MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

CONTRACT DOCUMENTS

CONTRACT 2018.04

CLEANING AND PAINTING STEEL STRUCTURES - CIDER HILL ROAD UNDERPASS BRIDGE - MILE 6.2, CAPTAIN THOMAS ROAD UNDERPASS BRIDGE - MILE 14.8, ROUTE 126 UNDERPASS BRIDGE - MILE101.7 AND HIGH STREET UNDERPASS BRIDGE - MILE 103.6

NOTICE TO CONTRACTORS

PROPOSAL

CONTRACT AGREEMENT

CONTRACT BOND

FINAL LIEN AND CLAIM WAIVER AND AFFIDAVIT

SPECIFICATIONS

MAINE TURNPIKE AUTHORITY

SPECIFICATIONS

The Specifications are divided into two parts:
Part I, Supplemental Specifications and Part II, Special Provisions.

The Maine Turnpike Supplemental Specifications are additions and alterations to the 2014 Maine Department of Transportation Standard Specifications. See Subsection 100.1.

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MAINE TURNPIKE AUTHORITY

NOTICE TO CONTRACTORS

Sealed Proposals will be received by the Maine Turnpike Authority for:

CONTRACT 2018.04

CLEANING AND PAINTING STEEL STRUCTURES -
CIDER HILL ROAD UNDERPASS BRIDGE - MILE 6.2, CAPTAIN THOMAS ROAD UNDERPASS BRIDGE - MILE 14.8, ROUTE 126 UNDERPASS BRIDGE - MILE101.7 AND HIGH STREET UNDERPASS BRIDGE - MILE 103.6

at the office of the Maine Turnpike Authority, 2360 Congress Street, Portland, ME, until 1:00 p.m., prevailing time as determined by the Authority on February 15th, 2018 at which time and place the Proposals will be publicly opened and read. This Project includes a wage determination developed by the State of Maine Department of Labor.

The following work is included in this Contract:

Cider Hill Road Underpass Bridge: Cleaning and painting specified areas of structural steel and metal work, and all non-galvanized bearing assemblies, with a three coat NEPCOAT paint system along with all work incidental thereto in accordance with these Specifications.

Captain Thomas Road Underpass Bridge: Cleaning and painting specified areas of structural steel and metal work, and all non-galvanized bearing assemblies, with a three coat NEPCOAT paint system along with all work incidental thereto in accordance with these Specifications.

Route 126 Underpass Bridge: Cleaning and painting specified areas of structural steel and metal work, and all non-galvanized bearing assemblies, with a three coat NEPCOAT paint system along with all work incidental thereto in accordance with these Specifications.

High Street Underpass Bridge: Cleaning and painting specified areas of structural steel and metal work, and all non-galvanized bearing assemblies, with a three coat NEPCOAT paint system along with all work incidental thereto in accordance with these Specifications.

Contractors and Subcontractors involved with the removal of lead based paint and the field application and touch-up of the coating systems shall be qualified in accordance with SSPC QUALIFICATION PROCEDURE NO. 1, Standard Procedure for Evaluating Painting Contractors (Field Application to Complex Industrial Structures) and SSPC QUALIFICATION PROCEDURE NO. 2, Standard Procedure for the Qualification of Painting Contractors (Field Removal of Hazardous Coatings from Complex Structures) prior to Bid opening and shall remain qualified throughout the duration of the Contract. Copies of current certificates issued by the Qualifying Agency shall be submitted with the Bid package.

The following bridges are included in the Contract:

Bridge Name	Approximate Square Feet of Steel to be Cleaned and Painted	Mile	Town
Cider Hill Road Underpass Bridge	23,870	6.2	York
Captain Thomas Road Underpass Bridge	12,130	14.8	Ogunquit
Route 126 Underpass Bridge	14,110	101.7	West Gardiner
High Street Underpass Bridge	8,440	103.6	West Gardiner

Plans and Contract Documents may be examined by prospective Bidders weekdays between 8:00 a.m. and 4:30 p.m. at the office of the Maine Turnpike Authority, 2360 Congress Street, Portland, Maine. **The Plans and Contract Documents** may be obtained from the Authority upon payment of Seventy-Five ($75.00) Dollars for each set, which payment will not be returned. Checks shall be made payable to: Maine Turnpike Authority. The Plans and Contract Documents may also be downloaded from a link on our website at http://www.maineturnpike.com/projects-planning/Construction-Contracts.aspx.

For general information regarding Bidding and Contracting procedures, contact Nate Carll, Purchasing Manager, at (207)482-8115. For information regarding Schedule of Items, plan holders list and bid results, visit our website at **http://www.maineturnpike.com/projects-planning/Construction-Contracts.aspx** . For Project specific information, fax all questions to Nate Carll, Purchasing Manager, at (207) 871-7739 or email ncarll@maineturnpike.com. Responses will not be prepared for questions received by telephone. Bidders shall not contact any other Authority staff or Consultants for clarification of Contract provisions, and the Authority will not be responsible for any interpretations so obtained.

All work shall be governed by the Specifications entitled "State of Maine, Department of Transportation, Standard Specifications, Revision of November 2014", "Standard Details, Revision of November 2014" and "Best Management Practices for Erosion and Sediment Control", latest issue. Copies and recent updates to these publications can be downloaded at: http://www.maine.gov/mdot/contractors/publications/ .

Proposals must be accompanied by an original bid bond, certified or cashier's check payable to the Maine Turnpike Authority in an amount not less than Five (5%) Percent of the Total Amount in the Proposal, but not less than $500.00. The Bidder to whom a Contract is awarded will be required to furnish a Surety Corporation Bond, satisfactory to the Authority, on the standard Contract Bond form of the Authority, for a sum not less than the Total Amount of the Proposal.

Proposals must be made upon the Proposal Forms furnished by the Authority separately with the Contract Documents, and must be enclosed in the sealed special addressed envelope provided therefore bearing the name and address of the Bidder, the name of the Contract, and the date and time of Proposal opening on the outside.

A pre-bid conference will be held on February 2nd, 2018 at 11:00 a.m. at the Maine Turnpike Authority, 2360 Congress Street, Portland, Maine. Perspective Bidders will be allowed to attend the pre-bid meeting via a telephone conference call. All perspective Bidders planning to attend the pre-bid conference via conference call are encouraged to register on the Plan Holder List by January 31, 2018. Those registering will be sent an email containing the call-in number.

The Authority reserves the unqualified right to reject any or all Proposals and to accept that Proposal which in its sole judgment will under all circumstances serve its best interest.

MAINE TURNPIKE AUTHORITY

Nate Carll
Purchasing Manager
Maine Turnpike Authority

Portland, Maine

Maine Turnpike Authority

MAINE TURNPIKE

PROPOSAL

CONTRACT 2018.04

CLEANING AND PAINTING STEEL STRUCTURES - CIDER HILL ROAD UNDERPASS BRIDGE - MILE 6.2, CAPTAIN THOMAS ROAD UNDERPASS BRIDGE - MILE 14.8, ROUTE 126 UNDERPASS BRIDGE - MILE101.7 AND HIGH STREET UNDERPASS BRIDGE - MILE 103.6

MAINE TURNPIKE AUTHORITY

PROPOSAL

CONTRACT 2018.04

CLEANING AND PAINTING STEEL STRUCTURES -
CIDER HILL ROAD UNDERPASS BRIDGE - MILE 6.2, CAPTAIN THOMAS ROAD UNDERPASS BRIDGE - MILE 14.8, ROUTE 126 UNDERPASS BRIDGE - MILE101.7 AND HIGH STREET UNDERPASS BRIDGE - MILE 103.6

TO MAINE TURNPIKE AUTHORITY:

The work consists of cleaning and painting the structural steel and metal work, and all non-galvanized bearing assemblies, with a three coat NEPCOAT paint system for Cider Hill Road Underpass Bridge, Captain Thomas Road Underpass Bridge, Route 126 Underpass Bridge, and High Street Underpass Bridge and all other work incidental thereto in accordance with the Plans and Specifications.

The Contractor shall be certified to SSPC QP 1 and QP 2.

The following bridges are included in the Contract:

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Bridge Name	Approximate Square Feet of Steel to be Cleaned and Painted	Mile	Town
Cider Hill Road Underpass Bridge	23,870	6.2	York
Captain Thomas Road Underpass Bridge	12,130	14.8	Ogunquit
Route 126 Underpass Bridge	14,110	101.7	West Gardiner
High Street Underpass Bridge	8,440	103.6	West Gardiner

This Work will be done under a Contract known as Contract 2018.04 according to the Plans and Specifications which are on file in the office of the Maine Turnpike Authority, 2360 Congress Street, Portland, Maine.

On the acceptance of this Proposal for said Work, the undersigned will give the required bond with good security conditioned for the faithful performance of said Work, according to said Plans and Specifications, and the doing of all other work required by said Specifications for the consideration herein named and with the further condition that the Maine Turnpike Authority shall be saved harmless from any and all damages that might accrue to any person, persons or property by reason of the carrying out of said Work, or any part thereof, or by reason of negligence of the undersigned, or any person or persons under his employment and engaged in said Work.

The undersigned hereby declares that he/she has carefully examined the Plans, Specifications and other Contract Documents, and that he/she will contract to carry out and complete the said Work as specified and delineated at the price per unit of measure for each scheduled item of Work stated in the Schedule of Prices as follows:

It is understood that the TOTAL AMOUNT stated by the undersigned in the following Schedule of Prices is based on approximate quantities and will be used solely for the comparison of bids, and that the quantities stated in the Schedule of Prices for the various items are estimates only and may be increased or decreased all as provided in the Specifications.

SCHEDULE OF BID PRICES
CONTRACT NO. 2018.04
CLEANING AND PAINTING OF STEEL STRUCTURES -CIDER HILL ROAD, CAPTAIN THOMAS ROAD, ROUTE 126 AND HIGH STREET

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
506.141	Field Painting of Existing Structural Steel - Cider Hill Road Underpass	Lump Sum	1				
506.142	Field Painting of Existing Structural Steel - Captain Thomas Road Underpass	Lump Sum	1				
506.143	Field Painting of Existing Structural Steel - Route 126 Underpass	Lump Sum	1				
506.144	Field Painting of Existing Structural Steel - High Street Underpass	Lump Sum	1				
506.171	Surface Preparation of Existing Structural Steel - Cider Hill Road Underpass	Lump Sum	1				
506.172	Surface Preparation of Existing Structural Steel - Captain Thomas Road Underpass	Lump Sum	1				
506.173	Surface Preparation of Existing Structural Steel - Route 126 Underpass	Lump Sum	1				
506.174	Surface Preparation of Existing Structural Steel - High Street Underpass	Lump Sum	1				
506.181	Containment System and Pollution Control Measures - Cider Hill Road Underpass	Lump Sum	1				
506.182	Containment System and Pollution Control Measures - Captain Thomas Road Underpass	Lump Sum	1				
506.183	Containment System and Pollution Control Measures - Route 126 Underpass	Lump Sum	1				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
506.184	Containment System and Pollution Control Measures - High Street Underpass	Lump Sum	1				
506.191	Disposal of Special Waste or Hazardous Waste - Cider Hill Road Underpass	Lump Sum	1				
506.192	Disposal of Special Waste or Hazardous Waste - Captain Thomas Road Underpass	Lump Sum	1				
506.193	Disposal of Special Waste or Hazardous Waste - Route 126 Underpass	Lump Sum	1				
506.194	Disposal of Special Waste or Hazardous Waste - High Street Underpass	Lump Sum	1				
526.306	Temporary Concrete Barrier, Type I - Supplied by Authority (600 LF)	Lump Sum	1				
527.341	Work Zone Crash Cushion - TL-3	Unit	4				
619.1202	Temporary Mulch	Lump Sum	1				
629.05	Hand Labor, Straight Time	Hour	40				
631.35	Foreman	Hour	20				
652.3611	Traffic Control Devices and Maintenance of Traffic Control Devices - Cider Hill Road Underpass	Lump Sum	1				
652.3612	Traffic Control Devices andMaintenance of Traffic Control Devices - Captain Thomas Road Underpass	Lump Sum	1				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
652.3613	Traffic Control Devices and Maintenance of Traffic Control Devices - Route 126 Underpass	Lump Sum	1				
652.3614	Traffic Control Devices and Maintenance of Traffic Control Devices - High Street Underpass	Lump Sum	1				
652.41	Portable-Changable Message Sign	Each	2				
652.45	Truck Mounted Attenuator	Calendar Day	180	200	00	36,000	00
652.451	Automated Trailer Mounted Speed Limit Sign	Calendar Day	180	75	00	13,500	00
652.46	Temporary Portable Rumble Strip	Unit	150	150	00	22,500	00
659.10	Mobilization	Lump Sum	1				
					TOTAL:		

Acknowledgment is hereby made of the following Addenda received since issuance of the Plans and Specifications: _____

_____

_____

Accompanying this Proposal is an original bid bond, cashiers or certified check on _____ Bank, for _____, payable to the Maine Turnpike Authority. In case this Proposal shall be accepted by the Maine Turnpike Authority and the undersigned should fail to execute a Contract with, and furnish the security required by the Maine Turnpike Authority as set forth in the Specifications, within the time fixed therein, an amount of money equal to Five (5%) Percent of the Total Amount of the Proposal for the Contract awarded to the undersigned, but not less than $500.00, obtained out of the original bid bond, cashier's or certified check, shall become the property of the Maine Turnpike Authority; otherwise the check will be returned to the undersigned.

The performance of said Work under this Contract will be completed during the time specified in Subsection 107.1.

It is agreed that time is of the essence of this Contract and that I (we) will, in the event of my (our) failure to complete the Work within the time limit named above, pay to Maine Turnpike Authority liquidated damages in the amount or amounts stated in the Specifications.

The undersigned is an Individual/Partnership/Corporation under the laws of the State of _____, having principal office at _____, thereunto duly authorized.

_____ *(SEAL)*

_____ *(SEAL)*

Affix Corporate Seal
or Power of Attorney
Where Applicable

_____ *(SEAL)*

By: _____

Its: _____

Information below to be typed or printed where applicable:

INDIVIDUAL:

_____	_____
(Name)	(Address)

PARTNERSHIP - Name and Address of General Partners:

_____	_____
(Name)	(Address)
_____	_____
(Name)	(Address)
_____	_____
(Name)	(Address)
_____	_____
(Name)	(Address)

INCORPORATED COMPANY:

_____	_____
(President)	(Address)
_____	_____
(Vice-President)	(Address)
_____	_____
(Secretary)	(Address)
_____	_____
(Treasurer)	(Address)

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

YORK TO AUGUSTA

CONTRACT AGREEMENT

This Agreement made and entered into between the Maine Turnpike Authority, and sometimes termed the "Authority", and _____

_____

herein termed the "Contractor":

WITNESSETH: That the Authority and the Contractor, in consideration of the premises and of the mutual covenants, considerations and agreements herein contained, agree as follows:

FIRST: The parties hereto mutually agree that the documents attached hereto and herein incorporated and made a part hereof collectively evidencing and constituting the entire Contract to the same extent as if herein written in full, are the Notice to Contractors, the Accepted Proposal, the Specifications, the Plans, this Agreement, the Contract Bond and all Addenda to the Contract Documents duly issued and herewith enumerated:

_____

_____

SECOND: The Contractor for and in consideration of certain payments to be made as hereafter specified, hereby covenants and agrees to perform and execute all of the provisions of this Contract and of all documents and parts attached hereto and made a part thereof, and at his own cost and expense to furnish and perform everything necessary and required to construct and complete, ready for its intended purpose, in accordance with the Contract and such instructions as the Engineer may give, acceptable to the Authority, in the times provided, all of the Work covered and included under Contract No. _____ covering _____ as herein described.

THIRD: In consideration of the performance by the Contractor of his covenants and agreements as herein set forth, the Authority hereby covenants and agrees to pay the Contractor according to the Schedule of Prices set forth in the Proposal with additions and deductions as elsewhere herein provided in the times and in the manner stated in the Specifications. This Agreement shall insure to the benefit of, and shall be binding upon the parties hereto, and upon their respective successors and assigns; but neither party hereto shall assign or transfer his interest herein in whole or in part without the consent of the other, except as herein provided.

IN WITNESS WHEREOF the parties to this Agreement have executed the same in quintuplicate.

AUTHORITY -

MAINE TURNPIKE AUTHORITY

By: _____

Title: CHAIRMAN

Date of Signature: _____

ATTEST:

_____
Secretary

CONTRACTOR -

_____
CONTRACTOR

By: _____

Title: _____

Date of Signature: _____

WITNESS:

_____

CONTRACT BOND

KNOW ALL MEN BY THESE PRESENTS that _____

of _____ in the County of _____ and State of _____

as Principal, and _____ a Corporation duly organized under the

laws of the State of _____ and having a usual place of business in _____

_____

As Surety, are held and firmly bound unto the Maine Turnpike Authority in the sum of _____Dollars ($_____.___), to be paid to said Maine Turnpike Authority, or its successors, for which payment, well and truly to be made, we bind ourselves, our heirs, executors, successors and assigns jointly and severally by these presents.

The condition of this obligation is such that the Principal, designated as Contractor in the foregoing Contract No. _____ shall faithfully perform the Contract on his part and satisfy all claims and demands incurred for the same and shall pay all bills for labor, material, equipment and all other items contracted for, or used by him, in connection with the Work contemplated by said Contract, and shall fully reimburse the Obligee for all outlay and expense which the Obligee may incur in making good any default of said Principal, then this Obligation shall be null and void; otherwise it shall remain in full force and effect.

Signed and sealed this _____ day of _____, A.D., 201___

Witnesses: CONTRACTOR

_____ _____ *(SEAL)*

_____ _____ *(SEAL)*

_____ _____ *(SEAL)*

SURETY

_____ _____ *(SEAL)*

_____ _____ *(SEAL)*

_____ _____ *(SEAL)*

(Surety must attach copy of Power of Attorney showing authority of Office or Agent to execute bonds)

FINAL LIEN AND CLAIM WAIVER AND AFFIDAVIT

Upon receipt of the sum of _____, which sum represents the total amount paid, including the current payment for work done and materials supplied for Project No. _____, in _____, Maine, under the undersigned's Contract with the Maine Turnpike Authority.

The undersigned, on oath, states that the Final Payment of _____ is the final payment for all work, labor, materials, services and miscellaneous (all of which are hereinafter referred to as "Work Items") supplied to the said Project through _____and that no additional sum is claimed by the undersigned respecting said Project.

The undersigned, on oath, states that all persons and firms who supplied Work Items to the undersigned in connection with said Project have been fully paid by the undersigned for such Work Items or that such payment will be fully effected immediately upon receipt of this payment.

In consideration of the payment herewith made, the undersigned does fully and finally release and hold harmless the Maine Turnpike Authority, and its Surety, if any, from any and all claims, liens or right to claim or lien, arising out of this Project under any applicable bond, law or statute.

It is understood that this Affidavit is submitted to assure the Owner and others that all liens and claims relating to the Work Items furnished by the undersigned are paid.

_____
(Contractor)

By: _____

Title: _____

State of MAINE

County of _____

I, _____, hereby certify on behalf of _____
(Company Officer) *(Company Name)*

its _____, being first duly sworn and stated that the foregoing representations are
(Title)

are true and correct upon his own knowledge and that the foregoing is his free act and deed in said capacity and the free act and deed of the above-named

_____

.

(Company Name)

The above-named, _____, personally appeared before me this ____ day of _____ and swears that this is his free act and deed.

(SEAL)

_____
Notary Public

My Commission Expires: _____

STATEMENT OF QUALIFICATION

The undersigned, under the pains and penalty of perjury, offers the following information as evidence of his qualifications to perform the Work as bid upon according to all the requirements of the Plans and Specifications.

1. How long have you been in business under present business name? _____ Years

2. Have you ever failed to complete any work awarded? _____ Yes _____ No

   If Yes, provide explanation: _____

   _____

   _____

3. Bank Reference: _____

   _____

   _____

4. History of Contracts: On the following "History of Contracts" sheet, provide full information about all of your Contracts similar to this Contract.

5. Status of Contracts on Hand: On the following "Status of Contracts on Hand" sheet, provide full information about all of your Contracts.

_____
(Date)

_____
(Name of Bidder as appearing in submitted Proposal)

HISTORY OF CONTRACTS

PROJECT NAME:

OWNER:

LOCATION:

DESCRIPTION:

CONTRACT AMOUNT:

NAME OF SUBCONTRACTOR(S):

SUBCONTRACTOR'S CONTRACT AMOUNT(S):

CONTRACT COMPLETION DATE:

ACTUAL COMPLETION DATE:

LIST OF OTHER CONTRACTORS WORKING ON A PROJECT FOR THE OWNER AT THE SAME TIME:

STATUS OF CONTRACTS ON HAND

OWNER	CONTACT NAME & TELEPHONE NO.	LOCATION OF WORK	DESCRIPTION OF WORK	GENERAL CONTRACTOR OR SUBCONTRACTOR	CONTRACT AMOUNT	BALANCE TO BE COMPLETED	ESTIMATED DATE OF COMPLETION

MAINE TURNPIKE AUTHORITY

SPECIFICATIONS

PART I – SUPPLEMENTAL SPECIFICATIONS

(Rev. November 10, 2016)

Supplemental Specifications available on the Maine Turnpike Authority website

MAINE TURNPIKE AUTHORITY

SPECIFICATIONS

PART II – SPECIAL PROVISIONS

PART II - SPECIAL PROVISIONS

APPENDICES

MAINE TURNPIKE AUTHORITY

SPECIFICATIONS

PART II - SPECIAL PROVISIONS

All work shall be governed by the Maine Department of Transportation Standard Specifications, Revision of November 2014, except for that work which applies to sections of the Maine Department of Transportation Standard Specifications which are amended by the Maine Turnpike Supplemental Specifications and the following modifications, additions and deletions.

General Description of Work

The following work is included in this Contract:

Cider Hill Road Underpass Bridge: Cleaning and painting specified areas of structural steel and metal work, and all non-galvanized bearing assemblies, with a three coat NEPCOAT paint system along with all work incidental thereto in accordance with these Specifications.

Captain Thomas Road Underpass Bridge: Cleaning and painting specified areas of structural steel and metal work, and all non-galvanized bearing assemblies, with a three coat NEPCOAT paint system along with all work incidental thereto in accordance with these Specifications.

Route 126 Underpass Bridge: Cleaning and painting specified areas of structural steel and metal work, and all non-galvanized bearing assemblies, with a three coat NEPCOAT paint system along with all work incidental thereto in accordance with these Specifications.

High Street Underpass Bridge: Cleaning and painting specified areas of structural steel and metal work, and all non-galvanized bearing assemblies, with a three coat NEPCOAT paint system along with all work incidental thereto in accordance with these Specifications.

The Contractor shall be certified to SSPC QP 1 and QP 2.

The following bridges are included in the Contract:

.

Bridge Name	Approximate Square Feet of Steel to be Cleaned and Painted	Mile	Town
Cider Hill Road Underpass Bridge	23,870	6.2	York
Captain Thomas Road Underpass Bridge	12,130	14.8	Ogunquit
Route 126 Underpass Bridge	14,110	101.7	West Gardiner
High Street Underpass Bridge	8,440	103.6	West Gardiner

Plans

The drawings included in these Contract Documents, and referred to as the Plans, show the general character of the work to be done under this Contract. They bear the general title "Maine Turnpike – Contract 2018.04 – Cleaning and Painting of Steel Structures – Cider Hill Road Underpass Bridge, Captain Thomas Road Underpass Bridge, Route 126 Underpass Bridge and High Street Overpass Bridge; Miles 6.2, 14.8, 101.7 and 103.6". The right is reserved by the Resident to make such minor corrections or alterations in the Plans as he deems necessary without change in the unit prices on the Schedule of Prices of the Proposal.

101.2 Definition

Holidays

The following is added after Memorial Day in the General Provisions:

Independence Day 2018	12:00 p.m. preceding Tuesday to
(Fourth of July)	12:00 p.m. the following Thursday.

102.11.2 Curable Bid Defects

This Subsection is amended by the addition of the following:

(E) Missing or incomplete "Statement of Qualifications", "History of Contracts", and/or "Status of Contract on Hand" which are contained in the proposal package.

103.4 Notice of Award

The following sentence is added:

The Maine Turnpike Authority Board is scheduled to consider the Contract Award on February 22nd, 2018.

104.3.8 Wage Rates and Labor Laws

Section 104.3.8 Wage Rates and Labor Laws has been amended as follows:

The fair minimum hourly rates determined by the State of Maine Department of Labor for this Contract are as follows:

THIS DOCUMENT MUST BE CLEARLY POSTED AT THE PERTAINING STATE FUNDED PREVAILING WAGE CONSTRUCTION SITE

State of Maine
Department of Labor
Bureau of Labor Standards
Augusta, Maine 04333-0045
Telephone (207) 623-7906

Wage Determination - In accordance with 26 MRSA §1301 et. seq., this is a determination by the Bureau of Labor Standards, of the fair minimum wage rate to be paid to laborers and workers employed on the below titled project.

Title of Project -------- MTA 2018.04-Cleaning and Painting of Steel Structures, York Co

Location of Project -- York, Ogunquit in York County

2018 Fair Minimum Wage Rates
Heavy & Bridge York County

Occupation Title	Minimum Wage	Minimum Benefit	Total	Occupation Title	Minimum Wage	Minimum Benefit	Total
Backhoe Loader Operator	$20.00	$2.16	$22.16	Laborer (Includes Helper-Tender)	$16.50	$1.63	$18.13
Boom Truck (Truck Crane) Operator	$21.66	$6.86	$28.52	Laborer - Skilled	$21.00	$4.15	$25.15
Bricklayer	$24.00	$3.99	$27.99	Line Erector-Power/Cable Splicer	$25.75	$7.36	$33.11
Bulldozer Operator	$20.00	$4.06	$24.06	Loader Operator - Front-End	$21.00	$3.21	$24.21
Carpenter	$24.31	$10.58	$34.89	Mechanic- Maintenance	$20.00	$5.72	$25.72
Carpenter - Rough	$20.94	$4.46	$25.40	Mechanic- Refrigeration	$24.88	$4.76	$29.64
Cement Mason/Finisher	$17.00	$0.56	$17.56	Millwright	$29.90	$23.69	$53.59
Communication Equipment Installer	$20.00	$1.85	$21.85	Painter	$22.00	$3.06	$25.06
Comm Transmission Erector Microwave & Cell	$19.00	$3.57	$22.57	Paver Operator	$20.00	$3.78	$23.78
Crane Operator =>15 Tons)	$29.00	$10.84	$39.84	Pile Driver Operator	$25.00	$11.13	$36.13
Crusher Plant Operator	$17.75	$2.48	$20.23	Pipe/Steam/Sprinkler Fitter	$22.25	$8.62	$30.87
Diver	$32.00	$0.00	$32.00	Pipelayer	$28.00	$12.54	$40.54
Driller -Rock	$18.38	$2.60	$20.98	Pump Installer	$21.00	$3.73	$24.73
Earth Auger Operator	$23.76	$6.31	$30.07	Reclaimer Operator	$18.50	$2.85	$21.35
Electrician - Licensed	$30.07	$17.09	$47.16	Rigger	$20.00	$6.12	$26.12
Electrician Helper/Cable Puller (Licensed)	$27.00	$12.01	$39.01	Roller Operator - Earth	$15.88	$1.76	$17.64
Excavator Operator	$23.25	$3.71	$26.96	Roller Operator - Pavement	$18.30	$1.64	$19.94
Fence Setter	$16.00	$1.17	$17.17	Truck Driver - Light	$18.15	$2.88	$21.03
Flagger	$12.00	$0.00	$12.00	Truck Driver - Medium	$17.75	$1.82	$19.57
Grader/Scraper Operator	$21.33	$5.13	$26.46	Truck Driver - Heavy	$19.00	$3.19	$22.19
HVAC (Heat-Vent-Air Conditioning)	$23.00	$3.05	$26.05	Truck Driver - Tractor Trailer	$20.50	$5.46	$25.96
Ironworker – Ornimental	$22.48	$4.85	$27.70				
Ironworker - Reinforcing	$26.20	$12.15	$38.35				
Ironworker - Structural	$23.00	$6.26	$29.26				

The Laborer classifications include a wide range of work duties. Therefore, if any specific occupation to be employed on this project is not listed in this determination, call the Bureau of Labor Standards at the above number for further clarification.

Welders are classified in the trade to which the welding is incidental.

Apprentices - The minimum wage rate for registered apprentices are those set forth in the standards and policies of the Maine State Apprenticeship and Training Council for approved apprenticeship programs.

Posting of Schedule - Posting of this schedule is required in accordance with 26 MRSA §1301 et. seq., by any contractor holding a State contract for construction valued at $50,000 or more and any subcontractors to such a contractor.

Appeal - Any person affected by the determination of these rates may appeal to the Commissioner of Labor by filing a written notice with the Commissioner stating the specific grounds of the objection within ten (10) days from the filing of these rates.

Determination No: HB-005-2018

A true copy

Filing Date: January 8, 2018

Attest: Scott R Cotnoir

Scott A. Cotnoir
Wage & Hour Director

Expiration Date: 12-31-2018

BLS(Heavy & Bridge York)

THIS DOCUMENT MUST BE CLEARLY POSTED AT THE PERTAINING STATE FUNDED PREVAILING WAGE CONSTRUCTION SITE

State of Maine
Department of Labor
Bureau of Labor Standards
Augusta, Maine 04333-0045
Telephone (207) 623-7906

Wage Determination - In accordance with 26 MRSA §1301 et. seq., this is a determination by the Bureau of Labor Standards, of the fair minimum wage rate to be paid to laborers and workers employed on the below titled project.

Title of Project --------MTA 2018.04- Cleaning and Painting of Steel Structures, Ken Co.

Location of Project --West Gardiner, Kennebec County

2018 Fair Minimum Wage Rates
Heavy & Bridge Kennebec County

Occupation Title	Minimum Wage	Minimum Benefit	Total	Occupation Title	Minimum Wage	Minimum Benefit	Total
Backhoe Loader Operator	$20.00	$2.16	$22.16	Laborer (Includes Helper-Tender	$16.50	$0.94	$17.44
Boom Truck (Truck Crane)Operator	$21.66	$6.86	$28.52	Laborer - Skilled	$18.25	$3.84	$22.09
Bricklayer	$24.00	$3.99	$27.99	Line Erector-Power/Cable Splicer	$27.50	$6.29	$33.79
Bulldozer Operator	$20.00	$4.06	$24.06	Loader Operator - Front-End	$19.00	$2.03	$21.03
Carpenter	$21.35	$7.96	$29.31	Mechanic- Maintenance	$21.25	$7.11	$28.36
Carpenter - Rough	$20.13	$6.29	$26.42	Mechanic- Refrigeration	$24.88	$4.76	$29.64
Cement Mason/Finisher	$17.00	$0.56	$17.56	Millwright	$24.66	$9.63	$34.29
Communication Equipment Installer	$20.00	$0.00	$20.00	Painter	$22.00	$3.14	$25.14
Comm Transmission Erector Microwave & Cell	$19.00	$3.57	$22.57	Paver Operator	$20.00	$3.78	$23.78
Crane Operator =>15 Tons)	$25.00	$9.00	$34.00	Pile Driver Operator	$25.00	$11.13	$36.13
Crusher Plant Operator	$17.75	$2.48	$20.23	Pipe/Steam/Sprinkler Fitter	$26.00	$7.95	$33.95
Diver	$32.00	$0.00	$32.00	Pipe Layer	$28.00	$12.54	$40.54
Driller -Rock	$18.38	$2.60	$20.98	Pump Installer	$21.00	$3.73	$24.73
Earth Auger Operator	$23.76	$6.31	$30.07	Reclaimer Operator	$18.50	$2.85	$21.35
Electrician - Licensed	$26.50	$10.03	$36.53	Rigger	$20.00	$6.12	$26.12
Electrician Helper/Cable Puller (Licensed)	$19.30	$4.39	$23.69	Roller Operator - Earth	$15.88	$1.76	$17.64
Excavator Operator	$19.82	$2.53	$22.35	Roller Operator - Pavement	$18.30	$1.64	$19.94
Fence Setter	$16.00	$1.17	$17.17	Truck Driver - Light	$18.15	$2.88	$21.03
Flagger	$12.00	$0.00	$12.00	Truck Driver - Medium	$17.75	$1.82	$19.57
Grader/Scraper Operator	$21.33	$5.13	$26.46	Truck Driver - Heavy	$16.75	$2.10	$18.85
HVAC (Heat-Vent-Air Conditioning)	$23.00	$3.05	$26.05	Truck Driver - Tractor Trailer	$20.50	$5.46	$25.96
Ironworker – Ornamental	$22.85	$4.85	$27.70				
Ironworker - Reinforcing	$26.48	$11.83	$38.31				
Ironworker - Structural	$22.25	$8.73	$30.98				

The Laborer classifications include a wide range of work duties. Therefore, if any specific occupation to be employed on this project is not listed in this determination, call the Bureau of Labor Standards at the above number for further clarification.

Welders are classified in the trade to which the welding is incidental.

Apprentices - The minimum wage rate for registered apprentices are those set forth in the standards and policies of the Maine State Apprenticeship and Training Council for approved apprenticeship programs.

Posting of Schedule - Posting of this schedule is required in accordance with 26 MRSA §1301 et. seq., by any contractor holding a State contract for construction valued at $50,000 or more and any subcontractors to such a contractor.

Appeal - Any person affected by the determination of these rates may appeal to the Commissioner of Labor by filing a written notice with the Commissioner stating the specific grounds of the objection within ten (10) days from the filing of these rates.

Determination No: **HB-006-2018**

A true copy

Filing Date: **January 8, 2018**

Attest: Scott R. Cotnoir

Scott A. Cotnoir
Wage & Hour Director

Expiration Date: **12-31-2018**

BLS(Heavy & Bridge Kennebec)

104.4.2 Preconstruction Conference

The following paragraph is added:

The preconstruction conference will be held after bid award to discuss the procedures to be used for all lead abatement, the coating application, the inspection hold points, the responsibilities and documentation methods of each party involved, all safety methods to be used, contingency plans, and all other areas relating to the adequate completion of the painting of this Contract. Present at this preconstruction conference shall be all parties directly involved in the lead abatement, paint application, and inspection of this Project including the Authority, all Quality Assurance personnel, the Contractor and/or subcontractors, and all Quality Control personnel.

104.4.6 Utility Coordination

This Subsection is amended by the addition of the following:

These Special Provisions outline the arrangements which have been established by the Authority for coordination of the work to be accomplished by the utilities. The scope and schedule of utility relocation work is noted herein. The Contractor shall plan and conduct his work accordingly.

General

FairPoint Communications Inc. has (4) - 4" conduits underneath Cider Hill Road Underpass Bridge in the southernmost bay running parallel with the bridge from the west abutment to east abutment. This utility and support members shall be protected at all times from project activities including cleaning and painting. See Subsection 506.034 for more Contract requirements regarding utility protection. See Subsection 104.4.7 for other Contracts with work being performed around this utility.

Utility working days are Monday through Friday, conditions permitting. Times are estimated on the basis of a single crew for each utility. Any times and dates mentioned are estimates only and are dependent upon favorable weather, working conditions, and freedom from emergencies. The Contractor shall have no claim against the Authority if they are exceeded.

The Contractor shall plan and conduct his operations in accordance with the following utility schedule. The Contractor must comply with all OSHA regulations pertaining to work adjacent to utility wires. The Contractor shall plan and conduct his work accordingly.

Utility Schedule:

- The Contractor shall notify FairPoint Communications Inc. at least 7 days before work begins around their utility.

The following utilities are located within the Project limits. The Contractor shall ascertain the location of the existing utilities and any other necessary information by direct inquiry at the office of the following utility owners:

AERIAL UTILITIES

COMMUNICATION:

FairPoint Communications
5 Davis Farm Rd
Portland, Maine 04103
Marty Pease
Office: (207) 797-1119
Cell: (207) 272-7993
mpease@fairpoint.com

Spectrum (Charter Communications)
118 Johnson Road
Portland, Maine 04102
Don Johnson
(207) 253-2291
don.johnson@charter.com

ELECTRIC:

Central Maine Power
57 Old Winthrop Road
Augusta, Maine 04330
Skip McKay
(207) 626-9445
maurice.mckay@cmpco.com

UNDERGROUND UTILITIES

WATER:

York Water District
P.O. Box 447
York, Maine 03909
Don Neumann
(207) 363-2265

UNDERGROUND UTILITIES

Same info as for Aerial Utilities

104.4.7 Cooperation With Other Contractors

This Subsection is amended by the addition of the following:

Adjacent contracts currently scheduled for the 2018 construction season include:

- 2017.09 York Toll Plaza Replacement
- 2017.10 Clearing: MM 42-47.7, 92.8-100.8 and 85-85.6
- 2018.01 Mainline pavement rehabilitation: MM 98-102.6
- 2018.05 I-295 SB Underpass bridge rehabilitation
- 2018.08 Dennett Road Bridge Repair and York River Bridge wearing surface repair
- 2018.15 Cobbosseecontee Bridge deck rehabilitation

105.2.4.2 Lead Paint

The Contractor shall note that the existing bridge structure contains lead based paint. A copy of the Lead Determination Report is attached as **Appendix A**. The Contractor shall treat all paint as lead based unless he can provide laboratory TCLP results of 5 mg/L or less. The Contractor shall institute every precaution when working with materials coated with lead based paints.

Lead Paint Removal

The Contractor is required to remove and dispose of lead based paint and paint residue before cutting, grinding, drilling and sandblasting existing materials in preparation of completing the work except as provided under the Drilling of Lead Based Paint subsection in this Special Provision. All lead based paint and paint residue shall be removed, handled, stored and disposed of in conformance with all local, State and Federal laws and regulations governing lead based paint. The Contractor may use his own properly trained employees to abate the lead based paint in accordance with applicable regulations and requirements; or he may hire a licensed lead abatement subcontractor to abate the lead based paint in accordance with applicable regulations and requirements.

The Contractor, or licensed lead abatement subcontractor, shall submit a Project specific Health and Safety (OSHA) Plan and a Hazardous Waste Management Plan (EPA/DEP) a minimum of 21 days prior to undertaking the removal of lead based paint.

Drilling of Lead Based Paint

The Contractor may drill lead based painted steel, without lead based paint removal, provided the Contractor collects and recycles the drill cuttings at a licensed metal recycling facility. If the Contractor chooses not to collect and recycle the drill cuttings at a licensed metal recycling facility he will be required to abate the area where drilling is to occur in full accordance with the lead based paint removal, storage and disposal requirement of this Special Provision.

The Authority will require a signed statement from the Contractor stating the drill cuttings were collected and recycled at a licensed metal recycling facility and the name the recycling facility.

Health and Safety Plan

The Health and Safety Plan submittal shall describe how the Contractor/licensed lead abatement subcontractor intends to remove the lead based paints; and shall outline how the Contractor/licensed lead abatement subcontractor will adhere to all Federal, State and local ordinances which govern worker (including authorized representatives of the Authority) exposure to lead based paints, and ensure the safety of the workers performing lead removal. Copies of current worker training certificates (OSHA), medical screenings, and respirator fit up shall be included in the submittal.

Hazardous Waste Management Plan

The Hazardous Waste Management Plan submittal shall describe how the Contractor/licensed lead abatement subcontractor intends to manage the hazardous waste that will be generated, temporarily accumulated, stored, transported off-site and disposed; adhere to ordinances associated with the management of hazardous wastes; and ensure protection of the environment. See also Special Provision 506.11 Waste Management.

The Hazardous Waste Management Plan shall:

- Be signed by the Contractor;
- State whether Contractor or licensed lead abatement subcontractor will be undertaking the work; and,
- State whether abated lead materials will be accumulated and stored on-site, or be transported to an Authority storage facility, if designated.

The Hazardous Waste Management Plan shall include (at a minimum) the following:

- Storage, Accumulation and Labeling Requirements:
  - All hazardous waste shall be managed in US DOT approved waste containers and stored in an approved fully-enclosed locking secured structure which has a firm, impervious floor surface and secondary containment the capacity of which must exceed 20% of the total capacity of all containers used to store waste or 110% of the capacity of the largest container, whichever is greater.
  - The lockable secured structure shall be labeled “Danger- Unauthorized Personnel Keep Out” and “Hazardous Waste Storage Area”.
  - The lockable secured structure shall be locked at all times when not being accessed.
  - All waste containers shall be labeled with the words “Hazardous Waste”, the hazard (e.g., toxic, flammable, etc.), accumulation start date, container full date, generator information and site location.
  - Waste containers shall be kept closed unless waste is being added to the container.
  - Waste containers shall be 55 gallons or less
  - The Contractor shall store and manage all hazardous waste, in conformance with MaineDEP regulations as detailed in Chapters 850 – 857 and EPA regulations as defined in 40 CFR 260 – 268.

- All hazardous wastes are limited to an on-site storage time as outlined in the Contractor's provisional generator's permit but will not exceed 90 days from accumulation start date.

- Inspections (including frequency and checklist):

  - Inspections shall be performed each day the Contractor works
  - Inspection checklist shall be similar to MaineDEP format (Refer to Appendix A1 of MaineDEP Handbook for Hazardous Waste Generators – January 2003)
  - A Daily Inspection Log shall be kept at the storage site and include the amount and type of hazardous waste transported, the date the waste was accepted at the storage site, and the project location where the waste was generated.
  - The Contractor shall provide the Authority with (2) keys or combinations for each locking secured structure for inspection purposes.

- Transport and DOT "Pre-Transport Requirements":

  - Specify the licensed hazardous waste transporter to be used
  - Obtain Generator's EPA ID No. (typically a provisional ID # is obtained through the licensed hazardous waste transporter)
  - US DOT – approved containers must be used for shipment
  - Schedule MTA for signing Hazard Waste Manifest

- Recordkeeping Requirements:

  - Describe where at the jobsite the required records (e.g., inspection logs, training records, Lead Determination report/hazardous waste characterization, etc.) will be maintained
  - Describe how and when copies of the required documents specified above will be transferred to the MTA Environmental Services Coordinator's office

The Contractor/licensed lead abatement subcontractor, shall provide documentation to the MTA that the employees who will be removing, handling, managing and/or directly supervising the hazardous waste operations have received required Resource Conservation and Recovery Act (RCRA) hazardous waste management training, and all training is current.

The lead based hazardous waste must remain on-site, unless the removal is being performed by a licensed lead abatement subcontractor that collects the paint residue in HEPA vacuums and is licensed by DEP/EPA to transport and temporarily store lead based hazardous waste at the removal Contractor's licensed waste storage facility. Both on-site and licensed off-site lead based hazardous waste storage facilities require secure storage and daily inspection of the stored waste.

If the removal Contractor is not licensed by DEP/EPA to transport and temporarily store lead based hazardous waste off-site, then an EPA licensed Hazardous Waste transporter(s) shall be used to remove hazardous waste from the site. All removal and disposal documentation will be required when the hazardous waste leaves the site. As the Generator, only the Authority's Environmental Services Coordinator or his trained designee shall sign waste manifests when material is removed from the Project site.

The removal, storage, handling, transporting, and disposal of lead based paint and lead based paint residue will not be measured separately for payment, but shall be incidental to the various Contract work items.

105.8.2 Permit Requirements

The Contractor shall prepare a Contractor's Staging Plan illustrating the Contractor's proposed limit of all construction access locations, field office locations, material and temporary waste storage locations, as well as include the Contract limits of any earthwork disturbance. All applicable erosion and sedimentation control devices needed shall be detailed on the Contractor's Staging plan and are not limited to those devices shown on the Contract Staging plan. **This Plan shall be submitted for review and approval, to the Resident within 14 days of Contract award.** Payment for creating, revising, and completing this plan shall be incidental to Item 659.10, Mobilization.

At any time during the Contract, if the contractor anticipates disturbing earth, excavation or placing fill material, the Contractor shall submit a Limit Of Disturbance plan (including any additional erosion and sedimentation control measures needed) to the Resident for review and approval prior to any disturbance taking place:

- If the contractor proposes earth disturbance, the Resident shall have a minimum of five (5) working days to approve the LOD plan and then shall submit a Notice of Intent for MaineDEP approval. The approval may take a minimum of 21 working days.

Compliance with the erosion and sedimentation control requirements outlined in this Contract is required by the Contractor.

The Contractor shall comply with the conditions outlined in the Maine Pollutant Discharge Elimination System General Permit for stormwater discharge associated with construction activity. The Contractor shall indemnify and hold harmless the Maine Turnpike Authority or its agents, representatives and employees against any and all claims, liabilities or fines arising from or based on the violation of the above noted permits.

106.9.1 Warranty by Contractor

NEPCOAT Paint System

The Contractor unconditionally warrants and guarantees that the NEPCOAT paint system Work will be free from warranty defects for two (2) years from the date of Final Acceptance. Final Acceptance includes receipt of all conforming closeout documentation.

The cost of the Two-Year Coating System Failure Warranty will not be paid separately but shall be incidental to the various contract pay items.

General

The warranties shall include all costs associated with the Remedial work as approved by the Authority including but not limited to traffic control, surface preparation of structural steel,

containment system, disposal of hazardous material, field painting, and other incidentals required for the work.

The warranties apply to the entirety of the structural steel paint system applied by the Contractor. The warranted items will be assessed by visual inspection and destructive inspection as needed at the discretion of the Authority.

The structural steel paint system is considered defective if any of the following conditions are discovered within the specified warranty period:

1. The occurrence of visible rust or rust breakthrough, paint blistering, peeling, scaling or un-removed slivers.
2. Paint applied over dirt, debris, blasting media or rust products not removed during blasting operations.
3. Material deficiencies, application deficiencies, incomplete coatings (holidays), or coating thicknesses outside the thickness limits specified in the manufacturer's product data sheet submittals.
4. Damage to the coating system caused by the Contractor while removing scaffolding, netting, forms, hanger brackets, safety wires, or performing other work.
5. Not following the manufacturer's surface preparation and coating application requirements.

Exclusions to the warranty will be damage to the coating resulting from vehicle damage, fire, or other damage not caused by the Contractor or subcontractor.

If the Authority discovers any warranty defects during the warranty period, the Contractor agrees to promptly perform all remedial work at no additional cost or liability to the Authority.

The painting system will be inspected by an Authority representative the last month of the warranty period. Within (30) days of being notified of warranty defects, the Contractor shall submit to the Authority for approval a Remedial Work Plan including scope of work, conceptual work methods, schedule, construction phasing, and other significant aspects of the work. Unless otherwise provided by the Authority in writing, any work commenced prior to the Authority's approval of the Work Plan will be at the Contractor's sole risk. All warranty work shall be completed within (60) days of the Authority's acceptance of the Contractor's Remedial Work Plan or by June 1 of the following year (if the Remedial Work Plan is accepted after mid-October) for accommodating weather conditions.

Upon final inspection, satisfactory to the Authority, the Authority will issue a written acceptance of the remedial work. The Contractor warranties and guarantees all remedial work to be free from warranty defects for one (1) year after such acceptance.

107.1 Contract Time and Contract Completion Date

This Subsection is amended by the addition of the following:

All work shall be completed on or before October 26th, 2018. The project shall be substantially complete by October 12, 2018.

107.1.1 Substantial Completion

This Subsection is amended by the addition of the following:

Substantially complete shall be defined by the Authority as the following:

- All bridge painting work, including final touch up, shall be complete and accepted.
- No further lane closures are required. Shoulder closures will be permitted, except during periods of inclement weather.
- Soil samples will have been taken and delivered to the lab for analysis.
- All disturbed slopes shall have been loamed, seeded, mulched and erosion control mesh blanketed and/or protected temporary erosion control mix where necessary.

Supplemental Liquidated damages on a calendar day basis in accordance with Subsection 107.8 shall be assessed for each calendar day that substantial completion is not achieved.

107.4.7 Limitations of Operations

The contractor's personnel and equipment shall remain behind drums or barricades at all times. A minimum traffic lane width of 15'-0", excluding the drums, is required during daylight hours and 12'-6", excluding the drums, is required during nighttime hours. Additional setups to contain and remove paint, and to coat the prepared steel may be required to maintain the minimum traffic lane widths.

The Contractor shall submit a schedule to the Resident at least (2) weeks prior to beginning work when more than (1) crew or multiple crews will be working on the project at more than one bridge location at a time.

Concurrent work at multiple bridge locations shall only include either a combination of Cider Hill Road (Mile 6.2) and Captain Thomas Road (Mile 14.8) or Route 126 (Mile 101.7) and High Street (Mile 103.6).

Contract work at Route 126 (Mile 101.7) shall not begin until August 1st, 2018.

110.2.1 Bonds

The following is added to the first paragraph:

Paint system specific warranty requirements are outlined in section 106.9.1. The two-year paint system warranties shall be included in the Performance and Payment Bonds issued for this contract.

SPECIAL PROVISION

SECTION 506

PAINTING OF STRUCTURAL STEEL

(Lead Abatement and NEPCOAT Coating Application)

All requirements in this specification are the responsibility of the Contractor unless noted otherwise. The provisions of the MaineDOT Standard Specification - Section 506 Shop Applied Protective Coating - Steel do not apply to this Special Provision.

506.01 Description

This specification covers the field cleaning of and application of a protective coating system to the specified areas of existing structural steel on the Cider Hill Road Underpass Bridge – Mile 6.2, Captain Thomas Road Underpass Bridge – Mile 14.8, Route 126 Underpass Bridge – Mile 101.7 and High Street Underpass Bridge – Mile 103.6.

The work shall consist of furnishing all supervisory personnel, including competent person(s), labor, tools, equipment, containment, scaffolding, protection of public and private property, Quality Control activities, materials, and incidentals necessary for satisfactory completion of the Work. The specific areas to be cleaned and coated are as follows:

Cider Hill Road Underpass Bridge – Mile 6.2, York:

All steel areas, including beams, beam splices, diaphragms, diaphragm connection plates, bearing stiffeners, angle braces, bearing assemblies, downspouts, lateral bracing, and existing utility supports; excluding the galvanized finger joint downspout at the southeast corner.

Captain Thomas Road Underpass Bridge – Mile 14.8, Ogunquit:

All steel areas, including beams, beam splices, cross frame connection plates, bearing stiffeners and angle braces; excluding the galvanized downspouts, bearing assemblies, abutment diaphragms and cross frames.

Route 126 Underpass Bridge – Mile 101.7, West Gardiner:

All steel areas, including beams, beam splices, diaphragm connection plates, bearing stiffeners, angle braces, diaphragms, bolsters and bearing assemblies; excluding the galvanized downspouts and overhead mounted sign supports.

High Street Underpass Bridge – Mile 103.6, West Gardiner:

All steel areas, including beams, beam splices, diaphragm connection plates, bearing stiffeners, angle braces and diaphragms; excluding the galvanized downspouts and bearing assemblies.

506.02 General

All identified structural steel requires the complete removal of existing rust, mill scale and coatings which may contain lead and hexavalent chromium, by abrasive blast cleaning or power tool cleaning

It is the responsibility of the Contractor to test the existing coating to determine the toxic metal content and, based on those results, design and implement the appropriate plans for containment, environmental protection, waste disposal and worker safety. For informational purposes, a chemical analysis report of paint chip samples taken from the existing paint coating system indicates the presence of toxic metals. The full Report of Analytical Results can be found in **Appendix A**.

Apply a coating system to the cleaned surfaces. The coating system shall be selected from the Northeast Protective Coating Committee (NEPCOAT) Qualified Products List B - Organic Primer, Three Coat System. The list may be found through NEPCOAT's web page: http://www.nepcoat.org.

Contractors and Subcontractors involved with the removal of lead based paint and the field application and touch-up of the coating systems shall be qualified in accordance with SSPC QUALIFICATION PROCEDURE NO. 1, Standard Procedure for Evaluating Painting Contractors (Field Application to Complex Industrial Structures) and SSPC QUALIFICATION PROCEDURE NO. 2, Standard Procedure for the Qualification of Painting Contractors (Field Removal of Hazardous Coatings from Complex Structures) prior to Bid opening and shall remain qualified throughout the duration of the Contract. Copies of current certificates issued by the Qualifying Agency shall be submitted with the Bid package.

Perform lead abatement in compliance with all applicable federal, state and local regulations, including the current version of 29 CFR 1926, OSHA Construction Industry Health and Safety Standards, and in particular, the OSHA Lead in Construction Standard (29 CFR 1926.62).

Assure that the latest copies of the following documents are on site and available at all times. Applicable parts of the documents are enforceable as part of the Contract:

- SSPC Vis 1, Visual Standard for Abrasive Blast Cleaned Steel.
- SSPC Vis 3, Visual Standard for Power and Hand-Tool Cleaned Steel.
- SSPC Guide 6, Guide for Containing Surface Preparation Debris Generated During Paint Removal.
- SSPC PA-17 Procedure for Determining Conformance to Steel Profile/Surface Roughness/Peak Count Requirements.
- SSPC Guide 7, Guide to the Disposal of Lead-Contaminated Surface Preparation Debris.
- 40 CFR 60, Appendix A, Method 22, Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Fires.
- 40 CFR Part 50 Appendix B, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere (High-Volume Method).
- 40 CFR Part 50 Appendix G, Reference Method for the Determination of Lead in Suspended Particulate Matter Collected from Ambient Air.
- SSPC Guide 16, Guide to Specifying and Selecting Dust Collectors.

- SSPC Technical Update TU-7, Conducting Ambient Air, Soil, and Water Sampling During Surface Preparation and Paint Disturbance Activities.
- 29 CFR 1926, OSHA Construction Industry Health Standards.
- SW 846, Test Methods for Evaluating Solid Waste – Physical/Chemical Methods
- Method 1311, Toxicity Characteristic Leaching Procedure (TCLP)
- Department of Environmental Protection's *Handbook for Hazardous Waste Generators.*
- Maine Department of Environmental Protection's *Hazardous Waste Management Rules.*

Supply the Resident with the applicable product data sheets and material safety data sheets MSDS) before any coating work is performed. Also, obtain from the manufacturer written procedures for touch-up including acceptable coating materials. If the coating manufacturer recommends a coating material for touch-up that is different from the coating material chosen by the Contractor, it will be supplied at no additional cost to the Authority. Obtain in writing from the coating manufacturer, and provide to the Resident, a chart or table listing minimum and maximum recoat times for the primer and intermediate coat over the expected range of temperatures and relative humidity.

The primer color and the blasted steel shall be contrasting colors, the primer color and stripe coat color shall be contrasting colors as approved by the manufacturer, and the primer color and intermediate coat shall be contrasting colors. The finish topcoat color shall be green and match the following AMS-STD-595 (previously Federal Standard 595C), light green, color number: 14272.

After completion of the coating work, the completion date (month and year), NTPEP System No. (provided on the NEPCOAT Qualified Products List), the type of coating system used (Organic Zinc = OZ), and top coat federal color number shall be stenciled on the inside of the fascia beams, at the locations designated by the Resident, in four inch letters and numbers (for example: October 2018, NEPCOAT SSC 11-03, OZ E U, Fed Color 14272). The paint used for this marking shall be black polyurethane or another paint approved by the Resident. The Contractor shall submit in writing to the Resident the proposed identification layout for approval prior to stenciling.

The existing beam ends and abutment diaphragms at High Street have a solvent or waxed based bituminous coating that was installed for corrosion protection. The coating, generally referred to as “tectyl coating”, may be under the existing paint system or a topcoat applied to the existing paint system. This solvent or waxed based bituminous coating shall be removed in its’ entirety prior to the application of the specified paint system.

Local road name signs that are attached on the fascia girders over the center pier shall be removed and stored for paint removal and painting, and re-mounted after the painting is complete. All costs associated with this work shall be considered incidental to the related Contract Pay Items.

Galvanized overhead sign supports attached to the concrete fascia and exterior fascia girders at Route 126 shall be protected at all times during cleaning and painting operations.

506.03 Quality Control

The Contractor is responsible for all aspects of the quality of the Work, including labor, equipment, materials, incidentals, processes, construction methods and Quality Control. Quality Control (QC) is the planned and specified actions or operations necessary to produce an end product that Conforms to the requirements of the Contract and includes inspections and testing for process control to the extent determined necessary by the Contractor. All costs associated with QC activities shall be considered incidental to related Pay Items.

506.031 Submittals

The Schedule of Work shall be in conformance with Standard Specification Section 107.4, Scheduling of Work, unless there is a Special Provision which supersedes the Standard Specification.

All Plans and submittals from the Contractor will be reviewed by the Authority in accordance with Section 105.7, Working Drawings, of the Standard Specifications.

506.032 Quality Control Qualifications

Provide QC personnel trained and certified by: The National Association of Corrosion Engineers (NACE) – International: Coating Inspector Program Level 1 (minimum); SSPC BCI Coatings Inspection Training and Certification for the Bridge Industry (Level I without certification), or Level II; or other training that is acceptable to the Authority. If the Contractor's QC personnel do not follow and enforce the approved Quality Control Plan, the Resident may require the Contractor to retain the services of an independent third party certified NACE/SSPC BCI inspector for the remainder of the Project, at no additional cost to the Authority. If the Resident determines that the Contractor is not performing the QC function properly, the Resident will issue the Contractor a verbal warning. The second time the Resident finds that the QC function is being improperly performed, for the same reason, the Contractor will be given a written warning. The third time the Resident finds that the QC function is being improperly performed, for the same reason, the Contractor will be required to retain the services of a third-party NACE/SSPC BCI certified inspector, at no additional cost to the Authority. Discovery by the Authority of a pattern of rework for the same items would be considered improper performance of the QC function.

506.033 Quality Control Plan

Submit a QC Plan to the Authority for review at least 21 days prior to the beginning of any removal of paint. The QC plan shall include: The names of all the Contractor's on-site representatives, including the NACE/SSPC BCI certified inspector, who will be responsible for the inspection and the acceptance of the Contractor's work; the definition of hold points, from pre-surface preparation inspection to final inspection; the format and submittal process for daily work reports and coating/DFT reports; and the process for rework.

Develop a Job Control Record (JCR) to systematically organize all reports, tests, test locations, test results, Non-Conformance Reports, final acceptance and other documents deemed necessary by the Resident.

Record the following in the JCR as applicable:

- Daily inspection reports including location of the work, personnel and equipment.
- Surface preparation - cleanliness and anchor profile.
- Environmental conditions – ambient temperature, surface temperature, relative humidity, dew point.
- Condition of the containment
- Coating batch and/or lot number, date of manufacture and shelf life.
- Mixing/thinning
- Dry Film Thickness (DFT) for each coat.
- Cure data-time/temperature/relative humidity.
- Final inspection and acceptance.
- All other job documentation generated by the Contractor.

Submit the format for the JCR and sample forms to the Resident for review prior to beginning application of protective coating.

Violation of the QC Plan may result in a suspension of work. If the Authority orders a suspension, in writing, work shall not resume until the Contractor provides a plan, which is acceptable to the Authority, describing how compliance will be restored and maintained. A suspension resulting from the Contractor's failure to adhere to the QC Plan shall be considered an Inexcusable Delay.

506.034 Surface Preparation/Coating Plan

Provide written procedures (preparation plan) for the surface preparation, the remediation of soluble salts, and coating application and repair. The plan shall include a description of the equipment that will be used for surface preparation and coating. The plan shall also identify the type and brand name of abrasive proposed for use; provide Material Safety Data Sheets (MSDS) sheets for proposed abrasive. Also, include the surface preparation methods and materials to be used in "sensitive areas", e.g. areas in close proximity to galvanized members, bearings, utility hangers, & utilities, etc. If any of the areas that are determined to be sensitive by the Authority are damaged due to surface preparation practices, the Contractor will be responsible for the repair of all damage at no additional cost to the Authority. It is recommended that the Contractor explore alternative surface preparation methods for these "sensitive areas", such as power tool cleaning and the use of impregnated sponge and other less aggressive blast media. The Contractor shall receive approval from the Authority before performing any removal methods when working in "sensitive areas".

The preparation plan shall identify the methods of protection or work isolation procedures that will be followed to protect surrounding structures, equipment, galvanized bridge deck members, utility cables, etc. and property from exposure to surface preparation and paint debris. The Contractor is responsible for any damage caused by surface preparation.

All grease, oil, chlorides, salts and any other foreign matter must be removed prior to removal of any existing paint.

506.035 Containment Plan

Provide a containment plan to the Authority for review. Do not begin the erection of containment system(s), or paint disturbance activities until review by the Authority has been completed.

No containment system or part thereof, including equipment, shall extend below the bottom flange over an open roadway when there is no lane closure. All work platforms or scaffolding must be secured by either steel cable or chain, use of rope(s) is prohibited. The Contractor shall note that there is an existing snow fence on the exterior fascia of Cider Hill Road. No containment system component shall be attached to the existing snow fence.

Prepare detailed drawings and structural analysis stamped by a Professional Engineer (PE) licensed in the State of Maine. Install the containment in accordance with the drawings stamped by the Contractor's PE. Do not begin surface preparation until the Contractor's PE or approved representative has field verified the proper installation of each and every platform or suspended cable containment system installed within this Contract. Perform all surface preparation and painting in the approved containment system, conforming to the latest SSPC Guide 6, Guide for Containing Surface Preparation Debris Generated During Paint Removal Operations, for the specified level of cleaning, as applicable.

The Contractor is responsible for ensuring the containment meets all OSHA, federal and state regulations. Throughout the entire Project, work shall only be conducted within approved containment enclosures. The proposal shall be sufficiently detailed to show conformance with the requirements of SSPC Guide 6, Class 1A containment specifications. The Containment Plan shall also describe, in detail, the Contractor's methods of protecting galvanized bridge members, existing utilities, etc. The Contractor shall be responsible for all damage incurred. The Containment Plan shall include the following information and requirements, at a minimum:

A. Detailed drawings and structural analysis, prepared and stamped by a PE licensed in the State of Maine.

B. Detailed design calculations stamped by a PE licensed in the State of Maine for the Contractor’s operation including all construction loads applied to the structure. The design shall use the latest editions of the AASHTO LRFD Bridge Design Specifications with HL-93 Live Load. The applied loads from the proposed paint containment system (enclosures, work platforms, collected waste product, equipment, etc.) shall not exceed the allowable resistance of any bridge member.

C. The Contractor shall determine the wind speed above which damage to the existing structure(s) will result from wind loading on the containment system. If actual wind speeds exceed this design wind speed, the Contractor shall immediately make provisions to properly relieve the containment wind loading. The process for relieving the wind loading shall not release any of the lead paint waste. The Contractor may redesign/reconfigure the containment enclosure(s) or suspend operations until the actual wind speeds fall to levels below the design wind speed. Any release of pollutants from the containment enclosure(s), in excess of applicable state or federal limits, to the surrounding environment due to containment failure will result in the immediate suspension of work. Prior to resuming

containment failure will result in the immediate suspension of work. Prior to resuming work, the Contractor shall take appropriate actions to abate the discharge and obtain the Authority's concurrence on a plan of action to prevent reoccurrence. The time and costs associated with any delays and clean-up, modifications, and rebuilding of the containment enclosure(s) resulting from wind damage or associated with any actions required to prevent any reoccurrence of release of pollutants caused by wind loads shall be borne by the Contractor. Any delays due to the suspension of work or due to containment failure, as the result of wind loads, shall be considered Inexcusable Delays. The Contractor shall monitor and document actual wind speeds on the existing structure(s), as appropriate, to ensure the safety of the existing structure(s); the cost of all wind monitoring shall be incidental to related Contract Pay Items.

D. A plan for staging, installing, moving, and removing the containment and the methods of attachment that will be used. Attachment points to main framing members only (main girders, floor beams, truss members may be allowed with prior approval from the Resident) will be allowed. The plan shall include the methods of access that will be provided to work areas inside containment, locations of safety lines, locations of containment entryways, etc.

E. Detailed plans for lighting the inside of the containment for surface preparation, painting, and inspection. Provide work area illumination as follows:

Work Area Illumination Requirements in Foot Candles		
Description of Work	Minimum	Recommended
General Work Area Illumination	10	20
Surface Preparation and Coating Application	20	50
Inspection	50	200

Provide a light meter that measures illumination in foot candles. Failure to provide at least the minimum illumination will be considered denial of access to the work and may result in rejection of the work by the Resident.

F. Detailed plans for maintaining the environmental conditions required during coating application and curing, including monitoring, measuring and documenting environmental conditions.

G. Detailed plans for the collection and removal of accidental spills or discharges.

H. Technical data sheets, specification sheets and any other information needed to thoroughly describe the containment plan, materials, and containment and ventilation equipment proposed for use.

506.036 Environmental Protection Plan

Thirty days prior to the initiation of on-site work, submit to the Authority for review and acceptance an Environmental Protection Plan that establishes programs for the monitoring activities that will be undertaken on the Project. This plan shall include written programs to address the following:

A. *Regulated Area Monitoring and Maintenance.* For establishing and maintaining regulated areas around activities which could generate airborne emissions of lead or other toxic metals.

B. *High Volume Ambient Air Monitoring.* The Contractor shall contract with an independent environmental monitoring firm to conduct high volume ambient air monitoring for TSP-lead to assure compliance with this item and any applicable state and local regulations. Have the monitoring begin at least 24 hours prior to any abrasive blasting, for a baseline. Procedures for the monitoring which confirm that the monitoring equipment is properly calibrated, sited, and operated; filters are properly handled and transported; the laboratory analysis is performed correctly; and that all monitoring, calculations, documentation, and forms will be provided directly to the Authority by the monitoring firm, with copies to the Contractor. Prior to any sampling, the Contractor shall clearly identify proposed monitor locations, including what corrective action will be implemented immediately, in the event of unacceptable results.

C. *Ground (Soil) Evaluations.* For inspection of the ground and soil prior to commencement and upon completion of the Work to assure that the ground has not been negatively impacted by Project activities. This shall include the bridge site and the areas used to store equipment and waste. Contract with an independent environmental monitoring firm, staffed with a Maine Certified Geologist, to conduct sampling and analysis of the soil to determine whether it has been impacted by Project activities. Environmental data captured from the waste storage areas prior to use will be incorporated into the required hazardous waste closure efforts described in Section 506.11.

The ground (soil) will be considered to have been impacted by project activities based on the analysis as described below:

1. Visible paint chips, spent abrasive, or debris are present on the ground.

2. The ground (soil) is considered to have been impacted by project activities at site specific locations based on 50 percent increases over the pre-job lead concentration. For example, if the pre-job total lead concentration is 200 parts per million (ppm) at a specific sampling location, an impact is considered to have occurred if the post-job lead concentration results in an increase of 100 ppm or more.

3. If the laboratory analysis or visual assessments show the soil to have been impacted by project activities, as directed by and at no additional cost to the Authority, conduct the necessary cleanup or remediation.

The plan shall clearly identify proposed soil sampling locations and define the corrective action(s) that will be taken in the event of unacceptable results. Further information on the procedures that the Contractor will use to meet the requirements for closure of the hazardous waste storage areas as define by MDEP regulations in Chapter 851, shall also be included. All monitoring calculations, documentation, and forms will be provided directly to the Authority by the monitoring firm.

D. *Remediation of Ground (Soil).* In the event that post-Project inspection, sampling or analysis show unacceptable results, outline what steps will be taken to accomplish the necessary clean-up or remediation of the ground (soil), as appropriate, to satisfy all applicable regulatory agencies. Any clean up measures shall be at no additional cost to the Authority.

E. *Final Cleaning/Clearance Evaluations.* Procedures and methods that will be used to conduct and document final Project clean-up, and final visual cleanliness inspections and evaluations. This process is to assure that the Project area and surrounding equipment, structures, soil, water, and sediment along the river banks have not been negatively impacted by Project activities.

F. *Laboratory Qualifications.* Provide the name of the laboratory and/or firm that will be used for analysis of regulated area exposure monitoring, worker exposure monitoring, high volume ambient air monitoring and waste and soil samples, as required. Provide documentation that this firm is American Industrial Hygiene Association (AIHA) accredited for metals analysis, and has successfully participated (previous 12 months at a minimum) in the AIHA ELPAT program.

G. *Worker Protection Compliance Program.* A Project-specific compliance program, prepared under the direction of, and signed and sealed by, a Certified Industrial Hygienist (CIH), for the protection of workers from lead, in accordance with 29 CFR 1926.62, and other toxic metals in the paint. Include the name, experience, and qualifications of the competent person who will be making routine inspections of Project activities to ensure compliance with the program. If Subcontractors are operating under a separate program, include the program with the submittals.

506.037 Pre-Production Meeting

Coordinate a pre-production meeting with the Authority's Resident at least two weeks prior to the beginning of the removal of the existing coating. Provide two weeks' notice to the Authority prior to the meeting. The meeting agenda will include procedures to be used for all lead abatement, the coating application, the inspection hold points, the responsibilities and documentation methods of each party involved, all safety methods to be used, contingency plans, and all other areas relating to the adequate completion of the painting of this Contract, including coordination with the U.S. Coast Guard, when applicable. Present at this pre-production meeting shall be all parties directly involved in the lead abatement, paint application, and inspection of this Project including the Authority, the Contractor and any Subcontractors, all Quality Control personnel, coating technical representatives, the Authority's hazardous waste representative, a representative from the Contractor's hazardous waste transporter and any additional stakeholders who may have a direct impact on the completion of this Project. The Contractor shall be responsible for ensuring that all applicable personnel working directly, or indirectly, for the Contractor be present at this meeting.

506.04 Quality Assurance

The Authority will perform Quality Assurance (QA). QA may be accomplished by reviewing QC reports provided by the Contractor, by performing random inspections of work previously inspected by the Contractor and/or by randomly accompanying the Contractor's inspector during QC inspections and testing.

Provide the Authority with the opportunity to perform QA inspections of the Work at the following hold points, as a minimum:

A. Prior to start of work.
B. Immediately following surface preparation.
C. Immediately prior to application of the first coat.
D. Prior to application of additional coats.

E. After final coat is applied and cured.
F. Any time the relative humidity is at, or above, 85% and the steel temperature is not 5 degrees above the dew point.

QA inspections are the prerogative of the Authority. As such, the Authority may, or may not, choose to perform inspections at hold points. Consequently, if any QA inspections performed at hold points result in no rework being identified or, if no QA inspections are performed at any hold points, this does not constitute Acceptance of the Work by the Authority. If the Authority discovers Unacceptable Work at any time prior to Final Acceptance, the Contractor shall repair, replace, or otherwise bring the Unacceptable Work into conformance with the Contract, at no additional cost to the Authority. Refer to Standard Specification Section 107.9, Project Closeout, for procedures leading up to Final Acceptance.

Facilitate QA as required, by providing ample notice to the Authority of availability for QA (minimum of ½ hour notice), adequate time for QA and by providing access to the work, along with all necessary safety equipment needed by the Authority to perform the QA.

Provide all of the inspection and testing equipment needed to verify the quality of the surface preparation and coating process, including, but not limited to mirrors, flashlights and wet film thickness gauges. This equipment shall be made available for use by the Authority at all times. All equipment shall be properly maintained and kept in working order by the Contractor.

Provide access and railing in compliance with OSHA standards for representatives of the Authority to all work locations where cleaning or coating application may be in progress, for the purpose of QA. The Contractor is also responsible for providing adequate lighting for QA purposes, at no additional cost to the Authority.

If the Contractor is dissatisfied in any way with the Authority's management of its QA program, the Contractor shall bring this issue immediately to the attention of the Resident or, at the least, to the next scheduled Progress Meeting.

506.05 Protective Measures

During surface preparation and field painting of the existing structural steel, provide adequate safety measures for the protection of the public and surrounding area against damage due to paint drippings, paint spatter, over-spray, falling objects, etc. The Contractor is fully responsible for property damage or personal injury which may result from operations incidental to surface preparation of the structural steel and the field application of the coating system. The coating system shall be protected at all times during application and curing to prevent contamination caused by construction or traffic activities. No coating material shall be stored on the bridge structure, or under the bridge structure.

506.06 Surface Preparation.

It is expected that chlorides and salts are present on the structures, especially at corrosion sites. Before existing coating is removed, the contaminants shall be remediated to a level of 7 μg/cm2 or less. Acceptable methods of removing contaminants from the coating are steam cleaning or High-Pressure Water Cleaning (5000-10,000 psi). After cleaning, test for chlorides and soluble salts. If the chlorides and soluble salt level exceeds 7 μg/cm2, continue cleaning until acceptable

levels are achieved. Use a Bresle Test kit or an equal approved by the Resident to determine contaminant levels. Record the results in the JCR. After abrasive blast cleaning and immediately prior to the application of the primer coat, test the bare substrate for chlorides and soluble salts and meet the level specified above. Record the results in the JCR. The frequency of testing shall be as specified below. Products such as Chlor-Rid™ or equal may be used with the approval of the Resident.

Test for soluble salts at a minimum of five locations per bridge span or as directed by the Resident. If after the initial testing has been done, it appears that no unacceptable levels of chlorides and soluble salts are present, the Resident may require a diminished number of tests. The Resident is not obligated to require less testing.

The abrasive blast media shall meet the requirements *of SSPC-AB 1, AB 2 or AB 3.* The anchor profile shall be angular and meet the requirements of the coating manufacturer's published data sheet.

Abrasive blast clean the steel in accordance with *SSPC-SP 10, Near-White Blast Cleaning* except that inaccessible areas and sensitive areas as designated by the Resident shall be cleaned in accordance with *SSPC-SP 11, Power Tool Cleaning to Bare Metal*. After abrasive blast cleaning visually inspect the substrate for fins, tears, delamination and other unacceptable discontinuities. Remove unacceptable discontinuities with a grinder or other suitable power tool. Blast the affected area(s) to develop an acceptable anchor profile. The Contractor may propose an alternative method of developing an acceptable anchor profile on repair areas to the Resident.

Exercise care to avoid any nicking or gouging of the steel during rust removal. Nicks and gouges are cause for a suspension of activities until appropriate adjustments are made to prevent a reoccurrence. Repair damage to steel caused by surface preparation.

Double blow down or vacuum residual dust on the blasted substrate. Solvent clean any visible contamination that may result from handling, inspection or other activities that may inadvertently leave contaminants on the surface of the steel.

The allowable time between abrasive blast cleaning and primer application shall not exceed the Manufacturer's Product Data Sheet or 12 hours, whichever is less. If rust-back occurs, re-blast the entire prepared substrate prior to application of primer.

Newly fabricated steel members shall be cleaned in accordance with SSPC-SP 10.

Use *SSPC VIS.1* for abrasive blast cleaned substrate and *SSPC VIS.3* for hand or power tool cleaned substrate to determine acceptable surface cleanliness.

Measure the anchor profile in accordance with ASTM D 4417 Method C - (replica tape). If the anchor profile fails to meet the minimum requirements, re-blast the substrate until the minimum required anchor profile is achieved. If the anchor profile exceeds the maximum allowed, generate a Non-Conformance Report (NCR) describing the condition of the substrate and a proposed solution and submit it to the Resident for review.

The required number of measurement locations shall be in accordance with SSPC PA-17 “Procedure for Determining Conformance to Steel Profile/Surface Roughness/Peak Count

Requirements" (a minimum of three locations per each work shift or twelve-hour period, whichever is shorter). The Resident may require additional anchor profile testing of the substrate on every plane of each beam or girder. Record the location and results in the JCR. Label the replica tape (location, profile, etc.) and affix the tape to the JCR. Provide copies to the Resident. Any change in the items or personnel listed in Table B1 (as applicable) between acceptance of surface preparations will require additional testing as directed by the Resident.

TABLE B1
PROCESS CONTROL ITEMS
FOR ABRASIVE NOZZLE BLAST CLEANING

1	Worker performing abrasive blast cleaning
2	Blast nozzle type
3	Blast nozzle size
4	Number of nozzles operating from same compressor
5	Abrasive manufacturer
6	Abrasive type, hardness and physical shape (e.g., steel grit, steel shot, or ratio of mix, or type of mineral abrasive, such as garnet, coal slag, etc.)
7	Abrasive size (sieve size)
8	Air pressure at nozzle
9	Blast hose length (as a range)
10	Blast hose diameter
11	Compressor size (CFM)
12	Air pressure at compressor

506.061 Pre-Production Surface Preparation Test Sections

Prepare test sections prior to production surface preparation. Prepare at least one test section for each specified degree of surface preparation. Test sections should be at least 1 square meter in size and include representative surfaces such as riveted and bolted connections. Prepare the test section surface preparation using the same equipment, materials and procedures that will be used for the duration of the Project. Perform the test cleaning in locations approved by the Authority.

SSPC-Vis 1 and SSPC-Vis 3 photographic standards, as applicable, will be used by the Authority to determine the level of cleanliness achieved. Do not proceed with production surface preparation activities until the Authority agrees that the test section conforms to the applicable cleanliness requirements. The agreed upon test areas shall be masked off and left unpainted until the completion of the Project and will be used for calibration of gauges by both Authority and Contractors personnel. A desiccant filled masking paper shall be used, all at no additional cost to the Authority.

506.062 Removal of Existing Debris

Remove and properly dispose of accumulated winter sand/salt, bird droppings, dirt, grease, and debris from all areas to be prepared and painted prior to undertaking any paint removal or surface preparation operations.

506.063 Sharp Edges and Steel Defects

Defects Remove by grinding all fins, tears, slivers, scabs, laminations, etc., that are present on any steel member, or that become apparent during the abrasive blasting operation. Re-blast areas that have been ground to achieve the specified profile. Immediately report to the Authority any cracks or significant metal loss found in the structural steel.

506.064 Removal of Pack Rust

Remove all rust scale on any surface and loose pack rust that has formed between structural members. Remove tight pack rust until the highest point is a minimum of 3 mm (1/8 inch) below the surface of the surrounding steel.

Exercise care to avoid any nicking or gouging of the steel during rust removal. Nicks and gouges are cause for a suspension of activities until appropriate adjustments are made to prevent a reoccurrence. Damage to steel by the Contractor shall be repaired by the Contractor as approved by, and at no cost to, the Authority and no additional time will be added.

506.065 Compressed Air Cleanliness

Provide compressed air that is free from moisture and oil contamination. Conduct a white blotter test in accordance with ASTM D 4285 “Standard Test Method for Indicating Oil or Water in Compressed Air” to verify the cleanliness of the compressed air. Conduct the test at least once per shift for each compressor system and at any time requested by the QAI. Notify the QAI prior to performing the test so that the QA Inspector can witness the test. Sufficient freedom from oil and moisture is confirmed if soiling or discoloration is not visible on the paper. If air contamination is identified, suspend operations and adjust as necessary to achieve clean, dry air.

506.07 Mixing

Thoroughly mix the coating according to the manufacturer’s recommendations. Thinning, if necessary shall be per the manufacturer’s recommendations.

506.08 Conditions for Coating

Apply and cure all coatings in accordance with the manufacturer’s recommendations. Provide digital data recorders that measure and record temperature and relative humidity during the curing period for all coatings. Provide a minimum of two data recorders, which shall be placed in the immediate vicinity of the curing operation, and shall also provide the Authority with the software necessary to download the recorded data. The data recorders shall measure and record the temperature and relative humidity during the entire curing cycle. No subsequent coating shall be applied until the Contractor demonstrates that the requirements of the manufacturer’s product data sheets minimum recoat curing schedule have been met.

506.09 Paint Application

Caulk all gaps between abutting surfaces and at areas of pack rust that cannot be removed, as between the intermediate and top coat. Apply caulking between the bearing plates and the

concrete piers. Provide the name, generic type, technical data sheets, and application instructions for the material to the Resident. Provide written concurrence from the coating manufacturer that the caulking is compatible for use with the coating.

Measure the environmental conditions in the immediate vicinity of the piece(s) being coated during the coating operation and the entire cure period. Provide two data loggers capable of measuring ambient humidity and temperature. The data loggers shall come with software that can download the data onto a computer. Print the data. The data will become part of the JCR. Place the data loggers in the immediate vicinity of the coating operation during the entire application and curing cycle. The data will be used by the Resident to determine that the cure/recoat time requirements for each coat have been met. Failure to comply will result in the coating being cured for the maximum time necessary to assure adequate cure as determined by the Resident.

Apply each coat in a neat and workmanlike manner. Apply the coating inside the approved containment. For limited access areas, apply by brush and roller first, followed by a spray application to the balance as directed by the Resident. Apply the coating smoothly and uniformly without film defects, in conformance with these specifications and applicable provisions of *SSPC-PA 1, Shop, Field and Maintenance Painting of Steel*. Correct skips, thin areas or other deficiencies before each succeeding coat is applied. The surface of the paint receiving additional coating shall be free from dust, grease, oil or any other contaminant that would prevent bonding.

Measure the DFT of each coat with a Type 2 Electronic Gauge in accordance with *SSPC-PA 2, Measurement of Dry Coating Thickness with Magnetic Gauges*. Record the following:

- Gauge type/manufacturer/model
- Serial number
- Coat/shim used for calibration (e.g. Primer Coat/5 mil. Shim, etc.)
- Measurements/spot average/location
- Cure time
- Non-conforming areas and determination for correction

Brushes, when used shall be of good quality so as not to leave bristles in the coating and have sufficient body and length of bristle to spread the coating in a uniform flow. Rollers, when used, shall be of a type which will not leave a stippled texture or roller particles on the coated surface.

Inform the Resident prior to mixing and thinning all coating. Record the batch and lot numbers of the coating, the type and amount of thinner used, the time and pot life of the coating in the JCR.

Mix and add thinner in conformance with the Manufacturer's Product Data Sheet. Measure the thinner with a graduated cup or other measuring device. Mix the paint using the method, equipment and for the amount of time recommended by the coating manufacturer. Coating that is not mixed and thinned in accordance with the Manufacturer's Product Data Sheet will be rejected.

Stripe coat the substrate with primer in accordance with SSPC-PA 1, Section 7 “General Requirements for Application of Coatings”. The stripe coat is to be applied to edges, welds, outside corners, bolt heads/threads and crevices as directed by the Resident. The stripe coat shall be brush and/or roller applied. Spray application of the stripe coat is allowed only upon prior approval of

the Resident. Whenever possible apply the stripe coat prior to application of the primer coat, however, in order to save the blast, the Contractor may apply the stripe coat after the application of primer with the prior concurrence of the Resident. Failure to notify the Resident will render the work Non-Conforming Work.

Measure and record the DFT readings in the JCR. Document that minimum cure time has been achieved in the JCR. Include the data logger printout. Maintain environmental conditions to assure acceptable cure time between coats and after the top coat is applied. Coating that has been improperly cured will be rejected, removed and re-coated. The Resident will determine that the coating has been properly cured based on QC tests, measurements and documentation.

Identify areas on Non-Conformance and generate a Non-Conformance Report (NCR). Present the NCR to the Resident with a proposed repair. Examples of Non-Conformance are, but not limited to:

- Overspray
- Sags, drips, runs
- Thin coating
- Excessive film build
- Orange peel, mud cracking
- Blisters
- Surface contamination
- Discontinuities that may be reasonably expected to cause premature coating failure

Repair damaged coating or defectively applied coating (runs, sags, skips, misses, etc.). Remove the affected coating layers and reapply. If all coating layers are damaged or defective, remove all coating layers to the specified degree of cleanliness. Feather the edges of the remaining coating to create a smooth transition from the repaired area to the remaining coating. Reapply all affected coating layers.

506.10 Samples for Testing

The Authority may require random coating material samples from the Contractor. If necessary, the samples will be sent to an independent certified laboratory to obtain infrared spectra to check the formulation compared to that on the approved coatings list. Sampling and testing shall be at no additional cost to the Authority. If the material fails the independent lab analysis, the Contractor shall remove and replace the coating to the Contract specified conditions, at no additional cost to the Authority.

506.11 Waste Management

The Contractor shall collect, store and dispose of all hazardous, special and solid waste in compliance with relevant Federal, State and local laws and requirements. The procedures used for management and disposal of lead paint and related waste shall conform to the latest requirements of Steel Structures Painting Council Guide 7, “Guide for the Disposal of Lead-Contaminated Surface Preparation Debris”. The Contractor shall have a copy of this guide available on site at all times. The Contractor shall also have a copy of the Maine Department of Environmental Protection’s (DEP’s) Handbook for Hazardous Waste Generators and a copy of the State of Maine Hazardous Waste Management Rules, 06-096 CMR Chapters 850-857, on site at all times. Thirty

days prior to generating any waste, the Contractor shall submit their Waste Management Plan which shall include the Spill Prevention Control and Countermeasure Plan (SPCCP), to the Authority for review and comment. Work shall not proceed until the Authority has reviewed and commented on this plan. See Supplemental Specification 656 Temporary Soil Erosion and Water Pollution Control for more information.

The Contractor shall perform all work on behalf of the Authority and comply with all Federal, State and local regulations. All hazardous waste activities associated with this Contract shall be managed according to the latest edition of the MaineDEP Handbook for Hazardous Waste Generators (http://www.maine.gov/dep/waste/hazardouswaste/documents/hwhandbook.pdf). The Contractor shall set up secure storage facilities for hazardous waste at the following designated Authority locations:

- The hazardous waste storage area for Cider Hill Underpass Bridge and Captain Thomas Underpass Bridge shall be located at the York Maintenance Facility. Hazardous waste from each site location shall be kept separated and stored in properly labeled containers. No mixing of hazardous waste from separate site locations will be permitted.

- The hazardous waste storage area for the Route 126 Underpass and High Street Underpass Bridges shall be located at the West Gardiner Maintenance Facility. Hazardous waste from each site location shall be kept separated and stored in properly labeled containers. No mixing of hazardous waste from separate site locations will be permitted.

For secure storage facilities for hazardous waste located at the bridge site, the Contractor shall obtain temporary provisional generator status from the MaineDEP prior to removing any lead based paints. The Contractor shall submit copies of the temporary provisional generator status paperwork, along with all requirements imposed by the MaineDEP, to the Resident for the Authority's records. All hazardous waste storage at these facilities is limited to an on-site storage time of 90 days from accumulation start date.

For secure storage facilities for hazardous waste located at an approved Authority location, the Contractor shall obtain temporary provisional generator status from the MaineDEP prior to removing any lead based paints. The Contractor shall submit copies of the temporary provisional generator status paperwork, along with all requirements imposed by the MaineDEP, to the Resident for the Authority's records. The Contractor shall transport the hazardous waste in either the recycling equipment (steel shot recycler or water recycler) or in UN/DOT approved, shippable, labeled, 55-gallon steel drums from the work site to the secure storage facility using a fully-enclosed secure means of transportation. All hazardous waste storage at these facilities is limited to an on-site storage time of 90 days from accumulation start date.

The Contractor must obtain approval of the Uniform Hazardous Waste Manifest from the Authority's Environmental Services Coordinator prior to any hazardous waste leaving the secure storage facility for disposal.

All hazardous waste shall be managed in US DOT approved containers and stored in an approved fully-enclosed locking secured structure which has a firm, impervious, floor surface and secondary containment that is either 110% of the largest container or 20% of all containers, whichever is larger. All waste containers must be labeled with the words "Hazardous Waste", the hazard (e.g., Toxic, flammable, etc.), accumulation start date, container full date, generator

information and site location. The lockable secured structure must be labeled "Danger-Unauthorized Personnel Keep Out" and "Hazardous Waste Storage Area". The secured structure shall be locked at all times when not being accessed. The Contractor shall provide the Authority with (2) keys or combinations for each locking secured structure for inspection purposes. Waste containers in the waste storage security area must be inspected each operating day and a Daily Inspection Log shall be kept at the storage site and include the amount and type of hazardous waste transported, the date the waste was accepted at the storage site, and the project location where the waste was generated. Provide the log to the Authority at the end of the Project. The Contractor shall store and manage all hazardous waste, in conformance with MaineDEP regulations as detailed in Chapters 850 – 857 and EPA regulations as defined in 40 CFR 260 – 268. All hazardous wastes are limited to an on-site storage time as outlined in the Contractor's provisional generator's permit.

The Contractor shall test paint debris (including waste paint, personal protective equipment, gray water and spent solvents) to determine the appropriate disposal options. A minimum of one composite sample representative of each waste type must be collected and tested for Toxicity Characteristic Leaching Process (TCLP), constituents in accordance with the procedures outlined in EPA SW846 Method 1311. The Authority must be notified at least one week in advance of the date of sampling activities and provided with the proposed protocol for sample collection. The Authority shall witness the sampling. Chain-of-custody must be adhered to for sample removal. Certified TCLP test results shall be provided to the Authority upon receipt by the Contractor.

The Contractor shall inform the Authority at least one (1) week in advance of planned date(s) for removal of hazardous waste from the jobsite. The Authority shall obtain an Environmental Protection Agency Identification Number prior to shipping any hazardous waste for disposal. This number must be used by the Contractor to ship hazardous waste off site. Secure an Authority approved transporter (i.e., Enpro Services, Inc., or Environmental Projects, Inc. (EPI)) licensed by DEP for transportation of hazardous waste. Preparation of all necessary transportation forms is the responsibility of the Contractor. The Hazardous Waste Manifest must be approved and signed by the Authority. A six part, prenumbered Uniform Hazardous Waste Manifest (EPA Form 8700-22) shall be prepared when shipping hazardous waste. The appropriate original sheets of the multi-part hazardous waste manifest must be provided to the Authority and must be sent to the John Branscom, Environmental Coordinator, Maine Turnpike Authority, 2360 Congress Street, Portland, Maine 04102.

The Contractor shall select a Treatment, Storage or Disposal (TSD) facility as soon as the waste has been tested and the results are known. The Contractor will submit the selected TSD for Maine Turnpike Authority approval. Following approval by the Maine Turnpike Authority, the Contractor shall obtain approval for acceptance of the waste from the selected facility prior to transport.

Hazardous/special paint debris and other waste shall not be placed or accumulated on unprotected ground or released to waters of the State. Work areas shall be adequately shielded at all times to prevent dispersion of debris by wind or rain. All of the Contractor's equipment and storage areas used for the handling and storage of hazardous waste and hazardous materials shall have impervious tarps placed under them. Any evidence of improper storage and handling shall be cause for immediate suspension of work in progress, and work will not be allowed until corrective actions are taken. Emergency procedures to be taken in the event of a release of hazardous/special

waste or hazardous matter to the environment shall be part of the Contractor's Spill Prevention, Control and Countermeasures Plan that is required as part of the Contractor's Waste Management Plan and by the Authority's Supplemental Specifications and Supplemental Standard Details for Construction, Section 656.3.4, f. Spill Prevention.

The Contractor shall have Aid Agreements with the local fire department, police department, hospital and hazardous waste spill responder. Copies of these agreements shall be provided to the department prior to generating any waste, in conformance with the DEP Rules, Chapter 851 "Standards for Generators of Hazardous Waste", Section 13 "Management Standards", Part C "Operation" (7)(c)(ii) and 40 CFR 264.37 "Arrangements with Local Authorities".

When the project no longer generates wastes, the Contractor shall ensure all waste and residuals are removed from the individual hazardous waste storage areas and transported to a licensed and approved TSD facility. The Contractor shall then move forward with closure of the hazardous waste storage areas as defined in Chapter 851 of MDEP's regulations. The Contractor shall ensure a Maine professional engineer oversees and approves of the closure process and submits a certification to the Authority and MDEP when the closure is complete.

Failure of the Contractor to comply with this section shall result in the following:

- First finding of non-conformity shall be a written warning which will include deadline for compliance.
- Second finding of non-conformity shall be documented in writing, and all operations by the Contractor, except those needed to restore compliance, will be immediately suspended, until full compliance has been restored.
- Third and subsequent findings of non-conformity will be documented in writing and all operations shall be immediately suspended, except those needed to restore compliance, until full compliance has been fully restored, and the Contractor assessed a penalty of $10,000.00 per incident. If the Contractor fails to restore the Project into compliance, additional fines shall be assessed.

All penalties assessed shall be in addition to any fines assessed by DEP/EPA for failing to comply with the Federal, State, or local regulations. The Contractor shall not be granted additional time for suspensions of work due to noncompliance.

506.111 Visible Emission Observations

A. Visible Emission Assessments

1. Conduct visible emissions assessments as defined in this Section and in accordance with 40 CFR 60, Appendix A, Method 22 "Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares". This assessment is based on total visible emissions regardless of the opacity of the emission. SSPC Technical Update No. 7 provides guidance on conducting visible emission assessments.
2. Conduct the visible emissions assessments to account for all locations where emissions of lead dust might be generated, including but not limited to, the containment or work area, dust collection and waste recovery equipment as applicable, and waste containerizing areas.

3. In addition to assessing airborne emissions, conduct visual inspections for releases or spills of dust and debris that have become deposited on surrounding property, structures, equipment or vehicles.
4. State and local regulations regarding visible emissions:
    a) Note that State of Maine regulations regarding visible emissions, as well as any local requirements, are in addition to, but not in lieu of, the requirements of this Section.

B. Acceptance Criteria for Visible Emissions Assessments

1. For surface preparation activities, visible emissions in excess of SSPC Guide 6, Level 1 (1% of the workday) are unacceptable. This amounts to a maximum duration of 4 minutes and 48 seconds in an 8-hour workday, or 36 seconds per hour. This criterion applies to scattered, random emissions of short duration. Sustained emissions (e.g., 1 minute or longer) from a given location, regardless of the total length of emissions for the workday, are unacceptable. Immediately shut down the emission-producing operation, change work practices, extend the ground coverings, modify the containment, or take other appropriate corrective action to prevent similar releases from occurring in the future.
2. Visible emissions in excess of the above criteria are cause for immediate shutdown. Immediately stop the applicable operations if these criteria are violated. Correct and repair the deficiencies causing the emission, and undertake clean up with HEPA vacuums.
3. Violations of any high volume ambient air monitoring acceptance criteria is cause for immediate project shut down and the initiation of corrective action, even if the visible emissions results are acceptable.

C. Frequency and Location of Emissions Assessments

1. Conduct the specialized assessments as described in this Section at least four times (for a minimum of fifteen minutes each) during each shift in which paint disturbance operations are underway. Document all observations even if visible emissions are not observed.
2. Perform casual observations of emissions on an ongoing basis.

A. Assessment and Correction of Spills or Releases

1. Conduct all activities so that spills or releases of paint chips or spent abrasive do not occur.
2. On a daily basis, visually inspect the site for releases of dust, paint chips, and spent abrasive outside of the work area that have become deposited on surrounding property, structures, equipment, or vehicles and on the unprotected ground or in areas where rain water could carry the debris outside of the work area.
3. Clean up all visible paint chips and debris on a daily basis at the end of each shift, or more frequently if directed by the Authority. Conduct the cleaning by manually removing paint chips or by HEPA vacuuming.
4. When releases are observed, in addition to cleaning the debris, immediately shut down the emission-producing operations, change work practices, extend the ground coverings, modify the containment, or take other appropriate corrective action to prevent similar releases from occurring in the future. Do not resume operations until the corrective measures have been inspected and approved by the Authority.

E. Reporting of Visible Emissions and Releases

1. Document all visible emission observations and all cases where work has been halted due to unacceptable visible emissions or releases, the cleanup activities invoked, and the corrective action taken to avoid reoccurrence. Provide a report to the Authority within 48 hours of the occurrence.
2. Maintain the results of the assessments in a log at the site. Identify the frequency of observations made, the methods of observation utilized, the name of the observer(s), and documentation completed. Include and summarize the documentation prepared for work stoppages due to unacceptable visible emissions or releases. Make the log available to the Authority for review upon request.

506.112 High Volume Ambient Air Monitoring

All ambient air monitoring shall be performed by the Contractor according to EPA regulations 40 CFR Part 50 Appendix B, "Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere (High-Volume Method)", and 40 CFR Part 50 Appendix G, "Reference Method for the Determination of Lead in Suspended Particulate Matter Collected from Ambient Air".

A. Conduct daily high volume ambient air monitoring for TSP-Lead during any dust producing operations (i.e., abrasive blast cleaning, containment movement, and/or vacuuming spent abrasive) to confirm that emissions do not impact the public.
B. Conduct ambient air monitoring at a minimum of three locations per jobsite or as directed by the Resident. The Contractor shall provide the monitors, and all necessary calibration and support equipment, power to operate the units, security (or arrangements to remove and replace the monitors daily), filters, and flow chart recorders. Provide operational high volume ambient air monitors for the duration of the project to account for each of the monitoring locations. Dust producing activities will not be permitted to begin if monitoring locations are not supported by the required number of monitors. Therefore, several back up monitors are recommended.
C. High volume ambient air sample results will be compared to the acceptance criteria of 1.5 micrograms per cubic meter over a 90-day period. Utilize the formulae of SSPC Guide 6 to extrapolate the acceptance criteria to an adjusted daily allowable concentration.
D. In the event that the TSP-Lead air monitoring results exceed the acceptance criteria on any one day of blasting, the Contractor shall suspend dust producing operations (e.g., paint removal and/or clean-up) and implement appropriate corrective action to control emissions.
E. Document all cases when work has been suspended due to emissions exceeding the ambient air monitoring criteria.
F. Background samples shall be collected for two days prior to the start of work while no dust producing operations are underway. The background monitoring shall be conducted on one weekday and one weekend day. The background monitoring shall coincide with the anticipated working hours for the paint removal operations, but shall last for a minimum of 8 hours each day.
G. Calibrate the monitors according to the manufacturer's written instructions upon mobilization to the site, following any repairs or maintenance to the units, and quarterly.
H. Filters shall be placed in monitors prior to start of dust-producing operations and the filters removed upon completion of dust producing activities for that day. Advise the Authority in advance when the filters will be removed and replaced. The monitor operator shall record

the following information, at a minimum, on field data and laboratory chain-of custody forms (or equivalent):

1. Monitor location and serial number
2. Flow rate, supported by flow charts
3. Start, stop times and duration of monitoring
4. Work activities and location of work during the monitoring period
5. Wind direction/speed

I. Ambient Air Monitoring Results. The laboratory shall provide the results directly to the Authority with a copy to the Contractor within 3 days of the sampling. The results shall include:

1. Monitor identification and location
2. Work location and activities performed during monitoring period
3. Monitor flow rate, duration, and volume of air sampled
4. Laboratory methods used for filter digestion / analysis
5. Sample results for the actual duration of monitoring
6. Sample results expressed in micrograms per cubic meter of air
7. Comparison of the results with the adjusted daily allowable concentration indicating whether the emissions are compliant
8. Field data and chain-of-custody records used to derive results

506.113 Regulated Areas

Physically demarcated regulated area(s) shall be established around exposure producing operations at the OSHA Action Level for the toxic metal(s) present in the coating. The Contractor shall provide all required protective clothing and equipment for personnel entering into a regulated area. Unprotected street clothing is not permitted within the regulated areas. Conduct air sampling at the boundaries of the regulated area for lead and any other toxic metals that may be present in the coating being removed. Use a minimum of two low flow pumps located at points on the perimeter of the regulated area, one upwind and one downwind from the work area. Until monitoring results are available, establish the regulated area a minimum of 15 feet from any equipment or operations that might generate airborne emissions of toxic metals. If the monitoring confirms that emissions at the boundary do not exceed the OSHA Action Level as an 8-hour Time Weighted Average, discontinue monitoring. If the monitoring results exceed the OSHA Action Level, modify work practices and the containment to provide better controls over the emissions and repeat the monitoring until results are below the OSHA Action Level. Additional monitoring is not required unless directed by the Authority, or if visible emissions occur or if there are changes to the work practices or equipment being used in the regulated area. Verify that cassettes are analyzed by an American Industrial Hygiene Association (AIHA) laboratory accredited for metals analysis. Have the laboratory provide results within 72 hours of the field sampling.

506.12 Method of Measurement

Surface Preparation of Existing Structural Steel shall be measured for payment as one lump sum, complete and accepted.

Field Painting of Existing and New Structural Steel shall be measured for payment as one lump sum, complete and accepted.

Containment and Pollution Control Measures shall be measured for payment as one lump sum, complete and accepted.

Disposal of Special Waste or Hazardous Waste materials shall be measured for payment as one lump sum.

506.13 Basis of Payment

The accepted quantity of Surface Preparation of Existing Structural Steel will be paid at the respective Contract lump sum price, which shall be full compensation for furnishing all materials, labor, tools, equipment, scaffolding, QC activities, and any other incidentals necessary for the satisfactory performance of the work.

The accepted quantity of Field Painting of Existing and New Structural Steel will be paid at the Contract lump sum price, which shall be full compensation for furnishing all material, labor, equipment, scaffolding, QC activities, and incidentals necessary for the satisfactory performance of the work.

Containment and pollution control will be paid for at the Contract lump sum price, which shall be full compensation for furnishing all materials, labor, equipment, and incidentals necessary for the satisfactory performance of the work.

Disposal of Special Waste or Hazardous Waste materials will be paid at the Contract lump sum price, which shall be full compensation for all permits, tests, transportation, tipping fees and incidentals necessary for the satisfactory performance of the work.

Payment will be made under:

Pay Item		Pay Unit
506.141	Field Painting of Existing Structural Steel - Cider Hill Road Underpass Bridge	Lump Sum
506.142	Field Painting of Existing Structural Steel - Captain Thomas Road Underpass Bridge	Lump Sum
506.143	Field Painting of Existing Structural Steel - Route 126 Underpass Bridge	Lump Sum
506.144	Field Painting of Existing Structural Steel - High Street Underpass Bridge	Lump Sum
506.171	Surface Preparation of Existing Structural Steel - Cider Hill Road Underpass Bridge	Lump Sum

506.172	Surface Preparation of Existing Structural Steel - Captain Thomas Road Underpass Bridge	Lump Sum
506.173	Surface Preparation of Existing Structural Steel - Route 126 Underpass Bridge	Lump Sum
506.174	Surface Preparation of Existing Structural Steel - High Street Underpass Bridge	Lump Sum
506.181	Containment and Pollution Control Measures - Cider Hill Road Underpass Bridge	Lump Sum
506.182	Containment and Pollution Control Measures - Captain Thomas Road Underpass Bridge	Lump Sum
506.183	Containment and Pollution Control Measures - Route 126 Underpass Bridge	Lump Sum
506.184	Containment and Pollution Control Measures - High Street Underpass Bridge	Lump Sum
506.191	Disposal of Special Waste or Hazardous Waste - Cider Hill Road Underpass Bridge	Lump Sum
506.192	Disposal of Special Waste or Hazardous Waste - Captain Thomas Road Underpass Bridge	Lump Sum
506.193	Disposal of Special Waste or Hazardous Waste - Route 126 Underpass Bridge	Lump Sum
506.194	Disposal of Special Waste or Hazardous Waste - High Street Underpass Bridge	Lump Sum

SPECIAL PROVISION

SECTION 526

CONCRETE BARRIER

(Temporary Concrete Barrier Type I - Supplied by Authority)

526.01 Description

The following paragraphs are added:

This work shall consist of loading, transporting, setting, resetting, removing, transporting and stacking Temporary Concrete Barrier Type I – Supplied by Authority. The barrier shall have attachments allowing individual sections to be connected into a continuous barrier.

The work also includes supplying connecting pins and furnishing and mounting retro-reflective delineators, per Subsection 526.02 and 526.03.

Concrete barriers supplied by Authority shall be available at the following location(s):

Maintenance Area	Linear Feet of Barrier
York Maintenance Facility Mile 6.8 Southbound	300
Auburn Maintenance Facility Mile 76.9 Northbound	300

Upon substantial completion of work, the Contractor shall remove and transport the barrier back to its maintenance area of origin. All barrier shall be returned, sorted and stacked according to type in locations directed by the project Resident or maintenance area foreman.

526.02 Materials

The following paragraphs are added:

e. Delineators shall be bi-directional with a minimum effective reflective area of eight square inches as approved by the Resident. The reflectors shall be methyl methacrylate and the housing of acrylonitrile butadiene styrene. Color shall be in accordance with the MUTCD.

526.021 Acceptance

The Resident shall have the authority to accept or reject all Temporary Concrete Barrier Type I – Supplied by Authority used on the Project that does not meet the requirements of this specification

526.03 Construction Requirements

The following paragraphs are added:

The Contractor shall notify the Resident prior to the scheduled pick-up and delivery of concrete barrier. No barrier shall be removed from or stacked at the Turnpike Maintenance Area without approval of the Resident.

The Contractor shall move and place barrier-utilizing methods that will not damage the barrier. Barrier that is damaged by the Contractor by failing to use proper methods shall be replaced by the Contractor at no additional cost to the Maine Turnpike Authority.

Concrete barrier supplied by the Authority consists of several different styles. Not all barriers may be compatible. The Contractor shall utilize caution when setting barrier to use identical barrier types as adjacent barrier. Non-compatible barrier that cannot be attached together shall be overlapped by a minimum of 10 feet with the blunt end on the non-traffic side of the barrier. This work will not be measured separately for payment, but shall be incidental to the concrete barrier.

Concrete barrier placed at roadway low points shall be shimmed on 1" by 2" by 2' long wood planks to allow drainage to pass under the barrier. In addition, the Resident may direct the Contractor to shim the concrete barrier at other locations to provide for proper roadway drainage. All labor, material, and equipment necessary to shim the barrier will not be measured separately for payment, but shall be incidental to the Concrete Barrier.

The removal of concrete barrier from adjacent to the travel lane may be conducted without a lane closure if it is accomplished in accordance with the following requirements:

1. Barrier is removed from the trailing end and the workmen and equipment involved in the operation are always behind the barrier. No workmen or equipment shall enter the travel lane.
2. Barrier shall be dragged away from the travel lane to at least a 30-degree angle by the use of a cable.
3. Barrier shall be lifted no more than six inches while within 10 feet of the travel lane.

Retro-Reflective Delineators shall be mounted as follows:

4. One on top of each barrier.
5. One on the traffic side of every barrier used in a taper.
6. One on the traffic side of every other barrier at regularly spaced intervals and locations.
7. Delineators shall be installed on both sides of the barrier if barrier is used to separate opposing traffic.
8. Delineators shall be physically adhered so as to withstand the force of throw from a snow plow.
9. If more than 25% of delineators in any 50 foot section of barrier fall off for any reason, the Contractor will be responsible for reinstalling all the delineators in that run at that their own cost.
10. Contractor is required to submit the installation method for review and approval to the Resident.

526.04 Method of Measurement

The following paragraphs are added:

Temporary Concrete Barrier Type I – Supplied by Authority shall be measured for payment by the lump sum.

The loading, transporting, setting, resetting, removing, transporting, sorting and stacking of the barrier, the furnishing, installation and maintenance of the barrier delineators, and furnishing and installing connector pins will not be measured separately for payment, but shall be incidental to the cost of the Barrier. Temporary storage of Concrete Barrier between construction phases, if required, will not be measured separately for payment, but shall be incidental to the cost of the Barrier. All equipment required to load, unload, transport and stack Concrete Barrier shall be supplied by the Contractor.

Any Barrier lost or damaged by the Contractor shall be replaced by the Contractor at no additional cost to the Authority.

526.05 Basis of Payment

The fifth paragraph is deleted and not replaced.

The following paragraphs are added:

Temporary Concrete Barrier Type I – Supplied by Authority will be paid for at the Contract lump sum price, complete in place. Such payment shall be full compensation for loading, transporting, setting, resetting, temporary storage, removing, transporting and stacking at the area designated, furnishing all materials, and all other incidentals necessary to complete the work. Temporary Concrete Barrier Type I – Supplied by Authority and all connecting pins shall remain the property of the Authority, and shall be returned to the Turnpike Maintenance Area as designated in Subsection 526.01.

Payment of Concrete Barrier shall be based on a percentage of the work accomplished during that pay period.

Payment will be made under:

Pay Item		Pay Unit
526.306	Temporary Concrete Barrier, Type I – Supplied by Authority	Lump Sum

SPECIAL PROVISION

SECTION 527

ENERGY ABSORBING UNIT

(Work Zone Crash Cushion)

527.01 Description

The first paragraph is deleted in its entirety and replaced with the following:

The Contractor shall furnish and install work zone crash cushions where shown on the Plans, as specified herein, in Special Provision 652, or as approved by the Resident. Work zone crash cushions are required at each exposed end of temporary concrete barrier or guardrail.

The exposed end of the concrete barrier within 30 feet of the mainline travel lane shall be protected at all times. Barrier shall not be reset until after the work zone crash cushion(s) has been set to protect the exposed end of the barrier.

527.02 Materials

The following paragraph is added:

Only work zone crash cushions meeting the NCHRP Report 350 TL-3 crash test requirements may be used on the turnpike and local roadways with posted speeds of 45 MPH or greater. Work zone crash cushions meeting the NCHRP Report 350 TL-2 crash test requirements may be used on local roadways with posted speeds of 40 MPH or less. The Contractor shall provide the Resident with documentation of the proposed work zone crash cushion's NCHRP Report 350 Crash Test Results prior to installation at the jobsite.

527.03 Construction Requirements

The following is added to the end of the first paragraph:

The design speeds for work zone crash cushions shall be 45 mph for local road and 70 mph for turnpike roadways unless otherwise noted on the Plans.

527.04 Method of Measurement

Work Zone Crash Cushions used to protect exposed ends of guardrail for steel girder erection will not be measured separately for payment, but shall be included under the Maintenance of Traffic for Steel Girder Erection item.

527.05 Basis of Payment

Payment will be made under:

Pay Item		Pay Unit
527.341	Work Zone Crash Cushions – TL-3	Unit

SPECIAL PROVISION

SECTION 619

MULCH

(Temporary Mulch)

619.01 Description

The first paragraph is modified by the addition of the following:

"as a temporary or permanent erosion control measure" after the word "mulch".

Add the following sentence at the end of the first paragraph:

Refer to Section 656 Temporary Soil and Water Pollution Control, for more information on Temporary Mulch.

619.03 General

The first paragraph is deleted and replaced with the following:

Cellulose fiber mulch shall not be used within 200 feet of a wetland or stream. The limits shall be 200 feet up station and down station of the wetland or streams as well as the slopes adjacent to the stream. The application of hay or straw mulch with an approved binder shall be used at these locations to prevent erosion.

The use of cellulose fiber mulch will only be allowed at other areas with the approval of the Resident. The Contractor may be required to demonstrate that the material may be applied in a manner that will prevent erosion and will aid in the establishment of permanent vegetation. The Resident reserves the right to require the use of hay or straw mulch at all locations if he determines that the cellulose mulch is ineffective. Cellulose fiber mulch is not acceptable for winter stabilization.

610.06 Method of Measurement

The following sentence is added:

Temporary Mulch will be paid for by the lump sum.

656.10 Basis of Payment

Temporary Mulch will be paid for at the Contract price per lump sum which shall be full compensation for furnishing and spreading the Temporary Mulch as many times as necessary as determined by the Contractor's operations and staging. The price shall also include the additional mulch netting and snow removal necessary during the winter months.

Payment will be made under:

Pay Item		Pay Unit
619.1202	Temporary Mulch	Lump Sum

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC

(Specific Project Maintenance of Traffic Requirements)

This Specification describes the specific project maintenance of traffic requirements for this Project.

The following minimum traffic requirements shall be maintained. These requirements may be adjusted based on the traffic volume when authorized by the Authority.

Maine Turnpike Traffic Control Requirements

This Section outlines the minimum requirements that shall be maintained for work on, over, or adjacent to the Maine Turnpike roadway. Operations are allowed as outlined below:

Bridge work directly over traffic or within six feet of a travel lane as measured from the painted pavement marking line or traffic control device will require a lane closure. This work includes but is not limited to the following:

1. Installing and removing shielding
2. Superstructure demolition
3. Unbolting structural steel
4. Removing structural steel
5. Erecting structural steel or concrete beams
6. Installing and removing deck and diaphragm forms
7. Erecting or moving sign panels on bridges
8. Bolting structural steel
9. Painting structural steel

When approved by the Resident, Items 3, 6 and 8 may be performed over traffic if a temporary floor is provided between the bottom flanges of the beams.

If the work involves a worker working higher than eight feet above grade, then a truck mounted attenuator (TMA) shall be included in the work zone layout.

Long term right shoulder closures in accordance with the Maintenance of Traffic details shown on the Plans may be used to create staging areas to complete work not over travel lanes (excluding above the median). The Contractor shall install signs, drums, work zone crash cushions and temporary concrete barrier to create staging areas. All maintenance of traffic control devices including concrete barrier and work zone crash cushions shall immediately be removed from the shoulder once work is complete as determined by the Resident.

Existing driveways, access roads and side streets shall be maintained during local road operations and access shall not be impeded by Contractor activities.

The existing Access Road to the West Gardiner MTA Maintenance Facility located north of the Route 126 Underpass Bridge shall be maintained during Contract operations and access shall not be impeded at any time by Contractor activities. No equipment or material storage will be allowed on the existing Maintenance Facility Access Road.

Lane closures will only be allowed in accordance with allowable closure tables in **Appendix B**.

All temporary lane closures shall be made utilizing drums.

See Subsection 104.4.7 Cooperation with Other Contractors for more information on other projects that may be in the area.

Maine Turnpike Under the **Cider Hill Road** Underpass Bridge Traffic Control Requirements:

Three lanes of traffic in each direction shall be maintained on the Maine Turnpike under the Cider Hill Road Underpass Bridge except when lane closure(s) are required to undertake project work. Single and Double lane closures shall be in accordance with the Maintenance of Traffic details shown on the Plans in **Appendix D**. The lane closures shall incorporate advance signing and maintenance of traffic devices as needed for the Northbound Weigh Station entering ramp and the Exit 7 Southbound Interchange entering ramp. For all southbound and northbound lane or shoulder closures, Maintenance of Traffic for the Northbound Weigh Station entering ramp and the Exit 7 Southbound Interchange entering ramp shall be coordinated with the Resident.

No inside left shoulder closures will be allowed at any time.

Temporary right shoulder closures in accordance with the Maintenance of Traffic details shown on the Plans, and in accordance with allowable closure tables in **Appendix B**, will be permitted on the Maine Turnpike under the Cider Hill Road Underpass Bridge.

See **Appendix B** for permitted Maine Turnpike Single and Double Lane Closure hours under the Cider Hill Road Underpass Bridge.

Cider Hill Road Underpass Bridge Traffic Control Requirements:

Temporary lane or shoulder closures are permitted on the Cider Hill Road Underpass Bridge in accordance with the Maintenance of Traffic details to allow for the installation and removal of the proposed containment system. The Contractor shall provide a minimum roadway width of 22 feet for two-way traffic and 11 feet for one-way traffic. For all local road one-way alternating traffic setups, flaggers shall be incidental to the Maintenance of Traffic item.

Maine Turnpike Under the **Captain Thomas Road** Underpass Bridge Traffic Control Requirements:

Three lanes of traffic in each direction shall be maintained on the Maine Turnpike under the Captain Thomas Road Underpass Bridge except when lane closure(s) are required to undertake project work. Single and Double lane closures shall be in accordance with the Maintenance of Traffic details shown on the Plans.

No inside left shoulder closures will be allowed at any time.

Temporary right shoulder closures in accordance with the Maintenance of Traffic details shown on the Plans, and in accordance with allowable closure tables in **Appendix B**, will be permitted on the Maine Turnpike under the Captain Thomas Road Underpass Bridge.

See Appendix B for permitted Maine Turnpike Single and Double Lane Closure hours under the Captain Thomas Road Underpass Bridge.

Captain Thomas Road Underpass Bridge Traffic Control Requirements:

Temporary lane closures are permitted on the Captain Thomas Road Underpass Bridge in accordance with the Maintenance of Traffic details to allow for the installation and removal of the proposed containment system. The Contractor shall provide a minimum roadway width of 22 feet for two-way traffic and 11 feet for one-way traffic. For all local road one-way alternating traffic setups, flaggers shall be incidental to the Maintenance of Traffic item.

Maine Turnpike Under the **Route 126** Underpass Bridge Traffic Control Requirements:

Two lanes of traffic in each direction shall be maintained on the Maine Turnpike under the Route 126 Underpass Bridge except when lane closure(s) are required to undertake project work. Single lane closures shall be in accordance with the Maintenance of Traffic details shown on the Plans. Southbound lane closures shall incorporate advance signing and maintenance of traffic devices as needed for the Exit 102 Southbound Interchange entering ramp. For all southbound lane or shoulder closures, Maintenance of Traffic for the Exit 102 Southbound Interchange entering ramp shall be coordinated with the Resident.

No inside left shoulder closures will be allowed at any time.

Temporary right shoulder closures in accordance with the Maintenance of Traffic details shown on the Plans, and in accordance with allowable closure tables in **Appendix B**, will be permitted on the Maine Turnpike under the Route 126 Underpass Bridge.

See **Appendix B** for permitted Maine Turnpike Single Lane Closure hours under the Route 126 Underpass Bridge.

Route 126 Underpass Bridge Traffic Control Requirements:

Temporary lane or shoulder closures are permitted on the Route 126 Underpass Bridge in accordance with the Maintenance of Traffic details to allow for the installation and removal of the proposed containment system. The Contractor shall provide a minimum roadway width of 22 feet for two-way traffic and 11 feet for one-way traffic. For all local road one-way alternating traffic setups, flaggers shall be incidental to the Maintenance of Traffic item.

Maine Turnpike Under the **High Street** Traffic Control Requirements:

Two lanes of traffic in each direction shall be maintained on the Maine Turnpike under the High Street Underpass Bridge except when lane closure(s) are required to undertake project

work. Single lane closures shall be in accordance with the Maintenance of Traffic details shown on the Plans. The northbound lane closures shall incorporate advance signing and maintenance of traffic devices as needed for the Exit 103 Northbound Interchange entering ramp. For all northbound lane or shoulder closures, Maintenance of Traffic for the Exit 103 Northbound Interchange entering ramp shall be coordinated with the Resident.

No inside left shoulder closures will be allowed at any time.

Temporary right shoulder closures in accordance with the Maintenance of Traffic details shown on the Plans, and in accordance with allowable closure tables in **Appendix B**, will be permitted on the Maine Turnpike under the High Street Underpass Bridge.

See **Appendix B** for permitted Maine Turnpike Single Lane Closure hours under the High Street Underpass Bridge.

High Street Underpass Bridge Traffic Control Requirements:

Temporary lane closures are permitted on the High Street Underpass Bridge in accordance with the Maintenance of Traffic Details to allow for the installation and removal of the proposed containment system. The Contractor shall provide a minimum roadway width of 22 feet for two-way traffic and 11 feet for one-way traffic. For all local road one-way alternating traffic setups, flaggers shall be incidental to the Maintenance of Traffic item.

652.7 Method of Measurement

The first paragraph is revised to read as follows:

Signs and panel markers will not be measured separately but shall be incidental to the various Traffic Control Devices and Maintenance of Traffic Control Devices lump sum pay items. Flashing arrow boards, barricades, battery operated flashing and steady burn lights, drums and cones will not be measured separately but shall be incidental to the various Traffic Control Devices and Maintenance of Traffic Control Devices lump sum pay items. Such payment shall be full compensation for all incidentals necessary to install and maintain the respective devices. Portable change-able message signs will be measured by each unit authorized and installed on the project. No additional payment will be made for devices that require replacement due to poor condition or inadequate retro-reflectivity.

652.8 Basis of Payment

The first paragraph is revised to read as follows:

The accepted quantity of signs and panel markers will not be measured separately but shall be incidental to the various Traffic Control Devices and Maintenance of Traffic Control Devices lump sum pay items. Such payment shall be full compensation for furnishing and installing all signs, sign supports, and all incidentals necessary to complete the installation of the signs.

The second paragraph is revised to read as follows:

The accepted quantity of flashing arrow boards, barricades, battery operated flashing and steady burn lights, drums and cones will not be paid separately but shall be incidental to the various Traffic Control Devices and Maintenance of Traffic Control Devices lump sum pay items. Such payment shall be full compensation for all incidentals necessary to install and maintain the respective devices.

The accepted quantity of portable change-able message signs will be paid for at the contract unit price each of the actual number of portable change-able message signs authorized furnished and installed. Such payment shall be full compensation for all incidentals necessary to install and maintain the respective portable change-able message signs. See Supplemental Specification Section 652 Maintenance of Traffic (General) for additional information.

The accepted quantity of Truck Mounted Attenuator will be paid for at the contract unit price per calendar day for the actual number of Truck Mounted Attenuator days authorized and furnished. See Special Provision Section 652 Maintenance of Traffic (Truck Mounted Attenuator) for additional information.

Traffic Control Devices and Maintenance of Traffic Control Devices – Cider Hill Road Underpass Bridge will be paid at the contract lump sum price. Such payment shall be full compensation for furnishing and installing all signs, drums, cones, barricades, and flashing arrow panels as shown on the Plans, or necessary for effective traffic control on the Cider Hill Road Underpass Bridge, on the Maine Turnpike, the adjacent ramp(s) in the vicinity of the Cider Hill Road Underpass Bridge, and for all days the Contractor maintains traffic as specified herein, and for moving devices as many times as necessary; for replacing devices damaged, lost or stolen; and for cleaning, maintaining and removing all devices used for traffic control.

Traffic Control Devices and Maintenance of Traffic Control Devices – Captain Thomas Road Underpass Bridge will be paid at the contract lump sum price. Such payment shall be full compensation for furnishing and installing all signs, drums, cones, barricades, and flashing arrow panels as shown on the Plans, or necessary for effective traffic control on the Captain Thomas Road Underpass Bridge, on the Maine Turnpike, and for all days the Contractor maintains traffic as specified herein, and for moving devices as many times as necessary; for replacing devices damaged, lost or stolen; and for cleaning, maintaining and removing all devices used for traffic control.

Traffic Control Devices and Maintenance of Traffic Control Devices – Route 126 Underpass Bridge will be paid at the contract lump sum price. Such payment shall be full compensation for furnishing and installing all signs, drums, cones, barricades, and flashing arrow panels as shown on the Plans, or necessary for effective traffic control on the Route 126 Underpass Bridge, on the Maine Turnpike, the adjacent ramp(s) in the vicinity of the Route 126 Underpass Bridge, and for all days the Contractor maintains traffic as specified herein, and for moving devices as many times as necessary; for replacing devices damaged, lost or stolen; and for cleaning, maintaining and removing all devices used for traffic control.

Traffic Control Devices and Maintenance of Traffic Control Devices – High Street Underpass Bridge will be paid at the contract lump sum price. Such payment shall be full compensation for furnishing and installing all signs, drums, cones, barricades, and flashing arrow

panels as shown on the Plans, or necessary for effective traffic control on the High Street Underpass Bridge, on the Maine Turnpike, the adjacent ramp(s) in the vicinity of the High Street Underpass Bridge, and for all days the Contractor maintains traffic as specified herein, and for moving devices as many times as necessary; for replacing devices damaged, lost or stolen; and for cleaning, maintaining and removing all devices used for traffic control.

652.8.2 Other Items

The following Pay Items are added:

Pay Item		Pay Unit
652.3611	Traffic Control Devices and Maintenance of Traffic Control Devices – Cider Hill Road Underpass Bridge	Lump Sum
652.3612	Traffic Control Devices and Maintenance of Traffic Control Devices – Captain Thomas Road Underpass Bridge	Lump Sum
652.3613	Traffic Control Devices and Maintenance of Traffic Control Devices – Route 126 Underpass Bridge	Lump Sum
652.3614	Traffic Control Devices and Maintenance of Traffic Control Devices – High Street Underpass Bridge	Lump Sum

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC

(Temporary Portable Rumble Strips)

652.01 Description:

This work consists of furnishing and placing temporary portable rumble strips RoadQuake 2F TPRS or an approved equal.

652.02 Materials:

Furnish a temporary portable rumble strip system, which includes a method to transport and move these to on-site locations where they will be used. The Contractor shall submit for approval, literature and all necessary certifications to the Maine Turnpike prior to procurement of the product.

652.03 General:

Placement:

Provide rumble strips where the plans show or as directed by the Resident as follows:

Prior to placing rumble strips, clean the roadway of sand and other materials, that may cause slippage.

Place one end of the rumble strips 6 inches from the roadway centerline. Extend the strips perpendicular to the direction of travel. Ensure strips lay flat on the roadway surface.

Only one series of rumble strips, placed before the first work zone, is required per direction of travel for multiple work zones spaced 1 mile or less apart. Work zones spaced greater than 1 mile apart require a separate series of rumble strips. Each lane shall use one group of temporary rumble strips.

Bracketed “Rumble Strip Ahead” and “Bump” signs shall be utilized and will be paid for under the respective construction sign pay items.

Maintenance:

Maintain rumble strips as follows:

If rumble strips slide, become out of alignment, or are no longer in the wheel path of approaching vehicles during the work period, thoroughly clean both sides of the rumble strips and reset on a clean roadway.

Repair or replace damaged rumble strips immediately.

652.04 Method of Measurement:

The accepted quantity of temporary portable rumble strips shall be measured by the unit complete in place, per lane closure application. A unit shall consist of 1 group of 3 full-lane width of rumble strips. As shown in the plans, a maximum of 3 units may be used at each lane closure. A unit shall be measured for each group of rumble strips, each time they are used for a lane closure.

652.05 Basis of Payment:

The accepted quantity of temporary portable rumble strips will be paid for at the contract unit price per unit which shall include the transport device. Payment is full compensation for providing, relocating, maintaining or replacing, and removing temporary portable rumble strips.

Pay Item		Pay Unit
652.46	Temporary Portable Rumble Strip	Unit

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC

(Automated Speed Limit Sign)

652.1 Description

This special provision provides for furnishing, operating, and maintaining an Automated Trailer Mounted Radar Speed Limit Sign for project use. The Contractor shall furnish, operate, and maintain the Automated Trailer Mounted Radar Speed Limit Signs during the project operations.

652.1.1 Instruction and maintenance manuals shall be provided.

652.2 Materials

Automated Trailer Mounted Speed Limit Sign

Trailer mounted speed limit signs shall be self-contained units including sign assembly, flashing lights, directional radar to measure speed limits, a regulatory speed limit sign, a construction sign stating “Work Zone Speed Limit When Flashing” and power supply specifically constructed to operate as a trailer-mounted sign. The preferred color of the unit shall be “construction orange”.

Signs

Base material for the regulatory speed limit signs shall be weather proof, rigid substrate specifically manufactured for highway signing and meet the retro-reflective sheeting application requirements of the sheeting manufacturer.

Sign text shall consist of the letters, digits and symbols either applied by stick-on or silk screen, to conform to the dimensions and designs indicated in the Contract, MUTCD and/or FHWA Standard Highway Signs. The materials and methods shall be in accordance with standard commercial processes.

The regulatory sign should have changeable speed limit numbers.

“Work Zone” construction signs shall be mounted on the trailer unit above and below the regulatory speed limit sign. (see Appendix). The “When Flashing “construction sign shall be added to the trailer.

Signs and secondary signs shall follow the MUTCD for minimum mounting heights.

Power supply

The power supply shall be either full battery power with solar panel charging (capable of maintaining a charged battery level) and 135 ampere, 12 volt deep cycle batteries, or diesel powered generator with a fuel capacity sufficient for 10 hours of continuous operation.

Flashing Lights

Each unit shall be equipped with two mono-directional flashing lights, placed in accordance with the MUTCD, with amber lenses and reflectors, which are visible through a range of 120 degrees when viewed facing the sign. The lights, either strobe, halogen, or incandescent lamps, shall be visible for a minimum distance of one mile under daylight conditions and shall have a minimum flash rate of 40 flashes per minute. An "On" indicator light shall be mounted on the back of the signs, which is visible for at least 500 feet to provide confirmation that the flashing lights are operating.

Radar

The directional radar shall monitor approaching traffic only. The radar shall be capable of measuring speeds from 5 to 70 MPH at a distance of up to 1500 feet and shall have a high speed cut off thresh hold.

CONSTRUCTION REQUIREMENTS

652.3.2 Responsibility of the Contractor

The Contractor shall furnish the Automated Trailer Mounted Speed Limit Sign as described in this Special Provision for this project.

All existing speed limit signs, which conflict with the construction zone trailer mounted speed limit signs shall be covered completely during the operation of the flashing lights. These signs shall be immediately uncovered when the use of the flashing lights is discontinued.

Automated Trailer Mounted Speed Limit Signs shall be used only during the Contractor's actual work hours, unless specifically authorized by the Engineer.

The Resident will record the actual time and location for the signs on a daily basis when the Automated Trailer Mounted Speed Limit Signs are in use.

Automated Trailer Mounted Speed Limit Signs shall be located as shown on the plans.

Automated Trailer Mounted Speed Limit Signs shall be delineated with retro-reflective temporary traffic control devices while in use and shall also be delineated by affixing a retro-reflective material directly on the trailer.

Upon delivery of the Automated Trailer Mounted Speed Limit Sign and before acceptance by the Authority, the Contractor shall have a representative of the manufacturer review the condition and notify the Resident in writing, of all deficiencies noted.

The Contractor shall arrange to have all necessary repairs performed at no cost to the Authority.

To avoid impairing driver vision, the Contractor shall dim the lighted speed limit readings by 50 percent during nighttime use, and restore full power lighting during daytime operation.

652.7 Method of Measurement

Automated Trailer Mounted Speed Limit Sign shall be measured for payment by the calendar day for each calendar day that the unit is used on a travel lane or shoulder on the project, as approved by the Resident, and shall include the Trailer, Radar Speed Limit Sign, flashing beacon amber lights, regulatory speed limit sign, "Work Zone Speed Limit When Flashing" construction sign, fuel, necessary maintenance, and all checking of Radar Speed Limit Signs by manufacturer. Also included are all project moves including the transporting and delivery of the unit.

652.8 Basis of Payment

The Automated Trailer Mounted Speed Limit Sign(s) will be paid for at the Contract unit price per calendar day. This price shall include all costs associated with the use of the Automated Trailer Mounted Speed Limit Sign.

Payment will be made under:

Pay Item		Pay Unit
652.451	Automated Trailer Mounted Speed Limit Sign	Calendar Day

SPECIAL PROVISION

SECTION 719

SIGNING MATERIAL

Section 719.01 Reflective Sheeting

This Subsection is deleted in its entirety and replaced with the following:

Retroreflective sheeting for signs shall meet at a minimum the requirements for, ASTM 4956 – Type VII, Type VIII or Type IX (Prismatic), for all signs. All Type 1 Guide Signs shall meet at a minimum the requirements for ASTM 4956 –Type IX (Prismatic) sheeting.

Reflective sheeting, used in sign construction, shall have been manufactured within the six months immediately prior to the fabrication of each sign. Upon delivery at the job site of each shipment of signs, a letter of certification shall be provided that the reflective sheeting conforms to the requirements.

For Type 1 Guide Signs, all reflective sheeting shall be color matched on each sign unit.

All warning signs shall be fluorescent yellow except for Ramp Advisory Speed signs which shall be yellow.

All Construction Series signs that use orange backgrounds shall be fluorescent orange.

All Pedestrian Signs shall be fluorescent yellow-green.

EZ-PASS Purple shall conform to the FHWA Purple color block.

719.02 Demountable High Intensity Reflectorized Letters, Numerals, Symbols, and Borders

This Subsection, including the title, is deleted in its entirety and replaced with the following:

719.02 Direct Applied Reflectorized Letters, Numerals, Symbols, and Borders

Direct applied letters, numerals, symbols and borders shall consist of cut out sheeting shall meet at a minimum the requirements for ASTM 4956 – Type VII, Type VIII or Type IX (Prismatic) sheeting.

All Type 1 Guide Signs shall meet at a minimum the requirements for ASTM 4956 – Type IX (Prismatic) sheeting.

APPENDIX A

RCRA 8 METALS TEST REPORTS

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert. No. E87604

January 3, 2017

Mr. John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook,ME 04092

RE: Katahdin Lab Number: TJ0930
Project ID: Turnpike Bridge Paint
Project Manager: Ms. Kristen Schultz
Sample Receipt Date(s): December 23, 2016

Dear Mr. Doughty:

Please find enclosed the following information:

* Report of Analysis (Analytical and/or Field)
* Chain of Custody (COC)
* Login Report

A copy of the Chain of Custody is included in the paginated report. The original COC is attached as an addendum to this report.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact the project manager listed above. The results contained in this report relate only to the submitted samples. This cover letter is an integral part of the ROA.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in an attached technical narrative or in the Report of Analysis.

We appreciate your continued use of our laboratory and look forward to working with you in the future. The following signature indicates technical review and acceptance of the data.

Please go to http://www.katahdinlab.com/cert.html for copies of Katahdin Analytical Services Inc. current certificates and analyte lists.

Sincerely,
KATAHDIN ANALYTICAL SERVICES

Leslie Dimond

Authorized Signature

01/03/2017

Date

TECHNICAL NARRATIVE

Metals Analysis

Katahdin Sample Numbers TJ0930- (1-5) are solid samples that were subjected to TCLP extraction on 12/27/16 in accordance with USEPA Method 1311. The TCLP fluid blank identified as PBT1358A is associated with these samples. The measured barium concentration in TCLP fluid blank PBT1358A (0.06 mg/L) is above the laboratory's reporting limit. However, because the concentration of barium in the TCLP blank and in the associated TCLP extract are well below the regulatory limit, reanalysis was not required.

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL "U" LOQ or "U" LOD, where the rate of false negatives is <1%.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), but above the Method Detection Limit (MDL).

I-7 The laboratory's Practical Quantitation Level (PQL) or LOQ could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 Please refer to cover letter or narrative for further information.

H_ Please note that the regulatory holding time for _____ is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. _____ for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H1 - pH H2 - DO H3 - sulfite H4 - residual chlorine

T1 The client did not provide the full volume of at least one liter for analysis of TSS. Therefore, the PQL of 2.5 mg/L could not be achieved.

T2 The client provided the required volume of at least one liter for analysis of TSS, but the laboratory could not filter the full one liter volume due to the sample matrix. Therefore, the PQL of 2.5 mg/L could not be achieved.

M1 The matrix spike and/or matrix spike duplicate recovery performed on this sample was outside of the laboratory acceptance criteria. Sample matrix is suspected. The laboratory criteria was met for the Laboratory Control Sample (LCS) analyzed concurrently with this sample.

M2 The matrix spike and/or matrix spike duplicate recovery was outside of the laboratory acceptance criteria. The native sample concentration is greater than four times the spike added concentration so the spike added could not be distinguished from the native sample concentration.

R1 The relative percent difference (RPD) between the duplicate analyses performed on this sample was outside of the laboratory acceptance criteria (when both values are greater than ten times the PQL).

MCL	Maximum Contaminant Level	NL	No limit
NFL	No Free Liquid Present	FLP	Free Liquid Present
NOD	No Odor Detected	TON	Threshold Odor Number

D-1 As required by Method 5210B, APHA Standard Methods for the Examination of Water and Wastewater (21st edition), the BOD value reported for this sample is 'qualified' because the check standard run concurrently with the sample analysis did not meet the criteria specified in the method (198 +/- 30.5 mg/L). These results may not be reportable for compliance purposes.

D-2 The measured final dissolved oxygen concentrations of all dilutions were less than the method-specified limit of 1 mg/L. The reported BOD result was calculated assuming a final oxygen concentration equal to 1 mg/L. The reported value should be considered a minimum value.

D-3 The dilution water used to prepare this sample did not meet the method and/or regulatory criteria of less than 0.2 or 0.4 mg/L dissolved oxygen (DO) uptake over the five day period of incubation. These results may not be reportable for compliance purposes.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: TJ0930-001
Report Date: 1/3/2017
PO No.:
Project: Turnpike Bridge Paint

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MM 103.6 SB HIGH ST	AQ	No(Total)	12/23/2016	12/23/2016

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1
BARIUM, TCLP	0.530	mg/L	0.025	1	0.005	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	
CADMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1
CHROMIUM, TCLP	0.147	mg/L	0.0750	1	0.015	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	
LEAD, TCLP	121.	mg/L	0.1	5	0.005	SW846 6010	12/29/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	12/28/16	EAM	SW846 7470	12/28/16	MD	JL28HGW1	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1
SILVER, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: TJ0930-002
Report Date: 1/3/2017
PO No.:
Project: Turnpike Bridge Paint

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MM 101.7 SB RT 126	AQ	No(Total)	12/23/2016	12/23/2016

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1
BARIUM, TCLP	2.13	mg/L	0.025	1	0.005	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	
CADMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1
CHROMIUM, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1
LEAD, TCLP	1.54	mg/L	0.02	1	0.005	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	12/28/16	EAM	SW846 7470	12/28/16	MD	JL28HGW1	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1
SILVER, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: TJ0930-003
Report Date: 1/3/2017
PO No.:
Project: Turnpike Bridge Paint

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MM 52.6 SB LEIGHTON	AQ	No(Total)	12/23/2016	12/23/2016

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1
BARIUM, TCLP	0.114	mg/L	0.025	1	0.005	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	
CADMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1
CHROMIUM, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1
LEAD, TCLP	4.57	mg/L	0.02	1	0.005	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	12/28/16	EAM	SW846 7470	12/28/16	MD	JL28HGW1	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1
SILVER, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: TJ0930-004
Report Date: 1/3/2017
PO No.:
Project: Turnpike Bridge Paint

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MM F 0.6 E-AUBURN	AQ	No(Total)	12/23/2016	12/23/2016

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1
BARIUM, TCLP	1.21	mg/L	0.025	1	0.005	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	
CADMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1
CHROMIUM, TCLP	0.0830	mg/L	0.0750	1	0.015	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	
LEAD, TCLP	96.8	mg/L	0.1	5	0.005	SW846 6010	12/29/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	12/28/16	EAM	SW846 7470	12/28/16	MD	JL28HGW1	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1
SILVER, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: TJ0930-005
Report Date: 1/3/2017
PO No.:
Project: Turnpike Bridge Paint

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MM F 1.6 E-FALMOUTH	AQ	No(Total)	12/23/2016	12/23/2016

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1
BARIUM, TCLP	0.505	mg/L	0.025	1	0.005	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	
CADMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1
CHROMIUM, TCLP	0.200	mg/L	0.0750	1	0.015	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	
LEAD, TCLP	133.	mg/L	0.1	5	0.005	SW846 6010	12/29/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	12/28/16	EAM	SW846 7470	12/28/16	MD	JL28HGW1	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1
SILVER, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	12/28/16	MD	SW846 3010	12/28/16	MD	JL28ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin Analytical Services, LLC. **Sample Receipt Condition Report**

Client: HNTB	KAS PM: KSS	Sampled By: NA
Project: MTA bridge paint	KIMS Entry By: SO	Delivered By: NA
KAS Work Order#: TJ 0930-	KIMS Review By: [illegible]	Received By: SO
SDG #:	Cooler: 1 of 1	Date/Time Rec.: 12/23/16 1520

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				✓	
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.		✓			Temp (°C): 14.9
Samples received at <6 °C w/o freezing?				✓	Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?				✓	The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?				✓	
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles: **Aqueous:** No bubble larger than a pea?				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
Air: Refer to KAS COC for canister/flow controller requirements.	√ if air included				
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

600 Technology Way
P.O. Box 540
Scarborough, ME 04070
Tel: (207) 874-2400
Fax: (207) 775-4029

Chain of Custody

Client:	Contact:	Phone #:	Fax #:
HNTB	John Doughty	(207)774-5155	(207)228-0909
Address: 340 County Road Suite 6-C	City: Westbrook	State: Maine	Zip Code: 04092
Purchase Order #:	Proj. Name/No.: Turnpike Bridge Paint		Katahdin Quote #:
Bill (if different than above):		Address:	
Sampler (Print/Sign): Nick Adams /			Copies To:

LAB USE ONLY — Work Order #: TJ 0930 (Katahdin Project Number)

Remarks:

Shipping Info: FEDEX UPS CLIENT
Airbill No:
Temp C: Temp Blank Intact Not Intact

	Sample Description	Date/Time Collected	Matrix	No. of Containers	Analysis and Container Type Preservatives: TCLP & Total Metals	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N
	MM 103.6 SB High Street Underpass grab	12/23/2016 1135	S	1	1										
	MM 101.7 SB Route 126 Underpass grab	12/23/2016 1230	S	1	1										
	MM 52.6 SB Leighton Road Underpass grab	12/23/2016 1335	S	1	1										
	MM F 0.6 East Auburn Street Underpass grab	12/23/2016 1400	S	1	1										
	MM F 1.6 East Falmouth Road Underpass grab	12/23/2016 1420	S	1	1										

COMMENTS: Meteals list: As, Ba, Cd, Cr, Pb, Se, Ag, Hg

Relinquished By:	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:
Nick Adams	12/23/16 1530				
Relinquished By:	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:

All laboratory and field work shall be governed by KATAHDIN's Standard Terms and Conditions, except where a Purchase Order or Contract supersede.

Katahdin
ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Dec. 27, 2016
12:20 PM

Login Number: TJ0930

Account: HNTBCO001 NoWeb
HNTB Corp.

Project:

Quote/Incoming:

Primary Report Address:
John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook,ME 04092
jdoughty@hntb.com

Primary Invoice Address:
Accounts Payable
HNTB Corp.
340 County Rd
Suite 6-C
Westbrook,ME 04092

Report CC Addresses:

Invoice CC Addresses:

Login Information:

ANALYSIS INSTRUCTIONS	:	FIRM TAT!!
CHECK NO.	:	
CLIENT PO#	:	
CLIENT PROJECT MANAGE	:	
CONTRACT	:	
COOLER TEMPERATURE	:	14.9
DELIVERY SERVICES	:	KAS
EDD FORMAT	:	
LOGIN INITIALS	:	GN
PM	:	HHM
PROJECT NAME	:	Turnpike Bridge Paint
QC LEVEL	:	I
REGULATORY LIST	:	
REPORT INSTRUCTIONS	:	Email PDF and invoice to John, no HC.
SDG ID	:	
SDG STATUS	:	

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
TJ0930-1	MM 103.6 SB HIGH ST	23-DEC-16 11:35	23-DEC-16		**28-DEC-16**	28-DEC-16	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	P	TCLP-METALS		8oz Glass		**MM 103.6 SB High Street Underpass grab**

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC, TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM, TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM, TCLP-SILVER

TJ0930-2	MM 101.7 SB RT 126	23-DEC-16 12:30	23-DEC-16		**28-DEC-16**	28-DEC-16	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	P	TCLP-METALS		8oz Glass		**MM 101.7 SB Route 126 Underpass grab**

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC, TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM, TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM, TCLP-SILVER

TJ0930-3	MM 52.6 SB LEIGHTON	23-DEC-16 13:35	23-DEC-16		**28-DEC-16**	28-DEC-16	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	P	TCLP-METALS		8oz Glass		**MM 52.6 SB Leighton Road Underpass grab**

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC, TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM, TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM, TCLP-SILVER

TJ0930-4	MM F 0.6 E-AUBURN	23-DEC-16 14:00	23-DEC-16		**28-DEC-16**	28-DEC-16	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	P	TCLP-METALS		8oz Glass		**MM F 0.6 East Auburn Street Underpass grab**

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC, TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM, TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM, TCLP-SILVER

Katahdin ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Dec. 27, 2016
12:20 PM

Quote/Incoming:

Login Number: TJ0930

Account: HNTBCO001 NoWeb
HNTB Corp.

Project:

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
TJ0930-5	MM F 1.6 E-FALMOUTH	23-DEC-16 14:20	23-DEC-16		**28-DEC-16**	28-DEC-16	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	SAMPLING				**MM F 1.6 East Falmouth Road Underpass grab**
Solid	P	TCLP-METALS		8oz Glass		

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC
TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM
TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM
TCLP-SILVER

Total Samples: *5* ***Total Analyses:*** *6*

Karahdin
ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: TJ0970-001
Report Date: 1/3/2017
PO No.:
Project: Turnpike Bridge Paint

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MM 6.2 SB GRAB	AQ	No(Total)	12/28/2016	12/28/2016

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	1/3/17	MD	SW846 3010	12/30/16	MD	JL30ICW1	1
BARIUM, TCLP	0.0705	mg/L	0.025	1	0.005	SW846 6010	1/3/17	MD	SW846 3010	12/30/16	MD	JL30ICW1	
CADMIUM, TCLP	0.0595	mg/L	0.0500	1	0.01	SW846 6010	1/3/17	MD	SW846 3010	12/30/16	MD	JL30ICW1	
CHROMIUM, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/3/17	MD	SW846 3010	12/30/16	MD	JL30ICW1	1
LEAD, TCLP	U 0.02	mg/L	0.02	1	0.005	SW846 6010	1/3/17	MD	SW846 3010	12/30/16	MD	JL30ICW1	1
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	1/3/17	MD	SW846 7470	1/3/17	MD	KA03HGW2	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/3/17	MD	SW846 3010	12/30/16	MD	JL30ICW1	1
SILVER, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/3/17	MD	SW846 3010	12/30/16	MD	JL30ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin
ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: TJ0970-002
Report Date: 1/3/2017
PO No.:
Project: Turnpike Bridge Paint

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MM 33.4 NB GRAB	AQ	No(Total)	12/28/2016	12/28/2016

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	1/3/17	MD	SW846 3010	12/30/16	MD	JL30ICW1	1
BARIUM, TCLP	1.42	mg/L	0.025	1	0.005	SW846 6010	1/3/17	MD	SW846 3010	12/30/16	MD	JL30ICW1	
CADMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	1/3/17	MD	SW846 3010	12/30/16	MD	JL30ICW1	1
CHROMIUM, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/3/17	MD	SW846 3010	12/30/16	MD	JL30ICW1	1
LEAD, TCLP	U 0.02	mg/L	0.02	1	0.005	SW846 6010	1/3/17	MD	SW846 3010	12/30/16	MD	JL30ICW1	1
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	1/3/17	MD	SW846 7470	1/3/17	MD	KA03HGW2	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/3/17	MD	SW846 3010	12/30/16	MD	JL30ICW1	1
SILVER, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/3/17	MD	SW846 3010	12/30/16	MD	JL30ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin
ANALYTICAL SERVICES

nelac
Cert. No. E87604

January 13, 2012

Mr. Trevin Hobb
HNTB Corp.
340 County Rd
Suite 6C
Westbrook,ME 04092

RE: Katahdin Lab Number: SE8598
Project ID: MTA Bridges Event 12/11
Project Manager: Ms. Shelly Brown
Sample Receipt Date(s): December 27, 2011

Dear Mr. Hobb:

Please find enclosed the following information:

* Report of Analysis (Analytical and/or Field)
* Chain of Custody (COC)
* Login Report

A copy of the Chain of Custody is included in the paginated report. The original COC is attached as an addendum to this report.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact the project manager listed above. The results contained in this report relate only to the submitted samples. This cover letter is an integral part of the ROA.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in an attached technical narrative or in the Report of Analysis.

We appreciate your continued use of our laboratory and look forward to working with you in the future. The following signature indicates technical review and acceptance of the data.

Please go to http://www.katahdinlab.com/cert.html for copies of Katahdin Analytical Services Inc. current certificates and analyte lists.

Sincerely,
KATAHDIN ANALYTICAL SERVICES

Deborah J Nadeau
Authorized Signature

01/13/2012
Date

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS
(Refer to BOD Qualifiers Page for BOD footnotes)

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

I-7 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 Please refer to cover letter or narrative for further information.

MCL Maximum Contaminant Level

NL No limit

NFL No Free Liquid Present

FLP Free Liquid Present

NOD No Odor Detected

TON Threshold Odor Number

H1 Please note that the regulatory holding time for pH is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. pH for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H2 Please note that the regulatory holding time for DO is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. DO for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H3 Please note that the regulatory holding time for sulfite is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Sulfite for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H4 Please note that the regulatory holding time for residual chlorine is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Residual chlorine for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Trevin Hobb
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: SE8598-001
Report Date: 1/11/2012
PO No.:
Project: MTA Bridges Event 12/11

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MILE 6.6 GRAB	AQ	No(Total)	12/27/2011	12/27/2011

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
BARIUM, TCLP	0.0505	mg/L	0.025	1	0.005	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	
CADMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
CHROMIUM, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
LEAD, TCLP	765.	mg/L	0.2	10	0.005	SW846 6010	1/10/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	1/6/12	NAT	SW846 7470	1/6/12	NAT	FA06HGW1	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
SILVER, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Trevin Hobb
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: SE8598-003
Report Date: 1/11/2012
PO No.:
Project: MTA Bridges Event 12/11

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MILE 14.8 GRAB	AQ	No(Total)	12/27/2011	12/27/2011

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
BARIUM, TCLP	1.16	mg/L	0.025	1	0.005	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	
CADMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
CHROMIUM, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
LEAD, TCLP	0.02	mg/L	0.02	1	0.005	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	1/6/12	NAT	SW846 7470	1/6/12	NAT	FA06HGW1	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
SILVER, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Trevin Hobb
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: SE8598-005
Report Date: 1/11/2012
PO No.:
Project: MTA Bridges Event 12/11

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MILE 19.9 GRAB	AQ	No(Total)	12/27/2011	12/27/2011

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
BARIUM, TCLP	0.640	mg/L	0.025	1	0.005	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	
CADMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
CHROMIUM, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
LEAD, TCLP	U 0.02	mg/L	0.02	1	0.005	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	1/6/12	NAT	SW846 7470	1/6/12	NAT	FA06HGW1	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
SILVER, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Trevin Hobb
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: SE8598-007
Report Date: 1/11/2012
PO No.:
Project: MTA Bridges Event 12/11

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MILE 42.0 GRAB	AQ	No(Total)	12/27/2011	12/27/2011

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
BARIUM, TCLP	0.955	mg/L	0.025	1	0.005	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	
CADMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
CHROMIUM, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
LEAD, TCLP	U 0.02	mg/L	0.02	1	0.005	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	1/6/12	NAT	SW846 7470	1/6/12	NAT	FA06HGW1	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
SILVER, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Trevin Hobb
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: SE8598-009
Report Date: 1/11/2012
PO No.:
Project: MTA Bridges Event 12/11

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MILE 42.5 GRAB	AQ	No(Total)	12/27/2011	12/27/2011

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
BARIUM, TCLP	2.60	mg/L	0.025	1	0.005	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	
CADMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
CHROMIUM, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
LEAD, TCLP	0.060	mg/L	0.02	1	0.005	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	1/6/12	NAT	SW846 7470	1/6/12	NAT	FA06HGW1	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
SILVER, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Trevin Hobb
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: SE8598-011
Report Date: 1/11/2012
PO No.:
Project: MTA Bridges Event 12/11

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MILE 44.0 GRAB	AQ	No(Total)	12/27/2011	12/27/2011

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
BARIUM, TCLP	0.105	mg/L	0.025	1	0.005	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	
CADMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
CHROMIUM, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
LEAD, TCLP	625.	mg/L	0.2	10	0.005	SW846 6010	1/10/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	1/6/12	NAT	SW846 7470	1/6/12	NAT	FA06HGW1	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
SILVER, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Trevin Hobb
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: SE8598-013
Report Date: 1/11/2012
PO No.:
Project: MTA Bridges Event 12/11

Sample Description	Matrix	Filtered	Date Sampled	Date Received
FAL SPUR 1.10 EAST	AQ	No(Total)	12/27/2011	12/27/2011

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
BARIUM, TCLP	0.259	mg/L	0.025	1	0.005	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	
CADMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
CHROMIUM, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
LEAD, TCLP	160.	mg/L	0.1	5	0.005	SW846 6010	1/10/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	1/6/12	NAT	SW846 7470	1/6/12	NAT	FA06HGW1	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
SILVER, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Trevin Hobb
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: SE8598-015
Report Date: 1/11/2012
PO No.:
Project: MTA Bridges Event 12/11

Sample Description	Matrix	Filtered	Date Sampled	Date Received
FAL SPUR 1.10 WEST	AQ	No(Total)	12/27/2011	12/27/2011

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
BARIUM, TCLP	0.421	mg/L	0.025	1	0.005	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	
CADMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
CHROMIUM, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
LEAD, TCLP	214.	mg/L	0.1	5	0.005	SW846 6010	1/10/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	1/6/12	NAT	SW846 7470	1/6/12	NAT	FA06HGW1	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1
SILVER, TCLP	U 0.0750	mg/L	0.0750	1	0.015	SW846 6010	1/6/12	EAM	SW846 3010	1/6/12	NAT	FA06ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin Analytical Services, Inc. — Sample Receipt Condition Report

Client: HNTB	KAS PM: SB	Sampled By: NA
Project: TURNPIKE BRIDGES	KIMS Entry By: GV	Delivered By: NA
KAS Work Order#: SE 8598	KIMS Review By:	Received By: GV
SDG #:	Cooler: 1 of 1	Date/Time Rec.: 12/27/11 1255

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				✓	
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.		✓			Temp (°C): N/A
Samples received at <6 °C w/o freezing?	✓			✓	Note: Not required for metals analysis.
Ice packs or ice present?	✓			✓	The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Katahdin ANALYTICAL SERVICES
600 Technology Way
P.O. Box 540
Scarborough, ME 04070
Tel: (207) 874-2400
Fax: (207) 775-4029

Chain of Custody

Client: HNTB	Contact: Trevin Cobb	Phone #:	Fax #: ( )
Address:	City: Westbrook	State: Maine	Zip Code: 04092
Purchase Order #:	Proj. Name/No.: MTA Bridges		Katahdin Quote #:
Bill (if different than above):	Address:		
Sampler (Print/Sign): Nick Adams /			Copies To:

LAB USE ONLY — Work Order #: SE 8598 — Katahdin Project Number

Remarks:

Shipping Info: FEDEX UPS CLIENT
Airbill No:
Temp C: Temp Blank Intact Not Intact

Analysis and Container Type / Preservatives

	Sample Description	Date/Time Collected	Matrix	No. of Containers	TCLP Metals + Total	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N
	Mile 6.8 Maine Turnpike grab	12/27/2011 0820	S	1	1											
	Mile 14.8 Maine Turnpike grab	12/27/2011 0850	S	1	1											
	Mile 19.9 Maine Turnpike grab	12/27/2011 0910	S	1	1											
	Mile 42.0 Maine Turnpike grab	12/27/2011 0945	S	1	1											
	Mile 42.5 Maine Turnpike grab	12/27/2011 1010	S	1	1											
	Mile 44.0 Maine Turnpike grab	12/27/2011 1020	S	1	1											
	Fal Spur 1.10 East grab	12/27/2011 1050	S	1	1											
	Fal Spur 1.10 West grab	12/27/2011 1100	S	1	1											

COMMENTS: Meleals list: As, Ba, Cd, Cr, Pb, Se, Ag, Hg

Relinquished By: Nick Adams	Date/Time 12/27/2011	Received By:	Relinquished By:	Date/Time	Received By:
Relinquished By:	Date/Time 1300	Received By:	Relinquished By:	Date/Time	Received By:

Katahdin
ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Dec. 27, 2011
02:21 PM

Login Number: SE8598

Account: HNTBCO001 NoWeb
HNTB Corp.

Project:

Quote/Incoming:

Login Information:

ANALYSIS INSTRUCTIONS	:
CHECK NO.	:
CLIENT PO#	:
CLIENT PROJECT MANAGE	:
CONTRACT	:
COOLER TEMPERATURE	: n/a
DELIVERY SERVICES	: KAS
EDD FORMAT	:
LOGIN INITIALS	: GN
PM	: SMB
PROJECT NAME	: MTA Bridges Event 12/11
QC LEVEL	: I
REGULATORY LIST	:
REPORT INSTRUCTIONS	: email pdf and invoice trevin, no HC
SDG ID	:
SDG STATUS	:

Primary Report Address:

Trevin Hobb
HNTB Corp.
340 County Rd
Suite 6C
Westbrook,ME 04092
trobb@HNTB.com

Primary Invoice Address:

Accounts Payable
HNTB Corp.
340 County Rd
Suite 6-C
Westbrook,ME 04092

Report CC Addresses:

Invoice CC Addresses:

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SE8598-1	MILE 6.8 GRAB	27-DEC-11 08:20	27-DEC-11			09-JAN-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	SAMPLING				
Solid	P	TCLP-METALS		8oz Glass		

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC, TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM, TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM, TCLP-SILVER

SE8598-3	MILE 14.8 GRAB	27-DEC-11 08:50	27-DEC-11		09-JAN-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	SAMPLING				
Solid	P	TCLP-METALS		8oz Glass		

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC, TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM, TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM, TCLP-SILVER

SE8598-5	MILE 19.9 GRAB	27-DEC-11 09:10	27-DEC-11		09-JAN-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	SAMPLING				
Solid	P	TCLP-METALS		8oz Glass		

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC, TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM, TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM, TCLP-SILVER

SE8598-7	MILE 42.0 GRAB	27-DEC-11 09:45	27-DEC-11		09-JAN-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	SAMPLING				
Solid	P	TCLP-METALS		8oz Glass		

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC, TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM, TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM, TCLP-SILVER

Login Number: SE8598 Quote/Incoming:

Account: HNTBCO001 NoWeb

HNTB Corp.

Project:

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SE8598-9	MILE 42.5 GRAB	27-DEC-11 10:10	27-DEC-11			09-JAN-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	SAMPLING				
Solid	P	TCLP-METALS		8oz Glass		

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC, TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM, TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM, TCLP-SILVER

SE8598-11	MILE 44.0 GRAB	27-DEC-11 10:20	27-DEC-11			09-JAN-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	SAMPLING				
Solid	P	TCLP-METALS		8oz Glass		

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC, TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM, TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM, TCLP-SILVER

SE8598-13	FAL SPUR 1.10 EAST	27-DEC-11 10:50	27-DEC-11			09-JAN-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	SAMPLING				
Solid	P	TCLP-METALS		8oz Glass		

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC, TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM, TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM, TCLP-SILVER

SE8598-15	FAL SPUR 1.10 WEST	27-DEC-11 11:00	27-DEC-11			09-JAN-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	SAMPLING				
Solid	P	TCLP-METALS		8oz Glass		

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC, TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM, TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM, TCLP-SILVER

Total Samples: *8* ***Total Analyses:*** *16*

APPENDIX B

PERMITTED LANE CLOSURE HOURS

MAINE TURNPIKE AUTHORITY
2018 Bridge Painting
APPENDIX B
CIDER HILL BRIDGE LANE REQUIRMENTS
MM 6.2

	May, Weeks 1 & 2 of June, September, October												
NORTHBOUND	Sun to Mon		Mon to Tue		Tue to Wed		Wed to Thur		Thur to Fri		Fri to Sat		
Single lane closure permitted	1800	2400	000	2400	000	2400	000	2400	000	1100	1800	1100	
Double lane closure permitted	2000	700	2100	700	2100	700	2100	700	2100	700	2200	700	
SOUTHBOUND													
Single lane closure permitted	1800	2400	000	2400	000	2400	000	2400	000	2400	000	1800	
Double lane closure permitted	2200	600	1900	600	1900	600	1900	600	1900	600	2000	800	
	Weeks 3 & 4 of June, July, August												
NORTHBOUND	Sun to Mon		Mon to Tue		Tue to Wed		Wed to Thur		Thur to Fri		Fri to Sat		
Single lane closure permitted	1800	900	1900	900	1900	900	1900	900	1900	900	2100	900	
Double lane closure permitted	2100	600	2200	600	2200	600	2200	600	2200	600	2300	600	
SOUTHBOUND													
Single lane closure permitted	2100	1000	1600	1000	1600	1000	1600	1000	1600	1000	1700	900	
Double lane closure permitted	2300	600	2100	600	2100	600	2100	600	2100	600	2100	600	
	Notes:												
	#1	For Memorial Day weekend restrictions, See Supplemental Specifications Section 101.2											
	#2	For Fourth of July weekend restrictions, See Special Provisions Section 101.2											
	#3	For Labor Day weekend restrictions, See Supplemental Specifications Section 101.2											
	#4	For Columbus Day weekend restrictions, See Supplemental Specifications Section 101.2											
	#5	All lanes shall be open to traffic for all Holiday and Weekend periods and other specified periods in accordance with this chart											
	#6	Shoulder closures will only be allowed during Single Lane Closure periods											

MAINE TURNPIKE AUTHORITY
2018 Bridge Painting
APPENDIX B
CAPT THOMAS BRIDGE LANE REQUIRMENTS
MM 14.8

	May, Weeks 1 & 2 of June, September, October												
NORTHBOUND	Sun to Mon		Mon to Tue		Tue to Wed		Wed to Thur		Thur to Fri		Fri to Sat		
Single lane closure permitted	1800	2400	000	2400	000	2400	000	2400	000	1300	1900	1800	
Double lane closure permitted	2000	600	2100	600	2100	600	2100	600	2100	600	2200	800	
SOUTHBOUND													
Single lane closure permitted	1800	2400	000	2400	000	2400	000	2400	000	2400	000	1800	
Double lane closure permitted	2100	600	1900	600	1900	600	1900	600	1900	600	1900	700	
	Weeks 3 & 4 of June, July, August												
NORTHBOUND	Sun to Mon		Mon to Tue		Tue to Wed		Wed to Thur		Thur to Fri		Fri to Sat		
Single lane closure permitted	1800	1100	1900	1100	1900	1100	1900	1100	1900	1000	2200	900	
Double lane closure permitted	2100	600	2200	600	2200	600	2200	600	2200	600	2300	600	
SOUTHBOUND													
Single lane closure permitted	2200	2400	000	2400	000	2400	000	2400	000	1000	1500	900	
Double lane closure permitted	2200	600	2000	600	2000	600	2000	600	2000	600	2200	600	
	Notes:												
	#1	For Memorial Day weekend restrictions, See Supplemental Specifications Section 101.2											
	#2	For Fourth of July weekend restrictions, See Special Provisions Section 101.2											
	#3	For Labor Day weekend restrictions, See Supplemental Specifications Section 101.2											
	#4	For Columbus Day weekend restrictions, See Supplemental Specifications Section 101.2											
	#5	All lanes shall be open to traffic for all Holiday and Weekend periods and other specified periods in accordance with this chart											
	#6	Shoulder closures will only be allowed during Single Lane Closure periods											

MAINE TURNPIKE AUTHORITY
2018 Bridge Painting
APPENDIX B
ROUTE 126 BRIDGE LANE REQUIRMENTS
MM 101.7

May, June, September, October

Single lane closure permitted	Sun to Mon		Mon to Tue		Tue to Wed		Wed to Thur		Thur to Fri		Fri to Sat	
NORTHBOUND	1800	2400	000	2400	000	2400	000	2400	000	2400	000	1800
SOUTHBOUND	1800	2400	000	2400	000	2400	000	2400	000	2400	000	1800

July, August

Single lane closure permitted	Sun to Mon		Mon to Tue		Tue to Wed		Wed to Thur		Thur to Fri		Fri to Sat	
NORTHBOUND	1800	2400	000	2400	000	2400	000	2400	000	2400	000	1800
SOUTHBOUND	1800	2400	000	2400	000	2400	000	2400	000	2400	000	1800

Notes:

#1	For Memorial Day weekend restrictions, See Supplemental Specifications Section 101.2
#2	For Fourth of July weekend restrictions, See Special Provisions Section 101.2
#3	For Labor Day weekend restrictions, See Supplemental Specifications Section 101.2
#4	For Columbus Day weekend restrictions, See Supplemental Specifications Section 101.2
#5	All lanes shall be open to traffic for all Holiday and Weekend periods and other specified periods in accordance with this chart
#6	Shoulder closures will only be allowed during Single Lane Closure periods

MAINE TURNPIKE AUTHORITY
2018 Bridge Painting
APPENDIX B
HIGH STREET BRIDGE LANE REQUIRMENTS
MM 103.6

May, June, September, October

Single lane closure permitted	Sun to Mon		Mon to Tue		Tue to Wed		Wed to Thur		Thur to Fri		Fri to Sat	
NORTHBOUND	1800	700	1800	700	1800	700	1800	700	1800	700	1900	900
SOUTHBOUND	1800	1300	1800	1300	1800	1300	1800	1300	1800	1000	1800	900

July, August

Single lane closure permitted	Sun to Mon		Mon to Tue		Tue to Wed		Wed to Thur		Thur to Fri		Fri to Sat	
NORTHBOUND	1800	700	1800	700	1800	700	1800	700	1800	700	2000	900
SOUTHBOUND	1900	1000	1800	1000	1800	1000	1800	1000	1800	900	1800	900

Notes:

#1	For Memorial Day weekend restrictions, See Supplemental Specifications Section 101.2
#2	For Fourth of July weekend restrictions, See Special Provisions Section 101.2
#3	For Labor Day weekend restrictions, See Supplemental Specifications Section 101.2
#4	For Columbus Day weekend restrictions, See Supplemental Specifications Section 101.2
#5	All lanes shall be open to traffic for all Holiday and Weekend periods and other specified periods in accordance with this chart
#6	Shoulder closures will only be allowed during Single Lane Closure periods

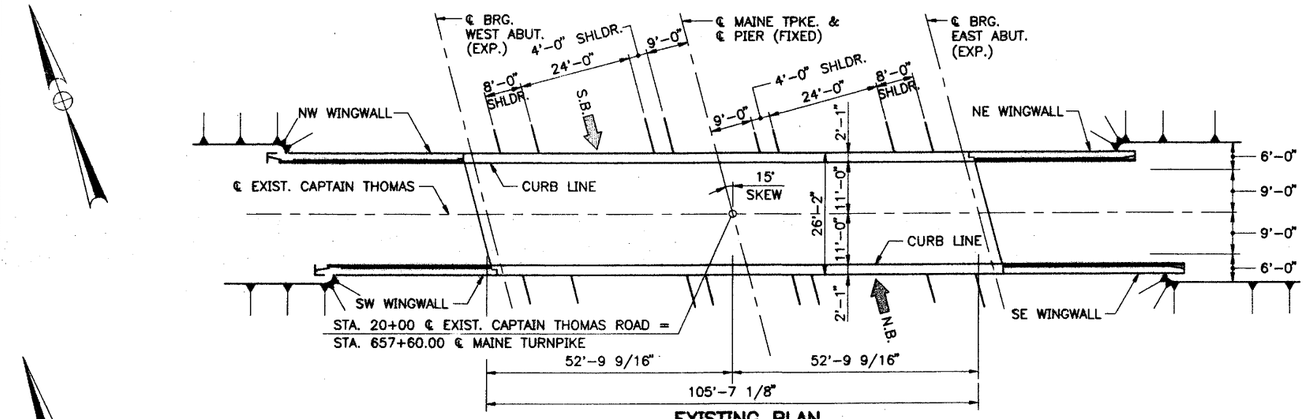
APPENDIX C

CIDER HILL ROAD UNDERPASS BRIDGE AS-BUILTS

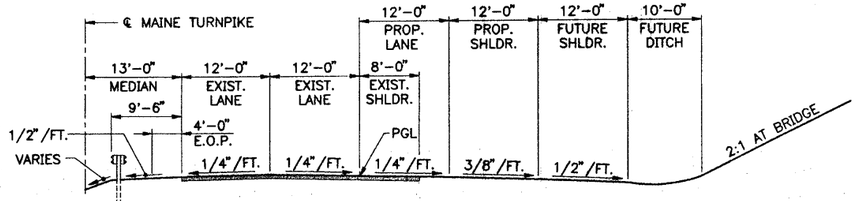
CAPTAIN THOMAS ROAD UNDERPASS BRIDGE AS-BUILTS

ROUTE 126 UNDERPASS BRIDGE AS-BUILTS

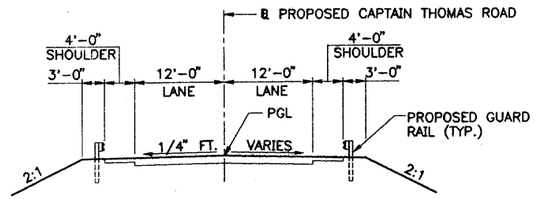
HIGH STREET UNDERPASS BRIDGE AS-BUILTS



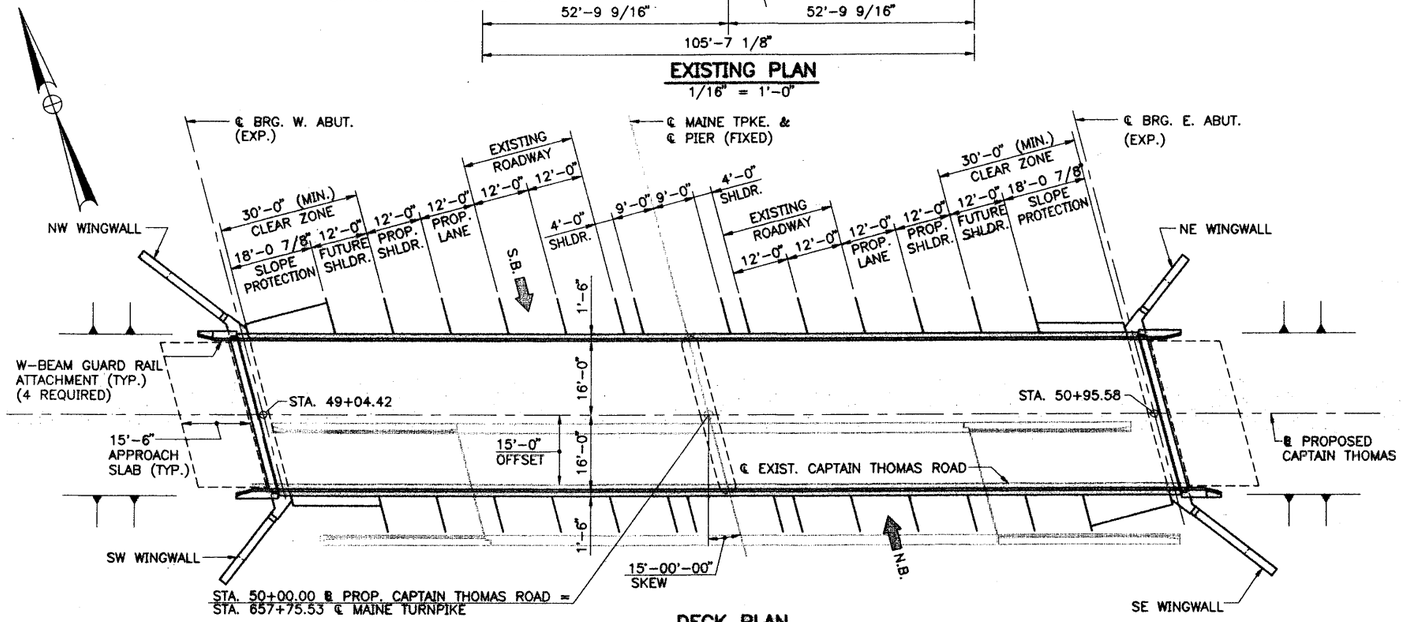
EXISTING PLAN
1/16" = 1'-0"



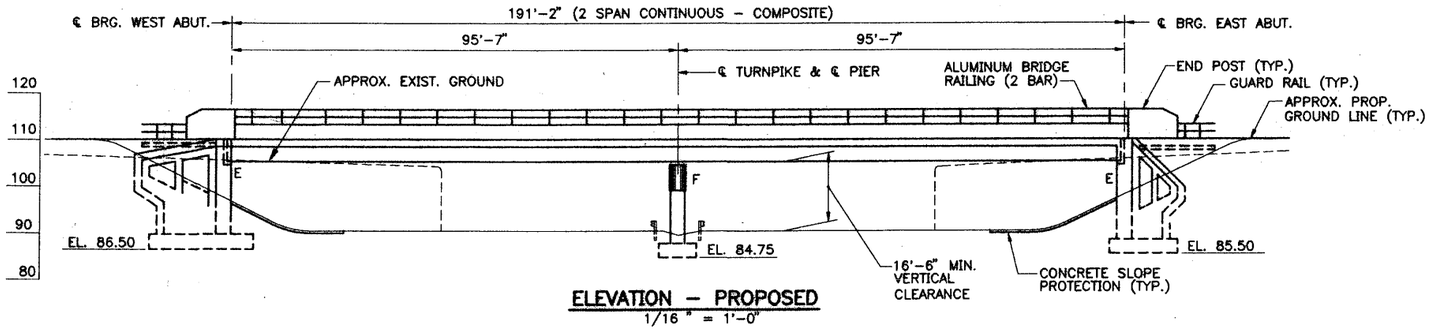
HALF APPROACH SECTION
MAINE TURNPIKE
1"=10'



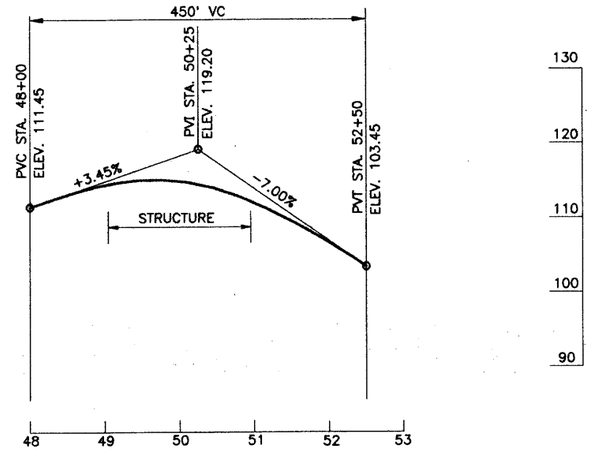
APPROACH SECTION
CAPTAIN THOMAS ROAD
1"=10'



DECK PLAN
1/16" = 1'-0"



ELEVATION – PROPOSED
1/16 " = 1'-0"



PROPOSED PROFILE
HOR. 1" = 100'
VERT. 1" = 10'

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Scale:			
No.	Revision	By	Date

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Designed	AD	10/99	Checked	AAD	10/99
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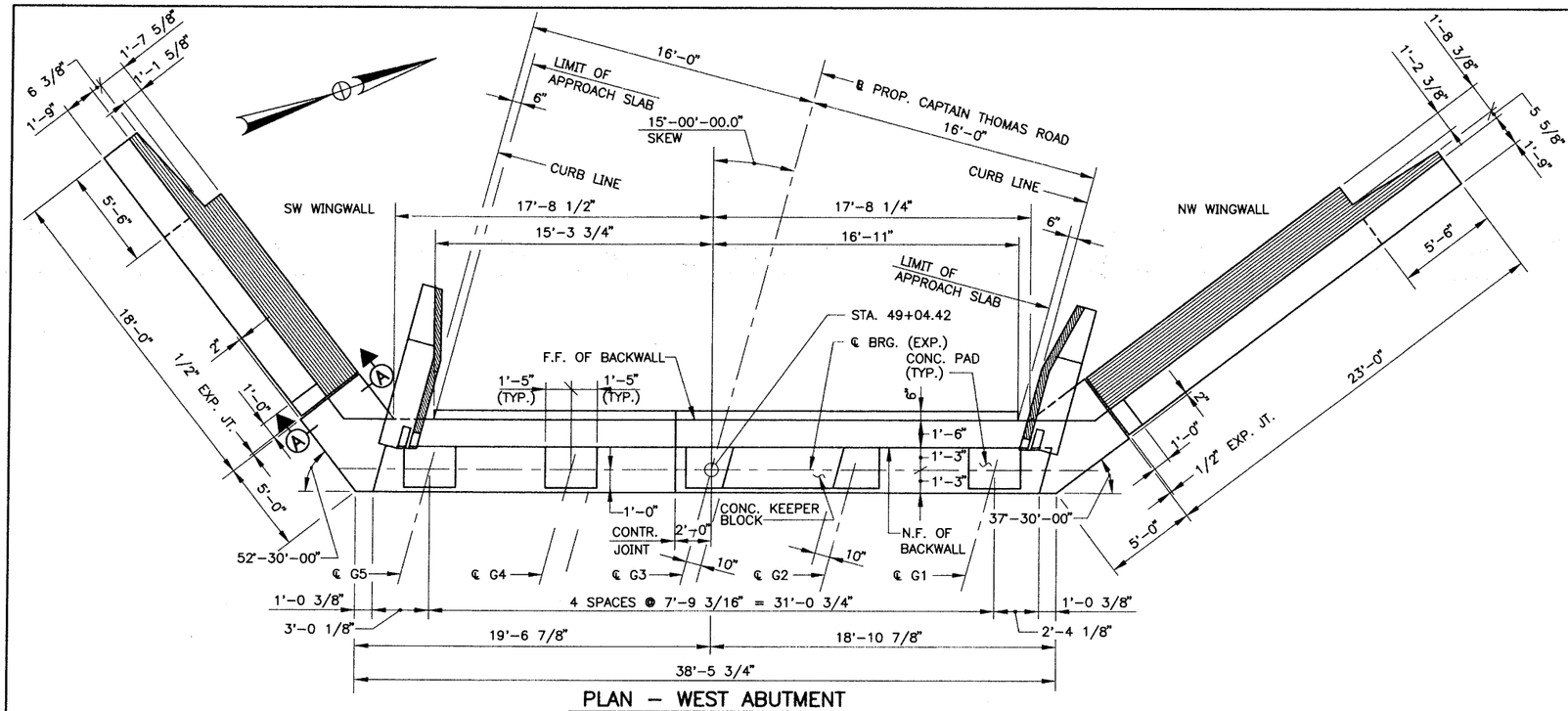
HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092

MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT

MAINE TURNPIKE Trans pass

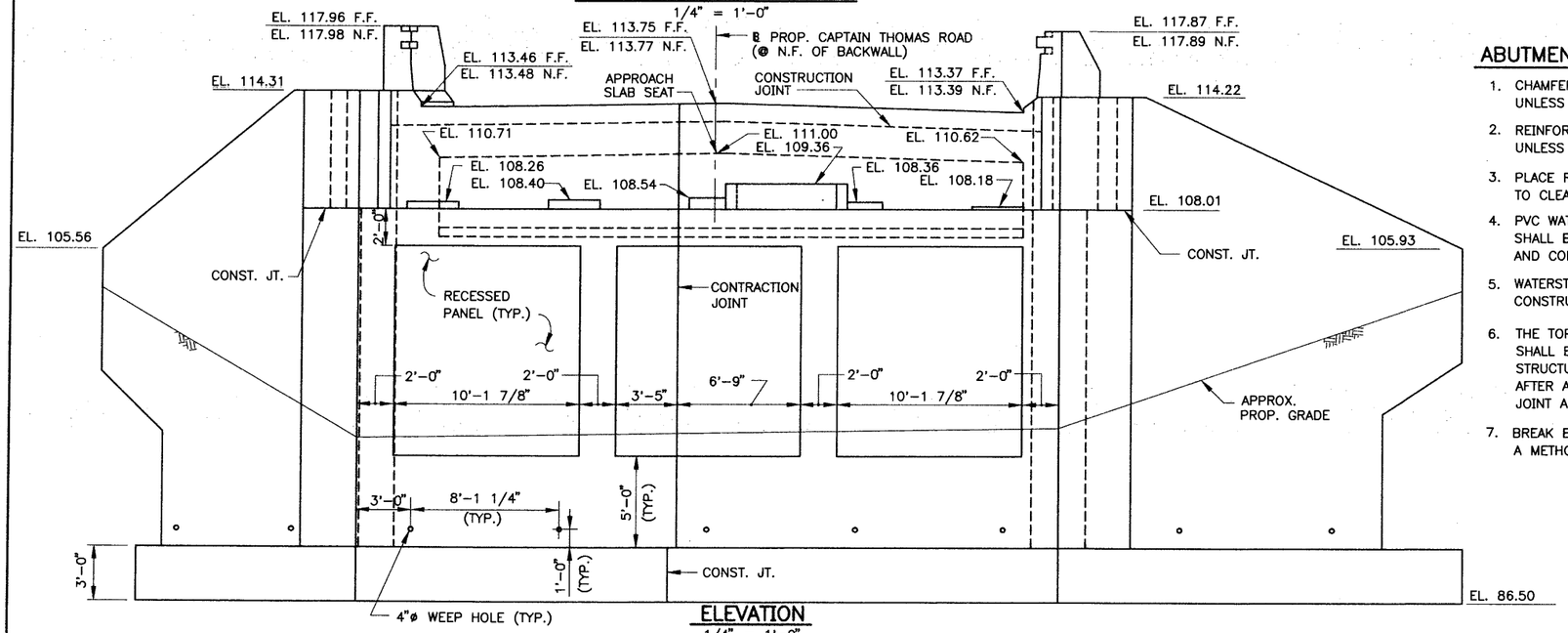
BRIDGE REPLACEMENT
CAPTAIN THOMAS ROAD UNDERPASS
PLAN & ELEVATION

SHEET NUMBER: CT-S1
CONTRACT: 2000.01
99 OF 165



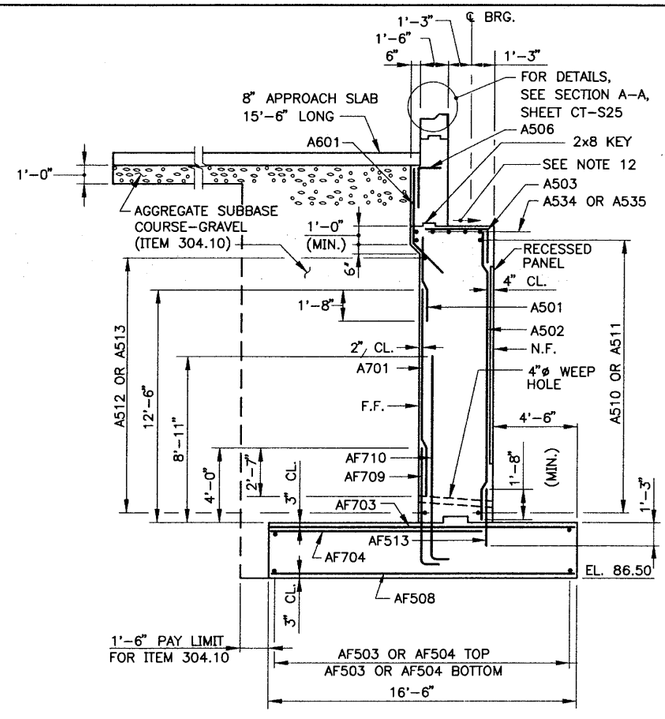
PLAN – WEST ABUTMENT

1/4" = 1'-0"



ELEVATION

1/4" = 1'-0"



TYPICAL WEST ABUTMENT SECTION

1/4" = 1'-0"

ABUTMENT NOTES

1. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE INDICATED.
2. REINFORCING STEEL SHALL HAVE 2" COVER UNLESS OTHERWISE INDICATED.
3. PLACE REINFORCING STEEL IN BRIDGE SEAT TO CLEAR ANCHOR BOLTS.
4. PVC WATERSTOPS, AS SHOWN ON SHEET CT-S10, SHALL BE PLACED IN ALL VERTICAL EXPANSION AND CONTRACTION JOINTS.
5. WATERSTOPS ARE REQUIRED IN HORIZONTAL CONSTRUCTION JOINTS.
6. THE TOP PORTION OF THE ABUTMENT BACKWALLS SHALL BE PLACED AFTER ALL SUPERSTRUCTURE STRUCTURAL SLAB CONCRETE IS IN PLACE AND AFTER ALL NECESSARY ADJUSTMENTS TO THE JOINT ARMOR HAVE BEEN MADE.
7. BREAK BOND AT VERTICAL CONTRACTION JOINTS BY A METHOD TO BE APPROVED OF BY THE ENGINEER.
8. FOR BEARING DEVICES AND ANCHOR BOLT DETAILS, SEE SHEET CT-S17.
9. FOR APPROACH SLAB DETAILS, RECESSED PANEL DETAILS, EXPANSION, CONTRACTION AND CONSTRUCTION JOINT DETAILS, SEE SHEET CT-S10.
10. APPROACH SLAB SEATS SHALL HAVE A ROUGHENED SURFACE TO THE SATISFACTION OF THE ENGINEER.
11. ALL CONCRETE KEYS SHALL BE FORMED.
12. TOP OF ABUTMENT SEAT SHALL BE SLOPED 1/8" BETWEEN CONCRETE BEARING PADS.
13. SEE SHEET NO. CT-S10 FOR FRENCH DRAIN DETAILS TO BE LOCATED BEHIND ABUTMENT AND WINGWALL STEMS RESPECTIVELY.
14. FOR SECTION A-A, SEE SHEET NO. CT-S8.

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Scale:

No.	Revision	By	Date

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Westbrook, ME 04092

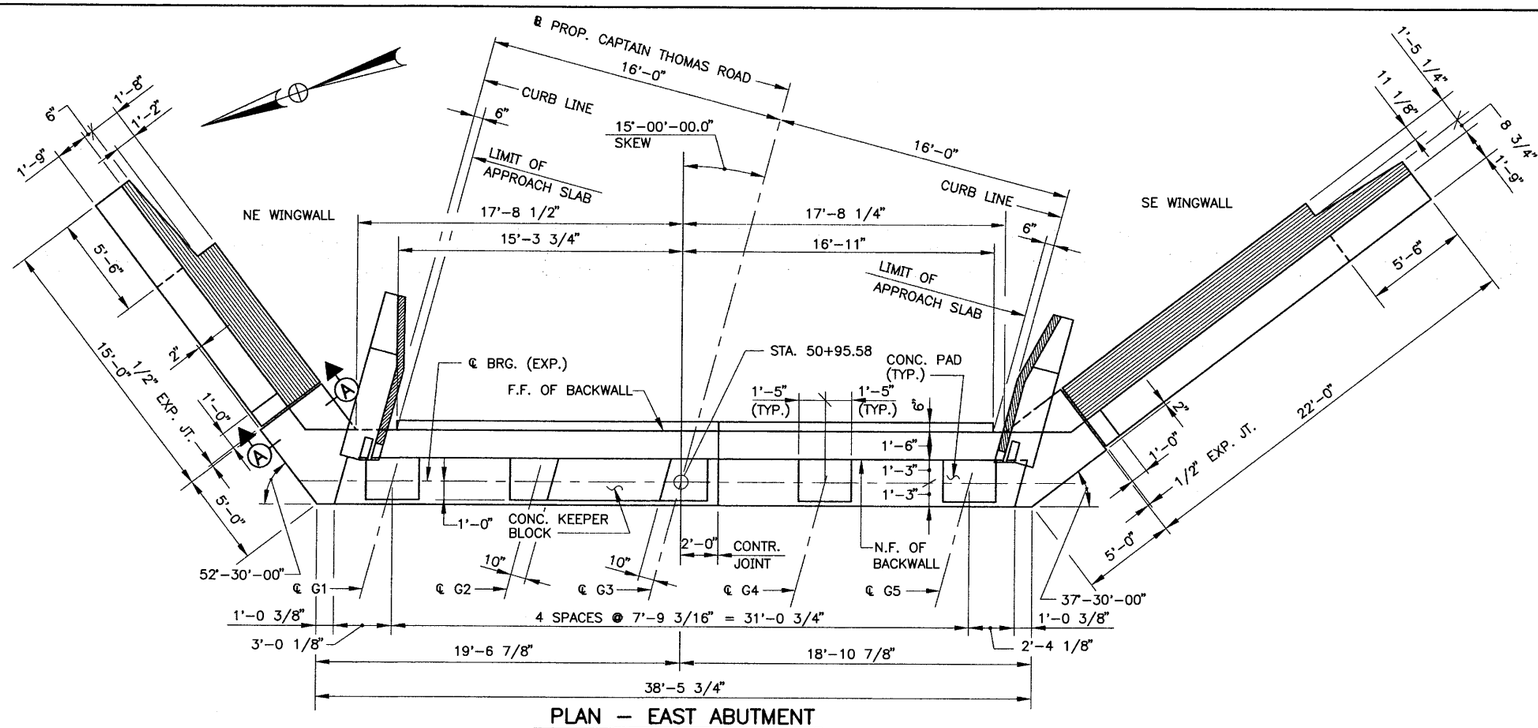
MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT

MAINE TURNPIKE Trans pass

BRIDGE REPLACEMENT
CAPTAIN THOMAS ROAD UNDERPASS
PROPOSED WEST ABUTMENT

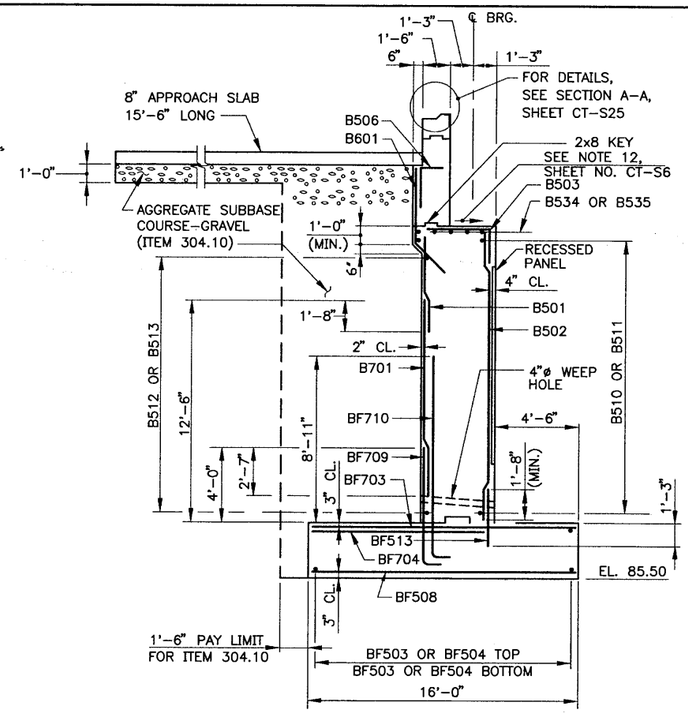
SHEET NUMBER: **CT-S6**

CONTRACT: **2000.01**



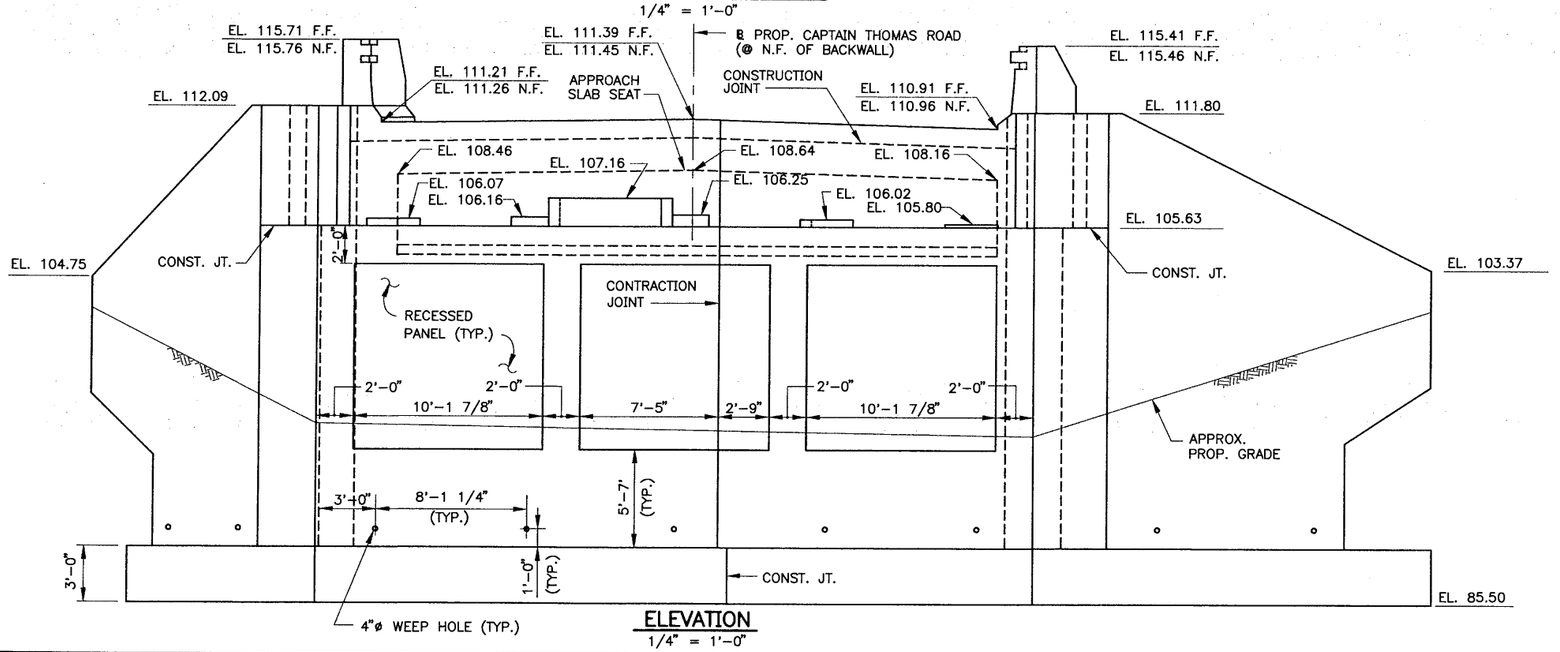
PLAN – EAST ABUTMENT

1/4" = 1'-0"



TYPICAL EAST ABUTMENT SECTION

1/4" = 1'-0"



ELEVATION

1/4" = 1'-0"

ABUTMENT NOTES

1. FOR ABUTMENT NOTES SEE SHEET NO. CT-S6.
2. FOR SECTION A-A, SEE SHEET NO. CT-S9.

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No.	Revision	By	Date

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HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092

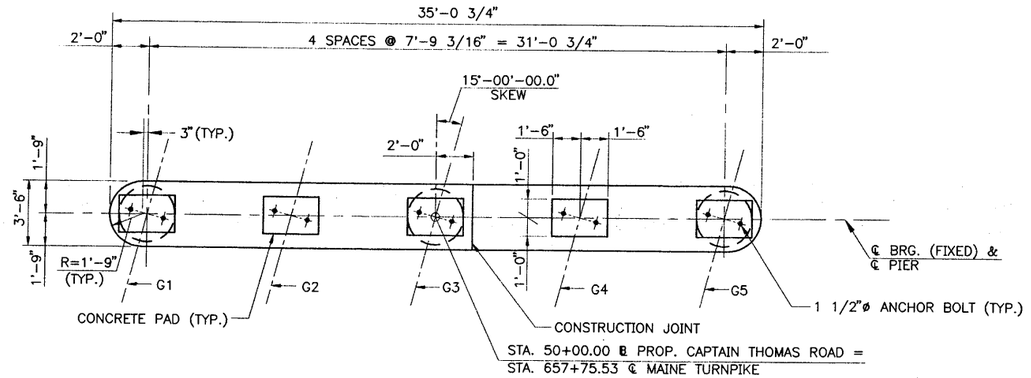
MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT

MAINE TURNPIKE Trans pass

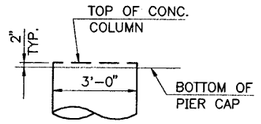
BRIDGE REPLACEMENT
CAPTAIN THOMAS ROAD UNDERPASS
PROPOSED EAST ABUTMENT

SHEET NUMBER: **CT-S7**

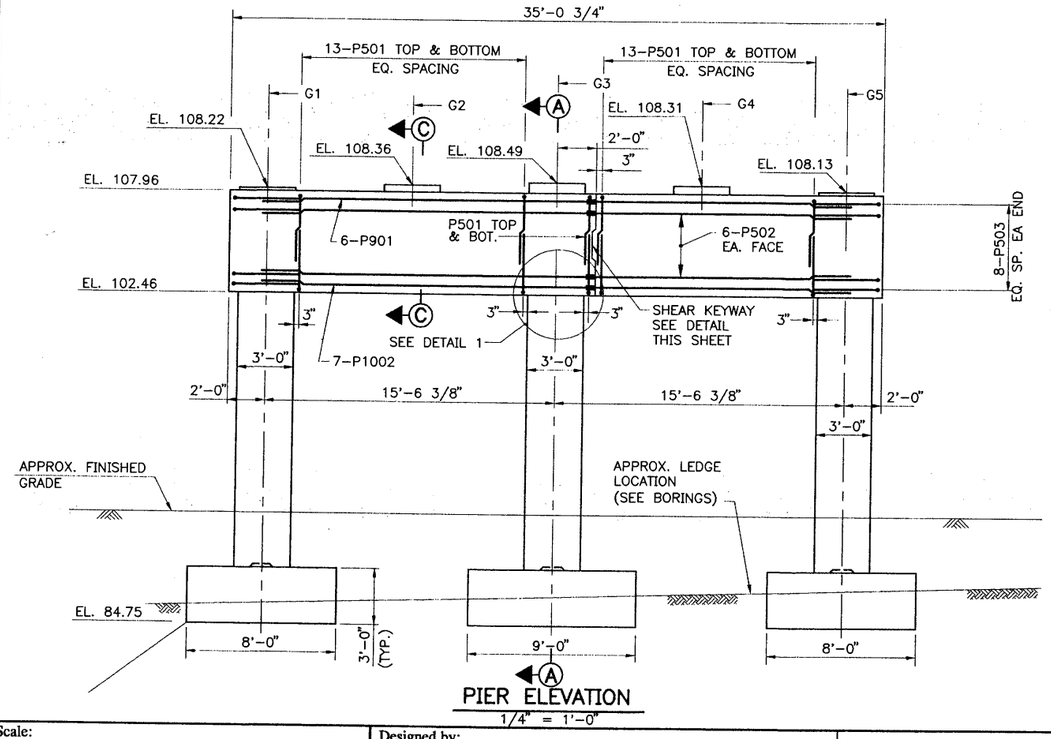
CONTRACT: **2000.01**



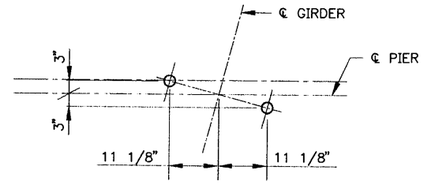
PLAN
1/4" = 1'-0"



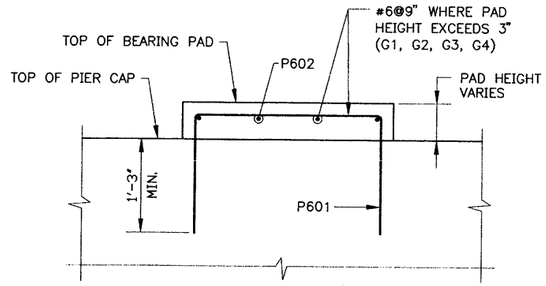
DETAIL 1
N.T.S.



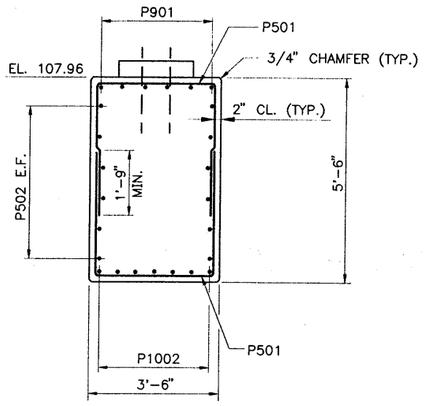
PIER ELEVATION
1/4" = 1'-0"



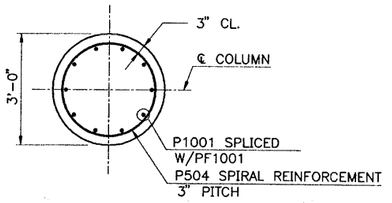
ANCHOR BOLT LAYOUT
3/4" = 1'-0"



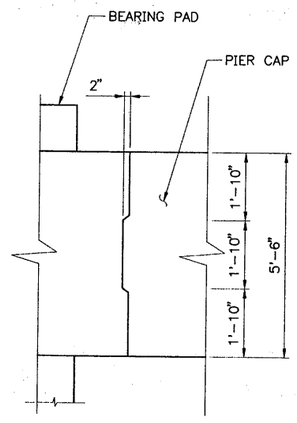
BEARING PAD DETAIL
1" = 1'-0"



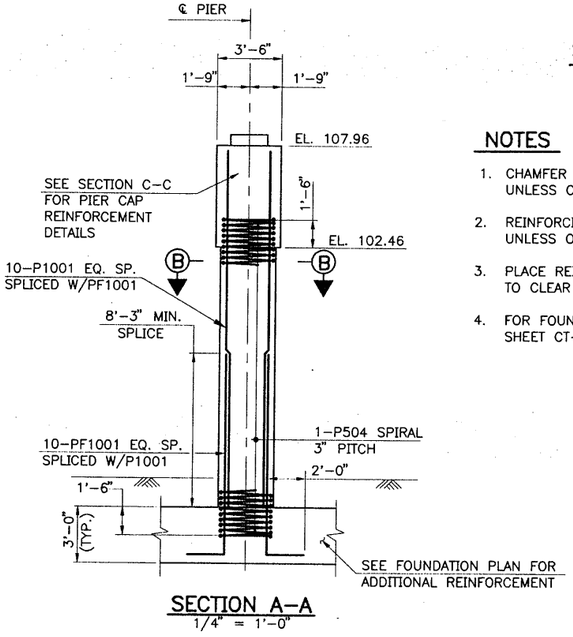
SECTION C-C
1/2" = 1'-0"



SECTION B-B
1/2" = 1'-0"



SHEAR KEYWAY DETAIL
1/2" = 1'-0"



SECTION A-A
1/4" = 1'-0"

NOTES

1. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4", UNLESS OTHERWISE INDICATED.
2. REINFORCING STEEL SHALL HAVE A 2" MINIMUM COVER UNLESS OTHERWISE INDICATED.
3. PLACE REINFORCING STEEL ON PIER CAP AND BEARING PADS TO CLEAR BEARING ANCHOR BOLTS.
4. FOR FOUNDATION PLAN AND FOOTING REINFORCEMENT, SEE SHEET CT-S5.

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Scale:

No.	Revision	By	Date

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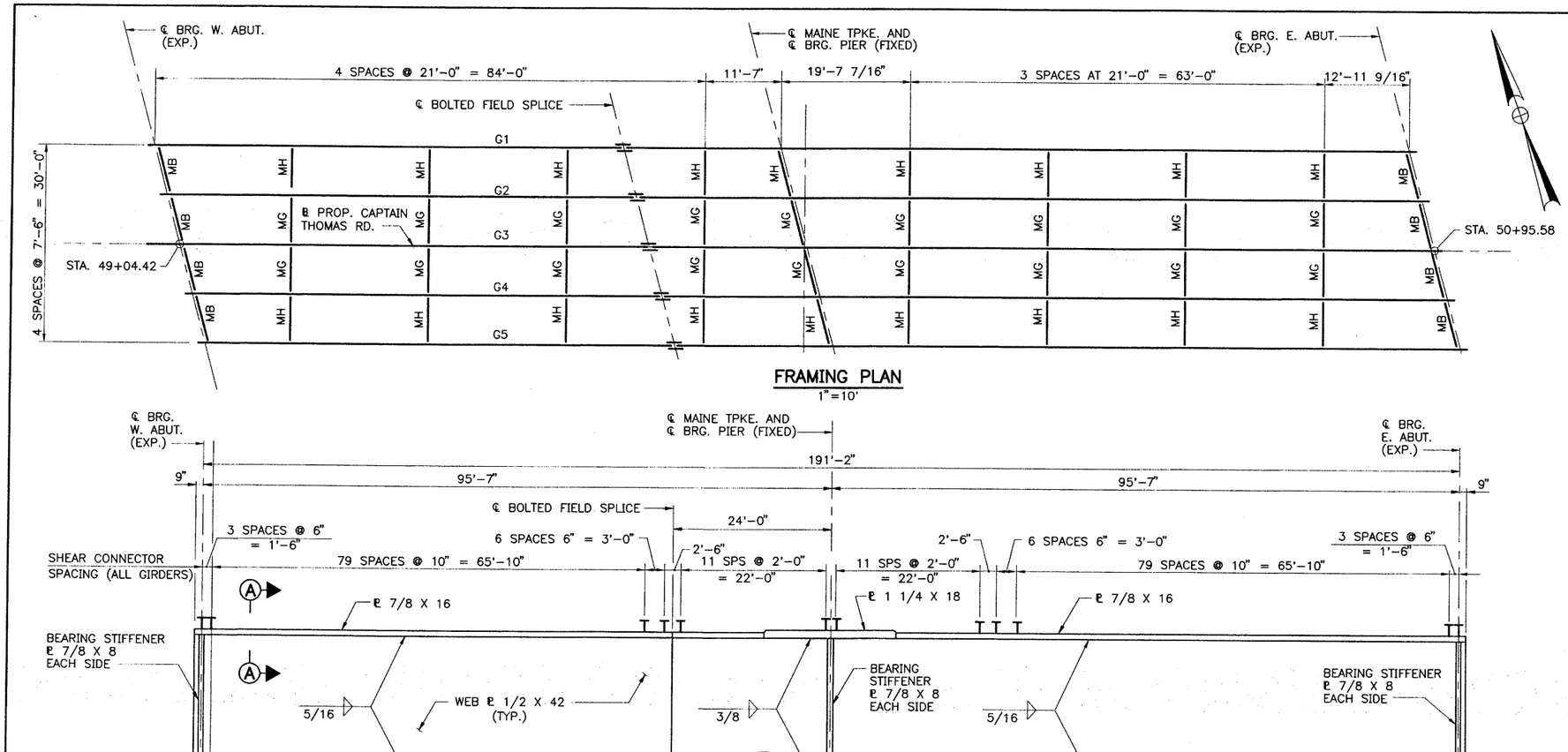
Drawn	LS	8/99	In Charge of	RAL	8/99

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092

MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT
MAINE TURNPIKE Trans pass

BRIDGE REPLACEMENT
CAPTAIN THOMAS ROAD UNDERPASS
PIER DETAILS

SHEET NUMBER: **CT-S14**
CONTRACT: **2000.01**

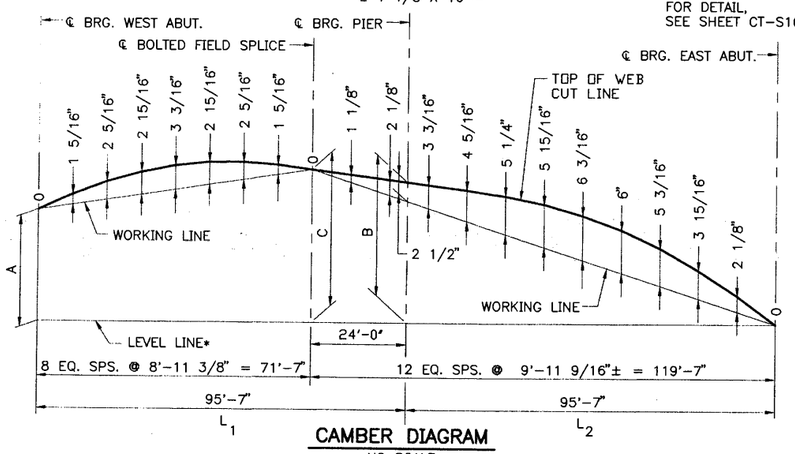


FRAMING PLAN

1"=10'

GIRDER ELEVATION

NO SCALE

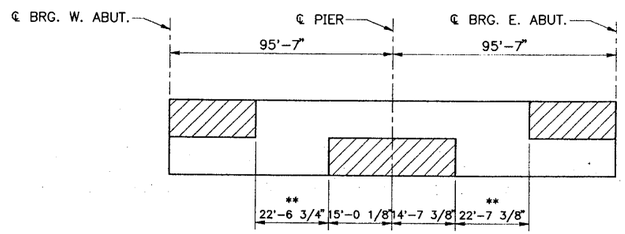


CAMBER DIAGRAM

NO SCALE

* LEVEL LINE IS THE HORIZONTAL REFERENCE LINE THROUGH LOWEST POINT ON CUT LINE.

GIRDER NO.	DIMENSIONS IN FEET		
	A	B	C
G1	2.109	2.114	2.378
G2	2.198	2.159	2.434
G3	2.287	2.204	2.490
G4	2.377	2.249	2.547
G5	2.466	2.293	2.602



GIRDER STRESS DIAGRAM

NO SCALE

AREAS OF GIRDER WHICH WILL ALWAYS BE IN COMPRESSION. ALL OTHER AREAS WILL BE IN TENSION OR ARE AREAS OF STRESS REVERSALS.

** STRESS REVERSALS

STRUCTURAL STEEL NOTES

1. CAMBER ORDINATES, AS SHOWN, ARE COMPUTED TO COMPENSATE FOR ALL DEAD LOAD DEFLECTIONS AND THE EFFECT OF VERTICAL CURVATURE.
2. NO TRANSVERSE BUTT WELD SPLICES WILL BE ALLOWED IN THE FLANGE OR WEB PLATES WITHIN 10' FROM THE POINTS OF MAXIMUM NEGATIVE OR MAXIMUM POSITIVE MOMENT. BUTT WELD SPLICES IN FLANGES SHALL NOT BE LESS THAN ONE FOOT FROM TRANSVERSE BUTT WELDS IN THE WEB PLATE OR CONNECTION PLATE TO WEB WELDS.
3. BUTT WELDS AT WEB SPLICES AND FLANGE SPLICES SHALL BE GROUND FLUSH IN LONGITUDINAL DIRECTION OF GIRDER.
4. BEARING STIFFENERS SHALL BE PLUMB AFTER ERECTION AND DEAD LOADING OF THE STRUCTURE.
5. CROSSFRAME OR DIAPHRAGM CONNECTION PLATES MAY BE EITHER PLUMB OR NORMAL TO THE TOP FLANGE FOR THE ENTIRE BRIDGE.
6. FILLER PLATES SHALL CONFORM TO AASHTO M270, GRADE 36. MILL TESTS FOR FILLER PLATE MATERIAL WILL NOT BE REQUIRED.
7. FOR DETAILS OF DIAPHRAGM & CROSSFRAME TYPES MB, MG AND MH, SEE STANDARD DETAILS, PAGES 504(15) AND 504(17). SEE NOTE 3 ON SHEET NO. CT-S2.
8. WELDED GIRDERS: FLANGES, WEBS, SPLICE PLATES AND BEARING STIFFENERS SHALL BE AASHTO M270, GRADE 50. BOLTS SHALL BE AASHTO M164. ALL OTHER STRUCTURAL STEEL SHALL BE AASHTO M270, GRADE 36.
9. ALL FLANGE AND WEB PLATES SHALL BE DESIGNATED "CVN" WITH THE MATERIAL MEETING SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS IN ACCORDANCE WITH AASHTO SPECIFICATIONS (TEMPERATURE ZONE 2 DESIGNATION).
10. FOR TENSION FLANGE CONNECTION DETAIL FOR DIAPHRAGMS & CROSSFRAMES, SEE STANDARD DETAILS, PAGE 504(21). SEE NOTE 3 ON SHEET NO. CT-S2.
11. FOR SHEAR CONNECTOR LAYOUT AND SECTION A-A, SEE SHEET NO. CT-S16.
12. SIGN SUPPORTS SHALL BE GALVANIZED AND INCIDENTAL TO ITEM 504.702, SEE SHEET CT-S16 FOR DETAILS.

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No.	Revision	By	Date

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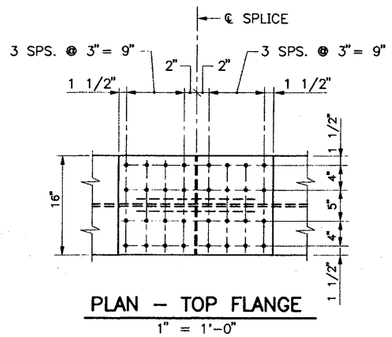
MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT

MAINE TURNPIKE Trans pass

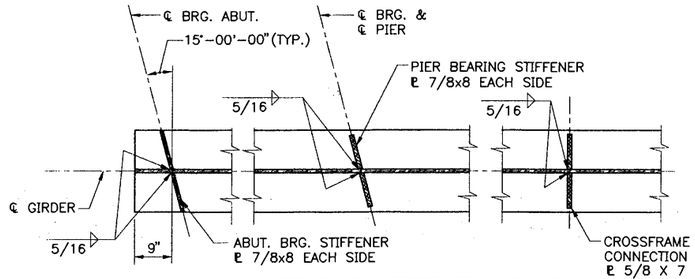
BRIDGE REPLACEMENT
CAPTAIN THOMAS ROAD UNDERPASS
FRAMING PLAN

SHEET NUMBER: **CT-S15**

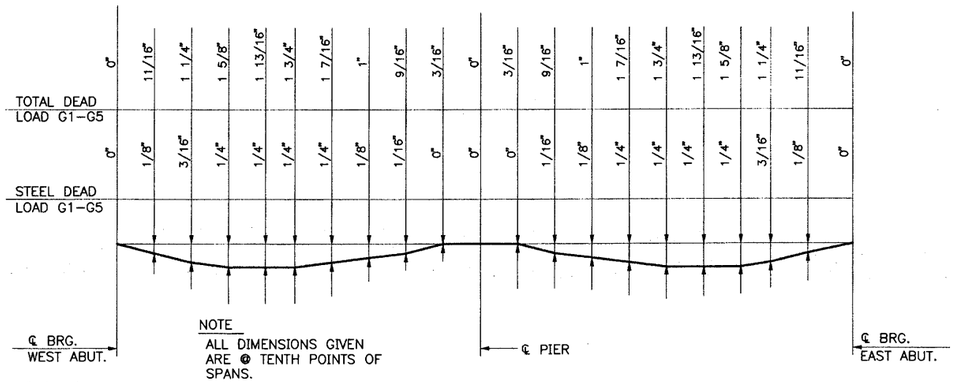
CONTRACT: **2000.01**



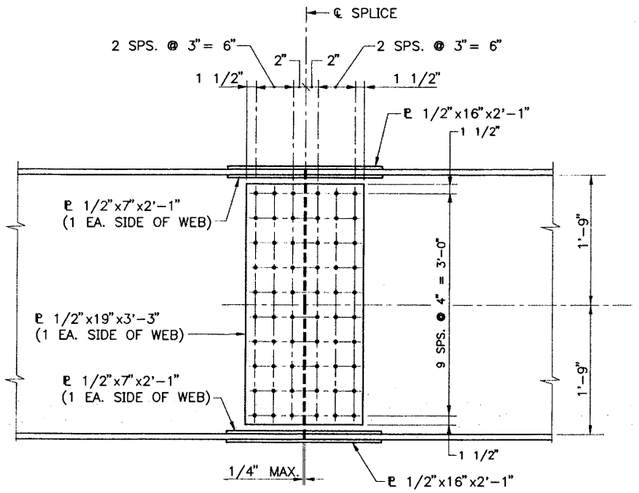
PLAN – TOP FLANGE
1" = 1'-0"



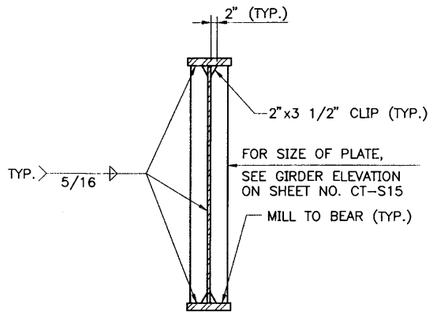
BEARING STIFFENER DETAILS
NO SCALE



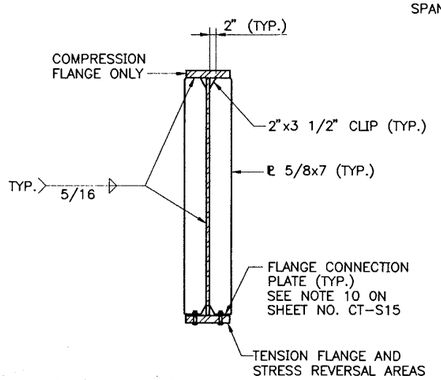
DEAD LOAD DEFLECTION DIAGRAM
HORIZ. 1" = 20'
VERT. 1" = 1"



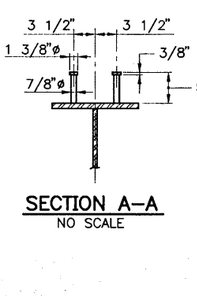
ELEVATION
1" = 1'-0"



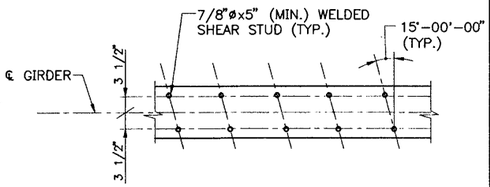
BEARING STIFFENER DETAIL
NO SCALE



CROSSFRAME CONNECTION PLATE DETAILS
NO SCALE

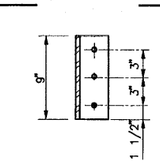


SECTION A–A
NO SCALE

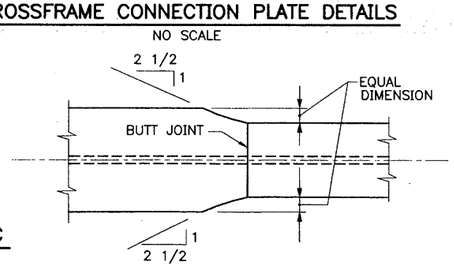


SHEAR CONNECTOR LAYOUT
NO SCALE

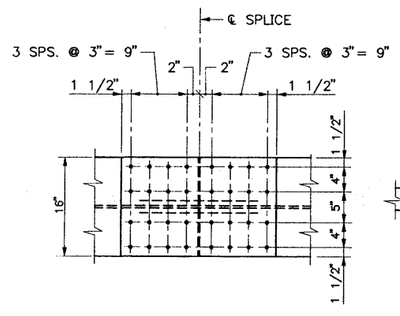
SIGN SUPPORT
(4 REQUIRED)
1 1/2 " = 1'-0"



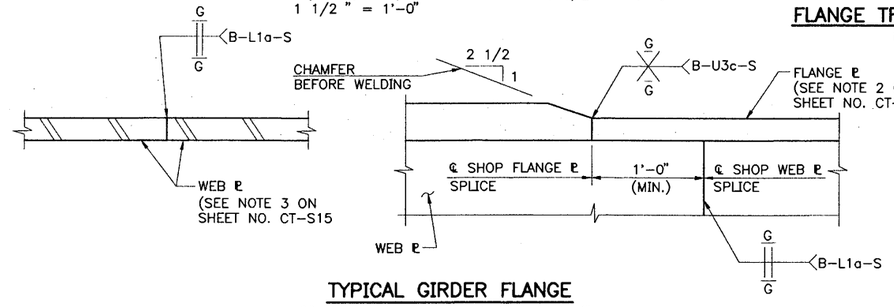
SECTION C–C
1 1/2 " = 1'-0"



FLANGE TRANSITION DETAIL
NO SCALE



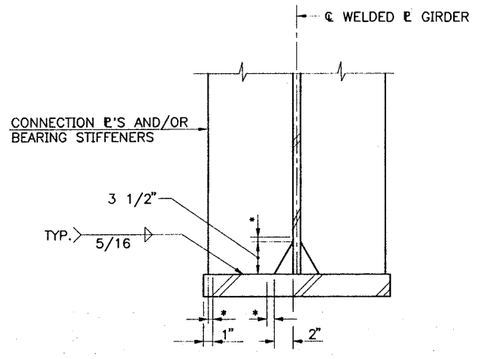
PLAN – BOTTOM FLANGE
1" = 1'-0"



TYPICAL GIRDER FLANGE AND WEB PLATE SHOP SPLICE
NO SCALE

NOTES

1. ALL BOLTS SHALL BE 7/8"ø , AASHTO M164, HIGH STRENGTH BOLTS. HOLES SHALL BE 15/16"ø .
2. NUTS SHALL BE ON INSIDE FACE OF WEB SPLICE FOR FASCIA GIRDERS.
3. NUTS SHALL BE UP ON ALL FLANGE SPLICES.
4. FOR STRUCTURAL STEEL NOTES, SEE SHEET NO. CT–S15.



* NO WELD FOR 1/4" MIN., 1/2" MAX. (EXCEPT MUST MAINTAIN 1" MINIMUM FROM EDGE OF FLANGE)

WELD TERMINATION AND COPING DETAILS FOR WELDED PLATE GIRDERS
NO SCALE

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Scale:

No.	Revision	By	Date

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

	By	Date		By	Date
Designed	CLC	8/99	Checked	AAD	8/99
Drawn	RJT	8/99	In Charge of	RAL	8/99

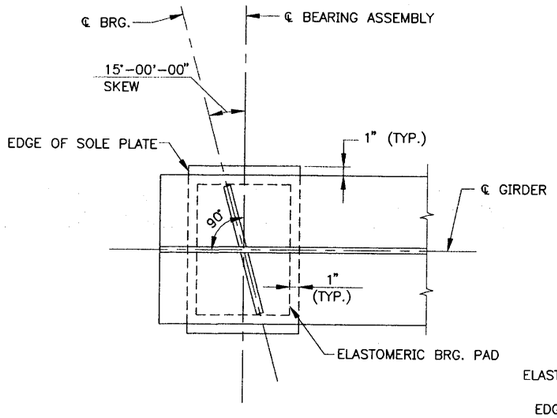
HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092

MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT

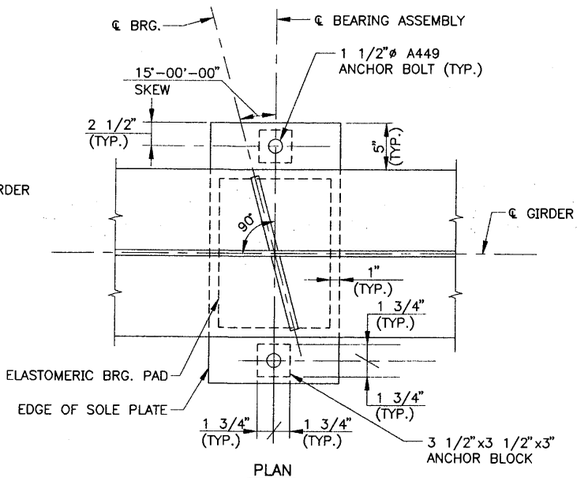
MAINE TURNPIKE Trans pass

BRIDGE REPLACEMENT
CAPTAIN THOMAS ROAD UNDERPASS
STRUCTURAL STEEL DETAILS

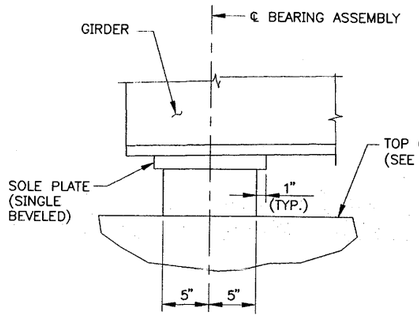
SHEET NUMBER: **CT–S16**
CONTRACT: **2000.01**



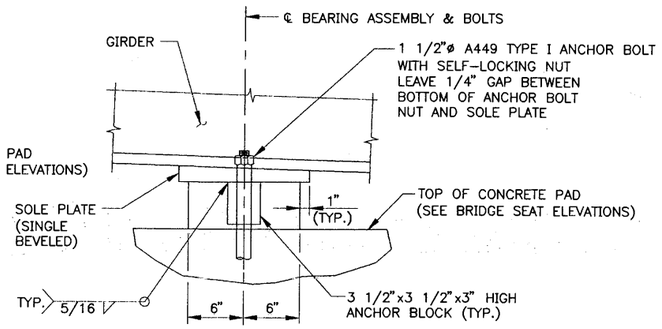
PLAN



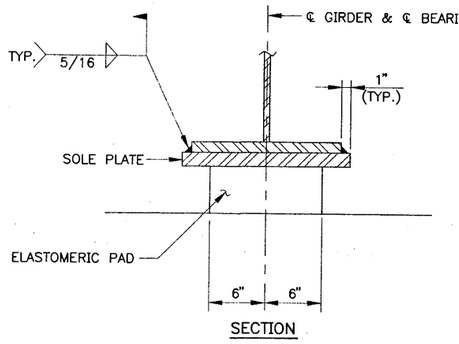
PLAN



ELEVATION

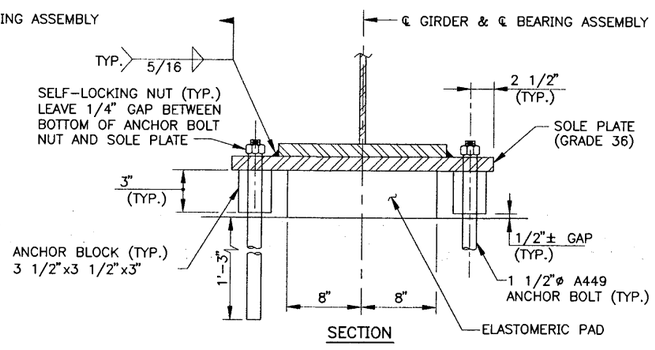


ELEVATION



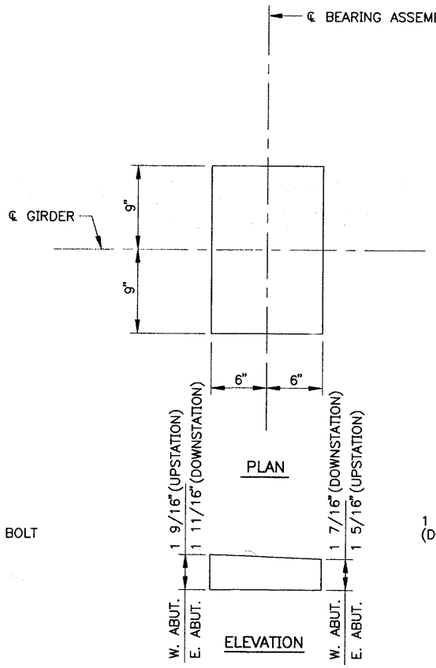
SECTION

BEARING ASSEMBLY – EXPANSION
WEST & EAST ABUTMENTS (10 REQUIRED)
1 1/2" = 1'-0"



SECTION

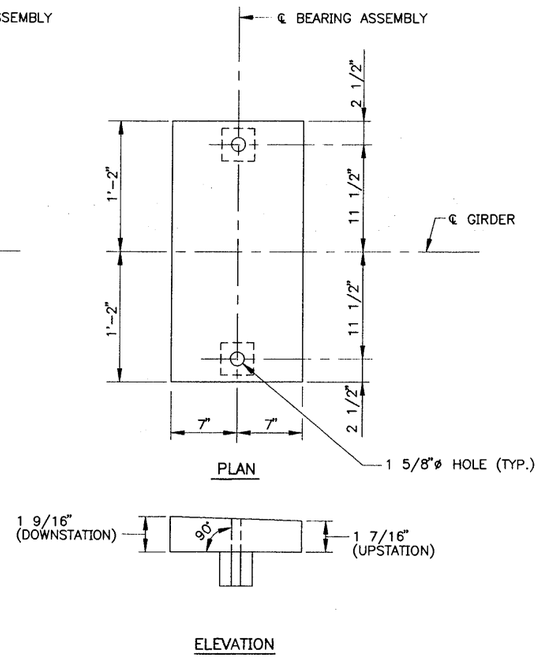
BEARING ASSEMBLY – FIXED
PIER (5 REQUIRED)
1 1/2" = 1'-0"



PLAN

ELEVATION

SOLE PLATE – EXPANSION
WEST & EAST ABUTMENTS
N.T.S.



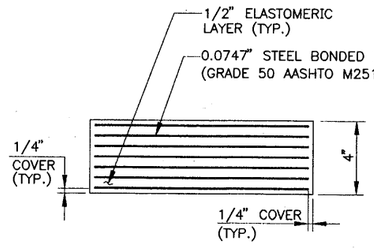
PLAN

ELEVATION

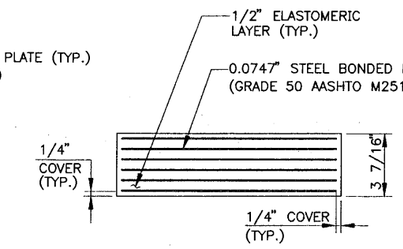
SOLE PLATE – FIXED
PIER
N.T.S.

NOTES:

1. ELASTOMER SHALL BE 100% POLYCHLOROPRENE (NEOPRENE) WITH DUROMETER HARDNESS OF 60.
2. SOLE PLATE, ANCHOR BOLTS, WASHER AND NUTS SHALL BE GALVANIZED.
3. CONTRACTOR SHALL RE-FINISH GALVANIZING AS DIRECTED BY ENGINEER AFTER WELDING.



ELASTOMERIC BEARING PAD – EXPANSION
WEST AND EAST ABUTMENTS
N.T.S.



ELASTOMERIC BEARING PAD – FIXED
PIER
N.T.S.

ELASTOMERIC BEARING PAD
N.T.S.

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Scale:

No.	Revision	By	Date

Designed by: HNTB ARCHITECTS ENGINEERS PLANNERS

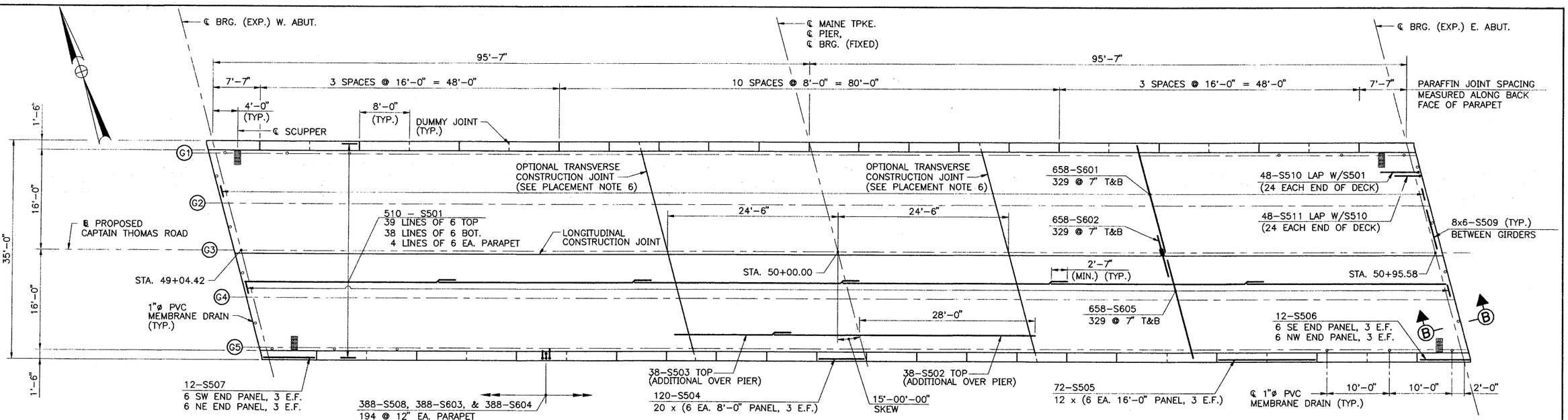
	By	Date		By	Date
Designed	AAD	8/99	Checked	CC	8/99
Drawn	LS	8/99	In Charge of	RAL	8/99

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092

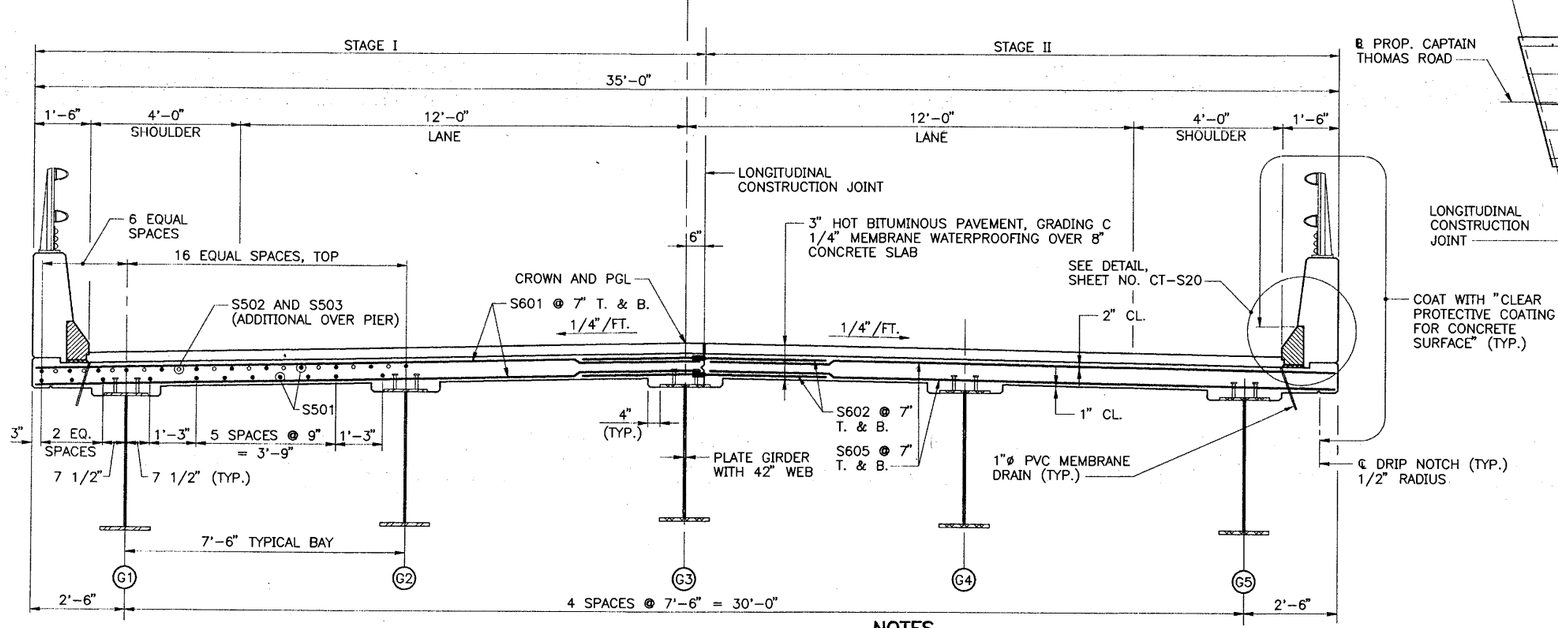
MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT
MAINE TURNPIKE Trans pass

BRIDGE REPLACEMENT
CAPTAIN THOMAS ROAD UNDERPASS
BEARING DETAILS

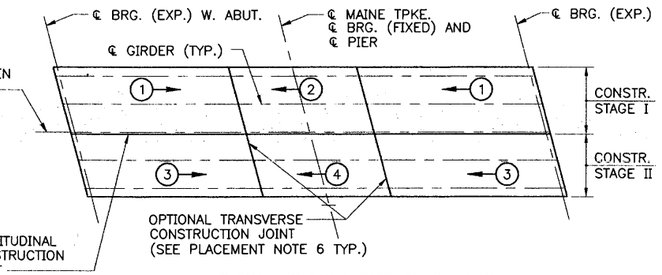
SHEET NUMBER: CT-S17
CONTRACT: 2000.01



DECK PLAN
1/8" = 1'-0"



TYPICAL SECTION
1/2" = 1'-0"



DECK PLACEMENT SEQUENCE
NO SCALE

PLACEMENT NOTES

1. THE NUMBERS IN CIRCLES INDICATE PLACING SEQUENCE. THE ARROWS INDICATE DIRECTION OF PLACEMENT.
2. THE FORMWORK FOR THE CONSTRUCTION JOINTS SHALL REMAIN IN PLACE UNTIL A MINIMUM OF 48 HOURS HAS ELAPSED AFTER PLACEMENT OF THE SLAB. AFTER WHICH, REMOVAL OF FORMWORK MEETING THE REQUIREMENTS FOR FORM REMOVAL OF SECTION 502 (STRUCTURAL CONCRETE) OF THE STANDARD SPECIFICATIONS, MAY PROCEED.
3. PLACEMENTS DESIGNATED BY THE SAME NUMBER DO NOT NECESSARILY HAVE TO BE PLACED THE SAME DAY. A WAITING PERIOD OF 72 HOURS IS NECESSARY BETWEEN ADJACENT PLACEMENTS.
4. STAY IN PLACE FORMS ARE NOT ALLOWED TO BE USED.
5. BEGIN PLACEMENT AT THE LOW END OF THE BLOCK.
6. THE OPTIONAL TRANSVERSE CONSTRUCTION JOINT MAY BE OMITTED PROVIDED THAT THE CONCRETE OF THE ENTIRE DECK SLAB REMAINS PLASTIC UNTIL THE COMPLETION OF THE LAST PLACEMENT AND ALL OTHER SPECIFICATIONS FOLLOWED.

NOTES
1. FOR SUPERSTRUCTURE NOTES, SEE SHEET CT-S19.
2. FOR SECTION B-B, SEE SHEET CT-S25.
3. FOR PARAPET DETAILS, SEE SHEET CT-S20.

Scale:

No.	Revision	By	Date

Designed by: HNTB ARCHITECTS ENGINEERS PLANNERS

	By	Date		By	Date
Designed	AD	8/99	Checked	AAD	8/99
Drawn	RJT	8/99	In Charge of	RAL	8/99

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092

MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT
MAINE TURNPIKE Trans pass

BRIDGE REPLACEMENT
CAPTAIN THOMAS ROAD UNDERPASS
DECK REINFORCEMENT AND TYPICAL SECTION

SHEET NUMBER: **CT-S18**
CONTRACT: **2000.01**

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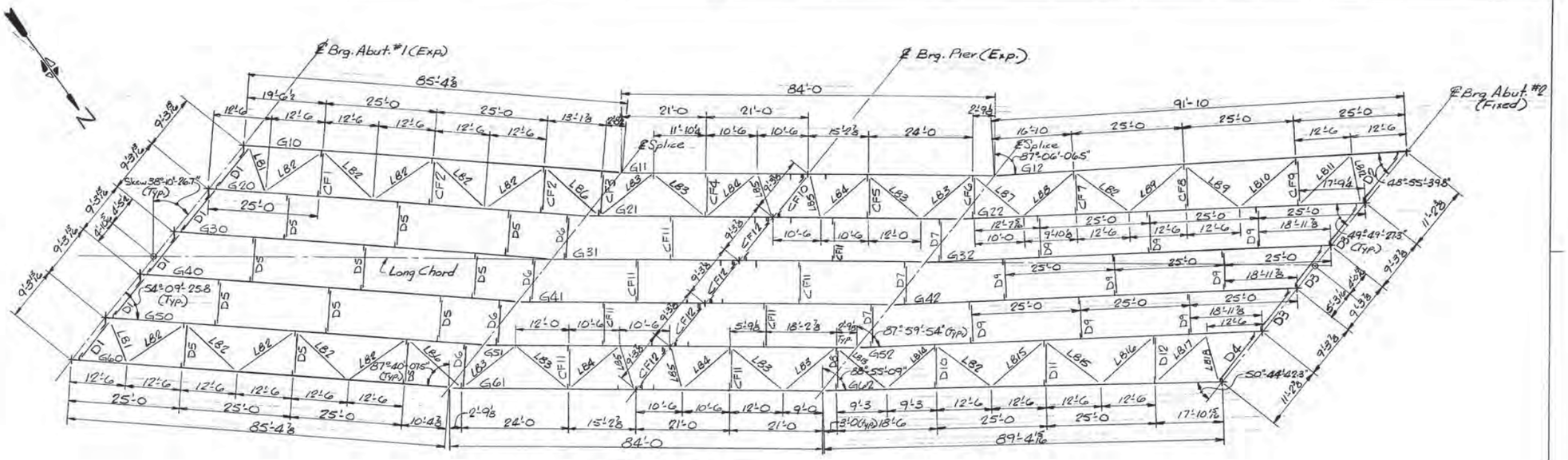
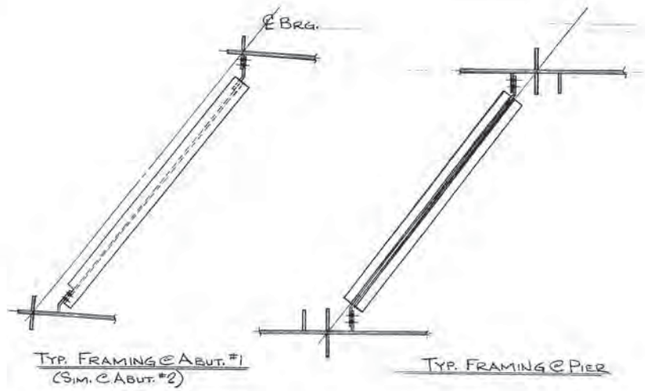


FRAMING PLAN

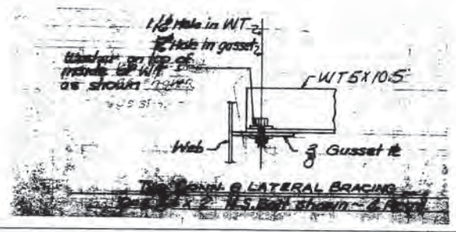


NOTE:
ALL DIMENSIONS ARE HORIZONTAL.
BOLTS ARE TO BE ¾"-A325 TYPE 1.

SPLICE NOTE

In order to maintain the 0-1/4" gap shown, the webs and flanges are to be cut (with the use of mechanical guide) at the time of shop assembly of the field splices. Holes are to be drilled full size from the solid with all material in exact relative field position.

No welding on filler plates or splice plates is allowed; except that web splice plates and fillers may be tack welded for drilling as follows:no tack weld closer to flange than 1/6 of web width, or longer than 3", or spaced less than approximately 12" on center. All tack welds willbe removed and web surface ground flush. Bolt for shipment



ITEM No. 504.7001
PROJECT No. 1-95-1(29)3

APPROVED: 4-6-78

FRAMING PLAN

PRINT DIST.		
1p	3/1/78	Shop/S
2p	3/10/78	State
1s	4-7-78	Bypass
2s	4-7-78	Slide Rule
3p	5/15/78	Cust.
REV.		
CHECKED		
DRAWN	2-22-78	BB

Bancroft & Martin Inc.
South Portland, Maine 04106

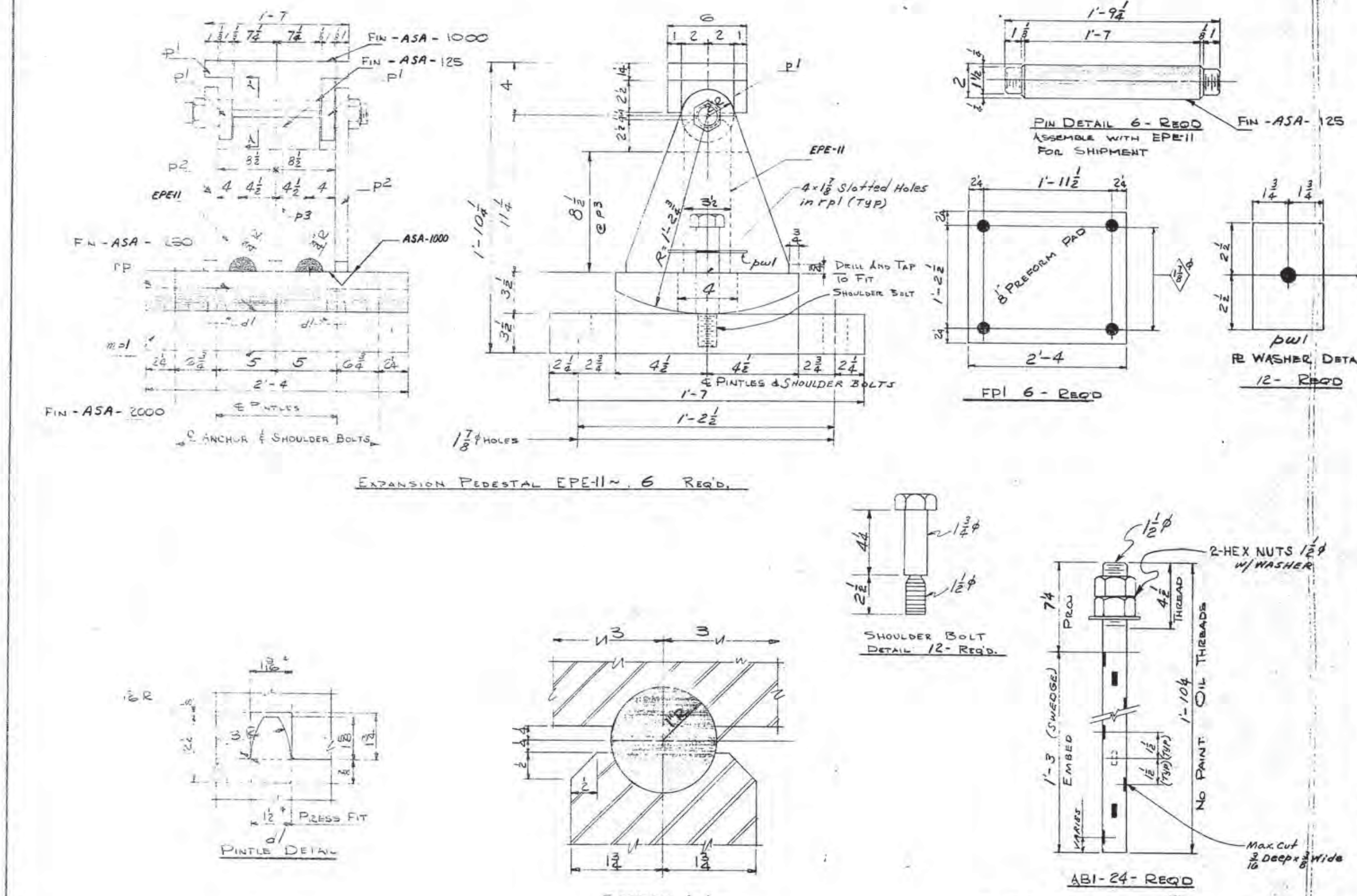
JOB: CIDER HILL ROAD OVER I-95
YORK, MAINE

CUSTOMER: SHOALS INC.

DESIGNER: MAINE DEPT. of TRANS.

ORDER NO.	JOB NO.	DRAWING NO.
	8878-8	E-1

160-147



PIN NOTE:
THE DIAMETER OF THE PIN HOLE SHALL NOT EXCEED THAT OF THE PIN BY MORE THAN 1/50 INCH.

PAINT NOTE:
NO PAINT ON TOP OF SOLE PLATES AND 1" DOWN FROM TOP ON SIDES COAT WITH BOILED LINSEED OIL.
NO PAINT ON SURFACES WITH ASA 125 FINISH, COAT WITH MIXTURE OF WHITE LEAD AND TALLOW.
NO PAINT ON THE ANCHOR BOLTS - OIL THREADS.
MASONRY PLATES AND BEARING SURFACES OF EXPANSION BEARING ROCKERS ANSI 250, SHALL RECEIVE 2 COATS OF SHOP PAINT.

600 K

BILL OF MATERIAL — JOB NO. BS78-8 — DWG. NO. 51-1

SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	ITEM NO.		REMARKS
		EXPANSION PEDESTAL ASSEMBLY							
	6	mp1	PL 3 1/2 × 19	2	4		6/A		▲
EPE-11	6		PL 3 1/2 × 11	1	5		6/C		
	12	p1	bar 4×1	0	4 3/4		6/G		
	12	p2	bar 7 1/2×1	1	1 1/4		6/D		▲
	12	p3	bar 2×1	0	8 1/2		6/E		▲
	6	rp1	PL 3 1/2× 9	2	4		6/B		▲
	6	sp1	bar 6×3 3/4	1	7		6/F		
FP1	6		Pad 1/8 ×19	2	4		6/P		Preformed Pad Req. No 7792
	6	SHOP	2ϕ bar	1	9 1/4		6/H		Bridge Pin
	12	Do	1 1/2ϕ NUTS	—			6/I		Recessed Pin Nuts (Comps) A325 - Type I
	12	d1	1 1/2ϕ bar	0	2 1/2		6/J		PINTLE
AB1	24		1 1/2 ϕ Bar	1	10 1/4		6/M		swedge ▲
FIELD	24		1 1/2ϕ Std Washer	—			6/O		A-307
	48	SHOP	1 1/2 ϕ HEX. NUTS				6/N		A-307
	12		1 3/4 ϕ HEX BOLTS	0	6 3/4		6/K		Shoulder Bolt Req# 7791 ▲
	12	pw1	bar 3 1/2 × 1/4	0	5		6/L		
		Item No. 504.7001							
		Project No 1-95-1(29)3							

STEEL: ASTM. A36
WELDING ELECTRODE SEE WELDING PROCEDURES 152 OR 301
SHOP CONN: WELDED - 2" CONT. FILLET
FIELD CONN: WELDED
HOLES: AS NOTED
PAINT: INORGANIC ZINC (PER ME. SPEC)
SPECIAL CLEANING: BLAST CLEAN SSPC-SP10
APPROVED: 4-6-78

PEDESTAL DETAILS

PRINT DIST.		
1p	3/17/78	Shoals
2p	3/17/78	State
3P	4/6/78	Shop
2p	5/15/78	Cus &

REV.	
CHECKED	3/13/78 RM
DRAWN	2/27/78 Silva

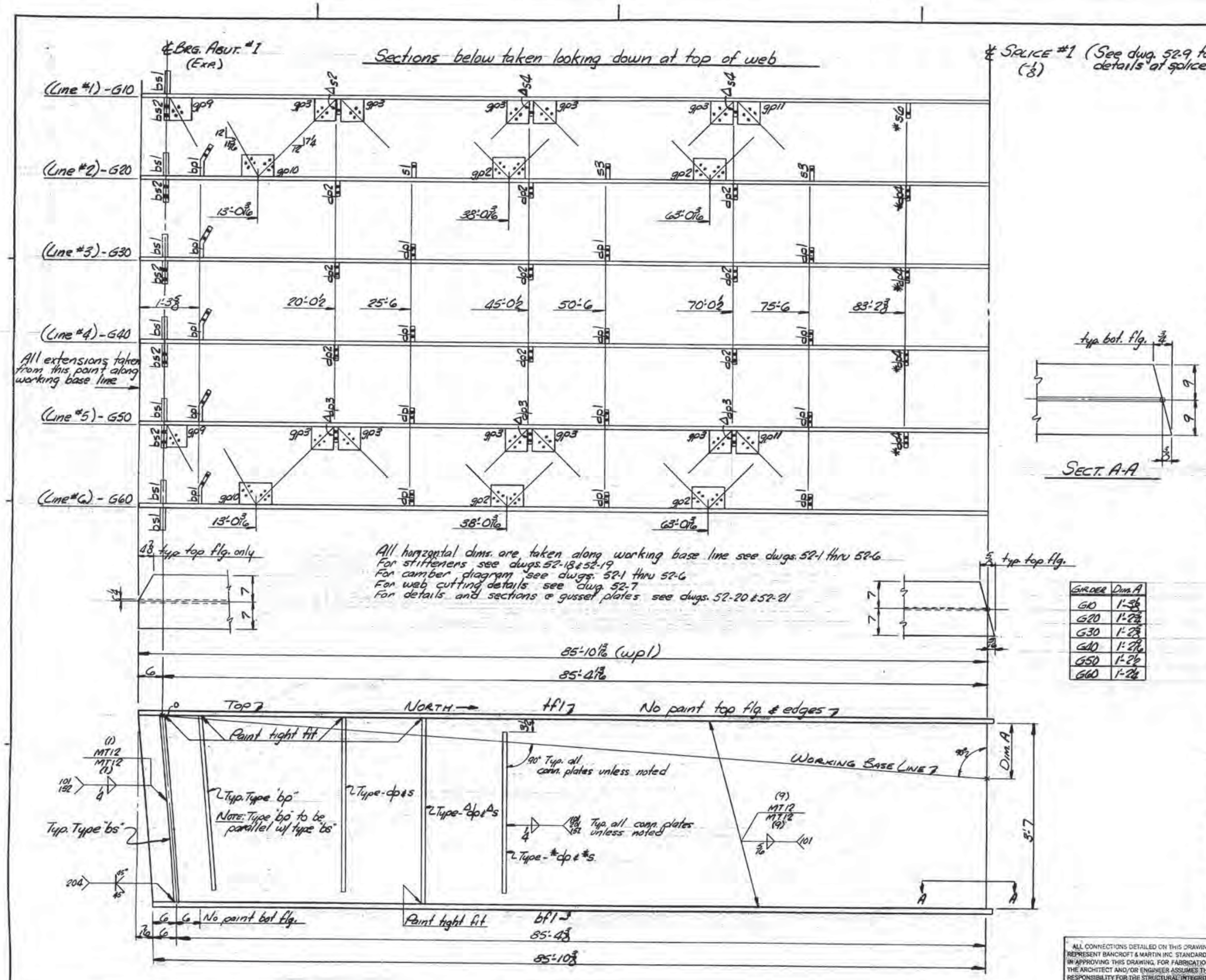
Bancroft & Martin Inc.
South Portland, Maine 04106

JOB: CIDER HILL RD OVER I-95 YORK MAINE
CUSTOMER: SHOALS CORP.
DESIGNER: MAINE DEPT. OF TRANS, BUREAU OF HWYS.

ORDER NO.	JOB NO.	DRAWING NO.
	BS78-8	51-1

▲ Revised Std. to substitute … instead of …

EPE



Girder	Dim. A
G10	1'-2 5/8
G20	1'-2 3/4
G30	1'-2 3/8
G40	1'-2 7/16
G50	1'-2 1/2
G60	1'-2 1/4

SHIP — BILL OF MATERIAL — JOB NO. 8S78-8 — DRAWING NO. 52-13 — REV. △

MARK	NO.	MARK	SHAPE	LENGTH		WT.	ITEM NO.		REMARKS
G10	1		Girder	85	10 13/16	—			
G20	1		Do	85	10 9/16	—			
G30	1		Do	85	10 9/16	—			
G40	1		Do	85	10 9/16	—			
G50	1		Do	85	10 9/16	—			
G60	1		Girder	85	10 9/16	—			
	6	wpl	PL 1/2 x 43	85	10 13/16		1/B		Cut from PL ... CVN
	6	tfl	PL 1 1/4 x 14	85	11 1/4		1/H		CVN
	6	bfl	PL 1 3/8 x 18	85	10 3/8		1/N		CVN A572 Gr 50
	7	bs1	Bar 6 x 9/16	3	7		1/W		
	5	bs2	Bar 6 x 9/16	3	7		1/W		
	5	bp1	PL 3/8 x 10	3	3 1/2		1/U		
	12	dp1	Bar 7 x 3/8	3	3 1/2		3/F		
	9	dp2	Do	3	3 1/2		↓		
	3	dp3	Do	3	7		↓		
	4	dp4	Bar 7 x 3/8	3	0		3/F		
	1	s1	Bar 6 x 3/8	3	3 1/2		2/K		
	1	s2	Do	3	7		↓		
	2	s3	Do	3	3 1/2		↓		
	2	s4	Do	3	7		↓		
	1	s6	Bar 6 x 3/8	3	0		2/K		
	4	gp2	PL 3/8 x 9	2	1		3/X		
	10	gp3	PL 3/8 x 9	1	0 1/2		3/Y		
	2	gp9	PL 3/8 x 9	0	9 1/2		3/Y		
	2	gp10	PL 3/8 x 9 1/2	1	9 1/2		3/Z		
	2	gp11	PL 3/8 x 9	1	1		3/Y		

HOLES ARE FOR HIGH TENSILE B... THEY ARE TO BE FREE FROM BURRS AND SHALL NOT BE PAINTED ON ANY SURFACE WITHIN 5" OF SUCH OPEN HOLES

IT. NO. 504.7001 BR. NO. PROJ. NO. I-95-1(29)3

FOR APPROVAL ☒ FOR FILES & FIELD

STEEL: ASTM. ☑ A36 ☐ A572 GR ☐ A588 GR ☑ Unless Noted
WELDING ELECTRODE: ☐ E70 ☑ See Welding Proc. ☐ None
SHOP CONN: ☐ Bolted ☑ Welded ☐ None
FIELD CONN: ☑ Bolted ☐ Welded ☐ None
HOLES: ☐ 13/16 ☑ 15/16 ☐ ☐ Unless Noted ☐ None
PAINT: ☐ None ☐ Shopcoat ☐ Galv. After Fab. ☑ As Noted
SPECIAL PAINT: Inorganic Zinc per Me. Specs.
SPECIAL CLEANING: ☑ Blast Clean ☐ None SSPC-SP10

GIRDERS

APPROVED: 4/6/78

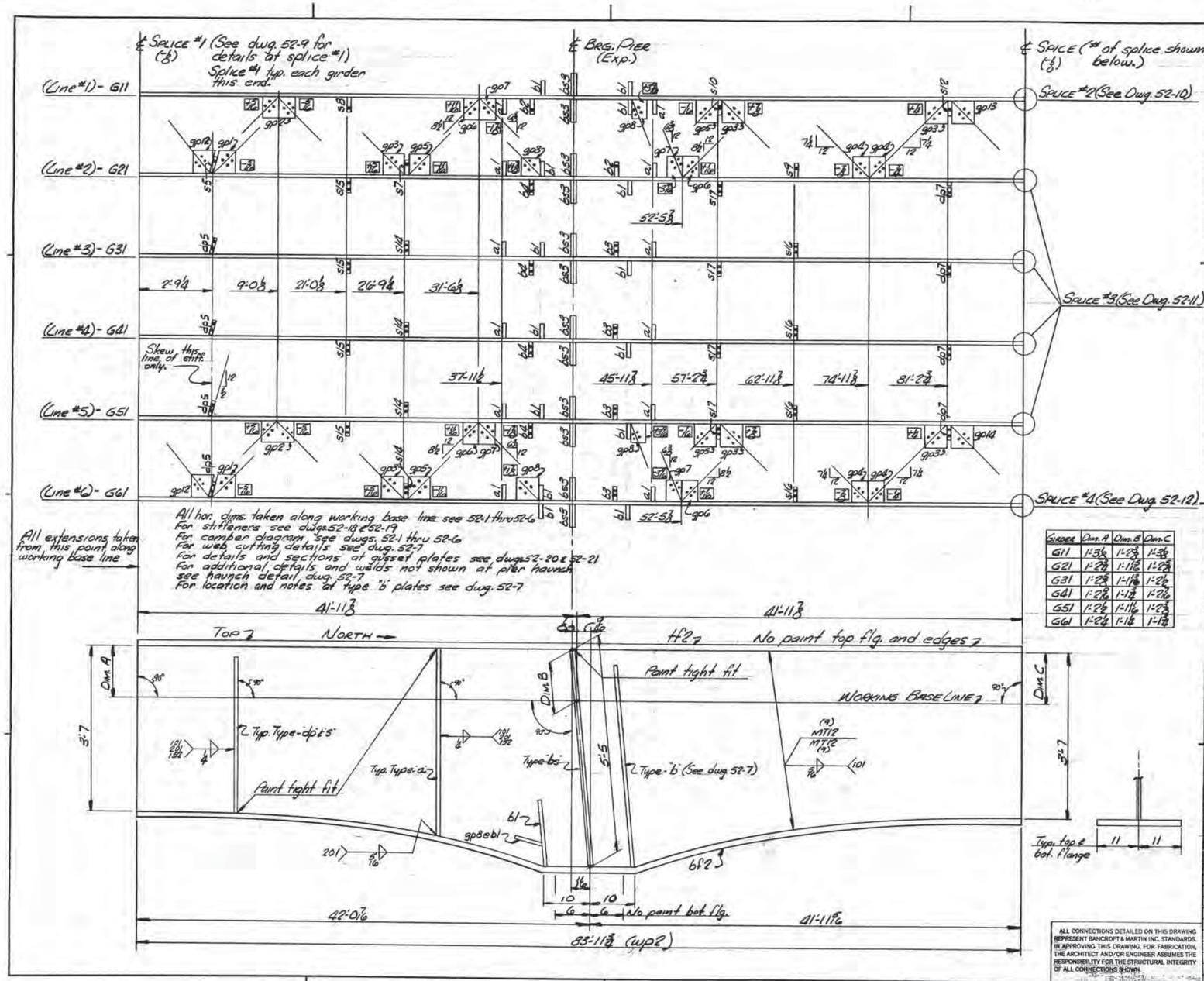
PRINT DIST.		
2p	3/17/78	APP.
1s	4-7-78	FAB. B
		F&F.
1p	3/17/78	Shoals
2s	4-7-78	F.A.
2p	5/15/78	Cust.
REV. △		
CHECKED		
DRAWN	3/7/78	MGR

Bancroft & Martin Inc.
South Portland, Maine 04106

JOB: Cider Hill Road over I-95 York, Maine
CUSTOMER: Shoals Inc
DESIGNER: Maine Dept. of Trans.

ORDER NO.	JOB NO.	DRAWING NO.	REV.
	8S78-8	52-13	△

ALL CONNECTIONS DETAILED ON THIS DRAWING REPRESENT BANCROFT & MARTIN INC. STANDARDS. IN APPROVING THIS DRAWING FOR FABRICATION, THE ARCHITECT AND/OR ENGINEER ASSUMES THE RESPONSIBILITY FOR THE STRUCTURAL INTEGRITY OF ALL CONNECTIONS SHOWN.



Girder	Dim. A	Dim. B	Dim. C
G11	1'-3½	1'-2⅜	1'-3⅜
G21	1'-2⅜	1'-1½	1'-2⅜
G31	1'-2⅜	1'-1⅜	1'-2½
G41	1'-2⅜	1'-1⅜	1'-2½
G51	1'-2⅜	1'-1⅜	1'-2⅜
G61	1'-2⅜	1'-1⅜	1'-1⅞

ALL CONNECTIONS DETAILED ON THIS DRAWING REPRESENT BANCROFT & MARTIN INC. STANDARDS. IN APPROVING THIS DRAWING, FOR FABRICATION, THE ARCHITECT AND/OR ENGINEER ASSUMES THE RESPONSIBILITY FOR THE STRUCTURAL INTEGRITY OF ALL CONNECTIONS SHOWN.

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	ITEM	REMARKS
G11	1		GIRDER	83 11¾	—		
G21	1		Do.	83 11¾	—		
G31	1		Do.	83 11¾	—		
G41	1		Do.	83 11¾	—		
G51	1		Do.	83 11¾	—		
G61	1		GIRDER	83 11¾	—		
	6	wp2	PL ⅜ x 65	83 11¾		11C	Cut from PL ⅜ x 65 A572 Gr 50
	6	hf2	PL 1½ x 22	83 10½		11L	A572 Gr 50
	6	bf2	PL 12 x 22	84 0⅜		11M	A572 Gr 50
	12	a1	Bar 8 x ⅜	5 11⅝		11X	
	14	b1	Bar 8 x ½	1 6		11Y	
	2	b2	Bar 8 x ½	5 1½		2/T	
	4	b3	Bar 8 x ½	5 1½		2/T	
	4	b4	Bar 8 x ½	5 1½		2/T	
	12	bs3	PL 1 x 9	5 5		11Z	
	4	dp5	Bar 7 x ⅜	3 3½		3/F	
	4	dp7	Bar 7 x ⅜	3 3½		3/F	
	1	s5	Bar 6 x ⅜	3 3½		2/K	
	1	s7	Do.	3 11½		2/L	
	1	s8	Do.	3 7½		2/L	
	1	s9	Do.	3 7½		2/L	
	1	s10	Do.	3 11½		2/L	
	1	s12	Bar 6 x ⅜	3 7		2/K	
	4	s14	PL ⅜ x 8½	3 11½		3/E	
	4	s15	Do.	3 7½			
	4	s16	Do.	3 7½			
	4	s17	PL ⅜ x 8½	3 11½		3/E	
	2	gp1	PL ⅜ x 9	1 0½		3/H	C.O.
	2	gp2	Do.	2 1		3/K	
	6	gp3	PL ⅜ x 9	1 0½		3/H	
	4	gp4	PL ⅜ x 9	1 0½		3/K	
	4	gp5	PL ⅜ x 9½	0 11		3/H	
	4	gp6	PL ⅜ x 9½	0 11		3/W	
	4	gp7	PL ⅜ x 9	1 1½		3/W	
	4	gp8	PL ⅜ x 9	1 1½		3/U	
	2	gp12	PL ⅜ x 9	1 0⅜		3/H	C.O.
	1	gp13	PL ⅜ x 9	0 11½		3/H	
	1	gp14	PL ⅜ x 9	0 11		3/H	

HOLES ARE FOR HIGH TENSILE BOLTS THEY ARE TO BE FREE FROM BURRS AND SHALL NOT BE PAINTED ON ANY SURFACE WITHIN 5" OF SUCH OPEN HOLES.

JT. NO. 504.7001 | BR. NO. | PROJ. NO. I-95-1(29)3

FOR APPROVAL X **FOR FILES & FIELD**

STEEL: ASTM. ☑ A36 ☐ A572 Gr 1 ☐ A588 Gr 1 ☑ Unless Noted ☐
WELDING ELECTRODE: ☐ E70 ☑ See Welding Proc. ☐ None ☐
SHOP CONN: ☐ Bolted ☑ Welded ☐ None
FIELD CONN: ☑ Bolted ☐ Welded ☐ None
HOLES: ☐ 13/16 ☑ 15/16 ☐ Unless Noted ☐ None
PAINT: ☐ None ☐ Shopcoat ☐ Galv. After Fab. ☑ As Noted
SPECIAL PAINT: Inorganic Zinc per Me. Specs.
SPECIAL CLEANING: ☑ Blast Clean ☐ None SSPC-SP10

GIRDERS

APPROVED: 4/16/78

	PRINT DIST.		
Rp	3/17/78	APP. Shop	
Is	4-7-78	FAB. Is	
		F&F	
Ip	3/17/78	Shoals	
Is	4-7-78	F.A.	
Rp	5/15/78	Cust.	
REV. △			
CHECKED			
DRAWN	3/8/78	MSP	

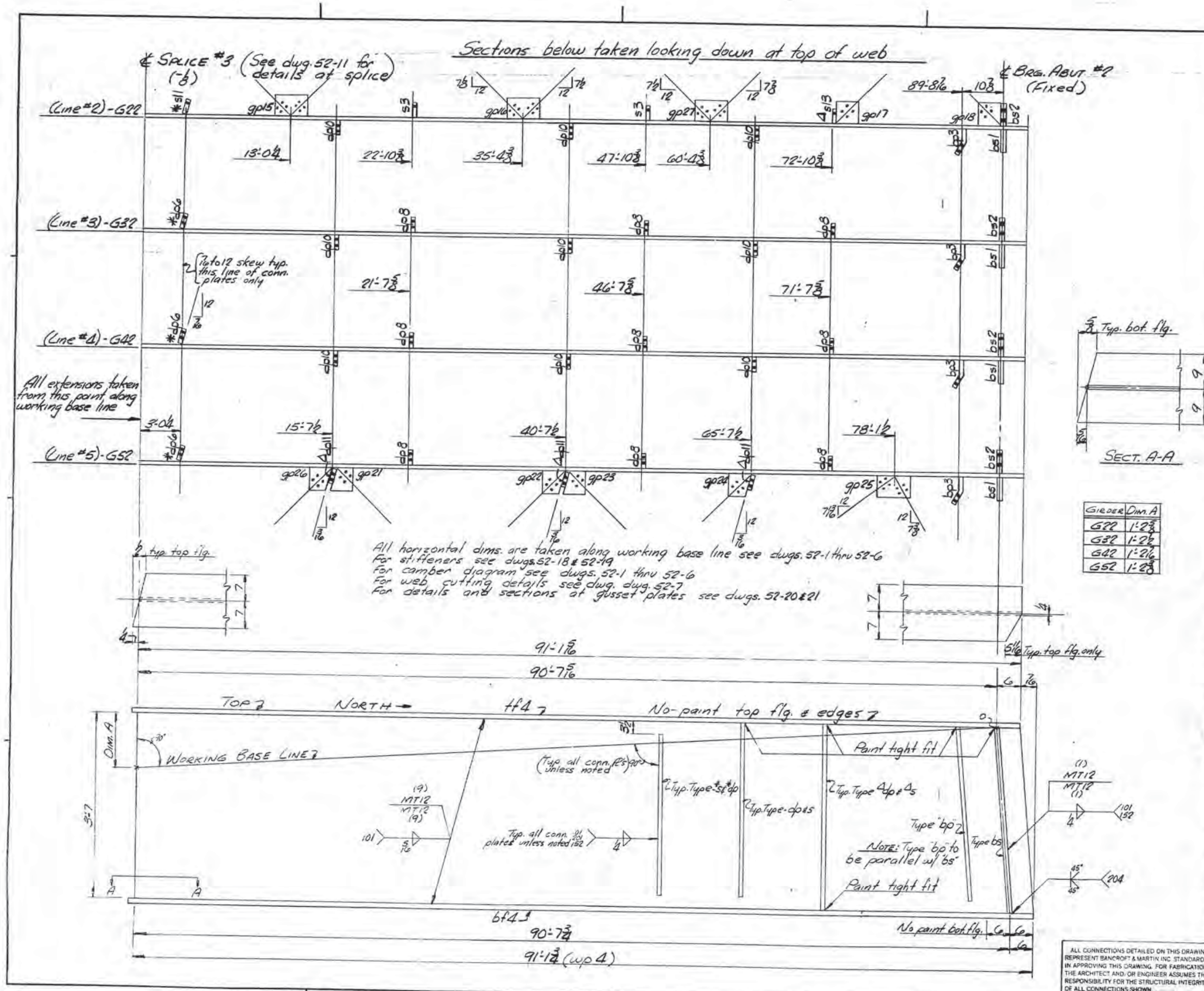
Bancroft & Martin Inc.
South Portland, Maine 04106

JOB: CIDER HILL ROAD over I-95
YORK, MAINE

CUSTOMER: SHOALS INC.

DESIGNER: MAINE DEPT. OF TRANS.

ORDER NO.	JOB NO.	DRAWING NO.	REV.
	BS78-8	52-14	△



GIRDER	Dim. A
G22	1'-2 3/8
G32	1'-2 1/2
G42	1'-2 1/4
G52	1'-2 3/8

BILL OF MATERIAL

SHIP | JOB NO. 8578-8 | DRAWING NO. 52-16 | REV. △

MARK	NO.	MARK	SHAPE	LENGTH		WT.	ITEM NO.		REMARKS
G22	1		GIRDER	91	1 3/4	—			
G32	1		Do	91	1 3/4	—			
G42	1		Do	91	1 3/4	—			
G52	1		GIRDER	91	1 3/4	—			
	4	wp4	PL 1/2 x 43	91	1 3/4		1/E		Cut from PL 1/2 x 49 1/2 x 91'-6 CVN
	4	tf4	PL 1 1/4 x 14	91	1 1/16		1/I		CVN
	4	bf4	PL 1 3/8 x 18	91	2 3/16		1/O		CVN A572 GR. 50
	4	bs1	Bar 6 x 9/16	3	7		1/W		
	4	bs2	Bar 6 x 9/16	3	7		1/W		
	4	bp3	PL 3/8 x 10	3	3 1/2		1/U		
	2	s3	Bar 6 x 3/8	3	3 1/2		2/K		
	1	s11	Do	3	0		2/K		
	1	s13	Bar 6 x 3/8	3	7		2/K		
	3	dp6	Bar 7 x 3/8	3	0		3/F		
	9	dp8	Do	3	3 1/2		↓		
	9	dp10	Do	3	3 1/2		↓		
	3	dp11	Bar 7 x 3/8	3	7		3/F		
	1	gp15	PL 3/8 x 9	1	10		3/X		
	1	gp16	Do	1	11 1/2		3/X		
	1	gp17	PL 3/8 x 9	0	11 1/2		3/V		
	1	gp18	Do	1	0		3/U		
	1	gp21	Do	1	0 1/2		3/V		L.O.
	1	gp22	Do	1	0 1/2		3/V		L.O.
	1	gp23	Do	0	11 5/8		3/V		L.O.
	1	gp24	PL 3/8 x 9	1	0		3/V		L.O.
	1	gp25	PL 3/8 x 12 1/2	1	8 1/2		3/W		
	1	gp26	PL 3/8 x 9	0	10 1/2		3/V		L.O.
	1	gp27	PL 3/8 x 9	2	0		3/X		

HOLES ARE FOR HIGH TENSILE BOLTS THEY ARE TO BE FREE FROM BURRS AND SHALL NOT BE PAINTED ON ANY SURFACE WITHIN 5" OF SUCH OPEN HOLES

IT. NO. 504.7001 | BR. NO. | PROJ. NO. I-95-1(29)3

FOR APPROVAL ☒ **FOR FILES & FIELD**

- STEEL: ASTM. ☑ A36 ☐ A572 GR ☐ A588 GR ☑ Unless Noted ☐
- WELDING ELECTRODE: ☐ E70 ☑ See Welding Proc. ☐ None ☐
- SHOP CONN: ☐ Bolted ☑ Welded ☐ None
- FIELD CONN: ☑ Bolted ☐ Welded ☐ None
- HOLES: ☐ 13/16 ☑ 15/16 ☐ ☐ Unless Noted ☐ None
- PAINT: ☐ None ☐ Shopcoat ☐ Galv. After Fab. ☑ As Noted
- SPECIAL PAINT: Inorganic Zinc per Me. Specs.
- SPECIAL CLEANING: ☑ Blast Clean ☐ None SSPC-SP10

GIRDERS

APPROVED: 4/6/78

PRINT DIST.		
2p	3/17/78	APP.
1s	4-7-78	FAB. B
		F&F.
1p	3/17/78	
2s	4-7-78	F.A.
2p	5/15/78	

Bancroft & Martin Inc.
South Portland, Maine 04106

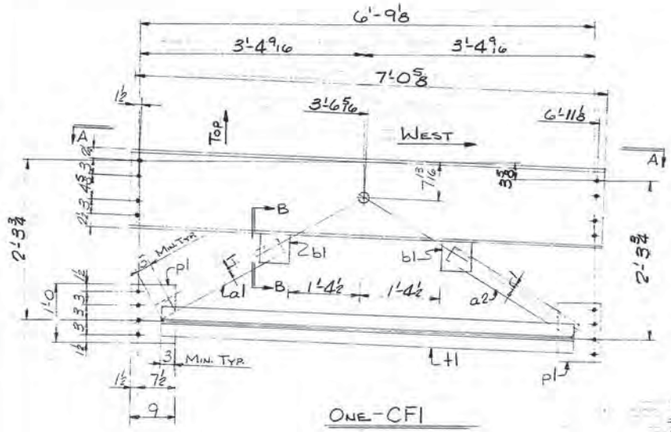
JOB: CIDER HILL ROAD over I-95 YORK, MAINE
CUSTOMER: SHOALS INC.
DESIGNER: MAINE DEPT. OF TRANS.

ORDER NO.	JOB NO.	DRAWING NO.	REV.
	8578-8	52-16	△

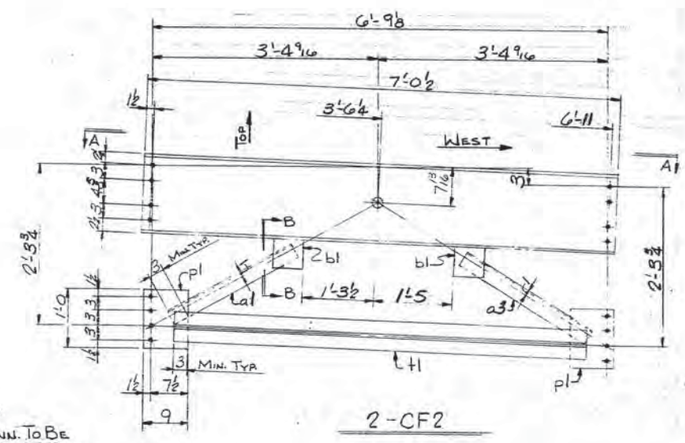
REV. △ | CHECKED | DRAWN 3/11/78 MAP

ALL CONNECTIONS DETAILED ON THIS DRAWING REPRESENT BANCROFT & MARTIN INC. STANDARDS. IN APPROVING THIS DRAWING FOR FABRICATION, THE ARCHITECT AND/OR ENGINEER ASSUMES THE RESPONSIBILITY FOR THE STRUCTURAL INTEGRITY OF ALL CONNECTIONS SHOWN.

[redacted]

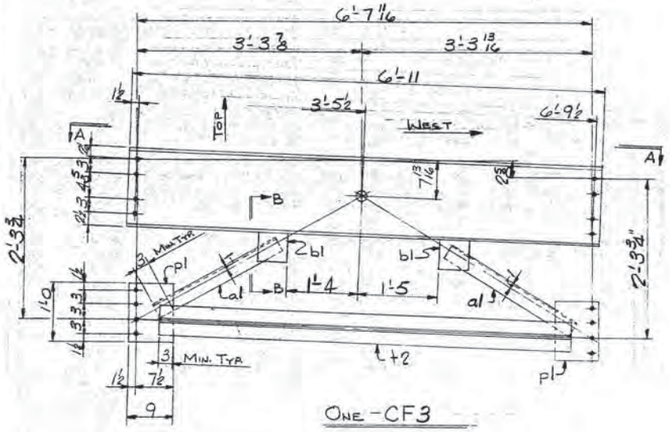


ONE-CF1

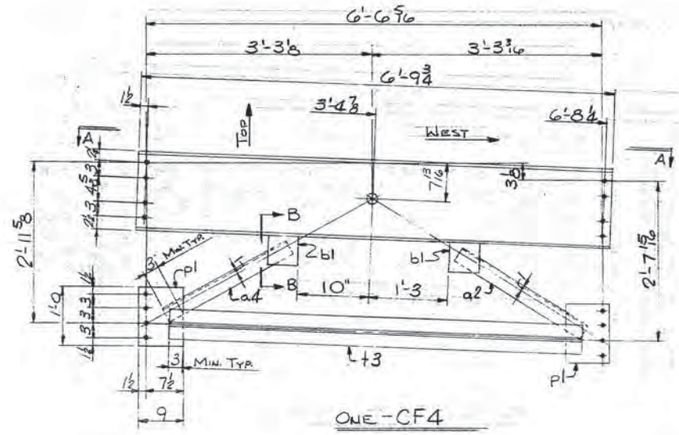


2-CF2

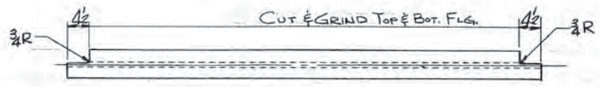
SHOP NOTE:
ALL SHOP CONN. TO BE 5/16 CONT. FILLET WELD. SEE WELDING PROCEDURE 201.



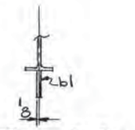
ONE-CF3



ONE-CF4



SECT. A-A



SECT. B-B

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	ITEM NO	REMARKS
CF1	1		W16x26	7 0⅝		2/C	
CF2	2		Do	7 0½		2/C	
CF3	1		Do	6 11		2/B	
CF4	1		W16x26	6 9¾		2/B	
	10	pl	PL⅜x9	1 0		2/N	
	10	bl	Bar 6x⅜	0 6		2/M	
	5	a1	L3x3x5/16	1 8		2/J	
	2	a2	Do	1 9¾			
	2	a3	Do	1 8½			
	1	a4	L3x3x5/16	2 3½		2/J	
	3	t1	WT5x10S	6 1		2/B	
	1	t2	Do	5 11		2/F	
	1	t3	WT5x10S	5 10		2/F	

HOLES ARE FOR HIGH TENSILE BOLTS THEY ARE TO BE FREE FROM BURRS AND SHALL NOT BE PAINTED ON ANY SURFACE WITHIN 5" OF SUCH OPEN HOLES

BILL OF MATERIAL — JOB NO. BS78-8 — DRAWING NO. 53-1 — REV. △

I.T. NO. 504.7001 — BR. NO. — PROJ. NO. I-95-1(29)3

FOR APPROVAL | **X FOR FILES & FIELD**

STEEL: ASTM: X A36 | A572 [GR] | A588 [GR] | Unless Noted
WELDING ELECTRODE: E70 | X See Welding Proc. | None
SHOP CONN: Bolted | X Welded | None
FIELD CONN: X Bolted | Welded | None
HOLES: 13/16 | X 5/8 | Unless Noted | None
PAINT: None | Shop Coat | Gal. After Fab. | X As Noted
SPECIAL PAINT: (INORGANIC ZINC (FED.MIL.SPEC)), AS NOTED
SPECIAL CLEANING: X Blast Clean | None (SSPC-SP10)

CROSSFRAMES

APPROVED: 4-6-78

REV.	PRINT DIST		
4	3/17/71	APP.	
1s	4-6-78	FHWA	
		FBF	
1p	3-17-71	Shank	
2s	4-7-78	EA.	
2p	5/15/78	CWB	

CHECKED	4-6-78	RGM	
DRAWN	2/25/78	BB	

Bancroft & Martin Inc.
South Portland, Maine 04106

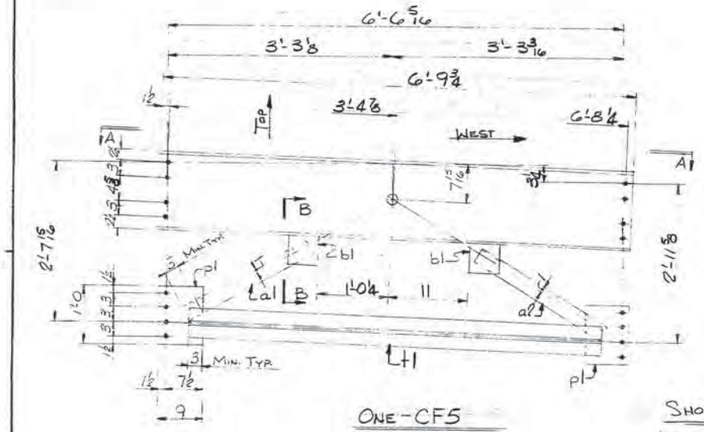
JOB: CIDER HILL ROAD OVER I-95
YORK, MAINE

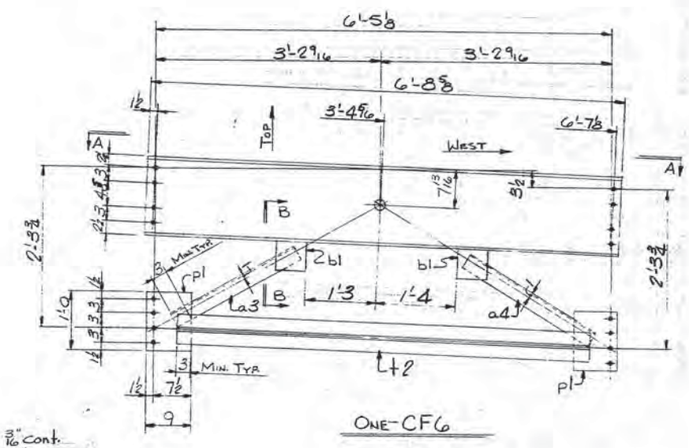
CUSTOMER: SHOALS INC.

DESIGNER: MAINE DEPT. of TRANS.

ORDER NO.	JOB NO.	DRAWING NO.	REV.
	BS78-8	53-1	△

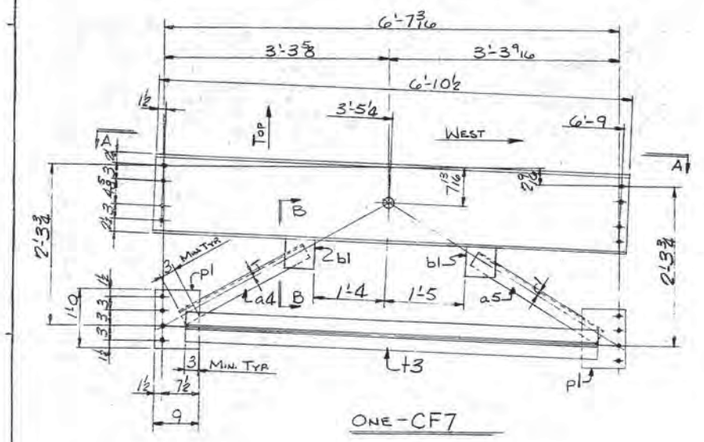
160-172

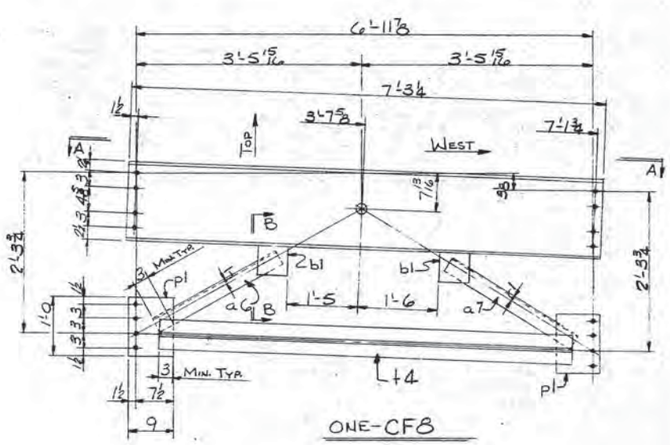


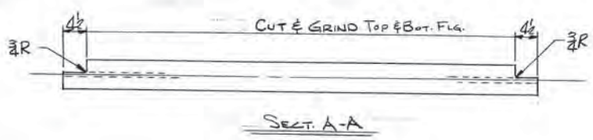


SHOP NOTE:

All shop conn. to be 3/16" cont. fillet weld. See welding procedure 201.







SECT. A-A

SECT. B-B

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	ITEM NO.	REMARKS
CF5	1		W16x26	6 9 3/4		2/B	
CF6	1		Do	6 8 5/8		2/B	
CF7	1		Do	6 10 1/2		2/C	
CF8	1		W16x26	7 3 1/4		2/D	
	8	pl	PL 3/8 x 9	1 0		2/N1	
	8	b1	Bar Cx 3/8	0 6		2/M	
	1	a1	L 3x3x5/16	2 0		2/J	
	1	a2	do	2 4 1/2			
	1	a3	do	1 7			
	2	a4	L 3x3x5/16	1 7 3/4			
	1	a5	do	1 8			
	1	a6	do	1 8 1/2			
	1	a7	L 3x3x5/16	1 9		2/J	
	1	t1	WT 5x10.5	5 10		2/E	
	1	t2	do	5 9		2/F	
	1	t3	do	5 11		2/G	
	1	t4	WT 5x10.5	6 3		2/H	

HOLES ARE FOR HIGH TENSILE BOLTS THEY ARE TO BE FREE FROM BURRS AND SHALL NOT BE PAINTED ON THE SURFACE WITHIN 2" OF SUCH OPEN HOLES

I.T. NO. 504,7001 | BR. NO. | PROJ. NO. I-95-1(29)3

FOR APPROVAL [X] **FOR FILES & FIELD**

STEEL: ASTM. [X] A36 [ ] A572 GR. [ ] A588 GR. [ ] Unless Noted [ ]
WELDING ELECTRODE: [ ] E70 [X] See Welding Proc. [ ] None [ ]
SHOP CONN: [ ] Bolted [X] Welded [ ] None
FIELD CONN: [X] Bolted [ ] Welded [ ] None
HOLES: [ ] 13/16 [X] 15/16 [ ] Unless Noted [ ] None
PAINT: [ ] None [ ] Shopcoat [ ] Galv. After Fab. [X] As Noted
SPECIAL PAINT: INORGANIC ZINC (PER MFR. SPEC.), AS NOTED
SPECIAL CLEANING: [X] Blast Clean [ ] None (SSPC-SP10)

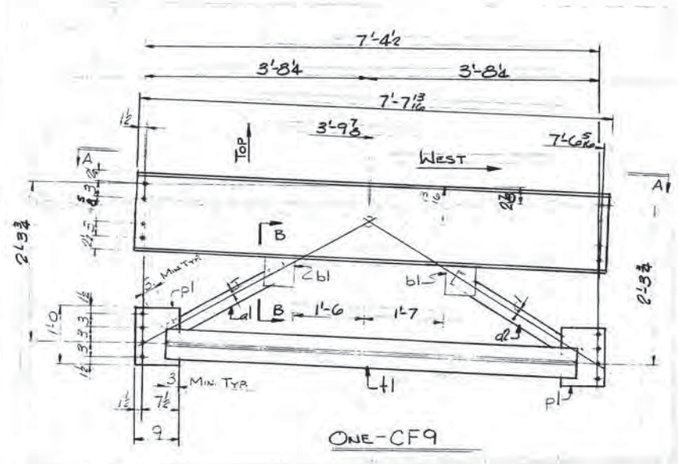
CROSSFRAMES

APPROVED: 4-6-78			Bancroft & Martin Inc. South Portland, Maine 04106
PRINT DIST			
4p	5-17-78	APP.	
1s	4-6-78	F&B.	
		F&F	
1p	5-17-78	S	
2s	4-7-78	F.A.	
2p	5/15/78	C&SD	
REV.			
CHECKED	4-6-78	RGM	
DRAWN	2/28/78	BB	

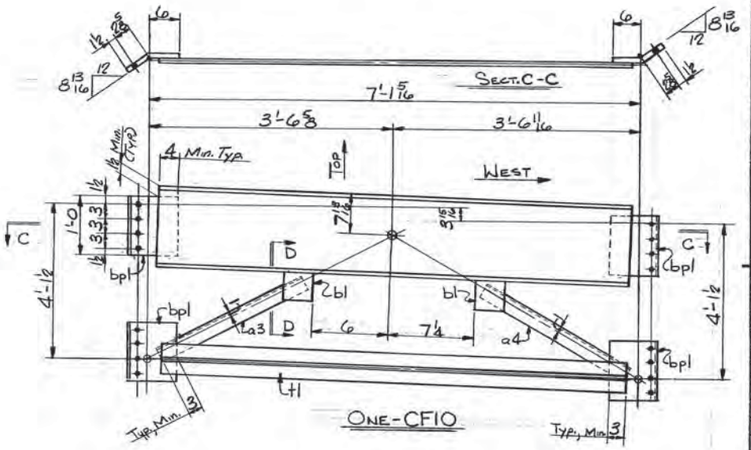
JOB: CIDER HILL ROAD OVER I-95 YORK, MAINE
CUSTOMER: SHOALS INC.
DESIGNER: MAINE DEPT. of TRANS.

ORDER NO.	JOB NO.	DRAWING NO.	REV.
	BS78-8	53-2	△

160-173

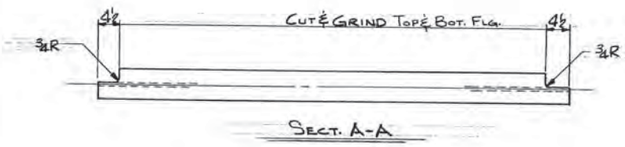


ONE-CF9

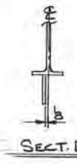


ONE-CF10

SHOP NOTE:
All shop conn. to be 3/16" cont. fillet weld. See welding procedure 201.



SECT. A-A



SECT. D-D

SECT. BB

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	ITEM NO.	REMARKS
CF9	1		W16x26	7 7 13/16		1/E	
CF10	1		W16x26	6 10		2/W	
	4	bl	Bar 6x⅜	0 6		2/W	
	2	pl	PL ⅜ x 9	1 0		2/N	
	4	bpl	PL ⅜ x 10½	1 0		2/S	BEND
	1	a1	L 3x3x5/16	1 9½		2/W	
	1	a2	do	1 10½		2/W	
	1	a3	do	3 8		2/W	
	1	a4	L 3x3x5/16	3 10½		2/W	
	2	t1	WT 5x10.5	6 0	8	2/S	

HOLES ARE FOR HIGH TENSILE BOLTS THEY ARE TO BE FREE FROM BURRS AND SHALL NOT BE PAINTED ON ANY SURFACE WITHIN 5" OF SUCH OPEN HOLES

IT. NO. 504.7001 | BR. NO. | PROJ. NO. I-95-1(29)3

FOR APPROVAL [X] **FOR FILES & FIELD**

STEEL: ASTM. [X] A36 [ ] A572 GR. [ ] A588 GR. [ ] Unless Noted [ ]
WELDING ELECTRODE: [ ] E70 [X] See Welding Proc. [ ] None [ ]
SHOP CONN: [ ] Bolted [X] Welded [ ] None
FIELD CONN: [X] Bolted [ ] Welded [ ] None
HOLES: [ ] 13/16 [X] 15/16 [ ] [ ] Unless Noted [ ] None
PAINT: [ ] None [ ] Shopcoat [ ] Galv. After Fab. [X] As Noted
SPECIAL PAINT: INORGANIC ZINC (PER. MAINE SPEC.), AS NOTED
SPECIAL CLEANING: [X] Blast Clean [ ] None (SSPC-SP10)

CROSSFRAMES

APPROVED: 4-6-78
PRINT DIST.

	3-17-78	APP. S	
lp ls	4-6-78	FAB.	
		F&E	
lp	3-17-78	Shop	
ls	4-7-78	FA	
lp	5/15/78	CUST	
REV. △			
CHECKED	4-6-78	RAM	
DRAWN	3/17/78	BB	

Bancroft & Martin Inc.
South Portland, Maine 04106

JOB: CIDER HILL ROAD OVER I-95
YORK, MAINE

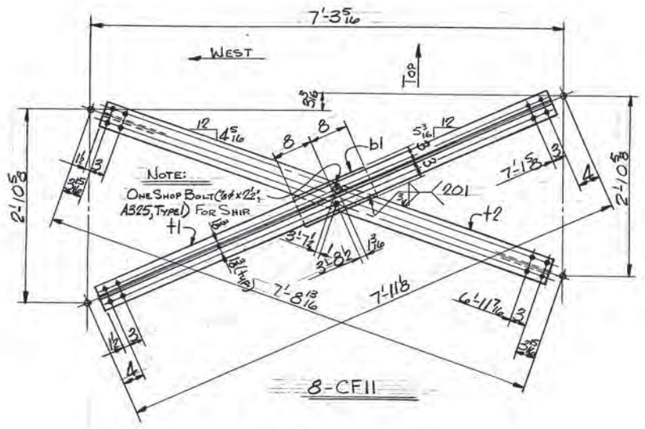
CUSTOMER: SHOALS INC.

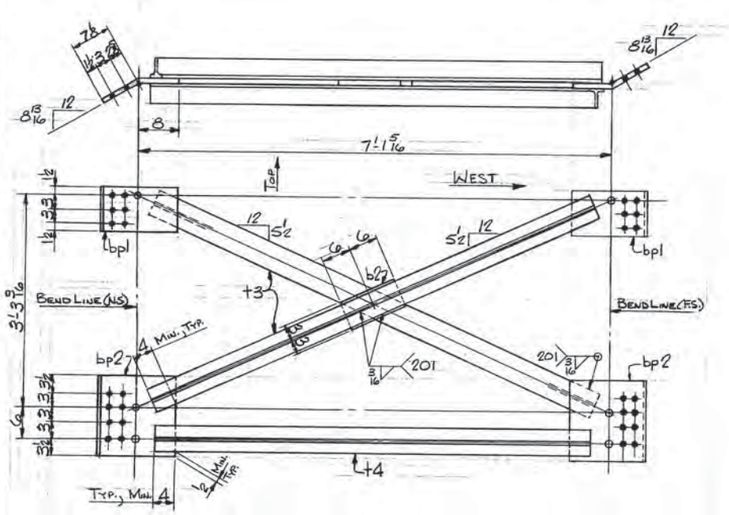
DESIGNER: MAINE DEPT. of TRANS.

ORDER NO.	JOB NO.	DRAWING NO.	REV.
	BS78-8	53-3	△

ALL CONNECTIONS DETAILED ON THIS DRAWING REPRESENT BANCROFT & MARTIN INC. STANDARDS. IN APPROVING THIS DRAWING, FOR FABRICATION, THE ARCHITECT AND/OR ENGINEER ASSUMES THE RESPONSIBILITY FOR THE STRUCTURAL INTEGRITY OF ALL CONNECTIONS SHOWN.

[redacted]





SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	ITEM NO.	REMARKS
CF11	8		CROSSFRAMES		—		
CF12	4		Do		—		
	8	+1	WT4x8.5	7 6 3/8		3/H	
	8	+2	do	7 3 5/16		3/H	
	8	+3	WT4x8.5	7 3		2/0	
	4	+4	WT5x10.5	6 6		2/P	
	8	b1	Bar 6 x 3/8	1 4		3/J	
	4	b2	Bar 6 x 3/8	1 0		2/S	
	8	shop	7/8ø HS. Bolts	0 2 1/2		5/Q	A325, Type I
	8	shop	7/8ø Hard Washer	—		5/U	do do
	8	bp1	PL 3/8 x 9	1 3 3/8		2/G	Bend
	8	bp2	PL 3/8 x 15 3/8	1 4		2/R	Bend

HOLES ARE FOR HIGH TENSILE BOLTS THEY ARE TO BE FREE FROM BURRS AND SHALL NOT BE PAINTED ON ANY SURFACE WITHIN 1" OF SUCH OPEN HOLES

ALL CONNECTIONS DETAILED ON THIS DRAWING REPRESENT BANCROFT & MARTIN INC. STANDARDS. IN APPROVING THIS DRAWING, FOR FABRICATION, THE ARCHITECT AND/OR ENGINEER ASSUMES THE RESPONSIBILITY FOR THE STRUCTURAL INTEGRITY OF ALL CONNECTIONS SHOWN.

JOB NO. BS78-8 | DRAWING NO. 53-4 | REV. △

IT. NO. 504.7001 | BR. NO. | PROJ. NO. I-95-1(29)3

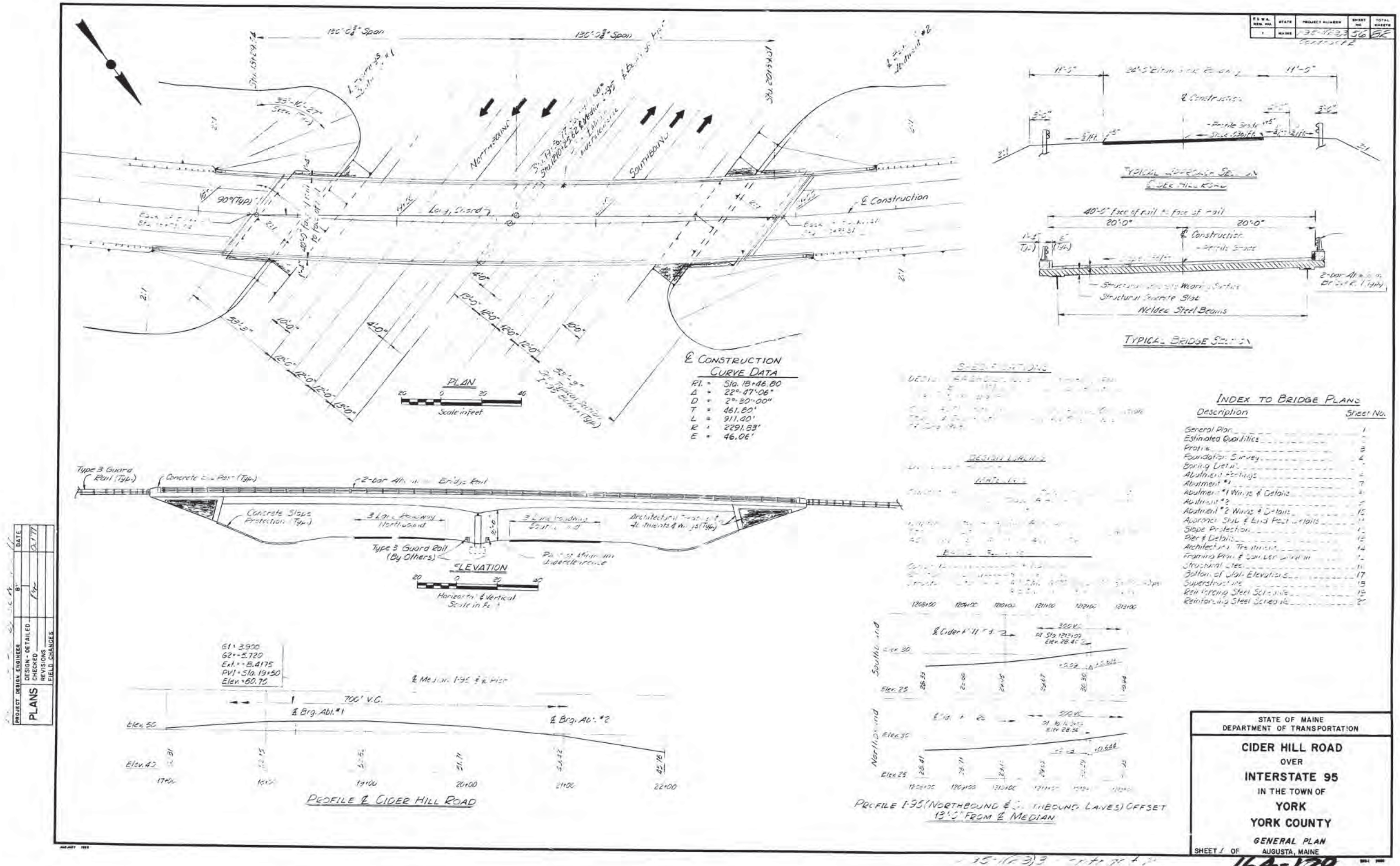
FOR APPROVAL [X] **FOR FILES & FIELD**

STEEL: ASTM.	[X] A36	[ ] A572 [GR.]	[ ] A588 [GR.]	[ ] Unless Noted	[ ]
WELDING ELECTRODE:	[ ] E70	[X] See Welding Proc.	[ ] None		
SHOP CONN:	[X] Bolted	[X] Welded	[ ] None		
FIELD CONN:	[X] Bolted	[ ] Welded	[ ] None		
HOLES:	[ ] 13/16	[X] 15/16	[ ]	[ ] Unless Noted	[ ] None
PAINT:	[ ] None	[ ] Shopcoat	[ ] Galv. After Fab.	[X] As Noted	

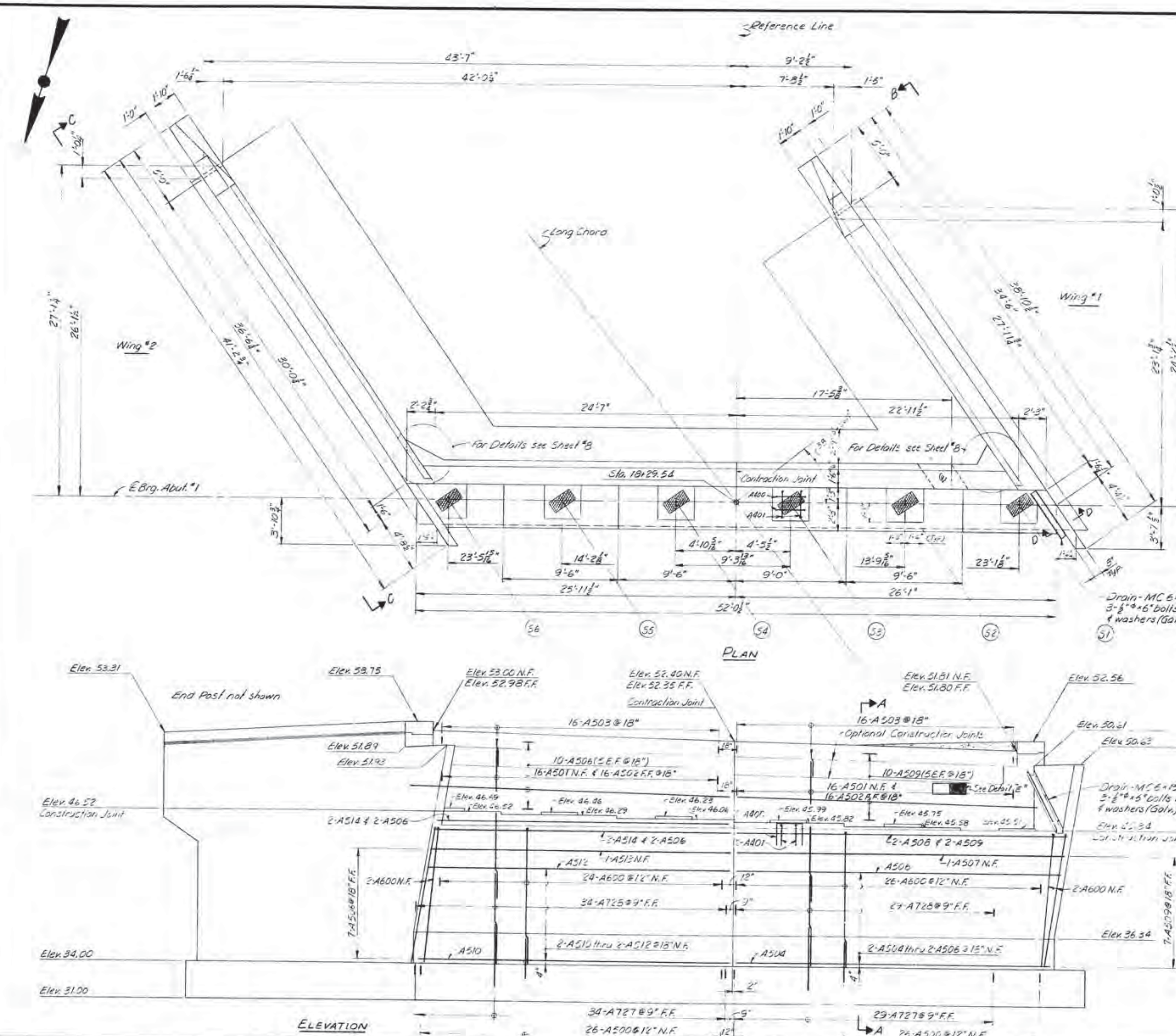
SPECIAL PAINT: INORGANIC ZINC (PER MAINE SPEC.); AS NOTED
SPECIAL CLEANING: [X] Blast Clean [ ] None (SSPC-SP10)

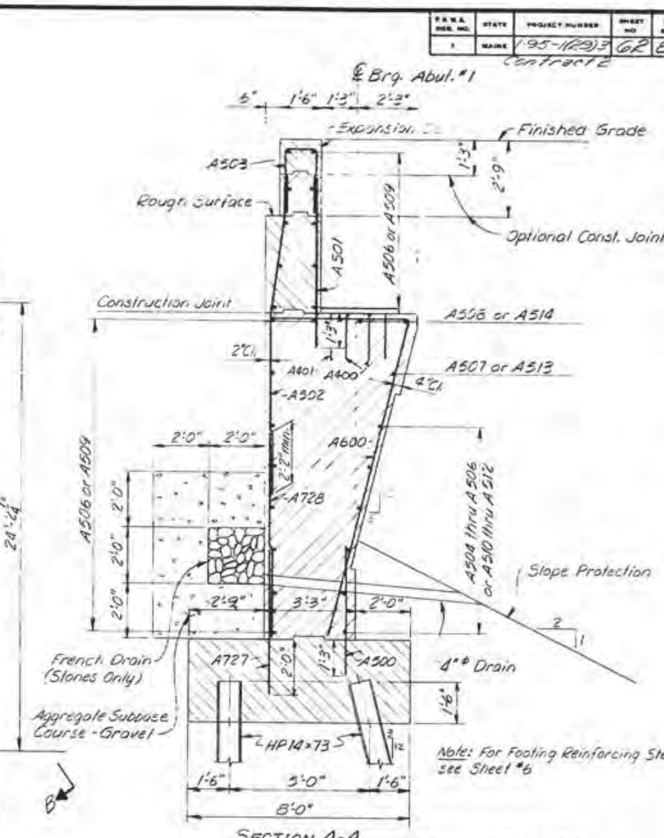
CROSSFRAMES

APPROVED: 4-6-78			Bancroft & Martin Inc.
PRINT DIST.			South Portland, Maine 04106
2/P	3-17-78	APP.	
2/S	4-6-78	FAB.	JOB: CIDER HILL ROAD OVER I-95 YORK, MAINE
		F&E.	
1/P	3-17-78	Shop	
2/S	4-7-78	E.A.	
2/P	5/15/78	Coast	CUSTOMER: SHOALS INC.
REV. △			DESIGNER: MAINE DEPT. of TRANS.
CHECKED	4-6-78	RSM	ORDER NO. / JOB NO. B / DRAWING NO. CF-1 / REV. △
DRAWN	3/8/78	BB	



I-95-1(23)56 Contract #2
130'-0 3/8" Span
130'-0 3/8" Span
Northbound
Southbound
℄ Construction
Long. Guard
Typical Approach Section
Cider Hill Road
11'-0"
11'-0"
40'-0" face of rail to face of rail
20'-0"
20'-0"
Structural Concrete Slab
Welded Steel Beams
2-bar Aluminum Br. Rail (Typ.)
Typical Bridge Section
PLAN
Scale in feet
℄ Construction
Curve Data
P.I. = Sta. 18+46.80
Δ = 22°-47'-06"
D = 2°-30'-00"
T = 461.80'
L = 911.40'
R = 2291.83'
E = 46.06'
Specifications
Design Loading
Index to Bridge Plans
Description
Sheet No.
General Plan
Estimated Quantities
Profile
Foundation Survey
Boring Data
Abutment Footings
Abutment #1
Abutment #1 Wings & Details
Abutment #2
Abutment #2 Wings & Details
Approach Slab & End Post Details
Slope Protection
Pier & Details
Architectural Treatment
Framing Plan & Camber Diagram
Structural Steel
Bottom of Slab Elevations
Superstructure
Reinforcing Steel Schedule
Reinforcing Steel Schedule
Type 3 Guard Rail (Typ.)
Concrete End Post (Typ.)
2-bar Aluminum Bridge Rail
Concrete Slope Protection (Typ.)
3 Lane Roadway Northbound
3 Lane Roadway Southbound
Architectural Treatment Abutments & Wings (Typ.)
Type 3 Guard Rail (By Others)
Point of Minimum Underclearance
ELEVATION
Horizontal & Vertical Scale in Feet
G1 = 3.900
G2 = -5.720
Ext. = -8.4175
PVI = Sta. 19+50
Elev. 60.75
700' V.C.
℄ Median I-95 & ℄ Pier
℄ Brg. Abt. #1
℄ Brg. Abt. #2
Elev. 50
Elev. 40
17+00
18+00
19+00
20+00
21+00
22+00
Profile ℄ Cider Hill Road
Southbound
Northbound
Elev. 30
Elev. 25
Profile I-95 (Northbound & Southbound Lanes) Offset 13'-0" From ℄ Median
PLANS
Project Design Engineer
Design - Detailed
Checked
Revisions
Field Changes
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
CIDER HILL ROAD
OVER
INTERSTATE 95
IN THE TOWN OF
YORK
YORK COUNTY
GENERAL PLAN
AUGUSTA, MAINE
SHEET 1 OF
164-128





ABUTMENT NOTES

1. Chamfer all exposed edges of concrete a consistent dimension between ½" and ¾" inclusive, unless otherwise indicated.
2. Reinforcing steel shall have 2 inches cover unless otherwise indicated.
3. Place reinforcing steel in bridge seats to clear anchor bolts.
4. Break bond at vertical contraction joints by a method approved by the Engineer.
5. Polyvinylchloride waterstops as shown on Standard Details BD104 shall be placed in all vertical contraction and construction joints.
6. Waterstops are not required in horizontal construction joints.
7. Protective Coating for Concrete Surfaces shall be applied to the following areas: Top of concrete curbs, top of backwall
8. Place 4" diameter drains in breastwall and wings at 16 foot maximum spacing. Exact location to be determined by the Engineer in the field.
9. Welding of reinforcing steel will be allowed in the top 2' of the abutment backwall.
10. At least one of the "Optional Const. Joints" shown in the Abutment backwalls shall be incorporated to ensure proper placement of the joint devices, unless some other method, approved by the Engineer, is chosen by the contractor which will provide for proper placement of the joint device. Typ. both Abut.

REFERENCES

For Approach Slab Details see Sheet #11
For Wing Details, Reinforcing Steel and Rail Layouts see Sheet #8
For End Post Details see Sheet #11
For Footing Details and Piles see Sheet #6
For Expansion Dam Details see Standard Details BD 105-74
For Elevations B-B & C-C see Sheet #8

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CIDER HILL ROAD
OVER
INTERSTATE 95
IN THE TOWN OF
YORK
YORK COUNTY
ABUTMENT #1
SHEET OF AUGUSTA, MAINE

I-95-1(29)3 Contract 2 Cider Hill Brg.

164-134

F.A.P. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	1-95-1(23)64 Contract 2	8	12

PLAN

SECTION A-A

ELEVATION

DETAIL B"

REFERENCES

For Wing Details, Reinforcing Steel and Rail Layouts see Sheet #10
For End Post Details see Sheet #11
For Footing Details and Piles see Sheet #6
For Armored Joint Details see Standard Details EC 124-77
For Elevations B-B & C-C see Sheet #10
For Approach Slab Details see Sheet #11

PROJECT DESIGN ENGINEER — PLANS

	BY	DATE
DESIGN - DETAILED	G.O.T.	5-77
CHECKED	R.C.B.	6-77
REVISIONS	Pap	
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CIDER HILL ROAD
OVER
INTERSTATE 95
IN THE TOWN OF
YORK
YORK COUNTY

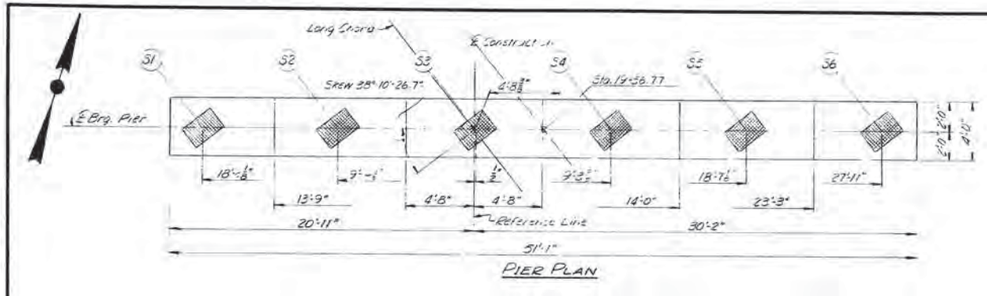
ABUTMENT #2

SHEET 8 OF 12 AUGUSTA, MAINE

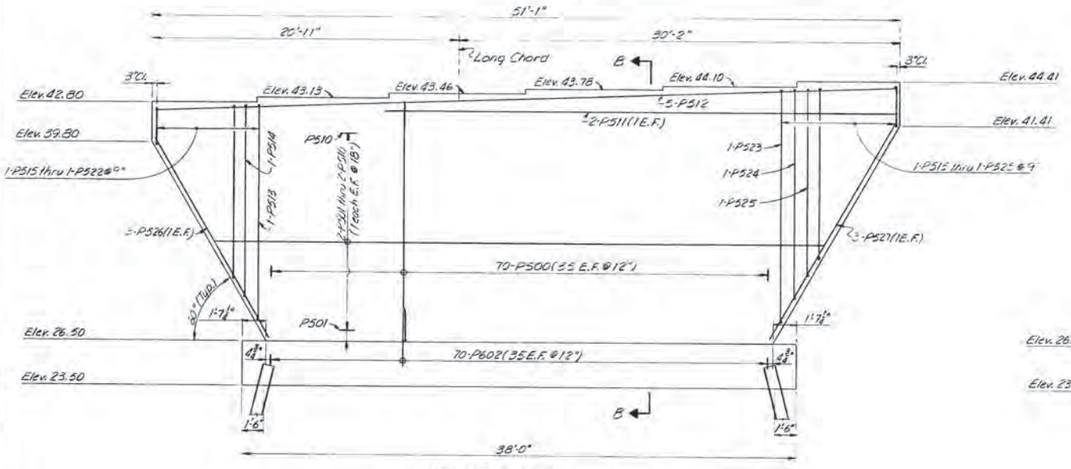
1-95-1(23)3 Contract 2

164-136

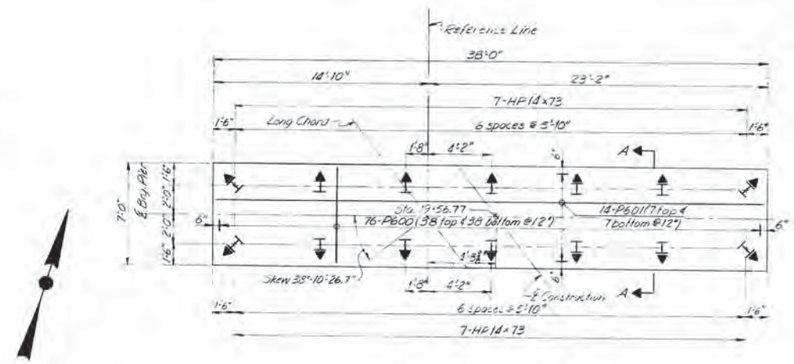
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1(29)65 CONTRACT 2		



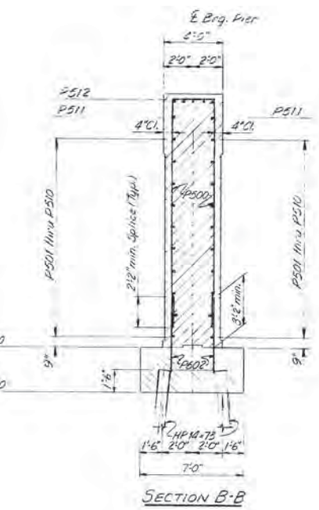
PIER PLAN



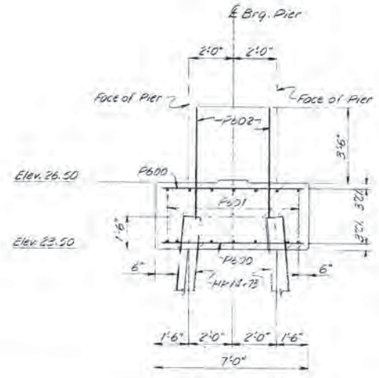
PIER ELEVATION



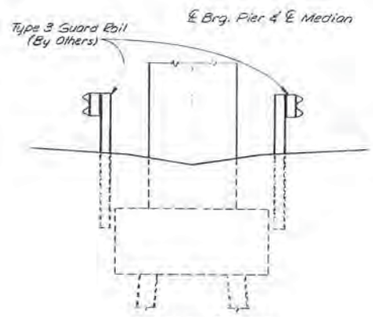
PIER FOOTING PLAN



SECTION B-B



SECTION A-A



GENERAL SECTION

DESIGN CRITERIA

1. Critical A.A.S.H.T.O. Loading - Group III
2. Wind - 100 mph

PIER NOTES

1. Chamfer all exposed edges of concrete a constant dimension between ¾" & 1" inclusive, unless otherwise indicated.
2. Reinforcing steel shall have 2 inches minimum cover unless otherwise indicated.
3. Place reinforcing steel on bridge seats to clear anchor bolts.

PILE NOTES

1. Piles shall be driven to ledge or practical refusal.
2. All piles shall have Pointed Reinforced Pile Tips as shown in Standard Detail ED 154-77.
3. Alternate types of Pointed Reinforced Pile Tips may be used if they have at least the cross-sectional area of the Pointed Reinforced Pile Tip shown on the plans and are approved by the Engineer.
4. Estimated driven lengths of piles are determined from available soils information with no allowance for uncertain pile penetration.
5. Embedment of piles in footings may vary between 1'-0" and 2'-0". The actual embedment up to a maximum of 1'-6" will be included in the measurement for payment.
6. Piles marked H is HP, shall be battered 1 inch per foot in the direction of the arrow.
7. Maximum pile loads: 90 tons
8. Following are pile locations, number of piles required, size of pile and estimated driven lengths:

Pier 14-HP 14 x 73 @ 49'

PROJECT DESIGN ENGINEER	BY	DATE
PLANS	S.A.T.	6-77
DESIGN - DETAILED	R.C.B.	6-77
CHECKED	PSB	10-77
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

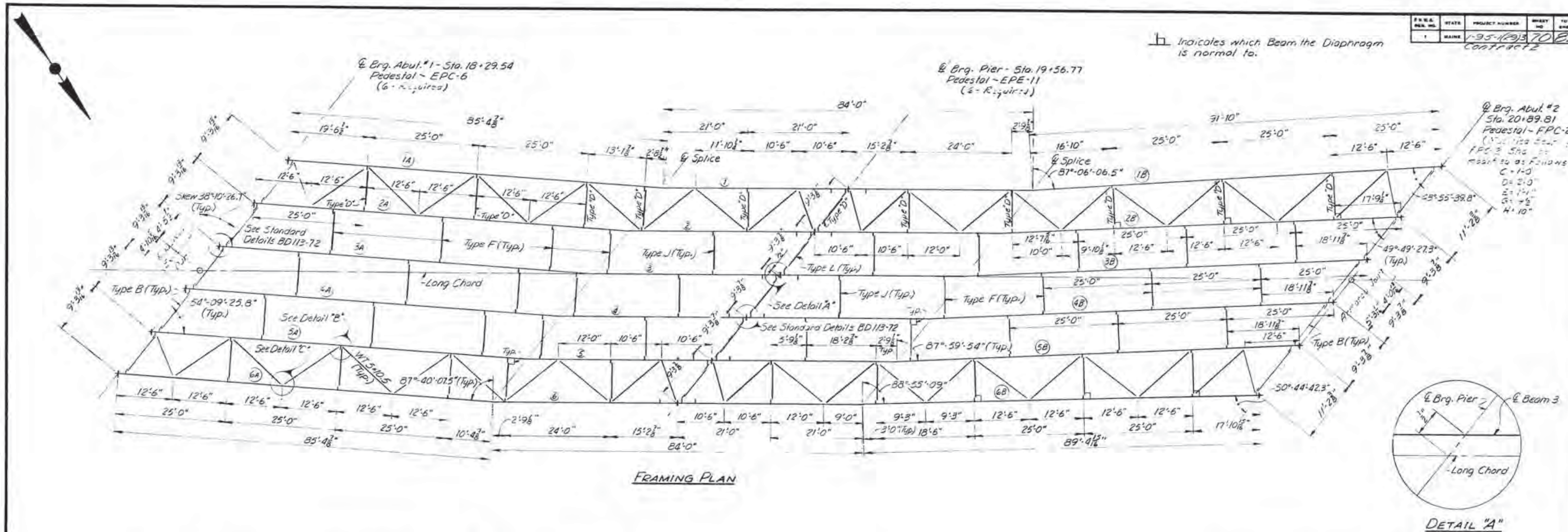
CIDER HILL ROAD
OVER
INTERSTATE 95
IN THE TOWN OF
YORK
YORK COUNTY

PIER & DETAILS

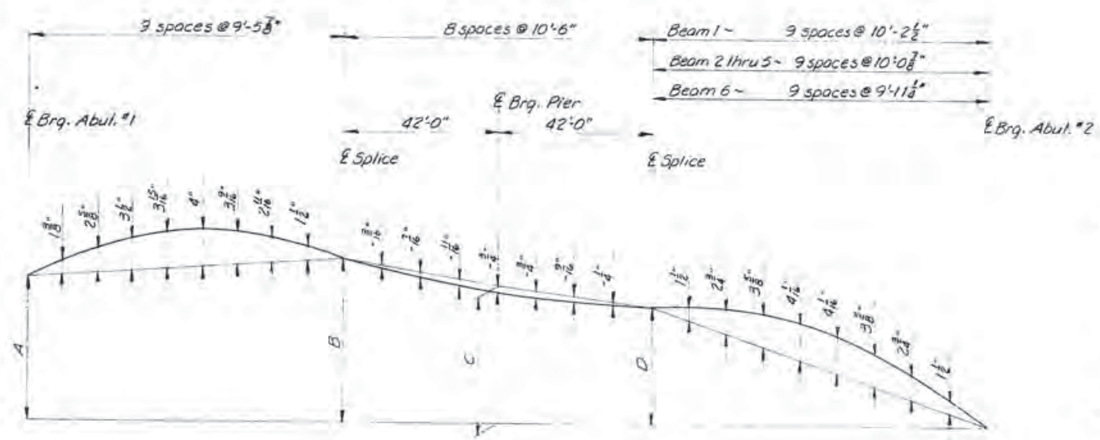
SHEET 8 OF 11 AUGUSTA, MAINE

1-95-1(29)3 Contract 2
Cider Hill Road

164-140

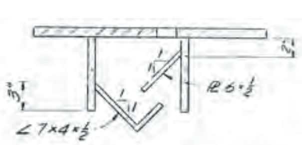


Framing Plan

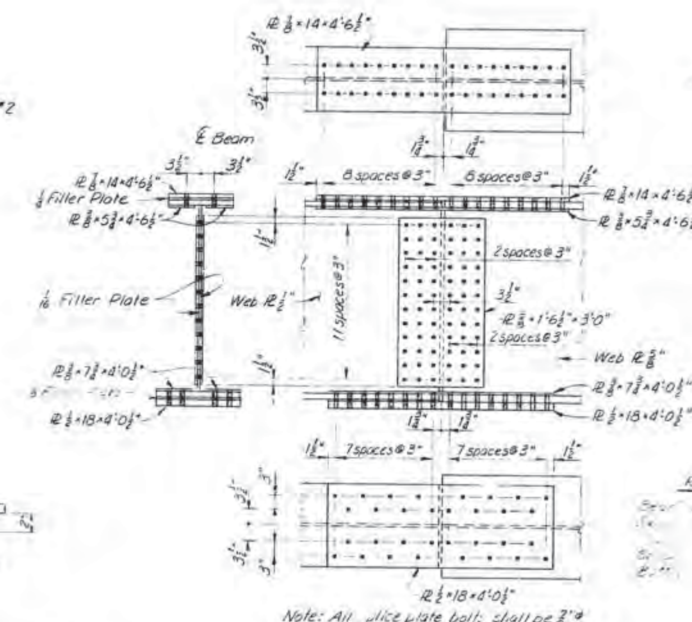


	A	B	C	D
Beam 1	3'-3 1/8"	3'-5 9/16"	2'-10 9/16"	2'-5"
Beam 2	2'-11 7/8"	3'-2 13/16"	2'-8 1/4"	2'-3 5/16"
Beam 3	2'-9 9/16"	3'-1 3/16"	2'-6 15/16"	2'-2 3/16"
Beam 4	2'-7 1/8"	2'-11 9/16"	2'-5 11/16"	2'-1 5/16"
Beam 5	2'-5"	2'-10"	2'-5 3/16"	2'-0 7/16"
Beam 6	2'-1 3/8"	2'-7 7/16"	2'-2 1/4"	1'-10 5/8"

Camber Diagram & Table

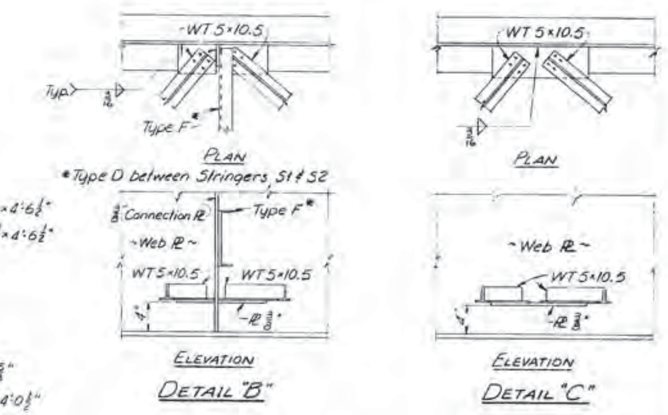


Section Through Expansion Dam At Abutment #1



Note: All splice plate bolts shall be 7/8" ø and conform to ASTM A325. Holes for 7/8" ø bolts shall be 15/16" ø.

Splice Details



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

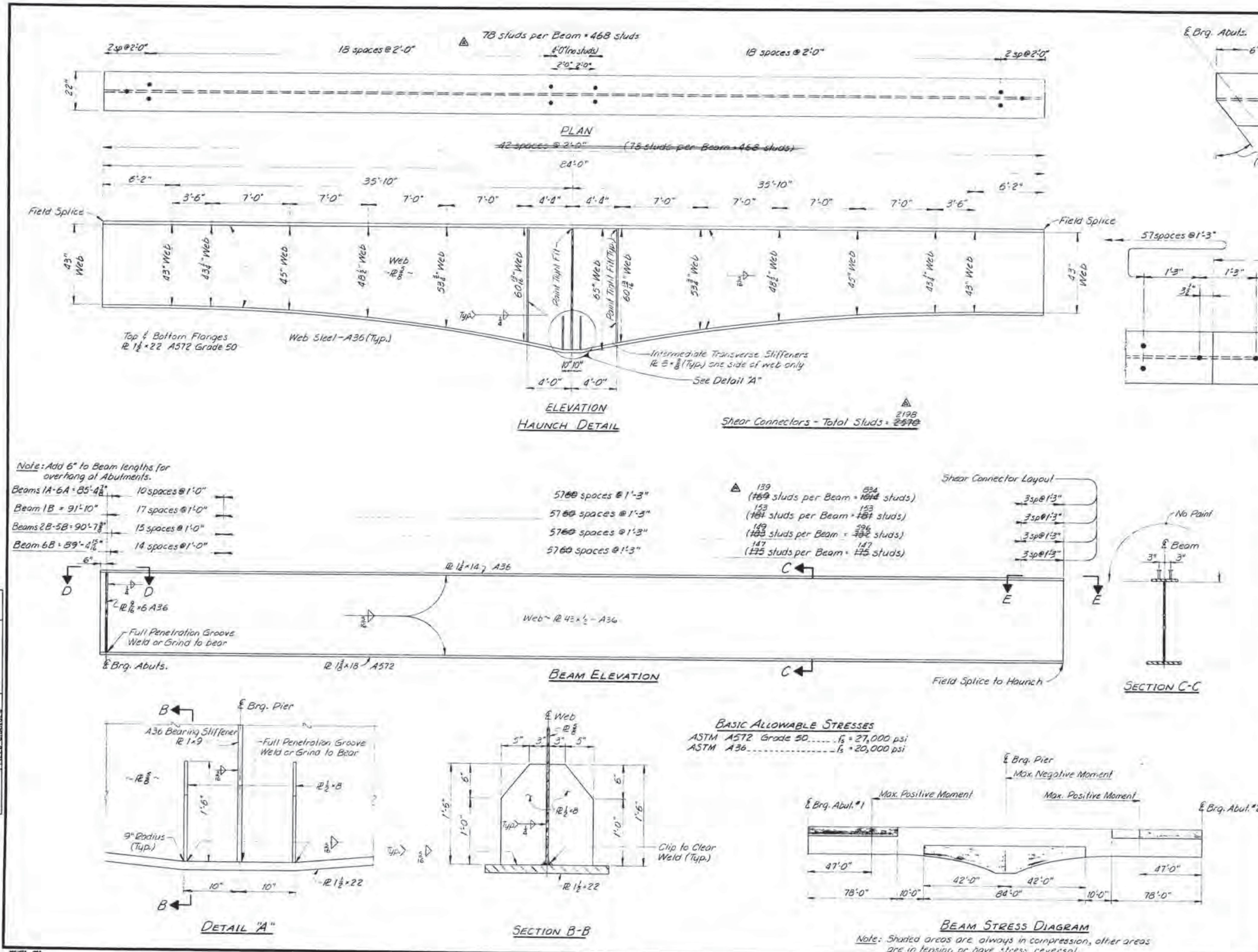
CIDER HILL ROAD
OVER
INTERSTATE 95
IN THE TOWN OF
YORK
YORK COUNTY

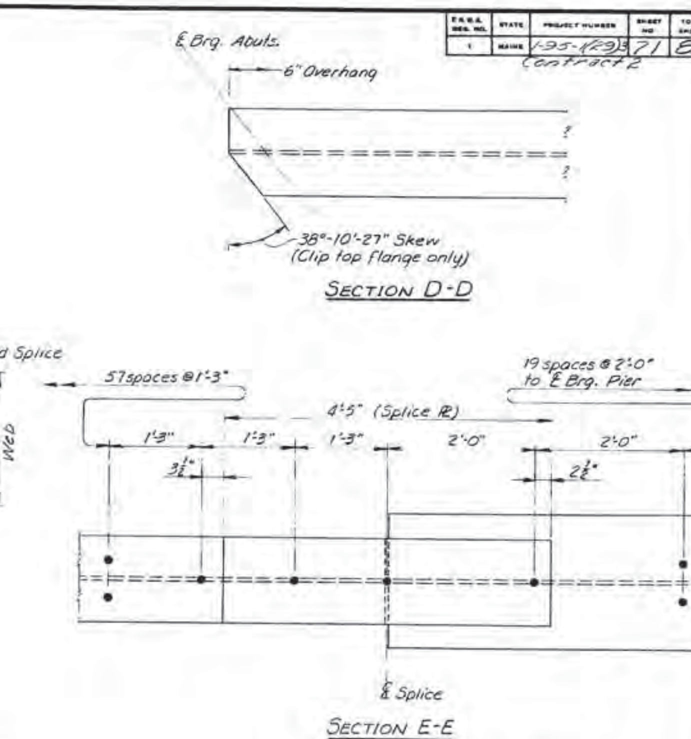
FRAMING PLAN & CAMBER DIAGRAM

SHEET 15 OF 20 AUGUSTA, MAINE

I-95-1(23)3 Contract 2 Cider Hill Road

164 1/2 / 142





STRUCTURAL STEEL NOTES

1. Camber ordinates, as shown, are computed to compensate for all dead load deflections and for the curvature of the finish grade profile.
2. No transverse butt weld splices in the flange plates or web plates within 10 feet from the points of maximum negative moment or maximum positive moment will be allowed.
3. Sections of flange plates or web plates between transverse butt weld splices or from field splices shall be not less than 20 feet in length unless otherwise shown on the plans.
4. Butt weld splices in flanges shall not be closer than one foot from transverse welds in the web plates.
5. One longitudinal butt weld splice in the web will be allowed in the haunched sections of the girders. Feather edges between the longitudinal welds and the bottom flanges will not be allowed.
6. Bearing stiffeners shall be plumb after erection and dead loading of the structure. Intermediate web stiffeners may be either plumb or normal to the top flange.
7. Crossframe or diaphragm connection plates may be either plumb or normal to the top flange.
8. Filler plates may be ASTM A36 steel and mill tests for filler plate material will not be required.

A - Revision to Shear Connetors 1-19-78 G.O.T.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CIDER HILL ROAD
OVER
INTERSTATE 95
IN THE TOWN OF
YORK
YORK COUNTY

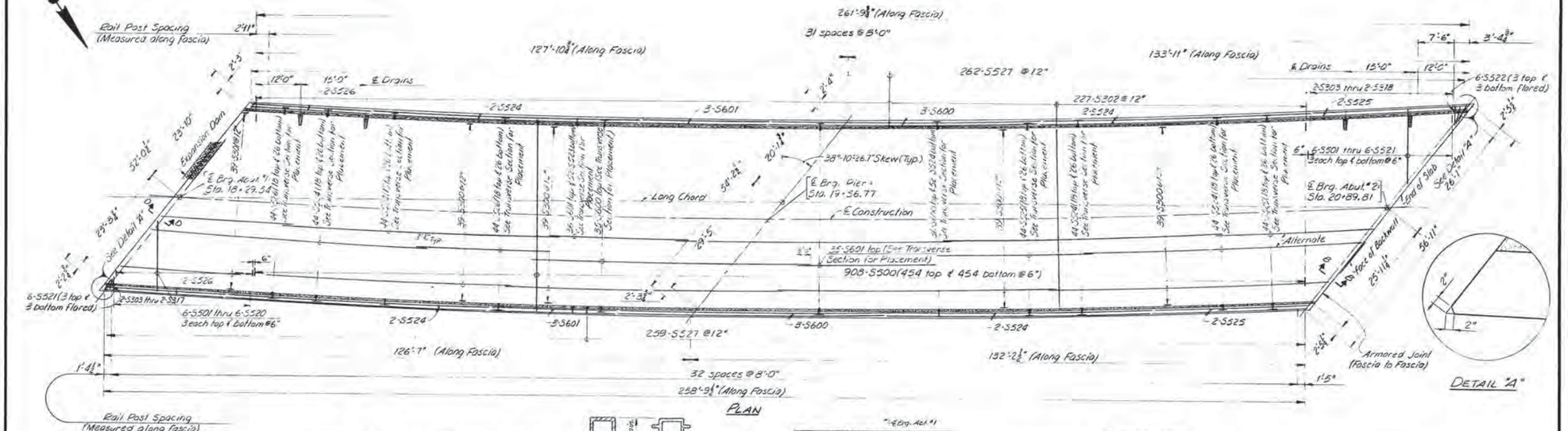
STRUCTURAL STEEL

SHEET 16 OF 55 AUGUSTA, MAINE

I-95-1(29)3 Contract 2
Cider Hill Road
164-443

F.A.N.A. NOS. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	1-95-1(29)3	73	82

Contract 2



PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	G.D.T. B.C.B.	5-77
CHECKED	PSG	Oct 77
REVISIONS		
FIELD CHANGES		

PLANS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CIDER HILL ROAD
OVER
INTERSTATE 95
IN THE TOWN OF
YORK
YORK COUNTY

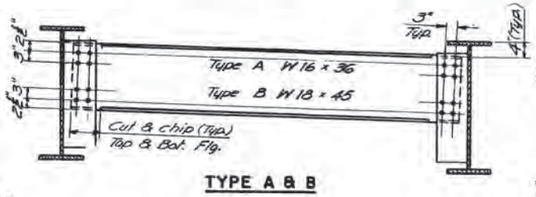
SUPERSTRUCTURE

SHEET 18 OF 20 AUGUSTA, MAINE

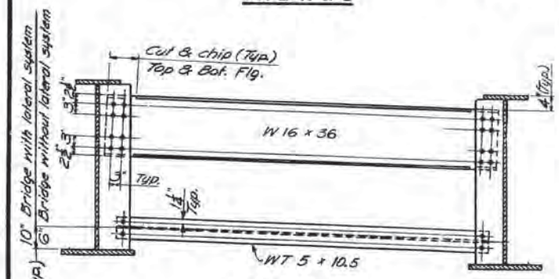
1-95-1(29)3 Contract 2
Cider Hill Road 164-145

F.A.P. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1(29)3 CONTRACT 2	3-A	92

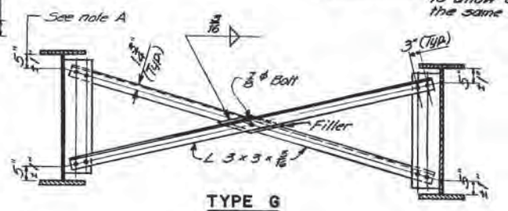
NOTE A This dimension may be varied (±1") to allow a series of diagonals to have the same slope.



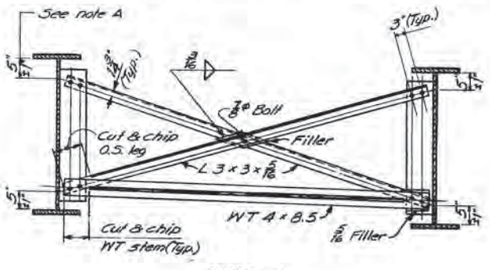
TYPE A & B



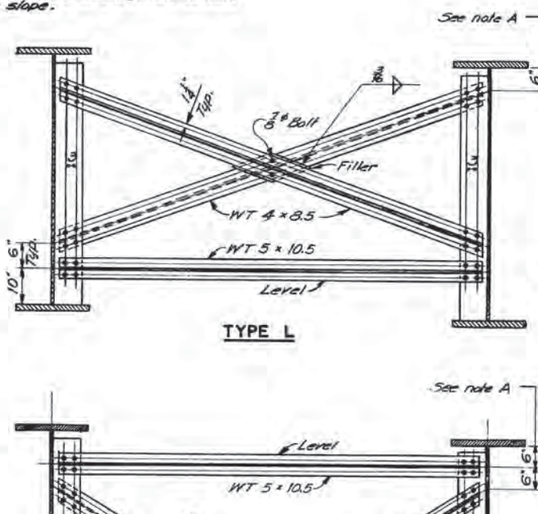
TYPE C



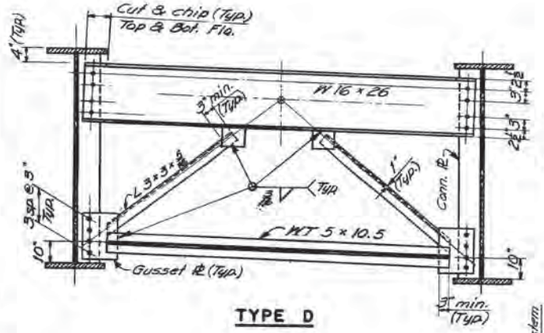
TYPE G



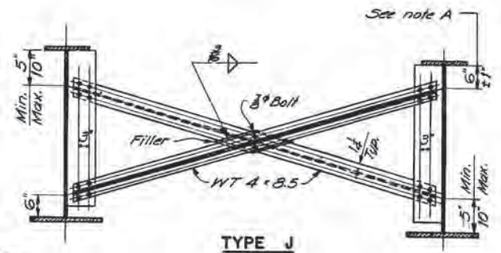
TYPE H



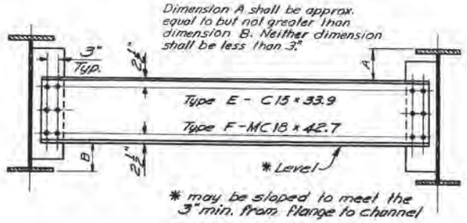
TYPE L



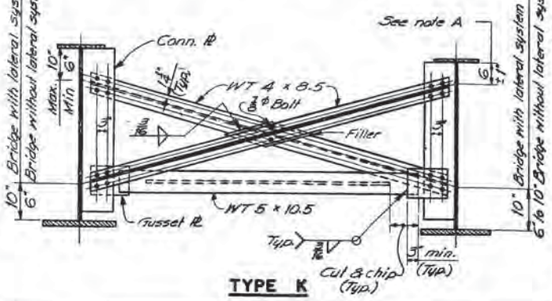
TYPE D



TYPE J

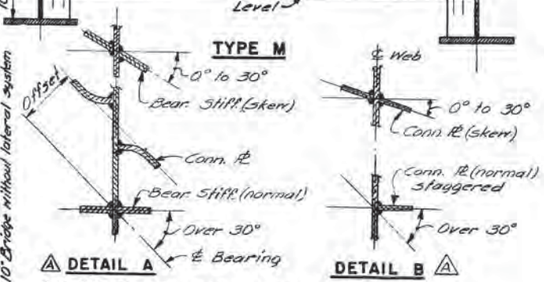


TYPE E & F



TYPE K

TYPE M



DETAIL A DETAIL B

ASTM STEEL CLASSIFICATION

(When structural steel is specified to be unpainted) All structural steel shall be A588 unpainted or A 242 unpainted

(When structural steel is specified to be painted) All structural steel shall be A36.

FABRICATION NOTES

1. For location and type of cross-frame or diaphragm see design details.
2. All bolts shall be 7/8" ϕ H.S. bolts.
3. Holes for 7/8" ϕ H.S. bolts shall be 15/16" ϕ and Edge distances shall be 1 1/4" minimum unless otherwise shown.
4. Connection plates and gusset plates shall have a minimum thickness of 3/8" and shall have sufficient width to provide erection clearances. When bearing stiffeners or intermediate stiffeners are used as connection plates, the plate size will be given on the design details.
5. Connection plates shall be fastened to beam and girder webs by Fillet weld Both sides.
   0° to 30° skew - Skew Conn. Pl.
   Over 30° skew - Conn. Pl. normal (Stagger)
   See Detail B
6. The skew angle is the angle between the connection plate and a line normal to the beam.
7. Bearing Stiffeners shall be used as connection plates when the skew is 30° or less.
   0° to 30° skew - Skew Stiffener
   Over 30° skew - Stiffener normal
   Use bent connection plates.
   See Detail A
8. All fillet weld sizes shall be the minimum for the thickness of metal being joined according to AWS Specifications for Welded Highway & Railway Bridges.
9. Connection plates on welded beams and girders shall extend to the top flange in areas where the top flange is always in compression or when used as a bearing stiffener or intermediate stiff.
10. Connection plates shall extend to the bottom flange when used as a bearing stiffener, at points where lateral bracing is attached & on welded beams and girders in areas where the bottom flange is always in compression.
11. When a conn. plate is extended to a flange it shall be a paint tight fit except as otherwise indicated on design details.
12. Conn. plates shall be 2" clear from flanges, except as indicated by Notes 7 & 8.
13. Use only those items called for on the design details. In case of conflict between these standard details and the design details, the design details shall be followed.

PLANS	BY	DATE
DESIGN - DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

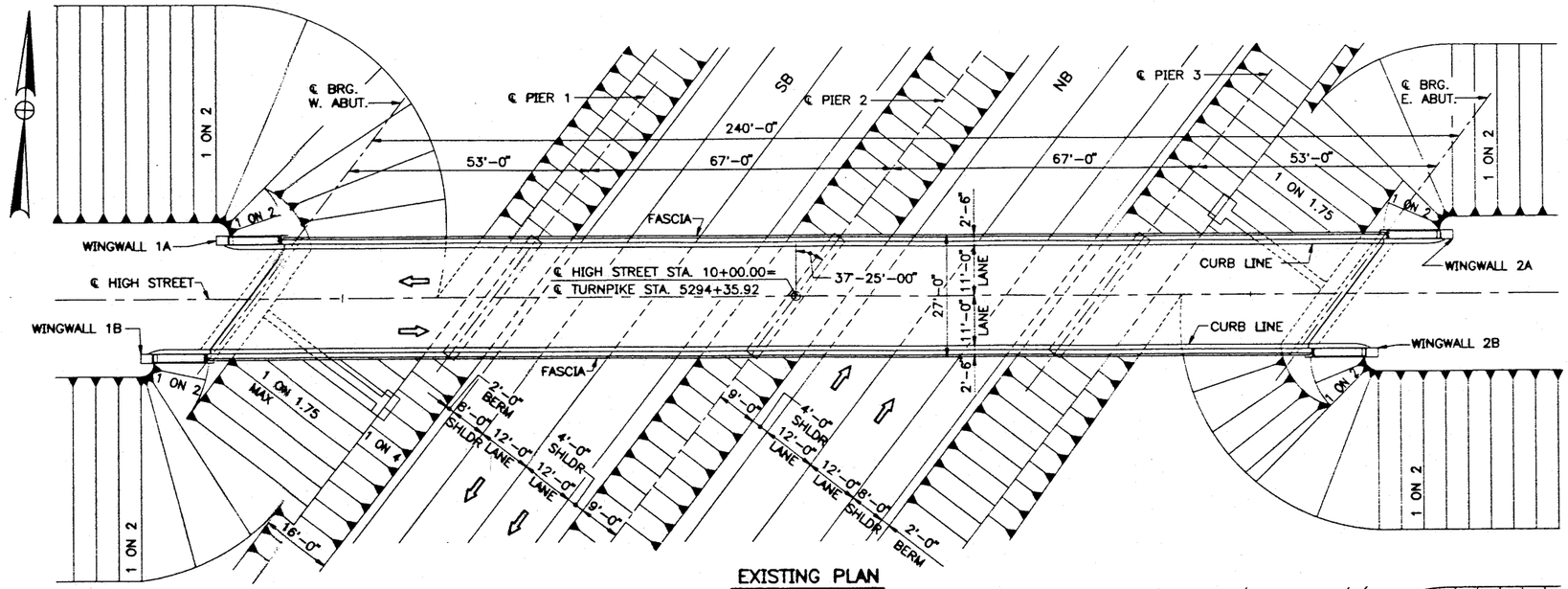
STANDARD DETAILS
(BD 113 - 72)

DIAPHRAGMS & CROSSFRAMES

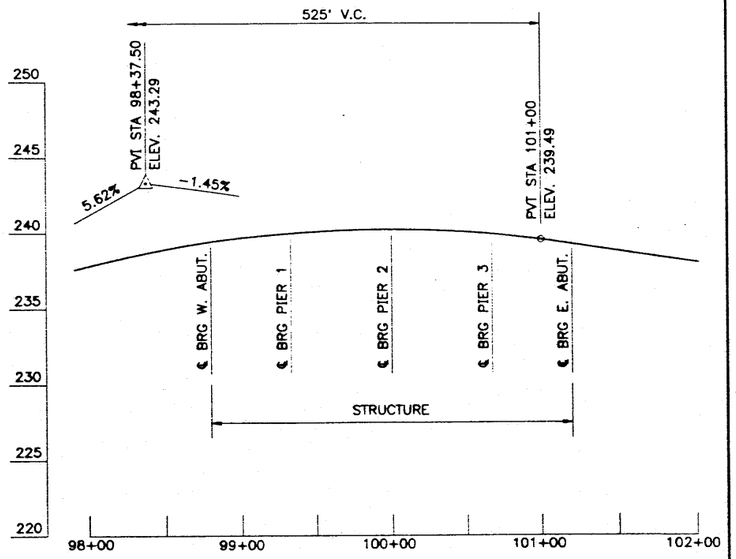
△ REVISED MAR. 1, 1977

SHEET OF AUGUSTA, MAINE SEPT. 1972

I-95-1(29)3 Contract 2
Cider Hill Rd 164-152



EXISTING PLAN
1/16"=1'-0"

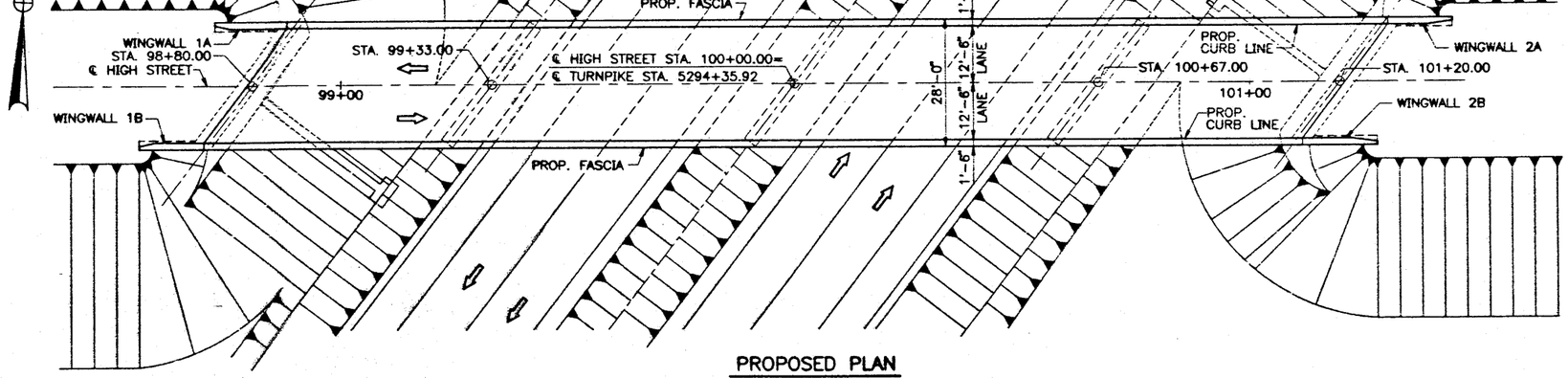


NOTE: FOR ADDITIONAL PROFILE INFORMATION, SEE HIGHWAY PLANS.

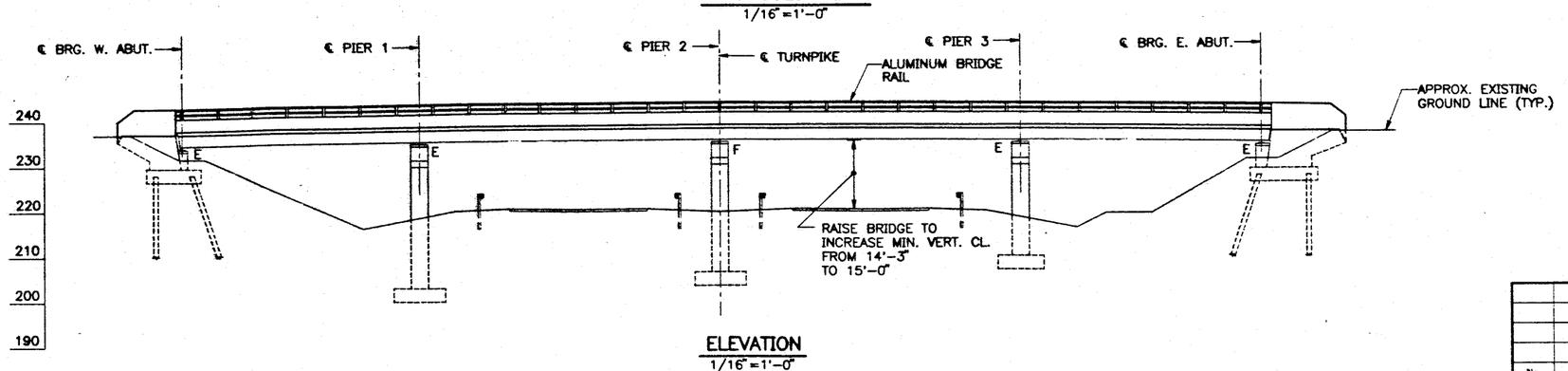
PROPOSED PROFILE
HORIZ. 1"=50'
VERT. 1"=5'

PVC STA: 95+75
Elev: 228.54

$228.54 + (5.62)(A1 - 95.75) + \left(\frac{-1.45 - 5.62}{5.25}\right)\frac{(A1-95.75)^2}{2}$



PROPOSED PLAN
1/16"=1'-0"



ELEVATION
1/16"=1'-0"

No	Revision	By	Date	In Charge Of: RAL
				Designed DMD 3/97
				Drawn CSL 3/97
				Checked JMH 3/97

Maine Turnpike Authority
Maine Turnpike

Trans pass

HIGH STREET UNDERPASS

GENERAL PLAN AND ELEVATION

HNTB
ARCHITECTS ENGINEERS PLANNERS

Contract 97.12

Sheet No. HS-2
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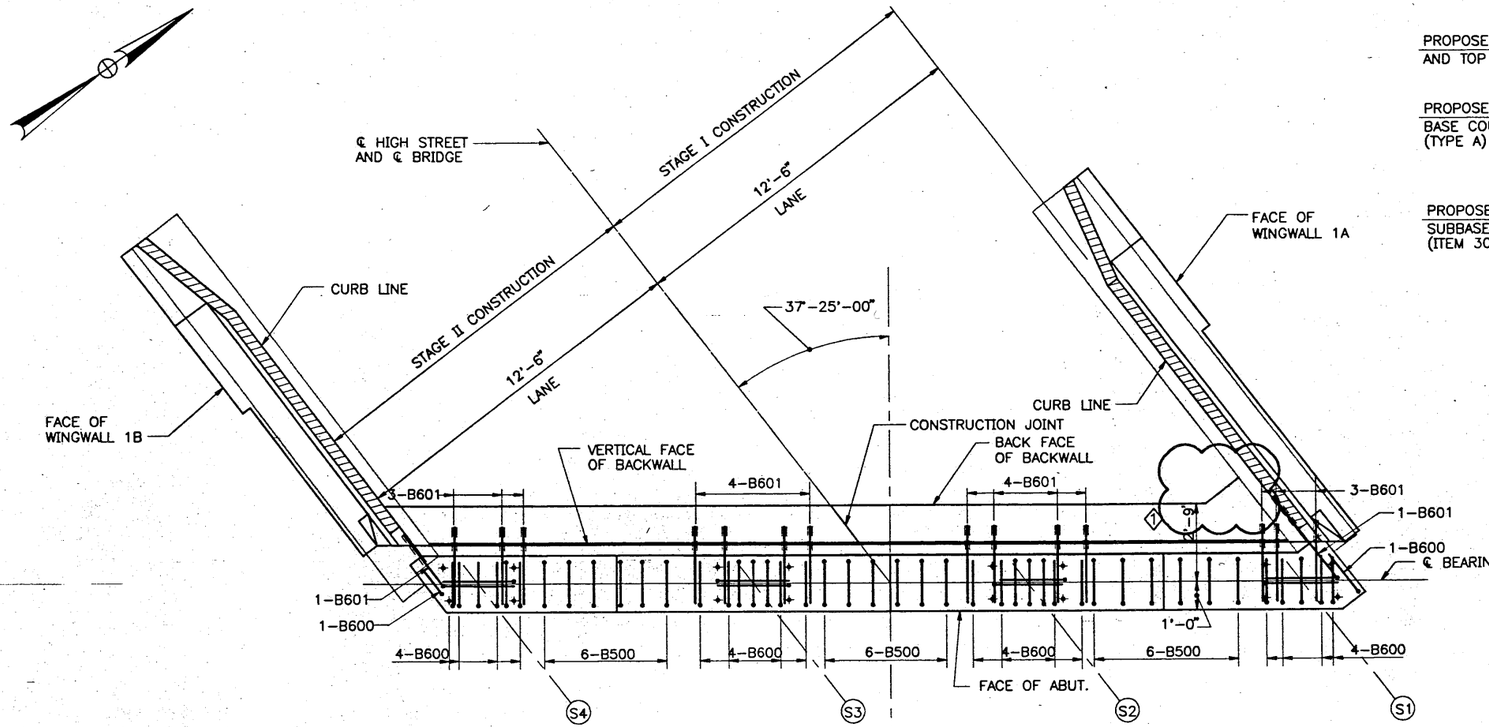
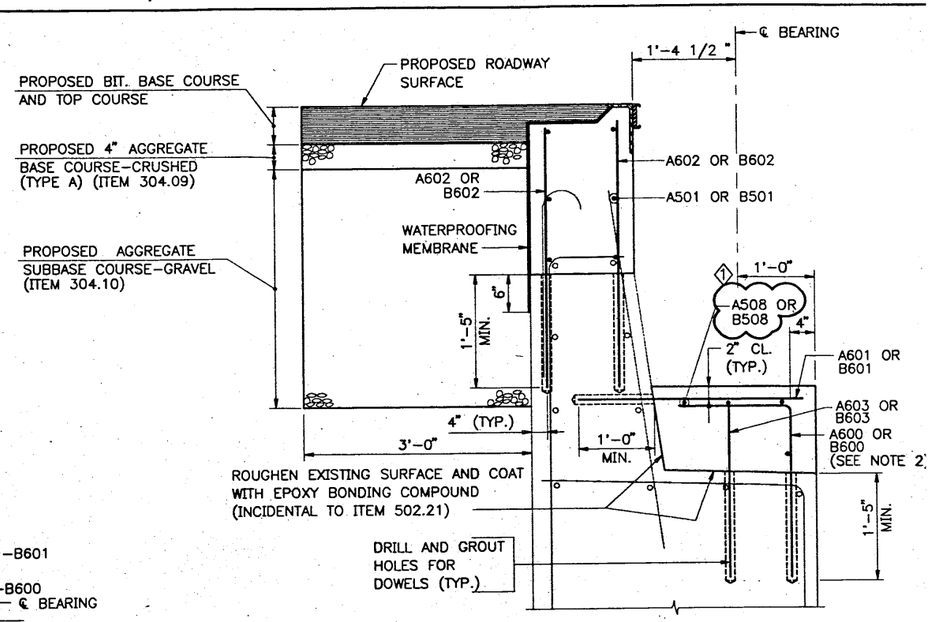
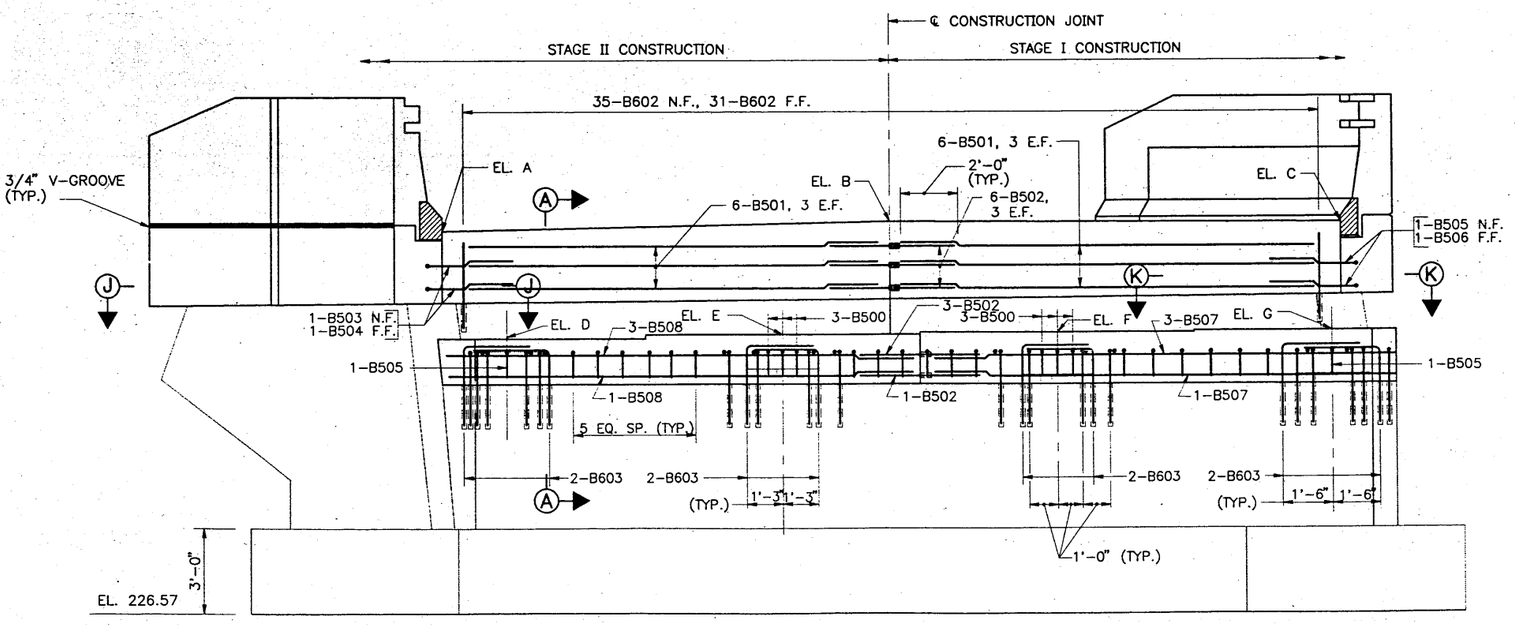


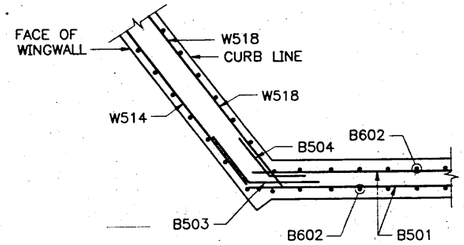
PROPOSED PLAN
3/8"=1'-0"



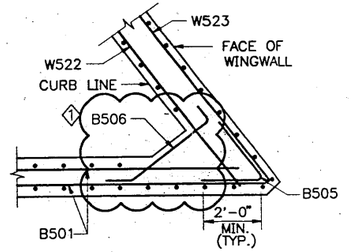
PROPOSED SECTION A-A
1" = 1'-0"



PROPOSED ELEVATION
3/8"=1'-0"



SECTION J-J
3/8"=1'-0"



SECTION K-K
3/8"=1'-0"

NOTES

1. FOR ABUTMENT NOTES, SEE SHEET NO. HS-6.
2. SEE NOTE 1, SHEET NO. HS-6.

ABUTMENT ELEVATIONS	
POINT	WEST ABUTMENT
A	239.05 *
B	239.39 *
C	239.34 *
D	235.26
E	235.40
F	235.49
G	235.53

* ELEVATIONS ARE AT FRONT FACE OF BACKWALL.

No.	Revision	By	Date
1	GENERAL REVISION	AD	5/6/97

	By	Date
Designed	DMD	3/97
Drawn	LMR	3/97
Checked	JMH	3/97
In Charge Of:	RAL	

Maine Turnpike Authority
Maine Turnpike

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HIGH STREET UNDERPASS
WEST ABUTMENT MODIFICATION

HNTB
ARCHITECTS ENGINEERS PLANNERS

Contract 97.12

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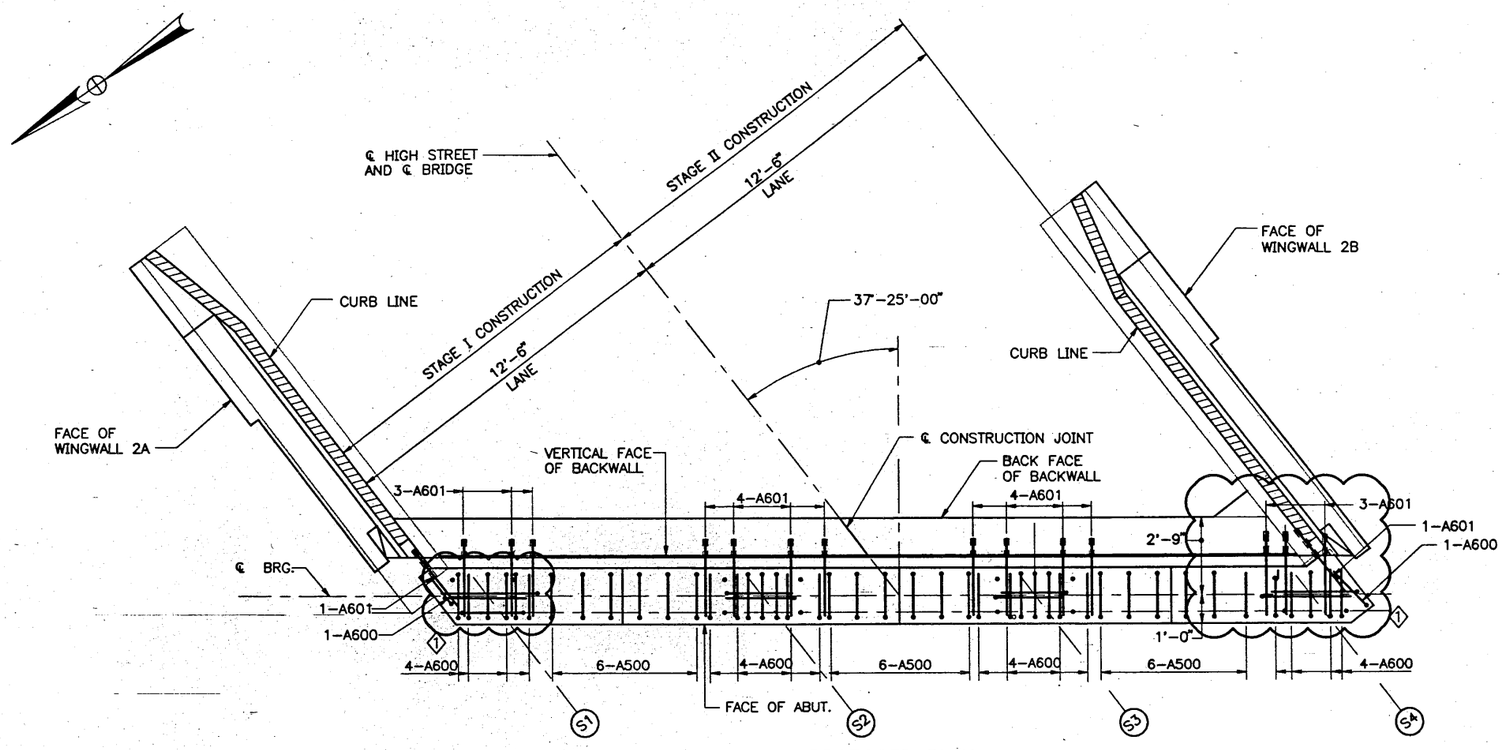
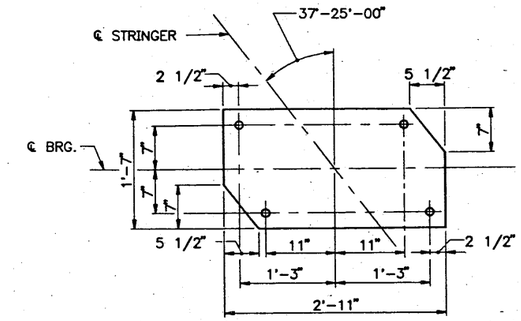
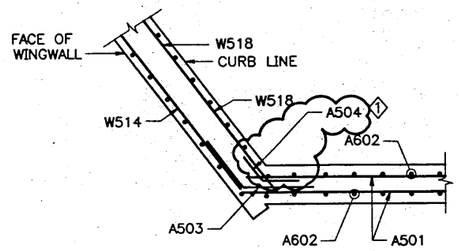


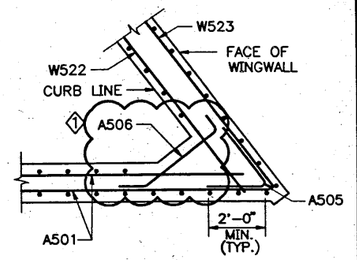
PROPOSED PLAN
3/8" = 1'-0"



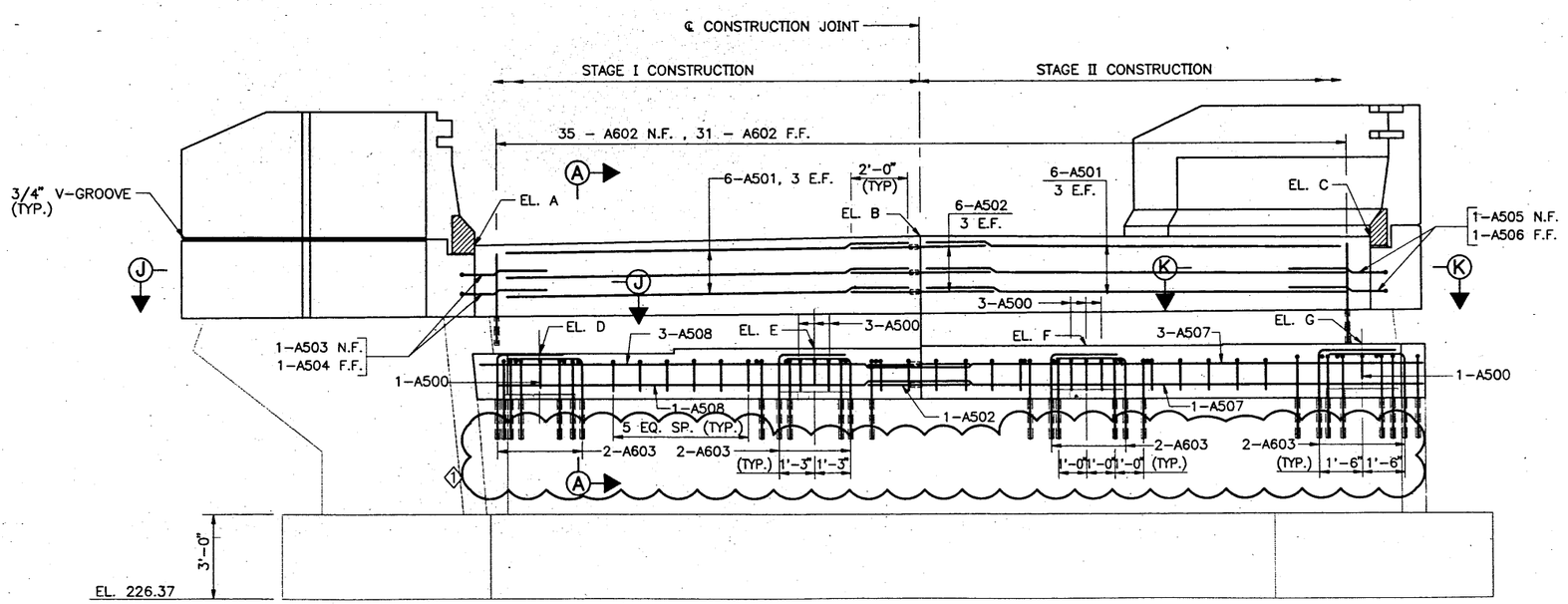
DETAIL – MASONRY ℄ FOR S1 AND S4 (AT ABUTMENTS ONLY)
1" = 1'-0"



SECTION J–J
3/8" = 1'-0"



SECTION K–K
3/8" = 1'-0"



PROPOSED ELEVATION
3/8" = 1'-0"

ABUTMENT NOTES

1. A600 BARS SHALL BE LOCATED SO AS NOT TO INTERFERE WITH THE INSTALLATION OF ANCHOR BOLTS FOR THE MASONRY PLATE.
2. FOR REINFORCING STEEL SCHEDULE, SEE SHEET NO. HS–20.
3. FOR WINGWALL ELEVATIONS AND SECTIONS, SHEET NOS. HS–7 AND HS–8.
4. BRIDGE SEAT ELEVATIONS SHOWN ON THE ABUTMENT SHEETS ARE BASED ON POT BEARINGS MANUFACTURED BY STRUCTURAL ACCESSORIES, INC. OF TERRYVILLE, CT. IF THE CONTRACTOR SELECTS A BEARING FROM ANOTHER APPROVED BEARING MANUFACTURER, AFFECTED DETAILS AND ELEVATIONS SHALL BE ADJUSTED TO ACCOMMODATE THE SELECTED BEARINGS.
5. FOR ROADWAY EXPANSION JOINT DETAIL, SEE SHEET NOS. HS–15 AND HS–16.
6. FOR LIMITS OF CONCRETE PROTECTIVE COATING, SEE SHEET NO. HS–8.
7. ANCHOR BOLT LAYOUT FOR WEST AND EAST ABUTMENTS SHALL BE SIMILIAR TO ANCHOR BOLT LAYOUT DETAIL SHOWN ON SHEET NO. HS–9 FOR PIERS 1, 2 AND 3, EXCEPT AS NOTED.

ABUTMENT ELEVATIONS

POINT	EAST ABUTMENT
A	238.85 *
B	239.17 *
C	239.12 *
D	235.06
E	235.19
F	235.27
G	235.31

* ELEVATIONS ARE AT FRONT FACE OF BACKWALL

No.	Revision	By	Date
1	GENERAL REVISION	AD	5/6/97

	By	Date
Designed	DMD	3/97
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In Charge Of:	RAL	

Maine Turnpike Authority
Maine Turnpike

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HIGH STREET UNDERPASS
EAST ABUTMENT MODIFICATIONS

HNTB
ARCHITECTS ENGINEERS PLANNERS

Contract 97.12

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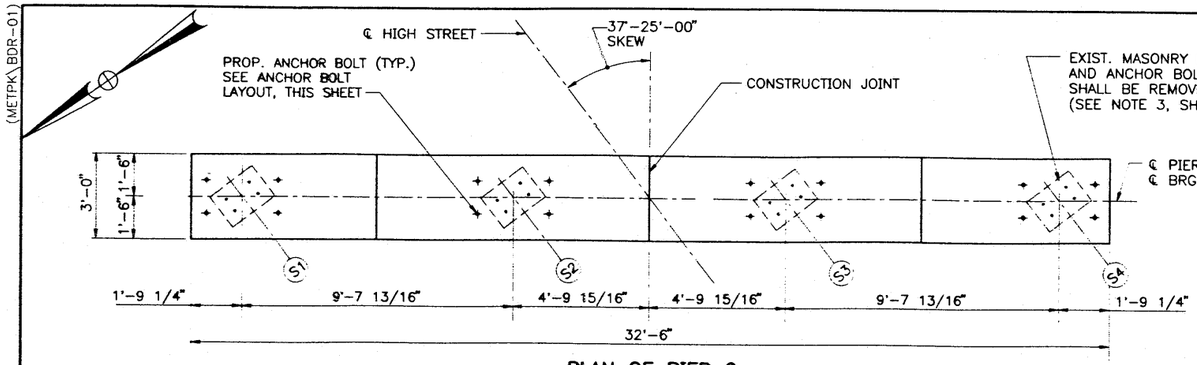
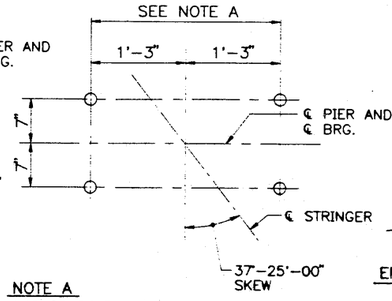


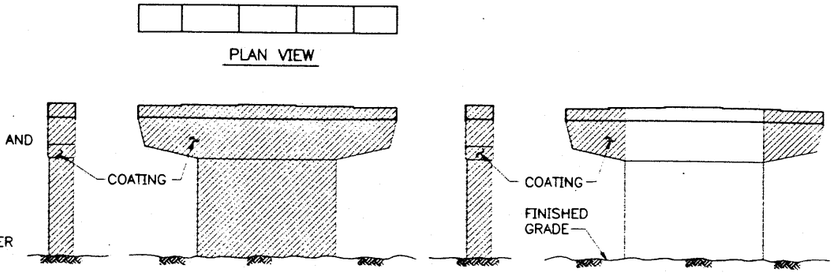
PLAN OF PIER 2

3/8"=1'-0"



NOTE A

ANCHOR BOLT SPACING SHALL BE COORDINATED WITH THE BEARING MANUFACTURER, AND SHALL ALLOW FOR DRILLING OF HOLES WITH EXISTING STRINGERS AND DIAPHRAGMS IN PLACE (SEE NOTE 6).

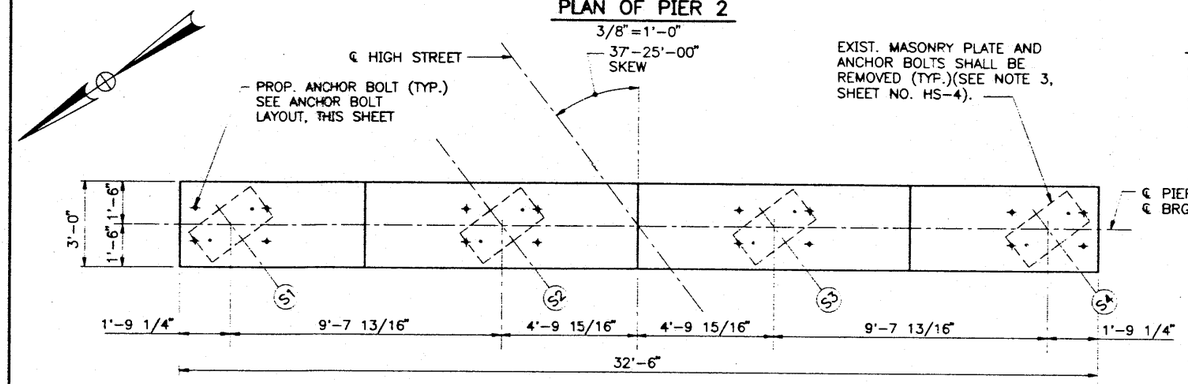


ELEVATION TRAFFIC SIDE

ELEVATION NON-TRAFFIC SIDE (PIERS 1 AND 3 ONLY)

NOTE

ALL EXPOSED SURFACES ON PIER 2, EXCEPT TOP OF PIER CAP, SHALL BE COATED WITH PROTECTIVE COATING.

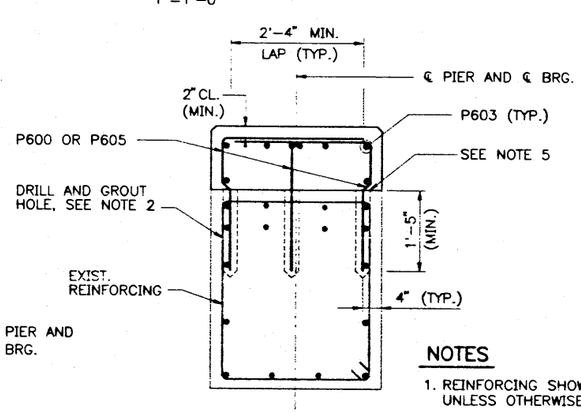


PLAN OF PIERS 1 AND 3

3/8"=1'-0"

ANCHOR BOLT LAYOUT PIERS 1, 2 AND 3

1"=1'-0"

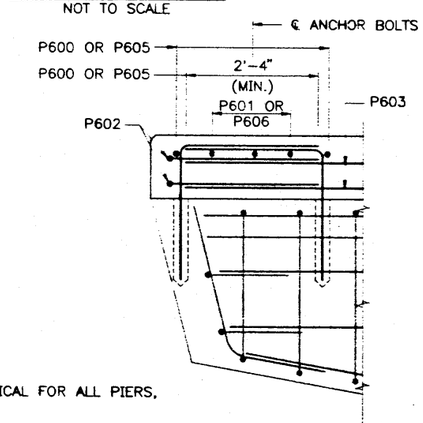


SECTION A-A

3/4"=1'-0"

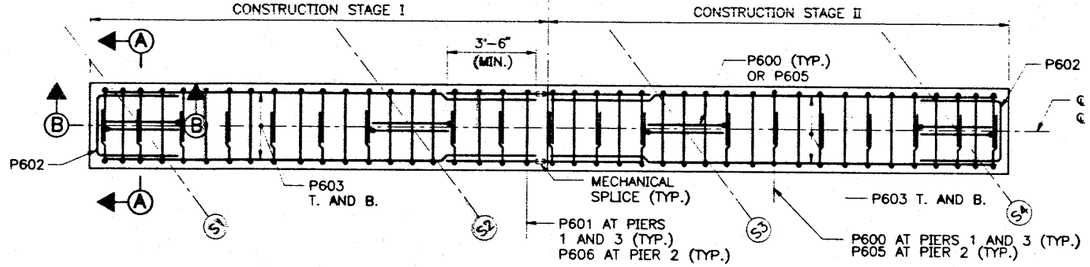
LIMITS OF PIGMENTED PROTECTIVE COATING PIERS 1, 2, AND 3

NOT TO SCALE



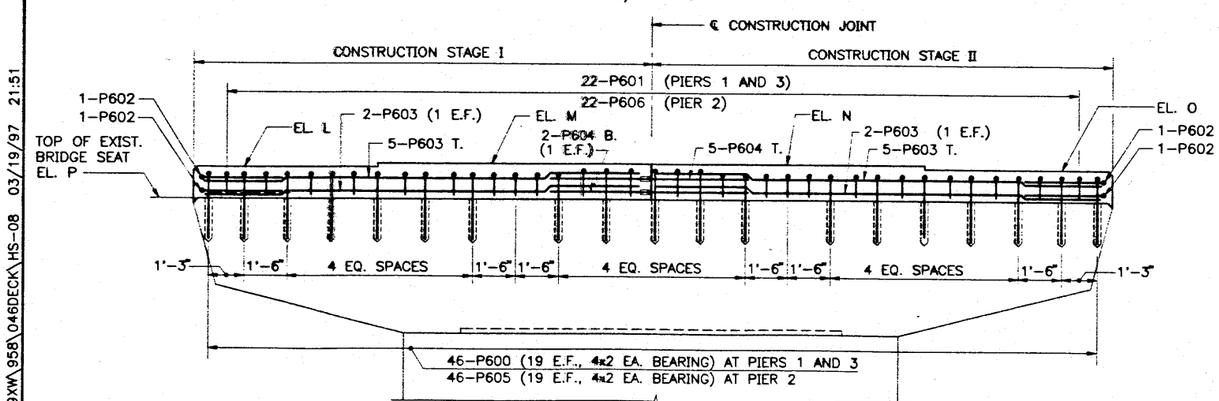
SECTION B-B

3/4"=1'-0"



REINFORCEMENT PLAN – PIERS 1, 2 AND 3

3/8"=1'-0"



ELEVATION – PIER CAP

(LOOKING UPSTATION)

3/8"=1'-0"

PIER ELEVATIONS			
POINT	PIER 1	PIER 2	PIER 3
L	236.02	236.08	235.72
M	235.98	236.30	235.79
N	235.94	236.30	235.85
O	235.88	236.10	235.90
P	234.16	234.63	234.01

NOTES

1. REINFORCING SHOWN IS TYPICAL FOR ALL PIERS, UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL EXPOSE THE TOP LAYER OF THE REINFORCING STEEL WHERE DRILLING IS REQUIRED PRIOR TO ANY DRILLING. THE CONTRACTOR SHALL REPORT INTERFERENCE OF DOWELS WITH EXISTING REINFORCING TO THE ENGINEER. CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING REINFORCING STEEL. (DRILLING AND GROUTING HOLES SHALL BE INCIDENTAL TO ITEM 502.23)
3. REMOVAL OF THE EXISTING MASONRY PLATE, ANCHOR BOLTS AND BEARING ASSEMBLY SHALL BE INCIDENTAL TO ITEM 202.12.
4. SEE SHEET NO. HS-20 FOR REINFORCING STEEL SCHEDULE.
5. REMOVE ALL DETERIORATED OR LOOSE CONCRETE. ROUGHEN AND CLEAN TO ELIMINATE BOND INHIBITING MATERIALS ON ALL CONCRETE SURFACES, INCLUDING LOCATIONS WERE EXPOSING THE TOP LAYER OF REINFORCING IS NOT REQUIRED. CLEAN ALL EXPOSED REINFORCING STEEL USING AN ACCEPTABLE METHOD APPROVED OF BY THE ENGINEER AND THEN APPLY AN EPOXY COATING TO BARS. APPLY A BONDING AGENT TO THE EXISTING SUBSTRATE, BY FOLLOWING THE MANUFACTURER'S INSTRUCTIONS AND APPROVED OF BY THE ENGINEER, PRIOR TO PLACEMENT OF NEW CONCRETE. (INCIDENTAL TO ITEM 502.23.)
6. FOR MASONRY PLATE ANCHOR BOLT LAYOUT OF STRINGERS S1 AND S4, AT THE ABUTMENTS ONLY, SEE SHEET NO. HS-6 FOR DETAILS.

No.	Revision	By	Date
			By Date
			Designed DMD 3/97
			Drawn LMR 3/97
			Checked JMH 3/97
			In Charge Of RAL

Maine Turnpike Authority

Maine Turnpike

Trans pass

HIGH STREET UNDERPASS

PIER MODIFICATIONS

HNTB ARCHITECTS ENGINEERS PLANNERS

Contract 97.12

Sheet No. HS-9

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(METPK\BDR-01)

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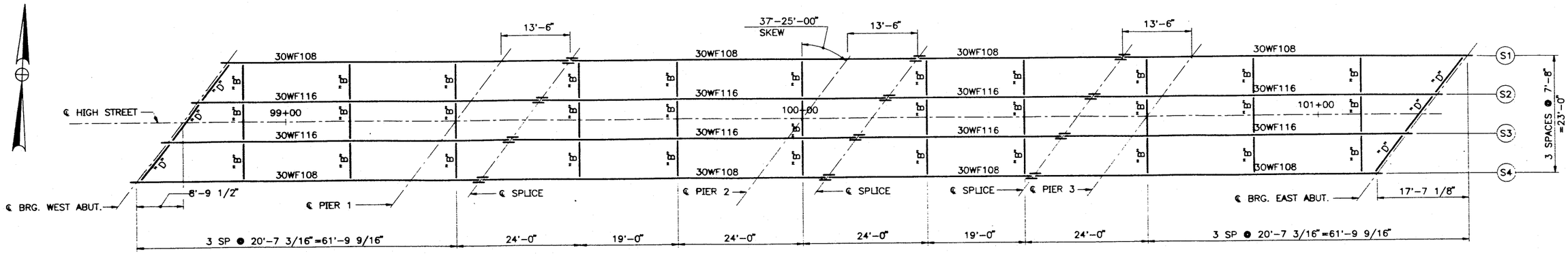
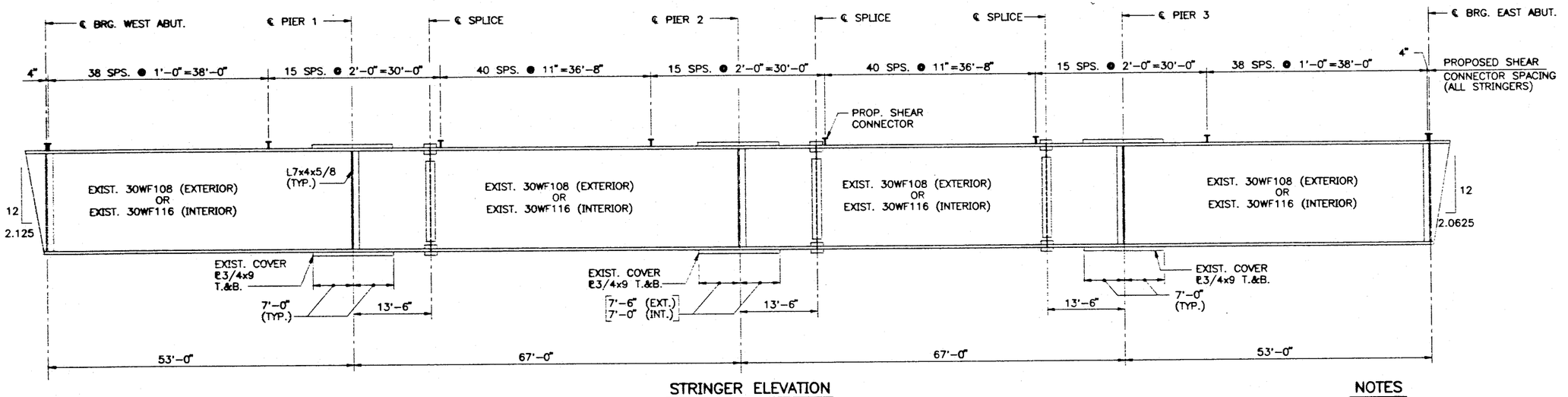
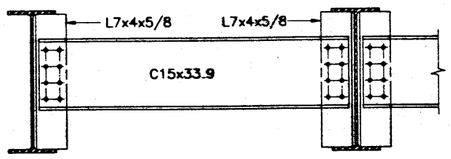


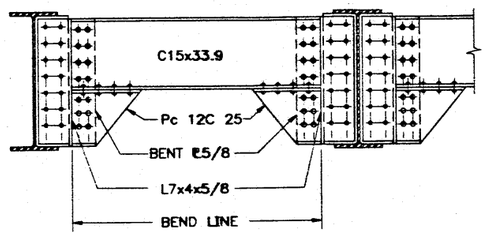
FRAMING PLAN (EXISTING)
1" =10'



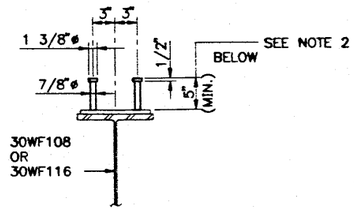
STRINGER ELEVATION
1" =10'-0" (HORIZONTAL)



DIAPHRAGM TYPE B (EXISTING)
3/4" =1'-0"

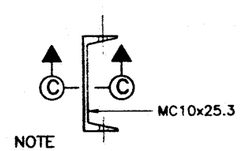


DIAPHRAGM TYPE D (EXISTING)
3/4" =1'-0"



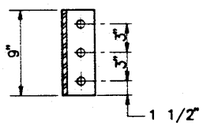
SHEAR CONN. NOTES
1. SEE STRINGER ELEVATION FOR PROPOSED SHEAR CONNECTOR SPACING
2. 7" FOR EXTRA DEPTH HAUNCH SEE SHEET HS-13.

PROPOSED SHEAR CONNECTOR DETAIL
1" =1'-0"

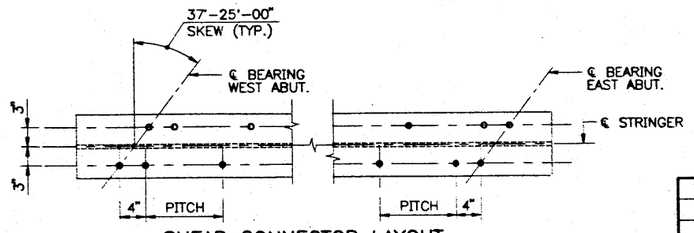


NOTE
LOCATION OF SIGN SUPPORT WILL BE DETERMINED IN FIELD.

SIGN SUPPORT
(2 REQUIRED)
1 1/2" =1'-0"



SECTION C-C
1 1/2" =1'-0"



SHEAR CONNECTOR LAYOUT
1" =1'-0"

NOTES
1. EXISTING DIAPHRAGMS ARE CONNECTED TO THE STRINGERS WITH THE USE OF BOLTS AND/OR RIVETS. ALL BOLTS AND RIVETS WHICH ARE REMOVED TO JACK THE SUPERSTRUCTURE, SHALL BE REPLACED WITH NEW 7/8"ø AASHTO M164 HIGH STRENGTH BOLTS, NUTS AND WASHERS, WHICH SHALL BE INCIDENTAL TO ITEM 504.721, JACKING EXISTING SUPERSTRUCTURE. ALL DIAPHRAGM HOLES SHALL BE GROUND SMOOTH.
2. PROPOSED SHEAR CONNECTORS ARE REQUIRED AND SHOWN ON THE EXISTING STRINGER ELEVATIONS. SHEAR CONNECTORS ARE PAID FOR UNDER ITEM 505.09.
3. ALL DIAPHRAGM BOLTED CONNECTIONS BETWEEN STAGE I AND STAGE II SHALL BE MADE AFTER STAGE II IS LOADED.
4. SIGN SUPPORTS SHALL BE INCIDENTAL TO ITEM 520.221.

No.	Revision	By	Date
		By	Date
	Designed	DMD	3/97
	Drawn	RSJ	3/97
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Maine Turnpike Authority
Maine Turnpike

Trans pass

HIGH STREET UNDERPASS
FRAMING PLAN AND STRINGER ELEVATION

HNTB
ARCHITECTS ENGINEERS PLANNERS

Contract 97.12

Sheet No. HS-10
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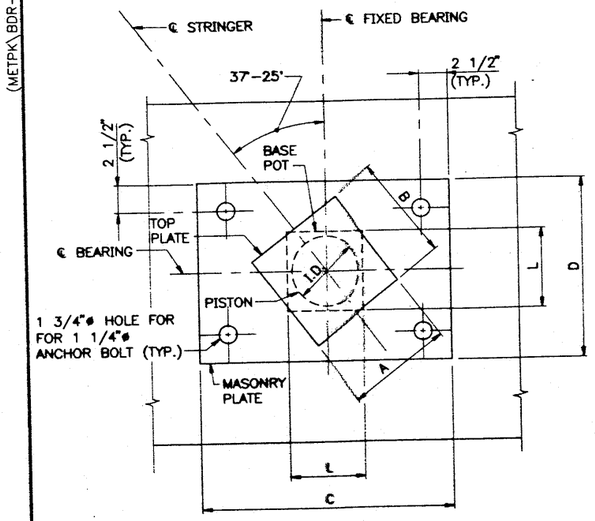
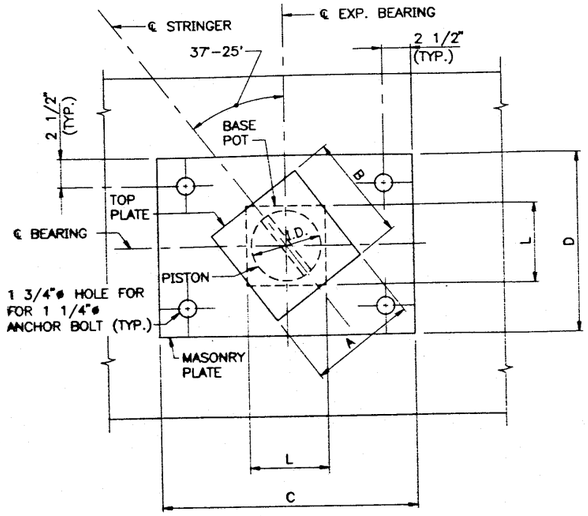
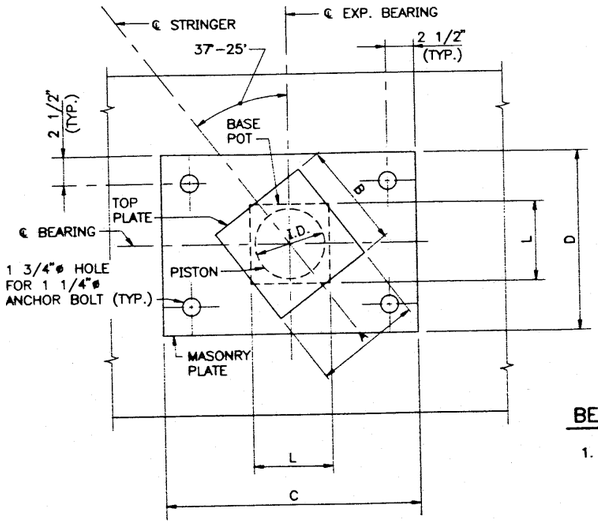


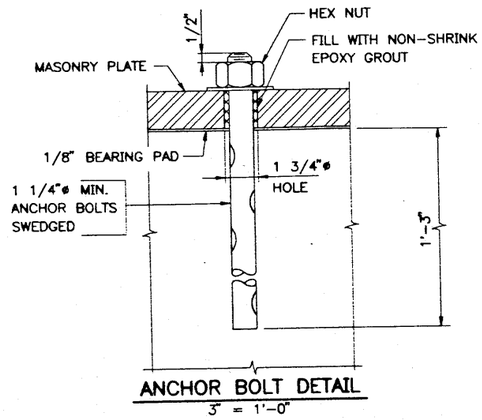
PLAN



PLAN



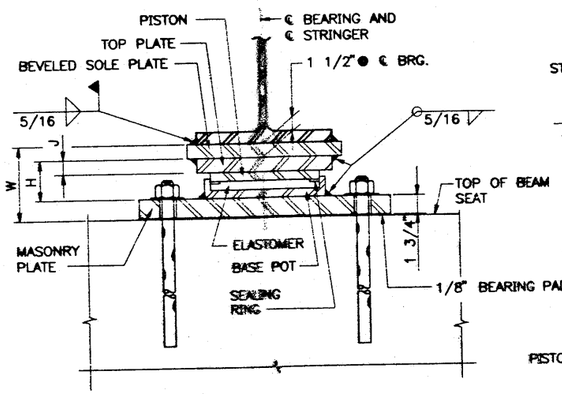
PLAN



ANCHOR BOLT DETAIL
3" = 1'-0"

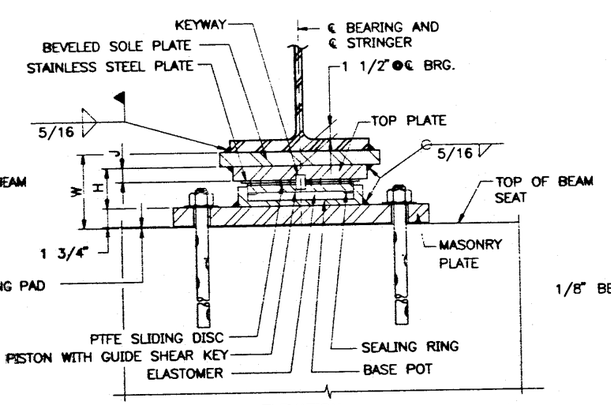
BEARING DEVICE NOTES

1. THE BEARING DIMENSIONS SHOWN ON THIS SHEET AND THE CORRESPONDING BRIDGE SEAT ELEVATIONS ARE ESTIMATED BASED ON GUIDED EXPANSION AND FIXED BEARINGS MANUFACTURED BY STRUCTURAL ACCESSORIES, INC. OF TERRYVILLE, CT. AFFECTED DETAILS AND ELEVATIONS SHALL BE ADJUSTED TO ACCOMMODATE THE SELECTED BEARINGS ACTUALLY SUPPLIED.
2. ALL DIMENSIONS ARE IN INCHES.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL.
4. ALL STEEL FOR THE BEARING DEVICE ASSEMBLIES, INCLUDING MASONRY PLATES, SHALL BE AASHTO M270, GRADE 50.
5. THE BASE POT SHALL BE SHOP WELDED TO THE MASONRY PLATE AS SHOWN. HOLD-DOWNS SHALL NOT BE PROVIDED.
6. PTFE INDICATES POLYTETRAFLUORETHYLENE.
7. MASONRY BASE PLATES SHALL BE PLACED ON 1/8" PREFORMED FABRIC PAD.
8. THE 1 1/4"ø ANCHOR BOLTS AND NUTS SHALL BE A307. WASHERS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M293 (ASTM F436). WASHERS AND NUTS SHALL BE GALVANIZED.
9. ANCHOR BOLT SPACING SHALL BE COORDINATED WITH THE BEARING MANUFACTURER.
10. BEARINGS TO BE ADJUSTED FOR TEMPERATURE ACCORDING TO THE CORRECTIONS TABLE, OR AS DIRECTED BY THE ENGINEER.



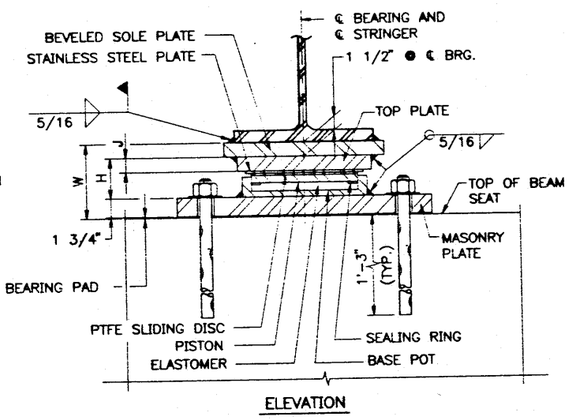
ELEVATION

FIXED BEARING
N.T.S.



ELEVATION

GUIDED EXPANSION BEARING
N.T.S.



ELEVATION

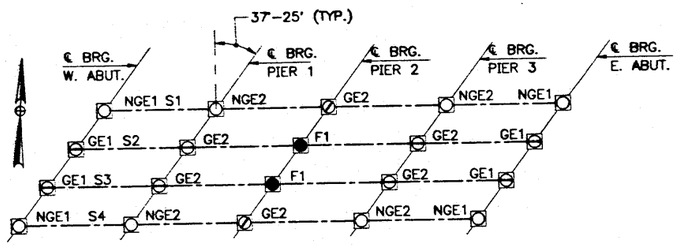
NON-GUIDED EXPANSION BEARING
N.T.S.

MAXIMUM LOADS ON EACH BEARING

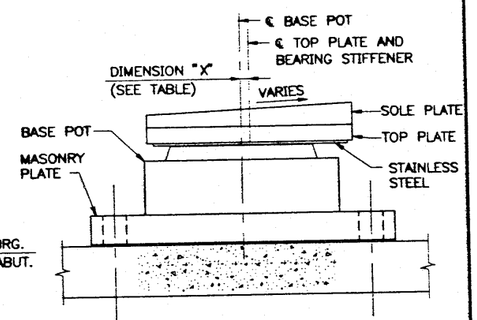
LOCATION	STRINGER	BEARING TYPE	D.L. (KIPS)	L.L (KIPS)	TOTAL (KIPS)	HORIZ. FORCE (KIPS) LONG.	HORIZ. FORCE (KIPS) TRANS.	TOTAL LONG. MOVEMENT (IN) (-30° F TO 120° F)	BEARING SETTING CORRECTIONS (INCHES) DIMENSIONS "X" TOWARD PIER 2 0°	15°	30°	45°	AWAY FROM PIER 2 60°	75°	90°	100°
W. ABUTMENT	S1, S4	NGE1	23	35	58	–	–	1 3/8	7/16 →	1/4 →	1/8 →	0	← 1/8	← 1/4	← 7/16	← 1/2
	S2, S3	GE1	25	38	63	–	7									
PIER 1	S1, S4	NGE2	75	59	134	–	–	13/16	← 1/4	← 3/16	← 1/16	0	→ 1/16	→ 3/16	→ 1/4	→ 5/16
	S2, S3	GE2	84	63	147	–	15									
PIER 2	S1, S4	GE2	75	60	135	14	–	–	–	–	–	0	–	–	–	–
	S2, S3	F1	84	64	148	15	15									
PIER 3	S1, S4	NGE2	75	59	134	–	–	13/16	← 1/4	← 3/16	← 1/16	0	→ 1/16	→ 3/16	→ 1/4	→ 5/16
	S2, S3	GE2	84	63	147	–	15									
E. ABUTMENT	S1, S4	NGE1	22	35	57	–	–	1 3/8	7/16 →	1/4 →	1/8 →	0	← 1/8	← 1/4	← 7/16	← 1/2
	S2, S3	GE1	25	38	63	–	7									

BEARING TYPE	MAX VERT. LOAD (KIP)	DIMENSIONS (INCHES) I.D.	A	B	H	J	L	W	SOLE PLATE	MASONRY PLATE 1 3/4" THICK C	D
GE1	100	6.03	7.50	10.25	3.304	1.00	7.75	6.679	12 3/4x12 3/4x1 1/2	35	19
GE2	150	7.38	9.00	11.75	3.777	1.375	9.00	7.152	12 3/4x12 3/4x1 1/2	35	19
F1	150	7.38	8.38	8.38	2.50	0.75	9.00	5.875	12 3/4x12 3/4x1 1/2	35	19
NGE1	100	6.03	10.00	10.00	2.65	0.75	7.75	6.025	12 3/4x12 3/4x1 1/2	35 *	19 *
NGE2	150	7.38	11.25	11.25	2.63	0.75	9.00	6.005	12 3/4x12 3/4x1 1/2	35	19

* MASONRY PLATES FOR STRINGERS S1 AND S4, AT WEST AND EAST ABUTMENTS, SHALL BE MODIFIED. SEE SHEET NO. HS-6 FOR DETAILS.



POT BEARING ALIGNMENT PLAN
N.T.S.



TYPICAL SECTION
N.T.S.

LEGEND
- ● – FIXED
- ⊘ – GUIDED LONGITUDINAL EXP.
- ⊘ – GUIDED TRANSVERSE EXP.
- ⊘ – NON-GUIDED EXPANSION

No.	Revision	By	Date

	By	Date
Designed	DMD	3/97
Drawn	LMR	3/97
Checked	JMH	3/97
In Charge Of:	RAL	

Maine Turnpike Authority
Maine Turnpike

Trans pass

HIGH STREET UNDERPASS

POT BEARING DETAILS

HNTB
ARCHITECTS ENGINEERS PLANNERS

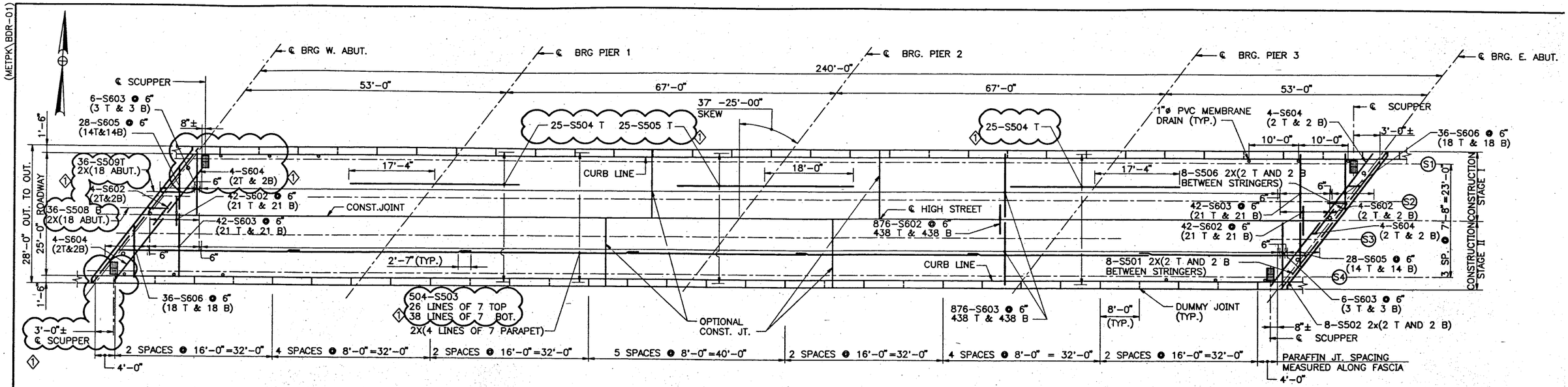
Contract 97.12

Sheet No. HS-11
45 of 58

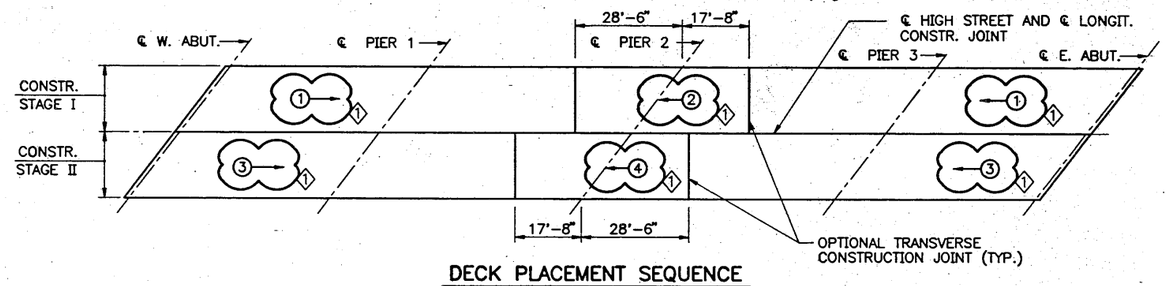
(METPK\BDR-01)

H:\B09009XW\958\048DECK\HS-11 03/19/97 10:28

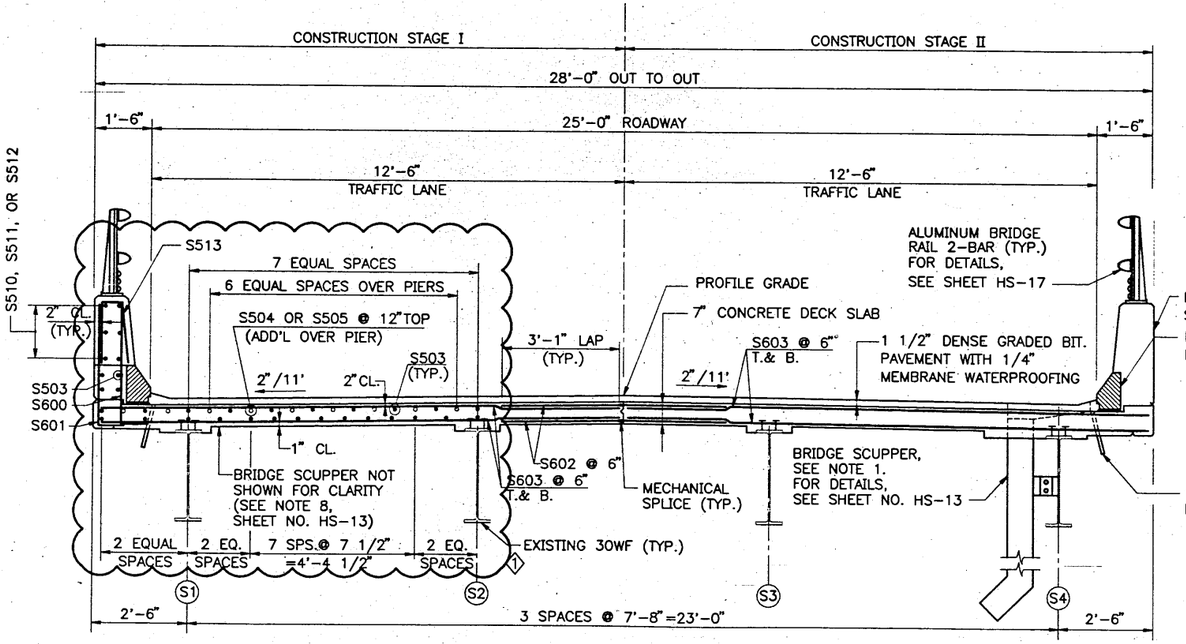
(METPK\BDR-01)



DECK PLAN
1"=10'



DECK PLACEMENT SEQUENCE
1"=20'



TYPICAL SECTION
1/2"=1'-0"

PLACEMENT NOTES

1. THE NUMBERS IN CIRCLES INDICATE PLACING SEQUENCE. THE ARROWS INDICATE DIRECTION OF PLACEMENT.
2. BEGIN PLACEMENT AT THE LOW END OF THE BLOCK.
3. THE FORMWORK FOR THE CONSTRUCTION JOINTS SHALL REMAIN IN PLACE UNTIL MINIMUM OF 48 HOURS HAS ELAPSED AFTER PLACEMENT OF THE SLAB. AFTER WHICH, REMOVAL OF FORMWORK MEETING THE REQUIREMENTS FOR FORM REMOVAL OF SECTION 502 (STRUCTURAL CONCRETE) OF THE STANDARD SPECIFICATIONS, MAY PROCEED.
4. PLACEMENTS DESIGNATED BY THE SAME NUMBER DO NOT NECESSARILY HAVE TO BE POURED THE SAME DAY. A WAITING PERIOD OF 72 HOURS IS NECESSARY BETWEEN ADJACENT POURS.
5. STAY IN PLACE FORMS SHALL NOT BE USED.
6. THE TRANSVERSE CONSTRUCTION JOINTS MAY BE OMITTED, IF APPROVED BY THE ENGINEER AND PROVIDED THAT THE CONCRETE OF THE ENTIRE DECK SLAB REMAINS PLASTIC UNTIL THE COMPLETION OF THE LAST PLACEMENT AND ALL OTHER SPECIFICATIONS ARE FOLLOWED. A WRITTEN REQUEST TO OMIT THE TRANSVERSE CONSTRUCTION JOINTS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

SUPERSTRUCTURE NOTES

1. ADJUST REINFORCING STEEL TO FIT AROUND THE SCUPPERS IN A MANNER APPROVED OF BY THE ENGINEER. DO NOT CUT TRANSVERSE REINFORCING BARS. CUT LONGITUDINAL STEEL IN FIELD TO SUIT AND EPOXY COAT CUT ENDS.
2. THE CONCRETE DECK SHALL BE GIVEN A SMOOTH BULL FLOAT OR WOOD FLOAT FINISH.
3. FOR SLAB DETAILS, SEE SHEET NOS. HS-13 AND HS-14.
4. FOR ROADWAY EXPANSION JOINT DETAILS, SEE SHEET NOS. HS-15 AND HS-16.
5. FOR STEEL REINFORCING SCHEDULE, SEE SHEET HS-20.
6. ONLY DOWEL BAR SPLICERS SHALL BE USED WITHIN CONCRETE DECK SLAB FOR STAGE I CONSTRUCTION AT THE LONGITUDINAL CONSTRUCTION JOINT. DOWEL-IN BARS SHALL THEN BE USED WITHIN CONCRETE DECK SLAB FOR STAGE II CONSTRUCTION.
7. 1"ø PVC MEMBRANE DECK DRAINS SHALL BE INSTALLED SUCH THAT THEY DO NOT DRAIN ONTO A STRINGER FLANGE OR BRIDGE SEAT.

No.	Revision	By	Date
1	GENERAL REVISION	AD	5/6/97

	By	Date
Designed	DMD	3/97
Drawn	LMR	3/97
Checked	JMH	3/97
In Charge Of: RAL		

Maine Turnpike Authority
Maine Turnpike

Trans pass

HIGH STREET UNDERPASS

DECK PLAN AND TYPICAL SECTION

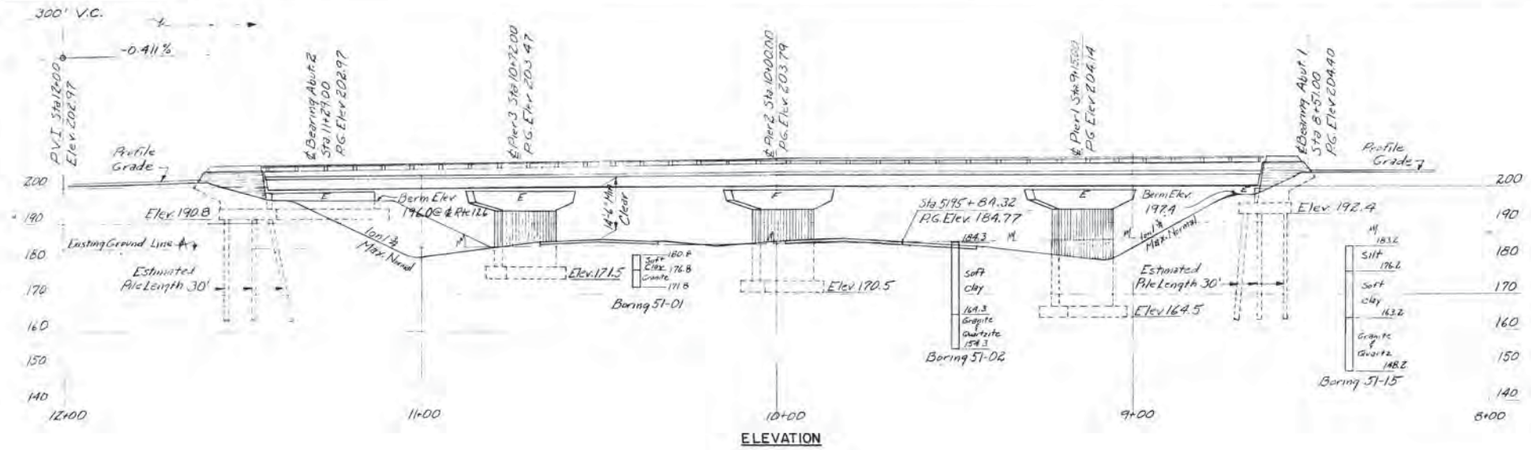
HNTB
ARCHITECTS ENGINEERS PLANNERS

Contract 97.12

Sheet No. HS-12
46 of 58

M:\B09009XW\958\046DECK\HS-12 05/08/97 09:08

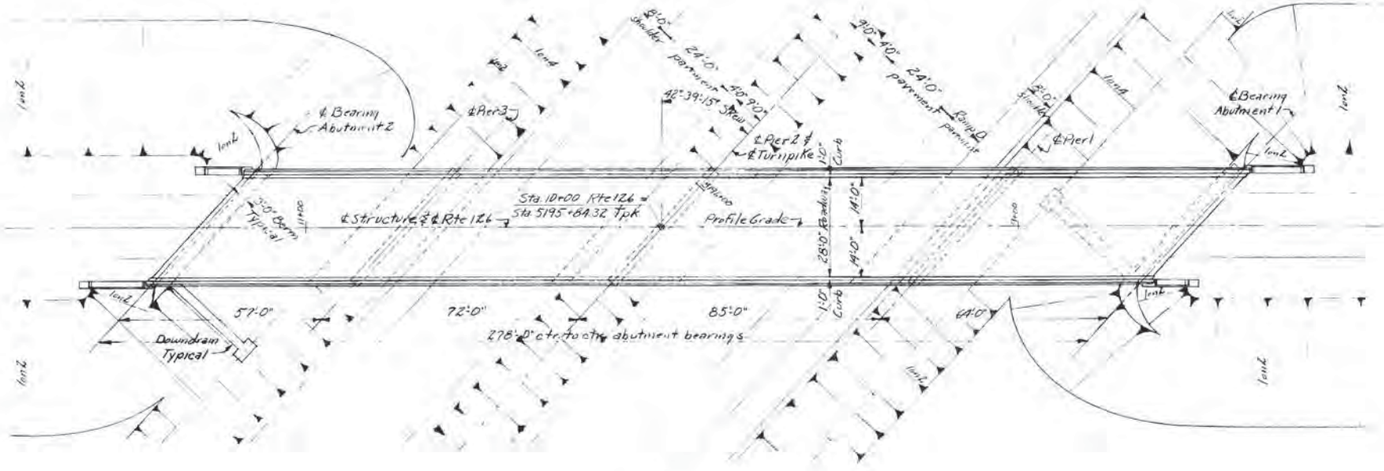
78.01.04



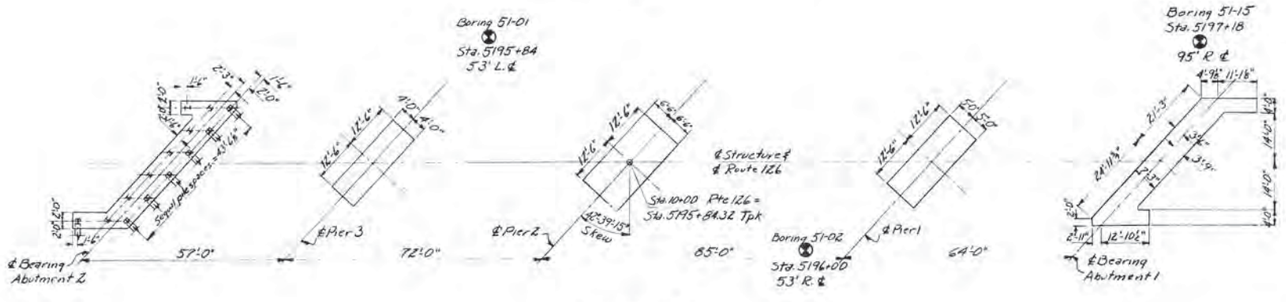
ELEVATION

GENERAL NOTES

Design Specifications: AASHO (1953) with minor modifications.
Design Live Loading: H20
Maximum Pile Loads: Abutments - 34.4 tons per pile
Maximum Base Pressures: Pier 1 - 5.8 tons per square foot.
Pier 2 - 5.4 tons per square foot.
Pier 3 - 5.1 tons per square foot.



PLAN

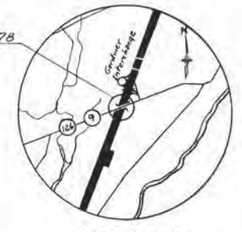


FOOTING PLAN

Note:
Abutment footings similar by rotation.
Abutment piling to be 10 BP 42, battered 3" per foot where shown.
Pier footings shall extend a minimum of 6' into solid undisturbed rock.

REFERENCES

Dwg. No.	TITLE	Substructure Contractor	Superstructure: Steel Fabricator	Superstructure: Steel Erector	Superstructure: Floor Contractor
SD1A	Standard Abutment Details	✓	✓	✓	✓
SD2	Standard Pier Details	✓	✓	✓	
SD3	Standard Abutment Drainage Details	✓			
SD4	Standard Pile Details	✓			
SD5	Standard Handrail, Bearing Devices and Miscellaneous Details	✓	✓	✓	✓
SD6	Standard Diaphragm Details		✓	✓	✓
SD10	Type "A" Splices for 36"F Beams		✓	✓	✓
SD12A	Type "E" Expansion Joint, Expanding Length over 100'	✓	✓	✓	✓
SD17	Standard Bridge Floor Cross Sections, 28'-0" & 30'-0" Roadways.	✓	✓	✓	✓



VICINITY MAP
Scale: 1"=1 mile

DRAWING NO. 78.01.04

	BY	DATE
MADE	R.S.G.	5-3-54
TRACED		
CHECKED	H.J.G.	5-7-54
IN CHARGE OF	I.D.S.K.	

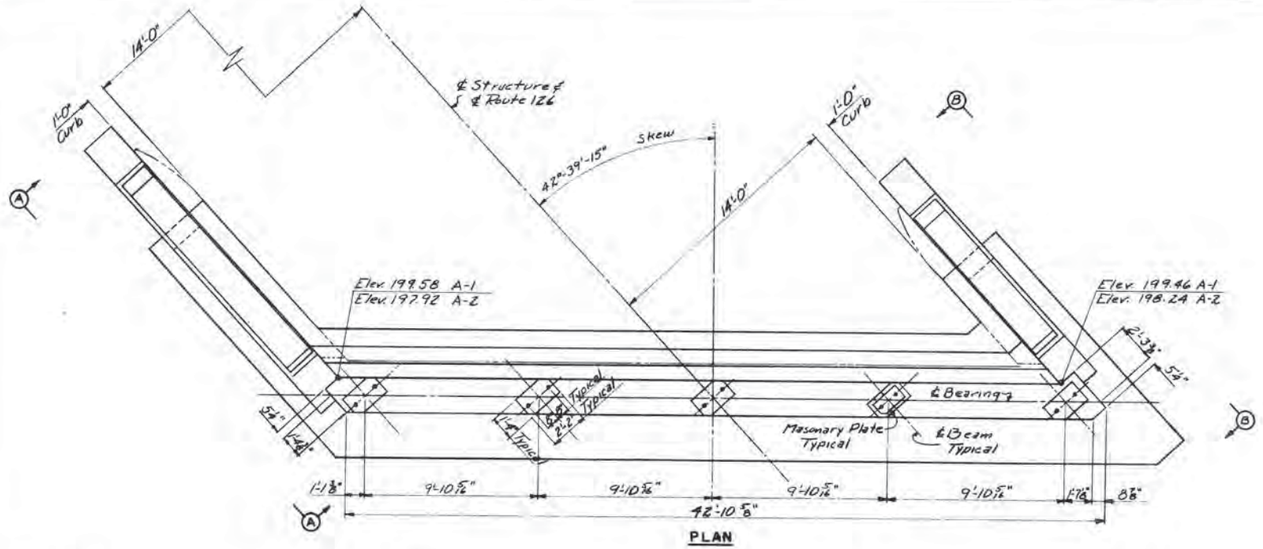
No.	REVISION	BY	DATE
2	As-Built	HBH	12-56
1	Pier Footings	CVA	7-55

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
SECTION 2 - PORTLAND TO AUGUSTA
STRUCTURE NO. 78 — TURNPIKE UNDER
STATE ROUTE 126
STA. 5195 + 84.32
GENERAL PLAN AND ELEVATION

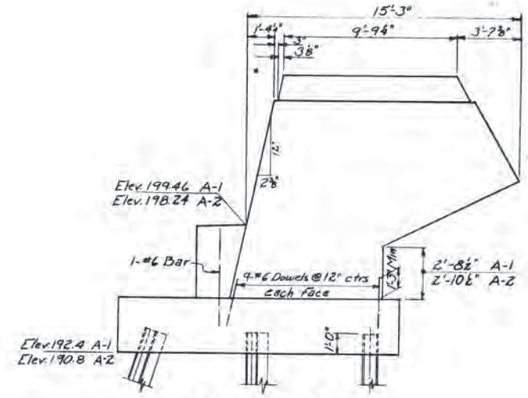
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK — KANSAS CITY

SCALE: 1"=20'-0"
CONTRACT NO. _____
SHEET NO. 242 OF 282

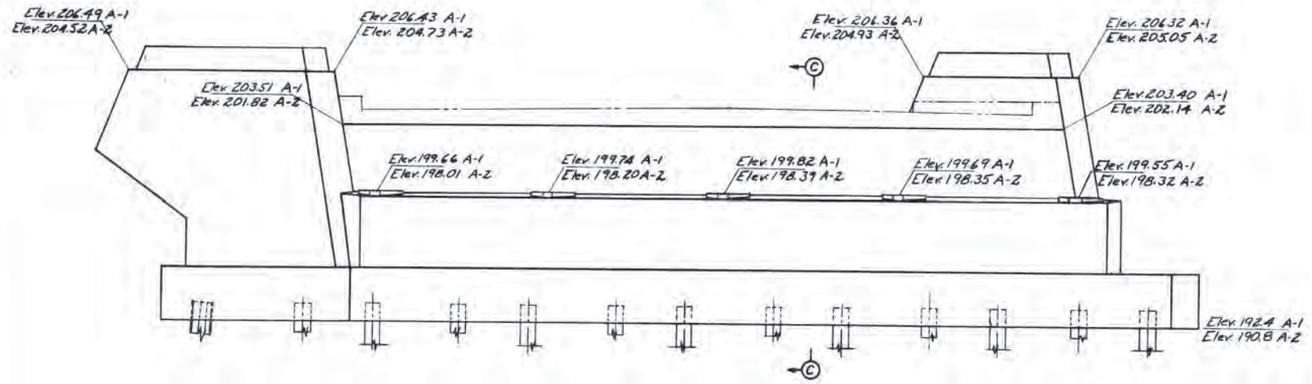
78.02.04



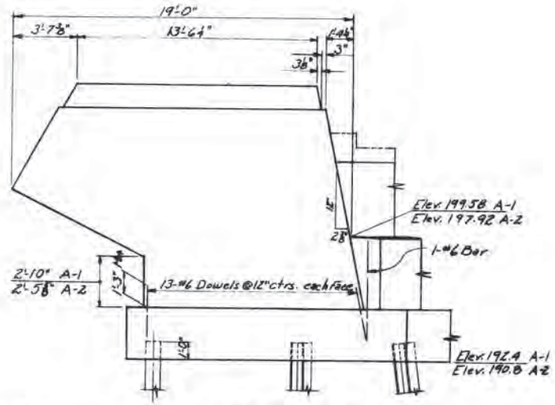
PLAN



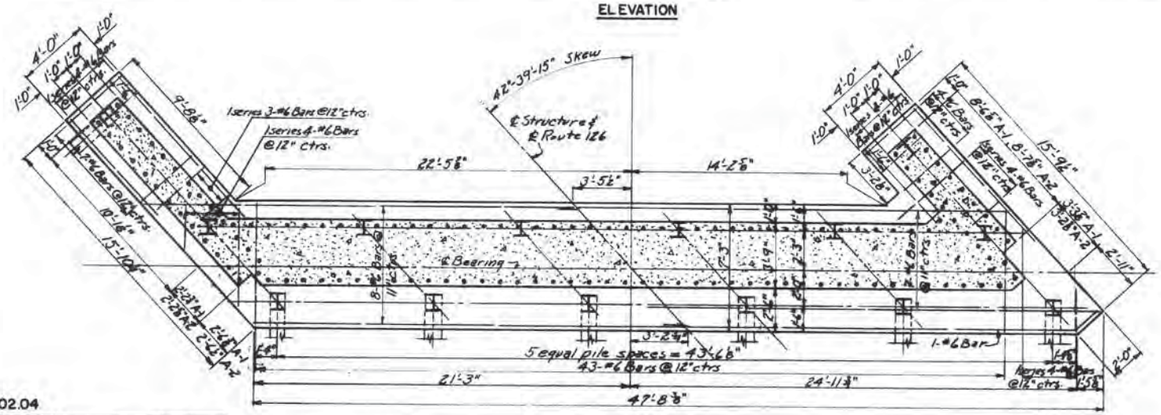
ELEVATION B-B



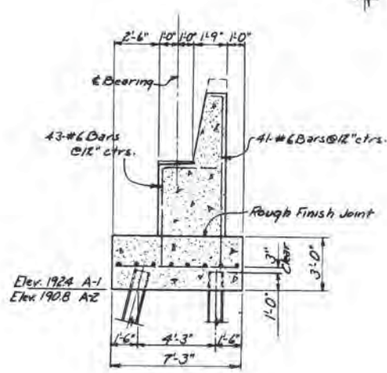
ELEVATION



ELEVATION A-A



FOOTING PLAN



SECTION C-C

Notes:
Abutments 1 & 2 are similar by rotation except for elevations and dimensions noted.
Masonary plates shall have from corners chipped as shown. (See Standard Drawing No. 5)
All piles to be 10 BP 42. Batter 3" per foot where shown.

DRAWING NO. 78.02.04

	BY	DATE				
MADE	R.S.G.	5-4-58				
TRACED						
CHECKED	H.J.G	5-7-58	1	As-Built	H&H	12-9-58
IN CHARGE OF	I.D.S.K.		No.	REVISION	BY	DATE

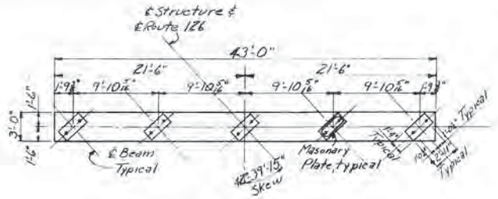
MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
SECTION 2 - PORTLAND TO AUGUSTA

STRUCTURE NO. 76 — TURNPIKE UNDER
STATE ROUTE 126
STA. 5198 + 84.32
ABUTMENTS

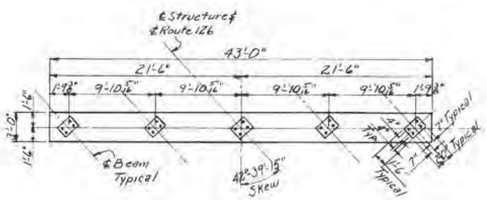
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK — KANSAS CITY

SCALE: 3/8"=1'-0"
CONTRACT NO. _____
SHEET NO. 343 OF 382

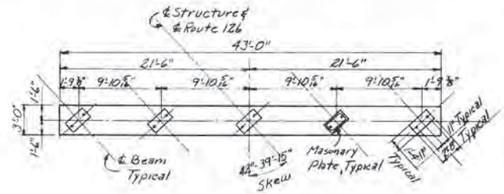
78.03.04



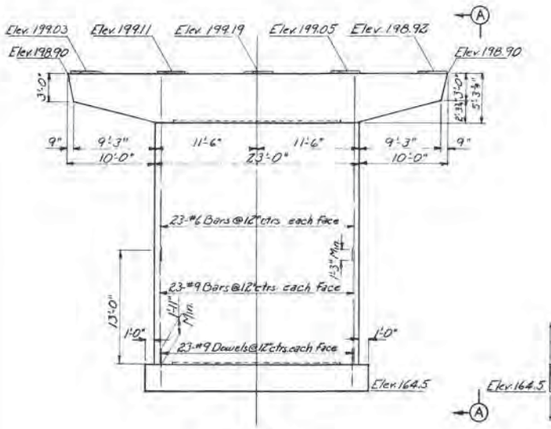
PLAN



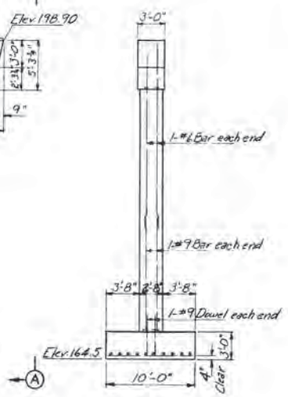
PLAN



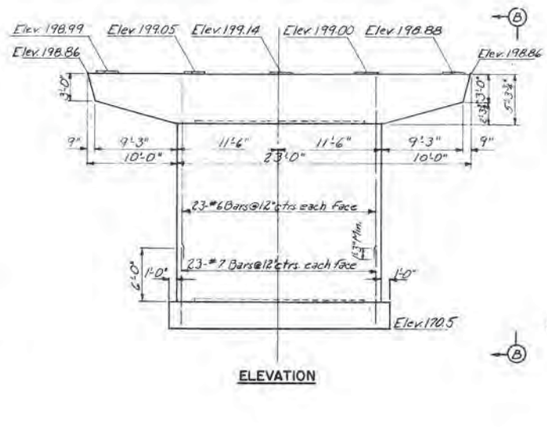
PLAN



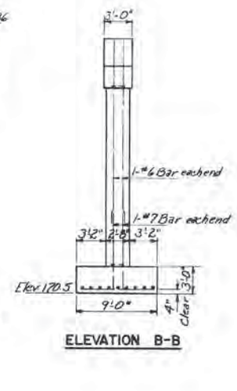
ELEVATION



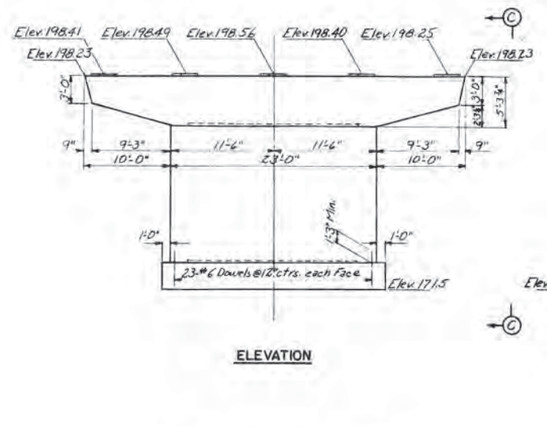
ELEVATION A-A



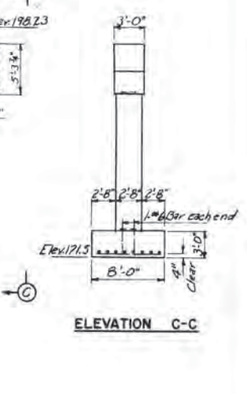
ELEVATION



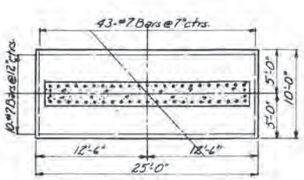
ELEVATION B-B



ELEVATION

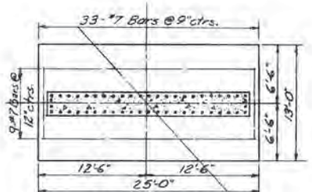


ELEVATION C-C



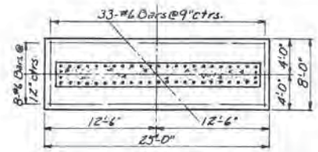
FOOTING PLAN

PIER 1



FOOTING PLAN

PIER 2



FOOTING PLAN

PIER 3

Note:
For reinforcing steel not shown see Standard Drawing No. 2
Masonary plates on Piers 1 & 3 shall have corners clipped as shown. (See Std. Dwg. No. 5)
Footings shall extend a minimum of 6" into solid undisturbed rock.

DRAWING NO. 78.03.04

	BY	DATE	No.	REVISION	BY	DATE
MADE	R.S.G.	4-30-58				
TRACED			2	As-Built	NBH	12-9-58
CHECKED	H.V.G.	5-7-58	1	Pier Footings	CTA	7-9-58
IN CHARGE OF	I.D.S.K.					

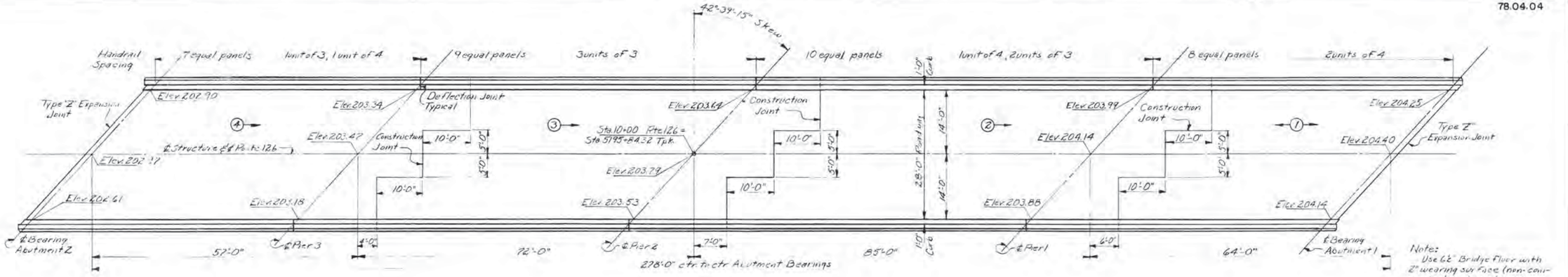
MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
SECTION 2 - PORTLAND TO AUGUSTA

STRUCTURE NO. 78 — TURNPIKE UNDER
STATE ROUTE 126
STA. 5195 + 84.32
PIERS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK — KANSAS CITY

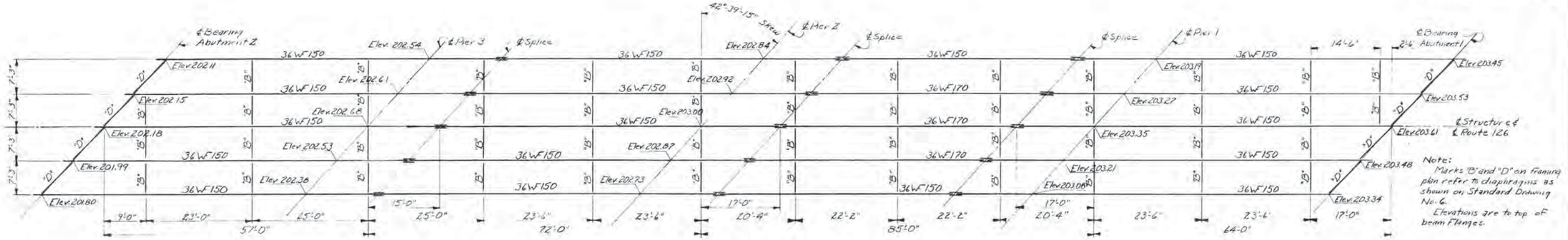
SCALE: 8"=1'-0"
CONTRACT NO.
SHEET NO. 244 OF 382

78.04.04



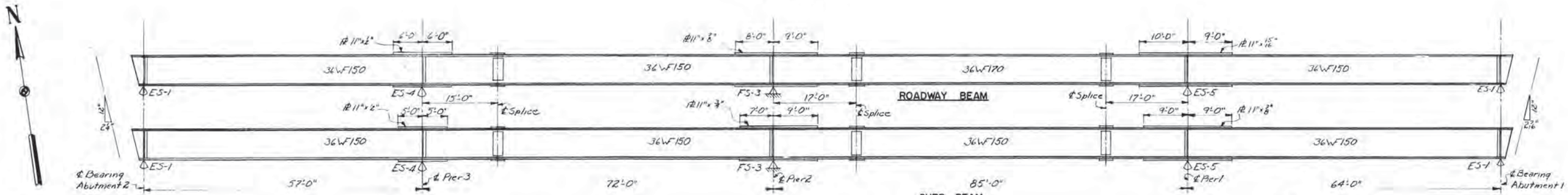
PLAN
Scale: 1/32" = 1'-0"

Note:
Use 6½" Bridge Floor with 2" wearing surface (non-composite design) as shown on Standard Drawing No. 17.
Elevations are to top of finished roadway.
Direction and sequence of placing concrete noted thus: (N)→



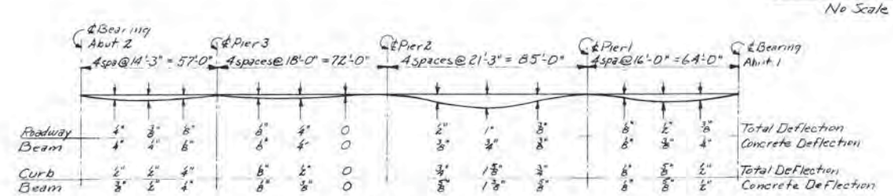
Note:
Marks 'B' and 'D' on framing plan refer to diaphragms as shown on Standard Drawing No. 6.
Elevations are to top of beam flanges.

FRAMING PLAN
Scale: 3/32" = 1'-0"



BEAM ELEVATIONS
No Scale

Note:
Top and bottom cover plates are the same.
Bevels shown at ends of beams are with respect to beam axis.
All stiffeners at points of support are 2@ 7"x⅝"



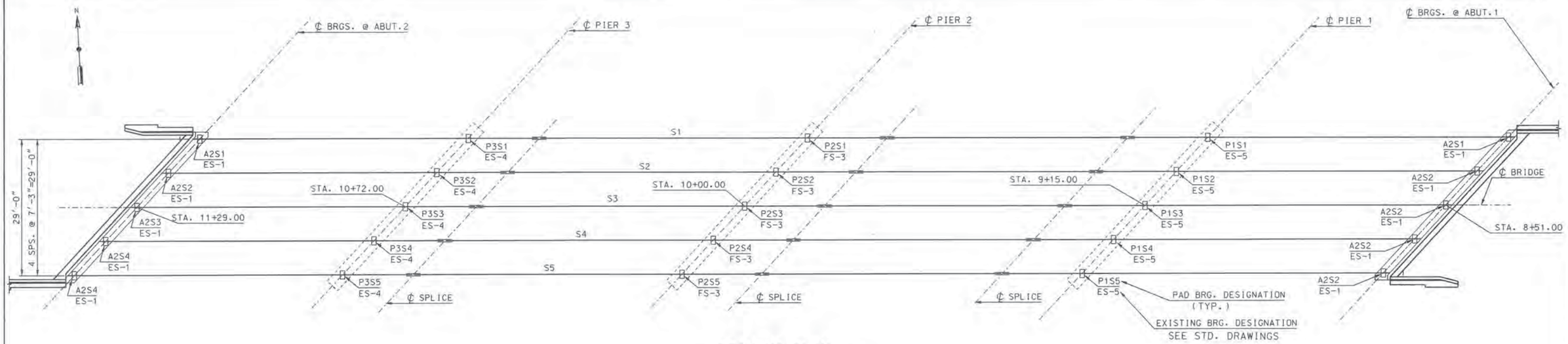
DEAD LOAD DEFLECTION DIAGRAM
No Scale

DRAWING 78.04.04						
	BY	DATE				
MADE	RSG.	4-30-54				
TRACED						
CHECKED	HJG	5-7-54	1	As-Built	HBN	12-56
IN CHARGE OF I.D.S.K.			No	REVISION	BY	DATE

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
SECTION 2 – PORTLAND TO AUGUSTA
STRUCTURE NO. 78 TURNPIKE UNDER
STATE ROUTE 126
STA. 5195 + 84.32
SUPERSTRUCTURE

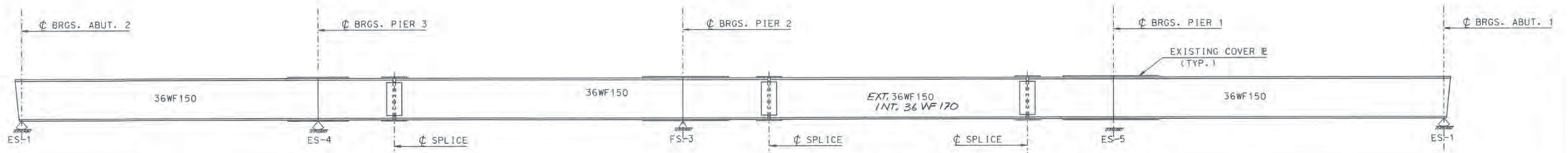
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY

SCALE: As Shown
CONTRACT NO. _____
SHEET NO. 345 OF 382



FRAMING PLAN

1" = 10'-0"



TYPICAL BEAM ELEVATION

N.T.S.

PAD TABLE

LOCATION	Δ (FT.)	MASONRY ℙ	PAD SIZE	PAD REINFORCEMENT
A1S1	0.0000	EXISTING TO REMAIN	EXISTING TO REMAIN	FOR PAD DETAIL, SEE SHEET S-27 FOR REINFORCING SCHEDULE, SEE SHEETS S27#S28
A1S2	0.0000			
A1S3	0.0000			
A1S4	0.0000			
A1S5	0.0000			
P1S1	0.0000			
P1S2	0.0000			
P1S3	0.0000			
P1S4	0.0000			
P1S5	0.0000			
P2S1	0.0000			
P2S2	0.0000			
P2S3	0.0000			
P2S4	0.0000			
P2S5	0.0000			
P3S1	0.0000			
P3S2	0.0000			
P3S3	0.0000			
P3S4	0.0000			
P3S5	0.0000			
A2S1	0.0000			
A2S2	0.0000			
A2S3	0.0000			
A2S4	0.0000			
A2S5	0.0000			

NOTES:

1. SHEAR STUDS ARE NOT REQUIRED UNLESS SHOWN.
2. THERE IS NO PROFILE CHANGE FOR THIS BRIDGE.
3. EXISTING BEARINGS. TO REMAIN.

Design Filename: d:\f09009\br78\framsl_ut.dgn
Plotted on: 11-APR-1994 14:34 Generated by: HH.

No.	Revision	By	Date	In Charge Of:	By	Date
				Designed		
				Drawn		
				Checked		

Maine Turnpike Authority
Maine Turnpike

RT. 126
OVER
MAINE TURNPIKE
FRAMING PLAN

HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF
ARCHITECTS ENGINEERS PLANNERS

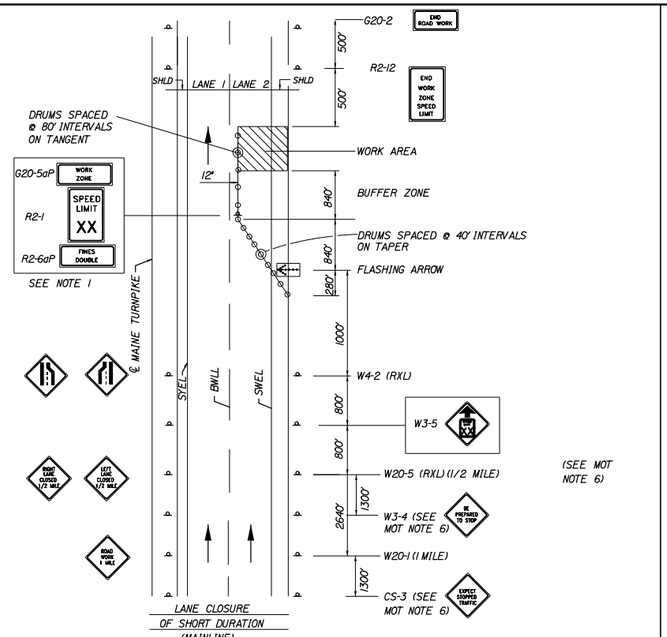
Contract 94.3

Sheet No. S-25
BE of 30

APPENDIX D

PLANS

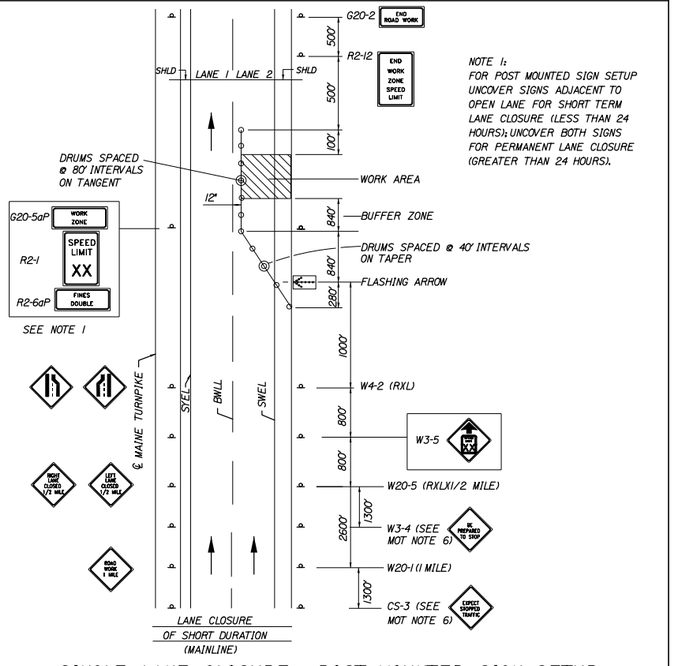
Date:1/17/2018



LANE CLOSURE
OF SHORT DURATION
(MAINLINE)

SINGLE LANE CLOSURE SIGNS ON EASELS

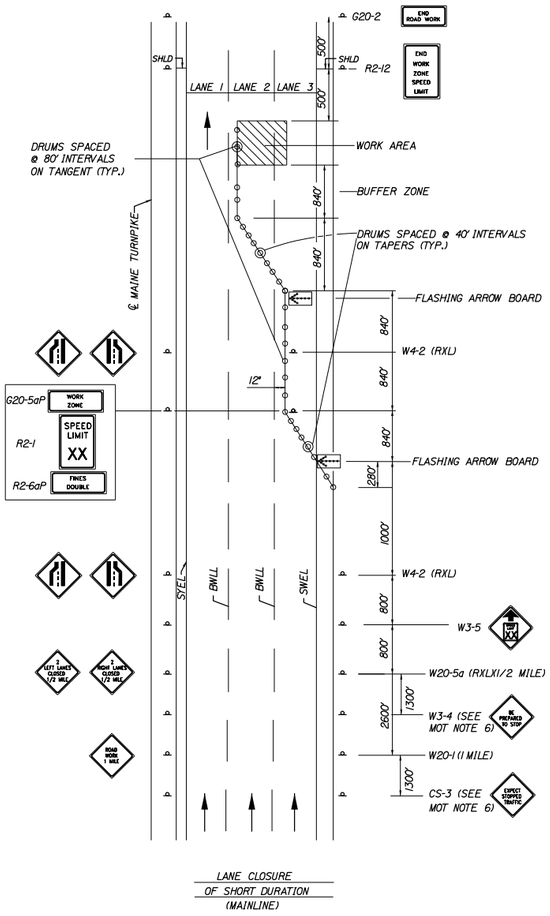
1. FOR EASEL SET UP ONLY. THIS SIGN IS NOT BRACKETED. ONE SIGN ASSEMBLY IS PLACED AT THE END OF THE TAPER .



NOTE 1:
FOR POST MOUNTED SIGN SETUP UNCOVER SIGNS ADJACENT TO OPEN LANE FOR SHORT TERM LANE CLOSURE (LESS THAN 24 HOURS); UNCOVER BOTH SIGNS FOR PERMANENT LANE CLOSURE (GREATER THAN 24 HOURS).

LANE CLOSURE
OF SHORT DURATION
(MAINLINE)

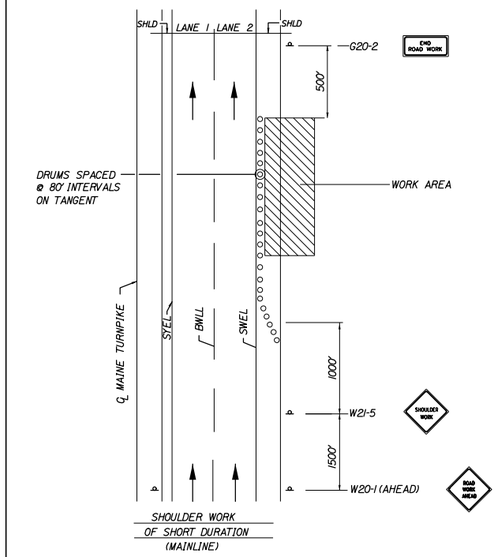
SINGLE LANE CLOSURE - POST MOUNTED SIGN SETUP



LANE CLOSURE
OF SHORT DURATION
(MAINLINE)

DOUBLE LANE CLOSURE

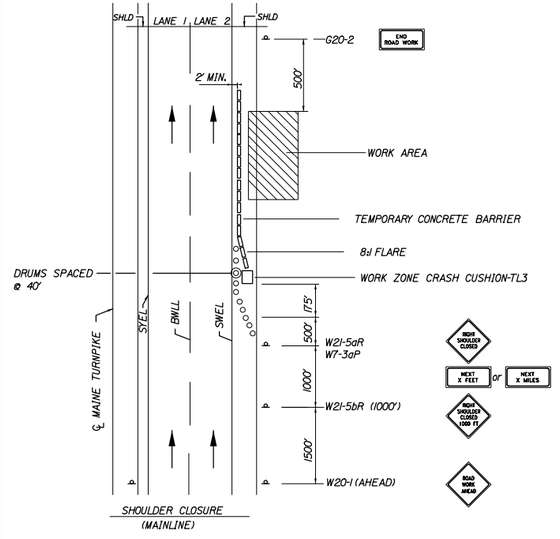
1. SEE SINGLE LANE CLOSURE NOTES FOR REDUCED SPEED SIGNS, TRAFFIC STOPPAGE SIGNS, SIGN SPACING AND OTHER PERTINENT INFORMATION.



SHOULDER WORK
OF SHORT DURATION
(MAINLINE)

TEMPORARY RIGHT SHOULDER CLOSURE

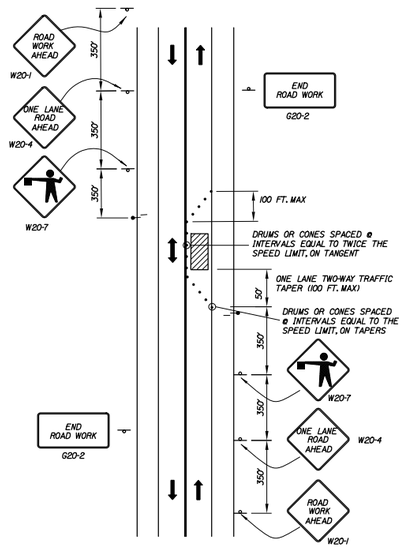
1. THE W20-1 AND G20-2 SIGNS ARE NOT REQUIRED IF THE SHOULDER CLOSURE IS WITHIN A PREVIOUSLY ESTABLISHED WORK ZONE.



SHOULDER CLOSURE
(MAINLINE)

LONG TERM RIGHT SHOULDER CLOSURE

1. THE W20-1 AND G20-2 SIGNS ARE NOT REQUIRED IF THE SHOULDER CLOSURE IS WITHIN A PREVIOUSLY ESTABLISHED WORK ZONE.



LOCAL ROAD SINGLE LANE CLOSURE

NOTES:
1. ROAD WORK AHEAD & END ROAD WORK SIGNS MAY BE OMITTED FOR SHORT DURATION OPERATIONS (LESS THAN 1 HOUR).

2. FLAGGERS SHALL BE LOCATED SO THEY ARE CLEARLY VISIBLE TO APPROACHING DRIVERS.

3. SIGN SPACING ASSUMES LOCAL ROAD SPEED IS 40 MPH OR LESS.

GENERAL MAINTENANCE OF TRAFFIC NOTES:

1. ALL PAVEMENT STRIPING & SIGNING SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", U.S.D.O.T., F.H.W.A., LATEST EDITION.
2. THESE PLANS SHOW THE GENERAL CONDITION FOR TURNPIKE MAINLINE TRAFFIC CONTROL. DURING CONSTRUCTION, SLIGHT MODIFICATIONS IN CONSTRUCTION PROCEDURE MAY OCCUR AND MAY REQUIRE SOME MINOR ADJUSTMENTS TO BE MADE IN THE FIELD. ALL PROCEDURES MUST BE APPROVED BY THE RESIDENT.
3. THE CONTRACTOR SHALL REMOVE ALL PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS IN ACCORDANCE WITH THE SPECIFICATIONS AND MUTCD. PAYMENT SHALL BE MADE UNDER ITEM 627.77 - REMOVING PAVEMENT MARKINGS.
4. EXPOSED BARRIER ENDS SHALL BE PROTECTED BY A WORK ZONE CRASH CUSHION. PAYMENT WILL BE UNDER ITEM 527.34 - WORK ZONE CRASH CUSHION - TL-3.
5. GEOMETRIC INFORMATION FOR TRAFFIC PHASES SHOWN ON THE PLANS WILL BE SUPPLIED TO THE CONTRACTOR AFTER AWARD.
6. ERECT CS-3 AND W3-4 SIGNS IMMEDIATELY PRIOR TO SCHEDULED STOPPAGES FOR EQUIPMENT MOVES AND REMOVE THE CS-3 AND W3-4 SIGNS IMMEDIATELY AFTER THE SCHEDULED STOPPAGES ARE COMPLETE.

ABBREVIATIONS FOR ALL M.O.T. PLANS

BWLL = BROKEN WHITE LANE LINE
SWLL = SOLID WHITE LANE LINE
SYLL = SOLID YELLOW LANE LINE
TBWLL - TEMPORARY BROKEN WHITE LANE LINE
TSWLL = TEMPORARY SOLID WHITE LANE LINE
TSYLL = TEMPORARY SOLID YELLOW LANE LINE

Filename: 001_MOT Details 1.dgn

Scale:

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: DALE A. MITCHELL, P.E.

	By	Date		By	Date
Designed	CAH	2/16	Checked	JRD	1/17
Drawn	SLR	2/16	In Charge of	RAL	1/17

HNTB CORPORATION
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

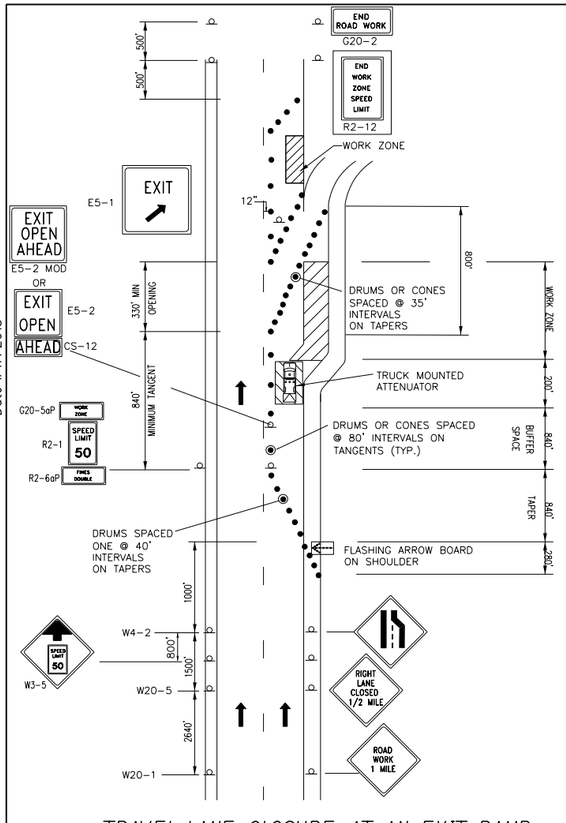
MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

BRIDGE PAINTING

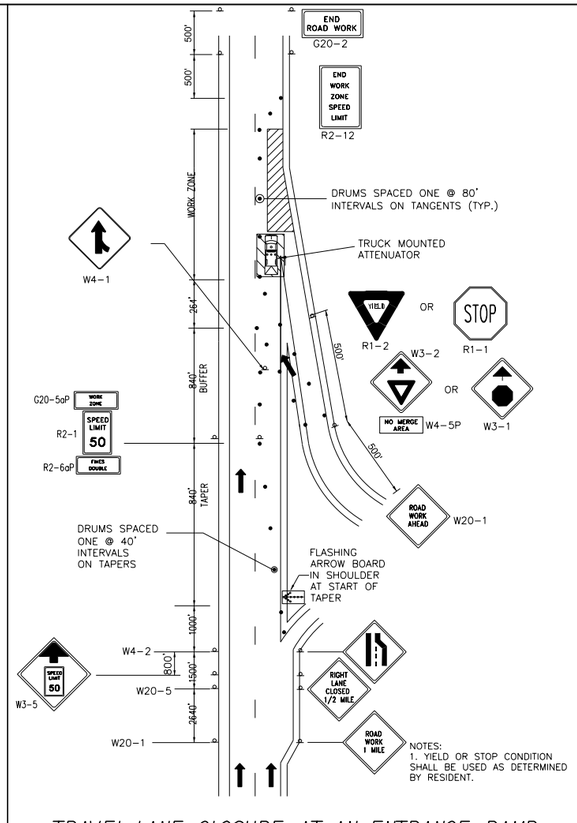
MAINTENANCE OF TRAFFIC DETAILS 1

SHEET NUMBER: MOT-01

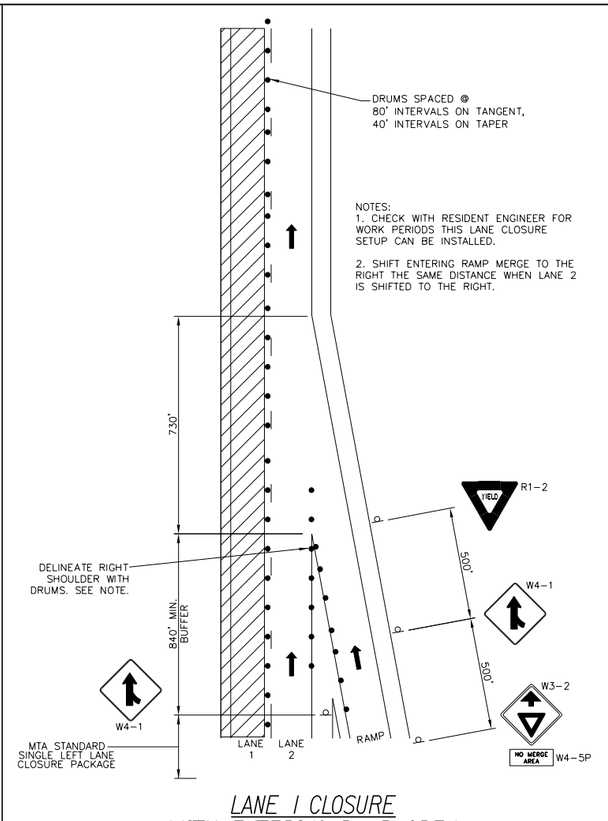
CONTRACT:2018.04



TRAVEL LANE CLOSURE AT AN EXIT RAMP



TRAVEL LANE CLOSURE AT AN ENTRANCE RAMP



LANE 1 CLOSURE
WITH ENTERING RAMP OPEN

Date:1/17/2018

Filename: 002_MOT Details 2.dgn

Scale:				Designed by: HNTB					
No.	Revision	By	Date	CONSULTANT PROJECT MANAGER: DALE A. MITCHELL, P.E.					
					By	Date		By	Date
				Designed	CAH	2/16	Checked	JRD	1/17
				Drawn	SLR	2/16	In Charge of	RAL	1/17

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

BRIDGE PAINTING

MAINTENANCE OF TRAFFIC DETAILS 2

SHEET NUMBER: MOT-02

CONTRACT:2018.04

IDENTIFICATION NUMBER	SIZE OF SIGN WIDTH	SIZE OF SIGN HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	TEXT DIMENSIONS (INCHES) VERTICAL SPACING	TEXT DIMENSIONS (INCHES) ARROW RTE. MKR.	NUMBER OF SIGNS REQUIRED CIDER HILL ROAD, YORK	NUMBER OF SIGNS REQUIRED CAPT. THOMAS OGUNQUIT	NUMBER OF SIGNS REQUIRED ROUTE 126 W. GARDINER	NUMBER OF SIGNS REQUIRED HIGH STREET W. GARDINER	COLOR BACK-GROUND	COLOR LEGEND BORDER	BORDER RADIUS	AREA IN SQUARE FEET
G20-2	48"	24"	END ROAD WORK	TEXT DIMENSIONS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			4	4	4	4	COLORS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			8.00 (128)
G20-5aP	48"	24"	WORK ZONE				4	4	4	4				8.00 (128)
R1-1	48"	48"	STOP				2	1	1	-				16.00 (64)
R1-2	60"	60" 60"	YIELD				2	1	1	1				12.50 (62.5)
R2-1 (50)	48"	60"	SPEED LIMIT XX				4	4	4	4				20.00 (320)
R2-6aP	48"	24"	FINES DOUBLED	6" 6"	4.5"		4	4	4	4				8.00 (128)
R2-12	36"	54"	END WORK ZONE SPEED	6" 6" 6" 6"	4.5" 4.5" 4.5"		4	4	4	4				13.50 (216)
W3-1	48"	48"					2	1	1	-				16.00 (64)
W3-2a	48"	48"					2	1	1	1				16.00 (80)
W3-5 (50)	48"	48"	SPEED LIMIT XX				4	4	4	4				16.00 (256)
W4-1	48"	48"					2	2	2	2				16.00 (128)
W4-2L	48"	48"					8	8	4	4				16.00 (384)

Date:12/14/2017

Filename: 003_Sign Summary 1.dgn

Scale:

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: DALE A. MITCHELL, P.E.

	By	Date		By	Date
Designed	JRD	1/17	Checked	MHP	1/17
Drawn	JRD	1/17	In Charge of	RAL	1/17

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

BRIDGE PAINTING

SIGN SUMMARY 1

SHEET NUMBER: MOT-03

CONTRACT:2018.04

IDENTIFICATION NUMBER	SIZE OF SIGN WIDTH	SIZE OF SIGN HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	TEXT DIMENSIONS (INCHES) VERTICAL SPACING	TEXT DIMENSIONS (INCHES) ARROW RTE. MKR.	NUMBER OF SIGNS REQUIRED CIDER HILL ROAD, YORK	NUMBER OF SIGNS REQUIRED CAPT. THOMAS ROAD, OGUNQUIT	NUMBER OF SIGNS REQUIRED ROUTE 126 W. GARDINER	NUMBER OF SIGNS REQUIRED HIGH STREET W. GARDINER	COLOR BACK-GROUND	COLOR LEGEND BORDER	BORDER RADIUS	AREA IN SQUARE FEET
W4-2R	48"	48"		TEXT DIMENSIONS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			8	8	4	4	COLORS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			16.00 (384)
W4-5P	30"	24"					2	1	1	1				5.00 (25)
W20-1 (1 MILE) (AHEAD)	48"	48"					4 2	4 1	4 1	2 2				16.00 (224) (96)
W20-5L (1/2 MILE) (AHEAD)	48"	48"					4 0	4 1	4 1	4 1				16.00 (256) (48)
W20-5R (1/2 MILE) (AHEAD)	48"	48"					4 0	4 1	4 1	4 1				16.00 (256) (48)
W21-5aR	48"	48"					2	2	2	2				16.00 (128)
W21-5bR (1000 FT) (2000 FT)	48"	48"					2 0	2 0	2 0	2 0				16.00 (128) (0)
W20-7	48"	48"					2	2	2	2				16.00 (128)
W20-4	48"	48"					2	2	2	2				16.00 (128)

Date:12/14/2017

Filename: 004_Sign Summary 2.dgn

Scale:

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: DALE A. MITCHELL, P.E.

	By	Date		By	Date
Designed	JRD	1/17	Checked	MHP	1/17
Drawn	JRD	1/17	In Charge of	RAL	1/17

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

BRIDGE PAINTING

SIGN SUMMARY 2

SHEET NUMBER: MOT-04

CONTRACT:2018.04

IDENTIFICATION NUMBER	SIZE OF SIGN WIDTH	SIZE OF SIGN HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	TEXT DIMENSIONS (INCHES) VERTICAL SPACING	TEXT DIMENSIONS (INCHES) ARROW RTE. MKR.	NUMBER OF SIGNS REQUIRED CIDER HILL ROAD, YORK	NUMBER OF SIGNS REQUIRED CAPT. THOMAS OGUNQUIT	NUMBER OF SIGNS REQUIRED ROUTE 126 W. GARDINER	NUMBER OF SIGNS REQUIRED HIGH STREET W. GARDINER	COLOR BACK-GROUND	COLOR LEGEND BORDER	BORDER RADIUS	AREA IN SQUARE FEET
W20-5aR	48"	48"	2 RIGHT LANES CLOSED XX MILE	TEXT DIMENSIONS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			4	4	-	-	COLORS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			16.00 (128)
W20-5aL	48"	48"	2 LEFT LANES CLOSED XX MILE				4	4	-	-				16.00 (128)
W16-4P	30"	24"	NEXT XX FEET				2	2	2	2				5.00 (40)
W21-5	48"	48"	SHOULDER WORK				2	2	2	2				16.00 (128)
W3-4	48"	48"	BE PREPARED TO STOP				6	6	4	4				16.00 (320)
CS-1	48"	48"	EXPECT STOPPED TRAFFIC	6" 6" 6"	4" 4"		6	4	4	4	ORANGE	BLACK		16.00 (288)

Date:12/14/2017

Filename: 005_Sign Summary 3.dgn

Scale:

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: DALE A. MITCHELL, P.E.

	By	Date		By	Date
Designed	JRD	1/17	Checked	MHP	1/17
Drawn	JRD	1/17	In Charge of	RAL	1/17

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

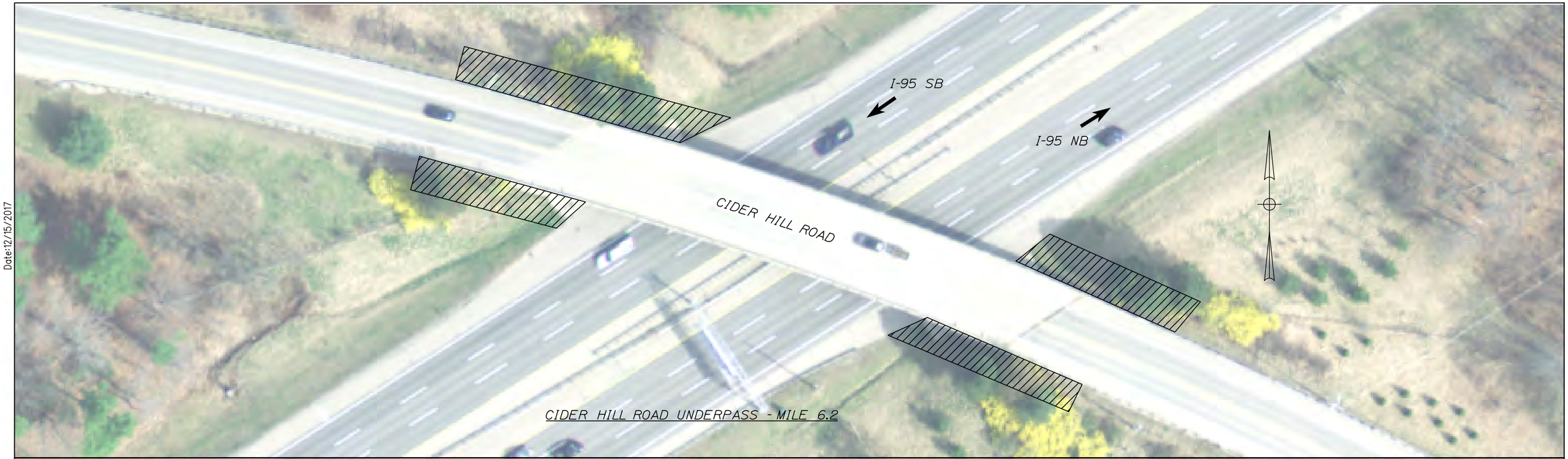
MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

BRIDGE PAINTING

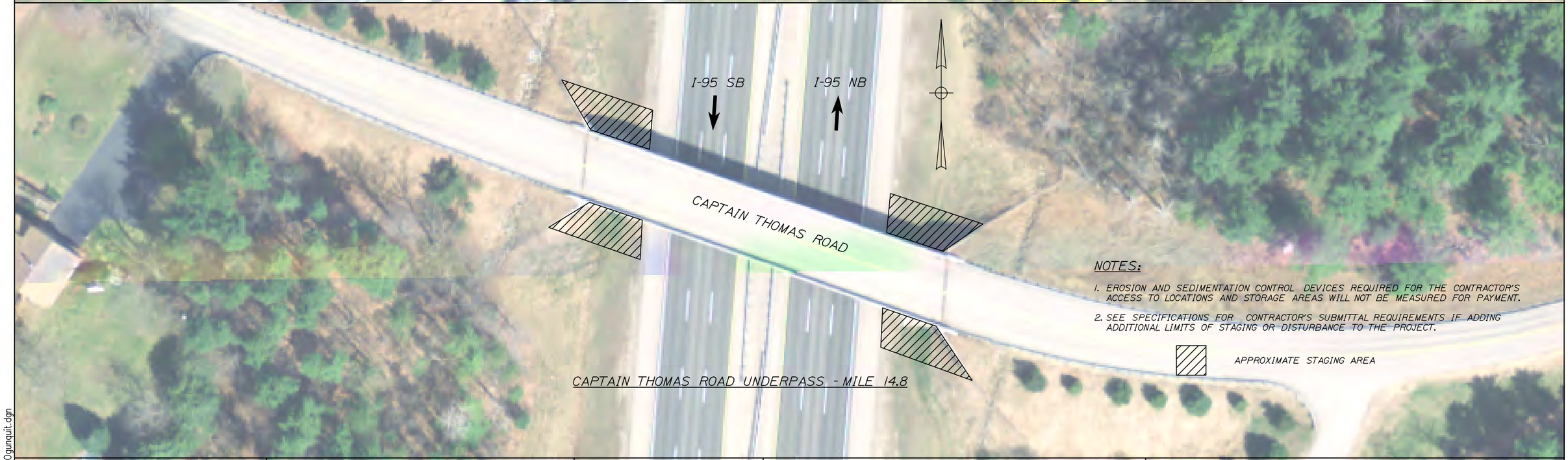
SIGN SUMMARY 3

SHEET NUMBER: MOT-05

CONTRACT:2018.04



CIDER HILL ROAD UNDERPASS - MILE 6.2



CAPTAIN THOMAS ROAD UNDERPASS - MILE 14.8

NOTES:

1. EROSION AND SEDIMENTATION CONTROL DEVICES REQUIRED FOR THE CONTRACTOR'S ACCESS TO LOCATIONS AND STORAGE AREAS WILL NOT BE MEASURED FOR PAYMENT.
2. SEE SPECIFICATIONS FOR CONTRACTOR'S SUBMITTAL REQUIREMENTS IF ADDING ADDITIONAL LIMITS OF STAGING OR DISTURBANCE TO THE PROJECT.

APPROXIMATE STAGING AREA

Date:12/15/2017

Filename: 001_LOD York & Ogunquit.dgn

Scale: 25 0 25 50
Scale of Feet

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: DALE A. MITCHELL, P.E.

	By	Date		By	Date
Designed	JRD	1/17	Checked	JRD	12/17
Drawn	MHP	1/17	In Charge of	RAL	12/17

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

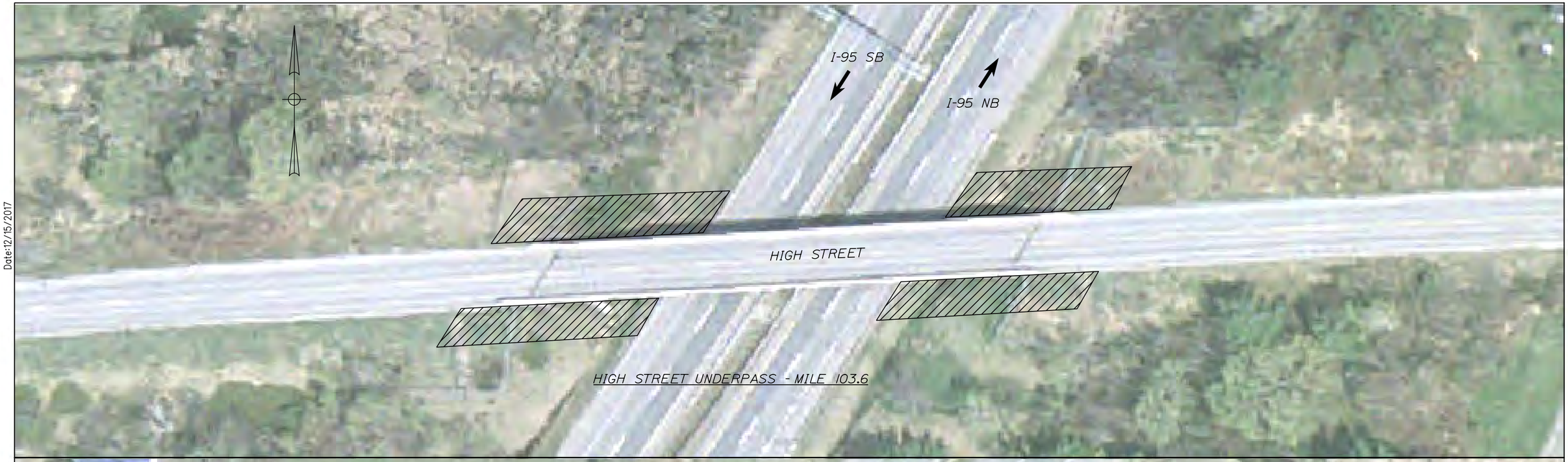
MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

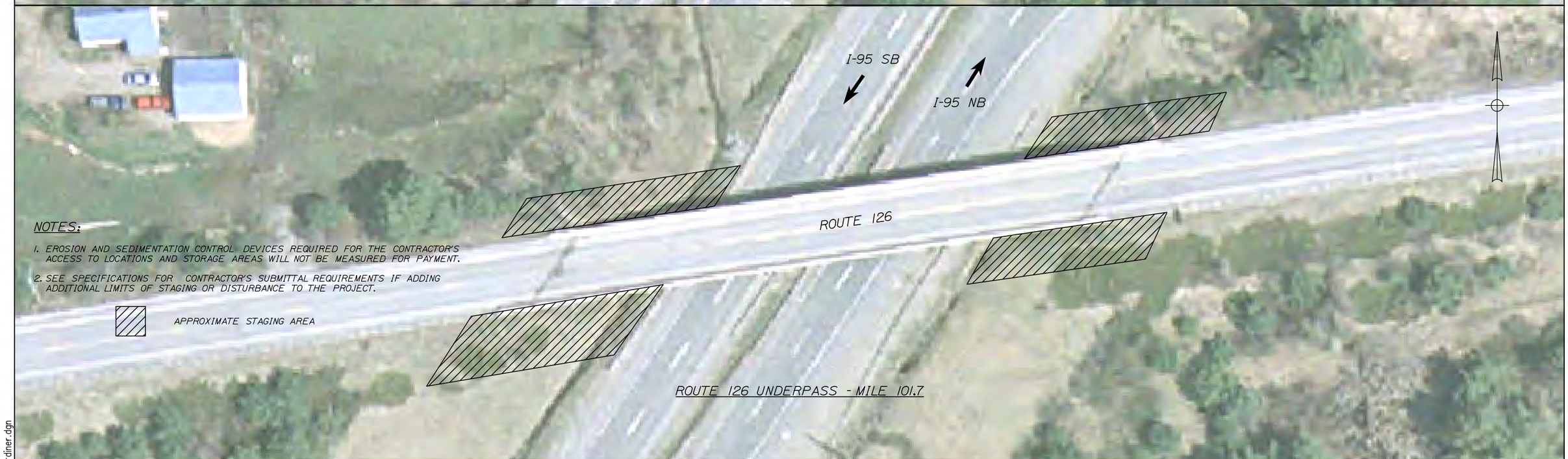
BRIDGE PAINTING
YORK AND OGUNQUIT UNDERPASSES

CONTRACTOR'S STAGING PLAN

SHEET NUMBER: CSP-01

CONTRACT:2018.04





NOTES:

1. EROSION AND SEDIMENTATION CONTROL DEVICES REQUIRED FOR THE CONTRACTOR'S ACCESS TO LOCATIONS AND STORAGE AREAS WILL NOT BE MEASURED FOR PAYMENT.
2. SEE SPECIFICATIONS FOR CONTRACTOR'S SUBMITTAL REQUIREMENTS IF ADDING ADDITIONAL LIMITS OF STAGING OR DISTURBANCE TO THE PROJECT.

APPROXIMATE STAGING AREA

Date:12/15/2017

Filename: 002_LOD West Gardiner.dgn

Scale: 25 0 25 50
Scale of Feet

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: DALE A. MITCHELL, P.E.

	By	Date		By	Date
Designed	JRD	1/17	Checked	JRD	12/17
Drawn	MHP	1/17	In Charge of	RAL	12/17

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FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: KRISTI VAN OOYEN, P.E.

BRIDGE PAINTING
WEST GARDINER UNDERPASSES

CONTRACTOR'S STAGING PLAN

SHEET NUMBER: CSP-02

CONTRACT:2018.04