drawings, methods of installation or Contractor's construction detail(s) does not relieve the Contractor of the responsibility for compliance with the contract specifications, or relieve the Contractor of the responsibility for providing adequate quality control measures and does not relieve the Contractor of the responsibility for providing proper and sufficient materials, equipment and labor to complete the approved work in accordance with the contract documents.

Unless otherwise stated in the contract documents, no portion of the work requiring shop drawings or a sample of the work shall be commenced until the submission has been approved by the Department. Should, for any reason, the contract not be awarded, the Contractor will not be entitled to reimbursement for work performed prior to the contract award. Subsequent to award, the Contractor will not be entitled to reimbursement for changes made to the contract documents unless changes occur after approval of the submission.

Unless otherwise stated in the contract documents, review of shop drawings, erection plans and demolition plans will begin only after the submission of a complete set of information required to complete a discrete item of work. The review process will allow two work days per drawing submitted or a minimum of 10 days, unless stated otherwise in the contract documents. Unless otherwise stated in the contract documents, including the Steel Construction Manual or the Prestressed Concrete Construction Manual, a drawing shall be defined as a sheet of similar size and scale as the plan sheets prepared and offered for sale to potential bidders, or sheet provided on a different size media and using a proportional scale. Submission of materials directly to a reviewing unit shall be done only with the prior approval of the Engineer. Complete copies of all submissions shall be provided to the Engineer.

105-17 CONTRACT RECORDS. The Engineer will keep contract records in accordance with the Manual for Uniform Record Keeping (MURK). Changes that are made in subsequent revisions of the Manual will be incorporated in the contract procedures and records unless authorized to the contrary in writing by the Deputy Chief Engineer, Construction (DCEC). The Contractor is invited to review the contract records with the Engineer if desired. The Contractor may request occasional or incidental copies of contract records in support of on-going construction activities, subject to the availability of staff to fulfill the Contractor's request. If the Contractor desires significant or large numbers of copies of records, the Contractor shall file a Freedom of Information Law (FOIL) request with the Regional Director. In several instances, (such as Force Account work, application for approval of Subcontractors, etc.) the Contractor shall furnish such data and information on forms as established in MURK and furnished by the Department.

105-18 MANUFACTURER WARRANTIES AND GUARANTEES. The Contractor shall provide to the Department or the authority having jurisdiction of the facility any manufacturer's warranties and guarantees normally given as customary trade practice. For contracts involving the furnishing and/or installing of electrical and mechanical equipment, the Contractor shall guarantee the satisfactory in-service operation of mechanical and electrical equipment and related components for a period of 6 months following contract acceptance, at no cost to the State for either parts or labor. This requirement does not apply to mechanical and electrical equipment furnished by the State.

105-19 CONTRACTOR WARRANTIES. The Department may make available, subject to express agreement in writing between the Department and the Contractor, with approval from the FHWA when required, warranties associated with the contract for limited circumstances. A prototype warranty specification is available from the Department for the purpose of the Contractor's providing a warranty for a particular item, as opposed to providing a warranty for an entire contract. The product warranty will be developed between the Department and the Contractor with input from appropriate technical experts and the Office of Legal Affairs in conjunction with the Office of Construction, and incorporated into the contract via change order. The warranty may be used in situations including, but not limited to, work performed not in full compliance with the contract documents, where initial testing does not indicate any deficiency in the end product.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

105-20 OPENING HIGHWAY TO TRAFFIC PRIOR TO CONTRACT FINAL ACCEPTANCE.

When directed, in writing by the Regional Construction Engineer, the Contractor shall open to traffic any portion of new pavement and/or structures before contract final acceptance. Traffic on these portions of highway so opened to travel by the Regional Construction Engineer, shall be maintained and protected in accordance with the provisions of the contract.

Should the Contractor be dilatory in completing the work on the portion of the highway directed to be opened, the Regional Construction Engineer may order all or a portion of the said highway open to traffic; and in this event the Contractor shall not be relieved of its liability and responsibility during the period the work is so opened prior to contract final acceptance.

These provisions apply not only to the reconstruction of existing highways, but also to work on new locations where traffic is not maintained during construction.

105-21 CIVIL RIGHTS MONITORING AND REPORTING. The Department approved civil rights reporting software is *Equitable Business Opportunity Solution* (EBO). The EBO software is a web-based system owned and maintained by the Department, and provided to the Contractor at no cost. The Contractor shall use the Department approved civil rights reporting software on all contracts. The Contractor shall submit complete, accurate, electronic data to the Department for each month, not later than the 15th of the following month, using the Department approved civil rights reporting software. Data shall be current through the end of the last full payroll week for that month, or as otherwise approved by the Engineer to coordinate with contract payment submittals.

A. Civil Rights Officer(s). The Contractor shall designate a Corporate Civil Rights Officer, a Corporate DBE Representative, and a contract site Equal Employment Opportunity (EEO) Representative; and each Subcontractor shall designate a Corporate Civil Rights Officer, and a contract site Equal Employment Opportunity (EEO) Representative in the Department approved civil rights reporting software. The designated individuals shall have the responsibility to and shall be capable of effectively administering and promoting an active program of equal employment opportunity and who shall be assigned adequate authority and responsibility to do so. A single individual may fulfill multiple roles. The Contractor shall update the Department approved civil rights reporting software within 10 calendar days of any changes in these roles.

B. Workforce Participation Plan. At the pre-construction meeting, the Contractor shall submit a *Workforce Participation Plan* covering the Contractor's workforce and the workforce of its Subcontractors with subcontracts over \$10,000, together and coordinated with the contract progress schedule, that addresses the Equal Employment Opportunity goals.

The Contractor shall not start work until the Department and the Contractor have agreed upon has accepted the *Workforce Participation Plan*. The Contractor shall submit a revised plan when a significant work force build-up or reduction will substantially affect goal attainment, or when a revised schedule is requested by the Department. Such revised *Workforce Participation Plan* must be agreed upon by the Department or the original will remain in effect.

C. Equal Employment Opportunity (EEO) Monitoring and Reporting. The Contractor's compliance with the EEO Requirements will be based on its Employment Utilization, affirmative action steps and its good faith efforts to meet the goals.

The Department, in evaluating the Contractor's good faith efforts to meet the EEO goal(s), will first analyze the Contractor's goal attainment on an individual contract. If the Contractor is not meeting the goal(s) for a single trade or contract, the Department will analyze, progressively, the Contractor's goal attainment on all contracts held by the Contractor within the county, the Region, and/or the State. This method of analysis shall be applied primarily but not solely to contracts with small population numbers. Other factors to be considered include, but are not limited to; the location of the contracts, the relative proximity of the contracts to each other, and the nature of the work.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

1. Employee Utilization Data. The Contractor shall submit employee utilization data for its workforce and for each Subcontractor with a subcontract exceeding \$10,000 to the Department on a monthly basis showing hours worked for each payroll week, for each trade and classification, by gender and ethnicity. Employee utilization data shall include data from the start of the contract up to and including the month being reported. For the purpose of determining utilization percentages, the hours of female and minority employment shall be tabulated separately and attainment percentages calculated separately.

2. Federal-Aid Highway Construction Contractors Annual EEO Report. The Contractor shall submit all required employee utilization data to produce a Form FHWA 1391 *Federal-Aid Highway Construction Contractors Annual EEO Report* to the Department annually not later than August 15th, covering the last payroll period worked in July, for all ongoing Federal-Aid contracts. The data shall indicate the number of minority men, minority women, non-minority men, and non-minority women employees currently engaged in each trade.

3. Monthly Training Progress Report. When training is required under §102-11 *Equal Employment Opportunity Requirements* and/or Training Special Provisions, the Contractor shall submit a monthly training progress report to the Engineer not later than the 15th of each month.

4. Contractor Compliance. If the Contractor fails to meet the EEO goal(s) for minorities or women, the Department may require training of minorities and women to satisfy the employment goals. If the Contractor fails to meet the EEO goal(s) or is in noncompliance with the nondiscrimination clauses, the Department may suspend additional contract payments in accordance with Article 8 *No Payment on Contractor's Non-Compliance* of the contract agreement, the Contractor may be directed to attend a hearing before the Contract Review Unit, or the Department may follow any other lawful procedure upon due notice in writing to the Contractor, including cancellation, termination, or suspension in whole or in part in accordance with Article 11 *Right to Suspend Work and Cancel Contract* of the contract agreement.

The Contractor may also be referred to the U.S. Department of Labor, Office of Federal Contract Compliance Programs (OFCCP), which has the sole authority to determine compliance with Executive Order 11246 and its implementing regulations. OFCCP may declare the Contractor ineligible for further Federal-Aid contracts in accordance with procedures authorized in Executive Order 11246, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246, or by rule, regulation, or order of the U.S. Secretary of Labor, or as otherwise provided by law.

D. D/M/WBE Monitoring and Reporting. The Engineer will monitor the work to ensure that the identified D/M/WBEs perform the work as identified in the Contractor's commitments. Attainments will be measured based on payments made to D/M/WBEs. Attainments based on work completed by D/M/WBEs that are no longer certified will not be counted after the D/M/WBE is no longer certified.

1. Report of Payments to Subcontractors and D/M/WBEs. The Contractor shall report payments made to all Subcontractors and all D/M/WBEs, in order to measure goal attainment and to gauge the effect of D/M/WBE goal(s) on the industry. The Contractor shall submit payment data for all Subcontractors and for all D/M/WBEs approved by the Department that are due a payment or have received a payment within the last month. The Subcontractor or D/M/WBE shall acknowledge payment not later than 7 calendar days after receipt.

The Contractor shall enter the final payment to each Subcontractor or D/M/WBE and designate it as such when the final payment is made, or as a separate \$0.00 entry indicating final payment has been made, prior to contract final acceptance, excepting those payments due from

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

work contained in a change order that have not been approved. The Subcontractor or D/M/WBE shall acknowledge payment not later than 7 calendar days after receipt.

2. Revisions to D/M/WBE Utilization. The Contractor shall obtain Department approval for substantial revisions in D/M/WBE utilization prior to implementing any proposed change through submission of a revised *D/M/WBE Utilization Worksheet* using the Department approved civil rights reporting software.

If the reduction of the D/M/WBE's work or the removal of the D/M/WBE, including for reasons of commercially useful function violations, causes the D/M/WBE utilization to fall below the goal(s), the Contractor shall make good faith efforts to find another D/M/WBE to substitute for the original D/M/WBE to perform at least the same amount of work as the D/M/WBE that was terminated, to the extent needed to meet the contract goal(s).

A D/M/WBE may be substituted if the work committed to the D/M/WBE is deleted or reduced by the Department and enough work remains to substitute an equal commitment amount to the affected D/M/WBE. If not enough work remains, the Department may relieve the Contractor from attaining that portion of the commitments.

The following modifications will be considered a substantial revision in D/M/WBE utilization:

1. Adding, removing or substituting a D/M/WBE.
2. Adding new item(s) of work to a D/M/WBE within a core (3 digit) contract pay item number (i.e. 606 – Guide Railing) not currently approved.
3. Significantly reducing the dollar value of or eliminating the D/M/WBE's item(s) of work. Significant reduction will be determined by comparison to the total D/M/WBE contract goal.

The following modifications will not be considered a substantial revision in D/M/WBE utilization:

1. Increasing the dollar value of an item(s) of work or adding new item(s) of work within the same core (3 digit) contract pay item number (i.e. 606 – Guide Railing) to a D/M/WBE.
2. Substituting similar dollar values of work within a currently approved core (3 digit) contract pay item number (i.e. 606 – Guide Railing).
3. Changes in utilization due to differences between estimated quantities and actual work performed.

a. DBE Program. In accordance with 49 CFR 26.53(f)(1), the Contractor shall not terminate a DBE listed on the approved DBE Utilization plan without the prior written consent of the Department. This includes, but is not limited to, instances in which a contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm.

The Department will consent only if the prime contractor has good cause to terminate the DBE firm. Good cause includes, at a minimum, one the following circumstances:

- The listed DBE fails or refuses to execute a written contract;
- The listed DBE fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the Contractor;
- The listed DBE fails or refuses to meet the Contractor's reasonable, nondiscriminatory bond requirements.
- The listed DBE becomes bankrupt, insolvent, or exhibits credit unworthiness;
- The listed DBE is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1,200 or applicable state law;
- The Department has determined that the listed DBE is not a responsible contractor;

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

- The listed DBE voluntarily withdraws from the project and provides to the Department written notice of its withdrawal;
- The listed DBE is ineligible to receive DBE credit for the type of work required;
- A DBE owner dies or becomes disabled with the result that the listed DBE is unable to complete its work on the contract;
- Other documented good cause that you determine compels the termination of the DBE. Provided, that good cause does not exist if the Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the Contractor can self-perform the work for which the DBE was engaged or so that the Contractor can substitute another DBE or non-DBE contractor after contract award.

Before submitting its request to terminate and/or substitute a DBE to the Department, the Contractor shall give notice in writing to the DBE subcontractor, with a copy to the Engineer, of its intent to request to terminate and/or substitute, and the reason for the request.

The Contractor shall give the DBE five days to respond to the notice and advise the Department and the Contractor of the reasons, if any, why the DBE objects to the proposed termination of its subcontract and why the Department should not approve the Contractor's action. If required in a particular case as a matter of public necessity (e.g., safety), the Department may approve a response period shorter than five days.

b. M/WBE Program. In the cases of substantial reduction, removal or substitution, the Contractor shall provide written justification with a substantive basis for the change. A Contractor's ability to negotiate a more advantageous contract with another Subcontractor will not be considered a valid basis for change.

3. Contractor Compliance. If the Contractor fails to meet the D/M/WBE utilization goal(s), to exert a good faith effort, or otherwise fails to comply with the D/M/WBE requirements, the Department may take further actions, as follows:

a. DBE Program. The Department may suspend contract payments in accordance with Article 8 *No Payment on Contractor's Non-Compliance* of the contract agreement, the Contractor may be directed to attend a hearing before the Contract Review Unit, or the Department may follow any other lawful procedure upon due notice in writing to the Contractor, including cancellation, termination, or suspension in whole or in part in accordance with Article 11 *Right to Suspend Work and Cancel Contract* of the contract agreement. The Contractor may also be referred to the USDOT for possible suspension or debarment as provided in 49 CFR 29 and such other sanctions as may be imposed and remedies invoked as provided under the authority of 49 CFR 26, or by rule, regulation, or order of the Commissioner or as otherwise provided by law.

b. M/WBE Program. The Department may suspend contract payments in accordance with Article 8 *No Payment on Contractor's Non-Compliance* of the contract agreement, the Contractor may be directed to attend a hearing before the Contract Review Unit, or the Department may follow any other lawful procedure upon due notice in writing to the Contractor, including cancellation, termination, or suspension in whole or in part in accordance with Article 11 *Right to Suspend Work and Cancel Contract* of the contract agreement.

Where Department determines that Contractor is not in compliance with the requirements of the Contract and Contractor refuses to comply with such requirements, or if Contractor is found to have willfully and intentionally failed to comply with the MWBE participation goals, Contractor shall be obligated to pay to the Department liquidated damages.

Such Liquidated Damages for failure to meet the M/WBE requirements shall be calculated as an amount equaling the difference between the amount committed to MWBEs

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

by the Contractor at award; and the amount actually paid to MWBEs for work performed or materials supplied under the Contract, not including any amount for work deleted by the Department.

If a determination has been made which requires the payment of liquidated damages and such identified sums have not been withheld by the Department, Contractor shall pay such liquidated damages to the Department within sixty (60) days after they are assessed, unless prior to the expiration of such sixtieth day, the Contractor has filed a complaint with the Director of the Division of Minority and Woman Business Development pursuant to Subdivision 8 of Section 313 of the Executive Law in which event the liquidated damages shall be payable if Director renders a decision in favor of the Department.

The Department may file a complaint with the NYS Department of Economic Development, Division of Minority and Women's Business Development pursuant to Executive Law Article 15-A, or other sanctions may also be imposed and remedies invoked as provided under the authority of Executive Law Article 15A, 5 NYCRR 140-145, or by rule, regulation, or order of the Commissioner or as otherwise provided by law.

E. Compliance Reviews. The Department conducts annual civil rights contract compliance reviews of selected Federal-aid contracts in accordance with 23 CFR 230.409. A compliance review consists of a thorough review of all civil rights contract requirements, including Nondiscrimination in Labor/Employment, EEO, Training, and DBE requirements. A Contractor will typically not be selected for more than one compliance review per year statewide. Based on contract monitoring and/or the results of compliance review(s), the Department may conduct a review of some or all ongoing contracts with a single Contractor, regardless of funding source.

SECTION 106 - CONTROL OF MATERIAL

106-01 SOURCES OF SUPPLY. Within seven (7) days of contract award, the Contractor shall notify the Deputy Chief Engineer, Structures (DCES), with a copy to the Engineer, of the name and address of the fabricator of materials provided under contract pay items contained in the following sections:

Section 561 *Piles and Pile Driving Equipment*,
 Section 562 *Reinforced Concrete Three-Sided Structures*,
 Section 563 *Prestressed Concrete Units (Structural)*,
 Section 564 *Structural Steel*,
 Section 565 *Bridge Bearings*,
 Section 566 *Modular Expansion Joint Systems*,
 Section 567 *Bridge Joint Systems*,
 Section 568 *Bridge Railing*,
 Section 576 *Bridge Drainage System*,
 Section 587 *Bridge Railing Reconstruction*,
 Section 594 *Timber and Lumber*,
 Section 596 *Open Steel Floor*,
 Section 597 *Timber Bridge Railing and Transitions*,
 Section 644 *Overhead Sign Structures*, and
 Section 656 *Miscellaneous Metals*.

The above list is those that commonly require source of supply notification to the DCES. The list may not be all inclusive, and does not supersede requirements found elsewhere in the Standard Specifications, Steel Construction Manual, or Prestressed Concrete Construction Manual. The source of supply notification shall list the shop or shops in which the materials will be manufactured and/or fabricated. The Contractor shall notify the DCES a minimum of 7 calendar days prior to any changes in the scheduled start of fabrication or changes in shop location in order to ensure that appropriate staff are available and present to perform shop inspections.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

At the Preconstruction Meeting, the Contractor shall furnish the sources of supply, types and associated contract pay item(s) of all other materials that require testing or other prior approval which it proposes to use in the work, to the Engineer in writing. The Contractor shall notify the Engineer a minimum of 7 calendar days prior to any changes in sources of supply in order to ensure that the materials are obtained from approved sources or that required inspection or approval will be completed in a timely manner.

106-02 QUALITY REQUIREMENTS. All materials used in the work shall meet the quality requirements described in Section 700 *Materials and Manufacturing*, unless the requirements are altered by a contract pay specification or by notes shown in the contract documents. Materials shall be inspected, sampled, and tested by the Department, or its designated representative, as described in Section 700 *Materials and Manufacturing*, as indicated by notes in the contract documents, or by procedural directives issued by the Department.

The Contractor shall provide to the Engineer a Material Safety Data Sheet (MSDS) for materials to be used in the work, before each material is first used in accordance with 29 CFR 1926 Subpart D. This applies to materials brought to the contract site to be incorporated into the work, as well as materials that are used at the contract site.

Test specimens shall be removed from sampled items in the presence of the Department representative, prepared for testing, and shipped to the Department as directed by the Department. The cost of all samples; shipment of samples; and any other expenses incurred in making materials or products ready for inspection, sampling and/or testing; shall be included in the unit prices bid for the various items in the contract. Where testing methods are not described in the specifications, details of test methods may be obtained by application to the Department.

The cost of all required inspection, sampling and testing performed in the 48 contiguous states of the United States and the provinces of Canada shall be paid for by the Department unless specifically excluded elsewhere in the contract documents or procedural directives.

The instructions for the use of all materials and products, as well as all identifying information required by the specifications (i.e., labels, tags, certifications, etc.) shall be in the English language. The U.S. Standard Screen Sieves meeting ASTM E11, shall be used on all materials requiring gradation tests.

Mechanical property measurements, dimensions, and all other numerical data included in documents such as shop drawings and computations prepared specifically for the contract, Material Details, and Manufacturer's Safety Data Sheets shall be presented in U.S. customary units, but they may also include International System (SI) of units, consisting of meters, kilograms, and seconds, as a second set of measurements. The U.S. Customary Units will take precedence and reviews will be based on these units. U.S. Customary Units should be the units listed first, and the SI Units should be included within parenthesis. Failure to adhere to this convention may result in the rejection of the drawing.

Documents which are relevant to the production and acceptance of hot mix asphalt (HMA) and portland cement concrete (PCC) mixtures shall be submitted in US Customary Units only. This refers to mix design forms, production monitoring (QC) forms, batching tickets, delivery tickets, and all other mix design and production related documents.

Unless otherwise directed by the Department, no materials shall be used until the Engineer has received written notification of acceptance of that material and such material shall be used only so long as the quality remains equal to that of the accepted sample. This initial acceptance of a material will in no way preclude further examination and testing of a material at any time the Engineer suspects that the material is no longer properly represented by the accepted sample. The acceptance at any time of any materials will not bar its future rejection if it is subsequently found to be defective in quality or uniformity.

Unless otherwise designated, when a reference is made in these specifications to a specification or test designation either of the AASHTO, ASTM, Federal Specifications, or any other recognized non-proprietary national organization, it shall mean the specification or test method (including Provisional AASHTO and Tentative ASTM) which is current on the date of advertisement for bids.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

106-03 PLANT INSPECTED MATERIALS. The manufacture, production and/or fabrication of some materials and products may require acceptance of the plant, including, but not limited to: mill, plant, shop or other location; on a recurring basis prior to the production and inspection of materials produced.

Materials inspected at manufacturing or fabrication plants shall be marked with the contract number and the contract pay item number prior to shipment to the contract site. Any material which has been plant inspected and accepted by this Department for any Department contract, shall not be shipped to other work unless authorized by the Department.

Where plant inspection is not maintained, the method and procedure for sampling, inspecting and reporting shall be in accordance with the procedural directives of the Department, issued by the Materials Bureau.

A. Covered Locations. The Department maintains plant inspection capabilities throughout the contiguous 48 states of the United States and the provinces of Canada. The Contractor shall notify the Department 60 calendar days in advance of beginning of the work in any mill, plant, shop or other manufacturing location that is not currently accepted, to allow time for a qualification inspection and arrangements for inspection, sampling and/or testing during the work.

B. Non Covered Locations. When inspection, sampling, and/or testing of materials and products manufactured, produced and/or fabricated in a non covered location, and deemed by the Department to require inspection, sampling and/or testing at the site of manufacture, production and/or fabrication, the plant, and manufacturer and/or fabricator shall be qualified by the Department prior to the required inspection, sampling and/or testing. The Contractor shall notify the Department 60 calendar days in advance of beginning of the work in any mill, plant, shop or other manufacturing location to allow time for a qualification inspection and arrangements for inspection, sampling and/or testing during the work.

The expense of all required inspection, sampling, testing and qualification of plants and manufacturers or fabricators in non-covered locations shall be paid for by the Contractor. These expenses shall include the costs of wages and benefits, travel, meals, lodging, communication and all other direct costs of inspection, sampling and testing paid by the Department to perform these services using Department employees or designated representatives under contract to the Department. Reimbursement to the Department shall be made in the form of a deduction from payments due the Contractor. The costs of tests performed in a Department Laboratory will not be charged to the Contractor.

The location of inspection, sampling and/or testing materials and products will, at the option of the Department, be performed at the site of manufacture, production and/or fabrication or at a covered location designated by the Contractor and approved by the Department.

C. Stock Lot Testing. When the Department determines that conformance with the contract requirements of plant inspected materials from non-covered locations may be determined by visual inspection and/or testing, specimens may be presented at a covered location in specifically defined lot quantities as directed by the Department. Such materials or products shall be offered for inspection not less than 30 days prior to their intended shipment to the contract. All expenses attendant to making such materials or products available for inspection, sampling and/or testing shall be paid by the Contractor.

D. Sample Shipment. The shipment of samples to the Department Laboratory from locations outside of the 48 contiguous states of the United States and the provinces of Canada shall be a direct cost borne by the Contractor or its agent and all such shipments shall be made under provisions established by the Department to ensure identity and security of the sample.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

106-04 MATERIAL CERTIFICATION AND APPROVED LIST. Whenever any specification provides for Manufacturer's Certification, Material Certification or Approved List as a Basis of Acceptance, the Department reserves the right to sample and/or test material in any shipment prior to incorporation in the work. Approved List shall mean the list which is current on the date of incorporation of material into the work. The Contractor may request reimbursement from the Department for additional costs for materials that were purchased after contract award and prior to the product being removed from the Approved list, but are removed from the Approved list after contract award.

Manufacturers' Certifications and documents prepared for general use, such as catalog cuts and manufacturer's directions, may use S.I. or U.S. customary measurement units, or units from both systems. In drawings and documents containing dual units, the US Customary units will be the primary units, and the US Customary units will be the units reviewed. The Contractor shall be responsible for all annotations on the source documents, conversions between the measurement systems and all errors resulting therefrom.

Some standard specifications reference a Manufacturer's Certification as evidence of acceptability of specific materials or products. A Manufacturer's Certification can only be properly executed by the manufacturer or producer of the material or product. When manufactured products are subsequently provided by a Material Supplier other than the manufacturer, a Material Supplier's Certification shall be provided in addition to the Manufacturer's Certification.

A. Material Certification. When shipments are made directly to a contract by the manufacturer or producer a Manufacturer's Certification shall include the essential components outlined below. When shipments are made to a contract by a Material Supplier, a Material Supplier's Certification shall accompany the Manufacturer's Certification and shall include the essential components outlined below.

1. Identification of Manufacturer or Producer. Name of the company and address of its manufacturing or producing facility.

2. Identification of Material or Product. Generic name of the material or product and the Department Section 700 materials designation number.

3. Identification of Shipment. Sufficient detail to describe the quantity contained in the shipment, the contract number and a date of shipment. A Material Supplier's Certification shall clearly indicate that the shipment is all or a portion of the quantity detailed on the accompanying Manufacturer's Certification.

4. Statement of Conformance. The certification shall definitively state that the material contained in the shipment meets the requirements of a specific Department specification or a specific specification or standard of another agency (i.e., ASTM, AASHTO, AWWA, etc.). If the material in the shipment contains steel and/or iron, the certification shall definitively state that the material is or is not of domestic origin. An acceptable statement is: "Conforms (or Does not conform) to the requirements of NYSDOT Standard Specifications §106-11 *Buy America*."

If the product supplied has been altered subsequent to the certification by the manufacturer, the Material Supplier's Certification shall definitively state that the material or product contained in the shipment meets the requirements of a specific Department specification or a specific specification or standard of another agency.

5. Certification Execution. The certification shall be signed by a person authorized to legally bind the company, as indicated by statement or title/position. Notarization of the signature is not required.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

106-05 RECYCLED MATERIALS. To promote sustainable management practices that protect our natural resources and reduce energy and resource consumption, the Contractor should provide reused or recycled materials to the maximum extent practicable. Recycled materials currently approved by the Department include glass, recycled asphalt pavement (RAP), recycled portland cement concrete aggregate (RCA), blast furnace slag, fly ash, microsilica, waste stream plastics and tires.

In order to be considered for use by the Department, recycled or waste material must exhibit the desired engineering characteristics, consistently satisfy specification requirements, provide an acceptable level of performance, be economically competitive with available materials, and not be harmful to the environment. If waste materials are proposed to be used, the Contractor may need to obtain a beneficial use determination (BUD) from the NYS Department of Environmental Conservation prior to its use as specified in 6 NYCRR 360-1.15. The beneficial use determination, testing, evaluation and approval of unapproved waste materials can be a very long term process over multiple years, and should not be expected to be completed for any given contract.

106-06 STORAGE AND HANDLING OF MATERIALS. Materials shall be so stored as to ensure the preservation of their quality and fitness for the work. Stored materials, even though accepted before storage, shall be inspected prior to their use in the work and shall meet the contract requirements at the time of their use. Railroad cars, barges and other containers used for the transportation of materials shall be clean when any materials are deposited therein.

106-07 BASIS FOR MEASUREMENT. Weight shall be used in all cases for percentage determination unless otherwise specified.

106-08 REJECTED MATERIALS. Any material which is rejected because of failure to meet the required tests or that has been damaged so as to cause rejection, shall be immediately removed from the site of the work by the Contractor at no additional cost to the State unless otherwise directed by the Engineer. Material which has been rejected on the results of Department tests will not be resampled or retested unless otherwise directed by the Department. No rejected materials, the defects of which have been subsequently corrected, shall be used until written notification of the acceptance of the material has been received by the Engineer.

106-09 EQUIVALENTS. The requirements for apparatus, articles, or materials shall be specified, if feasible, in generic terms which afford competition for equivalent products or items. When no generic specification can be found or devised, a minimum of at least three, if available, known acceptable trade names or proprietary products shall be provided for the Contractor's benefit and to afford the desired competition. The Department will determine whether a product proposed by a Contractor meets the requirements of the specifications.

106-10 QUALITY ASSURANCE. The policies, procedures and guidelines required by the FHWA to assure the quality of materials and construction in Federal-Aid projects are defined in 23 CFR 637 Subpart B *Quality Assurance Procedures for Construction*.

The Department has established a Quality Assurance (QA) Program in accordance with 23 CFR 637 to assure that the materials and workmanship incorporated into each Department project are in conformity with the contract documents. The Department's QA Program includes both an Acceptance Program and an Independent Assurance Program. The Department's QA Program applies to both Federal-Aid and non Federal-Aid contracts.

Quality Assurance is defined as "all those planned and systematic actions necessary to provide confidence that a product or service will satisfy given requirements for quality." Contractor/vendor operational techniques and activities that are performed or conducted to fulfill contract requirements are a core part of the QA Program.

In accordance with §108-05 *Subletting or Assigning the Contract*, the Contractor is responsible for all work performed by Subcontractors, Trucking Firms, Manufacturers, Fabricators, Materials Suppliers and

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

any other parties in the performance of the contract. The Contractor is responsible to assure that all materials used meet the appropriate requirements, all products produced from approved component materials meet established quality and performance requirements, and the final constructed product meets all requirements and is free from defects that affect the service life of the installed product. The Contractor is therefore responsible for all quality assurance activities necessary, performed by itself or other parties, to assure that the materials and workmanship meet established Department requirements. The Department's Acceptance Program activities shall not be incorporated as part of, or as a replacement for, the Contractor's quality assurance activities.

A. Acceptance Program. The Department's Acceptance Program defines the requirements for Verification Sampling and Testing activities, which are those activities performed by the Department or its representatives used to verify that materials and workmanship meet established requirements.

Verification Sampling and Testing requirements define the frequency of inspection, sampling and testing; the specific location(s) of inspection, sampling and testing; and the specific quality characteristics (attributes/properties) to be inspected and/or tested; for materials and workmanship incorporated into the work.

The Department reserves the right to take samples at any time and location to assure the materials and workmanship incorporated into the work are in conformity with the contract documents. If sampled material is found to not meet specification requirements, the Department reserves the right to reject all material or work represented by the sample tested.

B. Independent Assurance Sampling and Testing. Independent Assurance Sampling and Testing (IAST) assures that when acceptance testing is performed on Department contracts, proper procedures are followed and equipment used is in proper working order and calibration. IAST is separate and independent from acceptance testing. Testing performed for IAST will in no way affect any acceptance or payment decision. The results of IAST testing will be used to determine the qualifications of inspectors performing acceptance testing and the condition of equipment used in acceptance testing on Department projects.

The IAST program will evaluate the personnel and equipment responsible for performing quality control sampling and testing that is used to make acceptance decisions. The Contractor and all personnel, organizations, who are responsible for performing acceptance sampling and testing on behalf of the Contractor shall cooperate with and accommodate this program by performing, and allowing State representatives to perform sampling and testing at the times and locations requested by the Regional IAST personnel. The required sampling and testing procedures are listed in the Department's Independent Assurance Sampling and Testing Manual. IAST personnel will observe the tester obtaining samples and performing the tests. IAST personnel will also take split samples to the Regional Laboratory for testing.

106-11 BUY AMERICA. In accordance 41 U.S.C. §10a et. seq., 23 CFR 635.410 and Section 146 of the State Finance Law permanently incorporated predominantly steel and/or iron products materials shall be domestically produced.

A product is considered predominantly of steel or iron if the product consists of at least 90% steel or iron content when it is delivered to the job site for installation, including sites where any precast concrete products are manufactured or fabricated.

Products that are subject to Buy America coverage include, but are not limited to, the following:

- steel or iron products used in pavements, bridges, tunnels or other structures, including, but not limited to: fabricated structural steel, reinforcing steel, piling, high strength bolts, anchor bolts, dowel bars, permanently incorporated sheet piling, bridge bearings, cable wire/strand, prestressing/post-tensioning wire, motor/machinery brakes and other equipment for moveable structures;
- guiderail, guiderail posts, end sections, terminals, cable guiderail;
- steel fencing material, fence posts;

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

- steel or iron pipe, conduit, grates, manhole covers, risers;
- mast arms, poles, standards, trusses, or supporting structural members for signs, luminaires, or traffic control systems; and
- steel or iron components of precast concrete products, such as reinforcing steel, wire mesh and pre-stressing or post-tensioning strands or cables.

Miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above components (or manufactured products that are not predominantly steel or iron) are not subject to Buy America coverage. Examples include, but are not limited to: traffic signal controllers, cabinets, covers, shelves, clamps, fittings, sleeves, washers, bolts, nuts, screws, tie wire, spacers, chairs, lifting hooks, faucets, door hinges, door hardware, light bulbs, etc.

For Federal-Aid contracts, the Contractor may permanently incorporate in the construction of this contract a minimal amount of foreign steel and/or iron materials that are subject to Buy America requirements, if the combined cost of such materials does not exceed one-tenth of one percent (0.1 %) of the total contract cost or \$2,500, whichever is greater. The combined cost of foreign steel and/or iron materials will be the value of the materials as they are delivered to the contract, documented by invoice or bill of sale to the Contractor.

To qualify as domestic, all manufacturing processes, including manufacture, fabrication, grinding, drilling, welding, finishing, and coating of any product containing steel and/or iron materials, must have been performed in the United States. To further define the coverage, a domestic product is a manufactured steel and/or iron materials construction material that was produced in one of the 50 States, the District of Columbia, Puerto Rico, or in the territories and possessions of the United States. Raw materials used in the steel and/or iron materials may be imported. Raw materials are materials such as iron ore, limestone, waste products, etc., which are used in the manufacturing process to produce the steel and/or iron materials products. Waste products include scrap; i.e., steel no longer useful in its present form from old automobiles, machinery, pipe, railroad rail, steel trimmings from mills or product manufacturing, and the like. Extracting, crushing, and handling the raw materials which are customary to prepare them for transporting are exempt from Buy America. The use of foreign source steel or iron billets is not acceptable under Buy America.

For non Federal-Aid contracts, the Contractor shall provide structural steel, reinforcing steel and/or other major steel items to be permanently incorporated in the work produced or made in whole or substantial part in the United States. The combined cost of foreign steel and/or iron materials will be the value of the materials as they are delivered to the contract, documented by invoice or bill of sale to the Contractor.

A. Control of Materials. All items, regardless of origin, shall comply with their individual specification requirements and with the requirements stated elsewhere in this subsection. In the event the contract is awarded based on using only domestic steel and/or iron materials, the Contractor shall supply only domestic steel and/or iron materials and will be paid the domestic bid prices. The Contractor shall ensure the domestic steel and/or iron materials are supplied in conformance with the above referenced laws. The Contractor shall inform all affected Subcontractors and material suppliers of these specific requirements and ascertain that steel and/or iron materials being supplied is in conformance with these requirements.

B. Waivers. Waivers to the Buy America requirement may be requested by the Contractor if it can be demonstrated that the use of domestic steel and/or iron materials would be inconsistent with the public interest, such materials and products are not produced in the United States in sufficient and reasonably available quantities and of satisfactory quality.

Provided one or more of the above requirements are met, the Contractor may submit a request for a waiver to the Engineer. The request shall include copies of all documentation verifying the unavailability of the material or product, and/or justification of the application for a waiver.

For Federal-Aided contracts, the Department will submit approved waiver requests to the FHWA for review. The Contractor shall investigate and respond to any public comments made to the FHWA

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Office of Program Administration, indicating that a domestic supplier can provide the material for which a waiver has been requested. Final approval of the Buy America Waiver request will be made by the Administrator, Federal Highway Administration. The waiver will be effective when it is posted in the Federal Register.

For non-Federal-Aid contracts, upon final approval of the affected Department program areas, notification and approval of the Buy America Waiver request will be made by the Deputy Chief Engineer, Construction (DCEC).

SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

107-01 LAWS, RULES, REGULATIONS AND PERMITS. The Contractor shall conduct its operations in compliance with all the laws and regulations of the United States, State of New York and Public Authorities and the applicable ordinances of any county, city, town, or village and the lawful direction of the officers, agents or representatives of the United States, the State of New York, Public Authorities or of said county, city, town, or village. The Contractor shall procure all licenses and permits necessitated by the Contractor's operations. All costs due to compliance with the above described laws, regulations, and ordinances shall be included in the contract bid prices unless otherwise provided for in the contract.

A. Invasive Species. Federal and State Agencies have promulgated regulations regarding invasive plant species, agricultural insects and diseases. The Contractor shall thoroughly clean all construction equipment and vehicles operating in infested areas prior to moving to non-infested areas in accordance with Federal and State Department of Agriculture regulations for plant pest control.

B. Independent Contractor. The relationship of the Contractor to the State is that of an independent Contractor, and said Contractor, in accordance with its status as such Contractor, covenants and agrees that it will conduct itself consistent with such status, that it will neither hold itself out as nor claim to be an officer or employee of the State by reason hereof, and that it will not, by reason hereof, make any claim, demand or application to or for any right or privilege applicable to an officer or employee of the State, including, but not limited to workers' compensation coverage, unemployment insurance benefits, social security coverage, or retirement membership or credit.

C. Cooperation With Investigations. The Contractor hereby agrees to the provisions of §139-a and §139-b of the State Finance Law which require that upon the refusal of a person, when called before a grand jury, head of a State department, temporary State commission or other State agency, or the organized crime task force in the NYS Department of Law, which is empowered to compel the attendance of witnesses and examine them under oath, to testify in an investigation, concerning any transaction or contract had with the State, any political subdivision thereof, a public authority or with any public department, agency or official of the State or of any political subdivision thereof or of a public authority, to sign a waiver of immunity against subsequent criminal prosecution or to answer any relevant question concerning such transaction or contract;

1. Such person, and any firm, partnership or corporation of which he is a member, partner, director or officer shall be disqualified from thereafter selling to or submitting bids to or receiving awards from or entering into any contracts with the State of any public department, agency or official thereof, for goods, work or services, for a period of five years after such refusal, and;

2. Any and all contracts made with the State or any public department, agency or official thereof, since the effective date of this law, by such person, and by any firm, partnership or corporation of which he is a member, partner, director or officer may be canceled or terminated by the State without incurring any penalty or damages on account of such cancellation or termination, but any

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

moneys owing by the State for goods delivered or work done prior to the cancellation or termination shall be paid.

D. Archaeological Salvage. Whenever, during the course of construction, historical or prehistoric objects or human remains are encountered, such objects shall not be destroyed or moved. The Contractor shall stop work to avoid disturbing such areas and notify the Engineer immediately.

The Engineer will notify the appropriate Department personnel and other authorities and arrange to have an immediate inspection of the site conducted.

Removal or salvage of archaeological objects will be considered extra work. Such work will be limited to that performed within the right-of-way, and at any location under direct control of the Contractor used as a source of approved borrow material or a spoil disposal area.

107-02 PATENTED DEVICES, MATERIALS AND PROCESSES. It is mutually understood and agreed that the contract prices are to include all royalties and costs arising from patents, trademarks, and copyrights in any way involved in the work. Whenever the Contractor is required or desires to use any design, device, material or process covered by letters, patent or copyright, the Contractor shall indemnify and save harmless the State from any and all claims for infringement by reason of the use of any such patented design, device, material or process, to be performed under the contract, and shall indemnify the said State for any costs, expenses and damages which it may be obliged to pay, by reason of any such infringement, at any time during the prosecution or after the completion of the work.

107-03 FEDERAL AID PARTICIPATION. All contracts in which the Federal Government participates financially are designated as Federal-Aid contracts. For all Federal-Aid contracts, the Contractor shall conform in all respects in accordance with the true intent and meaning of each and all of the requirements contained in the FHWA-1273 *Required Contract Provisions Federal-Aid Construction Contracts*, a copy of which will be found incorporated in each Federal-Aid contract proposal. When any of such Federal Provisions may be in conflict with any other provisions of the contract the Federal Provisions shall prevail and take precedence and be of force over and against any said conflicting provisions of said contract.

107-04 PUBLIC NOTICES. Before commencing any work on the site, the Contractor shall provide a satisfactory weather resistant surface, and post, in a location accessible to all workers, a copy of the NYSDOL schedules of prevailing wages and supplements for this contract, a copy of all redeterminations of such schedules for the contract, the Workers' Compensation Law notice, required safety notices, and all other notices required by law to be posted at the site. The Contractor shall maintain such notices in a legible manner and shall replace any notice or schedule which is damaged, defaced, illegible or removed for any reason. The notices shall be maintained until all work on the site is complete.

107-05 SAFETY AND HEALTH REQUIREMENTS. The Contractor shall perform all work in the contract with due regard to the safety and health of the employees and of the public. The Contractor shall comply with 29 CFR 1926 *Safety and Health Regulations for Construction*, administered by the Federal Occupational Safety and Health Administration (OSHA); NYS Labor Law and 12 NYCRR regarding the safety and protection of persons employed in construction and demolition work.

The Contractor shall notify the Engineer of any inspections scheduled or conducted on the contract by OSHA, NYS Department of Labor (NYSDOL), or other safety and health agencies, of any resulting closing conference, and provide the Engineer with the opportunity to be present at such inspections and closing conference. The Contractor shall notify the Department in writing of the results of any safety and health inspections conducted by representatives of OSHA, NYSDOL, or other safety and health agencies, within one work day of the completion of the closing conference resulting from such inspections. If any citations are issued for alleged violations of OSHA Regulations, a copy shall be provided to the Engineer within one work day of their receipt by the Contractor, and a copy of the final disposition of such citations shall be provided to the Engineer within one work day of receipt by the Contractor.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

A. High Visibility Apparel. All workers shall wear at all times protective helmets and construction apparel or traffic control apparel when working within a highway right of way or contract limits. High visibility apparel is intended to contrast with the background for worker conspicuity. All high-visibility apparel shall be closed front and rear; in good condition to maintain the color, visibility, reflectivity, and conspicuity. Workers shall include Contractor employees, Subcontractor employees, material suppliers, and other personnel under the direction of the Contractor. Protective helmets and high-visibility apparel are not required for employees when they are within a completely enclosed cab constructed of steel frame and glass, or inside a motor vehicle.

1. Protective Helmets. Protective helmets shall meet OSHA standards for impact, electrical shock, and burn protection. Protective helmets used during nighttime operations shall be equipped with a minimum of 3 in² of reflective tape on all four sides. Protective helmets for flaggers shall be orange.

2. Construction Apparel. Construction Apparel shall consist of a vest, shirt, or jacket; fluorescent orange-red or fluorescent yellow-green or a combination of these colors meeting the requirements of ANSI 107 Class 2.

3. Traffic Control Apparel. Traffic Control Apparel shall consist of a vest, shirt, or jacket; fluorescent orange-red with fluorescent yellow-green striping bands or fluorescent yellow-green with fluorescent orange-red striping bands, placed both horizontal and vertical, meeting the requirements of ANSI 107 Class 2.

B. Project Safety and Health Plan. The Contractor shall perform all necessary planning, supervision, and training activities to ensure that all of the requirements of 29 CFR 1926 are fully met for all workers employed in the construction of the contract. The Contractor shall provide to the Department prior to the start of work satisfactory evidence that all current requirements of 29 CFR 1926 will be adequately addressed. As a minimum, the Contractor shall provide a written Project Safety and Health Plan which documents the Contractor's company policy relative to safety, and which identifies and addresses specific safety and health concerns to be encountered on the project. Before the work begins and periodically throughout the progress of the work, the Contractor's supervisory staff shall meet with the Engineer to review and discuss the status of safety issues. An appropriate notice shall be posted on the contract site that the Project Safety and Health Plan is available for examination by any worker employed on the project. As a minimum this plan shall include the following items:

- Identification of project and company safety officers.
- Hazardous Materials Communications Plan.
- Employee Safety Training Program.
- Company safety policy.
- Procedures to address project safety and health concerns.
- Procedures to address distraught, emotionally disturbed persons and/or homeless persons.
- Procedures for compelling worker compliance with safety and health requirements.

Certain of these items may be submitted in the format of a Company Safety and Health Program, with the Project Safety and Health Plan limited to project-specific issues.

The Contractor shall provide to the Department a Project Safety and Health Plan covering all on-site work to be done by each Subcontractor, Owner/Operator and any other party, prior to starting work. As an alternative, the Contractor may provide a certification that all on-site activities performed by and workers employed by each Subcontractor, Owner/Operator and any other party will be subject to the Contractor's Project Safety and Health Plan.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Submission of the required Project Safety and Health Plan by the Contractor and its acceptance by the Department shall not be construed to imply approval of any particular method or sequence for addressing safety and health concerns, or to relieve the Contractor from the responsibility to adequately protect the safety and health of all workers involved in the project as well as any members of the public who are affected by the project.

In accordance with NYS Labor law §220-h, all laborers, workers, and mechanics shall be certified prior to performing any work on a contract over \$250,000 as having successfully completed a course in construction safety and health approved by the US Department of Labor's Occupational Safety and Health Administration (OSHA) that is at least ten hours in duration. The Contractor shall attach proof of completion to first certified payroll for initial workers, and to subsequent payrolls for new or additional workers. The Contractor shall clearly indicate on subsequent payrolls any workers not previously employed on that contract. If no proof of completion has been submitted for a worker listed on a certified payroll, the Engineer will alert the Contractor to this fact. If the Contractor cannot provide proof of completion and the worker continues to work, the Department will notify the Contractor in writing with a copy to the NYSDOL by e-mail at PWAsk@labor.ny.gov.

C. Emergency Contact Person. The Contractor shall designate someone to be available to respond to emergency calls. The name of the person and the telephone number at which he/she can be reached at any time shall be given to the Engineer and all police agencies in the area. Such person shall have full authority and capability to mobilize forces promptly as required to respond to an emergency and protect the public.

D. Accident Reporting. The Contractor shall immediately notify the Department verbally of any accident or incident that results in the death of a worker, motorist or pedestrian. The Contractor shall notify the Department in writing within 24 hours, with the details relative to any accident or incident occurring within the contract limits or is directly related to construction activity or involving any worker employed on the contract or delivering materials, equipment or supplies to the contract, provided:

- The accident or incident results in the death of a worker, or (2) requires that a worker is hospitalized overnight for treatment of the injury, or (3) results in 3 or more personal injuries: or:
- The accident or incident involved a utility (overhead or underground) or:
- The accident or incident involved a motorist or pedestrian or:
- The incident was a near miss or:
- The accident otherwise meets the notification requirements of OSHA.

The Engineer will provide the Contractor with a copy of the Department accident report for any accident occurring within the contract limits or involving the Contractor's personnel, equipment or operations.

E. Imminent Danger and Emergency Actions. Any action by the Contractor that presents a potentially imminent danger of injury to the public, a worker, or the inspection staff will be halted immediately by the Engineer, and operations stopped in accordance with §105-01 *Engineer's Authority*. The Contractor's personnel shall have local emergency numbers readily available. These numbers shall include local utility, police/fire and medical assistance. In the event of an emergency, the Contractor shall evacuate all employees and endangered persons from the immediate vicinity to the best of the Contractor's ability.

F. Restricted Areas. The Contractor shall identify, guard and protect restricted areas such as open and unattended excavations, areas subject to falling debris and other potentially hazardous locations in and adjacent to areas lawfully frequented by any person in accordance with the requirements of 29 CFR 1926 Subpart G. Such protection shall consist of one, or a combination of, the following:

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

- A substantial fence or barricade, not less than 4 feet in height and mounted on satisfactory supports spaced at intervals of not more than 10 feet. Warning signs reading "DANGER-KEEP OUT" shall be mounted on the fence or barricade at no more than 100 foot intervals. The signs shall be a minimum of 24 inches wide by 16 inches high. The lower portion of the sign shall be white and shall bear the words "KEEP OUT" in 5 inch high black letters. The upper portion shall be predominantly red with 5 inch high white lettering spelling out the word "DANGER." The lettering shall be enclosed by an approximately elliptical, white ring and the entire sign bordered in black. All barricades and warning signs shall be furnished, erected, relocated, maintained, and removed as required.
- A 4 foot (minimum) extension of the trench sheeting above the ground surface adjacent to an excavation.
- A substantial covering over an excavation. Where it is possible that vehicles will move over such covering, the covering shall be of sufficient strength to withstand the loading.

G. Work Site Access. The Contractor shall provide safe access to the work site by workers and inspection staff such that no active traffic lanes are routinely crossed by pedestrian workers or inspection staff reporting to and leaving the work site. Vehicles and equipment used to transport personnel to the work site shall safely enter and depart the work site.

The Contractor shall designate a safe parking area(s) for workers to park private vehicles near the project site acceptable to the Engineer. Contractor personnel shall park in non-designated parking areas within the right of way only with the prior approval of the Engineer.

H. Fall Protection. The Contractor shall provide fall protection for all workers in compliance with 29 CFR 1926 and NYS Labor Law. The Contractor shall include procedures to provide fall protection in the Project Safety and Health Plan. The minimum fall protection requirements include the following:

- 1.** Fall protection shall be provided for all workers at or above 6 feet or the height thresholds listed in 29 CFR 1926, Subpart L and Subpart M, whichever is lower, and for all locations where there is a risk of a fall onto dangerous equipment or an impalement hazard, regardless of height. All fall protection systems shall meet the requirements of 29 CFR 1926, Subpart M. For situations where lifelines are interrupted, double lanyards shall be utilized to ensure that workers are continuously protected. One lanyard shall remain connected at all times.
- 2.** Attachments or other temporary appurtenances on all beams and other structural elements shall be in place prior to erection or removal to provide fall protection until other means of protection such as deck forms are in place. Fall protection shall consist of personal fall arrest systems, safety nets or other means. During placement or removal of structural members when the member is supported by a lifting device, workers exposed to moving members shall be required to tie off only if they are not exposed to a greater risk from the moving member. Fall protection systems utilized shall enhance safety rather than create a secondary hazard.
- 3.** The Contractor shall establish procedures to minimize occurrences of unprotected exposure to fall hazards. When a worker must rig a fall protection system, and rigging cannot be accomplished from an aerial lift or by tying-off to the existing structure, momentary exposure to a fall hazard may be unavoidable.
- 4.** Ladders or stairways meeting the requirements of 29 CFR 1926, Subpart X shall be provided at all points of personnel access where there is a change in elevation of 19 in or more, and no ramp, runway, sloped embankment or personnel hoist is provided. Climbing on forms, falsework, or the structure to gain access to work areas is expressly prohibited.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

5. Scaffolds necessary to provide temporary access to work areas shall be in compliance with 29 CFR 1926, Subpart L and shall include a top rail, mid rail, and toe board on all open sides and ends. Scaffolds shall be erected, moved, altered and/or dismantled only under the supervision and direction of a competent person.

6. Suspended scaffolds may be used only if personnel lifts, scaffolds, or other means are not practical, and shall meet the requirements of 29 CFR 1926, Subpart L. Specifically, the scaffold shall be secured to the suspension cables at all times. All personnel working on a suspended scaffold shall be provided fall protection using an independent anchorage.

7. Workers in personnel aerial lifts shall use a personal fall arrest system attached to the boom or basket. Aerial lifts shall be operated in accordance with 29 CFR 1926, Subpart L.

I. Working Over Water. Any worker who is exposed to the risk of drowning shall wear a U.S. Coast Guard approved personal flotation device (PFD) at all times. A risk of drowning shall be considered to exist where water depths exceed 1.5m, or water is subject to sudden fluctuations to a depth exceeding 5 feet. A risk of drowning may also exist where water depths as little as 2 feet are combined with swift currents, or a fall into the water may result in a person being rendered unconscious or otherwise disabled. Working on top of ice shall be considered as working over water. Where practical, workers should not work alone in situations where a risk of drowning exists.

When continuous fall protection is used, without exception, the drowning hazard has effectively been removed, and wear of a PFD is not required. When safety nets are used as fall protection the drowning hazard has not been removed, and wear of a PFD is required. When aerial lifts are used over or near water the drowning hazard has not been removed, and wear of a PFD is required by occupants of the lift, regardless of whether a personal fall arrest system is used.

When working over or adjacent to water, ring buoys with a minimum of 100 feet of line attached, shall be placed at a maximum interval of 200 feet along the work site shoreline or along the work limits and a boat/skiff for emergency response shall be in place prior to that exposure. The boat/skiff shall be unlocked and available for immediate use at all times, and able to retrieve a worker from the water in no more than 4 minutes from the time they entered the water. If additional hazards (very cold water, rapids, etc.) exist the boat/skiff shall be able to retrieve the worker before being overcome by that hazard.

A boat/skiff for emergency rescue operations shall be equipped with a motor, paddles or oars, a ring buoy, and a reach extension device. The boat/skiff shall be equipped and operated in accordance with NYS Navigation Law.

J. Electrical Safety. Electrical safety policy and procedures are based on the New York State High Voltage Proximity Act and 29 CFR 1926 Subpart K. They apply to all operations that could cause employees or the vehicles or equipment they are operating to come into contact with ("direct contact") or enter into dangerous proximity to ("indirect contact") energized electrical systems. Electrical systems shall be assumed to be energized high voltage until verified otherwise by the Utility. The Contractor shall identify and reference all potential electrical hazards and document such actions to the Engineer as part of the Project Safety and Health Plan.

Pursuant to the High Voltage Proximity Act, for all electrical systems carrying 600 volts or more, the Contractor shall:

- Notify the Utility at least 5 work days before any work begins which requires the Utility to identify voltages and clearances, or de-energize, insulate or relocate lines.
- Ensure employees are not placed in dangerous proximity to high voltage. Dangerous proximity is defined as within 10 feet for voltages up to 50 kilovolts, and an additional 4 inches for every 10 kilovolts over 50 kilovolts. Dangerous proximity applies to the individual and any conductive object.
- Inform employees of the hazards and corresponding precautions when working near high voltage.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

- Post warning decals on equipment regarding the 10foot minimum clearance.
- Ensure that when any equipment operator is unable to assess clearances, a "spotter" observes for clearance and directs the operator.

Prior to the start of work where contact with energized electrical systems is possible, the Contractor shall identify existing facilities and reference their location to prominent physical features. In advance of work, the Utility shall be called upon to identify energized facilities, and to determine the need to de-energize, insulate, or otherwise protect the facilities against accidental contact. The actual work of protecting facilities will be carried out by the Utility. Facility relocation or protection provided at the request of the Department will be as described in the contract documents. Protection provided for the benefit, or at the request, of the Contractor shall be the financial responsibility of the Contractor.

Energized electrical lines or equipment shall be conspicuously marked and workers shall be reminded of their locations and the safeguards and precautions to be taken prior to beginning any nearby work that may cause the workers to approach electrical lines. New employees shall be informed of electrical hazards and proper precautions and procedures.

1. Paving Operations. Prior to the start of each workday high visibility markers or other devices approved by the Engineer shall be placed to mark the location of all overhead wires, including, but not limited to electrical, telephone and cable television. As an alternative, the pavement beneath overhead lines may be marked with spray paint or by other means approved by the Engineer. This requirement shall also apply to off-site areas used for contract purposes. The Contractor shall periodically patrol the worksite to ensure that the markings are in place and shall replace any that are missing and shall maintain all markings in good condition.

2. Aerial Lifts, Lifting Equipment, Boom Devices. Where there is potential for proximity or contact with energized lines or equipment, work shall not begin until a safety meeting is conducted and appropriate steps are taken to identify, mark, and warn against accidental contact.

3. Tree Work. Branches touching wires shall be removed by the Utility before work begins. Limbs and branches shall not be dropped onto overhead wires. If limbs or branches fall across electrical wires, work shall stop immediately and the Utility shall be notified. Workers shall be equipped with appropriate personal protective gear for working near electricity.

4. Building Electrical Work. Employees working on electrical systems for buildings shall be knowledgeable about and shall employ, when appropriate, OSHA Lock-Out/Tag-Out procedures to prevent exposure to unguarded electrical systems.

K. Open Excavations and Trenches. In accordance with 29 CFR 1926.650, a trench is a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet. If forms or other structures are installed or constructed in an excavation so as to reduce the dimension measured from the forms or structure to the side of the excavation to 15 feet or less, the excavation is also considered to be a trench. The Contractor shall provide protection from collapse and cave-in for any employee who enters a trench or other excavation in accordance with the requirements of 29 CFR 1926 Subpart P, unless the excavation is less than 5 feet in depth and examination of the ground by the Contractor's competent person provides no indication of a potential cave-in. The Contractor shall include procedures to meet the excavation safety requirements in the Project Safety and Health Plan.

Trenching and excavation work shall be carried out under the supervision of the Contractor's competent person. The Contractor shall provide ladders or ramps for access and egress within 25 feet of an employee work area if a trench is 4 feet or more deep. The Contractor shall keep traffic,

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

equipment and materials at least 2 feet away from the edge of any trench or excavation, or use retaining devices. When mobile equipment is operated near an excavation or must approach the edge of an excavation, either the operator must have a clear and direct view of the edge of the excavation; or a warning system of barricades, hand signals or mechanical signals shall be used. Workers shall not be permitted under loads that are being handled by lifting or digging equipment.

For the purposes of open excavations and trenches, the term "competent person" shall be defined as one who has had specific training in, and is knowledgeable about, soil analysis, the use of protective systems and the requirements of 29 CFR 1926 Subpart P.

L. Hazardous Materials. The Contractor shall provide workers Hazard Communication Training (29 CFR 1926.59), Safety Training (29 CFR 1926.21), and other training as required by 29 CFR 1926.

1. Asbestos. Asbestos abatement contractors and workers, including both removal and air monitoring contractors, shall be appropriately licensed and certified by the NYS Department of Labor (NYSDOL). The asbestos abatement contractor will perform all removal and disposal of asbestos-containing material. The Contractor shall verify that a disposal site for the asbestos-containing material is available before starting work. Prior to removal and disposal work, the Contractor shall supply the Engineer with proof that:

- The firm performing the work has a valid asbestos-handling license.
- The firm's insurance coverage consists of an asbestos specific-occurrence type policy with no deductible or sunset clause.
- Its abatement supervisor is a NYSDOL certified asbestos project supervisor.
- All employees engaged in the work are properly certified and have current physical examinations and respirator fit tests.
- Proper notification of work beginning on the asbestos project has been given to NYSDOL and the United States Environmental Protection Agency (USEPA).

After work is completed, the Contractor shall provide the Engineer with two (2) copies of Daily Logs, Visitor's Logs, OSHA Air Monitoring Records, and NYSDOL compliance air monitoring records.

2. Lead Safety and Health. The Contractor shall provide worker lead protection in accordance with 29 CFR 1926.62. The Contractor shall provide to the Engineer a written Lead Compliance program addressing as a minimum the specific issues listed in 29 CFR 1926.62 (e)(2), a written Hazard Communication program and Worker Lead Training program as components of the Project Safety and Health Plan. The Contractor shall provide detailed information describing the training and experience of the competent person who will supervise the compliance program on site, provide a description of procedures to monitor worker exposures to lead and provide the proposed medical monitoring program. If respirators are to be used to protect workers from lead exposure, a written respirator program shall be provided.

Specific operations that would likely result in worker exposure to lead include, but are not limited to:

- Removal of lead based paint coatings by abrasive blasting or other procedures.
- Cleanup and removal of paint debris.
- Cleanup, relocation, and dismantling of paint removal containment structures.
- Flame cutting, heating, or welding of steel coated with lead-based paint.
- Removal of bolts or rivets coated with lead-based paint.
- Any other operations that may dislodge existing coatings of lead-based paint, or subject them to abrasion or elevated temperatures.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

The Contractor shall identify and implement engineering and work practice controls to reduce worker exposure to lead to a level at or below the Permissible Exposure Level (PEL). The use of respirators and protective clothing shall be used to supplement engineering and work practice controls, if necessary, to protect workers from exposures above the PEL. Reliance on respirators or protective clothing to protect workers from exposures above the PEL, without first implementing feasible engineering and work practice controls, shall not be permitted except for initial assessment of exposure levels as described in 29 CFR 1926.62 (d). The removal of lead-based paint from structural steel shall be required prior to heating, welding, or flame cutting to reduce worker exposure below the PEL. In cases where the Contractor can clearly demonstrate through exposure monitoring that other work practices and engineering controls, under the oversight of a certified industrial hygienist, can effectively maintain actual worker exposure below the permissible exposure level, exceptions to this requirement may be granted by the Engineer.

The Contractor shall provide to the Engineer copies of documentation, as they are completed, to demonstrate full compliance with 29 CFR 1926.62. These records shall include, as applicable, the completed worker lead training, completed respirator programs, air monitoring results, exposure monitoring results, worker medical monitoring results, and other such records as are necessary to document compliance with the standard.

3. Equipment Involving Radioactive Materials. The use of equipment involving radioactive materials, including but not limited to nuclear density gauges, shall adhere to all applicable regulations, including U.S. Nuclear Regulatory Commission regulations, related USDOT regulations concerning transportation of radioactive materials, and 12 NYCRR 38. Fourteen (14) days prior to the start of any work involving such equipment, the Contractor shall submit to the Engineer a written Radiation Safety Plan. The plan shall address in detail transportation and storage of the equipment and operating and emergency procedures. It shall provide the name and address of the Contractor's Radiation Safety Officer. A copy of the owner's license to possess the radiation source, issued by the NYSDOL, shall also be provided. All operators of the equipment shall be certified by a gauge manufacturer as to having completed training on the safe use of the equipment. A copy of the certification shall be provided to the Engineer for each operator prior to their work on the project.

4. Silica. The Contractor shall provide protection to all workers from exposure to hazardous levels of silica in accordance with 29 CFR 1926.55. In accordance with §107-05B, *Project Safety and Health Plan*, the Contractor shall identify and address silica health and safety in the written Project Safety and Health Plan. The Contractor shall identify and implement worker training, engineering controls, and workplace practice controls to reduce worker exposure to silica prior to instituting a program based on respirators or protective clothing to protect workers from exposures. Engineering controls shall include, but shall not be limited to; dust suppression through the application of water or other methods, use of general or local ventilation, and containment/isolation. Workplace practice controls shall include proper use and implementation of supervision, task procedures, employee training, signing, protective clothing, housekeeping, and personal hygiene. If engineering controls and work practice controls cannot reduce exposures below the personal exposure limit, the Contractor shall institute a respirator program. Each of these safety components is covered individually by 29 CFR 1926.

Many materials disturbed by the Contractor's operations may contain hazardous levels of silica. Silica may be in soil, concrete or asphalt pavement, superstructure or substructure materials. Specific operations that may result in worker exposures to silica, include, but are not limited to:

- Saw cutting, grinding, milling, hammering, drilling, or chipping of rock, cement concrete, or asphalt concrete.
- Concrete pavement rubblizing.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

- Demolition of brick, cement concrete, or masonry structures.
- Abrasive blasting, if the abrasive contains silica, or of cement concrete, rock, or asphalt concrete.
- Dry sweeping or pressurized air blowing of cement concrete, rock, sand, or asphalt concrete dust.

M. Demolition/Removal of Buildings and Structures. Demolition or removal work shall not be performed by the use of explosives unless approved by the Regional Director.

N. Drilling and Blasting. Blasting shall be performed in accordance with the Department publication entitled *Procedures for Blasting*. This publication is available upon request from the Regional Director or the Director, Geotechnical Engineering Bureau.

The Contractor shall submit a written Blast Plan in accordance with *Procedures for Blasting* for approval by the Department a minimum of 10 work days prior to start of blasting operations. A preblast meeting relative to the method, manner and procedure of blasting operations shall be held with the Engineer, the Contractor, the Blaster, a Departmental Engineering Geologist and representatives of all interested agencies prior to the commencement of drilling and blasting operations.

Whenever explosives are used, they shall be of such character and strength and in such amounts as permitted by state and local laws and ordinances and all agencies having jurisdiction over them. The Department reserves the right to specify the maximum size of the charges. Blasting shall be done only when the Engineer and those agencies shall approve and under such restrictions as they may impose.

If a blast causes injury, damage to property, adverse affects upon traffic, or causes gases to migrate and/or accumulate in a potentially harmful manner, all blasting operations shall cease by order of the Engineer for a review of the procedures. The review will be conducted by the Engineer in conjunction with an Engineering Geologist to ensure that proper procedures and practices were used to determine if the approved procedures need to be revised. Should the findings of the review indicate the injury, damage, traffic delay, or migration/accumulation of gases was attributed to improper blasting operations, the blaster of record may be removed at the Department's option.

The Contractor shall meet all the requirements of 12 NYCRR 23, 12 NYCRR 39, and 12 NYCRR 61, which include but are not limited to the licensing for ownership, possession, transportation, or use of explosives, certifications for blasters, and provisions for storage, construction and maintenance of magazines.

O. Equipment Safety Procedures. The following provisions shall apply to all work on the project, including but not limited to, the activities of all Subcontractors, Manufacturers, Fabricators, Material Suppliers, independent truckers and owner-operators. The Contractor shall include the proposed equipment safety procedures in the Project Safety and Health Plan.

- A spotter shall guide the backing of any vehicle or equipment with restricted visibility to the rear. This rule applies in any location where workers on foot, pedestrians, private vehicles or similar hazards may be present.
- If the operator loses visual contact, the vehicle shall immediately be brought to a full stop until visual contact with the spotter is reestablished.
- Dump truck boxes may be raised only under the control of a spotter, unless the vehicle is in an area clearly marked to be free of overhead wires and safe for dumping.
- Dump truck boxes shall be lowered prior to moving, except when dumping into a paver or similar operations, under the control of a spotter.
- All excavating, lifting and similar equipment shall comply with electrical safety requirements, and shall operate under the control of a spotter whenever working within 5m of

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

an overhead line. The distance shall be measured as a slope distance perpendicular from the conductor to the nearest point on the vehicle.

- Any operator found in violation of the above rules by the Engineer or his/her representative will be removed from the project immediately, and will not be allowed to work on any Department project for a minimum of one year.

P. Lifting. The following shall apply for all lifting operations when utilizing lift equipment. The Contractor shall conduct construction lifting operations that use a crane or a derrick in compliance with 29 CFR 1926 Subpart CC *Cranes and Derricks in Construction* and shall conduct lifting operations for demolition and underground construction that use a crane or a derrick in compliance with 29 CFR 1926 Subpart DD *Cranes and Derricks Used in Demolition and Underground Construction*. This paragraph does not apply to lifting operations covered under Section 585 *Structural Lifting Operations*, nor ordinary excavation operations. This paragraph does apply to cranes with either fixed or swinging leads that are dedicated to pile driving operations.

1. Lift Equipment. Lift equipment is defined as equipment capable of lifting an item more than 15 feet high, has the ability to swing or rotate a boom, and has a maximum rated lifting capacity exceeding one ton. Lift equipment shall have durable, legible load charts which shall have been prepared by either the equipment manufacturer or a Professional Engineer. If manufacturer's load charts are unavailable, charts may be prepared by a Professional Engineer. The Professional Engineer shall utilize the same factors of safety against overturning as the equipment manufacturer. The charts shall be attached to the equipment in a location accessible to the operator while at the controls. The charts shall contain a full range of load ratings at all stated operating radii. The charts shall also note conditions such as outriggers, counter weights, and work area, i.e., over side, over front, or over rear of equipment.

Equipment may lift loads up to those indicated on the Manufacturer's or Professional Engineer's load chart if the equipment has the following safety devices and the safety devices are operating:

- a. Load and radius measuring device pre-programmed to continuously relate the measured data to the load radius chart as a direct reading of load or percentage of the rated load, and connected to a warning light and an acoustical signal located at the operator's position or in the cab to indicate overload.
- b. A device that continuously indicates the levelness of the machine and is visible from the operator's controls.

Lift equipment with non-operational safety devices or no safety devices shall be operated at levels not to exceed 78% of the Manufacturer's or Professional Engineer's load charts. This equipment shall have a separate load chart labeled *78% Load Chart* and it shall be attached to the equipment.

Lift Equipment with operational safety devices that is operating from a barge shall utilize a manufacturer's or Professional Engineer's load chart that is established specifically for operating from a barge. Lift Equipment on barges with non-operational safety devices or no safety devices shall operate at 78 % of the Manufacturer's or Professional Engineer's load chart for working on barges. This equipment shall have a separate load chart labeled *78% Load Chart for Equipment on Barges*.

Equipment used for lifting over a railroad shall be restricted such that the operational capacity shall be limited to 66 2/3% of its tipping load as specified in §105-09 *Work Affecting Railroads* or be limited to the load limits indicated in the previous three paragraphs, whichever is lower.

2. Lift Plans. A written lift plan may be a component of an Erection Plan, Demolition Plan, or other plan that is submitted and approved by the Department in accordance with the Steel Construction Manual, the Prestressed Concrete Construction Manual or other requirement. A

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

written lift plan need not be submitted separately for approval, provided the required minimum elements are contained in the approved plan.

Structural elements shown on shop drawings and erection drawings may have units expressed in both metric and USC units, however the measurements or dimensions in the predominant unit system used in the contract documents shall control.

a. Type A Lifts. A Type A Lift is the most complex type of lift, poses a greater risk, and requires significant prior planning. Type A lifts include, but are not limited to lifting primary structural steel or structural concrete elements, span type overhead sign structures, arm type overhead sign structures with a lift weight greater than 20,000 lbs.

A lift will also be considered Type A when lift equipment to perform a Type B lift is placed on a bridge structure, on false work; over a railroad; over a sensitive underground utility facility; when there is a two machine lift; or when a slider beam is used.

The Contractor shall submit a written Type A Lift Plan to the Engineer 30 calendar days prior to the lift for review and approval by the Department and, when applicable, any railroad affected by the proposed procedure. The Type A Lift Plan and supporting calculations shall be sealed and signed by a Professional Engineer. Any and all alterations or modifications to a Type A Lift Plan shall be sealed and signed by a Professional Engineer. The Engineer shall be notified of any alterations or modifications to approved lift plans.

As a minimum, a Type A lift plan shall include the following:

1. Title Block with contract number, PIN, contract description, county, contractor name and bridge identification number (BIN)/or sign identification number (SIN) as appropriate.
2. Plan of the work area showing support structures, roads, railroad tracks, canals, streams and utilities.
3. Lifting sequence, if applicable
4. Location of trucks for delivery or removal of materials.
5. Location of lift equipment, including pin locations, length of boom, and counterweight size and location.
6. Lift radii, lift configuration(s) and restrictions on swing radii.
7. Capacity chart for lift equipment, including a comparison of total lift weight vs. capacity for the pick radius.
8. Weight of the item to be lifted, including additional equipment such as rigging, beam clamps, jibs, swing-away, super-lifts, blocks, cheek plates, headache balls, and cables
9. Wind restrictions if they are requirements of the Manufacturer.
10. Sectional views of all lifts where electrical facilities are within a 15 foot radius of any part of the lifting equipment or object being lifted.
11. Description of lifting devices or other connecting equipment, and pertinent rigging with dimensions.
12. Location of outriggers, outrigger supports, and outside dimensions of tracks for track mounted lifting equipment.
13. Cranes or crane outriggers shall not be placed on a reinforced earth structure, within the limits specified, during a lift.

b. Type B Lifts. A Type B Lift includes arm type overhead sign structures with a lift weight less than 20,000 lbs, structural elements with a lift weight greater than 20,000 lb; when the lift equipment or the item being lifted is within 15 feet of energized overhead electrical lines, or where the operator cannot directly see the item being lifted at all times during the lift.

The Contractor shall submit a written Type B Lift Plan, including all of the applicable elements required for a Type A Lift Plan, prepared by the Competent Person.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

c. *Type C Lifts.* A lift will be considered a Type C Lift when it does not meet the requirements for a Type A or Type B Lift. A written lift plan is not required for Type C Lifts.

3. Pre-Lift Meeting.

a. *Type A Lifts.* A pre-lift meeting will be required for lifts that require a Type A Lift Plan, a written Erection Plan, Demolition Plan, or other requirement that includes a lift plan. The Competent Person, and other appropriate contractor staff, shall attend the pre-lift meeting with the Engineer, as well as representatives from the utilities and railroads if deemed applicable, a minimum of five work days before lifting operations are to be performed. The meeting shall include but not be limited to: the review of site conditions, erection or demolition plans, lift loads vs. lift equipment capacity, obstructions, utilities, and the roles of Department and Contractor personnel.

b. *Type B Lifts.* The Competent Person, and other appropriate contractor staff, shall review the lift operations with the Engineer at the location of the lift, before lifting operations are performed. The review shall include but not be limited to: the review of site conditions, lift loads vs. lift equipment capacity, and obstructions, and the roles of Department and Contractor personnel.

c. *Type C Lifts.* A pre-lift meeting is not required for Type C lifts.

4. Competent Person. The Contractor shall designate, to the Engineer, one person, who is competent in lifting operations, to be completely in charge of each lifting operation. In general, Competent Person shall mean one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. The Competent Person shall have the authority to take an unsafe piece of equipment out of service until the hazard is eliminated. The Competent Person shall be knowledgeable about lifting equipment and equipment operations, Manufacturer's specifications and recommendations, and have a thorough knowledge of the requirements, regulations and standards governing his/her duties. The Competent Person shall, as a minimum, have the ability to interpret load charts, calculate lift loads, recognize overhead wire hazards and know all aspects of the rigging.

The Competent Person shall inspect all lift equipment prior to and during usage to make sure the equipment is in a safe operating condition.

5. Lift Operations. The Competent Person shall be present for all lifting operations. If a crane is utilized in a lifting operation, or a crane with either fixed or swinging leads is utilized in a pile driving operation, the operator shall present to the Engineer a valid New York State Certificate of Competence to operate a crane, except an individual operating a crane within a city having a population of one million or more. Individuals operating a crane within a city having a population of one million or more shall present the Engineer with a valid license or certification to operate a crane issued by such city. If there are any other local crane license requirements, they too shall be presented to the Engineer. In addition, a copy of the annual inspection report of the crane shall be readily available and provided upon the Engineer's request.

Any crane or other lift equipment that extends into the identified sloped test surface around an airport, military airport or heliport, or 200 feet or more above ground level, as defined in 14 CFR Part 77.9 shall have the appropriate flags, lights, beacons or markings in accordance with Federal Aviation Administration (FAA) Advisory Circular (AC) 70-7460-1K *Obstruction Marking and Lighting*, and the owner shall file a *Notice of Proposed Construction or Alteration* with the FAA.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Any discrepancies between the Lift Plan and the actual lift conditions shall be reported immediately to the Competent Person in charge of the lift operations and to the Engineer. The operation shall not proceed until all issues are resolved.

Q. Histoplasmosis. Histoplasmosis is a fungal infection caused by a soil organism found in large masses of bird or bat droppings, and is a potential health hazard in areas where birds or bats have nested for long periods. Such conditions are often found on bridge structures, in barns, farm buildings and cold storage facilities. Areas with small amounts of dried droppings pose minimal hazard. Airborne material may enter the body by inhalation or ingestion.

Prior to work in any area where birds or bats nest, the Contractor shall conduct a thorough inspection to determine if, and to what extent there is a build-up of droppings. Workers conducting an inspection shall be equipped with personal protective equipment, which include gloves, rubber boots, rain suit components, goggles and a dust/nuisance respirator. Questions regarding proper equipment for this activity shall be directed to the Engineer.

If substantial material is found, the Contract shall clean the work area using a high powered water hose or by scraping. If the material is to be scraped away, it shall be kept wet during the entire process. Workers engaged in cleaning activity shall wear personal protective equipment specified above. Application of a cleaning agent (bleach, for example), before removal may help dissolve the material, and a disinfectant shall be applied to cleaned surfaces. Compressed air shall not be used to remove pigeon droppings because it produces airborne particles.

When cleaning has been successfully completed, the personal protective equipment specified above is no longer required. Employees engaged in cleaning, or any other activity which involves exposure to pigeon droppings, shall observe a high degree of personal hygiene, even if the exposure is casual. Special care shall be taken to wash hands thoroughly before eating or smoking.

R. Confined Spaces. Confined spaces are defined as any space having limited means of egress, which is subject to the accumulation of toxic or flammable contaminants or has an oxygen deficient atmosphere. Confined spaces include, but are not limited to: sanitary sewers, sanitary manholes and structures, drainage lines and drainage structures, underground utility vaults, enclosed bridge beams and heated enclosures. All personnel required to enter confined spaces shall be instructed as to the nature of the hazards, the necessary precautions and in the use of protective and emergency equipment required.

Fuel-fired heated enclosures are frequently constructed to provide the requirements for winter concrete placement or similar operations. The Contractor shall provide adequate ventilation to maintain acceptable air quality or conduct air quality monitoring when heaters are or have been operating prior to personnel entry. If acceptable air quality cannot be verified, then appropriate respirators shall be worn. No worker shall enter a confined, heated space unless that space can be ventilated or the worker removed from outside the enclosure if the worker is overcome by fumes. Particularly during off-shift hours, no worker shall enter an unventilated, heated enclosure unless another worker is present immediately outside the enclosure. All unnecessary combustibles and debris shall be removed from the enclosure and escape exits shall be provided so workers can escape safely if a fire starts, prior to heating.

S. Fire and Explosion Prevention. The Contractor shall ensure that combustibles do not accumulate. Flammable materials shall be handled and stored as required by OSHA regulations. "No Smoking" signs shall be posted and enforced wherever flammable materials are stored or used. Fire extinguishers shall be provided and maintained throughout the site, in accordance with the requirements of 29 CFR 1926, Subpart F. Fires will be considered, as a minimum, a near-miss accident, and therefore shall be reported in accordance with existing reporting requirements.

During refueling, all possible sources of ignition, including, but not limited to sparks, open flames and electrical equipment shall be eliminated. Fuel containers shall be grounded to the tank to prevent

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

static electrical sparks. A "No Smoking or Open Flame" sign shall be posted conspicuously in the vicinity of refueling operations.

Cutting and welding equipment shall be stored according to recognized safety standards. Any defective tanks or equipment shall be removed to a safe storage area immediately until repairs are made. When cutting or burning is underway, steps shall be taken to ensure that sparks do not ignite combustibles.

T. Use of Personal Entertainment Devices and Portable Phones. The Contractor shall ensure that workers are able to perceive hazards, are not distracted from their tasks, and are not creating hazard(s) through the use of personal entertainment devices. The Contractor shall ensure that portable phones, two-way radios, and other communication devices are used by workers for performing work tasks only. Flaggers shall use portable phones, two-way radios, and other communication devices only to communicate with other flaggers, workers or supervisors regarding flagging operations. Equipment operators shall use portable phones, two-way radios or other communication devices while actively operating equipment only for communicating with workers performing directly related work tasks. Truck drivers shall use hands free technology for all calls while driving within work zones. Portable phones, two-way radios, and other communication devices shall be equipped with hands-free technology whenever practicable. Workers shall not use personal entertainment devices with earphones such as radios, cellular/smart phones, portable media players, or other personal listening devices while working.

107-06 INSURANCE. The Contractor shall procure, at its own sole cost and expense, and shall maintain in force at all times during the term of this contract including any extensions or renewals until Contract Final Acceptance, the policies of insurance covering all operations under the contract whether performed by it or its subcontractors as herein below set forth, written by companies authorized by the New York State Insurance Department to issue insurance in the State of New York and that have an A.M. Best Company rating of (A -) or better or approved by the Department. The Department may, at its sole discretion, permit the placement of policies with a non-authorized carrier or carriers upon request by the Contractor accompanied by the documentation required by 11 NYCRR §27.0 *et seq.*; provided that nothing herein shall be construed to require the Department to accept insurance placed with a non-authorized carrier under any circumstances. The Contractor shall deliver to the Department evidence of such policies as the Department deems necessary to verify that the required insurance is in effect.

A. Conditions Applicable to Insurance. All policies of insurance required by this agreement must meet the following requirements:

1. Coverage Types and Policy Limits. The types of coverage and policy limits required from the Contractor are specified in Paragraph B *Insurance Requirements* below. General liability insurance shall apply separately on a per-job or per-project basis.

2. Policy Forms. Except as may be otherwise specifically provided herein or agreed in writing by the Department, policies must be written on an **occurrence** basis. In the event that occurrence-based coverage is not commercially available, claims-made policy forms will be considered provided that, at minimum, it includes provisions that allow for (a) reporting circumstances or incidents that may give rise to future claims and (b) an extended reporting period of not less than three (3) years with respect to events that occurred but were not reported during the term of the policy.

3. Certificates of Insurance/Notices. Contractor shall provide a Certificate or Certificates of Insurance, in a form satisfactory to the Commissioner, before commencing any work under this contract. Certificates or transmittal correspondence shall reference the NYSDOT Contract D Number. Certificates shall be mailed to the:

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Construction Contractor Insurance
New York State Department of Transportation
Contract Management Bureau
 50 Wolf Rd.
 Albany, NY 12232
 Insur.constr.contr@dot.ny.gov

Unless otherwise agreed, policies shall be written so as to require that the policy will not be (i) canceled, (ii) materially changed or (iii) permitted to expire or lapse for any reason except upon ten (10) days' prior written notice to the Department by Certified Mail, Return Receipt Requested at the address stated above. In addition, if required by the Department, the Contractor shall deliver to the Department within forty-five (45) days of such request a copy of any or all policies of insurance not previously provided, certified by the insurance carrier as true and complete. Certificates of Insurance shall:

1. Be in the form provided by the Department (C218 or successor) unless the Department specifically approves a different form. The ACORD forms of Certificate of Insurance are not acceptable.
2. Be signed by an authorized representative of the insurance carrier or producer and be acknowledged before a notary public.
3. Disclose any deductible, self-insured retention, aggregate limit or any exclusion to the policy that materially changes the coverage required by the contract.
4. Specify the Additional Insureds and Named Insureds as required herein.
5. Refer to this Contract by number on the face of the certificate, and
6. Expressly reference the inclusion of all required endorsements.

If at any time during the term of this contract, it shall come to the attention of the Department that required insurance is not in effect or that adequate proof of insurance has not been provided, the Department may, at its option:

- a. Direct the Contractor to suspend work and not re-enter the premises with no additional payment or extension of time due on account thereof, or
- b. May withhold further contract payments in accordance with Article 8 *No Payment Due to Contractor's Non-Compliance* of the contract agreement, or
- c. Treat such failure as a breach or default of the contract.

4. Additional Insureds. All insurance policies required by these specifications, except workers' compensation and professional liability shall be endorsed to provide coverage to **"The State of New York/New York State Department of Transportation, any municipality in which the work is being performed, any public benefit corporation, railroad, or public utility whose property or facilities are affected by the work, and any consultants working for or on the project, and their agents or employees"** with respect to any claim arising from the Contractor's Work under this contract or as a result of the Contractor's activities. The endorsement shall be effected by endorsement of the applicable policy using ISO form CG 20 10 11 85, CG 20 37 07 04, CG 20 33 07 98 when used in combination with CG 20 37 07 04, or CG 20 33 10 01 or a form(s) that provides equivalent coverage.

5. Primary Coverage. All insurance policies, excepting workers' compensation, shall provide that the required coverage shall be primary as to any other insurance that may be available to the Department for any claim arising from the Contractor's Work under this contract, or as a result of the Contractor's activities.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

6. Waiver of Subrogation. As to every type and form of insurance coverage required from the Contractor, there shall be no right of subrogation against **the State of New York/New York State Department of Transportation, its agents or employees.** To the extent that any of Contractor's policies of insurance prohibit such a waiver of subrogation, Contractor shall secure the necessary permission to make this waiver.

7. Policy Renewal/Expiration. At least ten (10) calendar days prior to the expiration of any policy required by this contract, evidence of renewal or replacement policies of insurance with terms no less favorable to the Department than the expiring policies shall be delivered to the Department in the manner required for service of notice in Paragraph A.3. *Certificates of Insurance/Notices* above.

8. Self-Insured Retention/Deductibles. Contractors utilizing self-insurance programs are required to provide a description of the program for Department approval. Collateralized deductible and self-insured retention programs administered by a third party may be approved. Except as may be specifically provided in the Contract Documents of a particular project, Contractor or third-party-administered insurance deductible shall be limited to the amount of the bid deposit or \$100,000., whichever is less. Security is not required if it is otherwise provided to an administrator for an approved risk management program. The Department will not accept a self-insured retention program without security being posted to assure payment of both the self-insured retention limit and the cost of adjusting claims. The Contractor shall be solely responsible for all claim expense and loss payments within any permitted deductible or self-insured retention. If the Contractor's deductible in a self-administered program exceeds the amount of the bid deposit, the Contractor shall furnish an irrevocable Letter of Credit as collateral to guarantee its obligations. Such Letter of Credit or other collateral as may be approved by Department must be issued by a guarantor or surety with an AM Best Company rating of (A -) or better. If, at any time during the term of this agreement, the Department, in its sole discretion, determines that the Contractor is not paying its deductible, it may require the Contractor to collateralize all or any part of the deductible or self-insured retention on any or all policies of insurance or, upon failure to promptly do so, the same may be withheld from payments due the Contractor.

9. Waiver of Indemnities. The Contractor waives any right of action it and/or its insurance carrier might have against the Department (including its employees, officers, commissioners, or agents) for any loss that is covered by a policy of insurance that is required by this contract. The Contractor waives any right of action it and/or its insurance carrier might have against the Department (including its employees, officers, commissioners, or agents) for any loss, whether or not such loss is insured.

10. Subcontractor's Liability Insurance. In the event that any portion of the work described in this contract is performed by an approved subcontractor, the insurance requirements of this Article shall be incorporated into the subcontract agreement. Subcontractor insurance requirements shall include the requirements for Workers' Compensation, Commercial General Liability, and, if applicable, Commercial Auto and/or Professional Liability. Excess or umbrella insurance is not required for subcontractors. Contractor shall require that Certificates of Insurance, meeting the requirements of the Department are provided to the Department documenting the insurance coverage for each and every subcontractor employed by them to do work under this contract.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

B. Insurance Requirements. The types of insurance and minimum policy limits shall be as follows:

1. Workers' Compensation and Disability Insurance. As required by State Finance Law §142, the Contractor shall maintain in force workers' compensation insurance upon forms required by or acceptable to the Workers Compensation Board for all of Contractor's employees. Contractor shall also maintain disability insurance as required by the Disability Benefits Law of the State of New York.

2. Commercial General Liability Insurance. The Contractor shall maintain an occurrence form commercial general liability policy or policies insuring against liability arising from premises (including loss of use thereof), personal injury or death, advertising injury, liability insured under an insured contract (including the tort liability of another assumed in a business contract) occurring on or in any way related to the premises or occasioned by reason of the operations of Contractor. Such coverage shall be written on an ISO occurrence form (ISO Form CG 00 01 12 07 or a policy form providing equivalent coverage) in an amount of not less than \$1,000,000. per occurrence and not less than \$2,000,000. aggregate. Unless otherwise provided, the policy or policies of insurance providing the liability coverage shall include:

- a. Coverage for contractual liability assumed by the Contractor insured under an insured contract (including the tort liability of another assumed in a business contract).
- b. All insurance policies required by these specifications except workers' compensation and professional liability shall be endorsed to provide coverage to "using ISO form CG 20 10 11 85, CG 20 37 07 04, CG 20 33 07 98 when used in combination with CG 20 37 07 04, or CG 20 33 10 01 or a policy form or forms providing equivalent coverage.
- c. Products-Completed Operations Coverage, as provided in the General Liability Policy, or in certain instances through ISO form CG 26 11 09 99 or suitable equivalent.
- d. Where contract work will be performed by unregistered off-road equipment, Contractor shall provide documentation of a blanket Pollution Liability policy, or an endorsement to cover short-term pollution events, ISO form CG 04 33 10 01 or equivalent.
- e. Coverage for claims for bodily injury asserted by an employee of an additional insured and any Employer Liability Exclusion which may otherwise operate to exclude such coverage shall be voided in this respect.
- f. Explosion, Collapse and Underground Hazards coverage ("XCU") (*for contracts that call for the performance of excavating, underground work, and/or the use of blasting equipment*).

3. Commercial Automobile Insurance including liability and required coverage for New York. (*applicable to any project where automobiles or other vehicles will be employed to complete the work*). In the event that automobiles are used in connection with Contractor's business or operations with the Department, the Contractor shall maintain a commercial or other automobile policy or policies insuring against liability for bodily injury, death, or damage to property and other mandatory coverages, relating to the use, operation, loading or unloading of any of Contractor's automobiles (including owned, hired and non-owned vehicles) on and around the project. This should be ISO form CA 00 01 10 01, CA 00 01 01 87 or a policy form providing equivalent coverage along with mandatory New York endorsements. Coverage shall be in an amount of not less than \$1,000,000. each accident.

4. Umbrella or Excess Liability Insurance. The Contractor shall maintain an occurrence form umbrella liability policy or policies insuring against liability arising from premises (including loss of use thereof), operations, independent Contractors, products-completed operations, personal injury and advertising injury, and liability insured under an insured contract (including the tort liability of another assumed in a business contract) occurring on or in any way

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

related to the premises or occasioned by reason of the operations of Contractor or arising from automobile liability as described above. Such coverage shall be written on an ISO occurrence form CU 00 01 12 07 or a policy form providing equivalent coverage. In the event that umbrella coverage is unavailable, equivalent excess coverage may be substituted. The minimum required limits for the umbrella/excess coverage shall be sufficient to provide a total of not less than \$5,000,000. per occurrence/ aggregate.

5. Special Protective and Highway Liability Policy. The Contractor shall maintain, separate and apart from its umbrella policy, a policy issued to and covering the liability of the People of the State of New York, The State of New York, the Commissioner of Transportation, all employees of the Department of Transportation, any municipality in which the work is being performed, any public benefit corporation, railroad, or public utility whose property or facilities are affected by the work, against damages that the insureds may be held legally liable to pay for property damage, personal injuries, or death that is caused by any occurrence that takes place within any location where work is to be or is being performed by Contractor, including at the location of any of the work. This should be ISO form CG 00 14 12 or a policy form providing equivalent coverage along with mandatory New York endorsements. Coverage shall be in an amount of not less than \$1,000,000. per occurrence and at least \$2,000,000. for each aggregate limit.

6. Contractor's Risks. The Contractor shall be responsible for obtaining any insurance it deems necessary to cover its own risks, including without limitation: (a) business interruption, such as gross earnings, extra expense, or similar coverage, (b) personal property, and/or (c) automobile physical damage and/or theft. In no event shall the Department be liable for any damage to, or loss of, personal property, or damage to, or loss of, an automobile that is covered by a policy of insurance that is required by this agreement, even if such loss is caused by the negligence of the Department.

7. Professional Liability/ Errors and Omissions. *(applicable to professional services requiring the signature, stamp or certification of a licensed professional, including, without limitation, erection plans, demolition plans, containment plans, coffer dams, and temporary sheeting.)* The Contractor shall maintain at its own expense or shall require to be maintained, such insurance as is customary to compensate the Department for any claims or losses that occur because of Contractor's errors, omissions malpractice or breach of professional obligations. Such policy or policies may be written on a claims-made form so long as coverage is maintained to be in effect to cover claims arising from the performance of services under this contract. Said coverage may be subject to a deductible or self-insured retention level of no more than \$250,000. subject to approval by the Department, such approval not to be unreasonably withheld, except that it is also agreed that the Department may withhold payment for services rendered under this contract in the event, and to the extent of any deductible in the event that a claim is asserted. Such coverage shall be written on a claims-made basis (or a policy form providing equivalent coverage) in an amount of no less than \$1,000,000. per claim and not less than \$1,000,000. in the aggregate.

8. Railroad Protective Liability Insurance. *(applicable to any Work Affecting Railroads as described in §105-09.)* The Contractor shall maintain at its own expense railroad protective liability policy of insurance in the name of the affected railroad and with limits of coverage as specified in the Special Notes on Railroad Insurance, or if no limits of coverage are specified, the limits shall be not less than \$5,000,000. combined Bodily Injury Liability and/or Property Damage for each occurrence with a \$10,000,000. Aggregate Limit applying separately to each annual period. Said policy shall be subject to the approval of the railroad and comply with 23 CFR 646 Subpart A.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

9. Marine Protection & Indemnity. (applicable to any Work performed on a navigable waterway using barges or other watercraft). Anytime the activity involves work on navigable water or the work is connected to water related activities, Marine Protection & Indemnity and Hull and Machinery coverage is required. Hull and Machinery coverage shall be provided for the total value of the watercraft or equipment. The Contractor shall obtain Protective and Indemnity Liability insurance for all marine operations under the Agreement, with a minimum (\$1,000,000.) limit. The policy shall be endorsed to add the Department as an Additional Insured.

10. Pollution Liability Insurance. (applicable where the Contractor will employ mobile equipment or tanks or facilities for fueling vehicles or equipment on-site). The Contractor shall procure and maintain, either through an endorsement to a commercial general liability policy or through a separate policy, insurance protecting Contractor and the Department from the liability and financial loss relating to Contractor's contamination of soil and the accidental release of petroleum products, chemicals and/or toxic gases from broken pipelines, utilities and stationary and mobile fuel tanks that can result from Contractor's operations. Such coverage shall be written on policy form providing coverage for contamination both on and off the leased premises and shall provide coverage in an amount of not less than \$1,000,000. per occurrence and not less than \$1,000,000. aggregate.

107-07 PROTECTION OF UNDERGROUND FACILITIES. The Contractor shall use the necessary precautions to prevent damage to pipes, conduits, and other underground facilities. All costs associated with verification of the location of underground facilities pursuant to 16 NYCRR 753 *Protection of Underground Facilities*, as amended, shall be included in the prices bid for the respective contract items involved unless separate payment is otherwise provided for in the contract. The Contractor shall provide access to Public Service Commission personnel to examine and inspect excavation and demolition methods used within 15 feet in any direction of any underground facility.

A. One-Call. Pursuant to 16 NYCRR 753 *Protection of Underground Facilities*, prior to non-emergency excavation, subsurface exploration of any kind, or installation below existing grade, including, but not limited to; digging, auguring, backfilling, boring, drilling, excavation, grading, jack hammering, pipe jacking, pavement milling, pile driving, plowing in, pulling in, sawcutting, tree root removal, trenching, tunneling and the installation of guiderail posts, sign posts, fence posts or underground conduit, the One-Call notification system shall be notified of the date and location of the proposed work. The Contractor shall contact the One-Call notification system serving the area a minimum of 2 days and a maximum of 10 days, not including the date of the call, prior to work. The Contractor shall mark proposed locations of excavation, or other activity listed above, with white paint, white stakes or other indications as agreed to by the Utilities to facilitate the work of underground utility designation. Utilities that do not belong to the One-Call notification system shall be contacted separately. The Town, City or County may be contacted to obtain a list of Utilities. If additional work is required, and staking, marking or other designation has been lost, the Contractor shall contact the One-Call notification system for subsequent designation. If an underground facility has been designated, but the Contractor cannot physically locate the facility, the Utility shall be notified, so that the designation can be verified. If an unmarked or unknown facility is discovered during the course of the Contractor's operations, the Utility or suspected Utility shall be notified. If the owner cannot be determined, the One-Call notification system shall be notified. The Contractor shall support and protect from damage all exposed underground facilities. The Contractor shall notify the Engineer of any accidental contact with or potential damage to any underground facility, regardless of whether the damage is visible or not.

The Contractor shall provide to the Engineer, in writing, the information provided to the One-Call notification system or the Utility if it is not a One-Call notification system member, and the control number issued for each call placed to request designation of underground facilities. The Contractor

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

shall protect and preserve designations until no longer required for safe work near the underground facility.

The Contractor shall identify and provide to all forepersons and equipment operators, a list of emergency phone numbers for each Utility having facilities within the contract limits. Supervisors shall periodically review the location of underground facilities with all workers who are subject to exposure, including new employees. If the Contractor fails to notify the One-Call notification system or a non-member Utility prior to excavation or activity listed above, a Stop Work Order will be issued in accordance with the provisions of §105-01 *Engineer's Authority*. Prior to lifting the Stop Work Order, the Department will consider convening a show cause meeting, at its convenience, to consider possible worker dismissal in accordance with §105-02 *Character of Workers* or contract termination in accordance with Article 11 *Right to Suspend Work and Cancel Contract* of the contract agreement.

B. Verification. Pursuant to 16 NYCRR 753 *Protection of Underground Facilities*, the Contractor shall verify precise location, size, depth and direction of run of an underground facility or its encasement, by hand shovel or vacuum excavation, prior to the use of powered equipment or the installation of any proposed work, including the projected line of a trenchless installation such as boring or drilling, within the tolerance zone. Powered equipment may be used to remove pavement or masonry within the tolerance zone, but only to the depth of such pavement or masonry. Powered equipment shall not be used within 4 inches of the verified location of an underground facility.

C. Contact or Damage. Pursuant to 16 NYCRR 753 *Protection of Underground Facilities*, the Contractor shall, in the event of contact or damage to an underground facility, immediately notify the Utility and the Engineer, suspend excavation or demolition in the immediate vicinity of the contacted or damaged facility and take such emergency actions as are warranted to protect all endangered persons to the best of its ability.

D. Pressure Pipes. Pressure pipes shall not be pressurized without being adequately restrained against movement, and no personnel shall be allowed in a trench or area containing a pressure pipe during initial pressurization until the pipe has been fully pressurized. Particular attention shall be paid to fittings and bends that create a thrust, which, if improperly restrained, may cause the pipe joints to separate and injure nearby personnel.

E. Quality Level Designations. The quality of information gathered about underground utilities is shown on contract plans using a Quality Level Designation. The Quality Level Designation may be different within the same area for different underground utilities, depending on the accuracy and availability of information. If Quality Level Designations are not shown in the contract documents, information shall be assumed to be Quality Level D. Below are the Quality Level Designation definitions:

1. Quality Level A. Quality Level A is the highest degree of accuracy. The information shown on the plans has been obtained by the actual exposure (or verification of previously exposed and surveyed utility facilities) of subsurface utilities, using (typically) minimally intrusive excavation equipment to determine their precise horizontal and vertical positions, as well as their other utility facility attributes. Shown on contract plans as QLA.

2. Quality Level B. Quality Level B is the second highest degree of accuracy. The information shown on the plans has been obtained through the application of appropriate surface geophysical methods (i.e., underground cameras, radar, sonar, tone outs, etc.) to identify the existence and appropriate horizontal position of subsurface utility facilities. Quality Level B data are reproducible by surface geophysics at any point of their depiction. The information was surveyed to applicable tolerances and reduced onto the plans. No excavations were performed. Shown on contract plans as QLB.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

3. Quality Level C. Quality Level C is the third highest degree of accuracy. The information shown on the plans has been obtained by surveying and plotting visible above-ground utility features and by using professional judgment in correlating this information to Quality Level D information. Shown on contract plans as QLC.

4. Quality Level D. Quality Level D is the lowest degree of accuracy. The information shown on the plans was derived solely from existing NYSDOT and/or utility company records or recollections. Shown on contract plans as QLD.

107-08 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE. The Contractor shall protect and preserve all public and private property, including all existing vegetation, existing landscape features, and monuments within, along, and adjacent to the highway right of way. The Contractor shall use every precaution necessary to prevent damage, injury, pollution or destruction; shall protect all trees and other woody plants which are to remain; and shall take special care to protect the natural vegetation and surroundings including all natural drainageways, waterways, wetlands, woods and fields. The Contractor shall store materials in such a manner as to prevent leaching which would be injurious to water, soils, and plants.

A. Within the Right of Way. Before beginning the use of any area within the right of way, but not within the limits of disturbance shown in the contract documents, the Contractor shall obtain the written approval of the Engineer. Before beginning the use of any area within the right of way, but outside the contract limits, the Contractor shall obtain the written approval of the Department through modification of the contract limits by change order or the issuance of a highway work permit.

Approval will not be given if the area is not suitable for acceptable restoration or if serious or permanent environmental damage is foreseeable. This applies to areas such as, but not limited to: borrow areas, spoil areas, equipment and/or material storage areas, haul roads, batching areas, water points, shop areas and all similar areas.

Where a contract pay item for turf establishment is not included in the contract, disturbed earth areas within the work limits shall be graded and seeded as specified for the standard turf establishment item. The cost of this work shall be included in the prices bid for the various items in the contract and no separate payment will be made therefore.

B. Outside the Right of Way. The Contractor shall notify the Engineer of the use of any specific area outside the right of way before work in any such area is begun, except areas which have been or are being used by the Contractor as its established and permanent headquarters, equipment storage sites or to commercial borrow sources, commercial gravel pits, commercial quarries, and all similar areas. The Contractor shall provide the Engineer with a copy of any permit application or notice of intent, without attachments.

In accordance with the SPDES General Permit for Stormwater Discharges from Construction Activity, any construction activity that results in a soil disturbance of more than 1 acre on a single property will require SPDES permit coverage from the NYS Department of Environmental Conservation (NYSDEC). When SPDES permit coverage is required, the property owner, as the "Operator" must develop and implement a NYSDEC approved stormwater pollution prevention plan (SWPPP) and conduct required periodic inspections until the permit coverage is terminated.

In accordance with the Mined Land Reclamation Law, (Environmental Conservation Law Article 23, Title 27), all borrow pits and aggregate sources outside of the State right of way, where more than 1,000 tons or 750 cubic yards, whichever is less, of minerals are removed from the earth within any twelve successive calendar months, require mining permits obtained from NYSDEC. When a mining permit is required, the Contractor, in addition to complying with restoration requirements for all areas as stated below, may be required by the Engineer to meet pertinent standards contained in the law and/or 6 NYCRR Part 420 et. seq.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Where borrow pits result in the formation of ponds or low areas intermittently filled with water, the Contractor shall furnish the Engineer with a copy of its agreement with the landowner permitting the use of such areas. If such an area is within sight of any highway, the Regional Director's written approval shall be obtained prior to the removal of borrow from such a location. If such approval is not granted, material for use on the contract or for any other State contract may not be removed from the area. If the Contractor removes material from such an area without the written approval of the Regional Director, payment will not be made for any item of work in which the material has been used. Grading plans may be required for such areas and due consideration given to the appearance of the areas if they are visible from any highway.

C. Restoration. All areas disturbed by the Contractor shall be restored to a pleasing and acceptable condition, particularly those areas within sight of the finished highway or any other highway. All such areas shall present a pleasing appearance to travelers on any highway. Where deemed necessary by the Engineer, the Contractor shall submit a grading plan. Grading plans shall include the sequence of operations, the erosion and sediment controls, final slopes and surface restoration details.

Because the extent of such areas and the use and treatment during construction is within the discretion of the Contractor, within the limitations and requirements outlined, no direct payment will be made for any labor, material or equipment necessary for the restoration of these areas. The cost of the work shall be included in the amount bid for other items of work. Work shall be done in general accordance with the Department's specifications for similar items of work.

The Contractor shall repair all injuries to woody plants which are to remain by approved horticultural methods; and shall scarify the compacted soil and regrade so as to restore the property to a natural condition. Where the soil over the root area of trees to be preserved has been compacted, it shall be restored by proper cultivation to a condition to permit the entrance of water and the proper aeration of roots.

In general, the restoration of disturbed areas shall include:

1. The removal of all equipment and parts, junk, rubbish, excess materials and debris of all kind;
2. Clean up as required, grading as shown on a grading plan if required; or graded so as to blend into the surrounding ground forms;
3. Scarification of yards, batch sites, haul roads, etc., to the depth necessary to support vegetation;
4. The removal of pavement or granular surfacing from, and regrading of, temporary roads or areas;
5. The repair/removal of damaged trees;
6. The fertilizing, seeding and mulching of disturbed areas;
7. Grading the slopes of excavated areas to a stable condition, but in no case shall earth cut faces be left steeper than one (1) vertical on one and one-half (1.5) horizontal. All rock cut slopes shall be scaled to remove any loose or unstable rock.

The restoration of disturbed areas shall be accomplished prior to contract final acceptance. The work of restoring Contractor's work areas (storage, batching, equipment, shop areas, etc.) may be done after contract final acceptance, but shall be completed prior to execution of the final agreement.

107-09 DAMAGE. All damage, direct or indirect, of whatever nature resulting from the performance of the work or resulting to the work during its progress from whatever cause, including omissions and supervisory acts of the State, shall be borne and sustained by the Contractor, and all work shall be solely at its risk until it has been finally inspected and accepted by the State except that:

A. Damage by Public Traffic. Payment shall be made to the Contractor for repair or replacement of any permanent element of the highway which is completed to the stage of serving its intended function and is subsequently damaged by accident by public traffic. The Contractor must supply

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

satisfactory evidence that such damage was caused by a public traffic accident and not by vandalism or by the Contractor's equipment. Satisfactory evidence shall generally be limited to: accident reports filed with the NYS Department of Motor Vehicles, police agencies or insurance companies; statements by reliable, unbiased eye witnesses; or identification of the vehicle involved in the accident. Physical evidence that the damage was caused by a motor vehicle (such as tire marks or broken headlight glass) will not be sufficient unless it can be shown that the damage was not caused by the Contractor's vehicles or by vandalism. Payment for damage by public traffic will be made only after the Contractor has demonstrated to the satisfaction of the Regional Director that it had made every reasonable effort to collect the costs from the person or persons responsible for damage.

Work for which there is a item in the contract will be paid for at the unit price for that contract pay item. Work for which there is no item in the contract will be paid for at an agreed price or by means of force account. Payment will not be made for repair or replacement in any way connected with untimely failure of any portion of the highway under public traffic, and the determination regarding this matter shall be made by the Regional Director, taking into consideration the normal life and the amount of normal wear of the element involved. This provision does not relieve the Contractor of the responsibility of work zone traffic control for the contract or the responsibility of having wholly complete and acceptable work at the time of final inspection and contract acceptance.

The Contractor shall not be responsible for damages resulting from faulty designs as shown in the contract documents nor damages resulting from willful acts of Department officials or employees and nothing in this paragraph or contract shall create or give to third parties any claim or right of action against the Contractor or State beyond such as may legally exist irrespective of this paragraph or contract.

B. Damage by Occurrence. The term "Occurrence" shall include only those floods, droughts, tidal waves, fires, hurricanes, earthquakes, windstorms or other storms, landslides or other catastrophes when such occurrences or conditions and effects have been proclaimed a disaster or state of emergency by the President of the United States, or the Governor of New York State, or the Federal Highway Administrator, or the chief executive of a county or city.

If damage to the work in progress is caused by an Occurrence, and to the extent that such damage has been determined by the Department to be beyond that which may be anticipated from heavy storms, and also to the extent that such damage is not reimbursable by insurance carried by the Contractor, the Contractor may apply to the State to pay or participate in the cost of repairing the damage to the work, unless such damage is caused by the Contractor's action or inaction or the Contractor's means and methods of construction.

The Contractor's written request for the State to pay or participate in the cost of rebuilding, repairing, restoring or otherwise remedying damage to the work caused by an occurrence shall be submitted to and approved by the Commissioner before performing any work other than emergency work, including emergency work necessary to provide for passage of public traffic.

At the sole discretion of the Department, the contract may be terminated and the Contractor relieved of further obligation to perform the work.

C. Obligation to Indemnify by the Contractor. To the fullest extent permitted by law, the Contractor shall indemnify and save harmless the State, any municipality in which the work is being performed, and/or any public benefit corporation, railroad, or public utility whose property or facilities are affected by the work, from suits, claims, actions, damages and costs, of every name and description arising from the work under its contract during its prosecution and until the final acceptance thereof. The Contractor and any assigns, heirs, or successors in interest shall also indemnify and save harmless, to the fullest extent permitted by law, any consultant working for or on the project from suits, claims, actions, damages and costs involving personal injury and property damage arising from the Contractor's work under the contract during its prosecution and until the final acceptance thereof. The State may retain such monies from the amount due the Contractor as may be necessary to satisfy any claim for damages recovered against the State, any municipality in

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

which the work is being performed, and/or any public benefit corporation, railroad or public utility whose property or facilities are affected by the work, or consultants working for the State on or for the project. The Contractor's obligation under this paragraph shall not be deemed waived by the failure of the State to retain the whole or any part of such monies due the Contractor, nor where such suit, action, damages and/or costs have not been resolved or determined prior to release of any monies to the Contractor under the contract, nor shall such obligation be deemed limited or discharged by the enumeration or procurement of any insurance for liability for damages imposed by law upon the Contractor, Subcontractor or the State, any municipality in which the work is being performed, and/or any public benefit corporation, railroad or public utility whose property or facilities are affected by the work, or any consultants working for the State on or for the project.

The Contractor has the obligation, at its own expense, for the defense of any action or proceeding which may be brought against the parties specified in paragraph §107-09C. *Obligation to Indemnify by the Contractor*. This obligation shall include the cost of attorneys' fees, disbursements, costs and other expenses incurred in connection with such action or proceeding.

Such obligation does not extend to those suits, actions, damages and costs of every name that arise out of the sole negligence of the State, any municipality in which the work is being performed, and/or any public benefit corporation, railroad or public utility whose property or facilities are affected by the contract work, or any consultants working for the State, their agents or employees, relative to the construction, alteration, or repair or maintenance of a building, highway or structure and appurtenances and appliances thereof including moving, demolition and excavating connected therewith.

The State reserves the right to join such action, at its sole expense, when it determines there is an issue involving a significant public interest.

D. Prompt Response to Claims by the Public. The Contractor's responsibility for the contract site applies to the full limits of the contract regardless of the extent or nature of contract work at a particular location. This obligation begins when the contract is awarded and continues until contract final acceptance. The Contractor shall promptly address all written damage claims of the public and, if not addressed directly, claims shall be promptly turned over to the Contractor's insurance carrier without prejudicing the validity of the claim. There should be an interval of no more than 10 work days between receipt of a written claim by the Contractor and receipt by the carrier. The Contractor and/or the Insurance Carrier are expected to investigate, determine and adjust such claims promptly and fairly with notice to the Engineer. The Engineer will monitor claims by the public. If the Contractor fails to provide satisfactory resolution through a timely claims adjustment process or denies the claim without proper cause and justification, the Department may invoke Article 8 *No Payment Due to the Contractor's Non-Compliance* of the contract agreement or utilize other remedies.

107-10 MANAGING SURPLUS MATERIAL AND WASTE. The Contractor shall manage all surplus materials and waste generated in the performance of the contract in accordance with applicable federal, state, and local laws and regulations. Nothing herein is intended to prevent the Contractor from removing surplus materials or waste to appropriate off-site locations for beneficial reuse, recovery, or recycling purposes. The Contractor is encouraged to reuse, salvage or recycle materials to the maximum extent possible. Surplus or used materials generated from Department contracts that are easily recognizable, maintain their physical properties, are easily separated and transported, and have value as commodities are often recycled. These include metals (steel, iron, etc.), recycled asphalt pavement (RAP) in the form of chunks or millings, and recycled portland cement concrete aggregate (RCA). Surplus and used materials, unless identified otherwise, become the property of the Contractor. In accordance with 6 NYCRR 371.1(e)(1)(xiii) excluded scrap metal is not solid waste when being recycled.

Waste Management shall mean the collection, transportation, transfer, processing, recovery, storage, reclamation, treatment, handling and disposal of waste whether performed directly by the Contractor or others. Unless otherwise noted in the contract documents, all materials or substances that are spent,

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

useless, worthless, or in excess to the Department, including materials generated on-site by the Department's contract supervision and inspection activities, are covered by this subsection.

Unless specifically noted in the contract documents, it is not guaranteed that placement of surplus materials or spoil will be allowed within the right of way. Payment for managing surplus material and solid waste shall be included in the various contract pay items. The absence or unavailability of disposal areas on the contract site or the refusal of a permitted solid waste management facility to accept waste will not be the basis for a dispute for additional compensation for the disposal of wastes.

A. Excess Soil and Rock. Excess soil and rock may be generated by construction activities associated with Department contracts. Excess soil and rock may be presumed uncontaminated absent records, existing data, or knowledge/observation to the contrary. These materials may be excess because the quantity available exceeds the quantity required, or they do not have the engineering properties required for use, or they may not be of economic value in the current location, such as when the cost to transport the material approaches or exceeds its sale value. Provided these materials are uncontaminated, in accordance with 6 NYCRR 360-1.15(b)(7) they are not considered waste when used as fill material. These materials may be sold ("placed in commerce") to a consumer and the consumer is responsible for its use/placement.

B. Spoil. Spoil may include excess soil and rock, and contains recognizable, uncontaminated concrete (including incidental pavement markings), asphalt pavement (including incidental pavement markings), brick, glass or soil materials generated by the cleaning of drainage ditches, culverts, storm sewers, catch basins or related appurtenances. Reinforcing steel embedded in concrete is considered an incidental metal and is included within the definition of concrete. Spoil may be presumed uncontaminated absent records, existing data, or knowledge/observation to the contrary. Spoil shall not be pulverized, shredded, or otherwise processed such that the individual waste components are rendered unrecognizable. Provided spoil is uncontaminated, in accordance with 6 NYCRR 360-1.15(b)(11) these materials are not considered waste when placed in commerce for service as a substitute for conventional aggregate.

Spoil areas for the disposal of excess soil and rock and spoil shall be established and restored in accordance with §107-08 *Protection and Restoration of Property and Landscape*. Excess soil and rock and spoil may be disposed of within the right of way whenever possible to flatten embankment side slopes, or may be disposed of in other locations within the right of way approved by the Engineer, but is not subject to the provisions governing lift placement and compaction. The Department makes no assurance that appropriate spoil areas within the right of way will be available for any individual contract. If no spoil area is available within the right of way, the Contractor shall dispose of these materials elsewhere, subject to appropriate environmental and land use regulations. Excess soil and rock and spoil may be disposed of at a location outside the right of way that takes no compensation, fee or other form of consideration, exempt from permit requirements, in accordance with 6 NYCRR 360-7(b)(1), between the hours of sunrise and sunset.

C. Construction and Demolition Debris. In accordance with 6 NYCRR 360-1.2(b)(38), Construction and demolition (C&D) debris is uncontaminated solid waste resulting from land clearing and from the construction, remodeling, repair and demolition of utilities, structures, and roads. C&D debris may include excess soil and rock or spoil, and includes but is not limited to: wood (including painted, treated and coated wood and wood products), land clearing debris, plumbing fixtures, electrical wiring, electrical components containing no hazardous liquids, nonfriable asbestos, wall coverings, plaster, drywall, roofing shingles and other roof coverings and pipes or metal attached to or embedded in these waste materials. C&D debris shall not be pulverized, shredded, or otherwise processed such that the individual waste components are rendered unrecognizable. C&D debris shall be disposed of in an permitted C&D waste management or processing facility. Nonfriable asbestos shall be disposed of at permitted C&D waste management facility. If a C&D waste facility is not available, C&D debris may be disposed of at a solid waste facility.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

Unadulterated wood chips and mulch used for mulch, landscaping, or erosion control purposes are not solid waste. Trees, stumps, wood chips and yard waste generated from activities within the right of way may be disposed of in spoil areas within the right of way only, but are not subject to the provisions governing lift placement and compaction. Spoil areas shall be established and restored in accordance with §107-08 *Protection and Restoration of Property and Landscape*. These materials may also be disposed of at a permitted C&D or solid waste management facility.

In Nassau and Suffolk Counties all C&D debris shall be disposed of only in a C&D landfill or processing facility permitted by the NYS Department of Environmental Conservation (NYSDEC). In addition to the requirements of these specifications, no on-site disposal shall take place in these counties without appropriate notice to the Regional Office of the NYSDEC.

Within the Adirondack Park, construction and demolition debris shall only be deposited in accordance with additional requirements of the Adirondack Park Agency.

D. Non-Hazardous Solid Waste. Non-hazardous solid waste includes, but is not limited to: tires, office trash, garbage, roadside litter and street sweepings. The Contractor may collect and store non-hazardous solid waste on the contract site in transfer containers or other appropriate containers pending transportation to a legally permitted solid waste management facility. The Contractor shall meet the following conditions:

- Waste management activities shall be controlled to prevent odors and other nuisance conditions.
- Putrescible solid waste shall be removed when transfer containers are full, or weekly, whichever comes first.
- Non-putrescible solid waste may be collected and stored on the site in a transfer or other appropriate container not longer than 45 days.

E. Non-Hazardous Industrial Waste. Non-hazardous industrial waste includes, but is not limited to: asbestos, pavement marking waste, contaminated soil, empty drums and empty fuel tanks. These wastes require disposal at permitted solid waste management facilities or may be used in applications that have received generic or case-specific beneficial use determinations from NYSDEC. A waste transporter permitted by NYSDEC is required for transport of over 500 pounds of waste in a single load to a disposal facility.

1. Asbestos. Friable and nonfriable asbestos containing materials (ACM) shall only be handled or packaged for transport by a NYS Department of Labor licensed contractor using certified personnel. Friable asbestos waste shall only be transported by a permitted waste transporter under a waste shipment record and disposed of at a permitted waste management facility approved to accept friable asbestos. Non-friable asbestos shall be transported and disposed of as C&D debris.

2. Pavement Marking Wastes. Pavement marking wastes, including millings from the localized removal of only pavement markings and not surface milling, including the pavement material and debris containing the removed markings generated by cleaning and removal operations shall be disposed of as non-hazardous industrial solid waste, at a permitted solid waste management facility, typically a municipal landfill. Pavement marking waste should be collected by typical construction methods such as sweeping and/or vacuuming.

Solid waste management facilities may question whether pavement marking wastes are regulated hazardous wastes because yellow pavement marking products may contain lead and chromium in the pigments. Testing by the Department (toxicity characteristic leaching potential (TCLP)) of yellow pavement marking waste as well as the dried pure paint samples indicated that although it contained lead and chromium, it did not meet the regulatory limit for classification as a hazardous waste and was therefore considered a non-hazardous industrial waste.

3. Contaminated Soil. Soil contaminated with petroleum or other non-hazardous materials shall be disposed of as non-hazardous industrial waste at a permitted solid waste management

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

facility or used in applications that have received generic or case-specific beneficial use determinations from the NYSDEC.

4. Empty Drums or Containers that Previously Held a Known Hazardous Material.

In accordance with 6 NYCRR Part 371.1(h), drums and containers that have had the contents removed by common practices, have less than 1 inch of product residue on the bottom, and less than 3% of the original product are considered “empty” and non-hazardous, even if the material they previously contained would otherwise have been classified as a hazardous waste. This does not apply to drums or containers that held acutely hazardous wastes. Empty drums and containers shall be recycled or disposed of at a permitted waste management facility. Empty containers may be returned to the manufacturer, sent to a reconditioner or handled as scrap metal, cardboard, etc. and are exempt from waste transporter requirements when destined for such reuse.

F. Hazardous Waste. Hazardous wastes are those wastes that are specifically “listed wastes” per 6 NYCRR 371 and/or those that display hazardous wastes characteristics for ignitability, corrosivity, reactivity and/or toxicity.

1. Generator Status. Unless specifically noted otherwise in the contract documents, for all contacts that generate more than 220 pounds of hazardous waste per month, the Contractor shall comply with the regulations governing a Large Quantity Generator.

a. *Conditionally Exempt Small Quantity Generator (CESQG).* Federal and State hazardous waste regulations classify a CESQG as one that generates less than 220 pounds of hazardous waste per month and stores less than 2,200 pounds of hazardous waste.

b. *Small Quantity Generator (SQG).* Federal and State hazardous waste regulations classify an SQG as one that generates between 220 and 2,200 lb of hazardous waste per month or stores between 2,200 pounds and 13,200 pounds of hazardous waste.

c. *Large Quantity Generator (LQG).* Federal and State hazardous waste regulations classify an LQG as one that generates more than 2,200 pounds of hazardous waste per month.

2. Hazardous Waste Handling Requirements. The Contractor shall meet the following hazardous waste requirements:

a. Waste shall be properly packaged, with a written description and labeled as hazardous.

b. Waste shall be inspected at least weekly while stored on site.

c. Waste shall be shipped by a permitted waste transporter with a hazardous waste manifest and required documentation.

d. Waste shall be disposed of at a permitted hazardous waste treatment storage and disposal facility (TSDF).

e. Waste shall be removed within 90 days after generation, unless a specific contract pay item requires removal sooner.

f. Hazardous waste shall be stored on the site of generation until manifested and shipped for disposal. The only exceptions for this are for CESQG wastes which may be temporarily relocated to non-permitted facilities.

g. Preparedness and prevention features and contingency planning and emergency procedures shall be developed as per 6 NYCRR 373-3.3 and 373-3.4, respectively.

h. Personnel must be trained in hazardous waste management procedures relevant to the positions in which they are employed.

i. Appropriate security shall be provided for hazardous wastes while stored on site.

107-11 AIR QUALITY PROTECTION. The Contractor shall schedule and conduct activities to minimize impacts to air quality and to prevent hazardous or objectionable air quality conditions within the contract limits and in areas adjacent to or affected by the work. The Engineer will suspend the

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

performance of any construction activity that creates hazardous or objectionable air quality conditions until the unsatisfactory condition has been corrected.

A. Dust. The Contractor shall apply pro-active measures to prevent discharge of dust into the atmosphere that unreasonably interferes with the comfortable enjoyment of life and property or is harmful to plants or animals.

B. Burning. Any material generated by any activity for the development, modification and construction of any transportation facility shall not be burned on the contract site. This shall include but not be limited to products of land clearing and demolition.

C. Prevention. The Contractor shall employ appropriate protection techniques and/or systems to prevent hazardous or objectionable air quality conditions, particularly when conducting drilling, cutting, grinding, abrasive blasting or similar operations that impact air quality.

107-12 WATER QUALITY PROTECTION. Water quality protection is a joint responsibility of the Department, as the owner and the holder of environmental permits, and the Contractor, acting as an agent for the Department. The Contractor shall protect all water resources within the contract limits and on lands adjacent to or affected by the work, and take measures to maintain water quality of receiving water bodies.

The Contractor shall schedule and conduct its work to minimize soil erosion, not cause or contribute to a violation of water quality standards and prevent sedimentation on lands adjacent to or affected by the work. Construction of temporary soil erosion and sedimentation control measures, temporary and permanent soil stabilization, construction of drainage facilities and performance of other contract work which will contribute to the control of erosion and sedimentation shall be carried out in conjunction with related construction operations. The area of disturbance at any one time by construction operations shall be kept to a minimum and shall not exceed the limits established in the contract documents or applicable permits.

Prior to the start of related construction, the Contractor shall review the erosion and sediment control plan included in the contract documents, and if necessitated by the Contractor's operations, modify the plan for compatibility with the Contractor's intended sequence of construction operations, to include, but not limited to: construction phases; contract milestones, installation of control measures, clearing and grubbing operations, earthwork, etc. The Contractor's modified erosion and sediment control plan shall be submitted to the Engineer for approval, along with a progress schedule for accomplishment of temporary and permanent erosion and sediment control work in accordance with §108-01 *Progress Schedule*.

Prior to the start of related construction, the Contractor shall submit for approval a proposed plan of erosion and sediment control and water pollution control on material storage areas, haul roads and borrow pits and a plan for disposal of surplus excavated materials within the right of way. The Contractor shall submit for approval the names of individuals who will be inspecting control measures, and a description of their qualifications. The Contractor's erosion and sediment control plan shall be prepared in accordance with Department specifications and the guidance contained in the *New York Guidelines for Urban Erosion and Sediment Control*, latest edition, printed by the Empire State Chapter, Soil and Water Conservation Society, c/o Cayuga County SWCD, 7413 County House Road, Auburn, New York 13021. No related work shall be started until the erosion and sediment control plans and progress schedules have been approved by the Engineer. As conditions change during construction or work is not progressed in accordance with the schedule, the Contractor shall regularly submit a progress schedule update in accordance with §108-01 *Progress Schedule* and an updated erosion and sedimentation control plan, as necessary, for approval by the Engineer.

The Contractor's operations shall be carried out in accordance with the approved erosion and sediment control plans, progress schedule, contract documents and permits. The Contractor shall be guided by, but not limited to, the following:

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

A. Permits. All applicable statutes, regulations, permits and approvals of the NYSDEC, other water quality management agencies and fish and wildlife agencies shall be complied with in the performance of the contract. Care shall be taken so as not to cause turbidity that will result in a visible contrast to the natural conditions of a waterway or impoundment, cause sedimentation or impair the waters for their best usages.

B. Borrow or Spoil Areas. Erosion and sediment control of borrow areas, spoil areas and construction roads shall be conducted both during and after completion of the work, to minimize soil erosion and not cause or contribute to a violation of water quality standards and prevent sedimentation on lands adjacent to or affected by the work.

C. Fording. Fording of waterways may require a permit from NYSDEC, and will not normally be allowed, therefore, temporary bridges or other structures shall be used where a waterway crossing is necessary. Unless otherwise approved in writing by the Engineer, the Contractor shall not ford or operate mechanized equipment in waterways.

D. Work Areas Adjacent to Waterways. When work areas, borrow areas, spoil areas or gravel pits are located in or adjacent to waterways or impoundments, such areas shall be separated from the rest of the waterway or impoundment by a dike or other barrier to prevent sediment from entering a flowing waterway or impoundment. Care shall be taken during the construction and removal of such barriers so as not to cause turbidity or sedimentation.

E. Removal of Temporary Obstructions. All waterways shall be cleared as soon as practicable of false work, piling, debris or other obstructions placed during construction operations and which are not a part of the finished work.

F. Maintenance. Ditches which are filled, or are partly or wholly inoperative, shall be cleaned and made operative before the Contractor stops work for each day, and shall be maintained in a satisfactory condition for the duration of the contract. All erosion and sedimentation control measures which have been displaced, or are partly or wholly inoperative, shall be repaired within 72 hours after required inspection, unless repairs are required sooner by the contract documents.

G. Water Discharges. Water containing sediment from aggregate washing, pump discharges or other operations shall be treated by filtration, settling basin or other means sufficient to prevent turbidity or sedimentation of receiving waterways. Turbid wash water or pump discharges shall not be allowed to enter waterways or impoundments.

H. Pollutants. Pollutants such as fuels, lubricants, bitumens, raw sewage and other harmful materials shall not be discharged into or near waterways and impoundments or into natural or manmade channels leading thereto.

The Contractor shall ensure that all controls are functioning in an effective manner and address all failures or other problems in a pro-active manner, immediately. If a situation comes to the Engineer's attention, the Engineer will inform the Contractor of unsatisfactory construction procedures and operations insofar as water quality management are concerned. The Engineer will also review the Contractor's compliance with state and federal permit conditions as they relate to water quality. If the unsatisfactory construction procedures and operations are not corrected in a timely manner, the Engineer will suspend the performance of any or all operations in accordance with §105-01 *Engineer's Authority* until the unsatisfactory condition has been corrected.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

SECTION 108 - PROSECUTION AND PROGRESS

108-01 PROGRESS SCHEDULE. The purpose of a progress schedule is to ensure adequate planning and execution of the work and to evaluate the progress of the work. The Contractor's progress schedule, updates, revisions and reports will be an integral part of the Department's management of the capital program. The Contractor's schedules will be used by the Department to monitor 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 its progress schedule submissions are both accurate and timely.

Approval of the progress schedule shall not be construed to imply approval of any particular method or sequence of construction or to relieve the Contractor of providing sufficient materials, equipment and labor to guarantee completion of the contract in accordance with the contract documents. Approval shall not be construed to modify or amend the contract agreement or the completion date therein.

All costs to create and update the progress schedule shall be solely the Contractor's obligation and will be at no additional cost to the State unless specifically provided for in other contract provisions.

If the work falls behind the progress schedule, the Contractor shall take such actions as necessary to improve its progress. If the Contractor is behind schedule any month, the Contractor shall indicate what measures it will take in the next thirty (30) days to put the work back on schedule so as to meet the contract completion date specified in the contract. In preparing the revised schedule, the Contractor shall consider increasing its work force, construction plant and equipment, the number of work shifts, etc.

A. Contracts Without Type 2 CPM Schedule Requirements. The following requirements shall apply to all contracts that do not contain a requirement for a CPM Schedule.

1. Baseline Progress Schedule. At the Preconstruction Meeting, the Contractor shall prepare and submit a complete baseline progress schedule to the Engineer for approval, showing the significant on-site construction activities with planned start and completion dates, including activities of the Contractor, subcontractors, fabricators, and suppliers to ensure adequate planning and communication.

Activities shall include, the following items, as applicable: (a) milestone events; (b) seasonal weather limitations (c) the procurement and fabrication of materials, plant and equipment; (d) the order in which the Contractor proposes to complete activities; (e) temporary structures or systems; (f) major construction or work zone traffic control stages; (g) activities assigned to Utilities, railroads and other parties; (h) activities assigned to the Department and other State or municipal entities; (i) sampling and testing of materials; (j) settlement, surcharge or cure periods; (k) punch list work, and (l) inspection activities assigned to the Department, including final inspection.

Any graphical representations shall be shown at a suitable scale to be legible and readable.

2. Progress Schedule Updates and Revisions. On a monthly basis the Contractor shall update and revise the schedule to reflect any major changes in the work, completion time, or both, and submit the updated and revised schedule to the Engineer. The modification of a date, either planned or actual, is considered an update. The modification of progress schedule logic in any manner is considered a revision.

When requested by the Regional Construction Engineer, the Contractor shall furnish weekly progress schedule updates and revisions indicating number of personnel, equipment type, and location and nature of the work to be performed.

The Engineer will acknowledge in writing within 7 days of receipt that the submittals are accepted, or that revisions are needed. If the proposed progress schedule is not acceptable, the Engineer may direct the Contractor to submit a new schedule. The Department may request that meetings be held by the Contractor at least on a monthly basis and be attended by the Engineer who will monitor the Contractor's progress and performance.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

3. Failure to Submit Progress Schedule. If the Contractor fails to submit a progress schedule to a degree that the Regional Construction Engineer deems such failure to adversely affect the management and/or administration of the contract,, the Engineer may withhold approval of contract payments pursuant to Article 8 *No Payment on Contractor's Non-Compliance* of the contract agreement until such time as the Contractor submits the required progress schedule.

B. Contracts With Type 2 CPM Schedule Requirements. The Contractors progress schedule will be used to establish a standard methodology for time adjustment analysis, based on the principles of the Critical Path Method of scheduling, to identify work items and paths that are critical to the timely completion of the work, to identify upcoming activities on the critical path(s), to evaluate the best course of action for recovering schedule delays, to facilitate efforts to complete the work in a timely manner, and to evaluate resource requirements of the Contractor and the Department.

The Contractors progress schedule will be used as the basis for analyzing the time impact of changes in the work and unanticipated delays on any contract milestone dates; to resolve contract disputes concerning time; and as the basis for recommendations for changes to the contract completion date.

Events, actions, and progress that cause delays or gains to the progress schedule will be analyzed solely by the Contemporaneous Period Analysis method.

1. Baseline Progress Schedule. The Contractor shall prepare and submit a complete baseline progress schedule to the Engineer for approval, showing all of the on-site construction activities with durations and seasonal or other limitations, including activities of the Contractor, subcontractors, fabricators, and suppliers to ensure adequate planning and communication. The number and details of the activities will be dependent upon the nature, size, and complexity of the work.

Activities shall include, but shall not be limited to: (a) milestone events; (b) a list of activities on the critical path; (c) the procurement/submittal process including shop drawings and sample submittals; (d) the fabrication and delivery of key elements and those with long lead times; (e) temporary structures or systems; (f) falsework and shoring; (g) major construction or work zone traffic control stages; (h) activities assigned to Utilities, railroads and other parties; (i) activities assigned to the Department and other State or municipal entities; (j) sampling and testing of materials; (k) settlement, surcharge or cure periods; (l) punch list work, and (m) inspection activities assigned to the Department, including final inspection.

2. Progress Schedule Updates and Revisions. The Contractor shall update and revise the progress schedule to reflect changes in the work, completion time, or both, and submit the updated and revised schedule to the Engineer. The modification of a date, either planned or actual, is considered an update. The modification of progress schedule logic in any manner is considered a revision.

The Engineer will acknowledge in writing within 7 days of receipt that the submittals are accepted, or that revisions are needed. If the proposed schedule is not acceptable, the Engineer may direct the Contractor to submit a new schedule. The Department may request that meetings be held by the Contractor at least on a monthly basis and be attended by the Engineer who will monitor the Contractor's progress and performance.

3. Documentation of Delay. The Contractor shall document delays and shall provide detailed information including but not limited to; the events that caused the delay, the party or parties responsible for the delay, activities in the current progress schedule affected by the events, and the magnitude of the delay using the current progress schedule update.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

The Contractor shall maintain a contemporaneous tally of all delay days, those it contends are attributable to the State, and those it contends attributable to the Contractor. The Contractor shall submit the tally of delay days to the Engineer on a monthly basis. The Engineer will also maintain a contemporaneous tally of delay days, in order to facilitate agreement on the status and responsibility for delays, or to limit and document disagreements between the Contractor and the Department.

If the Contractor alleges that a time related delay has or is occurring that impacts the Critical Path, the Contractor shall submit a monthly progress schedule update and revision with the next progress schedule submission, and a narrative Time Impact Analysis.

The Department, as necessary, will either request in writing that the Contractor submit an Application for Extension of Completion Date and/or request in writing that the Contractor accelerate the work impacted, and submit a schedule revision which demonstrates how the acceleration will recover the necessary time. Upon submission of a progress schedule update and revision containing a Time Impact Analysis, the Department will evaluate the merit of the requested time extension.

The Engineer will review the documentation of delay within 14 calendar days of receipt and will provide a written response to the Contractor regarding deficiencies of the submission, required additional information and the Department's technical review and findings to date.

4. Failure to Submit Progress Schedule. If the Contractor fails to submit a progress schedule to a degree that the Regional Construction Engineer deems such failure to adversely affect the management and/or administration of the contract, the Engineer may withhold approval of contract payments pursuant to Article 8 *No Payment on Contractor's Non-Compliance* of the contract agreement until such time as the Contractor submits the required progress schedule.

If the Contractor fails to submit the required progress schedule updates and revisions, the Contractor waives its rights to adjustments of time and related compensation for delays that accrue during the period in which the progress schedule has not been submitted in accordance with the detailed CPM scheduling requirements. The Department will have no liability for any subsequent Contractor time related disputes which occurred during the period of time in which the Contractor failed to submit monthly progress schedule updates and revisions in a timely manner.

108-02 COMPLETION DATE. The Contractor shall employ and supply a sufficient force of workers, materials and equipment and shall progress the work with such diligence so as to ensure completion of the work prior to the contract completion date.

In accordance with Article 4 *Date of Completion* of the contract agreement, the Contractor shall complete all work to be performed under the contract within the time stated in the contract agreement or within such extended time for completion as may be granted by the Commissioner. If the Contractor desires an extension of time, an *Application for Extension of Completion Date* shall be submitted to the Engineer sufficiently early for the Engineer to make a recommendation and forward the application so that it may be filed with the Regional Director at least 15 days prior to the contract completion date.

The Contractor may propose a projected early completion date on any progress schedule submission. If the Contractor desires reimbursement for delay damages caused by the Department in accordance with §109-05D *Time Related Dispute Compensation* related to an early completion date, the Contractor shall obtain approval of the change to the completion date via a separate Value Engineering Change Proposal (VECP) in accordance with §104-10 *Value Engineering Change Proposal*.

If the VECP is approved by the Department, the contract completion date will be revised to the proposed early completion date, via Change Order.

If the Contractor fails to complete all contract work by the revised contract completion date, the Department will assess Engineering Charges, but not Liquidated Damages, for the work that remains uncompleted, for the period after the revised contract completion date to the original contract completion date, in accordance with §108-03 *Failure to Complete Work on Time*.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

If the Contractor fails to complete all contract work by the original contract completion date, the Department will assess Engineering Charges for the work that remains uncompleted, and Liquidated Damages, for each calendar day from the original contract completion date to the final date of completion of the work, in accordance with §108-03 *Failure to Complete Work on Time*.

108-03 FAILURE TO COMPLETE WORK ON TIME. For each calendar day, or any portion thereof, that any work remains uncompleted after the contract completion date specified in the contract agreement, Liquidated Damages and/or Engineering Charges from the contract completion date to the final date of completion of the work will be assessed against the Contractor. When specified in the contract documents, Liquidated Damages may also be assessed for each calendar day, or any portion thereof, for failure to complete certain portions of work or for failure to comply with requirements shown in the contract documents. Liquidated Damages will be assessed not as a penalty, but as liquidated damages; provided however that due account shall be taken of any adjustment of the contract time for completion of the work as provided for elsewhere in the specifications.

A. Engineering Charges. Engineering Charges include all appropriate engineering and inspection expenses incurred by the State, its consultants and inspection agencies, and by railroad companies.

Engineering Charges will be assessed in cases where the work has been unduly delayed by the Contractor because of unwarranted reasons, inefficient operation, or for any other reason for which the Department determines the Contractor to be responsible. Reasonable time necessary for reviews of shop drawings by the State or its agents, for changes or additions to the work to meet field conditions which do not significantly affect the scheduled completion of the contract, delays incurred by seasonal and weather limitations, localized labor actions and shortages of supplies or materials, and other situations which should be anticipated are neither compensatory nor eligible for extensions of time without the assessment of Engineering Charges, except as provided for under §108-04 *Delay Provisions*.

Before assessing Engineering Charges, the Department will give due consideration to factors attributing to such delay due to extenuating circumstances beyond the control of the Contractor limited to the following:

1. The work or the presence on the contract site of any third party, including but not limited to that of other contractors or personnel employed by the State, by other public bodies, by railroad, transportation or utility companies or corporations, or by private enterprises, or any delay in progressing such work by any third party except as indicated or disclosed in the contract documents or ordinarily encountered or generally recognized as inherent in the work.
2. The existence of any facility or appurtenance owned, operated, or maintained by any third party, except as indicated or disclosed in the contract documents or ordinarily encountered or generally recognized as inherent in the work .
3. The act, or failure to act, of any public or governmental body, railroad, transportation or utility companies or corporations, including, but not limited to, approvals, permits, restrictions, regulations or ordinances not attributable to a Contractor's submission, action or inaction or Contractor's means and methods of construction.
4. Restraining orders, injunctions, or judgments issued by a court not caused by a Contractor's submission, action or inaction or Contractor's means and methods of construction.
5. Any industry-wide labor boycotts, strikes, picketing or similar situations, as differentiated from jurisdictional disputes or labor actions affecting a single or small group of contractors or suppliers.
6. Any industry-wide shortages of supplies or materials required by the contract work, as differentiated from delays in delivery by a specific or small group of suppliers.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

7. Unusually severe storms of extended duration or impact, other than heavy storms or climatic conditions which could generally be anticipated by the bidders, as well as floods, droughts, tidal waves, fires, hurricanes, earthquakes, landslides, or other catastrophes.
8. Decisions by the Department to open certain sections of the contract to traffic before the entire work is completed.
9. Significant changes in contract quantities, major extra contract work, delays in the review or issuance of change orders or field change sheets, or delays beyond the established time periods for review and approval for shop drawings, which significantly affect the overall completion of the contract.
10. Failure of the State to provide individual rights-of-way parcels for an extended period of time beyond that indicated by the contract if such unavailability, as determined by the Commissioner, significantly affects the scheduled completion of the contract.
11. Any situation which was beyond the contemplation of the parties at the time of entering into the contract.
12. Award of the contract by the State more than 45 days beyond the letting date.
13. Situations covered by §104-03 *Differing Site Conditions*, §104-04 *Significant Changes in the Character of Work* and §104-05 *Suspensions of Work Directed by the Engineer*.

B. Liquidated Damages. Liquidated damages will be in the amount per calendar day specified in Table 108-1 *Schedule of Liquidated Damages*, in addition to Engineering Charges as provided for in §108-03A. *Engineering Charges*. Liquidated Damages for special or very large contracts may be specified in the contract proposal. Liquidated Damages will not apply to contracts containing no work within the roadway limits. The Commissioner may waive such portions of the liquidated damages as may accrue if the work is deemed to be in such condition as to be safe and convenient for use by the traveling public.

Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion or after the date to which the time for completion may have been extended, will in no way constitute a waiver on the part of the State of any of its rights under the contract.

The Contractor is responsible and liable for said liquidated damages even in the event that the Contractor abandons the performance of the contract or the Contractor's employment is terminated pursuant to the provisions of this contract.

TABLE 108-1 SCHEDULE OF LIQUIDATED DAMAGES		
Original Total Contract Bid Price		Liquidated Damages per Calendar Day
From More Than	To and Including	
\$0	\$ 100,000	\$ 500
\$100,000	\$500,000	\$1,000
\$500,000	\$2,000,000	\$1,500
\$2,000,000	\$5,000,000	\$2,000
\$5,000,000	\$10,000,000	\$2,500
\$10,000,000	\$20,000,000	\$4,000
\$20,000,000	-	\$7,000

108-04 DELAY PROVISIONS.

A. Compensable Delays. The Department may provide monetary compensation for delays and interference in certain defined instances. The Contractor will only be eligible for extra compensation caused by delay or interference affecting the performance or the scheduling of contract work for those instances arising out of:

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

1. §104-03 *Differing Site Conditions*;
2. §104-04 *Significant Changes in the Character of the Work*; and
3. §104-05 *Suspensions of Work Directed by the Engineer*;
4. Situations not referenced in this paragraph and which are not within the contemplation of the parties at the time of entering into the contract.

These aforementioned provisions may also form the basis for extra work compensation pursuant to §105-14 *Disputed Work and Dispute Resolution* and §109-05 *Extra Work and Time Related Compensation*. Failure of the Contractor to adequately progress completion of the work will be considered in determining whether the aforementioned instances are the primary causes of delay. In all such instances, for any requests made under this subsection, the Contractor shall keep detailed written records of the costs in accordance with §104-06 *Notice and Recordkeeping*. Any dispute shall be promptly submitted to the Engineer in writing, pursuant to §105-14 *Disputed Work and Dispute Resolution*.

B. Non-Compensable Delays. The Contractor agrees to make no monetary request for, and has included in its bid prices for the various items of the contract, any extra/additional costs attributable to any delays, inefficiencies or interferences in the performance of the contract caused by or attributable to the items set forth below. The Contractor shall be compensated solely by an extension of time, with or without engineering charges as appropriate, to complete the performance of the work in accordance with the provisions of §108-02 *Completion Date*.

1. The work, or the presence on the contract site, of any third party, including but not limited to personnel or other contractors employed by the State, by other public bodies, by railroad, transportation or utility companies or corporations, or by private enterprises.
2. Any delay in progressing work by any third party as indicated or disclosed in the contract documents or ordinarily encountered or generally recognized as inherent in the work.
3. The existence of any facility or appurtenance owned, operated, or maintained by any third party, as indicated or disclosed in the contract documents or ordinarily encountered or generally recognized as inherent in the work.
4. The act, or failure to act, of any other public or governmental body, railroad, transportation or utility companies or corporations, including, but not limited to, approvals, permits, restrictions, regulations or ordinances attributable to a Contractor's submission, action or inaction or Contractor's means and method of construction.
5. Restraining orders, injunctions, or judgments issued by a court which were caused by a Contractor's submission, action or inaction or Contractor's means and method of construction.
6. Any labor boycott, strike, picketing or similar situation.
7. Any shortages of supplies of materials required by the contract work.
8. Climatic conditions, storms, floods, droughts, tidal waves, fires, hurricanes, earthquakes, landslides, or other catastrophes. However, payment may be made for repairing damage to the work caused by an "occurrence" as provided in §107-09 *Damage*.
9. Extra work which does not significantly affect the overall completion of the contract, delays in the review or issuance of change orders, or field change sheets or delays within the established time periods for review and approval for shop drawings.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

10. Any situation which was within the contemplation of the parties at the time of entering into the contract.

11. Award of the contract by the State more than forty-five (45) days beyond the letting date.

108-05 SUBLETTING OR ASSIGNING THE CONTRACT. The Contractor shall perform, with its own organization, contract work amounting to not less than 50 percent of the total contract bid price. The amount for any items designated as "Specialty Items" will be deducted from the original total contract bid price before computing the amount of work required to be performed by the Contractor with its own organization. The amount subcontracted will be computed based on contract pay item bid prices, except where a subcontractor is identified as performing less than the full scope of an item.

- "Its own organization" shall be construed to include only workers employed and paid directly by the Contractor and equipment owned or rented by it, with or without operators.
- "Specialty Items" shall be limited to those items identified in the contract documents.

The Contractor is responsible for all work performed by Subcontractors, Truckers, Manufacturers, Fabricators, Material Suppliers, Services and any other parties in the performance of the contract, regardless of whether Department approval has been obtained. Work shall be performed only by Subcontractors and Truckers specifically approved by the Regional Construction Engineer, and work shall not begin prior to approval by the Regional Construction Engineer. Work shall not be assigned by a Subcontractor to a lower tier subcontractor. Work by a non-approved Subcontractor or Trucker will be suspended by the Engineer and payment for work by a non-approved Subcontractor or Trucking Firm may be withheld.

A. Subcontractors. Except as provided below, Subcontractor approval is required for:

- Firms performing on-site work as defined in the contract documents.
- Firms performing the on-site maintenance of previously furnished and installed products.
- Firms delivering materials to the contract site and incorporating them directly into the work by the firm's on-site work force.

Subcontractor approval is not required for:

- Manufacturers, Fabricators and Material Suppliers who do not incorporate supplies or materials directly into the contract work.
- Service work which is not accounted through labor, equipment and materials, including, but not limited to Work Services and Professional Services.
- Off-Site Trucking and Material Delivery.
- Owner/Operator Trucking, both on-site and off-site.

1. Subcontractor Approval. Prior to approval of a Subcontractor by the Department, the Subcontractor shall file and have approved a completed Form CCA-2 *New York State Vendor Responsibility Questionnaire - For Profit Construction* with the Contract Management Bureau.

If a Contractor is not SSPC certified, Subcontractors performing structural paint removal operations and painting work shall be SSPC certified or alternatively certified by the Department in accordance with §105-03 *Methods and Equipment*.

The Contractor shall submit Subcontractor approval requests using the Department approved civil rights reporting software to the Regional Construction Group for approval by the Regional Construction Engineer. For each Subcontractor, the Contractor shall submit the following:

- Labor affidavit Form AC 2948 *Subcontractor's Certification*
- *Subcontractor's Certification - Project Specific Safety and Health Plan*;
- Proof of Insurance in accordance with §107-06 *Insurance*;

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

- *Contractor/Subcontractor SPDES Permit Certification* (if there is a contract SPDES permit)
- The Department reserves the right to suspend or withdraw its approval of subcontractors where the Department determines it is in the best interest of the State to do so, including, but not limited to a Subcontractor's failure to comply with Health and Safety requirements, failure to comply with the terms of the Contract, and/or failure to remain a responsible subcontractor for the entire duration of the Contract.

2. Subcontract Provisions. All Subcontracts shall be in writing and shall contain all pertinent provisions of the contract in regard to Federal and State Laws and Regulations. All Subcontractors shall maintain insurance coverages as required by §107-06 *Insurance*.

All subcontracts, supply or equipment contracts in excess of \$10,000 shall incorporate the provisions of §102-11 *Equal Employment Opportunity Requirements*.

All subcontracts shall incorporate the provisions of §105-21 *Civil Rights Monitoring and Reporting*.

All subcontracts shall incorporate the provisions of §108-05D. *Title VI Assurance*, including supply and equipment contracts, unless exempt by 49 CFR 21, or directives issued pursuant thereto.

All subcontracts, supply or equipment contracts shall incorporate the provisions of §105-14 *Disputed Work and Dispute Resolution*. If such subcontracts or supply or equipment contracts do not have similar provisions, then the State payments to the Contractor for such subcontract or supply or equipment work shall be limited to only that which are provided by the provisions of §105-14 *Disputed Work and Dispute Resolution* as if it were in effect for such subcontract or supply or equipment contract.

All Subcontractors working within the contract limits or at a facility dedicated to the contract shall have a written Project Safety and Health Plan in accordance with §107-05 *Safety and Health Requirements* or shall have a copy of the Contractor's written Project Safety and Health Plan and shall confirm by written agreement with the Contractor that all construction operations are adequately addressed. The Contractor shall have a copy of each Subcontractor's written Safety and Health Plan, and shall ensure that the Subcontractor's plans are not in conflict with the Contractor's written Safety and Health Plan.

For Federal-Aid contracts, all subcontracts, supply or equipment contracts shall directly incorporate all of the provisions of Form FHWA-1273 *Required Contract Provisions Federal-Aid Construction Contracts*, the provisions may not be incorporated by reference.

For Federal-Aid contracts, the Contractor shall include the provisions of §108-05C. *DBE Program Assurance* in every subcontract.

B. Owner/Operators. Owner/Operators are defined as individual businesses operated by the owner, who do not have any other employees, and therefore are not subject to prevailing wage rates. Prior to performance of on-site work or trucking by an Owner/Operator, the Contractor shall submit proof of commercial automobile insurance and a *Subcontractor's Certification - Project Specific Safety and Health Plan* or *Certification - Trucking Safety and Health Plan* to the Engineer.

In order to be an Owner/Operator, the following conditions shall be met:

1. The operator shall be the registered owner of the vehicle, and the name of the operator shall match the name of the owner on the vehicle registration; or,

If the registered owner of the vehicle is a firm or corporation, typically a finance or leasing company, the operator shall furnish a lease or purchase agreement for the vehicle.

2. Insurance for the vehicle should be carried in the Owner/Operator's name, or in the name of the registered owner.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

C. DBE Program Assurance. The Contractor shall carry out the applicable requirements of 49 CFR 26 in the award and administration of Federal-Aid 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 Department deems appropriate.

D. Title VI Assurance.

1. Compliance with Regulations. The Subcontractor shall comply with the Regulation relative to nondiscrimination in federally-assisted programs of the USDOT 49 CFR 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

2. Nondiscrimination. The Subcontractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Subcontractor shall not participate either directly or indirectly in the discrimination prohibited by 49 CFR 21.5, including employment practices when the contract covers a program set forth in 49 CFR 21 Appendix B.

3. Solicitations for Subcontractors, Including Procurements of Materials and Equipment. In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential Subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this contract and 49 CFR 21 relative to nondiscrimination on the grounds of race, color, or national origin.

4. Information and Reports. The Subcontractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information and its facilities as may be determined by the Department or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a subcontractor is in the exclusive possession of another who fails or refuses to furnish this information the subcontractor shall so certify to the Department, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance. In the event of the Subcontractor's noncompliance with the nondiscrimination provisions of this contract, the Department shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

- a. withholding of payments to the Contractor under the contract until the Subcontractor complies, and/or
- b. cancellation, termination or suspension of the contract, in whole or in part.

108-06 COMMENCEMENT OF ACTIONS ON STATE PUBLIC WORKS CONTRACTS. In accordance with State Finance Law §138-a, the time within which an action on this contract, against the Contractor, must be commenced shall be computed from the date of completion of the physical work. The Contractor may notify the Department in writing that such physical work has been completed by specifying a completion date, which date shall be no more than 30 days previous to the date of such notice, in which case the completion date set forth in such notice shall be deemed to be the date of completion of the physical work unless the Department, within 30 days of receipt of such notice, notifies the Contractor in writing of its disagreement.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

In the event the Contractor fails to send a notice provided for herein, or the State disagrees, then the date of completion of the physical work shall be determined in any other manner provided by law. If the Contractor elects to send such a notice, it shall be sent by certified mail to:

New York State Department of Transportation
Office of Legal Affairs
50 Wolf Road
Albany, New York 12232

The Department hereby disagrees with any date selected by the Contractor pursuant to §138-a of the State Finance Law which is earlier than the date of contract final acceptance as determined by the Commissioner or his/her designee. The provisions of §138-a shall in no way modify the duties and obligations of the Department to comply with Article eleven-A of the State Finance Law (prompt payment legislation).

108-07 SEASONAL SHUT-DOWN. If it should become necessary to stop the work due to the lateness of the season, the Contractor shall open proper draining ditches, erect temporary structures where necessary, prepare the contract site so that there will be a minimum interference with traffic, set up and maintain a competent organization to maintain traffic through the contract site, and take precautions to prevent damage or unreasonable deterioration of the work during the time it is closed.

SECTION 109 - MEASUREMENT AND PAYMENT

109-01 MEASURING QUANTITIES. All contract payments, including the final, will be made for quantities of work performed and materials placed in accordance with the contract documents as determined by the measurements of the Engineer, and the resulting quantities shall be accepted as final, conclusive and binding upon the Contractor.

The Engineer will choose the method by which the work will be measured, such as: measured from documents/data (contract plans, cross sections, CADD files, etc.); measured with an appropriate device such as measuring tape or wheel; or measure from field survey of completed work. Measurements on slopes will generally use the slope distance to determine lengths and areas. Measurements on slopes of 1 on 4 or steeper will use the slope distance.

Various methods of quantity computation may be used by the Engineer, including but not limited to: arithmetic calculations, manual measuring tools such as a planimeter, or computer based tools/software. The Engineer will choose the computation method, and the method may vary by contract and by contract pay item as appropriate, with the goal of obtaining reasonably accurate quantities of work for payment using a commensurate amount of effort and resources.

109-02 COMPENSATION FOR ALTERED QUANTITIES. The Department reserves the right to order changes in quantities of contract pay items as is necessary to complete the work, in accordance with the intent of the contract documents.

A. Major Items. For Major Items (as defined in §101-02 *Definitions of Terms*), payment will be made for all extra work at the contract unit bid price for work up to 125% of the original contract quantity. For Major Item quantities less than 75% or more than 125% of the original contract quantity, consideration of contract adjustment will be in accordance with §104-04B. *Major Items*. Total payments made for all work on a Major Item that decreases to below 75% of the original contract item quantity, will not exceed the total payments which would have been made if the original contract quantity had been completed at the original unit price bid.

B. Minor Items. For Minor Items (as defined in §101-02 *Definitions of Terms*), payment will be made for extra work at the contract unit bid price, except for any extra work that is both: (1) more than 200% of the original contract quantity and (2) results in an increase of more than \$5,000 from

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

the original contract amount, will be considered a Significant Change in accordance with §104-04C *Minor Items*.

109-03 SCOPE OF PAYMENT. The Contractor is directed to the provisions of Sections 70, 71 and 79-a of the Lien Law that apply to funds being received by a Contractor for a public improvement. The funds received by the Contractor shall constitute trust funds in the hands of the Contractor and shall be applied first to the payment of certain claims.

No certificate approving or authorizing the first partial payment, or in the event there shall be no first partial payment, then no certificate approving or authorizing any final payment will be made to a foreign Contractor unless such Contractor shall have furnished satisfactory proof that all taxes due by such Contractor under the provisions of Articles 9, 9A, 16 and 16A of the Tax Law have been paid. The certificate of the State Tax Commission to the effect that all such taxes have been paid shall be conclusive proof of the payment of such taxes. The term foreign Contractor means: in the case of an individual, a person who is not a resident of this State; in the case of a partnership, one having one or more partners who is not a resident of this State; and in the case of a corporation, one not organized under the laws of this State.

Section 179 of the State Finance Law requires the Department to make payment on highway construction contracts within certain time frames. If the Department unjustifiably fails to pay within the prescribed time, it may be required to pay interest for each day in excess of the prescribed time.

109-04 PARTIAL PAYMENTS. Upon application by the Contractor, and approval by the Regional Construction Engineer, payments for the actual cost of certain materials may be made to the Contractor prior to incorporation of such material in the permanent work.

A. Eligibility. To be eligible for partial payment, materials must meet all of the following conditions:

1. Inclusion on the listing later in this section;
2. Have a minimum material cost of \$5,000. Individual components of an item or related items may be combined to meet the minimum (i.e. combination of all guiderail components);
3. Be materials which will be incorporated into permanent work;
4. Steel and iron materials shall be in a condition which is ready for fabrication or installation. Other materials shall be in a condition which is ready for on-site installation without further fabrication or processing;
5. Be delivered and stored at the work site or at a site and in a manner approved by the Regional Construction Engineer; and
6. Be materials which will be stored, or already have been stored, for a minimum of 60 days.

B. Application for Partial Payment. With application for partial payments, the Contractor shall provide documentation as follows:

1. Bill(s) of sale or vouchers indicating the actual dollar value of the materials as stored;
2. Certification of Title showing that title to the materials, without encumbrances, is in the name of the Contractor and that title is warranted to the NYS Department of Transportation;
3. Documented evidence of acceptability of the materials; and
4. If the materials are stored on private property, a release and waiver covering such materials, and providing access to the storage site, which release and waiver shall be executed by the property owner in favor of the NYS Department of Transportation or its agents.

When applying for partial payment of products which are claimed to be in short supply or unique to an individual contract, the Contractor shall include documentation supporting that claim.

The amount of partial payments will not exceed the total invoice amount for stored materials, nor will the partial payment for materials relating to any contract work item exceed eighty five percent (85%) of

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

the unit price for that item. The quantity of material for which payments are made will not exceed the estimated contract quantity for that item.

The making of partial payments shall not be deemed to be a final acceptance of materials, nor will it relieve the Contractor of responsibility for such materials. The Contractor shall be responsible for ensuring that only those materials which comply with the specifications are incorporated into the work.

Costs associated with handling, transportation and storage of materials; including storage site rental, security, and weather protection; shall be borne by the Contractor and included in the prices bid for contract work. Materials, other than those which are determined by the Regional Construction Engineer to be unique to the contract, not incorporated into the work shall remain the property of the Contractor. Partial payments made for such unused materials will be withdrawn with no further obligation by the State.

LIST OF MATERIALS

- Iron, Steel and Aluminum products (including bridge bearings and all metal components of railings and bridge superstructures);
- Precast and Prestressed Concrete products;
- Pipe and Underdrain products;
- Concrete and Stone curb or masonry products;
- Concrete, Steel and Timber piles and appurtenances;
- Timber products;
- Traffic Signal, Traffic Control, Signing and Lighting components;
- Intelligent Transportation System (ITS) components (cameras, telecommunications components, computers, etc.)
- Cable, Wire and Conduit;
- Impact Attenuator components;
- Materials in short supply; or
- Materials meeting specific, unique requirements

109-05 EXTRA WORK AND TIME RELATED COMPENSATION. The Contractor will be compensated for extra work under existing unit prices in accordance with §109-02 *Compensation for Altered Quantities*, by agreed price in accordance with §109-05A. *Agreed Price Work*, or by force account in accordance with §109-05B. *Force Account Work*.

A. Agreed Price Work. Agreed prices for new items of work or materials in accordance with one of the methods outlined below may be accepted by the Engineer and incorporated into a change order as the Department may deem them to be just and fair and beneficial to the State. An agreed price may be offered by the Contractor, and accepted by the Engineer for a defined quantity of additional work. The Contractor shall provide an agreed price proposal generally not later than 7 calendar days prior to beginning the work. If a price has not been agreed to, in writing, prior to starting the work, the Contractor shall keep and submit daily records to document all labor, material and equipment used to complete the work in accordance with §109-05C.1. *Daily Summary*. A change order containing an agreed price not supported by one of the following may be subsequently rejected by the Department or the Office of the State Comptroller.

1. Original/Adjusted Contract Bid Price. The original contract bid price, or the original contract bid price adjusted for documented increase or decrease in labor cost, material cost, equipment rate, mobilization, and/or site conditions.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

2. Weighted Average Price. The statewide or regional weighted average price (WAP) for a contract pay item for minimum of 3 contracts of similar type, quantity, and/or location of work over a one to two year period; as shown in the Pay Item Catalog (PIC). The Engineer may adjust the WAP for documented increase or decrease in labor, materials, equipment, mobilization, and/or site conditions.

3. Average of 3 Lowest Bidders. The average bid price for a contract pay item by the 3 lowest responsible bidders on the contract, including the Contractor, presented in the Tabulation of Bids. If less than 3 responsible bids were received, this option shall not be used.

4. Price Analysis. A price analysis shall be based on an estimated breakdown of charges listed in §109-05B. *Force Account Work* below, using the equipment and other rates available when the agreed price is developed by the Contractor. The analysis shall be based on crew composition, material prices, equipment production and overall production rates that are reasonable in comparison with contract bid price work.

Necessary labor costs include wages, supplemental (fringe) benefits, workers compensation insurance and other such reasonable charges that are paid by the Contractor pursuant to existing written agreements with its employees and/or labor organizations. The Contractor will be reimbursed for FICA, Medicare, Federal Unemployment Tax (FUTA), State Unemployment Insurance (SUI), and paid holidays using the Standard Labor Markup Rate on all wages, not including supplemental (fringe) benefits. The Standard Labor Markup Rate, initially 12.5%, may be modified by the Department via Official Issuance.

The Contractor will be reimbursed for FICA and Medicare using the Standard Fringe Markup Rate on all supplemental (fringe) benefits paid in cash to the employee. The Standard Fringe Markup Rate, initially 6.4%, may be modified by the Department via Official Issuance.

The Workers Compensation insurance rate will be the statutory loss cost rate established by the NYS Workers Compensation Insurance Rating Board, with the insurer's approved lost cost multiplier, the NYS Assessment and the NYS Surcharge, subject to the Construction Employment Limitation Program (CELP) limits. The Contractor shall submit an insurance policy declaration page and rate page from its insurer to validate the Workers Compensation insurance rate.

Where the Longshore and Harbor Workers' Compensation Act, Jones Act, Federal Employees Liability Act or other legal requirements impose additional liability on the Contractor, additional differentials will be added to the Worker's Compensation insurance rate.

The hourly Workers Compensation insurance rate will be based on the rate described above, multiplied by gross wages up to the CELP wage limit, and divided by 40. The Contractor will be reimbursed for the hourly Workers Compensation insurance rate up to first 40 hours worked in any week, with no reimbursement for time in excess of 40 hours per week.

Equipment rates shall be used with no rate adjustment factor and no regional adjustment factor. An appropriate type and size of equipment similar to that available on the contract site, if present, shall be used.

Due to the cost and effort associated with development, a price analysis should generally be reserved for extra work under an individual contract pay item or a single price analysis, of more than \$5,000.

B. Force Account Work. Where there are no applicable unit prices for extra work and agreed prices cannot be readily established or substantiated, the Contractor will be reimbursed by Force Account for the actual, reasonable and verifiable cost of the items listed below. The Contractor shall maintain and submit force account records in accordance with §109-05C. *Force Account Report*.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

1. Contractor Costs. At the preconstruction meeting, the Contractor should provide the Engineer documentation supporting its insurance rates for the current period, and provide updates within 30 days after the renewal date, to assist in timely preparation and review of force account reports. All rates will be those in effect at the time the work is performed.

a. Labor. Necessary labor costs include wages, supplemental (fringe) benefits, payroll taxes, State Unemployment Insurance (SUI), Federal Unemployment Tax (FUTA), paid holidays, workers compensation insurance and other such reasonable charges that are paid by the Contractor pursuant to existing written agreements with its employees and/or labor organizations. Insurance and other costs incurred or limited on a weekly or other periodic basis will be reimbursed based on the percentage of the employees' weekly hours worked under force account.

(1) Wages and Fringe Benefits. Each class of labor will be reimbursed separately at the actual payroll rate, an average rate based on different classes of labor will not be accepted. The wage rate for an individual worker may be up to 150% of the prevailing wage, provided the Contractor documents through certified payrolls that the worker has and continues to be paid more than the prevailing wage for contract work. The Contractor shall obtain the approval of the Engineer for wage rates for individual workers over 110% of the prevailing wage prior to that individual starting work.

There are no prevailing wage rates for forepersons. Forepersons are typically paid at a higher rate than the trades they supervise, due to additional responsibilities. The reimbursement for forepersons will be based on previous certified payrolls or other payroll records for that individual, if available, provided crew composition and overall production rates are reasonable.

If the Contractor is obligated by a labor agreement to pay a full day's pay for an individual in a required labor classification, and cannot find other work on that day for that individual, the Contractor will be reimbursed for a full day's pay for that individual.

Professional or technical personnel specifically required or agreed to by the Department, in writing, to be present for specific critical work operations will be reimbursed as a direct labor cost. The reimbursement for these professional or technical personnel will be based on previous payrolls for that individual, as certified by the employer, or by comparison to costs for similarly qualified personnel.

No reimbursement will be made for travel, lodging, bonuses, or other similar payments made to workers.

(2) Standard Labor Markup. The Contractor will be reimbursed for FICA, Medicare, Federal Unemployment Tax (FUTA), State Unemployment Insurance (SUI), and paid holidays using the Standard Labor Markup Rate, on all wages, not including supplemental (fringe) benefits. The Standard Labor Markup Rate, initially 12.5%, may be modified by the Department via Official Issuance.

The Contractor will be reimbursed for FICA and Medicare using the Standard Fringe Markup Rate on all supplemental (fringe) benefits paid in cash to the employee. The Standard Fringe Markup Rate, initially 6.4%, may be modified by the Department via Official Issuance.

(3) Workers Compensation Insurance. The Workers Compensation insurance rate will be the statutory loss cost rate established by the NYS Workers Compensation Insurance Rating Board, with the insurer's approved lost cost multiplier, all assessments and credits, and an experience modifier of 1.00, subject to the Construction Employment Limitation Program (CELP) limits. The Contractor shall submit an insurance policy

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

declaration/rate page from its insurer to validate the Workers Compensation insurance rate.

Where the Longshore and Harbor Workers' Compensation Act, Jones Act, Federal Employees Liability Act or other legal requirements impose additional liability on the Contractor, additional differentials will be added to the Worker's Compensation insurance rate.

The hourly Workers Compensation insurance rate will be based on the rate described above, multiplied by gross wages up to the CELP wage limit, and divided by 40. The Contractor will be reimbursed for the hourly Workers Compensation insurance rate up to first 40 hours worked in any week, with no reimbursement for time in excess of 40 hours per week. For workers that work on force account and contract work during the same week, the amount reimbursed for Workers Compensation will be based on the percentage of the weekly hours worked on force account.

For Contractors that obtain Workers Compensation insurance through a pooled fund or similar arrangement, the Contractor shall supply documentation from the Contractor's insurance carrier detailing the rate and basis for application.

b. Materials. Materials are necessary products incorporated in the temporary or permanent work. The Contractor will be reimbursed for the costs of materials, including transportation to the site and sales taxes for materials not permanently incorporated into the work. Material transportation may be accounted for as part of the material unit price, a material unit price for transportation, a fee for transportation, or equipment and operator charges. Contractor or Subcontractor costs for transportation of materials shall be accounted for as labor and equipment in accordance with §109-05B.1.a. *Labor* and §109-05B.1.c. *Equipment* respectively. Because force account work has no associated pay lines/limits, materials will be measured as actual quantities delivered and incorporated, including any required overlap, and appropriate allowances for waste and/or disposal due to construction operations and/or installation practices.

The Contractor will be reimbursed, including sales taxes when applicable, for expendable materials such as oxygen, acetylene, propane, welding rods, form lumber, form oil, grinding wheels, saw blades, hammer and drill bits, drill steel, and tooth-bits consumed in progressing the work. Other small tools and tool/equipment supplies used or consumed in progressing the work are considered to be included in overhead and no separate reimbursement will be made.

Material acquired by direct purchase shall be documented by bills or acceptable invoices. All prices on used material incorporated in either temporary or permanent work shall be billed at a fair value, less than the original cost when new. A reasonable salvage credit will be determined by the Engineer in coordination with the Contractor for substantial salvageable material recovered.

c. Equipment. Equipment, other than small tools, used by the Contractor shall be of suitable size and suitable capacity required for the work to be performed. If the Contractor elects to use equipment of a higher rate than the equipment suitable for the work, payment will be made at the rate applicable to the suitable equipment. The equipment actually used and the suitable equipment upon which the rate is based will be recorded as a part of the Force Account Report. Usage will be recorded in hours to the nearest half hour. The Engineer will verify the suitability of the equipment. If there is a differential in the rate of pay of the operator of oversize or higher rate equipment, the rate paid for the operator will likewise be related to the suitable equipment

If the Contractor rents equipment, the Contractor will be reimbursed for sales taxes when applicable.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

(1) *Mobilization Costs.* If the Contractor does not have a needed type or piece of equipment on the contract site or the equipment is not available to perform the extra work, the Contractor will be reimbursed for the reasonable cost of mobilization to and demobilization away from the work site. Mobilization and demobilization includes the cost of transporting equipment; 50% of the hourly ownership rate of transported equipment during transportation, including loading, unloading, assembly, and disassembly; and fees for any required regulatory permits. Costs for demobilization away from the work site will not be paid if the equipment is kept on the site and performs additional contract bid price work.

(2) *Ownership Costs.* The Contractor will be reimbursed for its costs for providing equipment at the rates listed in the "Rental Rate Blue Book for Construction Equipment" posted by Equipment Watch (hereafter referred to as the Blue Book). The hourly ownership rates will reimburse the Contractor for all non-operating costs of providing equipment, including depreciation on the original purchase, costs of major overhaul repairs, facilities capital, normal risk insurance, property taxes, storage, licenses, security, record keeping, and mechanic's supervision.

The hourly ownership rate will be the Blue Book monthly rate divided by 176, multiplied by the rate adjustment factor for the equipment model year and then multiplied by the regional adjustment factor. If the Contractor has a piece of equipment remanufactured, rebuilt, or significantly altered, the rate adjustment factor may be modified, as documented by Equipment Watch.

For equipment required to be present and operating, the Contractor will be reimbursed for the product of the hours of actual use, multiplied by the hourly ownership rate.

For equipment required to be present; dedicated exclusively to the force account, not available for mobilization elsewhere, and not used on contract bid price work that day; the Contractor will be reimbursed for the product of the remaining non-operating hours in the shift, multiplied by 50% of the hourly ownership rate.

Equipment that is not required to be present will not be eligible for reimbursement of non-operating hours. If the Engineer directs or agrees that equipment mobilized for the operation is no longer required to be present, the Contractor may demobilize the equipment. If the equipment is demobilized, and subsequently determined to be required to be present, the Contractor will be reimbursed for remobilization.

For equipment without an operator that is designed to operate on a continuous long term basis, such as a pump, portable variable message sign (PVMS), or temporary traffic signal, the Contractor will be reimbursed for a maximum of 176 hours a month.

(3) *Operating Costs.* The hourly operating rate includes preventative and field maintenance, fuel, lubricants, and other operating expenses as outlined in the Blue Book, not including consumables or the operator's wages. The Contractor will be reimbursed for the product of the number of hours of actual use multiplied by the hourly operating rate. No reimbursement for operating costs will be made for equipment that is not operating.

(4) *No Established Rate.* If rates are not established in the Blue Book for a particular piece of equipment, the Contractor shall contact the Blue Book publisher to establish rates. If the publisher will not establish rates, the Department, in coordination with the Contractor, may establish rates for ownership costs and operating costs for that piece of equipment consistent with its cost and expected life.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

(5) *Maximum Ownership Costs.* The maximum amount reimbursed for ownership costs of equipment, is limited, on a contract basis, to the original purchase price as listed in the "Green Guide for Construction Equipment" published by Equipment Watch. The Contractor shall not exchange equipment for a similar item for the purpose of extending the maximum ownership cost. Exchange of equipment for an engineering or mechanical reason shall be approved by the Engineer, or the maximum ownership cost will be limited to that for the original piece of equipment. If the ownership cost is limited by the original purchase price, the Contractor will continue to be reimbursed for the operating cost for hours of actual use.

(6) *Backup Equipment.* The Contractor will be reimbursed at 50% of the hourly ownership rate for redundant/backup equipment specifically required, or agreed to by the Department in writing, to be present for specific critical work operations.

(7) *Owner/Operator Equipment.* Equipment Owner/Operators utilized by the Contractor in the performance of work shall be accounted for as a service charge in accordance with §109-05B.3. *Service Charges.*

d. *Insurance.* The Contractor will be reimbursed for Commercial General Liability (CGL), Umbrella or Excess Liability, Special Protective and Highway Liability, Contractor's Risks, Professional Liability/Errors and Omissions, Railroad Protective Liability, Marine Protection and Indemnity, and Pollution Liability insurances required in accordance with §107-06 *Insurance*, at the rate paid by the Contractor, in accordance with the method procured from its insurer(s).

(1) Contractors or Subcontractors that pay insurances on the basis of a percentage of payroll will be reimbursed that percentage of the portion of item §109-05B.1.a. *Labor* specified in the Contractor's insurance policy.

(2) Contractors or Subcontractors that pay insurances on the basis of a percentage of gross sales will be reimbursed that percentage of the total of items §109-05B.1.a. through §109-05B.1.f.

e. *Overhead.* The Contractor will be reimbursed for overhead at 10% of items §109-05B.1.a. *Labor*, §109-05B.1.b. *Materials* and §109-05B.1.c. *Equipment*. Overhead will be defined to include the following:

(1) Additional costs for bond(s), Disability Benefits and Commercial Automobile insurance;

(2) All salary, benefits and expenses of executive officers, supervising officers/employees, superintendents, project engineers, office engineers, CPM Schedulers, clerical or administrative employees, and other project level staff, but not including working forepersons; including payroll taxes, unemployment insurance, workers compensation insurance, and charges that are paid by the Contractor to or on behalf of those employees pursuant to written agreement with its employee(s) and/or labor organizations;

(3) Small tools and small tool/equipment supplies, including shovels, picks, axes, saws, bars, sledges, lanterns, etc.;

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

(4) Contractor's field office rental, utility charges, potable water, sanitation, cleaning, computers, CADD equipment, office equipment, office supplies, reproduction costs, etc.;

(5) Administrative or other efforts required to maintain records and produce force account reports.

f. Profit. The Contractor will be reimbursed for profit at 10% of items §109-05B.1.a. *Labor*, §109-05B.1.b. *Materials* and §109-05B.1.c. *Equipment*.

2. Subcontractor Costs. When the work is performed by a Subcontractor, the Contractor will be reimbursed the actual, reasonable and verifiable cost of such subcontracted work as outlined above in §109-05B.1. *Contractor Costs*, plus an additional 5% for subcontract administration, and the Contractor's costs for insurance in accordance with §109-05B.1.d *Insurance*.

3. Service Charges. When work is performed by, and a fee is paid to a professional service, a work service, or an equipment owner/operator, the Contractor will be reimbursed the actual cost of the service fee plus 5% for service administration. This 5% will be applied only once to the service fee regardless of the firm making direct payments.

The rate for equipment with an operator shall not exceed the total of the Blue Book ownership rate, the Blue Book operating rate, and the wages for an appropriate operator. For specialized equipment or circumstances, the wages for an appropriate operator may be up to 150% of the prevailing wage rate.

C. Force Account Report. Payment for force account work will be made on the basis of the following reports. Reports shall be submitted in a format acceptable to the Department. Appropriate forms are available from the Department.

If the Engineer or his/her representative disagrees with the accuracy, applicability, or reasonableness of any portion of a Contractor's submission, he/she shall promptly notify the Contractor.

1. Daily Summary. The Contractor shall deliver a daily summary of force account work using the most recent recordkeeping forms required by the Department to the Engineer not later than close of business on the work day following that for which the work is reported. The daily summary shall be dated and signed by the Contractor's authorized representative.

The Engineer's signature indicates that the record, as modified, is contemporaneous and accurate, but does not indicate concurrence with any dispute. The Engineer will annotate the record as necessary, sign and date, and provide a copy to the Contractor.

The summary shall contain:

- a. The contract number, other contract information, and the Contractor name/information.
- b. A brief description of the work performed and the work location for that day.
- c. A list of personnel by name, including the hours worked, and labor classification.
- d. A list of materials used indicating the quantity and nature. The cost shall be documented later by proper receipts.
- e. A list of equipment used indicating the number of hours used and the type, manufacturer, model, model year, size of equipment, and any required attachments.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

2. Labor Summary. If there is an approved Force Account Estimate, within 7 calendar days after the end of each pay period, the Contractor shall deliver to the Engineer a Force Account Summary of Labor used on the work, which shall include the name, labor classification, hours worked, hourly rate of pay, supplemental (fringe) benefits, and/or other items as shown on the certified payroll. Progress payments on the force account will not be made until the Contractor provides a Force Account Summary of Labor to the Engineer.

3. Force Account Report Submission. On completion of the specific force account work, the Contractor shall deliver to the Engineer a Force Account Report, wherein all labor, materials, equipment, and other charges are shown and totaled. The Force Account Report shall be dated and signed by the Contractor's authorized representative. When the Contractor and the Engineer agree on the Force Account Report, the Engineer will prepare and submit a change order containing the Force Account Report to the Regional Construction Engineer for approval.

4. Force Account Review. The Regional Construction Engineer, or designee, will review the Force Account Report and make any notations, remarks or comments on this form that may assist in final payments. The emphasis of this review will be on labor rates, payroll taxes, material costs, equipment rates, insurance rates, conformance with payment provisions of technical specifications, and overall documentation. The Regional Construction Engineer will forward the change order to the Deputy Chief Engineer, Construction (DCEC). The DCEC, after review and approval, will forward the change order to the Office of the State Comptroller (OSC) for review and filing. Only after filing by OSC may the Engineer begin to process contract payments based on the change order, as the work is completed.

5. Late Submissions. For the purposes of payment of interest pursuant to Section 179f of the State Finance Law, if the Contractor fails to deliver the completed force account report to the Engineer in a timely manner, and as a result the change order for the force account work is not fully approved at the date of contract final acceptance, the required final payment date will be extended by the number of calendar days between contract final acceptance and the issuance of this change order, attributable to the late force account submissions. This applies to interest only and does not extend time frames with regard to notice and recordkeeping in accordance with §104-06 *Notice and Recordkeeping*.

D. Time Related Dispute Compensation. The Contractor will only be eligible for extra compensation for expenses or costs which are identified as compensable under §108-04A. *Compensable Delays.* In the event any legal action is instituted against the State by the Contractor due to any such dispute for additional compensation, whether due to time related dispute, delay, acceleration, breach of contract, or otherwise, the State's liability will be limited to those items which are specifically identified as compensable under §109-05D.1. *Recoverable Contractor Costs.* Nothing in this subsection is intended to create any liability of the State not existing at common law or pursuant to the terms of this contract or to prevent the Contractor from filing a claim in the New York State Court of Claims. The remedies contained herein are exclusive.

1. Recoverable Contractor Costs. Only the following elements will be recoverable by the Contractor as "time related dispute compensation" provided that they are actual, reasonable and verifiable. Any such adjustment will be made via change order. Escalated costs will include unanticipated higher or lower costs attributable, with appropriate credits, to the performance of work or portions of work in an extended time period due to extenuating circumstances beyond the control of the Contractor.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

- a. *Extra work.* The Contractor will be reimbursed for extra work required due to a time related dispute in accordance with §109-05B. *Force Account Work*, less any appropriate credit.
- b. *Labor.* The Contractor will be reimbursed for documented escalated labor costs determined in accordance with §109-05B.1.a. *Labor*.
- c. *Materials.* The Contractor will be reimbursed for documented escalated material costs determined in accordance with §109-05B.1.b. *Materials*.
- d. *Equipment.* The Contractor will be reimbursed for documented escalated equipment costs less appropriate credits, determined in accordance with §109-05B.1.c. *Equipment*. The costs for idle equipment will be 50% of the ownership rate set forth in §109-05B.1.c. *Equipment*. Idle time shall not exceed 8 hours per day, 40 hours per week, or the annual usage hours established in the "Blue Book". The Contractor will be reimbursed for backup equipment costs, in accordance with §109-05B.1.c.(6) *Backup Equipment*. Equipment with a daily ownership rate of less than \$5 or a current purchase price of less than \$500 will be considered as small tools and equipment, and will not be directly reimbursed. No operating costs will be paid for idle equipment.
- e. *Insurance.* The Contractor will be reimbursed for documented additional or escalated insurance costs during the extended period.
- f. *Extended Contract Site Supervision and Management.* The Contractor will be reimbursed for documented additional or escalated contract site overhead costs during the extended period, including those for superintendents, project engineers, office engineers, CPM schedulers, clerical and other project level staff, but not including working forepersons. Allowable costs will include salary, Standard Labor Markup on salary, benefits not included in the Standard Labor Markup, and workers compensation insurance.
- g. *Extended Contractor's Field Office Costs.* The Contractor will be reimbursed for fees paid to service provider(s) during the extended period, for required Contractor's field office rental, utility charges, potable water, sanitation, cleaning, etc.
- h. *Bond Costs.* The Contractor will be reimbursed for documented additional or escalated bond costs during the extended period.
- i. *Home Office Overhead.* The Contractor will be reimbursed for home office overhead at 10% of items §109-05D.1.b. *Labor* and §109-05D.1.c. *Materials*. The Contractor will be reimbursed for home office overhead at 10% of documented escalated equipment costs under §109-05D.1.d. *Equipment*. No home office overhead will be paid for idle equipment.
- j. *Profit.* The Contractor will be reimbursed for profit at 10% of items §109-05D.1.b. *Labor* and §109-05D.1.c. *Materials*, except when §104-05 *Suspensions of Work Ordered by the Engineer* applies, no profit will be allowed. The Contractor will be reimbursed for profit at 10% of documented escalated equipment costs under §109-05D.1.d. *Equipment*. No profit will be paid for idle equipment.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

2. Recoverable Subcontractor Costs. When costs are recoverable by a Subcontractor as "time related dispute compensation", the Contractor will be reimbursed the actual, reasonable and verifiable subcontractor costs as outlined above in §109-05D.1., an additional 5% of those costs for subcontract administration, and costs for Contractor insurances in accordance with §109-05D.1.e. *Insurance*.

3. Non-Recoverable Costs. In any dispute for time related compensation, the Department will have no liability for the following items and the Contractor shall make no claim for the following items:

- a. Home office overhead in excess of that provided in §109-05D.1.h. *Home Office Overhead*;
- b. Profit, in excess of that provided in §109-05D.1.i. *Profit*;
- c. Loss of anticipated or unanticipated profit;
- d. Labor inefficiencies and loss of productivity;
- e. Consequential damages, including but not limited to interest on monies in dispute, including interest which is paid on such monies, loss of bonding capacity, bidding opportunities, or interest on investment, or any resultant insolvency;
- f. Indirect costs or expenses of any nature;
- g. Direct or indirect costs attributable to performance of work where the Contractor, because of situations or conditions within its control, has not progressed the work in a satisfactory manner.
- h. Attorneys fees and dispute or claims preparation expenses.

E. Acceleration Compensation. The Contractor will be reimbursed for additional costs associated with acceleration directed by the Department in writing.

1. Recoverable Contractor Costs. The following elements will be recoverable by the Contractor as compensation for acceleration, provided that they are actual, reasonable and verifiable. Recoverable costs include costs attributable, with appropriate credits, to the performance of work or portions of work during the original contract period, but at an accelerated rate, attributable to the Department's directed acceleration.

- a. *Labor.* The Contractor will be reimbursed for additional labor costs, primarily the premium portion of overtime;
- b. *Materials.* The Contractor will be reimbursed for additional material costs, primarily costs for accelerated production and delivery costs or additional fabrication costs associated with a revised delivery schedule;
- c. *Equipment.* The Contractor will be reimbursed for additional equipment costs, primarily costs for mobilization and demobilization of additional equipment required;
- d. *Insurance.* The Contractor will be reimbursed for additional insurance costs, including Commercial General Liability (CGL), Umbrella or Excess Liability, Special Protective and Highway Liability, Contractor's Risks, Professional Liability/Errors and Omissions, Railroad Protective Liability, Marine Protection and Indemnity, and Pollution Liability insurances required in accordance with §107-06 *Insurance*, at the rate paid by the Contractor, in accordance with the method procured from its insurer(s).

(1) Contractors or Subcontractors that pay insurances on the basis of a percentage of payroll will be paid that percentage of the portion of item §109-05E.1.a. *Labor* specified in the Contractor's insurance policy.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

(2) Contractors or Subcontractors that pay insurances on the basis of a percentage of gross sales will be paid that percentage of the total of items §109-05E.1.a. *Labor*, §109-05E.1.b. *Materials*, §109-05E.1.c. *Equipment* and §109-05E.1.e. *Overhead*.

e. *Overhead*. The Contractor will be reimbursed for overhead at 10% of items §109-05E.1.a. *Labor*, §109-05E.1.b. *Materials* and §109-05E.1.c. *Equipment*.

f. *Profit*. The Contractor will be reimbursed for profit at 10% of items §109-05E.1.a. *Labor*, §109-05E.1.b. *Materials* and §109-05E.1.c. *Equipment*.

2. Recoverable Subcontractor Costs. When costs are recoverable by a Subcontractor as acceleration compensation, the Contractor will be reimbursed the actual, reasonable and verifiable subcontractor costs as outlined in §109-05E.1. *Recoverable Contractor Costs*, an additional 5% of those costs for subcontract administration, and the Contractor's costs for insurance in accordance with §109-05E.1.d *Insurance*.

109-06 CONTRACT PAYMENTS. Payments will be made to the Contractor for work satisfactorily performed monthly in accordance with Article 7 *Contract Payments* of the contract agreement. No contract payment will be rendered unless the value of the work done equals 5% of the Contract Amount or \$1,000, whichever is the lesser. At the Contractor's request, semimonthly contract payments may be rendered provided the value of the work performed in a two-week interval is in excess of \$50,000 or if, in the opinion of the Department, it is to the best interests of the State to do so.

In order to enable the Department to process a contract payment properly and expeditiously, the Contractor shall submit weekly certified payroll statements for the Contractor and each Subcontractor, required material certifications, Subcontractor/Vendor prompt payment data, and other required documents and submissions, as may be appropriate to this contract.

Unless otherwise specified in a particular contract pay item, no progress payment will be made for any item of work until its completion in accordance with the specification. In accordance with Article 8 *No Payment on Contractor's Non-Compliance* of the contract agreement, no contract payment will be completed so long as any lawful or proper direction to the Contractor by the Commissioner or his/her representative concerning the work or material has not been complied with.

This contract may be funded by monies from other governmental or non-governmental entities which may include municipalities, counties, towns, villages, or authorities. Extra work for others, including municipalities, utilities, or other entities added to the contract by change order may require funds to be deposited with the State prior to approval of the change order. Funding delays for extra work for others may cause payment delays. If extra work for others is combined with Department funded work, payment for all the work may be delayed.

The Contractor will receive all payments by electronic transfer only, which are generated by the Office of the State Comptroller (OSC). The Contractor shall comply with the OSC procedures to authorize payments via the electronic payments program, known as *e-payments*. Information on the *e-payments* program is available on the OSC website at www.osc.state.ny.us/epay/index.htm. A single authorization by the Contractor to OSC will be used for all payments made to that firm for all State contracts. Information for Contractor management of their New York State vendor account is available from OSC at www.osc.state.ny.us/vendor_management/index.htm.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

109-07 PROMPT PAYMENTS BY THE CONTRACTOR. In accordance with Section 139-f(2) of the State Finance Law, the Contractor shall pay each Subcontractor and materialman for the value of work performed pursuant to contract no later than 7 calendar days from the receipt of each payment the Contractor receives from the State. Payment by the Contractor to Subcontractors or materialmen shall reflect the quantities or percentage of work completed by the Subcontractor or materials furnished by the materialmen, and paid by the State; and such payment shall be based upon the actual conditions of the subcontract or purchase order. The Contractor shall not hold any retainage, but may deduct an amount necessary to satisfy any claims, liens or judgments against a Subcontractor or materialman which have not been fully discharged.

In accordance with 49 CFR 26.29, the Contractor shall pay each Subcontractor or vendor for satisfactory performance of their contracts no later than 30 calendar days from the receipt of each payment the Contractor receives from the State. A Subcontractor's or vendor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the Department. The Contractor shall not issue a joint check for payment to a Disadvantaged Business Enterprise (DBE) and another entity, such as a material supplier, without the prior approval of the Department.

In accordance with Section 179-f of the State Finance Law, if the State makes an interest payment to the Contractor on a contract payment which is due, a pro rata share of such interest shall be paid to subcontractors and materialmen in a proportion equal to the percentage of their pro rata share of the contract payment. Such pro rata share of interest shall be due to such subcontractors and materialmen only for those payments which are not paid prior to the date upon which interest begins to accrue between the State and the Contractor. Such pro rata share of interest shall be computed daily until such payments are made to the subcontractors and materialmen.

The Contractor shall maintain an accounting system acceptable to the Department to track payments made by the State to the Contractor and payments made by the Contractor to each Subcontractor, Manufacturer, Fabricator or Material Supplier by item and by date. The Contractor shall enter payment data into the current Department approved civil rights reporting system in accordance with §105-21 *Civil Rights Monitoring and Reporting*, with any exceptions noted and explained.

109-08 ELIMINATED MATERIALS. Materials required by the contract documents and not incorporated into the work due to changes caused by field conditions or revisions to the design by the State after the material was ordered or purchased may be eligible for reimbursement. Materials will be eligible for reimbursement if they are determined by the Regional Director to be unique to the contract, and meet one or more of the following conditions:

- The material order cannot be canceled or changed to reflect the revised quantity required.
- The material cannot be restocked or the cost of restocking is excessive.
- The Contractor or Subcontractor does not maintain a supply of the material.
- The cost of the material exceeds \$1000. or five percent (5%) of the item, whichever is greater.

The Contractor will be reimbursed its material cost minus salvage value, or the material cost plus necessary delivery costs to a site identified by the Engineer, if the Department opts to take the material. Overhead and profit will be paid once, at a maximum of five percent (5%) for all materials not incorporated into the work, regardless of whether the Contractor or the Subcontractor pays for the material and/or delivery costs.

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

109-09 FINAL ACCEPTANCE AND FINAL AGREEMENT. The provisions of Article 9 *Final Acceptance of Work* and Article 10 *Final Payment* of the contract agreement shall apply.

A. Final Additions or Deductions. Upon the completion of the work as shown in the contract documents, should the final completed quantities show either an increase or decrease from the original estimate of quantities, as modified by any change orders, then such increases or decreases will be included in a cleanup Change Order. Payments will be made promptly as any outstanding change orders are filed with OSC.

B. Partial Acceptance. For Where and When, Requirements, Job Order (JOC), Standby, Emergency, and other contracts of similar types where the work occurs in a variety of separate and distinct locations that are not defined at the time of Letting, or for separate and distinct sites where extra work was added to the contract, the Department may issue a partial acceptance of an individual work site(s). Partial acceptance will release the Contractor from the requirement to provide insurance in accordance with §107-06 *Insurance* for that site only, and from responsibility for any damages to the work at that site after partial acceptance.

C. Contract Final Acceptance. Within 30 days of notice by the Contractor to the Engineer after the work required under the contract has been completed, the Regional Director or designee(s) will inspect the work. The work may also be inspected, accepted and approved by other agencies and/or municipalities who will have jurisdiction over the work after final acceptance.

Prior to the final acceptance of the work, the Contractor shall provide the following:

All Certified Payrolls

Final Survey Notes/Computations

Approved Reproducible Drawings

Approved Field Change Sheets from VECP or other Contractor Proposals

After satisfactory inspection of the work, the Regional Director will recommend to the Deputy Chief Engineer, Construction (DCEC) that the work so completed be accepted. After contract final acceptance, the Contractor is released from the requirement to provide insurance in accordance with §107-06 *Insurance*.

D. Final Payment. Section 179 of the State Finance Law requires the Department to make final payment on highway construction contracts within seventy-five (75) calendar days after contract final acceptance by the Commissioner. If the Department unjustifiably fails to pay the final payment within the prescribed 75 calendar days, it may be required to pay interest for each day in excess of the 75 calendar days. The Department, in accordance with Section 179 of the State Finance Law, has determined that a thirty (30) calendar day inspection period after contract final acceptance is required for final payments, after which time the 75 day interest-free processing period will commence.

E. Final Agreement. The final agreement will not be drawn and finalized until all work required under the contract has been satisfactorily completed, all disputes presented and all accounts for extra work and materials have been rendered, considered, and if agreed to, incorporated by change order, and resulting payments made to the Contractor. Work remaining to be accomplished under an Uncompleted Work Agreement shall be considered as completed work for the purpose of the final agreement, provided the Uncompleted Work Agreement has been executed in accordance with §109-10 *Uncompleted Work Agreement*. Work accomplished under a warranty agreement shall be considered as completed work for the purpose of the final agreement, provided the warranty agreement has been executed and any required bond deposited by the Contractor.

In order to enable the Department to process the final agreement properly and expeditiously, the Contractor shall promptly submit final Labor Affidavits, verification of final payments to all Subcontractors/vendors, and resolution of any outstanding disputes, or other required submissions, as

REVISIONS TO STANDARD SPECIFICATIONS SECTION 100 - PHASE 7

may be appropriate. The Commissioner, or his/her designee, will approve a final agreement as prepared and approved by the Regional Director.

Other submissions may be required to enable the processing of the final payment. Any time taken beyond the date of contract final acceptance to satisfy or furnish the above information shall extend the required payment date by an equal period of time. If the Contractor fails to respond to a Department request for information required to complete the Final Agreement, or fails to sign the Final Agreement without presenting additional information or a dispute, within 90 days, the Department may execute the Final Agreement based upon the best available information, and close the contract.

F. Initiation of Claim. The signature by the Contractor of the final agreement; shall constitute and operate as a release to the State from any and all claims of any liability to the Contractor for anything theretofore done or furnished for or relating to or arising out of the work done under the Contract, and for any prior act, neglect, or default on the part of the State or any of its officers, agents, or employees, unless the Contractor serves a detailed and verified statement of claim upon the NYS Department of Transportation not later than 40 days after the signature of the final agreement by the Contractor. As contract payments are routinely made via electronic funds transfer, and final agreements do not include any further payment to the Contractor, for the purposes of State Finance Law Section 145, acceptance of final payment shall be deemed to be signature of the final agreement by the Contractor, or signature of the final agreement by the Commissioner or designee if the Contractor has failed to respond within 180 days after being provided the final agreement. Such statement of claim shall specify the items and details upon which the claim will be based and any such claim shall be limited to such items. Should the Contractor refuse to accept the final payment as tendered by the Office of the State Comptroller, it shall constitute a waiver of any right to interest thereon.

109-10 UNCOMPLETED WORK AGREEMENTS. Whenever a contract shall, in the judgment of the Department, be substantially completed, and keeping the contract open and maintaining the contract bonding, would be an injustice to the Contractor, the Department may enter into an Uncompleted Work Agreement with the Contractor. Prior to entering into an Uncompleted Work Agreement, the essential items in the contract shall have been completed by the Contractor in accordance with the terms of the contract and the provisions of §109-09E. *Final Agreement*, and certified by the Regional Construction Engineer. The essential items in the contract shall include, but will not be limited to the completion of or the safe working order of all pavement, shoulders, barrier, guide rail, impact attenuators, drainage, signs, signals and other safety appurtenances, so that the highway is safe for use by the traveling public without the use of temporary or emergency devices.

The final contract accounting will include such uncompleted items and pay therefore at the item prices in the contract, upon execution of the Uncompleted Work Agreement. The Uncompleted Work Agreement will be based on an estimate of work remaining to be completed. When the cost to perform the work is not reflected by the unit prices bid, the Engineer will estimate the value of the uncompleted work. If actual quantities are later found to vary from the estimate, no additional quantities can be added under an Uncompleted Work Agreement.

The Contractor shall execute an Uncompleted Work Agreement upon depositing with the Department a certified check drawn upon a legally incorporated bank or trust company, or securities as are listed in State Finance Law §139(3). The deposit shall be an amount equal to at least double the value of such uncompleted work, including those pay items that are uncompleted and such work that is required but not included as a contract pay item. The deposit will be held by the Department until the Engineer certifies that all previously uncompleted work has been satisfactorily completed. When the Contractor satisfactorily completes the uncompleted portions of work, the deposit will be returned. No partial releases of funds from an Uncompleted Work Agreement will be made. If portions of uncompleted work will be completed at varying times, the Department may consider the use of multiple Uncompleted Work Agreements.

EXCAVATION AND EMBANKMENT

Make the following changes to the Standard Specifications dated May 1, 2008:

Page 153, **Delete** the first paragraph of §202-3.09 and **Replace** it with the following:

The appropriate construction details specified for Section 203 *Excavation and Embankment*, as stated in §203-3.01 *General* through and including §203-3.02 *Unclassified Excavation and Disposal* shall apply. The excavation shall be dewatered and kept free from water, snow and ice when necessary.

Page 186, **Delete** “§203-1.01” in the first paragraph of §206-1.01 and **Replace** it with “Section 203, *Definitions*”.

Page 187, **Delete** the first paragraph of §206-3.01 entirely and **Replace** it with the following:

The appropriate construction details specified for “Excavation and Embankment” in §203-3.01 *General* through and including §203-3.03 *Embankment In Place*, and §203-3.06 *Select Granular Fill* and §203-3.14 *Select Structural Fill* shall apply to the work specified in this section.

Page 187, **Delete** the first paragraph of §206-3.03 entirely and **Replace** it with the following:

The provisions of §203-3.01D *Suitable Materials* and/or §203-3.01E *Unsuitable Materials* shall apply to all material excavated under this section which is not used as backfill.

Page 195, **Delete** “§203-3.08, Disposal of Surplus Excavated Materials” in the second bullet of the third paragraph of §209-3.02 and **Replace** it with “Section 203, *Disposal of Surplus Excavated Material*”.

Page 205, **Delete** “§203-3.16, Borrow” in the first paragraph of §302-2.03 and **Replace** it with “Section 203, *Borrow*”.

Page 212, **Delete** “§203-3.12, Compaction” in the first paragraph of §304-3.03 and **Replace** it with “Section 203, *Compaction*”.

Page 214, **Delete** “§203-3.12, Compaction” in the first paragraph of §307-3.01 D and **Replace** it with “Section 203, *Compaction*”.

Page 215, **Delete** “§203-3.12, Compaction” in the first paragraph of §307-3.10 and **Replace** it with “Section 203, *Compaction*”.

Page 277, **Delete** each use of “§203-3.12, Compaction” in the first paragraph of §411-3.03 and **Replace** it with “Section 203, *Compaction*”.

As modified by EI 08-037, **Delete** “§203-2.02 C Select Granular Fill and Select Structure Fill” in the first paragraph of §554-2.02 A 2 b and **Replace** it with “Section 203, *Select Granular Fill*”.

As modified by EI 08-037, **Delete** “§203-2.02 C Select Granular Fill and Select Structure Fill” in the first paragraph of §554-2.03 B 1 and **Replace** it with “Section 203, *Select Structural Fill*”.

EXCAVATION AND EMBANKMENT

As modified by EI 08-037, **Delete** “§203-2.02 C Select Granular Fill and Select Structure Fill” in the second paragraph of §554-2.03 C 2 and **Replace** it with “Section 203, *Select Structural Fill*”.

As modified by EI 08-037, **Delete** “§203-3.12 B.6. *Compaction Equipment for Confined Areas*” in the first paragraph of §554-3.01 D 3 c and **Replace** it with “Section 203, *Compaction Equipment for Confined Areas*”.

As modified by EI 08-037, **Delete** “§203-3.12 B.6. *Compaction Equipment for Confined Areas*” in the first paragraph of §554-3.02 D 4 and **Replace** it with “Section 203, *Compaction Equipment for Confined Areas*”.

As modified by EI 08-037, **Delete** “§203-3.12 *Compaction*” in the first paragraph of §554-3.02 F 5 and **Replace** it with “Section 203, *Compaction*”.

As modified by EI 08-037, **Delete** “§203-3.12 *Compaction*” in the first paragraph of §554-3.03 C 4 and **Replace** it with “Section 203, *Compaction*”.

Page 482, **Delete** “§203-3.15, “Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables”” in the second paragraph of §597-3.02 G and **Replace** it with “Section 203, *Select Structural Fill*.”

Page 489, **Delete** “§203-3.15, Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables” in the first paragraph of §603-3.03 and **Replace** it with “Section 203, *Select Granular Fill*.”

Page 497, **Delete** “§203-3.15, Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables” in the first paragraph of §604-3.11 and **Replace** it with “Section 203, *Select Granular Fill*.”

Page 506, **Delete** “§203-3.15, Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables” in the fourth paragraph of §606-3.01 D and **Replace** it with “Section 203, *Select Granular Fill*.”

Page 507, **Delete** “§203-3.15” in the first paragraph of §606-3.01 E and **Replace** it with “Section 203, *Select Granular Fill*.”

Page 604, **Delete** “§203-3.12, *Compaction*” in the first paragraph of §620-3.01 and **Replace** it with “Section 203, *Compaction*”.

As modified by EI 08-020, **Delete** the first paragraph of §632-2.02 and **Replace** it with the following:

Backfill material shall conform to the material requirements as specified in Section 203, *Select Structural Fill*.

EXCAVATION AND EMBANKMENT

As modified by EI 08-020, **Delete** the first paragraph of §632-2.03 and **Replace** it with the following:

Unit infill material shall conform to the material requirements as specified in Section 203, *Select Structural Fill*.

As modified by EI 08-020, **Delete** “§203-3.15, Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables” in the second paragraph of §632-3.02 E and **Replace** it with “Section 203, *Select Structural Fill*.”

Page 648, **Delete** “§203-3.08, Disposal of Surplus Excavated Materials” in the second paragraph of §644-3.04 and **Replace** it with “Section 203, *Disposal of Surplus Excavated Material*”.

Page 648, **Delete** “§203-3.15, Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables” in the third paragraph of §644-3.04 and **Replace** it with “Section 203, *Select Structural Fill*.”

Page 694, **Delete** “§203-3.15, Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables” in the first paragraph of §659-3.04 and **Replace** it with “Section 203, *Select Granular Fill*.”

Page 695, **Delete** “§203-3.15, Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables” in the first paragraph of §660-3.04 and **Replace** it with “Section 203, *Select Granular Fill*.”

Page 695, **Delete** “§203-3.15, Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables” in the first paragraph of §661-3.04 and **Replace** it with “Section 203, *Select Granular Fill*.”

Page 696, **Delete** “§203-3.15, Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables” in the first paragraph of §662-3.04 and **Replace** it with “Section 203, *Select Granular Fill*.”

Page 698, **Delete** “§203-3.15, Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables” in the second paragraph of §663-3.04 and **Replace** it with “Section 203, *Select Granular Fill*.”

Page 706, **Delete** “§203-3.15, Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables” in the first paragraph of §664-3.04 and **Replace** it with “Section 203, *Select Granular Fill*.”

Page 709, **Delete** “§203-3.12, Compaction” in the first paragraph of §667-3.03 and **Replace** it with “Section 203, *Compaction*”.

EXCAVATION AND EMBANKMENT

Page 711, **Delete** “§203-3.08, Disposal of Surplus Excavated Materials” in the fourth paragraph of §670-3.03 and **Replace** it with “Section 203, *Disposal of Surplus Excavated Material*”.

Page 711, **Delete** “§203-3.15, Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables” in the fourth paragraph of §670-3.03 and **Replace** it with “Section 203, *Select Granular Fill*.”

Page 712, **Delete** the second sentence in the Method B of the sixth paragraph of §670-3.04 and **Replace** it with the following:

The clear area shall be backfilled with Select Granular Fill in accordance with §203-2.06 *Select Granular Fill*, and compacted in accordance with §203-3.06 *Select Granular Fill*.

Page 713, **Delete** “§203-3.15, Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables” in the second paragraph of §670-3.07 and **Replace** it with “Section 203, *Select Granular Fill*.”

Page 714, **Delete** “§203-3.15, Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables” in the sixth paragraph of §670-3.08 and **Replace** it with “Section 203, *Select Granular Fill*.”

Page 723, **Delete** “§203-3.08, Disposal of Surplus Excavated Materials” in the second paragraph of §680-3.09 and **Replace** it with “Section 203, *Disposal of Surplus Excavated Material*”.

Page 723, **Delete** “§203-3.15, Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables” in the third paragraph of §680-3.09 and **Replace** it with “Section 203, *Select Granular Fill*.”

Page 725, **Delete** “§203-3.15, Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables” in the first paragraph of §680-3.13 and **Replace** it with “Section 203, *Select Granular Fill*.”

Page 156-176, **Delete** SECTION 203 entirely and **Replace** it with the following:

SECTION 203 - EXCAVATION AND EMBANKMENT

203-1 DESCRIPTION. This work shall consist of excavation, disposal, placement and compaction of all materials that are not provided for under another section of these Specifications, and shall be executed in conformance with payment lines, grades, thicknesses and typical sections specified in the contract documents.

203-1.01 Definitions.

A. Unclassified Excavation. Unclassified excavation shall consist of the excavation and disposal of all materials, of any description, encountered in the course of construction, unless

EXCAVATION AND EMBANKMENT

otherwise specified in the contract. Estimated limits and descriptions of subsurface deposits and formations which may be shown in the contract documents are supplied as a part of Base Line Data.

B. Embankment. The embankment is the portion of a fill section situated between the embankment foundation and the subgrade surface, excluding any material placed under another section of these specifications.

C. Embankment Foundation. The embankment foundation is the surface upon which an embankment is constructed after all work required under §203-3.03A. *Embankment Foundation* has been completed.

D. Subgrade Surface. The subgrade surface is the surface of the road section upon which the select materials and/or subbase are placed.

E. Subgrade Area. The subgrade area is that portion of an embankment situated above either of the following, but excluding any material placed under another section of these specifications.

1. A line located 2 ft. below the subgrade surface and extended to the intersection with the embankment side slopes, or
2. The embankment foundation, whichever is higher.

The material and compaction requirements for the subgrade area in embankments are found in §203-2.01A. *Subgrade Area Material* and §203-3.03C. *Compaction*, respectively.

In cut sections, the subgrade area is not defined except where undercut and backfill with a select material item is specified or ordered: in such cases, the payment lines for undercut work shall define the subgrade area.

F. Embankment Side Slope Area. The embankment side slope areas are those cross-sectional areas of an embankment situated outside of lines projected downward and outward on a one on one slope from the edges of the subgrade surface to their intersection with the embankment foundation, but excluding any portion lying within a subgrade area.

G. Topsoil. See Section 613 *Topsoil*.

H. Suitable Material. A material whose composition is satisfactory for use in embankment construction is a suitable material. The moisture content of the material has no bearing upon such designation. In general, any mineral (inorganic) soil, blasted or broken rock and similar materials of natural or man made (i.e. recycled) origin, including mixtures thereof, are considered suitable materials. Determinations of whether a specific natural material is a suitable material shall be made by the Engineer on the above basis.

Recycled materials that the Department has evaluated and approved for general use shall be considered to be suitable material for embankment construction subject to the conditions for use as determined by the Department. The Regional Geotechnical Engineer and Geotechnical Engineering Bureau are available to provide guidance on the use of such materials. In general, the use of recycled materials must be also sanctioned by the Department of Environmental Conservation, usually in the

EXCAVATION AND EMBANKMENT

form of a Beneficial Use Determination (BUD).

Glass from recycling facilities meeting the requirements of §733-05 *Glass Backfill* shall be considered suitable material for embankment construction.

Reclaimed Asphalt Pavement (RAP), and Recycled Portland Cement Concrete Aggregate (RCA) shall be considered suitable materials for embankment construction, subject to the following conditions for use:

RAP - The Contractor shall provide and place RAP conforming to the requirements of §733-06 *Reclaimed Asphalt Pavement for Earthwork and Subbase*.

RCA-The Contractor shall provide and place RCA conforming to the requirements of §733-07 *Recycled Portland Cement Concrete Aggregate*.

Pieces of broken up concrete pavement from on-site pavement removal or in-place recycling (i.e. rubblizing, crack and seat, break and seat, etc.) may be used in embankment construction. Refer to §203-3.03A. *Embankment Foundation* and §203-3.03B. *Embankments*.

I. Unsuitable Material. Any material containing vegetable or organic matter, such as muck, peat, organic silt, topsoil or sod, or other material that is not satisfactory for use in embankment construction under §203-1.01H. *Suitable Material* is designated as an unsuitable material. Certain man made deposits of industrial waste, toxic or contaminated materials, sludge, landfill or other material may also be determined to be unsuitable materials, based on an evaluation by the Department's Geotechnical Engineering Bureau and Office of Environment, and the Department of Environmental Conservation.

J. Borrow. Borrow is material required for earthwork construction in excess of the quantity of suitable material available from the required grading, cuts and excavations. Borrow may be necessary even though not shown in the contract documents.

K. Embankment Construction Control Devices. Embankment construction control devices allow real-time observations of embankment construction to assess the actual performance of the embankment compared to that envisioned in the design phase. Settlement and pore water pressure are common measures of embankment performance. Techniques for monitoring settlement include a settlement rod or a surface settlement gauge. A settlement rod is an optical survey technique to monitor settlement of the embankment surface. The settlement rod(s) establish monitoring point(s) in relation to a reliable bench mark.

A surface settlement gauge is an optical survey technique to monitor settlement of the existing ground surface, below the embankment installation. The surface settlement gauge is installed prior to placing the embankment and extended upwards through the fill.

Pore water pressure monitoring may be used to determine the effective overburden diagrams (the basis of all geotechnical analyses), monitoring consolidation progress of embankments constructed over soft soils, evaluating seepage in natural slopes or earth dams (slope stability), checking the effectiveness of subsurface drainage facilities, or monitoring water well tests.

A piezometer is an instrument which provides measurements of pore water pressure at the elevation of the installed sensor. Pore pressure data is needed in a foundation soil to assess the excess pore water pressure and hence the undrained strength of the soil. Piezometers are used at various depths within cohesive foundation soils. Some piezometers are used in granular foundation soils to assess their drainage behavior.

EXCAVATION AND EMBANKMENT

L. Proof Rolling. Proof rolling consists of applying test loads over the subgrade surface by means of a heavy pneumatic-tired roller of specified design, to locate and permit timely correction of deficiencies likely to adversely affect performance of the pavement structure.

M. Select Granular Fill – Slope Protection. Select granular fill – slope protection is a material used to protect the grade of a slope from erosion and sloughing from runoff and groundwater seepage. Seepage is the slow movement of water through small openings and spaces in the surface of unsaturated soil into or out of a body of surface or subsurface water. Sloughing is a shallow surface failure caused by erosive removal of supporting material.

Select granular fill – slope protection is highly permeable while also providing sufficient frictional resistance to resist seepage forces and remain in place.

N. Applying Water. Under this work, the Contractor shall furnish and apply water for dust control. Moisture control for compaction purposes is the Contractor's responsibility. Water shall not be applied in inclement weather or when the temperature is 32° F or less.

O. Modifying Cut Slopes and Other Means of Obtaining Borrow. The Regional Director may approve the modification of cut slopes and other means of obtaining material, which is not part of the contract, so long as provisions are made to prevent unsafe conditions, damage, and nuisances to property, wildlife areas, and haul routes within and outside the contract limits. Such approval may be granted only after review of a written proposal by the Contractor showing the final deposition of the material, the haul route, hauling hours, and provisions necessary to comply with the above. Should unanticipated conditions arise resulting in any unsatisfactory situation, the Engineer shall immediately rescind the approval pending satisfactory correction.

The following procedure shall apply to areas within the R.O.W. limits which are not designated as available sources of borrow by a Special Note in the contract proposal where the Contractor requests and is granted permission to modify slopes to obtain material for use on State contract work only. The Contractor will be required to reimburse the State with a rebate for the material obtained in these areas. Permission will not be granted to excavate material beyond the design slopes if it is to be used on other than State contract work.

The rebate to be obtained from the Contractor for this material is comprised of 1) A royalty based on the actual value of the excavated material, and 2) A credit for the difference in the Contractor's handling costs if these handling costs have been reduced. The royalty which is to be obtained for the excavated material shall be appropriate for the item for which it is to be utilized and shall be comparable to the current price being paid to purchase similar material in the area.

If the Contractor's handling costs associated with obtaining material from within the R.O.W. limits are greater than those for obtaining material from other acceptable sources, these additional handling costs must be borne by the Contractor. The royalty shall not be reduced to offset any increased handling costs incurred by the Contractor.

If the Contractor's handling costs associated with obtaining materials from within the R.O.W. limits are less than those for obtaining material from other acceptable sources, the differences shall be reimbursed to the State as a credit in addition to the royalty.

The difference in the Contractor's handling cost shall be determined by an analysis based on a comparison of haul lengths, hauling equipment, hauling operation, use of haul roads or public highways, preparation and restoration of the borrow areas, and any other variables involved.

Prior to modifying rock cut slopes, the Geotechnical Engineering Bureau must be consulted. If

EXCAVATION AND EMBANKMENT

rock cut slopes are flattened sufficiently to eliminate the need for presplitting, an additional rebate will be necessary.

All special requirements to be fulfilled by the Contractor, at the Contractor's own expense, shall be clearly stated in the agreement. The foregoing requirement of receiving a rebate from the Contractor for material obtained by modification of slopes shall apply only to locations not designated in the Contract Documents.

P. Winter Earthwork. Compaction of soil during cold weather is difficult and can be impractical. Water acts as a lubricant aiding in the process of compaction. As the temperature decreases, the water becomes more viscous (less slippery) and inhibits efforts to pack the soil particles together. Eventually, the water becomes ice, at which point compaction is impossible. For this reason, New York State does not permit normal earthwork placement between November 1st thru April 1st unless there is an approved Winter Earthwork submittal.

Winter Earthwork is defined as construction operations requiring soil compaction performed from November 1st thru April 1st. The execution of Winter Earthwork requires modifications to compaction procedures, changes to material requirements, and/or additional equipment and structure assembly for controlling the weather effects on the material and existing ground conditions.

Although Winter Earthwork may be performed when the air temperature, ground temperature, or material temperature is at or below 32° F, frozen material will not be placed, nor will fill material be placed on ground frozen to any depth, in any work incorporated into the final product

203-2 MATERIALS

203-2.01 General. The requirements for select materials and subgrade area materials are described below. All processing operations including washing, removal of oversize material, blending, or crushing shall be completed at the source of the material. The procedure for acceptance or rejection of these materials shall be in conformance with the procedures contained in the geotechnical control procedure “*Procedure for the Control and Quality Assurance of Granular Materials*”.

A. Subgrade Area Material. Subgrade area material shall consist of any suitable material having no particles greater than 6 in. in maximum dimension, unless Select Granular Subgrade with the well graded rock option is used. In that case, refer to §733-13 *Select Granular Subgrade*. If concrete is used, any exposed mesh or rebar shall not exceed 1 in. in length. RAP is also permitted.

B. Glass Backfill. Provide backfill material meeting the requirements of §733-05 *Glass Backfill*.

C. RAP. Provide backfill material meeting the requirements of §733-06 *Reclaimed Asphalt Pavement for Earthwork and Subbase*.

D. RCA. Provide backfill material meeting the requirements of §733-07 *Recycled Portland Cement Concrete Aggregate*.

E. Miscellaneous. Necessary fill material for cleaning, grading and shaping the existing roadside section shall conform to the requirements of §203-2.01A, *Subgrade Area Material*.

203-2.02 Unclassified Excavation and Disposal. None Specified.

EXCAVATION AND EMBANKMENT

203-2.03 Embankment In Place. Provide backfill material meeting the requirements of §733-08 *Embankment In Place*.

1. Embankment In Place – Winter Earthwork. If modified methods and procedures are not outlined in the Winter Earthwork Submittal, provide backfill material meeting the requirements of §733-16 *Winter Earthwork Material for Embankment In Place*.

203-2.04 Select Borrow. Provide backfill material meeting the requirements of §733-09 *Select Borrow*.

1. Select Borrow – Winter Earthwork. If modified methods and procedures are not outlined in the Winter Earthwork Submittal, provide backfill material meeting the requirements of §733-16 *Winter Earthwork Material for Select Borrow*.

203-2.05 Select Fill. Provide backfill material meeting the requirements of §733-10 *Select Fill*.

1. Select Fill – Winter Earthwork. If modified methods and procedures are not outlined in the Winter Earthwork Submittal, provide backfill material meeting the requirements of §733-16 *Winter Earthwork Material for Select Fill*.

203-2.06 Select Granular Fill. Provide backfill material meeting the requirements of §733-11 *Select Granular Fill*.

1. Select Granular Fill – Winter Earthwork. If modified methods and procedures are not outlined in the Winter Earthwork Submittal, provide backfill material meeting the requirements of §733-16 *Winter Earthwork Material for Select Granular Fill*.

203-2.07 Select Granular Fill Slope Protection. Provide backfill material meeting the requirements of §733-12 *Select Granular Fill Slope Protection*.

1. Select Granular Fill Slope Protection – Winter Earthwork. If modified methods and procedures are not outlined in the Winter Earthwork Submittal, provide backfill material meeting the requirements of §733-16 *Winter Earthwork Material for Select Granular Fill Slope Protection*.

203-2.08 Surface Settlement Gauges. Provide materials for the embankment construction control device surface settlement gauge meeting the requirements of §733-17 *Surface Settlement Gauge*.

203-2.09 Settlement Rods. Provide materials for the embankment construction control device settlement rod meeting the requirements of §733-18 *Settlement Rod*.

203-2.10 Piezometers. Provide materials for the piezometer installation meeting the requirements of §732-11 *Open Well Piezometer*.

203-2.11 Applying Water. Water used for dust control purposes may be obtained from any source.

EXCAVATION AND EMBANKMENT

203-2.12 Select Granular Subgrade. Provide backfill material meeting the requirements of §733-13 *Select Granular Subgrade*.

1. Select Granular Subgrade – Winter Earthwork. If modified methods and procedures are not outlined in the Winter Earthwork Submittal, provide backfill material meeting the requirements of §733-16 *Winter Earthwork Material for Select Granular Subgrade*.

203-2.13 Select Structural Fill. Provide backfill material meeting the requirements of §733-14 *Select Structural Fill*.

1. Select Structural Fill – Winter Earthwork. If modified methods and procedures are not outlined in the Winter Earthwork Submittal, provide backfill material meeting the requirements of §733-16 *Winter Earthwork Material for Select Structural Fill*.

203-2.14 Sand Backfill. Provide backfill material meeting the requirements of §733-15 *Sand Backfill*.

203-3 CONSTRUCTION DETAILS

203-3.01 General. The Contractor shall remove all soil, rock, and other material, and utilize or dispose of these materials as required by the contract documents. All excavation and embankment work shall be executed to payment lines shown in the contract documents.

All graded earth surfaces outside the roadway limits shall be smoothed and trimmed in reasonably close conformity (6± in.) of true grade. After trimming, the area shall be left in a compact and satisfactory condition, free of large stones or other objectionable materials, as determined by the Engineer.

Earthwork construction operations requiring compaction shall not be performed from November 1st thru April 1st except with a Winter Earthwork submittal subject to the provision of this Section and approved by the Regional Director or his designated representative. Winter earthwork operations constitute an additional risk to the Department and Winter Earthwork submittals should not be expected to be automatically approved. Winter Earthwork will be subject to the following restrictions:

- Transitioning from the normal construction season to the exempt winter earthwork months between November 1st and April 1st, the use of standard earthwork materials may be permitted only under the conditions where the air temperature, ground temperature and material temperature are all above 32° F at the time of placement. Modifications to compaction procedures, including but not limited to the use of thinner lifts, may be required when the temperatures are above 32° F but below 40° F at the time of placement.
- Between November 1st and April 1st, if the air temperature, ground temperature, or material temperature is at or below 32° F, earthwork may only proceed using material that meets the requirements of §733-16 *Winter Earthwork* and/or standard earthwork material placement utilizing the modified methods and procedures contained in the approved Winter Earthwork Submittal.

In all work incorporated into the final product, the Contractor shall not place material that is frozen, or place fill material on ground that is frozen to any depth regardless of the date.

EXCAVATION AND EMBANKMENT

A. Winter Earthwork Submittal. For Contractors choosing to proceed with earthwork construction operations requiring compaction between November 1st thru April 1st, provide the Engineer with a Winter Earthwork submittal, with a copy to the Regional Geotechnical Engineer, outlining the modifications to the materials and/or methods including the following:

1. Material Requirements. The material meets the requirements of §733-16 *Winter Earthwork*. Provide information on material composition and source substitute, if proposed.

2. Material Placement. Provide information on the proposed methods for controlling the weather effects on the material and existing ground conditions (i.e. insulation, enclosures, canvas and framework). Devise a plan to be outlined in the Winter Earthwork Submittal such that all snow, ice, and frozen material shall be removed from the surface of the ground on which embankment or backfill material is to be placed, and from the surface under construction before succeeding lifts are added.

3. Procedures. Provide verification procedures to ensure the existing ground is not frozen to any depth (e.g. test pits). Provide procedures to address freeze-thaw action in earthwork that has remained idle during temperature fluctuations (e.g. re-roll and seal the surface prior to placement of succeeding lift).

4. Seasonal Adjustment Acceptance. Provide acknowledgement of a transition period allowing the continued use of standard earthwork materials between November 1st and April 1st only under conditions where the air temperature, ground temperature and material temperature are all above 32° F at the time of placement. Provide acknowledgement of the winter earthwork restrictions stating that, if the air temperature, ground temperature, or material temperature is at or below 32° F, earthwork will only proceed using material that meets the requirements of §733-16 *Winter Earthwork* and/or standard earthwork material placement utilizing the modified methods and procedures contained in the approved Winter Earthwork Submittal.

Proceed with Winter Earthwork only after receiving written approval by the Regional Director or his designated representative subject to the provisions of this Section.

B. Scheduling of Work to Minimize Soil Erosion and Water Pollution. The Contractor shall ensure effective and continuous soil erosion and sediment control throughout the construction period. The Contractor shall prepare and submit for approval, plans and schedules for all excavation, stripping, embankment, fill and grading operations. Such plans and schedules shall include but are not limited to temporary and permanent erosion control measures specified in Section 209 *Soil Erosion and Sediment Control*, Section 610 *Turf and Wildflower Establishment* and Section 612 *Sodding*.

C. Drainage and Grading. The Contractor shall provide and maintain slopes, crowns and ditches on all excavation and embankments to ensure satisfactory surface drainage at all times. Ditches and other drainage facilities necessary to remove ponded water shall be constructed as soon as practical to have the work area dry during the progression of work. All existing culverts and drainage systems shall be maintained in satisfactory operating condition throughout the course of the work. If it is necessary to interrupt existing surface drainage, sewers or under-drainage, then temporary drainage facilities shall be provided until the permanent drainage work is complete. Top-of-slope interceptor

EXCAVATION AND EMBANKMENT

ditches, where shown on the contract documents, shall be completed before adjacent excavation operations are begun. In earth cuts, the Contractor shall progress excavation operations in such a manner that the portion of the cut immediately adjacent to the design slope is at least 5 ft. lower than the general level of the cut at all times until the lower payment line is reached.

The construction of these temporary drainage facilities shall be considered as incidental to the construction of the project and no additional payment will be allowed.

Any portion of an embankment or subgrade which has been damaged by the Contractor's equipment during the course of construction, shall be repaired and re-compacted by the Contractor at no additional cost to the State.

Where seepage causes instability of slopes, excavation and backfill or other corrective measures shall be performed as ordered by the Engineer and paid for under the appropriate item. Excavation for the installation of slope protection may be necessary at any time and location throughout the duration of the contract and may not necessarily coincide with the Contractor's performance of the general excavation work.

D. Suitable Materials. Moisture content has no bearing on the suitability of material to be used for embankment construction, however, the moisture content of a material may be such that its use will require manipulation. It is the Contractor's responsibility to determine the economics of using, or disposing of and replacing, such materials. Material determined by the Contractor to be uneconomical for use may be disposed of as specified under §203-3.02B. *Disposal of Surplus Excavated Materials* and replaced with other material at no additional cost to the State.

When a contract includes the item "Unclassified Excavation and Disposal", all excavated suitable materials, including the excavation performed under "Structure Excavation" and "Trench and Culvert Excavation," shall become the Contractor's property for disposal or use under another item of these specifications.

E. Unsuitable Materials. All excavated unsuitable materials shall be the Contractor's property for disposal as surplus materials under the provisions of §203-3.02B. *Disposal of Surplus Excavated Materials*.

F. Borrow. The management of a borrow source and the acceptability of all borrow material shall be subject to the approval of the Engineer at all times. The Contractor shall notify the Engineer at least ten (10) work days in advance of opening any borrow area, and request approval of the source under the pay item involved. Test pits required by the Engineer to evaluate the acceptability and limits of the source, shall be provided by the Contractor at the Contractor's own expense. Concurrent removal of material for more than one pay item from a single source or pit shall be prohibited except with the written permission of, and under such conditions and restrictions as may be imposed by the Engineer. All borrow pits shall be stripped of sod, topsoil and vegetable matter well in advance of any working face. The minimum distance by which stripping shall lead excavation for a given source shall be established by the Engineer to suit local conditions. Where a borrow source is not under direct control of the Contractor or where special conditions exist, the Engineer may waive any of the above requirements and establish alternative provisions for the control and acceptability of borrow.

Ordinary borrow will be accepted for use where the material qualifies under the definition of Suitable Material, §203-1.01H. *Suitable Material*. All borrow placed within the limits of Embankment or the Subgrade Area shall be placed in conformance with §203-3.03B. *Embankments* or §203-3.01G. *Subgrade Area* respectively, as appropriate, or where used for fill or backfill at

EXCAVATION AND EMBANKMENT

structures, culverts and pipes, in conformance with §203-3.06 *Select Granular Fill* and §203-3.17 *Select Structural Fill*.

G. Subgrade Area. Where a subgrade area is defined in an embankment by §203-1.01E. *Subgrade Area*, the material placed shall conform to §203-2.01A. *Subgrade Area Material*, placed and compacted in conformance with §203-3.03B. *Embankments* and §203-3.03C. *Compaction*. Where longitudinal and transverse changes from cut to fill are encountered in the work, a subgrade transition section shall be provided in conformance with Standard Sheet *Earthwork Transition and Benching Details*. Where a subgrade area becomes defined by §203-1.01E. *Subgrade Area* in a cut section, the materials placed and other details shall be as specified under §203-3.02C. *Proof Rolling in Cut Sections* 3. *Procedure*, unless otherwise required by the contract documents. Prior to subbase course placement, the surface on which the subbase is to be placed shall be thoroughly compacted to the satisfaction of the Engineer.

1. Subgrade Surface Tolerance. After compaction, the subgrade surface shall not be above design elevation at any location.

203-3.02 Unclassified Excavation and Disposal.

A. Rock Excavation. Presplitting is required where the design rock slope is 1 vertical on 1 horizontal or steeper and the vertical height of the exposed rock slope exceeds 5 ft. Ripping will not be allowed within 10 ft. of a slope that requires presplitting. Test sections will be required at the outset of presplit drilling and blasting operations for the evaluation of the presplit rock slopes by a Departmental Engineering Geologist. The Contractor will be required to completely expose the presplit rock face in the test section for evaluation prior to any further presplit drilling.

All rock slopes shall be thoroughly scaled and cleaned. For rock excavations involving multiple lifts, scaling of upper lifts shall be completed prior to drilling and fragmenting of lower lifts. Scaled rock slopes shall be stable and free from possible hazards of falling rocks or rock slides that endanger public safety. If, after scaling, such conditions still exist, a determination of the cause will be made by a Departmental Engineering Geologist and if it is determined that the conditions are the result of poor quality work or improper methods employed by the Contractor, the Contractor shall provide approved remedial treatment, at no expense to the State. Such treatment may include, but is not necessarily limited to, laying back the slope, rock bolting, or shotcreting. In no case shall the subgrade be trimmed prior to the completion of the scaling operation at any location.

1. Presplitting. Prior to drilling presplitting holes, the overburden shall be completely removed to expose the rock surface along the presplitting line. The methods of collaring the holes to achieve required inclination and alignment shall be approved by the Engineer.

The presplitting holes shall be a maximum of 4 in. in diameter, spaced not more than 3 ft. center to center along the slope, and drilled at the designed slope inclination for a maximum slope distance of 60 ft. When excavation operations are conducted in multiple lifts, the presplitting holes for successive lifts may be offset a distance of not more than 3 ft. for a design slope of 1 vertical on 1 horizontal and not more than 1 ft. for slopes of steeper design; however, a presplitting hole shall not be started inside the payment line. The Contractor shall control the presplit drilling operations by using proper equipment and technique to achieve the design slope and maximum bench between lifts. If presplitting is conducted in lifts, each lift shall be of

EXCAVATION AND EMBANKMENT

approximately equal depth. All presplitting holes shall be checked and cleared of obstructions immediately prior to loading any holes in a round. All presplitting holes shall be loaded with a continuous column charge manufactured especially for presplitting which contains not more than 0.35 lbs. of explosive per foot. The top of the charge shall be located not more than 3 ft. below the top of rock. A bottom charge of not more than 3 lbs. of packaged explosive may be used; however, no portion of any bottom charge shall be placed against a proposed finished slope. Each presplitting hole shall be filled with No. 1A crushed stone stemming meeting the gradation requirements of §703-02 *Coarse Aggregate*. The presplitting charges shall be fired with detonating cord extending the full depth of each hole and attached to a trunk line at the surface. Detonation of the trunk line shall be with blasting cap(s) and shall precede the detonation of fragmentation charges within the section by a minimum of 25 milliseconds. Presplitting shall extend for a minimum distance equal to the burden plus 3 ft. beyond the limits of fragmentation blasting within the section.

2. Fragmentation Blasting. Fragmentation holes, or portions thereof, shall not be drilled closer than 4 ft. to the proposed finished slope. Where presplitting is required, fragmentation holes adjacent to the presplitting holes shall be drilled parallel to the presplitting holes for the full depth of the production lift at a spacing not exceeding the spacing of the production pattern. Only packaged explosives shall be used 10 ft. or less from a design slope which requires presplitting regardless of the construction sequence.

Fragmentation charges shall be detonated by properly sequenced millisecond delay blasting caps.

3. Explosive Loading Limits. In the absence of more stringent requirements, the maximum quantity of explosives allowed per delay period shall be based on a maximum particle velocity of 2 in./s at the nearest structure to be protected. In the absence of seismic monitoring equipment, the following explosive loading limits shall apply:

DISTANCE EQUAL TO OR LESS THAN 212 ft. FROM THE NEAREST STRUCTURE

- a. When the distance from the proposed blasting area to the nearest structure to be protected is 6 ft. or less, no blasting shall be allowed.
- b. When the distance between the blasting area and the nearest structure to be protected is greater than 6 ft. and equal to or less than 15 ft., a maximum of ¼ lb. of explosives per delay period (minimum of 25 milliseconds) blasting cap shall be allowed.
- c. When the distance between the blasting area and the nearest structure to be protected is greater than 15 ft. and equal to or less than 212 ft., a Scaled Distance of 30 ft. shall be utilized to determine the maximum amount of explosive allowed per delay period (minimum of 25 milliseconds) blasting cap. The Scaled Distance Formula is as described below:

$SD = \frac{D}{\sqrt{E_{\max}}}$
where: SD = Scaled Distance D = Distance from blasting area to nearest structure to be

EXCAVATION AND EMBANKMENT

protected in feet

or

$E_{\max} = \frac{D^2}{(SD)^2}$
where: $E_{\max}$ = Maximum pounds of explosive per delay period (minimum of 25 milliseconds) blasting cap

DISTANCE GREATER THAN 212 ft. FROM THE NEAREST STRUCTURE

a. When the blaster elects to utilize more than 50 lbs. of explosive per delay period (minimum of 25 milliseconds) blasting cap, a seismograph shall be employed to monitor the blasting vibrations generated. The initial loading shall be computed using a Scaled Distance of 30 ft. The resulting particle velocity measured by the seismograph shall be evaluated by a Department Engineering Geologist. The Geologist's evaluation shall be the basis for adjusting the Scaled Distance.

No separate payment shall be made for this work. The cost shall be included in the appropriate excavation item. The above requirements shall in no way relieve the Contractor of liability for any damage incurred as a result of the blasting operations.

B. Disposal of Surplus Excavated Materials. Only unsuitable materials, or that portion of suitable material excavated in excess of the quantity required to construct all embankments on the project, shall be considered as surplus.

Where disposal of surplus materials cannot be accommodated within the right of way, the excess shall become the Contractor's property for disposal. Surplus material disposed of within the right-of-way shall be placed in accordance with §107-10 *Managing Surplus Material And Waste*.

C. Proof Rolling in Cut Sections. Immediately prior to final trimming of the subgrade surface and placement of subbase materials in cut sections, all areas of the subgrade surface within roadway limits shall be proof rolled according to the requirements of this subsection. This work, and any delays due to this work, shall be considered incidental to the excavation item.

1. Purpose. In cut sections, the purpose of proof rolling is to determine the location and extent of areas below the subgrade surface that require corrective undercutting and are not so specified in the contract documents.

2. Equipment. The proof roller used in embankment sections, as specified in §203-3.03D. *Proof Rolling in Embankment Sections 1. Equipment*, shall be employed for proof rolling in cut sections except that the roller shall be loaded to achieve a single stress level in operation, using a gross ballasted weight of 30 tons and all tires inflated to 40 psi.

3. Procedure. Two complete passes shall be applied over all elements of the area to be proof

EXCAVATION AND EMBANKMENT

rolled. Where any portion of the cut subgrade surface other than that which has been damaged by the Contractor's operations fails to provide a satisfactory support for the proof rolling operation, the Engineer may order corrective undercut and backfill work performed. Backfill of undercuts shown in the contract documents or ordered by the Engineer shall be in conformance with §203.3-13 *Select Granular Subgrade*. Where natural soil below this course will not support the weight of the construction equipment, and when ordered by the Engineer, the course shall be placed in one lift. No additional proof rolling shall follow corrective work.

4. Exceptions. Proof rolling of the subgrade surface in cut sections will not be required in any area where the subgrade surface is in a rock cut, or where undercut and backfill has been previously performed. The Engineer may order undercutting and backfill without proof rolling of any cut where the need for corrective work, as determined by the Engineer, is obvious without actual proof rolling. The Engineer may also delete proof rolling in any cut section where, based upon a written evaluation by a Departmental Geotechnical Engineer, proof rolling would be detrimental to the work.

203-3.03 Embankment In Place.

A. Embankment Foundation. After completion of the work required under Section 201 *Clearing and Grubbing*, and Section 202 *Removal of Structures and Obstructions*, the embankment foundation shall be prepared. Sod and topsoil shall be removed where the final pavement grade is 6 ft. or less above the existing ground surface and in other areas designated in the contract documents or by the Engineer. Prior to embankment construction and subbase course placement, the surface on which the embankment and/or subbase is to be placed shall be thoroughly compacted to the satisfaction of the Engineer. Unsuitable materials other than sod and topsoil shall be removed to the depths shown in the contract documents or as directed by the Engineer. Underwater areas shall be filled in accordance with §203-3.04 *Select Borrow* or §203-3.05 *Select Fill* and paid for under its appropriate item.

Where embankments are to be constructed over ground that will not adequately support embankment construction equipment, an initial layer of fill may be allowed to form a working platform. The need, manner of construction, and thickness of such a layer shall be subject to approval of the Engineer, and the layer will be permitted only where the lack of support is, as determined by the Engineer, not due to deficient ditching, grading or drainage practices or where the embankment could be constructed in the approved manner by the use of different equipment or procedures. Thicknesses of up to 3 ft. may be permitted for such a layer. Concrete or asphalt slabs may be used at the bottom of such a layer, provided they are placed horizontally.

In locations where embankments are to be constructed on hillsides or against existing embankments with slopes steeper than 1 vertical on 3 horizontal, the slopes shall be benched. Required benches shall be constructed as shown on the Standard Sheet *Earthwork Transition and Benching Details*.

Where old pavement is encountered within 2 ft. of the top of the subbase course, it shall be broken up or scarified.

B. Embankments. The embankment shall be constructed of suitable material as defined by §203-1.01H. *Suitable Material*. Embankment material shall not be placed on frozen earth, nor shall frozen soils be placed in any embankments. Embankment material shall be placed and spread in lifts (layers) of uniform thickness, then uniformly compacted as specified under applicable portions of §203-

EXCAVATION AND EMBANKMENT

3.03C. *Compaction.* During embankment construction operations, earth moving equipment shall be routed so as to prevent damage to any compacted lift. Damage to any compacted lift at any time during the course of construction, such as rutting under the loads imposed by earth moving equipment, shall be fully repaired by the Contractor at his/her own expense prior to placement of any overlying materials. At the close of each day's work, the working surface shall be crowned, shaped and rolled with smooth steel wheel or pneumatic tired rollers, for positive drainage.

Particles with a dimension in excess of $\frac{2}{3}$ of the loose lift thickness are designated as oversized particles. Oversized particles shall be removed prior to compaction of the lift and may be placed in the Embankment Side Slope Area.

Pieces of concrete or asphalt may be used provided that the voids between the pieces are completely filled, and the greatest dimension of any piece does not exceed $\frac{2}{3}$ the loose lift thickness. Exposed mesh or rebar shall not exceed 1 in. in length.

Embankments constructed using rock products or pieces of concrete shall be spread by bladed equipment on each lift to minimize the formation of large voids as the work progresses. The top lift of a rock or concrete fill shall be chinked.

When permitted by a note in the contract documents, stumps, logs, and other materials may be placed in the Embankment Side Slope Area, provided that: 1) such matter is deposited and compacted concurrent with the adjacent embankment, and; 2) any stumps or woody material are covered by not less than 2 ft. of soil beneath the exposed side slope surface.

Glass shall not be placed in contact with synthetic liners, geogrids, geotextiles or other geosynthetics.

C. Compaction

1. General Requirements. It shall be the Contractor's responsibility to properly place and compact all materials in the road section and other locations specified in the contract documents, and to correct any deficiencies resulting from insufficient or improper compaction of such materials throughout the contract period. The Contractor shall determine the type, size and weight of compactor best suited to the work at hand, select and control the lift (layer) thickness, exert control over the moisture content of the material, and other details necessary to obtain satisfactory results. During the progression of the work, the Department will inspect the Contractor's operations and will permit the work to continue where:

a. Lift thickness is controlled and does not exceed the maximum allowed according to the equipment classifications in subparagraph 2. *Compaction Equipment*, of this subsection, and the equipment meets all specified class criteria. Thinner lifts and lighter equipment than the maximum allowed may be necessary for satisfactory results on some materials.

b. The compactive effort (number of passes and travel speed) is uniformly applied and not less than that specified for the given equipment class and lift thickness. Higher efforts than the minimum allowed may be necessary for satisfactory results on some materials.

c. The Engineer concludes from a visual observation that adequate compaction has been attained, with the exception of backfill at structures, culverts, pipes, conduits, and direct burial cables. However, the State reserves the right to perform density tests at any time. When tests are performed, the results shall indicate that not less than 90% of Standard Proctor

EXCAVATION AND EMBANKMENT

Maximum Density is attained in any portion of an embankment, or 95% in a subgrade area, or as specified for other items with a percent maximum density requirement.

d. Significant rutting under the action of the compactor is not observed on the final passes on a lift.

Whenever the Contractor's operations do not conform to the above criteria, or requirements contained in other subparagraphs of this subsection, the Engineer will prohibit placement of an overlying lift until the Contractor takes effective corrective action.

As part of the Department's Quality Assurance (QA) program, the Engineer or his representative may verify the adequacy of the compaction at any time through QA testing. When the Engineer determines that QA tests are necessary, the Contractor shall provide any assistance requested to facilitate such tests. Such assistance shall include but will not be limited to excavation and backfill of test pits and holes. This work shall be considered to be incidental construction.

Damage to any compacted lift at any time during the course of construction such as rutting under the loads imposed by earth moving equipment, shall be fully repaired by the Contractor at his/her own expense prior to placement of any overlying materials.

2. Compaction Equipment. The selection of compaction equipment is the Contractor's responsibility, but shall be subject to meeting the requirements of this subparagraph and approval by the Engineer with respect to its provisions. All compaction equipment shall be marked by a permanently attached manufacturer's identification plate designating the name of the manufacturer, model number and serial number of the machine as minimum identification. This plate shall be installed in a readily visible location. Compaction equipment lacking such an original manufacturer's identification plate, or with altered or illegible plates, will not be recognized as acceptable compaction equipment. Any equipment not principally manufactured for soil compaction purposes and equipment which is not in proper working order in all respects shall not be approved or used. The Engineer will also withhold approval of any compactor for which the Contractor cannot furnish manufacturer's specifications covering data not obvious from a visual inspection of the equipment and necessary to determine its classification.

The term, "pass," for any type of compactor, shall denote one direct vertical application of compactor effort over all elemental areas of a lift surface. Terms in common parlance, such as "coverage," "trips," etc., have no significance, equivalence, or application under these specifications.

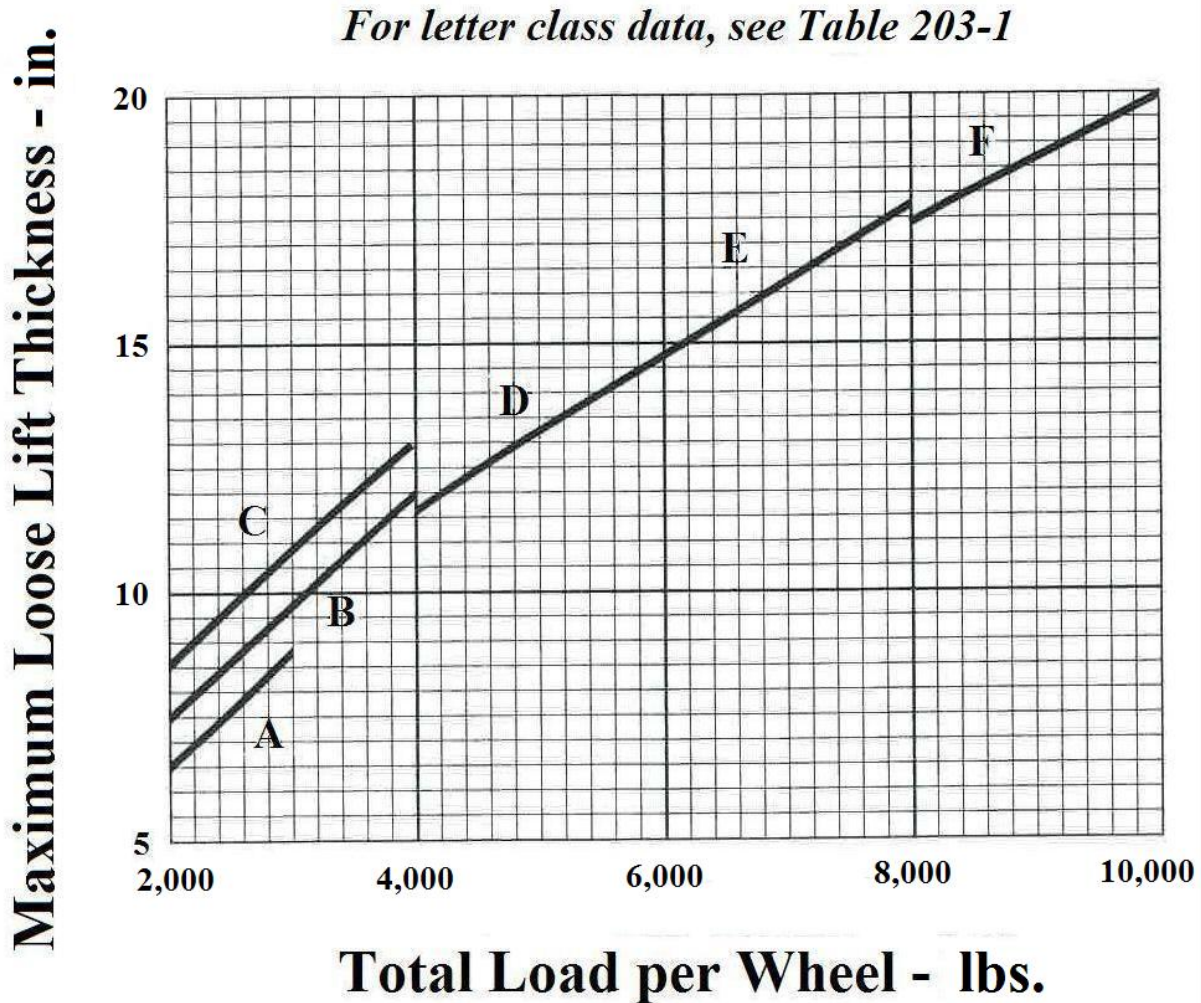
TABLE 203-1 PNEUMATIC-TIRED COMPACTOR CLASSIFICATIONS				
Pneumatic Compactor Class	Tire Requirements			Range of Ballasted Wheel Loads (lbs. per Wheel)
	Tire Size	No. Plys	Inflation Pressure (psi)	
A	7.50 x 15	4	35	2,000 – 3,000
B	7.50 x 15	6	60*	2,000 – 4,000
		10	90*	
C	7.50 x 15	14	130*	2,000 – 4,000

EXCAVATION AND EMBANKMENT

D	9.00 x 20	10	75*	4,000 – 6,000
		12	90*	
E	11.00 x 20	12	90*	6,000 – 8,000
		18		
F	13.00 x 24	18	100*	8,000 – 10,000
* Inflation pressure for not less than the last two passes on each lift. May be reduced during earlier passes and gradually increased to this level.				

a. *Pneumatic-Tired Compactors.* This type of compactor shall be classified for use according to the requirements of Table 203-1. For the lift thickness selected by the Contractor, the minimum class and wheel load which will be allowed on that lift thickness, shall be as shown in Figure 203-1.

EXCAVATION AND EMBANKMENT

FIGURE 203-1 PNEUMATIC-TIRED COMPACTORS

The minimum effort for all pneumatic compactors shall be 6 passes, at speeds up to 12 ft./sec on no more than the first 2 passes, and all subsequent passes at speeds of 6 ft./sec. or less.

b. Smooth Drum Vibratory Compactors. This type of compactor is defined as a machine which primarily develops its compactive effort from the vibrations created and is classified for use according to the developed compactive force rating (CFR) per linear inch of drum width.

The CFR is defined as follows:

EXCAVATION AND EMBANKMENT

CFR = <u>Unsprung Drum Weight (lbs.) + Dynamic Force (lbs.)</u> Drum Width (in.)

The unsprung drum weight is the static weight of the drum and appurtenances without any reaction transmitted to the drum from the main chassis of the compactor. The dynamic force produced is dependent on the frequency of vibration, and therefore, CFR ratings shall be determined for the actual operating frequency of the compactor. Approval for vibratory compactors shall be confined, however, to equipment operating at not less than 1100 vpm, nor more than 1500 vpm, and those where the actual dynamic force at the actual operating frequency is at least 2.5 times the unsprung drum weight.

Conversion of manufacturer's published ratings, at a given frequency, shall be made with the following equation:

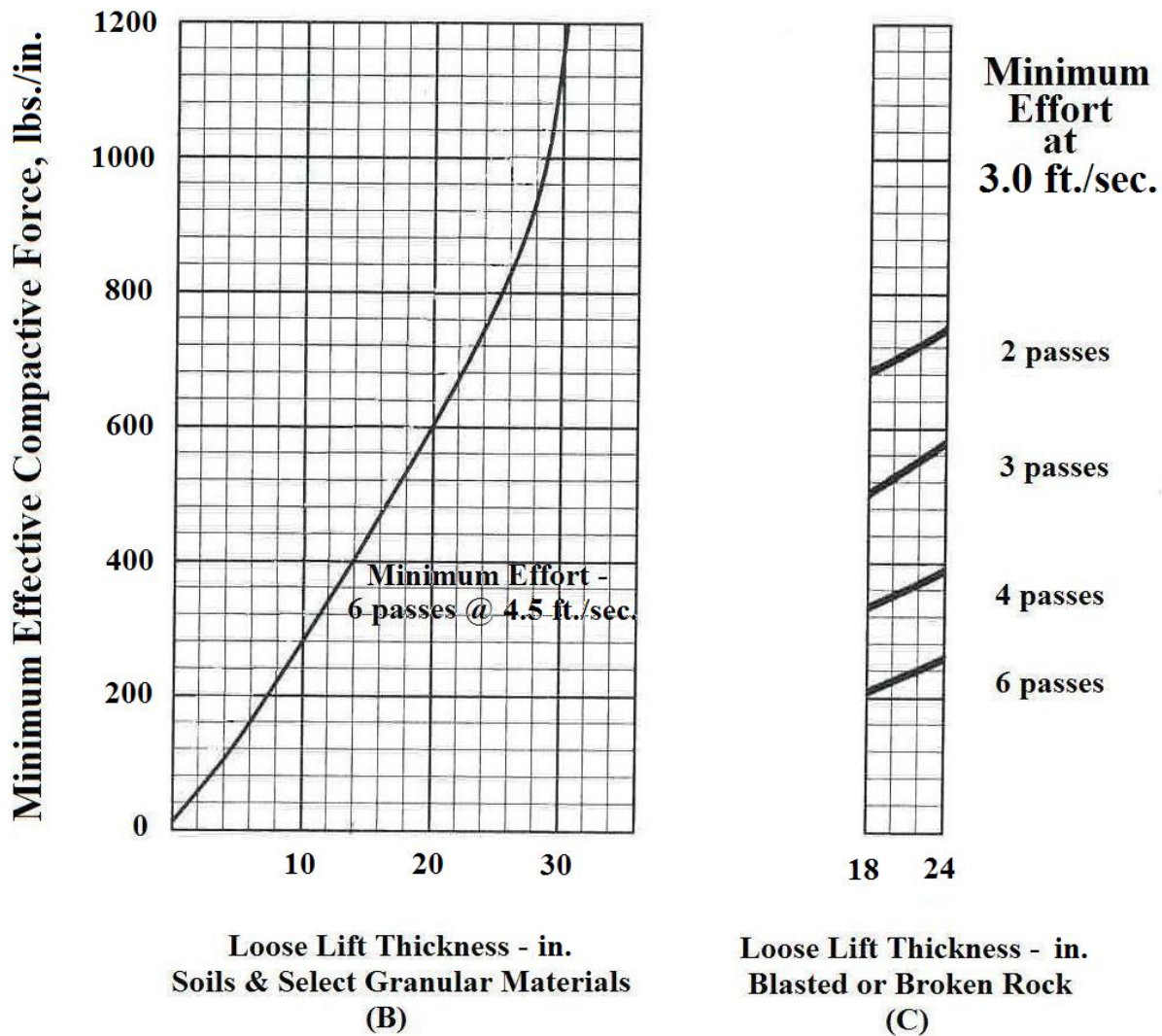
$F_2 = \frac{F_1 (V_2)^2}{(V_1)^2}$
where: F_1 = Dynamic Force at Rated Frequency F_2 = Dynamic Force at Operating Frequency V_1 = Rated Frequency V_2 = Operating Frequency

For the lift thickness selected by the Contractor, the minimum CFR rating and minimum effort on such a lift, shall be as shown in Figures 203-2B&C, respectively. Non-Centrifugal (Vertical force only) types of vibratory compactors shall be approved as above, less 175 lbs./in. before using Figures 203-2 B&C as a minimum number of passes at a single specified speed. An equivalent effort, relating varying numbers of passes to other speeds is given by the equation:

Speed X = <u>(Specified Speed) (Min. Passes at Speed X)</u> (Specified Min. Passes)

The Contractor may choose to alter the specified minimum pass requirement, provided that speed is adjusted to the value given by this equation and does not exceed 6 ft./sec.

EXCAVATION AND EMBANKMENT

FIGURE 203-2 VIBRATORY COMPACTORS

Where vibratory compactors are used on a project, the Contractor shall furnish for the exclusive use of the Engineer, one vibrating reed tachometer per project, plus one additional tachometer for each group of two vibratory compactors in excess of two per project. Tachometers shall have a frequency range adequate to cover operating frequencies of all vibratory compactors used on the project and shall have scale divisions of 50 vpm or less. Tachometers may be placed on the ground surface near the compactor when making readings, or with suitable damping materials interposed, placed directly on the compactor drum frame.

EXCAVATION AND EMBANKMENT

The dispensations permitted under this specification for vibratory compactors are contingent upon proper operation of the equipment at all times during compaction operations. In any instance where the Engineer encounters any problems with operators rolling without vibration, for any reason, and immediate and effective corrective action is not taken by the Contractor, the Engineer will halt the work until the problem is resolved. If continuing problems of this nature occur, the Engineer may suspend all provisions of this subparagraph and consider the vibratory compactors as smooth steel wheel rollers classified according to their gross weight.

c. Sheepfoot and Segmented Pad Foot Rollers. This type of compactor shall be defined as a machine which is primarily designed to compact a lift from the bottom to the top.

The maximum loose layer thickness of the material to be compacted shall be equal to the length of the feet plus 15%. The end area size and configuration of the feet shall be selected by the Contractor to suit the characteristics of soil being compacted.

Where sheepfoot and segmented pad foot rollers are used, with or without vibration, the number of passes required for job control shall be determined by a jobsite test in which the feet penetrate into the loose lifts and, with further passes, eventually and substantially “walk out” of the layer. This job control shall then be established for that machine, lift thickness and material, provided that adequate moisture control is continuously maintained per §203-3.03C. *Compaction 3. Moisture Control.* Sheepfoot and segmented pad foot rollers shall be operated at speeds not exceeding 6 ft./sec., when towed and 15 ft./sec. when self-propelled.

d. Smooth Steel Wheel Rollers. Smooth steel wheel rollers shall be considered as primary compactors on layers whose maximum thickness, after compaction, is 8 in. When so used, the roller shall have a nominal gross weight of not less than 10 tons, exert a minimum force of not less than 300 lbs/in. of width on the compression roll faces, and a minimum of 8 passes shall be applied over each lift with the roller operating at a speed not exceeding 6 ft./sec.

When the Contractor employs smooth steel wheel rollers exclusively for surface compaction, leveling or finishing operations on lifts previously compacted by other types of primary compactors, the above restrictions shall not apply.

This section applies to non-vibratory rollers or vibratory rollers operated in the static mode only.

e. Other Type of Compactors. Compactor types other than those classified above, may be employed by the Contractor, subject to approval by the Engineer of the proposed minimum applied effort (minimum number of passes and travel speed) and maximum lift thickness. Such approval by the Engineer will be based upon the results of appropriate on-site field tests.

f. Compaction Equipment for Confined Areas. In areas inaccessible to conventional compactors, or where maneuvering space is limited, impactor rammers, plate or small drum vibrators, or pneumatic buttonhead compaction equipment may be used with layer thickness not exceeding 6 in. before compaction. Hand tampers shall not be permitted. The Engineer may approve or reject any of the above described mechanical devices based upon the results of appropriate on-site field tests.

EXCAVATION AND EMBANKMENT

3. Moisture Control. All fill or backfill material to be compacted, shall be at a moisture content for adequate compaction of that material using the compactor selected by the Contractor to perform the work. The Contractor shall be responsible for determining the appropriate moisture content, and for controlling it within the proper limits as the work is progressed. When water must be added to a material, it may be added on the lift or in the excavation or borrow pit. Water added on the lift, however, shall be applied by use of an approved pressure distributor. Distributors must be approved and documented by the Engineer. Documentation by the Engineer shall be adequate evidence of approval. Water added shall be thoroughly incorporated into the soil, and the soil shall be manipulated to attain uniform moisture distribution. When the moisture content of a lift about to be compacted exceeds the required amount, compaction shall be deferred until the layer has dried back to the required amount. Natural drying may be accelerated by blending in a dry material or manipulation alone, to increase the rate of evaporation. Increased loose lift thickness caused by blending in a dry material, however, may necessitate a change in compaction equipment and/or methods to meet the minimum provisions of subparagraph 2. *Compaction Equipment* of this subsection.

EXCAVATION AND EMBANKMENT

FIGURE 203-3 GUIDE FOR SELECTING THE INITIAL STRESS LEVEL FOR PROOF ROLLING EMBANKMENT SECTIONS

Relative Subgrade Support	Poor	Fair			Good		Excellent
Compacted Subgrade Soil Type Description	Well Graded Soils						GRAVEL - SAND Mixtures little to no fines
							GRAVEL - SAND - SILT - CLAY Mixtures
							SANDS or GRAVELLY SANDS little or no fines
							SAND - SILT - CLAY Mixtures, slight plasticity
							SILTY SANDS OR SAND - SILT Mixtures, slight plasticity
	Poorly Graded Soils						
							SANDS or GRAVELLY SANDS little or no fines
							SAND - SILT - CLAY Mixtures, plastic
							SILTY GRAVELS or GRAVEL - SAND - SILT Mixtures
							SAND - SILT - CLAY Mixtures or CLAYEY SANDS, plastic to high pl.
						SILTS and Very Fine SANDS slight or no plasticity	
						GRAVELS and GRAVEL - SAND Mixt. little or no fines	
							LEAN CLAYS, SILTY CLAYS, slightly plastic to plastic
							ELASTIC SILTS, Micaceous or Diatomaceous SILTS
							FAT CLAYS, SILTY CLAYS highly plastic
Stress Level	Minimum	1	2	3	4	5	Maximum
Gross Tons	30	34	38	42	46	50	50
Tire psi	40	50	60	70	80	90	130

D. Proof Rolling in Embankment Sections. Immediately prior to final trimming of the subgrade surface and placement of subbase materials in embankment sections, all areas of the subgrade surface within roadway limits shall be proof rolled according to the requirements of this subsection. This work, and any delays due to this work, shall be considered incidental to the embankment item.

1. Equipment. The proof roller shall consist of a chariot type rigid steel frame with a box body suitable for ballast loading up to 50 tons gross weight, and mounted on four pneumatic tired wheels acting in a single line across the width of the roller on its transverse load center line. The wheels shall be equipped with 18.00 x 24 or 18.00 x 25, 24 ply tires, and shall be suspended on articulated axles such that all wheels carry approximately equal loads when operating over uneven surfaces.

2. Determination of Roller Stress. Initially, the gross ballasted weight and tire inflation pressure of the proof roller shall be adjusted to the highest stress level shown in Figure 203-3

EXCAVATION AND EMBANKMENT

based on:

- a. The general description of the subgrade soils.
- b. The estimation of the relative subgrade support within the subgrade soil description range.

The initial roller stress for embankments constructed of rock shall be the maximum level listed in Figure 203-3 (50 Gross Tons, 130 Tire psi).

The roller shall be operated briefly to establish the acceptability of the initial stress level. Proof rolling of the embankment shall be performed at the next lower stress level whenever operation of the roller at a higher stress level is accompanied by consistent lateral displacement of soil out of the wheel paths.

3. Procedure. After an acceptable stress level is established, two complete passes of the roller shall be applied over all elements of the area to be proof rolled. Any deficiencies disclosed during the proof rolling operation shall be corrected. Subsidence depressions shall be filled with material similar to the subgrade soil and then compacted in a normal manner. After compaction, these areas shall be proof rolled again. Corrective work shall be judged complete and accepted by the Engineer when all elements of the subgrade surface over a given embankment show a satisfactory uniform response to the proof roller.

4. Exceptions. Proof rolling of the subgrade surface in embankment sections will not be required in any area where:

- a. Due to restrictions in available access and/or maneuvering space, use of the proof roller may damage adjacent work;
- b. The proof roller will approach a culvert, pipe or other conduit closer than 5 ft. in any direction.

203-3.04 Select Borrow. The management of a select borrow source and the acceptability of all select borrow material shall be in conformance with §203-3.01F. *Borrow*.

Underwater areas shall be filled with select borrow to 2 ft. above the water surface at the time of placement and in conformance with the details shown on the appropriate Standard Sheet or as noted in the contract documents.

All select borrow placed within the limits of Embankment or the Subgrade Area shall be placed in conformance with §203-3.03B. *Embankments* or §203-3.01G. *Subgrade Area* respectively, as appropriate, or where used for fill or backfill at structures, culverts and pipes, in conformance with §203-3.06 *Select Granular Fill* and §203-3.17 *Select Structural Fill*.

203-3.05 Select Fill. Underwater areas shall be filled with select fill to 2 ft. above the water surface at the time of placement and in conformance with the details shown on the appropriate Standard Sheet or as noted in the contract documents.

All select fill placed within the limits of Embankment or the Subgrade Area shall be placed in conformance with §203-3.03B. *Embankments* or §203-3.01G. *Subgrade Area* respectively, as appropriate,

EXCAVATION AND EMBANKMENT

or where used for fill or backfill at structures, culverts and pipes, in conformance with §203-3.06 *Select Granular Fill* and §203-3.17 *Select Structural Fill*.

203-3.06 Select Granular Fill. The type of material to be used in bedding, filling and backfill at culverts, pipes, conduit and direct burial cable shall be in conformance with the details shown on the appropriate Standard Sheet or as noted in the contract documents. Do not use RAP. Do not use slabs or pieces of either concrete or asphalt.

Fill or backfill material at culverts and pipes shall be deposited in horizontal layers not exceeding 6 in. in thickness prior to compaction. Compaction of each layer shall be as specified under §203-3.03C. *Compaction.* A minimum of 95% of Standard Proctor Maximum Density will be required. When placing fill or backfill around culverts and pipes, layers shall be deposited to progressively bury the pipe or culvert to equal depths on both sides. The limits to which this subsection will apply shall be in accordance with the Standard Sheets or as modified in the contract documents.

Fill or backfill for conduit or cable placed in a trench shall be carefully placed in a horizontal layer to a depth of 6 in. over the top of the conduit or cable. This layer of material shall not be compacted, however, the remaining portion of the trench shall be backfilled in accordance with the preceding paragraph. Where cables or conduits are placed and backfilled by a machine in one operation, the above requirements for backfilling do not apply.

Where sheeting has been used for the excavation, and incremental removal of sheeting is not specified in the contract documents, sheeting shall be pulled when the trench has been backfilled to the maximum unsupported trench depth allowed by 29 CFR 1926.

203-3.07 Select Granular Fill Slope Protection. The Contractor shall perform the excavation in accordance with the requirements for “Unclassified Excavation and Disposal” as described elsewhere in these specifications. The Contractor shall then spread material conforming to the requirements given in §733-12 *Select Granular Slope Protection*, in one layer to its full thickness by a method approved by the Engineer. The work shall be performed where shown in the contract documents or where directed by the Engineer in accordance with the Standard Sheets, and details shown on the contract documents. Compaction of the slope protection is not required. Slope Protection shall be either of two types, as described below:

A. Select Granular Fill, Slope Protection - Type A. Under this type, the Contractor shall furnish and install the slope protection where shown in the contract documents in accordance with the details shown on the Standard Sheets.

B. Select Granular Fill, Slope Protection - Type B. Under this type, the Contractor shall furnish and install the slope protection where directed by the Engineer in accordance with the details shown on the Standard Sheets.

203-3.08 Surface Settlement Gauges. Surface settlement gauges shall be constructed, installed, and maintained where shown in the contract documents and in accordance with the details contained in the geotechnical control procedure “*Settlement Gauges and Settlement Rods*” covering construction, installation, maintenance, and abandonment of these devices.

Where surface settlement gauges are called for, it will be the Contractor's option to install pipe gauges or manometer gauges, unless a definite type is specified in the contract documents. Surface settlement gauges will be accepted for conformance with the specification requirements on the basis of an inspection

EXCAVATION AND EMBANKMENT

of the installation by the Departmental Geotechnical Engineer.

203-3.09 Settlement Rods. Settlement rods shall be constructed, installed, and maintained where shown in the contract documents and in accordance with the details contained in the geotechnical control procedure “*Settlement Gauges and Settlement Rods*” covering construction, installation, maintenance, and abandonment of these devices.

Settlement rods will be accepted for conformance with the specification requirements on the basis of an inspection of the installation by the Departmental Geotechnical Engineer.

203-3.10 Piezometers. Piezometers shall be constructed, installed, and maintained at the locations shown in the contract documents and in accordance with the detailed drawings included in the contract documents.

203-3.11 Applying Water. None Specified.

203-3.12 Select Granular Subgrade. The type of material to be used in fill or backfill of undercuts shall be in conformance with the details shown in the contract documents or as ordered by the Engineer.

Fill or backfill material shall be deposited in horizontal layers not exceeding 6 in. in thickness prior to compaction. Compaction of each layer shall be as specified under §203-3.03C. *Compaction.* A minimum of 95% of Standard Proctor Maximum Density will be required.

203-3.13 Select Structural Fill. The type of material to be used in bedding, filling and backfill at structures shall be in conformance with the details shown on the appropriate Standard Sheet or as noted in the contract documents or as ordered by the Engineer. Do not use RAP. Do not use slabs or pieces of either concrete or asphalt.

Fill or backfill material at structures shall be deposited in horizontal layers not exceeding 6 in. in thickness prior to compaction. Compaction of each layer shall be as specified under §203-3.03C. *Compaction.* A minimum of 95% of Standard Proctor Maximum Density will be required. When filling behind abutments and similar structures, all material shall be placed and compacted in front of the walls prior to placing fill behind the walls to a higher elevation. The limits to which this subsection will apply shall be in accordance with the Standard Sheets or as modified in the contract documents.

Where sheeting has been used for the excavation, and incremental removal of sheeting is not specified in the contract documents, sheeting shall be pulled when the trench has been backfilled to the maximum unsupported trench depth allowed by 29 CFR 1926.

203-3.14 Sand Backfill. The type of material to be used in bedding and filling shall be in conformance with the details shown in the contract documents or as ordered by the Engineer.

Bedding or fill material shall be deposited in horizontal layers not exceeding 6 in. in thickness prior to compaction. Compaction of each layer shall be as specified under §203-3.03C. *Compaction.* A minimum of 95% of Standard Proctor Maximum Density will be required.

203-4 METHOD OF MEASUREMENT

203-4.01 General. Quantities for all items of work with payment units in cubic yards will be computed from payment lines shown in the contract documents. Work performed beyond any designated payment line, including any offset required for the construction of presplit rock slopes in lifts, will not be included

EXCAVATION AND EMBANKMENT

in the computation of quantities for the item involved.

For any item paid for in its final position, no additional quantity will be measured for payment to make up losses due to foundation settlement, compaction, erosion or any other cause.

Cross-sectioning, for the purpose of determining quantities for payment, will be employed only where payment lines are not shown in the contract documents or Standard Sheets, and cannot be reasonably established by the Engineer.

Quantities for benching will be computed for payment from the details and instructions shown on the Standard Sheet *Earthwork Transition and Benching Details*.

The excavation of unsuitable materials designated as topsoil under Section 613 *Topsoil*, will be included in the quantity measured for the appropriate unclassified excavation item, without distinction..

Where the item, "Embankment in Place," is designated for the project by the proposal, all borrow of ordinary suitable materials shall be incidental to the work of that item.

203-4.02 Unclassified Excavation and Disposal. Unclassified excavation and disposal will be measured in cubic yards, measured to the nearest whole cubic yard, computed in the original position for all excavation within right-of-way limits. No deduction shall be made for any pipes, culverts, structures, or other obstructions, unless these are measured for payment under another contract item. Excavation for borrow of suitable materials for embankment construction, shall not be included in the computation for this work.

203-4.03 Embankment in Place. Embankment in place will be measured in cubic yards, measured to the nearest whole cubic yard, computed in the final compacted position. Any additional quantity of material required to compensate for embankment settlement shall not be included in the measurement of this item. The quantities of embankment will exclude the total volume of pipes, culverts, other roadway items, and granular backfill within the payment lines for such granular backfill.

203-4.04 Select Borrow. Select borrow will be measured in cubic yards, measured to the nearest whole cubic yard, computed in the original position.

203-4.05 Select Fill. Select fill will be measured in cubic yards, measured to the nearest whole cubic yard, computed in the final compacted position.

203-4.06 Select Granular Fill. Select granular fill will be measured in cubic yards, measured to the nearest whole cubic yard, computed in the final compacted position. A deduction shall be made for pipes (based on nominal diameters) and other payment items when the combined cross-sectional area exceeds 1 ft² unless otherwise shown in the contract documents. No deduction will be made for the cross-sectional area of an existing facility.

203-4.07 Select Granular Fill Slope Protection. Select granular fill slope protection will be measured in cubic yards, measured to the nearest whole cubic yard, computed in the final position.

203-4.08 Surface Settlement Gauges. Surface settlement gauges will be measured by the number of devices satisfactorily installed.

203-4.09 Settlement Rods. Settlement rods will be measured by the number of devices satisfactorily installed.

EXCAVATION AND EMBANKMENT

203-4.10 Piezometers. Piezometers will be measured by the number of devices satisfactorily installed.

203-4.11 Applying Water. The unit of measurement of water will be one pressure distributor per calendar day, denoted hereafter as one p.d.d., for dust control. Where the Contractor works in more than one separate and distinct shift per calendar day, each shift shall be considered as one p.d.d. A single shift plus overtime work, however, shall be considered as one p.d.d. The quantity thus determined shall be applied directly as the quantity to be paid for where the distributors used have a capacity of 3,000 gal. or less.

Provided that the Engineer determines that the total operating distributor capacity (number and sizes of all distributors) employed is reasonably commensurate with the needs for water application, additional payment will be allowed for distributors exceeding 3,000 gal. in capacity as follows:

Distributor Capacity	Pressure Distributor per Calendar Day Adjustment
3,000 gal. < distributor capacity < 5,000 gal.	p.d.d.'s will be multiplied by 1.5
5,000 gal. ≤ distributor capacity	p.d.d.'s will be multiplied by 2.0

No additional quantity shall be measured for payment for compaction purposes.

203-4.12 Select Granular Subgrade. Select granular subgrade will be measured in cubic yards, measured to the nearest whole cubic yard, computed in the final compacted position.

203-4.13 Select Structural Fill. Select structural fill will be measured in cubic yards, measured to the nearest whole cubic yard, in the final compacted position. A deduction shall be made for pipes (based on nominal diameters) and other payment items when the combined cross-sectional area exceeds 1 ft² unless otherwise shown in the contract documents. No deduction will be made for the cross-sectional area of an existing facility.

203-4.14 Sand Backfill. Sand backfill will be measured in cubic yards, measured to the nearest whole cubic yard, in the final compacted position. A deduction shall be made for pipes (based on nominal diameters) and other payment items when the combined cross-sectional area exceeds 1 ft² unless otherwise shown in the contract documents. No deduction will be made for the cross-sectional area of an existing facility.

203-5 BASIS OF PAYMENT

203-5.01 General-All Items. The unit price bid shall include the cost of furnishing all labor, materials, and equipment as necessary to complete the work, except where specific costs are designated or included in another pay item of work. Incidental costs, such as acquisition of borrow pits or material outside of the right-of-way, rock drilling and blasting, compaction and special test requirements, stockpiling and re-handling of materials, precautionary measures to protect private property and utilities, to form and trim graded surfaces, proof rolling, re-proof rolling, corrective work disclosed by proof rolling and any delays caused by this corrective work, shall be included in the unit price of the pay item where such costs are

EXCAVATION AND EMBANKMENT

incurred. The exception is that corrective work ordered in cut sections based on an evaluation of proof rolling will be paid for under the appropriate excavation and backfill items.

Quantities for any additional items of work or substitution of material in accordance with the approved Winter Earthwork submittal shall be furnished at no cost to the State.

203-5.02 Unclassified Excavation and Disposal. The provisions of §203-5.01 *General-All Items* apply including the following:

The unit price bid shall cover all costs of required excavation within the right of way limits, and all costs of disposal if the excavated materials are not used under another pay item.

203-5.03 Embankment In Place. The provisions of §203-5.01 *General-All Items* apply.

203-5.04 Select Borrow. The provisions of §203-5.01 *General-All Items* apply.

203-5.05 Select Fill. The provisions of §203-5.01 *General-All Items* apply.

203-5.06 Select Granular Fill. The provisions of §203-5.01 *General-All Items* apply.

203-5.07 Select Granular Fill Slope Protection. The provisions of §203-5.01 *General-All Items* apply.

203-5.08 Surface Settlement Gauges. The provisions of §203-5.01 *General-All Items* apply including the following:

The unit price bid shall cover all costs of providing, installing and maintaining each device, including excavation, trenching and backfill during the course of the work. No payment will be made under any other item of the contract for any work associated with these items.

When each installation is completed, 75% of the item unit price will be paid. The remaining 25% will be paid when each device has been properly maintained and is abandoned according to the procedures contained in the geotechnical control procedure “*Settlement Gauges and Settlement Rods*”. Unless otherwise specified in the proposal, the unit price shall also include the costs of removal.

203-5.09 Settlement Rods. The provisions of §203-5.01 *General-All Items* apply including the following:

The unit price bid shall cover all costs of providing, installing and maintaining each device, including excavation, trenching and backfill during the course of the work. No payment will be made under any other item of the contract for any work associated with these items.

When each installation is completed, 75% of the item unit price will be paid. The remaining 25% will be paid when each device has been properly maintained and is abandoned according to the procedures contained in the geotechnical control procedure “*Settlement Gauges and Settlement Rods*”. Unless otherwise specified in the proposal, the unit price shall also include the costs of removal.

203-5.10 Piezometers. The provisions of §203-5.01 *General-All Items* apply including the following:

The unit price bid shall cover all costs of providing, installing and maintaining each device, including excavation, trenching and backfill during the course of the work. No payment will be made under any other item of the contract for any work associated with these items.

When each installation is completed and the device placed in satisfactory operation, 75% of the unit

EXCAVATION AND EMBANKMENT

price will be paid. The remaining 25% will be paid when all earthmoving and slope work is completed in the vicinity of each installation. Any installation rendered inoperative due to damage by construction equipment after partial or full payment, shall be immediately repaired or the full amount of such payment shall be deducted from other monies due the Contractor under the contract.

203-5.11 Applying Water. The unit price bid per one operating pressure distributor per calendar day for applying water shall include the costs of furnishing all labor, material and equipment necessary for dust control.

203-5.12 Select Granular Subgrade. The provisions of §203-5.01 *General-All Items* apply.

203-5.13 Select Structural Fill. The provisions of §203-5.01 *General-All Items* apply.

203-5.14 Sand Backfill. The provisions of §203-5.01 *General-All Items* apply.

Payment will be made under:

Item No.	Item	Pay Unit
203.02	Unclassified Excavation and Disposal	Cubic Yards
203.03	Embankment In Place	Cubic Yards
203.05	Select Borrow	Cubic Yards
203.06	Select Fill	Cubic Yards
203.07	Select Granular Fill	Cubic Yards
203.0801	Select Granular Fill, Slope Protection - Type A	Cubic Yards
203.0802	Select Granular Fill, Slope Protection - Type B	Cubic Yards
203.10	Surface Settlement Gauges	Each
203.12	Settlement Rods	Each
203.13	Piezometers	Each
203.1601	Applying Water	P.D.D.
203.20	Select Granular Subgrade	Cubic Yards
203.21	Select Structural Fill	Cubic Yards
203.25	Sand Backfill	Cubic Yards

SECTION 206 - TRENCH, CULVERT AND STRUCTURE EXCAVATION

Make the following changes to the Standard Specifications dated May 1, 2008:

Page 186 through 189, under SECTION 206 – TRENCH, CULVERT AND STRUCTURE EXCAVATION, **Remove** the entire section and **Replace** it with the following:

“SECTION 206 - TRENCH, CULVERT AND STRUCTURE EXCAVATION

206-1 DESCRIPTION

206-1.01 General. This work shall consist of the excavation of materials and backfill or disposal of excavated material required for trenches, culverts, structures, conduit and direct burial cable not otherwise provided for in other sections of these specifications. All such excavation shall be unclassified excavation as defined in §203-1.01. The work shall be conducted in accordance with 29 CFR 1926 Subpart P.

206-1.02 Structure Excavation. The work specified under this item shall include the excavation for all bridge foundations, walls and other major structures and backfill of suitable excavated material if another item is not specified.

206-1.03 Trench and Culvert Excavation. The work specified under this item shall include the excavation of all materials and backfill or disposal of excavated material required for trenches, culverts, pipes, manholes, drainage structures and other minor structures, conduit and direct burial cable.

206-1.04 Conduit Excavation and Backfill including Surface Restoration. The work specified under this item shall include the excavation, necessary backfill and surface restoration required for conduits and direct burial cables.

206-1.05 Test Pits. The work specified under this item shall include the excavation and backfill of test pits at locations shown in the contract documents, or as directed by the Engineer. Excavation and backfill methods, limits and equipment used shall be approved by the Engineer. This work will not relieve the contractor of the responsibility to locate underground facilities as required under 16 NYCRR 753.

206-2 MATERIALS. (Not Specified).

206-3 CONSTRUCTION DETAILS

206-3.01 General. The appropriate construction details specified for “Excavation and Embankment” in §203-3.01 through §203-3.14 shall apply to the work specified in this section.

The excavation shall be dewatered and kept free from water, snow and ice when necessary.

Special care shall be taken not to disturb the bottom of the excavation, and not to remove the material at final grade until just before the structure is placed.

The provisions of §203-3.01D *Suitable Materials* and/or §203-3.01E *Unsuitable Materials* shall apply to all material excavated under this section which is not used as backfill.

The Contractor shall carry out all excavation operations in a safe and prudent manner so that the workers, the public, and adjacent public and private property will be protected from unreasonable hazard in accordance with §107-05K. *Open Excavations and Trenches*.

Slopes may not be steeper than allowed by 29 CFR 1926 Subpart P.

SECTION 206 - TRENCH, CULVERT AND STRUCTURE EXCAVATION

When excavation is required for the installation of conduit or direct burial cable, the Contractor shall notify the Engineer upon completion of the excavation. No conduit or cable shall be placed in the excavation until the Engineer has approved the depth and cross-section.

When the Contractor, in placing conduits, direct burial cable or utilities, excavates into the pavement, subgrade, subbase, or shoulder courses, such courses must be replaced in kind, character and condition, to maintain a uniform road section, except when the Contract Documents specify that other materials shall be used.

206-3.02 Structure Excavation. The Contractor's competent person shall verify field conditions, including excavation depth, groundwater, and soil conditions with the Engineer in accordance with 29 CFR 1926 Subpart P prior to performing structure excavation for all bridge foundations, walls and other major structures.

The Contractor shall backfill with suitable excavated material if a separate backfill item is not specified in the contract documents.

206-3.03 Trench and Culvert Excavation. The Contractor's competent person shall verify field conditions, including excavation depth, groundwater, and soil conditions with the Engineer in accordance with 29 CFR 1926 Subpart P prior to performing trench and culvert excavation.

For utility lines, exclusive of conduit and cable lines, of less than 12 inches in diameter, the excavation width shall be the actual bottom width necessary to properly perform the installation work required, or 3 feet, whichever is less.

206-3.04 Conduit Excavation and Backfill including Surface Restoration. When the Contractor is required to excavate through portland cement concrete, asphalt concrete, composite pavement, or sidewalk, a saw cut shall be made along neat lines and to the depth as shown in the contract documents or as directed by the Engineer.

Any damage to existing pavement, sidewalk, curb or other facilities caused by the Contractor's operations under this item shall be repaired by the Contractor at no additional cost to the State.

206-3.05 Test Pits. The Contractor shall excavate and backfill test pits in order to determine existing underground utility type, size and/or condition where new utility connections to existing facilities are proposed. The Contractor shall excavate and backfill test pits in a manner approved by the Engineer that prevents damage to wrappings, coatings or other protective coverings, such as by hand digging, vacuum excavation or similar non-destructive locating equipment. The limits of the excavation shall be those sufficient to determine existing utility type, size and/or condition.

206-4 METHOD OF MEASUREMENT

206-4.01 General. The quantity of excavation will be in cubic yards, to the nearest whole cubic yard, computed from payment lines shown on the plans or the appropriate standard sheets. Work performed beyond any designated payment line will not be included in the computation of quantities for the item involved.

206-4.02 Structure Excavation. Vacant.

206-4.03 Trench and Culvert Excavation. Unless otherwise shown or indicated on the contract

SECTION 206 - TRENCH, CULVERT AND STRUCTURE EXCAVATION

plans, payment lines for excavation of pipe and culvert lines, and minor structures will be determined as follows:

A. Bottom Payment Line. The elevation of the bottom payment line will be the invert elevation of the pipe, conduit, or culvert. For pipes, conduits, or culverts of nominal horizontal dimensions of 12 to 144 inches, the width of the excavations at the bottom payment line will be the nominal inside horizontal dimension of the pipe, conduit, or culvert plus 4 feet, or three (3) times the nominal inside horizontal dimension, whichever is less; for pipes with a nominal horizontal dimension greater than 144 inches the width will be as shown on the appropriate standard sheets or in the contract documents. For concrete and smooth interior corrugated polyethylene pipe, twice the minimum wall thickness will be added to the preceding. For concrete pipe, the bottom payment line is the Bedding Control Line shown on the applicable standard sheet.

B. Top Payment Line. The top payment line will be the surface at the centerline of the pipe, culvert or conduit immediately prior to commencing trench excavation.

C. Side Payment Lines. The side payment lines of the excavation will be vertical to the bottom payment line.

For utility lines, exclusive of conduit and cable lines, of less than 12 inch diameter, the excavation width will be the actual bottom width necessary, as determined by the Engineer, to properly perform the installation work required, or 3 feet, whichever is less.

D. Payment Lines for Minor Structures. Payment lines for minor structures will be vertical from the bottom of the footing and will extend vertically from a line 2 feet from the perimeter of the structure footing. The top payment line shall be the same as for (B) above. The bottom payment line will be the bottom of footing elevation, or the bottom of undercut elevation as directed by the Engineer.

206-4.04 Conduit Excavation and Backfill including Surface Restoration. The quantity of conduit and/or cable excavation and backfill including surface restoration for payment will be the number of linear feet measured along the center of the conduit and/or cable placed, in accordance with the methods stated below.

Wherever a pair or group of conduits and/or cables are physically connected together, they will be considered as a single conduit and/or cable.

A. Wherever conduit and/or cable in the same trench are physically separated laterally by 6 inches or more between centerlines, as shown on the plans or as directed by the Engineer, the linear feet measurement will be made along the center of each conduit and/or cable.

B. Wherever a pair or group of conduits and/or cable in the same trench are physically separated laterally by less than 6 inches between centerlines of adjacent conduit and/or cable, as shown on the plans or as directed by the Engineer, the linear feet measurement for those conduits and/or cable will be made along the center of that pair or group of conduit and/or cables.

206-4.05 Test Pits. The quantity to be measured for payment will be the number of test holes excavated and backfilled in accordance with the contract documents.

SECTION 206 - TRENCH, CULVERT AND STRUCTURE EXCAVATION

206-5 BASIS OF PAYMENT

206-5.01 General. The cost for necessary guarding to protect the public from open trenches, and that required for the protection to ensure the safety of the workers, and for any necessary excavation support shall be included in other items. Progress payments will be made after the excavation has been completed and prior to the completion of other work included under this item, including but not limited to pumping and backfilling. Payment will be made, at the unit price bid, for 75% of the quantity excavated within the prescribed payment lines. The balance of the quantity excavated will be paid for upon proper completion of backfill placement.

No extra payment will be made for the cost of any materials excavated or placed outside the payment lines shown on the plans or as described in this specification. No extra payment will be made for excavation protection or support systems not shown in the contract plans, unless use of such systems is directed by the Engineer.

With exception of the Conduit Excavation and Backfill including Surface Restoration item, the work of replacing pavement, subcourses and shoulder courses will be paid for and performed under the provisions of their respective items and subsections.

206-5.02 Structure Excavation. The unit price bid for this work shall include the cost of labor, materials and equipment required to satisfactorily complete the work including the costs of excavation, backfill (except select backfill paid for separately), disposal of excavated material, presplitting rock excavations where required, and keeping the site dewatered and free from earth, water, ice and snow where necessary. Payment for Sheet piling, Cofferdams or Temporary Water Diversion Structures required by the contract documents will be made in accordance with the appropriate item.

Where cofferdams are specified for structure excavation, the work required to keep the site free from earth, water, ice and snow shall be included in the item for cofferdams when necessary.

206-5.03 Trench and Culvert Excavation. The unit price bid for this work shall include the cost of labor, materials and equipment required to satisfactorily complete the work, including the costs of excavation, backfill (except select backfill paid for separately), disposal of excavated material, presplitting rock excavations where required, and keeping the site dewatered and free from earth, water, ice and snow when necessary.

206-5.04 Conduit Excavation and Backfill including Surface Restoration. The unit price bid for this work shall include the cost of furnishing all labor, materials and equipment necessary to satisfactorily excavate and backfill the trench, including sawcutting, and to restore and replace any pavement, shoulder, and sidewalk courses, subcourses, curbs, drives, lawns and other top surfaces as required to complete the work.

206-5.05 Test Pits. The unit price bid for this work shall include the cost of furnishing all labor, materials and equipment necessary to satisfactorily excavate and backfill the test pit and replace any pavement, shoulder and sidewalk courses, subcourses, curbs, drives, lawns and other top surfaces required to complete the work.

Payment will be made under:

Item No.	Item	Pay Unit
206.01	Structure Excavation	Cubic Yard

SECTION 206 - TRENCH, CULVERT AND STRUCTURE EXCAVATION

206.0201	Trench and Culvert Excavation	Cubic Yard
206.03	Conduit Excavation and Backfill including Surface Restoration	Foot
206.05	Test Pit Excavation	Each”

SECTION 207 - GEOSYNTHETICS

Make the following changes to the Standard Specifications dated May 1, 2008 as modified by EI 08-006:

Page 189 through 192, under SECTIONS 207 – GEOTEXTILES AND PREFABRICATED COMPOSITE DRAINS FOR STRUCTURES, **Remove** the entire section and **Replace** it with the following:

SECTION 207 - GEOSYNTHETICS

207-1 DESCRIPTION

207-1.01 Geotextiles. The work shall consist of furnishing and installing approved Geotextile of the Class and Type indicated, at the locations, and in the manner shown on the plans or as directed by the Engineer, in writing, prior to performing the work.

207-1.02 Geomembranes. The work shall consist of furnishing and installing approved Geomembrane, including the preparation of the surface upon which the Geomembrane is placed, at the locations and in the manner shown on the plans or as directed by the Engineer, in writing, prior to performing the work.

207-1.03 Prefabricated Composite Drains for Structures. The work shall consist of furnishing and installing an approved Prefabricated Composite Structural Drain (PCSD) or Prefabricated Composite Integral Abutment Drain (PCIAD) as specified at the location (s) shown on the contract documents or as directed by the Engineer, in writing, prior to performing the work.

Prior to installation, the Contractor shall furnish the Engineer with copies of the manufacturer's literature with details and installation requirements for the PCSD or PCIAD. If not included in the manufacturer's literature, a letter identifying the geotextile wrap shall also be provided to the Engineer.

207-2 MATERIALS. Materials shall meet the requirements specified in the following subsections of Section 700 – Materials.

Geotextiles	§737-01
Geotextile Bedding	§737-01 A.
Geotextile Separation	§737-01 B.
Geotextile Drainage	§737-01 C.
Geotextile Slope Protection	§737-01 D.
Geotextile Stabilization	§737-01 E.
Turbidity Curtain	§737-01 F.
Silt Fence	§737-01 G.
Geomembranes	§737-02
Prefabricated Composite Structural Drains	§737-04
Prefabricated Composite Integral Abutment Drains	§737-05

Materials shall be subject to the Department's Quality Assurance (QA) program outlined in Section 737.

SECTION 207 - GEOSYNTHETICS

Adhesives used for joining geotextiles shall be fast-tacking, not be detrimental to the performance, lifespan or function of the geotextile, and create a bond strong enough to meet AASHTO M288 requirements for seam efficiency.

207-3 CONSTRUCTION DETAILS

207-3.01 Geotextiles

A. General. The Geotextiles shall be protected from exposure to sunlight during transport and storage. After placement, the Geotextile shall not be left uncovered for more than two (2) weeks.

Traffic or construction equipment will not be permitted directly on the Geotextile. Geotextiles may be joined by sewing, using adhesive or overlapping. Sewn seams shall be lapped a minimum of 4 in. and double sewn. The thread used to sew the seam shall be nylon or polypropylene. Geotextiles that are joined using adhesive shall be lapped a minimum of 4 in. Overlapped seams shall have a minimum overlap of 20 in. except when placed under water where the overlap shall be a minimum of 3 ft. All seams shall be subject to the approval of the Engineer. Geotextile which becomes torn or damaged due to the Contractor's operations shall be replaced or patched at no cost to the State. The patch shall extend 3 ft. beyond the perimeter of the tear or damage.

B. Bedding and Slope Protection. The Geotextile shall be placed and anchored on a prepared surface approved by the Engineer. The Geotextile shall be laid loosely but in intimate contact with the soil so that placement of the overlying materials will not stretch or tear the Geotextile. Where Geotextile is placed above water, the backfill placement shall begin at the toe and proceed up the slope.

Where Geotextile is placed under water, the long dimension (provided that the width dimension is wider than the channel width) shall be placed parallel to the direction of flow. If the width dimension is not wider than the channel width, the long dimension shall be placed perpendicular to the direction of flow. Successive Geotextile sheets shall be overlapped so that the upstream sheet is placed over the downstream sheet. As the Geotextile is placed under water, the backfill material shall be placed on it to the required thickness. The Geotextile placement shall not progress more than 50 ft. ahead of the backfill placement.

Rip-rap, stone filling (Heavy) or stone filling (Medium) shall not be dropped onto the Geotextile from a height greater than 1 ft. Slope protection and smaller sizes of stone filling shall not be dropped onto the Geotextile from a height exceeding 3 ft.

C. Separation and Stabilization. The Geotextile shall be placed as directed by the Engineer. The Geotextile shall be laid loosely but in intimate contact with the soil so that placement of the overlying material will not stretch or tear the Geotextile.

D. Drainage. The Geotextile shall be placed to conform loosely to the shape of the trench.

After placing the filter material, the Geotextile shall be folded over the top of the filter material to produce a minimum overlap of 12 in. The Geotextile shall then be covered with the subsequent course.

207-3.02 Geomembranes. The Geomembrane shall be protected during transport and storage. The surface upon which the Geomembrane is to be placed shall be within reasonable conformity to the proposed grade. Traffic or construction equipment will not be permitted directly on the Geomembrane. Care shall be exercised by workers when walking or working on the Geomembrane.

SECTION 207 - GEOSYNTHETICS

Seams shall be sealed as per the manufacturer's recommendations and to the satisfaction of the Engineer. The edges of the Geomembrane shall be secured in the manner shown on the contract plans or as directed by the Engineer.

Geomembrane which becomes torn or damaged shall be replaced or patched as ordered by the Engineer. The patch shall extend 3 ft. beyond the perimeter of the tear or damage and the seams shall be approved by the Engineer.

207-3.03 Prefabricated Composite Drains for Structures. The Contractor shall install the drain in conformance with the manufacturer's installation procedures. The drain shall be installed so that the backfill, when placed, will be in contact with the geotextile and forms a continuous drainage layer without interruption within the drain's plane. In installations where concrete is to be poured against the prefabricated composite drain, only drains with impermeable cores will be allowed. At all locations, a positive outlet for the water in the drain shall be provided. This may involve making a hole in the core at the weep hole locations for approved drains with an impermeable core. Do not puncture the geotextile. Any damaged geotextile shall be repaired.

Adhesive shall be applied to the wall surface, and not directly to the drain.

During all periods of shipment and storage, the drain shall be wrapped and protected from direct exposure to sunlight, mud, dirt and debris.

Care shall be exercised while backfilling to prevent damage to the drain. Repairs or replacements of drain damaged by construction operations shall be performed, as directed by the Engineer, at no cost to the State.

207-4 METHOD OF MEASUREMENT

207-4.01 Geotextiles

A. General. The quantity of Geotextile will be the number of square yards computed from the payment lines indicated in the contract documents. Measurement will not be made for Geotextile used for repairs, seams, or overlaps. If taken, the amount of quality assurance samples will be added to this quantity.

B. Drainage. The quantity of Geotextile will be measured in area based on the theoretical perimeter determined from the typical section indicated in the contract documents.

207-4.02 Geomembranes. The quantity of Geomembrane will be the number of square yards computed from the payment lines indicated in the contract documents. Measurement will not be made for Geomembranes used for repairs, seams, or overlaps.

207-4.03 Prefabricated Composite Drains for Structures. The quantity of PCSD or PCIAD will be measured in square yards installed computed from the payment lines indicated in the contract documents.

207-5 BASIS OF PAYMENT

207-5.01 Geotextiles. The unit price bid shall include the cost of furnishing all labor, equipment, and materials necessary to complete the work, including the cost of preparing the surface upon which the Geotextile is placed. No payment will be made for replacement or repairs.

SECTION 207 - GEOSYNTHETICS

207-5.02 Geomembranes. The unit price bid shall include the cost of furnishing all labor, materials, and equipment necessary to satisfactorily complete the work, including the cost of preparing the surface upon which the Geomembrane is placed and securing the edges of the Geomembrane. No payment will be made for replacement or repairs.

207-5.03 Prefabricated Composite Drains for Structures. The unit price bid shall include the cost of furnishing all labor, equipment, and material necessary to complete the work. No payment will be made for repairs or replacement.

Payment will be made under:

Item No.	Item	Pay Unit
207.20	Geotextile Bedding	Square Yard
207.21	Geotextile Separation	Square Yard
207.22	Geotextile Drainage	Square Yard
207.23	Geotextile Slope Protection	Square Yard
207.24	Geotextile Stabilization	Square Yard
207.25	Geomembrane	Square Yard
207.26	Prefabricated Composite Structural Drain	Square Yard
207.27	Prefabricated Composite Integral Abutment Drain	Square Yard

ROCK SLOPE REINFORCEMENT AND CATCHMENT SYSTEMS

Make the following changes to the Standard Specifications dated May 1, 2008 as modified by EI 08-046:

Page 204, **add** the following after Section 211:

SECTION 212 – ROCK SLOPE REINFORCEMENT AND CATCHMENT SYSTEMS

212-1 DESCRIPTION. This work shall consist of furnishing and installing rock slope stabilization techniques or roadside protective measures in conformance with payment lines, type, size, and at the locations specified in the contract documents.

212-1.01 Definitions.

A. General. As outlined in Section 203 *Excavation and Embankment*, all rock slopes shall be thoroughly scaled and cleaned of unsound material and loose masses of rock. This section provides requirements for specific techniques developed to address situations where a hazardous rock slope situation still exists after stripping and scaling in order to control a rockfall within a designated rockfall catchment area.

B. Rock Fall. A rockfall is the movement of rock from a slope that is so steep the rock continues to move down slope. The movement may be by free falling, bouncing, rolling or sliding.

C. Rock Catchment Area. The rockfall catchment area is defined as the area between the edge of roadway pavement and the base of an adjacent rockslope that is used to restrict rockfall from reaching the roadway. The term catchment area is synonymous with ditch, rockfall ditch, rockfall catch ditch and rock fallout area. The catchment area width is the horizontal distance between the roadway edge of pavement and the base (toe) of a rockslope.

D. Rock Catchment Fences. Rock catchment fences are techniques to control rockfalls within the R.O.W. Rock catchment fences are wire or cable mesh draped from support columns situated to define the catchment area. The catchment fence, or impact section, attenuates the rockfall energy to capture the falling rock and maintain it within the catchment area.

E. Rock Mesh Slope Protection. Rock mesh slope protection is a technique to control rockfalls within the R.O.W. Rock mesh slope protection is the placement of wire or cable mesh on a slope face. The mesh controls the descent of falling rock, which accumulates near the base of the slope within the catchment area.

212-2 MATERIALS

212-2.01 Wire Rope Rock Catchment Fence. The rock catchment fence system, as obtained from the manufacturer, shall have a tested capability of retaining a rock impact of 155 kip-ft of kinetic energy. The result of demonstration tests shall be furnished as required by the Engineer.

A. Net Assembly. Provide a fence consisting of a net conforming to §710-06 *Rock Slope Net and Wire Mesh Assemblies*, Net Assembly.

Cover all nets with chain link mesh fencing material of a minimum 11 gauge, 2 in. zinc coated mesh, conforming to the requirements of §710-02 *Galvanized Steel Fence Fabric*.

B. Wire Ropes. Provide the following wire ropes:

1. Net Supporting Wire Rope. Provide net supporting wire rope conforming to §710-27 *Rock Slope Wire Ropes*, Net Supporting Wire Rope.

2. Seam Rope. Provide seam rope conforming to §710-27 *Rock Slope Wire Ropes*, Seam Rope for Wire Rope Rock Catchment Fence.

3. Tieback Restraining Cables. Provide tieback restraining cables conforming to §710-27 *Rock Slope Wire Ropes*, Tieback Restraining Cable.

4. Anchor Cables. Provide anchor cables conforming to §710-27 *Rock Slope Wire Ropes*, Anchor Cable. Braking elements in the tieback restraining cable shall incorporate a protective, crushable sleeve as recommended by the manufacturer.

C. Support Columns. Fabricate the net support columns from W8 x 48 wide flange members conforming to

ROCK SLOPE REINFORCEMENT AND CATCHMENT SYSTEMS

the requirements of §715-18 *Soldier Piles*.

D. Miscellaneous Appurtenances. All steel bolts, nuts and washers shall conform to the requirements of §723-60 *Anchor Bolts*. All miscellaneous appurtenances such as wire rope clips, thimbles, bolts, etc., shall be galvanized as supplied by the manufacturer.

212-2.02 Chain Link Rock Catchment Fence.

A. Fence Fabric. Provide aluminum coated steel fence fabric a minimum of 6 gauge, chain link type with twist selvage edges, conforming to the requirements of §710-04 *Aluminum Coated Steel Fence Fabric*, except for gauge.

Vinyl coated steel fence fabric shall be 9 gauge, chain link type with twist selvage edges, conforming to the requirements of §710-03 *Vinyl Coated Steel Fence Fabric*, Class A Wire Diameter, except color. The color shall be black unless otherwise specified in the contract documents.

B. Cables. Provide galvanized guide rail cables a minimum $\frac{3}{4}$ in. in diameter, consisting of 3 strands (7 wires per strand) conforming to the requirements of §710-22 *Cable Guide Railing* and having a minimum tensile strength of 25 kips.

C. Posts. Provide No. 11 steel rebar posts and No. 9 hook bar anchors conforming to the requirements of §709-01 *Bar Reinforcement, Grade 420*. The rebar posts and hook bar anchors shall be galvanized in accordance with the requirements of §719-01 *Galvanized Coatings and Repair Methods*, Type I. Exposed cut ends shall be field repaired in accordance with §719-01 *Galvanized Coatings and Repair Methods*. Hook bar anchors shall have a 180° hook with an outside diameter of 11 in.

No. 11 steel rebar posts shall also conform to the requirements of §709-04 *Epoxy-Coated bar Reinforcement*, except color. The color shall be as specified on the plans or by the Engineer.

D. Grout. Provide grout to fill the annular space around the No. 11 steel rebar posts, No. 9 hook bar anchors and for backfilling below the anchor angle, conforming to the requirements of §701-05 *Concrete Grouting Material*.

E. Anchor Angles. Provide 2 ft. long sections of anchor angles of 8 in. by 6 in. by 1 in. steel angle. The steel shall conform to the requirements of §715-01 *Structural Steel* and shall be galvanized in accordance with §719-01 *Galvanized Coatings and Repair Methods*, Type I. The anchor angle shall have two 2 in. diameter holes (for the bolts) bored through the 8 in. side. The holes shall be centered 4 in. in from each end along a line 3 in. in from the edge opposite the angle. The anchor angle shall also have three $\frac{7}{8}$ in. diameter holes drilled on 4 in. centers along the centerline, with the middle hole located in the center of the 6 in. side for attachment of the steel turnbuckles.

F. Rock Bolt Assembly. Provide 1 $\frac{1}{4}$ in. nominal diameter, 5 ft. long, rock bolt assembly conforming to the requirements of §731-03 *Rock Bolt Assembly*.

Provide galvanized and Epoxy-coated $\frac{3}{8}$ in. x 2 $\frac{1}{2}$ in. throat by 4 $\frac{1}{2}$ in. depth "U" bolts as shown in Detail's C1 & C2 of the Standard Sheet 212-4 *Chain Link Rock Catchment Fence* with $\frac{1}{8}$ in. thread length to clamp $\frac{3}{4}$ in. guide rail cables to No. 11 rebar posts.

G. Miscellaneous Appurtenances.

1. Thimbles. Provide galvanized thimbles for $\frac{3}{4}$ in. guide rail cable conforming to the requirements of §710-22 *Cable Guide Railing* and as shown in Detail F of the Standard Sheet 212-5 *Chain Link Rock Catchment Fence*.

2. Clips. Provide galvanized cable clips for $\frac{3}{4}$ in. guide rail cable conforming to the requirements of §710-22 *Cable Guide Railing* and as shown in Detail F of the Standard Sheet 212-5 *Chain Link Rock Catchment Fence*.

3. Turnbuckles. Provide galvanized steel turnbuckle cable end assemblies conforming to the

ROCK SLOPE REINFORCEMENT AND CATCHMENT SYSTEMS

requirements of §710-22 *Cable Guide Railing* and as shown in Detail G of the Standard Sheet 212-5 *Chain Link Rock Catchment Fence*.

4. Cable Splices. Provide galvanized cable splices conforming to the requirements of §710-22 *Cable Guide Railing* and as shown in Detail H of the Standard Sheet 212-5 *Chain Link Rock Catchment Fence*.

5. Wedges. Provide wedges for cable splices and cable ends conforming to the requirements of §710-22 *Cable Guide Railing* and as shown in Detail X of the Standard Sheet 212-5 *Chain Link Rock Catchment Fence*.

6. Wire Ties. Provide galvanized steel wire ties (12 gauge).

212-2.03 Wire Mesh Slope Protection.

A. Wire Mesh. Provide wire mesh conforming to §710-06 *Rock Slope Net and Wire Mesh Assemblies*, Wire Mesh.

B. Cables. Provide galvanized mesh support cables having a minimum diameter of $\frac{3}{4}$ in., 6 x 19 Independent Wire Rope Core (IWRC) construction (or equivalent), conforming to the requirements of §710-22 *Cable Guide Railing*.

C. Anchors. Provide galvanized $\frac{3}{4}$ in. diameter wire rope anchors conforming to the requirements of §710-22 *Cable Guide Railing*.

Furnish anchor centralizers consisting of plastic, steel or any material not detrimental to the anchor. Do not use wood.

D. Grout. Provide grout conforming to the requirements of §701-05 *Concrete Grouting Material*.

E. Miscellaneous Appurtenances.

1. Seam Wire Rope. Provide seam rope conforming to §710-27 *Rock Slope Wire Ropes*, Seam Rope for Wire Mesh Slope Protection.

2. Steel Rings. Provide 1 in. x 4 in. steel rings conforming to the requirements of Federal Specification RR-C71D Type VI.

3. Clips. Provide $\frac{3}{4}$ in. wire rope clips conforming to the requirements of §710-22 *Cable Guide Railing*.

4. Thimbles. Provide $\frac{3}{4}$ in. thimbles conforming to the requirements of §710-22 *Cable Guide Railing*.

212-2.04 Wire Mesh Drape.

A. Wire Mesh Drape. Provide wire mesh drape conforming to the requirements of §710-06 *Rock Slope Net and Wire Mesh Assemblies*, Rock Slope Wire Mesh Drape Assembly.

B. Cables. Provide galvanized mesh support cables a minimum $\frac{3}{4}$ in. in diameter, consisting of 3 strands (7 wires per strand) conforming to the requirements of §710-22 *Cable Guide Railing* and having a minimum tensile strength of 25 kips.

C. Miscellaneous Appurtenances. Provide appurtenances, galvanized as supplied by manufacturer, as follows:

1. Tie Wire. Provide $\frac{1}{12}$ in. minimum diameter steel tie wire.

2. Hog Rings. Provide $\frac{1}{8}$ in. minimum diameter (11 gauge) hog rings or other steel fasteners.

3. Steel Rings. Provide welded forged steel rings with a stock diameter of 1 in. and a maximum inside diameter of 4 in.

D. Rock Bolt Assembly. Provide 1 $\frac{1}{4}$ in. nominal diameter, 6 $\frac{1}{2}$ ft. long (min.), rock bolt assembly conforming to the requirements of §731-03 *Rock Bolt Assembly* except resin packages of one setting time only shall be utilized for installation of the mesh support and cable anchor rock bolts.

ROCK SLOPE REINFORCEMENT AND CATCHMENT SYSTEMS

212-2.05 Temporary Rock Catchment Barrier.

A. Precast Concrete Barrier Units. Provide precast concrete barrier units consisting of three (3) components: precast concrete column supports, precast temporary concrete barriers, and precast concrete beams as detailed on the Standard Sheet 212-9 & 10 *Temporary Rock Catchment Barrier*.

1. Precast Concrete Column Supports. Provide precast concrete column supports conforming to the requirements of §704-05 *Precast Concrete Barrier* and to the dimensions and details “F”, “G”, “H”, “I”, and “N” on the Standard Sheet 212-10 *Temporary Rock Catchment Barrier*. Additional joint connection details shall be as shown on Standard Sheet 619-01 *Temporary Concrete Barrier*.

Each column support shall have cast-in-place a 6 in. x 6 in. x ¼ in. structural steel tube to be used for support of the wire rope rock fence. The tube steel shall conform to the requirements of ASTM A500, Grade B or C, and shall conform to the dimensions and detail “N” on the Standard Sheet 212-10 *Temporary Rock Catchment Barrier*.

2. Precast Temporary Concrete Barriers. Provide precast temporary concrete barriers conforming to the requirements of §704-05 *Precast Concrete Barrier* and to the dimensions, joint connections, material details, and anchoring details shown on Standard Sheet 619-01 *Temporary Concrete Barrier*.

3. Precast Concrete Beams. Provide precast concrete beams conforming to the requirements of §704-05 *Precast Concrete Barrier* and to the dimensions and details “K”, and “M” shown on the Standard Sheet 212-10 *Temporary Rock Catchment Barrier*.

The Engineer will inspect all precast concrete barrier unit components upon delivery to the project site for conformance to specifications. Any barrier unit component having damage and/or defects in the concrete and/or joint connections will be rejected.

The precast concrete barrier units shall form a smooth and continuous barrier when joined together. Any sections damaged or misaligned while in service shall be corrected or replaced.

B. Net Support Columns. Fabricate the net support columns from W5 x 16 wide flange members conforming to the requirements of §715-18 *Soldier Piles*

Each support column shall have four (4) pairs (eight holes) of 1 in. diameter holes drilled on the side facing the rock slope. Two (2) holes shall be situated 3 in. from the top of the post and the remaining three (3) pairs spaced equally approximately 40 in. apart.

After any required drilling, welding and/or cutting, all support columns and related hardware shall be hot dipped galvanized in accordance with the requirements of §719-01 *Galvanized Coatings and Repair Methods*, Type I.

C. Net Support Ropes. Provide net support ropes conforming to §710-27 *Rock Slope Wire Ropes*, Net Supporting Wire Rope.

D. Wire Rope Netting. Provide wire rope netting conforming to §710-06 *Rock Slope Net and Wire Mesh Assemblies*, Net Assembly.

Two (2) aluminum stop sleeves shall be used at all locations where two individual wire ropes are joined together.

The 8 in. x 8 in. mesh size shall be fabricated using high strength, hot dipped, galvanized steel clips, which are attached so that they are non-moveable. Nets damaged during clipping shall be rejected by the Engineer.

E. Chain Link Fence Fabric. Provide a minimum of 9 gauge chain link fence fabric conforming to the requirements of §710-02 *Galvanized Steel Fence Fabric*. The galvanized chain link fence fabric shall be 12 ft. high and have a 2 in. mesh size. The chain link fence fabric shall be continuous between wire rope net panels.

F. Synthetic Fabric Layer. Provide a synthetic fabric, 10 ½ ft. in height conforming to the requirements of §737-01A *Geotextile Bedding*.

G. Cushion Sand. Provide sand conforming to the requirements of §703-06 *Cushion Sand*.

ROCK SLOPE REINFORCEMENT AND CATCHMENT SYSTEMS

H. Miscellaneous Material. Provide miscellaneous hardware such as shackles, thimbles, wire clips, bolts, etc. which shall be hot dipped galvanized in accordance with §719-01 *Galvanized Coatings and Repair Methods*, Type I.

212-2.06 Move Temporary Rock Catchment Barrier. None Specified.

212-3 CONSTRUCTION DETAILS

212-3.01 Wire Rope Rock Catchment Fence. Assemble the wire rope rock catchment fence as detailed on the Standard Sheet 212-1, 2 & 3 *Wire Rope Rock Catchment Fence*.

Submit to the Engineer for approval not less than two weeks prior to the installation of the wire rope rock catchment fence. Do not begin work prior to approval. Provide the following:

- a) Proposed start date, completion date and detailed construction sequence.
- b) Proposed anchor drilling method and equipment including hole diameter, method of keeping holes open, and hole clean out procedures.
- c) Proposed anchor installation procedure including grout placement procedures, grouting equipment, and the procedure for setting the wire rope anchor centralizers.
- d) Method of verifying anchor capacity and equipment setup including details of the jacking frame and appurtenant bracing. Include the calibration data for the stressing device. The calibration shall be performed by an independent testing laboratory within 60 calendar days of the submittal date.

Install grouted wire rope anchors with accompanying centralizers at the top of the rock slope on 12 ft. centers or as indicated by Engineer. Mix grout per manufacturer's instructions. Wait a minimum of 7 days after grouting before applying any load to the anchors. Proof test each anchor in accordance with §212-3.03 A. *Anchor Testing*.

Fasten all net braiding with high strength, corrosion resistant clips or other fasteners to produce a permanent, non-movable joint. Damage to the wire rope resulting from the installation of the clips, insofar as it affects the integrity of the system, in the opinion of the Engineer, shall be cause for rejection of the net panel.

Cut the chain link material to fit each wire rope netting panel. Attach the chain link mesh fencing material to the inside face of the wire rope nets with clips to extend a minimum of 3 ft. beyond the bottom of the fence.

Provide and install one braking element per top and bottom net supporting rope per 20 ft. net section. Position the braking element not more than 3 ft. from the column.

Use seam ropes to fasten adjacent wire rope nets and the nets to the net support wire ropes, with at least 1 wrap per 16 in.

The column spacing shall be 20 ft.

Install a tie-back restraining cable to extend from the top of each column in a direction perpendicular to the length of the fence and on the slope side of the fence. Install a braking element in each cable not more than 3 ft. from the column.

For a fence whose length is 120 ft. or less, both end columns shall have a lateral restraining cable without the braking element. This cable shall extend from the top of the column at an angle of 60° from the vertical to the ground. For a fence which is longer, install lateral restraining cables at every multiple of 120 ft., or approximately midway for a fence less than 240 ft.

Paint the fence installation where specified, with the appropriate material and color as directed by the Engineer.

212-3.02 Chain Link Rock Catchment Fence. Assemble the chain link rock catchment fence as detailed on the Standard Sheet 212-4 & 5 *Chain Link Rock Catchment Fence*.

Install galvanized No. 11 steel rebar posts in 2 in. diameter vertical holes drilled to a minimum depth of 2 ft. into rock. Post spacing shall be 8 ft. Pour a sufficient amount of concrete grouting material into the hole before inserting the post to allow overflow after insertion.

Install anchor angles for terminal sections. The location of the anchor angles shall be in line with the corresponding fence section and shall be determined by the angle (60° minimum) between the top longitudinal cable and the end post. The angle between any longitudinal cable and the end post shall not exceed 90°. Drill bolt holes for anchor angles into the rock spaced 16 in. on-center to a depth of 4 ft. The bolt hole diameter shall be compatible with the bolt/drill hole/resin cartridge diameter, as recommended by the bolt manufacturer, but in no

ROCK SLOPE REINFORCEMENT AND CATCHMENT SYSTEMS

case shall the bolt hole diameter exceed the resin cartridge diameter by more than $\frac{3}{8}$ in. Install the anchor angle within $90^\circ \pm 15^\circ$ to the axis of the rock bolt and in intimate contact with the rock surface for its entire contact area. Acceptable methods of leveling the rock surface include the following:

- a) Chipping the rock surface.
- b) Applying a special mix supplied by the bolt manufacturer for leveling purposes.
- c) A combination of chipping and leveling.

Clean out the bolt hole to its full depth with air or water. Place the appropriate amount of resin in the hole. Insert the bolt into the hole and rotate at approximately 100 rpm while pushing the bolt down through the resin cartridges to the bottom of the hole by a means approved by the Engineer. Rotate the bolt in this position for 30 to 60 seconds to insure mixing of the resin in the hole. Do not rotate the bolt longer than the setting time of the resin. Leave the bolts undisturbed in the hole for the time required for the resin to harden. Place the anchor angle over the bolts on the prepared surface and add the appurtenances. Tension the bolts to 40 kips by means of hollow-ram hydraulic jack, or as ordered by the Engineer. Support the base of the jack at $90^\circ \pm 2^\circ$ to the axis of the bolt.

If a failure of the bolt or anchorage occurs, a determination of the cause of failure will be made by a Departmental Engineering Geologist. Correct, as ordered by the Engineer, at no cost to the State, failures attributable to causes other than failure of the rock in the anchorage zone.

The State reserves the right to sample and test delivered materials.

Install No. 9 hook bar anchors on the uphill side of the fence, one hook bar anchor at each post located in a direction normal to the fence alignment. The location of the hook anchor on the ground surface shall be determined by the angle ($60^\circ \pm 5^\circ$) between the tie-back cable and the post at the top longitudinal cable. Construct hook bar anchorage according to depth of overburden.

Install No. 9 hook bar anchors at intermediate fence sections. The location of the hook bar anchors shall be in line with the corresponding fence section and shall be determined by the angle between the longitudinal cables and the intermediate anchorage post. This angle shall be between a minimum of $60^\circ \pm 5^\circ$ and a maximum of 90° . Construct hook bar anchorages according to depth of overburden.

Secure longitudinal cables to anchor angles at terminal sections with steel turnbuckle cable end assemblies. Secure longitudinal cables at intermediate fence sections to hook bar anchors with one (1) thimble, and four (4) cable clips per cable loop. The maximum distance between terminal sections, and/or intermediate anchorage sections, shall be 200 ft.

Secure $\frac{3}{4}$ in. longitudinal guide rail cables to rebar posts with "U" bolts so as to have minimum sag without bending posts. Cable splices shall be staggered a minimum of 20 ft. on adjacent cables. Splices shall be spaced a minimum of 100 ft. on the same cable.

Recommended installation sequence:

- a) Start with lowest longitudinal cable working from one terminal anchorage toward another or toward an intermediate anchorage, if used.
- b) Draw cable taut and secure with "U" bolt to posts.
- c) Complete tightening entire length of lower cable between anchorages before starting next higher cable.

Install aluminum fence fabric on uphill side of posts. Attach fence fabric to longitudinal cables with 12 gauge galvanized steel wire ties at 1 ft. intervals. Fence fabric splices shall be overlapped a minimum of four chain link rows. Attach fabric sections by tying both ends of the overlap at 1 ft. intervals, or by a method approved by the Engineer.

Install vinyl coated fence fabric on roadway side of posts. Attach fence fabric to longitudinal cables with 9 gauge vinyl coated steel wire ties at 1 ft. intervals. Fence fabric splices shall be overlapped a minimum of four chain link rows. Attach fabric sections by tying both ends of the overlap at 1 ft. intervals, or by a method approved by the Engineer.

Bottom of fence fabric shall be in contact with the ground surface. Add fence fabric material as necessary. Added material shall be overlapped a minimum of four chain link rows. Tie both ends of the overlap at 1 ft. intervals, or as approved by the Engineer.

Attach tie-back cables on uphill side of rebar posts after longitudinal cables have been tightened and chain link fence fabric has been installed. Tie-back cables shall have a maximum sag of $\frac{3}{4}$ in. measured at the center.

212-3.03 Wire Mesh Slope Protection. Assemble the wire mesh slope protection as detailed on the Standard Sheet 212-6 & 7 *Wire Mesh Slope Protection*.

ROCK SLOPE REINFORCEMENT AND CATCHMENT SYSTEMS

Design the grouted wire rope anchors so that the design load (P) is at least equal to 30 kips.

Submit shop drawings to the Engineer for approval not less than two weeks prior to the installation of the wire mesh slope protection. Do not begin work prior to approval. Provide drawings including the following:

- Proposed start date, completion date and detailed construction sequence.
- Details of the wire mesh and anchor layout on the existing slope.
- Proposed anchor drilling method and equipment including hole diameter, method of keeping holes open, and hole clean out procedures.
- Proposed anchor installation procedure including grout placement procedures, grouting equipment, and the procedure for setting the wire rope anchor centralizers.
- Method of verifying anchor capacity and equipment setup including details of the jacking frame and appurtenant bracing. Include the calibration data for the stressing device. The calibration shall be performed by an independent testing laboratory within 60 calendar days of the submittal date.

Install grouted wire rope anchors with accompanying centralizers at the top of the rock slope on 12 ft. centers or as indicated by Engineer. Mix grout per manufacturer's instructions. Wait a minimum of 7 days after grouting before applying any load to the anchors. Proof test each anchor in accordance with §212-3.03 A. *Anchor Testing*.

Connect vertical wire rope tag lines to the anchors. Connect the horizontal support cable(s) to the vertical tag lines with steel rings as shown on the attached drawing for this specification. Do not draw cable taut. Maintain a minimum cable sag of $\frac{3}{4}$ in. on the horizontal support cable between vertical tag lines.

Attach the mesh to the horizontal support cable by a continuous weave through each of the mesh openings with galvanized 5/16 in. seam wire rope, as shown on the attached drawing for this specification.

Install the wire mesh in vertical strips. Overlay horizontal and vertical laps a minimum of 1 ft. and connect with a continuous weave through each of the mesh openings with galvanized 5/16 in. seam wire rope along the edge of the upper mesh strip. The mesh shall be installed in such a manner that the end of a roll curls into the rock face.

Install the wire mesh to cover the specified area of rock face.

A. Anchor Testing. Proof test each anchor. Perform the proof test by incrementally loading and unloading the anchors to 1.5 times the design load (P) in accordance with Table 212-1 *Wire Mesh Slope Protection Proof Test Load Schedule*. Record the anchor movements to the nearest 0.025 mm at each load increment.

TABLE 212-1 WIRE MESH SLOPE PROTECTION PROOF TEST LOAD SCHEDULE	
Load¹	Observation Period
AL	Minimum of 1 minute ²
0.25 P	Minimum of 1 minute ²
0.50 P	Minimum of 1 minute ²
0.75 P	Minimum of 1 minute ²
1.00 P	Minimum of 1 minute ²
1.25 P	Minimum of 1 minute ²
1.50 P (Load Hold) ²	10 minutes (or 60 minutes depending on total movement ³)

¹P = Design Load

AL = Alignment Load. The AL necessary to maintain position of the stressing and testing equipment shall not exceed 0.05 P. Set dial gauges to "zero" after the alignment load has been applied.

²Hold each load increment, except for the 1.5 P load, until the deflection stabilizes.

³The load hold portion of the proof test is a maximum test load of 1.50 P, which shall be held constant for 10 minutes. The load hold time shall start when the pump begins to load the anchor from the 1.25 P load to the test load. A load cell shall be used to monitor the constant load. Total movements with respect to an independent fixed reference point shall be recorded at 1 minute, 2, 3, 4, 5, 6, and 10 minutes. If the total movement between 1 minute and 10 minutes exceeds $\frac{1}{24}$ in., the test load shall be held for an additional 50 minutes. Total movements shall be recorded at 15, 20, 25, 30, 45 and 60

ROCK SLOPE REINFORCEMENT AND CATCHMENT SYSTEMS

minutes.

No part of the temporary yoke or load frame shall bear within 3 ft. of the anchor.

Plot the movement versus load for each increment.

An anchor will be accepted by the Engineer if the creep rate at 1.5P does not exceed 1/24 in. between the 1 and 10 minute readings or for a load hold time of 60 minutes, the creep rate does not exceed 1/12 in. per log cycle of time. If an anchor fails the proof test, install a new anchor at no cost to the State.

212-3.04 Wire Mesh Drape. Assemble the wire mesh drape as detailed on the Standard Sheet 212-8 *Wire Mesh Drape*.

Install untensioned resin rock bolts at the top of the rock slope on 50 ft. centers (maximum) or as shown in the contract documents. Proof test the first rock bolt per resin lot number to 20 kips in accordance with §212-3.03 A.

Anchor Testing.

Place ¾ in. diameter guide rail cable horizontally across the top of the rock slope, secured by 1 ¼ in. diameter resin rock bolts. Maintain a minimum cable sag of 2 ft. to 3 ft. between rock bolts. Do not draw cable taut. Splices of the guide rail cable will not be allowed.

Fold the mesh over or under the guide rail cable a minimum of 1 ft. and connect the horizontal lap with galvanized tie wire with a continuous weave through each of the mesh openings.

Install the wire mesh in vertical strips, each lapped over the other by a minimum of 1 ft. Connect the adjacent vertical strips by either a continuous weave of galvanized tie wire along the edge of the outer mesh strips only, or with hog rings or metal ties on a 6 in. staggered pattern along the edges of both panels. When used, overlay horizontal laps a minimum of 1 ft. and connect with a continuous weave of galvanized tie wire along the edge of the upper mesh strip.

Install the wire mesh to cover the area of rock face identified in the contract documents.

Repair all damaged galvanized surfaces in accordance with §719-01 *Galvanized Coatings and Repair Methods*.

212-3.05 Temporary Rock Catchment Barrier. Assemble and maintain the temporary rock catchment barrier as detailed on the Standard Sheet 212-9 & 10 *Temporary Rock Catchment Barrier*.

A. Precast Concrete Barrier Units. Each run, or bay, of precast concrete barrier units (precast concrete column support, precast temporary concrete barrier and precast concrete beam) shall be fastened together to form a continuous chain. After placement, each successive unit shall be moved longitudinally to remove any slack in the connecting joint. The units at each end of a run or bay shall be connected as shown on Standard Sheet 619-01 *Temporary Concrete Barrier*. To reduce movement of the barrier in areas where limited deflection is desired, one of the anchoring methods shown on Standard Sheet 619-01 *Temporary Concrete Barrier* shall be used. Where shown in the contract documents, the ends of the barrier run shall be fitted with an impact attenuation device or a tapered end section and flared back.

The empty space within each concrete barrier unit shall be filled with sand for the full height (32 in.) of the unit. The back of the concrete barrier units shall also be covered with sand to the full height of the unit. The sand shall then be laid back at the angle of repose of the material to a minimum sand thickness of 18 in. as shown in detail "E" on Standard Sheet 212-9 *Temporary Rock Catchment Barrier*. The cost of installing and removing the sand, including the final cleaning of the pavement and shoulder, shall be included in the bid price for this Item.

The Contractor shall provide and maintain delineation of temporary barriers. This delineation shall make the barrier visible to approaching traffic, as well as to traffic which is adjacent to the barrier. The Contractor shall have the choice of using one or more of the following: warning lights, delineators, pavement marking, reflective tape placed on the barrier, reflective paint, or any other device subject to the approval of the Engineer. The delineation devices shall be maintained dirt and snow free, and be visible throughout the term of the contract including shutdown periods.

B. Net Support Columns. The W5 x 16 posts shall be installed in the 6 in. x 6 in. x ¼ in. structural steel tubes cast in the precast concrete column support units. The columns shall be inserted flush with the bottom of the precast concrete column supports.

ROCK SLOPE REINFORCEMENT AND CATCHMENT SYSTEMS

C. Net Support and Lateral Anchor Ropes. The 5/8 in. net support wire ropes shall be installed as shown in detail “B” on Standard Sheet 212-9 *Temporary Rock Catchment Barrier*. The net support wire rope shall have maximum sag of 2 in. At both end sections and at every 125 ft. section of temporary catchment barrier (five precast concrete barrier units) install lateral anchors as shown in detail “C” on Standard Sheet 212-9 *Temporary Rock Catchment Barrier*. The wire rope loop at a ¾ in. shackle connection shall be secured with three (3) wire rope clips as shown in detail “J” on Standard Sheet 212-10 *Temporary Rock Catchment Barrier*.

D. Rock Catchment Fence Fabric. The rock catchment fence fabric (wire rope net, chain link fence fabric and synthetic fabric) shall be attached to the support rope after the concrete barrier units have been installed.

The wire rope net panels shall be attached to the support ropes with ¾ in. shackles spaced approximately 3 ft. apart. The chain link fence fabric, 12 ft. in height, shall be attached to the wire rope net with hog rings or twist ties. The area between two adjacent wire rope net panels shall be covered with chain link fence fabric. The layer of synthetic fabric, with a minimum height of 10 ½ ft., shall be attached to the chain link fence.

212-3.06 Move Temporary Rock Catchment Barrier. Move and reset the temporary rock catchment barrier in accordance with the requirements of §212-3.05 *Temporary Rock Catchment Barrier*.

212-4 METHOD OF MEASUREMENT

212-4.01 Wire Rope Rock Catchment Fence. Wire rope rock catchment fence will be measured as the number of linear feet of fencing, measured from center-to-center of end posts.

212-4.02 Chain Link Rock Catchment Fence. Chain link rock catchment fence will be measured as the number of linear feet of fence, measured along the top of the fence between the terminal posts. An allowance of 10 linear feet will be added for each terminal section anchorage and for each intermediate section anchorage installed.

212-4.03 Wire Mesh Slope Protection. Wire mesh slope protection will be measured as the number of square feet of rock face satisfactorily covered. No measurement will be made of wire mesh used in any overlap.

212-4.04 Wire Mesh Drape. Wire mesh drape will be measured as the number of square feet of rock face satisfactorily covered. No measurement will be made of wire mesh used in any overlap.

212-4.05 Temporary Rock Catchment Barrier. Temporary rock catchment barrier will be measured as the number of linear feet of barrier, measured along the centerline of the uppermost concrete barrier surface, from one end anchor to the other.

212-4.06 Move Temporary Rock Catchment Barrier. Moving temporary rock catchment barrier will be measured as the number of linear feet of barrier moved, measured along the centerline of the uppermost concrete barrier surface, from one end anchor to the other.

212-5 BASIS OF PAYMENT

212-5.01 Wire Rope Rock Catchment Fence. The unit price bid per linear feet for wire rope rock catchment fence shall include the costs of furnishing all labor, material and equipment necessary to complete the work.

212-5.02 Chain Link Rock Catchment Fence. The unit price bid per linear feet for chain link rock catchment fence shall include the costs of furnishing all labor, material and equipment necessary to complete the work.

212-5.03 Wire Mesh Slope Protection. The unit price bid per square feet for wire mesh slope protection shall include the costs of furnishing all labor, material and equipment necessary to complete the work, including anchor testing and disposal of any material removed from the slope.

212-5.04 Wire Mesh Drape. The unit price bid per square feet for wire mesh drape shall include the costs of

ROCK SLOPE REINFORCEMENT AND CATCHMENT SYSTEMS

furnishing all labor, material and equipment necessary to complete the work, including anchor testing and disposal of any material removed from the slope.

212-5.05 Temporary Rock Catchment Barrier. The unit price bid per linear feet for temporary rock catchment barrier shall include the costs of furnishing all labor, material and equipment necessary to erect, maintain, and remove the required barrier, including any required connection devices, end treatments, delineation or guiding devices, and devices for pinning and connecting temporary precast concrete barrier units.

After placement, 90% of the item unit price will be paid. The remaining 10% will be paid when the rock catchment barrier has been removed.

212-5.06 Move Temporary Rock Catchment Barrier. The unit price bid per linear feet for moving temporary rock catchment barrier shall include the costs of furnishing all labor, material and equipment necessary to remove, transport, erect, and maintain the required barrier, including any required connection devices, end treatments, delineation or guiding devices, and devices for pinning and connecting temporary precast concrete barrier units.

Movements necessary to maintain, realign, or replace damaged units will not be considered as moving temporary rock catchment barrier and shall be done at no additional cost to the State.

Payment will be made under:

Item No.	Item	Pay Unit
212.0106	Wire Rope Rock Catchment Fence (Medium Impact – 6 ft.)	Feet
212.0108	Wire Rope Rock Catchment Fence (Medium Impact – 8 ft.)	Feet
212.0110	Wire Rope Rock Catchment Fence (Medium Impact – 10 ft.)	Feet
212.0112	Wire Rope Rock Catchment Fence (Medium Impact – 12 ft.)	Feet
212.0201	Chain Link Rock Catchment Fence	Feet
212.0202	Vinyl Coated Chain Link Rock Catchment Fence	Feet
212.03	Wire Mesh Slope Protection	Square Feet
212.04	Wire Mesh Drape	Square Feet
212.0501	Temporary Rock Catchment Barrier (10 ft.)	Feet
212.0502	Move Temporary Rock Catchment Barrier (10 ft.)	Feet

Make the following changes to the Standard Specification of May 4, 2006 / May 1, 2008:

Section 501-3.02 D. Delivery Tickets, *add* the following line to the top of the bullet list for delivery ticket requirements:

- “SiteManager Mix ID”

DELETION OF STANDARD SPECIFICATIONS SECTIONS 303, 403, 618 and §703-09

Make the following changes to the Standard Specifications dated May 4, 2006 and May 1, 2008:

Delete Section 303 *Optional Flexible Shoulder* in its entirety.

Delete Section 403 *Hot Mix Asphalt (HMA) Pavements for Municipalities* in its entirety.

Delete Section 618 *Bituminous Material* in its entirety.

Delete §703-09 *Reclaimed Asphalt Pavement (RAP)* in its entirety.

SUBBASE COURSE

Make the following changes to the Standard Specifications dated May 1, 2008:

Pages **209-213**, **Delete** SECTION 304 entirely and **Replace** it with the following:

SECTION 304 - SUBBASE COURSE

304-1 DESCRIPTION

304-1.01 General. The work consists of furnishing, placing and compacting a subbase course of the specified type in conformity with the lines, grades, thicknesses and typical sections shown in the contract documents.

304-1.02 Optional Type. When the Optional Type subbase item is specified, select any of the four (4) options as follows:

Option A. Subbase construction consisting of two (2) separate layers of Type 4 and Type 3 Subbase Course.

Option B. Subbase construction consisting of a single layer of Type 1 Subbase Course.

Option C. Subbase construction consisting of a single layer of Type 2 Subbase Course.

Option D. Subbase construction consisting of a single layer of Type 4 Subbase Course.

304-1.03 Definitions. Deleterious: Any material that does not consist of concrete, asphalt, glass, brick, stone, sand, gravel, blast furnace slag, or other materials deemed acceptable, when these materials are used in subbase in conformance with the specification requirements, OR any material which will adversely affect the performance of the product either during handling, during construction, or in its final application.

304-2 MATERIALS. Provide subbase material meeting the requirements of §733-04 *Subbase Course*.

Provide a subbase material meeting the specification requirements and is within the Contractor's capabilities to place and fine grade to the required tolerances. Should the subbase course become unstable at any time prior to the placement of the overlying course, correct the unstable condition at no additional cost to the State. Perform any required modification prior to placing the material on the grade.

RAP will not be allowed as an acceptable alternate to Types 1, 3 and 4 at intersection locations or in areas with a high percentage of truck traffic as shown in the contract documents, unless Portland Cement Concrete pavement is to be installed as part of the pavement structure. A high percentage of trucks is defined to be 10% or more. For interstates and other freeways, a DDHV of 250 vph is used to indicate a high percentage of trucks.

304-3 CONSTRUCTION DETAILS

304-3.01 General. Notify the Engineer in writing of which placement option, material option (if applicable) and/or material type is proposed for use, at least 14 calendar days prior to performing the work. If it is proposed that more than one option or type is to be used, submit a plan to the Engineer

SUBBASE COURSE

describing where each option or type is proposed for use. This plan must be approved by the Engineer prior to incorporating it into the project. The State reserves the right to disapprove the use of more than one option on a project. Use uniform subbase types and materials within the limits of the roadbed as defined in §101-02 *Definition of Terms*.

A. Winter Earthwork. For Contractors choosing to proceed with earthwork construction operations requiring soil compaction from November 1st thru April 1st, provide the Engineer with a Winter Earthwork submittal, with a copy to the Regional Geotechnical Engineer, in accordance with §203-3.01 A. *Winter Earthwork Submittal*. In all work incorporated into the final product, the Contractor shall not place material that is frozen, or place fill material on frozen ground.

Winter earthwork restrictions for subbase material are such that construction operations may only proceed if the air temperature, ground temperature, and material temperature is above 32° F. Therefore, the Winter Earthwork submittal shall provide details of how standard subbase material will be placed utilizing the modified methods and procedures to adjust for the weather influence on the compaction operations.

304-3.02 Placement

- Place the upper course material on the grade in a manner to minimize segregation, using equipment and procedures approved by the Engineer. Do not perform uncontrolled spreading from piles dumped on the grade.
- The maximum compacted layer thickness shall be as shown in the contract documents. In confined areas, the maximum compacted layer thickness is 6 in. The minimum loose lift thickness is 1.5 times the maximum particle size.
- Place Type 1 with a minimum compacted layer thickness of 6 in.
- Do not place Type 3 material within 4 in. of the bottom of a pavement course.
- Do not place materials blended with glass in contact with synthetic liners, geogrids, geotextiles or other geosynthetics. Ensure that glass incorporated into subbase is thoroughly mixed so that glass constitutes no more than 30 percent by weight anywhere in the subbase.
- When placing material under Option A, place and compact each material in a separate lift.

304-3.03 Compaction. When the moisture content is within the limits for proper compaction, compact the material in accordance with the requirements of §203-3.03 C. *Compaction*. Density tests are not required for the acceptance of these courses.

If a subbase course is disturbed by frost action prior to paving, re-compact the subbase.

304-3.04 Traffic and Contamination. The movement of highway traffic over the final surface of the subbase may be permitted at locations designated by, and under such restrictions as shown in the contract documents, provided such movements take place prior to the final finishing of this course to the specified tolerance. Do not allow highway traffic to move over subbase containing glass. The movement of construction equipment on this course may be permitted at locations designated by and under such restrictions as ordered by the Engineer. At locations where permission is granted for such movement, place and maintain the temporary surface of the course, upon which the construction traffic is running, at least 2 in. above the final surface of the course. Just prior to paving and after all construction traffic not required for the removal has ceased, remove the 2 in. protective layer, and prepare and compact the exposed surface of the course to the specified tolerance.

No payment will be made for furnishing, placing, maintaining, removing and disposing of the 2 in.

SUBBASE COURSE

thick protective layer. Include the cost thereof in the price bid for Subbase Course.

If the subbase is damaged or mixed with the subgrade or any other material due to the Contractor's operation, remove such material and replace it with the appropriate subbase material at no additional cost to the State.

304-3.05 Tolerance. Place Types 1, 2 or 4 so that after compaction the top surface of the course does not extend more than ¼ in. above nor more than ¼ in. below true grade for the course at any location. Place Type 3 course so that the finished surface does not extend above the true grade and surface for this course at any location.

304-4 METHOD OF MEASUREMENT

304-4.01 Subbase Course. The quantity is the number of cubic yards of material, computed from payment lines shown in the contract documents.

304-5 BASIS OF PAYMENT

304-5.01 Subbase Course. The unit price bid for this work includes the cost of furnishing all labor, material and equipment necessary to complete the work. Include the cost of adding water in the price bid unless the item for applying water is included in the contract. No direct payment will be made for losses of material resulting from compaction, foundation settlement, erosion, or any other cause. No deductions will be made for the volumes occupied by manholes, catch basins and other such objects.

No additional payment will be made for the protective layer, as stated in 304-3.04.

Progress payments will be made after the subbase course has been properly placed and compacted. Payment will be made at the unit price bid for 75% of the quantity. The balance of the quantity will be paid for after the final finishing to the required tolerance and just prior to the placing of the next course.

Payment will be made under:

Item No.	Item	Pay Unit
304.11	Subbase Course, Type 1	Cubic Yards
304.12	Subbase Course, Type 2	Cubic Yards
304.13	Subbase Course, Type 3	Cubic Yards
304.14	Subbase Course, Type 4	Cubic Yards
304.15	Subbase Course, Optional Type	Cubic Yards

SECTION 401 - PLANT PRODUCTION

Make the following changes to the Standard Specifications dated May 1, 2008:

Delete Section 401 – Plant Production entirely and **replace** it with the following:

SECTION 401 - PLANT PRODUCTION

401-1 DESCRIPTION. The contractor is responsible for Quality Control (QC). QC is defined as all activities required to produce HMA that meets all specification requirements. The contractor shall incorporate a Quality Control system for all plant production of hot mix asphalt (HMA) and assume responsibilities for all QC activities at the production facilities.

The contractor shall produce the HMA according to the specifications herein and provide production documentation. Quality Adjustment Factors (QAFs) will be used to assess HMA production quality and these factors will be applied to calculate a quality payment adjustment.

The Department is responsible for Quality Assurance (QA). QA is defined as all activities performed by the Department to assure that HMA production meets the specification requirements. The Department will determine quality payment adjustments for each day's production using a daily QAF obtained from the calculations of the average absolute values for volumetric and non-volumetric mixes in accordance with Materials Procedure (MP) 401, *Quality Control and Quality Assurance Procedures for Quality Control Hot Mix Asphalt Production*. The daily QAFs measure production variation from the mean of the specification limits.

401-2 MATERIALS. The provisions of §402-2, *Materials*, apply and are as modified herein. Produce HMA in accordance with the requirements outlined in this specification, including all applicable Test Methods and Materials Procedures. HMA mixture designs must be accepted by the Department prior to any HMA production.

The Department reserves the right to suspend any mixture design when the mixture produces unacceptable paving results or exhibits properties that will affect the anticipated pavement performance.

401-2.01 Hot Mix Asphalt Designs. Formulate and submit a HMA design to the Regional Materials Engineer (RME) that satisfies all design criteria outlined in MM 5.16, *Superpave Hot Mix Asphalt Mixture Design and Mixture Verification Procedures*. When the submitted HMA design is assigned verification status, the design must be verified during production. Notify the RME at least 24 hours prior to the start of verification status production. When producing under verification status, make necessary adjustments to control the process. Apply daily QAFs to both verification and production status mix designs. Mixtures produced under verification status are allowed for use on State projects.

For any HMA permeable base and shim mixtures required by the contract documents, formulate and submit to the RME a job mix formula that satisfies the General Limits imposed by Table 401-1, *Composition of Hot Mix Asphalt Mixtures*.

401-2.02 Aggregates. Aggregate must be from a source approved by the Department. Use fine aggregate that consists of materials conforming to the requirements of §703-01, *Fine Aggregate*. In addition, fine aggregate may consist of screenings, free from deleterious materials and manufactured from sources of stone, gravel, or slag meeting the requirements of §703-02, *Coarse Aggregate*.

Use coarse aggregate that consists either of crushed stone, crushed gravel, or crushed slag conforming to the requirements of §703-02, *Coarse Aggregate* and MM 5.16.

Use slag aggregate on State projects only when an alternate pay item which takes the mix yield differential into account is included on the plans or in the itemized proposal.

When coarse aggregates for the mixture are from more than one source or of more than one type of material, proportion and blend them to provide a uniform mixture.

SECTION 401 - PLANT PRODUCTION

TABLE 401-1 COMPOSITION OF HOT MIX ASPHALT MIXTURES						
Mixture Requirements	Permeable Base				Shim	
	Type 1		Type 2		Type 5	
Screen Sizes	General Limits % Passing ¹	Job Mix Tolerance %	General Limits % Passing ¹	Job Mix Tolerance %	General Limits % Passing ¹	Job Mix Tolerance %
2 in	100	-	100	-	-	-
1 1/2 in	95-100	-	75-100	±7	-	-
1 in	80- 95	±6	55- 80	±8	-	-
1/2 in	30- 60	±6	23- 42	±7	-	-
1/4 in	10- 25	±6	5- 20	±6	100	-
1/8 in	3- 15	±6	2- 15	±4	80-100	±6
No. 20	-	-	-	-	32- 72	±7
No. 40	-	-	-	-	18- 52	±7
No. 80	-	-	-	-	7- 26	±4
No. 200	0- 4	±2	-	-	2- 12	±2
Asphalt Content, % ^{2,3}	2.0-4.0	NA	2.5-4.5	NA	7.0-9.5	NA
Mixing and Compaction Temperature Range °F ⁴	225-300		225-300		250-325	

NOTES:

1. All aggregate percentages are based on the total weight of the aggregate.
2. The asphalt content is based on the total weight of the mix. When using slag aggregates in the mix, the asphalt content shall be increased accordingly, a minimum of 25 percent for an all slag mix.
3. Use the PG binder listed in the proposal or as designated by the Region Materials Engineer following the guidance specified in the Comprehensive Pavement Design Manual, Chapter 6, Section 6.2.5 – *Performance Graded Binder Selection*.
4. Or as recommended by the PG binder manufacturer.

A. Coarse Aggregate Type F1 Conditions. Use one of the following types of coarse aggregate.

1. Limestone, dolomite or a blend of the two having an acid-insoluble residue content of not less than 20.0%.
2. Sandstone, granite, chert, traprock, ore tailings, slag or other similar noncarbonate materials.
3. Gravel, or a natural or manufactured blend of the following types of materials: limestone, dolomite, gravel, sandstone, granite, chert, traprock, ore tailings, slag or other similar materials, meeting the following requirements:

- a. 12.5 Nominal Maximum Size Aggregate Mixes. Noncarbonate plus 1/8 inch particles must comprise a minimum of 30.0% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities). A minimum of 95.0% of plus 3/8 inch particles must be non-carbonate.
- b. 9.5 Nominal Maximum Size Aggregate Mixes. Noncarbonate plus 1/8 inch particles must comprise a minimum of 30.0% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities). A minimum of 95.0% of plus No. 4 particles must be non-carbonate.

B. Coarse Aggregate Type F2 Conditions. Use one of the following types of coarse aggregate.

1. Limestone, dolomite, or a blend of the two having an acid-insoluble residue content of not less than 20.0%.

SECTION 401 - PLANT PRODUCTION

2. Sandstone, granite, chert, traprock, ore tailings, slag or other similar noncarbonate materials.
3. Gravel, or a natural or manufactured blend of the following types of materials: limestone, dolomite, gravel, sandstone, granite, chert, traprock, ore tailings, slag or other similar materials, meeting the following requirements:
 - a. 12.5 Nominal Maximum Size Aggregate Mixes. Noncarbonate plus 1/8 inch particles must comprise a minimum of 10.0% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities). A minimum of 20.0% of plus 3/8 inch particles must be noncarbonate.
 - b. 9.5 Nominal Maximum Size Aggregate Mixes. Noncarbonate plus 1/8 inch particles must comprise a minimum of 10.0% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities). A minimum of 20.0% of plus No. 4 particles must be noncarbonate.

C. Coarse Aggregate Type F3 Conditions. Use one of the following types of coarse aggregate.

1. Limestone or a blend of limestone and dolomite having an acid-insoluble residue content of not less than 20.0%.
2. Dolomite.
3. Sandstone, granite, chert, traprock, ore tailings, slag or other similar noncarbonate materials.
4. Gravel, or a natural or manufactured blend of the following types of materials: limestone, dolomite, gravel, sandstone, granite, chert, traprock, ore tailings, slag or other similar materials, meeting the following requirements:
 - a. 12.5 Nominal Maximum Size Aggregate Mixes. Noncarbonate plus 1/8 inch particles must comprise a minimum of 10.0% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities). A minimum of 20.0% of plus 3/8 inch particles must be noncarbonate.
 - b. 9.5 Nominal Maximum Size Aggregate Mixes. Noncarbonate plus 1/8 inch particles must comprise a minimum of 10.0% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities). A minimum of 20.0% of plus No. 4 particles must be noncarbonate.

D. Coarse Aggregate Type F9 Conditions. Use coarse aggregate meeting the requirements of §703-02, *Coarse Aggregate*.**401-2.03 Mineral Filler.** Use mineral filler conforming to the requirements of §703-08, *Mineral Filler*.**401-2.04 Performance-Graded Binder.** Use the Performance-Graded Binder (PG Binder) in the production of these mixtures that meets Section 702 – *Bituminous Materials*.

Initial acceptance of the PG Binder is based on the primary source appearing on the Department's Approved List for Bituminous Material Primary Sources, A. Performance-Graded Binders for Paving. Acceptance of the PG Binder is contingent upon satisfactory test results from samples taken, as required by the Department's procedural directives, at the location where the material is incorporated into the work. A primary source is defined as a firm that samples, tests, and certifies by Production Lot that the PG Binder is in conformance with the specifications. The procedural directives for sampling, testing, and certifying the PG Binder, and for achieving and maintaining approved list status, are available from the Materials Bureau.

The temperature of PG Binder delivered to the HMA Production Facility shall not exceed 350°F, unless the PG Binder supplier recommends it.

401-2.05 Reclaimed Asphalt Pavement. Reclaimed Asphalt Pavement (RAP) shall meet the requirements of MM 5.16.**401-3 CONSTRUCTION DETAILS.****401-3.01 Quality Control.** Perform all sampling and testing in accordance with Materials Procedure 401. Document all QC test results and records in a legible manner and provide them to the State at the end of each

SECTION 401 - PLANT PRODUCTION

production season or when requested by the RME. HMA produced without the required sampling, testing and documentation may be rejected.

401-3.02 Production Facility Laboratory. Maintain an approved production facility site laboratory to perform all required HMA sampling and testing according to MP 401.

401-3.03 Plant Lots and Sublots. Determine plant lots and sublots on a daily basis in accordance with MP 401.

401-3.04 Quality Control Sampling and Testing. Obtain and test QC samples as outlined in MP 401.

401-3.05 Production Control. Produce HMA according to MP 401. Make necessary process control adjustments during production according to MP 401.

401-3.06 Production Quantities. Whenever production is made for the Department, notify the Regional Materials office by 3:00 p.m. the business day before the day of production.

Maintain a record of each day's production quantity for each mix design supplied to the project site daily. Retain these records at the production facility. These records must be available to the Department's representative for review. Ship all production quantities as outlined in §401-3.07 *Documentation*.

401-3.07 Documentation. Record all QC test data for each plant on the appropriate forms provided by the Department according to MP 401. Also, keep a copy of the plant automation printout at the plant facility for each mix type produced and make them available for review at all times. Transmit a summary of all test data weekly to the RME.

Provide a delivery ticket indicating the total quantity in tons being delivered with each delivery vehicle supplying HMA. The method of determining the delivered quantity is subject to the approval of the RME. Make one legible copy of the delivery ticket available to the Department's paving inspector prior to the placement of the mixture showing the following minimum information:

- Ticket number
- Plant identification
- Contract number
- Site Manager Mix ID (as outlined in MP 401)
- Mix Code (as outlined in MP 401)
- Quantity of material in vehicle
- Date and Time

The quality assurance technician (QAT) will determine the quality adjustment factor (QAF) for each day's production in accordance with MP 401.

The Engineer will use the Daily QAF to calculate the payment adjustment for each day's production according to §402-4 *Method of Measurement*.

401-3.08 HMA Mixing Plant. HMA mixing plants must meet the requirements in MP 401.

401-3.09 Hot Mix Asphalt Holding Bins. HMA mixtures may be held in holding bins which meet the requirements in MP 401.

401-3.10 Evaluation of Lots Represented by 0.85 QAF. When any material results in a QAF of 0.85, the Engineer will evaluate the subject material to determine if it will be left in place. The Engineer may require the Contractor to core the pavement to determine if the in-place density is acceptable at no additional cost to the State. When cores are required, the Engineer will divide the pavement area being evaluated into 4 sublots in accordance with the requirements of §402-3.08, *Pavement Density Samples*. The material will be left in-place when either of the following sets of conditions is met.

SECTION 401 - PLANT PRODUCTION

- The calculated plant air voids used for payment are greater than 5.5% and less than or equal to 7.0%, the asphalt content, based on automation, is within 0.2% of the production target, the Contractor achieved field density of 92% to 97%, and there are no defects such as, but not limited to, cracking, raveling, rutting, shoving, or bleeding.
- The calculated plant air voids used for payment are greater than or equal to 1% and less than 1.5%, the validated QC and QA plant air void test results, according to MP 401, average 1.5% to 5.5%, the asphalt content, based on automation, is within 0.2% of the production target, the contractor achieved field density of 92% to 97%, and there are no defects such as, but not limited to, cracking, raveling, rutting, shoving, or bleeding.

If the material does not meet the above conditions or it is unknown, such as for mixes accepted based on gradation or if QA testing was not required, the Engineer will determine if the material in question may remain in-place considering, but not limited to, the following:

- Type of material produced
- The layer in which the material was placed
- The location and traffic volume
- Laboratory test results
- Field test results, such as density

If the subject material is left in-place, it will be assigned a QAF of 0.85. If determined the subject material will not be left in-place, the Contractor shall remove and replace the material at no additional cost to the State.

401-4 METHOD OF MEASUREMENT. The quantity will be the number of tons delivered as determined from the automated proportioning system, the delivery vehicle weigh system, or the HMA holding bin weigh system. The measurement or calculation will be the quantity based on the measured amount and reported to the nearest 0.01 of a ton.

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

Make the following changes to the Standard Specifications dated May 1, 2008:

Delete Section 402 – Hot Mix Asphalt (HMA) Pavements in its entirety and **replace** it with the following:

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

402-1 DESCRIPTION. These specifications apply to all plant mixed Hot Mix Asphalt (HMA) produced at a production facility under Section 401, Plant Production, irrespective of aggregate gradation, type, and amount of HMA material or use.

This work will consist of providing, placing, and performing density monitoring of one or more courses of HMA pavement constructed on the prepared foundation in accordance with the contract documents or as directed by the Engineer.

402-2 MATERIALS

402-2.01 General. Use aggregate and PG binder from a supplier listed in the Department's Approved List of Fine and Coarse Aggregates. Use of mineral filler or any other materials for the production of HMA will be accepted in accordance with the State's written instructions.

A PG Binder grade and the Design Estimated Traffic in 80 kN ESALs will be specified by Special Note in the contract documents.

402-2.02 Composition of Mixtures. Supply HMA for the project meeting the requirements of §401-2 of the Standard Specifications and the mixture design procedure as written in Materials Method (MM) 5.16, *Superpave Hot Mix Asphalt Mixture Design and Mixture Verification Procedures*.

The Contractor will be responsible for the quality and performance of the mixture created from approved components. The Department reserves the right to take samples at any time and location to assure the materials and workmanship incorporated into each Department project are in conformity with the approved plans and specifications.

402-3 CONSTRUCTION DETAILS. The Engineer will conduct a pre-paving meeting prior to any routine HMA placement. The attendance to this meeting will include Regional Materials Engineer, Paving Foreman, Chief Inspector or Paving Inspector(s), HMA plant representative, density gauge operator, if necessary, and traffic protection personnel. Participants will review all aspects of the specifications requirements including, but not limited to, the following:

- HMA mixture delivery temperature
- Equipment and setup
- Mix codes to assure correct mix is delivered to the project
- Gauge operator certification
- Proper construction practice to provide quality product
- Traffic Control Activities

A certified density gauge operator must be present to monitor pavement density using a density gauge for 50 Series (non-mainline areas), 60 Series, and 70 Series compaction methods. The gauge operator must hold a current Density Gauge Inspector Certification from the Associated General Contractors, New York State, or its equivalent, as determined by the Director, Materials Bureau.

Do not place HMA mixture on any wet surface. Wet surface is defined as one that is moistened, covered, or soaked with water.

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

402-3.01 Temperature and Seasonal Limitations.

A. Surface Temperature

1. Place HMA only when the pavement surface temperature is equal to or greater than those specified in Table 402-1, *Temperature Requirements*.

TABLE 402-1 TEMPERATURE REQUIREMENTS

Nominal Compacted Lift Thickness	Surface Temperature Minimum
≤ 1 in	50°F
1 in < Thickness ≤ 3 in	45°F
> 3 in	40°F

2. Temperature Measurement: Furnish a surface thermometer capable of reading surface temperature to nearest 1° F for the exclusive use of the Engineer. The Engineer will measure pavement surface temperatures on the surface where the mixture is to be placed. The controlling temperature will be the average of three readings taken at locations 25 feet apart utilizing a surface thermometer covered by insulation for 10 minutes or until a constant temperature is reached. Infra Red (IR) temperature guns may be used in lieu of surface thermometer. When IR gun is used and if there is a dispute with the value obtained, the Engineer will determine the temperature using the surface thermometer.
- B. Seasonal Limits:** Place HMA Top Course on mainline and shoulders between April 1 and November 30 for the counties of Dutchess, Orange, Putnam, Rockland, Westchester, Nassau, Suffolk, and the City of New York. For all other counties, place HMA Top Course between April 15 and October 31. When placing Top Course HMA outside the seasonal limitations, provide a limited warranty against defects in such work. Perform the warranty work in accordance with Materials Procedure (MP) 402-01, *Warranty Requirements for Hot Mix Asphalt (HMA) Top Course*. Unless specified elsewhere in this specification or contract documents, these seasonal limits do not apply for any other HMA layer placement.
- C. Temporary HMA Placements:** HMA placement for temporary detours, which are not and will not become part of the permanent pavement, will not be subject to the temperature and seasonal limitations but must be approved by the Engineer when placed outside temperature and seasonal limits.
- D. Miscellaneous HMA Placements:** The Engineer may allow the placement of HMA mixtures for curbs, driveways, sidewalks, gutters, and other incidental construction below the minimum temperature and outside the seasonal limits to expedite the completion of the project.
- E. Scheduling HMA Placement:** Schedule paving operations such that all HMA placements are completed within the temperature and seasonal limitations, provide safe and adequate work zone traffic control, and protect previously laid courses. Such scheduling will include expediting construction operations to permit paving within the seasonal limitations or by limiting the length of work so that it can be completed before the seasonal shut-down. Should paving operations not be completed within temperature and seasonal limitations, provide, at no additional cost to the state, all temporary materials and work necessary such as shimming of castings and protrusions, drainage of the roadway, providing acceptable rideability, and other work needed for the adequate work zone traffic control. Base or Binder layers which will be permanently incorporated into the work may be left open to traffic over the winter. However, if there is any damage to these layers, repair any damaged areas prior to placing subsequent layer at no additional expense to the State. This requirement also applies to the repairs deemed necessary by the Engineer on the temporary HMA placements. Clean this pavement course in accordance with Section 633, *Conditioning Existing Pavement*, at no additional expense to

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

the State, prior to applying a tack coat and overlaying. Apply tack coat in accordance with Section 407, Tack Coat, immediately prior to HMA overlay.

402-3.02 HMA Pavers. Provide pavers capable of spreading and finishing courses of HMA plant mix material in lane widths, shoulders, or similar construction applicable to the specified typical section and thicknesses shown on the plans. Repair or replace immediately any paver found to be worn or defective either before or during its use. Provide HMA pavers that meet the following requirements:

- Self-powered with an activated screed or strike-off assembly.
- Capable of operating at forward speeds consistent with satisfactory placement of the mixtures.
- Have a receiving hopper with sufficient capacity for uniform spreading operation and with automatic flow controls to place the mixture uniformly in front of the screed. Heat the screed or strike-off assembly as necessary to produce a finished surface of the required smoothness and texture without tearing, shoving or gouging the mixture.
- When screed extensions are necessary for placement of mainline pavement, provide extensions of the same design as the main screed.
- Mount auger and tunnel extensions on the paver when the screed is extended more than 1 foot for fixed paving widths wider than 12 feet when mat uniformity is not achieved as determined by the Engineer.
- When used for placing the initial paving layer, Base, Binder, and Top Courses, pavers must be equipped with approved automatic transverse slope and longitudinal grade screed controls. The controls shall automatically adjust the screed and increase or decrease the mat thickness to compensate for irregularities in the existing surface. The controls shall be capable of maintaining the proper transverse slope and be readily adjustable so transitions and super-elevated curves can be satisfactorily paved. The controls shall operate from suitable fixed or moving references as prescribed in §402-3.06, *Spreading and Finishing*.

When paving mainline, provide a paver with functional automatic transverse slope and longitudinal grade screed controls that can be operated from either side of the paver. The transverse slope and longitudinal grade screed controls of the HMA paver may be manually adjusted according to the requirements of §402-3.06, *Spreading and Finishing*.

Engineer will inspect and approve HMA pavers for use prior to the start of paving operations.

402-3.03 Hauling Equipment. Provide HMA transport trucks that have clean, smooth, tight metal beds with waterproof covers for transporting HMA mixtures to the work site. When a flexible cover is used, provide a cover that overlaps the vehicle's sideboards and back by a minimum of 6 inches and is fastened. The inside surface of the vehicle body may be lightly coated with a release agent listed on the Department's Approved List for Release Agents. Petroleum products or solvents are not permitted for use as release agents. All hauling equipment is subject to the approval by the Engineer.

402-3.04 Rollers. Rollers can either be vibratory, static steel wheel type, or pneumatic tire rollers. The Engineer will inspect rollers prior to start of paving operations to determine acceptability. A minimum of two rollers, one for breakdown and one for finish rolling, are required unless the HMA placement is on a bridge deck, bridge approaches, or other areas where a single steel wheel vibratory roller may be sufficient to achieve required density. Rollers must be in good mechanical condition, and capable of operating at speeds slow enough to avoid displacement of the mixture. The use of equipment which results in excessive crushing of aggregate will not be permitted. All rollers for HMA placement must appear on the Department's Approved List for Rollers, available on the Department's website.

A. Vibratory rollers: These rollers shall be specifically designed for the compaction of HMA mixture. Vibratory roller models satisfying the specification requirements contained herein will be evaluated by the Materials Bureau to determine compaction capabilities. If acceptable, the roller model will be placed on the Department's Approved List for Hot Mix Asphalt Vibratory Compaction Equipment. Vibratory roller models

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

appearing on this list will be allowed to be used. Alternate types of rollers may be approved by the Director, Materials Bureau, upon reviewing the specification of the rollers and demonstration that satisfactory results can be achieved.

Provide vibratory rollers that meet the following requirements:

Nominal Amplitude	0.05 in maximum.
Vibration Frequency	1500 vpm minimum.
Drum Width (dual vibrating drums)	54 inches, minimum
(single vibrating drum)	84 inches, minimum

All vibratory rollers shall be equipped with a speedometer that accurately indicates roller speed in either ½ mph or 50 ft per minute increments (maximum) throughout the specified operating range. Vibratory rollers must also be equipped with a speed control device that can be set to prevent the roller from traveling in excess of 2 ½ mph or 220 ft per minute when the roller is in vibratory mode. The type of speed control device will be subject to the approval of the Director, Materials Bureau. When rollers have pneumatic drive wheels, release agents listed on the Department's Approved List may be used on the tires to prevent material pickup.

B. Static steel-wheel rollers. These rollers shall be self-propelled and be either 10 to 12 ton three axle types or 8 to 10 ton two axle types.

C. Pneumatic rubber-tired rollers: These rollers shall be self-propelled and consist of two axles on which multiple pneumatic-tired wheels are mounted in such a manner that the rear wheels shall not follow in the tracks of the forward wheels and will be spaced to give essentially uniform coverage with each pass. The axles will be mounted in a rigid frame provided with means for adding ballast. The wheels shall be mounted so as to oscillate individually or in pairs. The tires must be smooth and show no tread pattern, be of equal size and diameter, and be uniformly inflated. Pneumatic rollers shall meet the following requirements unless otherwise approved:

Maximum Wheel Load	5,600 lbs
Tire Compression on Pavement	80±5 psi
Maximum Axle Load	22,400 lbs

402-3.05 Conditioning of Existing Surface. When specified in the contract documents, clean the surface of the existing pavement, fill joints and cracks, and level the surface to a uniform grade and cross slope prior to the application of a new HMA course in accordance with the provisions of Section 633, *Conditioning Existing Pavement*. Clean any foreign material from the pavement resulting from construction operations at no additional cost to the State.

Prior to placing new HMA, apply a thin, uniform tack coat as specified in Section 407, *Tack Coat*, to all contact surfaces of existing HMA and Portland Cement Concrete layers including such areas as adjacent pavement edges, curbing, gutters, manholes, and other structures where the HMA will be in contact.

Fill any depressions and wheelpath ruts prior to paving Truing and Leveling course, as directed by the Engineer. Use Table 402-2, *Mixture Selection for Filling Wheelruts & Depressions*, to select the appropriate mix type.

**TABLE 402-2 MIXTURE SELECTION FOR FILLING
WHEELRUTS & DEPRESSIONS**

Depth Range (in)	Mixture Type
< ¼	No treatment
¼ ≤ Depth < ¾	Shim

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

$\geq \frac{3}{4}$	9.5 Top Course

If a Truing and Leveling course is specified in the plans or in the itemized proposal, place the course(s) of a minimum variable thickness of proper plant mix necessary to bring the surface of the existing pavement to the same transverse slope and longitudinal grade required for the finished pavement surface. The surface of this course shall be tested in the same manner prescribed in §402-3.10, *Surface Tolerance*, except that the allowable variation from the true surface after compaction must not exceed $\frac{3}{8}$ inch. Unless a mixture type is specified in the plans, use Table 402-3, *Mixture Selection for T&L Course*, to select the appropriate mix type such that dragging of stones is minimized during placement of the mixture.

TABLE 402-3 MIXTURE SELECTION FOR T&L COURSE

Compacted Thickness Range (in)	Mixture Type
≤ 2	9.5 or 12.5 Top Course
$2 < \text{Thickness} \leq 3$	19.0 or 25.0 Binder Course
$3 < \text{Thickness} \leq 5$	25.0 Binder Course or 37.5 Base Course

Select a mixture such that dragging of stones at the thin edge is minimized when constructing wedges for super-elevation. If dragging is excessive in any T&L course, the Engineer shall disallow the selected T & L mixture for the application.

402-3.06 Spreading and Finishing

- A. Surface Tolerance:** The requirements of §402-3.10, *Surface Tolerance*, shall apply.
- B. Mix Temperature:** For 50, 60, and 70 series compaction methods, select a desired HMA mixture temperature to be delivered within the mixing and compaction range of 250°F and 325°F, or as recommended by the PG Binder manufacturer. Notify the Engineer of the desired delivery temperature. Produce and deliver mixtures to the work site, and incorporate into the work within 20°F of the specified temperature. For 80 Series compaction method, the Contractor will select the desired mix temperature with the concurrence of the Engineer.
- C. Tack Coat:** Apply tack coat on the contact surfaces between all HMA pavement lifts in accordance with Section 407, *Tack Coat*, prior to placing HMA mixture regardless of time period between lifts. Tack coat is not required on the surface of Permeable Base courses. Paving over a tack coat should not commence until the emulsion has broken (goes from brown to black) or is tacky when touched.
- D. HMA Mixture from Multiple Plants:** Supply of HMA mixture from multiple plants to a single paver is prohibited.
- E. Top Course Texture and Color:** Supply Top Course HMA from a single plant for the entire project duration such that the pavement surface has a uniform color and texture as determined by the Engineer. Exception to this requirement is when a contract includes multiple paving sites or the project length is at least 5 miles and supply from multiple plants at discrete points of terminus is practical. In that case, the above requirement will apply to each paving site and locations between discrete points of terminus as approved by the Regional Materials Engineer. Limits of each site will be subject to approval by the Regional Materials Engineer. If a plant breaks down, another plant may supply mixture meeting the requirements of §402-2.02 if

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

the aggregate used for manufacturing of the HMA is from the same source with the concurrence of the Regional Materials Engineer.

- F. Reference Line:** When the initial pavement course is laid with automatic HMA pavers on a new or a reconstruction project, use a taut reference line positioned at or near the pavement centerline or edge to guide the paver. Erect and maintain the reference line to the satisfaction of the Engineer. Support the reference line at approximately 25 feet intervals on tangent sections and at closer intervals on curves. Tension the line sufficiently to remove any sagging. The Engineer may permit a moving reference of at least 30 feet in length in lieu of a reference line. The moving reference may be a floating beam, ski, or other suitable type such that the resulting pavement layer surface is sufficiently even. A short ski or shoe may also be used for the initial course with the approval of the Engineer if a satisfactory fixed reference such as a curb, gutter, or other fixed reference is adjacent to the pavement. In addition, any course in an adjacent lane may be used as the reference for the use of a short ski. When the proposed floating beam or the short ski does not produce the results similar to those obtained using a taut reference line, the Engineer shall disapprove the use of these devices. The Engineer has final approval of the method chosen by the Contractor.

The automatic screed controls are not required for shoulders, temporary detours, behind curbs, where existing grades at roadway intersection or drainage structure must be met, or in other areas where its use is impractical.

- G. Mix Placement:** Use HMA paver(s) to place the mixture either over the entire width or over a partial width that may be practical. Place the mixture on a clean, tack coated surface. Upon arrival at the site, the trucks will deliver the mixture into the paver. Immediately spread and strike off to the required width and appropriate loose depth to established grade, elevation, and to obtain the required compacted thickness at the completion of work. If the areas to be paved are less than 1000 ft² or small and scattered, the HMA mixture may be spread by hand or other method approved by the Engineer. For these areas, dump and spread the mixture such that the compacted thickness meets the thickness specified in the plans.

Place all pavement courses using one of the reference line methods mentioned in §402-3.06 F. Prior to the beginning of rolling, check the loose mat, adjust any irregularities, and remove and replace all unsatisfactory material.

When filling wheel ruts with Shim Course or 9.5 Top Course mixture in an existing pavement, place mixture in each wheelpath rut separately. Use a drag box configuration or approved equal having side forms to shim the ruts. Spread and strike off the Shim Course material to a uniform width of approximately 4 feet. The intent of the operation is to fill the low area only and not to place the material over the pavement's full lane width. The placement equipment wheels and/or other appurtenances must not interfere with the distribution and placement of the Shim Course material.

402-3.07 Compaction. Compact the HMA pavement sufficiently using the appropriate compaction method specified in Table 402-4 *Compaction Methods*, to achieve pavement densities in a range of 92% to 97%, expressed as a percentage of the mixture's maximum theoretical density (MMTD).

When placing HMA mixture using 50, 60, or 70 series compaction method, control all operation of the rollers including speed, amplitude settings, vibration frequency, and the type of rollers.

Immediately compact the HMA using rollers meeting the requirements of §402-3.04, *Rollers*, after the mixture has been placed. Compact the HMA when the mixture is in the proper condition such that the rollers do not cause displacement, cracking, or shoving. Initially, compact all courses with the roller traveling parallel to the centerline of the pavement, beginning at each edge and working toward the center. Compact super-elevated curves starting at the low-side edge and working toward the higher edge.

Correct immediately any displacement occurring as a result of reversing the direction of the roller, or from other causes, using rakes and additional HMA mixture as required. Exercise care in rolling so as not to displace the line and grade of the edges of the HMA mixture. To prevent adhesion of the mixture to the rollers, keep the wheels

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

properly moistened with water, water mixed with small quantities of detergent, or other approved material. Petroleum products or solvents are not permitted.

Upon completion of the HMA placement, there shall be no visible defects in the pavement, such as shallow ruts, ridges, roller marks, cracking, tearing, segregation, bleeding, or any other irregularities. Any defects that become apparent shall be corrected, or the defective pavement replaced, to the satisfaction of the Engineer, at no additional cost to the State.

Along forms, curbs, headers, walls, and other areas not accessible to rollers, compact the mixture thoroughly with mechanical tampers. On depressed areas, use a trench roller or a small vibratory roller with the approval by the Engineer.

Remove any mixture that becomes loose and broken, mixed with dirt, or is in any way defective and replace with fresh HMA mixture. Compact the mixture to conform to the surrounding area. Correct any area showing an excess or deficiency of HMA material.

When Shim Course or 9.5 Top Course is used for filling wheel ruts, make a minimum of three passes of a pneumatic rubber tire roller for compaction. Otherwise, make a minimum of two passes when Shim Course is used as a skim coat. The Engineer may allow the use of other types of rollers.

Do not use vibratory compaction when HMA mixture is placed on structural bridge decks or other structures with less than 2 feet of cover over the structure or when specified in contract documents. If vibratory compaction is used, repair all damages which may occur to the highway components and adjacent property, including buried utility and service facilities, at no additional cost to the State.

Monitor density for 60 and 70 Series projects with density gauges specified in §402-3.07 E, *Density Gauges*. The density gauge operator shall possess a current Density Gauge Inspector Certification from The Associated General Contractors, New York State, or its equivalent, as determined by the Director, Materials Bureau. Any pavement section placed under 60 or 70 Series which is monitored by a gauge operator whose certification is revoked for reasons outlined in the New York State Inspector Certification Program manual under "Decertification", will be evaluated by sampling and testing of pavement cores in accordance with §402-3.08, *Pavement Density Samples*, and subject to payment adjustment in accordance with Table 402-10, *Density Quality Adjustment Factors for 60 Series*. The above requirement also applies when a density gauge is used for monitoring pavement density in the areas other than mainline under 50 Series compaction method.

Table 402-4, *Compaction Methods*, associates specific item being placed to the required compaction method.

TABLE 402-4 COMPACTION METHODS

Compaction Methods	Item Number
A=50 series	402.XX5FQR
B=60 series	402.XX6FQR
C=70 series	402.XX7FQR
D=80 series	402.XX8FQR & other

NOTE: XX = 37, 25, 19, 12, 09, 05, 01

F = Friction requirement (1, 2, 3, 9)

Q = Quality item number (core item = 0, plant = 1, density = 2)

R = Revision number

Below is a detailed requirement for each of the compaction methods:

A. 50 Series Compaction Method. On the first day of mainline paving, construct the pavement under the provisions of "Option 1 - Test Section" or "Option 2 – First Day Routine Paving."

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

1. **Option 1 - Test Section.** Construct a test section on the project site at a location approved by the Engineer. The purpose of the test section is to determine if the mixture can be compacted uniformly within the 92-97% of MMTD. The test section will be the same depth specified for the construction of the course which it represents. The test section length shall be at least 300 linear feet but not to exceed 1,500 linear feet when the test section is on the mainline. If required by the Engineer, construct full pavement width to close the joint(s). Use the first 150 feet of the test section to stabilize the paving operation. Once the test section is complete, the Engineer will select core locations, excluding the first 150 feet, in accordance with §402-3.08, *Pavement Density Samples*. Before the road is open to traffic, take the cores at the marked locations. Also, take loose mix samples as specified under §402-3.08, *Pavement Density Samples*. In addition to the above requirements, the following shall apply to the test section provision:
 - Only one test section will be placed per day. Subsequent test sections are subject to approval by the Engineer.
 - The first 200 tons of quantity placed on a test section will be adjusted by a factor of 1.5 as a Test Section Adjustment. The adjusted quantity will be paid based on the Quality Index price. The remaining quantity will be paid at the bid price. A maximum of two test sections per item will be subject to this adjustment.
 - The test section adjustment factor of 1.5 shall not apply for a test section if any HMA of 150 tons or more is placed on the same day, on the same project, other than the quantity required for the construction of the test section.
 - Pavement Density Quality Adjustment Factors (QAF) shall not apply for the first two test sections. Subsequent test section(s) located on the mainline is subject to pavement density QAF.
 - Placing HMA under “*Routine Paving*” provisions for this item is not permitted until the results of the cores from the test section have a minimum pavement density QAF of 1.00.
 - When the pavement density QAF is less than 1.00, the Contractor shall construct another test section in accordance with “*Option 1, Test Section.*”
 - When the calculated QAF is 0.60 or less, the Engineer will evaluate the test section to determine if it can be left in place. The guidance for evaluation can be found under §402-4, *Method of Measurement*. The Test Section Adjustment shall not apply for the test section.
2. **Option 2 – First Day Routine Paving.** It is not necessary to construct a test section on the first day of paving. Any HMA placed under this provision shall meet the following:
 - The test section adjustment of 1.5 shall not apply.
 - All material placed will be subject to a pavement density QAF.
 - If the pavement density QAF on the first day of paving is less than 1.00, construct a test section in accordance with the provisions of the “*Option 1 - Test Section*” under this method.
 - Evaluate density in accordance with 3. *Routine Paving*, below.
3. **Routine Paving.** Place all HMA beyond the “*Option 1 - Test Section*” using the provisions described below.

A paving lot is defined as a day's production of at least 200 tons. Each paving lot will be equally divided into four sublots in accordance with Materials Procedure (MP) 402-02, *Hot Mix Asphalt (HMA) Pavement Density Determination*. The Engineer will select and mark a core location in each subplot in accordance with §402-3.08, *Pavement Density Samples* once the compaction operation is completed. The Engineer will exclude the first 150 feet of the day's paving. Extract a core at the marked location in each subplot. Take four loose mix samples representing the lot. Pavement cores and loose mix samples will be tested and analyzed by the Department in accordance with MP 402-02 to determine the pavement density

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

QAF. If the quantity placed is less than 200 tons on any day, pavement cores and loose mix samples are not required. The density QAF for that day will be reported as 1.00, provided the density gauge used on previous sections is utilized and the Engineer is satisfied that the procedures used in these areas to obtain pavement densities are similar to previously placed pavement sections. When paving is continuous within a 24-hour period, a new lot will result when a change occurs in the paving crew. When a project includes multiple paving operations, each paving operation will be considered a lot and evaluated separately.

When consecutive lots are found to have a density QAF equal to or less than 0.85, stop paving operations and immediately construct a new test section in accordance with the provisions of “*Option 1 - Test Section*”, described previously in this section.

The density QAF shall not apply to material placed on shoulders, maintenance widening, crossovers, bridges and ramps with a uniform full-width section of less than 1250 feet in length. Payment for these areas shall be based on satisfactory placement and compaction. Placement and compaction procedures will be satisfactory when the procedures used in these areas obtain pavement density similar to that obtained on the mainline pavement sections. When the shoulder shows signs of distress during compaction, decrease the compaction effort until no further damage occurs to the shoulder or subbase. If density gauge(s) is used to monitor mainline paving, use the same gauge(s) to monitor density on the above referenced areas.

B. 60 Series Compaction Method. On the first day of mainline paving, construct the pavement under the provisions of “*Option 1 - Test Section*” or “*Option 2 – Test Section and Continue Paving.*” The Engineer will approve the location of the test section. Placement of HMA under this method will not be allowed unless both a density gauge and a certified operator are present.

1. Option 1 - Test Section Only. Prior to routine paving operations for this item, construct a test section at a location approved by the Engineer. The purpose of constructing a test section is to determine a Project Target Density (PTD) for this item and correlation of a density gauge(s) to the cores. It is advisable to use the same equipment and procedures to construct the test section which will be used in the construction of the remainder of the course being laid. The test section will be the same depth specified for the construction of the course which it represents. The test section length shall be at least 300 linear feet but no more than 1,500 linear feet. If required by the Engineer, construct full pavement width to close the joint(s). Use the first 150 feet of the test section to stabilize the paving operation. At the conclusion of the test section, the Engineer will randomly select four 6-inch core locations on the test section in accordance with §402-3.08, *Pavement Density Samples* excluding the first 150 feet and mark the locations.

During construction of the test section, take loose mix samples in accordance with §402-3.08, *Pavement Density Samples* such that they represent the material placed on the test section. Take density gauge(s) readings at each core location prior to drilling the cores in accordance with Materials Procedure (MP) 402-02, *Hot Mix Asphalt (HMA) Pavement Density Determination*, based on the type of density gauge used. Take cores at each of the marked core location.

Deliver the cores, loose mix samples, and the four density gauge readings with the gauge type, model, and serial number to the Regional Materials Engineer in accordance with §402-3.08, *Pavement Density Samples*. The Regional Materials Engineer will test the samples and establish a PTD for each density gauge in accordance with Materials Procedure (MP) 402-02 within one business day of the delivery of the samples and density gauge readings. In addition to the above requirements, the following shall apply to the test section provision:

- Only one test section will be placed per day. Subsequent test sections are subject to approval by the Engineer.
- The first 200 tons of quantity placed on a test section will be adjusted by a factor of 1.5 as a Test Section Adjustment. The adjusted quantity will be paid based on the Quality Index price. The

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

remaining quantity will be paid at the bid price. A maximum of two test sections per item will be subject to this adjustment.

- The test section adjustment factor of 1.5 shall not apply for a test section if any HMA of 150 tons or more is placed on the same day, on the same project, other than the quantity required for the construction of the test section.
- Placing HMA under “Routine Paving” provisions for this item is not permitted until a Project Target Density has been established.
- When the average density of the four cores is less than 88% of the maximum theoretical density, the Engineer may evaluate the test section to determine if it should be left in place. The guidance for evaluation can be found under §402-4, *Method of Measurement*. The Test Section Adjustment shall not apply for the test section.

2. Option 2 – Test Section and Continue Paving. The following shall apply when HMA is placed on the first day under this option:

- Construct a test section as described under “*Option 1 - Test Section Only.*” Establish an Interim PTD as described in Materials Procedure (MP) 402-03 based on the density gauge used. Use this Interim PTD to monitor pavement density until the Actual PTD is established by the Regional Materials Engineer.
- The test section adjustment factor of 1.5 shall not apply.
- All material placed after the test section for that day shall be subject to a payment adjustment.
- Take additional loose mix samples, other than those taken under the “Test Section” provisions, in accordance with §402-3.08 and store these samples at the plant.
- Take density gauge(s) readings over the entire day’s placement in accordance with Materials Procedure (MP) 402-02.
- When this option is selected and if the density readings at two consecutive locations fall below 96% or above 103% of the Interim PTD or if the moving average of the last 10 nuclear density readings falls below 98% of the Interim PTD, stop routine paving operations and wait for the Actual PTD.
- Submit a copy of the appropriate BR form(s) at the end of the first day’s paving to the Engineer as described in Materials Procedure (MP) 402-02. The Engineer will determine whether the density readings taken using the Interim PTD are acceptable, based on the Actual PTD in accordance with Materials Procedure (MP) 402-02. If not, the Engineer will randomly select four core locations over the entire placement under Interim PTD, excluding the test section, and drill cores at the selected locations. Prior to drilling these cores, take density readings at each core location. Deliver the core samples, density gauge readings, and the loose mix samples to the Regional Laboratory in accordance with §402-3.08, *Pavement Density Samples*. If the average density of the pavement cores is not between 92% and 97% of the mixture’s maximum theoretical density, the Engineer will make a payment adjustment in accordance with Table 402-10, *Density Quality Adjustment Factors for 60 Series*, to the material placed on that day and the subsequent days, excluding the material placed on the test section. Otherwise, continue under “*Routine Paving*”.

3. Routine Paving. Use only the density gauge(s) that has been correlated with cores during the construction of the test section and a PTD has been determined by the Regional Materials Engineer for pavement density monitoring during routine paving operations. Construct a new test section under the provisions of “Test Section” to establish a PTD for other gauge(s). Compact the pavement sufficiently to achieve the PTD value at each test location. Take density gauge readings at each location in accordance with Materials Procedure (MP) 402-02. The test locations will be every 200 feet along the length of the pavement for each paver pass randomly selected by the Engineer in accordance with Materials Procedure (MP) 402-02. Record these density values on the appropriate BR form based on the type of gauge used.

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

The minimum acceptable density reading is 96% and no greater than 103% of the PTD at a single test location and 98% of the PTD calculated as a moving average of the last 10 test locations.

If density gauge readings over two consecutive locations fall below 96% or above 103% of the PTD or if the moving average of the last 10 density gauge readings falls below 98% of the PTD, stop routine paving operations and construct a new test section in accordance with requirements of “*Option 1- Test Section Only.*”

Placement and compaction on shoulders, ramps, maintenance widenings and crossovers, and bridges will be deemed satisfactory by the Engineer when the procedures used in these areas obtain pavement density similar to that obtained on the mainline pavement sections. Monitor and record the density of the above referenced areas with the same density gauge to insure the PTD is achieved. If the shoulder subbase is structurally insufficient to sustain the level of compaction such that the shoulder shows signs of distress, decrease the compaction effort until no damage occurs to the shoulder or subbase.

In addition to the daily density monitoring with a gauge, additional set(s) of pavement cores and loose mix samples are required for pavement density verification at the frequency specified in Table 402-5, *Additional Pavement Samples*. The frequency is based on the days of mainline HMA placement. Take density samples from the same day's placement. The Engineer will select the day of coring and will notify the Contractor 24 hrs prior to the day of coring. When notified, take these samples in accordance with §402-3.08, *Pavement Density Samples*. Before drilling the cores, take density gauge readings and record on the appropriate forms based on the type of gauge used. Deliver all the samples and the density gauge readings to the Regional Materials Engineer for testing.

TABLE 402-5 ADDITIONAL PAVEMENT SAMPLES

HMA Placement Days	Set of Pavement Samples
2 or Less	None
3 – 5	One Set
More than 5	Two Sets

Based on the additional Pavement Samples, the Regional Materials Engineer will establish a new PTD if different from the original PTD. The Engineer shall evaluate core density results using Table 402-10, *Density Quality Adjustment Factors for 60 Series*, and make payment adjustment, if necessary. When a contract includes multiple sites, the requirement under Table 402-05 applies to each paving site.

The Engineer may request pavement samples in accordance with §402-3.08, *Pavement Density Samples*, for density verification from HMA placed under the following situations:

- Insufficient number of density readings recorded, either at a specific location or at the required frequency.
- Paving completed after the only correlated density gauge on site breaks down.
- Gauge readings do not seem to accurately represent the HMA density.
- When the plant production QAF is 0.85 and need to evaluate the pavement section in accordance with §401-4.03, *Evaluation of Sublots Represented by 0.85 QAF*, whether to keep it in place.

When pavement samples are requested for the above situation(s), the Engineer will randomly select core locations. Take cores and density gauge readings at each core location in accordance with §402-3.08, *Pavement Density Samples*, and deliver them to the Regional Materials Laboratory. The Regional Materials Engineer may establish a new PTD based on these cores. The material placed under the above situations will be subject to a payment adjustment in accordance with Table 402-10.

The Engineer may also request additional pavement samples to verify PTD used on the project for the situations listed below and the material placed under these situations will not be subject to payment adjustment:

- Changes in condition of existing pavement being overlaid.

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

- Excessive plant mix variations.
- Using a different Job Mix Formula or a different HMA plant other than the one used to produce mix for the Test Section, as long as the aggregate and PG Binder sources do not change.

- 4. Multiple Paving Sites.** When a project includes multiple paving sites, a test section will be constructed at the initial paving site to establish a PTD. For the rest of the paving sites, the Engineer will require pavement cores, loose mix samples, and gauge readings on the first day to verify PTD unless it is specified in the contract documents to construct a test section.

A test section may be requested by the Engineer when a different HMA plant other than the one used at previous site(s) is supplying the mixture using different aggregate and PG Binder sources. The provisions of 1.5 test section incentive shall apply.

- C. 70 Series Compaction Method.** On the first day of paving, construct a test section on the project site at a location approved by the Engineer using the same equipment and procedures to be used in the construction of the remainder of the course being laid. HMA placement under this method, including the construction of the test section, will not be allowed unless both a density gauge and a certified operator are present. The test section is for determining the Project Target Density (PTD) using the “peak” method. Routine paving operations may begin immediately following the construction of the test section once a PTD has been established by the Engineer based on the evaluation of density readings in accordance with the provisions of “Test Section” below.

- 1. Test Section.** To establish a PTD prior to routine paving, construct a test section of at least 300 linear feet on the mainline which has the same depth specified for the construction of the course it represents. The maximum length is 1,500 linear feet. Use the first 150 feet of the test section to stabilize the paving operation. Use the remainder of the test section length to determine the Project Target Density (PTD). Initially, compact the pavement with a breakdown roller once sufficient HMA is placed in the testable area. Make four vibratory passes or as recommended by the Engineer. If non-vibratory compaction is specified in the contract documents, make four static passes. The Engineer will select three random locations in accordance with Materials Procedure (MP) 402-02 based on the type of density gauge used and mark these sites so that subsequent density testing can be performed at the same locations. Use either the intermediate or the finish roller for further rolling the test section. Take density readings at the three selected sites after every additional machine pass until the increase in density is less than 2 lbs/ft³, or until the Engineer stops further compaction because the pavement shows signs of distress.

The Engineer will determine PTD by calculating the average of the highest density reading from each of the random locations. Use the resulting PTD to monitor the pavement density for the project.

- 2. Routine Paving.** Use only density gauge(s) that is correlated during the construction of the test section and the PTD determined by the Engineer to monitor pavement density during routine paving operations. Construct a new test section under the provisions of “Test Section” to establish a PTD for other gauge(s).

Begin routine paving immediately after the PTD has been established. Compact the pavement sufficiently to achieve the PTD value at each test location. The minimum acceptable density reading will be 96% or maximum of 103% of the PTD in a single test location and 98% of the PTD calculated as a moving average of the last 10 test locations as determined by a density gauge. Take density gauge readings at each location, randomly selected by the Engineer, in accordance with the Materials Procedure (MP) 402-02, approximately every 200 feet along the length of the pavement for each pass of the paver. Record these values on the appropriate BR form based on the type of gauge used.

If density gauge readings over two consecutive locations fall below 96% or above 103% of the PTD or if the moving average of the last 10 density gauge readings falls below 98% of the PTD, stop routine paving operations and immediately construct a new test section in accordance with requirements of the Test Section.

Placement and compaction on shoulders, ramps, maintenance widenings and crossovers, and bridges

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

will be deemed satisfactory by the Engineer when the procedures used in these areas obtain pavement density similar to that obtained on the mainline pavement sections. Monitor the density of areas with the same density gauge to insure the PTD is achieved. If the shoulder subbase is structurally insufficient to sustain the level of compaction such that they show signs of distress, decrease the compaction effort until no damage occurs to the shoulder or subbase.

D. 80 Series Compaction Method. Use one of the compaction options listed below for this method. The rollers used for compaction of the HMA mixtures under this method must be on the Department's Approved List for Rollers.

The number of passes listed in Table 402-6, *Number of Passes*, are recommended and may be increased or decreased by the Engineer to obtain adequate density. One vibratory pass is defined as one movement of a single drum of the roller over the pavement section in each direction. One static pass is defined as one movement of the roller over the pavement in each direction. Complete all breakdown roller passes before the mat temperature falls below 250°F. Remove all ruts, ridges, roller marks, or other irregularities from the surface using static rolling. All turning of the rollers must be performed on material which has had a minimum of one roller pass. The Engineer may approve alternate compaction procedures for areas where the specified procedures are not practical.

TABLE 402-6 NUMBER OF PASSES¹

Pavement Courses	Option 1 Three Roller Train (Static)		Option 2 Vibratory Rollers	
	Steel Wheel Rollers	Pneumatic Roller	Vibratory Passes	Static Passes
37.5 Base (Each Lift)	8	3	6	4
25.0 Binder	8	3	6	4
19.0 Binder	6	3	4	2
12.5 Top	6	3	4	2
9.5 Top	4	3	4	2
Permeable Base ²	-	-	-	2

1. Based on 12-foot lane width.

2. For the Permeable Base course, the mixture shall be compacted between 140°F and 230°F. Up to 2 additional passes may be required to obtain adequate density.

1. Option 1 - Static Compaction. Use this option only when the compacted thickness of the finished mat is 4 inches or less. The roller speeds shall not exceed 3 mph and will move at a uniform speed. The roller drive wheel or drum shall be nearest to the paver. When paving multiple lanes simultaneously, increase the required number of rollers proportionately for each additional full lane width unless otherwise approved by the Engineer. Under this option, compact the HMA mixtures with steel-wheel rollers operating in a static mode. Each pass shall overlap the previous roller pass by one-half the width of the roller.

Initially, compact the HMA with a steel-wheel roller immediately followed with a pneumatic rubber-tired roller. A minimum of 3 passes of the rubber-tired roller will be required. One pass is defined as one movement of the roller over any point of the pavement in either direction.

Use a steel-wheel roller for finish rolling the HMA to remove all shallow ruts, ridges, roller marks, and other irregularities from the surface.

When the compaction procedure fails to produce acceptable results, adjust the procedure to obtain the

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

desired results.

2. **Option 2 - Vibratory Compaction.** Furnish a vibrating reed tachometer for the exclusive use of the Engineer. The vibrating reed tachometer must have a frequency range of 1,000 to 4,000 vpm with a minimum reed interval of 50 vpm between 1,000 and 4,000 and a minimum reed interval of 100 vpm between 2,000 vpm and 4,000 vpm.

Operate the vibratory rollers at a uniform speed not to exceed 2 ½ mph (220 ft per minute) on all pavement courses. If satisfactory compaction is not obtained, or damage occurs to highway components and/or adjacent property using vibratory compaction equipment, immediately cease using this equipment and proceed with the work in accordance with compaction procedures stipulated under Option 1 at no additional cost to the State.

E. Density Gauges

1. **Nuclear Density Gauge.** Use a nuclear density gauge to monitor the pavement density in accordance with this sub-section and Materials Procedure (MP) 402-03. Submit a Safety Control plan at least two weeks prior to using the gauge. The nuclear density gauge shall meet the following requirements:
 - The gauge shall consist of a radioactive source, scaler, and other basic components housed in a single backscatter unit.
 - The gauge must be calibrated at least every two years.
 - Must be operated by personnel trained in the principles of nuclear testing and safety practices.
2. **Non-nuclear Density Gauge.** Use a non-nuclear density gauge to monitor the pavement density in accordance with this sub-section. The non-nuclear density gauge shall meet the following requirements:
 - Must be capable of functioning in the temperature and moisture levels experienced during HMA paving.
 - Shall contain the internal circuitry to determine the density of HMA pavements by measuring changes in the electromagnetic field resulting from the HMA compaction process.
 - The gauge must be calibrated at least every two years.

402-3.08 Pavement Density Samples

- A. **Pavement Cores.** The Engineer will select one pavement core location for each subplot in accordance with Materials Procedure MP 402-02, *Hot Mix Asphalt (HMA) Statistical Pavement Density Determination*, to represent each paving subplot. The Engineer will select a total of four 6-inch diameter core locations. The pavement core samples will be taken from within the 6-inch diameter circles outlined. Under no circumstances will the Engineer designate the coring locations before the rolling operation is completed. The rolling operation is completed when all compaction equipment has moved off the subplot designated for coring. Obtain the 6-inch diameter pavement core samples no later than a day following placement of the lot. If necessary, cool the pavement so that the core samples are not damaged during coring. If the core sample does not de-bond during coring, do not intentionally separate the pavement core from the underlying material. The Regional Materials Laboratory will separate the pavement core layer required for testing from the underlying material by sawing, if necessary.

Extraction of companion cores is not allowed. Additional cores may be taken under the following:

- As described in §402-3.08 G, *Dispute Resolution*,
- If it is necessary to establish an interim target density on the first day of paving. In that case, take a core at no more than two core locations during the construction of a test section or two cores within the first 150 feet when a test section is not constructed

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

- To perform a quality control tests during routine paving. A maximum of two cores is allowed with prior permission of the Engineer. Core(s) shall not be adjacent to the project cores.

- B. Filling Core Holes.** Backfill all core holes with a similar HMA material immediately after extracting the cores or before opening the lane to traffic. Prior to backfilling, wipe the core hole with a cloth to remove any standing water. Place HMA in the core hole in layers of 3 inches or less and compact each layer with 10-18 lb slide hammer with a diameter of at least 4 inches but less than 6 inches. Use of a shovel or similar method is not allowed. The Engineer may approve alternative method if it will provide acceptable results. If core holes are not filled within 2 business days of placement, the Engineer will stop routine paving until the core holes are filled.
- C. Loose Mix Samples.** On each paving day when pavement cores are required, take four loose mix samples in accordance with AASHTO T168, *Standard Test Method for Sampling Bituminous Paving Mixtures*. Take these samples such that they represent the day's HMA placement. Loose mix maximum theoretical specific gravity values from plant HMA QC/QA testing may be included as part of the required loose mix samples with prior approval of the RME. When HMA placement is less than the anticipated quantities, it is recommended that a minimum of three loose mix samples be obtained before placement is terminated. When operational conditions cause HMA placement to be terminated before the specified number of samples have been taken, the following procedures will be used:
1. If three samples are taken, the loose mix maximum theoretical specific gravity density will be based on the average of the samples taken.
 2. When HMA is placed under 50 Series and if only one or two samples are taken, the day's production will be added to the next day's production and sublots determined based on the total quantity placed during the two days. Therefore, a maximum of six loose mix samples will be used to determine the loose mix maximum specific gravity.
- D. Securing Cores.** The Engineer will secure the cores which will be tested by the Regional Materials Laboratory in accordance with MP 402-02 once they have been extracted from the pavement by the Contractor.
- E. Sample Delivery.** Deliver the cores, loose mix samples, and gauge density readings, when required, to the Regional Laboratory no later than the end of the following day's placement. Pavement cores and loose mix samples required under 50 Series or 60 Series methods must be submitted together at the end of the day's placement but no later than **a day following placement of the lot**. If these samples are not submitted together for any paving lot, the QAF will be assigned a 1.00 or less for that lot when a QAF is applicable. **If, for any reason, a delay occurs in the delivery of the lot** samples for three consecutive lots, paving operations for the item will not be permitted to continue until the samples are delivered and tested.
- F. Unacceptable Pavement Cores.** Cores arriving at the Regional Laboratory for testing that are damaged or with a damaged or missing security seal will not be tested. The Engineer will select new core(s) within a foot from the original core location(s) at the same offset. The provision of selecting new core location also applies to core(s) that get damaged during extraction.
- G. Process for Dispute Resolution.** The following items may be disputed:
1. When a core(s) is located in the area that is believed not to represent the entire subplot's placement, notify the Engineer immediately.
 2. When the test results of the cores and loose mix samples obtained by the Regional Materials Laboratory are in question, notify the Engineer and the Regional Materials Engineer, in writing, within two

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

business days upon receipt of the results. The notification must include details of the dispute such as the specific test result(s) being disputed and the reason. The Main Office Materials Bureau will review the information and advise the Engineer and the Regional Materials Engineer on how to proceed with the resolution.

The dispute resolution must be initiated in a timely manner as described above.

402-3.09 Joints. The finished pavement at all joints must comply with the surface tolerance requirements and exhibit the same uniformity of texture and compaction as other sections of the course. Do not pass rollers over the unprotected edges of a freshly laid mixture unless permitted by the Engineer.

Construct all joints, excluding the tapered wedge joint, such that the exposed edge of the newly placed layer is full thickness of the layer and straight unless the exposed joint will not be part of the joint. If the edge of the newly placed layer is unacceptable to the Engineer, correct the edge by using a power driven saw or other approved tools to cut a neat line. Prior to placing the adjacent layer, apply a light tack coat, in accordance with Section 407, to all pavement edges in order to provide bonding with the newly laid pavement.

Place successive HMA courses over a full depth HMA pavement such that all longitudinal joints are offset no more than 6 inches from the joint of the lower pavement course, unless otherwise approved by the Engineer. Place successive HMA courses on the existing PCC pavement such that all longitudinal joints are stacked on top of the joint of the lower PCC pavement.

A. Transverse. Place the courses as continuously as possible to limit the number of transverse joints. Stagger the transverse joints in adjacent lanes a minimum of 10 feet. Form the transverse joint by cutting back the previous run to expose the full depth of the course.

Set up the paver such that material is laid to overlap the previously placed edge by 2 to 3 inches. The thickness of the overlap material will be approximately one-fourth the compacted thickness of the course. Bump back the overlapped material onto the adjacent hot mat using a rake so that the roller operator can crowd the material into the hot side of the joint resulting in a smooth and well compacted joint after rolling. Broadcasting of the overlap material onto the fresh mat is not allowed. If the overlap is excessive, trim off the excess material so that the material along the joint is uniform. Remove and discard the coarse particles of aggregate in the overlap material if deemed necessary by the Engineer.

Compact the transverse joint in static mode with the roller parallel to the joint and perpendicular to traffic. Place boards of proper thickness at the edge of the pavement for the off pavement movement of the roller. Make the first pass with the roller operating on the previously laid material with 6 to 8 inches of its drum(s) overlapping onto the non-compacted mix. Then make successive passes with the roller drum(s) moving approximately one foot onto the hot material per pass until half the width of the roller is on the hot mat.

If a vibratory roller with pneumatic drive wheels is used, align the first pass with one of the pneumatic wheels directly on the joint and the drum operating in static mode. Then make successive passes with the roller drum moving approximately one foot per pass onto the hot mat until half the width of the roller is on the hot mat.

B. Longitudinal. Ensure that the longitudinal joints in the Top Course will correspond with the edges of the proposed traffic lanes. Other joint arrangements will require approval of the Engineer. If a dual-drum vibratory roller is used during construction of a longitudinal joint using either Option 1 or 2, operate the roller in vibratory mode, unless static rolling is required. Rollers must be as close to the paver as practical. Make the first pass with the roller traveling toward the paver and operating on the hot mat with 6 to 8 inches of the roller drum overlapping onto the cold mat. Apply a second pass to the joint as it travels back away from the paver. If a single-drum vibratory roller with pneumatic drive wheels is used, operate the roller in vibratory mode and follow the same procedure except that the roller will be aligned on the joint so that the pneumatic drive wheels travels on the joint. All turning movements of the roller will be done on previously compacted material. After

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

applying two roller passes on the longitudinal joint, proceed with the roller to the low side of the lane and compact as described in §402-3.07, *Compaction*.

For all HMA layers, other than Top Course, place the mixture such that no more than 100 feet of the longitudinal pavement joint is exposed at the end of the working day when traffic is maintained on the roadway during paving operations. For Top Course of 2 inches or less, refer to §402-3.09C, *Exposed Longitudinal Joint*.

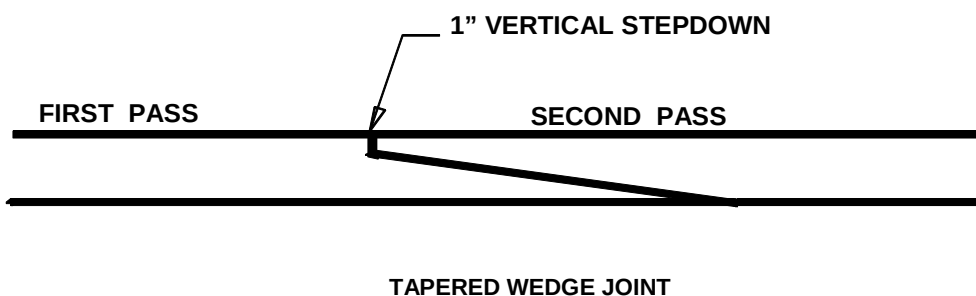
When paving Top Course, select one of the following options to construct the longitudinal joint. Use Option A for all other HMA courses:

1. **Option A - Butt Joint.** Under this option lay the HMA such that it uniformly overlaps the adjacent cold mat 2 to 3 inches. The thickness of the overlap material will be approximately one-fourth the compacted thickness of the course. Bump back the overlapped material onto the adjacent hot lane using a rake so that the roller operator can crowd the material into the hot side of the joint resulting in a smooth and well compacted joint after rolling. Broadcasting of the overlap material onto the fresh mat is not allowed. If the overlap is excessive, trim off the excess material so that the material along the joint is uniform. Remove and discard the coarse particles of aggregate in the overlap material if necessary.

Bumping is not required when the use of a rake is a safety concern, as determined by the Engineer. Instead, place the HMA in a manner such that the thickness of the uncompacted layer is approximately 25% more than the compacted thickness of the adjacent cold HMA layer with a ½ to 1 inch overlap.

2. **Option B - Tapered Wedge Joint.** Use this option when placing Top Course only. Place the HMA mixture for the first mat with an attachment to the paver to provide a sloping wedge with a vertical step-down at the longitudinal pavement joint. Extend a wedge of material from the bottom of the step-down to the existing surface at a slope of 1 on 8 or flatter. Compact the first mat such that the roller compacts up to but does not extend past the step-down. The vertical step-down will be ½ inch minimum after compaction of the mat. Place the second mat such that it uniformly overlaps the adjacent cold mat 1 to 1 ½ inches. The thickness of the overlap material will be approximately one-fourth the compacted thickness of the HMA layer. Bump back the overlapped material onto the adjacent hot lane using a rake so that the roller operator can crowd the material into the hot side of the joint resulting in a smooth and well compacted joint after rolling. Do not broadcast the overlap material onto the lane. If the overlap is excessive, trim off the excess material so that the material along the joint is uniform. Remove and discard the coarse particles of aggregate in the overlap material if deemed necessary by the Engineer.

Bumping is not required when the use of a rake is a safety concern, as determined by the Engineer. Instead, place the HMA in a manner such that the thickness of the uncompacted layer is approximately 25% more than the compacted thickness of the adjacent cold HMA layer with a ½ to 1 inch overlap.



- C. **Exposed Longitudinal Joint.** The longitudinal joint for the entire day may be exposed to traffic overnight when the HMA placement is Top Course of up to 2 inches. Exposed joints will not be permitted for more than one night, over the weekends, holidays, or when there are other concerns, such as pending wet weather.

Leaving exposed joints for any other HMA layers below the Top Course is not allowed. If the exposed joint is

1 ON 8 SLOPE OR FLATTER

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

left open, the following applies:

- Place UNEVEN LANES (W8-11) warning signs posted in advance of the condition, at each ramp, and roadway intersection, and repeated every ½ mile, supplemented with NEXT [X] MILES (W16-4) auxiliary signs to alert drivers of the uneven edge.
- Use Option B, Tapered Wedge Joint, except when the thickness is 1 inch or less where a butt joint is allowed.
- If the exposed longitudinal pavement joint becomes damaged due to rounding of the notched wedge, saw-cut the joint prior to placing the adjacent lane.

402-3.10 Surface Tolerance. Construct each pavement course to a ¼ inch surface tolerance. The Engineer may test the surface with a 16-foot straight edge or string line placed parallel to the centerline of the pavement and with a 10-foot straight edge or string line placed transversely to the centerline of the pavement on any portion of the pavement. Variations exceeding 6 mm will be satisfactorily corrected or the pavement removed and replaced at no additional cost to the State.

402-3.11 Thickness Tolerance. The thickness indicated for each of the various courses of HMA pavement is the nominal thickness. Construct the pavement so that the final compacted thickness is as near to the nominal thickness as is practical, and within the tolerances specified below.

The Engineer may request cores to determine the thickness of the completed pavement layer for final acceptance and payment. Provide work zone traffic control and take cores at no additional cost to the State. Take cores and fill the all core holes in accordance with §402-3.08, *Pavement Density Samples*. The Engineer may use another acceptance method such as yield calculations to determine the final thickness for acceptance and payment.

HMA mixture, placed as a Truing and Leveling course as described in §402-3.05, *Conditioning of Existing Surface*, will not be considered in pavement thickness determinations. The allowable tolerance for HMA specified under a single pay item is as follows:

- ¼ inch or less for a required course whose nominal thickness is 4 inches or less
- ½ inch or less for a course or courses whose nominal thickness is over 4 inches

The tolerance for the total thickness of all HMA mixture courses is as follows:

- ¼ inch or less when the total nominal thickness indicated on the plans is 4 inches or less
- ½ inch or less when the total nominal thickness is over 4 inches but not more than 8 inches
- ⅝ inch or less when the total nominal thickness is more than 8 inches

When the HMA mixture is placed on newly constructed subbase material, an additional tolerance of ¼ inch will be allowed both in the nominal thickness of the course placed directly on the subbase and the total pavement thickness.

No payment will be made for any material placed in excess of the permissible tolerance. Tolerances indicated for the thicknesses of individual layers of multilayer pavements (including composite pavements) are guides which should be met as closely as practical. Tolerance for the total thickness of such pavement is also a guide.

The Regional Director may accept and pay for HMA placed under the following conditions:

- When the individual layer placed does not meet the thickness tolerance but substantially conforms to the plans and specifications, true to line and grade in order to attain a smooth riding pavement.
- When the total thickness of such pavements is less than the specified thickness including tolerances but substantially conforms to the plans and specifications.

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

- When the total thickness of such pavements is greater than the specified thickness and the excess thickness is necessary to attain a smooth riding pavement surface.

Payment for excess thickness necessary to achieve a smooth riding surface will be considered only in cases where an existing pavement surface has been resurfaced.

402-3.12 Paver and Equipment Cleaning. Do not clean tools and equipment used for HMA placement on the pavement surface, or near streams, ponds, drainage structures or other areas that are tributaries to waterways. Use an area approved by the Engineer for cleaning all paving equipment and tools. If possible, remove solid pieces of asphalt by scraping or other mechanical means prior to application of a cleaning agent. If a petroleum product is used for cleaning, contain all liquid products during cleaning operations using tarpaulins, sand pads, pails, or other collection methods to prevent spillage or accidental release. Use hand sprayers or other similar devices to minimize the amount of petroleum product applied. Properly dispose of sand and collected petroleum products as petroleum contaminated soil at no additional cost to the State.

402-3.13 Shoulder Edge Wedge. When specified, construct a shoulder edge wedge as detailed in the Contract Documents. Place HMA on the pavement shoulders where the outside edge of Top and Binder Course consist of an angle of 35° or flatter measured from finished grade to the preceding layer surface. Construct the shoulder edge wedge by using a device attached to the screed. Hand work should be minimized. The top of the tapered section shall begin at the end of the shoulder width as specified in contract documents such that the tapered section will be an additional width of material outside of the paved shoulder width. The shoulder edge wedge is optional at locations where guiderails are installed.

402-4 METHOD OF MEASUREMENT. Provisions of §401-4 Method of Measurement, apply, including the following:

The HMA will be measured in tons of compacted mixture. Quality payment adjustments are measured in Quality Units. Quality Units will be determined for each day's production and placement by using the daily Quality Adjustment Factor (QAF) for plant production, pavement density, longitudinal joint density, pavement smoothness, and the quantity placed.

Quality Units = (Quality Adjustment Factor - 1.00) x HMA Placed (Tons)

Quality Units will be determined for test sections for 50 and 60 Series compaction methods, when applicable, by using a factor of 1.5 for the first 200 tons placed on the test section.

Quality Units = 0.5 x HMA Placed (Tons) (not to exceed 200 tons)

When the pavement density QAF applies, use one of the following methods of measurement in Table 402-7, *Method of Measurement*, corresponding to the item used on the project:

TABLE 402-7 METHOD OF MEASUREMENT

Method Type	Pay Item Number	Description
A=50 series	402.XX5FQR	QAF based on calculated PWL using four cores.
B=60 series	402.XX6FQR	QAF based on average of four core densities.

The quantity of the HMA mixture subject to adjustment will be determined from quantity placed on the mainline and ramps of uniform width longer than 1250 feet. When shoulders and mainline are placed together, the mainline quantity may be determined using typical sections shown in the contract documents.

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

The pavement density QAF will not apply to HMA placed on ramps with a uniform full width section less than 1250 feet in length, shoulders, widenings, crossovers, and bridges. Payment in these areas will be a QAF of 1.00 based on satisfactory placement and compaction.

When a QAF of a paving lot for 50 Series or 60 Series is calculated to be 0.60, the lot will be evaluated by the RME to determine if it can be left in place. The type of material produced (i.e. Binder, Top), the layer in which it is used, and the location of use (i.e., mainline or a non-critical area) will be primary considerations in the determination of whether the HMA can be left in place. If the RME determines that the HMA can be left in place, the Engineer will apply a QAF of 0.60. If the HMA cannot be left in place, remove and replace at no cost to the State.

- A. 50 Series Method.** The RME will determine the paving lot's Percent Within Limits (PWL) in accordance with MP 402-02 and determine the density QAF as shown in Table 402-8, *Quality Payment Schedule for 50 Series*. The Engineer will use the QAF to calculate the Quality Units for the accepted HMA quantity.

TABLE 402-8 QUALITY PAYMENT SCHEDULE FOR 50 SERIES

Percent Within Limits (PWL)	Quality Adjustment Factor (QAF)
$PWL_{92-97} > 93$	1.05
$PWL_{92-97} \leq 93$	$\sum (PWL_{\text{Segment}} \times \text{Pay Factor}_{\text{Segment}})^1$

1. PWL_{Segment} will be calculated for each of the nine density ranges in Table 402-9, *Density Segment Pay Factors*, using the standard deviation and average density for the lot.

TABLE 402-9 DENSITY SEGMENT PAY FACTORS

Density Segment	Segment Pay Factor
88 – 89	0.60
89 – 90	0.70
90 – 91	0.80
91 – 92	0.90
92 – 93	1.00
93 – 96	1.05
96 – 97	1.00
97 – 98	0.90
98 – 99	0.80

- B. 60 Series Method.** When pavement density samples are taken and if payment adjustment is applicable, the Engineer will make the adjustment in accordance with Table 402-10, *Density Quality Adjustment Factors for 60 Series*. The Engineer shall make full payment when the average density of the four cores is between 92% and 97% of the mixture's average daily maximum theoretical density. If the average density fails to meet this limit, a payment adjustment will be made, based on Index Price, to all the material placed on the mainline for the day the cores represent, excluding the material placed on the test section.

TABLE 402-10 DENSITY QUALITY ADJUSTMENT FACTORS FOR 60 SERIES

Average Core Density	Quality Adjustment Factor
≤ 92 Density ≤ 97	1.00
$91.0 \leq \text{Density} < 92.0$ or $97.0 < \text{Density} \leq 98.0$	0.95
$90.0 \leq \text{Density} < 91.0$	0.90

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

88.0 ≤ Density < 90.0	0.85
Density < 88.0 or Density > 98.0	0.60

402-5 BASIS OF PAYMENT. The unit price bid for all pavement courses shall include the cost of all material, labor and equipment necessary to complete the work, including obtaining the pavement cores, filling and compaction of all core holes. Quality Units may apply to the hot mix asphalt items as calculated in §402-4. Payment of Quality Units will be made based on the Index Price listed in the contract documents. The Index Price shown in the itemized proposal for each Quality Unit is considered the price bid. The unit (index) price is not to be altered in any manner by the bidder. Should the bidder alter the amount shown, the altered figure will be disregarded and the original price will be used to determine the total amount bid for the Contract.

Payment will be made under:

Item No.	Item	Pay Unit
402.010902	Type 1 F9, Asphalt-Treated Permeable Base Course	Ton
402.010912	Plant Production Quality Adjustment to 402.010902	Quality Unit
402.011902	Type 2 F9, Asphalt-Treated Permeable Base Course	Ton
402.011912	Plant Production Quality Adjustment to 402.011902	Quality Unit
402.017902	True & Leveling F9, Superpave HMA, 70 Series Compaction	Ton
402.017912	Plant Production Quality Adjustment to 402.017902	Quality Unit
402.018902	True & Leveling F9, Superpave HMA, 80 Series Compaction	Ton
402.018912	Plant Production Quality Adjustment to 402.018902	Quality Unit
402.058902	Shim Course F9, Hot Mix Asphalt	Ton
402.058912	Plant Production Quality Adjustment to 402.058902	Quality Unit
402.095102	9.5 F1 Top Course HMA, 50 Series Compaction	Ton
402.095112	Plant Production Quality Adjustment to 402.095102	Quality Unit
402.095122	Pavement Density Quality Adjustment to 402.095102	Quality Unit
402.095152	Test Section Adjustment to 402.095102	Quality Unit
402.095202	9.5 F2 Top Course HMA, 50 Series Compaction	Ton
402.095212	Plant Production Quality Adjustment to 402.095202	Quality Unit
402.095222	Pavement Density Quality Adjustment to 402.095202	Quality Unit
402.095252	Test Section Adjustment to 402.095202	Quality Unit
402.096102	9.5 F1 Top Course HMA, 60 Series Compaction	Ton
402.096112	Plant Production Quality Adjustment to 402.096102	Quality Unit
402.096122	Pavement Density Quality Adjustment to 402.096102	Quality Unit
402.096152	Test Section Adjustment to 402.096102	Quality Unit
402.096202	9.5 F2 Top Course HMA, 60 Series Compaction	Ton
402.096212	Plant Production Quality Adjustment to 402.096202	Quality Unit
402.096222	Pavement Density Quality Adjustment to 402.096202	Quality Unit
402.096252	Test Section Adjustment to 402.096202	Quality Unit
402.096302	9.5 F3 Top Course HMA, 60 Series Compaction	Ton
402.096312	Plant Production Quality Adjustment to 402.096302	Quality Unit
402.096322	Pavement Density Quality Adjustment to 402.096302	Quality Unit
402.096352	Test Section Adjustment to 402.096302	Quality Unit
402.097102	9.5 F1 Top Course HMA, 70 Series Compaction	Ton
402.097112	Plant Production Quality Adjustment to 402.097102	Quality Unit
402.097202	9.5 F2 Top Course HMA, 70 Series Compaction	Ton
402.097212	Plant Production Quality Adjustment to 402.097202	Quality Unit
402.097302	9.5 F3 Top Course HMA, 70 Series Compaction	Ton

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

402.097312	Plant Production Quality Adjustment to 402.097302	Quality Unit
402.098102	9.5 F1 Top Course HMA, 80 Series Compaction	Ton
402.098112	Plant Production Quality Adjustment to 402.098102	Quality Unit
402.098202	9.5 F2 Top Course HMA, 80 Series Compaction	Ton
402.098212	Plant Production Quality Adjustment to 402.098202	Quality Unit
402.098302	9.5 F3 Top Course HMA, 80 Series Compaction	Ton
402.098312	Plant Production Quality Adjustment to 402.098302	Quality Unit
402.098902	9.5 F9 Top Course HMA, Shoulder Course, 80 Series Compaction	Ton
402.098912	Plant Production Quality Adjustment to 402.098902	Quality Unit
402.125102	12.5 F1 Top Course HMA, 50 Series Compaction	Ton
402.125112	Plant Production Quality Adjustment to 402.125102	Quality Unit
402.125122	Pavement Density Quality Adjustment to 402.125102	Quality Unit
402.125152	Test Section Adjustment to 402.125102	Quality Unit
402.125202	12.5 F2 Top Course HMA, 50 Series Compaction	Ton
402.125212	Plant Production Quality Adjustment to 402.125202	Quality Unit
402.125222	Pavement Density Quality Adjustment to 402.125202	Quality Unit
402.125252	Test Section Adjustment to 402.125202	Quality Unit
402.126102	12.5 F1 Top Course HMA, 60 Series Compaction	Ton
402.126112	Plant Production Quality Adjustment to 402.126102	Quality Unit
402.126122	Pavement Density Quality Adjustment to 402.126102	Quality Unit
402.126152	Test Section Adjustment to 402.126102	Quality Unit
402.126202	12.5 F2 Top Course HMA, 60 Series Compaction	Ton
402.126212	Plant Production Quality Adjustment to 402.126202	Quality Unit
402.126222	Pavement Density Quality Adjustment to 402.126202	Quality Unit
402.126252	Test Section Adjustment to 402.126202	Quality Unit
402.126302	12.5 F3 Top Course HMA, 60 Series Compaction	Ton
402.126312	Plant Production Quality Adjustment to 402.126302	Quality Unit
402.126322	Pavement Density Quality Adjustment to 402.126302	Quality Unit
402.126352	Test Section Adjustment to 402.126302	Quality Unit
402.127102	12.5 F1 Top Course HMA, 70 Series Compaction	Ton
402.127112	Plant Production Quality Adjustment to 402.127102	Quality Unit
402.127202	12.5 F2 Top Course HMA, 70 Series Compaction	Ton
402.127212	Plant Production Quality Adjustment to 402.127202	Quality Unit
402.127302	12.5 F3 Top Course HMA, 70 Series Compaction	Ton
402.127312	Plant Production Quality Adjustment to 402.127302	Quality Unit
402.128102	12.5 F1 Top Course HMA, 80 Series Compaction	Ton
402.128112	Plant Production Quality Adjustment to 402.128102	Quality Unit
402.128202	12.5 F2 Top Course HMA, 80 Series Compaction	Ton
402.128212	Plant Production Quality Adjustment to 402.128202	Quality Unit
402.128302	12.5 F3 Top Course HMA, 80 Series Compaction	Ton
402.128312	Plant Production Quality Adjustment to 402.128302	Quality Unit
402.128902	12.5 F9 Top Course HMA, Shoulder Course, 80 Series Compaction	Ton
402.128912	Plant Production Quality Adjustment to 402.128902	Quality Unit
402.195902	19 F9 Binder Course HMA, 50 Series Compaction	Ton
402.195912	Plant Production Quality Adjustment to 402.195902	Quality Unit
402.195922	Pavement Density Quality Adjustment to 402.195902	Quality Unit
402.195952	Test Section Adjustment to 402.195902	Quality Unit
402.196902	19 F9 Binder Course HMA, 60 Series Compaction	Ton
402.196912	Plant Production Quality Adjustment to 402.196902	Quality Unit

SECTION 402 - HOT MIX ASPHALT (HMA) PAVEMENTS

402.196922	Pavement Density Quality Adjustment to 402.196902	Quality Unit
402.196952	Test Section Adjustment to 402.196902	Quality Unit
402.197902	19 F9 Binder Course HMA, 70 Series Compaction	Ton
402.197912	Plant Production Quality Adjustment to 402.197902	Quality Unit
402.198902	19 F9 Binder Course HMA, 80 Series Compaction	Ton
402.198912	Plant Production Quality Adjustment to 402.198902	Quality Unit
402.255902	25 F9 Binder Course HMA, 50 Series Compaction	Ton
402.255912	Plant Production Quality Adjustment to 402.255902	Quality Unit
402.255922	Pavement Density Quality Adjustment to 402.255902	Quality Unit
402.255952	Test Section Adjustment to 402.255902	Quality Unit
402.256902	25 F9 Binder Course HMA, 60 Series Compaction	Ton
402.256912	Plant Production Quality Adjustment to 402.256902	Quality Unit
402.256922	Pavement Density Quality Adjustment to 402.256902	Quality Unit
402.256952	Test Section Adjustment to 402.256902	Quality Unit
402.257902	25 F9 Binder Course HMA, 70 Series Compaction	Ton
402.257912	Plant Production Quality Adjustment to 402.257902	Quality Unit
402.258902	25 F9 Binder Course HMA, 80 Series Compaction	Ton
402.258912	Plant Production Quality Adjustment to 402.258902	Quality Unit
402.376902	37.5 F9 Base Course HMA, 60 Series Compaction	Ton
402.376922	Pavement Density Quality Adjustment to 402.376902	Quality Unit
402.376912	Plant Production Quality Adjustment to 402.376902	Quality Unit
402.376952	Test Section Adjustment to 402.376902	Quality Unit
402.377902	37.5 F9 Base Course HMA, 70 Series Compaction	Ton
402.377912	Plant Production Quality Adjustment to 402.377902	Quality Unit
402.378902	37.5 F9 Base Course HMA, 80 Series Compaction	Ton
402.378912	Plant Production Quality Adjustment to 402.378902	Quality Unit

Mix Type – XX	Compaction Series - Y	Friction - Z	Quality Adjustment - Q
9.5 Top - 09	50 series - 5	F1 - 1	HMA Item - 0
12.5 Top - 12	60 Series - 6	F2 - 2	Plant – 1
19.0 Binder - 19	70 Series - 7	F3 - 3	Density – 2
25.0 Binder - 25	80 Series - 8	F9 - 9	Test Section – 5
37.5 Base - 37			

“GENERATOR KNOWLEDGE” FOR DISPOSAL OF TREATED WOOD

The U.S. Environmental Protection Agency (EPA) and New York State Department of Environmental Conservation (NYSDEC) technique for evaluating whether a material is hazardous for toxicity is the Toxicity Characteristic Leaching Procedure (TCLP). TCLP testing of pentachlorophenol (“penta”) and creosote treated wood by the Electric Power Research Institute, Association of American Railroads, and others has conclusively demonstrated that treated wood products are not a hazardous waste. Under EPA’s and NYSDEC’s rules, such “generator knowledge” can be utilized in place of testing to determine that a waste is not hazardous. This information can be used as evidence that treated wood products can be disposed as non-hazardous waste, based on generator knowledge, in lieu of physical testing.

Generator knowledge information, obtained from the American Wood Preservers Institute (AWPI) can be viewed at their web site located at www.awpi.org. AWPI’s information comes from studies conducted by the Electric Power Research Institute (EPRI), the Washington Public Ports Association (WPPA), and the Association of American Railroads (AAR). EPRI test results are for both penta-treated and creosote-treated wood. WPPA and AAR test results are for creosote-treated wood.

NOTE: Arsenically-treated (*e.g.*, chromated copper arsenate [CCA]) wood products disposed by the end user are exempt from classification as a federal hazardous waste regardless of the TCLP results for specified constituents from any individual sample. Also, wood products treated with preservatives that contain no TCLP constituents (*e.g.*, Kodiak Preserved Wood containing Copper Dimethyldithiocarbamate) are not hazardous waste.

Additional questions regarding generator knowledge can be directed to the Hazardous Waste/ Groundwater Section of the Environmental Analysis Bureau at (518) 457-5672.

HMA WITH CRUSHED GLASS

SCOPE. This specification covers the requirements for the addition of crushed glass to hot mix asphalt mixtures. The provisions of Section 402 - Hot Mix Asphalt (HMA) Pavements applies except that the Contractor has the option of blending of the crushed glass in the following mixes:

- 1 1/2 inch Nominal Max. Size
- 1 inch Nominal Max. Size
- 3/4 inch Nominal Max. Size
- Truing and Leveling Course

If the Contractor chooses the crushed glass option, the following modifications to the Standard Specifications shall apply:

MATERIAL REQUIREMENTS

Crushed glass shall be subject to the approval of the Regional Materials Engineer prior to its use. The crushed glass shall contain no more than 1% (by weight) contaminants and shall meet the following gradation:

Sieve Size	Percent Passing
3/8 inch	100
1/4 inch	90 - 100
No. 30	0 - 20

Note: The gradation requirements may be modified upon approval by the Regional Materials Engineer.

Crushed glass may be included in the mixture up to 5%, maximum, of the total aggregate weight. The crushed glass, aggregate, and Performance-Graded Binder (PGB) shall meet the requirements specified in the Standard Specification §401-2.01 Hot Mix Asphalt Designs and §401-2.04 Performance-Graded Binder.

CONSTRUCTION DETAILS

The crushed glass shall be proportioned from a separate feed bin approved by the Regional Materials Engineer. In addition, all requirements pertaining to aggregate shall apply to crushed glass including the equipment requirements for automatic proportioning and recording as stipulated for aggregate in §401-3.08.

METHOD OF MEASUREMENT. The provisions of §401-4 and §402-4, Method of Measurement, shall apply.

BASIS OF PAYMENT. The provisions of §402-5, Basis of Payment, shall apply.

SECTIONS 407 – TACK COAT, AND 702 – BITUMINOUS MATERIALS

Make the following changes to the Standard Specifications dated May 1, 2008:

Page 207, **Delete** “§302-3.04, Mixing for Option A” Fifth Paragraph. **Replace** it with “The application temperature of the bituminous material shall be designated by the Engineer and be within the range of 130°F to 170°F.”

Page 269, **Delete** Section 407 in its entirety, and **Replace** it with the following:

“SECTION 407 - TACK COAT

407-1 DESCRIPTION. This work shall consist of preparing and treating an existing Portland cement concrete surface or hot mix asphalt surface with tack coat in accordance with the Contract documents and as directed by the Engineer.

407-2 MATERIALS. The tack coat shall meet the applicable requirements of §702. Use of alternative tack coat material requires prior approval by the Director, Materials Bureau.

407-3 CONSTRUCTION DETAILS.

407-3.01 Equipment. A distributor shall be used for applying tack coat. The distributor shall be capable of applying the tack coat uniformly on variable widths of surface up to 15 feet.

The distributor equipment shall include a quantity measuring system and a thermometer for measuring temperature of tank contents. Prior to being used on a project, this equipment shall be calibrated in accordance with ASTM D 2995 *Standard Practice for Estimating Application Rate of Bituminous Distributors* or an equivalent calibration procedure acceptable to the Engineer. The Engineer will witness the equipment calibration or require the Contractor to provide documentation certifying the calibration.

Distributors shall be equipped with circulation spray bars which shall be adjustable both laterally and vertically. An attached bristle broom that drags on the pavement behind the spray bars may be attached to the distributor. If the broom is used, it shall be adjustable laterally and vertically so that the full width of the applied tack coat is bristled uniformly into the pavement surface.

A bituminous material sampling valve shall be attached to the distributor. The distributor tank shall be equipped with an agitator that is capable of ensuring the tack coat remains homogeneous.

Tack coat stored in the distributor tank shall be heated and maintained at a temperature between 85°F and 160°F.

Hand operated spray units will be permitted only in areas where the use of a distributor is impractical.

The Engineer will determine the final acceptance of all equipment used for applying the tack coat.

407-3.02 Application of Tack Coat. The tack coat contained in the distributor tank shall be homogeneous.

The tack coat shall be applied to a prepared clean pavement. Material shall be applied uniformly across the width of the designated area.

The tack coat shall not be applied on a wet pavement surface or when the pavement surface temperature is below 40°F.

The application rate shall be as determined in Table 407-1 *Tack Coat Application Rates*. These are recommended application rates for tack coat on various surface types and may be modified by the Engineer.

SECTIONS 407 – TACK COAT, AND 702 – BITUMINOUS MATERIALS

TABLE 407-1 – TACK COAT APPLICATION RATES		
Surface Type	Application Rate (gal/yd ²)	
	Diluted Tack Coat	Straight Tack Coat
New Hot Mix Asphalt	0.05 - 0.06	0.03 - 0.04
Milled Surfaces and Existing Hot Mix Asphalt	0.08 - 0.10	0.05 - 0.06
Portland Cement Concrete	0.08 - 0.10	0.05 - 0.06
Vertical Surfaces (curbs, drainage structures, and appurtenances)	0.09 - 0.11	0.06 - 0.07

407-3.03 Sampling. The Engineer will request samples from the Contractor at the frequency listed in Materials Method 702-2 *Asphalt Emulsion - Quality Assurance*. The Engineer will witness the Contractor sampling the material. The sample will represent all material from the same certified lot, placed that day.

407-4 METHOD OF MEASUREMENT. The quantity to be measured for payment will be in gallons of tack coat measured at 60°F to the nearest gallon. The following formula will be used to calculate material quantity at 60°F:

$$\text{Volume @ 60°F} = \text{Volume}_D \times [1 - (\Delta T \times 0.00025)]$$

ΔT = Delivered Temperature (°F) - 60

Volume_D = Quantity at Delivered Temperature (gallons)

407-5 BASIS OF PAYMENT. The unit price bid per gallon for tack coat shall include the cost of all labor, materials, and equipment necessary to satisfactorily complete the work.

The Regional Materials Engineer will evaluate material represented by failing samples. If the Engineer elects to leave the material in place, the Contractor shall receive a pay reduction of 75% of the tack bid price, for the pavement section represented by the failing sample.

Payment will be made under:

Item No.	Item	Pay Unit
407.0102	Diluted Tack Coat	Gallon
407.0103	Straight Tack Coat	Gallon

Page 539, **Delete** “§609-3.07 Preparation of Surface” **Replace** in its entirety with

“B. Preparation of Surface. When hot mix asphalt curb is constructed on a freshly laid hot mix asphalt surface, the surface shall be clean. When curb is to be laid on a cured or aged concrete base, hot mix asphalt pavement, or performance graded binder treated base, the surface shall be thoroughly swept and cleaned by compressed air.

The surface shall be thoroughly dried and, immediately prior to placing of the hot mix asphalt mixture, shall receive a tack coat meeting the requirements of Table 702-8. The tack coat shall be applied at a rate of 0.05 to 0.15 gallons per square yard. The tack coat shall be prevented from spreading to areas outside of the area to be occupied by the curb.

SECTIONS 407 – TACK COAT, AND 702 – BITUMINOUS MATERIALS

Page 618, **Delete** “§633-2 Materials” Line 5 beginning with “Asphalt Emulsions,” and **Replace** with “Anionic or Cationic Asphalt Emulsion 702”

Page 808, **Delete** “705-14 Material Requirements D” Bullet 1. Replace with “Medium setting asphalt emulsion meeting Table 702-4 or Table 702-5.”

Page 763, **Delete** §702 in its entirety, and **Replace** it with the following:

“SECTION 702 - BITUMINOUS MATERIALS

SCOPE. These specifications cover the material requirements and testing methods of bituminous materials:

1. Performance-Graded (PG) Binders for Paving.
2. Miscellaneous Asphalt Cements.
3. Synthetic Resins.
4. Anionic and Cationic Asphalt Emulsions.
5. Polymer-Modified Asphalt Emulsions.
6. Asphalt Emulsion Diluted Tack Coat.
7. Asphalt Emulsion Straight Tack Coat.
8. High Volume Chip Seal Emulsions.
9. Asphalt Rejuvenating Agent.

GENERAL. The bituminous material volume shall be measured at 60°F. The specific gravity at 60°F shall be included with each shipment of bituminous material to a plant or project site.

MATERIAL REQUIREMENTS. Bituminous materials shall meet the following requirements.

1. Performance-Graded (PG) Binders for Paving. PG binder, designated PG XX-YY, is defined as the range of pavement temperatures expressed in degrees Celsius, maximum to minimum, over which the PG binder can be expected to provide acceptable performance. The PG binder shall be manufactured by refining crude petroleum and blending with a modifier, if necessary, to meet the required performance grade. PG binders shall meet the requirements of Table 702-1 *Performance-Graded Binders for Paving*. The PG binder supplier shall certify that the PG binder meets NYSDOT requirements. If the PG binder is modified, the supplier shall include type of modification and any special handling instructions in the certification. The PG binder supplier shall provide the design mixing and compaction temperatures on Form BR 320, *SUPERPAVE Performance Graded Binder Temperature Viscosity Data*. Also, the supplier shall provide AASHTO M 320 test data and all necessary shipping documents in accordance with the Department’s Materials Method 702-1 *Quality Assurance Procedure for Performance-Graded (PG) Asphalt Binders*.

TABLE 702-1 PERFORMANCE-GRADED BINDERS FOR PAVING						
MATERIAL DESIGNATION	702-5828	702-5834	702-6422	702-6428	702-7022	702-7622

SECTIONS 407 – TACK COAT, AND 702 – BITUMINOUS MATERIALS

PERFORMANCE-GRADE	PG 58		PG 64		PG 70	PG 76
	-28	-34	-22	-28	-22	-22
Test Requirements	AASHTO M 320					

Silicone additives will be permitted in paving binders. Silicone may be introduced into the PG binder in accordance with the manufacturer's recommendations either at the refinery, terminal, or at a mixing plant storage tank. PG binder treated with silicone shall conform to the specifications for untreated PG binder.

Any PG binder previously approved that has been stored in the mixing plant tank over the winter shall be re-sampled and accepted by the Department before it is used.

2. Miscellaneous Asphalt Cements. Asphalt cements shall meet the requirements in Table 702-2 *Miscellaneous Asphalt Cements*. The asphalt cement shall be homogeneous, free from water, and shall not foam when heated to 350°F. The supplier shall provide material test results and shipping documents that state the volume of material certified.

TABLE 702-2 MISCELLANEOUS ASPHALT CEMENTS		
MATERIAL DESIGNATION	702-0700	
Test Requirements	Minimum	Maximum
Penetration, 77°F (25°C), 100 g, 5 second (AASHTO T 49)	18	60
Flash Point, COC, °F (AASHTO T 48)	393	-
Solubility in trichloroethylene, % (AASHTO T 44)	99.5	-
Softening Point, °F (AASHTO T 53)	130	167
Loss on Heating, 325°F (163°C), 5 hour, % (AASHTO T 47)	-	1.0
Penetration of Residue, % of Original (AASHTO T 49)	60	-
Ductility, 77°F (25°C), 5 cm/minute, cm (AASHTO T 51)	5	-

3. Synthetic Resins. The synthetic resins covered under these specifications are two types: synthetic resin binder and rapid curing synthetic resin liquid. The synthetic resin binder is a light insensitive liquid used in colored synthetic resin binder concrete. The rapid curing synthetic resin liquid is a tack coat for the resin binder concrete and shall be light colored and compatible with the resin binder concrete placed over it. The synthetic resin shall be homogeneous and shall meet the requirements in Table 702-3 *Synthetic Resins*.

TABLE 702-3 SYNTHETIC RESINS				
TYPE	Resin Binder		Rapid Curing Resin Liquid	
MATERIAL DESIGNATION	702-7000		702-7100	
Test Requirements	Min.	Max.	Min.	Max.
Penetration, 77°F (25°C), 100 g, 5 second	75	100	-	-
Viscosity, 140°F (60°C), m ² /s (x 10 ⁻⁶)	-	-	8	30

SECTIONS 407 – TACK COAT, AND 702 – BITUMINOUS MATERIALS

Flash Point, COC, °F	400	-	-	-
Solubility in trichloroethylene, %	99.5	-	99.5	-
Loss of Heating, 325°F (163°C), 5 hr., %	-	1.0	-	-
Water, %	-	0.0	-	0.2
Color, (30% binder/70% toluene) Gardner Standard Color Scale, (ASTM D 1544)	-	16	-	-
Test on Residue from Thin Film Oven Test, (AASHTO T 179)	47	-	-	-
Residue from Evaporation, 221°F (105°C), 3 hr., (ASTM D 1644), %	-	-	50	-
Suggested Spraying Temperature, °F	-	-	50	120
Typical Uses	Hot Plant Mix		Tack Coat	

4. Anionic and Cationic Asphalt Emulsions. The emulsion shall be homogeneous and show no separation of asphalt, after thoroughly mixing, within 30 days after delivery. The asphalt emulsion shall be agitated or circulated to ensure a homogeneous emulsion prior to sampling or application of material. Material that has separated due to freezing is unacceptable at any time.

Asphalt emulsions shall meet the requirements shown in Table 702-4 *Anionic Asphalt Emulsions*, or Table 702-5 *Cationic Asphalt Emulsions*. Test data and shipping documents shall be provided by the supplier in accordance with the Department's Materials Method 702-2 *Asphalt Emulsion – Quality Assurance*.

TABLE 702-4 ANIONIC ASPHALT EMULSIONS																				
TYPE	RAPID SETTING								MEDIUM SETTING								SLOW SETTING			
MATERIAL DESIGNATION	702-3001		702-3002		702-3101		702-3102		702-3201		702-3301		702-3401		702-3402		702-3501		702-3601	
GRADE	RS-1		RS-1h		RS-2		HFRS-2		MS-2		HFMS-2		HFMS-2h		HFMS-2s		SS-1		SS-1h	
Test Requirements	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Emulsion⁽¹⁾:																				
Viscosity, Saybolt Furol, 77°F (25°C), second	20	100	20	100	-	-	-	-	100	-	100	-	100	-	50	-	20	100	20	100
Viscosity, Saybolt Furol, 122°F (50°C), second	-	-	-	-	75	400	75	400	100	400	100	400	-	-	-	-	-	-	-	-
Storage Stability Test, 1 Day (Difference in % Residue)	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1
Demulsibility, 35 mL, 0.02 N, CaCl ₂ , %	60	-	60	-	60	-	60	-	-	-	-	-	-	-	-	-	-	-	-	-
Cement Mixing Test ⁽²⁾ , %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	-	2.0
Sieve Test, %	-	0.10	-	0.10	-	0.10	-	0.10	-	0.10	-	0.10	-	0.10	-	0.10	-	0.10	-	0.10
Residue by Distillation, %	55	-	55	-	63	-	63	-	65	-	65	-	65	-	65	-	57	-	57	-
Oil Distillate, Volume Total Emulsion, %	-	1.5	-	1.5	-	2.5	-	2.5	-	8	-	8	-	8	-	8	-	1.5	-	1.5
Residue from Distillation Test⁽¹⁾:																				
Penetration, 77°F (25°C), 100 g, 5 second	100	200	40	90	100	200	100	200	100	200	100	200	40	90	200	-	100	200	40	90
Ductility, 77°F (25°C), 5 cm/minute, cm	40	-	40	-	40	-	40	-	40	-	40	-	40	-	40	-	40	-	40	-
Solubility in trichloroethylene, %	97.5	-	97.5	-	97.5	-	97.5	-	97.5	-	97.5	-	97.5	-	97.5	-	97.5	-	97.5	-
Float Test ⁽³⁾ , 140°F (60°C), second	-	-	-	-	-	-	1200	-	-	-	1200	-	1200	-	1200	-	-	-	-	-

1. All tests performed per AASHTO T 59 unless otherwise noted.

2. The Cement Mixing test is waived if the emulsion will be used for soil stabilization.

3. Float Test AASHTO T 50, except that the residue from distillation shall be poured immediately into the float collar at 500°F (260°C)

SECTIONS 407 – TACK COAT, AND 702 – BITUMINOUS MATERIALS

TABLE 702-5 CATIONIC ASPHALT EMULSIONS																
TYPE	RAPID SETTING						MEDIUM SETTING				SLOW SETTING				QUICK SETTING	
MATERIAL DESIGNATION	702-4001		702-4002		702-4101		702-4201		702-4301		702-4401		702-4501		702-4601	
GRADE	CRS-1		CRS-1h		CRS-2		CMS-2		CMS-2h		CSS-1		CSS-1h		CQS-1h	
Test Requirements	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Emulsion⁽¹⁾:																
Viscosity, Saybolt Furol, 77°F (25°C), second	20	100	20	100	-	-	-	-	-	-	20	100	20	100	20	100
Viscosity, Saybolt Furol, 122°F (50°C), second	-	-	-	-	100	400	50	450	50	450	-	-	-	-	-	-
Storage Stability Test, 1 Day (Difference in % Residue)	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1
Classification Test	Passes		Passes		Passes		---		---		---		---		---	
Particle Charge Test ⁽²⁾	Positive		Positive		Positive		Positive		Positive		Positive		Positive		Positive	
Sieve Test, %	-	0.10	-	0.10	-	0.10	-	0.10	-	0.10	-	0.10	-	0.10	-	0.10
Cement Mixing Test ⁽³⁾ , %	-	-	-	-	-	-	-	-	-	-	-	2.0	-	2.0	-	-
Residue by Distillation, %	60	-	60	-	65	-	65	-	65	-	57	-	57	-	62	-
Oil Distillate, Volume Total Emulsion, %	-	1.5	-	1.5	-	2.5	-	10	-	10	-	1.5	-	1.5	-	-
Residue from Distillation Test⁽¹⁾:																
Penetration, 77°F (25°C), 100 g, 5 second	100	250	40	90	100	250	100	250	40	90	100	250	40	90	40	90
Ductility, 77°F (25°C), 5 cm/minute, cm	40	-	40	-	40	-	40	-	40	-	40	-	40	-	40	-
Solubility in trichloroethylene, %	97.5	-	97.5	-	97.5	-	97.5	-	97.5	-	97.5	-	97.5	-	97.5	-

1. All tests performed per AASHTO T 59 unless otherwise noted.

2. If the Particle Charge test is inconclusive, material having a maximum pH value of 6.7 will be accepted.

3. The Cement Mixing test is waived if the emulsion will be used for soil stabilization.

5. Polymer-Modified Asphalt Emulsions. Polymer-modified asphalt emulsions shall meet the requirements of Table 702-4 and 702-5 except as modified in Table 702-6 *Polymer Modified Asphalt Emulsions*.

The polymer modifier shall be milled or blended into the base asphalt or emulsifying agent prior to the emulsification process.

TABLE 702-6 POLYMER MODIFIED ASPHALT EMULSIONS		
MATERIAL DESIGNATION		702-XXXXP ⁽¹⁾
Emulsion Grade	Test Requirement	Minimum
CQS-1h – 702-4601	Elastic Recovery at 50°F(10°C) ^(2,3) , %	40
	Softening Point, °F ⁽⁴⁾	140
All Other Polymer Modified Emulsions	Elastic Recovery at 50°F(10°C) ^(2,3) , %	50
	Softening Point, °F ⁽⁴⁾	140

1. XXXX shall be the four digit code matching the appropriate emulsion grade listed in table 702-4 & 702-5

2. Elastic Recovery procedure: Use ASTM D 6084 Testing Procedure “A.” Samples will be tested at 50°F (10°C).

3. Recover emulsion’s asphalt residue according to ASTM D 6997 except as modified herein, when the lower temperature reaches approximately 275°F (135°C), move the ring burner approximately level with the bottom of the still. Increase the temperature to a maximum 350°F +/- 10°F (177°C +/- 5°C), maintaining this temperature for 15 minutes.

4. According to AASHTO T 53

6. Asphalt Emulsion – Diluted Tack Coat. Diluted tack coat emulsion shall be agitated or circulated to ensure a homogeneous emulsion prior to sampling or application of material. The consistency

SECTIONS 407 – TACK COAT, AND 702 – BITUMINOUS MATERIALS

of the diluted tack coat shall be appropriate for pumping and uniform application.

Only the grades of emulsions meeting the requirements of Table 702-7 *Diluted Tack Coat* shall be allowed. These diluted tack coats may be produced by diluting the base asphalt emulsion grade with an emulsifier and/or water and thoroughly mixing into a homogeneous liquid.

TABLE 702-7 DILUTED TACK COAT			
MATERIAL DESIGNATION		702-XXXXT ⁽¹⁾	
Emulsion Grades	Test Requirements ⁽²⁾	Min.	Max.
702-3401 702-3601 702-4501	Sieve Test	-	0.10
	Residue by Distillation, %	38	50
	Oil Distillate, Volume of Total Emulsion, %	-	2
	Test on Residue from Distillation:		
	Penetration, 77°F (25°C), 100 g, 5 seconds	40	90

1. XXXX = 3401, 3601 or 4501

2. All tests performed per AASTHO T59

7. Asphalt Emulsion – Straight Tack Coat. Straight tack coat emulsion shall be agitated or circulated to ensure a homogeneous emulsion prior to sampling or application of material. The consistency of the straight tack coat shall be appropriate for pumping and uniform application.

Only the grades of emulsions meeting the requirements of Table 702-8 *Straight Tack Coat* shall be allowed in straight tack coat applications. These tack coats shall not be further diluted with water.

TABLE 702-8 STRAIGHT TACK COAT			
MATERIAL DESIGNATION		702-XXXXT ⁽¹⁾	
Emulsion Grades	Test Requirements ⁽²⁾	Min.	Max.
702-3002 702-4002	Sieve Test, %	-	0.10
	Residue by Distillation – Grade 702-3002, %	55	-
	Residue by Distillation – Grade 702-4002, %	60	-
	Oil Distillate, Volume of Total Emulsion, %	-	2
	Test on Residue from Distillation:		
	Penetration, 77°F (25°C), 100 g, 5 seconds	40	90

1. XXXX = 3002 or 4002

2. All tests performed per AASTHO T59

8. High Volume Chip Seal Emulsions. The following emulsion grades are modified when used in certain Chip Seal applications. The material shall meet the requirements of Table 702-4, Table 702-5 and Table 702-6 except as modified in Table 702-9 *High Volume Chip Seal Emulsions*.

TABLE 702-9 HIGH VOLUME CHIP SEAL EMULSIONS

SECTIONS 407 – TACK COAT, AND 702 – BITUMINOUS MATERIALS

MATERIAL DESIGNATION		702-XXXXC ⁽¹⁾	
Emulsion Grades	Test Requirements	Min.	Max.
702-3101 702-3102 702-4101	Penetration 77°F (25°C) ⁽²⁾	80	150

1. XXXX = 3101, 3102 or 4101

2. Perform penetration per AASTHO T59.

9. Asphalt Rejuvenating Agent – Asphalt rejuvenating agents are used for heater scarification or hot in-place recycling projects.

Use ASTM D 4552, *Standard Practice for Classifying Hot-Mix Recycling Agents*, grades RA25 and RA75 petroleum-based recycling agents specifically designed as a rejuvenator meeting the requirements in Table 702-10 *Recycling Agent*. Use *Emulsified Recycling Agents*, grades ERA25 (an emulsified RA25) and ERA75 (an emulsified RA75) petroleum-based recycling agents specifically designed as a rejuvenator meeting the requirements in Table 702-11 *Emulsified Recycling Agent*.

TABLE 702-10 RECYCLING AGENT					
MATERIAL DESIGNATION (GRADE)		702-5030 (RA25)		702-5050 (RA75)	
Test Requirements	Test Method	Min	Max	Min	Max
Tests on Residue from Distillation: Viscosity, 140°F (60°C), cSt Flash Point, CSC, °F	T 201 T 48	901 426	4500 --	4501 426	12500 --
Test on Residue from RTFO, 325°F (163°C): Viscosity Ratio Weight Change, ±, %	T 240	-- --	3 3	-- --	3 3
Specific Gravity	T 228	Report		Report	

TABLE 702-11 EMULSIFIED RECYCLING AGENT					
MATERIAL DESIGNATION (GRADE)		702-5031 (ERA25)		702-5051 (ERA75)	
Test Requirements	Test Method	Min	Max	Min	Max
Tests on Residue from Distillation: Viscosity, 140°F (60°C), cSt Flash Point, CSC, °F	T 201 T 48	901 426	4500 --	4501 426	12500 --
Test on Residue from RTFO, 325°F (163°C): Viscosity Ratio Weight Change, ±, %	T 240	-- --	3 4	-- --	3 4
Specific Gravity	T 228	Report		Report	
Saybolt Furol	T 59	20	100	20	100

SECTIONS 407 – TACK COAT, AND 702 – BITUMINOUS MATERIALS

Viscosity @ 77°F (25°C), sec.					
Storage Stability, 24 hrs, %		--	1.5	--	1.5
Sieve, %		--	0.1	--	0.1
Residue, by distillation, %		65	--	65	--

BASIS OF APPROVAL. The procedural directives for sampling, testing, and certifying the bituminous material, and for achieving and maintaining Approved List status, are available from the Materials Bureau.

BASIS OF ACCEPTANCE. PG binder will be accepted based on the Primary Source appearing on the approved list and the source's certification and satisfactory test results from samples taken where the material is incorporated into the work.

Miscellaneous asphalt cements and synthetic resins will be accepted based on the manufacturer's certification.

Asphalt Emulsions, including Tack Coat, will be accepted based on the Primary Source appearing on the approved list, the source's certification, and satisfactory test results from samples taken where the material is incorporated into the work.

Asphalt Rejuvenating Agent will be accepted based on the manufacturer's certification. The use of any other grade of recycling agent requires prior approval from the Director, Materials Bureau."

PROVISIONS FOR STRUCTURAL CONCRETE CURING IN COLD WEATHER

Make the following changes to the Standard Specifications of May 1, 2008:

Page 299, Section 502 – PORTLAND CEMENT CONCRETE PAVEMENT, 502-2 MATERIALS AND EQUIPMENT, **Delete**: “Form Insulating Materials for Winter Concreting 711-07”, and **Replace** it with “Form Insulating Materials for Cold Weather Concreting 711-07”.

Page 338, Section 555 – STRUCTURAL CONCRETE, 555-2 MATERIALS, Section 555-2.01 General, **Delete**: “Form Insulating Materials for Winter Concreting 711-07”, and **Replace** it with “Form Insulating Materials for Cold Weather Concreting 711-07”.

Page 347, **Delete** Section 555 – STRUCTURAL CONCRETE, 555-3.08 Curing – C. Provisions for Curing in Cold Weather, and **Replace** it with the following:

“ C. Provisions for Curing in Cold Weather. If the ambient air temperature falls, or is expected to fall below 45°F, the requirements of Table 555-2 shall apply.

TABLE 555-2 COLD WEATHER CURING REQUIREMENTS	
Ambient Temperature (AT) at time of concrete placement and as anticipated during curing duration	Curing requirements
32°F < AT < 45°F for less than 24 consecutive hours	Contractor proposed/Engineer approved method for maintaining temperatures used
32°F < AT < 45°F for more than 24 consecutive hours	Heated enclosure required
AT < 32°F	Heated enclosure required

Prior to use, all proposed methods must meet the approval of the Engineer. If the curing temperature falls below 32°F at any time during the curing period, the concrete will be rejected.

To provide assurance of the curing temperatures, the Contractor shall supply thermometers meeting the requirements of §555.3.08A. Temperature measurements will be taken by the Engineer and a record will be maintained for the curing period. As a minimum, thermometers shall be placed adjacent to forms at the bottom, middle, and top of a placement. Additional thermometers may be placed in areas where extreme cold or heat, from external sources, can be expected.

If the existing method employed by the Contractor to maintain the curing temperature fails, the Contractor shall modify the existing method immediately to reestablish an acceptable curing temperature.

The length of the curing period will be extended until the required number of curing days are accumulated.

- 1. General.** When approval is granted in writing by the Engineer for cold-weather concreting, the curing temperature shall be maintained between 45°F and 85°F for the curing durations stated by provision of external heat or utilization of heat of hydration retained by insulated forms. Only when temperatures are maintained between 45°F and 85°F will the time be considered acceptable curing hours.
- 2. Provision of External Heat.** If the Contractor is required, or elects, to maintain curing temperatures by this method, the Contractor shall furnish sufficient canvas and framework, or other type of housing, to enclose and protect the structure. The enclosure and heat source(s) shall be established in such a way that the air surrounding the fresh concrete, on all sides, be kept at a temperature between 45°F and 85°F for the specified curing period. At the end of the curing period, the heat shall be gradually reduced at a rate not to exceed 1 degree F per hour until the temperature within the enclosure equals the temperature outside the enclosure. Materials and equipment necessary to erect the enclosure and provide external heat shall be present on the job site and approved by the Engineer before any concrete is placed.

External heat shall be provided by means of stoves, salamanders, heated hoses, steam equipment, warmed curing water, or other equipment supplied by, operated by the Contractor. Heating appliances shall not be placed in such a manner as to endanger formwork, centering, or expose any area of concrete

PROVISIONS FOR STRUCTURAL CONCRETE CURING IN COLD WEATHER

to drying out or damage due to excessive temperatures. Sufficient equipment shall be supplied to continuously maintain the specified temperature with a reasonable degree of uniformity in all parts of the enclosure. The enclosures shall be properly vented to prevent surface disintegration of fresh concrete due to an accumulation of carbon dioxide gas. All exposed concrete surfaces within the heated area shall be protected from drying by one of the following methods:

- Use of live steam.
- Continuous wet burlap or wet burlap used with curing covers.
- Curing compounds used with curing covers.

TABLE 555-3 INSULATION REQUIREMENTS FOR CONCRETE WALLS, PIERS AND ABUTMENTS ABOVE GROUND				
Wall Thickness (Inches)	Minimum ambient air temperatures (°F) allowable for concrete placed at 50°F (Thermal Resistance Values (R): hr·ft ² ·F/Btu)			
	R = 2	R = 4	R = 6	R = 8
Portland Cement Content: 400 lb/cy				
6	47	44	40	36
12	43	35	26	17
18	39	25	11	-2
24	34	16	-2	-20
36	25	-1	-27	-53
48	18	-10	-38	*
60	18	-10	-38	*
Portland Cement Content: 500 lb/cy				
6	47	43	38	33
12	42	31	20	9
18	36	19	2	-15
24	30	7	-16	-39
36	18	-15	-46	-79
48	10	-25	-60	*
60	10	-25	*	*
Portland Cement Content: 600 lb/cy				
6	46	41	35	29
12	40	28	14	0
18	33	13	-7	-29
24	26	-1	-28	-55
36	12	-27	-66	*
48	4	-40	*	*
60	4	-40	*	*
Portland Cement Content: 700 lb/cy				
6	45	39	32	25
12	38	24	8	-8
18	30	7	-16	-42
24	22	-9	-41	-74
36	5	-40	-85	*
48	-4	-54	*	*
60	-4	-54	*	*
Portland Cement Content: 800 lb/cy				

PROVISIONS FOR STRUCTURAL CONCRETE CURING IN COLD WEATHER

6	45	38	30	22
12	37	20	2	-16
18	28	1	-26	-55
24	18	-18	-54	-91
36	-2	-54	*	*
48	-11	-68	*	*
60	-11	-68	*	*

* < - 60 °F

When using concrete containing pozzolans, do not consider the pozzolons as part of the cement content. Use values given for a Portland cement content that are equal to or less than the actual cement content of the mix, due to a lower heat of hydration when using pozzolans.

3. Heat Retention by Insulated Forms. Insulated forms may be used to maintain acceptable curing temperatures in accordance with the provisions of Table 555-2, when ambient temperatures will not drop below 32°F. If the Contractor elects to maintain curing temperatures by this method, sufficient insulation shall be furnished to protect and maintain the temperature between the insulation and formwork within the range of 45°F to 85°F for the specified curing period.

Discontinuance of protection shall be accomplished in such a manner that the drop in temperature of any portion of the concrete shall be gradual. The surface temperature of concrete sections more than 2 feet in thickness shall not drop faster than 18°F in a 24-hour period. The surface temperature of concrete sections less than 2 feet in thickness shall not drop faster than 36°F in a 24 hour period.

Forms may be removed without restriction, providing the temperature difference between the air and the surface of the concrete is not more than 30°F. If possible, forms shall be removed about the middle of the day to take advantage of the generally higher afternoon temperatures.

Form insulating material shall be installed on the forms in such a manner so as to achieve the full benefit of its insulating properties and at the same time provide against the infiltration of wind and water. All portions of steel forms shall be covered by insulating material so that no steel is exposed to the air. Any tears or damaged areas in the insulating material shall be repaired. Special attention shall be given to ensure that all corners and angles are properly insulated and protected against wind damage.

Where tie rods extend through the form insulating material, a plywood washer (¾ x 6 x 6 inches approx.) shall be placed over the tie rod and secured against the insulating material.

After placement of the concrete, the exposed concrete surfaces shall be covered with insulating blankets, except for areas where protruding reinforcing bars make the use of blankets impracticable. These areas may be covered with hay or other acceptable insulating material. Tarpaulins shall be used to protect the insulating material.

Insulating material shall be insulating blankets, solid foam, or sprayed foam meeting the requirements of §711-07, Form Insulating Materials for Cold Weather Concreting. The appropriate R value of material shall be used to insulate the concrete according to Table 555-3.

Multiple layers of insulation may be used to attain the desired level of insulation (R value), to maintain the required curing temperatures. Extra care shall be taken in insulating edges and corners where additional layers or overlaps are required.

PROVISIONS FOR STRUCTURAL CONCRETE CURING IN COLD WEATHER

TABLE 555-4 MINIMUM TIME FOR FORM REMOVAL/FORMING/LOADING LIMITATIONS -SUBSTRUCTURES ⁽¹⁾			
SUBSTRUCTURE ELEMENT	STRIPPING ⁽²⁾	FORMING NEXT PLACEMENT	LOADING
All Footings	2 days	2 days	4 days before next placement
Abutment stems, backwalls	2 days if less than 10 feet (avg.). Add 1 day for each additional 5 feet to 5 days, maximum.	2 days	5 days before placing backwall on stem. 7 days before backfilling, 14 days before placing superstructure loads. ⁽³⁾
Pier Columns, Pier Plinths	2 days if less than 10 feet high (avg.). Add 1 day for each additional 5 feet.	4 days – columns 2 days if forming pedestal	Columns – 7 days before placing cap beam. Plinth- 2 days before pedestal placement. 21 days before placing superstructure loads. ⁽³⁾
Pier cap beams	8 days (bottom) 3 days (sides)	2 days	5 days before pedestal placement. 21 days before placing superstructure loads. ⁽³⁾
All pedestals	2 days	—	7 days (class A) 3 days (class F) ⁽⁴⁾
Wingwalls or Retaining walls	Same as abutment stems.	—	14 days before backfilling ⁽³⁾
Arch centers Centering under beams	8 days	—	14 day ⁽³⁾

Notes:

1 The minimum times for loading in this table are NOT applicable when using concrete that contains fly ash or ground, granulated blast furnace slag that is placed and/or cured when ambient temperatures are 60°F or less. The provisions in Note 3 are required for casting, curing, and testing of compressive strength cylinders for concrete that contains fly ash or ground, granulated blast furnace slag that is placed and/or cured when the ambient temperature is 60°F or less. The compressive strength results will be the basis of determining when loading can occur.

2 All concrete shall be cured for a minimum of seven curing days. A “Day” is a curing day as defined in Subsection 555-3.08A. Concrete surfaces being cured using forms, covers, or blankets from which the covers are removed for any purpose prior to the full cure period shall be sprayed with an approved clear (fugitive dye) curing compound within ten minutes of cover removal.

3 When early loading is requested, the minimum time requirements for loading may be reduced (or extended) based on test cylinder compressive strength results. The DCES will establish requirements for early loading upon request. The Contractor shall notify the Engineer, in writing, at least 10 days prior to placement, that early loading is being requested, so that arrangements for test cylinders can be made. Test cylinders shall be prepared in accordance with Materials Method 9.2 – Field Inspection of Portland Cement Concrete. Two test cylinders shall be prepared for each anticipated testing period. These cylinders shall be cured in the same manner as the substructure element which they represent. After the first compression test, the Engineer shall determine subsequent testing periods based on the results of the first test. No more than three tests for each substructure element shall be allowed.

4 Minimum time for loading pedestals shall not compromise minimum loading times specified for other placements. ”

PROVISIONS FOR STRUCTURAL CONCRETE CURING IN COLD WEATHER

Make the following changes to the Standard Specifications of May 1, 2008.

Page 872, *Delete* Section 711-07 FORM INSULATING MATERIALS FOR WINTER CONCRETING, in its entirety and ***Replace*** it with the following:

“711-07 FORM INSULATING MATERIALS FOR COLD WEATHER CONCRETING

SCOPE. This specification covers the material requirements for form insulating materials used for cold weather concreting operations.

GENERAL. Insulating materials shall be:

- Impervious to moisture penetration and absorption
- Uniform in thickness
- Durable
- Easy to apply
- Capable of maintaining consistent concrete temperature
- Be in good condition with no ragged or open edges, cracks or holes

MATERIAL REQUIREMENTS.

Insulation Blankets: Shall be clearly labeled with the manufacturer's name and the material's thermal resistivity (R value).

Foam Boards: Boards must be made of Expanded Polystyrene and shall be clearly labeled with the manufacturer's name and the material's thermal resistivity (R value).

Sprayed Foam: This product must meet the requirements of ASTM C1029.

BASIS OF ACCEPTANCE. The Contractor shall provide a material certification from the manufacturer that the insulating material meets the requirements of this specification and that the product R value is the same as labeled on the product. ”

BRIDGE PEDESTAL REPAIR AND REPLACEMENT CONCRETE

Make the following changes to the Standard Specifications dated May 1, 2008:

Add the following text after the first sentence of **Section 555-2.02 Concrete for Structures**:

“Mixtures using a CA2 gradation shall be used when the minimum placement dimension is 5 inches or greater, except for pedestal repairs, where Class D or DP concrete may be used when placement dimensions are greater than 1½ inches but do not exceed 12 inches.”

Add the following sentence after the first sentence of the second paragraph of **Section 555-3.04B. Conveyance**:

“Concrete pumps with smaller hose diameters may be used for small placements, where mixtures using a CA1 gradation (smaller aggregates) are allowed, and where access is limited.”

Delete the content of **Section 582-3.01 A. Horizontal or Essentially Horizontal Locations** in its entirety and **replace** it with the following:

“Class A, Class D or Class DP concrete shall be used. Class A concrete shall be placed only at locations where removal depths average greater than 5 inches. Class D concrete shall be placed only at locations where removal depths average between 1 ½ and 5 inches. Class D or DP may be used for pedestal repairs when access is limited and where placement dimensions are greater than 1½ inches but do not exceed 12 inches. Average depth shall be determined by a measurement procedure acceptable to the Engineer”

Delete the content of **Section 582-3.01 C. Overhead** in its entirety and **replace** it with the following:

“Class A, Class D or approved patching material shall be used when formwork is provided. Concrete classes shall be restricted to the depth limitations noted for horizontal locations. Approved patching material may be used without formwork provided lift thicknesses do not exceed 1 inch. Anchoring devices shall be used when patching material is used for repair depths of 1½ inches or greater.”

PROVISIONS FOR CONCRETING IN COLD WEATHER

Make the following changes to the Standard Specifications of May 1, 2008

Page 359

Under §557-3.05 *Handling and Placing Concrete*, **delete** line 5 and **replace** it with the following: For placements proposed between October 1st and April 1st the Preplacement Meeting should additionally review cold weather concreting operations including, but not limited to, the following:

Line 8; under §557-3.05 *Handling and Placing Concrete*, **delete** the 3rd bullet that begins “Engineers permission...”

Line 11; under §557-3.05 *Handling and Placing Concrete*, **delete** “September 15” and **replace** it with “October 1”.

Page 364

Delete §557-3.12. *Provisions For Concreting In Cold Weather* and **replace** it with the following:

557-3.12 Provisions for Concreting in Cold Weather. Cold-weather concreting provisions shall apply when the ambient air temperature below 45°F for 24 consecutive hours, or drops below 32°F at any time, during the curing or drying periods of the concrete.

When cold-weather concreting of superstructure slabs is progressed, curing shall be maintained in accordance with §555-3.08C *Provisions for Curing in Cold Weather*, except as modified here:

A. Superstructure Slabs.

The curing duration shall be 14 days (336 hours). Conditions may occur which prevent an entire 24 hour day from qualifying as a curing day, but do not prevent portions of that day from reaching temperatures that qualify as curing temperatures. If these conditions occur the Contractor may aggregate curing hours. An aggregation of 24 curing hours will be credited as one curing day based on the Engineer’s acceptance of monitored temperature data. Any aggregations of less than 24 curing hours will not be credited as a curing day. A curing hour is defined as any hour during which the curing temperature remains at, or above 45°F. Curing temperature is defined as the temperature of the air measured at the surface of the curing concrete.

Curing temperatures shall be maintained in accordance with the requirements of Table 555-2, *Cold Weather Curing Requirements*. If ambient air temperatures are expected to fall below 45°F, materials and equipment necessary to maintain required curing temperatures shall be present on the site or readily available. The contractor shall provide protection in a timely manner to maintain acceptable curing.

External heat and enclosures to maintain curing temperatures may be required, as determined by the contractors proposed curing methods documented at the Preplacement Meeting. Enclosures are defined as those materials, combinations of materials, or systems that provide for uniform temperature and curing management of the concrete. If enclosures are required, they shall be constructed in such a way that all surfaces of the fresh concrete shall be maintained between 45°F and 80°F for the curing period. On structures where bottom formwork is not required, the existing superstructure materials may be considered for their insulating values provided all curing temperature requirements are maintained. If the Contractor expects to, or will, perform work when ambient temperatures are below 45°F, the enclosure shall be constructed in such a manner that work can be performed inside the enclosure without exposing any concrete to a temperature below 45°F. All concrete surfaces within heated areas shall be protected from drying by the use of live steam or use of continuously wetted burlap. All concrete surfaces within heated areas shall be protected from surface disintegration of fresh concrete due to an accumulation of carbon dioxide gas by properly venting the enclosure or use of non-combustion type heating systems.

Continuously recording thermometers shall be placed on both the top and underside of the deck to monitor areas where extreme cold or heat can be expected. Multiple thermometers may be required as directed by the Engineer. On structures where bottom formwork is not required and the existing superstructure materials are

PROVISIONS FOR CONCRETING IN COLD WEATHER

considered for their insulating value, temperatures shall be monitored at the interface between the existing superstructure materials and new concrete using continuously recording thermocouples and thermometers.

A maximum temperature differential of 30° F between any two locations within any form of enclosure, heated or otherwise, shall be maintained at all times.

When the ambient temperature is 45°F or greater, an enclosure may be removed for access to progress additional work providing there is a temperature difference of 30 Fahrenheit degrees or less between the air and the surface of the concrete. If the temperature difference between the air and the surface of the concrete is greater than 30 Fahrenheit degrees, temperatures shall be gradually reduced at a rate not to exceed 1°F /hr until the temperature difference is equal to or less than 30 Fahrenheit degrees. If an enclosure is removed, all heating in other areas shall cease until such time that the enclosure is replaced. Upon completion of the incidental work and replacement of the enclosure, the Contractor shall reestablish acceptable curing temperature differentials, with a maximum temperature differential not more than 30 Fahrenheit degrees between any two locations within the enclosure.

After seven (7) curing days, the Contractor may perform work on the structure to complete sidewalks, safety walks, curbs, and barriers. Work shall progress only when ambient temperatures are 45°F or greater or within an enclosure as described above. Incidental work shall not cause damage to the structure.

For all incidental work, the requirements of §557-3.14, *Loading Limitations for Superstructure Slabs*, shall apply.

B. Structural Approach Slabs, Curbs, Sidewalks and Safety Walks on Bridges.

The provisions of 557-3.12 A *Superstructure Slabs* shall apply except the curing duration shall be 7 days (168 hours). After three (3) curing days, the Contractor may perform work on approach slabs to complete sidewalks, safety walks, curbs, and barriers. Work shall progress only when ambient temperatures are 45°F or greater or within an enclosure as described above. Incidental work shall not cause damage to the structure.

For structural approach slabs, the requirements of §557-3.15 *Loading Limitations for Structural Approach Slabs, Sidewalks, and Safety Walks on Bridges*, shall apply.

C. Saw Cut Grooving.

When concrete is placed, cured, or dried under cold weather provisions, and a surface treatment option requiring saw cut grooving is used, saw cut grooving may be commenced after 7 curing days and shall be completed prior to commencing the drying period. Work shall progress only when ambient temperatures are 45°F or greater or within an enclosure as described in §557-3.12 A. Care shall be taken to prevent damage to the structure and no chipping or spalling of concrete shall occur at the sawcut edges.

D. Winter Surface Treatment - Superstructure Slabs and Structural Approach Slabs.

Upon completion of the curing period, the Contractor shall progress one of the following two options:

- 1. Option 1.** The top surface and fascias of the superstructure slab shall be air dried for 10 days before being sealed with a penetrating sealer or exposed to freezing temperatures. Saw cut grooving shall be completed, as described above, prior to application of penetrating sealer. External heat and enclosures to maintain drying temperatures may be required. Drying shall be achieved by the following:
 - a. Providing free air flow and maintaining temperatures between 45°F and 80°F to the top surface and fascias (vertical faces) of the superstructure slab. Fascia forms shall be removed to allow for free air flow.
 - b. Drying of the underside of the structure, and of the fascias when a concrete barrier is to be placed on the superstructure slab, will not be required. However, ambient temperatures shall be maintained between 45°F and 80°F in these areas for the duration of the drying period.
 - c. The drying period shall be continuous except that aggregate drying hours may be allowed when a contractor ceases free air flow for any reason but protects the drying concrete from exposure to any additional water. Exposure to any additional water, beyond minor leakage thru an enclosure in limited

PROVISIONS FOR CONCRETING IN COLD WEATHER

areas, will require the drying period to re-commence for 10 days. Any 3 hour period of time, or fraction thereof, when the concrete is exposed to minor leakage shall not be counted as part of the drying period. Minor leakage shall be defined as water that dries or evaporates in 3 hours or less. Limited areas are defined as areas less than 100 ft². The total area of allowable minor leakage shall not exceed 5% of the concrete area under drying conditions. The same area of concrete shall not be exposed to minor leakage more than twice. Areas that exceed 100 ft² or are exposed to additional water that does not dry or evaporate in less than 3 hours, may be dried independently to accommodate removal of the original enclosure. Any independent enclosures shall be maintained under the same temperature and air flow requirements as the original enclosure for 10 days.

d. Means of accelerating the drying process will be considered by the Director, Materials Bureau, to achieve an internal moisture content of 85% relative humidity or less, measured at a depth of 1 inch from any concrete surface.

Once the drying period is complete, temperatures shall be gradually reduced at a rate not to exceed 1°F/hr until the temperature within the enclosure equals the temperature outside the enclosure. Application of a penetrating sealer, in accordance with other items shall be completed before opening the superstructure slab to traffic.

2. Option 2. The top surface and fascias of the superstructure slab shall be air dried for 24 hours before being sealed with an interim application of penetrating sealer or being exposed to freezing temperatures. No saw cut grooving will be performed. External heat and enclosures to maintain drying temperatures may be required. Work shall be progressed by doing the following:

a. Providing free air flow and maintaining temperatures between 45°F and 80°F to the top surface and fascias of the superstructure slab. Fascia forms shall be removed to allow for free air flow.

b. Drying of the underside of the structure, and of the fascias when a concrete barrier is to be placed on the superstructure slab, will not be required. However, ambient temperatures shall be maintained between 45°F and 80°F in these areas for the duration of the 24 hour drying period. Application of interim penetrating sealer shall be completed before opening the superstructure slab to traffic.

c. After April 1st the contractor shall clean the deck of debris and provide necessary site access. The Department will inspect the superstructure slab for freeze / thaw or scaling damage. Damage shall be defined as:

(1) Delaminations

(2) Surface defects as follows:

- Total combined area greater than 50 ft² with a scaling rating of 3 or greater as defined by ASTM C-672.
- Total combined area greater than 10 ft² where the surface distress is greater than 3/16 inch deep.

(3) Pop-outs – surface imperfections greater than 3/4 inch in diameter

d. If the above described damage exists, the Contractor shall repair any damaged or defective concrete greater than 3/16 inch deep by saw cutting the perimeter of the area to a depth of 3/4 inch, chipping any unsuitable material to 1-1/2 inch or sound concrete (whichever is deeper) with light, hand held, pneumatic tools, at a 45 degree angle into the repair area. Clean all repair area surfaces thoroughly by blast cleaning. Repair small areas 3 ft² or less using approved concrete repair material that provides a permeability less than 1200 coulombs, Item 701-04, preparing the surface according to the material manufacturer's recommendations. Repair larger areas using Class DP concrete, preparing the surface according to §584-3.02 and 584-3.03. Cure Class DP concrete for 7 days.

e. After all necessary repairs are completed, the Contractor shall perform diamond grinding to the

PROVISIONS FOR CONCRETING IN COLD WEATHER

entire superstructure slab and approach slabs, to within 1 foot of any curb or barrier. Diamond grinding shall be performed as follows:

- (1) The depth of the grinding shall be approximately 3/16 inch to obtain a smooth texture.
- (2) In all travel lanes, use equipment having gang-mounted diamond saw blades on a multi-blade arbor specifically designed for PCC pavement or superstructure production grinding. Using equipment capable of producing a 3 ft wide (minimum) grinding pass that is equipped with a vacuum system capable of removing slurry from the bridge deck surface, such as the Target 3800, Boart-Longyear (Kushion Kut) PC5000 or PC600, or equal as approved by the Director, Materials Bureau. Smaller diamond grinding equip shall be used as necessary to complete grinding adjacent to curbs or barriers. The Contractor shall submit requests to use other equipment at least 7 days prior to the start of grinding operations.
- (3) Begin and end diamond grinding lines normal to the bridge deck centerline. Grind the bridge deck longitudinally such that at least 95% of the bridge deck surface is ground and the bridge deck is in the same plane across a joint or crack when measured with a 3 ft (minimum) straightedge. When steel joints are specified, joints shall be placed to allow for the required grinding of 3/16 inch. Feathering of the grinding operation at steel joints shall be kept to a minimum. Provide surface drainage by maintaining the proper cross-slope on the finished surface and by blending adjacent passes. Regrind the bridge deck if an acceptable surface is not being obtained.
- (4) Continuously remove slurry from the bridge deck using the vacuum system on the grinding equipment. If required, provide equipment capable of transporting the slurry from the job site to an acceptable waste area or facility, without spilling.
- (5) Traffic may be allowed on ground areas after slurry removal is complete or on decks where only partial diamond grinding is complete.
- (6) After diamond grinding is complete, concrete shall be saw cut grooved according to contract documents and specifications for saw cut grooving, followed by penetrating sealer application placed in accordance with contract documents and specifications for penetrating sealers.

E. Winter Surface Treatment –Curbs, Sidewalks and Safety Walks on Bridges.

Upon completion of the curing period, concrete shall be air dried for 24 hours by providing free air flow and maintaining temperatures between 45°F and 80°F to all concrete surfaces. The drying period shall be continuous. Upon completion of drying, curbs, sidewalks and safety walks shall be sealed with a penetrating sealer in accordance with contract documents.

Page 366 Under §557-3.15, *Loading Limitations for Structural Approach Slabs, Sidewalks, and Safety Walks on Bridges*, **add** the following before the first sentence:

During the curing period, approach slabs may be subjected to a vehicle load not to exceed 10 tons, or a wheel load not to exceed 3 tons.

Page 367 Delete §557-4, METHOD OF MEASUREMENT, and **replace** it with the following:

557-4 METHOD OF MEASUREMENT. The work will be measured for payment in square yards of superstructure slab, approach slab, or sidewalk and safety walks installed, measured to the nearest 0.1 square yards.

Winter surface treatment of superstructure and approach slabs will be measured for payment in square yards of superstructure and approach slab, measured to the nearest 0.1 square yard.

Page 367 Delete §557-5, BASIS OF PAYMENT and **Replace** it with the following:

557-5 BASIS OF PAYMENT. The unit price bid shall include the cost of furnishing all labor, materials, and equipment necessary to complete the work. Unless otherwise provided, the unit price bid shall include the cost of

PROVISIONS FOR CONCRETING IN COLD WEATHER

furnishing and placing bar reinforcement, wire fabric for concrete reinforcement, copper flashing, flexible water stops, mechanical connectors where specified, sheet packing, water for wetting, joint sealing compounds, joint fillers, concrete curing materials, including any materials for temperature management during the curing period and the cost of screed rail supports and other brackets or braces necessary to support finishing machines.

If permanent metal forms are used, the cost of furnishing all facilities required for access, removing the permanent forms for inspection or repair purposes, painting the cut edges of the forms and repairing the concrete as required herein shall be included in the price bid for this work.

No extra compensation for corrective finishing or repairs to damaged or defective concrete will be paid.

Progress payments will be made on a per-span basis as follows:

Forty (40) percent of the area will be paid for after all reinforcing is properly placed. Forty (40) percent of the area will be paid for after the concrete has been properly placed and proper curing applications have been instituted.

The remainder will be paid for after completion of all curing, and necessary corrective work.

The unit price bid for Surface Treatment of Superstructure and Approach Slabs shall include all labor, materials and equipment necessary to satisfactorily complete the work including work zone traffic control for work associated with deck cleaning, evaluation, and diamond grinding. The cost for interim penetrating sealer applied under §557-3.12C.2., prior to the concrete being exposed to freezing conditions, shall be included in this item. The cost for saw cut grooving and final application of penetrating sealer will be paid for under separate items and paid for only once.

Winter Surface treatment – Superstructure Slabs and Structural Approach Slabs shall only be paid when environmental conditions related to temperature and moisture protection during the drying period require use of enclosures

Page 367 Add the following contract pay item to the list:

557.29	Winter Surface Treatment – Superstructure Slabs and Structural Approach Slabs	Square Yard

BRIDGE (BIN) PLATE

One Bridge Identification Number (BIN) plate will be required for each bridge in this contract. For each bridge there may, or may not, be an existing BIN plate.

Therefore, one of the following conditions will exist with regard to BIN plates for any particular structure:

Condition No. 1. A BIN plate is attached to the structure but the nature of the work to be done does not require its removal.

Condition No. 2. A BIN plate is attached to the structure and the nature of the work to be done requires its removal.

Condition No. 3. A BIN plate is attached to the structure and is defaced, or otherwise damaged or incorrect.

Condition No. 4. A BIN plate is not attached to the structure.

Under Condition No. 1. the Contractor's sole obligation shall be to protect the plate from damage during the course of the work.

Under Condition No. 2. the Contractor shall be required to remove and store the BIN plate until such time as the BIN plate may be reinstalled without danger of damage. This requirement shall also apply if the BIN plate is being transferred from an existing abandoned bridge to a new in-service bridge. The Contractor shall furnish all necessary expansion anchors.

Under Condition No. 3. the Contractor shall be required to furnish and install a new BIN plate, and remove the damaged BIN plate. The Contractor shall furnish the panel with reflective background, numerals and expansion anchors. IF the BIN number cannot be deciphered the Engineer will supply the number.

Under Condition No. 4. the Contractor shall be required to furnish and install a BIN plate on the completed structure. The Engineer will supply the Bridge Identification Number. The Contractor shall furnish the panel with reflective background, numerals and expansion anchors.

Regardless of which condition governs the BIN plate installation, should damage occur to the BIN plate and the Engineer determines it cannot be repaired, the Contractor shall furnish a new plate consisting of the panel with reflective background, numerals, and expansion anchors at no expense to the State. If the Engineer determines the BIN plate may be repaired, repair shall be done at no expense to the State. This requirement applies to all four conditions.

The material requirements for the three parts of the BIN plate are:

Panel with reflective background. The aluminum panel and reflective background shall conform to the material and fabrication requirements of Material Specification 730-01, Aluminum Sign Panels. The

BRIDGE (BIN) PLATE

background material shall be green reflective sheeting conforming to Materials Specification 730-05.01 (Class A Sheeting). The size of the panels shall be 1/8 inch thick by 3 inch by 12 inch. The panels shall have two 5/16 inch drilled or punched holes for mounting, located 1/2 inch from the ends of the panel and 1 1/2 inch from the top or bottom of the panel. The reflective sheeting used to form the background shall be a minimum of 3 inches wide by 10 inches long, or may be a full 12 inches long.

Numbers. The numbers shall be reflective sheeting conforming to Materials Specification 730-05.01 (Class A Sheeting), except that the adhesive shall be pressure-sensitive such that the numbers can be applied to the background in the field. The numbers shall be 2 inches high and silver-white in color conforming to FHWA series C dimensions.

Prior to placing the cutout numbers on the panel, the reflective background shall be clean and free of dirt and oil which may adversely affect proper adhesion. The numbers shall be placed on the reflective background, perpendicular to the longitudinal axis of the panel, and vertically centered. The reflective background and numbers shall be coated and/or edge sealed in accordance with the recommendations of the sheeting manufacturer.

Expansion Anchors. 1/4 inch diameter by 1 1/2 inch long stainless steel nail drive expansion anchors meeting GSA Specification A-A-1922 shall be used to attach the BIN plates to concrete and masonry surfaces.

The BIN plates shall be attached to the beginning abutment of the bridge using expansions anchors. The plate shall be placed high on the abutment, near the fascia of the bridge.

The cost of this work shall be included in the various items of the contract.

SECTION 605 - UNDERDRAINS

Make the following changes to the Standard Specifications dated May 1, 2008:

Pages 499 through 502, **Delete** SECTION 605 and **Replace** it with the following:

SECTION 605 – UNDERDRAINS

605-1 DESCRIPTION. The work shall consist of constructing underdrain installations in accordance with these specifications and in conformity with the lines, grades, and cross-sections shown in the contract documents.

605-2 MATERIALS

605-2.01 Underdrain Pipe. Underdrain pipe shall meet the requirements of the following subsections of Section 700 *Materials and Manufacturing* for the type of pipe specified in the contract documents:

Corrugated Steel Pipe - Type III, 16 gage	707-02
Porous Concrete Pipe Underdrain	706-05
Extra Strength Porous Concrete Pipe Underdrain	706-05
Perforated Corrugated Polyethylene Underdrain Tubing	706-13
Corrugated Aluminum Pipe - Type III, 16 gage	707-13
Perforated Polyvinyl Chloride Underdrain Pipe	706-18

Optional underdrain pipe shall meet the requirements of any of the above at the Contractors option except that porous concrete pipe shall not be used in an edge of pavement underdrain installation.

605-2.02 Underdrain Filter. The requirements for Underdrain Filter materials are described below. The procedure for acceptance or rejection of Underdrain Filter materials shall be in conformance with the procedures contained in the geotechnical control procedure “*Procedure for the Control and Quality Assurance of Granular Materials*”. Underdrain Filter material shall meet the requirements of the following subsections of Section 700 *Materials and Manufacturing* for the type of underdrain filter material specified in the contract documents:

A. Underdrain Filter Type I. Provide material meeting the requirements of §733-20 *Underdrain Filter, Type 1*.

B. Underdrain Filter Type II. Provide material meeting the requirements of §733-20 *Underdrain Filter, Type 2*.

C. Underdrain Filter Type III. Provide material meeting the requirements of §703-07 *Concrete Sand*.

605-3 CONSTRUCTION DETAILS

605-3.01 Underdrain Pipe. The construction details of Section 603 *Culverts and Storm Drains* shall apply. The type of filter material to be used at any location will be as shown in the contract documents. A carefully leveled and compacted bed of this material shall be prepared just prior to the placement of the underdrain pipe. The upgrade end of corrugated polyethylene underdrain pipe shall be closed with a solid plastic cap; the upgrade end of all other types of underdrain pipe shall be closed with a suitable plug. Unless otherwise shown in the contract documents, the underdrain pipe shall be placed with the perforations down. In the event that the semi-circular option of the Steel Pipe underdrain is utilized, the pipe shall be placed such that the flat surface is on the top.

A. Perforated Corrugated Polyethylene Underdrain Tubing and Perforated Polyvinyl Chloride (PVC) Underdrain Pipe. When these underdrains are daylighted through the side slope they shall be protected from sunlight by shielding with a minimum 3 ft. long section of corrugated steel or aluminum pipe at the outlet. The metal pipe for shielding the underdrain shall be of such internal diameter to easily slip over

the underdrain. For 4 in. and 6 in. diameter underdrains, the metal pipe shielding the underdrain shall extend a minimum of 6 in. into the ground and overlap the underdrain by 6 in. For underdrains from 8 in. through 12 in. in diameter, the metal shielding pipe shall extend at least 12 in. into the ground and overlap the underdrain by 12 in. In no case shall the outlet end of the underdrain be exposed or extend beyond the end of the metal pipe shielding it. To prevent intrusion of the filter material into the joint between the metal and underdrains, a reducer fitting shall be placed over the joint, roofing felt shall be wrapped around the joint, or another method shall be approved by the Engineer.

Perforated corrugated polyethylene underdrain tubing and perforated PVC underdrain pipe will melt and burn when exposed to flame. Flame damage or damage by deterioration, crushing or stretching will be cause for rejection.

B. Corrugated Aluminum Pipe. Do not place grout in contact with aluminum pipe, such as at drainage inlet structures, including connections, fixtures, etc., unless the aluminum has been thoroughly coated with Zinc Chromate Primer, §708-04 *Zinc Chromate Primer* or an equivalent alternative as approved by the Materials Bureau.

C. Optional Underdrain Pipe. The Contractor shall not intermix types of underdrain in the same run of pipe.

605-3.02 Underdrain Filter. After the pipe installation has been inspected and approved, Underdrain Filter shall be loosely placed around and over the pipe to such a depth that, after compaction, Underdrain Filter shall extend to a level 6 in. above the underdrain pipe or to the next course, whichever is less. Subsequent lifts of Underdrain Filter shall be no more than 6 in. thick prior to compaction and shall be compacted by two passes of a vibrating pad or drum type compactor. The remainder of the installation shall be in accordance with the applicable standard sheet or as indicated in the contract documents.

If the excavation for the underdrain extends outside the payment lines, it shall be backfilled with Underdrain Filter material installed at the Contractor's expense.

Any contaminated underdrain filter material shall be replaced by the Contractor at no additional cost to the State.

For corrugated polyethylene underdrain tubing, the filter material shall be placed around and over the tubing to such a depth that, after compaction, the underdrain filter material shall extend to a level 12 in. above the underdrain tubing or to the next course, whichever is less. After placement, the surface of the filter material shall be compacted by three passes of a vibrating pad or drum type compactor. The remainder of the backfill shall be placed in maximum 2 ft. loose lift thicknesses and compacted by three passes of a vibrating pad or drum type compactor after the placement of each lift.

In the event that a pipe is not included in this installation, the filter shall be placed in horizontal layers not exceeding 6 in. in thickness prior to compacting. Each lift shall be compacted by two passes of a vibrating pad or drum type compactor.

No compaction control tests will be required.

A. Underdrain Filter at Structures. Underdrain filter at structures denotes the installation of Underdrain Filter, Type I placed behind bridge abutments, walls, and other major structures requiring positive drainage to relieve large lateral pressures resulting from a saturated backfill. Underdrain Filter, Type I material shall be placed adjacent to structures in accordance with the contract documents. The lift thickness for the loose Type I material shall not exceed 6 in. and shall precede the placement of each lift of the adjacent backfill material. A physical barrier may be used to facilitate placement of the Underdrain Filter and adjacent backfill. This barrier shall not be left in place and shall be removed prior to compaction of the material. Each lift of filter material and backfill material located within a minimum distance of the footing heel projection plus 3 ft. shall be compacted simultaneously. Compactive effort for this material shall be provided by two passes of a vibratory or drum type compactor. Placement and compaction operations shall be conducted in a manner so as to ensure that the top surface of each lift of Type I filter material shall not be contaminated by the adjacent backfill materials. No compaction control tests will be required for the Type I filter material.

605-4 METHOD OF MEASUREMENT

605-4.01 Underdrain Pipe. Underdrain pipe will be measured in feet, measured to the nearest whole foot, installed in accordance with the contract documents.

605-4.02 Underdrain Filter. Underdrain filter material will be measured in cubic yards, measured to the nearest whole cubic yard, installed between the payment lines shown in the contract documents. A deduction to the cross sectional area of the underdrain trench will be made for the pipes (based on nominal diameters) when the combined cross-sectional area exceeds 1.0 sq. ft. No deduction will be made for the cross-sectional area of an existing facility.

A. Underdrain Filter at Structures. Underdrain filter, Type I material at structures will be measured in cubic yards, measured to the nearest whole cubic yard, installed between the payment lines shown in the contract documents. No deduction will be made for the volume occupied by the underdrain pipe.

605-5 BASIS OF PAYMENT

605-5.01 Underdrain Pipe. The unit price bid per foot shall include the cost of all labor, materials and equipment necessary to satisfactorily complete the work. The unit price bid per foot for perforated corrugated polyethylene underdrain tubing and perforated PVC underdrain pipe installations that are daylighted through the side slope shall include the shield pipe.

Excavation, granular fill and backfill will be paid for separately.

605-5.02 Underdrain Filter. The unit price bid per cubic yard shall include the cost of all labor, materials and equipment necessary to satisfactorily complete the work.

Excavation, granular fill and backfill will be paid for separately.

Payment will be made under:

Item No.	Item	Pay Unit
605.04xx	Porous Concrete Pipe Underdrain	Foot
605.05xx	Extra Strength Porous Concrete Pipe Underdrain	Foot
605.07xx	Corrugated Steel Pipe - Type III	Foot
605.08xx	Corrugated Aluminum Pipe - Type III	Foot
605.0901	Underdrain Filter, Type I	Cubic Yard
605.1001	Underdrain Filter, Type II	Cubic Yard
605.1101	Underdrain Filter, Type III	Cubic Yard
605.15xx	Perforated Corrugated Polyethylene Underdrain Tubing	Foot
605.16xx	Perforated Polyvinyl Chloride Underdrain Pipe	Foot
605.17xx	Optional Underdrain Pipe	Foot

Refer to the Standard Contract Pay Item Catalog for full Item Number and full Description.