



**STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION**



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Phone: 860-594-3128

December 26, 2013

Subject: Project No. 36-182

Rehabilitation of Bridge No. 00947, Route 34 over Naugatuck River in the Town of Derby.

NOTICE TO CONTRACTORS:

This is to notify all concerned and especially the prospective bidders that the bid opening for the subject project is still scheduled for January 8, 2014 at 2:00 P.M. in the Conference Room of the Department of Transportation Administration Building, 2800 Berlin Turnpike, Newington, Connecticut.

Addendum No. 1 is attached and can also be obtained on the Statewide Contracting Portal at http://www.biznet.ct.gov/scp_search/BidResults.aspx?groupid=64

This addendum is necessary to revise contract documents and bid item.

The Department has established a new link on the Website under Contractor Resources to receive contractor questions. Please submit all future questions via this link: <http://dot-contractsqanda.ct.gov/Default.aspx>

Philip J. Melchionne

For: Gregory D. Straka
Contracts Manager
Division of Contracts Administration

DECEMBER 23, 2013
REHABILITATION OF BRIDGE NO. 00947
ROUTE 34 OVER NAUGATUCK RIVER

STATE PROJECT NO. 36-182
CITY OF DERBY

ADDENDUM NO. 1

SPECIAL PROVISIONS

NEW SPECIAL PROVISIONS

The following Special Provisions are hereby added to the Contract:

- NOTICE TO CONTRACTOR – PREBID QUESTIONS AND ANSWERS
- ITEM NO. 0020904A – LEAD COMPLIANCE FOR ABRASIVE BLAST CLEANING
- ITEM NO. 0202222A – BOULDER PLACEMENT IN RIVER
- ITEM NO. 0602911A - DRILLING HOLES AND GROUTING ANCHOR BOLTS
- ITEM NO. 0707009A – MEMBRANE WATERPROOFING (COLD LIQUID ELASTOMERIC)

REVISED SPECIAL PROVISION

The following Special Provision is hereby deleted in its entirety and replaced with the attached like-named Special Provision:

- ITEM NO. 0503904A – JACKING FOR BEARING REPLACEMENT

CONTRACT ITEMS

REVISED CONTRACT ITEMS

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>ORIGINAL QUANTITY</u>	<u>REVISED QUANTITY</u>
0822001	TEMPORARY PRECAST CONCRETE BARRIER CURB	347 L.F.	639 L.F.
0822002	RELOCATED TEMPORARY PRECAST CONCRETE BARRIER CURB	588 L.F.	679 L.F.
0822005A	TEMPORARY PRECAST CONCRETE BARRIER CURB (STRUCTURE)	1,029 L.F.	665 L.F.
0822006A	RELOCATED TEMPORARY PRECAST CONCRETE BARRIER CURB (STRUCTURE)	1,386 L.F.	985 L.F.
0822052A	TEMPORARY PRECAST CONCRETE HALF-SECTION BARRIER CURB (STRUCTURE)	84 L.F.	105 L.F.

0822053A	RELOCATE TEMPORARY PRECAST CONCRETE HALF-SECTION BARRIER CURB (STRUCTURE)	84 L.F.	105 L.F.
0921001A	CONCRETE SIDEWALK	3,050 S.F.	3,210 S.F.
0970007A	TRAFFIC PERSON (UNIFORMED FLAGGER)	4,696 HR.	900 HR.

PLANS

REVISED PLANS

The following Plan Sheets are hereby deleted and replaced with the like-numbered Plan Sheets:

SUBSET SHEET NO.

02	01.A1
03	06.A1
04	04.A1 & 23.A1
05	02.A1, 03.A1, 05.A1, 13.A1, 14.A1, 15.A1, 16.A1, 17.A1, 18.A1, & 20.A1

ENVIRONMENTAL PERMITS

The following approved Environmental Permit is hereby added to the Contract:

- CT DEEP STRUCTURES, DREDGING AND FILL PERMIT

QUESTION & ANSWER

Q1. Reference Item No. “0202222 BOULDER PLACEMENT IN RIVER ** See Special Provisions **”

This Special Provision appears to have been inadvertently omitted from the special provision document in the contract.

A1. The special provision for Item No. 0202222A – Boulder Placement in River is included as part of this Addendum.

The Detailed Estimate Sheets do not reflect these changes.

The Bid Proposal Form has been revised to reflect these changes.

There will be no change in the number of calendar days due to this Addendum.

The foregoing is hereby made a part of the contract.

NOTICE TO CONTRACTOR – PRE-BID QUESTIONS AND ANSWERS

Questions pertaining to DOT advertised construction projects must be presented through the CTDOT Pre-Bid Q and A Website. The Department cannot guarantee that all questions will be answered prior to the bid date. **PLEASE NOTE - at 12:01 am, the day before the bid, the subject project(s) being bid will be removed from the Q and A Website, Projects Advertised Section, at which time questions can no longer be submitted through the Q and A Website. At this time, the Q and A for those projects will be considered final, unless otherwise stated and/or the bid is postponed to a future date and time to allow for further questions and answers to be posted.**

If a question needs to be asked the day before the bid date, please contact the Contracts Unit staff and email your question to dotcontracts@ct.gov immediately.

Contractors must identify their company name, contact person, contact email address and phone number when asking a question. The email address and phone number will not be made public.

The questions and answers (if any) located on the Q and A Website are hereby made part of the bid/contract solicitation documents (located on the State Contracting Portal), and resulting contract for the subject project(s). It is the bidder's responsibility to monitor, review, and become familiar with the questions and answers, as with all bid requirements and contract documents, prior to bidding. By signing the bid proposal and resulting contract, the bidder acknowledges receipt of, and agrees to the incorporation of the final list of Q and A, into the contract document.

Contractors will not be permitted to file a future claim based on lack of receipt, or knowledge of the questions and answers associated with a project. All bidding requirements and project information, including but not limited to contract plans, specifications, addenda, Q and A, Notice to Contractors, etc., are made public on the State Contracting Portal and/or the CTDOT website.

GENERAL

ITEM #0020904A – LEAD COMPLIANCE FOR ABRASIVE BLAST CLEANING

Description:

Work under this item shall include the special handling measures and work practices required for abrasive blast cleaning activities, principally involved in bridge coating removal/painting operations that impact materials containing or covered by lead paint. Lead paint includes paint found to contain **any** detectable amount of lead by Atomic Absorption Spectrophotometry (AAS) or X-Ray Fluorescence (XRF).

All activities shall be performed in accordance with the OSHA Lead in Construction Regulations (29 CFR 1926.62), the USEPA RCRA Hazardous Waste Regulations (40 CFR Parts 260 through 274), the CTDEEP Hazardous Waste Regulations (RCSA 22a-209-1 and 22a-449(c)), and SSPC Guide 6 – Guide for Containing Debris Generated During Paint Removal Operations.

All activities shall be performed by individuals with appropriate levels of OSHA lead awareness and hazard communication training, supervised at all times by the Contractor's Competent Person, and periodically inspected by personnel working for an industrial hygiene firm (IH firm), retained by the Contractor, under the direct supervision of a Certified Industrial Hygienist (CIH). Periodic inspections shall be conducted at least weekly while work impacting lead is occurring, but shall be as frequent as necessary to maintain Contractor compliance with the OSHA Lead Construction Standards. The Contractor's Competent Person shall be on-site at all times that the work impacting lead is being performed and shall be capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous or dangerous to employees, and has authorization to take prompt corrective measures to eliminate them.

Deviations from these Specifications require the written approval of the Engineer.

Materials:

All materials shall be delivered to the job site in the original packages, containers, or bundles bearing the name of the manufacturer, the brand name and product technical description, with MSDS sheets as applicable.

No damaged or deteriorating materials shall be used. If material becomes contaminated with lead, the material shall be decontaminated or disposed of as lead-containing waste material. The cost to decontaminate and dispose of this material shall be at the expense of the Contractor.

The following material requirements are to be met if to be used during the work:

Fire retardant polyethylene sheet shall be in roll size to minimize the frequency of joints, with factory label indicating minimum six (6) mil thickness.

Polyethylene disposable bags shall be minimum six (6) mils thick.

Tape (or equivalent product) capable of sealing joints in adjacent polyethylene sheets and for the attachment of polyethylene sheets to finished or unfinished surfaces must be capable of adhering under both dry and wet conditions.

Cleaning Agents and detergent shall be lead specific, such as TriSodium Phosphate (TSP).

Labels and warning signs shall conform to 29 CFR 1926.62, 40 CFR 260 through 274 and 49 CFR 172 as appropriate.

Air filtration devices and vacuum units shall be equipped with High-Efficiency Particulate Air (HEPA) filters.

Construction Methods:

(1) Pre-Abatement Submittals and Notices

A. Prior to the start of **any** work that will generate hazardous lead waste above conditionally exempt small quantities (greater than 100 kg/month or greater than 1000 kg stored at any time), the Contractor shall obtain from the Engineer a temporary EPA Hazardous Waste Generators ID number, in accordance with Item 0603222A Disposal of Lead Debris from Abrasive Blast Cleaning, unless otherwise directed by the Engineer.

B. Fifteen (15) working days prior to beginning work that impacts lead paint, the Contractor shall submit four copies of each of the following to the Engineer:

1. A written site-specific Lead Compliance Plan, prepared and stamped by a Certified Industrial Hygienist (CIH), that covers all workers on the project (Contractor, Subcontractor and ConnDOT representatives). The Lead Compliance Plan shall be prepared in accordance with 29 CFR 1926.62(e), and shall include: descriptions of each activity impacting lead; procedures for engineering, work practice, and administrative controls to be employed; daily on-site job-site inspections by the Competent Person; periodic on-site inspections by IH firm personnel (describe frequency and inspection criteria); hazard communication/training; medical surveillance; biological monitoring; exposure assessment air monitoring; personal protective equipment (PPE); respiratory protection; housekeeping; decontamination; procedures for waste containment, storage, handling and disposal; contents of the job completion close-out report; and all other procedures that may be necessary to comply with 29 CFR 1926.62 and 40 CFR 260 – 274.
2. Copies of all employee certificates, dated within the previous twelve (12) months, relating to OSHA lead awareness and hazard communication training and training in the use of lead-safe work practices. SSPC training programs, such as SSPC C-5

Deleading of Industrial Structures may be accepted as meeting these requirements if it can be demonstrated that such training addressed all required OSHA topics.

This information shall be updated and resubmitted annually, or as information changes, for the duration of lead removal work in order to verify continued compliance.

3. Name and qualifications of Contractor's OSHA Competent Person, as defined under 29 CFR 1926.62, who will be on-site at all times that the work impacting lead paint is being performed.
4. Name and qualifications of IH firm personnel that will be performing the periodic on-site inspections. Such personnel shall work under the direct supervision of the CIH that stamped the Lead Compliance Plan and have training within the previous twelve (12) months for OSHA lead awareness and the use of lead-safe work practices or equivalent. Such personnel shall also have a minimum of two years work experience related to the OSHA Lead in Construction Standard and be capable of recognizing the hazards associated therewith.
5. Documentation from the Contractor, typed on company letterhead and signed by the Contractor, certifying that all employees listed therein have received the following, and are medically fit to perform the work impacting lead:
 - a. medical monitoring within the previous twelve (12) months, as required in 29 CFR 1926.62;
 - b. biological monitoring within the previous six (6) months, as required in 29 CFR 1926.62;
 - c. respirator fit testing within the previous twelve (12) months, as required in 29 CFR 1910.134 (for those who don a tight-fitting face piece respirator)

This information shall be updated and resubmitted every 6 months, or as information changes, for the duration of lead removal work in order to verify continued compliance.

6. Names of the proposed non-hazardous construction and demolition (C&D) lead debris bulky waste disposal facility (CTDEEP-permitted Solid Waste landfill).
7. Names of the proposed scrap metal recycling facilities. The Contractor shall submit to the Engineer all documentation necessary to demonstrate the selected facility is able to accept lead-painted metal.
8. Negative exposure assessments conducted within the previous 12 months documenting that employee exposure to lead for each task is below the OSHA Action Level of 30 $\mu\text{g}/\text{m}^3$. If a negative exposure assessment has not been conducted, the Contractor shall submit its air monitoring program for the work tasks as part of the

Lead Compliance Plan. Until a negative exposure assessment is developed for each task impacting lead paint, the Contractor shall ensure that all workers and authorized person entering the Regulated Area wear protective clothing and respirators in accordance with OSHA 29 CFR 1926.62.

No activity shall commence until all required submittals have been received and found acceptable to the Engineer. Those employees added to the Contractor's original list will be allowed to perform work only upon submittal of acceptable documentation to, and review by, the Engineer.

Contractor shall provide the Engineer with a minimum of 48 hours notice in advance of scheduling, changing or canceling work activities.

(2) Lead Abatement Provisions

A. General Requirements:

All employees of the Contractor who perform work impacting lead paint shall be properly trained to perform such duties. In addition, the Contractor shall instruct all workers in all aspects of personnel protection, work procedures, emergency evacuation procedures and use of equipment including procedures unique to this project.

Contractor shall provide all labor, materials, tools, equipment, services, testing, and incidentals which are necessary or required to perform the work in accordance with applicable governmental regulations, industry standards and codes, and these Specifications.

Prior to beginning work, the Engineer and Contractor shall perform a visual survey of each work area and review conditions.

As necessary, the Contractor shall:

Shut down and lock out electrical power, including all receptacles and light fixtures, where feasible. The use or isolation of electrical power will be coordinated with all other ongoing uses of electrical power at the site.

Coordinate all power and fire alarm isolation with the appropriate representatives.

If adequate electrical supply is not available at the site, the Contractor shall supply temporary power. Such temporary power shall be sufficient to provide adequate lighting and power the Contractor's equipment. The Contractor is responsible for proper connection and installation of electrical wiring and shall ensure safe installation of electrical equipment in compliance with applicable electrical codes and OSHA requirements.

If water is not available at the site for the Contractor's use, the Contractor shall supply sufficient water for each shift to operate the wash facility/decontamination shower units in addition to the water needed at the work area.

The Engineer may provide a Project Monitor to monitor compliance of the Contractor and protect the interests of the Department. In such cases, no activity impacting lead paint shall be performed until the Project Monitor is on-site. Environmental sampling, including ambient air sampling, TCLP waste stream sampling, and dust wipe sampling, will be conducted by the State as it deems necessary throughout the project. Any Project Monitor provided by the Engineer is supplementary to the requirement for the Contractor to have periodic inspections performed at a frequency to ensure/document Contractor compliance with the regulations and the requirements of the Contractor's Lead Compliance Plan. Air monitoring to comply with the Contractor's obligations under OSHA remains solely the responsibility of the Contractor.

If at any time, procedures for engineering, work practice, administrative controls or other topics are anticipated to deviate from those documented in the submitted and accepted Lead Compliance Plan, the Contractor shall submit a modification of its existing plan for review and acceptance by the Engineer prior to implementing the change.

If air samples collected outside of the Regulated Area during activities impacting lead paint indicate airborne lead concentrations greater than original background levels or 30 ug/m^3 , whichever is larger, or if at any time visible emissions of lead paint extend out from the Regulated Area, an examination of the Regulated Area shall be conducted and the cause of such emissions corrected. Cleanup of surfaces outside the Regulated Area using HEPA vacuum equipment or wet cleaning techniques shall be done prior to resuming work.

Work outside the initial designated area(s) will not be paid for by the Engineer. The Contractor will be responsible for all costs incurred from these activities including repair of any damage.

B. Regulated Area

The Contractor shall establish a Regulated Area through the use of appropriate barrier tape or other means to control unauthorized access into the area where activities impacting lead paint are occurring. Warning signs meeting the requirements of 29 CFR 1926.62 shall be posted at all approaches to Regulated Areas. These signs shall read:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

The Contractor shall also implement appropriate engineering controls including a full negative pressure enclosure, in accordance with Item 0603563A – Class 1 Containment and Collection of Surface Preparation Debris (Site No. 1), and wet dust suppression methods, etc. as necessary, and as approved by the Engineer, to prevent the spread of lead contamination beyond the

Regulated Area in accordance with the Contractor's approved Lead Compliance Plan. Should the previously submitted plan prove to be insufficient to contain the contamination, the Contractor shall modify its plan and submit it for review by the Engineer.

Any air exhausted from the containment enclosure, abrasive-recycling equipment or vacuum equipment shall be passed through a HEPA filtering system. The Contractor is responsible for the design, effectiveness and maintenance of this filtering system. No discharge of debris dust shall be allowed.

C. Wash Facilities:

The Contractor shall provide handwash facilities in compliance with 29 CFR 1926.51(f) and 29 CFR 1926.62 regardless of airborne lead exposure.

If employee exposure to airborne lead exceeds the OSHA Permissible Exposure Limit of 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), shower rooms must be provided. The Shower Room shall be of sufficient capacity to accommodate the number of workers. One shower stall shall be provided for each eight (8) workers. Showers shall be equipped with hot and cold or warm running water. Shower water shall be collected and filtered using best available technology and disposed of in accordance with all Federal, State and local laws, regulations and ordinances.

D. Personal Protection:

The Contractor shall initially determine if any employee performing construction tasks impacting lead paint may be exposed to lead at or above the OSHA Action Level of $30 \mu\text{g}/\text{m}^3$. Assessments shall be based on initial air monitoring results as well as other relevant information. The Contractor may rely on historical air monitoring data obtained within the past 12 months under workplace conditions closely resembling the process, type of material, control methods, work practices and environmental conditions used and prevailing in the Contractor's current operations to satisfy the exposure assessment requirements. Monitoring shall continue as specified in the OSHA standard until a negative exposure assessment is developed.

Until a negative exposure assessment is developed for each task impacting lead paint, the Contractor shall ensure that all workers and authorized person entering the Regulated Area wear protective clothing and respirators in accordance with OSHA 29 CFR 1926.62. Protective clothing shall include impervious coveralls with elastic wrists and ankles, head covering, gloves and foot coverings. Sufficient quantities shall be provided to last throughout the duration of the project.

Protective clothing provided by the Contractor and used during chemical removal operations shall be impervious to caustic materials. Gloves provided by the Contractor and used during chemical removal shall be of neoprene composition with glove extenders.

Respiratory protective equipment shall be provided and selection shall conform to 42 CFR Part 84, 29 CFR Part 1910.134, and 29 CFR Part 1926.62. A formal respiratory protection program must be implemented in accordance with 29 CFR Part 1926.62 and Part 1910.134.

E. Air Monitoring Requirements

The Contractor shall:

1. Provide air monitoring equipment including sample filter cassettes of the type and quantity required to properly monitor operations and personnel exposure surveillance throughout the duration of the project.
2. Conduct initial exposure monitoring to determine if any employee performing construction tasks impacting lead paint may be exposed to lead at or above the OSHA Action Level of 30 micrograms per cubic meter. Monitoring shall continue as specified in the OSHA standard until a negative exposure assessment is developed.
3. Conduct personnel exposure assessment air sampling, as necessary, to assure that workers are using appropriate respiratory protection in accordance with OSHA Standard 1926.62 or the approved Lead Compliance Plan. Documentation of air sampling results must be recorded at the work site within twenty-four (24) hours and shall be available for review until the job is complete.

F. Periodic Inspections

The Contractor shall retain the services of IH firm personnel, working under the direct supervision of the CIH that stamped the Lead Compliance Plan, to perform periodic inspections of the job site work practices and engineering controls, on a frequency to ensure/document Contractor compliance with the regulations. Periodic inspections shall be performed at least weekly while work impacting lead is occurring, but shall be at the frequency necessary to maintain Contractor compliance with the OSHA Lead in Construction Standard. Any exceptions to 29 CFR 1926.62 or the accepted Lead Compliance Plan shall be reported to the Contractor and the Engineer prior to the IH firm personnel leaving the site and corrected immediately.

All findings of such periodic inspections shall be documented in writing to the Engineer no later than 10 days following the site visit. At a minimum, the inspection report shall document the following:

1. Description of current work activities
2. Description of engineering controls being implemented
3. Description of PPE being utilized
4. Description of visual review of containment system effectiveness
5. Results of all air sampling received since date of last report
6. Narrative interpreting sample results and making recommendations as necessary
7. Description of waste management practices being utilized

8. Descriptions of exceptions noted and corrective action taken

The report shall include a signature from the IH firm employee that performed the site inspection verifying that the Contractor's work practices are in compliance with 29 CFR 1926.62 and the previously submitted and accepted Lead Compliance Plan. The CIH shall sign verifying their concurrence.

G. Lead Abatement Procedures

The Contractor's Competent Person shall be at the job site at all times during work impacting lead.

Work impacting lead paint shall not begin until authorized by the Engineer, following a pre-work visual inspection by the Project Monitor or Engineer to verify existing conditions.

Any activity impacting lead painted surfaces shall be performed in a manner which minimizes the spread of lead dust contamination and generation of airborne lead.

The Contractor shall conduct exposure assessments for all tasks which impact lead paint in accordance with 29 CFR 1926.62(d) and shall implement appropriate personal protective equipment until negative exposure assessments are developed.

All abrasive blast cleaning work impacting the lead containing/coated materials shall be conducted within an established Regulated Area with a remote wash facility/decontamination system in accordance with "C. Wash Facilities" and the OSHA Lead in Construction Standard. In accordance with 29 CFR 1926.62, engineering controls and work practices shall be utilized to prevent the spread of lead dust and debris beyond the Regulated Area and limit the generation of airborne lead. Such engineering controls shall include the use of a full negative pressure enclosure (NPE) in accordance with SSPC Guide 6 and Item 0603563A. All wastes containing lead paint shall be properly contained and secured for storage, transportation and disposal.

The Contractor shall ensure proper entry and exit procedures for workers and authorized persons who enter and leave the Regulated Area. All workers and authorized persons shall leave the Regulated Area and proceed directly to the wash or shower facilities where they will HEPA vacuum gross debris from work suit, remove and dispose of work suit, wash and dry face and hands, and vacuum clothes. Lead chips and dust must not be removed by blowing or shaking of clothing. Wash water shall be collected, filtered, and disposed of in accordance with Federal, State and local water discharge standards. Any permit required for such discharge shall be the responsibility of the Contractor.

No one shall eat, drink, smoke, chew gum or tobacco, or apply cosmetics while in the Regulated Area.

Data from the limited lead testing performed by the Engineer is documented in the reports listed in the “Notice to Contractor – Hazardous Materials Investigations” or is presented herein. Under no circumstances shall this information be the sole means used by the Contractor for determining the extent of lead painted materials. The Contractor shall be responsible for verification of all field conditions affecting performance of the work as described in these Specifications in accordance with OSHA, USEPA, USDOT and CTDEP standards. Compliance with the applicable requirements is solely the responsibility of the Contractor.

Bridge No. 00947, Route 34 over Naugatuck River, Derby

- **Lead paint was identified on the painted metal surfaces of Bridge No. 00947. XRF readings showed the paint to be lead based.**

Girders, Cross Beams Beam Ends, Bearings, Rockers, Railings, etc	Metal	Green	0.6-20.3 mg/cm²
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- **TCLP waste stream sampling/analysis of the paint characterized the paint waste as RCRA hazardous waste.**

Paint debris	33 mg/l
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Abrasive blast cleaning techniques which are utilized on surfaces coated with lead paint must be conducted in accordance with the OSHA worker protection and USEPA RCRA/CTDEEP waste disposal standards, and shall be conducted in accordance with Item #0603479A – Abrasive Blast Cleaning and Field Painting of Beam Ends following SSPC-SP10 “Near White Blast Cleaning” procedures.

On Bridge No. 00947 the Engineer has previously characterized the projected abrasive paint blast debris waste stream as hazardous waste, which shall be handled and disposed of in accordance with USEPA/CTDEEP Hazardous Waste Regulations and 0603222A – Disposal of Lead Debris from Abrasive Blast Cleaning.

Any scrap metal components generated shall be segregated and recycled as scrap metal at the Contractor’s previously submitted scrap metal recycling facility. The recycling of scrap metal (regardless of lead paint concentration) is exempt from USEPA RCRA and CTDEEP Hazardous Waste Regulation.

Should lead contamination be discovered outside of the Regulated Area, the Contractor shall immediately stop all work in the Regulated Area, eliminate causes of such contamination and take steps to decontaminate non-work areas.

H. Prohibited Removal Methods:

The use of sand, steel grit, air, CO₂, baking soda, or any other blasting media to remove lead or lead paint without the use of a HEPA ventilated contained negative pressure enclosure is prohibited.

Power/pressure washing shall not be used to remove lead paint.

Compressed air shall not be utilized to remove lead paint.

Power tool assisted grinding, sanding, cutting, or wire brushing of lead paint without the use of cowled HEPA vacuum dust collection systems is prohibited.

Lead paint burning, busting of rivets painted with lead paint, welding of materials painted with lead paint, and torch cutting of materials painted with lead paint is prohibited. Where cutting, welding, busting, or torch cutting of materials is required, lead paint in the affected area must be removed first.

Chemical stripping of coatings from bridge components is prohibited.

I. Clean-up and Visual Inspection:

The Contractor shall remove and containerize all lead waste material and visible accumulations of debris, paint chips and associated items.

During clean-up the Contractor shall utilize HEPA filtered vacuum equipment.

The Engineer will conduct a visual inspection of the work areas in order to document that all surfaces have been maintained as free as practicable of accumulations of lead in accordance with 29 CFR 1926.62(h). If visible accumulations of waste, debris, lead paint chips or dust are found in the work area, the Contractor shall repeat the cleaning, at the Contractor's expense, until the area is in compliance. The visual inspection will detect incomplete work, damage caused by the abatement activity, and inadequate clean up of the work site.

All debris shall be contained and vacuum collected daily or more frequently as directed by the Engineer, due to debris buildup. Such debris, abrasive blast residue, rust and paint chips shall be stored in leakproof storage containers in the secured storage site, or as directed by the Engineer. The storage containers and storage locations shall be reviewed by the Engineer and shall be located in areas not subject to ponding.

All storage containers (roll offs or drums) shall have a protective liner and removable lid. These containers shall not have any indentations or damage that would allow seepage of the contained material.

If 55 gallon barrels are used, staging is required: 55 gallon barrels shall be stored together in two rows of five. The Contractor shall maintain a minimum lane clearance of 36 inches between each (barrel lot of ten).

The Contractor shall maintain a secure storage site, which shall be large enough to handle all debris. The Contractor shall store debris only in the secured storage site. During abrasive blast cleaning operations, all surface preparation debris shall be vacuum collected from the containment enclosure and removed to the abrasive recycling reclaimer unit, and the coating debris shall be conveyed to the secured storage site at the conclusion of the work shift. The Contractor shall account for all coating debris conveyed to the secured storage site and all coating debris transported from the project for disposal.

The secure storage site shall consist of an 8-ft. high fenced-in area with a padlocked entrance. Storage containers shall not be used on the project until and unless they have been reviewed and approved by the Engineer. Storage containers and sites shall be located so as not to cause any traffic hazard. Container storage sites shall be in areas that are properly drained and runoff water shall not be allowed to pool and shall be out of the 100-year flood plain. The containers shall be placed on pallets or other approved material and not directly on the ground.

Storage containers shall be closed and covered with a waterproof tarpaulin at all times except during placement, sampling and disposal of debris.

J. Post-Work Regulated Area Deregulation:

Following an acceptable visual inspection, any engineering controls implemented may be removed.

A final visual inspection of the work area shall be conducted by the Competent Person and the Project Monitor or Engineer to ensure that all visible accumulations of suspect materials have been removed and that no equipment or materials associated with the lead paint removal remain. If this final visual inspection is acceptable, the Contractor will reopen the Regulated Area and remove all signage.

The Contractor shall restore all work areas and auxiliary areas utilized during work to conditions equal to or better than original. Any damage caused during the performance of the work activity shall be repaired by the Contractor at no additional expense to the State.

K. Waste Disposal/Recycling:

Non-metallic building debris waste materials tested and found to be non-hazardous Construction and Demolition (C&D) bulky waste shall be disposed of properly at a CTDEEP approved Solid Waste landfill.

Metallic debris shall be segregated and recycled as scrap metal at an approved metal recycling facility.

Hazardous lead debris shall be disposed of in accordance with Item 0603222A, Disposal of Lead Debris from Abrasive Blast Cleaning.

L. Project Closeout Data:

Provide the Engineer, within thirty (30) days of completion of the project site work, a compliance package; which shall include, but not be limited to, the following:

1. Competent persons (supervisor) job log;
2. Certification that all requirements of the Lead Compliance Plan and OSHA Lead in Construction Standards, including training, medical surveillance, biological monitoring and medical removal protection, have been followed;
3. Copies of each periodic inspection report;
4. Report on regulatory compliance prepared by the CIH based on the periodic inspections performed.
5. OSHA-compliant personnel air sampling data;
6. Completed waste shipment papers for non-hazardous lead construction and demolition (C&D) waste disposal or recycling and scrap metal recycling.

M. Non Compliance:

Failure of the Contractor to implement the requirements of 29 CFR 1926.62, its Lead Compliance Plan, or any other requirement of this item shall, at the sole discretion of the Engineer, result in the suspension of all Contract work until such deficiencies are corrected.

Method of Measurement:

This item will include all noted services, equipment, facilities, testing and other associated work, including up to three (3) ConnDOT project representatives. Services provided to any ConnDOT project representatives in excess of three (3) representatives will be measured for payment in accordance with Article 1.09.04 – “Extra and Cost-Plus Work.”

1-Within thirty (30) calendar days of the award of the Contract, the Contractor shall submit to the Engineer for acceptance a breakdown of its lump sum bid price for this item detailing:

- (a) The development costs associated with preparing the Lead Compliance Plan in accordance with these Specifications.
- (b) The cost per month for the duration of the Project to implement the Lead Compliance Plan and provide the services of the CIH and IH firm.

2-If the lump sum bid price breakdown is unacceptable to the Engineer; substantiation showing that the submitted costs are reasonable shall be required.

3-Upon acceptance of the payment schedule by the Engineer, payments for work performed will be made as follows:

- (a) The lump sum development cost will be certified for payment.
- (b) The Contractor shall demonstrate to the Engineer monthly that the Lead Compliance Plan has been kept current and is being implemented and the monthly cost will be certified for payment.
- (c) Any month where the Lead Compliance Plan is found not to be current or is not being implemented, the monthly payment for the Lead Compliance for Abrasive Blast Cleaning Item shall be deferred to the next monthly payment estimate. If the Lead Compliance Plan is not current or being implemented for more than thirty calendar days, there will be no monthly payment.
- (d) Failure of the Contractor to implement the Lead Compliance Plan in accordance with this Specification shall result in the withholding of all Contract payments.

Basis of Payment:

The lump sum price bid for this item shall include: services, materials, equipment, all permits, notifications, submittals, personal air sampling, personal protection equipment, incidentals, fees and labor incidental to activities impacting lead removal, treatment and handling of lead contaminated materials, and the transport and disposal of any non-hazardous lead construction and demolition (C&D) bulky waste.

Final payment will not be made until all project closeout data submittals have been completed and provided to the Engineer. Once the completed package has been received in its entirety and accepted by the Engineer, final payment will be made to the Contractor.

<u>Pay Item</u>	<u>Pay Unit</u>
Lead Compliance for Abrasive Blast Cleaning	L.S.

ITEM #0202222A – BOULDER PLACEMENT IN RIVER

Description:

Work under this item shall consist of furnishing and installing boulders in the Naugatuck River in the vicinity of Piers 1 and 2 at Bridge 00947 as shown in the contract plans. The price for this work shall include furnishing and installation of the boulders, cost of mobilization, associated equipment, tools and labor required to complete this work.

Materials:

Boulders shall have a diameter of 4 to 5 feet and should be sound, tough, durable and free from defects impairing their durability. The boulders shall be of similar nature as the stones and boulders in the surrounding area. Material the Contractor proposes to bring to the site must be inspected and approved by the Office of Environmental Planning (OEP) at the source prior to the excavation or hauling of the material. A minimum notice of two weeks must be given to the OEP for inspection and approval.

Construction Method:

The in-water work period for this work in the Naugatuck River is from June 1st to September 30th. The work shall consist of placing boulders approximately 30 feet upstream from the fascia line of the bridge, in the channel between Piers 1 and 2 of bridge 00947, as shown in the contract plans.

The placement of the boulders shall be performed by equipment placed on the bridge. Placement of construction equipment is not permitted in the Naugatuck River. The contractor shall submit working drawings showing the sequence, equipment and method of placement of the boulders prior to construction for the approval of the Engineer. The Engineer shall notify the OEP at least two weeks prior to initiating the placement of the boulders. Any and all coordination with the Department of Energy and Environmental Protection (DEEP) will be done through the OEP. The Contractor shall react accordingly to this requirement by giving the Engineer sufficient time to fulfill the Engineer's obligation. Placement of the boulders should proceed during periods of low flow within the low tide period to ensure proper placement and as directed by the OEP or an approved representative.

The boulders should be placed in clusters of at least three boulders randomly in the riverbed at the approximate locations as shown in the details in the contract plans.

Method of Measurement:

This work will be paid on a lump sum basis and will not be measured for payment.

Basis of Payment:

This work will be paid for at the contract lump sum price for "Boulder Placement in River", which price shall include furnishing and installing the boulders, cost of mobilization, cost of equipment, tools and labor required to complete this work.

ITEM #0602911A – DRILLING HOLES AND GROUTING ANCHOR BOLTS

Description:

Work under this item shall consist of drilling, coring or a combination of drilling and coring holes in the existing structure and grouting anchor rods into the holes as shown on the plans.

Materials:

The grout shall be an epoxy/polymer grout conforming to the requirements of Article M.03.01-15.

Construction Methods:

Holes shall be core drilled to a depth and diameter as indicated on the plans. Care shall be taken to ensure that hole coring operations do not damage the existing reinforcement intended for reuse in proposed construction. Existing reinforcement, if encountered during the drilling or the coring operation, may be cut or bent as necessary. The Contractor shall be fully responsible for the type of drilling equipment used. Drilling methods shall not cause cracking, spalling, or other damage to the concrete. Any damage to the existing structure shall be repaired by the Contractor at his own expense and in a manner acceptable to the Engineer.

Each finished hole shall be blown clean with an air jet and as recommended by the grout manufacturer. The grout shall be mixed and placed strictly in accordance with the recommendation of the manufacturer. The grout shall completely fill the space around the anchor rod. Particular care shall be taken to conform to the manufacturer's specified time limit with in which the grout must be placed after mixing. The Contractor shall provide an approved means of keeping the anchor rod centered in the top and bottom of the hole until the grout has thoroughly hardened.

Method of Measurement:

This work will be measured for payment by the number of anchor rods grouted into drilled holes, each completed and accepted.

Basis of Payment:

This work will be paid for at the contract unit price each for "Drilling Holes and Grouting Anchor Bolts", which price shall include drilling or coring and preparing holes and grouting anchor rods. It shall also include all materials, hardware, grout, and all equipment, tools and labor incidental thereto.

The cost of furnishing and installing anchor rods shall be included in the cost of the item “Structural Steel (Site No. 1)”.

ITEM #0707009A – MEMBRANE WATERPROOFING (COLD LIQUID ELASTOMERIC)

Description: Work under this section includes furnishing and installation of a seamless elastomeric waterproofing membrane system to the concrete deck as shown on the plans, in accordance with this specification and as directed by the Engineer.

The completed membrane system shall be comprised of three separate layers at a minimum total thickness of 0.120 inch (120 mil) resulting from two equal spray applications over a primer.

Materials: The membrane waterproofing system shall be one of the following or approved equal:

1. Eliminator
Manufacturer: Stirling Lloyd Products, Inc.
152 Rockwell Road, Building A
Newington, CT 06111
Tel: 860-666-5008
2. Bridge Deck Membrane System
Manufacturer: Bridge Preservation, LLC
87 Shawnee Ave.
Kansas City, Kansas 66105
Tel: 913-321-9006

The membrane system shall meet the following requirements set forth in this specification:

A. Primer

The primer shall be 100% reactive, acrylic based, two component, spray applied resin capable of full cure in 40 minutes at 20°C (68°F).

B. Membrane

The membrane shall be 100% solvent free reactive, acrylic based, two component, spray applied material.

The membrane shall meet or exceed the following properties as related to laboratory prepared samples tested at 20°C (68°F) and 24 hour cure where applicable:

<u>PROPERTY</u>	<u>TEST METHOD</u>	<u>UNITS</u>
Gel Time		6-11 minutes
Cure Time		30 minutes
Water Vapor Transmission	ASTM E96	0.3 Perms or less
Adhesion	ASTM D4541	0.7 MPA (100 psi) or failure in concrete
Minimum Tensile Strength	ASTM D638, Method A, Die C	6.4 Mpa (940 psi)
Minimum Elongation at Break	ASTM D638, Method A, Die C	80%
Crack Bridging	ASTM C836	Pass @ 24 cycles, 1.59mm (0.0625 inch) -26°C (-15°F)
Ballast Impact	SNCF Test Method	No Damage

Materials Certificate: The Contractor shall submit to the Engineer a Materials Certificate for the primer and membrane in accordance with the requirements of Article 1.06.07.

Construction Methods: A Manufacturer's representative shall be present on-site immediately prior to and during application of the membrane. The representative shall inspect and approve the surface prior to priming, the handling, mixing and addition of components and application of the primer and membrane. The representative shall remain on-site until the membrane has fully cured.

The system shall be applied to the prepared area(s) as defined in the plans strictly in accordance with the Manufacturer's recommendations.

1) Job Conditions

A. Environmental Requirements

Application can proceed while air and substrate temperatures are between 0°C (32°F) and 40°C (104°F) providing the substrate is above the dew point. Outside of this range, the Manufacturer shall be consulted.

The Applicator shall be provided with adequate disposal facilities for non-hazardous waste generated during installation of the System. The applicator shall follow safety instructions regarding respirators and safety equipment.

B. Safety Requirements

All open flames and spark producing equipment shall be removed from the work area prior to commencement of application.

“No Smoking” signs shall be visibly posted at the jobsite during application of the membrane waterproofing.

Non-related personnel in the work area shall be kept to a minimum.

2. Delivery, Storage and Handling

A. Packaging and Shipping

All components of the System shall be delivered to the site in the Manufacturer’s packaging, clearly identified with the products type and batch number.

B. Storage and Protection

The Applicator shall be provided with a storage are for all components. The area shall be cool, dry and out of direct sunlight and in accordance with the Manufacturer’s recommendations and relevant health and safety regulations.

Copies of Material Safety Data Sheets (MSDS) for all components shall be kept on site for review by the engineer or other personnel.

C. Shelf Life – Membrane Components

Packaging of all membrane components shall include a shelf life date sealed by the Manufacturer. No membrane components whose shelf life has expired shall be used.

3) Inspection

Prior to priming of the surface, the Engineer, Applicator and Manufacturer’s representative shall inspect and approve the prepared substrate.

Random tests for adequate tensile bond strength shall be conducted on the substrate by the Applicator at the job site using an Elcometer Adhesion Tester in accordance with the requirements of ASTM D4541. The minimum test frequency shall be one per 500 m² (5000 ft²), but no less than three adhesion test per bridge.

Adequate surface preparation will be indicated by tensile bond strengths of primer to the substrate greater than or equal to 0.7 Mpa (100 psi) or failure in the concrete.

If the tensile bond strength is lower than the minimum specified, the Engineer may request additional substrate preparation. Any primer not adequately applied will be removed and a new application effected at the contractor's expense as directed by Engineer.

Cracks and joints shall be treated in accordance with the Manufacturer's recommendations as approved or directed by the Engineer.

4) Preparation

A. Protection

The Applicator shall be responsible for the protection of equipment and adjacent areas from over spray or other contamination. Parapets and bridge joints shall be masked prior to application of the materials.

B. Protection

The concrete deck shall have cured for a minimum of seven days in accordance with applicable provisions of Section 6.01.03 of the Standard Specifications.

Surfaces shall be free of oil, grease, curing compounds, loose particles, moss, algae, growth, laitance, friable matter, dirt, bituminous products, and previous waterproofing materials. If required, degreasing shall be performed via detergent washing in accordance with ASTM D4258.

The surface shall be abrasively cleaned in accordance with ASTM D4259 to provide a sound substrate free from laitance.

The substrate shall be inspected after excavation and all spalls repaired prior to placement of the prime coat. Spalls shall be repaired with rapid cure concrete patch materials per the Engineer's and Manufacturer's recommendations.

Voids and blow holes on vertical surfaces shall be repaired in the same manner.

The surface profile of prepared substrate is not to exceed 6 mm (1/4 inch) (peak to valley) and areas of minor surface deterioration of 13 mm (1/2 inch) and greater in depth shall also be repaired. The extent and location of then surface patches shall require the approval of the Engineer before the system is applied.

There shall be no visible moisture present on the surface at the time of the application of the System. Compressed oil-free air and/or a light passing of a propane torch may be used to dry the substrate.

All steel components to receive membrane waterproofing shall be blast cleaned in accordance with SSPC SP6 and coated with the membrane waterproofing system within the same work shift.

5) Application

A. The Contractor shall retain an Applicator who is fully trained and licensed by the membrane manufacturer who has successfully completed at least three spray membrane projects in the past 5 years. The Contractor shall furnish the Engineer with a list of references including contact persons along with addresses and phone numbers of persons who supervised these projects. This information shall be submitted to the Engineer prior to the start of construction. The Engineer shall have sole authority to determine the adequacy and compliance of the submitted information. Inadequate proof of ability to perform the work will be grounds to reject proposed applicators.

B. The System shall be applied in three distinct steps as listed below:

Substrate preparation

Priming

Membrane application

C. Immediately prior to the application of any components of the System, the surface shall be dry and any remaining dust or loose particles shall be removed using clean, dry oil free compressed air or industrial vacuum.

D. Where the area to be treated is bound by a vertical surface (e.g. curb or wall), the System may be continued up the vertical as necessary.

E. The handling, mixing and addition of components shall be performed in a safe manner to achieve the desired results in accordance with the Manufacturer's recommendations' or as approved or directed by the Engineer.

F. A neat finish with well-defined boundaries and straight edges shall be provided by the Applicator.

G. Primer

The primer shall consist of one coat with an overall coverage rate of 3.0-4.3m²/1 (125-175 ft²/gal) unless otherwise recommended in the manufacturer's written instructions.

All components shall be measured and mixed in accordance with the Manufacturer's recommendations.

The primer shall be spray applied using a single component spray system approved for use by the Manufacturer. If required by site conditions, brush or roller application shall be allowed.

The primer shall be allowed to cure tack-free for a minimum of 30 minutes or as required by the Manufacturer's instructions, whichever time is greater, prior to application of the first lift of waterproofing membrane.

Porous concrete (brick) may require a second coat of primer should the first coat be absorbed.

H. Membrane

The waterproofing membrane shall consist of two coats with a film thickness of 1.5 mm (60 mils) per coat and a total of 3.0 mm (120 mil) to achieve an overall coverage rate of 0.32m²/1 (13.0 ft²/gal). The waterproofing membrane shall consist of two coats of contrasting colors to aid in quality assurance and inspection.

The membrane shall be comprised of two liquid Components A and B and a hardener powder which is to be added to Component B in accordance with the Manufacturer's recommendations.

The substrate shall be coated in a methodical manner. Checks for wet film thickness shall be carried out typically once ever 9m² (100 ft²), where product gel time allows.

I. Repairs

If an area is left untreated or the membrane becomes damaged, a patch repair shall be carried out to restore the integrity of the system. The damaged areas shall be cut back to sound materials and wiped and solvent (e.g. acetone) up to a width of at least 100 mm (4 inches) on the periphery, removing any contaminants unless otherwise recommended by the manufacturer. The substrate shall be primed as necessary, followed by the membrane. A continuous layer shall be obtained over the substrate with a 100 mm (4 inches) overlap onto existing membrane.

Where the membrane is to be joined to existing cured material, the new application shall overlap the existing one by at least 100 mm (4 inches). Cleaning and surface preparation on areas to be lapped shall be as recommended in the manufacturer's written instructions.

J. Application of Tack Coat

1) A polymer-modified bitumen hot melt adhesive bond tack coat shall be provided by the waterproof membrane Manufacturer and be fully compatible with the liquid membrane. The tack coat shall be applied as per the Manufacturer's recommendations with all the guidelines regarding surfacing strictly adhered to.

2) The membrane to be coated shall be clean and free from loose debris, moisture, or other contaminants. Oil, diesel fuel, or grease shall be removed with solvent approved by the Manufacturer.

3) Field Quality Control

The following test shall be conducted by the Applicator or Manufacturer's representative and recorded on a form to be submitted to the Engineer. The testing equipment shall be furnished by the Contractor.

Temperature: Air, substrate temperatures and dew point.

Adhesion Tests: Adhesions tests of the cured membrane to the substrate shall be checked as per (Section 3).

Membrane Thickness: Wet film thickness shall be checked every 9 m² (100 ft²) using a gauge pin or standard comb type thickness gauge during application where membrane gel time permits. Ultrasonic testing, calibrated point-penetrating (destructive) testing, or other methods approved by the Engineer, shall be employed for determination of dry film thickness in the event that rapid set time of the membrane does not allow for the use of wet film thickness testing methods. Repair of the membrane system following destructive testing shall be in accordance with the manufacture's recommendations.

Coverage Rates: Rates for all layers shall be monitored by checking quantity of material used against the area covered.

4) Final Review

The Engineer and the Applicator shall jointly review the area(s) over which the completed System has been installed. Any irregularities or other items that do not meet the requirements of the Engineer shall be addressed at this time.

Method of Measurement: This item shall be measured by the number of square yards of waterproofed surface completed and accepted.

Basis of Payment: This item will be paid for at the contract unit price per square yard of "Membrane Waterproofing (Cold Liquid Elastomeric)", complete in place, which price shall include all surface preparation, furnishing and applying the system, quality control tests, and any necessary repairs and remediation work as well as all materials, equipment, tools, labor incidental to this work.

Pay Item	Pay Unit
Membrane Waterproofing (Cold Liquid Elastomeric)	S.Y.

ITEM #0503904A – JACKING FOR BEARING REPLACEMENT

Description:

Work under this item shall consist of designing, furnishing, installing, maintaining and removing temporary jacking systems (falsework bents, towers, or devices) that can raise the existing superstructure members the minimum amount necessary to reconstruct the pedestals, replace the bearings and reset the bearings subsequent to completion of each stage of construction at Abutment 1 only as shown on the plans, in accordance with these specifications, and as directed by the Engineer. Work under this item shall also include designing, furnishing, installing, maintaining and removing OSHA compliant work platforms and railings at the abutments and piers necessary for bearing replacement, bearing reset and the removal and disposal of the existing steel bearing assemblies.

Materials:

Steel, timber or any other material or combination of materials may be used for the temporary jacking and supporting of the beams.

The materials used shall be of satisfactory quality, and capable of safely carrying the anticipated loads. All materials shall be approved by the Engineer before use.

Work platforms and railings shall be designed for OSHA Loads.

Construction Methods:

Prior to construction, the Contractor shall submit working drawings, design computations and catalog cuts for review in accordance with Article 1.05.02. The design shall conform to the AASHTO Guide Design Specifications for Bridge Temporary Works or other relevant AASHTO Specifications.

The design computations shall include, but not be limited to, the following:

1. Material designations and material lists.
2. Allowable loads or capacities for all structural members and components. Appropriate reductions in allowable stresses and loads shall be used in design when other than new or undamaged materials are used in the construction of the temporary jacking system.
3. Soil or pavement bearing capacities, if applicable.
4. Anticipated lifting loads.
5. Anticipated design loads and stresses on structural members and components.
6. References for all design equations.

The working drawings shall include, but not be limited to, the following:

1. General Notes.
2. Details of jacking/framing assembly such as bents, towers etc.
3. Model number and capacity for each jack – The rated capacity shall be at least 1.5 times the anticipated lifting load. Each jack shall have its rated capacity clearly shown on the attached manufacturer's name plate. The jacks shall be hydraulically operated.
4. Schematic diagram showing the jacks, hoses, pumps, gages and any other jacking equipment – Pressure gages or other load measuring devices shall be used to monitor the applied lifting pressure. The jacks shall be individually employed or joined to operate collectively.
5. Maximum anticipated lifting load for each jacking point location.
6. Anticipated lift at each jacking point location.
7. Conversion table listing hydraulic pressures and their equivalent lifting forces.
8. Jacking procedures outlining the complete sequence of operations to be followed when jacking.
9. A Plan showing the layout of the jacking point locations and the details of the bracing and supporting members. All connections shall be detailed. Jacks shall be set level.
10. Details of proposed modifications to the existing structure and the methods of restoration. All modifications to the bridge shall be removed unless otherwise permitted by the Engineer to remain.
11. The location, length, and type of temporary barriers placed for protection of the jacking system.

The working drawings and design calculations shall be signed and sealed by a Professional Engineer licensed in the State of Connecticut, who shall also be available for consultation interpreting his drawings and calculations, and in the resolution of any problem that may occur during the performance of the work. Please note that each working drawing must be sealed. The furnishing of calculations and working drawings shall not serve to relieve the Contractor of any responsibility for the safety of the work or the successful completion of the work.

The catalog cuts shall contain the specifications for the jacks.

The Contractor shall field verify all working drawing dimensions before fabricating any materials. The jacking system shall be installed and detailed on the working drawings. The jacking system, once installed, shall not prohibit the Contractor from performing any work required by the contract plans. The Engineer may require that any lifting equipment which he deems to be inadequate or faulty be removed from the project site. The Contractor shall have two spare jacks available during the jacking operation.

The amount of jacking shall be the minimal amount as required to accomplish the work as detailed on the plans. The differential lift between adjacent girders shall not exceed 1/8 inch anytime during the jacking or lowering of the girders. In addition, the differential lift between girders present on the limits of the stage lines shall not exceed 1/4 inch anytime during the jacking or lowering of the girders.

Jacking against the concrete deck or any portion thereof shall not be permitted.

The beam ends shall be uniformly jacked the minimum amount necessary to complete the work detailed on the contract plans.

The applied lifting force at each jacking point location shall not exceed the maximum anticipated lifting load without approval by the Engineer.

The Contractor shall carefully inspect and maintain the jacking system during its use.

After the beams are raised, blocking may be installed as necessary to support the superstructure while work is performed on replacing the bearings.

After the pedestals have been reconstructed and bearings have been replaced and accepted, the beam ends shall be uniformly lowered until all loads are carried by the bearings.

The steel girders with replaced bearings at Abutment 1 shall be jacked again subsequent to completion of each stage of construction in order to reset the bearings.

When the jacking system is no longer required, the Contractor shall promptly remove and dispose of the equipment and materials. The area shall be restored to its original condition and to the satisfaction of the Engineer.

The Contractor shall be responsible for any damage caused to any part of the structure, utilities, pavement, or vehicular traffic as a result of the work required by this special provision. He shall repair and/or replace any such damage at no cost to the State, and to the satisfaction to the Engineer.

The contract plans depict one method of jacking the beams at the bridge abutments and the piers. The contractor may submit alternative methods, supported by working drawings and design computations (see earlier paragraphs for submission requirements), for review and approval by the Engineer.

The existing steel bearing assemblies shall be removed subsequent to the jacking operations in accordance with the details provided in the contract plans and disposed off by the contractor.

Method of Measurement:

This work shall be measured for the payment by the number of beam ends jacked, supported, and lowered. Re-jacking the girders at Abutment 1 subsequent to completion of each stage of construction in order to reset the bearings will not be measured for payment. No additional measurement shall be made for jacking a beam end multiple times. Removal and disposal of the existing steel bearing assemblies, furnishing, installation and removal of OSHA compliant work platforms with railings at abutments and piers will not be measured for payment.

Basis of Payment:

This work shall be paid for at the contract unit price for each “Jacking for Bearing Replacement”, complete and accepted, which price shall include all materials, tools, equipment, design and furnishing of working drawings and labor incidental thereto including the furnishing, installation and removal of OSHA compliant work platforms with railings at abutments and piers and removal and disposal of the existing steel bearing assemblies.

Elastomeric bearings for replacement shall be paid under the item “Steel-Laminated Elastomeric Bearings”.



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Affirmative Action/Equal Opportunity Employer

December 4, 2013

State of CT, Department of Transportation
Mark Alexander
2800 Berlin Turnpike - P.O. Box 317546
Newington, CT 06131-7546

SUBJECT: Permit #201303642-SJ
Route 34 Derby Bridge #00947, Derby

Dear Mr. Alexander:

Enclosed is the signed permit which constitutes the approval of your application to conduct regulated activities. Your attention is directed to the conditions of the enclosed permit. Construction or work must conform to that which is authorized.

Please note that Appendix B of the permit has been enclosed for your convenience to comply with Connecticut General Statutes Section 22a-363g. Also, please note that the Permit Notice, found at the back of your authorization, must be posted at the work area while the work is being undertaken. Please refer to the SPECIAL TERMS AND CONDITIONS of your permit for further details.

If you have not already done so, you should contact the local Planning and Zoning Office to determine local permit requirements on your project, if any. Also, your activity may be eligible for General Permit authorization from the U.S. Army Corps of Engineers ("Corps"). The State of Connecticut forwarded a copy of its tentative determination for this activity to the Corps for its determination of General Permit eligibility. You do not need to apply directly to the Corps unless they notify you to do so. For more information regarding this federal process, you may write to the Corps New England Division, Regulatory Branch, 696 Virginia Road, Concord, Massachusetts 01742-2751 or call (978) 318-8335.

If you have any questions concerning your permit, please contact me at 860-424-3693 or susan.jacobson@ct.gov.

Sincerely,

A handwritten signature in blue ink that reads "Susan Jacobson".

Susan Jacobson, Environmental Analyst
Office of Long Island Sound Programs
Bureau of Water Protection and Land Reuse

Enc. – Permit #201303642-SJ (original cover letter, Appendix B and Permit Notice; Permit copy)

cc: File #201303642-SJ (original permit; copy cover letter, Appendix B, Permit Notice)
First Class to: Adjacent Property Owners; State of CT, Department of Transportation

E-mail to: US ACOE, c/o Susan Lee; State of CT, Department of Transportation; Commissioner of DOT and Bureau of Waterways; Municipal CEO; Conservation, Planning, Zoning and Harbor Management Commissions; Dept. of Agriculture/Aquaculture Division

PERMIT

Permit No: 201303642-SJ

Municipality: Derby

Work Area: Naugatuck River off property located at
Route 34 Derby Bridge #00947

Permittee: State of CT, Department of Transportation
2800 Berlin Turnpike - P.O. Box 317546
Newington, CT 06131-7546

Pursuant to sections 22a-359 through 22a-363g of the Connecticut General Statutes (“CGS”) and in accordance with CGS section 22a-98 and the Connecticut Water Quality Standards, effective February 25, 2011, a permit is hereby granted by the Commissioner of Energy and Environmental Protection (“Commissioner”) to replace and modify a bridge for transportation infrastructure as is more specifically described below in the SCOPE OF AUTHORIZATION, off property identified as the “work area” above.

*******NOTICE TO PERMITTEES AND CONTRACTORS*******

UPON INITIATION OF ANY WORK AUTHORIZED HEREIN, THE PERMITTEE ACCEPTS AND AGREES TO COMPLY WITH ALL TERMS AND CONDITIONS OF THIS PERMIT. FAILURE TO CONFORM TO THE TERMS AND CONDITIONS OF THIS PERMIT MAY SUBJECT THE PERMITTEE AND ANY CONTRACTOR TO ENFORCEMENT ACTIONS, INCLUDING INJUNCTIONS AS PROVIDED BY LAW AND PENALTIES UP TO \$1,000.00 PER DAY PURSUANT TO THE ADMINISTRATIVE CIVIL PENALTY POLICY DESCRIBED IN SECTIONS 22a-6b-1 THROUGH 22a-6b-15 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES.

SCOPE OF AUTHORIZATION

The Permittee is hereby authorized to conduct the following work as described in application #201303642-SJ, including 36 sheets of plans with sheets 1-27, 30, and 32 dated May 2013 and sheets 28, 29, 31, and 33 dated September 2013, submitted by the Permittee to the Commissioner and attached hereto, as follows:

1. replace and modify bridge decking and superstructure by:

- a. installing a debris collection shield and relocating, as necessary;
 - b. installing temporary work platforms;
 - c. removing the existing deck and parapets;
 - d. modifying the northern section of wingwalls, piers and abutments to accommodate wider decking;
 - e. conducting substantial repairs on superstructure, as necessary;
 - f. eliminating scuppers and modifying the drainage system;
 - g. replacing a 16" water main;
 - h. replacing decking, sidewalks, parapets, lighting, signs, fencing and median barriers;
 - i. conducting repairs on the abutments, wingwalls and piers; and
 - j. removing the debris collection shield; and
2. place boulders in the river for habitat enhancement.

SPECIAL TERMS AND CONDITIONS

1. Boulder placement authorized in SCOPE OF AUTHORIZATION, paragraph 2., above, is prohibited between March 1st and June 30th, inclusive, of any year unless otherwise authorized in writing by the Commissioner. At least two weeks prior to conducting such work, the Permittee shall notify staff of the Inland Fisheries Division at 860-567-8998.
2. Prior to the commencement of bridge work authorized in SCOPE OF AUTHORIZATION, paragraph 1., above, the Permittee shall install a containment system for debris collection. The Permittee shall maintain or modify, as needed, the containment system to ensure optimal operating condition until the authorized work has been completed.
3. Prior to wingwall modifications authorized in SCOPE OF AUTHORIZATION, paragraph 1.d., above, the Permittee shall excavate landward of the wall and install a temporary earth retaining system to prevent sediment from entering the river.
4. The Permittee shall, to the maximum extent practicable, conduct the repairs authorized in SCOPE OF AUTHORIZATION, paragraph 1.i., above, during periods of lower water.
5. Not later than two (2) weeks prior to the commencement of any work authorized herein, the Permittee shall submit to the Commissioner, on the form attached hereto as Appendix A, the name(s) and address(es) of all contractor(s) employed to conduct such work and the expected date for commencement and completion of such work, if any.
6. The Permittee shall file Appendix B on the land records of the municipality in which the subject property is located not later than thirty days after permit issuance pursuant to CGS Section 22a-363g. A copy of Appendix B with a stamp or other such proof of filing with the municipality shall be submitted to the Commissioner no later than sixty (60) days after permit issuance.
7. The Permittee shall give a copy of this permit to the contractor(s) who will be carrying out the activities authorized herein prior to the start of construction and shall receive a written receipt for such copy, signed and dated by such contractor(s). The Permittee's contractor(s)

shall conduct all operations at the site in full compliance with this permit and, to the extent provided by law, may be held liable for any violation of the terms and conditions of this permit. At the work area the contractor(s) shall, whenever work is being performed, make available for inspection a copy of this permit and the final plans for the work authorized herein.

8. The Permittee shall post the attached Permit Notice in a conspicuous place at the work area while the work authorized herein is undertaken.
9. Except as specifically authorized by this permit, no equipment or material, including but not limited to, fill, construction materials, excavated material or debris, shall be deposited, placed or stored in any wetland or watercourse on or off-site, nor shall any wetland or watercourse be used as a staging area or access way other than as provided herein.
10. All waste material generated by the performance of the work authorized herein shall be disposed of by the Permittee at an upland site approved for the disposal of such waste material, as applicable.
11. On or before ninety (90) days after completion of the work authorized herein, the Permittee shall submit to the Commissioner "as-built" plans of the work area showing all tidal datums and structures, including any proposed elevation views and cross sections included in the permit. Such plans shall be the original ones and be signed and sealed by an engineer, surveyor or architect, as applicable, who is licensed in the State of Connecticut.

GENERAL TERMS AND CONDITIONS

1. All work authorized by this permit shall be completed within five (5) years from date of issuance of this permit ("work completion date") in accordance with all conditions of this permit and any other applicable law.
 - a. The Permittee may request a one-year extension of the work completion date. Such request shall be in writing and shall be submitted to the Commissioner at least thirty (30) days prior to said work completion date. Such request shall describe the work done to date, what work still needs to be completed, and the reason for such extension. It shall be the Commissioner's sole discretion to grant or deny such request.
 - b. Any work authorized herein conducted after said work completion date or any authorized one year extension thereof is a violation of this permit and may subject the Permittee to enforcement action, including penalties, as provided by law.
2. In conducting the work authorized herein, the Permittee shall not deviate from the attached plans, as may be modified by this permit. The Permittee shall not make de minimis changes from said plans without prior written approval of the Commissioner.
3. The Permittee may not conduct work waterward of the coastal jurisdiction line or in tidal wetlands at this permit site other than the work authorized herein, unless otherwise authorized by the Commissioner pursuant to CGS section 22a-359 et. seq. and/or CGS section 22a-32 et. seq.

4. The Permittee shall maintain all structures or other work authorized herein in good condition. Any such maintenance shall be conducted in accordance with applicable law including, but not limited to, CGS sections 22a-28 through 22a-35 and CGS sections 22a-359 through 22a-363g.
5. In undertaking the work authorized hereunder, the Permittee shall not cause or allow pollution of wetlands or watercourses, including pollution resulting from sedimentation and erosion. For purposes of this permit, "pollution" means "pollution" as that term is defined by CGS section 22a-423.
6. Upon completion of any work authorized herein, the Permittee shall restore all areas impacted by construction, or used as a staging area or access way in connection with such work, to their condition prior to the commencement of such work.
7. The work specified in the SCOPE OF AUTHORIZATION is authorized solely for the purpose set out in this permit. No change in the purpose or use of the authorized work or facilities as set forth in this permit may occur without the prior written authorization of the Commissioner. The Permittee shall, prior to undertaking or allowing any change in use or purpose from that which is authorized by this permit, request authorization from the Commissioner for such change. Said request shall be in writing and shall describe the proposed change and the reason for the change.
8. The Permittee shall allow any representative of the Commissioner to inspect the work authorized herein at reasonable times to ensure that it is being or has been accomplished in accordance with the terms and conditions of this permit.
9. This permit is not transferable without prior written authorization of the Commissioner. A request to transfer a permit shall be submitted in writing and shall describe the proposed transfer and the reason for such transfer. The Permittee's obligations under this permit shall not be affected by the passage of title to the work area to any other person or municipality until such time as a transfer is authorized by the Commissioner.
10. Any document required to be submitted to the Commissioner under this permit or any contact required to be made with the Commissioner shall, unless otherwise specified in writing by the Commissioner, be directed to:

Permit Section
Office of Long Island Sound Programs
Department of Energy and Environmental Protection
79 Elm Street
Hartford, Connecticut 06106-5127
(860) 424-3034
Fax # (860) 424-4054

11. The date of submission to the Commissioner of any document required by this permit shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this permit, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally

delivered or the date three (3) days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" as used in this permit means calendar day. Any document or action which is required by this permit to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed on or before the next day which is not a Saturday, Sunday, or a Connecticut or federal holiday.

12. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this permit shall be signed by the Permittee and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense."
13. In evaluating the application for this permit the Commissioner has relied on information and data provided by the Permittee and on the Permittee's representations concerning site conditions, design specifications and the proposed work authorized herein, including but not limited to representations concerning the commercial, public or private nature of the work or structures authorized herein, the water-dependency of said work or structures, its availability for access by the general public, and the ownership of regulated structures or filled areas. If such information proves to be false, deceptive, incomplete or inaccurate, this permit may be modified, suspended or revoked, and any unauthorized activities may be subject to enforcement action.
14. In granting this permit, the Commissioner has relied on representations of the Permittee, including information and data provided in support of the Permittee's application. Neither the Permittee's representations nor the issuance of this permit shall constitute an assurance by the Commissioner as to the structural integrity, the engineering feasibility or the efficacy of such design.
15. In the event the Permittee becomes aware that they did not or may not comply, or did not or may not comply on time, with any provision of this permit or of any document required hereunder, the Permittee shall immediately notify the Commissioner and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. In so notifying the Commissioner, the Permittee shall state in writing the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and the Permittee shall comply with any dates which may be approved in writing by the Commissioner. Notification by the Permittee shall not excuse noncompliance or delay and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically stated by the Commissioner in writing.
16. This permit may be revoked, suspended, or modified in accordance with applicable law.

17. The issuance of this permit does not relieve the Permittee of their obligations to obtain any other approvals required by applicable federal, state and local law.
18. This permit is subject to and does not derogate any present or future property rights or powers of the State of Connecticut, and conveys no property rights in real estate or material nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the property or activity affected hereby.

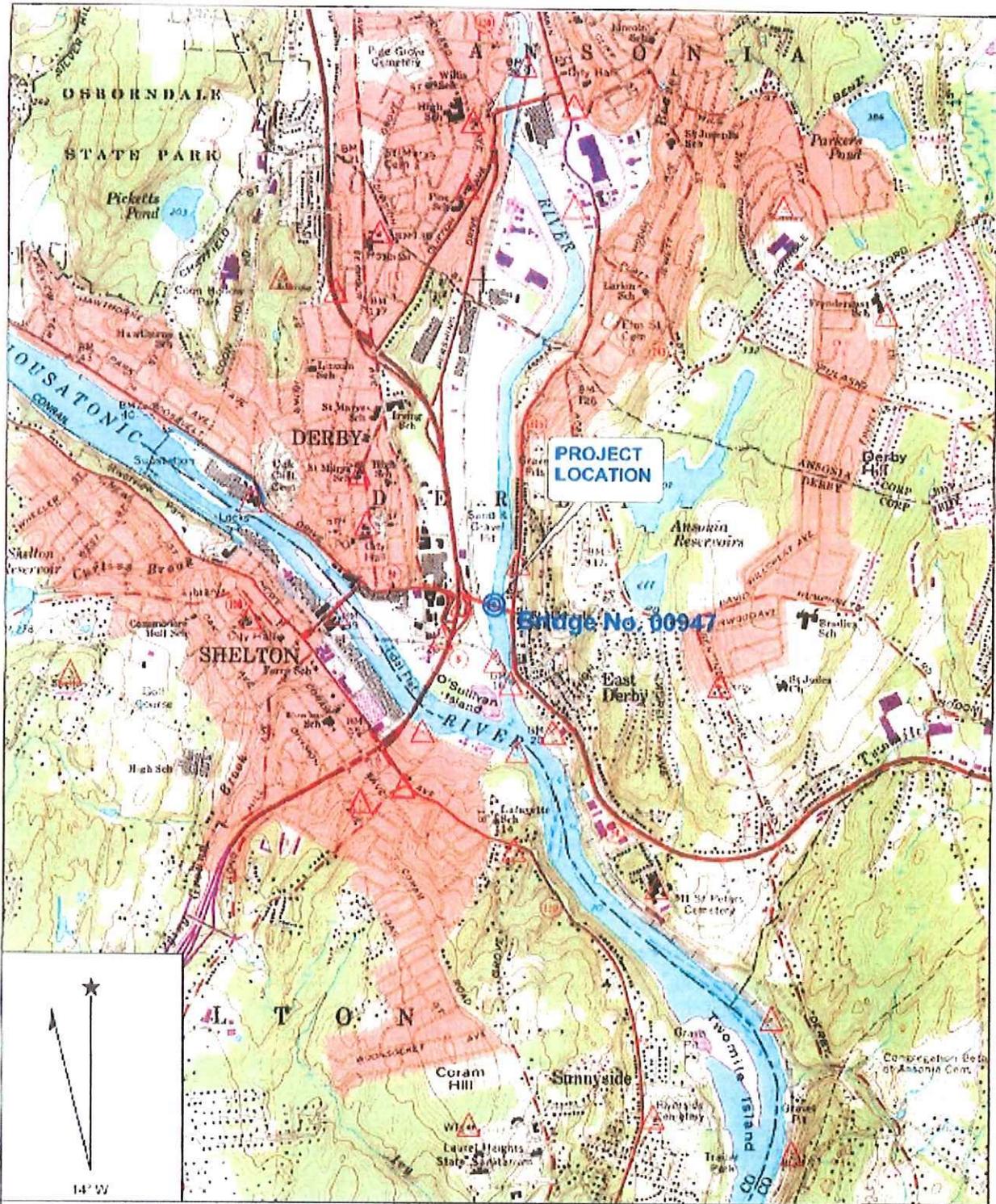
Issued on 12/3, 2013

STATE OF CONNECTICUT
DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION



Macky McCleary
Deputy Commissioner

Permit #201303642-SJ
State of CT, Department of Transportation



Name ANSONIA
 Date: 3/27/2013
 Scale: 1 inch equals 2000 feet

Location: 041° 19' 07.28" N 073° 04' 56.08" W
 Caption: Bridge No. 0047
 Route 34 over Naugatuck River
 Town of Derby

Copyright (C) 2002, MapInfo, Inc

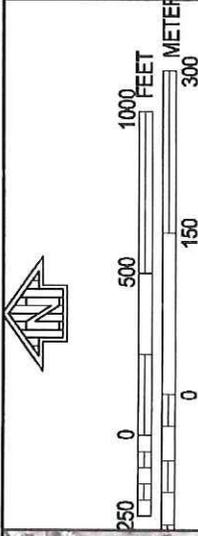
FILE: G:\150042148\4240880947\01\ISP\Envir_Comp\1501-LOCATION_PLAN.dwg

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LOCATION PLAN

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
 OVER NAUGATUCK RIVER, DERBY, CT
 APPLICATION BY: STATE OF CONNECTICUT
 DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
 MAY 2013
 FIGURE:
 1



PANEL U4U411

FIRM
FLOOD INSURANCE RATE MAP
NEW HAVEN COUNTY,
CONNECTICUT
(ALL JURISDICTIONS)

PANEL 404 OF 635
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

NUMBER	PANEL SUFFIX
09097	H
09095	H

ANSWER CITY OF
DERBY CITY OF



MAP NUMBER
 09009C0404H

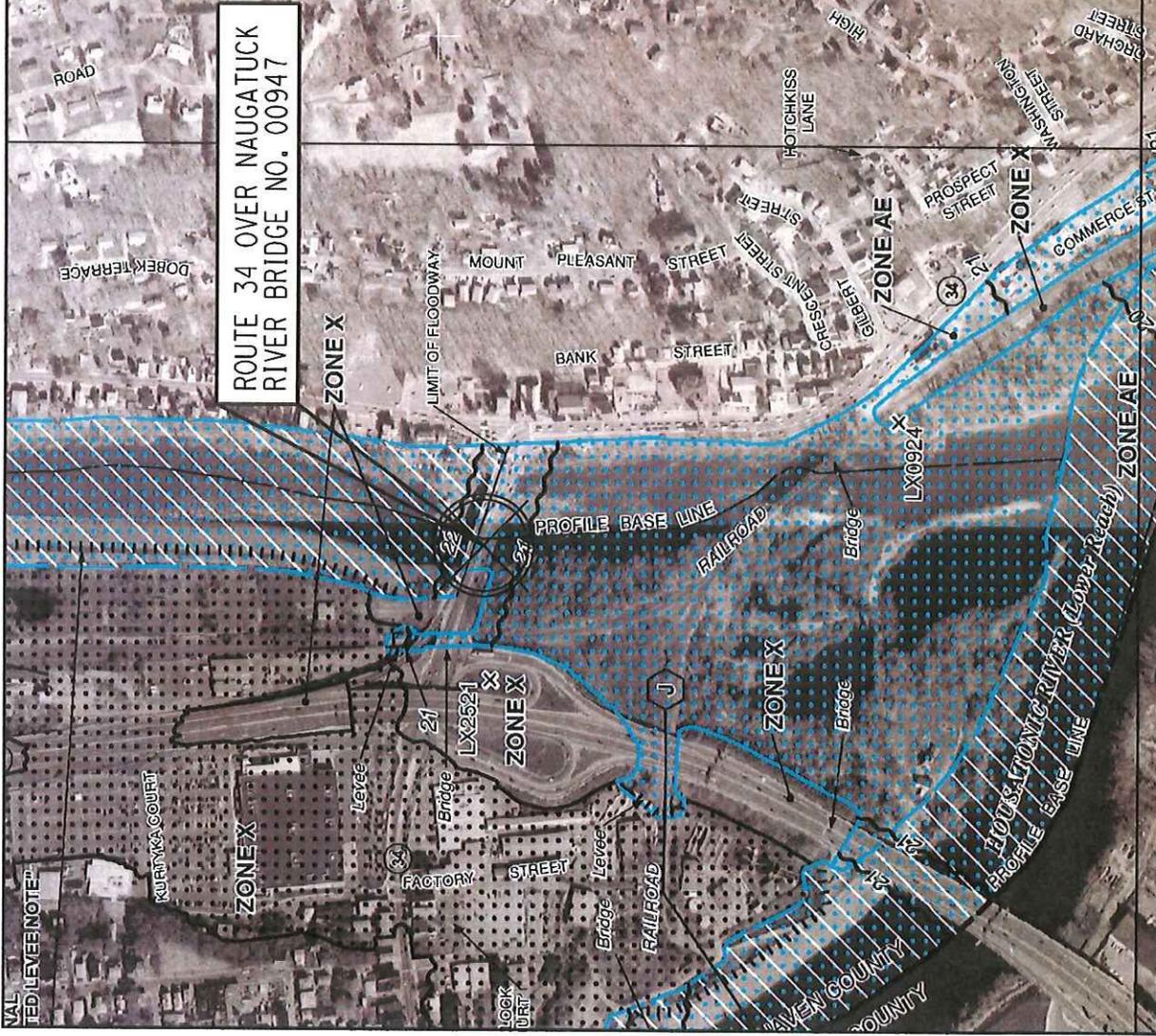
EFFECTIVE DATE
 DECEMBER 17, 2010

Federal Emergency Management Agency

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

NATIONAL FLOOD INSURANCE PROGRAM

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.fema.gov



ROUTE 34 OVER NAUGATUCK RIVER BRIDGE NO. 00947

FLOOD INSURANCE RATE MAP

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34 OVER NAUGATUCK RIVER, DERBY, CT

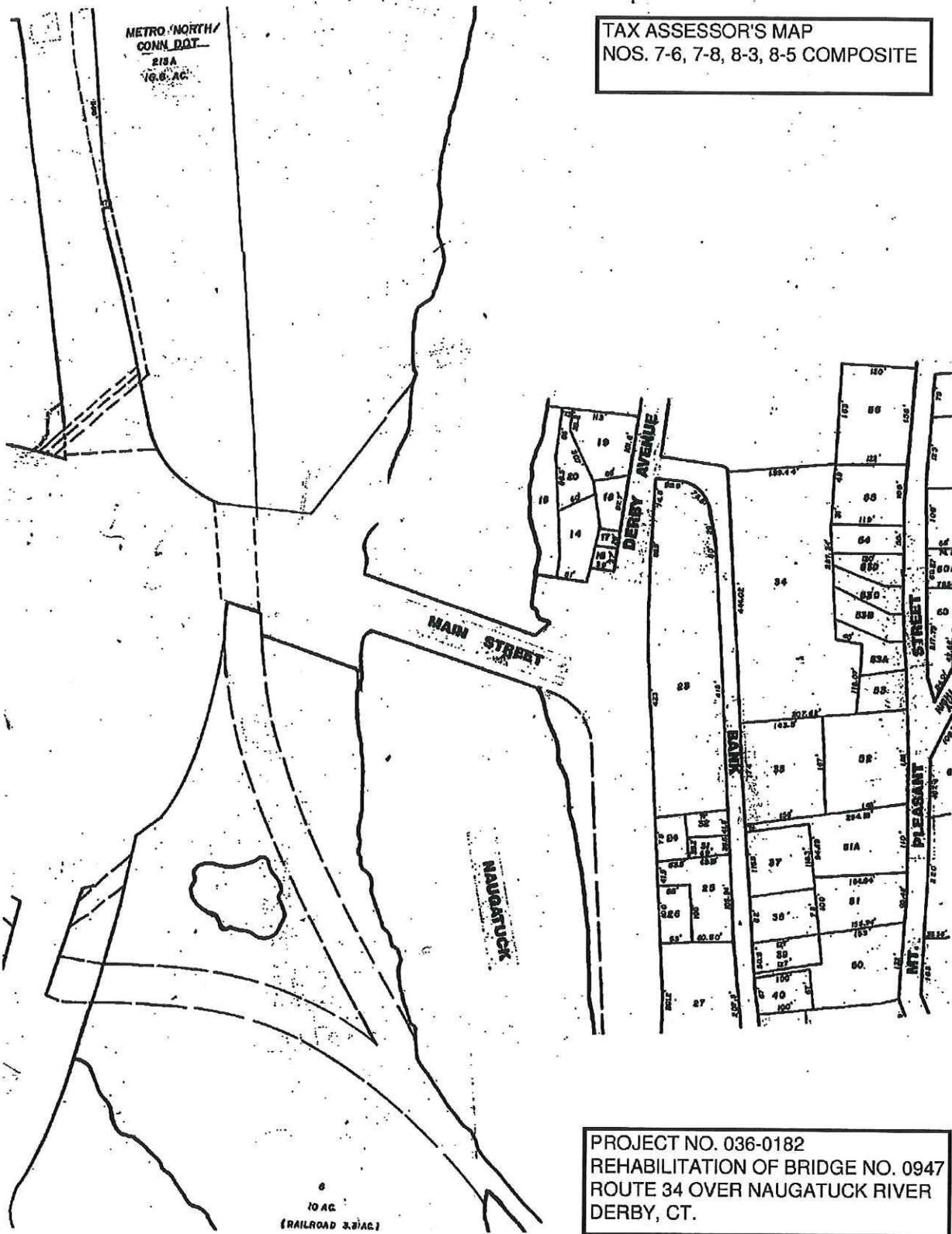
APPLICATION BY: STATE OF CONNECTICUT
 DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
 MAY 2013

FIGURE:
 2

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TAX ASSESSOR'S MAP
 NOS. 7-6, 7-8, 8-3, 8-5 COMPOSITE



PROJECT NO. 036-0182
 REHABILITATION OF BRIDGE NO. 0947
 ROUTE 34 OVER NAUGATUCK RIVER
 DERBY, CT.

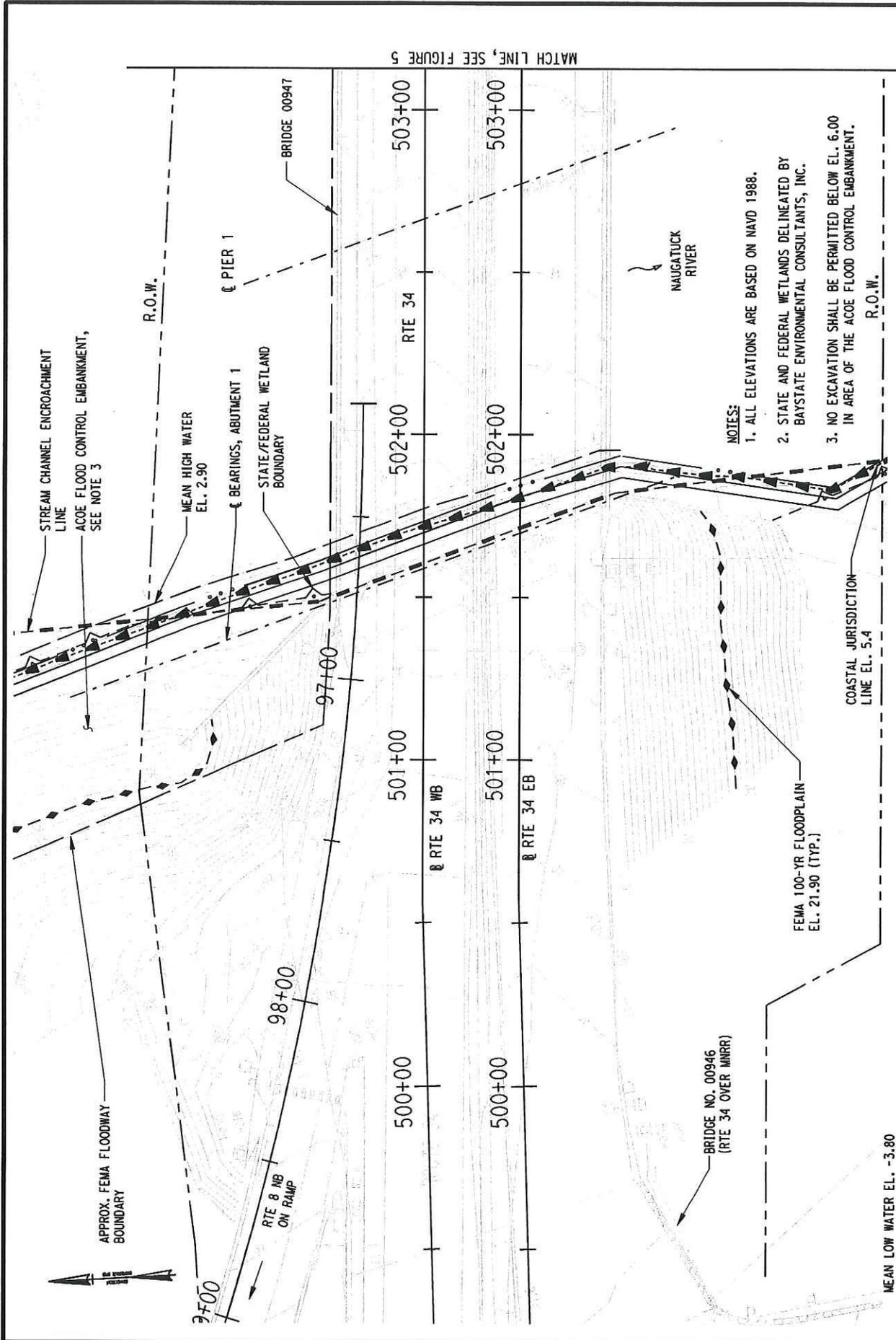
FILE: 0:\50042148\4240880047\01\SP\Envir\Comp\1603-TAX_ASSESSOR_WIP.dwg

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TAX ASSESSOR MAP

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
 OVER NAUGATUCK RIVER, DERBY, CT
 APPLICATION BY: STATE OF CONNECTICUT
 DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
 MAY 2013
 FIGURE:
 3



MATCH LINE, SEE FIGURE 5

NOTES:
 1. ALL ELEVATIONS ARE BASED ON NAVD 1988.
 2. STATE AND FEDERAL WETLANDS DELINEATED BY BAYSTATE ENVIRONMENTAL CONSULTANTS, INC.

3. NO EXCAVATION SHALL BE PERMITTED BELOW EL. 6.00 IN AREA OF THE ACOE FLOOD CONTROL EMBANKMENT.

EXISTING SITE PLAN -1
 SCALE IN FEET
 0 40 80
SCALE 1" = 40'

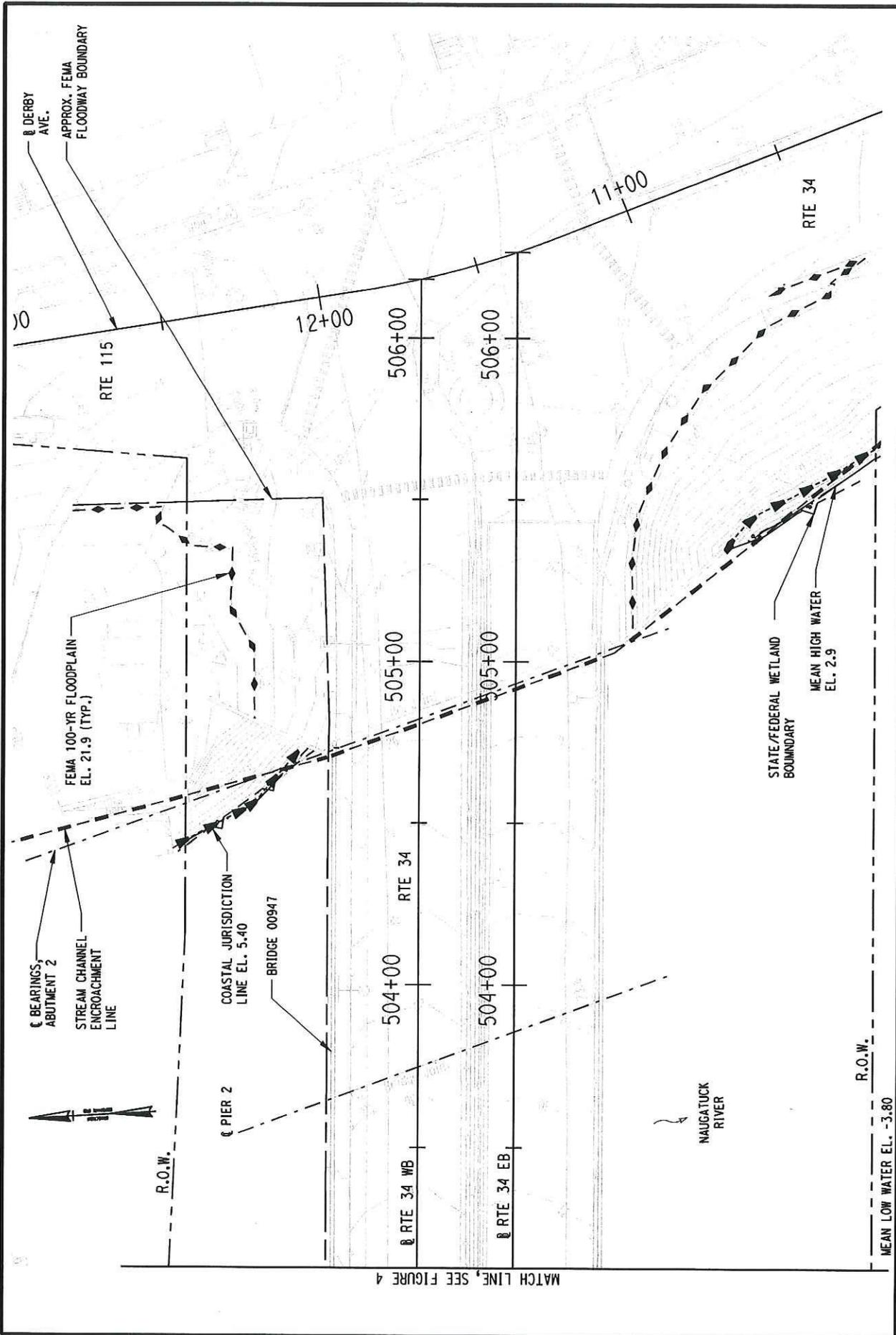


REHABILITATION OF BRIDGE NO. 00947, ROUTE 34 OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
 DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

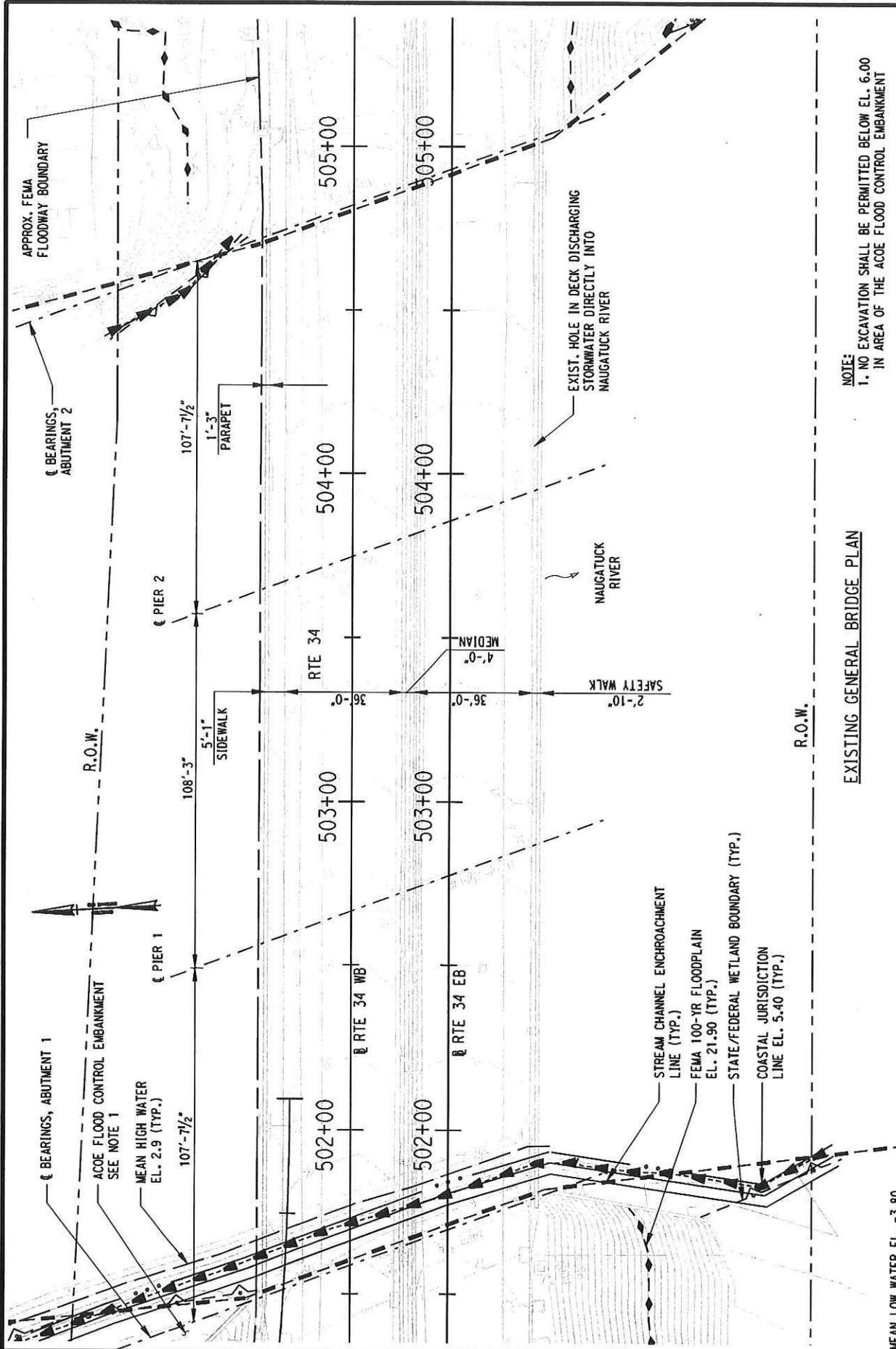
DATE: MAY 2013

FIGURE: 4



	EXISTING SITE PLAN - 2 SCALE IN FEET SCALE 1" = 40'	DATE: MAY 2013
	REHABILITATION OF BRIDGE NO. 00947, ROUTE 34 OVER NAUGATUCK RIVER, DERBY, CT	FIGURE: 5
APPLICATION BY: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182		

FILE: 01:5002148142408094710115PEnvr Comp\106-EXIST GPF-1.dwg



NOTE:
1. NO EXCAVATION SHALL BE PERMITTED BELOW EL. 6.00
IN AREA OF THE ACOE FLOOD CONTROL EMBANKMENT

EXISTING GENERAL BRIDGE PLAN

EXISTING BRIDGE PLAN
SCALE IN FEET

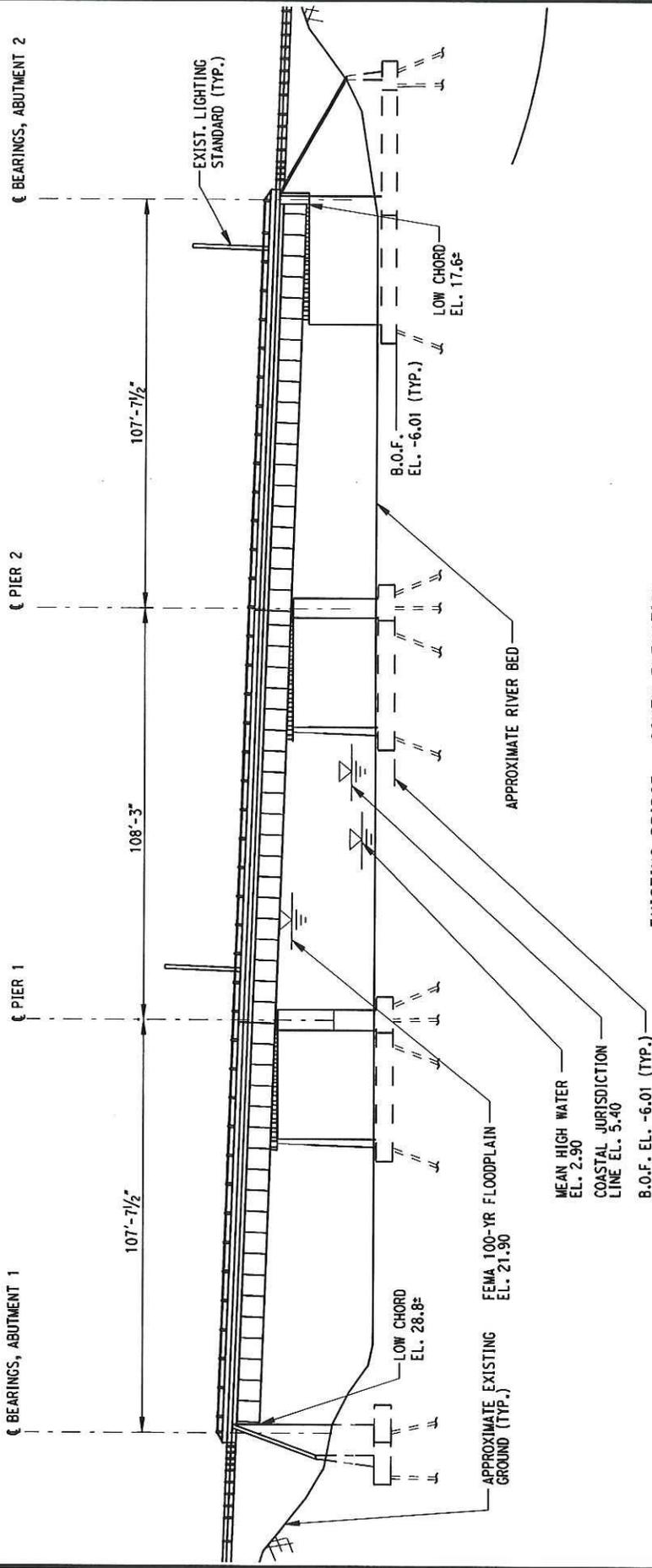
SCALE 1" = 40'

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
MAY 2013

FIGURE:
6



EXISTING BRIDGE - SOUTH ELEVATION

MEAN LOW WATER EL. -3.80



EXISTING BRIDGE ELEVATION
SCALE IN FEET



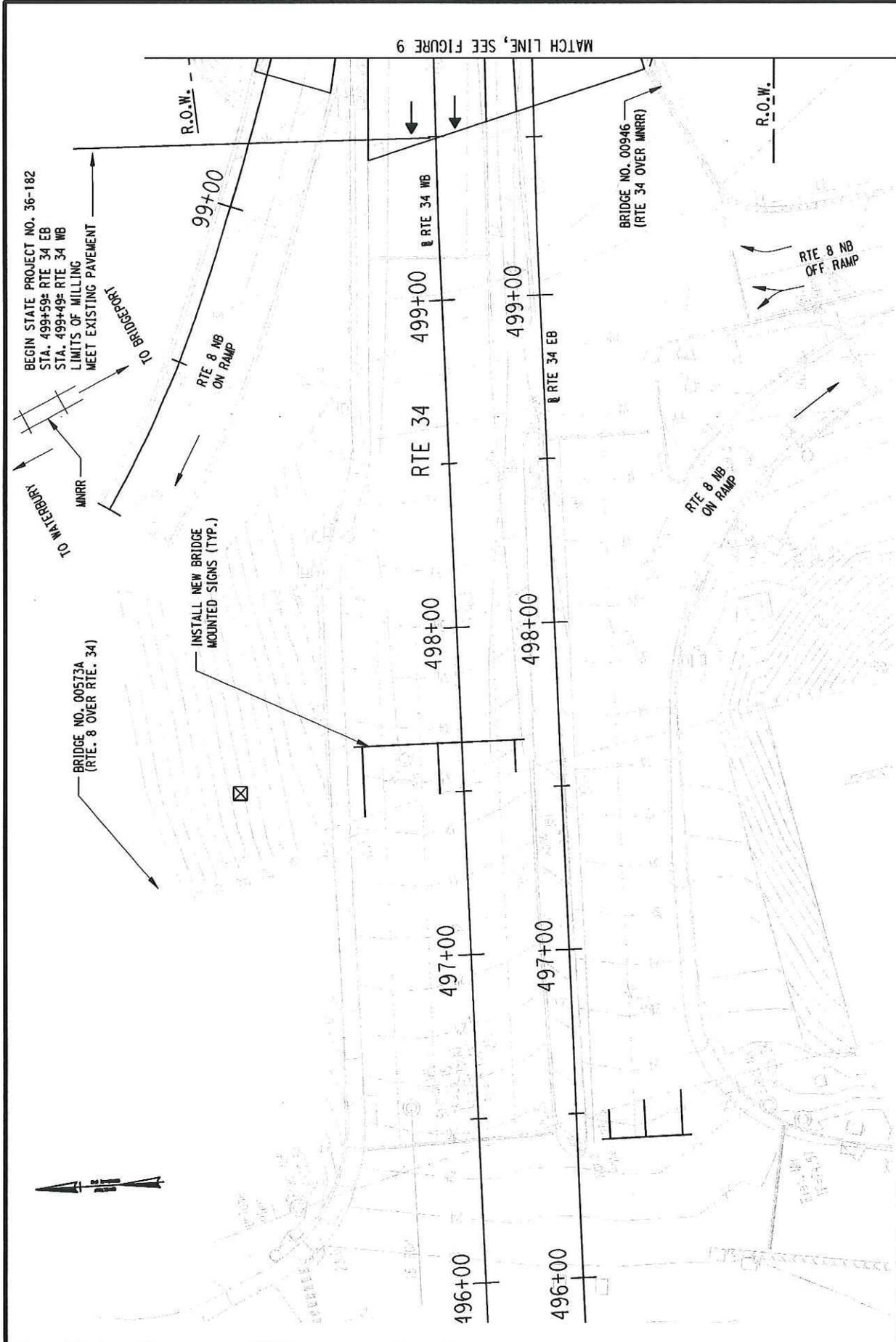
SCALE 1"=40'

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
MAY 2013

FIGURE:
7



MATCH LINE, SEE FIGURE 9

MEAN LOW WATER EL. -3.80

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PROPOSED PLAN 1
 SCALE IN FEET

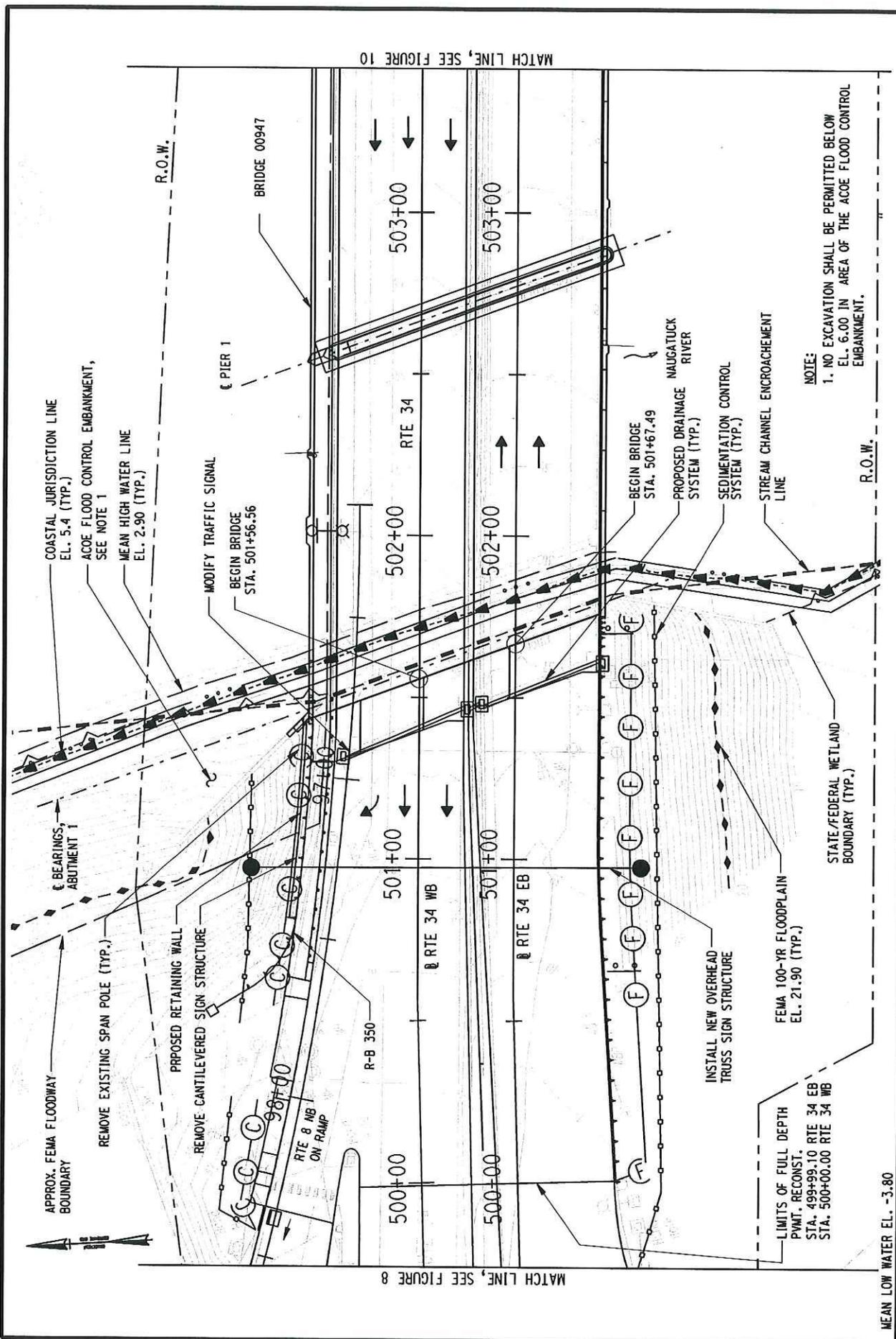
SCALE 1"=40'

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
 OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
 DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE: MAY 2013

FIGURE: 8



NOTE:
1. NO EXCAVATION SHALL BE PERMITTED BELOW EL. 6.00 IN AREA OF THE ACOE FLOOD CONTROL EMBANKMENT.

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PROPOSED PLAN 2
SCALE IN FEET

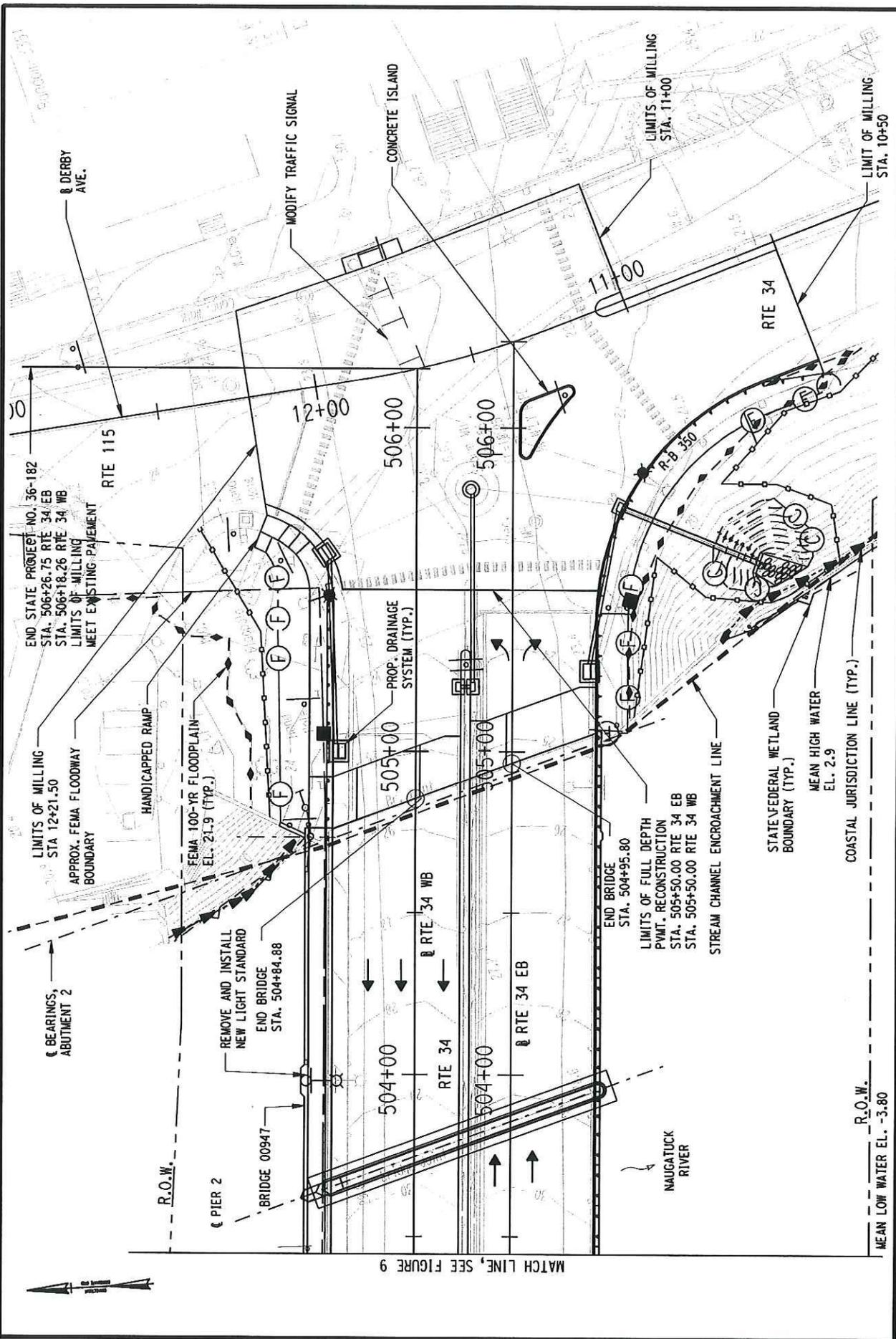
SCALE 1" = 40'

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
OVER NAUGATUCK RIVER, DERBY, CT

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DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE: MAY 2013

FIGURE: 9



PROPOSED PLAN - 3

SCALE IN FEET

0 40 80

SCALE 1"=40'

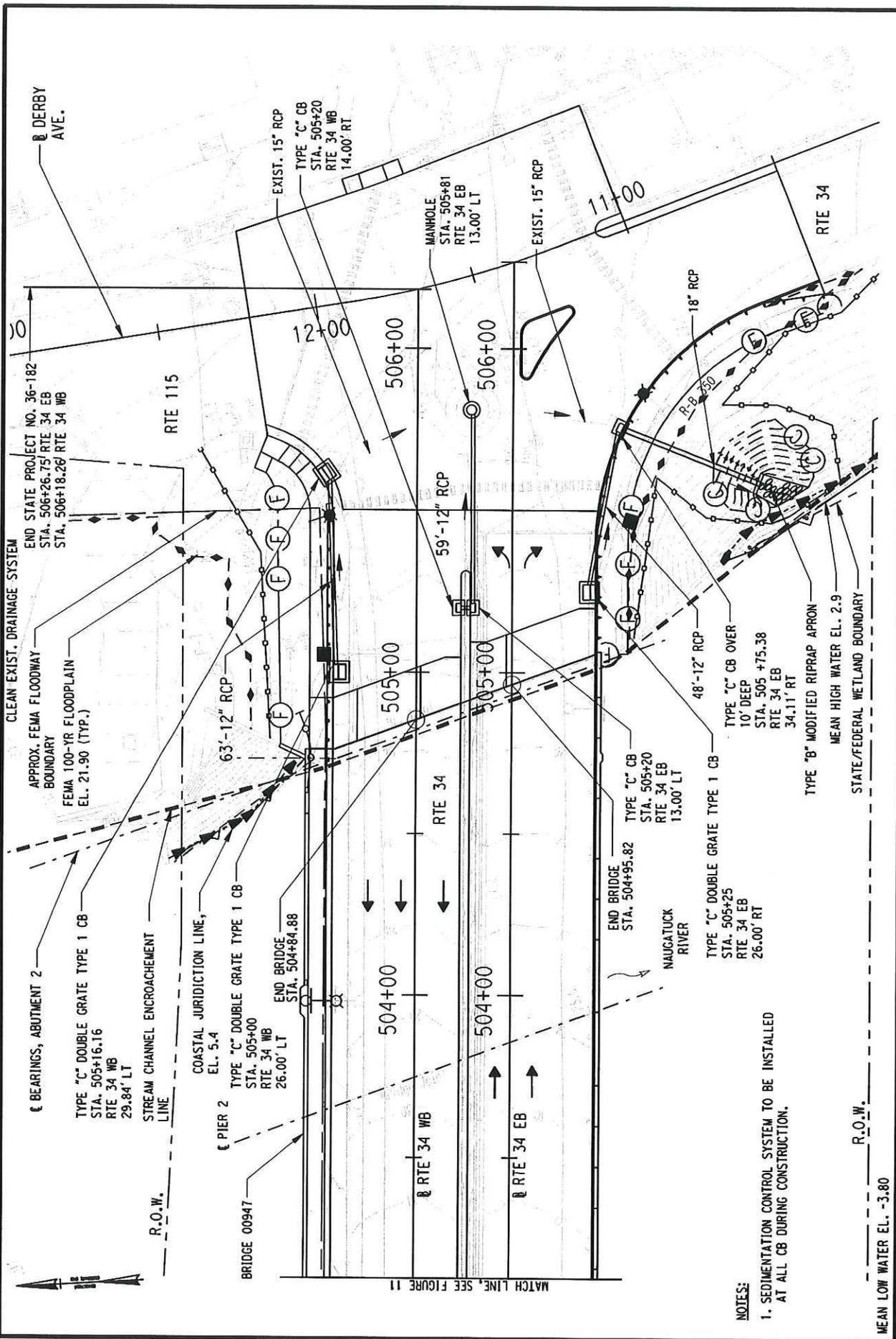
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REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE: MAY 2013

FIGURE: 10



NOTES:
 1. SEDIMENTATION CONTROL SYSTEM TO BE INSTALLED AT ALL CB DURING CONSTRUCTION.

MEAN LOW WATER EL. -3.80



DRAINAGE PLAN 2
 SCALE IN FEET



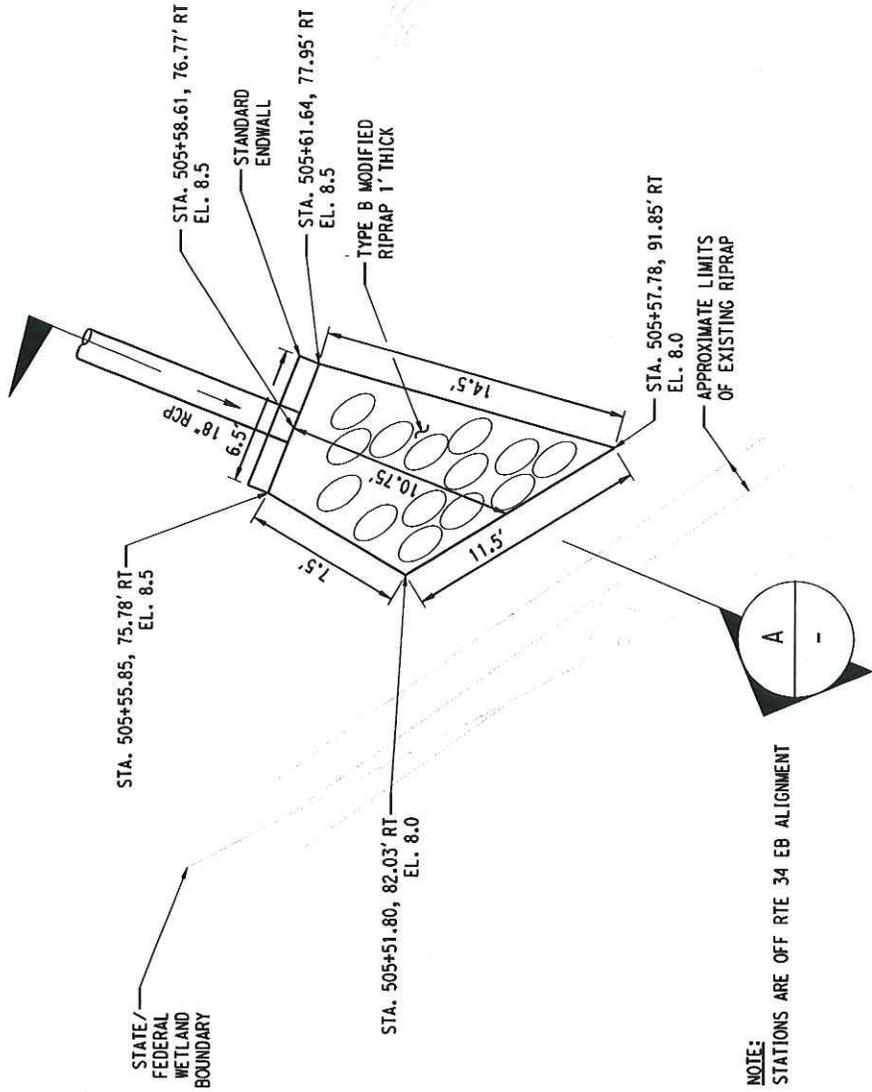
REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
 OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
 DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
 MAY 2013

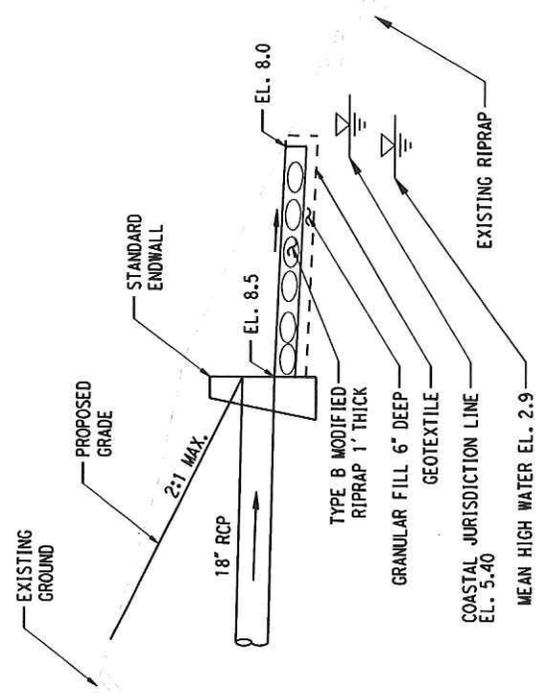
FIGURE:
 12

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NOTE:
STATIONS ARE OFF RTE 34 EB ALIGNMENT

PLAN



SECTION
A

**RIPRAP SPLASH PAD DETAIL FOR
OUTFALL AT SOUTHEAST APPROACH EMBANKMENT**
NOT TO SCALE

MEAN LOW WATER EL. -3.80

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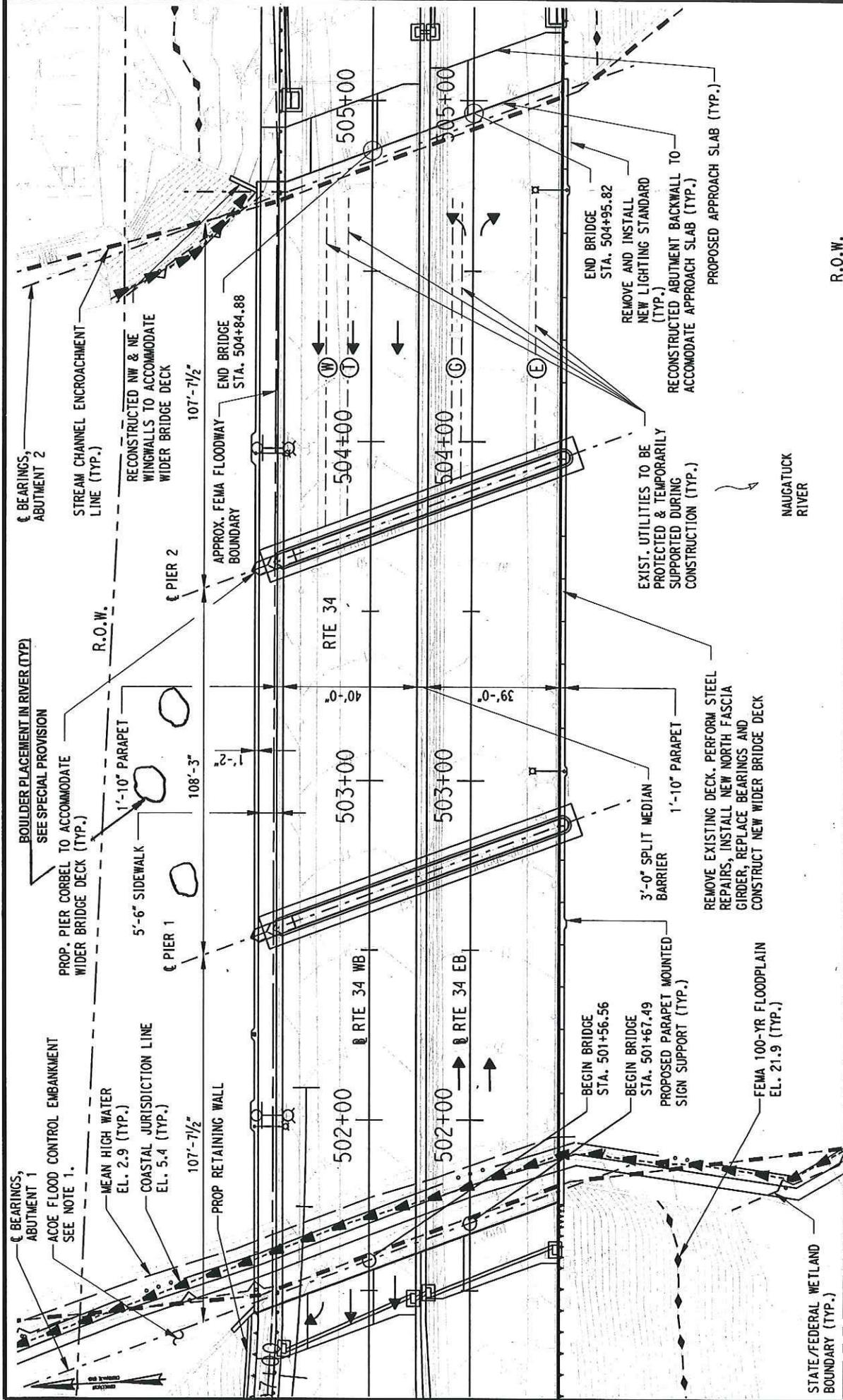
RIPRAP SPLASH PAD

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
MAY 2013

FIGURE:
13



GENERAL BRIDGE PLAN

NOTE
1. NO EXCAVATION SHALL BE PERMITTED BELOW EL. 6.00 IN THE AREA OF THE ACOE FLOOD CONTROL EMBANKMENT.

MEAN LOW WATER EL. -3.80

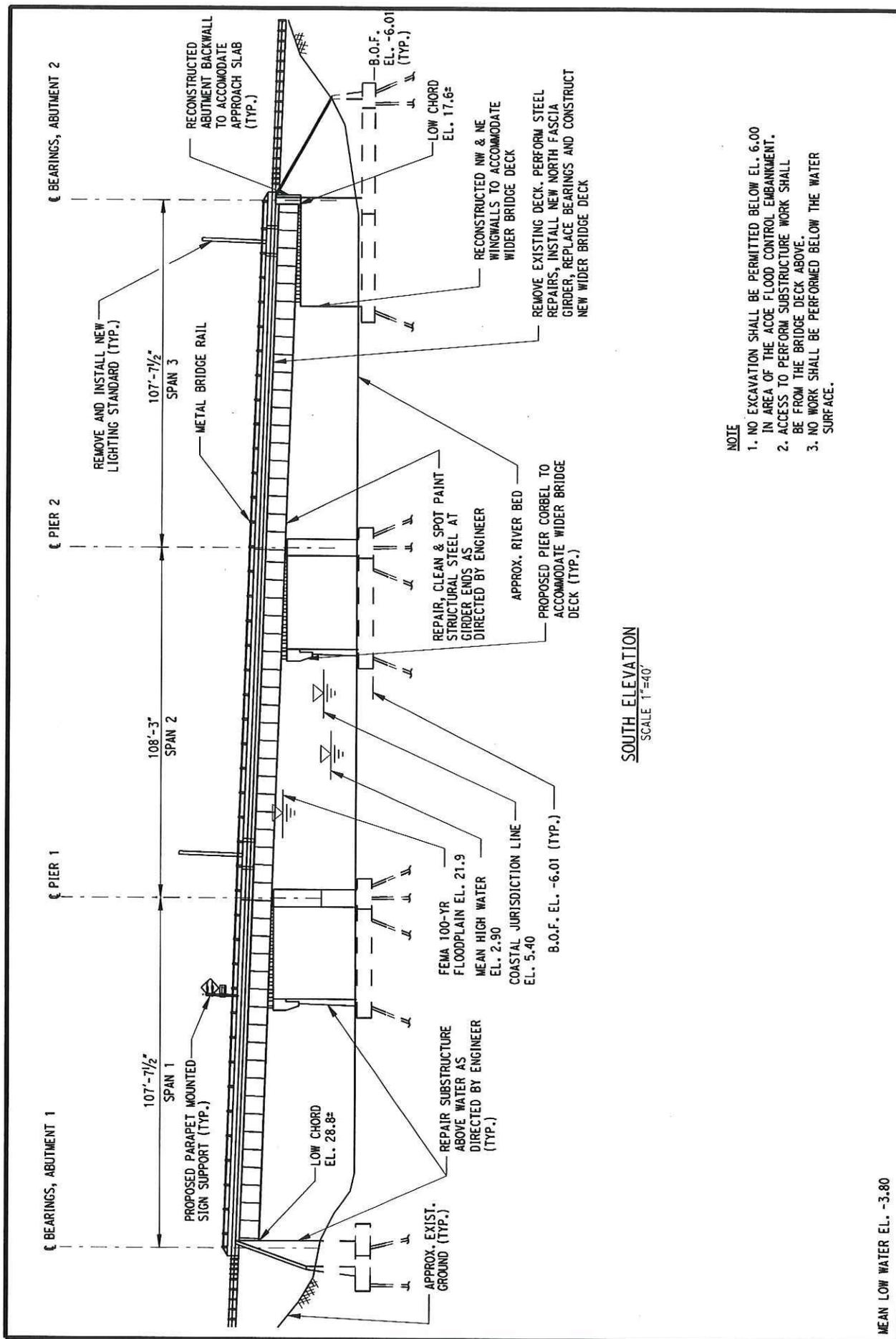
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PROPOSED GENERAL BRIDGE PLAN
SCALE IN FEET



REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
OVER NAUGATUCK RIVER, DERBY, CT
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DATE: MAY 2013
FIGURE: 14



SOUTH ELEVATION
SCALE 1"=40'

- NOTE**
1. NO EXCAVATION SHALL BE PERMITTED BELOW EL. 6.00 IN AREA OF THE ACEE FLOOD CONTROL EMBANKMENT.
 2. ACCESS TO PERFORM SUBSTRUCTURE WORK SHALL BE FROM THE BRIDGE DECK ABOVE.
 3. NO WORK SHALL BE PERFORMED BELOW THE WATER SURFACE.

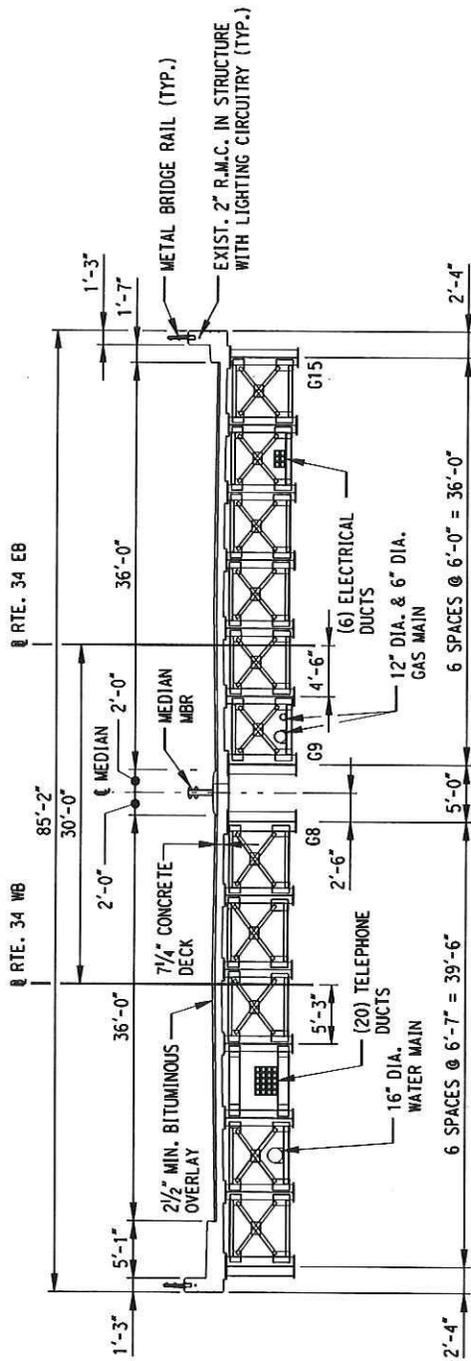
MEAN LOW WATER EL. -3.80

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PROPOSED BRIDGE ELEVATION SCALE AS NOTED

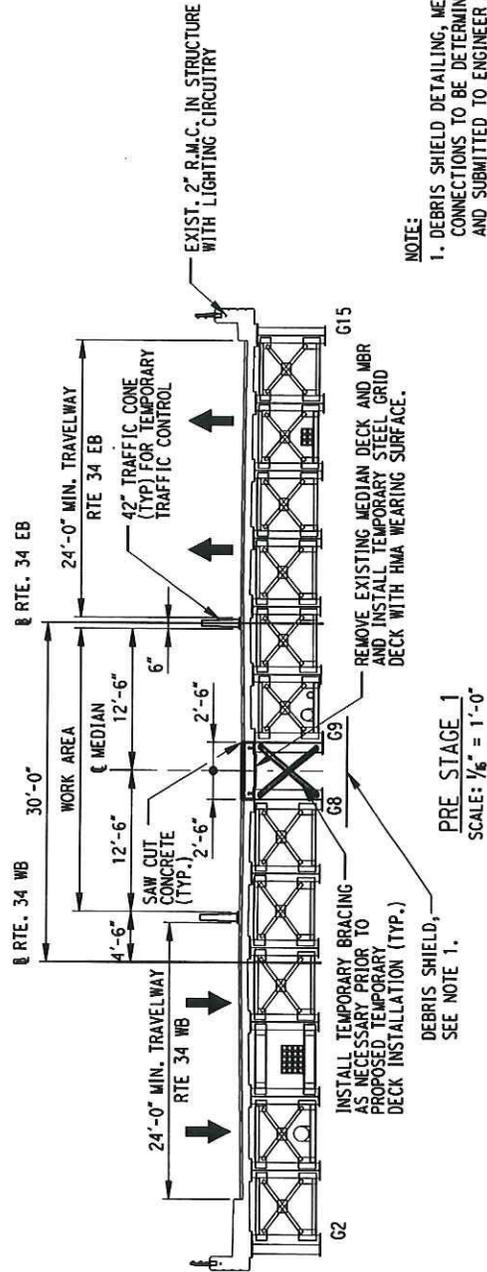
REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
OVER NAUGATUCK RIVER, DERBY, CT
APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
MAY 2013
FIGURE:
15



EXISTING CROSS SECTION

SCALE: 1/8" = 1'-0"



NOTE:
1. DEBRIS SHIELD DETAILING, METHOD OF SUPPORT AND CONNECTIONS TO BE DETERMINED BY THE CONTRACTOR AND SUBMITTED TO ENGINEER FOR REVIEW.



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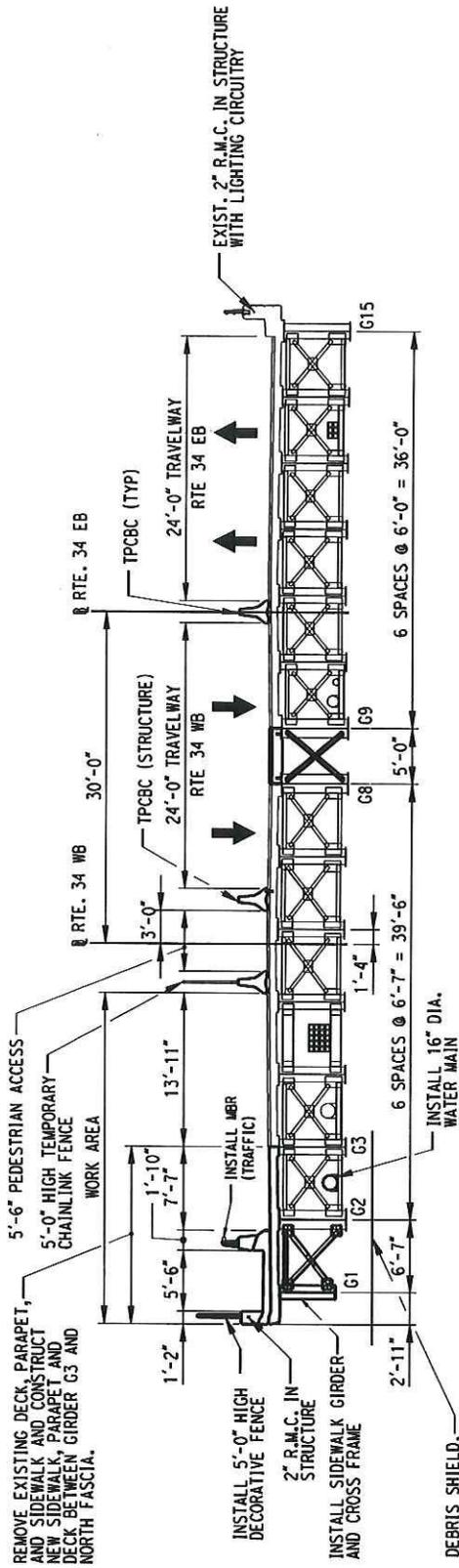
BRIDGE STAGING SECTIONS - 1
SCALE AS NOTED

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
OVER NAUGATUCK RIVER, DERBY, CT

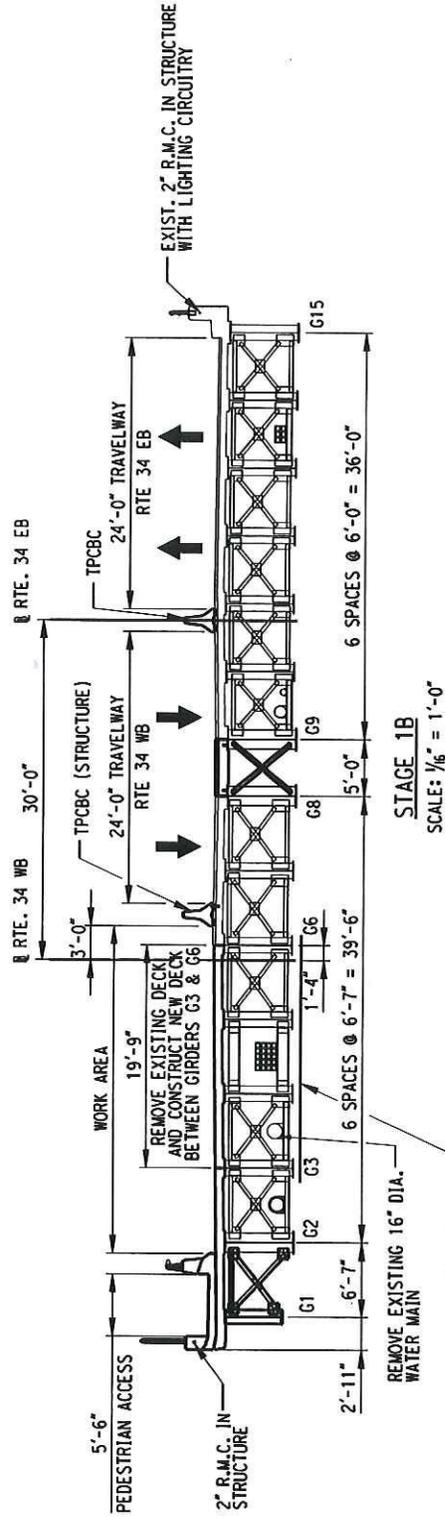
APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

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MAY 2013

FIGURE:
16



STAGE 1A
SCALE: 1/8" = 1'-0"



STAGE 1B
SCALE: 1/8" = 1'-0"

REMOVE EXISTING DECK, PARAPET, AND SIDEWALK AND CONSTRUCT NEW SIDEWALK, PARAPET AND DECK BETWEEN GIRDER G3 AND NORTH FASCIA.

5'-6" PEDESTRIAN ACCESS
5'-0" HIGH TEMPORARY CHAINLINK FENCE
WORK AREA

INSTALL 5'-0" HIGH DECORATIVE FENCE
2" R.M.C. IN STRUCTURE
SIDEWALK GIRDER AND CROSS FRAME

INSTALL 16" DIA. WATER MAIN

DEBRIS SHIELD, SEE NOTE 1 ON FIGURE 16.

5'-6" PEDESTRIAN ACCESS

WORK AREA

REMOVE EXISTING DECK AND CONSTRUCT NEW DECK BETWEEN GIRDERS G3 & G6

REMOVE EXISTING 16" DIA. WATER MAIN
DEBRIS SHIELD, SEE NOTE 1 ON FIGURE 16.



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BRIDGE STAGING SECTIONS - 2

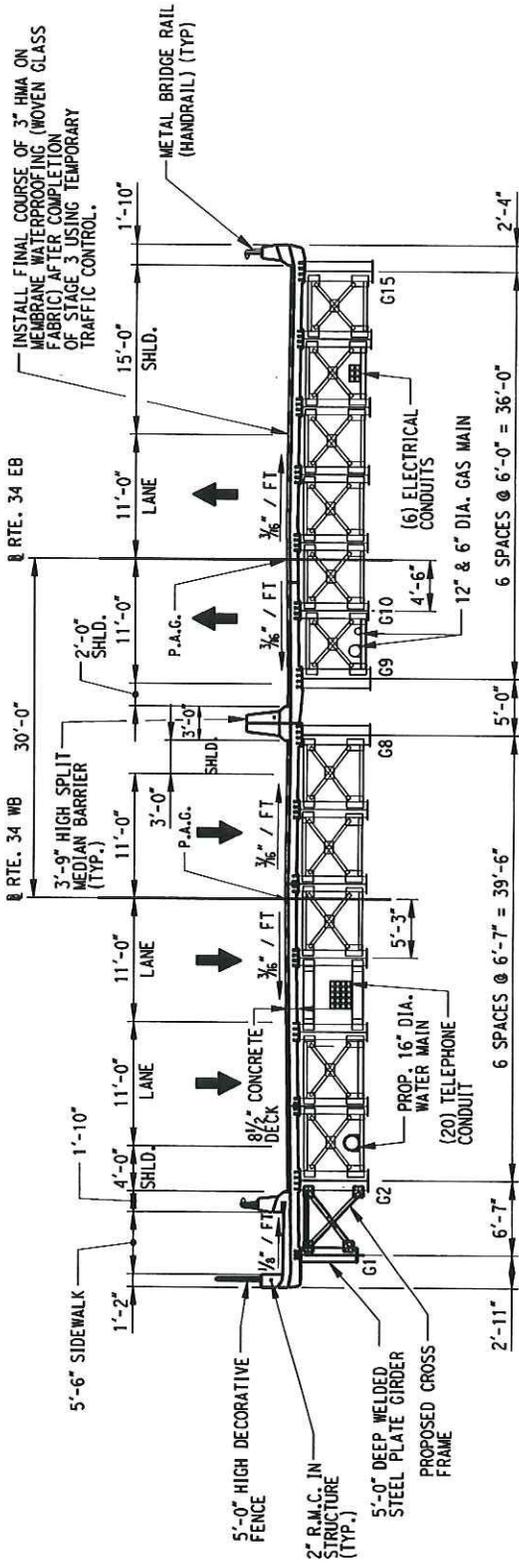
SCALE AS NOTED

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

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MAY 2013

FIGURE:
17



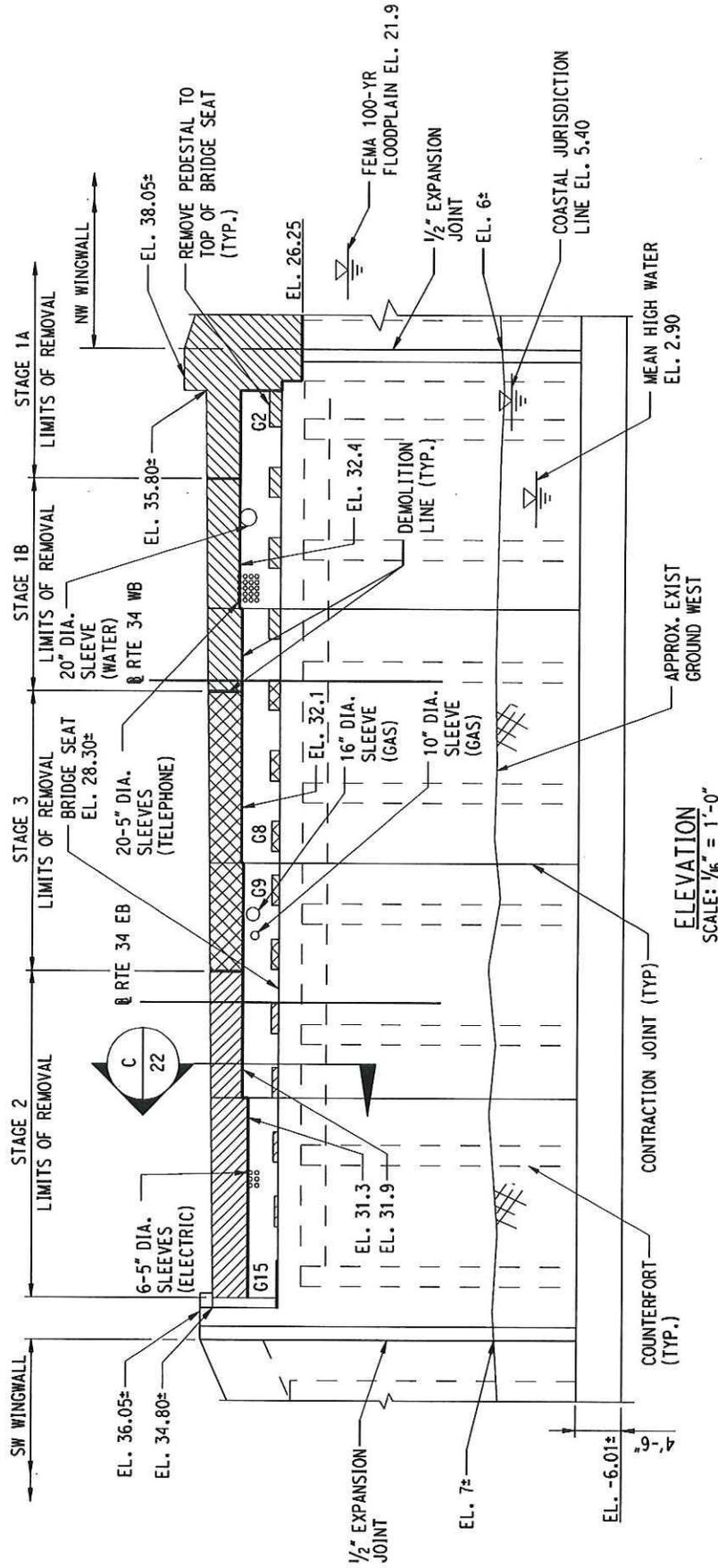
PROPOSED CROSS SECTION
SCALE: 1/8" = 1'-0"

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BRIDGE STAGING SECTIONS - 4
SCALE AS NOTED

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
OVER NAUGATUCK RIVER, DERBY, CT
APPLICATION BY: STATE OF CONNECTICUT
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DATE: MAY 2013
FIGURE: 19



ABUTMENT 1 - DEMOLITION

MEAN LOW WATER EL. -3.80



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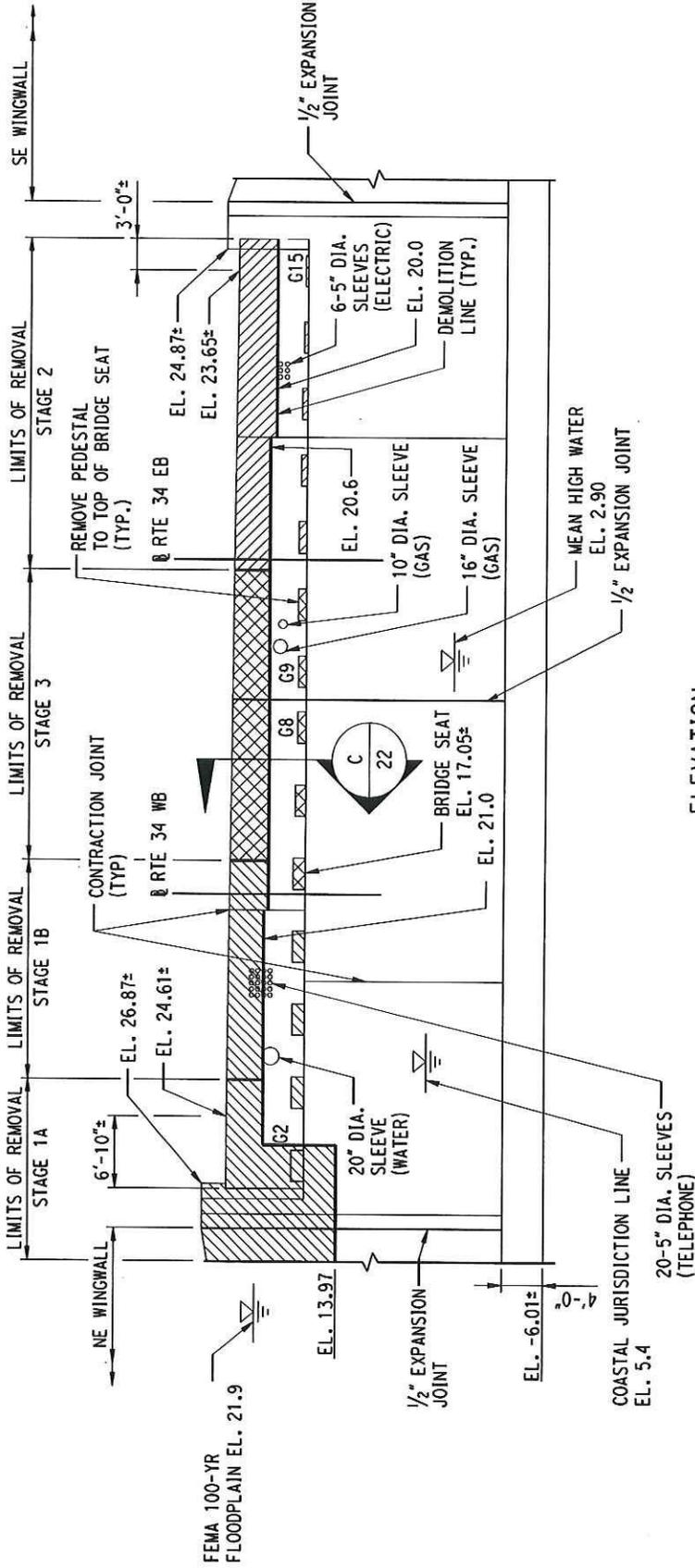
**ABUTMENT 1 DEMOLITION
SCALE AS NOTED**

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
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DATE:
MAY 2013

FIGURE:
20



ELEVATION
SCALE: 1/16" = 1'-0"

ABUTMENT 2 - DEMOLITION

MEAN LOW WATER EL. -3.80



59 Elm Street, Suite 101
New Haven, CT 06510

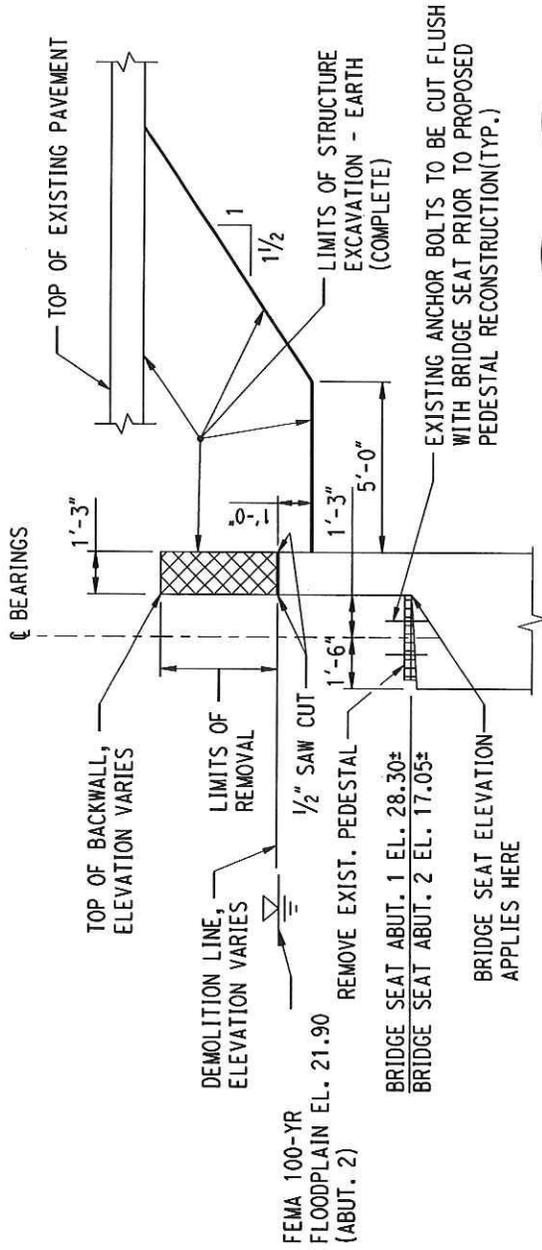
ABUTMENT 2 DEMOLITION
SCALE AS NOTED

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

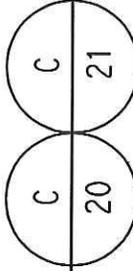
DATE:
MAY 2013

FIGURE:
21



ABUTMENT 1 & 2 DEMOLITION - CROSS SECTION

SCALE: 3/16" = 1'-0"



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New Haven, CT 06510

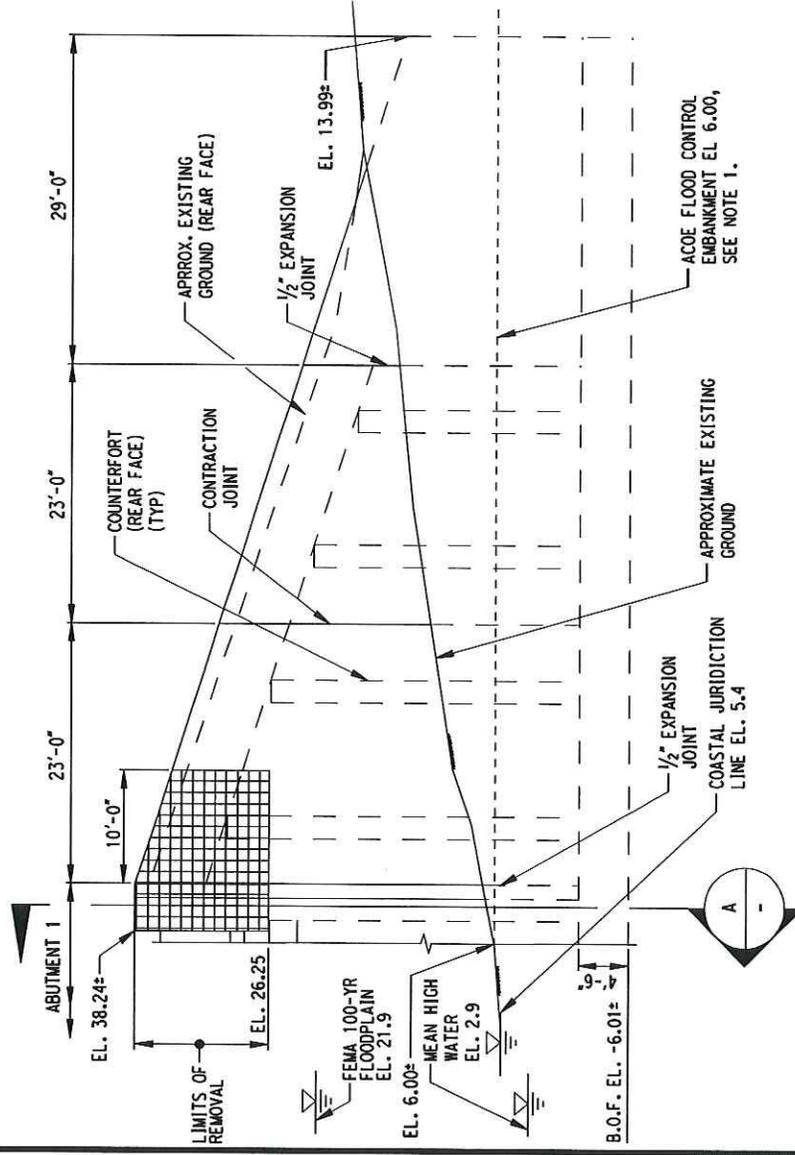
**ABUTMENT DEMOLITION
CROSS SECTION
SCALE AS NOTED**

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
OVER NAUGATUCK RIVER, DERBY, CT

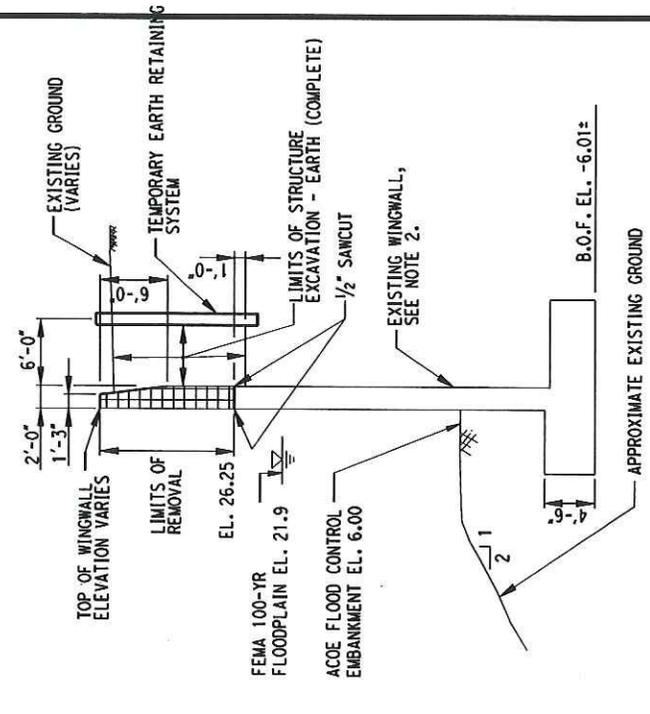
APPLICATION BY: STATE OF CONNECTICUT
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DATE:
MAY 2013

FIGURE:
22



NW WINGWALL DEMOLITION - ELEVATION
SCALE: 1/8" = 1'-0"



SECTION A NW WINGWALL DEMOLITION - CROSS SECTION
SCALE: 1/8" = 1'-0"

- NOTES:
1. NO EXCAVATION SHALL BE PERMITTED BELOW EL. 6.00 IN AREA OF THE ACOE FLOOD CONTROL EMBANKMENT
 2. COUNTERFORT IN CROSS-SECTION VIEW NOT SHOWN FOR CLARITY.

MEAN LOW WATER EL. -3.80



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NW WINGWALL DEMOLITION

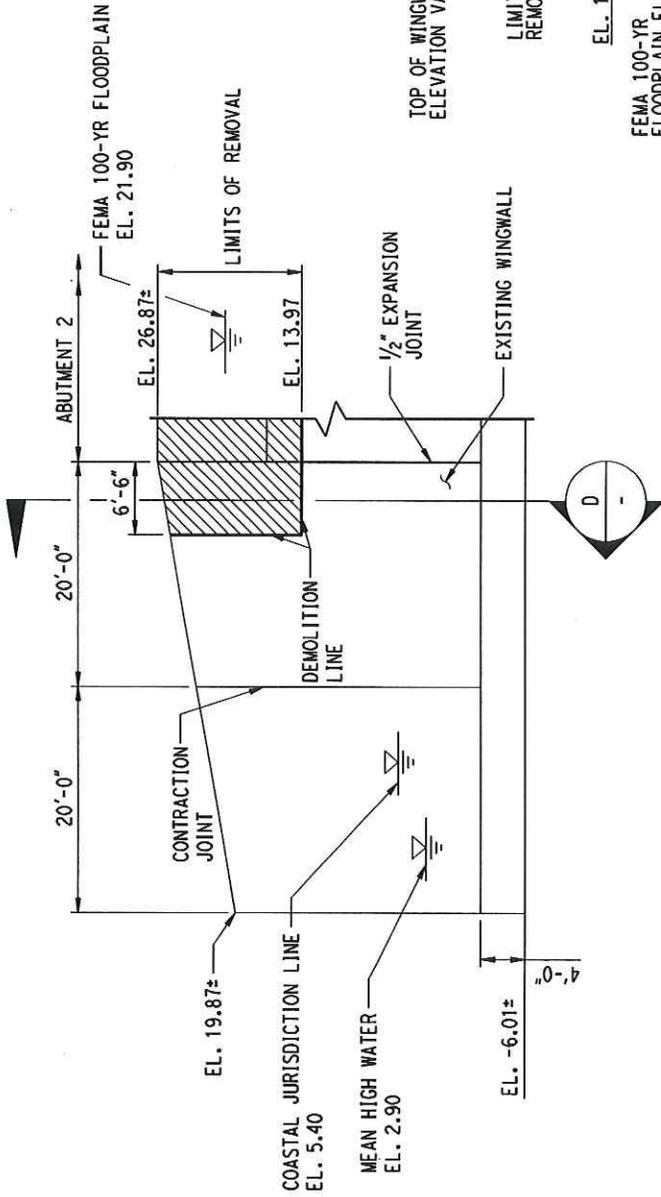
SCALE AS NOTED

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
OVER NAUGATUCK RIVER, DERBY, CT

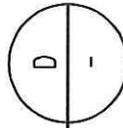
APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
MAY 2013

FIGURE:
23



NE WINGWALL DEMOLITION - ELEVATION
 SCALE: 1/16" = 1'-0"



NE WINGWALL CROSS SECTION AND PAY LIMITS
 SCALE: 1/16" = 1'-0"

MEAN LOW WATER EL. -3.80



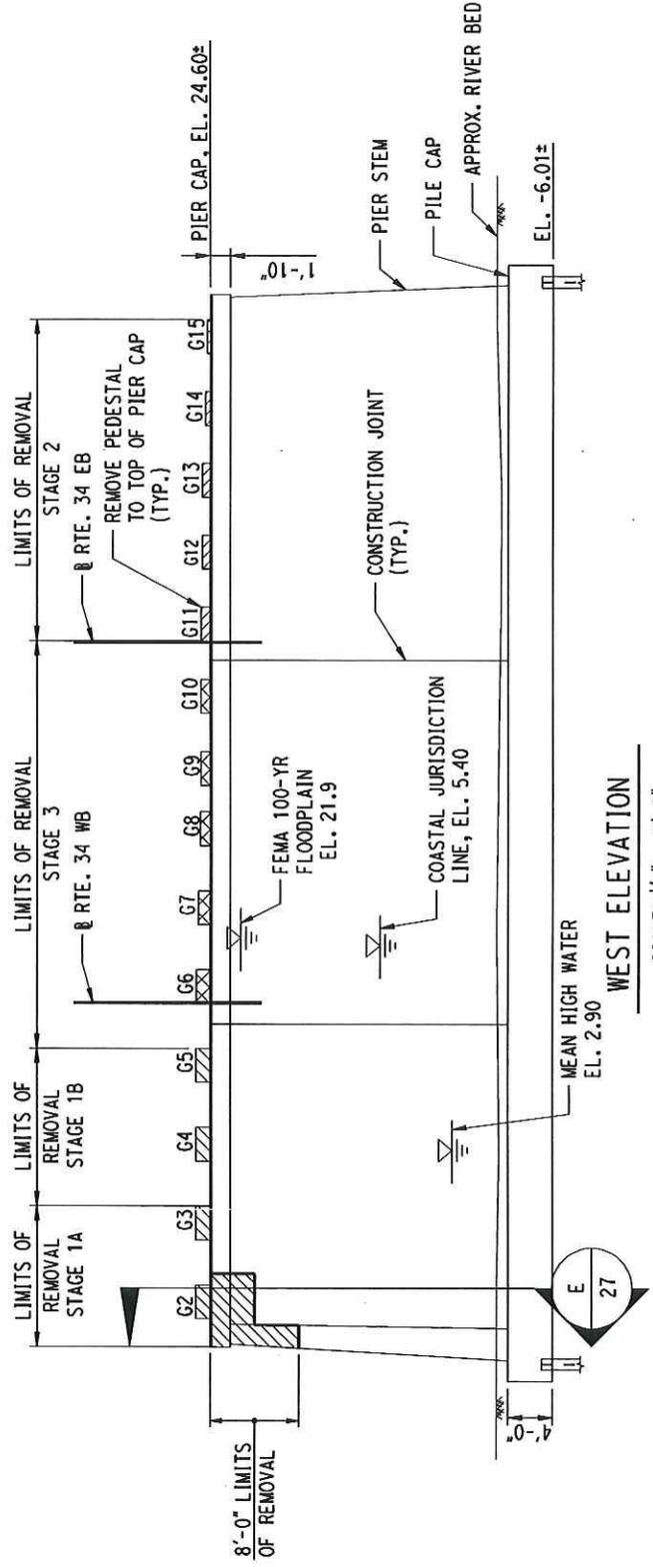
NE WINGWALL DEMOLITION
 SCALE AS NOTED

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
 OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
 DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
 MAY 2013

FIGURE:
 24



PIER 1 - DEMOLITION

MEAN LOW WATER EL. -3.80

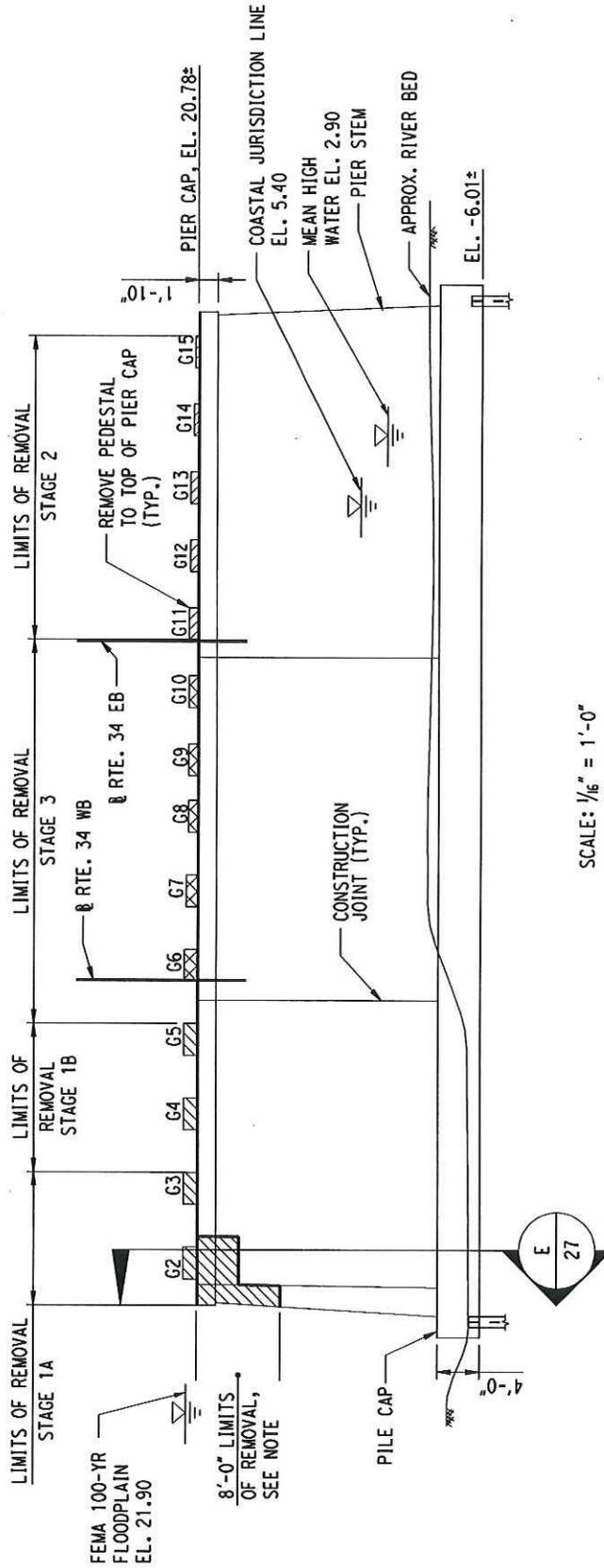
Dewberry
 59 Elm Street, Suite 101
 New Haven, CT 06510

**PIER 1
 DEMOLITION
 SCALE AS NOTED**

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
 OVER NAUGATUCK RIVER, DERBY, CT
 APPLICATION BY: STATE OF CONNECTICUT
 DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
 MAY 2013

FIGURE:
 25



PIER 2 - DEMOLITION

MEAN LOW WATER EL. -3.80



59 Elm Street, Suite 101
New Haven, CT 06510

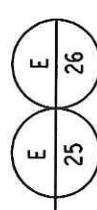
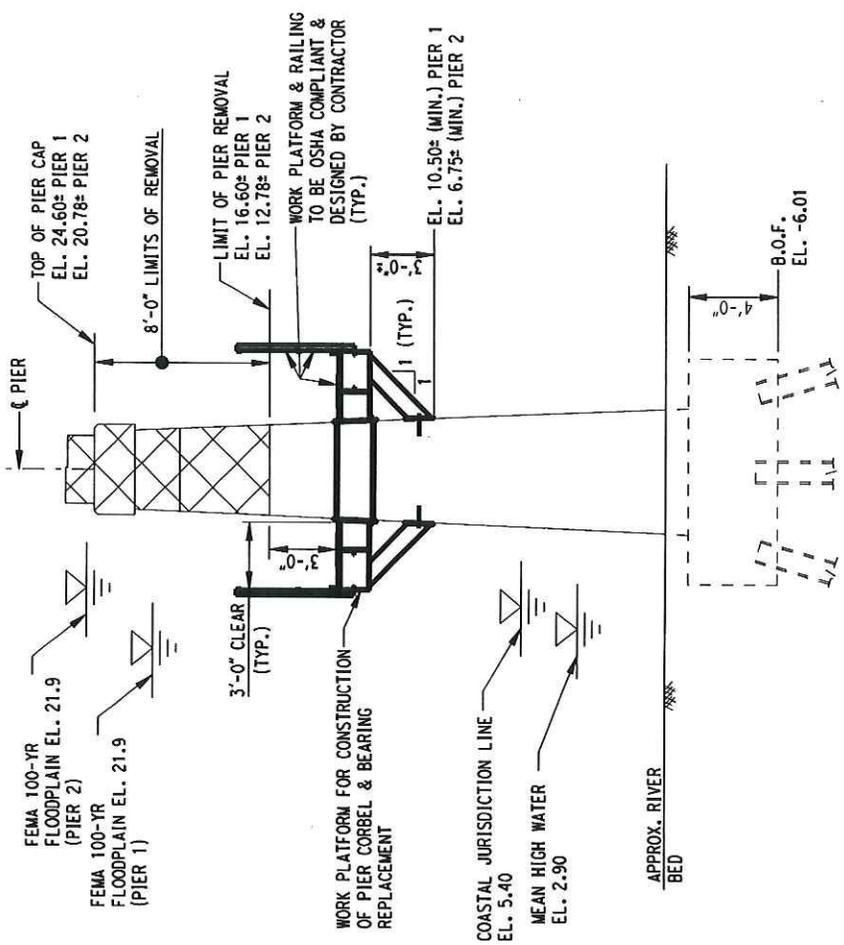
**PIER 2
DEMOLITION
SCALE AS NOTED**

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
MAY 2013

FIGURE:
26



PIER DEMOLITION CROSS SECTION
(PIER 1 SHOWN, PIER 2 SIMILAR)

MEAN LOW WATER EL. -3.80

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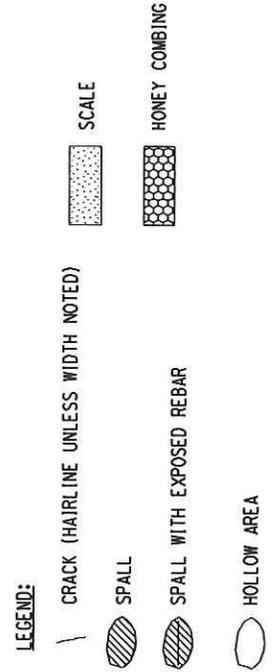
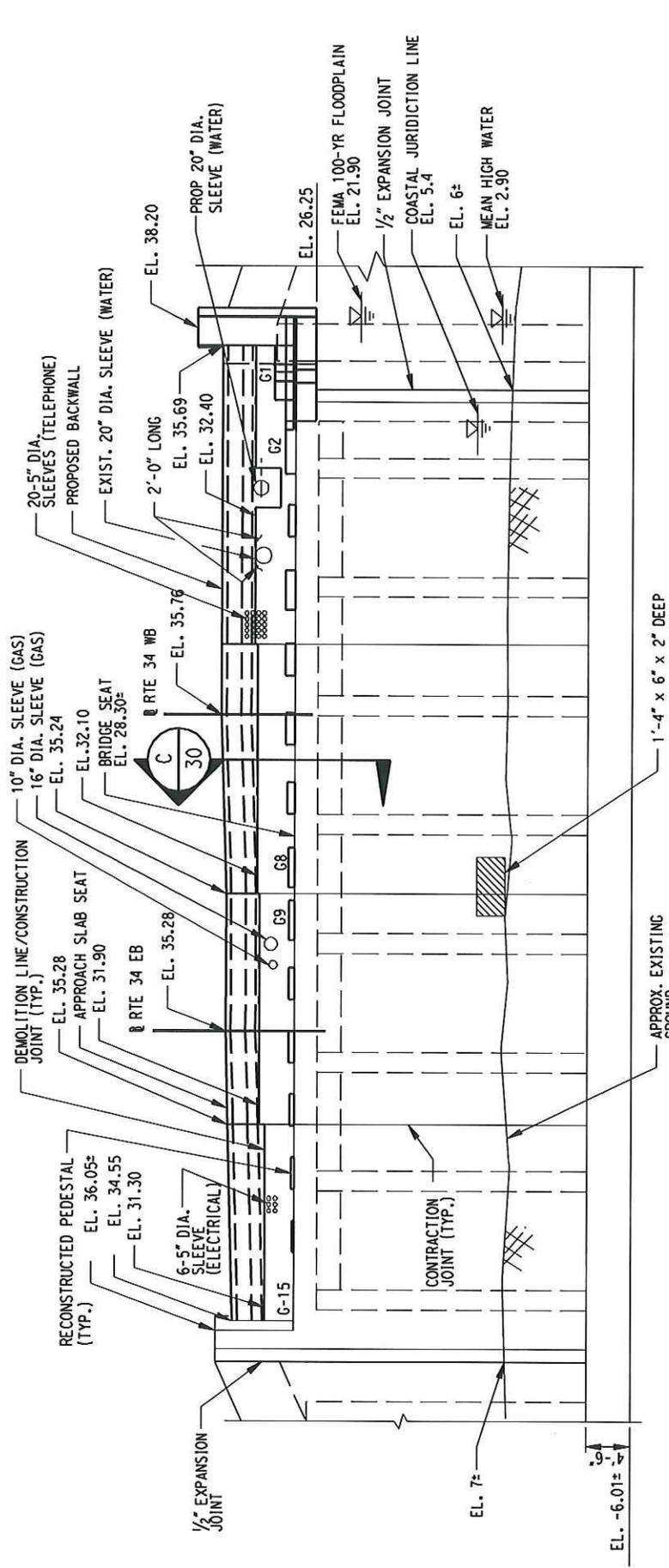
PIER DEMOLITION CROSS SECTION
SCALE IN FEET
0 8 16
SCALE 1/8"=1'-0"

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
MAY 2013

FIGURE:
27



ELEVATION
ABUTMENT 1 - REPAIR AND RECONSTRUCTION
 SCALE: 1/16" = 1'-0"

NOTE:
 1. REPAIR SUBSTRUCTURE ABOVE WATER SURFACE

MEAN LOW WATER EL. -3.80



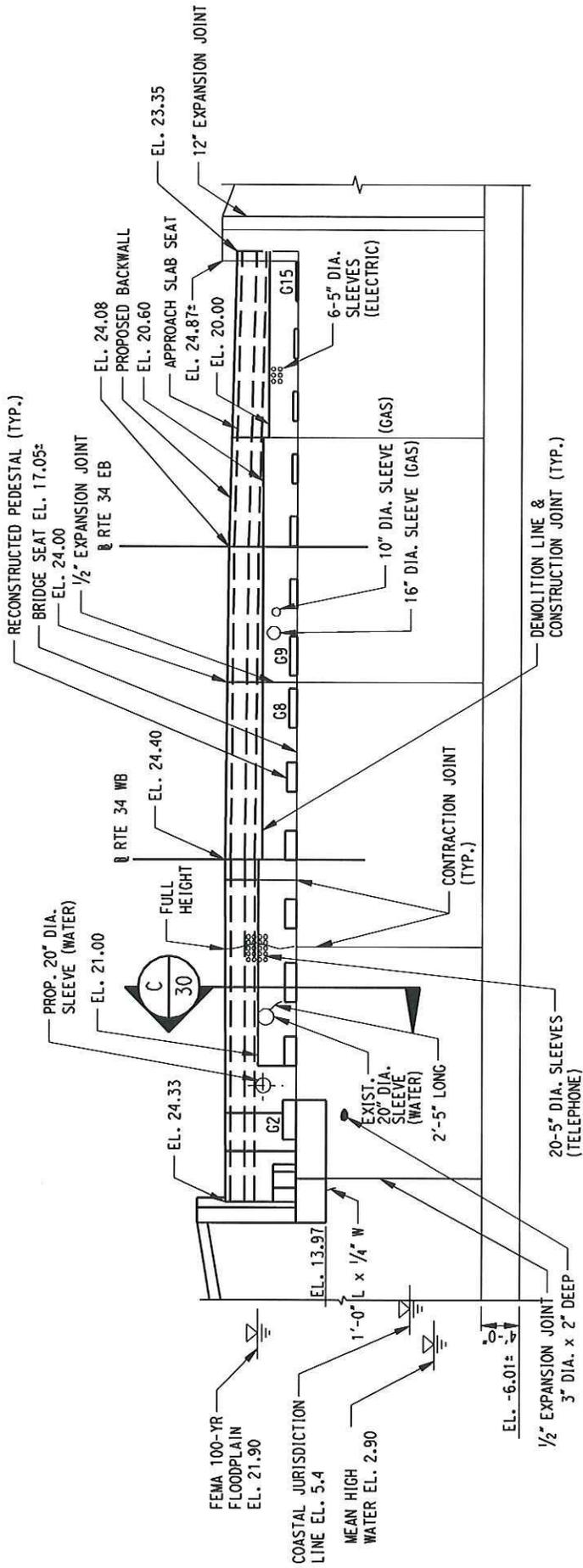
ABUTMENT 1 REPAIR & RECONSTRUCTION
 SCALE AS NOTED

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
 OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
 DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
 SEPTEMBER 2013

FIGURE:
 28



ELEVATION
ABUTMENT 2 - REPAIR AND RECONSTRUCTION
 SCALE: 1/16" = 1'-0"

NOTE:
 1. REPAIR SUBSTRUCTURE ABOVE WATER SURFACE.

- LEGEND:**
- CRACK (HAIRLINE UNLESS WIDTH NOTED)
 - ▨ SPALL
 - ▨ SPALL WITH EXPOSED REBAR
 - HOLLOW AREA
 - ▨ SCALE
 - ▨ HONEY COMBING

MEAN LOW WATER EL. -3.80



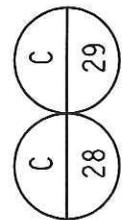
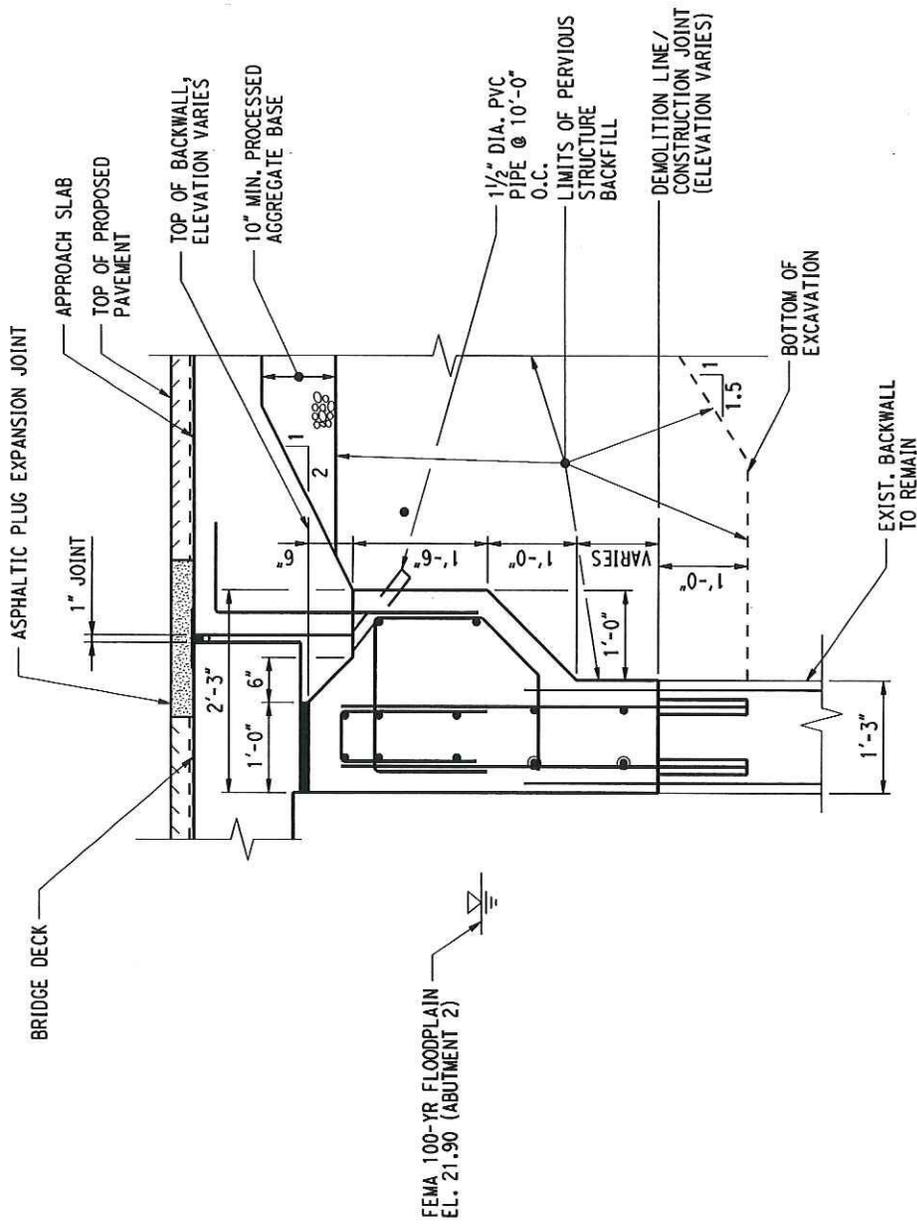
ABUTMENT 2 REPAIR & RECONSTRUCTION
 SCALE AS NOTED

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
 OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
 DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
 SEPTEMBER 2013

FIGURE:
 29



RECONSTRUCTED ABUTMENT BACKWALL - CROSS SECTION

SCALE: 1/2" = 1'-0"

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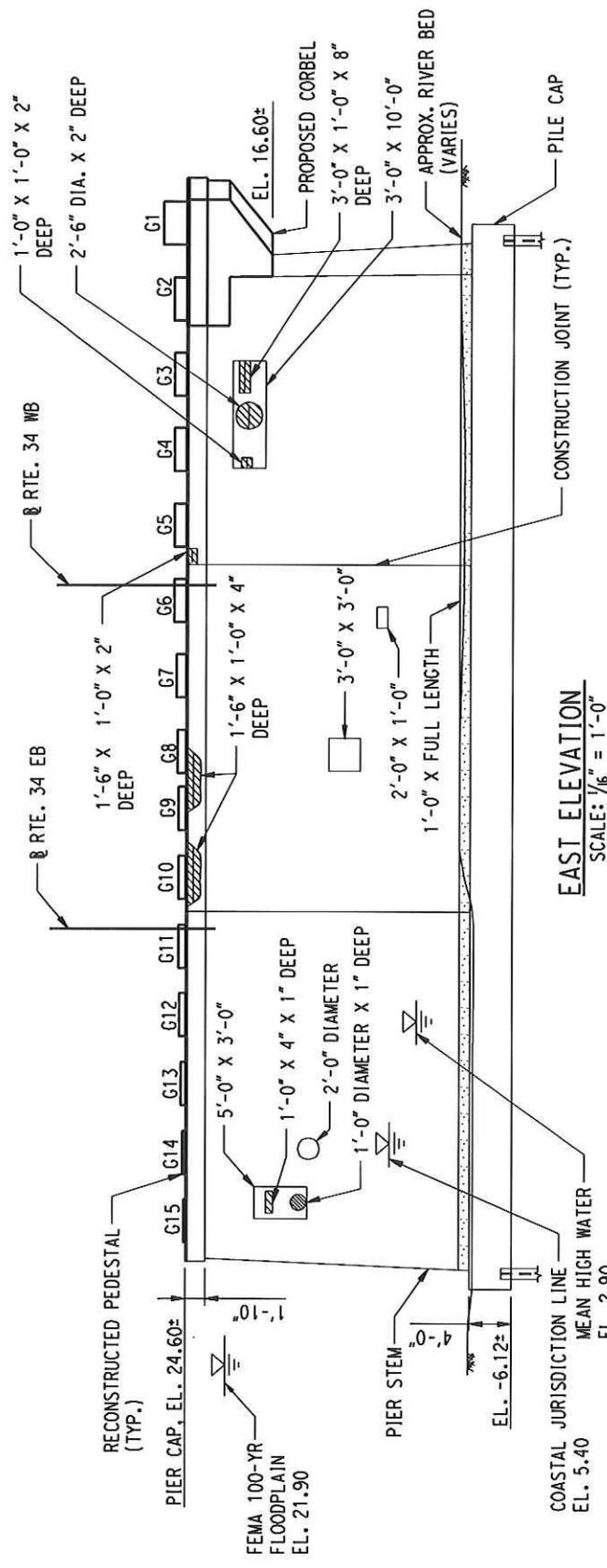
ABUTMENT 1 & 2 BACKWALL RECONSTRUCTION
 SCALE AS NOTED

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
 OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
 DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
 MAY 2013

FIGURE:
 30



EAST ELEVATION
SCALE: 1/8" = 1'-0"

PIER 1 REPAIR AND RECONSTRUCTION

NOTE:

- 1. REPAIR SUBSTRUCTURE ABOVE WATER SURFACE.

LEGEND:

- CRACK (HAIRLINE UNLESS WIDTH NOTED)
- SCALE
- SPALL
- HONEY COMBING
- SPALL WITH EXPOSED REBAR
- HOLLOW AREA

MEAN LOW WATER -3.80



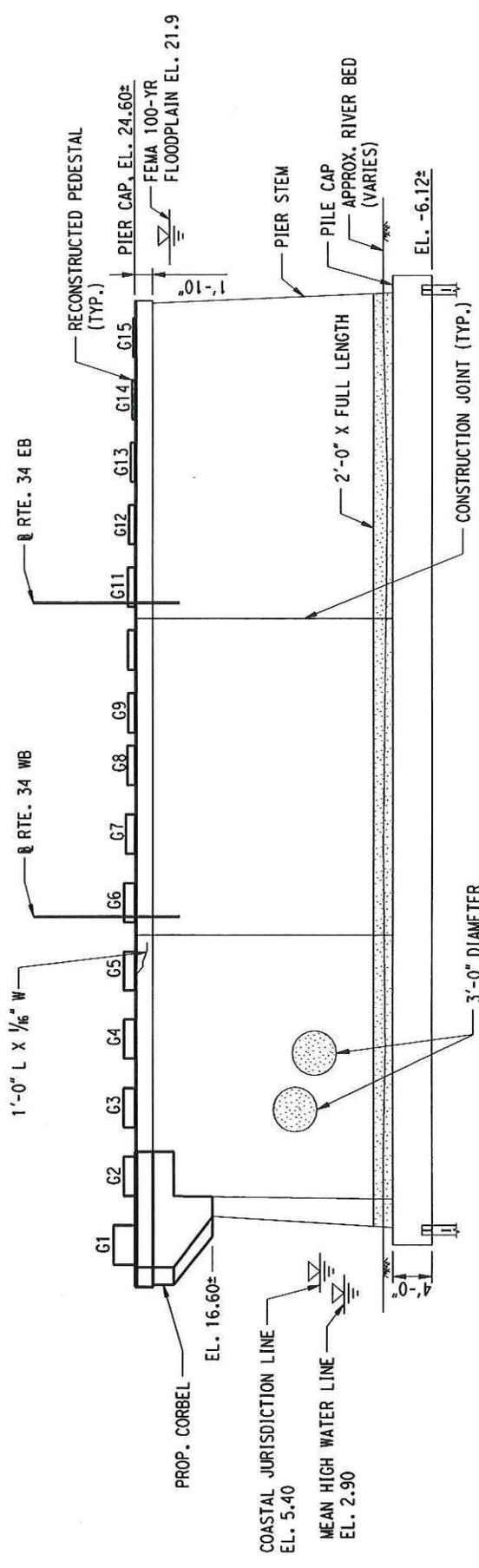
PIER 1 REPAIR & RECONSTRUCTION
SCALE AS NOTED

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
SEPTEMBER 2013

FIGURE:
31



WEST ELEVATION
 SCALE: 1/16" = 1'-0"

PIER 1 - REPAIR & RECONSTRUCTION

- NOTE:**
- REPAIR SUBSTRUCTURE ABOVE WATER SURFACE.

LEGEND:

- CRACK (HAIRLINE UNLESS WIDTH NOTED)
- SCALE
- HONEY COMBING
- SPALL
- SPALL WITH EXPOSED REBAR
- HOLLOW AREA

MEAN LOW WATER -3.80

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 New Haven, CT 06510

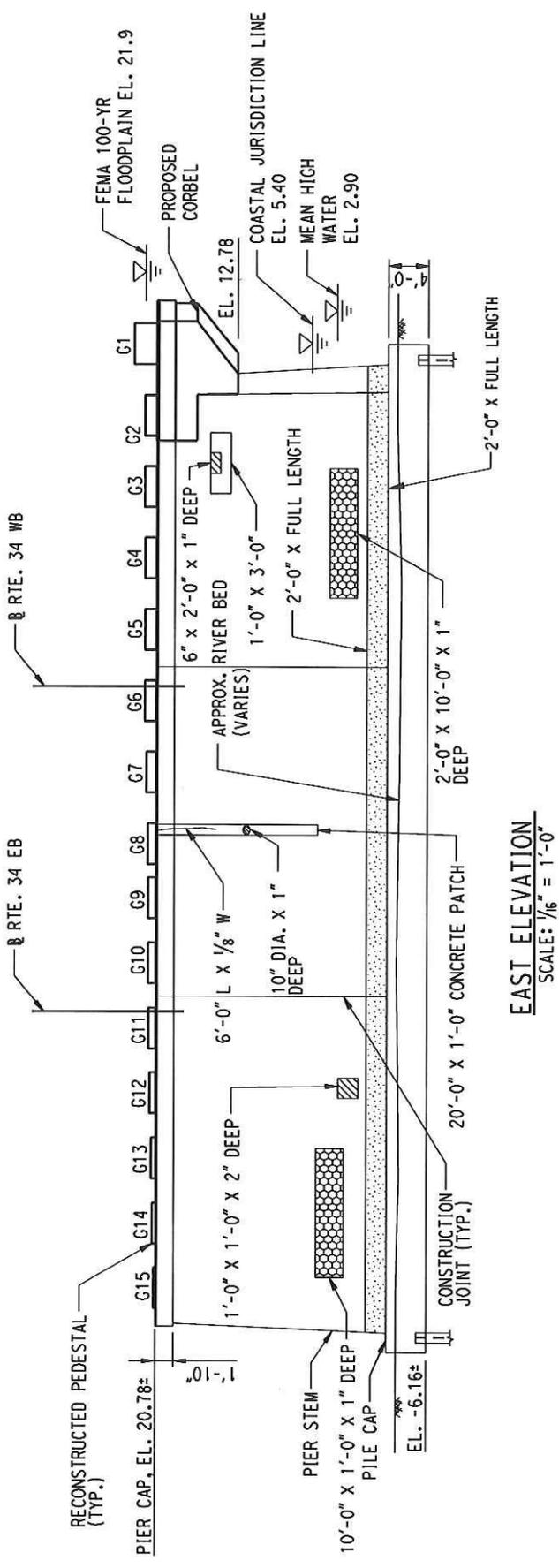
PIER 1 REPAIR & RECONSTRUCTION
 SCALE AS NOTED

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
 OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
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 MAY 2013

FIGURE:
 32



EAST ELEVATION
 SCALE: 1/16" = 1'-0"

PIER 2 - REPAIR & RECONSTRUCTION

LEGEND:

- CRACK (HAIRLINE UNLESS WIDTH NOTED)
- SCALE
- SPALL
- HONEY COMBING
- SPALL WITH EXPOSED REBAR
- HOLLOW AREA

NOTE:
 1. REPAIR SUBSTRUCTURE ABOVE WATER SURFACE.

MEAN LOW WATER -3.80



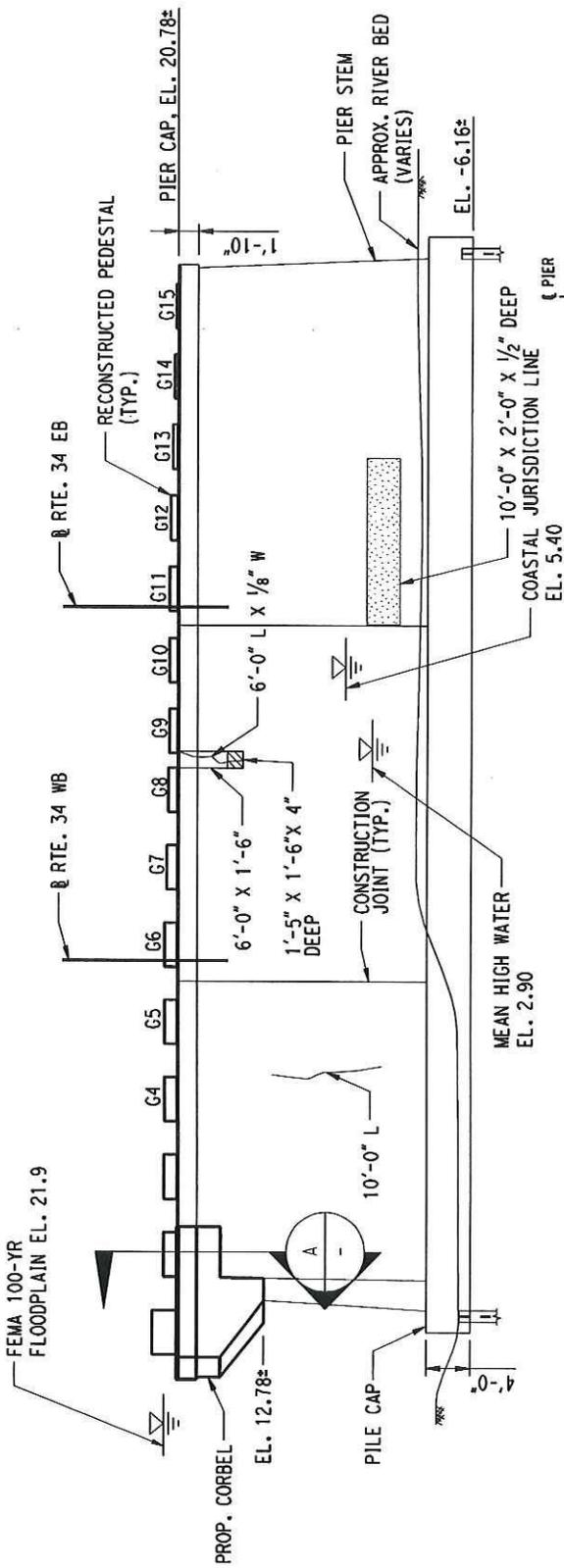
PIER 2 REPAIR & RECONSTRUCTION
 SCALE AS NOTED

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
 OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
 DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
 SEPTEMBER 2013

FIGURE:
 33



WEST ELEVATION
SCALE: 1/8" = 1'-0"

PIER 2 REPAIR & RECONSTRUCTION

NOTE:
1. REPAIR SUBSTRUCTURE ABOVE WATER SURFACE.

LEGEND:

- CRACK (HAIRLINE UNLESS WIDTH NOTED)
- SPALL
- SPALL WITH EXPOSED REBAR
- HOLLOW AREA
- SCALE
- HONEY COMBING



MEAN LOW WATER EL. -3.80



59 Elm Street, Suite 101
New Haven, CT 06510

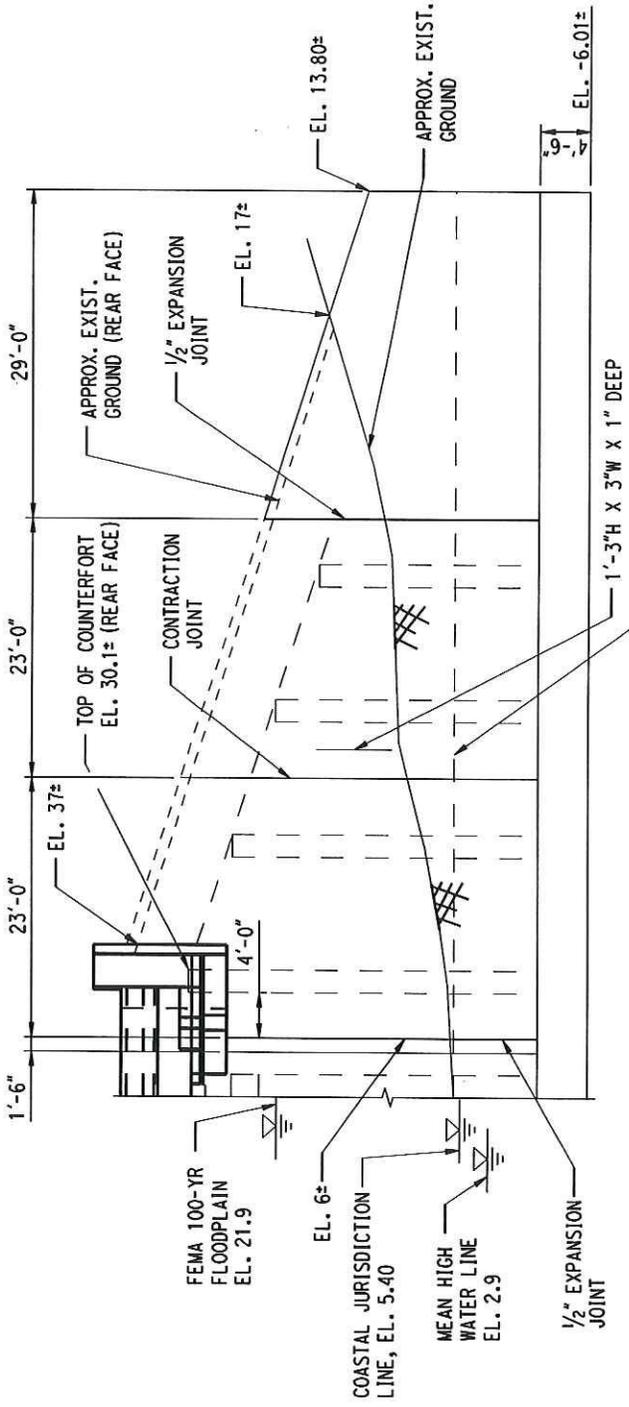
PIER 2 REPAIR & RECONSTRUCTION
SCALE AS NOTED

REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
MAY 2013

FIGURE:
34



NW WINGWALL - ELEVATION

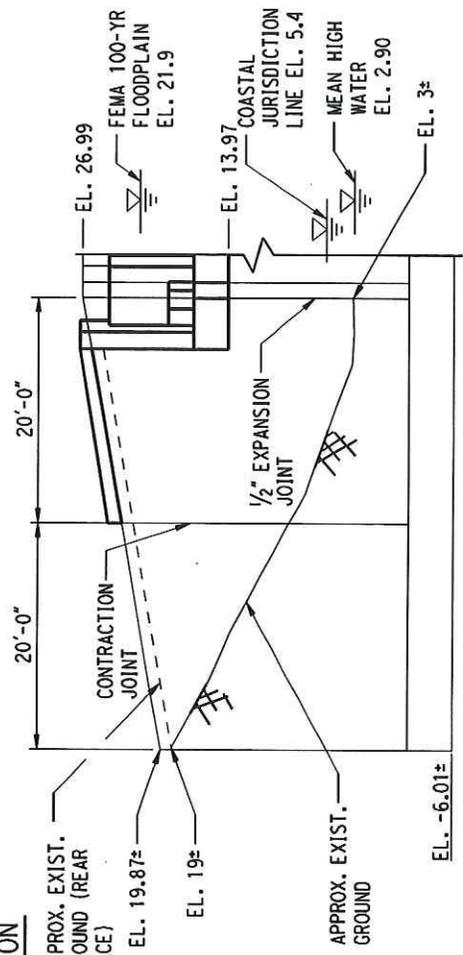
SCALE: 1/8" = 1'-0"

NOTE:
 1. REPAIR SUBSTRUCTURES ABOVE WATER SURFACE.
 2. NO EXCAVATION SHALL BE PERMITTED BELOW EL. 6.00 IN AREA OF THE ACCE FLOOD CONTROL EMBANKMENT.

LEGEND:

- CRACK (HAIRLINE UNLESS WIDTH NOTED)
- SCALE
- HONEY COMBING
- SPALL
- SPALL WITH EXPOSED REBAR
- HOLLOW AREA

MEAN LOW WATER EL. -3.80



NE WINGWALL - ELEVATION

SCALE: 1/8" = 1'-0"

**NW & NE WINGWALL
 REPAIR &
 RECONSTRUCTION**
 SCALE AS NOTED

Dewberry
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REHABILITATION OF BRIDGE NO. 00947, ROUTE 34
 OVER NAUGATUCK RIVER, DERBY, CT

APPLICATION BY: STATE OF CONNECTICUT
 DEPARTMENT OF TRANSPORTATION, PROJECT NO. 36-182

DATE:
 MAY 2013

FIGURE:
 36



PERMIT NOTICE

This Certifies that Authorization to perform work below the Coastal Jurisdiction Line and/or within Tidal Wetlands of coastal, tidal, or navigable waters of Connecticut

Has been issued to: State of CT, Department of Transportation

At this location: Route 34 Derby Bridge #00947, Derby

To conduct the following:

1. replace and modify bridge decking and superstructure; and
2. place boulders in the river for habitat enhancement.

Permit #: 201303642-SJ

Issued on: 12/3/13 *JPA*

This Authorization expires on: 12/3/18

This Notice must be posted in a conspicuous place on the job during the entire project.

Department of Energy and Environmental Protection
Office of Long Island Sound Programs
79 Elm Street • Hartford, CT 06106-5127
Phone: (860) 424-3034 Fax: (860) 424-4054
www.ct.gov/deep

OFFICE OF LONG ISLAND SOUND PROGRAMS

APPENDIX A

**TO: Permit Section
Department of Energy and Environmental Protection
Office of Long Island Sound Programs
79 Elm Street
Hartford, CT 06106-5127**

PERMITTEE: State of CT, Department of Transportation
2800 Berlin Turnpike - P.O. Box 317546
Newington, CT 06131-7546

Permit No: 201303642-SJ, Derby

CONTRACTOR 1: _____

Address: _____

Telephone #: _____

CONTRACTOR 2: _____

Address: _____

Telephone #: _____

CONTRACTOR 3: _____

Address: _____

Telephone #: _____

EXPECTED DATE OF COMMENCEMENT OF WORK: _____

EXPECTED DATE OF COMPLETION OF WORK: _____

PERMITTEE: _____
(signature) (date)



OFFICE OF LONG ISLAND SOUND PROGRAMS

APPENDIX B

NOTICE OF PERMIT ISSUANCE
DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION

To: Derby City Clerk

**Signature and
Date:**

Jason [unclear] 12/4/13

Subject: Route 34 Derby Bridge #00947
Coastal Permit #201303642-SJ

Pursuant to Section 22a-363g and Section 22a-361 of the Connecticut General Statutes, the Commissioner of Energy and Environmental Protection gives notice that a permit has been issued to the State of CT, Department of Transportation, 2800 Berlin Turnpike - P.O. Box 317546, Newington, CT, 06131-7546 to:

1. replace and modify bridge decking and superstructure; and
2. place boulders in the river for habitat enhancement.

If you have any questions pertaining to this matter, please contact the Office of Long Island Sound Programs at 860-424-3034.