STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION

ACWORTH
43566C
FEMA #670946

THIS PROJECT PROPOSES CULVERT REPLACEMENT AND 90 FEET OF ROADWAY RECONSTRUCTION ALONG A SEGMENT OF NH 123A LOCATED APPROXIMATELY 0.5 MILES WEST OF GATES MOUNTAIN ROAD IN THE TOWN OF ACWORTH.

NOTE: PLANS AND SPECIFICATIONS ON THIS PROJECT CANNOT BE TRANSFERRED TO ANY OTHER FIRM OR ORGANIZATION FOR THE PURPOSE OF SUBMITTING A BID AS A GENERAL CONTRACTOR WITHOUT THE KNOWLEDGE AND AUTHORITY OF THE DEPARTMENT.

NON-TRANSFERABLE:_____

GRAND TOTAL $_____

STATE OF NEW HAMPSHIRE
JAMES
A.
MARSHALL
No. 8232
LICENSED
PROFESSIONAL ENGINEER

10/23/24

ACWORTH
43566C

October 29, 2024

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STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION

JOHN O. MORTON BUILDING
CONTRACT SECTION

7 HAZEN DRIVE
POST OFFICE BOX 483
CONCORD, NH 03302

INVITATION FOR BIDS

Proposals are to be submitted electronically via https://nhdot.exevision.com/icx/Index.aspx by 2:00 o'clock PM, Eastern Time, on **THURSDAY, NOVEMBER 21, 2024** for the following project:

ACWORTH
43566C
FEMA # 670946

THIS PROJECT PROPOSES CULVERT REPLACEMENT AND 90 FEET OF ROADWAY RECONSTRUCTION ALONG A SEGMENT OF NH 123A LOCATED APPROXIMATELY 0.5 MILES WEST OF GATES MOUNTAIN ROAD IN THE TOWN OF ACWORTH.

BID BOND: 5% OF THE BID AMOUNT

A schedule of the minimum wages for all labor classifications as determined by the Secretary of Labor pursuant to Section 115 of the Federal Aid Highway Act of 1956 is included in the proposal. Unskilled labor may be hired from lists prepared by the NH Department of Employment Security designated in the proposal.

BIDDERS SHOULD ACT PROMPTLY AND SUBMIT ALL QUESTIONS PERTAINING TO THE PROJECT IN WRITING TO JASON AYOTTE AT Jason.M.Ayotte@dot.nh.gov AT LEAST FIVE (5) BUSINESS DAYS BEFORE THE HOUR AND DATE SET FOR THE BID OPENING. NO PHONE CALLS OR FAXES WILL BE ACCEPTED.

Plans and specifications **(NOT FOR BIDDING PURPOSES)** may be seen at the at the Assoc. General Contractors of NH, 48 Grandview Rd, Bow, NH; Construction Summary of NH, Inc., 734 Chestnut St., Manchester, NH; Signature Press & Blueprinting, Inc., 880 Candia Road Unit 7, Manchester, NH; AlphaGraphics Portsmouth, 933 Islington Street, Portsmouth NH; Minuteman Press, 95 Brewery Lane, Portsmouth, NH; Copy World, LLC, 5 Airport Road, Unit 21, West Lebanon, NH; Works in Progress, 20 Farrell Street, Suite 103, So. Burlington, VT; and Office of Const. Industries of MA, 1500 Providence Hwy., Suite 14, Norwood, MA.

In order to be authorized to bid, the Department's Request for Proposal (RFP) form must be submitted to the Contract Office of the Department of Transportation. Once the RFP form has been approved, the Contractor is authorized to bid. At this time, the password card will be issued allowing the Contractor access to the on-line bidding documents, including the Plans and Specifications. In addition, hard-copy Plans and Specifications can be obtained at the Contract Office of the Department of Transportation for THIRTY-FIVE DOLLARS ($35.00) (NON-REFUNDABLE). An additional FIVE DOLLARS ($5.00) will be charged for shipping fees (NON-REFUNDABLE). Checks should be made payable to "Treasurer, State of New Hampshire". Send check with Project Name and No. to the Department of Transportation, c/o Finance & Contracts, P.O. Box 483, 7 Hazen Drive, Concord, NH 03302.

Proposals must be **submitted electronically via** https://nhdot.exevision.com/icx/Index.aspx and received by the Department of Transportation as specified above no later than the date and time mentioned above, at which time they will be publicly opened and the results immediately posted on the Department's website. A bid bond shall be submitted electronically at the time of bid in the amount listed above, payable to, "Treasurer, State of New Hampshire", as security for the execution of the contract.

All individuals, firms, partnerships or corporations intending to bid, must file a statement showing their qualifications with the Department of Transportation on forms prepared for that purpose at least ten (**10**) days prior to opening of bids. No authorization to bid will be granted to a prospective bidder **not** prequalified.

Any information submitted as part of the Invitation to Bids may be subject to public disclosure under RSA 91-A. In addition, in accordance with RSA 9-F:1, any contract entered into as a result of the bid letting will be made accessible to the public online via the website Transparent NH (http://nh.gov/transparentnh/).

If contract price is $35,000 or more, the successful bidder will be required to furnish electronically, at the time of approval, a contract bond in the amount of One hundred (100) percent of their bid.

All bidders will be required to execute a sworn statement pursuant to Section 112(c) of Title 23 USC, certifying that he or she 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 such contract. Civil Rights Act of 1964,78 Stat. 252, USC 2005d to 2005d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color or national origin in consideration for an award.

The right is reserved to waive any informalities in or to reject any or all proposals.

OCTOBER 29, 2024
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William J. Oldenburg, P.E.
Director of Project Development

Information Report

ACWORTH
43566C
FEMA

County:	SULLIVAN
Date Bids Open:	11/21/2024
Scope of Work:	NH 123A culvert replacement and roadway repairs (B58 project storm STM77357)
Location:	NH 123A
Completion Date:	8/15/2025
Proposal Guarantee:	5% of bid amount

Item Number	Item Description	Unit	Estimated Quantity
ACWORTH 43566C			
Roadway			
201.22	REMOVING LARGE TREES	EA	2.00
202.451	REMOVAL OF CULVERT	U	1.00
203.1	COMMON EXCAVATION	CY	250.00
203.11	COMMON EXCAVATION - LRS	CY	34.00
203.2	ROCK EXCAVATION	CY	15.00
203.601	EMBANKMENT-IN-PLACE	CY	25.00
207.3	UNCLASSIFIED CHANNEL EXCAVATION	CY	30.00
214.	FINE GRADING	U	1.00
304.101	SAND	CY	80.00
304.201	GRAVEL	CY	90.00
304.301	CRUSHED GRAVEL	CY	130.00
403.11023	HBP-3/4" BINDER MIX, MACHINE METHOD	TON	47.00
403.11053	HBP-3/8" SURFACE MIX, MACHINE METHOD	TON	30.00
403.16	PAVEMENT JOINT ADHESIVE	LF	370.00
410.22	ASPHALT EMULSION FOR TACK COAT	GAL	11.00

417.	COLD PLANING BITUMINOUS SURFACES	SY	14.00
503.101	WATER DIVERSION STRUCTURE	U	1.00
503.201	COFFERDAMS	U	1.00
529.001	PRECAST CONCRETE BOX CULVERT	U	1.00
583.3	RIPRAP, CLASS III	CY	45.00
585.14	WEIR BOULDERS	CY	1.00
585.3401	SIMULATED STREAMBED MATERIAL	CY	40.00
593.411	GEOTEXTILE; PERM CONTROL CL.1, NON-WOVEN	SY	170.00
603.99036	36" TEMPORARY DRAINAGE PIPE	LF	80.00
618.7	FLAGGERS	HR	100.00
619.1	MAINTENANCE OF TRAFFIC	U	1.00
619.25	PORTABLE CHANGEABLE MESSAGE SIGN	U	6.00
621.31	SINGLE DELINEATOR WITH POST	EA	4.00
622.1	STEEL WITNESS MARKERS	EA	2.00
628.2	SAWED BITUMINOUS PAVEMENT	LF	45.00
632.0104	RETROREFLECTIVE PAINT PAVE. MARKING, 4" LINE	LF	3,400.00
645.3	EROSION STONE	TON	20.00
645.44	TEMPORARY SLOPE MATTING TYPE D (WILDLIFE FRIENDLY)	SY	360.00
645.512	COMPOST SOCK FOR PERIMETER BERM	LF	325.00
645.531	SILT FENCE	LF	325.00
645.7	STORM WATER POLLUTION PREVENTION PLAN	U	1.00
645.71	WATER QUALITY MONITORING, INSPECTION AND REPORTING	HR	50.00
646.31	TURF ESTABLISHMENT WITH MULCH AND TACKIFIERS	SY	360.00
647.1	HUMUS	CY	40.00
692.	MOBILIZATION	U	1.00
697.31	PROJECT OPERATIONS PLAN	U	1.00
698.13	FIELD OFFICE TYPE C	MON	5.00

699.	MISCELLANEOUS TEMPORARY EROSION AND SEDIMENT CONTROL	$	10,000.00
1010.15	FUEL ADJUSTMENT	$	10,000.00

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NEW HAMPSHIRE DEPARTMENT OF EMPLOYMENT SECURITY
EMPLOYMENT OF NEW HIRES

The following is a list of the local State Employment Security Offices from which the Contractor may secure the unskilled labor for this project:

Department of Employment Security
151 Pleasant Street, PO Box 159
Berlin, NH 03570-2006
Telephone: (603) 752-5500

Department of Employment Security
404 Washington Street, PO Box 180
Claremont, NH 03743-0180
Telephone: (603) 543-3111

Department of Employment Security
10 West Street, PO Box 1140
Concord, NH 03302-1140
Telephone: (603) 228-4100

Department of Employment Security
518 White Mountain Hwy.
Conway, NH 03818-4205
Telephone: (603) 447-5924

Department of Employment Security
109 Key Road
Keene, NH 03431-3926
Telephone: (603) 352-1904

Department of Employment Security
426 Union Avenue, Suite 3
Laconia, NH 03246-2894
Telephone: (603) 524-3960

Department of Employment Security
646 Union Street, Suite 100
Littleton, NH 03561-5314
Telephone: (603) 444-2971

Department of Employment Security
300 Hanover Street
Manchester, NH 03104-4957
Telephone: (603) 627-7841

Department of Employment Security
6 Townsend West
Nashua, NH 03063-1217
Telephone: (603) 882-5177

Department of Employment Security
2000 Lafayette Road
Portsmouth, NH 03801-5605
Telephone: (603) 436-3702

Department of Employment Security
29 South Broadway
Salem, NH 03079-3026
Telephone: (603) 893-9185

Department of Employment Security
6 Marsh Brook Road
Somersworth, NH 03878
Telephone: (603) 742-3600

06/24/08

SSD: 9/11/06, 12/5/90

WAGE RATES

FEDERAL AID PROJECTS

This proposal contains minimum wage determinations as specified by the U.S. Secretary of Labor. Copies of the attached wage determination(s) shall be posted on the bulletin board at the work site and furnished to employees upon request. Furthermore, the wage determination(s) shall be incorporated into all subcontract agreements.

If the Contractor, any subcontractor or lower-tier contractor intend to employ a classification of labor not listed in the attached determination(s), it shall submit a Request for Additional Work Classification(s) to the New Hampshire Department of Transportation, Labor Compliance Office at (603) 271-2467. The Contractor is responsible for ensuring that a Request is submitted for any additional classification of work to be employed by itself, any subcontractor or lower-tier contractor 3-4 weeks before the classification is utilized.

This contract is subject to the Work Hours Act of 1962, P.L. 87-581 and implementing regulations.

"General Decision Number: NH20240038 01/05/2024

Superseded General Decision Number: NH20230038

State: New Hampshire

Construction Type: Highway

County: Sullivan County in New Hampshire.

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	• Executive Order 14026 generally applies to the contract. • The contractor must pay all covered workers at least $17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	• Executive Order 13658 generally applies to the contract. • The contractor must pay all covered workers at least $12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours performing on that contract in 2024.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number 0 | Publication Date 01/05/2024

SUNH2019-014 11/22/2022

	Rates	Fringes
CARPENTER	$ 25.75	2.28
CEMENT MASON/CONCRETE FINISHER	$ 18.50	0.00
INSTALLER - GUARDRAIL	$ 20.50	2.69
IRONWORKER, REINFORCING	$ 22.35	2.03
LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor	$ 18.57	2.68
LABORER: Common or General	$ 17.76	2.32
LABORER: Pipelayer	$ 20.36	0.00
OPERATOR: Backhoe/Excavator/Trackhoe	$ 24.62	3.69
OPERATOR: Bobcat/Skid Steer/Skid Loader	$ 20.84	0.66
OPERATOR: Broom/Sweeper	$ 19.36	3.93
OPERATOR: Bulldozer	$ 29.10	4.94
OPERATOR: Crane	$ 27.81	7.02
OPERATOR: Grader/Blade	$ 28.55	0.53
OPERATOR: Loader	$ 23.21	5.11
OPERATOR: Mechanic	$ 24.73	6.96
OPERATOR: Milling Machine	$ 27.34	4.25
OPERATOR: Paver (Asphalt, Aggregate, and Concrete)	$ 25.50	6.70
OPERATOR: Roller	$ 20.89	4.42
PAINTER: Spray	$ 28.88	12.06
TRAFFIC CONTROL: Flagger	$ 14.33 **	2.29
TRUCK DRIVER: Dump Truck	$ 19.57	4.42

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 ($17.20) or 13658 ($12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

ACWORTH
43566C

October 29, 2004

PROSECUTION OF WORK

DESCRIPTION OF WORK

The Acworth 43566C project proposes a culvert replacement and 90 feet of roadway reconstruction along a segment of NH 123A located approximately 0.5 miles west of Gates Mountain Road in the Town of Acworth. The project is approximately centered where the existing culvert conveys an unnamed brook beneath NH 123A to the Cold River. The purpose of the project is to reconstruct and replace the NH Route 123A 4'-high by 2.8'-wide cast-in-place culvert, headwall, and wingwalls, damaged as a result of the July 29-30, 2021 storm event (B58 STM77350), which overtopped the roadway and damaged the existing culvert, headwall and wingwalls.

The proposed structure is a 6-foot x 6-foot by 34-foot precast concrete box culvert with headwalls, wingwalls, cutoff walls, and grade control walls. Also proposed is the reconstruction of NH 123A roadway with new structural section and pavement, placement of inlet and outlet stream simulation materials, stone and matting for slope stabilization, weir boulders, and site restoration. A temporary road closure with traffic detour and temporary stream diversion are included to accommodate construction activities. The roadway in the project location is approximately 20 feet wide.

CONCURRENT WORK

The Department has previously advertised and will advertise construction projects that will take place in the vicinity and during the life of this contract. These projects include, but are not limited to, the following:

Project	Anticipated Beginning	Anticipated Completion	Description
District Resurfacing	Spring 2025	Fall 2025	Resurfacing Various Tier 2, 3, and 4 Roadways in Districts 2, 3, and 4.
Alstead 43566A & 43566 B	Spring 2026	Fall 2026	NH 123A Roadway and Slope Stabilization ~MM 2.0 (Vilas Pool)

The Contractor shall cooperate and coordinate with all concurrent, abutting, and/or overlapping contracts. Refer to 105.07 for requirements regarding cooperation with other contractors working concurrently. Do not duplicate construction signs. Cover, uncover, or remove permanent signs as necessary (subsidiary to Item 619.1) to provide proper signing through the area.

UTILITIES

The following information is provided as a supplement to and in accordance with 105.06, Cooperation with Utilities.

There are utility facilities in the area belonging to, but not necessarily limited to, the following:

New Hampshire Electric Cooperative Inc.	**Consolidated Communications, Inc.**
Contact: Mark Taylor	Contact: David Kestner
Title: ROW/LDT Supervisor	Title: Network Engineer
Phone: 603-707-5710	Phone: 603-433-2119
E-mail: taylorm@NHEC.com	E-mail: David.Kestner@consolidated.com

The Contractor is advised to use caution when working near aerial power distribution and transmission wires, as well as underground power distribution and service wires. Contact the appropriate utility for the precautionary measures required.

Aerial:

There are existing aerial utility facilities within the project limits as shown on the Plans; however, no impacts or relocations are anticipated.

Underground:

There are no known underground utilities within the project limits.

Permanent Lighting:

There is no existing lighting within the project.

Temporary Lighting for Portable Concrete Barrier:

No portable concrete barrier within the project is anticipated therefore no temporary lighting for portable concrete barrier is anticipated. If portable concrete barrier is installed, provide temporary lighting as directed (at the Contractor's expense).

EXCAVATING, DREDGING OR FILLING STATE WATERS

The work as indicated qualifies under the US Army Corps of Engineers State Programmatic General Permit (SPGP). The Department has secured the necessary NH Department of Environmental Services' Wetlands Permit to accomplish the work and a copy of the approved Permit (#2024-01020), including any special conditions contained therein, is included elsewhere in the Proposal. Apply sufficiently in advance for any additional Wetlands Bureau or Corps of Engineers Permits or modifications to the existing Permit(s) necessary due to the Contractor's method of construction or for other work not shown on the plans. Prior to submission to the Wetlands Bureau, have any additional impacts reviewed by the Bureau of Construction and the Bureau of Environment. The Department's Permit is only for the work shown in the Proposal. The SPGP and its general conditions are available online at www.nae.usace.army.mil/Missions/Regulatory/StateGeneralPermits/NewHampshireGeneralPermit.aspx.

The Department has also secured the necessary NH Department of Environmental Services Shoreland Permit (#2024-02364) to accomplish the work shown on the Shoreland Plans. A copy of the approved Shoreland Permit is included elsewhere in the Proposal.

To assist the Contractor in preparing a bid, the Wetland Impact and Erosion Control Plans and the Wetlands Permit application, are available on-line on the Department's Bureau of Environment Wetlands Program Website on the *Wetland Applications, Plans, and Permits* webpage (www.dot.nh.gov/about-nh-dot/divisions-bureaus-districts/environment/wetland-applications).

For any work not shown on the Plans that the Contractor proposes to do in wetlands or waters of the State, make appropriate application, along with the necessary working plans, to the Wetlands Bureau and, if necessary, to the Corps of Engineers sufficiently in advance for their consideration and approval.

Contact the Project's Environmental Coordinator (Deidra Benjamin, 603-892-8256) for clarification of wetlands limits, if necessary.

EROSION CONTROL AND WATER QUALITY MANAGEMENT

This project does not require coverage under the National Pollutant Discharge Elimination Systems (NPDES) Construction General Permit (CGP) administered by the Environmental Protection Agency. Therefore, a Notice of Intent and Notice of Termination are not required.

Provide a Storm Water Pollution Prevention Plan (SWPPP) (Item 645.7) and monitoring of the SWPPP (Item 645.71) to assure that any detrimental impacts are minimized to the extent practical and restricted to the construction phase. Take note of the requirements in Section 645 - Erosion Control, particularly 3.1.1 regarding submittals and approvals of the SWPPP prior to specific work. Amend the SWPPP as necessary to provide for continued erosion and sediment control. Appropriate temporary measures shall be implemented as necessary to prevent erosion based upon the Contractor's method of operation and schedule.

Pursuant to 645.3.1.1, the SWPPP may be segmented or submitted in phases. The phased submission will expedite the preparation of the SWPPP and receipt of approval needed to advance the proposed work. It is anticipated that the SWPPP will need to separately address existing and final conditions for each location, or phase of construction. First, graphically show the pre-construction drainage patterns and proposed BMPs, as appropriate, to protect existing structure and surrounding natural resources during initial land clearing and earth moving activities. Second, graphically show the proposed BMPs and final conditions for each construction phase.

ENVIRONMENTAL COMMITMENTS

Refer to the *Summary of Environmental Issues* document found elsewhere in the Proposal.

INVASIVE PLANTS

Under the statutory authority of *RSA 430:55* (NH Department of Agriculture) and RSA 487:16-a (NH Department of Environmental Services), the spread of invasive plants listed in Agr 3800 and Env-Wq 1300 is prohibited. The project contains areas of the following prohibited NHDOT Invasive Species Control Type I plants: Glossy Buckthorn

To prevent the spread of these plants both within and outside the project area, appropriate containment measures and disposal methods must be in place. Prior to clearing and grubbing operations occurring in areas identified on the General Plans and/or identified by the Contractor or NHDOT during construction as containing invasive plant species, the Contractor shall mitigate these areas, subsidiary to the Work. All work must comply with the NHDOT manual, *Best Management Practices for the Control of Invasive and Noxious Plant Species,* available online (www.dot.nh.gov/projects-plans-and-programs/programs/environmental-management-system/invasive-species).

An Invasive Species Control and Management Plan is not required for this project.

All topsoil adjacent to the roadway surfaces on property under the control of the Department, or soils to a depth of 6" when no topsoil is present, have been determined to be Limited Reuse Soils (LRS). LRS which contains invasive plants shall be segregated, handled and disposed of separately from other LRS soils not containing invasive plants (see also the *Limited Reuse Soils* section elsewhere in this POW), and other invasive plants present in non-LRS containing soils.

In areas containing NHDOT Invasive Species Control Type I plants that are to be impacted by construction activities prior to see maturation, vegetation may be cut or removed as part of normal clearing operations. After seed maturation (approximately July 1st through February 1st), remove these plants following appropriate *Best Management Practices*.

Contact the Project's Environmental Coordinator (Deidra Benjamin, 603-892-8256) at the Department's Bureau of Environment for questions about invasive plant identification and control methods.

NORTHERN LONG-EARED BAT PROTECTION

The U.S. Fish and Wildlife Service (USFWS) has listed the Northern Long-Eared Bat as endangered under the Endangered Species Act (ESA) and has proposed to list the Tricolored Bat as endangered. Compliance with the avoidance and minimization measures identified below are necessary to ensure compliance with the ESA. These measures would also provide protection for the Tricolored Bat.

If there are any changes to the proposed project activities, alterations of the proposed clearing necessary due to the Contractor's method of construction, or, if additional resources may be impacted by the project additional consultation with the USFWS may be required. Contact the Project's Environmental Coordinator (Deidra Benjamin, 603-892-8256) at the Department's Bureau of Environment for questions about project limits, restrictions, or conservation measures.

Tree Cutting and Clearing Restrictions:

The Contractor shall ensure tree removal is limited to that specified in the project plans. Prior to tree removal, the Contractor shall layout the clearing limits in the field (e.g. with bright orange flagging/fencing or another marking method, subsidiary to the Work) to ensure all tree clearing work is within the tree clearing limits.

LIMITED REUSE SOILS (LRS)

Limited Reuse Soils (LRS) are transportation corridor soils that commonly contain metals at concentrations above naturally occurring background conditions, and Polycyclic Aromatic Hydrocarbons (PAHs) exceeding acceptable reuse concentrations. Soils currently managed as LRS by the Department include all topsoil within the limits of the existing state right-of-way (ROW), regardless of its depth. In those instances where there is no measurable topsoil, LRS is measured from the top of the ground to a depth of six (6) inches. In addition, as any ground or pulverized asphaltic materials, as well as street wastes (materials generated through street sweeping, catch basin clean outs, and ditching) are LRS. LRS generated from excavation anticipated for this project should be handled as described in the Soil Management Plan (SMP) included with the Special Attention – Supporting Information for POP Development (SA-POP).

Due to the presence of LRS Soils, the Contractor shall:

- Prepare a Project Operations Plan (POP) (Item 697.31)
- Refer to Special Attention – Supporting Information for POP Development(SA-POP) (See additional information below)

The Contractor shall submit the POP to the Bureau of Environment through the Engineer at least 15 Working Days prior to any excavation of LRS. The Bureau of Environment will review the proposed POP for compliance with state regulatory requirements and provide comments to the Engineer. The comments on the proposed POP must be addressed by the Contractor in a revised POP. When all comments have been addressed, the Bureau of Environment will approve the POP. ***No excavation of LRS may take place until the POP has been approved by the Department.***

The Contractor is responsible for managing all excavated soils that meet the definition of LRS.

All costs incurred due to excavating, handling, and stockpiling of LRS soils encountered on the project site will be paid for under Item 203.11 – Common Excavation - LRS. Any necessary replacement material will be paid under Item 647.1 – Humus as specified on the Plans.

For this project, it is anticipated that LRS can be re-used on-site, and no excess LRS will require off-site disposal.

Additional Information and Requirements:

LRS with Invasive Plants

LRS which is identified to contain invasive plants shall be segregated, handled, and re-used separately from LRS which does not contain invasive plants. Reuse of LRS impacted with invasive plants shall be in accordance with provision in the *Invasive Plants* section of this POW as well as the provisions for LRS above.

Millings to Contractor

The Contractor shall not stockpile any millings. All millings must be live loaded into trucks and delivered directly to their destination. Millings shall be managed in accordance with Special Provision to Section 417 – Cold Planing.

RIGHT-OF-WAY AND PROTECTION OF PROPERTY

The Contractor will only be permitted to perform work within the right-of-way and easements shown on the plans. There shall be no alteration or disturbance of roadway embankments or drainage structures, except that which is shown on the Plans, without prior review with the Bureau of Environment.

Right-of-Way agreements have been made with the following property owners:

PARCEL	NAME	ADDRESS/ CONTACT	PHONE	AGREEMENT
001	Scott Warburton	Scott Warburton 21 Echo Valley Road Acworth, NH 03607	603-835-2856	Contact 2 weeks prior to start of construction
002	William Brodne	William Brodne 1384 NH Route 123A Acworth, NH 03607	603-835-6554	Contact 2 weeks prior to start of construction

GEOTECHNICAL INFORMATION

To assist the Contractor in preparing a bid, the GEOTECHNICAL REPORT is available for review during the bidding period. This report is available on-line on the *Invitation to Bid* webpage at nhdot.com in the specific project's Proposal Package.

CONSTRUCTION REQUIREMENTS

General

1. LRS topsoil shall be removed as Item 203.11 – Common Excavation – LRS and stored within the State right-of-way. The LRS topsoil shall be reused under Item 647.1 - Humus. This material shall be placed at a depth of 4" or a depth needed to reuse all the topsoil (LRS) within the State right-of-way. The total depth shall not exceed 12" unless approved and directed by the Engineer.
2. Clearing and Grubbing will be subsidiary to the Work. Minimize or avoid clearing to the maximum extent practical.
3. No extra payment will be made for night work.
4. A detour will be allowed for the installation of the culvert and all associated work. See *Traffic Control Plan* for time frames and requirements.
5. The proposed cofferdam is anticipated to be material other than sheet pile to avoid conflict with existing overhead wires.
6. Contractor shall provide documentation of the location of the borrow and material sources to the Engineer to meet the Department's funding requirements as stated in the *Summary of Environmental Issues*.

Pavement Work

1. Remove existing pavement as shown in the Plans or as directed under Item 203.1 – Common Excavation.
2. Item 410.22 – Asphalt Emulsion for Tack Coat shall be used for each permanent pavement lift.
3. Item 403.16 – Pavement Joint Adhesive shall be applied to all exposed longitudinal joints for all pavement courses prior to placement of each pavement course pass.

Culvert and Water Diversion Work

1. The Water Diversion required to construct the box culvert in a dry condition will be paid for under Item 503.101 – Water Diversion Structure. Item 603.99036 – 36" Temporary Drainage Pipe is included for use in the water diversion. All other materials and work required to divert water around and/or away from the culvert installation shall be subsidiary to Item 503.101 – Water Diversion Structure; including clearing and grubbing; excavation; cofferdams or other measures to support the work; dewatering required to install the water diversion; as well as pumping or any other measures required to divert the unnamed brook from the culvert excavation.
2. The Water Diversion as shown on the Plans has been permitted and approval can be found elsewhere in the Proposal. The Contractor is responsible for securing any necessary approvals for any alternative Water Diversion design.
3. The last component of the precast box culvert shall be cast a minimum of 28 days before the date of installation.
4. Shop drawings for Item 529.001 – Precast Concrete Box Culvert and all its components shall be submitted to the Engineer for acceptance in accordance with 105.02.
5. If the Contractor desires, the concrete box may be placed in "c-sections" (with a removable top) for ease and quality of placing embedment material.
6. Utilize Item 585.3401 – Simulated Streambed Material for the bed material in the concrete box culvert and at the culvert inlet and outlet as shown in the Plans.

Signing and Pavement Marking

1. There are no signs to be replaced under the project. If the Contractor damages existing signs that are not intended to be replaced during construction, the Contractor will be responsible to replace them, at the Contractor's expense, according to NHDOT standards (available upon request).
2. NHDOT Bureau of Traffic will review all Contractor pavement marking layouts prior to final pavement marking operations. The Contractor shall notify the Bureau of Traffic **(BOT-pm-notification@dot.nh.gov)** at least two weeks in advance of scheduled final pavement marking operations. In addition, the Contractor shall notify the Bureau of Traffic when layout is complete.
3. See *Pavement Marking Notes* located elsewhere in the Proposal for additional details related to pavement markings.

ELECTRONIC SCHEDULING

The Contractor shall submit an electronic Bar Chart for documentation in accordance with 105.02. Refer to Section 108.03.A - Progress Schedule for detailed information.

SALVAGE OF MATERIALS

Salvage the following materials to the Department, if determined by the Engineer suitable for re-use, they shall be salvaged, stockpiled, and loaded onto the indicated recipient's vehicles as required under 104.04. Care shall be taken during the removal operations so as not to damage any salvaged materials. Material damaged during removal due to the Contractor's negligence shall be replaced at the Contractor's expense. Removal of all materials will be paid for under specific Items of the contract or subsidiary as shown on the Plans or as stated in the Proposal or the Standard Specifications.

Highway Maintenance District 4:

- Temporary blocks and shoring elements from culvert repair

Salvaged materials will be picked up on site by District 4. Contact the Assistant District Engineer (Frank Linnenbringer, 603-352-2302) or Patrol Foreman (Arthur Grenier, 603-826-5555) two (2) weeks in advance to schedule material pick up.

Materials deemed not salvageable, including guardrail posts, shall become the property of the Contractor who is responsible for proper disposal.

WORK HOURS

Do not perform any work involving high noise machinery such as jackhammers or excavating equipment, including starting and warming up the equipment, prior to 7:00 a.m. or after 7:00 p.m., unless otherwise permitted, required by the Contract, directed, or approved by the Engineer.

In addition to the Limitation of Work requirements described in 108.04, do not perform any work during special events scheduled by the Town of Acworth unless otherwise approved. Contact the Acworth Town Clerk (Charlotte Comeau, 603-835-6879) for special events.

NOTIFICATION PROCEDURES

See the *Traffic Control Plan* for required notifications related to detour and traffic control operations.

COMPLETION DATE

The Completion Date is Friday, August 15, 2025.

No allowance will be given for unfavorable weather or ground conditions (see Special Provision to 108.07) or for delays in materials (see 108.07.B.3).

ACWORTH
43566C

July 16, 2024

TRAFFIC CONTROL PLAN

The following are considered to be part of the Traffic Control Plan:

1. Sections 618 and 619 of the Standard Specifications*
2. Work Zone Traffic Control Standard Plans*
3. *Manual on Uniform Traffic Control Devices* (MUTCD), *2009 Edition*
4. *Flagger and Uniformed Officer Use in Work Zones Guidelines**

* Available on-line under *Doing Business with DOT>Contractors* at www.dot.nh.gov or through the NHDOT Contracts Office (603-271-3732).

The above referenced specifications, guidelines, and provisions herein provide minimum requirements. The Contractor may be directed to expand upon the Traffic Control Plan if conditions warrant.

All Uniformed Officers working on any NHDOT funded project, including municipally managed projects, shall have successfully completed a NHDOT approved course on *The Safe and Effective Use of Law Enforcement Personnel in Work Zones*. The officer shall supply proof of successful course completion upon request. Sources of NHDOT approved training may be found on-line under *Doing Business with DOT>Contractors* at www.dot.nh.gov.

MAINTENANCE OF TRAFFIC

1. A road closure of NH Route 123A will be allowed for this project. The closure shall be for a single period up to 28 calendar days, during the period of July 7, 2025 through August 15, 2025, to install the culvert and complete all work to restore the roadway to normal two-way operation.
2. Traffic will be redirected from the project area via a signed detour route as shown in the Plans.
3. Portable Changeable Message Signs (Item 619.25) shall be used as shown on the plan for advance notice of construction activities. *The intent is to reserve the use of these signs for meaningful messages that will help motorists get through the work zone safely and not simply repeat information found on other Construction Signs*.

NOTIFICATION REQUIREMENTS FOR TRAFFIC CONTROL

The Transportation Management Center (TMC) shall be notified after installing the first advanced warning sign for a detour, a lane closure, shoulder closure, or lane blocking event (lane blocking events include mobile operations). The TMC shall also be notified after the removal of the last advanced warning sign. The Engineer may approve any refinements to the traffic control plan as appropriate. An additional notification with specific information on the pending change

shall be provided to the Engineer at least 48 hours in advance of the proposed traffic control change. This work will be subsidiary to Item 619.1-Maintenance of Traffic. No changes in traffic control will be allowed without completing all advanced notification requirements. The Contractor shall communicate all lane altering events to the Contract Administrator (or designee) who will then communicate these events to the TMC (603-271-6862).

In addition, the Contractor shall notify and provide information relating to detour and traffic control operations to the area emergency services noted below (subsidiary to Item 619.1 – Maintenance of Traffic) thirty (30) days in advance of project start up and start of detour. Particularly this includes instances that may block traffic flow temporarily through the work zone:

Emergency Service Contacts:

- State Police Headquarters:
  - Lt. Matthew Lapierre, Matthew.P.Lapierre@dos.nh.gov, (603-892-4994)
- Sullivan County:
  - John Simonds, Sheriff, jsimonds@sullivancountynh.gov, 603-863-4200
- Cheshire County:
  - Arlene Crowell, Dir. of Police Comm., dispatch@co.cheshire.nh.us, 603-352-4238
- Town of Acworth:
  - Town Clerk, Charlotte Comeau (603-835-6879)
  - Chief and Fire Warden, Gary Baber (603-835-2555)
  - Emergency Management Director, Jennifer Bland (603-835-2130)
  - State Police Troop C (603-358-3333)
  - Golden Cross Ambulance Service (603-542-6660)
- Charlestown:
  - Police Dispatch (603-826-3141)

ADDITIONAL TRAFFIC CONTROL NOTIFICATION

Annual Over-Size/Over-Weight (OSOW) permits are issued for loads from 8'-6" to 10'-6" wide and 13'-6" in height. These permit holders are not required to notify the NHDOT OSOW permit office prior to traveling. Any dimensional restrictions imposed that will impede these permitted dimensions shall be called into the TMC. The Contractor shall communicate restrictions to the Contract Administrator (or designee) who will then communicate these restrictions to the TMC Operations Supervisor (603-271-6TMC).

PROHIBITION OF UNNECESSARY TRAFFIC OBSTRUCTION

The clear zone measured from the edge of the traveled way open to traffic shall be as follows:

- 15 feet in areas of posted speed limits 40 mph or less.

Work must be performed in such a way that does not adversely affect traffic from both sides of the roadway at any location at the same time.

VARIATION FROM THE TRAFFIC CONTROL PLAN

If the Contractor feels improvements can be made to the Traffic Control Plan for this project, the Contractor shall submit a written proposal to the Department with any necessary plans for consideration and approval.

Pavement Marking Notes

The following general notes relating to pavement markings, as applicable, will apply to this project.

1. Document the location of the existing pavement markings as described in 632.3.1.1.2. Provide a copy of this documentation to the Engineer prior to obscuring any pavement markings. The proposed pavement marking layout shall conform to the current adopted edition* of the MUTCD and NHDOT Standard Plans.

    a. The Contractor shall be responsible for locating the critical points, including but not limited to, the start/stop of tapers and stop bar locations throughout the project.

2. Replace words/symbols per *NHDOT Intersection Details* and *NHDOT Word and Symbol Lane Layout Details* which can be found elsewhere in this Proposal/Plans or on the NHDOT website (www.dot.nh.gov/doing-business-nhdot/engineers-consultants/highway-design-special-details#traffic). These details supersede NHDOT Standard Plans PM-7 and PM-8.

    a. All symbols, words, transverse markings (stop bars, crosswalk lines, and railroad symbols), lane lines, and all other markings noted with (T) shall be thermoplastic.

3. Pavement markings shall extend beyond project paving limits to overlap existing markings disturbed by construction.

4. The Contractor is reminded to follow the striping note on NHDOT Standard Plan PM-1 for passing zones. The markings shall be "ON THE RIGHT SIDE OF CENTERLINE WHEN TRAVELING SOUTH TO NORTH OR WEST TO EAST."

5. All passing zones shall be laid out in accordance with MUTCD Chapter 3 Section 3B.02. Minimum "lead-in" distances on each end of the passing zone where passing is allowed only in one direction are provided in MUTCD Table 3B-1, summarized below for pertinent speeds where passing zones are permitted:

Posted Speed	Minimum Passing Sight (Lead-in) Distance
35 mph	550 feet
40 mph	600 feet
45 mph	700 feet
50 mph	800 feet
55 mph	900 feet

***** See the Traffic Control Plan for current adopted edition of the MUTCD.

New Hampshire Department of Transportation
Bureau of Construction
Contractor Access of State Facility

This form is for the use of Contractors executing NHDOT Project Development Construction Contracts. Fill in the shaded boxes before submitting the form to the Contract Administrator who shall then arrange for a meeting with the appropriate Operations Headquarters Office. Once completed and signed by both the Contractor and the Department's Division of Operations representative, it shall serve as the written agreement to the terms and conditions required for use and entry onto the property of a State Maintenance Facility.

Project Name: | **State Project Number** | **NHDOT Contract Administrator**

NHDOT Maintenance Facility Location

Reason for Use of Department Property (Check all Applicable Boxes):

☐ Material Staging/Storage ☐ Equipment Staging/Storage ☐ Delivery of Salvaged Material

☐ Field Office Staging ☐ Other* _____

Type of Material (If Applicable):

- _____
- _____

Special Terms and Conditions:

- _____
- _____
- _____
- _____

_____
Name of Contractor

_____ _____
Contractor Representative Name | Operations Representative Name

_____ _____
Contractor Emergency Contact Number | Operations Contact Number

_____/_____ _____/_____
Contractor Signature/Date | Operations Representative Signature/Date

By signing this document, both parties mutually agree to all terms and conditions as discussed or listed on this form. The Contractor further agrees to preserve and protect the State property under the terms and conditions set forth in the Contract Documents, including but not limited to Section 107 of the NHDOT Standard Specifications.

Created 11/2019

MUNICIPAL WORK ZONE AGREEMENT
FOR
ACWORTH

STATE PROJECT: 43566C
FEDERAL PROJECT: 670946 (FEMA)

THIS AGREEMENT, executed in ***duplicate***, made and entered into this 16 day of September 2024, between the New Hampshire Department of Transportation, hereinafter called the "DEPARTMENT" and the Town of Acworth, hereinafter called the "TOWN."

WITNESSETH that,

WHEREAS, the DEPARTMENT shall construct project Acworth 43566C, Culvert Replacement on NH Route 123A in the TOWN.;

WHEREAS, The State Legislature has delegated the Commissioner of the DEPARTMENT with full authority to control traffic in highway/bridge construction work zones on Class I, II, and III highways; RSA 228:21, 236:1, and 228:37;

WHEREAS, The Department intends to use a combination of flaggers and/or uniformed officers, as appropriate, to control traffic and ensure public and worker safety; and

NOW, THEREFORE, in consideration of the above premises, it is mutually agreed as follows:

A. The DEPARTMENT will reconstruct NH Route 123A and replace the existing culvert located approximately 0.5 miles west of Gate Mountain Road. The DEPARTMENT proposes a new 6-foot x 6-foot x 34-foot precast concrete box culvert with headwalls, wingwalls, cutoff walls and stream restoration, as well as reconstruction of NH Route 123A roadway to restore the roadway from a July 29-30, 2021 storm event. NH Route 123A reconstruction is anticipated to include excavation and reconstruction of the roadway, shoulders and ditch line within the work area, as well as erosion control, detour, traffic control, and construction management of the work zone associated with construction activities

B. The DEPARTMENT will be responsible for the management and operation of the highway throughout the duration of the construction of the project. This includes the authority to determine the most appropriate way to control traffic within the construction work zone limits of the project.

C. The Department, as of April 1, 2013, will only compensate for the use of police officers that have successfully completed an NHDOT approved course on the Safe and Effective Use of Law Enforcement in Work Zones.

IN WITNESS WHEREOF, the parties here have affixed their signatures, the Town of Acworth, New Hampshire, on this 16 day of September, 2024; The Department of Transportation on this 18th day of Sept., 2024.

NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION

By: _____
William J. Oldenburg, P.E.
Director of Project Development

TOWN OF ACWORTH

By: Jim Jennison
Jim Jennison
Chair, Board of Selectmen

cc: Jennifer Bland (Acworth Emergency Management Director)

Revised August 1, 2018

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ACWORTH
43566C

October 10, 2024

Summary of Environmental Issues

The following is provided to assist in identifying the environmentally sensitive aspects of this project. This notification is neither intended to be all-inclusive nor to replace the need to thoroughly read and abide by all contract documents including but not limited to all applicable state specifications and permits. For clarification on any of the following or to obtain contact information for follow up coordination as necessary and as directed below, contact the project's Environmental Coordinator (Deidra Benjamin, 603-892-8256).

Actions to be Completed Prior to Earth Disturbing Activities (Including Clearing)

- Environmental documents shall be posted on the project's Bulletin Board. Documents shall include, but are not limited to, signed copies of permits issued by regulatory agencies, contact information and location of project Stormwater Pollution Prevention Plan.
- Prior to the commencement of work, the Contractor shall submit a Stormwater Pollution Prevention Plan specific to this project. The plan shall be approved by the Department and implemented and monitored as noted.
- The Contractor is directed to review and incorporate all applicable provisions outlined by the Department in the Wetland Plans "Erosion Control Strategies and Stabilization Matrix" sheet. This sheet outlines the Department's commitments and strategies to minimize the impacts of construction to the environment. The Erosion Control Strategies and Stabilization Matrix" sheet is available on-line on the Department's Bureau of Environment Wetlands Program Website on the *Wetland Applications, Plans, and Permits* webpage (www.dot.nh.gov/about-nh-dot/divisions-bureaus-districts/environment/wetland-applications).
- The Contractor shall abide by all conditions set forth in the NH Department of Environmental Services Wetlands Bureau Standard Dredge and Fill Permit #2024-01020 and Shoreland Permit #2024-02364, including amendments. Should the Contractor's method of construction require additional disturbance within jurisdictional areas, the Contractor shall secure all additional necessary permits and coordinate with the Bureau of Environment prior to the start of work.
- The Contractor shall ensure that removal of any tree larger than 3" in diameter at breast height is limited to that specified in the project plans. Bright colored flagging or fencing shall be installed prior to any tree clearing to ensure contractors stay within clearing limits.
- Areas of contaminated Limited Reuse Soils are located within the project limits and anticipated to be disturbed. The Contractor shall prepare and submit a Projects Operation Plan (POP) prior to the start of work. A Soils Management Plan prepared by the Department is available for use in preparation of the POP.
- This project is located within a ¼ mile of the Cold River, a NH Designated River. For any work proposed within a ¼ mile of the Designated River not shown on the plans including the contractor's method of construction, access, and staging areas, the Contractor shall coordinate with the Local Advisory Committee (Cold River is inactive, contact Tracie Sales, Rivers and Lakes Programs Administrator: tracie.sales@des.nh.gov).

- All borrow or fill material must come from pre-existing stockpiles, material reclaimed from maintained roadside ditches (provided the designed width or depth of the ditch is not increased), or commercially procured material from a source existing prior to the event. For any FEMA-funded project requiring the use of a non-commercial source or a commercial source that was not permitted to operate prior to the event (e.g., a new pit, agricultural fields, road ROWs, etc.) in whole or in part, regardless of cost, the Subrecipient must notify FEMA and the Recipient (State EMA) prior to extracting material. FEMA must review the source for compliance with all applicable federal environmental planning and historic preservation laws and executive orders prior to a Subrecipient or their contractor commencing borrow extraction. Consultation and regulatory permitting may be required. Non-compliance with this requirement may jeopardize receipt of federal funding. **Documentation of borrow sources utilized is required at closeout.**
- The Bureau of Environment shall be contacted for further review of the project if the scope of work changes or the Contractor proposes any work in previously undisturbed areas (Deidra Benjamin, 603-892-8256).

Actions to be Completed During Construction

- An Invasive Species Control and Management Plan is not required for this project. In areas containing NHDOT Invasive Species Control Type I plants that are to be impacted by construction activities prior to seed maturation, vegetation may be cut or removed as part of normal clearing operations. After seed maturation (July 1st through February 1st), remove these plants following appropriate Best Management Practices described in the Department publication, *Best Management Practices for the Control of Invasive and Noxious Plant Species*.
- If any visual indicators of archaeological resources are observed during ground disturbing activities, the Contractor shall stop work immediately and contact the Bureau of Environment for further review (Deidra Benjamin, 603-892-8256).

WETLANDS AND NON-SITE SPECIFIC PERMIT 2024-01020

NOTE CONDITIONS

PERMITTEE:	**NH DEPARTMENT OF TRANSPORTATION** **JASON AYOTTE** **PO BOX 483** **CONCORD NH 03301**
PROJECT LOCATION:	**NH RTE 123A, ACWORTH** **Tax Map/Block/Lot(s): 248/no block/N/A**
WATERBODY:	**UNKNOWN**
APPROVAL DATE:	**AUGUST 12, 2024** **EXPIRATION DATE: AUGUST 12, 2029**

Based upon review of permit application 2024-01020 in accordance with RSA 482-A and RSA 485-A:17, the New Hampshire Department of Environmental Services (NHDES) hereby issues this Wetlands and Non-Site Specific Permit. To validate this Permit, signatures of the Permittee and the Principal Contractor are required.

PERMIT DESCRIPTION:
Dredge and fill 1,147 square feet/117 linear feet (86 temporary) of perennial stream and banks and palustrine wetlands for replacement an existing 4 foot high by 2.8 foot wide by 28 foot long cast in place box culvert which carries NH-123A over an un-named stream in the Town of Acworth, NH. The proposed replacement is a 6 foot wide x 6 foot tall x 34 foot long concrete box. The proposed box will be embedded and have 18 inches of simulated stream bed material throughout (NHDOT 43566C).

THIS PERMIT IS SUBJECT TO THE FOLLOWING PROJECT-SPECIFIC CONDITIONS:

1. All work shall be done in accordance with the revised Wetlands plans and sequence for NHDOT Project No. 43566C, Wetlands Plan Federal Aid Project, FEMA 670946, N.H. Project 43566C, NH Route 123A, Acworth, NH and application materials dated April 12, 2024 as received by NHDES April 18, 2024, and plans dated June 2024, as received by NHDES on July 11, 2024.
2. The permittee shall notify the department Wetlands program in writing at least one week prior to commencing any work under the permit.
3. Wetland areas where permanent impacts are not authorized shall be restored to their pre-impact conditions and elevation by replacing the removed soil and vegetation in their pre-construction location and elevation conditions. Temporary impact areas shall be revegetated with species density and composition similar to existing conditions. Existing vegetation should be stockpiled and replaced in temporary impact areas if possible.
4. Materials used to emulate a natural channel bottom shall be consistent with materials identified in the reference reach. Final stream bed and bank surfaces must be natural, rounded stone not angular rip rap.
5. No activity shall be conducted in such a way as to cause or contribute to any violation of surface water quality standards specified in RSA 485-A:8 or Env-Wq 1700; ambient groundwater quality standards established under RSA 485-C; or any provision of RSA 485-A, RSA 483-B, or Env-Wq 1400 that protects water quality.
6. To prevent the use of soil or seed stock containing nuisance or invasive species, the contractor responsible for work shall follow Best Management Practices for the Control of Invasive and Noxious Plant Species (Invasive Plant BMPs).

7. All manufactured erosion and sediment control products, with the exception of turf reinforcement mats, utilized for, but not limited to, slope protection, runoff diversion, slope interruption, perimeter control, inlet protection, check dams, and sediment traps shall not contain plastic, or multifilament or monofilament polypropylene netting or mesh with an opening size of greater than 1/8 inches.
8. Water quality control measures shall be capable of minimizing erosion; collecting sediment and suspended and floating materials; and filtering fine sediment.
9. Water quality control measures shall be installed prior to start of work and in accordance with the manufacturer's recommended specifications or, if none, the applicable requirements of Env-Wq 1506 or Env-Wq 1508.
10. Water quality control measures shall be maintained so as to ensure continued effectiveness in minimizing erosion and retaining sediment on-site during and after construction.
11. Water quality control measures shall remain in place until all disturbed surfaces are stabilized to a condition in which soils on the site will not experience accelerated or unnatural erosion by achieving and maintaining a minimum of 85% vegetative cover using an erosion control seed mix, whether applied in a blanket or otherwise, that is certified by its manufacturer as not containing any invasive species; or placing and maintaining a minimum of 3 inches of non-erosive material such as stone.
12. Any sediment collected by water quality control measures shall be removed with sufficient frequency to prevent the discharge of sediment; and placed in an upland location in a manner that prevents its erosion into a surface water or wetland.
13. Temporary water quality control methods shall be removed upon completion of work when compliance with Env-Wt 307.03(c)(6) is achieved.
14. Equipment shall be staged and refueled outside of jurisdictional areas (unless allowed) and in accordance with Env-Wt 307.15.
15. If any temporary impact area that is stabilized with seeding or plantings does not have at least 75% successful establishment of wetlands vegetation after 2 growing seasons, the area shall be replanted or reseeded, as applicable.
16. Within 3 days of final grading or temporary suspension of work in an area that is in or adjacent to surface waters, all exposed soil areas shall be stabilized by seeding and mulching, if during the growing season; or mulching with tackifiers on slopes less than 3:1 or netting and pinning on slopes steeper than 3:1 if not within the growing season.
17. If any temporary impact area that is stabilized with seeding or plantings does not have at least 75% successful establishment of wetlands vegetation after 2 growing seasons, the area shall be replanted or reseeded, as applicable.
18. The person in charge of construction equipment shall inspect such equipment for leaking fuel, oil, and hydraulic fluid each day prior to entering surface waters or wetlands or operating in an area where such fluids could reach groundwater, surface waters, or wetlands.
19. The person in charge of construction equipment shall repair any leaks prior to using the equipment in an area where such fluids could reach groundwater, surface waters, or wetlands.
20. The person in charge of construction equipment shall maintain oil spill kits and diesel fuel spill kits, as applicable to the type(s) and amount(s) of oil and diesel fuel used, on site so as to be readily accessible at all times during construction; and train each equipment operator in the use of the spill kits.

THIS PERMIT IS SUBJECT TO THE FOLLOWING GENERAL CONDITIONS:

1. Pursuant to RSA 482-A:12, a copy of this permit shall be posted in a secure manner in a prominent place at the site of the approved project.
2. In accordance with Env-Wt 313.01(a)(5), and as required by RSA 482-A:11, II, work shall not infringe on the property rights or unreasonably affect the value or enjoyment of property of abutting owners.
3. In accordance with Env-Wt 314.01, a standard permit shall be signed by the permittee, and the principal contractor who will build or install the project prior to start of construction, and will not be valid until signed.
4. In accordance with Env-Wt 314.03(a), the permittee shall notify the department in writing at least one week prior to commencing any work under this permit.

5. In accordance with Env-Wt 314.08(a), the permittee shall file a completed notice of completion of work and certificate of compliance with the department within 10 working days of completing the work authorized by this permit.
6. In accordance with Env-Wt 314.06, transfer of this permit to a new owner shall require notification to, and approval of, the NHDES.
7. The permit holder shall ensure that work is done in a way that protects water quality per Env-Wt 307.03; protects fisheries and breeding areas per Env-Wt 307.04; protects against invasive species per Env-Wt 307.05; meets dredging activity conditions in Env-Wt 307.10; and meets filling activity conditions in Env-Wt 307.11.
8. This project has been screened for potential impact to known occurrences of protected species and exemplary natural communities in the immediate area. Since many areas have never been surveyed, or only cursory surveys have been performed, unidentified sensitive species or communities may be present. This permit does not absolve the permittee from due diligence in regard to state, local or federal laws regarding such communities or species. This permit does not authorize in any way the take of threatened or endangered species, as defined by RSA 212-A:2, or of any protected species or exemplary natural communities, as defined in RSA 217-A:3.
9. In accordance with Env-Wt 307.06(a) through (c), no activity shall jeopardize the continued existence of a threatened or endangered species, a species proposed for listing as threatened or endangered, or a designated or proposed critical habitat under the Federal Endangered Species Act, 16 U.S.C. §1531 et seq.; State Endangered Species Conservation Act, RSA 212-A; or New Hampshire Native Plant Protection Act, RSA 217-A.
10. In accordance with Env-Wt 307.02, and in accordance with federal requirements, all work in areas under the jurisdiction of the U.S. Army Corps of Engineers (USACE) shall comply with all conditions of the applicable state general permit.

APPROVED:

Karl D. Benedict
Public Works Supervisor, Wetlands Bureau
Land Resources Management, Water Division

THE SIGNATURES BELOW ARE REQUIRED TO VALIDATE THIS PERMIT (Env-Wt 314.01).

_____ _____

PERMITTEE SIGNATURE (required) PRINCIPAL CONTRACTOR SIGNATURE (required)

SHORELAND IMPACT PERMIT 2024-02364

NOTE CONDITIONS

PERMITTEE:	**NH DEPARTMENT OF TRANSPORTATION** **JASON AYOTTE** **PO BOX 483** **CONCORD NH 03301**
PROJECT LOCATION:	**NH ROUT 123A, ACWORTH** **Tax Map/Block/Lot(s): 248/no block/**
WATERBODY:	
APPROVAL DATE:	**SEPTEMBER 11, 2024** **EXPIRATION DATE: SEPTEMBER 11, 2029**

Shoreland Permit Application 2024-02364 has been found to meet or exceed the requirements of RSA 483-B as required per RSA 483-B:6, II. The New Hampshire Department of Environmental Services (NHDES) hereby issues this Shoreland Impact Permit with conditions pursuant to RSA 483-B:6, II.

PERMIT DESCRIPTION:
Impacts 2,611 square feet (SF) of protected shoreland in order to replace the existing structurally deficient and undersized culvert that is comprised of a single 4-foot-high by 2.8-foot-wide cast in place concrete culvert with a concrete box culvert featuring an additional half cut 36 inch diameter corrugated metal pipe as the culvert ceiling with a 6 foot span by 6 foot rise concrete box culvert.

Impervious Surface Percentage Approved: 43%

Natural Woodland Area Required per RSA 483-B:9, V, (b): 19,675 SF.

THE FOLLOWING PROJECT-SPECIFIC CONDITIONS HAVE BEEN APPLIED TO THE PERMIT PURSUANT TO ENV-WQ 1406.15(c):

1. All work shall be in accordance with plans by Hoyle Tanner dated July 2024 and received by the New Hampshire Department of Environmental Services (NHDES) on August 12, 2024 pursuant to Env-Wq 1406.15(f).
2. Within three days of final grading or temporary suspension of work in an area that is in or adjacent to wetlands or surface waters, all exposed soil areas shall be stabilized by seeding and mulching during the growing season, or if not within the growing season, by mulching with tack or netting and pinning on slopes steeper than 3:1 as required pursuant to RSA 483-B:9, V(d) Erosion and Siltation, (1).
3. This permit shall not preclude NHDES from taking any enforcement or revocation action as authorized pursuant to 483-B:5, I, if NHDES later determines that any of the structures depicted as "existing" on the plans submitted by the applicant were not previously permitted or grandfathered.

THE FOLLOWING STANDARD PROJECT CONDITIONS SHALL BE MET PURSUANT TO ENV-WQ 1406.20:

1. Erosion and siltation control measures shall be installed prior to the start of work, be maintained throughout the project, and remain in place until all disturbed surfaces are stabilized.
2. Erosion and siltation controls shall be appropriate to the size and nature of the project and to the physical characteristics of the site, including slope, soil type, vegetative cover, and proximity to wetlands or surface waters.

3. No person undertaking any activity in the protected shoreland shall cause or contribute to, or allow the activity to cause or contribute to, any violations of the surface water quality standards established in Env-Wq 1700, and the requirements in Env-Wq 1404.01(a) and(b).
4. Any fill used shall be clean sand, gravel, rock, or other suitable material.
5. For any project where mechanized equipment will be used, orange construction fence shall be installed prior to the start of work at the limits of the temporary impact area as shown on the approved plans; be maintained throughout the project; and remain in place until all mechanized equipment has been removed from the site.

ANY INDIVIDUAL CONDUCTING WORK UNDER THIS PERMIT IS ADVISED OF THE FOLLOWING:

1. During construction, a copy of this permit should be posted on site in a prominent location visible to inspecting personnel.
2. This permit does not convey a property right, nor authorize any injury to property of others, nor invasion of rights of others.
3. Pursuant to Env-Wq 1406.21, transfer of this permit to a new owner requires notification to, and approval of, NHDES.
4. This project has been screened for potential impact to **known** occurrences of protected species and exemplary natural communities in the immediate area. Since many areas have never been surveyed, or only cursory surveys have been performed, unidentified sensitive species or communities may be present. This permit does not absolve the permittee from due diligence in regard to state, local or federal laws regarding such communities or species. This permit does not authorize in any way the take of threatened or endangered species, as defined by RSA 212-A:2, or of any protected species or exemplary natural communities, as defined in RSA 217-A:3.

APPROVED:

Craig W. Day
Shoreland/Shoreline Specialist, Shoreland Program
Wetlands Bureau, Land Resources Management
Water Division

THIS PERMIT IS NOT VALID UNTIL SIGNED BY THE PARTIES BELOW (Env-Wq 1406.21(c))

PERMITTEE SIGNATURE (required)

PRINCIPAL CONTRACTOR SIGNATURE (required, if any)

Northern Long-Eared Bat

(*Myotis septentrionalis*)

NLEB Description:

The Northern Long-Eared Bat (NLEB) is between 3" and 3.7" long with a wingspan of 9" to 10" and is distinguished by its long ears. NLEB are medium to dark brown on their backs and have tawny to pale brown undersides. NLEB are nocturnal; they are active at night and sleep during the day.

NLEB Infected with White Nose Syndrome
CC: University of Illinois/Steve Taylor

Protection:

NLEB populations have been decimated by White-Nose Syndrome, a fungal disease. When a species experiences a significant population decline and is determined to be at risk, it may be listed under the Endangered Species Act (ESA). In 2022, NLEB was reclassified as endangered because the species viability has declined steeply since being listed as threatened in 2015. Endangered species are in danger of becoming extinct. Reclassifying NLEB provides additional conservation focus on the species.

Habitat:

Hibernating NLEB spend the winter in caves and mines called hibernacula. NLEB swarm in wooded areas surrounding hibernacula in the fall. During late spring and summer NLEB roost and forage in forests. During the day NLEB roost under bark and in tree crevices of both live and dead trees, and in caves and mines. NLEB sometimes also roost in buildings and bridges.

NH DOT NLEB Conservation Measures:

NHDOT incorporates NLEB conservation measures into project plans. The specific conservation measures for each project are found in the Summary of Environmental Issues (green sheet) and in contract documents. Contact Rebecca Martin at the Bureau of Environment (603-271-3226) with questions or for an explanation of NLEB conservation measures. Immediately report any dead or sick bat found in a project area to the Bureau of Environment (603-271-3226) and USFWS New England (603-223-2541).

More NLEB Information:

To learn more, visit the USFWS website (https://fws.gov) and search for the species.

FHWA Programmatic Consultation Avoidance and Minimization Measure: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all environmental commitments, including all applicable Avoidance and Minimization Measures.

S P E C I A L A T T E N T I O N

LIMITED REUSE SOILS

Limited Reuse Soils (LRS) (see the Special Provision for Section 101.64"A") are soils that are likely (based on "generator knowledge"[1]) and/or demonstrated (through laboratory analyses) to contain contaminant concentrations in the range of the New Hampshire Department of Transportation (NHDOT)-specific Acceptable Reuse Concentrations (ARCs).[2]

Roadside LRS commonly encountered at NHDOT construction projects include:

- Soils with elevated concentrations of several polynuclear aromatic hydrocarbons (PAHs) and a few common metals;
- Soils with petroleum residue (total petroleum hydrocarbons (TPH)) related to the normal operation of motor vehicles and asphalt pavement;
- Roadway reclaimed stabilized base materials (asphalt pavement surface being pulverized in place along with the underlying road base); and
- Millings.

The NHDOT has determined that roadside LRS may be encountered in all topsoil within the limits of the existing right-of-way, regardless of its depth. In instances where topsoil is not present, soil from the top of ground to a depth of six (6) inches is considered to be LRS. Soils excavated from beyond and/or below the specified LRS limits that do not exhibit visual or olfactory evidence of potential contamination will not require handling as impacted material.

Soils, which are <u>not</u> managed by a LRS Soil Management Plan (SMP), include:

- Soils containing solid waste present at more than *de minimis* amounts.
- Asbestos-impacted soils (i.e., soils containing asbestos or asbestos-containing material).
- Soils containing contaminants at concentrations above the Soil Remediation Standards (SRS) established in Env-Or 600 that are related to a release subject to regulation under Env-Or 600.
- Soils destined for disposal at an appropriately licensed facility, which are subject to analytical testing requirements of that receiving facility.
- Soils that are considered *de minimis* with respect to LRS management where all of the following stipulations apply:

    1. LRS shall not be stockpiled. For the purposes of this stipulation, "stockpile" will mean the mechanical consolidation of excavated soil from its point of origin to a new location, with or without soil collected from other excavations from the same project. The term "stockpile" will not include the establishment of temporary windrows along excavations, nor LRS

[1] Generator-knowledge includes the experience and awareness of NHDOT, the landowner (if not currently owned by NHDOT), and/or the NHDOT's consultant regarding historical development and/or natural background conditions.

[2] ARCs are summarized in an attachment to the LRS Soil Management Plan.

scraped off the surface of the ground at an excavation and temporarily piled next to the excavation area.

2. LRS shall be reused within property under the permanent control of the Department in the immediate area of its point of generation. LRS shall be reused on the same day it is excavated and/or generated, and shall be sufficiently protected with appropriate erosion and sedimentation control best management practices at the end of each work day.

- Soils located directly below existing paved surfaces and bridges
- Soils adjacent to access roads.

Soils Management Plan and Project Operations Plan

Contractors are advised that roadside LRS have been identified within the project limits. As such, a Soil Management Plan (SMP) applies to this project. The SMP provides guidance for the identification, handling, storage, reuse, and disposal of LRS soils generated during construction activities.

This project will require the development of a Project Operations Plan (POP), which specifies the Contractor's means and methods for handling, and management of LRS. This will include the implementation of the best management practices (BMPs) described in the SMP. **No excavation in known areas of LRS may take place until the POP has been approved.** In addition, following approval of the POP, the Contractor is required to notify the NHDOT's Bureau of Environment (BOE) at least two weeks prior to beginning excavation in the area(s) of known LRS.

In general, the SMP requires that LRS be reused, with priority, within the project limits on each project, if feasible. Reuse restrictions require that LRS placement be in accordance with the BMPs described in the SMP and with applicable federal, state, and local regulations. If reuse within the project limits with the foregoing restrictions is not possible, alternative disposal options will be identified in the SMP. LRS shall not be stored or disposed of on private land.

The Contractor shall direct questions relating to any of the information herein to the Bureau of Environment's Contamination Program Manager.

S P E C I A L A T T E N T I O N

SUPPORTING INFORMATION FOR

PROJECT OPERATIONS PLAN (POP) DEVELOPMENT

As described in Item 697.31, Contractors are advised that a Project Operations Plan (POP) is required for the project due to the known presence and/or potential presence of:

Media	Known to be Present	Potentially Present	Not Anticipated
LRS (Impacted Soil)	☒	☐	☐
Contaminated Soil (from a point source)	☐	☐	☒
Contaminated Groundwater	☐	☐	☒

The POP shall specify the Contractor's means and methods for handling and management of the impacted/contaminated materials referenced above. The Contractor shall review available data included and referenced in these contract documents to determine their means and methods.

The Contractor shall prepare and submit a proposed POP to the Bureau of Environment through the Engineer at least 15 business days prior to excavation of any soil. **No work shall be scheduled (or performed) in known Limited Reuse Soil (LRS areas) until the Bureau of Environment has indicated that the plan conforms to the requirements of the project.** The Department's Contamination Program will review the proposed POP for compliance with state regulatory requirements, and provide comments to the Engineer. The comments on the proposed POP must be addressed by the Contractor in a revised POP in order to receive approval of the POP from the Department. No excavation of impacted/contaminated soil or dewatering activities in impacted/contaminated areas may take place until the POP has been approved by the Department.

If the Contractor proposes alternate management methods to those outlined in the SMP, then the Contractor shall provide a detailed description of the proposed approach in the POP. The alternate method must be approved by the Bureau of Environment's Environmental Coordinator, in concurrence with the Department's Contamination Program, prior to excavation activities in the area of known contamination.

The Contractor shall direct questions relating to any of the information herein to the Bureau of Environment (603-271-3226).

Major Considerations for POP Preparation

The following identifies major considerations for the POP preparation based on review of available information for the Project Area by the Department and/or the Department's Environmental Consultant:

Item	Yes	No
NHDES Listed Sites within Project Limits	☐	☒
NHDES Listed Sites within 1,000 feet of Project Limits	☐	☒
Limited Reuse Soil requiring Management	☒	☐
Known Previously-consolidated Cells of Limited Reuse Soil within Project Limits	☐	☒
Known Contaminated Soil (from a point source) requiring Special Management	☐	☒
Potentially-Contaminated Soil – Contingency Plan	☒	☐
Dewatering of Known Contaminated Groundwater	☐	☒
Potentially-Contaminated Groundwater – Contingency Plan	☐	☒
Notes:		

Additional information is available for review as follows:

- Soil Management Plan (SMP, see attached) prepared by the Department.
- Department's available information: Contact the Bureau of Environment (603-271-3226) for review.

Impacted/Contaminated Soil

As it relates to impacted/contaminated soil, the Soil Management Plan includes:

☒	Narrative description of impacted/contaminated soil	☐	Cross-sections annotated with vertical extent of contamination	☐	Plan sheets annotated with horizontal extent of contamination
☒	Tabular summary of available soil analytical data	☒	Designated locations for staging impacted/ contaminated soils	☒	Contingency plan for potentially contaminated soil
☒	Reuse criteria	☒	Segregation criteria	☒	Equipment Cleaning
☒	Stockpile management requirements	☐	Soil boring logs / subsurface data	☐	Other

SOIL MANAGEMENT PLAN FOR LIMITED REUSE SOILS/ UNANTICIPATED POTENTIALLY CONTAMINATED SOILS

Applicability and Objectives

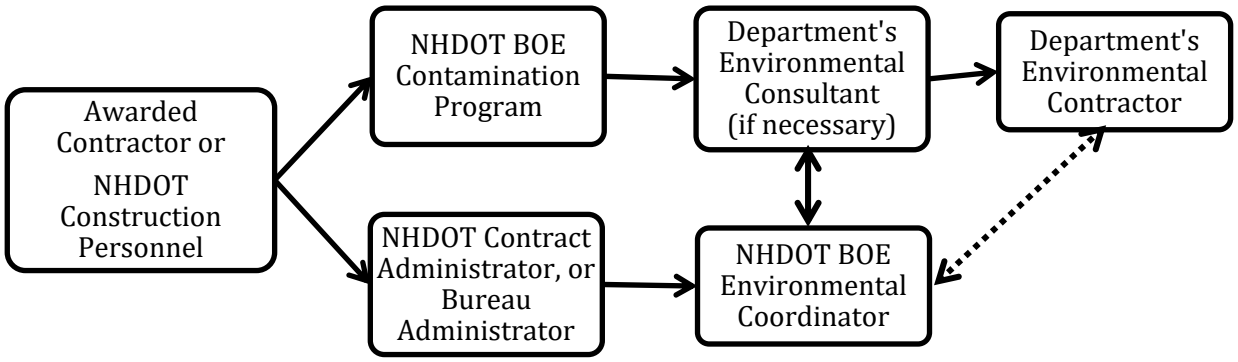
This Soil Management Plan (SMP) describes Best Management Practices (BMPs) that the NH Department of Transportation's (NHDOT) Project Contractor shall implement to manage Limited Reuse Soils (LRS), and/or unanticipated, potentially contaminated soils, that may be encountered on NHDOT Construction Projects, or during construction-related activities (also referred to as *Projects*), associated with the Acworth 43566C project.

Notification Requirements

All Projects require the following notification procedures to the Project Manager/lead person:

- At least two weeks notification prior to the Contractor beginning excavation in the area of known LRS identified herein, unless the project is being done with internal staff; and
- Immediate notification if the Contractor encounters other potentially contaminated soil and/or groundwater within Project Limits.

Notification Flow Chart



(Note that communication paths occur concurrently)

Contacts	Name	Office	Cell
NHDOT DCE[1] or Bureau Administrator	Tim Chapman	603-271-2571	603-491-6305
NHDOT BOE[2] Contamination Program	David Kammer	603-271-3226	N/A
NHDOT BOE Environmental Coordinator	Deidra Benjamin	N/A	603-892-8256
NHDOT's Environmental Consultant	Contacts will be determined after award. Contact Contamination Program for contact info.		

[1] District Construction Engineer
[2] Bureau of Environment

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APPENDICES

1.0 INTRODUCTION

1.1 Project Description and Project-specific Considerations

The project is located on NH Route 123A in the Town of Acworth, NH approximately 1.5 miles east of South Acworth Village and 7 miles northeast of the NH Route 123 x NH Route 123a intersection. Work will include replacement of any existing 4' high x 2.8' wide concrete box culvert with corrugated pipe culvert topper with a 6' high x 6' wide concrete box culvert. The existing culvert carries an unnamed stream under NH Route 123A which outlets into the adjacent Cold River. The existing culvert was damaged during a 2021 storm event and requires improvements to prevent future overtopping and damage to the roadway. Additional work will include reconstruction of the affected roadway pavement and shoulder, slope stabilization, stream scour protection and guardrail replacement within the project limits.

The proposed work is anticipated to generate approximately 40 CY of LRS, based on an assumed depth of 6" of topsoil within the excavation limits within existing State right-of-way (ROW). LRS will be collected during construction and temporarily stockpiled on existing pavement within the project area to the west of the crossing. LRS will be permanently used as loam and spread on the surface along the roadway embankments within the project area and within existing ROW. See attached plan indicating the location of the reuse area (see Figure 1).

1.2 Objective

This Generic Soil Management Plan (SMP) describes BMPs that the NHDOT's Project Contractor shall implement to manage LRS that may be encountered during execution of the proposed work, as indicated in project-specific documents. Application of the BMPs is anticipated to reduce the potential for exposure of workers and the public to potential contaminant identified/assumed to be in the LRS, and maintain conditions that are protective of human health and the environment.

This SMP will be included in project-specific documents to support the Prosecution of Work (POW), and/or other related administrative requirements and technical specifications, for the Contractor to address known, suspected, and/or unanticipated LRS. As applicable and required by the project and/or contract documents, the Contractor shall prepare and implement a Project Operations Plan (POP) that describes the Contractor's means and methods to adhere to the provisions of this SMP.

1.3 Applicability and Definitions

This SMP applies to management of LRS that are not otherwise addressed in a NHDES-approved Remedial Action Plan (RAP), or other NHDES-approved project-specific documents based on requirements to comply with the provisions of NHDES regulations (i.e., Env-Or 600 and Env-Sw 903), and with pertinent waivers issued by NHDES. The use of this SMP in lieu of a project-specific document or RAP will be determined by NHDOT based on performance of

project-specific environmental due diligence activities, including a review of NHDES-listed sites[3] within a 1,000-foot radius of the Project Limits[4].

For the purposes of this SMP:

- ***LRS*** are defined as: soils adjacent to roadways, on property under the control of NHDOT, that require removal or relocation, that are likely (based on "generator knowledge"[5]) and/or demonstrated (through field screening or laboratory analyses) to contain contaminants between naturally occurring background concentrations and NHDOT-specific Acceptable Reuse Concentrations (ARCs) provided in the attached table. LRS is associated with impacts related to surficial soil within the roadway network due to the presence and breakdown of asphalt pavement, the normal operation of motor vehicles, and other "non-point sources" of pollution in these areas.

  - LRS may be present in street wastes (e.g., soils generated through various activities, such as street sweeping, ditch maintenance, catch basin cleanout, and cleaning of stormwater management infrastructure).
  - LRS may be encountered in all topsoil adjacent to roadway surfaces on property under the control of NHDOT. In instances where topsoil is not present, LRS can be expected to be encountered in soil from the top of ground to a depth of six (6) inches. *NHDOT's understanding of the specified lateral and vertical limits adjacent to roadways may be updated periodically, and shared with NHDES, based on published research and/or state-specific analytical data.*
  - Soils excavated from beyond and/or below the specified LRS limits, that **DO NOT** exhibit visual or olfactory evidence of potential contamination, shall be presumed to be non-impacted and shall not require handling as impacted material.
  - Soils beyond specified LRS limits that **DO** exhibit visual evidence of LRS impacts (e.g., soils that contain more than *de minimis* amounts of asphalt fragments, and/or are discolored due to asphalt content) shall be determined to meet the definition of LRS, and shall be treated as LRS, whether previously identified or not.
  - LRS also includes any ground or pulverized asphaltic materials.

- ***Project Limits*** are defined as: project-specific areas under the control of NHDOT, subject to transportation-related construction, and /or construction-related activities that may include easements, rights-of-way, roadways, bridges, drainage features, sidewalks, and other property under the control of NHDOT.

[3] This includes all sites on the NHDES OneStop database, including both active and closed remediation sites.

[4] Project-specific areas under the control of NHDOT subject to transportation-related construction, and/or construction-related activities that may include easements, rights-of-way, roadways, bridges, drainage features, sidewalks, and other property under the control of NHDOT.

[5] Generator-knowledge includes the experience and awareness of NHDOT, the landowner (if not currently owned by NHDOT), and/or the NHDOT's consultant regarding current conditions, historic development, previous LRS reuse, and/or natural background conditions.

2.0 AREA OF CONCERN

As indicated above, LRS may be encountered within the limits of the existing right-of-way. The assumed area of impact identified in Section 1.3 above are hereafter referred to as the LRS limits. Soils excavated from beyond and/or below the specified LRS limits that do not exhibit visual or olfactory evidence[6] of potential contamination shall not require handling as impacted material.

NHDOT staff shall review the project design documents in conjunction with readily available NHDES files to determine if the project is anticipated to disturb soil at and/or downgradient from NHDES-listed sites. The Contractor shall be aware that contaminated soil may also be present in unknown locations at and in proximity to the Project Limits due to current and/or historic site development, use, practices and/or naturally-occurring geologic conditions.

If the Contractor encounters unanticipated potentially contaminated soil during construction, the Contractor shall STOP WORK and contact the NHDOT's Bureau of Environment (603-271-3226) immediately. NHDOT will assist the Contractor with requirements for handling these soils.

3.0 CONSTITUENTS OF CONCERN / ACCEPTABLE REUSE CONCENTRATIONS

For this project, it is anticipated that soil in the designated area of the project (soils adjacent to roadways, on property under the control of NHDOT, that require removal or relocation to complete construction/construction-related activities) is impacted by roadside soils/fill, also known as LRS.

Statewide analytical data collected by NHDOT, as well as nationwide information indicates that roadside soils commonly contain metals (primarily arsenic), polycyclic aromatic hydrocarbons (PAHs) and total petroleum hydrocarbons (TPH) at concentrations above naturally occurring background conditions, and in some cases at concentrations exceeding the applicable SRS.[7]

Available LRS analytical data from the State of New Hampshire are included in Appendix A; expected concentrations for "Acceptable Analytical Concentrations Acceptable for Reuse of LRS" within the Project Limits are also identified in Appendix A.

4.0 BMPs IN THE PROJECT LIMITS

The Contractor shall make every effort to utilize LRS in the Project Limits on property under the control of NHDOT as a priority over importing fill unless otherwise directed, provided that

[6] Throughout excavation activities, excavated soils shall be examined for visual and/or olfactory evidence of contamination. Visual evidence shall generally include the presence of visual staining or discoloration, and the presence of ground or pulverized asphalt in more than *de minimis* quantities. Olfactory evidence shall include odd or unusual odors (e.g., petroleum-like, solvent-like).

[7] NHDES Soil Remediation Standards (SRS, promulgated in Env-Or 600 Table 600-2, June 2015). When applied by NHDOT, this SMP should always refer to the version of Env-Or 600 current at the time of use.

the LRS is geotechnically suitable for reuse, and the handling and placement are completed according to the BMPs described in this section, and to applicable federal, state, and local rules and regulations.

The LRS management approach(s) (e.g., reuse within the Project Limits, off-site disposal) will be identified in project-specific documents.

4.1 Health and Safety

The Contractor shall plan and conduct operations to prevent damage to existing structures, safeguard people and property, and minimize disruptions to site traffic. The Contractor shall provide safe working conditions in compliance with applicable local, state and federal regulations, including health and safety regulations enforced by the Occupational Safety and Health Administration (OSHA) and/or US Department of Labor, as appropriate.

4.2 Excavation, Handling, and Placement – LRS

The Contractor shall complete earthwork related to LRS as required to meet the lines and grades specified in the project plans and as required by the project-specific contract documents. The work shall be completed to disturb the smallest area of LRS as possible.

NHDOT designs, constructs and maintains all projects under its control so as to prevent or control erosion of the land, and provide appropriate long-term stormwater management and treatment practices, in accordance with contract provisions, engineering standards, guidelines, BMPs, and all applicable regulatory standards, which also apply to the excavation, handling and placement of LRS.

Work shall stop if events occur or are imminent that might generate uncontrolled runoff, such as heavy rainfalls, or dust emissions, such as wind storms.

In all aspects of the work, the Contractor shall exercise care and diligence to prevent the mixing of impacted/presumed impacted soils with uncontaminated materials, and shall prevent migration of wastes and environmentally regulated substances. As LRS material is excavated, care shall be taken to segregate and separately stockpile excavated soil based on color, odor or other physical characteristics considered potentially significant with regard to indicating the level and type of contamination.

LRS can be temporarily stockpiled (as described in Section 4.3 of this SMP) or handled directly as "cut to fill" without segregation or stockpiling to facilitate the following LRS management options:

4.2.1 Reuse within Project Limits – LRS

LRS determined to be suitable for reuse within Project Limits shall be either:

1. Reused within the limits of previously-placed NHDOT roadway construction material; **OR**
2. Reused with **ALL** of the following conditions:
    - Reused only on property under the permanent control of NHDOT (e.g. right-of-way and/or permanent easements adjacent to right-of-way); and

- Reused outside of high-intensity public recreational use areas (e.g., rail trails), unless:
  - Placed two (2) feet below the final ground surface, covered with clean granular fill, or
  - Addressed through another NHDES-approved site-specific capping system; and
- Reused outside of residential and playground applications, as well as land used for the production of crops for direct human consumption; and
- If reused within 100-year floodplains:
  - Available reuse areas outside of 100-year floodplains are used first, or
  - Areas for reuse outside of 100-year floodplains are unavailable, and
- Reused more than 50 feet from a drinking water well or public drinking water supply; and
- If reused within 100 feet of water bodies, wetlands, or tidal buffer zones:
  - Available reuse areas beyond 100 feet of water bodies, wetlands, or tidal buffer zones are used first, or
  - Areas for reuse beyond 100 feet from water bodies, wetlands, or tidal buffer zones are unavailable, and
- Reused outside of drainage features (used for stormwater infiltration), unless adequate separation to groundwater is provided; and
- Reused outside of other areas that may reasonably be expected to erode during a significant storm event, including areas where erosion might directly discharge to surface water; and
- Reuse will adhere to the erosion and stormwater management and treatment provisions identified above (Section 4.2), as well as other applicable State and Federal regulations, regarding temporary and permanent, erosion controls and stabilization.

LRS can be temporarily stockpiled (as described in Section 4.3 of this SMP) or handled directly as "cut to fill" without segregation or stockpiling.

Where LRS is consolidated into "cells" within the Project Limits in areas that meet the setbacks to environmental receptors outlined above, the horizontal and vertical locations of the LRS consolidation areas shall be recorded by the Engineer using a global positioning system (GPS) device for NHDOT to track the location of the LRS so that the soils can be managed properly during future re-construction/maintenance activities, if necessary. The Contractor shall inform the Engineer when LRS consolidation areas are generated and identify their locations so that the Engineer can collect the necessary GPS data and provide it (in CSV format) to NHDOT for inventory mapping.

As approved by NHDOT, if LRS is reused within the LRS footprint, rather than placed in consolidation area(s), the horizontal and vertical locations of these reuse areas are not required to be shown on as-built drawings.

4.2.2 Stockpiling for Future Reuse – LRS

As discussed in Section 6.4 of this SMP, LRS can be temporarily stockpiled on property under the control of NHDOT for future reuse in accordance with the requirements of Section 4.3. For the purposes of this SMP, temporarily stockpiled means for the duration of project construction.

4.2.3 Off-Site Disposal – LRS

LRS generated by the project that cannot be reused as defined in Section 4.2.1 of this SMP can be managed in accordance with Section 6.0 of this SMP.

4.3 Stockpile Management

The Contractor shall manage LRS stockpiles to prevent the discharge of contaminants to the groundwater and surrounding soil not already known to be impacted by LRS[8]. The LRS stockpiles shall be kept separate from other on-site soil stockpiles. Specifically:

- The Contractor shall designate temporary stockpile areas within the project limits, with the location subject to the approval of the NHDOT. NHDOT shall ensure that stockpile locations are not staged near sensitive human health receptors such as public and private water supply wells or sensitive environmental receptors such as wetlands, surface water bodies, or marine environments.

- The Contractor shall establish separate stockpiles for LRS, other unanticipated contaminated soils, and other on-site stockpiled non-LRS stockpiles as encountered.

- The transfer of potentially contaminated materials from the excavation(s) to designated temporary stockpile areas shall be conducted in such a manner as to limit the spread of LRS. If a stockpile is sampled for disposal characterization analyses as described elsewhere in this SMP, then the Contractor shall not add additional material to the stockpile.

- Consistent with applicable State and Federal regulations, regarding temporary and permanent erosion controls and stabilization, the stockpile shall be graded such that stormwater runoff is diverted away from stockpiled materials (with no runon). The Contractor shall implement appropriate erosion and sediment control measures (e.g., silt fence, hay/straw bales) to prevent stormwater runon and runoff, and associated erosion by wind or water, and transport of the soil.

- The Contractor shall secure the stockpile areas (e.g. using caution flagging, fencing, or other equivalent means, as approved by NHDOT), as needed, to limit unauthorized entry and to limit contact of site workers and public access to stockpiled materials.

- The Contractor shall identify the stockpile with the origin and date of generation.

- The Contractor shall store the segregated soils onsite for a period not to exceed the timeframe identified in the project-specific contract documents without NHDOT approval.

[8] Methods to prevent the discharge of contaminants to the groundwater and surrounding soil during construction may include, among others, preventing the soil from contacting the ground, precipitation, and/or stormwater runoff via the use of 6-mil polyethylene sheeting (with applicable management practices) over and under stockpiles; or over excavating existing soil beneath and around stockpiles once removed to ensure that all stockpiled LRS is removed from the site.

4.4 Equipment Cleaning

Cleaning of all equipment (e.g., tools, heavy machinery, excavating and handling equipment) shall be completed in accordance with the requirements of the contract documents.

5.0 UNANTICPATED CONDITIONS

If the Contractor encounters unanticipated, potentially contaminated soil, the Contractor shall immediately STOP WORK, notify the NHDOT, and secure the area. The Contractor shall provide personnel trained in accordance with OSHA 1910.120 to continue work in this area.

The limits of potentially contaminated soil will be established in the field based on the NHDOT Engineer's (i.e., Environmental Consultant, NHDOT construction personnel, or the NHDOT Contamination Program, as defined in the project-specific contract documents) observations and field screening. Field screening completed by the Engineer will include using headspace sampling techniques for total volatile organic compounds (VOCs) using an appropriately calibrated photoionization detector (PID), or other field screening method appropriate for the suspected contaminant. Screening shall be based on visual and olfactory evidence at a frequency identified by the Engineer based on the extent of excavation.

If visual or olfactory evidence, or headspace screening of soils indicate a PID value above a threshold criterion of 50 ppm, the Contractor shall (when authorized by the Engineer) segregate and stockpile the soil as described herein for subsequent laboratory analysis. In accordance with Section 4.3 above, the Contractor shall establish separate stockpiles for LRS and other stockpiled soils, as encountered.

6.0 BMPS FOR EXCESS LRS AND UNANTICIPATED IMPACTED MATERIAL

This section describes the characterization, handling, and disposal requirements when excess LRS is generated by the project that cannot be reused as defined herein. This section also applies to management of unanticipated potentially contaminated soil, if encountered, on a project.

6.1 Characterization of Excess LRS

Excess stockpiled soils and unanticipated impacted materials that cannot be reused as defined herein will be sampled and analyzed for disposal characterization[9]. The entity responsible for the disposal characterization (e.g., NHDOT's Environmental Consultant or the NHDOT Contamination Program) will be identified in the project-specific contract documents, or internal NHDOT documentation.

[9] Excess LRS generated from construction activities undertaken by internal NHDOT construction personnel that does not exhibit visual or olfactory evidence of contamination may be transported to a NHDOT-owned facility for stockpiling until it may be reused along a roadway, within Project Limits, on property under the control of NHDOT, or in another use as may be individually approved by NHDES.

Disposal characterization will follow NHDES regulations (i.e., Env-Or 600 and Env-Sw 903), and the requirements of the proposed receiving facility:

- If the quantity of stockpiled LRS is less than 50 tons, sampling and analysis will not be completed, except as required by the receiving facility, in accordance with Env-Or 611.04 (c).

- If the quantity of stockpiled LRS is greater than 50 tons, sampling and analysis will, at a minimum, be based on the requirements of Env-Or-611.04. One composite soil sample will be collected per 200 tons of excavated material up to 2,000 tons, and then one composite soil sample for every additional 500 tons. The composite samples will be obtained from the stockpiled soils by homogenizing at least eight (8) discrete samples collected from newly exposed soil a minimum of 12 inches deep within the stockpile. Samples collected for VOC analysis will be collected as individual methanol-preserved soil samples for the laboratory to composite the individual samples (instead of compositing the soils in the field).

  The soil samples will be submitted for disposal characterization parameters consistent with the requirements of the proposed receiving facility, which may include the following, or a subset thereof, and not be limited to: VOCs, TPH, total RCRA-8 metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver), SVOCs or PAHs, pesticides, herbicides, PCBs, ignitability/flashpoint, corrosivity/pH, reactive sulfide, and reactive cyanide.

  Approximately two weeks will be required for analysis of the soil (stockpile) samples. The Contractor shall continue to manage the stockpile as described in Section 4.3 of this SMP until the final disposition is determined and the management approach is implemented.

Re-handling of soils in designated stockpile storage areas or exporting those soils from the site shall not occur without prior approval of the NHDOT Engineer or the NHDOT Contamination Program. Impacted/presumed impacted soils shall not be removed from the site unless the procedures described herein are implemented.

6.2 Non-Impacted Soil

Presumably non-impacted soil will include excavated material passing the initial classification criteria (visual and olfactory observations) that does not contain construction-type or other debris (e.g., municipal solid waste). This material shall be managed as non-impacted soil, unless analytical data or generator knowledge indicates the presence of contaminants of concern at concentrations other than what would be naturally occurring in the environment. Unless otherwise provided in project documents, this soil does not need to be managed as LRS, Non-Hazardous Contaminated Soil (NCS), Non-Hazardous Oil-Contaminated Soil (NOCS), or hazardous material.

Excavated material failing to meet the criteria for non-impacted soil for which on-site reuse has not been identified, and which is intended to potentially be shipped off-site for disposal, shall be sampled and tested by a qualified Environmental Consultant or the Contamination Program, as necessary, to determine the potential for on-site reuse as non-impacted material,

or off-site treatment or disposal/recycling options as impacted material. Potentially contaminated soil designated for additional testing shall be stockpiled in accordance with applicable rules and this SMP.

6.3 Disposition of Impacted Soils

Based on NHDOT experience, impacted soils are not expected to be considered hazardous wastes; however, the ultimate disposition of soils that cannot be reused shall depend on the results of stockpile characterization and an assessment of relevant management options as described herein.

6.3.1 Limited Reuse Soils (LRS)

LRS are the soils as defined herein. Similarly, soils that are chemically analyzed and contain contaminants at concentrations up to the limits provided in Appendix A shall be managed as LRS in accordance with the BMPs defined herein. LRS shall not be transported off the site for reuse at other properties unless otherwise authorized herein.

6.3.2 Non-Hazardous Contaminated Soil (NCS)

NCS is defined in Env-Or 611.02, and consists of soils that contain regulated contaminants, are not a hazardous waste as defined in RSA 147-B:2, VII, and cannot be certified as NOCS pursuant to Env-Or 611.03. Presuming the soil is not considered a RCRA "listed waste," the determination as to whether soil is NCS shall be made based on the results of laboratory analyses.

6.3.3 Non-Hazardous Oil-Contaminated Soil (NOCS)

NOCS is defined in Env-Or 611.02, and consists of soil that is contaminated with oil, is not a hazardous waste, and is certified as required by Env-Or 611.03, which requires documentation that the contamination is derived from an oil discharge from a household or regulated UST facility, and there is no reason to suspect that the soil may have been contaminated by a hazardous waste.

6.3.4 Hazardous Waste Contaminated Soil

Hazardous waste contaminated soil are those soils characterized as a hazardous waste based on the requirements outlined in RSA 147-B:2 VIII, and the hazardous waste identification requirements outlined in Env-Hw 400. Presuming the soil is not considered a Resource Conservation and Recovery Act (RCRA) "listed waste," these soils will be classified as hazardous waste based on the results of laboratory analyses completed (e.g., toxicity characteristic leaching potential [TCLP]). These soils shall be stored, treated, and disposed of in accordance with applicable local, state, and federal requirements, including the New Hampshire Hazardous Waste Rules Env-HW 100-1100.

6.4 Off-Site Management

BMPs for stockpile management provided in Section 4.3 shall apply to soils being temporarily stored outside of the Project Limits, on NHDOT-owned property, with NHDOT approval. This section does not apply to NCS and NOCS, which, when required to be temporarily stockpiled,

are both required to be stored within the Project Limits, on NHDOT-owned property/right-of-way.

6.5 Off-Site Disposal

If NHDOT has determined that reuse within the Project Limits with the foregoing BMPs is not possible and that an alternate, site-specific SMP approved by NHDES is not appropriate, then the excess soil will be managed as waste for removal to an authorized treatment or disposal facility holding appropriate federal, state, or local permits, licenses, or approvals (in accordance with Env-Sw 903). The transport and disposal of the material will be managed by the Contractor or by the NHDOT Contamination Program as required by the project-specific contract documents.

Soils subject to management under this SMP shall be managed in general conformance with the following criteria:

- Excess LRS shall not be removed from the Project Limits until it has been sampled and tested by a qualified Environmental Consultant or the NHDOT Contamination Program, as necessary, the results of the chemical analyses have been received, and the materials have been properly classified and approved by the NHDOT Contamination Program or the NHDOT's Environmental Consultant.
- LRS, impacted soil, or hazardous waste transported off-site shall be loaded into properly licensed and permitted vehicles, and transported directly to selected disposal or recycling facilities. Hazardous waste shall not be temporarily stored at an off-site facility.
- Documentation of any handling, management, sampling and analysis, transportation and off-site disposal performed by the Contractor shall be provided by the Contractor to the NHDOT. This documentation does not include sampling and analysis, transportation and off-site disposal that may be performed by NHDOT Contamination Program and/or Environmental Consultant.
- If off-site transport and disposal of LRS and/or impacted soil should occur, any documentation related to these efforts will need to be maintained and provided to NHDOT. More specifically, documentation related to off-site transport and disposal of LRS and/or impacted soil, including but not limited to, bills-of-lading/manifests, weigh tickets, analytical reports and waste profiles, shall be provided by the Contractor to NHDOT's Engineer within five (5) business days of receipt.
- Once final soil disposal options have been approved by the NHDOT or its qualified Environmental Consultant, arrangement for the transport and disposal of NCS or hazardous materials shall be made. Appropriate documentation (e.g., bills of lading, manifests) shall be used to transport soil from the site to the selected treatment or disposal facility.
- The transporter of LRS and/or impacted soil for off-site treatment or disposal shall be licensed to transport impacted soil, or hazardous material, as appropriate, to appropriate licensed disposal or recycling facilities.

FIGURES

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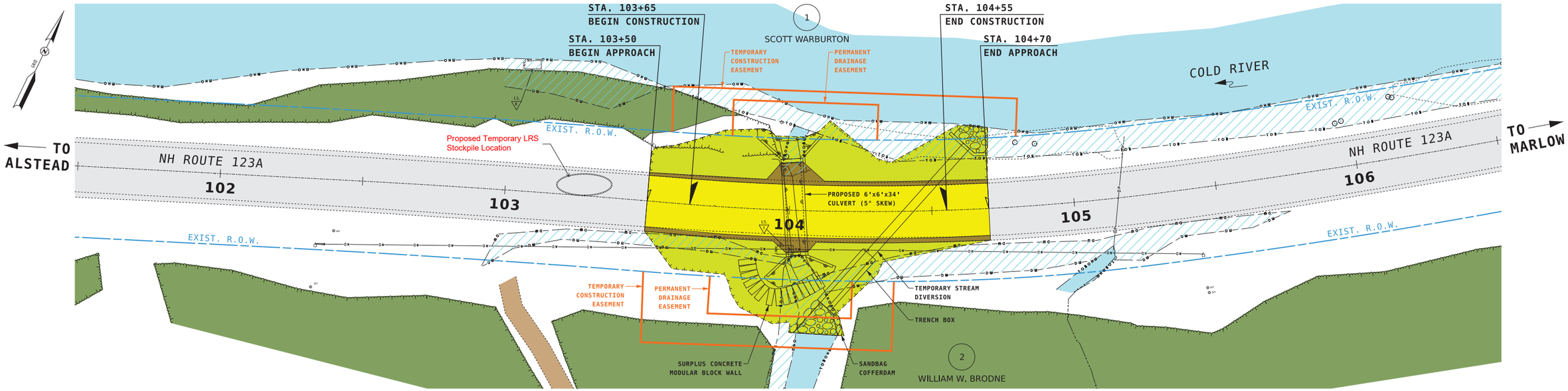
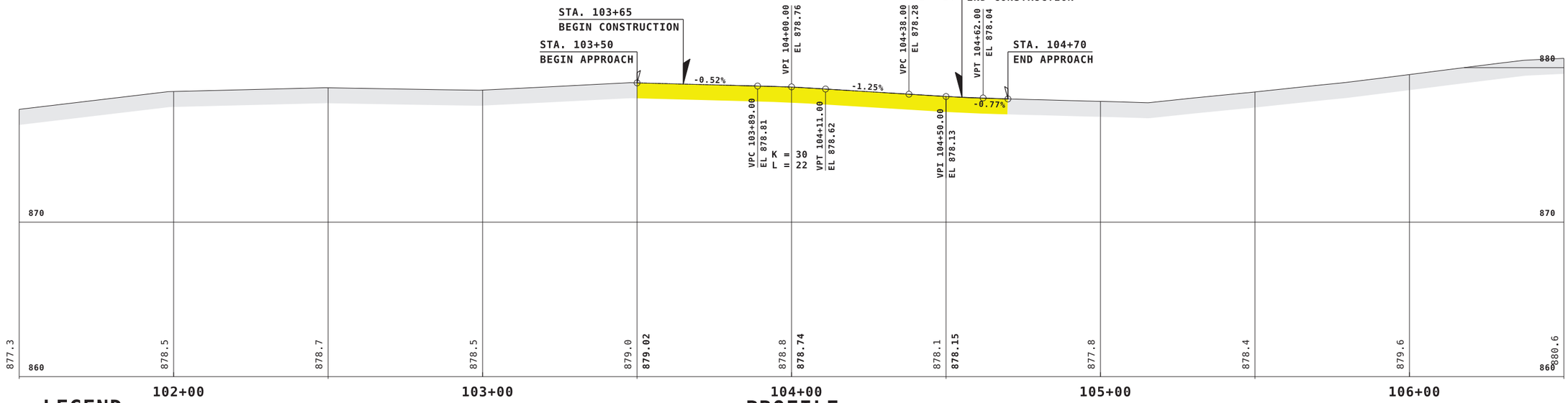


PLAN

10 0 10 20
SCALE IN FEET



PROFILE

SCALE: 1"= 10' HORIZ. & 1"= 2' VERT.

LEGEND

- Travel Way of Proposed Roadway
- Shoulder of Proposed Roadway
- Approximate Limit of Slope Work and Landscaping
- Existing Pavement (Roadways, Drives, Sidewalks, etc.)
- Existing Gravel Surface (Drives, Paths, etc.)
- Existing Tree and/or Brush Line
- Water (Rivers, Streams, Lakes, Ponds, Swamps, etc.)
- Delineated Wetlands
- Existing R.O.W. (Right -of-Way)
- Proposed Easements

PRE-ADVERTISEMENT MEETING
JULY 26, 2024
ACWORTH
43566C
(FEMA 670946)

POST PPS&E PLANS
SUBJECT TO CHANGE
DATE 7/19/2024

FIGURE 1
LRS Temporary Stockpile Location

HOYLE TANNER

New Hampshire DOT
Department of Transportation

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APPENDIX A

TABLE

Summary of Acceptable Reuse Concentrations

Table A.1
Summary of Acceptable Reuse Concentrations - NHDOT Roadside Limited Reuse Soil (LRS)

Regulated Analyte	Concentrations and Reference Values in mg/kg			
	NH SRS (Env-Or 606.19, Table 600-2)	NH Background	Roadside LRS Data	
			Maximum Concentration Detected	Roadside LRS Acceptable Reuse Concentrations
VOCs				
Benzene	0.3	NE	ND	0.3
Butylbenzene (n-)	110	NE	ND	110
Butylbenzene (sec-)	130	NE	ND	130
Butylbenzene (tert-)	100	NE	ND	100
Dichloroethane (1,2-)	0.1	NE	ND	0.1
Dioxane (1,4-)	5	NE	NA	5
Ethylbenzene	120	NE	NA	120
Isopropylbenzene	330	NE	ND	330
Isopropyltoluene (4-)	NS	NE	0.37	NS
Naphthalene	5	NE	NA	5
Methyl-tert Butyl Ether (MTBE)	0.2	NE	ND	0.2
Propylbenzene (n-)	85	NE	ND	85
Tetrachloroethylene (PCE)	2	NE	NA	2
Toluene	100	NE	0.175	100
Trimethylbenzene (1,2,4-)	130	NE	ND	130
Trimethylbenzene (1,3,5-)	96	NE	ND	96
Xylene (m,p-)	NS	NE	NA	NS
Xylene (o-)	NS	NE	NA	NS
Xylenes (total)	500	NE	0.44	500
PAHs – Carcinogenic				
Benzo(a)anthracene	1	NE	2.28	4
Benzo(a)pyrene	0.7	NE	2.71	5
Benzo(b)flouranthene	1	NE	5.23	52
Benzo(k)flouranthene	12	NE	1.6	36
Chrysene	120	NE	3.05	120
Dibenzo(a,h)anthracene	0.7	NE	0.11	5
Indeno(1,2,3-cd)pyrene	1	NE	1.4	4
PAHs – Noncarcinogenic				
Acenapthene	340	NE	ND	340
Acenaphthylene	490	NE	1.1	490
Anthracene	1,000	NE	0.68	2,500
Benzo(g,h,i)perylene	NS	NE	1.2	NS
Carbazole	NS	NE	NA	NS
Dibenzofuran	NS	NE	NA	NS
Fluoranthene	960	NE	6.33	2,500
Fluorene	77	NE	ND	77
Methylnaphthalene (2-)	96	NE	ND	96
Naphthalene	5	NE	ND	5
Phenanthrene	NS	NE	3.2	NS
Pyrene	720	NE	4.4	720
Polychlorinated Biphenyls (PCBs)	1	NE	NA	1
Total Petroleum Hydrocarbons (TPH)	10,000	NE	NA	500
Metals				
Arsenic	11	11	15	25
Barium	1,000	NE	70	1,000
Cadmium	33	2	1.3	33
Chromium (VI)	130	33	NA	130
Chromium (Total)	1,000	33	260	1,000
Lead	400	51	50	100
Mercury	7	0.3	0.16	7
Selenium	180	5	ND	180
Silver	89	NE	ND	89

Notes:
1. Results were provided to Sanborn Head by NHDOT.
2. Concentrations are presented in milligrams per kilogram (mg/kg), which are equivalent to parts per million (ppm), except where noted.
3. Only those analytes detected in one or more samples are shown.
4. "ND" indicates not detected above the laboratory reporting limit.
5. The Soil Remediation Standards (SRS) were promulgated in Env-Or 600 (June 2015).
6. NH Background metals concentrations are presented in "Background Metals Concentration Study, New Hampshire Soils," available from the NHDES website: (https://www.des.nh.gov/organization/divisions/waste/hwrb/documents/background_metals.pdf).
7. "NS" indicates no standard.
   "NE" indicates background has not been established.
   "NA" indicates samples were not analyzed for this parameter.
8. **Bold** indicates the detected concentration exceeds the "Roadside LRS Acceptable Concentrations."
9. Xylenes (total) indicates the sum of the detected concentrations of Xylenes (m,p -) and Xylenes (o-).

Table 1
Summary of Available Analytical Data
NHDOT Roadside Limited Reuse Soil (LRS)
Various Locations, New Hampshire

																Concentrations and Reference Values in mg/kg
	Acceptable Reuse Concentrations	**Maximum LRS Concentration Detected**	**NH SRS (Env-Or 606.19, Table 600-2)**	**NH Background**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
				Sample Date	**4/20/2015**	**4/28/2015**	**4/21/2015**	**12/23/2014**	**10/6/2014**	**8/28/2014**	**8/28/2014**	**6/30/2014**	**8/9/2013**	**8/5/2013**	**8/5/2013**
Metals															
Arsenic	25	**15**	11	11	2.8	4.8	10	5.6	2.4	2.7	6.1	1.7	3	2.3	4.6
Barium	1,000	70	1,000	NE	15	15	21	19	22	21	25	23	13	20	30
Cadmium	33	1	33	2	ND	ND	ND	ND	ND	ND	0.5	ND	ND	ND	0.8
Chromium (VI/Total)	130/1,000	260	1,000	33	8.2	12	42	14	12	12	25	11	11	7.4	34
Lead	100	50	400	51	7.7	12	12	9.5	6.2	22	19	15	6.6	4.2	17
Mercury	7	0.16	7	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	180	ND	180	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	89	ND	89	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOCs															
Benzene	0.3	ND	0.3	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloroethane, 1,2-	0.1	ND	0.1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	330	ND	330	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl-t-butyl ether	0.2	ND	0.2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	100	0.175	100	NE	ND	ND	ND	ND	ND	ND	ND	ND	0.0042	0.0078	ND
Xylene (total)	500	0.440	500	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzene, n-	110	ND	110	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzene, sec-	130	ND	130	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzene, tert-	100	ND	100	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl toluene, 4-	NE	0.37	--	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0011	ND
Propylbenzene, n-	85	ND	85	NE	ND	ND	ND	ND	ND			ND	ND	ND	ND
Trimethylbenzene, 1,2,4-	130	ND	130	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trimethylbenzene, 1,3,5-	96	ND	96	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PAHs – Carcinogenic															
Benzo(a)anthracene	4	**2.28**	1	NE	0.49	0.52	0.7	0.17	0.19	ND	**1.5**	**1.2**	ND	0.77	ND
Benzo(a)pyrene	5	**2.71**	0.7	NE	0.54	0.63	**0.73**	0.2	0.23	0.49	**1.4**	**1.1**	ND	ND	ND
Benzo(b)flouranthene	52	**5.23**	1	NE	0.78	0.92	**1**	0.27	0.34	0.69	**2.4**	**1.5**	ND	0.75	ND
Benzo(k)flouranthene	36	1.6	12	NE	0.27	0.34	0.35	0.091	0.11	ND	0.9	0.5	ND	ND	ND
Chrysene	120	3.05	120	NE	0.7	0.74	0.82	0.25	0.27	0.57	1.9	1.3	ND	0.92	ND
Dibenzo(a,h)anthracene	5	0.11	0.7	NE	ND	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	4	**1.4**	1	NE	0.42	0.49	0.5	0.14	0.17	0.45	**1.3**	0.79	ND	ND	ND
PAHs – noncarcinogenic															
Acenapthene	340	ND	340	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	490	1.1	490	NE	ND	ND	ND	0.088	ND	ND	ND	0.44	ND	ND	ND
Anthracene	2,500	0.68	1,000	NE	ND	0.12	ND	ND	ND	ND	0.46	ND	ND	ND	ND
Fluoranthene	2,500	6.33	960	NE	1.2	1.3	1.9	0.39	0.51	1	4.5	2.7	ND	1.5	ND
Fluorene	77	ND	77	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylnaphthalene, 2-	96	ND	96	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	5	ND	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo (g,h,i) perylene	NE	1.2	NE	NE	0.4	0.48	0.45	0.14	0.15	0.47	1.2	0.8	ND	0	ND
Phenanthrene	NE	3.2	NE	NE	0.72	0.58	0.95	0.22	0.21	0.51	2.5	1.4	ND	1	ND
Pyrene	720	4.4	720	NE	1.0	1.1	1.5	0.4	0.39	0.93	3.3	2.7	ND	1.5	ND

Notes:

1. Data were provided to Sanborn, Head & Associates, Inc. (Sanborn Head) by the New Hampshire Department of Transportation (NHDOT).
2. Concentrations are provided in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).
3. "<" indicates the analyte was not detected above the indicated laboratory reporting limit.
   "-" indicates the sample was not analyzed for this parameter.
   "NE" indicates a standard has not been established for this parameter.
   "ND" indicates that this parameter was not detected at a concentration greater than the laboratory reporting limit.
4. The Soil Remediation Standards (SRS) were promulgated in Env-Or 600 (June 2015).
5. NH Background metals concentrations are presented in "Background Metals Concentration Study, New Hampshire Soils," available from the NHDES website (https://www.des.nh.gov/organization/divisions/waste/hwrb/documents/background_metals.pdf).
6. A **bold** value indicates the detected concentration exceeds the SRS.
7. A shaded value indicates the detected concentration exceeds the Roadside LRS Acceptable Reuse Concentration.

Table 1
Summary of Available Analytical Data
NHDOT Roadside Limited Reuse Soil (LRS)
Various Locations, New Hampshire

	Acceptable Reuse Concentrations	Maximum LRS Concentration Detected	NH SRS (Env-Or 606.19, Table 600-2)	NH Background	12	13	14	15	16	17	18	19	20	21	22	23	24	25
				Sample Date	7/29/2013	7/29/2013	6/18/2013	6/18/2013	9/15/2010	12/10/2009	10/8/2009	7/23/2009	7/23/2009	7/23/2009	9/3/2009	9/3/2009	7/16/2007	7/16/2007
Metals																		
Arsenic	25	**15**	11	11	**15**	1.5	**12**	7.8	4.2	4	5.5	5.4	4.5	5.2	2.9	2.9	7	4.7
Barium	1,000	70	1,000	NE	21	20	70	14	20	22	36	2.5	54	44	14	14	20±	10±
Cadmium	33	1	33	2	1.3	ND	1.1	ND	ND	0.3±	ND	0.86	1.2	0.92	ND	ND	ND	ND
Chromium (VI/Total)	130/1,000	260	1,000	33	20	11	24	12	29	15	23	36	42	260	10	10	21	13
Lead	100	50	400	51	29	16	32	13	15	17	33	21	16	37	15	15	50	17
Mercury	7	0.16	7	0.3	ND	ND	ND	ND	0.16	ND	ND	ND	ND	ND	ND	ND	0.08	0.03±
Selenium	180	ND	180	5	ND	ND	ND	ND	ND	ND	0.4±	ND	ND	ND	ND	ND	0.1±	0.1±
Silver	89	ND	89	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOCs																		
Benzene	0.3	ND	0.3	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloroethane, 1,2-	0.1	ND	0.1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	330	ND	330	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl-t-butyl ether	0.2	ND	0.2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	100	0.175	100	NE	ND	0.13	ND	ND	ND	ND	ND	0.17	ND	ND	0.175	0.175	ND	ND
Xylene (total)	500	0.440	500	NE	ND	ND	0.44	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzene, n-	110	ND	110	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzene, sec-	130	ND	130	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzene, tert-	100	ND	100	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl toluene, 4-	NE	0.37	--	NE	ND	ND	0.37	ND	ND	ND	ND	ND	ND	ND	0.132	0.132	ND	ND
Propylbenzene, n-	85	ND	85	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trimethylbenzene, 1,2,4-	130	ND	130	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trimethylbenzene, 1,3,5-	96	ND	96	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PAHs – Carcinogenic																		
Benzo(a)anthracene	4	**2.28**	1	NE	ND	**1.8**	ND	ND	0.414	0.784	0.6	-	-	-	-	-	**2.28**	**1.97**
Benzo(a)pyrene	5	**2.71**	0.7	NE	ND	**1.6**	ND	ND	0.52	**0.85**	0.677	-	-	-	-	-	**2.71**	**2.49**
Benzo(b)flouranthene	52	**5.23**	1	NE	ND	**2.2**	ND	ND	**1.07**	**1.53**	**1.25**	-	-	-	-	-	**5.23**	**4.59**
Benzo(k)flouranthene	36	1.6	12	NE	ND	0.89	ND	ND	0.358	0.483	0.348	-	-	-	-	-	1.6	1.2
Chrysene	120	3.05	120	NE	ND	2.2	ND	ND	0.51	1.04	0.829	-	-	-	-	-	3.05	3
Dibenzo(a,h)anthracene	5	0.11	0.7	NE	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	ND	ND
Indeno(1,2,3-cd)pyrene	4	**1.4**	1	NE	ND	**1.4**	ND	ND	0.175±	0.509	0.213±	-	-	-	-	-	ND	0.720±
PAHs – noncarcinogenic																		
Acenapthene	340	ND	340	NE	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	ND	ND
Acenaphthylene	490	1.1	490	NE	ND	1.1	ND	ND	0.160±	0.220±	ND	-	-	-	-	-	ND	ND
Anthracene	2,500	0.68	1,000	NE	ND	0.68	ND	ND	ND	0.296	0.140±	-	-	-	-	-	ND	ND
Fluoranthene	2,500	6.33	960	NE	ND	4.3	ND	ND	0.957	2	1.47	-	-	-	-	-	6.22	6.33
Fluorene	77	ND	77	NE	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	ND	ND
Methylnaphthalene, 2-	96	ND	96	NE	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	ND	ND
Naphthalene	5	ND	5	NE	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	ND	ND
Benzo (g,h,i) perylene	NE	1.2	NE	NE	ND	1.2	ND	ND	0.158±	0.428	0.168±	-	-	-	-	-	0	0
Phenanthrene	NE	3.2	NE	NE	ND	3.2	ND	ND	0.464	1.11	0.65	-	-	-	-	-	2.45	2.51
Pyrene	720	4.4	720	NE	ND	4.1	ND	ND	1.02	1.8	1.05	-	-	-	-	-	4.17	4.4

Notes:

1. Data were provided to Sanborn, Head & Associates, Inc. (Sanborn Head) by the New Hampshire
2. Concentrations are provided in milligrams per kilogram (mg/kg) which are equivalent to parts p
3. "<" indicates the analyte was not detected above the indicated laboratory reporting limit.
   "-" indicates the sample was not analyzed for this parameter.
   "NE" indicates a standard has not been established for this parameter.
   "ND" indicates that this parameter was not detected at a concentration greater than the laborat
4. The Soil Remediation Standards (SRS) were promulgated in Env-Or 600 (June 2015).
5. NH Background metals concentrations are presented in "Background Metals Concentration Stud
6. A **bold** value indicates the detected concentration exceeds the SRS.
7. A shaded value indicates the detected concentration exceeds the Roadside LRS Acceptable Reus

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SPECIAL ATTENTION

INVASIVE SPECIES

The statutory authority of NH Department of Agriculture *RSA 430:55* and NH Department of Environmental Services RSA 487:16-a prohibits the spread of invasive plants listed on the NH Prohibited Species list. Construction activities should avoid impacting areas containing invasive plant species in order to avoid spreading these plants to new sites. If invasive plants cannot be avoided, then the following suggested best management practices (BMPs) should be incorporated into all projects. These BMPs have been summarized from the NHDOT manual *Best Management Practices for the Control of Invasive and Noxious Plant Species.*

Earthwork:

- Minimize soil disturbance whenever possible outside the limits of excavation.
- Stabilize disturbed soils by seeding and/or using mulch, hay, rip-rap, or gravel that is free of invasive plant material.
- Materials such as fill, loam, mulch, hay, rip-rap, and gravel should not be brought into project areas from sites where invasive plants are known to occur.

Movement of equipment:

- Equipment movement should be from areas not infested by invasive plants to areas infested by invasive plants whenever possible.
- Staging areas should be free of invasive plants to avoid spreading seeds and other viable plant parts.

Removing vegetation:

- In areas where Type I invasive plants will be impacted by construction activities, vegetation shall be cut or removed prior to seed maturation (approximately July 1st).
- Because Type II invasive plants (e.g., purple loosestrife, phragmites, and Japanese knotweed) have the ability to sprout from stem and root fragments, mowing these plants shall be avoided. In areas where Type II invasive plants will be impacted by construction activities, cut these plants by other means, and destroy all plant material. Extra care shall be taken to avoid spreading plant fragments.
- Equipment used to cut or remove invasive plants should be cleaned at least daily, as well as prior to transport.

The NHDOT manual *Best Management Practices for the Control of Invasive and Noxious Plant Species* and supporting fact sheet documents are available on line at www.dot.nh.gov/projects-plans-and-programs/programs/environmental-management-system/invasive-species or through the NHDOT Records Section (603-271- 1601).

Items will be included in the contract under Sections 201 and 697 for projects that will require these control methods.

CHAPTER Env-A 1000 PREVENTION, ABATEMENT, AND CONTROL OF OPEN SOURCE AIR POLLUTION

Statutory Authority: RSA 125-C:4

PART Env-A 1001 OPEN BURNING

Env-A 1001.01 Purpose. The purpose of this part is to regulate emissions of particulate matter and toxic air pollutants from the burning of materials in the open where the products of combustion are discharged directly into the atmosphere rather than through a stack, chimney, or flue, in order to achieve and maintain attainment of the ambient air quality standards in accordance with sections 109 and 110 of the Clean Air Act, and to protect the public health and welfare pursuant to RSA 125-C:1.

Env-A 1001.02 Scope. This part shall apply to any natural person, firm, corporation, association, municipality or state agency that conducts open burning within the state.

Env-A 1001.03 Permissible Burning.

(a) Open burning in any part of the state shall be done only when the following conditions are satisfied:

(1) When not prohibited by any local ordinance;

(2) When not prohibited by an official having jurisdiction over open burning;

(3) When no nuisance is created; and

(4) When all materials that are burned are in conformance with this part.

(b) Throughout the state, only the following types of burning shall be permissible without authorization from the division:

(1) Burning of untreated wood, campfire wood, brush or charcoal in a campfire, outdoor grill or outdoor fireplace for recreational purposes or for the preparation of food;

(2) On-premises burning for the purpose of frost prevention, or agricultural, forestry, or wildlife habitat improvement;

(3) Burning of solid fuel, liquid fuel, a motor vehicle, or a structure that has been certified to be free of asbestos in accordance with Env-C 400, provided that the following conditions shall be met:

a. The burning shall be conducted to provide bona fide instruction and training of firefighters in methods of fighting fires;

b. The burning shall be conducted under the direct control and supervision of qualified instructors; and

c. Written permission shall have been obtained in advance from the New Hampshire department of resources and economic

development, division of forests and lands, bureau of forest protection; or

(4) Burning of untreated wood, campfire wood or brush in bonfires in conjunction with holiday or festive celebrations.

(c) In an area which has been classified as “attainment” of the ambient air quality standards for particulates pursuant to Env-A 300, the following types of burning shall be permissible without authorization from the division:

(1) Burning of combustible domestic rubbish from a residence where the following conditions exist:

a. There is no public removal service;

b. The burning shall occur on-premises in a waste burner having a capacity of 7 cubic feet or less; and

c. The waste is generated from a residential building containing 4 or less dwelling units;

(2) Periodic on-site burning by the landowner of brush and leaves which originate on-site;

(3) Commercial burning of brush, provided that no other disposal method, such as chipping, can be utilized; or

(4) Burning of untreated wood from the construction or demolition of a building, provided that such burning shall be done in an area which shall be specified and approved by officials having jurisdiction over open burning.

Env-A 1001.04 Division Authorization for Certain Open Burning.

(a) In addition to any other required state or local permits or authorizations, written authorization shall be obtained from the division prior to conducting any of the following types of open burning:

(1) Burning of materials as described in Env-A 1001.03(c), above, in an area of the state that has been classified as “non-attainment” of the ambient air quality standards for particulates pursuant to Env-A 300;

(2) Burning by any city or town of brush or untreated wood from the construction or demolition of a building, provided the material originates within the state; or

(3) Open burning of explosive or dangerous material for which there is no other feasible method of safe disposal.

(b) The open burning in this section shall only be done in an area which is approved by the division and all officials having jurisdiction over open burning.

(c) The written authorization from the division shall include the date, time, and place where the open burning shall be permissible and any conditions and requirements which are necessary to ensure the safeness of the

burning and to properly regulate the emissions.

Env-A 1001.05 Absolute Prohibition Against Burning Tires and Tubes.

(a) No tires, tubes or any portion thereof shall be burned in the ambient air at any place in the state for any reason.

(b) Tires, tubes or any portion thereof which are received at any dump shall be separated from the waste and disposed of by a feasible means other than open burning.

Env-A 1001.06 Absolute Prohibition Against Burning in the Ambient Air at Salvaging or Reclaiming Operations.

(a) A suitable incinerator or other means of compliance approved by the division pursuant to Env-A 1201 shall be employed for all thermal salvaging or reclaiming.

(b) No salvaging or reclaiming operation shall burn anything on-site in the ambient air.

PART Env-A 1002 FUGITIVE DUST

Env-A 1002.01 Purpose. The purpose of this part is to regulate the direct emissions of particulate matter to the atmosphere from activities that involve mining, transportation, storage, use, and removal of mineral material or soil.

Env-A 1002.02 Scope.

(a) This part shall apply to any natural person, firm, corporation, association, municipality or state agency that emits fugitive dust within the state, including those engaged in any of the following:

(1) Commercial mining activities, including the construction, maintenance or operation of a commercial mining or strip mining facility or part thereof;

(2) Construction activities, including building, paving, sweeping, trenching, excavating, filling, or other activity associated with the building of streets, roads, highways, parking lots, shopping centers, housing developments, or other centers of business or residential development;

(3) Maintenance activities, including sweeping, vacuuming, or other activity involved with the upkeep of streets, roads, highways, parking lots, shopping centers, housing developments, or other centers of business or residential development, buildings, bridges, utilities, sewerlines, waterlines, or similar entities;

(4) Demolition activities, including the tearing down of buildings, bridges or other structures; and

(5) Bulk hauling activities, including the transportation and transfer of material over public roads.

(b) This part shall not apply to the following:

(1) Application of traction enhancement materials, including sand, and de-icing chemicals such as road salt, that have been applied to roads for public safety;

(2) Normal usage of gravel or dirt roads;

(3) Resurfacing activities of existing highways where the removal of surplus sand is not necessary; and

(4) Agricultural industry activities or operations.

Env-A 1002.03 Precautions to Prevent, Abate, and Control Fugitive Dust. Precautions shall be taken and continued throughout the duration of the activity in order to prevent, abate, and control the emission of fugitive dust. Such precautions shall include wetting, covering, shielding, or vacuuming.

SPECIAL ATTENTION

HISTORIC AND ARCHAEOLOGICAL RESOURCES

In order to avoid impacts to archaeological resources, the Contractor shall obtain and submit to the Engineer a written certification from either: 1) the State Archaeologist, or 2) a qualified archaeologist as defined below prior to any offsite excavation or other work at any disposal site, haul road, storage area, staging area, or other areas located outside the right-of-way limits of the project. Such certification shall be made on one of the attached forms. One is intended for site clearance by the state archaeologist and the other for investigation by a qualified archaeologist. Any work in such areas may only commence after receipt of this certification and upon written authorization to proceed by the Engineer.

This Special Attention does not apply to natural materials obtained from pre-existing (i.e., owned and operated by the Contractor prior to bidding on the subject contract) and/or commercially available sources. Commercially available sources is meant to include licensed or permitted sources where anyone could purchase natural materials.

If the State Archaeologist determines that further field investigation is necessary the Contractor must decide whether to pursue alternative locations or to have the site(s) in question evaluated. If the latter is decided, it will be necessary for the Contractor and the Engineer to meet with the NHDOT Bureau of Environment, the Division of Historic Resources and the Federal Highway Administration to determine the appropriate course of action. Note that the latter parties meet twice a month on the first and second Thursdays of each month.

Professional Qualifications for Principal Investigators in Archaeological Investigations

All archaeologists contracting with NHDOT as principal investigators will be qualified for such work, as determined by NHDHR. **See list of qualified archaeological firms at** www.nhdhr.dncr.nh.gov/project-review/consultant-lists**.** According to NHDHR guidelines, principal investigators must meet the minimum standards presented in 36 CFR 61.

These regulations require a graduate degree in archaeology, anthropology, or related field; at least one year full-time professional experience or an equivalent period of training in archaeological research, administration, or management; at least four months of supervised field and analytical experience in general North American archaeology; and demonstrated capability to complete archaeological research through all its phases. These standards distinguish between the prehistorian and historical archaeologist. Each must have a specialization in his/her respective areas and at least one year of full-time professional experience at the supervisory level in the study of the Native American cultural traditions or the historic period.

NHDHR also requires the following additional qualifications. All prehistorians will have at least one year of supervisory experience in the region encompassing the glaciated Northeast. Historical archaeologist will have a least one year of supervisory experience in New England, New Jersey, New York, or Pennsylvania. Historical archaeologists specializing in submerged nautical resources will possess at least one year's experience in the study of such resources along the Atlantic seaboard. NHDOT requires that the principal investigator has successfully completed one or more projects in New Hampshire in a timely manner. Principal investigators will be knowledgeable about the federal and state cultural resources management laws and regulations including those relating to the treatment of human remains in marked and unmarked graves. As soon as research or initial investigations indicate the likely presence of Native American or historic deposits, a principal investigator with training and experience in that area shall supervise the work.

The principal investigator is responsible for each aspect of the project. The principal investigator will maintain sufficient presence in repositories, the field, and laboratory to set up the study, ensure appropriate collection and accurate documentation of data, direct needed modifications as investigations proceed, field-check accuracy of field data, establish and direct analysis, and oversee documentation and preparation of recommendations at its close. In phases II and III as the intensity of excavation increases, it is anticipated that this presence will proportionately rise. All research, field investigations, analysis, and report preparation will be completed within the schedule set in the authorization of work unless notification is given and adequate justification is provided to NHDOT.

Depending on the nature of the site, the prehistoric or historic archaeologist may require additional qualifications or additional personnel qualified in other fields that may not be specified under 36CFR61. For example, projects for NHDOT encounter situations in which personnel with expertise and/or demonstrated experience in geomorphology, botany, faunal analysis, forensic anthropology, and industrial and urban archaeology are needed. These individuals will possess graduate training in their field, two years of professional experience in the area of expertise for which they are being consulted, and the demonstrated ability to complete a research project with a report of findings. Principal investigators may also need to add architectural historians, historians, historical landscape architects, etc. to their team whose professional qualifications will follow those provided in 36 CFR 61.

CERTIFICATION BY NHDHR

For the purpose of compliance with the Special Attention, Historic and Archeological Resources, dated February 14, 2003, relative to Federal-Aid Highway Project No. _____, NHDOT Project No. _____, I certify the following:

1. That I have reviewed the maps, plats, photographs or other identifying geographical information supplied to me by the Contractor.

2. That the areas located on these maps, etc. are to be utilized by the Contractor _____ _____ for the following purposes:

   a. Excavation area _____.
   b. Waste material area _____.
   c. Storage or staging area _____.
   d. Haul road _____.
   e. Other (describe) _____
      _____
      _____.

3. That I have reviewed the NHDHR site files relative to these locations and proposed uses.

4. On the basis of the above information, I have concluded that:

   a. The location(s) have been previously reviewed, no resources have been identified, and there is no need for further archaeological evaluation _____.
   b. The location(s) are such that no further archaeological evaluation is necessary _____.
   c. The location(s) are such that further field investigation is necessary _____.

_____ _____
NHDHR Review and Compliance Coordinator Date

Received:

_____ _____
NHDOT Contract Administrator Date

cc: FHWA
NH Division of Historical Resources
NHDOT, Bureau of Environment

CERTIFICATION BY ARCHAEOLOGICAL CONTRACTOR

For the purpose of compliance with the Special Attention, Historic and Archeological Resources, dated February 14, 2003, relative to Federal-Aid Highway Project No. _____, NHDOT Project No. _____, I certify the following:

1. That I have examined the areas identified on the attached plans, maps, or property plats.

2. That these areas are to be utilized by the Contractor _____ for the following purposes:
   a. Excavation area _____.
   b. Waste material area _____.
   c. Storage or staging area _____.
   d. Haul road _____.
   e. Other (describe) _____
   _____
   _____.

3. That I have used the following techniques in my examination:

   a. Literature search _____
   b. Walkover (describe methodology) _____
   _____
   c. Subsurface testing (if appropriate) _____
   _____

4. That in my professional opinion, there is minimal or no likelihood that there are cultural resources (either historic or pre-historic) present or that any such resources present have integrity, and that there is no need for any other evaluative measures prior to the use of the areas described above for the purposes noted.

_____ _____
Archaeological Contractor Date

Review by: _____ _____
NHDHR Review and Compliance Coordinator Date

Received:

_____ _____
NHDOT Contract Administrator Date

cc: FHWA
NH Division of Historical Resources
NHDOT, Bureau of Environment

August 16, 2024

S P E C I A L A T T E N T I O N

ELECTRONIC DESIGN DATA AND 3D TERRAIN MODELS

The New Hampshire Department of Transportation, hereinafter referred to as "the Department," provides certain electronic design data prepared by the Department and/or its consultants in accordance with the NHDOT CAD/D Procedures and Requirements, hereinafter referred to as the "Design Files," for Contractor use in bidding and ultimately constructing the project. (The information provided in the noted files is created with MicroStation® and Bentley® civil design software applications.)

This project:

- ☐ does not have Design Files.
- ☑ has Design Files but does not have 3D terrain models.
- ☐ has Design Files including 3D terrain models.

The Department provides the Design Files subject to the following conditions:

1. For projects that do not include 3D terrain models, the Design Files contributing to the final plan set will be provided following contract award.
2. For projects that include 3D terrain models, the models and supporting information are provided to all Bidders upon project advertisement. These files are identified as follows:

<u>3D Terrain Models</u>

- ☐ 3D terrain model representing the existing ground in DGN format
- ☐ 3D terrain model representing the design (finished ground) surfaces in DGN format
- ☐ 3D terrain models representing the subgrade, in DGN format
- ☐ 3D terrain model representing the existing ground in LandXML format
- ☐ 3D terrain model representing the design (finished ground) surfaces in LandXML format
- ☐ 3D terrain model representing the subgrade, in LandXML format

<u>Alignment Data Files</u>

- ☐ Geometry files containing horizontal and vertical profiles in DGN format
- ☐ Geometry files containing horizontal and vertical profiles in LandXML format
- ☐ Alignment Geometry Report (ASCII Report format)

<u>Other Design Files</u>

- ☐ Cross section Design Files (DGN & DXF formats).
- ☐ ROW Design Files (DGN & DXF formats).
- ☐ Existing natural and manmade features (DGN & DXF formats).
- ☐ Proposed features (DGN & DXF formats).
- ☐ Existing and proposed above ground and subsurface utilities and drainage features (DGN & DXF formats).

Note: Additional Design Files that contributed to the final plan set may be provided following contract award.

3. The Department and its consultants will provide a complete Project Journal to the Contractor that will define the files provided. Information in the Project Journal will include, but is not limited to, the following: project units; project scale; file names and associated descriptions; an index of all 3D terrain models provided, what they are used for, and horizontal and vertical extents of the data indicating any areas where the model may not be suitable for use by the Contractor; and an index of all alignments used, with descriptions.

4. The Design Files are provided as a convenience to the Contractor in connection with the Contractor's responsibilities and obligations relating to the project. The Department shall not be construed to have performed any services in connection with the Contractor's use of the Design Files, shall have no liability for any aspect of their use, and has no contractual relationship with the Contractor in connection with their use.

5. The Contractor shall not take advantage of any ambiguity or error contained within the data and, upon discovery of any ambiguity or error, shall notify the Department immediately before proceeding.

6. The Design Files are not, nor shall they be construed to be, a product or products. There are no warranties of any kind in such Design Files or in the media in which they are contained, either expressed or implied, including any warranty of merchantability or warranty of fitness.

7. Any conversion of the format is solely the responsibility of the Contractor. Conversion of Design Files from the machine-readable format used by the Department to some other format may introduce errors or other inaccuracies. The Contractor shall confirm the accuracy of any converted Design Files before using them. The Contractor shall take particular care to ensure that all files converted to other file formats maintain the same units of measure and coordinate system of the original data.

8. Any 3D terrain models created by the Contractor or their agents, for construction layout and/or automated machine guidance, shall be submitted to the Department in Bentley DGN or LandXML format. Submittal of the 3D terrain models to the Department, for digital inspection efforts onsite, shall occur no less than 21 calendar days in advance of Contractor's use onsite. No changes to the 3D terrain models shall be made after submittal without prior approval from the Engineer.

9. The Contractor shall not use, or allow others to use the Design Files, in whole or in part, for any purpose or project other than as stated above, without prior express written permission from the Department. Any assumptions the Contractor makes from this electronic information is at the Contractor's risk.

SPECIAL ATTENTION

FUEL ADJUSTMENT

(a) The shortage of all products in relation to the national and worldwide energy situation has made future costs of fuel unpredictable. For this reason, a price adjustment clause is being inserted in this contract to provide for either additional compensation to the Contractor or payment to the State, depending upon an increase or decrease in the price of fuel.

(b) The fuel usage factors, which will be applied to the several items of the Contract shall be those set forth in Table 1.

(c) Price adjustment will be based upon the quantity of fuel incorporated in the work as determined by the factors in Table 1.

- When the monthly sales price determined per paragraph (f) is more than 110% of the fixed base price set forth in paragraph (e), a contract adjustment will be made under Item 1010.15 based on: [monthly sales price less 110% of the fixed base price] multiplied by [item quantity eligible for payment during month] multiplied by [fuel factor].

- When the monthly sales price determined per paragraph (f) is less than 90% of the fixed base price set forth in paragraph (e), a contract adjustment will be made under Item 1010.15 based on: [monthly sales price less 90% of the fixed base price] multiplied by [item quantity eligible for payment during month] multiplied by [fuel factor].

(d) The Contractor warrants that its bid prices for this Contract include no allowances for any contingency to cover increased costs for which adjustment is provided herein.

(e) The fixed base price of fuel will be $ 2.6590 per gallon.

- This price is used solely to compute price adjustments. The fuel price will be the lower bulk retail price of **ultra low sulfur diesel fuel** for Boston as published by OPIS (Oil Price Information Service) in the Oil Price Daily, formerly known as the Journal of Commerce, and will include current Federal and State taxes.

(f) The monthly sales price of fuel will be determined by the Department based on the following schedule:

2024					
Month	**Publication Date**	**Month**	**Publication Date**	**Month**	**Publication Date**
January	December 26, 2023	May	April 22, 2024	September	August 26, 2024
February	January 22, 2024	June	May 28, 2024	October	September 23, 2024
March	February 26, 2024	July	June 24, 2024	November	October 28, 2024
April	March 25, 2024	August	July 22, 2024	December	November 25, 2024

Monthly sales prices will be set in the same manner as indicated in paragraph (e).

(g) When an adjustment is called for as provided in paragraph (c), the monthly sales price determined in paragraph (f) will be used for work accomplished in the following month.

(h) No price adjustment will be allowed beyond the Project completion date unless there is a Department-approved extension of time. Price adjustments will be made on quantities adjusted as a result of the final audit.

(i) The Department will not be responsible for computing or otherwise indicating price adjustments except to the prime contractor, which must make its own arrangements with its subcontractors.

(j) When no item for Fuel Adjustment is included in the Contract no adjustments will be made.

Pay item and unit:

1010.15 Fuel Adjustment [1] $

[1] Not a bid item.

Table 1 - FUEL FACTORS

Item of Work	Item No.	Units	Fuel
Excavation:			
Earth	203.1_,.4_ 203.50_,.51_,.52_ 203.6_,.7_ 206.1_ 207.1_ 504.1_	gal/c.y.	0.26
Rock	203.2_ 206.2_ 207.2_ 504.2_	gal/c.y.	0.34
Other	203.3_ 206.3_ 207.3_ 583._ 585._ 586._ 587._	gal/c.y.	0.31
Bases:			
Unprocessed	209._ 304.1_,.2_	gal/c.y.	0.46
Processed [4]	304.3_ 304.4_,.5_,.6_ 508._	gal/c.y.	0.82
Bituminous Concrete			
Pavement [2]	403._ 411._	gal/ton	1.90
All Other Items:		gal/$1,000 of work	13.0

Excluded Items: [3]

210._	510.41_	550.2_	565.7_	670.104
211._	510.61_	560._	568._	692._
306.31_	510.65_	561._	592._	693._
306.32_	521.2_	563.1_	603.0001	697._
306.33_	528._	563.2_	618._	698._
410._	544._	563.3_	619._	699._
419.3	548._	563.7_	624._	8_ _._
510.31_	550.1_	565.2_	645.7_	10_ _._

[2] Item 403.4, 403.16, & 403.26 shall be calculated using the "All Other Items" category rate.
[3] Also excluded are all supplementary agreements, extra work and per specification items.
[4] Item 304.32 shall be calculated using the "All Other Items" category rate.

NOTICE TO CONTRACTORS

MASH Compliant Portable or Temporary Barrier Requirement and Sunsetting of Non-MASH PCB on the NHS

For contracts on the NHS, all new Portable Concrete Barrier (PCB) (For Traffic Control) (Item 606.417) and Temporary Traffic Control Barrier (Item 606.953) manufactured after December 31, 2019, shall conform to the testing and evaluation criteria of the Manual for Assessing Safety Hardware (MASH). Existing 3-Loop PCB (NHDOT Standard GR-23) and temporary barrier that meets National Cooperative Highway Research Program (NHCRP) 350 can be used throughout its remaining useful service life (see current Standard Drawing GR-23 regarding linking pin information). Non-MASH compliant PCB and temporary barrier fabricated/manufactured after December 31, 2019 will not be allowed.

To achieve the goal of 100% MASH compliant PCB and temporary barrier on the NHS, the NHDOT will "phase-out" the use of non-MASH compliant barrier over a future four (4) year period. Beginning in 2030, approximately 25% of the contracts advertised will require the use of MASH compliant PCB and temporary barrier and the requirement will increase incrementally until the 2034 construction season, when all new contracts will specify the use of only MASH compliant PCB and temporary barrier.

Note: *In addition, a Certificate of Compliance for Item 619.1, accompanied with FHWA letter of compliance if one exists - or a copy of report of successful MASH testing if one does not exist, shall be provided to the Department stating that the traffic control devices provided meet the testing and evaluation criteria of MASH.*

New NHDOT Standard Portable Concrete Barrier

Item 606.417 - Portable Concrete Barrier (Standard Drawing GR-24 and GR-25, based on Roadside Pooled Fund F-Shape Concrete Portable Barrier) cast after December 31, 2019, meets all the testing and evaluation criteria of MASH and is therefore acceptable on applicable state contracts.

MASH-compliant PCB other than the state standard (GR-24 and GR-25) may be used on a project-by-project basis, with approval of the Engineer, and only if documentation of its MASH-compliance is provided.

SPECIAL ATTENTION

ROADSIDE SAFETY HARDWARE WORTHINESS COMPLIANCE WITH NCHRP REPORT 350 AND MASH

The American Association of State Highway and Transportation Officials (AASHTO) has most recently published the Manual for Assessing Safety Hardware (MASH), 2016 edition. The main objective of MASH is to present uniform guidelines for the crash testing of both permanent and temporary highway safety hardware and evaluation criteria to assess test results. The need for updated crash criteria was based primarily on the changes to the vehicle fleet since the publication of National Cooperative Highway Research Program (NCHRP) Report 350. Highway safety hardware includes, but is not limited to, longitudinal barriers, crash cushions, attenuators, end terminals, breakaway supports, and work zone hardware/devices.

IMPORTANT: AASHTO & FHWA formed a joint Implementation Agreement (dated January 7, 2016) for MASH to set dates for states to come into compliance with MASH standards for various categories of roadside safety hardware. This agreement states full compliance to MASH for all permanent hardware by January 1, 2020.

Temporary work zone devices manufactured after December 31, 2019 must be MASH 2016 compliant. However, NCHRP-350 and MASH 2009 compliant devices manufactured prior to January 1, 2020 can be used throughout their normal service life. Service life for portable concrete barrier has been defined in the *Notice to Contractors*. Service life for temporary impact attenuation devices has been defined in their item specifications. All other devices meeting NCHRP-350 or MASH 2009 compliance, and manufactured prior to January 1, 2020, such as temporary barricades, can be used until December 31, 2025.

WORK ZONE TRAFFIC CONTROL DEVICES:

The following is a summary of work zone traffic control devices categories, and their crash testing acceptance requirements, titled "Recommended Procedures for the Safety Performance Evaluation of Highway Features," testing and evaluation criteria as implemented by the AASHTO-FHWA Agreement (350 Agreement) dated July 1, 1998. These categories and associated requirements also apply to newly designed or revised devices that would now fall under MASH testing criteria.

Category I: Small, lightweight devices that are known to be crash-worthy from crash testing or years of demonstrable safe operational performance. These include plastic or rubber cones, tubular markers, flexible delineators, and plastic drums with no lights, batteries, signs, etc. added. For devices to be included in this category, there must be virtually no potential that they will penetrate windshields, cause tire damage, or have a significant effect on the control or trajectory of an impacting vehicle. These devices will be allowed based upon developer's self-certification, as long as there are no attachments to the device.

Category II: Devices that are not expected to produce significant vehicular velocity change, but may be otherwise hazardous. All or parts of the devices may be substantial enough to penetrate a windshield or injure a worker or they may cause instability when driven over or become lodged under a vehicle. The total mass of a Category II device must be less than 45 kg. Examples of this category are barricades, portable sign supports, intrusion detectors and alarms and drums, vertical panels, or cones with lights.

Category III: Devices expected to cause significant velocity change or other potentially harmful reactions in impacting vehicles and Category II devices with a mass greater than 45 kg. Examples of this category are Truck-mounted attenuators (TMA), portable crash cushions, and portable concrete barrier (requires appropriate sized pin and loop or better connection).

Category IV: Examples of this category are portable, usually trailer mounted devices such as area light supports, flashing arrow panels/arrows displays, temporary traffic signals, and changeable message signs. However, these types of devices combined with TMA are considered Category III devices.

All categories of project work zone traffic control devices in use shall conform to the testing and evaluation criteria as outlined above. Devices not conforming to the criteria shall be replaced with conforming devices at no expense to the Department.

05/03/23
SSD: 09/01/05, 04/07/09, 11/30/10, 06/01/13, 06/11/20

S P E C I A L A T T E N T I O N

SECTION 606 – GUARDRAIL

W-BEAM GUARDRAIL

Situations for connecting new standard beam guardrail to existing guardrail installations may include:

1) New standard beam guardrail, set at 31 inches high as required by the mid-splice guardrail system, to be connected to beam guardrail terminals that have been crash tested at 27 inches high or bridge approach units that were designed at a lower height.

2) New standard beam guardrail to be connected to existing beam guardrail that is not at the same height.

Additional items may be included in the contract to make up the height difference (e.g., thrie-beam transition panel shape unit, etc.), or to aid in connection between systems (e.g., back-up plate for aluminum approach railing, etc.). These items will be noted on the contract plans. Another means for making up the height difference is transitioning the height of the new standard beam guardrail over 50 feet to connect to the existing rail, terminal unit, or bridge approach unit.

Set the EAGRT heights according to the manufacturer's recommendation, as accepted under the Manual for Assessing Safety Hardware (MASH) - 2016 criteria. All other terminals, including, but not limited to, ELT, MELT, and CRT, shall be set at the crash acceptance height of 27-inch unless otherwise accepted under crash test acceptance for a higher height.

03/22/12
SSD: 6/7/94, 8/14/97, 3/17/98, 10/31/08, 07/06/10

ACWORTH
43566C

October 24, 2024

S P E C I A L A T T E N T I O N

PRECAST AND PRESTRESSED ITEMS

Four weeks prior to the start of casting of any precast and/or prestressed items specified below, the Contractor shall notify the Bureau of Materials and Research, Concrete Unit Supervisor (603-271-3151), of intent to start casting and advise them of the name and location of the manufacturer. This will allow the Department time to make arrangements for inspection. Items not documented as being inspected will not be accepted.

The following precast and/or prestressed items will have continuous inspection during casting: all bridge components; box culverts; permanent concrete barrier; special catch basins, drop inlets and manholes over six feet in diameter; concrete pipes greater than 72 inches in diameter; mechanically stabilized earth retaining walls, and precast concrete headwalls.

S P E C I A L A T T E N T I O N

PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) SECURITY

The Department has experienced several events on construction projects where control panels of a PCMS were entered/hacked resulting in an unauthorized message. PCMSs play an important role in the management of traffic through a work zone. The primary purpose of a PCMS in a work zone is to display real time information, advising the road user of unexpected situations ahead.

The Department is requiring all Contractors to take the necessary steps to secure the PCMSs on this project in an effort to prevent future hacking incidents. At a minimum, this should include the control panel being locked, allowing only authorized users the ability to access the keyboard. Secondly, having secure passwords that are only accessible to authorized personnel is another line of defense. Hacked PCMSs prevent them from performing their primary function of displaying important, real-time messages about current traffic conditions, putting the safety of both the traveling public and workers at risk.

While this Special Attention focused on PCMSs, this level of security should be extended to all traffic control devices, whose sole purpose is to convey real-time information that allow the traveling public to travel through our work zones in a safe manner.

NOTICE TO CONTRACTORS

Sunsetting of Orange Type VI Sheeting for Permanent and Temporary Operational Construction Signing

All new permanent and temporary construction operational signs requiring orange retroreflective sheeting shall be fluorescent in accordance with the Special Provisions for Sections 619 and 718.

The use of existing contractor inventory of permanent and temporary orange operational construction signs utilizing non-fluorescent retroreflective sheeting can be used throughout its remaining useful service life or until December 31, 2023, whichever is sooner, provided the signs meet Section 619.3.2.1. Only florescent orange retroreflective sheeting will be allowed after December 31, 2023.

11/29/23
SSD: 09/01/20

SPECIAL ATTENTION

e-Ticketing

Both the Department and contracting industry have been moving further toward electronic record keeping as a matter of good practice, realizing such benefits as being more efficient, safer, and environmentally friendly. Initially, the Department accelerated this practice in direct response to the Covid-19 pandemic by requiring, to the extent practical, an all-electronic environment, including electronic ticketing (e-Ticketing). Based on challenges that arose due to the varying platforms that were being used, the Department has officially partnered with HaulHub Technologies to standardize e-Ticketing on all projects with hot or cold mix bituminous asphalt paving.

By way of this Special Attention, all suppliers of bituminous asphalt will be required to have connectivity to the NHDOT's portal via HaulHub. There is no cost to the supplier as the Department has an active subscription with HaulHub. HaulHub has been provided with a list of all the active asphalt suppliers and has been actively working to make the necessary connections.

By way of HaulHub, when operators at the batch plants log the truck and job details and create the paper ticket, the digital ticket information is automatically sent to the HaulHub cloud from the producer's scale database. Once in the cloud, the information is available in real time on the mobile application (JobSlip) and from the Portal.

Although not currently required, this portal may also be used for concrete and other aggregates in lieu of paper tickets; otherwise, paper tickets will still be required per specification.

SPECIAL ATTENTION

BUILD AMERICA, BUY AMERICA

On November 15, 2021, the Infrastructure Investment and Jobs Act (IIJA) was signed into law (the Bipartisan Infrastructure Law, or BIL), which includes the Build America, Buy America Act (BABA) (Pub. L. No. 117-58). BABA strengthens existing Buy America regulations and specifically states that no Federal funds made available for infrastructure may be obligated for a project unless all the iron, steel, and Construction Materials permanently incorporated into the project are produced in the United States. Any project within the scope of a finding, determination, or decision under the National Environmental Policy Act (NEPA), regardless of the funding source for the individual project, are subject to BABA regulations if at least one contract within the scope of the NEPA decision is funded Federally.

This project is subject to BABA and will require certification of compliance from the Contractor in the following item categories (an item, article, material, or supply shall only be classified into one of the categories below):

1. **Iron and Steel:** All iron and steel permanently incorporated into the project must be produced in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing, and reduction of iron ore, which may occur in another country. This means all manufacturing processes, from the initial melting stage through the application of coatings, must occur in the United States.
    - Steel products include, but are not limited to, structural steel, piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals (mast arms), and luminaires.
    - Iron products include, but are not limited to, cast iron frames, grates, and detectable warning devices.

    Existing De Minimis Use Exemption for Iron and Steel: The requirements of the law and regulations do not prevent a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total construction contract price or $2,500.00, whichever is greater.

2. **Construction Materials**: Items, articles, materials, or supplies that consist of only one of the items listed below:
    i. Non-ferrous metals;
    ii. Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
    iii. Glass (including optic glass);
    iv. Fiber optic cable;
    v. Optical fiber;
    vi. Lumber;
    vii. Engineered wood; and
    viii. Drywall.

    Note: Minor additions of articles, materials, supplies, or binding agents to a Construction Material do not change the categorization of the Construction Material.

All Construction Materials permanently incorporated into the project must be produced in the United States. For the Construction Material to be considered "produced in the United States," it must meet the following standards:

i. Non-ferrous metals. All manufacturing processes, from initial smelting or melting through final shaping, coating, and assembly, occurred in the United States.

ii. Plastic and polymer-based products. All manufacturing processes, from initial combination of constituent plastic or polymer-based inputs, or where applicable, constituent composite materials, until the item is in its final form, occurred in the United States.

iii. Glass. All manufacturing processes, from initial batching and melting of raw materials through annealing, cooling, and cutting, occurred in the United States.

iv. Fiber optic cable (including drop cable). All manufacturing processes, from the initial ribboning (if applicable), through buffering, fiber stranding, and jacketing, occurred in the United States. All manufacturing processes also include the standards for glass and optical fiber, but not for non-ferrous metals, plastic, and polymer-based products, or any others.

v. Optical fiber. All manufacturing processes, from the initial preform fabrication stage through the completion of the draw, occurred in the United States.

vi. Lumber. All manufacturing processes, from the initial debarking through treatment and planing, occurred in the United States.

vii. Drywall. All manufacturing processes, from initial blending of mined or synthetic gypsum plaster and additives through cutting and drying of sandwiched panels, occurred in the United States.

viii. Engineered wood. All manufacturing processes, from the initial combination of constituent materials until the wood product is in its final form, occurred in the United States.

A Certificate of Compliance, conforming to the requirements of Section 106.04, shall be furnished for all above materials.

For iron and steel materials and for Manufactured Products produced predominantly of iron or steel or a combination of both*, records to be maintained by the Contractor for compliance with this Special Attention shall include a signed mill test report and a signed certification by each supplier, distributor, fabricator, and manufacturer that has handled the materials affirming that every process, including the application of a coating, performed on the iron or steel has been carried out in the United States of America, except as allowed by the de minimis use exemption and this Special Attention. The lack of these certifications will be justification for rejection of the material provided.

**Predominantly of iron or steel or a combination of both means that the cost of the iron and steel content exceeds 50% of the total cost of all its components. The cost of iron and steel is the cost of the iron or steel mill products, castings, or forgings utilized in the manufacture of the product and a good faith estimate of the cost of the iron or steel components.*

For Construction Materials, the manufacturer's or producer's certificate of compliance must identify where the Construction Material was produced and attest specifically to compliance with BABA.

Upon completion of the project, the Contractor shall certify in writing as to compliance with BABA and provide the total project delivered cost of all foreign steel and iron or Construction Materials provided under this requirement that are permanently incorporated into the project. The form for this certification is entitled "Build America, Buy America Certificate of Compliance" and can be found on the NHDOT website (www.dot.nh.gov/doing-business-nhdot/contractors).

Manufactured Products

FHWA has a longstanding Buy America nationwide General Applicability Waiver for Manufactured Products. Manufactured Products are defined as items, articles, materials, or supplies that have been: (1) processed into a specific form and shape; or (2) combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies. As of the date of this Special Attention, FHWA has not modified the waiver, and the waiver continues to apply to Manufactured Products that are not predominantly of iron or steel or a combination of both (see note above (*) for clarification regarding this statement).

Public Interest Waiver of Buy America Requirements for De Minimis Costs and Small Grants

The US Department of Transportation issued a public interest Waiver of Buy America Requirements for De Minimis Costs and Small Grants. The waiver is intended to ensure that state DOTs make efficient use of resources by focusing domestic sourcing efforts on products that provide the greatest manufacturing opportunities for American workers and firms. The waiver is applicable to contracts advertised on or after August 16, 2023, and applies to Manufactured Products and Construction Materials. The "De Minimis Costs" portion of the waiver (first bullet below) does not apply to iron and steel, which are already subject to a separate de minimis use exemption as detailed herein. The Waiver for De Minimis Costs and Small Grants exempts Manufactured Products and Construction Materials produced outside the United States for which:

- The total value of the non-compliant products is no more than the lesser of $1,000,000 or 5% of total applicable costs for the project (De Minimis Cost portion); or
- The total amount of Federal financial assistance applied to the Contract, through awards or subawards, is below $500,000 (Small Grants portion).

De Minimis Cost Clarification: The obligation to track costs throughout the life of the contract is the Contractor's responsibility. The term "total applicable costs" is defined as the total actual final material cost of the compliant and non-compliant iron and steel, Manufactured Products, and Construction Materials. Tracking applicable costs is critical to compliance, especially when non-compliant materials are being used, as actual costs change throughout the life of a contract due to change orders, quantity adjustments, material overruns and underruns, etc. NHDOT will compare the declared value (total actual final material cost) of non-compliant Construction Materials to the total actual final material cost of the project upon submission of the required declaration at the end of the project.

Small Grants Clarification: Tracking is also very important as it pertains to the Small Grants portion of the waiver. This portion of the waiver utilizes the total actual final construction cost (materials, equipment, labor, etc.) of the project, including adjustments and change orders that occur throughout construction, to determine whether the project is eligible for exemption. At the onset, the awarded contract value will be used to determine applicability. The Contractor is required to track costs throughout construction to ensure eligibility for the exemption of BABA requirements continues for the life of the contract.

SPECIAL ATTENTION

CONVICT PRODUCED MATERIAL

In accordance with the requirements of the Federal regulations (23 U.S.C. 114(b)(2), 23 CFR 635.417), essentially all convict produced material is prohibited from Federal–aid highway construction projects. More specifically, materials produced after July 1, 1991, by convict labor, may only be incorporated in a Federal-aid construction projects if: 1) such materials have been produced by convicts who are on parole, supervised release, or probation from a prison; or 2) such material has been produced in a qualified prison facility, e.g., prison industry, with the amount produced during any 12-month period, for use in Federal-aid projects, not exceeding the amount produced, for such use, during the 12-month period ending July 1, 1987*.

* Because the Department, Federal Highway Administration, nor New Hampshire Correctional Industries can produce documents to meet condition 2 above, this condition cannot be met for New Hampshire convict produced material.

1/2001
Supersedes 3/90
ALL FA PROJECTS

S P E C I A L A T T E N T I O N

LOBBYING

UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SUBJECT: LIMITATION ON USE OF GRANT OR CONTRACT FUNDS FOR LOBBYING

The lobbying restrictions were established by Section 319 of Public Law 101-121 (Department of the Interior and Related Agencies Appropriations Act for Fiscal Year 1990).

The law prohibits Federal funds from being expended by the recipient or any lower tier subrecipients of a Federal contract, grant, loan, or cooperative agreement to pay any person for influencing or attempting to influence a Federal agency or Congress in connection with the awarding of any Federal contract, the making of any Federal grant or loan, or the entering into of any cooperative agreement. The extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement is also covered.

Federal-aid contractors, and consultants, as well as lower tier subcontractors and subconsultants are also subject to the lobbying prohibition. To assure compliance, a certification provision is included in all Federal-aid construction solicitations and contracts, and consultant agreements exceeding $100,000 in Federal funds.

The Contractor shall be aware that by signing and submitting this proposal, he or she is attesting to the requirements of the certification provisions.

During the period of performance of a grant or contract, recipients and subrecipients must file disclosure form (Standard Form LLL) at the end of each calendar year quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any previously filed disclosure form.

Lower tier certifications should be maintained by the next tier above (i.e., prime contractors will keep the subcontractors' certification on file, etc.). Copies of Standard Form LLL will be included in the subcontract package for distribution to successful bidders.

December 24, 1998
Supersedes Spec. Attn. dated 3/29/88 & 12/5/90

FHWA Projects

S P E C I A L A T T E N T I O N

CONTRACT AFFIDAVIT - CERTIFICATION REGARDING DEBARMENT SUSPENSION

The separate form entitled, CONTRACT AFFIDAVIT (As Required by Section 112(c) of Title 23 USC) has been deleted from this proposal.

Bidders are advised that the last page of the bidding proposal has been revised to include the same reference, **IN BOLD PRINT**, relative to the non-collusion statement included on the discontinued form.

X X X X X X X X X X X X X X X

The Contractor is advised that 49 CFR 29.510, Appendix A, requires that the Contractor, including all principals, certify that they are not currently under debarment or suspension or have not been under debarment or suspension within the past three years. (For certification instructions see next page).

The certification has been added, **IN BOLD PRINT,** onto the next to the last page of the bidding proposal.

The Contractor is further advised that Appendix B of 49 CFR 29.510 regarding certification of lower tier transactions has been added to Form FHWA-1273.

Appendix A - Certification regarding Debarment, Suspension, and other Responsibility Matters - Primary Covered Transactions.

Instruction for Certification

1. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective 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 primary participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.

3. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

4. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of these regulations.

6. The prospective primary 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.

7. The prospective primary 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 Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

8. 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 may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

9. 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 a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

10. Except for transactions authorized under paragraph 6 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.

S P E C I A L A T T E N T I O N

SUMMARY OF REQUIREMENTS FOR FEDERAL-AID PROJECTS

1. Subletting on Federal-aid Contracts:

a. On Federal-Aid projects, the following documents are required to be incorporated in and made a part of, every subcontract agreement; including lower-tier subcontract agreements, and companies, and/or independent contractors that perform testing, monitoring, inspection services such as ground penetrating radar, erosion control monitoring, video inspection, SWPPP, POP, environmental testing/monitoring or vibration monitoring, require subcontractor approval:

- NHDOT Subcontracting Procedure and Forms:
  - Updated Annual Assurances (annual requirement). Contractors will not be approved or authorized to work until all Office of Access, Opportunity and Compliance (OAOC) Annual Assurance requirements have been fulfilled.
  - OAOC Form 15 - Transmittal Request
  - OAOC Form 14 - Contractor Acknowledgment Certification
  - OAOC Form 26 - Work Certificate
- A signed written contract, including:
  - A valid Certificate of Insurance, listing NHDOT as the Certificate holder. OAOC staff will verify coverage with the NH Department of Labor (NHDOL). Workers Compensation Insurance needs to be on the National Council on Compensation Insurance (NCCI) database and company must be in good standing with NH Secretary of State.
  - Per NH RSA 228:4-b, Workers' Compensation Insurance must cover all individuals performing work on site and shall remain in effect for the duration of the contractor's work on the project. No excluded individual, owner, or officer may perform work on site without exception. All persons working on site must have Workers' Compensation coverage on file with the NHDOL.
  - Attention of the Contractor is called to NHDOT Standard Specifications 107.02 and NH RSA 293- A:15.01, which, among other provisions, requires that all Contractors, including those based out-of-state, register their business name with the NH Secretary of State's Office and remain active or in good standing throughout the period of participation.
- Required Contract Provisions (FHWA-1273)
- Disadvantaged Business Enterprise (DBE) Program Requirements (Standard Specification 103.06)
- Prompt Payment to Subcontractors (Standard Specification 109.09)

- 41 CFR 60-4 Affirmative Action Requirements
    - Applicable only to contracts or subcontracts in excess of $10,000
- U.S. Department of Labor (USDOL) wage rates entitled "GENERAL WAGE DECISION" (as contained in the Contract)
    - Does not apply to companies performing Davis-Bacon exempt work (such as testing, monitoring, and inspection services).

b. Prime Contractors shall submit consent to sublet packages to the NHDOT **at least** 5 working days prior to said subcontractor (or lower-tier subcontractor) performing work on site. On Local Public Agency (LPA) projects, the Prime Contractor shall also provide a courtesy copy to the town or the town's consultant, if applicable.

c. LPA Projects Only: OAOC is the sole approval authority for all LPA construction project sub approvals. Consents to sublet shall be submitted directly to the OAOC.

2. FHWA Form 1273, Required Contract Provisions:

a. The Prime Contractor shall insert in each subcontract all the stipulations contained in the Required Contract Provisions. Primes shall further require their inclusion in any lower-tier subcontract or purchase order that may in-turn be made. The Required Contract Provisions shall not be incorporated by reference in any case.

b. In accordance with Section I, Paragraph 1, the Prime Contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor, or service provider. This shall include any unpaid wages found to be owed that is not paid by a subcontractor or lower-tier subcontractor.

c. In accordance with Section I, Paragraph 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 contact, suspension/debarment or any other action determined to be appropriate by the contracting agency and FHWA."

3. Certified Payrolls and Time Sheets:

a. Submission Format: Payrolls, as required by FHWA Form 1273, shall be submitted electronically (email) as a pdf document to the NHDOT Contract Administrator, consistently named in the following format: Contractor's name (abbreviated is acceptable) followed by the "week ending" date (yyyy/mm/dd). The Contractor's and each Subcontractor's payroll shall be submitted as separate, individual files.

Example: Plow Brothers Inc 2017-12-09

b. Multiple Counties/States or Categories (Highway/Building/Heavy): Whenever Contracts have multiple wage determinations, contractors shall indicate, on each payroll submission, which wage determination is applicable to the work. In the instance that there are multiple counties within the Contract the payroll shall indicate which county the work was performed.

c. Project Specific: Except for weekly gross pay, deductions, and weekly net pay, all information shown on certified payrolls shall be project specific. Please reference FHWA Form 1273 for additional payroll requirements and limitations.

d. Time Sheets: Every contractor shall create and maintain time sheets for every worker performing work on the project. This includes salaried employees who perform work in a classification, either intermittently or full time. Time sheets shall record all work performed during the work week, both Federal and non-Federal, shop time, travel time considered work time, including any time considered "hours worked" as described under the Fair Labor Standards Act, Part 785. When requested, Contractors shall provide copies of time sheets to the OAOC in support of certified payroll report information being provided. Time sheets, payroll records, and other basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years from final invoice for all laborers and mechanics working at the site of work.

4. Sign-In Sheets:

a. State Managed Projects: The use of daily sign-in sheets is required for subcontractors performing asbestos abatement. The OAOC may also direct the use of daily sign-in sheets on other State managed projects for any contractor who does not accurately report all workers performing work on site on their payrolls. The sign-in sheets shall be administered as described below.

b. LPA Projects: The use of daily sign-in sheets is **mandatory** on all LPA projects. Every worker must sign in, on a daily basis, prior to performing work on site. The OAOC Form 20- Daily Sign-In Record shall be used for this purpose. The Prime Contractor is responsible to ensure all sign-in sheet requirements are met and that sign-in sheets are turned in to the Contract Administrator on a daily basis. Contract Administrators shall review and initial sign-in sheets daily; cross matching what employees have indicated for their specific work classification and what employers are indicating on certified payroll reports, and also verifying employers of workers signing in have been approved to work by the NHDOT. Sign-in sheets shall be co-located with certified payrolls and filed in a 3-ring binder; newest sign-in sheets on top. Sign-in sheets are an inspection item.

5. Requesting Work Classifications, Classifying Workers, and/or Payment of Wages.

a. The Prime Contractor is required to submit an additional request to the NHDOT for any classification of labor/equipment that they or their subcontractors shall be utilizing under the Contract that is not contained in the Proposal's Federal General Decision.

b. Conformance submissions shall be in accordance with U.S. Department of Labor Memorandum No. 213, dated March 22, 2013. A copy of the Memorandum can be found at www.wdol.gov/aam/aam213.pdf.

c. Unless otherwise instructed by the OAOC, a SF 1444 shall be used for this purpose.

d. Requests must be submitted to the NHDOT prior to any work being performed in the classification(s).

e. Contractors who do not receive a USDOL conformance decision from the OAOC within 45 days of submission should follow-up with the OAOC.

f. Once a decision is received from the USDOL, the OAOC will notify the Prime Contractor. In cases when the USDOL stipulates a higher rate of pay than the one proposed by the Contractor, and the Contractor elects not to submit an appeal, restitution, if due, shall be paid to employees within 10 calendar days of being notified by the OAOC. Restitution requirements of the NHDOT shall apply.

g. Appeals shall be filed with the USDOL within 30 calendar days and a courtesy copy forwarded to the OAOC at the same time. Restitution, if applicable, does not need to be paid during the time the appeal is under review by the USDOL.

h. Contractors shall immediately inform the OAOC whenever appeal decisions (including reconsideration requests) are received from the USDOL.

i. In cases when a contractor indicates to the OAOC he/she plans to appeal the USDOL decision but fails to provide the OAOC proof of submission within 30 calendar days, the contractor shall comply with the original USDOL decision. The OAOC will subsequently notify the Contractor that proof of an appeal was not received within 30 days and restitution, if applicable, must be paid to workers within 10 calendar days. Contractors who fail to provide restitution will be deemed "in non-compliance."

j. OAOC payment release authorization letters (Okay to Pay letters) cannot be accomplished until all wage conformances have been deemed closed (USDOL responses have been received), any pending contractor wage appeals have been finalized, with restitution paid if applicable, and all Prompt Pay requirements have been met.

k. Job Classifications Descriptions (Laboring Category): While most of skilled and unskilled crafts appearing in Wage Determinations are self-explanatory, the below classifications (not all inclusive) have been described by the NHDOT and are consistent with USDOL requirements. Questions involving correct classification of workers should be addressed prior to performing work on the project. Workers performing in these classifications, according to the description, will be classified by contractors accordingly:

    1) Asbestos Abatement: All work associated with asbestos abatement shall be classified as "Laborer," unless said work involves piping that will be reinsulated. In these cases, "Asbestos Abatement Worker" shall be used.

    2) Blaster: Supervises and assists in locating, loading, and firing blast holes with explosives to break up hard materials. This work includes any of the following duties on-site: determining the spacing and depth of drilled holes; determining the amount of explosives, timing, and placement of detonators; handling blasting materials in the work area; loading holes with detonators, primers, and explosives; tamping and stemming holes; directing the placement of blasting mats or other flyrock controls; and detonating the charges.

    3) Brick Mason (also called Brick Layers): Builds and repairs walls, floors, paths/sidewalks, partitions, fireplaces, chimneys, and other structures with brick, pavers, precast masonry panels, concrete block, and other masonry materials, with or without mortar.

4) Carpenter (Form Work Only): Formwork carpenters build the molds that retain wet concrete in the construction of bridges, foundations, and other concrete structures. This also includes pre-manufactured forms made of steel, wood, or heavy plastic. Work under this class also includes bracing required to hold the forms in place.

5) Carpenter (Excluding Form Work): Involves all carpentry work not directly related to the pouring of concrete. This includes, without limitation, scaffolding, safety rail, platforms, walkways, stairs, demo containment, buildings, and bracing that is not in direct contact with concrete.

Note 1: Any work to dismantle where workers can simply "tear it apart" and where no safety concerns are present can be performed by Common or General Laborers.

Note 2: Questions involving these classes should be addressed prior to performing work on the project.

6) Drill Operator: Unless a hand-held tool, which can then be classified and performed as a Common/General Laborer, all drill work shall be performed in the "Drill Operator" classification. Conformances, if needed, shall be consistent with this requirement.

7) Guardrail Installer: Except for the "pounder," each person performing guardrail installation work shall be classified as "Guardrail Installer."

8) Ironworker (Reinforcing): Positions and secures steel bars to placement of reinforced concrete; determines number, size, shape, and location of reinforcing rods from plans, specifications, sketches and/or oral instructions; places and ties reinforcing steel using wire and pliers, sets rods in place, spaces and secures reinforcing rods. May bend steel rods with hand tools or operate a rod-bending machine; may reinforce concrete with wire mesh; may perform other related duties.

9) Ironworker (Structural): Performs any combination of the following duties to set beams, hang diaphragms, install bolts, torque bolts, test bolts, raise, place and unite girders, columns and other structural steel members to form completed structures or structure frameworks, working as a member of a crew; sets up hoisting equipment for raising and placing structural steel members; fastens steel members to cable of hoist using chain, cable or rope; signals worker operating hoisting equipment to lift and place steel members. Guides member using guy line (rope) or rides on member to guide it into position. Reads plans; rigs, assembles, and erects structural members requiring riveting or welding. May perform other related duties.

10) Lead Abatement Worker: All work associated with lead abatement shall be classified as "Lead Abatement Worker".

11) Stone Mason: Builds stone walls, as well as set stone exteriors and floors, lays/sets all cut stone, marble, slate, or stone, with or without mortar. They work with natural cut stone, such as marble, granite, limestone, and artificial stone made of concrete, marble chips, or other masonry materials.

12) Sweeper/Broom Operators: Whenever Sweeper or Broom does not appear in the Wage Determination, contractors may use the Truck Driver classification for this service if the equipment used is of the over the road type (only). However, anytime the Contract has an established classification/rate for "Sweeper or "Broom," this classification must be used and the minimum rate, as it appears in the contract, shall apply.

13) Traffic Coordinator: Performs sign placement and maintenance, including proper set up and relocation of construction sign packages and message boards; designs lane closures in accordance with local, state, and Federal requirements. Please do not confuse this classification with Flagger.

6. **Prompt Pay to Subcontractors and Material Suppliers:** Prompt pay requirements are outlined in the NHDOT Standard Specifications Section 109.09. Submissions are due to OAOC at laborcompliance@dot.nh.gov no later than the 10th calendar day of each month.

    a. State managed projects: Contractors may use the OAOC Form 18 or utilize their own document that contains the same required information unless otherwise instructed by the OAOC.

    b. LPA projects: Contractors shall use the OAOC Form 12.

    - Contractors may use the OAOC Form 18 or utilize their own document that contains the same required information unless otherwise instructed by the OAOC.
    - If no payments were made for a State managed or LPA project during the reporting period, contractors shall submit the appropriate certification form or email indicating "no payments made to subcontractors."

7. **Mandatory Training:** Prime Contractors who fail to obtain an annual average (based on the calendar year) of at least 60% "Satisfactory" ratings on all OAOC Compliance Field Audit Reports may be required to attend a mandatory 4-hour Contractor Compliance Training Class each spring (as scheduled by the OAOC). A principal owner or executive officer of the company, and his/her payroll accountant shall attend.

    a. Compliance ratings will be averaged over all projects if a Prime Contractor has multiple projects.

    b. The OAOC has at least two Contractor Compliance Training Seminars each year. Every contractor participating on Federal-aid construction projects is encouraged to attend.

8. **Restitution:** If required, restitution shall be performed in accordance with the OAOC guidelines. The OAOC Form 8 - Restitution Worksheet and Affidavit shall be used.

9. **Corrective Action Plan**

    a. Any Contractor, Subcontractor, or Lower-tier Subcontractor found to be in violation of Required Contract Provisions, made part of its contract may be suspended to work on existing or future projects and/or required to provide a Corrective Action Plan (CAP). Other sanctions may be imposed by the Department as appropriate.

Corrective action will include, but not limited to, the submission of certified payrolls or other records and reports necessary to verify compliance with the Provisions.

b. Any Contractor, regardless of the tier, found to have repeatedly violated the Required Contract Provisions, may be required to complete 4-hours of Contractor Compliance Training conducted by the Department. When mandated, a principal owner and/or company executive and his/her payroll accountant shall attend Contractor Compliance Training must be completed before participation on future projects is authorized. This requirement does not relieve the Contractor of its obligations under the prime contract, nor does it prevent the Department from seeking other remedies or enforcement actions, as provided by the governing Rules and Laws and Federal Regulations.

c. Companies will be notified of violations in writing. Actions the company must take to have participation privileges restored will be clearly indicated. Companies will also be advised that if a satisfactory response is not received within 7 days of the requested CAP, the company will be considered "non-responsive." In cases where lower tier companies are non-responsive, matter will then be deferred to the Prime Contractor for payment of outstanding payments as provided in Required Contract Provisions.

10. **Right to Withhold Payment:** The Department may withhold payments claimed by the Contractor on account of:

    a. Failure of the Contractor to make payments to Subcontractors for materials or labor.

    b. Regulatory non-compliance or enforcement.

    c. Failure to comply with OAOC Field Audit Report requirements.

    d. Failure to comply with monthly reporting requirements, as applicable.

    e. For projects with an On-The-Job Training (OJT) requirement, failure to submit OJT Form 1 - On-The-Job Training Acknowledgement and Statement of Intent within 30 days of the project start date.

    f. Failure to submit closeout documentation.

    g. All other causes that the Department reasonably determines negatively affect the State's interest.

11. **Final Payment Release:** Once final project records are transferred to the OAOC, a final review shall be performed to determine compliance with the Federal provisions. Release of any final payment shall not be made to the Contractor until the OAOC issues a payment release letter (Okay to Pay) certifying:

    a. All required payrolls, labor, and Equal Employment Opportunity (EEO) documentation have been received and deemed complete and correct.

    b. DBE requirements stipulated in the Contract and/or the Required Contract Provisions have been fulfilled.

12. **Deposits in Escrow:** Every attempt is made to complete compliance actions and resolve any disputes before the project is completed and final payments are made. Sometimes, however, corrective actions or disputes continue after completion and provisions must be made to ensure that funds are available to pay any wage restitution that is ultimately found due. In these cases, the project can proceed to final closing provided the Prime Contractor, from payments already

provided him/her, provides written evidence a deposit of an amount equal to the potential liability for wage restitution and liquidated damages, if applicable, has been deposited in an escrow account. When a final decision is rendered, the Prime Contractor makes disbursements from the account in accordance with the decision. Deposit/escrow accounts are established for one or more of the following reasons:

a. Where the parties have agreed to amounts of wage restitution that are due but the employer has not yet furnished evidence that all the underpaid workers have received their back wages. The deposit is equal to the amount of restitution due to workers lacking payment evidence. As proper documentation is received, an amount corresponding to the documentation is returned to the depositor. Amounts for any workers who cannot be located are held in the escrow account for three (3) years. Amounts remaining in the account not disbursed by the end of this three-year period shall be returned to the Prime Contractor.

b. Where underpayments are suspected or alleged and an investigation has not yet been completed. The deposit is equal to the amount of wage restitution and liquidated damages, if applicable, that is estimated to be due. If the final determination of wages due is less than the amount estimated and placed in the escrow account, the escrow will be reduced to the final amount and the difference will be returned to the depositor. If the parties agree to the investigative findings, the amounts due to workers will be disbursed from the escrow account in accordance with the schedule of wages due. Amounts for unfound workers will be retained for a period of three (3) years and subsequently disbursed to the depositor as described above in Paragraph 12a.

c. Where the parties are waiting for the outcome of an administrative hearing that has been or will be filed contesting a final determination of wages due. The deposit shall be equal to the amount of wage restitution and liquidated dates, if applicable, that have been determined to be due. Once the final decision is rendered, disbursements from the escrow account are made in accordance with the decision.

Please direct questions relating to any information in this document to the OAOC at laborcompliance@dot.nh.gov. See the OAOC website (https://www.dot.nh.gov/doing-business-nhdot/office-access-opportunity-and-compliance) for forms, documents, and other helpful material.

SPECIAL ATTENTION

Disadvantaged Business Enterprise (DBE)

Disadvantaged Business Enterprise (DBE) Policy. It is the policy of the New Hampshire Department of Transportation (NHDOT) to ensure nondiscriminatory opportunity for Disadvantaged Business Enterprises (DBEs) to participate in the performance of all contracts and subcontracts financed with Federal funds as specified by the regulations of the United States Department of Transportation (USDOT), Federal Highway Administration and as set forth below.

1. **Policy.** It is the policy of the USDOT to ensure nondiscriminatory opportunity for disadvantaged business enterprises, as defined in 49 Code of Federal Regulation (CFR) Part 26, to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds. Consequently, the DBE requirements of 49 CFR Part 26 applies to this contract.

2. **Disadvantaged Business Enterprise (DBE) Obligation.** The State and its Contractors agree to ensure nondiscriminatory opportunity for disadvantaged business enterprises, as defined in 49 CFR Part 26, to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds. Each subcontract the Prime Contractor signs with a subcontractor must include this assurance: "The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of USDOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the NHDOT deems appropriate."

3. **Sanctions of Non-Compliance**. The Contractor is hereby advised that failure of the Contractor, or any Subcontractor performing work under this contract, to carry out the requirements set forth in paragraphs 1 and 2 above shall constitute a breach of contract and, after notification of the USDOT, may result in termination of this contract or such remedy as the State deems appropriate.

Disadvantaged Business Enterprise (DBE) Program Goals. The NHDOT is required to set an overall DBE goal for participation in all transportation related Federal-aid projects which can be obtained through race-neutral means (i.e., voluntary participation and utilization of DBEs on federal-aid projects). Race-neutral DBE participation includes any time a DBE wins a prime contract through customary competitive procurement procedures or is awarded a subcontract on a prime contract that does not carry a DBE contract goal.

A. **Overall (Race-Neutral) Statewide DBE Goals.** The NHDOT strives to meet the set statewide DBE goal by using race-neutral means. The overall DBE goal is determined following guidelines set forth in 49 CFR 26.45, and based on the availability of ready, willing, and able DBEs who submitted bids for transportation related projects, compared as a percentage of all available contractors who submitted bids for transportation related projects during the same time period. This means that unless otherwise stated in the contract, the NHDOT relies on the voluntary cooperation (race-neutral means) of all contractors to utilize DBEs on every project, sufficient to meet or exceed the current statewide DBE goal. The DBE goal may be adjusted to consider other factors impacting DBE utilization, to narrowly tailor the overall DBE goal. The detailed goal setting methodology and current overall DBE goal may be viewed on the NHDOT website at www.dot.nh.gov.

B. Project/Contract Specific (Race-Conscious) DBE Goals. The NHDOT may place a project/contract specific DBE goal if it determines that the overall, statewide DBE goal will not be attained through race-neutral means. Contract goals are set so that they will cumulatively result in meeting the portions of the overall goal that the Department does not project being able to meet through race-neutral means. Any project/contract that contains a DBE goal shall be clearly expressed as a percentage of the federal-aid portion of the contract price and noted at the top of this DBE Special Attention, which will be inserted into the Contract.

Specific procedures for the "apparent low bidder" are detailed on pages 4 and 5 of this Special Attention under "Procedures for Projects/Contracts with a Specific DBE Goal (Race-Conscious)" and only apply to projects that contain specific DBE goal. Failure to follow these specific procedures, or to meet or exceed the required DBE goal or "Good Faith Effort" requirements, may result in sanctions, including a reduction of contract payments.

Disadvantaged Business Enterprise (DBE) Definition. A DBE is defined as a for-profit business that is owned and controlled by one or more socially and economically disadvantaged person(s). For the purpose of this definition:

A. "Socially and economically disadvantaged person" means any rebuttably presumed individual as defined by 49 CFR and/or any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who has been subjected to racial or ethnic prejudice or cultural bias within American society because of his or her identity as a member of groups and without regard to his or her individual qualities. The social disadvantage must stem from circumstances beyond the individual's control (49 CFR 26.5).

B. "Owned and controlled" means a business which is:

(1) A sole proprietorship legitimately owned and controlled by an individual who is a disadvantaged person.

(2) A partnership, joint venture, or limited liability Company in which at least 51% of the beneficial ownership interests is legitimately held by a disadvantaged person(s).

(3) A corporation or other entity in which at least 51% of the voting interest and 51% of the beneficial ownership interests are legitimately held by a disadvantaged person(s).

The disadvantaged group owner(s) or stockholder(s) must possess control over management, interest in capital, and interest in earnings commensurate with the percentage of ownership. Disadvantaged participation in a joint venture must also be based on the sharing of real economic interest and must include proportionate control over management, capital, and earnings, as above. If the disadvantaged group ownership interests are real, substantial and continuing and not created solely to meet the requirements of this program, a firm is considered a bona fide DBE.

Certified DBE Directory. The current New Hampshire Disadvantaged Business Enterprise (DBE) Directory is available online at www.dot.nh.gov/doing-business-nhdot/office-access-opportunity-and-compliance/disadvantaged-business-enterprise. This directory contains all currently certified DBEs available for work in New Hampshire and is updated weekly. Only firms listed in this directory are eligible for DBE Program/Goal credit on NH Federal-aid projects. Questions about DBE certification, or if further assistance is needed, should be directed to the External EEO Coordinator at (603) 271-8252 or dbecertification@dot.nh.gov.

Counting DBE Participation for Project/Contract Goals. In order for payments made to DBE contractors to be counted toward DBE goals, the DBE contractors must perform a Commercially Useful function (CUF), which means that DBE must be responsible for execution of the work of the contract and must carry out its responsibilities by actually performing, managing, and supervising the work involved, consistent with standard industry practices:

Furthermore, this means that:

A. The DBE must also be responsible for ordering its own materials and supplies, determining quantity and quality, negotiating price, installing (where applicable) and paying for the material itself;

B. The DBE must perform work commensurate with the amount of its contract;

C. The DBEs contribution cannot be that of an extra participant or a conduit through which funds are passed in order to obtain the appearance of DBE participation;

D. The DBE must exercise responsibility for at least fifty percent of the total cost of its contract with its own work force;

E. None of the DBE's work can be subcontracted back to the Prime Contractor, nor can the DBE employ the prime's, or other subcontractor's supervisors currently working on the project;

F. The DBE's labor force must be separate and apart form that of the Prime Contractor or other subcontractors on the project. Transferring crews between primes, subcontractors, and DBE contractors is not acceptable;

G. The DBE owner must hold a Public Works license and any other professional or craft licenses required for the type of work he/she performs on the project; and

H. The DBE may rent or lease, at competitive rates, equipment needed on the project from customary leasing sources or from other subcontractors on the project.

Allowable credit for payments made to DBEs for work performed. A contractor may take credit for payments made to a certified DBE that satisfies CUF requirements at the following rate:

A. **A DBE Prime Contractor**: Count 100% of the value of work performed by own forces, equipment and materials count towards DBE goals.

B. **An approved DBE Subcontractor**: Count 100% of the value of work performed by the DBE's own forces, equipment, and materials, <u>excluding the following</u>:

- The cost of materials/supplies purchased from a non-DBE Prime Contractor.
- The value of work provided by non-DBE lower tier subcontractors, including non-DBE trucking to deliver asphalt to a DBE contractor.

C. **A DBE owner-operator of construction equipment**: Count 100% of expenditures committed.

D. **A DBE manufacturer**: Count 100% of expenditures committed. The manufacturer must be a firm that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by the Contractor.

E. **A regular DBE dealer/supplier**: Count 60% of expenditures committed. A regular dealer/supplier is defined as a firm that owns, operates, or maintains a store, warehouse, or other establishment, in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. A person may be a dealer in such bulk items as petroleum products, steel, cement, gravel, stone or asphalt without owning, operating or maintaining a place of business, if the person both owns and operates distribution equipment for the products, by the means of a long-term agreement, and not by a contract-by-contract basis.

F. **A DBE Broker**: Count for DBE credit only the fees or commissions charged for assistance in the procurement, and fees and transportation charges for the delivery of materials or supplies required at the job site, but not the cost of materials procured. A broker is defined as any person(s) or firm

who arranges or expedites transactions for materials or supplies and does not take physical possession of the materials or supplies at their place of business for resale.

G. **A DBE renter of construction equipment to a contractor**: Count 20% of expenditures committed, with or without operator.

H. **A bona fide DBE service provider**: Count 100% of reasonable fees or commissions.

Eligible services include professional, technical, consultant, or managerial, services and assistance in the procurement of essential personnel, facilities, equipment, materials or supplies required for the performance of the contract. Eligible services also include agencies providing bonding and insurance specifically required for the performance of the contract.

I. **A trucking, hauling or delivery operation**: Count 100% of expenditures committed when trucks are owned, operated, licensed, and insured by the DBE and used on the contract and, if applicable, includes the cost of the materials and supplies. 100% of expenditures committed when the DBE leases trucks from another DBE firm including an owner-operator. 100% of reasonable fees, or commissions, the DBE receives as a result of a lease arrangement for trucks from a non-DBE, including an owner-operator.

J. **Any combination of the above**.

Reporting Requirements for Payments Made to DBEs. On all Federal-aid projects, due to the prompt payment requirement, contractors are required to report payments made to DBEs during the life of the contract, on a monthly basis. The NHDOT will provide the Contractor with a monthly Prompt Payment Certification Form, detailing all DBEs subcontracted by the Contractor, per project. The Contractor shall report any payments made to DBEs during the requested reporting period. This form shall be submitted to the of Office of Access, Opportunity and Compliance (OAOC) at laborcompliance@dot.nh.gov. Failure of the Contractor to submit this information may result in the Department withholding progress payments.

Removal of Approved DBEs from Projects/Contracts with a specific DBE Goal (Race-Conscious). Contractors are required to utilize the specific DBEs listed on their DBE Letters of Intent and/or DBE Commitment Forms to perform the work and supply the materials for which each is listed unless the contractor obtains a written consent from NHDOT OAOC. Without the written consent, the Contractor shall not be entitled to any payment for work or materials unless its performed or supplied by the listed DBE.

Contractors may not terminate for convenience, any approved DBE subcontractor and perform the work with their own forces, without prior written consent from the NHDOT OAOC.

Procedures for Projects/Contracts with a Specific DBE Goal (Race-Conscious). The apparent low bidder must document that it has obtained sufficient DBE participation to meet the specific Project/Contract DBE Goal, or document and provide adequate evidence of "Good Faith Efforts" to meet the requirement, even though it did not succeed in obtaining enough DBE participation to do so. The apparent low bidder must do the following:

All bidders or offerors are required to file with the NHDOT OAOC, a signed Letter of Intent (OAOC Form 29) and DBE Commitment Form (OAOC Form 30) within three (3) days after bid opening for their bid to be considered responsive. The forms ask for the following information:

a) The names and addresses of DBE firms that will participate in the contract.

b) A description of the work that each DBE will perform. To count toward meeting a goal, each DBE firm must be certified in a NAICS code applicable to the kind of work the firm would perform on the contract.

c) The dollar amount of the participation of each DBE firm participating.

d) Written documentation of the bidder/offeror's commitment to use a DBE subcontractor whose participation it submits to meet a contract goal.

e) Written confirmation from each listed DBE firm that it is participating in the contract in the kind and amount of work provided in the Prime Contractor's commitment.

Letters of intent do not represent formal subcontracts between the Prime Contractor and DBEs, however, shall represent the anticipated work and participation by the DBE on the project.

At a bidder's request, an additional two (2) days may be given to the apparent low bidder for a low bid contract with DBE goal, to furnish the DBE Commitment Form/Good Faith Effort information, as outlined in 49 CFR Part 26. The request must be submitted in writing and sent directly to the OAOC. The NHDOT Contracts Office shall also be made part of the notification process.

OAOC will review the DBE Commitment Form, the Letter of Intent and/or Good Faith Effort (GFE) information (if applicable) for completeness and accuracy and determine if the bidder has fulfilled the requirements and/or made the Good Effort in accordance with regulatory requirements, before NHDOT commits to the performance of the contract by:

a) ensuring that the bidder has obtained enough DBE participation to meet the goal; or

b) that it made adequate Good Faith Effort to meet the goal, even though it did not succeed in obtaining enough DBE participation to do so. If the bidder does document adequate Good Faith Effort, NHDOT will follow the approved process and will not deny award of the Contract on the basis that the bidder failed obtain enough DBE participation to meet the goal.

NHDOT will award the Contract only to a bidder who makes good efforts to meet the DBE goal.

Failure to provide the required DBE Forms and/or acceptable documentation of "Good Faith Efforts" to obtain DBE utilization within three (3) days after the bid opening date, or by the extended deadline, will be considered a lack of responsiveness on the part of the apparent low bidder.

If for any reason during the progress of project work the Prime Contractor finds that the DBE's subcontractors included on the DBE Commitment Form are unable to perform the proposed work, the Prime Contractor, with written approval from the Department, may substitute other DBE firms for those named on the list. If the Prime Contractor is able to clearly document his inability to find qualified substitute firms to meet the project goal, the Prime Contractor may request, in writing, a waiver of that portion of the goal.

If at any time during the life of the Contract it is determined that the Prime Contractor is not fulfilling the Race Conscious (RN) goal requirement or commitment(s) and is not making a Good Faith Effort to fulfill the DBE requirement, the Department may withhold progress payments. Failure of the Prime Contractor to meet the Race Conscious project goal or the specified DBE commitment(s), whichever is the lowest, may result in a reduction in Contract payment by an amount equal to the difference between the actual Contract dollars multiplied by the applicable commitment percentage and the dollar value of the work performed by the DBEs. If the Prime Contractor's failure to meet the DBE goal or commitment(s) in the Contract is the result of circumstances clearly documented to be beyond the control of the Prime Contractor, a written request for waiver of the goal or commitment(s) must be received. The OAOC may

waive, in whole or part, the reduction in contract payments specified herein. Fulfillment of the goal percentage shall be determined by dividing the dollars committed to the DBEs by the actual contract dollars.
For the purposes of this requirement "days: mean calendar days. In computing any period of time described in this policy, the day from which the period begins is not counted, and when the last day of the period is a Saturday, Sunday, or Federal holiday, the period extends to the next day that is not a Saturday, Sunday, or Federal holiday. Similarly, in circumstances where the recipient's offices are closed for all or part of the last day, the period extends to the next day on which the agency is open.

If NHDOT determines that the apparent low bidder has failed to meet the requirements of Good Faith Effort, NHDOT shall provide the bidder an opportunity for administrative reconsideration. Administrative reconsideration requests must be received within three (3) days of being informed of the decision to deny the contract award and made in writing to the Reconsideration Official: Senior Hearings Examiner, New Hampshire Department of Transportation, PO Box 483, Concord, NH 03302-0483. The reconsideration official shall not have any role in the original determination that the bidder did not document sufficient Good Faith Efforts. As part of this reconsideration, the bidder will have the opportunity to provide written documentation concerning the issue of whether it met the goal or made adequate Good Faith Efforts to do so. The bidder will have the opportunity to provide documentation or meet in person concerning its pre-bid Good Faith Efforts to meet the goal. The reconsideration official shall provide the bidder a written decision on reconsideration within fifteen (15) days, explaining the basis for finding that the bidder did or did not meet the goal or make adequate Good Faith Efforts to do so. The result of the reconsideration process is not administratively appealable to the U.S. Department of Transportation.

If the hearing officer concurs with the original determination that Good Faith Efforts were insufficient, NHDOT will not award the contract.

MUNICIPAL PROJECTS ONLY: Timely submission of invoices to Municipalities: Prime Contractors must submit all invoices received for satisfactorily completed work, from any subcontractor/lower-tier subcontractor/material supplier, to Municipalities for payment within 30 calendar days of receipt.

02/22/24

SSD: 1/7/00, 3/22/00, 6/14/00, 2/8/01, 4/2/01, 1/25/02, 4/1/02, 04/15/03, 04/20/04, 05/06/05, 05/19/06, 09/17/07, 06/12/08, 03/04/09, 08/26/09, 06/28/10, 06/10/11, 04/12/12, 04/18/13, 01/02/14, 10/22/14, 01/16/15, 01/15/16, 09/12/16, 02/09/17, 04/27/17

S P E C I A L A T T E N T I O N

QUALIFIED PRODUCTS LIST

The Qualified Products List is available online at www.dot.nh.gov on the *Doing Business with DOT>Contractors* webpage. A link to the Qualified Product List (QPL) is shown under the *Engineering Information* heading of this webpage. The QPL is now considered a live document and periodic updates will occur. The QPL in effect on the date of project advertisement shall apply to this contract.

Products added to the QPL can be used under this contract upon issuance of the updated QPL. The Contractor shall not use the anticipated addition of a product to the QPL as a basis for use of a product. A product removed from an updated QPL can still be used under this contract unless specifically directed by the Department that the removed product shall not be used.

S P E C I A L A T T E N T I O N

STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STANDARD PLANS FOR ROAD CONSTRUCTION & BRIDGE DETAIL SHEETS

This project will be constructed under the requirements of the 2016 Standard Specifications for Road and Bridge Construction, which has been adopted and will be utilized for projects advertising after March 1, 2016, and the 2010 Standard Plans for Road Construction, including revised Standard Plans.

For Bridge Standard Plans, Bridge Design will include the appropriate standard plans, now referred to as Detail Sheets, in the plan set that pertain to the specific project, as necessary.

The Standard Specifications for Road and Bridge Construction and the Standard Plans for Road Construction manuals are available for purchase from NHDOT Records Section (603-271-3514) or can be viewed on the NHDOT website: www.dot.nh.gov/doing-business-nhdot/contractors. The Standard Specifications, the Standard Plans, and the Bridge Detail Sheets are located under the *Engineering Information* heading.

SPECIAL ATTENTION

THIS PROJECT IS TO BE BID AND CONSTRUCTED UNDER THE 2010 STANDARD PLANS FOR ROAD CONSTRUCTION

NOTICE OF STANDARD PLANS

The following table is a list of all of the Standard Plans that have been adopted as additions or revisions to the *Standard Plans for Road Construction*, June 2010 Edition as of the date of this Proposal. The Bidder is responsible to examine each standard to determine its effect, if any, upon the Contract.

Note: All Standard Plans (and the List of Revisions) are available on-line:
www.dot.nh.gov/doing-business-nhdot/contractors/standard-plans-road-construction

Note: See also Highway Design Detail Sheets on-line:
www.dot.nh.gov/doing-business-nhdot/engineers-consultants

2010 Highway Standard Plans

Standard Plan	Description	Previous Revision Date	Current Revision Date
CR-1	Granite Curb Details		06/16/10
CR-2	Curb Details		06/16/10
DL-1	Roadside Delineation	06/16/10	**03/05/15**
DL-2	Interchange Delineation	06/16/10	**03/05/15**
DL-3	Milled Rumble Strips (Shoulders)		**Under Revision**
DL-4	Milled Rumble Strips (Shoulders)		**Under Revision**
DL-5	Milled Rumble Strips (Shoulders)		**Under Revision**
DL-6	Milled Rumble Strips (Centerline)	06/16/10	**01/25/16**
DL-7	Milled Rumble Strips (Centerline)	06/16/10	**01/25/16**
DL-8	Milled Rumble Strips (Centerline)	06/16/10	**01/25/16**
DP-1	Drainage Pipe Details		06/16/10
DR-1	Grate and Frame Details	06/16/10	**08/14/15**
DR-2	Grate and Frame, M.H.Cover and Pavement Depression Details	11/5/10	**08/14/15**
DR-3	Precast Concrete Median Barrier Drainage Details		06/16/10

DR-4	DI-DB, Underdrain Flushing Basin and Polyethylene Liner Details	06/16/10	**08/14/15**
DR-5	Precast Reinforced Concrete C.B., D.I. and M.H.		06/16/10
ES-1	End Sections for Corrugated Steel and Reinforced Concrete Pipes		06/16/10
EW-1	Earthwork - Muck Excavation		06/16/10
FN-1	Woven Wire Fence		06/16/10
FN-2	Chain Link Fence		06/16/10
GR-1	31" Mid-Splice Beam Guardrail Standard Section - Steel Posts and Hardware Details	06/16/10	**08/19/15**
GR-2	Beam Guardrail Standard Section - Steel Posts and Hardware Details	05/03/11	**08/19/15**
GR-2A	Beam Guardrail Standard Section - Wood Posts and Hardware Details	06/16/10	**08/19/15**
GR-3	Preferred Platform for Energy Absorbing Guardrail Terminal (EAGRT)		Superseded (08/19/15) - See Detail Sheets
GR-4	Alternative Platform for Energy Absorbing Guardrail Terminal (EAGRT)		Superseded (08/19/15) - See Detail Sheets
GR-5	Beam Guardrail Terminal Section Type E-2		06/16/10
GR-6	Beam Guardrail - Terminal Section Type E-2 Hardware Details		06/16/10
GR-7	Beam Guardrail - Terminal Section Type E-2 Modified 30		06/16/10
GR-8	Beam Guardrail - Terminal Section Type E-2 Modified 40		06/16/10
GR-9	Beam Guardrail - Terminal Section Type E-2 Modified 45		06/16/10
GR-10	Beam Guardrail - Terminal Unit Type G-2		06/16/10
GR-11	Beam Guardrail - Thrie Beam Double Faced (Wood Posts)	06/16/10	**11/05/10**
GR-12	Beam Guardrail - Thrie Beam Double Faced (Steel Posts)	11/05/10	**05/03/11**
GR-13	Beam Guardrail - Thrie Beam Single Faced (Wood Posts)	06/16/10	**11/05/10**
GR-14	Beam Guardrail - Thrie Beam Single Faced (Steel Posts)	11/5/10	**05/03/11**
GR-15	Precast Concrete Barrier 42" F-Shape (Double-Faced)	06/16/10	**11/05/10**
GR-16	Transition F-Shape Barrier	06/16/10	**11/05/10**
GR-17	Transition F-Shape Barrier and Guardrail (Wood Posts)	11/05/10	**10/30/12**
GR-18	Transition F-Shape Barrier and Guardrail (Steel Posts)	11/05/10	**10/30/12**
GR-19	Single Slope Barrier	11/05/10	**04/03/14**
GR-20	Transition Single Slope Concrete Barrier, Precast	10/30/12	**04/03/14**
GR-21	Transition Single Slope Concrete Barrier and Guardrail (Wood Posts)	11/05/10	**10/30/12**

GR-22	Transition Single Slope Concrete Barrier and Guardrail (Steel Posts)	11/05/10	**10/30/12**
GR-23	Portable Concrete Barrier 10 foot	01/03/20	**03/27/20**
GR-24	Portable Concrete Barrier (1 of 2) (12.5 ft-MASH)		**06/05/20**
GR-25	Portable Concrete Barrier (2 of 2) (12.5 ft-MASH)		**06/05/20**
HR-1	Handrail Details		06/16/10
HR-2	Concrete Bound and Steps		06/16/10
HW-1	Headwall Details		06/16/10
HW-2	Headwall Details (45° Wings)		06/16/10
HW-3	Headwall Details (2 Pipes 45° Wings)		06/16/10
MB-1	Mailbox Details	06/16/10	**02/25/16**
PL-1	Planting Details		02/26/10
PL-2	Planting Details		06/16/10
SL-1	Pull Boxes and Conduit Trench Detail		06/16/10
SL-2	Concrete Foundations and Light Pole Base, Type B		06/16/10

2010 Traffic Standard Plans

Standard No.	Description	Previous Revision Date	Current Revision Date
PM-1	Layout Details		02/26/10
PM-2	Tolerances for Pavement Marking Lines		02/26/10
PM-3	Divided Roadway Multiple Lanes with Entrance and Exit Ramps Striping Layout	11/05/10	**Superseded See Detail Sheets (07/20/20)**
PM-4	Divided Roadway Multiple Lanes with Entrance and Exit Ramps Striping Layout		**Superseded See Detail Sheets (07/20/20)**
PM-5	Divided Roadway Multiple Lanes with Entrance and Exit Ramps Striping Layout	02/26/10	**Superseded See Detail Sheets (07/20/20)**
PM-6	Painted Island Details		02/26/10
PM-7	Intersection Details	02/26/10	**11/05/10**
PM-8	Word and Symbol Lane Layout		**Superseded See Detail Sheets (03/21/17)**

PM-9	Pavement Marking at Minor Intersections		02/26/10
PM-10	Turning Lane Extension Details		02/26/10
PM-11	Accessible Parking Details		02/26/10
PM-12	Words and Symbols		02/26/10
PM-13	Words and Symbols		02/26/10
PM-14	Speed Zone Pavement Markings (Divided Highway)		02/26/10
PS-1	Aluminum Plank Details		02/26/10
PS-2	Aluminum Plank Details		02/26/10
PS-3	Aluminum Sheet Details		02/26/10
PS-4	Tubular/ U-Channel Post Detail		02/26/10
PS-5	Steel Beam Details (Non-Breakaway)		02/26/10
PS-6	Steel Beam Details (Non-Breakaway)		02/26/10
PS-7	Steel Beam Details (Breakaway)		02/26/10
PS-8	Steel Beam Details (Breakaway)		02/26/10
PS-9	Breakaway Mounts		02/26/10
PS-10	Breakaway Mounts		02/26/10
SG-1	Route Marker Details		02/26/10
SG-2	Regulatory Signs		02/26/10
SG-3	Regulatory Signs		02/26/10
SG-4	Regulatory Signs		02/26/10
SG-5	Regulatory Signs		02/26/10
SG-6	Regulatory Signs		02/26/10
SG-7	Warning Signs		02/26/10
SG-8	Warning Signs		02/26/10
SG-9	Warning Signs		02/26/10
SG-10	Warning Signs		02/26/10
SG-11	Warning Signs		02/26/10
SG-12	Miscellaneous Signs		02/26/10
SG-13	Informational Signs		02/26/10
SG-14	Informational Signs		02/26/10
TS-1	Traffic Signal Mast Arm Foundation – Type 1A	02/26/10	**10/09/17**
TS-2	Traffic Signal Mast Arm Foundation – Type 1B and 1C	02/26/10	**10/09/17**
TS-3	Traffic Signal Mast Arm Foundation – Type 1D and 1E	02/26/10	**10/09/17**
TS-4	Traffic Signal Mast Arm Foundation - Type 2	02/26/10	**10/09/17**

TS-5	Quadrupole Loop Detector 2-4-2 Turns	02/26/10	**01/17/19**
TS-6	Rectangular Loop Detector 3 Turns	02/26/10	**01/17/19**
TS-7	Standard Traffic Signal Mast Arms		01/17/19

Work Zone Traffic Control Standard Plans

Standard No.	Description	Previous Revision Date	Current Revision Date
TC-1	Text Amendment Note Sheet	11/28/18	**05/17/19**
TC-2	Permanent Construction Signing	08/03/04	**03/16/17**
TC-3	Two-Way Traffic Lane Shift	08/03/04	**03/16/17**
TC-4	Bridge Rehabilitation: Stop/Yield Control	11/28/18	**05/17/19**
TC-5	Single Lane Shift (Divided Highway)	08/03/04	**See Detail Sheets**
TC-6	Lane Closure with Lane Shift for Speed Reduction (Divided Highway)	03/16/17	**11/28/18**
TC-7	Multi-Lane Closure (Divided Highway)	11/28/18	**05/17/19**
TC-8	Construction Signing for Cold-Planed Surfaces	03/16/17	**11/28/18**

S P E C I A L A T T E N T I O N

ERRATA SHEET

The following table is a list of corrections to the 2016 *Standard Specifications for Road and Bridge Construction*, as of the date of this Proposal.

Section	Description	Correction	Date
DIVISION 100			
104.03	Maintenance of Traffic	Amend 'winter work suspensions' in 104.03 to read 'Winter Suspension'.	06/07/07
DIVISION 200			
DIVISION 300			
DIVISION 400			
DIVISION 500			
520	Classes of Concrete	Insert the following footnotes under Table 520-1A: [1] See 3.1.6 TESTING [2] For mixes containing fly-ash, silica fume, slag, or any other pozzolanic or cementitious material, the water/cement ratio of the concrete mix shall be based on the water cementitious (cement + pozzolanic or cementitious material) ratio of the mix. This water to cementitious ratio shall not exceed those listed in Table 1A. The maximum water/cement ratios listed for Concrete Class B and T are for design purposes only. [3] Deck Overlays. [4] <u>Maximum</u> 84 day Compressive Strength for Flowable Fill, Excavatable shall not exceed 200 psi. [5] These are recommended values that may be used as a starting point for a mix design that has shown ability to meet the requirements. The amount of cement shall be adjusted and fly-ash or ground granulated blast furnace slag shall be used provided the mix design meets the minimum and does not exceed the maximum compressive strength in accordance with 2.11.1. [6] Target values shown are for mix design approval only and are not intended for use as quality control or quality assurance requirements.	06/11/16

Section	Description	Correction	Date
520	Classes of Concrete – Performance Requirements (QC/QA)	Amend the title of *Table 420-1B - Class of Concrete – Performance Requirements (QC/QA)* to *Table **5**20-1B - Class of Concrete – Performance Requirements (QC/QA)*	11/28/16
528	Shear Key Grout for Butted Beams	Amend 528.2.9.1 to read: *Grout for shear keys shall be an approved grout as listed in Section 528A of the Qualified Products List.* Amend 528.2.9.2 to read: *For testing, 3 neat 2" cubes shall be molded and cured in accordance with AASHTO T 106 (ASTM C 109). The average compressive strength of the 3 cubes at 7 days shall be a minimum of 6000 psi.*	06/10/16
528	Installation of Deck Panels	Replace last sentence of 528.3.22.6.4 to read: *If leveling screws are used, they shall be completely removed and the holes filled with grout listed in Section 528A of the Qualified Products List prior to placement of deck concrete.*	06/10/16
550	PTFE Surfaces for Bearings	Amend the first sentence of 550.2.10 to read: *PTFE for use in expansion bearing assemblies shall be 100 percent virgin (unfilled) **polytetrafluoroethylene** polymer...*	08/03/16
550	Anchor Rods	Amend 550.3.15.4.1 to read: *Anchor rods shall be set in one of the following materials:* *(a) Non-shrinking, non-ferrous, cement-base grout listed in Section 550A of the Qualified Products List. This grout shall be used only when both the temperature of the masonry and the ambient temperature are kept at 40 °F or above until the grout has cured.* *(b) Sulfur.* Amend the first sentence of 550.3.15.4.2 to read: *Non-shrinking, non-ferrous, cement base grout shall be a product as included in Section 550A of the Qualified Products List.*	06/10/16
563	Bridge Rail	Amend 4.1 to read: *Bridge rail, of the type specified, will be measured by the linear foot to the nearest tenth of a foot.*	06/27/16
DIVISION 600			
606	Handrail	Amend 606.2.8.2 to read: *Grout for anchoring the pipe posts shall be High Strength, Impact Resistant, Non-shrink Grout as included in Section 528A of the Qualified Products List.*	06/10/16

Section	Description	Correction	Date
606	Temporary Impact Attenuators	Amend in 606.2.10.2 the reference to *2.12.4* to *2.**10**.4*.	11/28/16
	Repair of Hardened Concrete	Amend in 606.3.7.12.A the reference to *Fast Set Non-shrink Patching Mortar* to ***Rapid-Hardening Patching Material***.	03/21/18
609	Curbing	Amend the 2nd sentence of 609.2.5 to read: *The non-shrink, non-metallic grout shall be a product as included in Section 550A of the Qualified Products List.*	06/10/16
609	Curb anchors	Amend 609.3.1.5.1 to read: *Curb anchors shall be set and grouted using non-shrink, non-metallic grout as shown on the plans.*	06/10/16
621	Delineators	Add the following to the end of 621.3.1.3: *Grout shall be as listed in Section 550A of the Qualified Products List or as directed by the Engineer.*	06/10/16
632	Pavement Markings	Amend the AASHTO reference in 3.2.3.1 to read: *AASHTO M248 **Type** F*	
DIVISION 700			
707	Cement Mortar	Amend 2.3 to read: *Testing for impurities shall comply with AASHTO T 21. Results that are darker than the standard shall be cause for rejection, except as provided in 2.3.1.* Amend 2.3.1 to read: *Sand for mortar not conforming to 2.3 shall be tested in accordance with AASHTO T 71 and shall meet the requirements of 5.2.3 of AASHTO M 45.*	10/31/16

SPECIAL ATTENTION

THIS PROJECT IS TO BE BID AND CONSTRUCTED UNDER THE 2016 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION

NOTICE OF SUPPLEMENTAL SPECIFICATIONS

The following table is a list of all of the Supplemental Specifications that have been adopted as additions or revisions to the *Standard Specifications for Road and Bridge Construction*, **March 2016** Edition as of the date of this Proposal. The Bidder is responsible to examine each item to determine its effect, if any, upon the Contract.

Note: Due to the limited scope of some projects, not all Supplemental Specifications will be included in all Proposals. All Supplemental Specifications are available on-line: www.dot.nh.gov/about-nh-dot/divisions-bureaus-districts/highway-design/contracts-and-specifications/2016.

Section	Description	Revision	Previous Revision Date	Current Revision Date
DIVISION 100				
101	Definitions and Terms	101.79 – Revises Frequency of QPL Updates (06/06/17) 101.116-119 – Revises Definitions of Weather Days and Working Days (04/02/18)	06/06/17	04/02/18
105.02	Plans and Working Drawings	Section Rewrite-Approval/ Acceptance/Documentation (NHDOT: 12/07/23; FHWA: 11/16/23)	-	12/04/23
106.04	Qualified Products List	Revises Frequency of Updates		06/06/17
107.01	Legal Relations and Responsibility to Public	107.01 – Revises References to DES Rules and Regulations		07/06/18
108.09	Prosecution and Progress	108.09 – Amends the Requirements for Liquidated Damages		07/06/18
109.04	Differing Site Conditions, Changes and Extra Work	Revises Rental Rate Blue Book Online Requirements (04/02/18) Allows Positions above the Grade of Forman to be included in Certain Work Associated with Revisions to the Contract (02/28/24)	04/02/18	02/28/24
DIVISION 200				
211.3.4	Vibration Monitoring	Adds reference to pre- and post-construction survey requirements		04/05/17
DIVISION 300				

DIVISION 400				
401	Plant Mix Pavements - General	2.2.3 – Requires Suppliers to participate in NTPEP Asphalt Binder Suppliers (ABS) program (12/15/23) (NHDOT: 03/02/22; FHWA 12/15/23) 3.9 – Asphalt Release Agents must be listed on QPL (12/15/23) (NHDOT: 03/02/22; FHWA 12/15/23) Complete reorganization of Section 401, including incorporating all supplemental specifications thus far (01/28/21) (NHDOT: 12/02/20/FHWA: 01/28/21) 2.5.1 - Adds winter binder to the design control points (04/05/17) 2.10 – No greater than 1% TRB (06/06/17) 3.1.12.2 – Adds Pycnometer (4,000 g) to equipment list (06/18/24) 3.4.1 – Revises Cold Feeder Requirements (07/06/18) 3.4.7.1 – Revises Recycled Materials Weighing Procedures (07/06/18) 3.4.11 - 3.4.15 – Describes Introduction of Recycled Materials at a Batch Plant and Controls Minimum Dry Time for Recycled Aggregates (07/06/18) 3.5.2 & 3.5.2.1 – Revises Recycled Materials Requirements (07/06/18) 3.10.10.1 – Removes penalty for failing tack (06/06/17) 3.12 – Allows a reduction in use of pneumatic-tired rollers (06/06/17) 3.17.1.3 - Revise NETTCP QA Technologist requirements (11/07/18) 3.17.3.1.1 – Revises HMA gradation specification limits, completes addition of winter binder, removes allowance for Aim change after two sub-lots (06/06/17) 4.1.1 – Removes reference to Night Items (06/06/17)	12/15/23	06/18/24

403	Pavement Item Numbers	403.1.3, 403.5.1.1 & Item Key - Removes all references to Night Items and removes "percent wear" items. (06/06/17) 403 Item Key - Total overhaul of Item Numbers and Descriptions to allow for type of mix in item description (07/27/20) 403 Item Key & 5.2 - Further Update of Item Descriptions to allow for type of mix (07/01/21) (NHDOT: 12/02/20/FHWA: 01/28/21)	07/27/20	07/01/21
410	Bituminous Surface Treatment	2.1- Adopts new AASHTO Specifications for Emulsions (04/13/16) 3.4.1.1 – Revises pavement conditions, application rate for tack (01/04/17) 2.1.1, 2.1.2, 3.2, 3.3, 3.4 – Identifies tack sampling and penalties for non-conformance (06/06/17) 3.2 & 3.5.2 – Amends Distribution Equipment and Initiates an Annual Tack Truck Inspection Program (07/06/18)	06/06/17	07/06/18
411	Pneumatic Tired Roller/Remove "AC"	2.1.2/3.4.7 – Update language to remove references to "AC" and ¾" PMST (01/11/24) 3.5.5 – Requires the use of pneumatic tired rollers on all Section 411 paving (06/06/17). 5.1.1 – Ensures Tack Used for PMST and Leveling Course is a Pay Item (07/06/18) Update Pay Item Description (Remove "AC") (01/11/24) Removes Pay Items (04/02/18 & 01/11/24)	07/06/18	01/11/24
417	Rumble Strip Inlay	2.1 & 3.7 – Specifies PMST as the asphalt inlay to fill in rumble strips		04/02/18
DIVISION 500				
520	Portland Cement Concrete	3.8.1.1 – Revises the acceptable concrete delivery temp to 90° F (04/02/18) 3.1.6.2.1.2 A - Revise NETTCP QA Technologist requirements (11/07/18)	04/02/18	11/07/18

530	Waterproofing Concrete Surfaces	Deletes Section 530		05/21/18
538	Barrier Membrane	3.3.5 – Updates the laydown temperature range.		09/15/16
550	Structural Steel-Shim Plates	3.15.5.5 – Eliminate the use of weathering steel as a bearing shim plate (NHDOT: 01/08/20/FHWA: 03/18/20)		01/28/21
563	Bridge Fence	2.8 – Allows aluminum ties for attaching bridge fence		09/15/16
568	Structural Timber	2.2, 3.4.4 & 3.4.5 – Adds specific references to AWPA Standards & wooden piles		04/02/18
582	Preformed Joint Filler	2.4 – Revises Preformed Joint Filler Requirements		04/02/18
DIVISION 600				
603	Plastic Pipe	2.3, 2.6 & 2.7 – Updated to include Polypropylene Pipe as well as associated UV Requirements (04/13/16) 2.13 – Adds Contractor's Option (06/02/16)	04/13/16	06/02/16
605	Plastic Pipe	2.1 & 2.2 – Updated to include Polypropylene Pipe		04/13/16
606	Guardrail	2.2 – Adds specific references to AWPA Standards & wooden piles		04/02/18
608	Detectable Warning Devices	2.6 – Updates Detectable Warning Device Requirements		04/02/18
609	Curbs	2.4.1.1 – Allows the substitution of PG 76-28 binder in lieu of fibers		04/02/18
615	Cofferdam for Sign Installation	5.1.5 – Revises payment for sheeting and shoring for sign structures		04/02/18
645	Erosion Control	1.1 – Matting Section Revised and Pay Items Revised (04/02/18) 1.1 – 'Stabilization' changed to 'matting' (02/01/17) Incorporates BFM, FRM and SMM into the Standard Specs (07/06/18) 1.2.1 – Add Erosion Control Plans to furnish for SWPPP (11/07/18) 3.1.5 – Update construction dates for allowable area of exposed, unstabilized soil (11/07/18)	07/06/18	11/07/18

DIVISION 700				
702	Bituminous Materials	Amends/Corrects Table 702-1 & 702-2 (04/13/16 & 01/11/24) Amends Tables, and Adds Test Method (05/11/16)	05/11/16	01/11/24

ACWORTH
43566C

July 22, 2024

S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 101 – DEFINITIONS AND TERMS

This special provision adds the definition of Limited Reuse Soil and revises the definition of topsoil.

Insert 101.64"A" as follows:

101.64"A" Limited Reuse Soils (LRS). Material within the project that requires a Soils Management Plan* to address soil that is likely and/or demonstrated to contain concentrations of contaminants due to the presence and breakdown of asphalt pavement, the normal operation of motor vehicles, and other "non-point sources" of pollution. The definition of LRS includes:

- All topsoil within the project limits and within the existing right-of-way, regardless of depth.
  - In instances where topsoil is not present, LRS is defined as soil from the top of ground to a depth of six (6) inches.
- Asphalt pavement that has been ground or pulverized (including milled material and reclaimed stabilized base).
- Street waste (catch basin cleanouts, street sweeping, and ditching material).

* For projects where LRS is deemed *de minimis*, soil management will be addressed in the Prosecution of Work and not through a Soils Management Plan.

Revise 101.108 as follows:

101.108 Topsoil. The surface layer of soil consisting of mineral soil mixed with organic matter and vegetative debris that is suitable for plant growth and is typically darker in color than the underlying soil.

SUPPLEMENTAL SPECIFICATION

AMENDMENT TO SECTION 101 – DEFINITIONS AND TERMS

The intent of the Supplemental Specification is to revise:

- *the frequency of QPL updates (06/06/17)*
- *the definitions of weather days and working days (04/01/18)*

Amend 101.79 to read:

101.79 Qualified Products List (QPL). A list of products prequalified by the Engineer as meeting the Contract requirements for specified materials to be incorporated into the Work. The list is maintained and updated by the Bureau of Materials and Research.

Amend 101.116-119 to read:

101.116 Wear. The percent of wear of aggregate as determined by the AASHTO T 96 (Los Angeles Abrasion Test). The grading shall be Grading A unless otherwise specified.

101.117 Weather Day. Days on which weather conditions beyond the Contractor's control would prevent Work on the Controlling Activities for at least five hours with a work force consistent in size and type for the work to be performed. Should the Contractor prepare to begin work on any day on which inclement weather, or the conditions resulting from the weather, prevent the work from beginning at the usual starting time, and the crew is dismissed as a result, the Contractor will not be charged for a working day whether or not conditions change during the day and the rest of the day becomes suitable for construction operations.

101.118 Wetland. An area that is inundated or saturated by surface or ground water at a frequency and duration sufficient to support and that under normal conditions does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands include, but are not limited to swamps, marshes, bogs, and similar areas." (NH Code of Administrative Rules, Env-Wt 101.113)

101.119 Winter Suspension. Winter Suspension shall be such time that the Contractor, utilizing conventional means and methods, is unable to proceed in an efficient manner with construction activity due to unfavorable weather conditions and suspends operations until such time that conditions are favorable for sustained construction activity.

101.120 Winter Work. Winter Work is any work that is done in December, January, February, and March. The Contract may require winter work on all or portions of the project, in which case time will be determined as specified in 108.07 unless otherwise amended.

101.121 Work. The furnishing of all labor, materials, equipment, and incidentals necessary or convenient to the successful completion of the Project, and the carrying out of the duties and obligations imposed by the Contract.

101.122 Working Day. Any calendar day, except Saturdays, Sundays, Contract designated Holidays and Weather Days. Days in December, January, February, and March are not considered working days even if the Engineer allows the Contractor to work and the Contractor so chooses except when:

(1) The Contract requires Winter Work;
(2) The Contract Completion Date gets extended into this period and the weather conditions are favorable for the continuation of the remaining Work; however, should weather or site conditions change during the Winter Work period and the Contractor suspend operations as a result, Working Days will not be charged until April 1 whether or not the conditions become suitable for construction operations during the remainder of the Winter Work period.

101.123 Working Drawings. Working Drawings may be submitted for approval or documentation. See 105.02.

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July 22, 2024

S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 104 -- SCOPE OF THE WORK

AMENDMENT TO 104.04 – RIGHTS IN AND USE OF MATERIALS FOUND ON THE PROJECT

This special provision requires Limited Reuse Soil from within the project limits to be reused on site.

Amend the first paragraph of 104.04 as follows:

Materials found in the limits of excavation that are suitable for completing bid items of work may be used by the Contractor. The Contractor will be paid both for the removal of the materials at the corresponding Contract unit price and for the pay item for which the removed materials are used. Material defined as LRS found in the limits of excavation must be reused on the Project unless otherwise stated in the Soils Management Plan or as authorized in writing by the Engineer.

Amend the third paragraph of 104.04 as follows:

Material shall not be excavated or removed from within the highway Right-of-Way that is not within the grading limits without written authorization from the Engineer. Material authorized to be removed outside the grading limits may be subject to compensation from the Contractor at an agreed price at the time of authorization. The Contractor must handle LRS in accordance with the Soils Management Plan and provide information in the Project Operations Plan regarding how LRS will be addressed outside the grading limits. Replacement material covered under 104.04 shall be compacted to the density requirements specified for roadway embankment construction.

S U P P L E M E N T A L S P E C I F I C A T I O N

AMENDMENT TO SECTION 105 – CONTROL OF THE WORK

The purpose of this Supplemental Specification is to update Section 105.02 to correspond with the updated NHDOT standard stamps.

Replace Section 105.02 – Plans and Working Drawings with the following:

105.02 Plans and Working Drawings.

Plans shall be supplemented by Contractor-prepared Working Drawings as found necessary to control the Work and its prosecution. Working Drawings consisting of details that are not included in the Plans but are required for the Work shall be furnished to the Department. Working Drawings that include deviations from that which are shown in the Contract including, but not limited to, changes in dimensions, material, fabrication process, and specific design requirements shall be flagged on the drawings and/or accompanied by a written narrative specifically requesting such changes.

The Contractor shall submit the required Working Drawings to the Engineer for approval, acceptance, or documentation. All information the Engineer used in preparation of the Working Drawings shall be furnished in the submittal including, but not limited to, calculations, catalog cuts, sketches or drawings, narrative of work, design assumptions, and manufacturer's engineering data for prefabricated items, including falsework and forms. The Working Drawings shall be furnished well in advance of the Work to allow the Engineer time to review or distribute the Working Drawings. Any work done or materials ordered for work shown on the Working Drawings prior to approval or distribution of the drawings shall be at the Contractor's risk.

A. Approval. Working Drawings submitted for approval are typically fabrication shop drawings for permanent installations that provide additional detailing to Department designs and do not require a PE stamp. The Department "approval" is for general conformity with the contract plans, proposal, addenda, special provisions, and standard specifications.

Working Drawings submitted for approval shall include, but are not limited to, the following:

- Bending diagrams when required for reinforcing steel
- Bridge mounted sign supports
- Expansion joints (compression seal, strip seal, finger joints)
- Bridge railing
- Bridge bearings (elastomeric, steel)
- Structural steel
- Drilled shafts and micropiles
- Partial-depth precast deck panels
- Full-depth deck panels
- Pipe lining
- Welding procedures

B. Acceptance. Working Drawings submitted for acceptance are typically fabrication shop drawings for permanent installations that are designed by the Fabricator/Contractor and are stamped, prepared, and signed by a Licensed Professional Engineer registered in the State of New Hampshire. Calculations for the design shall be submitted for documentation. The Department will perform a review of both the Working Drawings and design calculations. The Department "acceptance" is for general conformity with the contract plans, proposal, addenda, special provisions, and standard specifications.

Working Drawings submitted for acceptance shall include, but are not limited to, the following:

- Overhead sign structures and foundations
- Traffic signal structures
- ITS supports and foundations
- Precast culverts, arches, frames, or other precast elements
- Retaining walls
- Prefabricated bridges
- Bridge bearings (high load multi-rotational, isolation)
- Expansion joints (modular)
- Railroad crossing structures
- Storm Water Pollution Prevention Plan and other environmental plans
- Detour plans (The Contractor may propose detours not shown on the Plans by submitting proposed locations, layout, grade, typical cross-sections, protective fixtures, and signing.)

C. Documentation. Working Drawings submitted for documentation are typically documents for temporary works that are designed by the Contractor and are stamped, prepared, and signed by a Licensed Professional Engineer registered in the State of New Hampshire. The Department will perform a review of both the Working Drawings and design calculations for general conformity with the contract plans, proposal, addenda, special provisions, and standard specifications. The Engineer's receipt of documentation or distribution of the Contractor's Working Drawings for documentation does not relieve the Contractor from responsibility under the Contract for errors in dimensions, incorrect fabrication and erection processes, design requirements specified, or successful completion of the Work.

Working Drawings submitted for documentation shall include, but are not limited to, the following:

- Progress schedules
- Temporary bridges
- Removal of existing bridge structures
- Cofferdams
- Water diversion structures
- Erection procedures
- Temporary support systems
- Falsework plans
- Scaffolding
- Bridge analysis

The Contractor shall submit the Working Drawings for approval and/or acceptance to the Engineer for review. The Engineer will be allowed up to fifteen (15) Working Days for review of each submission. If the Engineer has not responded to the Contractor after fifteen Working Days, the Contractor shall contact the Engineer to inquire about the status of the submittal. If the Engineer requires more time for review and the Contractor believes that an extension of the Contract Time is warranted due to this addition review time, the Contractor shall request a time extension and proceed as required by 104.02 and 108.07. A delay caused by additional time required for review is an Excusable, Non-compensable Delay. Each resubmission including requests for additional information will be treated as a new submission and may require up to fifteen (15) Working Days for review by the Engineer. The fifteen Working Days will begin upon receipt at the Bureau of Construction's main office. The review will be considered complete when the date and status has been placed on the submittal. One set of the drawings will be returned to the Contractor marked with a response. The Department reserves the right to return the Working Drawings for revisions based on the content and non-conformance with the Plans and Specifications.

If the submittal is a paper copy, after approval/acceptance has been given, the Contractor shall supply the Engineer with four sets of the revised Working Drawings. The Contract Amount shall include the cost of furnishing all Working Drawings.

10/31/16
SSD: 05/13/97, 12/09/98

ACWORTH
43566C

August 15, 2024

S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 105 -- CONTROL OF WORK

AMENDMENT TO SECTION 105.12 - CONSTRUCTION ZONE(S)

In accordance with Section 105.12 of the Standard Specifications, the construction work zone(s) designated for this contract shall extend 500 ft beyond the work limits as described below and/or as shown on the project layout map on the following page:

DESCRIPTION OF WORK LIMITS

The project is centered where the existing 4’ high by 2.8’ wide culvert conveys an unnamed brook beneath NH 123A to the Cold River, located approximately 0.5 miles west of Gate Mountain Road in the Town of Acworth. The project construction limits comprise of 90 feet of roadway over the culvert with 15 feet of approach work on either end along a segment of NH 123A.

ACWORTH - NH123A

Miles

1 ½ 0 1 2

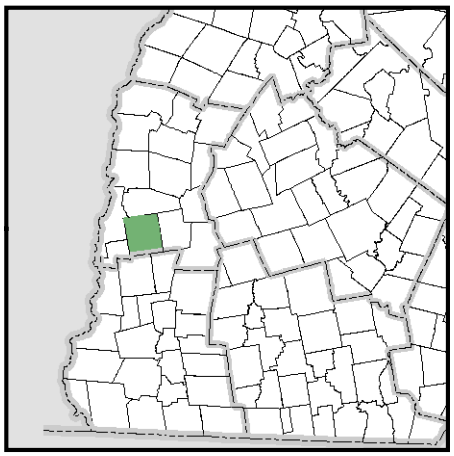
LEGEND

- Streams
- Water Bodies
- US Routes
- State Routes
- Interstates
- Local Roads
- Town Boundary

New Hampshire DOT
Department of Transportation

State #: 43566C

LOCATION MAP



SUPPLEMENTAL SPECIFICATION

AMENDMENT TO SECTION 106 – CONTROL OF MATERIAL

The purpose of this Supplemental Specification is to revise frequency of QPL updates.

Amend the last paragraph of 106.04 to read:

Products that have been prequalified by Materials and Research and are included on the Qualified Products List (QPL) may be used on projects without further testing, unless otherwise noted on the QPL, but a Certificate of Compliance for the qualified products will be required. The QPL is updated as warranted, and is available online at the Department's Website. A product that is not listed will not be used until qualified through a written request to Materials and Research. Such request should be made with sufficient lead-time to allow necessary testing or research.

ACWORTH
43566C

July 22, 2024

S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 106 -- CONTROL OF MATERIAL

AMENDMENT TO 106.10 – DISPOSAL OF SURPLUS AND WASTE MATERIALS

This special provision includes Limited Reuse Soil in this section.

Amend 106.10 as follows:

When practicable and whenever directed, surplus and waste material, including LRS, shall be disposed of by flattening slopes or for other grading within the project. When specified as embankment-in-place surplus or stockpile surplus, the material shall be placed as shown on the Plans or as directed in the Proposal in accordance with the appropriate specification. In case it is impossible to dispose of all the surplus and waste material in the manner described above, adhere to the following:

- Non-LRS: It shall be the Contractor's responsibility to secure disposal areas for non-LRS surplus and waste materials. Disposal Agreements, as provided by the Department, for such areas must be submitted to the Engineer for approval. The Disposal Agreement form may be obtained online at the Department's Website or from the Engineer.
- LRS: The LRS surplus and waste materials shall be managed as described in the Soils Management Plan.

03/21/22
SSD: 03/01/16

ACWORTH
43566C

July 22, 2024

S P E C I A L P R O V I S I O N

SECTION 107 -- LEGAL RELATIONS AND RESPONSIBILITIES TO PUBLIC

SUBSECTION 107.01 – LAWS TO BE OBSERVED

The intent of this Special Provision is to clarify Bulletin Board requirements.

Add to 107.01's third paragraph titled *Bulletin Board Requirements* the following:

New Hampshire Department of Transportation Bulletin Board Diagram
(Revision 3-8-2022)

NHDOT PROJECT: (PROJECT NAME) (PROJECT NUMBER)

Federal Posters

1 Equal Employment Opportunity (EEO) is The Law (OFCCP-1420) Rev. 11/09	2 "EEO is the Law" Poster Supplement 9/15	3 NOTICE Federal-Aid Project (FHWA-1022) Rev. 5/15	4 Employee Rights Under the Davis Bacon Act (WH-1321) [substitute for FHWA-1495] Rev. 10/17
5 Employee Rights and Responsibilities Under the Family & Medical Leave Act (WH-1420) Rev. 4/16	6 Employee Polygraph Protection Act (WH-1462) Rev. 7/16	7 Your Rights Under Uniformed Services Employment & Reemployment Rights Act (USERRA) Rev. 4/17	8 Job Safety & Health It's the Law (OSHA-3165) Minimum Size: 8 1/2 X 14 Rev. 2019

State Posters

9 Protective Legislation Law (Pay Day Notice) Rev. 2-1-18	10 The Whistleblowers' Protection Act (RSA 275-E Requirement) Rev. 2-1-18	11 The Workers' Right to Know (Toxic Substances) Rev. 2-1-18	12 Unemployment Notice (NH Employment Security Office) Rev. 1/12
13 Workers' Compensation (from Insurance Provider)	14 Criteria to Establish an Employee or Independent Contractor Rev. 2-1-2018	15 Equal Pay RSA 275:37 Rev. 6-25-18	

Other Required Postings

16 24-Hour Emergency Contact Information	17 Contractor's EEO Officer Appointment Letter (must have all contact information)	18 Contractor's EEO & Harassment Policy Statement	19 NHDOT Federal Compliance Officer Contact Information (OFC Poster 1)	20 Davis-Bacon Wage Rates	21 Additionally Approved Wage Rates

S U P P L E M E N T A L S P E C I F I C A T I O N

AMENDMENT TO SECTION 107 – LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

The intent of the Supplemental Specification is to revise references to DES rules and regulations

Amend the last 3 paragraphs in Section 107.01 as follows:

The Contractor shall also protect the atmosphere from particulate and gaseous pollutants in conformance with rules promulgated by the New Hampshire Department of Environmental Services, Air Resources Division.

The Contractor's attention is called to Chapter Env-A 1000 Prevention, Abatement and Control of Open Source Air Pollution, in particular the regulations concerning open burning (Env-A 1001) and the control of fugitive dust (Env-A 1002).

The Air Resources Division may order unauthorized burning to cease and may order authorized burning creating a nuisance to cease. The order may be issued directly to the Contractor or to the Contractor through the Engineer.

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ACWORTH
43566C

October 24, 2024

S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 108 -- PROSECUTION AND PROGRESS

AMENDING SUBSECTION 108.07 - DETERMINATION OF CONTRACT TIME EXTENSION FOR EXCUSABLE, NONEXCUSABLE, NONCOMPENSABLE, AND COMPENSABLE DELAYS

**** See Prosecution of Work for applicable completion date(s). ****

Amend the fourth paragraph to read:

The Contractor's plea that insufficient time was specified is not a valid reason for an extension of time. When the contract sets forth a calendar completion date, due consideration will have been given to the Saturdays, Sundays, legal holidays, and the period between December 1 and April 1 inclusive in the anticipated period of construction. **No extension of the contract completion date will be allowed due to such days.** When the contract stipulates a completion date that falls on a Saturday, Sunday, or legal holiday, or when the time as extended by the Engineer falls on a date that is a Saturday, Sunday, or legal holiday, the contract time will be extended to the next working day. **No consideration will be given for unfavorable weather or ground conditions.**

Delete 108.07.B.2.

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S U P P L E M E N T A L S P E C I F I C A T I O N

AMENDMENT TO SECTION 108 – PROSECUTION AND PROGRESS

The purpose of this Supplemental Specification is to amend the requirements for liquidated damages.

Replace Section 108.09 as follows:

108.09 Failure to Complete on Time.

For each work day that work remains uncompleted after the Contract Time, the sum specified below will be deducted from any money due the Contractor. This sum shall not be considered and treated as a penalty but as liquidated damages to defray the cost to the Department to administer the Contract including but not limited to the cost of engineering, inspection, supervision, inconvenience to the public obstruction of traffic, and interference with business due to the Contractor's failure to complete the Work on time. Any adjustment of the Contract Time for completion of the Work granted under the provisions of 108.07 will be considered in the assessment of liquidated damages.

In the case of a date in the Contract being given for the completion of parts, phases, or stages, the liquidated damages will be deducted for the period during which that particular work remains incomplete.

Permission for the Contractor or Surety to continue and finish work after the Contract Time and approved time extensions have elapsed shall not waive the Department's rights under the Contract.

The assessment of all or any of the liquidated damages that accrue may be terminated if the Department has determined that the Work is substantially complete and is in a condition for safe and convenient use by the traveling public.

The Work will be considered substantially complete when all necessary signing, striping, guardrail, and other safety appurtenances have been installed, and when applicable opened to the traveling public. For projects that will not be opened to the traveling public, the Contract will be considered substantially complete when it is ready for the subsequent project. This shall not be construed as a Contractual right and its application will be contingent upon the Contractor's diligence in completing the remaining items of work.

Liquidated damages shall be assessed in accordance with the following schedule:

Original Contract Amount ($)		**Daily Charge($)**
From more than	To and including	Working Day
0	750,000	850
750,000	2,000,000	1280
2,000,000	5,000,000	1700
5,000,000	10,000,000	2550
10,000,000	20,000,000	3400
20,000,000	20,000,000+	4250

Should the Contractor elect to work on Saturdays, Sundays, holidays, or days from December 1st, to April 1st, inclusive, after the Contract Completion Date, the Contractor will be charged liquidated damages for such days worked.

When the Contract Time is on a calendar date basis, the schedule for calendar date shall be used. When the Contract time is on a working day basis, the schedule for working days shall be used.

When Acceptance has been made by the Engineer as prescribed in 105.17, the daily charge will no longer be assessed.

Should the amount of money otherwise due the Contractor be less than the amount of such liquidated damages, the Contractor and the Surety shall be liable to the State for such deficiency.

The Engineer has the right to deduct the amount of anticipated liquidated damages against the Contractor from any estimated payment for Work performed under the Contract; or to claim and recover such sums by process of law. Review of anticipated Contract completion and potential liquidated damages will commence when 80% of the original Contract Time has elapsed.

S U P P L E M E N T A L S P E C I F I C A T I O N

AMENDMENT TO SUBSECTION 109 – MEASUREMENT AND PAYMENT

The purpose of this Supplemental Specification is to amend the Rental Rate Blue Book for Construction Equipment requirements (109.04.4.4; 04/02/18); and to allow positions above the grade of foreman to be included in certain work associated with revisions to the Contract (109.04.4.2; 02/28/24).

Amend 109.04.4.2 to read:

109.04.4.2 Labor.

For all labor, including equipment operators, and foremen in direct charge of the specific operation, the Contractor shall receive the rate of wage agreed to in writing for each and every hour that the labor and foreman are actually engaged in the work. In case the Contractor is required to pay overtime pay or holiday pay to labor engaged in the Work, such rate will be the rate reimbursed. When the Contractor is ordered to return to the project solely to perform Force Account work, labor will be considered as being actually engaged in the Work during the hours while traveling.

No part of the salary or expenses of anyone connected with the Contractor's forces above the grade of foreman or having general supervision of the Work will be included in the labor item as specified above unless approved by the Engineer.

The Contractor will also receive an additional amount (i.e. a labor burden rate) equal to 50 percent of the actual hourly wage rate paid to, or in behalf of workers, for costs of health and welfare benefits, taxes, insurances, retirement, and union benefits. A Contractor can request a different labor burden rate be used if an independently audited breakdown of the actual aforementioned costs, prepared by a Certified Public Accountant, is provided. The audit of the burden rate shall be prepared on current financial data and in conformity with the accounting practices prescribed by the Federal Acquisition Regulations 48 CFR, Part 31.

An amount equal to ten percent of the sum of the above items will also be paid the Contractor to compensate for all field and home office overhead costs and profit.

Subsistence and travel expenses paid by the Contractor will be reimbursed only when the Engineer orders Force Account Work and, in order to perform such work, it is necessary to move workers to the project particularly for that operation. Such subsistence and travel expenses allowed shall be carried on the daily report form under the classification of "Material," without, however, being subject to the added percentage for materials. If work other than such Force Account Work is performed by the individuals during or in connection with that operation, no subsistence or travel expenses will be allowed.

Amend 109.04.4.4 to read:

109.04.4.4 Equipment and Plant.

For any Contractor-owned machinery or special equipment (other than small tools), the use of which is approved by the Engineer, the hourly rate will not exceed that determined from the Rental Rate Blue Book online at "equipmentwatch.com" used in the following manner:

a. The hourly equipment rental rate R will be determined by formula as follows:

$$R = (A \times B \times C) + D$$

Where A = Monthly rate divided by 176. The listed weekly, hourly, and daily rates will not be used.

B = Regional adjustment factor for New Hampshire.

C = Model year adjustment for the year of equipment manufacture.

D = Estimated operating costs per hour.

This formula is equal to the **FHWA Rate** that is shown in the Rental Rate Blue Book at "equipmentwatch.com".

b. The number of hours to be paid for will be the number of hours that the equipment or plant is actually used on a specific Force Account activity and, in addition, shall include the time required to move the equipment to the location of such Force Account activity and return it to the original location or to another location requiring no more time than that required to return it to its original location, except that moving time will not be paid for if the equipment is used during the move on work other than the specific Force Account activity.

c. The "Rate Effective Date" to be selected online will be the actual date that the work was performed.

d. Overtime shall be charged at the same rate indicated in subparagraph (a) above.

e. The estimated operating costs per hour will be used for each hour that the equipment or plant is in operation on the Force Account work. Operating costs are not reimbursable for the time the equipment is idle.

f. The maximum rental period to be paid for per day shall not exceed eight hours unless the equipment operates for eight or more hours.

g. If equipment is idled solely due to the responsibility of the Department, then the Contractor may be compensated for such idle equipment at 50% of the rate defined in "A" above (monthly rate divided by 176).

h. The rates established above shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs, overhauls, and maintenance of any kind, depreciation, storage, field and home office overhead, profits, insurance, and all incidentals.

The Contractor shall provide the Engineer with the following: the manufacturer's name, equipment type, year of manufacture, model number, type of fuel used, horsepower rating, attachments required, together with their size or capacity, and any further information necessary to ascertain the proper rate. Unless otherwise specified, manufacturer's ratings and manufacturer approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment which has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer. The Contractor is not required to purchase an online subscription, as the equipment rental rates will be provided by the Department.

Equipment used by the Contractor shall be in good working condition and shall be of suitable size and suitable capacity required for the work to be performed. The rate for the basic equipment with the appropriate attachments shall include only the rate for the combined equipment necessary to perform the Extra Work. In case the Contractor elects to use equipment of a higher rental value than that suitable for the work, payment will be made at the rate applicable to the suitable equipment. The equipment actually used and the suitable equipment to be paid for will be recorded as a part of the record for Force Account work. The Engineer will determine 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 that for the suitable equipment.

Payable time periods will not include:

(1) time elapsed while equipment is inoperative due to breakdowns,

(2) time spent repairing equipment, or

(3) time elapsed 24 hours after the Engineer has advised the Contractor that the equipment is no longer needed.

If a piece of equipment is needed that is not listed in the above stated rental rate guide, a rate will be established by the Engineer in writing before the equipment is used. The Contractor may furnish any cost data which might assist the Engineer in the establishment of such rate.

If the Contractor does not own a specific type of equipment or if the Department orders the Contractor to utilize a specific type of equipment and the equipment must be obtained by rental, the Contractor shall inform the Contract Administrator of the need to rent the equipment and of the rental rate for that equipment before using it on the work. Provided that the rate is reasonable, the Contractor will be paid the actual rental cost for the equipment for the time that the equipment is actually used to accomplish the work, plus the cost of moving the equipment onto and away from the job. A 5 percent mark-up will be added to the actual rental cost, provided the total cost does not exceed the *Rental Rate Blue Book for Construction Equipment* rate (in accordance with 109.04.4.4(a)). The Contractor shall provide a copy of the paid receipt or canceled check for the rental expense incurred.

Transportation charges for each piece of equipment, whether owned or rented, moved to and from the site of the work will be paid provided:

(1) the equipment is obtained from the nearest approved source,

(2) the return charges do not exceed the delivery charges,

(3) haul rates do not exceed the established rates of licensed haulers,

(4) charges are restricted to those units or equipment not already available and not on or near the Project, and

(5) equipment is not used elsewhere on the project.

ACWORTH
43566C

September 27, 2024

S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 202 –- REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Item 202.451 – Removal of Culvert

This special provision provides for the removal of an existing culvert and neither amends nor modifies the provision of this section except as noted below.

Add to 1.2:

1.2.1 This work shall also consist of removing an existing 2.8’ wide x 4’ high x 28’ long reinforced concrete box culvert with 36” CMP arch and wing walls as shown in the Plans or as ordered.

Amend 3.3 as follows:

3.3 Removal of Pipes, Culverts, and Other Drainage Structures.

3.3.1 Existing sewer, water, miscellaneous other pipes and appurtenances, culverts, catch basins, manholes, and other drainage structures, that are not to remain as integral parts of a drainage system, shall be removed as directed. Those under roadways in use by traffic shall not be removed until satisfactory arrangements have been made to accommodate the traffic.

Add to Method of Measurement:

4.7 Removal of culvert will be measured by the unit.

Add to Pay Items and Units:

202.451	Removal of Culvert	Unit

ACWORTH
43566C

July 22, 2024

S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 203 -- EXCAVATION AND EMBANKMENT

Item 203.11 – Common Excavation - LRS

This special provision addresses Limited Reuse Soil (LRS), including adding an item for excavating, handling, transporting, and stockpiling of LRS. All the requirements as set forth in the Standard Specifications are applicable except as modified or changed herein.

Add to 1.1:

1.1.1 This work shall consist of excavating, handling, transporting, and stockpiling of Limited Reuse Soil (LRS) in conformance with the Soils Management Plan.

Add to 2.1:

2.1.1 Common Excavation – LRS shall consist of all excavation of LRS as defined in 101.64 "A" (see special provision found elsewhere in the Proposal).

Amend 3.1.2 as follows:

3.1.2 LRS. Topsoil and humus material shall be removed in excavation areas and also in fill areas to such depths as the Engineer may direct. Such material shall be reserved and shall be stockpiled in accessible piles that can be measured readily and accurately by the Engineer. Unless otherwise permitted, each stockpile shall contain a minimum of 200 cy, and have a height of at least 4 ft. Material defined as LRS must be reused on the Project unless otherwise stated in the Soils Management Plan or authorized in writing by the Engineer.

3.1.2.1 In areas where no measurable topsoil exists, the material from the top of ground to a depth of six inches is considered LRS. This material shall be stockpiled for reuse as described in 3.1.2.

Add to 3.7.1:

3.7.1.1 When placing LRS as embankment, refer to the Soils Management Plan for restrictions.

Amend 3.9 as follows:

3.9 Disposal of Surplus and Waste Material.

3.9.1 Definitions.

(a) Surplus material. Excess material from excavation beyond the minimum requirements of the project but otherwise suitable for use.

(b) Waste material. Material unsuitable for use in the work except in noncritical areas.

(c) LRS. See 101.64"A".

3.9.2 Blank.

3.9.3 When practicable and wherever directed, surplus and waste material shall be used for flattening slopes or for other grading within the project. If LRS materials are being used, refer to the Soils Management Plan for restrictions.

3.9.4 When specified as embankment-in-place surplus or stockpile surplus, the material shall be placed as shown on the plans or as directed in the Proposal in accordance with the appropriate specification.

3.9.5 In case it is impossible to dispose of all the surplus and waste material in the manner described above, the following shall apply:

(a) Non-LRS: It shall be the Contractor's responsibility to secure disposal areas for approval for non-LRS surplus and waste materials as part of the excavation items if such areas are not shown on the Plans.

(b) LRS: The Contractor shall manage the LRS material in accordance with the Soils Management Plan.

3.9.6 If disposal of surplus and waste material is by burying, the cover material shall be graded and shaped as directed by the Engineer. If material is to be placed on private land, the agreements as to how the disposal area(s) is to be left shall be set forth on the Disposal Agreement form provided by the Department in accordance with 106.10. Three signed copies of the Disposal Agreement shall be furnished to the Engineer. Approval of the proposed disposal area will be contingent upon agreement by the Contractor and the property owner to leave the area in such shape that it blends with the surrounding terrain and that erosion is kept to a minimum. Without special permission, slopes shall not be left steeper than 2:1 (horizontal to vertical). No disposal area shall be left in such condition that erosion might result in water pollution by silt or other deleterious substances. Areas shall be left in such shape and condition that material does not wash and block or obstruct drainage ways. If holes caused by settlement appear, they shall be filled as directed. A release from the property owner is required prior to Project Acceptance. LRS material shall only be placed on property under the control of the Department or as specified in the Soils Management Plan.

3.9.7 Unless otherwise ordered, disposal areas shall be covered with material capable of supporting vegetation and either fertilized and seeded with grass seed or planted with seedlings. Seedlings shall be set out in accordance with accepted horticultural practices as directed in the agreement.

3.9.8 Unless permission is given to preserve access roads to disposal areas adjacent to highways, such access roads shall be obliterated.

3.9.9 When the Contract requires the removal of intact existing pavement but does not require recycling, the Contractor is encouraged to save this bituminous material for future reuse. This material is considered to be a valuable resource because of the residual asphalt contained in it. Therefore, no existing bituminous pavement removed shall be incorporated in the embankment. If the Contractor elects to dispose of bituminous material it shall be disposed of in accordance with the Department of Environmental Services Waste Management Division regulations at no expense to the State.

3.9.9.1 Milled or reclaimed pavement shall be disposed of or recycled in accordance with the project's Soils Management Plan.

Amend 3.11.2 as follows:

3.11.2 Sources. Unless otherwise designated in the Contract, the Contractor shall make arrangements for obtaining material for embankment-in-place in accordance with 106.02. Permission to remove material beyond the template lines within the right-of-way and adjacent thereto shall be obtained in writing before any material is removed and will be contingent on many factors and if permission is granted, it will be by the Engineer after review by all interested parties. The Contractor shall provide information in the Project Operations Plan (POP) regarding how LRS will be managed outside the template in accordance with 104.04. Permission may be contingent, among other considerations, upon agreement by the Contractor to leave regular and uniform slopes in the area. Slopes excavated beyond the template lines without authorization shall be refilled when ordered, at no expense to the State. When permission to remove material beyond template lines within the right-of-way is granted, the cubic yard price will be contingent upon material type and agreed upon prior to authorization.

Amend 4.2.1 as follows:

4.2.1 If the actual topsoil (LRS) removal, the actual unsuitable material excavation, or the actual muck excavation beneath embankment areas differs from the estimated quantity shown on the Plans and backfill, an adjustment will be made to the final pay quantity of embankment-in-place equal to the actual increase or decrease from the estimated quantity for the material excavated.

Amend 5.1.4 as follows:

5.1.4 LRS removal will be paid for as Common Excavation-LRS. Payment of Common Excavation-LRS excavation will be full payment for excavating, handling, transporting, and stockpiling LRS at approved locations.

5.1.4.1 When topsoil is overlying muck, the first two feet (2') of muck will be considered topsoil (LRS) and its excavation will be paid for as Item 203.11. Excavation for muck that extends below two feet (2') will be included in and paid for as muck excavation. Payment of muck excavation will be full payment for excavating, transporting, and stockpiling muck at approved locations.

Add to Pay items and units:

203.11	Common Excavation – LRS	Cubic Yard

1/17/02

ACWORTH
43566C

July 22, 2024

S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 203 – EXCAVATION AND EMBANKMENT

Item 203.601 – Embankment-in-Place

Amend 4.1 to read:

4.1 Excavation, embankment-in-place, borrow, impervious material, and rehandling surcharge material will be measured by the cubic yard (cubic meter) in accordance with 109.01. Material removed from outside of template lines without prior approval will not be measured.

Amend 4.2 to read:

4.2 When the item of embankment-in-place is included in the proposal, no measurements of any borrow pits will be made for the purpose of establishing pay quantities for any item, and the item of borrow will not appear in the proposal.

Delete 4.2.1.

Amend 5.1.1 to read:

5.1.1 The item of embankment-in-place will be paid only for those materials for which payment is not specified under a separate item.

Amend 5.1.9 to read:

5.1.9 Backfill material meeting the requirements of 3.6.1 (1), (2) or (3) used to backfill unsuitable material excavation or muck excavation will be paid for under the item directed to be used by the Engineer.

Add to pay items and units:

203.601	Embankment-In-Place	Cubic Yard

1/17/02

ACWORTH
43566C

September 27, 2024

S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 304 – AGGREGATE BASE COURSE

Item 304.101 – Sand
Item 304.201 – Gravel
Item 304.301 – Crushed Gravel

Amend 4.1 to read:

4.1 Roadbed base course materials of sand, gravel, crushed gravel, crushed aggregate for shoulders and crushed ledge rock will be measured by the cubic yard.

Amend 5.1 to read:

5.1 The contract quantities, plus or minus quantity modifications authorized by the Engineer, of roadbed base course materials of sand, gravel, crushed gravel, crushed aggregate for shoulders, and crushed ledge rock will be paid for at the contract unit price per cubic yard complete in place.

Add to pay items and units:

304.101	Sand	Cubic Yard
304.201	Gravel	Cubic Yard
304.301	Crushed Gravel	Cubic Yard

4/23/09
SSD: 10/21/97, 2/9/98; Reviewed 6/10

ACWORTH
43566C

October 8, 2024

S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 401 -- PLANT MIX PAVEMENTS - GENERAL

Amend the second sentence of 2.2 to read:

On this project the grade of bituminous material shall be PG 58-28.

02/01/16
SSD: 1/11/1999,04/09/09,01/10/13

ACWORTH
43566C

October 8, 2024

S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 401 -- PLANT MIX PAVEMENTS - GENERAL

Items 403.XX - Hot Bituminous Pavement, XXXXXX (Superpave)

Add to 2.5.1:

2.5.1.2 The total 20-year ESAL for the SUPERPAVE Mix Design on this project shall be as follows:

- The Volumetric Mix Design for the 2.5 inch binder layer (Item 403.11023) shall utilize the 3/4" aggregate and a 50 gyration N design mix.

- The Volumetric Mix Design for the 1.5 inch wearing course overlay (Item 403.11053) shall utilize the 3/8" aggregate and a 75 gyration N design mix.

SUPPLEMENTAL SPECIFICATION

AMENDMENT TO SECTION 401 – PLANT MIX PAVEMENTS – GENERAL

This Supplemental Specification is a rewrite of Section 401 to remove redundancies and inconsistencies due to many revisions throughout the years. Previous supplemental specifications thus far have been incorporated (01/28/21).Additions include:

- *requiring producers and suppliers to participate in and maintain compliance with the AASHTO NTPEP Asphalt Binder Suppliers (ABS) audit program (12/15/23);*
- *requires asphalt release agents be listed on the QPL (12/15/23); and*
- *requires 4,000 g pycnometer (3.1.12.2) (xx/xx/xx).*

Description

1.1 These specifications include general requirements that are applicable to all types of plant mix asphalt pavements irrespective of the gradation of aggregate, kind and amount of asphalt binder, or pavement use. Deviations from these general requirements will be indicated in the specific requirements for each type.

1.2 These specifications provide for the use of reclaimed asphalt pavement material in certain specified mixtures.

1.3 This work shall consist of the construction of one or more courses of asphalt pavement constructed on a prepared foundation in accordance with these specifications and the specific requirements of the type under Contract. The work shall be in reasonably close conformance with the lines, grades, thickness, and typical cross-sections shown on the plans, within the tolerances specified or established by the Engineer.

1.4 These specifications provide for both method and quality control/quality assurance (QC/QA) specification work. Sections under the heading Performance Requirements (QC/QA) are applicable on QC/QA items only. Sections marked Method Requirements are applicable for non-QC/QA items and those portions of QC/QA items that are not measured for pay adjustment. All sections under the heading General are for use with all items.

1.5 Performance Requirements (QC/QA).

1.5.1 The work will be accepted under Performance Requirements (QC/QA) provisions in accordance with these Specifications and the applicable requirements of Section 106.

(a) The QC/QA Tier 1 item is to be used on specified projects that are on new locations, interstate projects, full depth reconstruction projects in rural areas, or on reclamation projects in rural areas.

(b) The QC/QA Tier 2 item is to be used on specified projects that are inlay type projects, full depth reconstruction projects with maintenance of traffic phasing, projects with intersecting streets, projects with pavement tapers, bridge projects with short approach paving, projects where there are many manhole/drainage structures or driveways (generally in urban and suburban areas).

QUALITY/PAY FACTORS TO BE ASSESSED

	Tier 1	Tier 2
Asphalt Content and Gradation	X	X
Cross Slope	X	
Density	X	X
Ride Quality	X	
Thickness	X	

Materials

2.1 Aggregates – General.

2.1.1 Aggregates shall be uniform quality durable pebbles or fragments of rock, with or without sand or other inert finely divided mineral aggregate. All material shall be free from clay balls, organic matter, deleterious substances, and an excess of flat or elongated pieces as specified in ASTM D 4791. Washing will not be required, except when aggregate plants do not produce clean material by the dry process method. In order to obtain uniformity of color and appearance of the pavement throughout the project, the aggregate for all the surface mixes shall be obtained from the same material source. Sufficient material shall be on hand prior to starting daily operations to ensure uninterrupted processing for the working day.

2.1.2 Fine aggregate shall consist of sound durable particles of sand, crushed stone, or a combination thereof. Stone screening shall be produced from stone at least equal in quality to that specified for coarse aggregate.

2.1.2.1 Fine aggregate may be 100 percent manufactured aggregate.

2.1.3 Mineral filler shall conform to AASHTO M 17 except that 100 percent shall pass the No 16 sieve, waiving the requirement for the No. 30 sieve.

2.1.4 Coarse aggregate shall be crushed stone or crushed gravel and shall have a percentage of wear as determined by AASHTO T 96 of not more than 45 percent unless otherwise specified by Contract item. In each stockpile, not less than 50 percent by weight of the particles retained on the No. 4 sieve shall have at least one fractured face. Stockpiles consisting of a blend of crushed stone and crushed gravel will be permitted so long as the overall consistency of the stockpile is reasonably maintained and the lesser portion of coarse aggregate material does not exceed 10 percent of the total. This percentage shall be determined on the portion of the total sample by weight that is retained on the No. 4 laboratory sieve.

2.2 Bituminous Materials – General.

2.2.1 Bituminous materials used for asphalt cement binder shall meet the properties specified in AASHTO M 320. The grade of asphalt cement binder to be used will be specified in a Special Provision contained in the Proposal. Asphalt cement shall not be air blown or contain any form of used, recycled or re-refined oil.

2.2.1.1 The unit bid price for hot bituminous pavement containing failing asphalt binder shall be assessed a 10% reduction for one temperature grade below the specified high temperature grade or one temperature grade above the specified low temperature grade. The penalty will be applied to all tonnage produced with the non-compliant binder. When the binder failure is non-compliant by two grades or more, as described above, the Contractor shall be required to remove and replace all non-compliant material at the Contractor's expense, or at the Engineer's discretion, may be allowed to leave the tonnage in place at a unit price reduction of 50%.

2.2.2 Liquid binder samples shall be obtained by plant personnel in the presence of the Inspector/Technician. Samples shall be obtained during each day's production.

2.2.3 Producers and suppliers of asphalt binders shall have a Quality Control (QC) plan approved by the Bureau of Materials and Research that complies with AASHTO R 26. Producers and suppliers shall also participate in and maintain compliance with the AASHTO National Transportation Product Evaluation Program (NTPEP) Asphalt Binder Suppliers (ABS) audit program. They shall further provide audit information from their facilities in compliance with the QC plan and product testing requirements of the ABS audit program.

2.2.3.1 All suppliers of PG binder shall certify that the PG binder supplied for use on Department projects does not contain used, recycled or re-refined oil.

2.3 Approval of Materials - Method Requirements.

2.3.1 At least five working days in advance of the date of starting operations, the Bureau of Materials & Research may request that representative samples of all materials proposed for use be submitted for testing.

2.4 Composition of Mixtures - General.

2.4.1 Hot bituminous pavement shall be composed of a mixture of aggregate, filler if required, and asphalt binder. The several aggregate fractions shall be sized, uniformly graded, and combined in such proportions that the resulting mixture meets the grading requirements of the job mix formula. The Contractor shall use the Volumetric Mix Design Method in AASHTO Standard Practice R 35 as modified herein.

2.4.2 The Contractor shall have the option of utilizing asphalt pavement removed under the Contract, if any, or old asphalt pavement from an existing stockpile or supplying all new materials for the production of asphalt pavement or any combination of the foregoing. If the job mix formula uses recycled materials, the mix shall meet the requirements of Reclaimed Asphalt Pavement as specified in 2.9.

2.4.3 The Department allows the use of recycled binder in mix designs, up to 1.0% Total Reused Binder (TRB), without any change in asphalt binder requirements as long as the mix design meets all volumetric mix design criteria. When a design has been completed using the maximum allowable percentage of TRB, one point verifications may be performed using decreasing percentages of TRB. If the design is not validated using a decreased amount of TRB, a new design will be required.

2.5 Job Mix – General.

2.5.1 When a new volumetric mix design is required, the Contractor shall use the Volumetric Mix Design Method in AASHTO Standard Practice R 35 to develop a mix that meets the associated design criteria. The Mix design shall follow the procedure detailed in AASHTO with the following exceptions: Amend Table 1 Superpave Gyratory Compaction Effort to read as follows:

Design ESALs (Million)	N initial	N design	N max
0 < **5**	6	50	75
≥**5**	7	75	115

Add the following:

Minimum Binder Content

50 Gyration		75 Gyration
	3/8”	6.0%
5.8%	1/2”	5.5%
5.5%	Winter Binder 3/4”	5.2%
4.9%	3/4”	4.6%
4.6%	1”	4.3%

This required minimum asphalt content is based on the use of aggregate with a specific gravity of 2.65 to 2.70. The minimum asphalt content requirement may be adjusted when aggregate with a higher specific gravity is used, or the minimum may be adjusted at the discretion of Materials and Research if it is believed to be in the best interest of the Department.

Amend Table 4 in AASHTO M 323, referenced in AASHTO R 35, to read as follows:

Table 401-1 –Design Control Points*

Standard			**Nominal Maximum Aggregate Size**									
Sieves	1”		3/4”		3/4” Winter Binder		1/2”		3/8”		No. 4	
	Max.	Min.	Max.	Min.	Max.	Min.	Max	Min.	Max.	Min.	Max.	Min.
Inch	Percentage by Weight Passing Criteria (Control Points)											
2												
1-1/2		100.0										
1	100.0	90.0		100.0		100.0						
3/4	90.0		100.0	90.0	100.0	90.0		100.0				
1/2			90.0		90.0		100.0	90.0		100.0		
3/8							90.0		100.0	90.0	100.0	99.0
No. 4									90.0		97.0	90.0
No. 8	45.0	19.0	42.0	32.0	48.0	38.0	52.0	42.0	56.0	46.0	75.0	65.0
No. 16											55.0	45.0
No. 30											36.0	26.0
No. 50											30.0	20.0
No. 100											13.0	8.0
No. 200	7.0	1.0	8.0	2.0	8.0	2.0	10.0	2.0	10.0	2.0	8.0	4.0

All mix designs shall be submitted to the Department for verification and approval.

* Superpave designs will be accepted through the restricted zone, pending verification and approval by the Bureau of Materials & Research. The Contractor shall submit compaction data from trial blends at the optimum asphalt content and at 0.5% below and above the optimum asphalt content. The data shall include the temperature at which the hot bituminous pavement was aged.

2.5.1.1 All 25 mm base course mixes shall be designed using the 50 gyration N_{design}.

2.5.2 The Design Information shall include:

(a) Asphalt Binder
(b) PG Test Data
(c) Specific Gravity
(d) Laboratory Mix/Compaction Temperature
(e) Aggregate
(f) Dry and Washed Gradation
(g) Bulk and Apparent Specific Gravity
(h) All appropriate consensus properties
(i) Blends
(j) Baghouse material from the plant shall be incorporated into the mix design. The amount of baghouse material should be based on estimated usage or experience.
(k) Moisture susceptibility according to AASHTO T 283.

Along with the design information, Materials & Research (M&R) requires 2 quarts of the designated asphalt binder, 4 pre-blended aggregate specimens for gyratory and 2 pre-blended aggregate specimens, suitable for AASHTO T-209 when mixed with the appropriate asphalt, in order to verify the design. M&R will accept the mix design based on the submitted information meeting the mix requirements and on verification of the mix volumetrics of the submitted specimen. If the verification samples indicate voids between 3.0 and 5.5 percent, and the Voids in Mineral Aggregate (VMA) and Voids Filled with Asphalt (VFA) fall within the specified limits, then the design will be accepted. Once accepted, the approved mix design is the job mix formula (JMF). If the voids are outside the aforementioned range or the VMA or VFA are outside the specified limits, the design will be rejected. M&R may elect to verify the design again.

2.5.3 The proposed mix designs and materials shall be submitted to the Engineer a minimum of 20 working days before placement for approval. It shall be the responsibility of the Contractor to ensure all approved mix designs have been entered into the plant automation system before production begins. The Contractor will also be required to post a copy of the JMF in the DOT testing laboratory.

2.5.4 Whenever the aggregate properties change enough to negate the project's existing design, a new design shall be submitted.

2.5.5 If it becomes necessary to change the asphalt binder grade or the source of aggregate, a new mix design shall be developed. Up to 14 calendar days will be required to evaluate a change. Approved changes in target values will not be applied retroactively for acceptance or payment. If it becomes necessary to change the source of asphalt binder, the Contractor must submit recent quality test results from the manufacturer for the asphalt binder including a temperature viscosity curve.

2.5.6 The Contractor shall perform a single point verification of an existing project mix design at the beginning of a new construction season to determine if the design remains valid. If the design is validated, the data from the single point verification shall be submitted to the Department. If the design cannot be validated, a new design shall be developed.

2.5.7 The Bureau of Materials and Research may require the use of certain chemical additives.

2.5.8 The laboratory performing the design shall be approved by the Department. To obtain the Department's approval, a laboratory must demonstrate that it is equipped, staffed, and managed so as to be able to produce job mix formulas and test hot asphalt mix in accordance with these Specifications. Approval for each laboratory shall remain in effect for a period of one year.

2.6 Method Requirements.

2.6.1 Stockpiled coarse aggregate shall meet the requirements of Table 401-2.

Table 401-2 -- Percent Passing

Sieve Size	Base Mix 1-1/2”	Binder Mix 3/4”	Surface Mix 1/2”	Surface Mix 3/8”
1-1/2”	100			
1-1/4”	90.0 - 100			
1”	50.0 - 85.0	100		
3/4”	10.0 - 50.0	90.0 - 100	100	
1/2”		15.0 - 55.0	90.0 - 100	100
3/8”			20.0 - 60.0	95.0 - 100
# 4				22.0- 55.0
No. 8	0 - 5.0	0 - 5.0	0 - 10.0	0 - 10.0

2.6.2 After the job mix formula (JMF) is established, all mixtures furnished for the project shall conform within the following ranges of tolerances:

Passing No. 4 and larger sieves	±7.0 percent
Passing No. 8 No. 100 sieves (inclusive)	±4.0 percent
Passing No. 200 sieve	±1.0 percent
Asphalt binder	±0.4 percent
Temperature of mixture	± 20 °F (11 °C)

2.6.3 When Non-compliant test results or other conditions make it necessary, it shall be the responsibility of the Contractor to make all adjustments required to ensure the mix conforms to the JMF.

If two consecutive non-compliant results occur, the Engineer may stop production until satisfactory corrective action has been taken. A 5% reduction in unit price will be assessed to all tonnage represented by consecutive gradation failures and a 10% reduction will be assessed to all tonnage represented by consecutive asphalt binder content failures. At the Engineer's discretion, the Contractor may be required to remove non-compliant material (no payment will be made for this material or its removal).

Contractor quality control personnel will not be required to be on site during production of non-quality control projects, but contract information shall be posted in the testing lab.

2.7 Plant Mix Surface Treatment - General.

2.7.1 The general composition limits given in Table 411-1 indicate target value ranges of mixtures permissible under Section 411. The job mix formula shall lie within the target value ranges indicated for the particular type of hot asphalt mix.

2.8 Bridge Pavement Bases Course – General.

2.8.1 Bridge pavement base course shall be 3/8” surface mix.

2.9 Non-modified Asphalt Binder – General.

2.9.1 Non-modified asphalt binder shall contain silicone additive with the concentration being 3 parts per million plus or minus 1 part per million of silicone to asphalt binder, unless otherwise directed. Silicone additive shall be in liquid form and have a viscosity of 1,000 centipoises (1 Pas) at 77 ºF. Asphalt binder containing silicone shall meet the requirements of 401.2.2

2.10 Allowed Recycled Materials – General.

2.10.1 Reclaimed asphalt pavement (RAP) may be used in the production of hot bituminous pavement. The allowed dust to asphalt ratio shall be as identified in AASHTO M 323. The maximum allowable total reused “asphalt” binder (TRB) in hot bituminous mixes shall be 1.0%. Any changes in the combination of recycled materials shall require a new mix design unless otherwise approved by the Bureau of Materials & Research.

2.10.2 Reclaimed Asphalt Pavement (RAP).

2.10.2.1 RAP shall consist of recycled asphalt pavement and shall be processed by crushing, cold milling, or other approved sizing techniques approved by the Bureau of Materials and Research to meet the required gradation specifications. The mixture of RAP and new aggregate shall meet the requirements specified in Table 401-1 for aggregate gradation. The RAP shall be tested every 1,000 tons for gradation and asphalt binder content as a stockpile is being built. These test results shall remain on file by the Contactor until such time as the entire RAP stockpile has been utilized.

2.10.2.2 The PG grade of added asphalt shall be as specified by the Bureau of Materials and Research. The aggregate component of the RAP shall meet the requirements of 401.2.1. The bitumen component of the RAP shall be asphalt cement and shall be free of significant contents of solvents, tars, and other volatile organic compounds or foreign substances that will make the RAP unacceptable for recycling as determined by the Bureau of Materials and Research.

2.10.2.3 RAP materials may be rejected if deemed unsuitable for any reason or require an increase or decrease in the mix asphalt content. The Contractor shall submit representative samples, and gradation and asphalt cement content test results of the RAP to be incorporated into the Recycled Mixture for approval by the Bureau of Materials and Research at least 30 calendar days prior to the start of paving.

2.11 Asphalt Modifiers - General.

2.11.1 The generic type of each asphalt binder admixture, modifier and/or additive shall be identified on the certificate of analysis, which shall be furnished by the manufacturer for each load of asphalt delivered. Modifiers shall be pre-blended with the asphalt binder.

2.11.2 Asphalt binder modification to produce high-strength mix shall utilize either a styrene-butadiene or a styrene-butadiene-styrene polymer to achieve the specified performance grade of asphalt. The Section 401 contract Special Provision specifying the asphalt binder grade shall also identify the AASHTO test method by which the binder grade shall be determined. The modified binder shall be pre-blended, storage-stable and homogeneous.

2.11.3 The use of Warm Mix Technologies will be permitted in mix production. Qualified technologies are listed on the Qualified Warm Mix Asphalt (WMA) Technologies List.

2.12 Pavement Joint Adhesive - General. Pavement Joint Adhesive shall be a product listed on the Qualified Products List.

Construction Requirements

3.1 Mixing Plants - General.

3.1.1 Coarse aggregates shall be furnished in at least two nominal sizes for mix types containing topsize aggregates of 1/2" and larger.

3.1.2 RAP shall be fed into the plant by equipment specifically designed for recycling and approved by the Bureau of Materials and Research. In addition, all requirements pertaining to aggregates shall apply to RAP. Scalping screens, grizzlies, or similar devices shall be installed on the RAP feed bin(s) to remove any debris or other foreign materials in excess of 2". If a drum mix plant is used, the RAP shall be fed into the drum so that it will not come in direct contact with the burner flame. Mixing of RAP with the new aggregate shall occur before the bituminous material introduction point. The final mix produced shall be visually free from any chunks of RAP.

3.1.3 Plants shall be approved at least five days prior to operations and will be capable of maintaining an adequate supply of mixture to the project.

3.1.4 The site shall have ample storage space for the required separate bins, stalls, or stockpiles to allow delivery of uncontaminated sized aggregates to the feeder. To prevent spillage from one pile or bin to the next, aggregate assigned to different stockpiles shall be separated by bulkheads or other satisfactory means.

3.1.5 Stockpiles of coarse aggregate produced for use in drum mix plants having top size aggregates greater than 3/4" shall be constructed in layers not to exceed 4 ft.

3.1.6 All blending of aggregates shall be accomplished through separate bins at the cold elevator feeders and not in stockpiles.

3.1.7 The plant shall be provided with a dust collector or collectors, designed to waste or return uniformly to the hot elevator all or part of the material collected, as directed. All plants shall have adequate covers and housing as may be necessary to ensure the proper collection of dust and the general cleanliness of the plant operation. The Contractor shall comply with all State and Federal environmental regulations.

3.1.8 Mixing plants shall conform to AASHTO M 156. An efficient dust collecting system shall be provided to prevent the loss of fine material. The material collected may be returned to the mixture at a uniform rate or discarded.

3.1.9 Safety Requirements for Inspection

3.1.9.1 Adequate and safe stairways to the mixer platform shall be provided, and guarded ladders to other plant units shall be located where required for accessibility to plant operations.

3.1.9.2 All gears, pulleys, chains, sprockets, and other dangerous moving parts shall be thoroughly guarded and protected.

3.1.9.3 Ample and unobstructed space shall be provided on the mixing platform. The plant operator shall have a clear and unobstructed view of the plant operations.

3.1.9.4 A platform shall be located in close proximity to the inspector's laboratory for the purpose of easily obtaining samples of the mixture from the trucks.

3.1.9.5 When the plant is to be operated in other than daylight hours, adequate lighting shall be provided in all areas frequented by the inspector during his normal routine. Specific areas to be illuminated include the truck loading zone and sampling location. A light or lights shall also be located so as to allow the clear observance of the truck body lubrication operation.

3.1.10 Scheduling Inspection Personnel

3.1.10.1 The Contractor shall notify the Bureau of Materials and Research at least three working days in advance of starting paving operations to allow sufficient time to schedule required plant inspection personnel. When paving bridge decks that have barrier membranes, this notice shall include the name of the membrane product so that the mix temperature may be established.

3.1.11 Access to Production Facilities

3.1.11.1 The Engineer shall have access at any time to all parts of the plant for inspection of the conditions and operations of the plant, for confirmation of the adequacy of the equipment in use, for verification of proportions and character of materials, and for determination of temperatures being maintained in the preparation of the mixtures. The Contractors shall provide a suitable building, room, or trailer for exclusive use by the DOT Technician as a testing laboratory in which to house and use the testing equipment. Laboratories shall be in an approved location, with one laboratory provided for each plant.

3.1.12 Field Laboratories

3.1.12.1 Field laboratories shall meet the following minimum requirements:

Size:	Laboratory shall consist of a minimum of 200 ft^2 of floor space, laid out to accommodate shelves, benches, desk, equipment and personnel movement.
Windows:	Two, with locks and screens, providing cross ventilation.
Doors:	One, with lock and screen.
Electrical:	Adequate lighting and power outlets.
Air Conditioner:	Unit size shall be as recommended for size of the facility.
Heat:	Thermostatically controlled to maintain a minimum temperature of 68°F (20°C).
Weatherproofing:	Roof, sides, and floor shall be maintained weatherproof at all times.
Appurtenances:	a) An exhaust fan and hood over the extractor. The hood shall be large enough to cover the extractor. The fan shall be a high-volume axial-flow fan, at least 10" in diameter, and of sufficient capacity to vent the fumes adequately. b) Free wall space of at least 12 ft^2; or a bulletin board of equal area for posting notices and job mix formulas. c) Suitable shelves and benches. Bench space shall be approximately 24" wide by 36" high. There shall be a minimum total length of 19 ft of bench space.

3.1.12.2 The following office furnishings and testing equipment shall be provided:

(a) Electronic balance with tray, at least 300 oz net capacity, sensitive to 0.003 oz.
(b) Desk and chair in good working condition.
(c) Set of U.S. Standard brass sieves, each sieve being 12" in diameter and 1- 1/2" high. The set shall consist of one each of the following sizes: 1- 1/2", 1-1/4", 1", 3/4", 1/2", 3/8", No. 4, No. 8, No. 16, No. 30, No. 50, No. 100, No. 200, with pan and cover.
(d) Motor driven shaker for 12" diameter sieves. Shaker shall meet the following requirements: Rotating turntable, tilt to 45-degree angle and have hammers to tap each sieve during operation.
(e) Motor driven centrifuge extractor, 100 oz capacity with variable speed up to 3600 rpm, with filter rings and non-toxic solvent approved by the Bureau of Materials and Research.
(f) Tachometer readily available to check the speed of the extractor.
(g) Automatic timer with interval of 0 to 30 minutes.
(h) Bristle brush for cleaning No. 200 sieve.
(i) Brass brush for cleaning 8" diameter sieves.
(j) Five pans or bowls, approximately 4" high, 15" round or square.
(k) Spatula, large spoon, garden trowel, measuring scoop, and 1-quart pitcher.
(l) Fire extinguisher, minimum five pound dry chemical.
(m) Desk brush and floor broom.
(n) Sample splitter (riffle type), chute width 1- 1/2 to 2"
(o) Microwave oven when drum mix plant is used.
(p) Minimum of one metal sample pail for each hot bin.
(q) Lavatory with toilet (See 698.3.1.4) and wash basin, unless approved otherwise.
(r) Water, hot and cold, and water suitable for drinking. (Fountain style will be acceptable).
(s) Telephone with private line.
(t) Drying oven, minimum of 3.5 ft^3.*
(u) Equipment sufficient to perform AASHTO T 209.*
(v) Water-cooled diamond saw capable of cutting 6" road cores.
(w) High Speed Internet Connection - Each laboratory (on State-bid projects) will be provided with bi-directional Internet access having a minimum data rate of 256K bps.
(x) Wheelbarrow when a drum mix plant is used.
(y) Pycnometer, 4,000 g.

*All ovens other than microwaves shall be vented to the outside.

3.1.12.3 All of the foregoing testing equipment shall be in good condition and shall be replaced or repaired by the Contractor if, during the duration of the project, it becomes unsuitable for testing purposes. Testing equipment shall be calibrated by the Contractor in accordance with 106.03. The above mentioned equipment is for operation of a single plant.

3.2 Storage of Asphalt Binder – General.

3.2.1 Tanks for storage of asphalt binder shall be of minimum 10,000-gallon capacity and equipped for heating the material under effective and positive control at all times, to the temperature requirements set forth in the specifications for the paving mixture. Heating shall be accomplished by steam or oil coils, electricity, or other means such that no flame shall come in contact with the heating tank.

3.2.2 A complete system providing for continuous circulation of the asphalt binder between the storage tank and the proportioning units shall be employed. The discharge end of the circulating pipe shall be maintained below the surface of the asphalt binder in the storage tank to prevent discharging the hot asphalt binder into the open air.

3.2.3 The Contractor shall provide an in-line valve that is conveniently located between the storage tank and the mixing plant. The valve shall be installed in such a manner that samples may be withdrawn from the line slowly at any time during plant operation. A drainage receptacle shall be provided for flushing the outlet prior to sampling.

3.3 Control of Asphalt Binder – General.

3.3.1 Satisfactory means either by weighing or metering shall be provided to obtain the proper amount of bituminous material in the mix within the tolerance specified. Means shall be provided for checking the quantity or rate of flow of bituminous material into the mixer as follows:

(a) Metering devices for asphalt binder shall indicate accurately to within 1.0 percent the amount of asphalt binder delivered. The section of the asphalt binder flow line between the charging valve and the spray bar shall be provided with a three-way valve and outlet whereby the quantity delivered by the meter may be checked by actual weight. The valve controlling the flow of asphalt binder to the mixer shall close tightly to prevent asphalt binder from leaking into the pug mill during the mixing cycle. The meter shall be constructed so that it may be locked at any dial setting to 0.1 gal and will automatically reset to this reading after the addition of asphalt binder to each batch. The dial shall be in full view of the mixer operator. The size and spacing of the spray bar openings shall provide a uniform application of asphalt binder the full length of the mixer in a thin uniform sheet or in multiple sprays.

(b) If a bucket is used for weighing the asphalt binder, the bucket shall be of sufficient capacity to hold and weigh the amount required for a batch in a single weighing. The filling system and bucket shall be of such design, size, and shape that asphalt binder will not overflow, splash, or spill outside the confines of the bucket during filling and weighing. The filling system and bucket shall be so arranged as to deliver the asphalt binder in a thin uniform sheet or in multiple sprays over the full length of the mixer. The time required to add the asphalt binder shall be not more than 15 seconds.

(c) Asphalt binder scales shall conform to the requirements for aggregate scales as specified in 3.4.10. Beam type scales shall be equipped with a tare beam or adequate counter-balance for balancing the bucket and compensating periodically for the accumulation of asphalt binder on the bucket.

3.3.2 Suitable means shall be provided, by either steam or oil jacketing or insulation, for maintaining the specified temperatures of the asphalt binder in the pipelines, meters, weigh buckets, spray bars, and other containers or flow line.

3.4 Batching Plants – General.

3.4.1 All aggregate shall be delivered by belt driven feeders. All feeders shall provide for adjustment of the cold feed and shall be capable of being secured in any position. The cold feeder for recycled materials shall be equipped with an oversize particle scalper.

3.4.2 Dryers shall continuously agitate the aggregate during the heating and drying process without leaving any visible unburned oily residue on the aggregate when it is discharged from the dryer. If unusually wet aggregate is being used, the input to the dryer shall be reduced to that amount which the dryer is capable of drying. Aggregates shall be free from coatings of dust after drying.

3.4.3 Plant screens shall be constructed and operated in such manner that all aggregates will be uniformly separated into the sizes required for proportioning. They shall have sufficient capacity to furnish the necessary quantity of each aggregate size required for continuous operation. Screen cloth that has become broken or has worn sufficiently to affect the gradation shall be replaced.

3.4.4 Thermometric equipment shall be provided as follows:

(a) An armored thermometer of suitable range shall be fixed in the asphalt binder feed line at a suitable location near the discharge at the mixer unit.

(b) The plant shall be further equipped with an approved thermometer, pyrometer, or other approved thermometric instrument that continuously indicates the temperature of the heated aggregate at the discharge chute of the dryer.

3.4.5 Hot bins shall consist of at least four separate aggregate compartments. One compartment shall be reserved for fine aggregate, and when required, one additional compartment shall be added for dry storage of mineral filler. Alternate bin systems may be utilized with prior approval from the Department. Provision shall be made for accurate proportioning. Each compartment shall contain the following features:

(a) Sufficient volume to supply the mixer at full rated capacity.

(b) An overflow pipe that shall be of such size and at such a location as to prevent any backing up of material into other bins or into contact with the screen. Overflow apparatus shall be equipped with a telltale device that alerts the operator and the inspector when the overflow equipment is full.

(c) Adequate telltale devices to indicate the position of the aggregate in the bins at the lower quarter points.

(d) Gates that cut off quickly and completely with no leakage.

(e) Adequate and convenient facilities including safe platforms for obtaining representative samples from each bin.

3.4.6 Weigh boxes shall be of sufficient size to hold the maximum required weight of aggregate for one batch without hand raking or running over. The weigh box shall be supported on fulcrums and knife edges so constructed that they remain in alignment or adjustment. All parts of the weigh box shall be free from contact with any supporting rods, columns, or other equipment that affects the proper functioning of the hopper or scale. Gates on both bins and weigh hopper shall be constructed to prevent leakage when closed.

3.4.7 Aggregate scales for any weigh box or hopper shall be of standard make and design and shall be accurate to 0.5 percent of the indicated load. The weight shall be indicated on a digital display. Scales shall be substantially constructed and shall be installed in such a manner as to be free from vibration. The display shall be in full view of the operator, and the numerals shall be of such a size that the inspector can easily read them. If the digital display is so located that it is not easily accessible to the inspector, a duplicate display will be required for exclusive viewing by the inspector. The job mix formula target weights shall continuously be part of the digital display during plant operations. The digital scale weight indications shall be displayed adjacent (in juxtaposition) to each target weight for easy comparison to the job mix formula. It shall be the responsibility of the Contractor to ensure that all scales are tested and sealed according to provisions as shown in the National Institute of Standards and Technology Handbook 44, at least on an annual basis. The work shall be accomplished by a competent commercial scale company prior to the start of the construction season. Scales shall be re-tested prior to use, after they have been moved. The Contractor shall have readily available at least ten standard 50 lb. weights, for checking the scales during operations.

3.4.7.1 Recycled materials weighed separately from the materials in the virgin weigh hopper shall be weighed on a dedicated scale with digital display at the accuracy described in 3.4.7.

3.4.8 The batch mixer shall be of an approved pug mill type, hot oil or steam jacketed, or heated by other approved means and capable of producing uniform mixtures within the specified tolerances. The mixer shall have a batch capacity of not less than 4,000 lb. and be constructed so as to prevent leakage during the mixing cycle. The amount of material that may be mixed per batch shall not exceed the manufacturer's rated capacity. If the mixer does not mix properly at the rated capacity, or if its production does not coordinate with the other plant units, the Department reserves the right to reduce the size of the batch until the desired efficiency is obtained. The pug mill shall be equipped with a sufficient number of paddles operated at such speed as to produce a properly and uniformly mixed batch. If, in the course of mixing, two adjacent paddle tips become broken, immediate repair will be called for. If the paddle tips become broken at widely separated points, repair may be delayed until the end of the working day. The clearance of the tips from all fixed and moving parts shall not exceed 3/4”. Badly worn or defective tips shall not be used in mixing operations. The mixer shall be covered to prevent loss of fine material. The discharge gate shall be so designed that no uncoated material is retained at the gate opening during the mixing operation. Leakage from the pug mill gate during operation will not be permitted.

3.4.9 Each plant shall be equipped with an accurate time lock to control the operations of a complete mixing cycle. A mixing cycle shall consist of two periods, the dry mixing period and the wet mixing period. The dry mixing period shall be the interval of time between the opening of the aggregate weigh hopper gate and the start of the application of asphalt binder. The wet mixing period shall be the interval of time between the start of the application of asphalt binder and the opening of the mixer gate. The time lock shall be capable of being set at intervals of five seconds or less throughout the mixing cycle and shall have a suitable case equipped with an approved lock. The setting of time intervals shall be performed in the presence and under the direction of the Engineer who may lock the case until such time as a change is to be made in timing periods. The time lock shall lock the asphalt binder bucket throughout the dry mixing period and shall lock the mixer gate throughout the dry and wet mixing period.

3.4.10 The use of a fully automatic batching plant will be required and shall meet the following requirements:

(a) The automatic proportioning controls shall include equipment for accurately proportioning batches of the various components of the mixture by weight in the specified sequence and for controlling and timing the mixing operation. Interlocks shall be provided that delay, stop, or lock out the automatic batch cycling whenever the batched quantity of any component weight or the total batch is not within the specified weight tolerance, or when there is a malfunction in any portion of the control system.

(b) The automatic control for each batching scale system shall be equipped with a device for stopping the automatic cycle in the underweight check position and in the overweight check position for each material so that the tolerance setting may be checked.

(c) Each dial scale system shall be equipped with a removable dial puller that can be attached to the dial lever system so that the dial can be moved smoothly and slowly through its range to check the settings of the automatic control system. The plant operator shall perform this automatic control system checkout procedure periodically as requested by the Engineer.

(d) The weigh batching controls shall meet the following tolerances for the various components weighed in each batch:

Component Weighed	Percentage of Total Batch Weight
Tare weight of aggregate weigh box	±0.5
Tare weight of asphalt binder weigh bucket	±0.1
Each aggregate component	±1.5
Mineral filler	±0.5
Asphalt	±0.1

(e) The total weight of the batch shall not vary by more than ±2.0 percent of the designated batch weight.

(f) Recording equipment shall be provided in all plants employing automatic proportioning. Each recorder shall include an automatic printer system. The printer shall be positioned so that the scale reading and the printer can be readily observed from one location by the plant inspector. The printer shall produce, in digital form, a weight slip conforming to the requirements of 109.01 and 401.3.8.1.

(g) If at any time the automatic proportioning or recording system becomes inoperative, the plant will not be allowed to operate.

3.4.11 Each size of hot aggregate, the mineral filler if required, recycled material if applied, and the bituminous cement shall be measured separately and accurately to the proportions in which they are to be mixed.

3.4.12 The virgin aggregate shall be dried and heated to a minimum temperature of 260° F. The asphalt binder shall be heated to a temperature between 260º and 325º F. The weigh hopper shall be charged with the hot aggregate, coarse sizes first, unless otherwise directed.

3.4.13 Virgin Aggregates shall be dry mixed for 5 to 15 seconds.

3.4.14 Recycled materials can only be introduced to the weigh hopper or to the mixer.

3.4.14.1 Recycled materials that are introduced in the weigh hopper shall be dry mixed per 3.4.13.

3.4.14.2 When recycled materials are delivered to the mixer separately from the virgin aggregates, wet mixing time shall not begin until all recycled material is introduced to the mixer and is moisture free. The duration shall be determined based on field/plant conditions, and by agreement of the Contractor and Engineer.

3.4.15 The asphalt binder shall be added and the mixing continued until a uniform coating is obtained and all particles of the aggregate are thoroughly coated. The total dry and wet cycle shall not be less than 35 seconds for base and binder mixtures and not less than 40 seconds for the surface mix. In no case shall the total mixing period exceed 75 seconds. If the aggregate in the hot bins contains sufficient moisture to cause foaming in the mixture, such aggregate shall be removed from the bins, and production rate shall be reduced so as not to exceed the capacity of the dryer. Material having once gone through the mixing plant shall not be returned to the stockpiles.

3.5 Drum Mix Plants – General.

3.5.1 The plant shall be specifically designed for the process and shall be capable of satisfactorily heating, drying, and uniformly mixing the bituminous material and aggregate in accordance with the job mix formula. The rate of flow through the drum shall be controlled in order that a homogeneous mixture is obtained with all particles uniformly coated. In no case shall the quantity of mix produced exceed the manufacturer's rated capacity. If the percent of moisture in the mixture exceeds 1.0 percent by weight, the right is reserved to decrease the rate of production. The plant shall be equipped with automatic burner controls.

3.5.2 The cold bins shall be divided in at least five compartments and shall be designed to prevent the overflow of material from one bin to another. Each cold bin shall be equipped with an orifice to feed the aggregate accurately and uniformly. The feeding orifice shall be adjustable, and indicators shall be provided to show the gate opening. An automatic plant shutoff device shall be provided to operate when any aggregate bin becomes empty or the flow from

any bin gate becomes restricted. A vibrator or other suitable means may be required in order to ensure a uniform flow of materials. The order of aggregate feed onto the composite cold feed belt shall be from coarse to fine. Aggregate shall pass through a scalping screen prior to the weigh belt.

3.5.2.1 When recycled material is used, an additional bin, equipped with its own oversize particle scalper, shall be required. In event of an emergency, this bin may be used to feed aggregate in an amount not to exceed 15% of material to complete the day's production.

3.5.3 The total cold aggregate feed shall be weighed continuously by an approved belt scale. The weighing system shall register within +0.5 percent of the indicated load.

3.5.4 Proportioning controls for aggregate and asphalt binder shall be located at the panel that also controls the mixture and the temperature. The panel shall be equipped with automatic controls that shall display, in digital form, the percentages of asphalt binder, mineral filler if required, and each aggregate in the job mix formula. The panel shall also be equipped to raise and lower the production rate without having to reset the individual controls for each change in production rate. The controls shall maintain aggregate flow accuracy such that the total variation of all materials being drawn per interval of time shall not exceed an amount equal to 1.5 percent of the total weight of bituminous mixture per interval of time.

3.5.5 Provisions shall be made for introducing the moisture content of the total cold feed into the belt weighing system and correcting the wet aggregate weight to dry aggregate weight. The system shall be capable of adjusting the flow of bituminous material to compensate for any variation in the dry weight of the aggregate flow. It shall be the responsibility of the Contractor to monitor and determine accurate moisture contents of the aggregate and RAP stockpiles used for production of hot bituminous pavement. Accurate moisture contents shall be determined at a minimum every other day of production. In the event of rain, moisture contents shall be determined for all aggregates and RAP to be utilized before the next day's production.

3.5.6 The dry weight of the aggregate flow shall be displayed by automatic digital readout in units of weight per interval of time.

3.5.7 When mineral filler is specified, a separate bin and feeder shall be provided with a variable drive interlocked with the aggregate feeders. Mineral filler shall be introduced and uniformly dispersed into the mixture without loss to the dust collection system. A device shall be provided to indicate when the flow of filler into the delivery system stops or its specified volume is out of job mix tolerance. The rate of flow shall be accurate to within 0.5 percent by weight, of the total mix. Means shall be provided to readily divert the flow of mineral filler into a container for measurement.

3.5.8 The asphalt binder shall be introduced through a continuously registering cumulative indicating meter by a pump specifically designed for the plant. The meter shall be located in the asphalt line so that it continuously registers the asphalt discharge to the mixer and so that the discharge through the meter can be readily diverted into a suitable container for measurement by actual weight. The meter shall indicate accurately to within 1.0 percent the amount of asphalt binder being delivered. The accuracy of the pump and meter shall be verified at periodic intervals as designated by the Engineer.

3.5.9 Satisfactory means shall be provided to ensure positive interlock between dry weight of aggregate flow and the flow of bituminous material through an approved meter.

3.5.10 The flow of bituminous material shall be displayed by automatic digital readouts in terms of volume or intervals of weight and time.

3.5.11 The plant shall have a means of diverting mixes at start up and shut down or where mixing is not complete or uniform.

3.5.12 A surge or storage system complying with 3.7 shall be provided.

3.6 Mixing Temperature - General.

3.6.1 The Engineer may adjust the job mix formula temperature within the limits of 260° and 350°F according to the existing conditions. Material with a temperature at discharge outside the job mix formula tolerance may be rejected. In no case will a mixture be accepted with a discharge temperature in excess of 375°F.

3.6.2 During hot weather, the temperature of the mixture when discharged shall be as low as is consistent with proper mixing and placing. During cold weather, a temperature approaching the upper limit is desirable.

3.7 Hot Storage System – General.

3.7.1 Material may be placed in a storage silo for a period not to exceed 24 hours from the time of mixing. The upper and lower gates when closed shall create an airtight seal. The silo shall be filled to capacity. 24-hour storage will not be allowed if there is reason to believe there is a problem with the gate seals or excessive heat loss.

3.7.2 The hot storage system shall be capable of conveying the hot mix from the plant to insulated and enclosed storage bins and storing the hot mix without appreciable loss in temperature, asphalt migration, segregation, or oxidation.

3.7.3 The conveyer system may be a continuous type or skip bucket type. If the continuous type is used, it shall be enclosed to prevent a drop in mix temperature. If the skip bucket type is used, the bucket must be of sufficient capacity to transport an entire batch and mass dump it into the bins.

3.7.4 The storage bins shall be designed in such a manner as to prevent segregation of the hot mix during discharge from the conveyor into the bins and shall be equipped with discharge gates that do not cause segregation of the hot mix while loading the mix into the trucks. The storage bin heating system shall be capable of maintaining the mix temperature without localized heating (hot spots).

3.7.5 The bin shall be equipped with a light or indicator to show when the level of material reaches the top of the discharge cone. The bin shall not be emptied below the top of the discharge cone until the use of the bin is completed each day. The material remaining in the discharge cone may be rejected if there is evidence of segregation.

3.8 Weighing and Hauling – General.

3.8.1 The Contractor shall provide an approved automatic printer system that prints the weights of the material delivered, provided the system is used in conjunction with an approved automatic batching and mixing control system. Such weights shall be evidenced by a weight slip for each load.

3.8.2 Weight slips shall include requirements as shown in 109.01 and the following for batch plants with automatic proportioning equipment:

(a) Tare weight of aggregate weigh box.
(b) Tare weight of asphalt binder weigh bucket.
(c) Accumulative weights as batched for each aggregate (total of last aggregate will be aggregate total).
(d) Weight of asphalt binder.
(e) Accumulated total weight of batch.

3.8.3 Each weight slip will show a consecutive load number and shall include an accumulative total of material delivered for each day.

3.9 Vehicles – General.

3.9.1 Asphalt Release Agent (ARA). ARAs used to facilitate the release of hot bituminous mixes from truck beds shall be as included in the Qualified Products List. In addition, ARA usage is permissible in lubricating and cleaning of production plant equipment, and roadway paving equipment (pavers, rollers, and hand tools).

3.9.2 The mixture shall be transported from the paving plant to the project in trucks having tight, smooth, metal beds previously cleaned of all foreign materials. Truck beds may be lined with a polyethylene type material designed and installed for hauling hot bituminous mixes. Each load shall be covered with canvas or other suitable material of sufficient size and thickness to retain heat and to protect it from weather conditions. The cover material when new shall weigh a minimum of 18 oz/yd^2 and it shall be a tightly woven or solid material. When necessary, so that the mixture can be delivered on the project at the specified temperature, truck beds shall be insulated, and covers shall be securely fastened.

3.9.3 Equipment that leaks oil, diesel fuel, gasoline, or any other substance detrimental to the pavement will not be allowed on the project.

3.10 Placing

3.10.1 General.

3.10.1.1 Prior to placing of any mix, a pre-paving conference shall be held to discuss and approve the paving schedule, source of mix, type and amount of equipment to be used, sequence of paving pattern, rate of mix supply, traffic control, and general continuity of the operation. Special attention shall be made to the paving pattern sequence to minimize cold joints. The field supervisors of the above mentioned operations shall attend this meeting.

3.10.1.2 The Contractor shall notify the Engineer at least five working days in advance of paving operations to allow sufficient time to schedule required site inspection and testing. All paving and compaction equipment shall be approved and on site prior to start up each day.

3.10.1.3 Base course pavement lifts shall not exceed the maximum compacted thickness of 5 inches. Any course exceeding 5 compacted inches shall be placed in 2 passes.

3.10.1.4 When performing paving operations at night, in addition to the requirements of 3.1.4.5, the Contractor shall provide sufficient lighting at the work site to ensure the same degree of accuracy in workmanship and conditions regarding safety as would be obtained in daylight.

3.10.1.5 When patching existing pavement, the material shall be placed on the prepared clean underlying surface at the locations designated and shall be spread to produce a smooth and uniform patch. The patch material shall be thoroughly compacted and shall match the line and grade of the adjacent pavement.

3.10.1.6 Relatively small areas not accessible to the paver may be spread by hand, but extreme care shall be taken to create a surface texture similar to the machine work. Surface material shall be spread by lutes and not by rakes.

3.10.1.7 Unless otherwise authorized, the final surface course shall not be placed until guardrail posts have been set and general cleanup has been completed.

3.10.1.8 When hot bituminous bridge pavement is to be placed over barrier membrane, the placing temperature shall be as specified in 538.3.3.5. A paver, mounted on rubber tracks or tires, shall be used to place the 1" base course unless this procedure is found to cause damage to the membrane. When such damage is found to be evident, the hand method may be allowed. The hand method may also be allowed if the Engineer determines that the use of a paver for this work is impracticable. During warm weather, the above paving shall be done during the cool period of the day. A paver shall be used to place the surface course.

3.10.1.9 Where pavement is placed adjacent to structural members such as expansion joints, the material in the top course shall be placed so that the compacted grade of the pavement is 1/4 to 3/8" above the grade of the structural member.

3.10.1.10 When paving on aggregate base courses and/or base course pavement, the first pass paved shall be on the travel way and not on the shoulders.

3.10.1.11 Drainage and utility structures within the limits of the pavement shall be set and raised in accordance with the provisions of 604.3.4. Contact surfaces of the drainage and utility castings as ordered shall be painted with a thin coating of suitable bituminous material.

3.10.1.12 At the beginning and end of the project or project section, the existing pavement shall be removed to a sufficient depth to allow the placing of the new pavement and construction of a transverse joint, which shall be painted with a suitable bituminous material. The underlying course shall be clean and free from foreign materials and loose bituminous patches and must present a dry, unyielding surface.

3.10.2 Performance Requirements (QC/QA). The Contractor shall provide the following equipment for testing and sampling at the project site. The equipment shall be in good condition and shall be replaced by the Contractor if, during the duration of the project, it becomes unsuitable for testing or sampling purposes.

3.10.2.1 Metal plate 12" minimum each side, flat bottom scoop 3000-gram capacity minimum, and sample containers to perform NHDOT Test Procedure B-7 (see Appendix A) sampling.

3.10.3 Weather Limitations - General

3.10.3.1 Mixtures shall be placed only when the underlying surface is dry and frost free. The Engineer may permit, in case of sudden rain, the placing of mixture then in transit from the plant, if laid on a base free from pools of water, provided motorist visibility is not impaired and all other specifications are met. No load shall be sent out so late in the day that spreading and compaction cannot be completed during the daylight, unless the requirements of 3.10.1.5 are met. The Engineer may suspend operations for the day when the Contractor is unable to meet specifications.

3.10.3.2 Surface course shall not be scheduled for placement after October 1st and before May 1st without written approval by the Engineer.

3.10.3.3 All mix placed after October 1st and before May 1st shall be modified by a qualified warm mix technology.

3.10.3.4 In special instances, when the Engineer determines that it is in the best interest of the State, the Engineer may waive the requirements of 3.10.3, provided that 3.10.3.1 shall always remain in effect.

3.10.4 Sweeping - General. Existing pavement or previously laid courses shall be thoroughly dry and free from all dust, dirt, and loose material. Sweepi ng with a power broom, supplemented by hand brooming, may be necessary.

3.10.5 Tack coat - General. Surfaces of any pavement course shall have a tack coat of emulsified asphalt applied in accordance with the requirements of 410.3.4.

3.11 Pavers and Material Transfer Vehicles (MTV) – General.

3.11.1 Pavers shall be:

(a) Self-contained, power-propelled units with adjustable vibratory screeds and full-width screw augers that reach within 18" of the end plate for fixed-width paving.
(b) Heated for the full width of the screed.
(c) Capable of spreading and finishing courses of hot asphalt mix in widths at least 12" more than the width of one lane.
(d) Equipped with a receiving hopper having sufficient capacity to ensure a uniform spreading operation.
(e) Equipped with automatic feed controls, which are properly adjusted to maintain a uniform depth of material ahead of the screed.
(f) Capable of being operated at forward speeds consistent with satisfactory laying of the mix.
(g) Capable of producing a finished surface of the required smoothness and texture without segregating, tearing, shoving, or gouging the mixture.
(h) Equipped with the following automatic screed controls:
    1. Two 24 ft. ski type devices or floating beams.
    2. Two grade sensors.
    3. Two short skis (joint matchers).
    4. Slope sensing control for transverse slope

3.11.1.1 Pavers used for all machine method work shall have a minimum weight of 28,000 lbs. and a minimum 8-foot wheelbase, unless otherwise approved by the Engineer.

3.11.1.2 All courses shall be spread and finished to the required thickness by approved, self-contained, self-propelled spreading and finishing machines (pavers). Pavers shall be provided with an adjustable, activated screed and shall be capable of spreading the mixtures with a finish that is smooth, true to the required cross-section, uniform in density and texture, and free from hollows, tears, gouges, corrugations, and other irregularities. Broadcasting behind the paver shall be held to a minimum. Pavers shall be capable of spreading and finishing courses of the required thicknesses and lane widths. Horizontally oscillating strike-off assemblies will not be approved.

3.11.1.3 The activated screed shall be of the vibrating or tamping bar type or a combination of both and shall operate without tearing, shoving, or gouging the mixture. The activated portion of the screed shall extend the full width of the mixture being placed in the traveled way and other areas with sufficient width to accommodate a paver. In other locations as permitted such as narrow shoulders, tapers, and areas adjacent to curbs, non-activated extensions to the screed will be allowed. The paver shall be equipped with a screed heater. The screed heater shall be used when starting a cold machine and for maintaining a suitable screed temperature when needed.

3.11.1.4 The paver hopper gates shall be adjusted to pass the correct amount of mix to the augers so that they operate more or less continuously. The height of material shall be maintained at a constant level in front of the screed, to a point where approximately half of the auger shall be visible at all times.

3.11.1.5 The sensors for either or both sides of the paver shall be capable of sensing grade from an outside reference line or from the surface using a ski type device. A slope control sensor, mounted on the slope beam of the paver shall be capable of sensing transverse slope of the screed. The sensors shall provide automatic signals that operate the screed to maintain the desired grade and transverse slope. Pavers shall not be used until the automatic controls have been checked and approved by the Engineer.

3.11.1.6 The use of automatic grade and slope controls shall be required on all pavers. On projects or parts of projects where the Engineer deems that the use of automatic controls are impracticable, some or all of the controls listed in 3.11.1(h) may be waived.

3.11.1.7 Whenever a breakdown or malfunction of the automatic controls occurs, the equipment may be operated manually for the remainder of the normal working day on which the breakdown or malfunction occurred. This method of operation must meet all other specifications.

3.11.1.8 The forward speed of the paver shall be adjusted to the rate of the supply of materials so that the paver operates without having to make stops except for emergencies. If the Engineer determines that the paving operations result in excessive stopping of the paver, the Engineer may suspend all paving operations until the Contractor makes arrangements to synchronize the rate of paving with the rate of delivery of materials.

3.11.2 Material Transfer Vehicle (MTV)

3.11.2.1 An approved MTV shall be used to transfer the bituminous mix from the hauling equipment to the paver. The MTV shall operate independently from the paver and shall be a commercially manufactured unit specifically designed for the transfer of mix from the hauling equipment to the paver without depositing the mix on the roadway. It shall have the ability to swing the discharge conveyor to reach the paver hopper. The MTV shall be designed so that the mix is internally remixed. The minimum storage capacity of the MTV shall be 12 tons.

3.11.2.2 The MTV will only be required for mainline construction and straight ramps (does not include loop ramps, interim connections, interim crossovers and side roads) when the section is a minimum of 600 tons per paver mobilization unless otherwise approved by the Contract Administrator.

3.11.2.3 When the MTV passes over a bridge that is not a fill over structure, it shall be as near to empty as possible. The MTV also shall not exceed 5 miles per hour while on the bridge. If the Contractor proposes moving the MTV over a bridge with more than a minimal amount of material in it, a proposal must be submitted to and approved by the Bureau of Bridge Design prior to the placing of any mix. The submittal needs to show in detail the wheel and axle loading that will be placed on the bridge deck.

3.12 Compaction.

3.12.1 General.

3.12.1.1 Immediately after the hot asphalt mix has been spread, struck off, and surface irregularities adjusted, it shall be thoroughly and uniformly compacted by rolling. The completed course shall be free from ridges, ruts, humps, depressions, objectionable marks, visible segregation, or irregularities and in conformance with the line, grade, and cross-section shown in the Plans or as established by the Engineer.

3.12.1.2 All compaction units shall be operated at the speed, within manufacturers recommended limits, that will produce the required compaction. The use of equipment, which results in excessive crushing of the aggregate, will not be permitted. Any asphalt pavement that becomes loose, broken, contaminated, shows an excess or deficiency of asphalt binder, or is in any way defective, shall be removed and replaced at no additional cost with fresh hot asphalt mix, which shall be immediately compacted to conform to the surrounding area. Hot asphalt mix shall not be permitted to adhere to the roller drums during rolling.

3.12.1.3 When a vibratory roller is being used, the vibration shall stop automatically when the roller is stopped or reversing direction of travel. Vibratory rollers shall not be operated in the vibratory mode under the following conditions: When checking or cracking of the mat occurs, when fracturing of aggregate occurs, and on bridge decks.

3.12.1.4 Pneumatic-tire rollers shall be self-propelled and shall be equipped with smooth tires of equal size and diameter. The wheels shall be so spaced that one pass of a two-axle roller accomplishes one complete coverage. The wheels shall not wobble and shall be equipped with pads that keep the tires wet. The rollers shall provide an operating weight of not less than 2,000 lb. per wheel. Tires shall be maintained at a uniform pressure between 55 and 90 psi with a 5 psi tolerance between all tires. A suitable tire pressure gauge shall be readily available.

3.12.1.5 Pneumatic-tired rollers shall be used on all pavement leveling courses.

3.12.1.6 Rollers must be in good mechanical condition, free from excessive backlash, faulty steering mechanism, or worn parts. The empty weight and the ballasted weight shall be properly marked on each roller.

3.12.1.7 To prevent adhesion of the mixture to the rollers, the wheels shall be kept properly moistened with water or water mixed with very small quantities of detergent or other approved material. Excess liquid will not be permitted. All steel rollers shall be equipped with adjustable wheel scrapers.

3.12.1.8 A minimum of three rollers shall be used. Unless an alternate compaction package is approved at the project pre-pave meeting, roller trains shall consist of the equipment describe herein.

3.12.2 Method Requirements.

3.12.2.1 The initial rolling shall be done with a static or vibratory steel-drum roller. Intermediate rolling shall be performed by a pneumatic-tired roller and/or a vibratory/oscillatory roller. Final rolling shall be performed with a static steel-drum roller. The minimum weight of static steel-drum rollers shall be 8 tons.

3.12.2.2 Unless otherwise directed, rolling shall begin at the sides and proceed longitudinally parallel to the roadway centerline, gradually progressing to the crown of the roadway. The overlap shall be one-half the roller width for wheeled rollers and 6 inches for vibrating rollers. No overlap is required for pneumatic-tired rollers. When paving in echelon or abutting a previously placed lane, the longitudinal joint shall be rolled first followed by the regular rolling procedure. On superelevated curves, the rolling shall begin at the low side and progress to the high side by overlapping of longitudinal passes parallel to the centerline.

3.12.2.3 Rollers shall move at a slow but uniform speed with the drive roll or drive wheels nearest the paver, except on steep grades. Static and pneumatic-tired rollers shall not operate at speeds in excess of 6 mph. All courses shall be rolled until all roller marks are eliminated.

3.12.2.4 Cores shall be collected by the Contractor at locations as determined and witnessed by the Engineer. One core per lane mile, but no less than two, shall be taken for each roadway segment paved. When shoulders are overlayed, cores shall be collected solely for density information at a frequency of one core for every 750 tons of mix.

The Contractor will deliver the cores to the designated testing laboratory once Department chain of custody measures have been applied.

The minimum compaction requirement shall be 91% of maximum theoretical density as determined in accordance with AASHTO T 209. The following reductions in unit price shall apply for all tonnage placed that is represented by any core (excluding shoulder cores) that does not meet the minimum requirement: for results below 91% but equal to or greater than 90%, a 5% reduction will be assessed; for any results below 90%, a 10% penalty for all tonnage placed will be assessed. At the Engineer's discretion, the Contractor may be required to remove noncompliant material below 90% (no payment will be made for this material or its removal).

3.12.2.4.1 All cores need not be cut at the same time. The Contractor will be allowed the option to collect cores through all placed lifts at once, provided cores are collected within two working days of placing the first course. Corrective action to any covered course is at the Contractor’s risk.

3.12.2.5 Any displacement occurring as a result of reversing the direction of a roller, or from other causes, shall be corrected at once by the use of lutes and the addition of fresh mixture when required. Care shall be exercised in rolling so as not to displace the line and grade of the edges of the bituminous mixture.

3.12.2.6 Along forms, curbs, headers, and similar structures and other places not accessible to a normal full-sized roller, sidewalk rollers weighing at least 2,000 lb (900 kg) shall be used. Where rollers are impracticable, the mixture shall be thoroughly compacted with heated or lightly oiled hand tamps or vibrating plate compactors.

3.12.2.7 Unless the Engineer determines that for the weight and placement conditions a lesser number will be satisfactory to obtain the desired pavement densities, the following is the list of required compaction equipment. The output of each paver placing surface course (Table 1) materials shall be compacted by the use of one each of the following complement of rollers as a minimum: a static or vibratory steel-wheel roller, a pneumatic-tired roller and a three-axle roller or a static steel-wheeled roller. If the required density is not being obtained with the rollers supplied, the use of additional rollers of the specified type may be ordered. Paving widths in excess of 16 ft will require additional rollers as ordered.

3.12.3 Performance Requirements (QC/QA).

3.12.3.1 As agreed upon at the Pre-Pavement meeting, the type of rollers to be used and their relative position in the compaction sequence shall be the Contractor's option, provided specification densities are attained.

3.13 Joints - General.

3.13.1 Unless otherwise shown on the plans, the longitudinal surface course joints shall be at the edge of lane placed, where the edge line, lane line and centerline pavement markings will be applied, and joints of other courses shall be offset approximately 2”.

3.13.2 The material being placed next to a previously paved lane shall be tightly crowded against the face of the abutting lane. The paver shall be positioned so that during spreading, the material will overlap the edge of the first lane by 1 to 2” and shall be left sufficiently high such that finish pavement of the lane being placed is approximately 1/8” higher than the previously paved lane after compaction. The overlapped material shall be rolled without luting. Longitudinal joint compaction shall be achieved by rolling from the hot side to within 6” of the previously placed mat. The next roller pass will overlap onto the previously placed paved lane by 6”. Further compactive effort shall be applied to all joints during the intermediate and final rolling.

3.13.3 Placing of the course shall be as continuous as possible while complying with Contract Traffic Control Plans. Transverse joints will be allowed at the end of each work shift or as required to provide properly bonded longitudinal joints.

3.13.3.1 No longitudinal joints greater than 1-1/2" height shall be left open to traffic unless a tapered overlapping ("wedge") joint is used. Joints between traveled way and shoulder greater than 3/4" shall be delineated by barrels. Barrels shall meet the requirements of Section 619.

3.13.3.2 Unless otherwise precluded by weather conditions, longitudinal joints shall not remain open to traffic longer than 30 hours.

3.13.4 If a bulkhead is not used to form the transverse joint, the previously laid material shall be cut back to the designed slope and grade of the course. The joint face shall be coated with approved bituminous bonding material meeting the requirements of 410.2.1 before the fresh mixture is placed against it. Extreme care shall be taken to ensure that no unevenness occurs at the joint. If unsatisfactory riding qualities are obtained at the transverse joint in the surface course, the joint shall be corrected by an approved method.

3.13.4.1 Prior to opening any lane(s) to traffic, transverse joints shall be ramped by means of an asphalt fillet at a minimum of 5 ft. horizontal to 1" vertical slope.

3.13.4.2 When paving into a permanent transverse joint, a full head of material shall be carried into the joint.

3.13.5 When specified, a bituminous pavement joint adhesive, Item 403.x6, shall be applied to the longitudinal joint. If joint adhesive has not been specified, an approved bituminous bonding material meeting the requirements of 410.2.1 shall be applied to completely cover all joint contact surfaces.

3.13.5.1 Joint adhesive shall be applied to the longitudinal joints so that the entire joint surface is covered with a minimum 1/8" thick layer of material. If a wedge joint is used the upper 4" of joint surface shall be covered with joint adhesive. In lieu of using joint adhesive, the Contractor may elect, with the approval of the Engineer, to use multiple pavers in echelon to eliminate the longitudinal joint. Echelon paving shall be performed as stated in 3.13.8.

3.13.5.2 The joint face on which the joint adhesive is to be applied shall be dry, free from loose material, dust, or other debris that could interfere with adhesion. If dust or debris adheres to the joint adhesive, it shall be cleaned or recoated as directed by the Engineer.

3.13.5.3 Trucks or traffic shall not drive across the joint adhesive until it has cooled sufficiently to prevent damage from tracking.

3.13.5.4 Joint adhesive shall be melted in a melting kettle that meets the requirements of 413.2.2(b). The joint adhesive shall be applied at the temperature specified by the manufacturer and shall not be heated above the safe heating temperature specified by the manufacturer.

3.13.5.5 Joint adhesive shall be applied using a pressure feed wand applicator system equipped with an applicator shoe as recommended by the manufacturer. A pour-pot applicator will be allowed on wedge joints only.

3.13.5.6 Joint adhesive (Bridge Base) shall be applied to curbs, concrete armoring, and pavement matches so that the entire joint is covered with a minimum 1/8" thick layer of material.

3.13.6 A tapered overlapping ("wedge") joint may be used on all longitudinal joints provided that the adjacent lane can be placed when the existing surface temperature is above 50° F.

3.13.6.1 An inclined face (3:1) on the joint shall be formed in the first bituminous mat placed. The inclined face may be for the entire height or an inclined face with a 1/2" maximum vertical face at the top of the mat.

3.13.6.2 After the initial mat is placed, the mat shall be rolled to the edge of the unconfined face.

3.13.6.3 When the adjoining mat is placed, the initial longitudinal wedge shall be treated as in 3.13.5.

3.13.7 The Contractor shall furnish and have available a 10 ft, lightweight metal straightedge with a rectangular cross-section of 2 by 4" at the paver at all times during paving operations. All courses shall be tested with the straightedge laid across the transverse joint parallel to the centerline and any variations from a true profile exceeding 3/16" shall be satisfactorily eliminated. The finished surface of the pavement shall be uniform in appearance, shall be free from irregularities in contour, and shall present a smooth-riding surface.

3.13.8 Echelon Paving. Echelon paving, when specified or approved, shall be defined as multiple pavers paving simultaneously and adjacent to one another such that all rolling of both mats is performed concurrently.

3.14 Variations in Profile and Cross Slope – Method (See 3.18.4.4.1)**.**

3.15 Replacement – General. If unsatisfactory areas are found in any course, the Contractor shall remove the unsatisfactory material and replace it with satisfactory material.

3.16 Finished Appearance – General. Any bituminous material remaining on exposed surfaces of curbs, sidewalks, or other structures shall be removed.

3.17 Quality / Process Control - General.

3.17.1 The Contractor shall operate in accordance with a Quality Control Plan, hereinafter referred to as the "Plan", sufficient to assure a product meeting the Contract requirements. The plan shall meet the requirements of 106.03.1 and these special provisions.

3.17.2 The Plan shall address all elements that affect the quality of the Plant Mix Pavement including, but not limited to, the following:

(a) Job mix formula(s).
(b) Hot asphalt mix plant details.
(c) Stockpile Management.
(d) Make & type of paver(s).
(e) Make & type of rollers including weight, weight per inch (centimeter) of steel wheels, and average ground contact pressure for pneumatic tired rollers.
(f) Name of Plan Administrator.
(g) Name of Process Control Technician(s).
(h) Name of Quality Control Technician(s).
(i) Mixing & Transportation.
(j) Process Control Testing.
(k) Placing sequence and placing procedure for ride quality.
(l) Paving and Weather Limitations.
(m) Sequence for paving around catch basins, under guardrail, around curb, at bridges, and intersections, drives and minor approaches, to ensure a proper finish and drainage.
(n) Procedure for fine grading the top of the surface to be paved.
(o) Binder supplier(s)

3.17.3 The Plan shall include the following personnel performing the described functions and meeting the following minimum requirements and qualifications:

A. Plan Administrator shall meet one of the following qualifications:

(a) Professional Engineer licensed in the State of NH with one year of highway experience acceptable to the Department and proof of past certification as a NETTCP QA Technologist.
(b) Engineer-In-Training with two years of highway experience acceptable to the Department and hold current certification as a NETTCP QA Technologist.
(c) An individual with three years highway experience acceptable to the Department and with a Bachelor of Science Degree in Civil Engineering Technology or Construction and hold current certification as a NETTCP QA Technologist.
(d) An individual with five years of paving experience acceptable to the Department and hold current certification as a NETTCP QA Technologist.

B. Process Control Technician(s) (PCT) shall utilize test results and other quality control practices to assure the quality of aggregates and other mix components and control proportioning to meet the job mix formula(s). The PCT shall periodically inspect all equipment used in mixing to assure it is operating properly and that mixing conforms to the mix design(s) and other Contract requirements. The Plan shall detail how these duties and responsibilities are to be accomplished and documented and whether more than one PCT is required. The Plan shall include the criteria utilized by the PCT to correct or reject unsatisfactory materials. The PCT shall be certified as a Plant Technician by the New England States Technician Certification Program or be a Materials Testing Technician in Training, working under the direct observation of a NETTCP certified Plant Technician.

C. Quality Control Technician(s) (QCT) shall perform and utilize quality control tests at the job site to assure that delivered materials meet the requirements of the job mix formula(s). The QCT shall inspect all equipment utilized in transporting, laydown, and compacting to assure it is operating properly and that all laydown and compaction conform to the Contract requirements. The plan shall detail how these duties and responsibilities are to be accomplished and documented, and whether more than one QCT is

required. The Plan shall include the criteria utilized by the QCT to correct or reject unsatisfactory materials. The QCT shall be certified as a HMA Paving Technician as certified by the North East Transportation Training and Certification Program or be a Materials Testing Technician in Training, working under the direct observation of a NETTCP certified HMA Paving Technician.

3.17.4 The Plan shall detail the coordination of the activities of the Plan Administrator, the PCT and the QCT. The Plan shall also detail who has the responsibility to reject material, halt production or stop placement.

3.17.4.1 All project-specific Appendices and issues agreed to at the Pre-Paving meeting shall be considered to be part of the Plan.

3.17.5 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 Department.

3.17.5.1 No surface course pavement shall be removed or repaired without prior approval of the Engineer.

3.18 Performance Requirements (QC/QA)

3.18.1 Asphalt pavement shall be sampled, tested, evaluated and recorded by the Contractor in accordance with the minimum process control guidelines in Table 401-3.

3.18.1.1 Cross slope shall be measured on every pavement lift using the method described in 3.18.5.5.1 prior to placement of subsequent lifts. Particular emphasis on the first pavement lift shall be required when correcting existing substandard cross slopes. Cross slope measurements exceeding 0.5% from the specified cross slope for that location shall require an adjustment in ongoing or subsequent paving operations to correct the deficiency. If two or more consecutive measured sublots are greater than 0.5% from the specified cross slope, paving operations shall cease until the Contractor submits a corrective action satisfactory to the Engineer.

Table 401-3 - Minimum Process Control Guidelines

Properties	Test Frequency	Test Method
Temperature of Mix	6 per day at paver hopper and plant	
Surface Temperature	As needed	
Temperature of Mat	4 per day	
Density	1 per 500 tons (500 metric tons) or min. 2 per day	AASHTO T 343 or ASTM D 2950
Maximum Theoretical Specific Gravity	1 per day of operation	AASHTO T-209
Fractured Faces	1 per 2000 tons (1800 metric tons) for Gravel Sources only	AASHTO T 11 & AASHTO T 27
Aggregate Gradation & Asphalt Binder content	1 per 750 tons (700 metric tons) recommended	AASHTO T 130 & 164
Asphalt Binder	As needed	AASHTO M 226 M 320
Thickness	Contractor Defined	Contractor Defined
Cross Slope	1 per 5 full stations	Per 3.18.5.5.1

3.18.2 The Contractor may utilize innovative equipment or techniques not addressed by the specifications or these provisions to produce or monitor the production of the mix, subject to approval by the Engineer.

3.18.3 Quality Assurance.

3.18.3.1 Asphalt pavement designated for acceptance under Quality Assurance (QA) provisions will be sampled once per sublot on a statistically random basis, tested, and evaluated by the Department in accordance with 106.03.2 and the acceptance testing schedule in Table 401-4. Testing shall not take place until the material has been placed and deemed acceptable by the Contractor.

Table 401-4 - Acceptance Testing Schedule

PROPERTIES	POINT OF SAMPLING	LOT SIZE	SUBLOT SIZE	TEST METHOD
Gradation	Behind paver & before rolling[4]	401.3.17.2.2	750 tons	AASHTO T 30 NHDOT B-1
Asphalt Binder content	Behind paver & before rolling[4]	401.3.17.2.2	750 tons	AASHTO T 164 NHDOT B-2 NHDOT B-6
Maximum theoretical specific gravity	Compacted Roadway[1] Core		750 tons	NHDOT B-8 AASHTO T 209
In Place Air Voids in total mix[5,6,7]	Compacted roadway[1] core	401.3.17.2.2	750 tons	NHDOT B-8 AASHTO T 269
Ride Smoothness[7]	Completion of surface course	Total project	0.1 lane mile	401.3.17.3.4
Cross Slope[7]	Completion of surface course	Total project	1 per 5 full stations	401.3.17.3.5
Thickness[2][5] [7]	Compacted roadway[1] core	Total project	750 tons	NHDOT B-8 ASTM D 3549

1. Excluding bridge pavements.
2. Measurements taken from full depth cores obtained for in place air voids determination.
3. For leveling course, samples to be taken at the plant.
4. Sampling and testing will not be performed for leveling course.
5. Not including leveling course.
6. When the Contractor is supplying mix to more than one paver simultaneously, Contractor's personnel shall keep a running total of tonnage supplied to each paver on each paver.
7. Tier 1 Item only.

3.18.3.2 Lot Size. For purposes of evaluating all acceptance test properties, a lot shall consist of the total quantity represented by each item listed under the lot size heading in the table above, up to 15,000 tons. For Items with quantities in excess of 15,000 tons, lot sizes will be determined at the pre-placement meeting. Each lot will be broken down into at least three (3) sublots.

The Contractor may request a change in the job mix formula. If the request is approved, all of the material produced prior to the change will be evaluated on the basis of available tests and a new lot will begin. Three sublots must be sampled and tested before a new lot may begin.

3.18.3.2.1 A lot for Gradation, Asphalt Content and In Place Air Voids shall be the total quantity represented by the job mix formula with the following exception; the shoulders will be evaluated as a separate lot for in place air voids.

3.18.3.3 Sublot Size. The quantity represented by each sample will constitute a sublot. The size of each sublot shall be as listed under the sublot size heading in Table 401-4. If there is insufficient quantity in a lot to make up at least three sublots of the designated size in Table 401-4, then the lot quantity will be divided into three equal sublots.

If there is less than one-half of a sublot remaining at the end, then it shall be combined with the previous sublot. If there is more than one-half of a sublot remaining at the end, then it shall constitute the last sublot and shall be represented by test results.

3.18.3.4 Test Results. The Engineer may calculate pay factors and pay adjustments at any time while a lot is being produced. This may be necessary for a partial estimate or to see if quality is falling to a point where immediate attention is required. Pay factors will be determined from all available acceptance tests for the lot being evaluated.

3.18.4 Acceptance Testing

3.18.4.1 Gradation and Asphalt Binder Content. Samples for gradation and asphalt binder content shall be obtained from behind the paver in conformance with NHDOT Test Procedure B-7 (see Appendix A) and taken from each pavement layer by the Contractor in the presence of the Engineer. The sample locations will be established by selecting a random location within each sublot in accordance with Section 106. Sample locations (center of sample) will not be within 1 foot from an edge of pavement or within 4 feet from any structure. Sample locations falling within 4 feet from any structure will be relocated 4 feet from the structure along station at the same offset.

Where samples have been taken, new material shall be placed and compacted to conform to the surrounding area immediately after the samples are taken. Samples shall be accompanied by a sample tag containing the following information:

a) Project name and number.
b) Lot and sublot number.
c) Material type.
d) Date placed.
e) Location in station and offset, tonnage
f) Contract Administrator
g) Sampler
h) Item number

When the project exceeds 30 minutes travel time from the testing laboratory location, material samples will be taken and identified by Department project personnel and shall be transported before cooling by the Contractor and delivered to Department testing technicians at the testing Laboratory. Samples lost in transit will incur a penalty of 5% of the bid price for the entire sublot represented by that sample. Sublots with no test results due to a lost sample will not be evaluated and the total quantity represented by that sublot shall not be included in any positive pay factor.

3.18.4.1.1 Testing. Target values shall be as specified in the job mix formula. All sieve sizes specified in the job mix formula will be evaluated for gradation. The specification limits in Table 401-5 will be used for calculating pay factors for gradation and asphalt binder content.

Table 401-5 - Gradation and Asphalt Binder Specification Limits

Property	**Maximum Aggregate Size**				
	1”	3/4”	¾” winter	1/2”	3/8”
	USL and LSL (Target +/- %)				
1 1/2”	0	0	0	0	0
1-1/4”	0	0	0	0	0
1”	8.0	0	0	0	0
3/4”	8.0	6.0	6.0	0	0
1/2”	7.0	6.0	6.0	5.0	0
3/8”	7.0	6.0	6.0	5.0	5.0
No. 4	4.5	4.5	4.5	4.0	4.5
No. 8	4.5	4.5	4.5	3.5	3.5
No. 16	2.5	2.5	2.5	2.5	2.5
No. 30	2.5	2.5	2.5	2.5	2.5
No. 50	2.5	2.5	2.5	2.5	2.5
No. 100	2.5	2.5	2.5	2.5	2.5
No. 200	1.0	1.0	1.0	1.0	1.0
Asphalt Binder	0.4	0.4	0.4	0.4	0.4

Any sublot with a gradation or asphalt binder content falling outside the ranges of the reject limits in Table 401-6 will be either removed and replaced at the expense of the Contractor or require corrective action to the satisfaction of the Engineer. After replacement or correction, new samples will be taken and the old test results from that sublot will be discarded.

Table 401-6 - Gradation and Asphalt Binder Content Reject Limits (Deviation from Target)

SIEVE SIZE	1”	3/4”	¾” Winter	1/2”	3/8”
	Percent Passing By Weight – Combined Aggregate				
1-1/4”					
1”					
3/4”	±12	(1)	(1)		
1/2”	(1)	±10	±10	(1)	
3/8”	(1)	(1)	(1)	±10	(1)
No. 4	±9	±9	±9	±9	±9
No. 8	±7	±7	±7	±7	±7
No. 16	±6	±6	±6	±6	±6
No. 30	(1)	(1)	(1)	(1)	(1)
No. 50	(1)	(1)	(1)	(1)	(1)
No. 100	(1)	(1)	(1)	(1)	(1)
No. 200	±3	±3	±3	±3	±3
Asphalt Binder: % of Mix	±1.0	±1.0	±1.0	±0.8	±0.8

(1) Reject limits will be waived for these sieves.

The Contractor shall have the option of requesting a change in job mix formula (aim change) values used for calculating quality level to reflect actual production values after the placement of two sublots as long as no change in plant production values are made. A new lot is not needed for this change.

3.18.4.2 In Place Air Voids. In place air voids shall be determined in accordance with AASHTO T 269 using 6” diameter cores taken from each pavement layer by the Contractor in the presence of the Engineer. Core sampling shall be in conformance with ASTM D 5361 and NHDOT Test Procedure B-8 (see Appendix A). Full depth cores containing all new pavement layers shall be required. Core locations (center of core) will be established by selecting a random location within each sublot in accordance with Section 106. When shoulders are overlayed, cores shall be collected solely for density information at a frequency of one core for every 750 tons of mix. Cores will not be located in the following areas:

(a) Within 1 foot from an edge of pavement.
(b) Within 4 feet from any structure. Core locations falling within this area will be relocated 4 feet from the structure along station at the same offset.
(c) Within shoulders 4 feet or less in width.
(d) Within 1 foot from any break in slope across the mat surface.

Cores shall be taken before opening pavement to traffic, except when location of core is within the last hour of that day’s placement. Cores shall be taken within 24 hours after placement. Where cores have been taken, new material shall be placed and compacted to conform to the surrounding area the same day the samples are taken. Core samples shall be accompanied by a sample tag containing the following information:

(a) Project name & number.
(b) Lot and sublot number.
(c) Material Type.
(d) Date placed.
(e) Date sampled.
(f) Location in station and offset, and/or tonnage.
(g) Plan thickness.
(h) Contract Administrator
(i) Sampler
(j) Item number

The complete sample(s) (unseparated) shall be protected against damage, transported, and delivered by the Contractor within one working day to Department testing technicians at the Laboratory. Sublots where the core becomes lost or damaged will be resampled at the direction of the Engineer at the Contractor’s expense.

The specification limits in Table 401-7 will be used for calculating pay factors for in place air voids for each lot:

Table 401-7 - In Place Air Voids Acceptance Limits

TARGET (%)	LSL	USL
Average of Samples	- 2.0%[1]	+2.0%[2]

[1] But not less than 2.5%
[2] But not more than 9%

When a core is less than 80% of the nominal thickness, a new core will be taken in the same sublot at a random location for the determination of in place air voids.

A sublot with a test result less than 2.0% for in place air voids will be rejected and subject to removal and replacement.

3.18.4.2.1 Maximum Theoretical Density (MTD). MTD shall be determined in conformance with AASHTO T 209 once per sublot from the core obtained for determining in place air voids.

3.18.4.2.2 Disputed Cores. If a Contractor believes that a core result is invalid for whatever reason, the Contractor shall notify the Engineer of this in writing within 24 hours of being informed of the test result. After being informed of the disputed core result, the Engineer will select three random core locations, one in each three sections of the disputed sublot at the same offset as the disputed core. The Contractor shall cut the cores at the selected locations in the presence of the Engineer who shall place them in secured containers for delivery and testing at the Bureau of Materials and Research laboratory in Concord, NH. If there are 10 or more cores already tested to date, the pay factor for voids in the lot will be calculated (without using the result of the disputed core). If less than ten cores have been tested in the disputed lot, the three cores shall be held until ten cores have been tested or the lot is complete, whichever comes first, at which time the pay factor will be calculated.

If the pay factor for the lot that contains the disputed result is 0.95 or greater, and the disputed test result is outside three standard deviations from the mean value of the lot (calculated without using the result of the disputed core), the three cores shall be tested and the average value of the three will be calculated.

If any of these three cores falls outside three standard deviations from the mean value for the lot (calculated without using the result of the disputed core), the original core test value will stand. If the three cores fall within three standard deviations of the mean value the average of the three cores will be used as the core result for the disputed sublot.

If the three cores are not used, the Contractor shall pay for the cost of testing.

3.18.4.3 Pavement Thickness. The thickness requirements contained herein shall apply only when each pavement layer is specified to be a uniform thickness greater than 3/4" The thickness of each layer of hot asphalt mix will be measured in conformance to ASTM D 3549 to determine compliance with the acceptance tolerance. Measurements shall be obtained from cores taken for determining in place air voids of each pavement layer. A leveling course, or the first layer over a gravel or stone base, a milled surface or an existing surface, shall be excluded from thickness measurement.

3.18.4.3.1 Once each thickness measurement has been taken, a thickness index will be calculated. The thickness index is the actual deviation from target divided by the allowable tolerance. This will allow statistical comparisons to be made among measurements based on varying specified thickness. Thickness indexes will be established for the sole purpose of calculating pay factors. Thickness index shall be calculated under the following equation using the specification limits in Table 401-8.

$$TI = (M - ST)/T$$

where: TI = Thickness Index
ST = Specified Thickness
M = Measured Layer Thickness from Core
T = 15% x ST, but no less than 1/4"

Table 401-8 -Thickness Index Acceptance Limits

	TARGET	LSL	USL
Thickness Index	0.00	-1.00	+1.00

3.18.4.3.2 Disputed Thickness If a Contractor believes that a thickness result is invalid for whatever reason, the Contractor shall notify the Engineer of this in writing within 24 hours of being informed of the test result. After being informed of the disputed result, the Engineer will select three random core locations in the disputed sublot. In the presence of the Engineer, the Contractor shall cut the cores at the selected locations and place them in secured containers for testing. The Contractor shall deliver these cores to the Department testing technicians at the Laboratory. If there are 10 or more cores already tested to date, the pay factor for thickness in the lot will be calculated (without using the result of the disputed core). If less than ten cores have been tested in the disputed lot, the three cores shall be held until ten cores have been tested or the lot is complete, whichever comes first, at which time the pay factor will be calculated.

If the pay factor for the lot that contains the disputed result is 0.95 or greater, and the disputed test result is outside three standard deviations from the mean value of the lot (calculated without using the result of the disputed thickness), the three cores shall be measured and the average value of the three will be calculated.

If any of these three cores falls outside three standard deviations from the mean value for the lot (calculated without using the result of the disputed core), the original thickness test value will stand. If the three cores fall within three standard deviations of the mean value, the average of the three measurements will be used as the thickness for the disputed sublot.

If the three cores are not used, the Contractor shall pay for the cost of testing.

3.18.4.4 Ride Smoothness.

3.18.4.4.1 The Contractor shall furnish and have available a 10 ft., light weight metal straightedge with a rectangular cross section of 2" x 4" at the paver at all times during paving operations. All courses shall be tested with the straightedge laid parallel or perpendicular to the centerline and any variations from a true profile or cross slope exceeding 3/16" shall be satisfactorily eliminated. The finished surface of the pavement shall be uniform in appearance, free from irregularities in contour and shall present a smooth-riding surface.

3.18.4.4.2 A GM type profilometer will be furnished by the Department for determination of pavement smoothness. This device provides a Ride Number in both wheel paths that are averaged to produce a ride number for the surface tested. In the event the Engineer feels that there is a significant difference in the wheel path profiles, a Ride Number evaluation of the individual wheel paths will be made. The surface will be tested within 30 days after the surface course and pavement markings for each discrete section of the project are complete. Immediately before testing, the Contractor will ensure the surface is entirely free from any foreign matter that may affect the test results. No special considerations will be given to criteria such as degree of curve and vertical geometry. Ride Number will be calculated to the nearest one hundredth for each 0.1-mile segment.

3.18.4.4.3 Profilometer testing will include all mainline paving including bridges with lanes at least 11 feet wide. Testing will begin 20 feet after the approach joint and end 20 feet before the departure joint. The pavement will not be evaluated over bridge expansion joints, tapers, raised pavement markings, and sections less than 0.1 mile in lane length.

3.18.4.4.4 All areas with bumps or high points exceeding 0.3" in 25 feet shall be corrected by removal of a minimum of 1" of the full lane width by the length required (a minimum of 100 feet) and replaced at the Contractor's expense.

3.18.4.4.5 The Ride Number average of all sublots will be used to determine the final pay factor. The final pay factor shall not exceed 1.05 and will be computed as follows:

For Level 1 Projects: (Ride Number 4.20)
Pay Factor = RN (0.5)-1.1

For Level 2 Projects: (Ride Number 4.14)
Pay Factor = RN (0.5682) – 1.3523

3.18.4.4.6 A final Ride Number shall be established after the surface course is completed and striped. Separate completed sections of a project will be evaluated before the entire surface course is completed. Any sublot with a ride number less than 3.7 shall be repaired or replaced.

3.18.4.4.6.1 Any sublot that has an individual wheel path ride number less than 3.7 shall be repaired or replaced. The repair treatment shall be for the full width of the lane. Sublots that have been repaired or replaced shall be reevaluated for ride smoothness and then averaged with all other sublots to determine the final project pay factor. Construction joints resulting from repairs or replacement will be included.

3.18.4.4.6.2 Level 1 will generally be all interstate and limited access highways with the following exception:

(a) A single course overlay that has a before ride number average of less than 4.00.

3.18.4.4.6.3 Level 2 will generally be all other highways with the following exceptions:

(a) Where the surface course must be constructed in short sections (< 3 sublots).
(b) Projects shorter than one half mile in length.
(c) Projects with a posted speed of 35 MPH or less.
(d) Projects with many driveways and/or cross roads with constant traffic.
(e) District resurfacing projects.

3.18.4.5 Cross Slope.

3.18.4.5.1 Cross slope will be measured once per sublot (see Table 401-4) behind the paver after final rolling of the surface course has taken place. Cross slope will only be evaluated when specific slopes and superelevations are shown on the plans for the entire project. Only travel lanes will be evaluated for cross slope. Measurements will be taken only in areas of normal tangent or full bank curves on even stations. Measurement shall take place utilizing one of the following methods, and shall be agreed upon by both parties: "digital read" level and 10 to 12 foot straightedge; "bubble" level, ruler, and 10 to 12 foot straightedge; transit; or electronic positioning equipment as approved by both Contractor and Department. If a straightedge is employed, perpendicularity shall be assured with the use of a right angle prism or other method acceptable to both parties. If a "bubble" or "digital read" level is employed, a second reading 180 degrees to the first shall be made and recorded, and the two shall be averaged for the test result. Measurement data shall be shared between parties within 24 hours of measurement.

3.18.4.5.2 Once a cross slope percentage has been measured, a cross slope index (CSI) will be calculated. The target cross slope shall be defined as the cross slope shown on the plans or as ordered to the nearest tenth of a percent. The CSI is the actual deviation from the target divided by **0.40** percent, which is the tolerance used for pay factor calculation only. This will allow statistical comparisons to be made among measurements based on varying specified cross slopes. The CSI will be established for the sole purpose of calculating pay factors. The CSI shall be calculated under the following equation using the specification limits in Table 401-10.

$$\text{CSI} = \frac{(M - SCS)}{T}$$

where: CSI = Cross Slope Index
SCS = Specified Cross Slope in percent
M = Measured Cross Slope in percent
T = 0.40

Table 401-10 - Acceptable Quality Level Limits

	TARGET	LSL	USL
Cross Slope Index	0.00	-1.00	+1.00

3.18.4.5.3 If three or more consecutive cross slope sublot measurements on the pavement lift used to calculate the pay factor deviate more than 0.5 (in percent) from the specified cross slope value at those locations, those sublots will be considered to exceed the engineering limit of 0.5%. The Contractor shall submit a corrective action plan for approval by the Engineer for cross slope sublots that exceed this limit.

3.18.4.5.4 After the approved corrective action plan is implemented, the sublots will be measured to ensure compliance, but will not be re-measured for the purpose of re-calculating pay factor. Alternatively, the Contractor may submit a written request for acceptance of the material at a negotiated price. The Engineer will determine whether the material may remain in place at the negotiated price.

3.18.4.6 Rejection of Material.

3.18.4.6.1 An Individual Sublot. For any sublots with any test results exceeding the specified reject limits, the Engineer will:

(a) Require complete removal and replacement with hot asphalt mix meeting the Contract requirements at no additional expense to the department, or

(b) Require corrective action to the satisfaction of the Engineer at no additional expense to the Department.

3.18.4.6.2 A Lot in Progress. The Engineer will shut down paving operations whenever:

(a) The pay factor for any property drops below .90 and the Contractor is taking no corrective action, or

(b) Three consecutive tests show that less than 50 percent by weight of the particles retained on the No. 4 sieve have at least one fractured face.

Paving operations shall not resume until the Engineer determines that material meeting the Contract requirements can be produced. Corrective action will be considered acceptable by the Engineer if the pay factor for the failing property increases. If it is determined that the resumption of production involves a significant change to the production process, the current lot will be terminated and a new lot will begin.

3.18.4.6.3 Remeasure and Retest. All requests to the Engineer to remeasure and retest a sublot shall be in writing.

Method of Measurement

4.1 Asphalt pavement mixture will be measured by the ton to the nearest 0.1 ton, and in accordance with 109.01. Batch weights will be permitted as a method of measurement only when the provisions of 3.8.3 are met, in which case, payment will be based on the cumulative weight of all the batches. The quantity will be the weight used in the accepted pavement, and no deduction will be made for the weight of asphalt binder or additives in the mixture.

4.1.1 No separate measurement will be made for lighting necessary or overtime required due to night operations at the plant or at the site.

4.1.2 Due to possible variations in the specific gravity of the aggregates, and to possible field changes in areas to be paved, the quantity used may vary from the proposal quantities, and no adjustment in Contract unit price will be made because of such variations.

4.2 Asphalt pavement, removed because of faulty workmanship or contamination by foreign materials, will not be included in the pay quantity.

4.3 Blank.

4.4 Joint adhesive will be measured by the linear foot for each lift of pavement to be placed, to the nearest foot of adhesive applied. If the Contractor chooses to pave in echelon in lieu of using joint adhesive, payment for the length of joint eliminated by the echelon paving will be made.

4.5 Echelon paving, when specified or approved, will be measured by the linear foot along the shared edge of the mats being simultaneously placed.

Basis of Payment

5.1 All work performed and measured as prescribed above will be paid for at the Contract unit price as provided in the respective sections for each type specified.

5.2 Tack coat material ordered under 3.10.5 will be paid as provided for in Section 410.

5.3 Blank.

5.4 Plant or project site lighting for hot bituminous pavement, machine or hand method, or overtime required due to night operations will be subsidiary to the paving items.

5.5 Asphalt cement additives will be subsidiary to the paving items.

5.6 Implementation of the Quality Control Plan and costs associated with obtaining core samples for acceptance testing shall be subsidiary. When items are to be accepted under Quality Assurance provisions, pay adjustment will be made in accordance with 106.03.2.4 as specified below.

5.6.1 Gradation composite pay factor (CPF). The total price for each lot will be adjusted by a composite pay factor (CPF) based on the gradation of the material after extraction using the pay factors for each sieve size and the sieve size weight factors in Tables 401-11, 11a & 11b.

Table 401-11 - Sieve Size Weight Factors 1”

Property		Weight Factor “f”
	1/2”	6
	#30	4
Gradation (each sieve)	#8 and #200 sieves	8
	All other sieves (each)	2

Table 401-11a - Sieve Size Weight Factors 3/4”

Property		Weight Factor “f”
	3/8”	6
	#30	4
Gradation (each sieve)	#8, and #200 sieves	8
	All other sieves (each)	2

Table 401-11b - Sieve Size Weight Factors 1/2” and 3/8”

Property		Weight Factor “f”
	No. 4	6
	#30	4
Gradation (each sieve)	#8, and #200 sieves	8
	All other sieves (each)	2

$$\text{Composite Pay Factor (CPF)} = \frac{[f_1(PF_1) + f_2(PF_2) + \ldots f_j(PF_j)]}{\Sigma f}$$

5.6.2 Pay Adjustment. The pay adjustment for each measured characteristic will be determined by the following equation:

$$PA_j = (Pf_j - 1)\frac{f_j}{\sum f}(Q)(P)$$

where: PA= Pay adjustment payment in dollars for each characteristic.
Pf = Pay factor or composite pay factor for each characteristic.
f = Weight factor from Table 401-12 for each characteristic.
$\sum f$ = Sum of weight factors.
Q = Quantity computed from all accepted delivery records for the lot.
P = Contract unit price per ton.

Table 401-12 – Tier 1 Weight Factors

Measured Characteristic	Weight Factor “f”
Gradation	0.15
Asphalt Binder Content	0.15
In Place Air Voids	0.20
Thickness	0.08
Cross Slope	0.12
Ride Smoothness	0.30

Table 401-13 – Tier 2 Weight Factors

Measured Characteristic	Weight Factor “f”
Gradation	0.25
Asphalt Binder Content	0.25
In Place Air Voids	0.5

5.6.3 Pay adjustment, Hot Bituminous Pavement QC/QA Items. The pay adjustment for gradation, cross slope, thickness, asphalt binder content, in place air voids, and ride quality (made up of the sum of all sublots) will be applied to Item 1010.3. Pay adjustments may be applied at the end of each month based on all available test results for each lot.

5.7 The accepted quantity of joint adhesive of type specified will be paid for at the Contract unit price per linear foot complete in place.

5.7.1 Recoating of the joint, as described in 3.13.5, shall be at the Contractor's expense.

5.7.2 When echelon paving is used in lieu of joint adhesive and the item is not included in the contract, the accepted quantity will be paid for at the price of joint adhesive under Item 403.6.

5.8 The Material Transfer Vehicle (MTV) Item will be paid for at the Item Bid Price per ton for the tons of bituminous mixture actually transferred by the MTV.

5.9 The accepted quantity of echelon paving will be paid for at the Contract unit price per linear foot complete.

5.9.1 If the Contractor chooses to pave in echelon in lieu of pavement joint adhesive, and the item is not in the contract, echelon paving will be paid as stated in 5.7.

APPENDIX A

NHDOT Test Procedure B-7

Sampling Bituminous Paving Mixtures for Acceptance Testing

Sample shall be taken behind the paver after placement and before compaction.

Sample location will be randomly selected by the Contract Administrator.

When paving over aggregate base course or cold planed surface, use a rectangular metal plate no less than 12" each side. Center plate on sample location.

After paver passes over plate, measure back to sample location.

Locate the edges of the plate.

Using a flat-bottomed scoop large enough to obtain up to a 3000 gram sample, place scoop on plate and push across the mat (perpendicular to the center line), through the center of the plate, filling the scoop to obtain the sample size specified below.

Required Sample Size

Base Courses	2000-3000 grams
Binder Courses	1500-3000 grams
Surface Courses	1000-3000 grams
Sand Courses	500-3000 grams

When sampling over an existing pavement, the plate is not required.

NHDOT Procedure B-8

Sampling and Testing

Procedure for In Place Air Voids

Cores will be taken at random locations selected by the Contract Administrator.

Cores shall be delivered intact by the Contractor to the Department's inspector at the Laboratory.

If Cores are lost or damaged, new cores shall be taken at the same location as the previous cores.

Cores shall be measured for thickness following ASTM D 3549.

Bulk specific gravity shall be determined by AASHTO T 166a.

Maximum Theoretical Density will be determined using the core by AASHTO T 209.

In Place Air Voids shall be determined by AASHTO T 2.

S U P P L E M E N T A L S P E C I F I C A T I O N

AMENDMENT TO SECTION 403 – HOT BITUMINOUS PAVEMENT

Purpose: To expand the HBP paving items to include the mix type in the in the item description (07/27/20 & 07/01/21). This update also to removes all references to night items and "percent wear" pay items (06/06/17).

Delete Section 1.3.

Amend Section 4.1.1 to read:

4.1.1 Hot Bituminous pavement transferred by the Material Transfer Vehicle (MTV) will be measured as prescribed in 401.4.

Amend Section 5.1.1 to read:

5.1.1 Blank.

Amend Section 5.2 to read:

5.2 Bridge surface course will be paid under machine method.

Replace Pay items and units with the following:

Key:
403. A B C D E

A Surface Type/Miscellaneous
1 Roadway
2 Bridge

B Placement Method

1	Machine Method	Ton
2	Hand Method	Ton
6	Pavement Joint Adhesive	Linear Foot
8	Leveling	Ton
9	Temporary	Ton

C Asphalt Type
0 Standard (as specified by Special Provision)
8 Polymer Modified (as specified by Special Provision)
9 High Strength

D Mix Type
0 Special (as specified by Special Provision)
1 1" Base Mix
2 3/4" Binder Mix
3 3/4" Winter Binder Mix
4 1/2" Surface Mix
5 3/8" Surface Mix
6 #4 Surface Mix

	E QC/QA Tier or Method	
	1 Tier 1	
	2 Tier 2	
	3 Method	
3	Blank	
4	Material Transfer Vehicle (MTV)	Ton
5	Blank	
6	Echelon Paving	Linear Foot
7	Blank	
8	Blank	
9	Blank	

Examples:

Method

403.11013	HBP-1” Base Mix, Machine Method	Ton
403.11023	HBP-3/4” Binder Mix, Machine Method	Ton
403.11033	HBP-3/4” Winter Binder Mix, Machine Method	Ton
403.11043	HBP-1/2” Surface Mix, Machine Method	Ton
403.11053	HBP-3/8” Surface Mix, Machine Method	Ton
403.12	HBP-Hand Method	Ton
403.x19x3	HBP- _____, Machine Method, High Strength	Ton
403.11963	HBP-#4 Surface Mix, Machine Method, High Strength	Ton
403.18	HBP-Leveling Course	Ton
403.19	HBP-Temporary	Ton
403.21053	HBP-3/8” Mix, Machine Method (Bridge Base)	Ton
403.29	HBP-Temporary (Bridge)	Ton

QC/QA

403.11011	HBP-1” Base Mix, Machine Method, QC/QA Tier 1	Ton
403.11012	HBP-1” Base Mix, Machine Method, QC/QA Tier 2	Ton
403.11021	HBP-3/4” Binder Mix, Machine Method, QC/QA Tier 1	Ton
403.11022	HBP-3/4” Binder Mix, Machine Method, QC/QA Tier 2	Ton
403.11031	HBP-3/4” Winter Binder Mix, Machine Method, QC/QA Tier 1	Ton
403.11032	HBP-3/4” Winter Binder Mix, Machine Method, QC/QA Tier 2	Ton
403.11041	HBP-1/2” Surface Mix, Machine Method, QC/QA Tier 1	Ton
403.11042	HBP-1/2” Surface Mix, Machine Method, QC/QA Tier 2	Ton
403.11051	HBP-3/8” Surface Mix, Machine Method, QC/QA Tier 1	Ton
403.11052	HBP-3/8” Surface Mix, Machine Method, QC/QA Tier 2	Ton
403.x18xx	HBP-_____, Machine Method, Polymer Modified, QC/QA Tier X	Ton
403.x19xx	HBP-_____, Machine Method, High Strength, QC/QA Tier X	Ton

Other

403.16	Pavement Joint Adhesive	Linear Foot
403.26	Pavement Joint Adhesive (Bridge Base)	Linear Foot
403.4	Material Transfer Vehicle (MTV)	Ton
403.6	Echelon Paving	Linear Foot
1010.3	Quality Control/Quality Assurance (QC/QA) for Asphalt	Dollar

S U P P L E M E N T A L S P E C I F I C A T I O N

AMENDMENT TO SECTION 410 – BITUMINOUS SURFACE TREATMENT

The purpose of this Supplemental Specification is to:

- *Adopt new AASHTO specifications for emulsions (2.1 – 04/13/16)*
- *Identify tack sampling and penalties for non-conformance (2.1.1*, 2.1.2*, 3.2, 3.3, 3.4, 06/06/17)*
- *Revise the pavement conditions and application rates for tack (3.4.1.1 – 01/04/17)*
- *Amend distribution equipment and initiate an annual tack truck inspection program (3.2*, 3.5.2, 07/06/18)*

** 2.1.1 & 2.1.2 were moved under 3.2 as these are Construction Requirements, not Materials requirements (07/06/18)*

Amend 2.1 to read:

2.1 Bituminous material shall be the type and grade specified or ordered and shall conform to the requirements of AASHTO M 140 or M 208, except as amended in Section 702.

Amend 3.2, 3.3, and 3.4 to read:

3.2 Equipment.

General equipment requirements for this work shall be as follows:

(a) Tack distribution trucks shall have a minimum GVW of 26,000 lbs and shall be equipped with a storage tank of 1,200-gallon minimum capacity.

(b) A tack distribution system shall be designed, equipped, maintained, and operated such that bituminous material at even heat (150° F) may be applied uniformly on variable widths of surface up to 12’ at readily determined and computer-controlled rates with uniform pressure. Distributor equipment shall include: a tachometer, pressure gauges, accurate inside and outside volume measuring devices, and an exterior thermometer for measuring temperatures of tank contents. Distributors shall be equipped with a power unit for the pump and with full circulation spray bars adjustable laterally and vertically from the truck cab. The spray bar shall contain spray nozzles providing a fan-shaped spray pattern adjusted so the vertical axis is perpendicular to the pavement surface. The spray pattern and spray bar height shall be adjusted to provide a uniform application of the tack coat [double coverage should be avoided for seal coats; overlapping coverage is required for tack coats]. The distributor shall be equipped with a mechanical device to adjust the spray height as material is discharged to keep a uniform height above the pavement for full coverage with the correct overlap. The distributor shall also be equipped with a hand-held spray attachment and 25’ hose for applying the material to areas inaccessible to spray bars and to fill in irregular areas to provide full coverage. Approved sampling valves shall be installed in distributors and transport tank trucks to permit the taking of representative samples of the contents. The recommended location of

the sampling valve is in the rear bulkhead of the tank, roughly one-third of the height above the bottom. The inlet pipe shall project into the contained liquid as shown in ASTM D 140.

(c) A rotary power broom shall be required unless the equipment listed under (d) is provided.

(d) In urban and/or curbed sections, a vacuum truck or street sweeper shall be provided.

(e) For seal coat applications only:

i A steel-wheeled roller.

ii A self-propelled pneumatic-tired roller.

iii A sand spreader capable of spreading blotter material in sufficient quantity to prevent traffic pickup of the applied bituminous material.

iv A steel-brush drag of an approved type.

3.2.1 Only certified tack distributors will be allowed. Vehicles and equipment will be subject to a yearly inspection by June 1st by the NHDOT Paving Specialist which will include field verification of spray patterns. Yearly inspection shall be arranged with a ten working day notification. Approved vehicles will receive a seal certifying the tack distributor for that year.

3.2.2 Sampling. Tack shall be sampled as directed by the Engineer using new non-metal sample containers provided by the Engineer. Samples shall be taken by the operator in the presence of the Engineer. At least 1 qt. of material shall be drained off through the sampling valve and discarded before the sample is taken. To prevent the loss of solvents, containers shall be sealed with a tight fitting cover immediately after being filled and provided to the Engineer for testing. Any tack that is found to be out of specification will result in non-payment for all tack applied on the date the tack is sampled.

3.2.2.1 Non-conforming tack will be evaluated by the Engineer to determine if overlying pavement should remain in place. Any pavement left in place shall not relieve the Contractor of the responsibility for latent defects and/or gross mistakes in the pavement layer above it as outlined in section 107.14.

3.3 Surface Preparation for Tack Coat. The existing surface shall be patched and shall be free of irregularities to provide a reasonably smooth and uniform surface to receive the treatment. Unstable corrugated areas shall be removed and replaced with suitable patching materials. The edges of existing pavements that are to be adjacent to new pavement shall be cleaned to permit the adhesion of bituminous materials.

3.4 Application of Tack Coat.

3.4.1 Bituminous material shall be uniformly applied with an approved applicator. When ordered, a pressure distributor shall be used. The tack coat shall be applied in such a manner as to offer the least inconvenience to traffic and to permit one-way traffic without pickup or tracking of the bituminous material.

3.4.1.1 A tack coat shall be applied immediately prior to placement of pavement. The rate of application of emulsified asphalt shall be between 0.02 and 0.06 gal/yd^2, based on the application rate table below. The Engineer may further modify the rate depending on the relative absorbance and texture of the pavement surface.

Existing Pavement Condition	Application Rate in Gal/yd^2
Smooth HMA	0.02 – 0.04
Milled HMA	0.04 – 0.06

Amend 3.5.2 to read:

3.5.2 Blotter material at the rate ordered shall be applied before the bitumen has set; the entire treated surface shall be dragged, rolled and maintained. The remaining blotter material shall be removed with a power broom.

Add to 5.2 the following:

5.2.2 The quantity of tack coat used on the day represented by a non-conforming test sample will not be paid.

ACWORTH
43566C

July 22, 2024

S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 417 -- COLD PLANING

This special provision addresses the Limited Reuse Soil issue for millings. All the requirements as set forth in the Standard Specifications are applicable except as modified or changed herein.

Add to Description:

3.5 Milled material not designated for salvage shall become property of the Contractor and shall be recycled for RAP purposes, such as hot bituminous pavement, crushed gravel for shoulder leveling, and other RAP appropriate products.

S U P P L E M E N T A L S P E C I F I C A T I O N

AMENDMENT TO SECTION 417 -- COLD PLANING OF BITUMINOUS SURFACES

The purpose of this Supplemental Specification is to specify the inlay mix as Plant Mix Surface Treatment.

Amend 2.1 as follows:

2.1 The asphalt mix to inlay the removed rumble strip shall consist of a Plant Mix Surface Treatment (PMST), conforming to Section 411.

Amend 3.7 as follows:

3.7 Asphalt Inlay of Rumble Strip Area. The milled area of removed rumbles shall be inlayed to match the existing pavement surface with PMST (placed by machine). The placement method shall be capable of spreading the mixtures with a finish that is smooth, uniform in density and texture, and free from hollows, tears, gouges, corrugations, and other irregularities.

ACWORTH
43566C

July 22, 2024

S P E C I A L P R O V I S I O N

AMENDMENT TO SUBSECTION 520 – PORTLAND CEMENT CONCRETE

The purpose of this special provision is to include Type IL -cement as an acceptable alternative due to availability of Type II, Type III, and Type IP cement.

Amend 2.1.1 as follows:

2.1.1 Portland cement shall be Type II, Type III, or Type IP conforming to AASHTO M 85 or M 240 as appropriate, unless otherwise shown on the plans or permitted. **Type IL Portland Limestone Cement meeting the requirements of AASHTO M240, may also be utilized, as appropriate.** Mill test reports shall be furnished with each delivery of cement.

S U P P L E M E N T A L S P E C I F I C A T I O N

AMENDMENT TO SUBSECTION 520 – PORTLAND CEMENT CONCRETE

The purpose of this Supplemental Specification:

- *Revise NETTCP QA Technologist requirements (3.1.6.2.1.2 A, 11/07/18)*
- *Amend the delivery temperature for Cast-in-Place concrete to match the Precast specifications (3.8.1.1, 04/02/18)*

Amend 3.1.6.2.1.2 a to read:

a) **Plan Administrator** shall meet one of the following qualifications:

1) Professional Engineer licensed in the State of NH with one year of highway experience acceptable to the Department and proof of past certification as a NETTCP QA Technologist.

2) Engineer-In-Training with two years of highway experience acceptable to the Department and hold current certification as a NETTCP QA Technologist.

3) An individual with three years highway experience acceptable to the Department and with a Bachelor of Science Degree in Civil Engineering or an Associate's Degree in Civil Technology or Construction and hold current certification as a NETTCP QA Technologist.

Amend 3.8.1.1 to read:

3.8.1.1 The temperature of the concrete shall not exceed 90° F when placed in the forms. This may require the addition of ice to mixing water, sprinkling the forms and reinforcing steel, scheduling the concrete placements for early morning or evening hours, or any other approved methods.

ACWORTH
43566C

September 27, 2024

SPECIAL PROVISION

SECTION 529 -- PRECAST CONCRETE COMPONENTS

Description

1.1 This work shall consist of manufacturing, storing, transporting, and erecting precast concrete items (i.e., abutments, wingwalls, approach slabs, moment slabs, box culverts, etc.; non-prestressed items), herein referred to as "primary components", "secondary components", and "culverts", in accordance with these specifications and in conformance with the lines, grades, design and dimensions shown on the plans or established by the Engineer.

1.1.1 This work shall also include field placement of grout for splice couplers, shear keys, and construction joints between abutting components during field assembly, when shown on the plans.

1.1.2 This work shall also include designing precast components as described herein, or as indicated on the plans. Plans and calculations for all contractor designed components shall be provided in accordance with 1.2, 1.3, and 1.4.

1.1.2.1 Contractor designed components for this project are as follows:

- Box Culvert (Highway)

1.2 Definitions. For the purposes of this special provision, the following terms are as defined:

1.2.1. Primary Components: Bridge components such as footings, abutments, wingwalls, approach slabs, sleeper slabs, deck slabs, piers, full-depth deck panels, and bridge railing.

1.2.2 Secondary Components: Headwalls, stairs, work pads, and moment slabs.

1.2.3 Culvert Components: Box culverts, 3-sided box culverts, arches, and frames, including headwalls, footings, wingwalls, grade control walls and cutoff walls.

1.2.4 Fabricator: Self-performing Contractor or Precast Plant Fabricator

1.2.5 Shop: Self-performing Contractor's Yard/Construction Site or Precast Fabricator's Plant

1.3 Requirements for Contractor Designed Components. The Contractor shall submit plans for acceptance and calculations for documentation for all Contractor designed components in accordance with 105.02.

1.3.1 The plans and calculations shall be prepared, stamped and signed by a Licensed Professional Engineer registered in the State of New Hampshire.

1.3.2 The calculations shall include a complete and thorough set of hand calculations that are specific to this project to support any computer generated calculations. The calculations shall include all applicable references to the LRFD specifications. A detailed explanation of any symbols and computer programs used in the design shall be provided. Calculations shall be performed in English units, with the final calculation results shown in English units.

1.4 Design Criteria for Contractor Designed Components. Contractor designed components shall meet all requirements of the current *AASHTO LRFD Bridge Design Specifications* for the applicable Strength and Extreme Event limit states, *NHDOT Standard Specification for Road and Bridge Construction*, and the Geotechnical Report except as modified herein:

1.4.1 Primary Components: N/A

1.4.2 Secondary Components: N/A

1.4.3 Culvert Components:

- Minimum clear cover on reinforcement for pre-cast members shall be 1.5 inches, unless otherwise noted on the plans. Bridge Box Culverts covered by less than 2.0-ft. of fill shall have a minimum clear cover of 2.5 inches on the top mat of reinforcement in the top slab, unless otherwise noted on the plans.
- All box culvert installations with clear spans equal to or greater than 6 feet shall include a cutoff wall at the inlet and outlet as shown on the plans. The cutoff wall shall be made integral with the culvert. Grade control concrete walls shall be installed as shown on the plans.
- A load rating of the Box Culvert (Bridge), Arch, or Frame shall be performed in accordance with *AASHTO Manual for Bridge Evaluation (MBE)* using the Load and Resistance Factor Rating (LRFR) method. The NHDOT Form 4 - Bridge Capacity Summary completed and stamped by a Licensed Professional Structural Engineer registered in the State of New Hampshire shall be submitted with the shop drawings.

Materials

2.1 Concrete.

2.1.1 Concrete materials shall conform to the requirements of Section 520 for Class AAA with a minimum 28-day compressive strength of 5,000 psi, unless otherwise noted on the plans.

2.1.2 Concrete shall be controlled, mixed, and handled as specified in the pertinent portions of Section 520, unless otherwise specified herein.

2.1.3 Mix Design. The Contractor shall submit a concrete mix design for approval conforming to the requirements of Section 520.

2.1.4 Corrosion Inhibitor. The following precast components exposed to salt treatment, or as noted on the plans, shall have corrosion inhibitor (calcium nitrate) admixture added at the rate of 3 gallons per cubic yard:

- Bridge Rail
- Stairs
- Piers at grade crossings
- Full-depth deck panels

2.2 Reinforcement for concrete shall conform to the requirements of Section 544. Steel reinforcement, with the exception of bars in the top slab, shall be uncoated. Steel reinforcement in the top slab shall be epoxy coated.

2.2.1 Grouted splice couplers, used to provide moment connections between components, shall develop a minimum of 125% of the specified yield strength of the reinforcing steel being spliced. Couplers shall be the same type as the steel reinforcement unless otherwise noted on the plans.

2.3 Grout and Concrete for Component Connections, Joints, and Bedding.

2.3.1 Grout for splice couplers shall be specified by the splice coupler manufacturer.

2.3.2 Grout for shear keys and construction joints between abutting components shall be an approved grout as listed in the Qualified Products List under Section 528 A High-Strength, Impact-Resistant Non-Shrink Grout. High early strength concrete conforming to the requirements of the special provision amendment to Section 520 for concrete class AA, high early strength, shall be used to fill footing shear keys and joints between approach slab components, when shown on the plans.

2.3.2.1 The compressive strength of the grout shall be equal to or greater than the joined components, unless otherwise noted on the plans.

2.3.2.2 The grout when thoroughly mixed shall be readily pourable so that it completely fills the shape of the joint.

2.3.3 Grout for bedding of components shall be an approved flowable non-shrink grout. A non-excavatable flowable fill, conforming to the requirements of the special provision amendment to Section 520 for concrete class F (non-excavatable), shall be used under the footings and approach slabs when shown on the plans.

2.4 Corrugated metal pipe (CMP) used to form voids in components as indicated on the plans shall be Type I, 16 gauge, galvanized, conforming to Section 603.

2.4.1 CMP voids in components shall be filled with field-cast concrete conforming to the requirements of the special provision amendment to Section 520 for concrete class AA, high early strength.

2.5 Profile rubber watertight gaskets between sections shall meet the requirements of ASTM C990.

2.6 Water repellent shall be silane/siloxane and conform to Section 534.2.2.

2.7 Granular backfill material shall conform to Section 209, Item 209.201

2.8 Barrier membrane on top slab of box culverts shall be welded by torch. Culvert side walls shall be waterproofed with peel and stick membrane for vertical surfaces. Barrier membrane shall conform to Section 538 with protection board.

2.9 Structural fill shall conform to Section 508.

Construction Requirements

3.1 General.

3.1.1 Specifications. Fabrication, transportation, and erection of precast concrete components shall conform to the applicable requirements of the current: *AASHTO LRFD Bridge Construction Specifications, Section 8: Concrete Structures; AASHTO LRFD Bridge Design Specifications, Section 5: Concrete Structures; AASHTO LRFD Guide Specification for Accelerated Bridge Construction; PCI MNL-116 Manual for Quality Control for Plants and Production of Precast and Prestressed Concrete Products; and PCI MNL-135 Tolerance Manual for Precast and Prestressed Concrete Construction; PCINE-14-ABC Guidelines for ABC Using Precast/Prestress Concrete* except as modified herein. In the case of conflicting specifications, the most stringent shall apply.

3.1.2 Approval/Acceptance. Prior to performing any work under Section 529, the Contractor must have received approved or accepted shop drawings and any special contract requirements. The Contractor shall bear full responsibility and costs for all materials ordered or work performed prior to approval or acceptance or written authorization from the Engineer.

3.2 Special Contract Requirements.

3.2.1 Primary Components Assembly Plan. A single assembly plan describing all aspects of the work including: handling; lifting; placing; supporting / securing; adjusting; grouting; and backfilling precast components, shall be submitted for acceptance in accordance with 105.02. The plan shall include, but shall not be limited to, the following:

a. Detailed shop drawings of all components in accordance with 3.4.

b. A work area plan depicting temporary and permanent structures, haul roads, utilities and other relevant temporary or permanent site features.

c. Details of all equipment to be used to lift components including: cranes; excavators; lifting slings; etc. Include crane locations, operating radii, lifting calculations, etc.

d. Construction loading analysis including calculations to confirm that the magnitude of stress in the components during handling and erection is within acceptable limits. The Contractor shall be responsible for demonstrating that all components have adequate capacity to resist stresses imposed during construction operations.

e. Detailed sequence of construction and schedule for all operations. Account for setting and cure time of field-cast concrete and grout.

f. Temporary support requirements for components including leveling bolts and shims, and bracing for lateral load and moment resistance. The Contractor shall be responsible for the stability of all components during construction operations.

g. Procedures for maintaining horizontal and vertical tolerances. Include details of all alignment brackets, jigs, templates, shims, and leveling bolts, etc.

h. Procedures for controlling tolerances of pile driving operations to maintain proper alignment within the pile pockets of components, where applicable.

i. Grouting plan specifying the type of grout products proposed for use and the method of installation for all grouted joints and connections, and bedding of components. Grouting of splice couplers shall be in accordance with the splice coupler manufacturer's recommendations.

j. Loading restrictions, including minimum time period before backfilling operations may proceed, where applicable.

3.2.1.1 The assembly plan shall be submitted for acceptance a minimum of thirty (30) days prior to the start of fabrication and shall be stamped by a Licensed Professional Engineer, registered in the State of New Hampshire. Multiple professional engineer stamps may be included on the various portions of the plan; however, **ONE** engineer shall be clearly identified as the Assembly Plan Engineer for the entire assembly plan. All questions, comments, and revisions shall be coordinated with the Assembly Plan Engineer.

3.2.2 Primary Components Pre-Placement Meeting. A pre-placement meeting will be held to review the specifications, schedule, and assembly plan, and to discuss any special requirements. The meeting will be held at least forty-five (45) days prior to the scheduled casting of any member. The Contract Administrator shall schedule the meeting and invite representatives of the Contractor, Fabricator, and the Bureaus of Bridge Design and Materials and Research, along with any other party the Engineer deems appropriate.

3.2.3 All precast components covered under Section 529 shall be produced by the same fabricator.

3.3 Qualification of the Fabricator. All shops manufacturing components for the Department shall satisfy the following minimum requirements:

3.3.1 Certification. The precast concrete manufacturing plant shall be certified by the Prestressed Concrete Institute Plant Certification Program in product Group B, certification category B1 or higher or National Precast Concrete Association (NPCA) Plant Certification. The Fabricator shall submit proof of certification prior to the start of production. Self-performing Contractors shall meet the qualifications of Section 102 of NHDOT Standard Specifications.

3.3.2 Engineering / Drafting. The Fabricator shall have trained, knowledgeable, and experienced drafting personnel available who can produce and check legible, complete, and accurate shop detail drawings.

3.3.3 Specifications. The Fabricator shall have available in the shop all pertinent specifications governing the work.

3.3.4 Quality Control. The Fabricator shall perform quality control functions to ensure that the work is in accordance with contract documents and specifications.

3.4 Shop Drawings. The Contractor shall prepare and submit detailed shop drawings for approval or acceptance in accordance with 105.02. Deviation from the approved or accepted shop drawings will not be permitted without written order or approval of the Engineer.

3.4.1 The shop drawings shall be properly titled as to project location and bridge components similar to the title box on the contract plans. The shop drawings shall include, but not necessarily be limited to, the following:

a. Fully and accurately dimensioned views showing the geometry of the components including all projections, recesses, notches, openings, blockouts, connections, joints and keyways, etc. The components shall be dimensioned by working points to allow for coordination between precast and field layout components.

b. Reinforcing bar lists, details, and bending schedules showing the size, spacing, location, and clear cover of reinforcing steel, including any reinforcing steel required, but not shown on the contract plans. Reinforcing steel or ties provided under lifting devices shall be shown in detail.

c. Details and locations of all items to be cast in the components (whether detailed on the contract drawings or provided for the Contractor's convenience) such as inserts, lifting devices, temporary supports, CMP voids, grout ports, etc.

d. Details and locations of all leveling bolts used to make fast and accurate adjustments to the vertical position of the components.

e. Size and spacing of ports for placing grout for bedding of components based on component size and flowable grout characteristics. The ports shall be arranged so that the grouting operation may progress in a manner that avoids air pockets.

f. All necessary modifications to components to resist handling stresses resulting from the proposed method of handling and erection.

g. Quantities for each component (concrete volume, reinforcing steel weight and total weight).

h. Description of method of curing, handling, storing, and transporting the components.

i. Details and locations of all blocking used to support components during storage, and transportation.

j. Description of protective measures taken to prevent damage to the concrete by freezing.

k. Site plan detailing the inlet and outlet of the culvert. This plan shall be used to confirm the limits (elevations and lengths) of the proposed headwalls, wingwalls, cutoff walls, etc. are adequate for use at the site.

3.5 Shop Inspection. A Department representative will inspect the fabrication for quality assurance. This inspection will include the examination of materials, work procedures, and the final fabricated components.

3.5.1 Fabrication shall only be done in the presence of an authorized inspector representing the Department. The Department's authorized quality assurance inspector is herein referred to as the "Inspector".

3.5.2 Notice. A minimum of fourteen (14) days prior to the scheduled start of casting of any component, the Fabricator shall contact the Department's Bureau of Materials and Research to provide notice of the scheduled start date. The Bureau of Materials and Research will assign an Inspector to the scheduled work to provide quality assurance testing. The Inspector will coordinate directly with the Fabricator to determine the casting schedule.

3.5.2.1 In addition to the requirements of 3.5.2, the Fabricator shall contact the Department's Bureau of Materials and Research at least two (2) days before the actual work begins to allow scheduling of independent quality assurance testing.

3.5.3 Cooperation. The Fabricator shall fully cooperate with the Inspector in the inspection of the work in progress.

3.5.3.1 The Fabricator shall allow the Inspector unrestricted access to the necessary areas of the shop during work hours. Work done while the Inspector has been refused access will be automatically rejected.

3.5.4 Authority. The Inspector will have the authority to reject any material or workmanship that does not meet the requirements of the contract documents.

3.5.4.1 Inspection at the shop is intended as a means of facilitating the work and avoiding errors. It does not constitute final approval and will not relieve the Contractor from any responsibility in regard to imperfect material or workmanship and the necessity for replacing same.

3.5.5 Acceptance. The Inspector will affix an acceptance stamp to components ready for shipment. This mark will be made by paint or ink stamp in a location that will not be visible when the structure is completed.

3.5.5.1 The Fabricator shall present the Inspector with a copy of the shipping invoice to be stamped for verification of inspection and acceptance prior to shipment.

3.5.5.2 The Inspector's acceptance implies that, in the opinion of the Inspector the components were fabricated from accepted materials and processes and loaded for shipment in accordance with the contract requirements. The Inspector's stamp of acceptance for shipment does not imply that the components will not be rejected by the Engineer if subsequently found to be defective.

3.6 Fabrication of Components.

3.6.1 Reinforcing. Reinforcing shall be furnished, handled, and installed in accordance with Section 544.

3.6.1.1 All reinforcing shall be free of dirt, rust, oil, grease, and other deleterious substances.

3.6.1.2 Clearance from the forms shall be maintained by supports, spacers, or hangers in accordance with 544.3.4, and shall be of approved shape and dimension.

3.6.1.3 Matching templates shall be used for accurate placement of grouted splice couplers to ensure fit-up between joined components.

3.6.1.4 Minimum clear cover on reinforcement for precast members shall be 1.5 inches, unless noted otherwise on the plans. Clear cover for the top mat reinforcement in the top slab of box culverts shall be 2.5 inches.

3.6.2 Inserts and Hardware. All items cast in the concrete shall be accurately placed in the position shown on the approved/accepted shop drawings and firmly held during the placing and setting of the concrete.

3.6.2.1 Recesses shall be provided around lifting devices to facilitate removal and grouting after erection.

3.6.2.2 Components shall not be drilled into for attachment purposes.

3.6.2.3 All inserts and hardware shall be galvanized unless otherwise noted on the plans.

3.6.3 Forms. Forms shall conform to 520.3.2 and be subject to the approval of the Engineer.

3.6.3.1 Forms shall be made and maintained true to the shapes and dimensions shown on the approved/accepted shop drawings. The surface of forms shall be smooth, and if necessary, joints shall be treated so that a minimum of joint marks are evident in the finished component.

3.6.3.2 Forms shall be cleaned before each use.

3.6.4 Concrete Placement and Curing. Concrete shall be controlled, mixed, and handled in accordance with Section 520, unless otherwise specified herein.

3.6.4.1 Concrete shall not be deposited in the forms until the Inspector has approved the placement of the reinforcing. Concrete shall be deposited only in the presence of the Inspector, and in accordance with 520.3.5.

3.6.4.2 Consolidation of concrete shall conform to 520.3.5.4, or as ordered.

3.6.4.3 For Self-performing Contractors, continuously wet cure components utilizing water retaining material for a minimum of seven (7) days in accordance with 520.3.10. Water retaining material shall be burlap conforming to 520.2.6.1, or cotton mats conforming to 520.2.6.4. For Precast Plant Fabricators, the shop drawings shall include the method of initial and final curing, along with the proposed curing procedure as noted in Section 3.4.1 h.

3.6.4.4 When the average daily temperature falls below 35°F for more than one day, protective measures shall be taken to prevent damage to the concrete by freezing. Components shall be protected from freezing temperatures (32°F) for five days or until attaining the minimum 28-day compressive strength indicated on the plans, whichever comes first.

3.6.5 Removing Forms and Finish of Components. Forms shall not be removed without approval. Proper care and precautions shall be exercised in removing forms so that no damage results to finished surfaces.

3.6.5.1 All components shall receive a Class 1, Ordinary Finish in accordance with 520.3.12, unless otherwise noted on the plans.

3.6.5.2 All shear key and construction joint surfaces along the edges of abutting components shall be abrasive blast-cleaned prior to shipping.

3.7 Dimensional Tolerances. The PCI Northeast Region Guidelines for Accelerated Bridge Construction Using Precast / Prestressed Concrete Elements Including Guideline Details, Report Number PCINE-14-ABC, available online at PCI Northeast website: www.pci.org/PCINE, shall be used in conjunction with this specification for determining appropriate dimensional fabrication tolerances for precast components.

3.8 Component Damage / Cracking and Repair. The PCI Northeast Guidelines for Resolution of Non-Conformances in Precast Concrete Bridge Elements, Report Number PCINE-18-RNPCBE, available online at PCI Northeast website: www.pci.org/PCINE, shall be used in conjunction with this specification to help identify damage and appropriate repair procedures, and determine the potential cause and remedial action.

3.8.1 The Engineer may approve repairs to occasional, non-recurring, and isolated defects. The Contractor shall submit procedures and materials for repairs to the Engineer for approval.

3.8.2 Rejection. Any of the following are considered defects that may constitute cause for rejection of a precast concrete component:

a. Fabrication not in conformance with the contract documents or plans.

b. Concrete breakage, full-depth cracking, extensive partial-depth cracking, or other damage determined to be significant by the Engineer.

c. Defects indicating concrete proportioning, placement and / or consolidation not in conformance with the contract documents or plans.

d. Components not in conformity with the dimensional fabrication tolerances given herein.

e. Damaged shear key or construction joint surfaces where such damage would prevent making a satisfactory joint as determined by the Engineer.

f. Discontinuity or crack in the concrete that would permit moisture to reach the reinforcing steel.

g. Significant component damage sustained during handling, transportation, or erection as determined by the Engineer.

h. Rock pockets or honeycombs over 6 square inches in area and over 1 inch deep.

i. Any section having more than one honeycomb area per side or surface even though the area is of a smaller scope than defined above.

j. Extensive fine hair cracks or checks.

k. Box culvert sections produced by racked or otherwise unsquared forms.

3.9 Concrete Strength Testing.

3.9.1 Each component cast shall have a minimum of two cylinders made available for testing by the Department at 28 days for quality assurance. Acceptance of the concrete for strength will be based on successfully attaining the minimum 28-day compressive strength indicated on the plans for the two cylinders.

3.9.2 The concrete test cylinders, prepared from fresh concrete at the time of placing, shall be cured under the same temperature and moisture conditions as the precast components.

3.10 Handling, Storing, and Shipping.

3.10.1 Components shall be lifted at the designated points by approved lifting devices embedded in the concrete and proper hoisting procedures.

3.10.2 Storage areas shall be smooth, well compacted, and sufficiently rigid to prevent damage due to differential settlement. Stacks of components may be supported by means of continuous blocking located as indicated on the approved/accepted shop drawings. Intermediate blocking between components shall be located directly over the blocking below.

3.10.3 Components may be loaded on a trailer as described above. Shock-absorbing cushioning material shall be used at all bearing points during transportation. Tie-down straps shall be located at the lines of blocking only.

3.10.4 Components shall not be subject to damaging torsional or impact stresses. Damaged components shall be repaired or replaced as directed by the Engineer, at no cost to the Department.

3.10.5 Shipping. Components shall not be transported from the manufacturing plant until they have reached a minimum age of seven (7) days, and the concrete has attained the minimum 28-day compressive strength indicated on the plans, as verified by test cylinders in accordance with 3.9. Components ready for shipment shall have received an acceptance stamp in accordance with 3.5.5.

3.11 Erection of Precast Concrete Components.

3.11.1 Delivery and Field Inspection. Material, workmanship and condition after shipment will be inspected after delivery to the construction site, with this and any previous inspections constituting only partial acceptance.

3.11.2 All work of erecting, supporting, adjusting, grouting, and concreting precast components shall be in accordance with the accepted assembly plan described in 3.2.1.

3.11.3 After components are in their final erected positions, they shall be subject to the inspection and approval of the Engineer. Furnish necessary facilities, including scaffolding and supports, to provide access to the structure to allow for inspection of workmanship.

3.11.4 Sealing of Lifting Holes, Grout Ports, and Leveling Bolts. After components are in their final erected positions, all lifting device recesses, grout ports, leveling bolt recesses, and other recesses used for erection purposes shall be filled with an approved high-strength non-shrink grout.

3.12 Erection of Precast Box Culvert (Highway) or (Bridge):

3.12.1 Box culvert sections shall be installed as shown on the accepted shop drawings. The box culvert shall be set on a 1-foot minimum thickness of structural fill or as detailed on the plans.

3.12.2 Grout the exterior of all joints to provide a smooth surface to apply barrier membrane with protection board.

3.12.3 Culverts with fill of 5 feet or more over the top slab: a 2-foot strip of barrier membrane with protection board shall be applied to all joints in the top slab and extend 1-foot down culvert wall.

3.12.4 Culverts with fill less than 5 feet over the top slab: the entire top slab shall be covered with barrier membrane with protection board and extend 1-foot down culvert wall.

3.12.5 Excavation shall conform to Section 206.3.

3.12.6 The Contractor shall provide temporary diversion of water to construct the culvert.

3.12.7 If the plan calls for extending an existing box culvert, the Contractor shall connect the new precast box culvert to the existing box culvert using a cast-in-place collar as shown on the plans or as ordered by the Engineer.

3.12.8 End sections, headers, and other appurtenances shall be furnished and installed as precast units or constructed as cast-in-place units in accordance with the plans and specifications.

3.12.9 Coat all exposed concrete surfaces of headers and end sections (except interior of box culvert or areas covered by barrier membrane) to one foot below fill lines with silane-siloxane water repellent.

3.12.10 Box culvert sections shall be backfilled with a granular backfill material a minimum of 3 feet from the outside face of the culvert or distance detailed on the plans.

3.13 Water Repellent. Water repellent (Silane-Siloxane) treatment shall be applied to all precast concrete surfaces in accordance with Section 534.

3.14 Joints. Profile rubber gaskets shall be installed at the field joints to create a soil-tight seal unless otherwise noted on the plans or approved shop plans. The profile rubber gaskets shall be the requirements of ASTM C1677. Install a 2-foot strip of barrier membrane with protection board to all joints as noted in 3.12.3.

Method of Measurement

4.1 Precast concrete substructure (abutment), precast concrete substructure (pier), precast concrete approach slab, precast concrete sleeper slab, precast full-depth deck panels, and precast moment slab will be measured by the cubic yard of concrete placed as shown on the plans or ordered.

4.2 Precast concrete box culverts, arches, frames, headwalls, stairs, and work pads will be measured by the unit as shown on the plans or ordered. For precast concrete box culverts, a unit will consist of precast box culvert sections, headwalls, cutoff walls, wingwalls, grade control walls and footings.

4.3 Precast concrete bridge rail will be measured by the linear foot as shown on the plans or ordered.

Basis of Payment

5.1 The accepted quantity of precast concrete substructure (abutment), precast concrete substructure (pier), precast concrete approach slab, precast concrete sleeper slab, precast full-depth deck panels, and precast moment slab will be paid for at the Contract unit price per cubic yard complete in place.

5.2 The accepted quantity of precast concrete box culverts (See Section 5.15 for subsidiary items specific to Highway box culverts), arches, frames, headwalls, stairs, and work pads will be paid for at the Contract unit price per unit complete in place.

5.3 The accepted quantity of precast concrete bridge rail will be paid for at the Contract unit price per linear foot complete in place.

5.4 Reinforcing steel, including splice couplers, will be subsidiary.

5.5 Corrugated metal pipes for forming voids in components will be subsidiary.

5.6 Modifications to components to resist handling stresses resulting from the proposed method of handling and erection, if necessary, will be subsidiary.

5.7 Grout for component connections, keys, and joints will be subsidiary.

5.8 Concrete for filling footing keys, approach slab joints, and cmp voids will be paid separately.

5.9 Flowable fill, for bedding of components will be paid separately.

5.10 The assembly of all precast components will be subsidiary.

5.11 Temporary diversion of water, and dewatering including trenching or pumping directly from trench or sumps shall be paid for under 503. If no separate item is in the contract for this work, it will be considered incidental and shall be subsidiary to the precast installation.

5.12 Water repellent (Silane-Siloxane) applied to all precast concrete surfaces shall be subsidiary.

5.13 Form liner shall be subsidiary.

5.14 Modifications to components to resist handling stresses resulting from the proposed method of handling and erection, if necessary, shall be subsidiary.

5.15 Precast Concrete Box Culvert (Highway):

5.15.1 Excavation shall be subsidiary.

5.15.2 Waterproofing, barrier membrane and protection board shall be subsidiary.

5.15.3 Granular backfill and structural fill shall be subsidiary.

5.15.4 All rock structure excavation, and excavation of unsuitable material required below the structural fill will be paid as provided in 206.

Pay items and unit:

529.0010_	Precast Concrete Box Culvert (Highway)	Unit
529.0020_	Precast Concrete Box Culvert (Bridge)	Unit
529.0030_	Precast Concrete Arch	Unit
529.0040_	Precast Concrete Frame	Unit
529.1	Precast Concrete Substructure, Abutment	CY
529.1070_	Precast Concrete Substructure, Abutment (Post-Tension)	CY
529.2	Precast Concrete Substructure, Pier	CY

529.21	Precast Concrete Substructure, Pier (Stay-In-Place Form)	CY
529.3	Precast Concrete Approach Slab	CY
529.31	Precast Concrete Approach Sleeper Slab	CY
529.316	Precast Concrete Approach Sleeper Slab Support	CY
529.4	Precast Concrete Full-Depth Deck Panels	CY
529.51	Precast Concrete Bridge Rail	LF
529.511	Precast Concrete Bridge Rail (Custom Stain)	LF
529.901	Precast Concrete Stairs	Unit
529.902	Precast Concrete Work Pad	Unit
529.903	Precast Concrete Moment Slab	CY

September 27, 2024

S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 585 – STONE FILL

Item 585.14 – Weir Boulders

Add to Description:

1.2 This work shall consist of furnishing and placing two weir boulders at the following locations on this project:

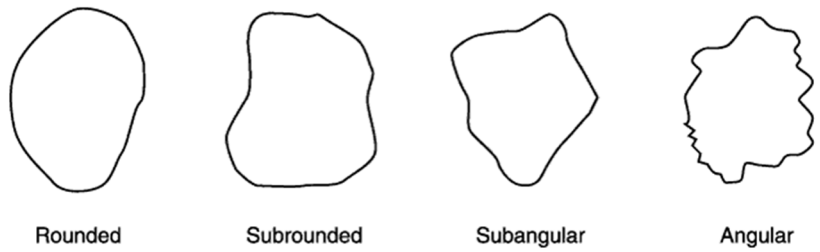
- Downstream of the proposed culvert at STA 104+02 under NH Route 123A. Place one bolder just upstream of each of the two trees with stumps to remain in-place.

Add to Materials:

2.1.6.1 Weir Boulders shall be composed of individual stones with volumes between 10ft^3 and 15 ft^3.

2.1.6.2 Particle shape shall generally conform to R and Sub-R.

R = Rounded, Sub-R = Subrounded, Sub-A = Subangular, A = Angular



Add to Construction Requirements:

3.5 Weir Boulders shall be placed in locations and arranged as shown on the contract plans. The intent is to create interlocking and sturdy structures that will retain stream flow at the heights specified on the contract plans.

Add to Method of Measurement:

4.2 Weir Boulders will be measured by the cubic yard.

Add to Basis of Payment:

5.1.1 The accepted quantity of Weir Boulders will be paid for at the Contract unit price per cubic yard complete in place.

Add to Pay Items and Units:

585.14	Weir Boulders	Cubic Yard

ACWORTH
43566C

September 27, 2024

S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 585 – STONE FILL

Item 585.3401 – Simulated Streambed Material

Add to Description:

1.2 This work shall consist of furnishing and placing Simulated Streambed Material at the following location on this project:

STA 104+08.0, RT 43.2' to 103+98.9, LT 24.3 (Item 585.3401)

1.2.1 The Simulated Streambed Material shall be placed in locations as shown on the contract plans. The intent is to protect and replicate the natural streambed environments of the reference reach listed above. The percentage of specific stream bed material was determined in the field utilizing the Wolman Pebble Count methodology. The gradation of substrate particle sizes are based on the Wentworth scale as referenced in the Guidelines for Naturalized River Channel Design and Bank Stabilization.

Add to 2.1:

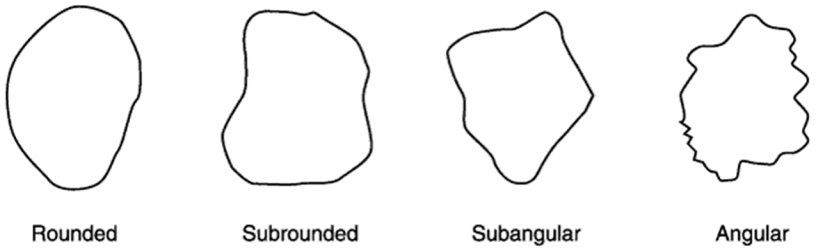
2.1.6 Simulated Streambed Material shall consist of the following gradation:

	% by Weight	Sieve Sizes (in)		
Item 585	.3401			
Sand	15%	0.003 to 0.08		(smaller than head of a match)
Gravel	20%	0.08 to 2.5		(between head of match and tennis ball)
Cobble	40%	2.5 to 10.00		(between tennis ball and volleyball)
Boulder	25%	10.0 to >		(Larger than volleyball)
Depth	12"	n/a		
Shape	Sub-R	n/a		

2.1.6.1 Streambed Material depth shall be as shown in the table except as noted in the contract plans.

2.1.6.2 Particle shape shall general conformity to:

R = Rounded, Sub-R = Subrounded, Sub-A = Subangular, A = Angular



Add to 3.1:

3.1.3 In accordance with the *Guidelines for Naturalized River Channel Design and Bank Stabilization* (https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-01/r-wd-06-37.pdf), specifically 2.2.1.2 Semi-Natural Form Design, the Streambed Material shall be placed directly on the existing channel floor as shown in the contract plans. In cases where scour protection or streambed anchorage material is required the scour/anchorage material shall be placed first. Then the Streambed Material shall be worked into the top 1'-0" filling voids, followed by the depth of Streambed Material specified.

Add to Method of Measurement:

4.2 Simulated Streambed Material will be measured by the cubic yard.

Add to 5.1:

5.1.1 The accepted quantity of Simulated Streambed Material will be paid for at the Contract unit price per cubic yard complete in place.

Add to Pay Items and Units:

585.3401	Simulated Streambed Material	Cubic Yard

09/18/14
SSD: 11/26/03

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October 24, 2024

S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 603 -- CULVERTS AND STORM DRAINS

Item 603.990_ _ - _ _ in. Temporary Drainage Pipe
Item 603.389_ _ - Temporary End Section for _ _ in. Pipe

Add to Materials:

2.8.4 Temporary end sections shall meet the requirements of 2.8 except used end sections may be allowed.

2.8.4.1 The thickness of the metal or class of concrete end section shall match the pipe furnished that the end section is connected to.

Add to Materials:

2.13 Temporary drainage pipe shall meet the requirements of 2.1, 2.2 or 2.3 except used pipe approved by the Engineer may be allowed.

2.13.1 The Contractor shall determine the D-load or thickness of steel or aluminum needed.

Add to Construction Requirements:

3.11 Temporary pipe and/or temporary end sections shall be removed from the project and remain property of the Contractor upon completion of the project, or when no longer needed.

Add to 5.1:

5.1.4 Removal of temporary pipe and/or temporary end sections will be subsidiary.

Add to pay items and unit:

603.990_ _	_ _ _ in. Temporary Drainage Pipe	Linear Foot
603.389_ _	Temporary End Section for _ _ in. Pipe	Each

SUPPLEMENTAL SPECIFICATION

AMENDMENT TO SECTION 603 -- CULVERTS AND STORM DRAINS

The purpose of this Supplemental Specification is to allow polypropylene pipe, clarify UV light requirements as well as Contractor's Option requirements.

Amend 2.3 to read:

2.3 Plastic Pipe.

2.3.1 Manufacturers of Polyvinyl Chloride (PVC) pipe, Polyethylene (PE) pipe and Polypropylene (PP) pipe must participate in and maintain compliance with the AASHTO National Transportation Product Evaluation Program (NTPEP) that audits producers of plastic pipe.

2.3.2 Polyvinyl chloride profile wall pipe shall conform to the requirements of AASHTO M 304. PVC pipe and associated fittings shall not be used in applications where it will be exposed to long term ultraviolet light .

2.3.3 Polyethylene pipe shall conform to the requirements of AASHTO M 252 or M 294, Type C, Type S, or Type D as specified on the plans. PE pipe and associated fittings shall be protected from ultraviolet light degradation by the inclusion of carbon black as specified in AASHTO M 294.

2.3.4 Polypropylene pipe shall conform to the requirements of AASHTO M 330, Type C, Type S, or Type D as specified on the plans. PP pipe and associated fittings shall be protected from ultraviolet light degradation by the inclusion of carbon black or ultraviolet light stabilizers as specified in AASHTO M 330.

2.3.5 Only soil tight pipefittings supplied or recommended by the manufacturer shall be used, unless otherwise specified.

2.3.6 When watertight joints are specified, watertight pipefittings supplied or recommended by the manufacturer shall be used and shall conform to ASTM D3212.

2.3.7 When the item description includes plastic pipe or plastic pipe material with the plastic material type not specified, either polyvinyl chloride, polyethylene, or polypropylene pipe shall be furnished meeting the requirements of 2.3.

Amend 2.6 to read:

2.6 Pipe for Slope Drainage.

2.6.1 Pipe for slope drain shall conform to the requirements of 2.3 and shall be limited to Type C.

2.6.2 The pipe coupler for plastic pipe shall consist of a plastic coupler and a minimum of 2 stainless steel or 3 plastic bands installed on the exterior corrugations. Slope pipe coupling bands shall engage a minimum of two full corrugations of each pipe section being joined, and shall be reinforced to meet the criteria for the "Downdrain Joint" category of Section 26 of the AASHTO LRFD Bridge Construction Specifications.

Amend 2.7 to read:

2.7 Pipe for Drives and Minor Approaches.

2.7.1 It shall be the Contractor's option to furnish reinforced concrete pipe or corrugated aluminized steel type 2 pipe, unless otherwise specified, for pipe for drives and minor approaches. Reinforced concrete pipe shall meet the requirements of 2.1. Corrugated aluminized steel pipe shall meet the requirements of 2.2. The strength or thickness shall meet the requirements of Table 3. Where cover is 2' or greater, and where load requirements can be met, polyethylene or polypropylene pipe, meeting the requirements of 2.3, may be used.

Amend Table 603-3 to read:

Table 603-3 - Required Strength of Culvert Pipes

Material	Diameter	Strength	Thickness, in. "Specified"	Pipe Stiffness
		Concrete	Steel	Plastic
Reinforced Concrete	All	2000 D		
Corrugated Metal	12"-18"		0.064	
	24"-30"		0.079	
	36"		0.109	
Plastic				Reference
(Polyethylene)	All			AASHTO M294
(Polypropylene)	All			AASHTO M 330

Add to Materials:

2.13 Contractor's Option. When the pipe material is not specified in the item description, pipe conforming to either 2.1 or 2.3 shall be supplied. Once selected, pipe of similar type shall be used for the entire pipe run.

Amend .4 under Pay Items to read:

.4 Pipe for Slope Drainage (Plastic only) Linear Foot

B Material
0 Unspecified
1 Blank
2 Blank
3 Blank
4 Plastic

C Type
0 Blank
1 Blank
2 Polyethylene (Type C)
3 Polypropylene (Type C)

Amend .8 under Pay Items to read:

.8 Plastic Pipe — Linear Foot

B Materials
0 Unspecified
1 PVC
2 Polyethylene
3 Polypropylene

C Type
1 Corrugated Interior (Type C)
2 Smooth Interior, Double Wall (Type S)
3 Smooth Interior, Triple Wall (Type D)
4 Blank
5 Corrugated Interior (Type C) (Watertight)
6 Smooth Interior, Double Wall (Type S) (Watertight)
7 Smooth Interior, Triple Wall (Type D) (Watertight)

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S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 619 – MAINTENANCE OF TRAFFIC

Orange Construction Signs

The purpose of this special provision is to for all orange construction signs (operational and permanent construction signs) to be fluorescent orange sheeting.

Replace 2.1.3 as follows:

2.1.3 Retroreflective sheeting for traffic control devices, including permanent and operational construction signing, shall conform to ASTM D 4956, of the Type specified below, in accordance with Section 718.

2.1.3.1 Category I Traffic Control devices (plastic tubular markers, flexible delineators, and plastic drums, etc.) shall have Type IV or higher sheeting.

2.1.3.2 All orange construction signs on rigid substrate shall have fluorescent orange color sheeting in accordance with Section 718. Other construction signs (non-orange in color) shall have Type IV or higher sheeting.

2.1.3.3 Roll-up signs and traffic cones shall have Type VI, S2 reboundable sheeting. Orange roll-up signs shall have fluorescent orange sheeting.

2.1.3.4 Sign text shall consist of the letters, digits and symbols either applied by stick on or silkscreen, to conform with the dimensions and designs indicated in the Contract, NHDOT Construction Sign Standards, MUTCD or FHWA Standard Highway Signs. The materials and methods shall be in accordance with standard commercial processes.

2.1.3.5 Sign blanks shall be prepared in accordance with current practice as recommended by the sheeting manufacturer.

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S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 619 – MAINTENANCE OF TRAFFIC

Protection of Structures in Traveled Way

The purpose of this special provision is to safeguard raised utilities and to protect motorists during paving operations.

Add to 3.1:

3.1.13 Any structure within the traveled way, which protrudes greater than 1'' and the next lift of pavement will not be placed within two days, shall be equipped with either a reusable safety ramp or an asphalt fillet to protect the motorists. This treatment shall remain in place until the final paving is completed.

Add to Method of Measurement:

4.4 Treatment for structures required in 3.1.13 will not be measured for payment.

Add to 5.1:

5.1.10 Treatment for structures required in 3.1.13 will be subsidiary to Item 619.1 - Maintenance of Traffic.

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July 22, 2024

S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 645 -- EROSION CONTROL

Item 645.512 - Compost Sock for Perimeter Berm

This special provision provides for compost sock for perimeter berm and neither amends nor modifies the provision of this section except as noted below. The intent of this item is to work in conjunction with or in-lieu of silt fence where entrenched silt fence is not feasible.

Description

1.1 The Contractor shall furnish and install degradable compost socks for perimeter berm at locations shown on the SWPPP/Erosion Control Plans or as ordered. Removal, if necessary, will be subsidiary to the item, and will be conducted as directed by the Engineer. The compost sock for perimeter berm shall be used as such and is not intended for areas which may receive concentrated flows such as channels or restricted outlets.

Materials

2.1 Compost Sock for Perimeter Berm. Sock must be:

- A mesh tube, oval to round in cross section, 12 inches in diameter. Sock must have a minimum durability of one year after installation.
- Composed of a knitted biodegradable or photodegradable material with 1/8 to 3/8 inch openings. Fabric must be clean; evenly woven; free of encrusted concrete or other contaminated materials; and free from cuts, tears, broken or missing yarns and thin, open, or weak places.

2.2 Compost Media.

- Compost may be derived from green material consisting of chipped, shredded, or ground vegetation; or clean recycled wood products.
- Compost must not be derived from mixed municipal solid waste and be reasonably free of visible contaminates. Compost must not contain paint, petroleum products, pesticides or any other chemical residues harmful to animal life or plant growth. Compost must not possess objectionable odors.

2.3 Chemical, Physical and Biological Parameters.

- Compost products specified for use in this application must meet the criteria specified in Table 1, below.
- Only compost products that meet all applicable state and federal regulations pertaining to its production and distribution may be used in this application. Approved compost products must meet related state and federal chemical contaminant (e.g., heavy metals, pesticides, etc.) and pathogen limits pertaining to the feedstocks (source materials) in which it is derived.

Table 1 – Compost Media Parameters

Parameters	Reported as (units of measure)	Characteristics
pH	pH units	5.0 - 8.5
Soluble Salt Concentration (electrical conductivity)	dS/m (mmhos/cm)	Maximum 5
Moisture Content	%, wet weight basis	30 – 60
Organic Matter Content	%, dry weight basis	25 – 65
Particle Size	% passing a selected mesh size, dry weight basis	3" (75mm), 100% passing 1" (25mm), 90% to 100% passing 3/4" (19mm), 70% to 100% passing 1/4" (6.4mm), 30% to 75% passing Maximum: particle size length of 6" (152mm) (no more than 60% passing 1/4" (6.4mm) in high rainfall/flow rate situations)
Stability Carbon Dioxide Evolution Rate	Mg CO2-C per g OM per day	< 8
Physical Contaminants (man-made inerts)	%, dry weight basis	< 1

Note: The composition of this media is similar to the vegetated filter berm media from AASHTO R 51. Very coarse (woody) composts that contain less than 30% of fine particles (1mm in size) shall be avoided, as optimum reductions in total suspended solids (TSS) is desired and berms may be seeded.

Construction Requirements

3.1 Site Preparation. To ensure optimum performance, cut down or remove heavy vegetation, and level uneven surfaces to ensure that the filter sock uniformly contacts the ground surface.

3.2 Installation.

- Prior to installation, clear the area of obstructions including rocks, clods, and debris greater than one inch
- Fill socks uniformly with compost to the desired length such that the logs do not deform. Secure ends.
- When more than one compost sock is required to achieve desired length, join socks longitudinally with a 1 foot 6 inch overlap.
- Compost sock may be installed using installation method Type 1, Type 2, or a combination:
    - Installation method Type 1:
        - Place directly on the ground with good contact with the finish grade.
        - Secure with wood stakes every 4 feet along the length of the compost sock.
        - Secure the ends of the compost sock by placing a stake 6 inches from the end of the compost sock.
        - Drive the stakes into the soil so that the top of the stake is less than 2 inches above the top of the compost sock.

- Installation method Type 2:
  - Place directly on the ground with good contact with the finish grade.
  - Secure with rope and notched wood stakes.
  - Drive stakes into the soil until the notch is even with the top of the compost sock.
  - Lace the rope between stakes and over the compost sock. Knot the rope at each stake.
  - Tighten the compost sock to the surface of the slope by driving the stakes further into the soil.
- Install compost sock approximately parallel to the slope contour or as otherwise specified in the SWPPP or ordered by the Engineer.

3.3 Maintenance.

- Inspect compost socks regularly, and after each rainfall event, to ensure that they are intact and functioning correctly. Remove sediment that builds up behind the sock before it interferes with the functionality of the sock. Deposit the removed sediment within the project limits so that the sediment is not subject to erosion by wind or by water.
- Repair or replace split, torn, or unraveling socks. Replace broken or split stakes. Sagging or slumping compost socks must be repaired with additional stakes or replaced. Correct locations where rills and other evidence of concentrated runoff have occurred beneath the socks. Compost socks must be repaired or replaced within 24 hours of identifying the deficiency.
- Remove sock mesh tubes when directed by the Engineer. Cut mesh and empty sock contents in place and rake to distribute evenly.

Method of Measurement

4.1 Compost sock for perimeter berm will be paid for by the linear foot (linear meter) to the nearest 1 foot (one-half meter). Measurement will be along the top of each continuous run complete in place.

Basis of Payment

5.1 The accepted quantity of compost sock for perimeter berm will be paid for at the contract unit price per linear foot (linear meter) installed. No additional payment will be made for overlaps, splices or the anchoring of the system.

Pay items and units:

645.512	Compost Sock for Perimeter Berm	Linear Foot

S P E C I A L P R O V I S I O N

AMENDMENT TO SECTION 645 – EROSION CONTROL

Item 645.71 – Water Quality Monitoring, Inspection and Reporting

This special provision provides for the use of consultants to assist the Department in water quality sampling, monitoring, inspection, and reporting needs associated with the use of various construction related permits, requirements, and regulations.

Add to 1.2:

1.2.4 This work shall consist of Water Quality Monitoring, Inspection and Reporting, which includes site specific monitoring, inspection, and reporting requirements for the following plans (collectively referred to herein as the "Plans"):

- Stormwater Pollution Prevention Plan (SWPPP)(Item 645.7)
- Stream Diversion Plan (Item 645.73)
- Erosion Control Plan (Item 645.74)
- Cold Weather Site Stabilization Plan (Item 645.75)
- Flocculent Assisted Sedimentation Plan (Item 645.853)
- Construction Related Turbidity Mixing Zone Plan (Department-supplied plan).

1.2.4.1 Plans are project specific, not all Plans are necessary for every project. See Proposal for the Plans associated with this Proposal.

1.2.4.2 Monitoring, inspection, and reporting criteria for each Plan(s) will be found in the specific Plan as noted in 1.2.4.

Replace 3.2.1.2 with the following:

3.2.1.2 The Monitor of the Plans shall be a "Qualified Person," as defined on the most recent Construction General Permit (CGP) (2022, page A-9) issued by the Environmental Protection Agency, with knowledge of methods of construction and demonstrated field knowledge of erosion control measures, their design, effectiveness, and maintenance requirements. More specifically, a "Qualified Person" must, at a minimum, hold a current valid construction inspection certification or license from any program listed below. The "Qualified Person" hereinafter will be called the "Monitor".

NHDOT Acceptable Training Provider and Specific Training Certification Programs

Sanctioning Body	Program
EPA	Construction Inspection Training Course
Alaska Certified Erosion & Sediment Control Lead	Alaska Certified Erosion & Sediment Control Lead (AK-CESCL) Training Program
CISEC Inc.	Certified Inspector of Sediment and Erosion Control (CISEC)
Envirocert	Certified Erosion, Sediment, & Storm Water Inspector (CESSWI)
Florida Department of Environmental Protection	Florida Stormwater, Erosion, and Sedimentation Control Inspector (FSESCI) Program
Kansas State University Polytechnic	Construction Stormwater Training
National Stormwater Center	Certified Stormwater Inspector Construction (CSI-Construction)
StormwaterONE	Qualified Compliance Inspector of Stormwater (QCIS)
StormwaterONE	Qualified Preparer of Stormwater Pollution Prevention Plans (QPSWPPP) (also includes QCIS)
University of Minnesota	Erosion and Stormwater Management Certification Program Construction Site Management Certification and Recertification

3.2.1.2.1 Other non-EPA courses may cover the minimum topics required by the CGP provided they cover the topics listed in Part 6.3.b of the CGP (2022).

3.2.1.2.2 If certification is from a course is not included above, submit documentation for Department approval.

3.2.1.2.3 The Contractor shall submit the name and qualifications of the person or firm proposed to monitor the plan(s) to the Engineer for documentation.

3.2.1.2.4 Monitoring, inspection, and reporting for the Plans shall be as described in each Plan, as well as the timely submission of all required reporting documents to the Department.

3.2.1.2.5 The Monitor shall be available for on-site consultations with the Engineer within 24 hours of request.

Replace 4.7 with the following:

4.7 Water Quality Monitoring, Inspection and Reporting for the Plans will be measured to the nearest 1/2 of an hour, for the actual number of authorized hours spent monitoring and inspecting the construction site(s) and off-site areas (as described in 3.2.2.3 of Section 645), and on-site summary monitoring report preparation and distribution. The minimum field time measurement will be 2.0 hours.

4.7.1 Travel time, other time not spent at the construction site(s) (or off-site areas as described above), and time not authorized will not be measured, except that, with prior authorization, up to 1 hour (per Report) will be measured for off-site consultation, information review and final recommendation, preparation, and distribution of the accepted final Monitoring Report(s).

Replace 5.7 with the following:

5.7 The accepted quantities of Water Quality Monitoring Inspection and Reporting for the various Plans will be paid for at the contract unit price per hour.

5.7.1 Travel time and other time not spent at the construction site(s) (or off-site areas as described above) and support services (i.e., travel expenses, clerical staff, copying, miscellaneous expenses, and overhead), except as stated in 4.1.1, will be subsidiary to this Item.

Pay item and unit:

645.71	Water Quality Monitoring, Inspection and Reporting	Hour

SUPPLEMENTAL SPECIFICATION

AMENDMENT TO SECTION 645 – EROSION CONTROL

The purpose of this Supplemental Specification is to:

- *Update erosion control requirements.*
- *Add Erosion Control Plans to list of items to furnish for SWPPP (1.2.1, 11/07/18)*
- *Update construction dates for allowable area of exposed, unstabilized soil (3.1.5, 11/07/18)*

Replace 1.1 with the following:

1.1 Erosion Control Products. This work shall consist of furnishing and placing hay mulch, bark mulch, "Rolled Erosion Control Products" (RECP), Hydraulic Erosion Control Products (HECP) or other material to provide soil stabilization and/or erosion control on slopes or in channels/ditches at locations shown on the plans or where ordered.

1.1.1 Temporary Slope Matting Type A (Not Currently Used)

1.1.2 Temporary Slope Matting Type B (Wildlife Friendly) shall be a biodegradable RECP specified for protection of slopes of 3:1 or flatter. These products shall maintain their functional integrity for a minimum of 3 months and then biodegrade.

1.1.3 Temporary Slope Matting Type C (Not Currently Used)

1.1.4 Temporary Slope Matting Type D (Wildlife Friendly) shall be a biodegradable RECP specified for protection of slopes of 2:1 or flatter. These products shall maintain their functional integrity for a minimum of 12 months and then biodegrade.

1.1.5 Permanent Channel Matting Type A shall be a RECP specified for protection of vegetated channels/ditches with a slope profile of 5% or less. These products are considered to be permanent and shall be non-degradable.

1.1.6 Permanent Channel Matting Type B (Not Currently Used)

1.1.7 Temporary Channel Matting Type A (Wildlife Friendly) shall be an extended term RECP specified for protection of vegetated channels/ditches with a slope profile of 3% or less. These products are considered temporary and shall have a functional longevity of 24 months.

1.1.8 Temporary Channel Matting Type B shall be a long term RECP specified for protection of vegetated channels/ditches with a slope profile of 3% to 5%. These products are considered temporary and shall have a functional longevity of 36 months.

1.1.9 Stabilized Mulch Matrix (SMM) shall be a moderate term HECP, specified for temporary erosion control on slopes of 3:1 or flatter. These products shall have a functional longevity of at least 3 months.

1.1.10 Bonded Fiber Matrix (BFM) shall be an extended term HECP, specified for temporary erosion control on slopes of 2:1 or flatter. These products shall have a functional longevity of at least 6 months.

1.1.11 Fiber Reinforced Matrix (FRM) shall be a long term HECP, specified for temporary erosion control on slopes of 2:1 or flatter. These products shall have a functional longevity of at least 12 months.

Amend 1.2.1 to read:

1.2.1 The Department will furnish the following data to the Contractor:

- Specific reproducible plan sheets and cross-sections of the project, as requested.
- Drainage calculations and plans (drainage area size and characteristics; runoff volume; type, size, and slope of pipes; invert elevations; and outlet velocities), as available.
- Geotechnical Report including soil boring logs, soil types, and test pit data, as available.
- Permits and certifications obtained for the project.
- A list of environmental commitments.
- A copy of the NHDOT's Notice of Intent application.
- A copy of the NHDOT's Acknowledgement letter from EPA.
- Documentation of permit eligibility related to federally listed threatened and endangered species.
- NHDES Wetlands Permit "Plan of Record".
- Erosion Control Plans

Add to 2.1:

2.1.4 Hydraulic Erosion Control Products (HECP) shall be temporary, biodegradeable, pre-packaged fibrous mulch products mixed with water and applied as a slurry in conjuction, with, or without Turf Establishment without Mulch (Item 646.2). Hydraulic Erosion Control Products (HECP) selected for use shall be from those listed on the Qualified Products List.

Amend 3.1.5 to read:

3.1.5 For the construction period from October 15th through May 1st the area of exposed, unstabilized soil shall be limited to one acre. The allowable area of exposed soil may be increased provided a winter construction plan shows adequate provisions to control erosion and sediment, provided the additional area of disturbance is necessary to meet the Contractors Critical Path Method schedule (CPM), and the Contractor can demonstrate there are adequate resources available (equipment & manpower) to respond to multiple events simultaneously and is reviewed and approved by the Department.

Add to 3.3**:**

3.3.6 Hydraulic Erosion Control Products (HECP).

3.3.6.1 The Contractor shall only use personnel or subcontractors trained in the use of the product.

3.3.6.2 Hydraulic Erosion Control Products (HECP) shall be mixed and applied in accordance with the manufacturer's specifications.

3.3.6.3 Apply HECPs to the soil surface from at least two opposing directions, to achieve an even coverage of all exposed soil surfaces. Do not apply either BFM or SMM within 24 hours of a predicted rain event, or under saturated soil conditions. FRM does not require a cure time and is effective immediately; and FRM may be applied immediately before, during, or after a "typical" rainfall event. Avoid installing FRM during high intensity rainfall events.

3.3.6.4 Inspection and Maintenance: Reapplication will be required if the HECP treated soils are disturbed or turbidity or water quality testing shows the need for an additional application within the functional longevity of the product.

Add to 4.1:

4.1.2 Hydraulic Erosion Control Products (HECP) will be measured by the pound based upon the delivery slips and tags furnished to the Engineer, but not to exceed the rate specified or ordered. If reapplication is required due to damage caused by the Contractor's negligence or inappropriate installation, retreated areas will not be measured for payment.

Amend 5.1 to read:

5.1 The accepted quantities of erosion control work will be paid for at the Contract unit price, complete in place.

Replace the Pay Items with the following:

Pay items and units:

645.11	Mulch	Acre
645.111	Mulch	Square Yard
645.12	Temporary Mulch	Acre
645.15__	Bark Mulch __in. Deep	Square Yard
645.3	Erosion Stone	Ton
645.42	Temporary Slope Matting Type B (Wildlife Friendly)	Square Yard
645.44	Temporary Slope Matting Type D (Wildlife Friendly)	Square Yard
645.45	Permanent Channel Matting Type A	Square Yard
645.471	Temporary Channel Matting Type A (Wildlife Friendly)	Square Yard
645.472	Temporary Channel Matting Type B	Square Yard
645.48	Erosion Control Mix	Cubic Yard
645.51	Hay Bales for Temporary Erosion Control	Each
645.52	Ryegrass for Temporary Erosion Control	Pound
645.531	Silt Fence	Linear Foot
645.532	Silt Fence with Support Fence	Linear Foot
645.611	Bonded Fiber Matrix	Pound
645.612	Fiber Reinforced Matrix	Pound
645.613	Stabilized Mulch Matrix	Pound
645.7	Storm Water Pollution Prevention Plan	Unit
645.71	Monitoring SWPPP and Erosion and Sediment Controls	Hour

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October 24, 2024

S P E C I A L P R O V I S I O N

SECTION 697 -- PROJECT MANAGEMENT PLAN

Item 697.31 - Project Operations Plan

Description

1.1 This work shall consist of developing a site-specific project operations plan and furnishing equipment and supplies needed to implement the plan if Limited Reuse Soils (LRS), asbestos soil, contaminated soil and/or groundwater, or any other contaminates or materials that may pose a risk to human health, is expected to be encountered on a project.

Construction Requirements

3.1 General. The Contractor shall develop and submit, through the Engineer, to the Bureau of Environment, for review and approval, a Project Operations Plan (POP) based on the SA-POP and the SMP in conformance with the project requirements 15 Working Days prior to the start of any work involving any known (or assumed) contaminate(s) on the project. The Bureau of Environment will review the proposed POP for compliance with state regulatory requirements, and provide comments to the Engineer. The comments on the proposed POP must be addressed by the Contractor in a revised POP. When all comments have been addressed, the Bureau of Environment will approve the POP. See the Prosecution of Work (POW) for project specific timeframes for review of submittals. **No excavation in known limited reuse soil areas or contaminated soil areas or dewatering activities in contaminated areas may take place until the POP has been approved.** The Contractor is not relieved of any responsibilities under 29 CFR 1926.65(e).

3.2 Asbestos Soil. The POP shall include an Asbestos Work Plan (AWP) that describes the Contractor's plan to abate Asbestos Containing Material (ACM). The AWP shall identify or provide:

- Proposed means and methods. These means and methods shall be protective of human health and the environment and conform to all applicable state and federal rules and regulations unless a waiver has been obtained.
- A list of equipment that will be used during the abatement and or associated site work disturbing ACM.
- Copies of the abatement contractors' licenses and certifications and a list of qualified personnel that will be on site and their contact information.
- Copies of all associated permits, notifications, or waivers (including any correspondence or approvals) necessary to complete the work.
- The proposed locations within the project where ACM may exist, where potential ACM is anticipated to be impacted, and proposed locations for temporary on-site storage, or stockpiles.

- Description of equipment, and personnel decontamination procedures.
- Description of access controls and site security plans (stock pile and storage locations shall be included).
- Description of best management practices (BMPs) and/or Engineering controls, as well as physical and visual controls to be deployed in or around the regulated areas and temporary storage/stockpile locations.
- Steps to inspect and maintain stockpiles until ACM is properly disposed.
- Proposed means and methods of ACM disposal and proposed licensed ACM disposal facility.

3.2.1 Department's Environmental Consultant shall be on site at all times during ACM removal to observe the Contractor's work procedures for compliance with applicable regulations and the accepted POP. The Environmental Consultant may conduct aggressive environmental air monitoring of the site. Should representative air samples exceed 0.05 f/cc or visible emissions (dust, debris) observed from the ACM removal operations, work shall stop and the work methods shall be assessed and revised. Work shall not resume until Contractor submits a revised POP, addressing the revised methods, and the Department has approved these revisions.

3.2.1.1 The Contractor shall notify the Engineer at least 2 weeks prior to performing asbestos work to allow time for the Department to notify the Environmental Consultant to be on-site.

3.3 Limited Reuse Soils (LRS). The plan shall identify:

- Proposed means to keep excavation within LRS areas to a minimum
- Proposed means to segregate LRS from other soil encountered during excavation.
- The proposed locations within the project area for stockpiles and, when necessary, containers for LRS.
- The means to prevent leachate, contaminated runoff and windblown impacts from stockpiles/containers of LRS.
- The means to secure the stockpiles/containers to limit public access.
- Steps to inspect and maintain stockpiles/containers until LRS are re-incorporated onto the project site or characterized and properly disposed.

3.3.1 Excavation, handling, on-site transportation and on-site storage of excavated LRS shall be performed in accordance with the POW, SMP and approved POP, as directed.

3.3.2 The Contractor shall notify the Engineer at least 2 weeks prior to performing LRS excavation.

3.4 Contaminated Soil and/or Groundwater. The plan shall identify:

- Proposed means to segregate clean soils from contaminated soil encountered during excavation.
- Proposed means to reduce the waste stream for excess soils that can be reused on site.

- The proposed locations within the project area for stockpiling suspected contaminated soils.
- The means to line and cap stockpiles to prevent leachate, contaminated runoff and windblown impacts from stockpiles of contaminated soils and waste materials.
- The means to secure the stockpile area to limit public access.
- Steps to inspect and maintain stockpiles until materials are characterized and properly disposed and/or reused.

3.4.1 Department's Environmental Consultant shall be on site at all times during contaminated soil/groundwater removal to observe the Contractor's work procedures for compliance with applicable regulations and the approved POP.

3.4.2 The POP shall also identify the Contractor's approach to dewater, if groundwater is encountered in areas of identified contamination. The plan shall identify the temporary storage location for water pumped during various phases of the work and the proposed treatment or the disposal location for contaminated groundwater and the proposed means to manage water that has been pumped to a frac tank, or other means of containment, and later found to be acceptable for onsite discharge as "clean" water.

3.4.3 The Contractor, when ordered by the Engineer, will be required to treat contaminated groundwater onsite prior to discharge of the treated water. Typically, treatment may involve carbon, adsorption, and aeration with filtration as required prior to discharge. The Contractor will be responsible for obtaining all necessary permits and approvals for discharging the contaminated groundwater. Potential options to manage the contaminated water include: discharge to municipal sanitary sewer with permission of the municipality under a NHDES Discharge Permit Request; discharge to the ground or groundwater under a NHDES Temporary Groundwater Discharge Permit; disposal as a contaminated water at an appropriate treatment/disposal facility in accordance with all applicable federal, state, and local rules and regulations; or discharge to surface water under the United States Environmental Protection Agency (USEPA) Dewatering and Remediation General Permit (DRGP). The POP shall identify the Contractor's proposed standby method for treating contaminated groundwater and discharge of the effluent. The Contractor may assume that the Department's Environmental Consultant will perform sampling and analysis to monitor compliance with the required discharge permit.

3.4.4 Excavation, handling, on-site transportation and on-site stockpiling of excavated materials shall be performed in accordance with the approved POP, as directed.

3.5 Other types of Contaminates/Materials. If other types of known contaminates/ materials are identified in the Prosecution of Work, the POP shall also identify the proposed means and methods to abate/segregate/contain the "material" per industry standards.

3.6 Health and safety precautions shall conform to industry standards, including, but not limited to, Department of Labor and OSHA rules and regulations.

3.7 The Contractor shall maintain all furnished equipment and supplies in good working condition and shall provide replacements due to breakdown, damage, usage, or theft within two (2) working days of notice.

3.7.1 Upon completion of project all equipment and supplies shall remain the property of the Contractor.

3.8 Personnel training shall be in accordance with 29 CFR 1926.65(e) for all personnel conducting, supervising, or managing field work. Cost for training shall be the responsibility of the Contractor.

3.9 Should the project have more than one known type of contaminate/material, the Contractor shall identify all means and methods for abatement/segregation/containment/ treatment/disposal, as necessary, for all contaminates/materials in one plan for review and approval.

Method of Measurement

4.1 The Project Operations Plan will be measured as unit. A unit shall include any equipment/supplies that are a requirement of the prepared Project Operations Plan, unless specifically stated under other items.

4.1.1 No separate measurement shall be made for replacement equipment/supplies required under 3.1, unless specifically stated under other items.

4.1.2 No separate measurement will be made for multiple **"**contaminates/materials" plans.

4.1.3 No separate measurement will be made for the Asbestos Work Plan.

Basis of Payment

5.1 The Project Operations Plan will be paid for at the Item Bid Price per unit.

5.1.1 No separate payment will be made for replacement equipment/supplies or replacement equipment/supplies required under 3.6 unless specifically stated under other items.

5.1.3 Segregating, handling, on-site transportation and on-site stockpiling of excavated materials will be paid under the appropriate 203 Item(s).

5.1.4 Excavation, handling, on-site transportation; on-site stockpiling of excavated ACM (soils) will be paid under Item 203.354 – Excavating and Handling Asbestos Contaminated Soils.

5.1.5 Treatment and disposal of contaminated groundwater will be paid under Item 1009.21 - Treatment and Disposal of Contaminated Groundwater (Frac Tank).

5.1.6 Off-site transportation and disposal of ACM (soils) will be paid for under Item 1009.323.

Pay item and unit:

697.31	Project Operations Plan	Unit

ACWORTH
43566C

October 29, 2024

SPECIAL PROVISION

AMENDMENT TO SECTION 698 – FIELD FACILITIES

This Special Provision provides for additional field office equipment as specified in 698.2.2.3.

Add to 2.2.3 The Contractor shall also provide the following equipment for use by the Engineer (indicated by the checkboxes below):

☑ Internet Access for Department Supplied Equipment:

Quantity: 2

Mobile Hotspot - Coverage shall be adequate for the area required and shall be 4G or 5G compatible. Unlimited data usage and at least 10 Mbps upload and 25 Mbps download bandwidth. Mobile Hotspot equipment is required to deliver a consistent minimum output of 25 Mbps..

☑ Internet Access for Field Office

Unlimited-hours, 50 Mbps (minimum upload/download) Broadband Internet Access and Wireless Router

☐ Desktop Computer

Quantity: _____

Processor:	Intel Core i5, Dual Core 2.4 GHz or better
Operating System:	Microsoft Windows 10
Memory:	8 GB RAM Minimum
Hard Disk Drive:	500 GB Minimum
Monitor:	24 inches or larger 1920 x 1080 resolution or better
Video:	Internal web camera 512 MB Video memory or higher
Audio:	16 Bit Audio with Speaker and Microphone
Communication:	Wireless (802.11a/b/g/n compliant) 10/100/1000 Ethernet
Expansion Ports:	Four USB 2.0/3.0
Internet Access:	Unlimited, 50 Mbps (minimum upload/ download) service (DSL/Satellite only acceptable if Cable unavailable)

Software:

- Microsoft Office 2010, or newer, Professional Version
- Bluebeam Revu (current version), or other approved software, that allows user to create, markup, and edit project documents; collaborate work processes with contracting parties; and offers full integration with Microsoft Office Antivirus software w/updated subscription maintained.

Other Equipment:

- Keyboard
- Optical mouse, wireless or with connecting cable
- Surge Protector: 15 Amps, six outlets with circuit breaker control and spike protection
- Two (2) flash drives, 64 GB minimum each
- Computer workstation unit: Approximately 6 feet long with 5 pedestal chair and static guard mats.

☐ Monitor

Quantity*: _____

24" Minimum Diagonal View Area

**Note: The Desktop Computer specification requires that a monitor be provided with the desktop (when selected). This quantity is in addition to the desktop computer monitor quantity*.

- Color Flat Panel
- Minimum 16:9 aspect ratio with a 1600x900 pixel resolution
- 3ms response time or better
- Adequate graphics card that supports the monitor's resolution; interfaces properly with the field computers and laptops; and provides high definition video display.
- Compatible connecting cable(s)

☑ Color Printer/Scanner/ Copier

- Laser Jet or Inkjet
- Network Capable
- Wireless
- Microsoft Windows compatible
- Resolution: 1200 vertical x 1200 horizontal dpi, minimum
- Capable of scan/copy/print 8 ½ x 14 color originals
- Tray Capacity: 100 sheets, minimum
- Replacement Toner Cartridge(s) as required, with 1 spare on hand at all times
- Speed: 10 sheets per minute, minimum
- Paper with the following minimum specifications:
  - 8 ½" x 11" sheets – 3 reams to be maintained
  - 8 ½" x 14" cut sheets – 2 reams to be maintained

☐ High Capacity Color Copier/Scanner/Printer

- Laser Jet
- Network Capable
- Wireless
- Microsoft Windows compatible
- Resolution: 600dpi color, 1200dpw b&w, minimum
- Capable of scan/copy/print 11 x 17 color originals
- Two dedicated printing trays: (1) 8½ x 11 and (1) 11 x 17
- Tray Capacity: 250 sheets, minimum
- Speed: 30 sheets per minute, minimum
- Duplex printing capable
- Replacement Toner Cartridge(s) as required, with 1 spare on hand at all times

- Paper with the following minimum specifications:
  - 8 ½" x 11" sheets – 3 reams to be maintained
  - 8 ½" x 14" cut sheets – 2 reams to be maintained
  - 11" x 17" cut sheets – 1 ream to be maintained

☑ Telephone Service — Landline phone service with voicemail accessibility.

☑ Telephone — A wired phone with an additional portable handset.

Quantity: 1

☑ 2-Drawer File Cabinet — In addition to the File Cabinet quantity requirements of 698.2.2.2, provide a 2-drawer file cabinet with the following minimum specifications:

Quantity: 1

Fire resistant, legal size; inside dimension approximately 10 x 15 x 26 in, each, with lock(s) and key(s). The file shall bear an Underwriters Laboratories "C" Label - 350ºF (177° C) for one hour, inside surface.

☐ 3 Hole Punch: — Adjustable, 2 to 3 metal hole punch able to punch through a minimum of 10 sheets of standard paper at once with 9/32" holes and chip tray.

☑ Surge Protector — 15 Amps, 6 outlets with circuit breaker control and spike protection

Quantity**: 2

***Note:* *The Desktop Computer specification requires that a surge protector be provided for each desktop (when selected). This quantity is in addition to the desktop computer surge protector quantity.*

☐ Strobe Light — Magnetic mount, 20 watt, 12/24 Volt DC, with DC Vehicle Adapter or equivalent.

Quantity: _____

☐ Concrete Testing Equipment — In addition to the Concrete Testing Equipment required per section 520.3.1.3.1.2, provide a complete additional set of Concrete Testing Equipment meeting the requirements of Section 520.3.1.3.1.2

☐ Portable Turbidimeter — Portable Turbidimeter with the following minimum specifications:

Quantity: _____

- Turbidity Range: 0 to 1000 NTU
- Range: .01 to 1100 NTU
- Accuracy: ± 2% of reading or .01 NTU (0 to 500 NTU); ± 3% of reading
- Resolution: .01 NTU < 10 NTU; .1 NTU < 100 NTU; 1NTU < 1100 NTU
- Analytical Method: ISO 7027
- Rechargeable battery pack with charger
- Twelve (12) sampling vials
- Calibration kit
- Range: .01 to 1100 NTU

☐ Distance Measuring Instrument:	1 portable distance measuring instrument, accuracy 1 foot per mile (minimum), automatic calibration, built-in WAAS enabled - 66-channel GPS receiver, 4 MB memory (400,000 events - including event code identifiers, distance, time and speed), 12 volt DC, able to download data to computer via USB or Serial RS-232. Must be capable of providing GPS coordinates in the WGS 1984 coordinate system.

S U P P L E M E N T A L S P E C I F I C A T I O N

AMENDMENT TO SECTION 702– BITUMINOUS MATERIALS

The purpose of this Supplemental Specification is to adopt new AASHTO specifications for emulsions.

Amend Section 702 to read**:**

Table 702-1 – Anionic Asphalt Emulsion

	Rapid-Setting						Medium Setting							
Grade	RS-1h		RS-1		RS-2		HFMS-2		MS-4		MS-5			**Test Method**
	min	max	min	max	min	max	min	max	min	max	min	max		
Tests on emulsified asphalt:														
Viscosity, Saybolt Furol at 25°C (77° F), s[a]	20	100	20	100										T59
Viscosity, Saybolt Furol at 50°C (122° F), s[a]					75	400	100 see (d)		100	500	100	500		
Storage stability test, 24 h, %[a,b]		1.0		1.0		1.0		1.0		1.0		1.0		
Demulsibility, 35 mL, 0.02 *N* $CaCl_2$, %[a]	60		60		60									
Coating ability and water resistance														
Coating, dry aggregate							good		75%		75%			
Coating, after spraying							fair		see (e) (f)		see (e) (f) (g)			
Coating, wet aggregate							fair							
Coating, after spraying							fair							
Sieve test, %[a,b]		0.10		0.10		0.10		0.10		0.10		0.10		
Distillation														
Oil distillate, %									1.0	7.0	0	3.0		
Residue, %[c]	55		55		65		65		65		65			
Tests on residue from distillation:														
Penetration, 25°C (77°F), 100 g, 5 s, 0.1 mm	40	90	90	150	90	150	90	250	250		150	250		T49
Ductility, 25°C (77°F), 5 cm/min, cm	40		40		40		40							T51
Ash content, %		1.0		1.0		1.0		1.0						T111
Float test, 60°C (140°F), s							1200		50		100			T50

Table 702-2 -- Cationic Asphalt Emulsion

Type	Rapid-Setting				
Grade	**CRS-1h**		**CRS-1**		
Tests on emulsified asphalt:	min	max	min	max	**Test Method**
Viscosity, Saybolt Furol at 50°C (122°F), s[a]	20	100	20	100	T59
Storage stability test, 24-h, %[a,b]		1		1	
Sodium dioctyl sulfosuccinate, %[a]	40		40		
Particle charge test	Positive		Positive		
Sieve test, %[a,b]		0.10		0.10	
Distillation:					
Oil Distillate by volume of emulsified asphalt, %		3		3	
Residue, %[c]	60		60		
Tests on residue from distillation:					
Penetration, 25°C (77°F), 100 g, 5 s, 0.1 mm	40	90	90	150	T49
Ductility, 25°C (77°F), 5 cm/min, cm	40		40		T51
Ash content, %		1		1	T111

Footnotes:

a. This test requirement and associated specification limits are waived for emulsified asphalt products following dilution
b. This test requirement on representative samples may be waived if successful application of the material has been achieved in the field.
c. For emulsions that are diluted, the percent residue requirements must be adjusted accordingly.
d. 50 + when material is used for sealing.
e. Wet Coating: Weigh 100 ± 0.5 g of aggregate, 20 to 30 mesh (0.85 to 0.60 mm) standard Ottawa sand, into a 600 mL glass beaker and add soft tap water, approximately twice the volume of that of sand. Weigh into the beaker containing the sand and water 8 ± 0.2 g of the emulsion at room temperature and mix for two minutes with a stiff spatula. Cover the mixture with approximately twice its own volume of tap water and pour the water off without further mixing. Repeat this process. After the second rinse, at least 75 percent of the sand shall remain coated.
f. Stripping: After evaluating the wet coating, place the mixture into a clear 600 mL glass beaker, cover the mixture with tap water, let stand for 1 to 16 hours, and examine. At least 75 percent of the sand shall remain coated.
g. The coating and stripping tests may be waived when MS-5 is used for sand sealing.

SPECIAL PROVISION

AMENDMENT TO SECTION 718 – RETROREFLECTIVE SHEETING

The purpose of this Supplemental Specification is to replace the entire 718 section of the 2016 Standard Specifications for Road and Bridge Construction with the following specification.

Replace Section 718 with the following:

Description

1.1 General. This section specifies the requirements for retroreflective sheeting and overlay film.

Materials

2.1 Retroreflective sheeting and overlay film shall be selected from the Qualified Products List.

2.1.1 Retroreflective sheeting shall be an unmetalized, microprismatic, retroreflective element material, consisting of a smooth, durable outer surface. Adhesive backing shall be pressure sensitive, and protected by a removable, translucent, synthetic release liner. Retroreflective Sheeting shall conform to the Standard Specification for Retroreflective Sheeting for Traffic Control (ASTM D4956) for the specified type.

2.1.2 Overlay film shall be of a durable, transparent, acrylic material. When applied in composite form (with retroreflective sheeting) it shall conform to the Standard Specification for Retroreflective Sheeting for Traffic Control (ASTM D4956), for application, classification, and color designation. Adhesive backing shall be pressure sensitive, and protected by a removable, translucent, synthetic release liner. The liner shall be printed with an indelible mark indicating the name of the film manufacturer.

2.2 Retroreflective sheeting, used on all Type A, AA, B, BB, C and CC signs, shall conform to the requirements of Type IV material except those specifically indicated otherwise herein, unless otherwise noted in the plans.

2.2.1 Retroreflective sheeting for the copy, border, and shields on overhead structures including bridge mounts shall conform to Type IV, VIII, IX, or XI material.

2.2.2 Fluorescent Retroreflective sheeting shall conform to Type VIII, IX, or XI material, unless otherwise noted in the plans.

Construction Requirements

3.1 Color Requirements. When overlay film is applied to retroreflective sheeting, the resulting color of the composite sheeting shall conform to ASTM D4956.

3.2 Warranty Requirements. Warranty on all types of sheeting shall cover the loss of retroreflectivity, loss of colorfastness, cracking, and any other conditions inherent to the sheeting, including inks and overlay film that causes it to be ineffective in providing the direction to the motorists as intended.

3.2.1 The Contractor's warranty period shall be 1 year from the date of Completion. During this period, defects in material or workmanship shall be repaired at the Contractor's expense. This warranty does not relieve the Contractor of the requirement of 106.04.

FHWA-1273 – Revised October 23, 2023

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (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). 23 CFR 633.102(e).

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. 23 CFR 633.102(e).

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) in accordance with 23 CFR 633.102. 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 solicitation-for-bids or request-for-proposals 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). 23 CFR 633.102(b).

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. 23 CFR 633.102(d).

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. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A 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 Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), 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 Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), 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 Part 230, Subpart A, 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 (*see* 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 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. 23 CFR 230.409 (g)(4) & (5).

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, sexual orientation, gender identity, 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 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 or other knowledgeable company official.

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, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. 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, sexual orientation, gender identity, 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, sexual orientation, gender identity, 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 thereunder. 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, sexual orientation, gender identity, 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, 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. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient 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 recipient deems appropriate, which may include, but is not limited to:
(1) Withholding monthly progress payments;
(2) Assessing sanctions;
(3) Liquidated damages; and/or
(4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

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

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

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

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

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than $10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, 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, sexual orientation, gender identity, 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), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

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 (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), 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 basic hourly 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. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. 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 must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. 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 classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH–1321) must 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. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must 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 be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate 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 used 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) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) 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 will be sent by the contracting officer by email to DBAconformance@dol.gov. 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.

(4) 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 will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must 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.

d. *Fringe benefits not expressed as an hourly rate.* 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 may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* 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, in accordance with the criteria set forth in § 5.28, 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.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and 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.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements* (1) *Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; 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 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section 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 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must 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.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements* (1) *Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (*e.g.,* the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH–347 or in any other format desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division website at *https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347/.pdf* or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working 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 29 CFR part 3; and

(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(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) *Use of Optional Form WH–347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, 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, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices* (1) *Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform 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 (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must 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, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must 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 this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

c. 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. 23 CFR 230.111(e)(2). 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 journeyworkers 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 as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 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 as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, 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 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 40 U.S.C. 3144(b) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or 29 CFR part 1 or 3; or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or 29 CFR part 1 or 3.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), 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 watchpersons 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. 29 CFR 5.5.

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 and interest from the date of the underpayment. 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 watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* 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.

* $31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, 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 that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

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” in paragraph 1 of Section VI 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: (based on longstanding interpretation)

(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. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), 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. Pursuant to 23 CFR 635.116(c), 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. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

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 Part 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. 23 CFR 635.108.

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 Part 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). 29 CFR 1926.10.

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 Part 635) in one or more places where it is readily available to all persons concerned with the project:

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

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

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

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 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 (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of $150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

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. 2 CFR 180.220 and 1200.220.

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. 2 CFR 180.320.

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. 2 CFR 180.325.

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. 2 CFR 180.345 and 180.350.

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, Subpart I, 180.900-180.1020, and 1200. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient 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 recipient or subrecipient 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. 2 CFR 180.330.

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. 2 CFR 180.220 and 180.300.

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. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. 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 System for Award Management website (https://www.sam.gov/). 2 CFR 180.300, 180.320, and 180.325.

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 CFR 180.325.

* * * * *

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 CFR 180.335;.

(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, 2 CFR 180.800;

(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, 2 CFR 180.700 and 180.800; 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. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. **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). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant 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. 2 CFR 180.365.

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, Subpart I, 180.900 – 180.1020, 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 recipient or subrecipient 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 recipient or subrecipient 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. 2 CFR 1200.220 and 1200.332.

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. 2 CFR 180.220 and 1200.220.

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 System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

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

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should 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 Part 20, App. A.

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.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)
This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

Training Special Provisions

This Training Special Provision supersedes subparagraph 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities", and is in implementation of 23 U.S.C. 140(a).

As part of the Contractor's Equal Employment Opportunity Affirmative Action Program, training shall be provided as follows:

> The Contractor shall provide on-the-job training aimed at developing full journeymen in the type of trade or job classification involved.

The number of trainees to be trained under the special provisions will be 0 (amount to be filled in by State highway department).

In the event that a contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided, however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this training special provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment. Prior to commencing construction, the contractor shall submit to the State highway agency for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeymen status is a primary objective of this Training Special Provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent that such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by the State highway agency and the Federal Highway Administration. The State highway agency and the Federal Highway Administration shall approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved but not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the division office. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the Contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the engineer, reimbursement will be made for training persons in excess of the number specified herein. This reimbursement will be made even though the contractor receives additional training program funds from other sources, provided such other does not specifically prohibit the contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the Contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirements of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program. It is not required that all trainees be on board for the entire length of the contract. A contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The Contractor shall furnish the trainee a copy of the program he will follow in providing the training. The contractor shall provide each trainee with a certification showing the type and length of training satisfactorily completed.

The contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

[40 FR 28053, July 3, 1975. Correctly redesignated at 46 FR 21156, Apr. 9, 1981]

NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION POLICY

Failure to complete the Training Special Provision requirement**:** When a Contractor fails to complete this Training Special Provision requirement and fails to make and document good faith efforts to fulfill the requirements of this provision, the New Hampshire Department of Transportation Office of Federal Compliance (OFC) shall notify the Prequalification Committee in writing. The Prequalification Committee will inform the Contactor of the OFC notification and require the Contractor to submit a Corrective Action Plan to the OFC. Failure to provide an acceptable Corrective Action Plan could lead to partial or full suspension consistent with the prequalification rules.

41 CFR 60-4 Affirmative Action Requirements
41 CFR 60-4.2 Solicitations

Notice of Requirement for Affirmative Action
To Ensure Equal Employment Opportunity
(Executive Order 11246)

The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows**:**

	Goals for minority participation for each trade	Goals for female participation in each trade
STANDARD METROPOLITAN STATISTICAL AREAS (SMSA)		
SALEM-PLAISTOW	**4.0**	**6.9**
MANCHESTER-NASHUA	**0.7**	**6.9**
NON-SMSA COUNTIES		
COOS, GRAFTON, SULLIVAN	**0.8**	**6.9**
BELKNAP, MERRIMACK, CARROLL, STRAFFORD	**3.6**	**6.9**
CHESHIRE	**5.9**	**6.9**
ROCKINGHAM	**4.0**	**6.9**
HILLSBOROUGH	**0.7**	**6.9**

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

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

The Contractor shall provide written notification to the Director of the Office of Federal contract compliance programs within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation addressed as follows:

Office of Federal Contract
Compliance Programs
Boston District Office
JFK Federal Building
15 New Sudbury St., Room E235
Boston, MA 02203

The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed as noted within in the Contract Special Provisions for Affirmative Action to ensure Equal Employment Opportunity**.**

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

1. As used in these specifications:

a. “Covered area” means the geographical area described in the solicitation from which this contract resulted;

b. “Director” means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

c. “Employer identification number” means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

d. “Minority” includes:

(i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

(ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);

(iii) 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

(iv) 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. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a through p of these specifications. The goals set forth in the solicitation from which this contract resulted 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. Covered Construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted constuction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications , Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

d. Provide immediate written notification to the Director 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.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newpaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, 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.

i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR part 60-3.

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

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

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

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete 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.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, sexual orientation, gender identity, or national origin.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

(b) The notice set forth in 41 CFR 60-4.2 and the specifications set forth in 41 CFR 60-4.3 replace the New Form for Federal Equal Employment Opportunity Bid Conditions for Federal and Federally Assisted Construction published at 41 FR 32482 and commonly known as the Model Federal EEO Bid Conditions, and the New Form shall not be used after the regulations in 41 CFR part 60-4 become effective.

[43 FR 49254, Oct. 20, 1978; 43 FR 51401, Nov. 3, 1978, as amended at 45 FR 65978, Oct. 3, 1980; 79 FR 72995, Dec. 9, 2014]

The United States Department of Transportation (USDOT)
Standard Title VI/Non-Discrimination Assurances

DOT Order No. 1050.2A

APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations**: The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination**: The contractor, with regard to the work performed by it during the contract, will 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 contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. **Solicitations for Subcontracts, 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 will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. **Information and Reports**: The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the FHWA to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the FHWA, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance**: In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

    a. withholding payments to the contractor under the contract until the contractor complies; and/or
    b. cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions**: The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment,

unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

The United States Department of Transportation (USDOT)
Standard Title VI/Non-Discrimination Assurances

DOT Order No. 1050.2A

APPENDIX E

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

NOTICE TO ALL BIDDERS

In accordance with the Section "NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)", the New Hampshire Department of Transportation has the authority and responsibility to notify the Office of Federal Contract Compliance Program of the United States Department of Labor if they become aware of any possible violations of Executive Order 11246 and 41 Code of Federal Regulation Chapter 60.

The Office of Federal Contract Compliance Programs is the sole authority for determining compliance with Executive Order 11246 and 41 Code of Federal Regulation Chapter 60 and the Contractor should contact them regarding related compliance issues.

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

To the U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., Eastern Time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

Bid Schedule

ACWORTH
43566C
FEMA

NOTE: For complete information concerning these items, see plans, special provisions, supplemental specifications, and 2016 NHDOT Standard Specifications for Road and Bridge Construction.

Item#	Quantity	Description	Unit Price	Amount
201.22	2.00 EA	REMOVING LARGE TREES At _____ Dollars Per EA		
202.451	1.00 U	REMOVAL OF CULVERT At _____ Dollars Per U		
203.1	250.00 CY	COMMON EXCAVATION At _____ Dollars Per CY		
203.11	34.00 CY	COMMON EXCAVATION - LRS At _____ Dollars Per CY		
203.2	15.00 CY	ROCK EXCAVATION At _____ Dollars Per CY		
203.601	25.00 CY	EMBANKMENT-IN-PLACE At _____ Dollars Per CY		
207.3	30.00 CY	UNCLASSIFIED CHANNEL EXCAVATION At _____ Dollars Per CY		
214.	1.00 U	FINE GRADING At _____ Dollars Per U		
304.101	80.00 CY	SAND At _____ Dollars Per CY		
304.201	90.00 CY	GRAVEL At _____ Dollars Per CY		

Item#	Quantity	Description	Unit Price	Amount
304.301	130.00 CY	CRUSHED GRAVEL At _____ Dollars Per CY		
403.11023	47.00 TON	HBP-3/4" BINDER MIX, MACHINE METHOD At _____ Dollars Per TON		
403.11053	30.00 TON	HBP-3/8" SURFACE MIX, MACHINE METHOD At _____ Dollars Per TON		
403.16	370.00 LF	PAVEMENT JOINT ADHESIVE At _____ Dollars Per LF		
410.22	11.00 GAL	ASPHALT EMULSION FOR TACK COAT At _____ Dollars Per GAL		
417.	14.00 SY	COLD PLANING BITUMINOUS SURFACES At _____ Dollars Per SY		
503.101	1.00 U	WATER DIVERSION STRUCTURE At _____ Dollars Per U		
503.201	1.00 U	COFFERDAMS At _____ Dollars Per U		
529.001	1.00 U	PRECAST CONCRETE BOX CULVERT At _____ Dollars Per U		
583.3	45.00 CY	RIPRAP, CLASS III At _____ Dollars Per CY		
585.14	1.00 CY	WEIR BOULDERS At _____ Dollars Per CY		
585.3401	40.00 CY	SIMULATED STREAMBED MATERIAL At _____ Dollars Per CY		

Item#	Quantity	Description	Unit Price	Amount
593.411	170.00 SY	GEOTEXTILE; PERM CONTROL CL.1, NON-WOVEN At _____ Dollars Per SY		
603.99036	80.00 LF	36" TEMPORARY DRAINAGE PIPE At _____ Dollars Per LF		
618.7	100.00 HR	FLAGGERS At _____ Dollars Per HR		
619.1	1.00 U	MAINTENANCE OF TRAFFIC At _____ Dollars Per U		
619.25	6.00 U	PORTABLE CHANGEABLE MESSAGE SIGN At _____ Dollars Per U		
621.31	4.00 EA	SINGLE DELINEATOR WITH POST At _____ Dollars Per EA		
622.1	2.00 EA	STEEL WITNESS MARKERS At _____ Dollars Per EA		
628.2	45.00 LF	SAWED BITUMINOUS PAVEMENT At _____ Dollars Per LF		
632.0104	3,400.00 LF	RETROREFLECTIVE PAINT PAVE. MARKING, 4" LINE At _____ Dollars Per LF		
645.3	20.00 TON	EROSION STONE At _____ Dollars Per TON		
645.44	360.00 SY	TEMPORARY SLOPE MATTING TYPE D (WILDLIFE FRIENDLY) At _____ Dollars Per SY		
645.512	325.00 LF	COMPOST SOCK FOR PERIMETER BERM At _____ Dollars Per LF		

Item#	Quantity	Description	Unit Price	Amount
645.531	325.00 LF	SILT FENCE At _____ Dollars Per LF		
645.7	1.00 U	STORM WATER POLLUTION PREVENTION PLAN At _____ Dollars Per U		
645.71	50.00 HR	WATER QUALITY MONITORING, INSPECTION AND REPORTING At _____ Dollars Per HR		
646.31	360.00 SY	TURF ESTABLISHMENT WITH MULCH AND TACKIFIERS At _____ Dollars Per SY		
647.1	40.00 CY	HUMUS At _____ Dollars Per CY		
692.	1.00 U	MOBILIZATION At _____ Dollars Per U		
697.31	1.00 U	PROJECT OPERATIONS PLAN At _____ Dollars Per U		
698.13	5.00 MON	FIELD OFFICE TYPE C At _____ Dollars Per MON		
699.	10,000.00 $	MISCELLANEOUS TEMPORARY EROSION AND SEDIMENT CONTROL At One and 0/100 Dollars Per $	$1 00	$10,000 00
1010.15	10,000.00 $	FUEL ADJUSTMENT At One and 0/100 Dollars Per $	$1 00	$10,000 00
		Grand Total:		