

Special Provisions for: Cavendish ER BRF 0146(13)

1. LABOR SUPPLY. Available workers for this Contract may be obtained from Manager, Employment & Training, Springfield, VT. The latest edition of the DBE Registry can be obtained from the Office of Civil Rights and Labor's Webpage at the following address: www.aot.state.vt.us/CivilRights/default.htm. Contractors that do not have access to the internet may obtain a copy from the Office of Contract Administration upon request.
2. CONTRACT COMPLETION DATE. This Contract shall be completed on or before August 22, 2014.
3. NOTICE TO BIDDERS. U.S. Department of Labor Davis-Bacon wage rates are applicable to this Contract. Copies of the applicable rates are included in this proposal.
4. CONTACT WITH THE AGENCY. From the time of advertising until the actual bid opening for this Contract, all prospective Contractors, subcontractors, and suppliers shall direct all inquiries related to this project solely to the Agency's Office of Contract Administration at (802) 828-2641. This number may also be accessed via the Agency's TTY/TDD Telecommunications Relay Service at 1-800-253-0191.

The deadline for submitting inquiries related to this project to the Office of Contract Administration is 4:30 p.m. Eastern Standard Time on XXX, 2013. No exceptions will be made to this requirement.

5. NOTICE TO BIDDERS. The Contractor is hereby notified that in the absence of the Engineer, the Agency's Safety Officer and the Agency's Hazardous Materials and Waste Coordinator shall each have the authority to suspend work when they determine that a serious safety or environmental violation exists on the job site. The period of time work is suspended due to a serious safety or environmental violation will not be justification for an extension of time.
6. NOTICE TO BIDDERS - CONCURRENT CONSTRUCTION. The Contractor is made aware of the following VTrans construction project expected to be in progress within the area of this project during 2014.

Project	Contractor	Anticipated Contract Completion Date
Cavendish-Weathersfield STP 0146(14)	TBD	2015

There will be no extra compensation paid to the Contractor for any inconvenience caused by working around this or other projects.

7. STANDARD SPECIFICATIONS. The provisions of the 2011 STANDARD SPECIFICATIONS FOR CONSTRUCTION, as modified herein, shall apply to this Contract.
8. SUPPLEMENTAL SPECIFICATIONS AND CONTRACT REQUIREMENTS. The Contractor's attention is directed to the following specifications and contract requirements included in the Proposal form and effective for this Contract:

Required Contract Provisions for Federal-Aid Construction

Standard Federal EEO Specifications
VT Agency of Transportation Contractor Workforce Reporting Requirements
Workers' Compensation; State Contracts Compliance Requirement
General Special Provisions dated July 2, 2013
Bulletin 3.5 Attachment C: Standard State Provisions for Contracts and Grants
Vermont Minimum Labor & Truck Rates
Disadvantaged Business Enterprise (DBE) Policy Contract Requirements
U.S. Department of Labor Davis-Bacon Wage Rates
Asphalt Price Adjustment Provisions dated April 6, 2010
Section 520 - Membrane Waterproofing, Spray Applied dated September 4, 2012
Stream Alteration Permit #HD-2-0101 dated May 31, 2013
Army Corp of Engineers Permit #NAE-2013-0844 dated May 2, 2013
--Geotechnical Report--
Certification for Federal-Aid Contracts
Contractor's EEO Certification Form
Debarment & Non-Collusion Affidavit

9. NOTICE TO BIDDERS - CONTRACT INSURANCE REQUIREMENTS. The Contractor is hereby notified that in the event of a discrepancy between the stated insurance requirements of Bulletin 3.5 Attachment C: Standard State Provisions for Contracts and Grants and those of Subsection 103.04 of the Standard Specifications for Construction, the requirements of Subsection 103.04 of the Standard Specifications for Construction shall govern.
10. NOTICE TO BIDDERS - ADDITIONAL CONTRACT REQUIREMENT. For construction and transportation projects over \$250,000.00, a payroll process by which during every pay period the Contractor collects from the subcontractors or independent contractors a list of all workers who were on the jobsite during the pay period, the work performed by those workers on the jobsite, and a daily census of the jobsite. This information, including confirmation that Contractors, subcontractors, and independent contractors have the appropriate workers' compensation coverage for all workers at the jobsite, and similar information for the subcontractors regarding their subcontractors shall also be provided to the Department of Labor and to the Department of Banking, Insurance, Securities, and Health Care Administration, upon request, and shall be available to the public.
11. NOTICE TO BIDDERS - INCENTIVE/DISINCENTIVE (I/D). The Agency's intent is to have the bridge closure period (BCP) be as short a duration as possible. To encourage the Contractor to provide a maximum effort to complete the identified work for I/D within the period as defined below, the Agency is willing to pay an incentive.
- (a) Dates. The allowable BCP is from 7:00 a.m. on Monday, June 23, 2014 to 6:59 p.m. on Friday, July 25, 2014, the I/D finish date. During the BCP, the Contractor will be allowed to work 7 days per week, **including holiday periods.**

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

The I/D dates as established above for this Contract are absolute fixed dates and will not be changed for any Act of God, omission, improper action, direction of the Engineer, or any other reason

unless done so by the Secretary and only under extreme conditions as determined by the Secretary.

- (b) Identified Work. All work required to open the bridge to two-way traffic including:

- (1) Bridge units placed and joints cured;
- (2) First course of pavement placed on deck and approaches; and
- (3) Centerline marked with line striping targets.

- (c) Pay Schedule. The Contractor will receive a lump sum compensation of forty thousand dollars (\$40,000) for completing the Identified Work on or before the I/D finish date.

In addition, the Contractor will be compensated at a rate of six thousand dollars (\$6,000) per day that the identified work is completed and opened to two-way traffic prior to the I/D finish date, up to a maximum total payment as specified herein. Only full days where the bridge is opened by 7:00 a.m. will count toward this extra incentive payment.

The maximum amount payable under the incentive clause shall be \$82,000 (including the lump sum payment).

For each day after the I/D finish date that the identified work remains uncompleted, the Contractor will be assessed a disincentive at a rate of six thousand dollars (\$6,000) per day. The full daily disincentive amount will be assessed for each day that traffic is not allowed on the bridge for any portion of the day. There shall be no maximum on the disincentive amount.

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

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

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

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

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

considerations. With prior approval of the Engineer, night work may be performed on Sunday.

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

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

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

The locations at which Flaggers and/or Uniformed Traffic Officers are stationed, whether within, on the edge of, or outside of the work area, shall be separately illuminated to the same intensity, minimal glare, and minimal shadow requirements as the work area.

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

13. NOTICE TO BIDDERS - NIGHTTIME WORK RESTRICTIONS. The Contractor is hereby notified that during the bridge closure period, no work shall be performed between the hours of 9:00 p.m. and 6:00 a.m. that creates a noise level exceeding 75 decibels. The decibel level shall be measured from the point of activity to the nearest occupied residence.

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

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

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

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

14. NOTICE TO BIDDERS - BUILDING INSPECTION. For the protection of the Contractor and all property owners, before beginning any construction activities, the Contractor shall deliver to the Engineer a copy of the Contractor's Insurer Inspection Report, inside and out, of buildings within 100 feet of the project limits that may be affected by any construction operations. Included with the Report will be a copy of the complete video CD record of the buildings made as part of the inspection.

Upon completion of project construction, the Contractor's Insurer shall again completely inspect, inside and out, and make a complete video CD record of all buildings as part of the inspection. A written copy of the complete inspection report and a copy of the complete video CD record shall be delivered to the Engineer by the Contractor.

The Agency will not accept the project until the Engineer has received all reports and all video CDs. The Engineer will forward the reports and the video CDs to the VTrans Project Manager for safe-keeping.

All members of the Insurer's inspection team shall personally identify themselves to the Engineer prior to beginning each inspection.

All costs involved in performing this work will be considered incidental to all Contract items.

15. NOTICE TO BIDDERS. All temporary construction signs shall meet the following requirements:
- A. Where sign installations are not protected by guardrail or other approved traffic barriers, all sign stands and post installations shall meet National Cooperative Highway Research Program (NCHRP) Report 350 or the AASHTO Manual for Assessing Safety Hardware (MASH). The appropriate resource shall be determined as described in the MASH publication. No sign posts shall extend over the top of the sign installed on said post(s). When anchors are installed, stub shall not be greater than 100 mm (4 inches) above existing ground.
 - B. As a minimum, roll up sign material shall have ASTM D 4956 Type VI fluorescent orange retroreflective sheeting.
 - C. All post-mounted signs and solid substrate portable signs shall have ASTM D 4956 Type VII, Type VIII, or Type IX fluorescent orange retroreflective sheeting.
 - D. All retroreflective sheeting on traffic cones, barricades, and drums shall be at a minimum ASTM D 4956 Type III sheeting.
 - E. All stationary signs shall be mounted on two 4.5 kg/m (3 lb/ft) flanged channel posts or 51 mm (2 inch) square steel inserted in 57 mm (2 ¼") galvanized square steel anchors. No sign posts shall extend over the top edge of sign installed on said posts.
 - F. Prior to placing temporary work zone signs on the project, the Contractor must furnish for the Engineer's approval a detail for temporary work zone signs on steel posts showing stubs projecting a maximum of 100 mm (4 inches) above ground level and bolts for sign post.
 - G. Construction signs shall be installed so as to not interfere with nor obstruct the view of existing traffic control devices, stopping sight distance, and corner sight distance from drives and town highways.
 - H. Speed zones, if used, should be a maximum of 16 kph (10 mph) below existing posted speeds. Temporary speed limit certificates must be approved by the Director of Program Development.

16. NOTICE TO BIDDERS. All retroreflective sheeting on permanent signs (signs to remain after the project is completed) shall be at a minimum ASTM D 4956 Type III sheeting, unless otherwise shown on the Plans.
17. UTILITIES. Existing aerial facilities owned by Green Mountain Power Corporation, TDS Telecom, and Comcast will be adjusted, as necessary, by employees or agents of the above companies. Contacts for these utilities are:

Green Mountain Power Corporation: Greg Heaton - (802)886-3306
TDS Telecom: Butch Sarracco - (802)485-9783
Comcast: Kevin Zaloudek - (802)776-1623

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

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

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

Act No. 86 of 1987 (30 VSA Chapter 86) ("Dig Safe") requires that notice be given prior to making an excavation. It is suggested that the Permit Holder or his/her contractor telephone 1-888-344-7233 at least 48 hours before, and not more than 30 days before, beginning any excavation at any location.

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

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

18. NOTICE TO BIDDERS - SALVAGED MATERIALS. The Contractor is hereby notified that all existing guardrail, state route markers used for the detour, signs, and sign posts removed and not re-used on the project, and deemed re-usable by the Agency, shall remain the property of the State.

All salvageable guardrail shall be disassembled to its basic component (rail, post, offset block, and end terminal) parts.

The Contractor shall load these salvaged materials onto suitable transport and deliver them to the VTrans District #2 Maintenance Facility located at 165 Elm Street in Chester, VT. The State will provide equipment and personnel to unload and stockpile these materials. Component materials not designated to be retained by the State shall be disposed of by the Contractor to the satisfaction of the Engineer.

The Contractor shall contact District #2 Transportation Administrator Tammy Ellis at [Tel.: (802)2548-5011] a minimum of two (2) weeks prior to beginning delivery to the designated location.

The Contractor shall remove these materials in such a manner that salvageable components are not damaged. All costs for loading and delivering these salvaged materials will be incidental to the Contract items under which they are removed.

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

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

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

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

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

20. SPECIAL CONSTRUCTION REQUIREMENTS.

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

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

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

ASPHALT PRICE ADJUSTMENT

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

The index price for asphalt cement is \$xxx.00 per ton.

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

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

SECTION 108 - PROSECUTION AND PROGRESS

- 23. 108.11 DETERMINATION OF EXTENSION OF CONTRACT TIME FOR COMPLETION, part (b) Determination of Contract Completion Date Extension, is hereby modified by adding new subpart (11) as follows:
 - (11) The days from April 15th to December 1st, inclusive, on which the weather or condition of the ground caused suspension of the work.

SECTION 490 - SUPERPAVE BITUMINOUS CONCRETE PAVEMENT

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

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

Voids in Mineral Aggregate (VMA)%	12.5 min.	13.5 min.	14.5 min.	15.5 min.	16.5 min.	17.5 min.
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26. 490.03 COMPOSITION OF MIXTURE, part (b) Design Criteria, TABLE 490.03B - DESIGN CRITERIA is hereby still further modified by deleting the ninth row (for "Voids Filled With Asphalt") in its entirety.
27. 490.03 COMPOSITION OF MIXTURE, part (b) Design Criteria, TABLE 490.03B - DESIGN CRITERIA is hereby still further modified by deleting footnotes (3), (4), and (5) in their entirety.
28. 490.03 COMPOSITION OF MIXTURE, part (b) Design Criteria, is hereby modified by deleting the heading "Voids Filled With Asphalt (VFA)" and the equation " $VFA = 100 \times ((VMA - V_a)/VMA)$ " in the second paragraph.
29. 490.03 COMPOSITION OF MIXTURE, part (c) Mix Design, is hereby modified by deleting the phrase ", and a single percentage for VFA" in the first sentence of the third paragraph.
30. 490.03 COMPOSITION OF MIXTURE, part (d) Control of Mixtures, TABLE 490.03C - PRODUCTION TESTING TOLERANCES is hereby modified by deleting the seventh (last) row (for "VFA") in its entirety.
31. 490.03 COMPOSITION OF MIXTURE, part (d) Control of Mixtures, TABLE 490.03C - PRODUCTION TESTING TOLERANCES is hereby further modified by deleting footnote 2 in its entirety.

SECTION 520 - MEMBRANE WATERPROOFING, SPRAY APPLIED

32. SUPPLEMENTAL SPECIFICATION SECTION 520 - MEMBRANE WATERPROOFING, SPRAY APPLIED, dated September 4, 2012 is hereby made a new Section of the Specifications, superseding all previous editions and their modifications.

SECTION 641 - TRAFFIC CONTROL

33. 641.02A PUBLIC RELATIONS OFFICER, is hereby made a new Subsection of this Section as follows:
34. 641.02A PUBLIC RELATIONS OFFICER. The Contractor shall provide a person to act as a Public Relations Officer on this project. The name and phone number of the Public Relations Officer shall be supplied to the Engineer, the Town of Cavendish, all emergency services, and abutting business owners. The Public Relations Officer's name and phone number shall also appear on all information distributed to the public identifying this person as the contact person concerning work schedule, traffic flow and patterns, access delays, etc.

The Contractor's Public Relations Officer shall compose and distribute informational flyers to all residents and businesses within and along the border of the construction zone and those on affected side streets. The distribution list will be approved by the Engineer prior to delivery. The flyers shall be distributed as directed by the Engineer but as a minimum, shall be distributed prior to commencing construction activities to forewarn the public of the project. A flyer distribution will also be required to select residences and businesses when construction activities directly affect them. A minimum of two weeks prior to their issue/distribution, the Public Relations Officer shall submit draft copies of all flyers to be distributed to the public, and all press release texts to the Engineer so they may be relayed to the Agency's Project Manager for review and comment.

Upon the Contractor's receiving the Notice to Proceed, the Contractor's Public Relations Officer shall submit an initial press release to the local television stations, statewide television stations known to be received in the area, radio stations, and newspapers, and shall erect the Portable Changeable Message Signs as indicated on the Plans and as directed by the Engineer. Once construction begins, the Public Relations Officer shall submit a press release on a weekly basis to the local television stations, radio stations, and newspapers. These releases shall indicate changes in traffic patterns, work zones, and times so as to give the public some advance warning which may result in the diversion of traffic away from the construction zone.

These releases shall include a map/plan indicating construction area activities.

The Contractor's Public Relations Officer shall contact all involved parties, (including but not limited to the list of interested/affected parties given in the first paragraph of this provision) and all affected utility companies and departments to invite and schedule a weekly on-site meeting to update/communicate with them on anticipated construction activities.

The Contractor's Public Relations Officer shall contact emergency personnel on a daily basis to alert them of construction activities/locations, and to update them on lane restrictions, traffic flow, or any other activities that may affect emergency access.

The Public Relations Officer shall also contact emergency personnel immediately in the event of any unanticipated/unexpected occurrences which may affect emergency access.

The Contractor's Public Relations Officer shall also provide weekly updates to the Town of Cavendish Town Manager Richard Svec [Tel.: (802)226-7291] and the Southern Windsor County Regional Planning Commission [Tel.: (802)674-9201] as to anticipated construction activities/schedule and to update these parties as to the extent of public relations work performed to date.

35. 641.06 METHOD OF MEASUREMENT, is hereby modified by adding the following paragraph:

The quantity of Public Relations Officer to be measured for payment will be on a lump sum basis for providing public relations for the Contract work.

36. 641.07 BASIS OF PAYMENT, is hereby modified by adding the following paragraph and pay item:

The accepted quantity of Public Relations Officer will be paid for at the Contract lump sum price.

<u>Pay Item</u>	<u>Pay Unit</u>
641.12 Public Relations Officer	Lump Sum

SECTION 652 - EROSION PREVENTION & SEDIMENT CONTROL PLAN

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

38. 652.01 DESCRIPTION. This work shall consist of designing, furnishing, and submitting for acceptance modifications to the Contract Erosion Prevention & Sediment Control Plan (hereinto known as the EPSC Plan), becoming a co-permittee with the Agency of Transportation, State of Vermont on associated permits, monitoring the EPSC Plan using an On-Site Plan Coordinator, and maintaining the erosion prevention and sediment control measures to ensure the effectiveness of the EPSC Plan.

39. 652.02 MATERIALS. Materials required for the field work maintenance of the EPSC Plan shall meet all requirements of the appropriate Section of the VAOT Standard Specifications for Construction.

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

40. 652.03 QUALIFICATIONS. Modifications to the EPSC Plan shall be prepared and signed by a Licensed Professional Civil Engineer registered in the State of Vermont or a qualified professional in erosion prevention and sediment control, certified by CPESC, Inc. or equivalent, hereinafter called the "Preparer."

41. 652.04 EROSION PREVENTION & SEDIMENT CONTROL PLAN. The EPSC Plan, developed using a combination of structural, non-structural, and vegetative practices to adequately prevent erosion and control

sedimentation, and meeting the requirements of the VTrans Erosion Prevention & Sediment Control Plan Designer Checklist (Non-Jurisdictional and Low Risk) or the Vermont Standards & Specifications for Erosion Prevention & Sediment Control based on area of disturbance and risk, has been included in the Contract Documents.

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

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

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

42. 652.05 SUBMITTALS. Three sets of the modified EPSC Plan as well as the updated Risk Evaluation, stamped and signed by the Preparer, shall be submitted to the Construction Engineer as Construction Drawings in accordance with Section 105. Submittals shall occur after award of the Contract but not later than the Pre-Construction Conference to allow time for review by the Agency. An Acceptance Memo or comments will be provided to the Contractor within 10 working days.

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

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

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

43. 652.06 MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN. The Contractor shall designate a person (On-Site Plan Coordinator) who is directly responsible for the on-site implementation of the EPSC Plan. This person shall generally be on-site on a daily basis during active construction and have the authority to halt construction activities if necessary. The On-Site Plan Coordinator shall have demonstrated experience in construction practices as they relate to erosion prevention and sediment control as well as a general understanding of

State and Federal environmental regulations and permits pertaining to the National Pollutant Discharge Elimination System Construction Program. The On-Site Plan Coordinator shall be proficient at reading and interpreting engineering and EPSC plans. Preference will be given to a Licensed Professional Civil Engineer registered in the State of Vermont or a qualified professional in erosion prevention and sediment control, certified by CPESC, Inc. or equivalent. The qualifications of the On-Site Plan Coordinator shall be included in the EPSC Plan. The Engineer, if not satisfied with the performance of this individual, may at any time request a replacement.

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

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

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

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

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

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

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

44. 652.07 MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN. This work shall consist of providing all labor and equipment necessary for field maintenance of erosion prevention and sediment control items in the Contract, and providing materials and labor necessary for installing, monitoring, maintaining and, where necessary, removing additional measures needed to correct deficiencies that develop during construction that lessen the performance of the EPSC Plan. Erosion prevention and sediment control measures shall be maintained by the

Contractor and removed when authorized by the Engineer. The Contractor shall establish vegetation in all areas disturbed during removal of the erosion prevention and sediment control measures.

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

45. 652.08 METHOD OF MEASUREMENT. The quantity of EPSC Plan to be measured for payment will be on a lump sum basis in the complete and accepted work.

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

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

46. 652.09 BASIS OF PAYMENT. The accepted quantity of EPSC Plan will be paid for at the Contract lump sum price. Payment will be full compensation for the initial preparation of modifications, submittals, and all incidentals necessary to complete the work. Subsequent modifications to the EPSC Plan during Construction will be considered incidental to Contract item 652.10.

Partial payments will be made as follows:

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

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

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

Payment will be made under:

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

SECTION 900 - SPECIAL PROVISION ITEMS

HIGH PERFORMANCE CONCRETE, RAPID SET

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

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

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

High Early Strength Portland Cement.....701.04

49. MIX DESIGN CRITERIA. Concrete shall meet the following requirements:

- (a) Compressive Strength.

12 Hour Compressive Strength - 2500 psi
24 Hour Compressive Strength - 3500 psi
28 Day Compressive Strength - 7000 psi

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

- (c) Air Content. 7 ± 1.5%

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

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

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

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

50. SUBMITTALS. A minimum of fourteen (14) calendar days prior to placement (or prior to the pre-placement meeting, if one is required), the Contractor shall submit the mix design for approval. The mix design shall be submitted to the Agency's Materials and Research

Laboratory, attention Structural Concrete Engineer. Concrete under this provision shall not be placed until the mix design has been approved.

(a) Trial Batch. The Contractor shall produce and place a 2 cubic yard trial batch at a location agreed upon by the Contractor and the Engineer. The Engineer shall be given a minimum of seven (7) days notice prior to the trial batch pour. The trial batch shall be poured in the presence of the Engineer and the Structural Concrete Engineer. The trial batch shall be produced, poured, and cured in the same manner that will occur during construction. The Contractor shall provide qualified personnel to test slump, air content, and unit weight of the trial batch. Cylinders shall be cast to determine whether the concrete meets the strength requirements required for the project.

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

Flange Connection - 3 days
Abutment closure pour - 24 hours
Pile cavities - 24 hours

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

The deck end closure pour shall obtain a strength of 3500 psi prior to being opened to traffic.

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

53. METHOD OF MEASUREMENT. The quantity of Special Provision (High Performance Concrete, Rapid Set) to be measured for payment will be the number of cubic meters (cubic yards) of concrete placed in the complete and accepted work, as determined by the prismatic method using dimensions shown on the Plans or as directed by the Engineer, including the volume of precast concrete stay-in-place forms, but excluding the volume of steel or other stay-in-place forms and form filling materials. No deductions will be made for the volume of concrete displaced by steel reinforcement, structural steel, expansion joint material, scuppers, weep holes, conduits, tops of piles, scoring, chamfers or corners, inset panels of 38 mm (1 ½ inches) or less in depth, or any pipe less than 200 mm (8 inches) in diameter.

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

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

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

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

Payment will be made under:

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

OBSTRUCTION REMOVAL FOR DRIVING PILES

- 55. DESCRIPTION. This work shall consist of removing foundation materials that prohibit the driving of piles by augering, pre-boring, or some other means of excavation.

- 56. CONSTRUCTION REQUIREMENTS.
 - (a) Augering and Pre-boring. After the obstruction is removed, the hole shall be backfilled with soil meeting the classification requirements of AASHTO A-1, A-2, or A-3. Backfill material shall have a maximum top size of 2.5" and be approved by the Engineer. Backfill material may require testing to verify its classification.

The backfill material shall be placed prior to re-driving of the pile.
 - (b) Other Means of Excavation. After the obstruction is removed, backfill shall be placed in accordance with Section 203.

Backfill material shall meet the requirements of Subsection 703.02.

The backfill material shall be placed prior to re-driving of the pile.

- 57. METHOD OF MEASUREMENT. The quantity of Special Provision (Obstruction Removal for Driving Piles) to be measured for payment will be the total number of linear feet (meters) of obstruction removal measured to the nearest linear foot (meter) from the elevation where the obstruction removal starts to the elevation where the obstruction removal ends.

- 58. BASIS OF PAYMENT. The accepted quantity of Special Provision (Obstruction Removal for Driving Piles) will be paid for at the Contract unit price per linear foot (meter). Payment will be full compensation for all excavation, backfilling, and materials testing;

and for furnishing all labor, materials, tools, equipment, and incidentals necessary to complete the work.

Unless otherwise specified in the Contract, no payment will be made for Special Provision (Obstruction Removal for Driving Piles) unless at least one pile has been driven per substructure unit and the Engineer has pile load tests that confirm that the minimum pile length and nominal pile resistance cannot be achieved without damaging or overstressing the pile.

If an obstruction is encountered during pile driving, no additional compensation will be made for removing nor re-driving the pile.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.640 Special Provision (Obstruction Removal for Driving Piles)	Linear Foot

CRITICAL PATH METHOD (CPM) SCHEDULE

59. DESCRIPTION. This work shall consist of preparing, submitting, and modifying Critical Path Method (CPM) construction schedule(s) for the Contract work as specified herein and as directed by the Engineer.

The Contractor is advised that its schedule and narrative, as specified herein, will be used by the Engineer to monitor project progress, plan the level-of-effort by its own work forces and consultants, and as a critical decision making tool. Accordingly, the Contractor shall ensure that it complies fully with the requirements specified herein and that its schedule(s) are both timely and accurate throughout the life of the project.

60. SUBMITTALS.

- (a) Within ten (10) working days after the award of the Contract, the Contractor shall submit to the Engineer sufficient information that the CPM software it proposes to use on the Contract is fully capable of producing the specified schedules required by the Contract. The software used must be MS Project or be compatible with MS Project.

The Engineer shall notify the Contractor in writing, within seven (7) working days after the receipt of the Contractor's notification on the software, if there are any objections to the CPM software selected.

- (b) No more than thirty (30) days after the award of the Contract, and no less than ten (10) calendar days prior to the start of work, the Contractor shall submit to the Engineer for acceptance a baseline construction schedule and narrative meeting the following requirements:

- (1) Baseline Schedule Requirements.

- a. Define a complete and logical plan that can realistically be accomplished for executing the work defined in the Contract.

- b. Include sufficient activities for adequate project planning for subcontractor, third party, vendor, and supplier activities. These activities shall include Working Drawing submissions as well as provide for adequate review times.
- c. Clearly show the critical path using the longest path definition and other critical elements of work.
- d. Include a unique identification number for each schedule activity.

Clearly and uniquely define each activity description. Do not use descriptions referring to a percent complete of a multi-element task.

- e. Define the duration of each activity.
 - 1. Limit the maximum duration of any activity to fifteen (15) days unless otherwise accepted by the Engineer.
 - 2. When the project contains a road closure period, the work within the closure period shall be broken down by hours instead of days. The maximum duration of each activity within the closure period shall be limited to twelve (12) hours.
- f. Clearly identify the relationships tying activities together.
- g. Do not have open-ended activities except for one start and one finish activity.
- h. Do not have any constrained activities unless the Engineer accepts such constraints.
- i. Include milestones to define significant contractual events such as Notice to Proceed, Interim Completion(s), road closures, road openings, Substantial Completion(s), and/or others as necessary.

(2) Baseline Narrative Requirements.

- a. The construction philosophy supporting the approach to the work outlined in the baseline schedule. Address the reasons for the sequencing of work and describe any limited resources, potential conflicts, and/or other items that may affect the schedule and how they may be resolved.
- b. Provide information on assumed resources, crew sizes, working hours, equipment, etc.
- c. The justification for activities with durations exceeding fourteen (14) working days or exceeding twelve (12) hours for those activities falling within a road closure period.

- d. The justification for constraints used.
 - e. The approach used to apply relationships between activities.
 - f. The project critical path and challenges that may arise associated with the critical path.
- (c) The Contractor shall submit one hard copy and one electronic copy of an updated construction schedule each month during the life of the Contract up to Substantial Completion.
- (1) Schedule Updates. Schedule updates shall include the following:
- a. Actual start and finish dates for completed activities.
 - b. Actual start dates, percent complete, and remaining duration for activities in progress.
 - c. Projected sequences of activities for future work.
 - d. Revised relationships and durations for unfinished activities, if warranted.
 - e. A well defined critical path.
 - f. A narrative describing the following:
 - 1. Work performed during the previous monthly period.
 - 2. Problems or delays that have been experienced to date, the party responsible for the problems or delays, and the Contractor's plan to resolve the problems or bring the delayed activities back on schedule.
 - 3. Differences between the work performed and the work planned for the period, including explanations for the deviations.
 - 4. The current critical path of the project, explaining any changes since the last update and the impacts of these changes.
 - 5. Potential problems that may be encountered during the next monthly period. Identify all potential problems the Agency may be party to and explain what action the Agency needs to take and the date by which time the action needs to be taken to avoid the problem.
- (d) The Contractor shall participate in progress meetings at the request of the Engineer to review and discuss updated schedule information including any activity delay, remedies, coordination requirements, change orders, potential delays, and other relevant issues.

Projects with short duration road closures of fourteen (14) calendar days or less are of particular importance as the project float will be limited. The Contractor shall promptly inform the Engineer of any schedule delays or changes that occur during one of these periods.

When the Engineer requests a meeting the Contractor shall:

- (1) Make available the project manager, scheduler, and appropriate field personnel.
- (2) Make and record an action item list that describes who is responsible for resolving existing or pending issues and the date by which the issue needs to be resolved to avoid Contract delays.
- (3) Submit a revised schedule update if necessary.

The Engineer will review the Contractor's schedule submittals and provide comments and disposition, either accepting the schedule or requiring revision and resubmittal of the schedule. The Engineer's comments may address work that has been omitted, unacceptable durations for items of work, or Contract violations. The planning, execution of the work, and the accuracy of their representation in the Contract Progress Schedule shall remain the sole responsibility of the Contractor.

The Contractor shall not be relieved of its responsibility for satisfactorily completing the work within the Contract time due to its failure to submit an acceptable project schedule. Additionally, the Contractor shall not withhold monthly or requested schedule submissions in the event that the Engineer does not provide formal review comments. The Contractor is to provide monthly updates regardless of any outstanding issues.

Failure to provide schedule updates as required under this Specification will result in a written notification from the Engineer. Upon receipt of this notification the Contractor has two (2) weeks to provide an updated schedule as required. Failure to provide an updated schedule will result in withholding of full Contract quantity payments until an updated schedule is received.

61. PROJECT FLOAT. Float belongs to the project and is a shared commodity between the Agency and the Contractor, and is not for the exclusive use or benefit of either party. The float may be claimed by whichever party first demonstrates a need for it.
62. METHOD OF MEASUREMENT. The quantity of Special Provision (CPM Schedule) to be measured for payment will be on a lump sum basis for providing project schedules and narratives in the complete and accepted work.
63. BASIS OF PAYMENT. The accepted quantity of Special Provision (CPM Schedule) will be paid for at the Contract lump sum price. Payment will be full compensation for initial preparation, submittals, modifications, resubmittals, and all incidentals necessary to complete the work. Subsequent modifications to the CPM Schedule during construction will be considered incidental to Special Provision (CPM Schedule).

Partial payments will be made as follows:

- (a) The first 25% of the Contract lump sum price will be paid upon the approval of the baseline schedule and narrative.
- (b) The remaining 75% of the Contract lump sum price will be pro-rated in equal amounts on a monthly basis. The time used for pro-rating will be equal to the number of months from approval of the baseline schedule to the **anticipated** Contract Completion Date.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.645 Special Provision (CPM Schedule)	Lump Sum
<u>INCENTIVE/DISINCENTIVE (I/D)</u>	

64. INCENTIVE/DISINCENTIVE (I/D), is hereby made a new Section of the Specifications as follows:

The payment of monies for performance under the Incentive/Disincentive (I/D) specifications contained in these Special Provisions shall be as follows:

- 1. For the incentive payment as described in part (c) of Special Provision **No. 11**, the Contractor will be paid in the next bi-weekly estimate in which the Contractor has satisfactorily met the requirements of I/D.
- 2. For the disincentive penalties as described in part (c) of Special Provision **No. 11**, the Engineer will deduct the amount due the Agency from the monies due the Contractor on the next bi-weekly estimate.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.650 Special Provision (Incentive/Disincentive) (N.A.B.I.)	Lump Unit

BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY

65. DESCRIPTION. This work shall consist of constructing one or more courses of bituminous mixture on a prepared foundation in accordance with these specifications and the specific requirements of the type of surface being placed, and in reasonably close conformity with the lines, grades, thicknesses, and typical cross sections shown on the Plans or established by the Engineer.

The work under this Section shall be performed in accordance with these provisions, the Plans, and the appropriate provisions of Section 406 or Section 490 of the Standard Specifications.

66. APPLICABILITY. This specification applies to Contracts where the total quantity of bituminous concrete pavement to be paid for under this item is less than or equal to 2000 metric tons (tons) or the total roadway length, including approaches, is 0.80 kilometers (0.50 miles) or less.

67. MATERIALS. Materials shall meet the requirements of the following Subsections:

Performance-Graded Asphalt Binder.....702.02
 Emulsified Asphalt, RS-1.....702.04
 Aggregate for Marshall Bituminous Concrete Pavement...704.10(a)
 Aggregate for Superpave Bituminous Concrete Pavement..704.10(b)

Aggregate shall meet requirements relating to Section 490 or 406, where so specified.

The grade of PG asphalt binder used to produce bituminous concrete pavement shall be 58-28. Substitutions will be accepted based on availability where the upper end temperature value is greater than 58°C (136°F) and/or the lower end is less than -28°C (-18°F).

68. DESIGN MIX TYPES. Design mix types may be substituted based on mix availability. Allowable mix type substitutions will be accepted on a one to one thickness relationship, except as listed in Tables A and B below.

TABLE A - ALLOWABLE 40 MM (1½") MIX TYPE IVS SUBSTITUTIONS⁽¹⁾

Design ESALs (millions)	Design	Allowable Substitution	
	490.30 Superpave Bituminous Concrete Pavement	406.25 Bituminous Concrete Pavement*	406.27 Med. Duty Bituminous Concrete Pavement*
< 0.3	TYPE IVS	TYPE III	TYPE III
0.3 to < 10	TYPE IVS	TYPE III	-
> 10	TYPE IVS	-	-

⁽¹⁾These table substitutions do not apply to bridge deck paving.

*Per Section 406.

TABLE B - ALLOWABLE 90 MM (3½") MIX TYPE IIS SUBSTITUTIONS

Design ESALs (millions)	Design	Allowable Substitution	
	490.30 Superpave Bituminous Concrete Pavement	406.25 Bituminous Concrete Pavement*	406.27 Med. Duty Bituminous Concrete Pavement*
< 0.3	TYPE IIS	TYPE I	TYPE I
0.3 to < 10	TYPE IIS	TYPE I	-
> 10	TYPE IIS	-	-

*Per Section 406

69. COMPOSITION OF MIXTURE.

- (a) Gradation. Gradation shall meet the requirements of Section 406 or 490, as appropriate.
- (b) Design Criteria. Design Criteria shall meet the requirements of Section 406 or 490, as appropriate.
- (c) Mix Design. Standard mix design will be in accordance with Subsection 490.03 with an n value of 65 gyrations. Allowable substitutions based on pre-existing approved mix designs and/or n values for intended Contract suppliers are listed in Table C below. A request for substitutions must be submitted in writing to the Engineer a minimum of 10 working days prior to production. Any substitutions from the standard mix design or mix types as detailed in the Plans shall not result in any increase in cost to the Agency.

TABLE C - ALLOWABLE SPECIFICATION SUBSTITUTIONS

Design ESALs (millions)	Acceptable Specification Substitution		
	Superpave Bituminous Concrete Pavement (Gyrations)	Bituminous Concrete Pavement* (75 Blow)	Med. Duty Bituminous Concrete Pavement* (50 Blow)
< 0.3	50	✓	✓
0.3 to < 10	65 ⁽¹⁾	✓	-
10 to < 30	80	-	-
> 30	125	-	-

⁽¹⁾Standard mix design specification.

*Per Section 406

- (d) Control of Mixtures.

The plant shall be operated so that no intentional deviations are made from the job-mix formula. The gradation of the actual mixture shall not vary from the job-mix formula by more than the following tolerances:

TABLE D - PRODUCTION TESTING TOLERANCES AND SPECIFICATION LIMITS

PRODUCTION TESTING TOLERANCES			SPECIFICATION LIMITS
Aggregate larger than 2.36 mm (No. 8) sieve	±	6.0 %	9.0 %
Aggregate passing the 2.36 mm (No. 8) sieve and larger than the 75 µm (No. 200) sieve	±	4.0 %	6.0 %
Aggregate passing 75 µm (No. 200) sieve	±	1.0 %	1.5 %
Temperature of Mixture ⁽³⁾	±	11°C (20°F)	15°C (30°F)
Air Voids	=	4.0 ± 1.0%	4.0 ± 1.5%
VMA	=	JMF ⁽¹⁾ ± 1.0%	JMF ⁽¹⁾ ± 1.5%
VFA ⁽⁴⁾	=	JMF ⁽¹⁾ ± 5.0% ⁽²⁾	JMF ⁽¹⁾ ± 7.0% ⁽²⁾

- (1) JMF stands for the most current Job-Mix Formula value as approved by the Engineer or the Engineer's designee.
- (2) The VFA value shall not be allowed to exceed 80.0% at any time.
- (3) Mix temperatures shall not exceed 180°C (355°F).
- (4) The VFA requirements only apply to Superpave Bituminous Concrete Pavement.

(e) Quality Acceptance.

- (1) General. Acceptance sampling and testing will be conducted in accordance with the Agency's Quality Assurance Program as approved by FHWA. Bituminous concrete mixtures designated under these specifications will be sampled a minimum of once per day of production or 500 metric tons (tons) and evaluated by the Agency for each mix type (each mix design) in accordance with the following acceptance guidelines.
- (2) Acceptance Guidelines. Temperature of the bituminous mixture shall be tested using the Verified Thermometer test method and PG Asphalt Binder content determined from the batch slip. Gradation shall be tested in accordance with AASHTO T 30. Mixture volumetric properties (air voids, VMA, and VFA) shall be calculated in accordance with Subsections 406.03(b) or 490.03(b), as appropriate.
- (3) Non-Compliant Material.
- a. Rejection by Contractor. The Contractor may, prior to sampling, elect to remove any defective material and replace it with new material at no expense to the Agency. Any such new material will be sampled, tested, and evaluated for acceptance.

- b. For any non-compliant material outside the production testing tolerances but within the specification limits as identified in Table D, payment shall be assessed a mixture pay factor, PF(mix), of (-0.10).
- c. For any non-compliant material outside the specification limits as identified in Table D, payment shall be assessed a mixture pay factor, PF(mix), of (-0.50), or can be removed and replaced at no cost to the Agency.
- (f) Boxed Samples. If Agency plant inspectors are not available for daily testing and inspection functions, then box samples will be taken by the Engineer at the project site to afford verification of mixture volumetrics/properties. Boxed samples will be processed and results reported to the Engineer within ten working days of being received at the Agency Central Laboratory in Berlin, Vermont. Gradation shall be tested in accordance with AASHTO T 30. Maximum Specific Gravity shall be tested in accordance with AASHTO T 209.
70. COMPACTION. Special Provision (Bituminous Concrete Pavement, Small Quantity) will be analyzed for density according to the procedure specified below.

The density of the compacted pavement shall be at least 92.0%, but not more than 97.0%, of the corresponding daily average maximum specific gravity for each mix type (each mix design) of bituminous mix placed during each day. For material that falls outside of this range, payment will be made by adjusting the daily production totals in accordance with Table E:

TABLE E - DENSITY PAY FACTORS

AVERAGE DENSITY	DENSITY PAY FACTOR, PF(d)
90.5% - 91.9%	- 0.100
92.0% - 97.0%	0.000
97.1% - 98.5%	- 0.100

When the Contract allows for a pay adjustment for mat density and the Agency elects to not take cores of any pavement course, the Density Pay Factor (PF(d)) will be considered equal to 0.000.

Bridges with a length equal to or greater than 6 meters (20 feet) will be cored for analyzing density of the bridge deck pavement. The minimum number of cores taken shall be 2, or as directed by the Engineer. Bridges with a length less than 6 meters (20 feet) will not be cored.

Bridge deck core areas shall be repaired to the satisfaction of the Engineer at no additional cost to the Agency.

The cores taken for acceptance testing will be the final cores taken for determination of densities.

When the Contract does not allow for a pay adjustment for mat density the Contractor shall, prior to performing any construction operations,

submit to the Engineer for approval the proposed rolling pattern and compaction equipment to be used on the project. Random investigative cores will be taken by Agency personnel on the first day's production of any pavement course, with the exception of leveling course, to verify effectiveness of the proposed rolling pattern and equipment.

Pending results of the investigative cores, necessary adjustments to the proposed rolling pattern and/or equipment shall be made by the Contractor to achieve densities as directed by the Engineer.

71. METHOD OF MEASUREMENT. The quantity of Special Provision (Bituminous Concrete Pavement, Small Quantity) to be measured for payment will be the number of metric tons (tons) for a lot of mixture (each type) complete in place in the accepted work (Q) as determined from the weigh tickets.

The quantities of all applicable Pay Adjustments calculated for the project will be determined as specified below.

When applicable, and when the mixture pay factor, PF(mix), for a lot of Special Provision (Bituminous Concrete Pavement, Small Quantity) is less than 0.000, the measured quantity of Special Provision (Bituminous Concrete Pavement, Small Quantity) placed will be multiplied by such pay factor to determine a Mixture Pay Adjustment, (PA(mix)), to the accepted tonnage placed (Q) for that lot based on the Contract bid price (B), as follows:

$$PA(mix) = PF(mix) \times Q \times B$$

When boxed samples are taken to determine mix properties, test results will determine PF(mix) as outlined in COMPOSITION OF MIXTURE, Quality Acceptance, Non-Compliant Material of this Section.

When applicable, and when the density pay factor, PF(d), for a lot of Special Provision (Bituminous Concrete Pavement, Small Quantity) is less than 0.000, the measured quantity of Special Provision (Bituminous Concrete Pavement, Small Quantity) placed that day will be multiplied by such pay factor to determine a Mat Density Pay Adjustment, (PA(d)), to the accepted tonnage placed (Q) for that lot based on the Contract bid price (B), as follows:

$$PA(d) = PF(d) \times Q \times B$$

72. BASIS OF PAYMENT. The measured quantity of Special Provision (Bituminous Concrete Pavement, Small Quantity) will be paid for at the Contract unit price per metric ton (ton). Payment shall be full compensation for furnishing, mixing, hauling, and placing the material specified and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Payment for Pay Adjustments shall be debited against the Contract prices (Lump Units) bid for the Pay Adjustment items.

The cost of repairing bridge deck core areas will not be paid for separately, but will be considered incidental to Special Provision (Bituminous Concrete Pavement, Small Quantity).

The costs of furnishing testing facilities and supplies at the plant will be considered included in the Contract unit price of Special Provision (Bituminous Concrete Pavement, Small Quantity).

The costs of obtaining, furnishing, transporting, and providing the straightedges required by Subsection 406.16 or Subsection 490.16, as appropriate, will be paid for under the appropriate Section 631 pay item included in the Contract.

The costs associated with obtaining samples for acceptance testing will be incidental to the cost of Special Provision (Bituminous Concrete Pavement, Small Quantity).

When not specified as items in the Contract, the costs of cleaning and filling joints and cracks, sweeping and cleaning existing paved surfaces, the emulsified asphalt applied to tack these surfaces, and tacking of manholes, curbing, gutters, and other contact surfaces will not be paid for directly, but will be incidental to Special Provision (Bituminous Concrete Pavement, Small Quantity).

Special Provision (Bituminous Concrete Pavement, Small Quantity) mixture approved by the Engineer for use in correcting deficiencies in the base course constructed as part of the Contract will not be paid for as Special Provision (Bituminous Concrete Pavement, Small Quantity), but will be incidental to the Contract item for the specified type of base course.

Special Provision (Bituminous Concrete Pavement, Small Quantity) mixture used to correct deficiencies in an existing pavement or to adjust the grade of a bituminous concrete surface completed under the Contract will be paid for at the Contract unit price for Special Provision (Bituminous Concrete Pavement, Small Quantity).

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.650 Special Provision (Mat Density Pay Adjustment, Small Quantity)(N.A.B.I.)	Lump Unit
900.650 Special Provision (Mixture Pay Adjustment) (N.A.B.I.)	Lump Unit
900.680 Special Provision (Bituminous Concrete Pavement, Small Quantity)	Ton

PREFABRICATED BRIDGE UNIT SUPERSTRUCTURE

73. DESCRIPTION. This work shall consist of manufacturing, transporting, and erecting concrete/steel composite prefabricated bridge units (PBU's) as shown on the Plans. The work shall also include connecting the units into a monolithic superstructure through use of closure pours as shown on the Plans.

The work under this Section shall be performed in accordance with these provisions, the Plans, and Sections 501, 506, 507, and 508 of the Standard Specifications.

74. MATERIALS. Materials shall meet the requirements of Subsections 501.02, 506.02, 507.02, and 508.02 and the following:

Concrete Repair Material.....780.01-780.04

Concrete for PBU decks shall meet the requirements of Section 501 for Concrete, High Performance Class A.

75. GENERAL FABRICATION REQUIREMENTS. The structural steel furnished under this Section shall be fabricated in a plant meeting the requirements of Subsection 506.03. After fabrication, the structural steel shall be transported to a location, approved by the Agency, where the remainder of the composite superstructure unit shall be fabricated.

The Fabricator or Contractor constructing the reinforced concrete portion of the PBU's shall:

- (a) have demonstrated experience in forming, casting, curing, and finishing High Performance Concrete superstructure decks in accordance with Section 501;
 - (b) adequately prepare and submit for approval a Quality Control Plan and erection/lifting plan(s) specific to the member detailed.
76. SUBMITTALS. As soon as practical after award of the Contract, all required information shall be prepared and submitted by the Contractor or Fabricator(s). Submittals shall be in accordance with Subsection 105.03 and shall include the following:
- (a) Structural Steel. In accordance with Subsection 506.04.
 - (b) Concrete. In accordance with Subsection 540.04, with the exception that when the PBU's have been designed by the Agency and no modifications to that design are being made by the Fabricator or Contractor, no structural design calculations are required.
 - (c) Reinforcing Steel. In accordance with Subsection 507.03.
77. INSPECTION. Structural steel shall be inspected by the Agency in accordance with Subsection 106.04 and Section 506.

Concrete elements furnished and the work performed herein shall be inspected by the Agency. The inspector shall have the authority to reject any material or work that does not meet the requirements of these Specifications. Advance notification of at least two weeks must be provided by the Contractor to the Agency's Engineer and the Structural Concrete Engineer concerning the proposed intention to commence work. A minimum of five working days notification must be provided to the Structural Concrete Engineer by the Contractor to confirm the fabrication start date.

Prior to placing any concrete elements produced under these Specifications, the Materials and Research Engineer shall have approved all applicable material certifications required in accordance with Subsection 700.02.

78. FABRICATION.
- (a) Forming Members. Forms shall be well constructed, carefully aligned, clean, substantial, and firm, and securely placed and fastened together to provide a level, true riding surface. The adjustable supports and deflection control shall be checked by the Fabricator's engineer prior to pouring and monitored throughout the pouring process. Any defects or damage due to form work, stripping, or handling may be cause for rejection. Holes, cutouts, anchorage, reinforcement, and any other related details shown on the Plans shall be provided for in the members.

The form finish shall be in accordance with the approved Fabrication Drawings.

Relative bearing elevations shall be within $\pm 0.01'$ of that shown on the Plans.

- (b) Structural Steel. Structural steel shall be fabricated in conformance with Section 506. All diaphragms shown on the Plans shall be installed prior to placing any concrete formwork.
- (c) Welding. All welding shall conform to the requirements of Subsection 506.10.
- (d) Reinforcing Steel. Bar reinforcement shall be furnished and installed in conformance with Section 507.
- (e) Concrete. Concrete mix and proportioning shall meet the requirements of Subsection 501.03 for Concrete, High Performance Class A. Concrete shall be produced and tested in accordance with Subsections 501.04 through 501.07.
- (f) Pre-Production Meeting. Unless the Engineer deems, in writing, that a pre-production meeting is unnecessary, then a pre-production meeting shall be held a minimum of seven (7) calendar days prior to beginning concrete placement. The pre-production meeting shall be attended by, and including but not limited to, the Crew Supervisor, Contractor Project Manager, Inspector or Inspector's Supervisor, and Design Project Manager and/or Designer.
- (g) Placing Concrete. Concrete shall not be deposited in the forms until the Agency representative has approved placement of the reinforcement and inserts. The concrete shall be vibrated internally, externally, or a combination thereof to the required consolidation. The vibrating shall be done with care and in such a manner that:
 - (1) Concrete is uniformly consolidated.
 - (2) Displacement of reinforcement and inserts is avoided.
 - (3) Acceptable finish surfaces are produced.
- (h) Curing. Curing shall meet the requirements of Subsection 501.17.
- (i) Removal of Forms. Forms shall not be removed until the curing period has ended.
- (j) Concrete Finishing. Finishing shall conform to the requirements of Subsection 501.16.
- (k) Dimensional Tolerances.
 - (1) Geometry of Concrete Deck.
 - a. Length (Each Unit). $\pm 3/4"$ (Adjacent unit lengths shall not vary by more than 20 mm (3/4"))
 - b. Width. $\pm 3/8"$

- c. Deck Thickness. + 3/8", - 1/4"
 - d. Deviation from Diagonals. ± 3/4" (horizontal)
 - e. Deviation from End Squareness or Skew. ± 3/4" (horizontal)
 - f. Stringer Spacing. ± 1/2" (within a unit)
 - g. Horizontal Alignment. ± 3/8" (Deviation from straight line parallel to the centerline of the unit)
 - h. Insert Location. ± 3/8"
- (2) Reinforcing.
- a. Spacing. ± 1" (non-cumulative)
 - b. Cover (Top and Bottom Mat). ± 1/4"
- (3) Field Installation.
- a. Vertical deviation between units prior to grouting shall not exceed 3/8".
 - b. Deviation in joint width between units shall be ± 1/2".
- (1) Acceptance of Units. Individual precast units will not be accepted for any of the following reasons:
- (1) Fractures or cracks passing through the deck.
 - (2) Camber that does not meet the requirements in the approved Fabrication Drawings.
 - (3) Honeycombed open texture.
 - (4) Dimensions not within the allowable tolerances as specified.
 - (5) Separation of the concrete deck from the steel girders.
 - (6) Defects that indicates proportioning, mixing, and molding not in compliance with the Specifications.
 - (7) Damaged ends where such damage would prevent making a satisfactory joint.
 - (8) Units with crack(s) within any part of the concrete that is/are greater than 0.8 mm (0.03") in width.
 - (9) Significant damage to the units during transportation, erection, or construction as determined by the Engineer.
 - (10) Units not fabricated in accordance with the Contract Documents.
- (m) Repair of Units. Units that contain minor defects caused by manufacture or handling may be repaired at the manufacturing

site. Repair procedures shall be in accordance with the approved Quality Control Plan and require approval by the Engineer. Minor defects are defined as holes, honeycombing, or spalls which are 150 mm (6 inches) or less in diameter and do not penetrate deeper than 25 mm (1 inch) into the concrete. Surface voids or "bugholes" that are less than 16 mm (5/8 inch) in diameter and less than 6 mm (1/4 inch) deep need not be repaired. Repairs shall be made using an overhead and vertical concrete repair material satisfactory to the Engineer. The repair material shall be cured as specified by the manufacturer. The Engineer shall approve final repairs.

- (n) Cracking. Crack widths less than 0.3 mm (0.01") shall be sealed with a penetrating sealer using Agency approved materials and procedures. Crack widths measuring 0.3 mm to 0.8 mm (0.01" to 0.03") shall be epoxy injected using Agency approved materials and procedures. At the Engineer's discretion, cracked members shall be repaired or replaced at the Contractor's expense.
 - (o) Labeling. Each unit shall be clearly and permanently labeled on the underside of the deck (in the vicinity of the upstation end diaphragm) with the following information:
 - (1) Manufacturer
 - (2) Date of Manufacture
 - (3) Mark Number
 - (p) Production Site Handling. Units shall not be lifted, moved, or otherwise disturbed until the concrete has reached full design strength.
 - (q) Pre-Assembly. The units shall be pre-assembled at the fabrication location to assure proper match between adjacent units before shipping to the project site, to the satisfaction of the Agency.
 - (r) Shipping. Units shall not be shipped until the minimum 28-day strength is attained and they have been stamped by the Agency. A 48-hour advance notice of the loading and shipping schedule shall be provided. The units shall be secured on the vehicle in order that no fatigue cracking will occur during transport. The Contractor shall secure the necessary hauling permits.
79. HANDLING. Handling shall be performed in accordance with Subsection 540.09.
80. INSTALLATION.
- (a) General. The PBU's shall be fabricated in accordance with the applicable Sections of the specifications and/or the Special Provisions for each respective item. Construction procedures and permissible variations other than those contained herein shall be submitted for approval.
 - (b) Erection Plan. Cranes, lifting devices, and other equipment for erecting PBU superstructure shall be of adequate design and capacity to safely erect, align, and secure all members and components in their final positions without damage. The

Contractor is solely responsible for the methods and equipment employed for the erection of the precast concrete/steel composite superstructure units.

The Contractor shall submit Construction Drawings in accordance with Section 105 for the methods and sequence of precast concrete/steel composite superstructure unit erection, the temporary bracing, and the equipment to be used for the erection. The erection plan shall include the necessary computations to indicate the magnitude of stress in the segments during erection and to demonstrate that all of the erection equipment has adequate capacity for the work to be performed. The erection plan shall contain provisions for all stages of construction, including temporary stoppages.

The PBU's may be used to support equipment prior to placement of the pavement only with written permission of the Engineer. The proposed use of the precast concrete/steel composite superstructure units for support of equipment shall be detailed in the erection plan.

Submittal of the erection plan is for the Agency's information only, and shall in no way be construed as approval of the proposed method of erection. Unless otherwise directed by the Engineer, the Contractor shall follow the erection plan as submitted.

- (c) Erection of Units. Erection of units shall not proceed until substructure concrete has been cured for the minimum length of time specified in the Plans or appropriate Specifications. Units shall be installed to the correct line and grade as shown on the approved drawings and as indicated in the approved erection procedure. Prior to setting units and to avoid torsion stresses, bearing elevations within a given PBU shall be adjusted to match relative elevations used during the deck casting operations. After all the units are erected, they shall be inspected to ensure the correctness of their location.
- (e) Matching Elevation of Units. Adjacent units shall match elevation within 6 mm (1/4 inch) vertically (along longitudinal edges) and 6 mm (1/4 inch) vertically at the end of units. If the tolerance is not met, the units shall be adjusted as indicated in the procedures shown on the approved Working Drawings.
- (f) Filling and Sealing Longitudinal Joints. Prior to placement of closure pour concrete or grout material, the surface of the joint shall be free of any material, such as oil, grease, or dirt, which may prevent bonding of the sealing materials.
- (g) Sealing of Lifting Holes. After the units are in their final locations, a bonding agent shall be applied and the lifting holes filled with cementitious grout. A removable form shall be provided at the bottom surface of the deck to retain the grout.
- (h) Loading. Units may be loaded upon erection and before the joints are sealed in accordance with the approved erection procedure. Once the joints are sealed, no further loading of the units will be allowed until joint material has properly and finally cured and as approved by the Engineer.

- (i) Final Repairs. After the installation work is complete, remaining concrete defects, holes for inserts, and lifting holes shall be repaired as indicated and approved by the Engineer.
- (j) Grout. Grout shall be placed in accordance with the requirements of Subsection 540.11.

81. METHOD OF MEASUREMENT. The quantity of Special Provision (Prefabricated Bridge Unit Superstructure) to be measured for payment will be the number of square meters (square yards) installed in the complete and accepted work. Measurement shall be bound by the horizontal projection of bridge fascias and centerline of bearings near the ends of the bridge.

82. BASIS OF PAYMENT. The accepted quantity of Special Provision (Prefabricated Bridge Unit Superstructure) will be paid for at the Contract unit price per square meter (square yard). Payment will be full compensation for detailing, fabricating, repairing, quality control testing, transporting, handling, and installing the materials specified, including concrete, reinforcing steel, structural steel, shear studs, connectors, and shims; for designing and installing lift brackets and any other material contained within or attached to the members; for any grouting work required; for furnishing and implementing the erection plan; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Bearing assemblies and concrete and reinforcing steel within the longitudinal superstructure closure pours and end diaphragm closure pours will be paid for separately.

Payment will be made as follows:

- (a) When Working Drawings have been submitted and approved in accordance with Section 105, a payment of 10 percent of the lump sum price will be allowed.
- (b) When the structural steel girders have been fabricated, accepted, and shipped to the concrete placement locations, a further payment of 40 percent of the lump sum price will be allowed.
- (c) When the concrete has been placed, cured, and units approved for shipment, a further payment of 40 percent of the lump sum price will be allowed.
- (d) The remaining 10 percent of the lump sum price will be paid when the PBU's are in place and remaining project efforts are approved to commence.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.675 Special Provision (Prefabricated Bridge Unit Superstructure)	Square Yard