

**APPLICATION AND REPORTING FORM FOR
COVERAGE UNDER THE STREAM ALTERATION
PERMIT**

(SECTION C.2.2) 10 VSA, SECTIONS 1022 & 7503 And 10
VSA, CHAPTER 41, SUBCHAPTER 2



VERMONT DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
**WATERSHED
MANAGEMENT DIVISION**
RIVERS PROGRAM

For Stream Alteration Permitting Use Only

Application Number: SA-06-004-2016

It is strongly recommended prior to your submission of this application to have a site visit with the District Engineer in your area. For engineer and district contact information, please visit our website at <http://www.watershedmanagement.vermont.gov/rivers.htm>

Site visit date 2011 Engineer present Pat Ross

Please select the application type below:

Individual Permit Application



\$350.00 Fee

General Permit Application



~~\$200.00 Fee~~

Reporting Activity not requiring
an Application



\$200.00 Fee

A. Applicant Contact Information:

1. Name: Town of Stowe

2a. Mailing Address: PO Box 730

2b. Town/County: Stowe - Lamoille

2c. State: VT

2d. Zip: 05672

3. Phone: 802-253-8770

4. Email: hshepard@townofstowe.vermont.org

B. Landowner (If different than applicant):

1. Name:

2a. Mailing Address:

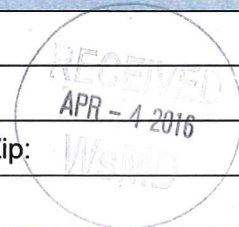
2b. City:

2c. State:

2d. Zip:

3. Phone:

4. Email:



C. Project Location:

1. Address: Mayo Farm Road

2. Town: Stowe - Lamoille

3. River: North Branch Little River

Please follow this link to the [ANR Atlas Map](#)

5a Latitude: -72.68922

5b. Longitude: 44.47702

D. Contractor:

1. Name: TBD

2. Phone: TBD

3. Email: TBD

E. Consultant:

1. Name: None / In-House Design

2. Phone: 802-253-8770

3. Email: hshepard@townofstowe.vermont.org

F. Project Description:

Construction of a new pedestrian bridge over the North Branch of the Little River near the intersection of Mayo Farm Rd and Weeks Hill Rd.

G. Please check the Required Attachments : (additional information may be required after initial application review)

- Location Map
- Project design drawings including: plan view, cross sections, existing & proposed conditions, bankfull width (channel width at high water)
- ~~For Individual and General Permits: List of adjoining landowners, names and addresses~~

No adjoining landowners - All Town owned

H. Applicant Certification for Reporting Activity Only:

I hereby certify that the information on this application is, to the best of my knowledge, true and accurate. I recognize that by signing this application I am giving consent to employees of the State to enter the subject property for the purpose of processing this application and for ensuring compliance with subsequent agency decisions relating to the project.

Applicant Signature: [Signature] Date: 4/1/16

**For Stream Alteration General and Individual Permit Applications:
Applicant must file copy of this application with Town Clerk and Adjoiners.**

I. Applicant Certification for General and Individual Permits:

I hereby certify that the information on this application is, to the best of my knowledge, true and accurate and that I have provided a copy of this application to the select board and town clerk of the municipality in which this activity is located, the local and regional planning commissions, and to each adjoining landowner as required in the Vermont Stream Alteration Rule. I recognize that by signing this application I am giving consent to employees of the State to enter the subject property for the purpose of processing this application and for ensuring compliance with subsequent agency decisions relating to the project.

Applicant Signature: _____ Date: _____

Print Full Name: _____

If the project is occurring on property other than your own, please include additional signatures below:

Landowner(s) Signature: _____ Date: _____

No adjoining landowners - All Town owned

Print Full Name: _____

Landowner(s) Signature: _____ Date: _____

Print Full Name: _____

A PERMIT MAY BE REQUIRED FROM THE US ARMY CORPS OF ENGINEERS. For information contact: USA Corps of Engineers, VT Project Office, 8 Carmichael Street Suite 205, Essex Jct VT 05452 802-872-2893

Submit this form and enclose the appropriate application fee listed on the top of page one, payable to:

State of Vermont
Vermont Department of Environmental Conservation
Watershed Management Division
Stream Alteration Permitting
1 National Life Drive, Main 2
Montpelier, VT 05620-3522

Direct all correspondence or questions to Stream Alteration Permitting at: ANR.WSMDRivers@vermont.gov
For additional information visit: www.watershedmanagement.vt.gov

QUIET PATH BRIDGE PROJECT LOCATION - TOWN OF STOWE

Attachment to Stream Alterations Permit

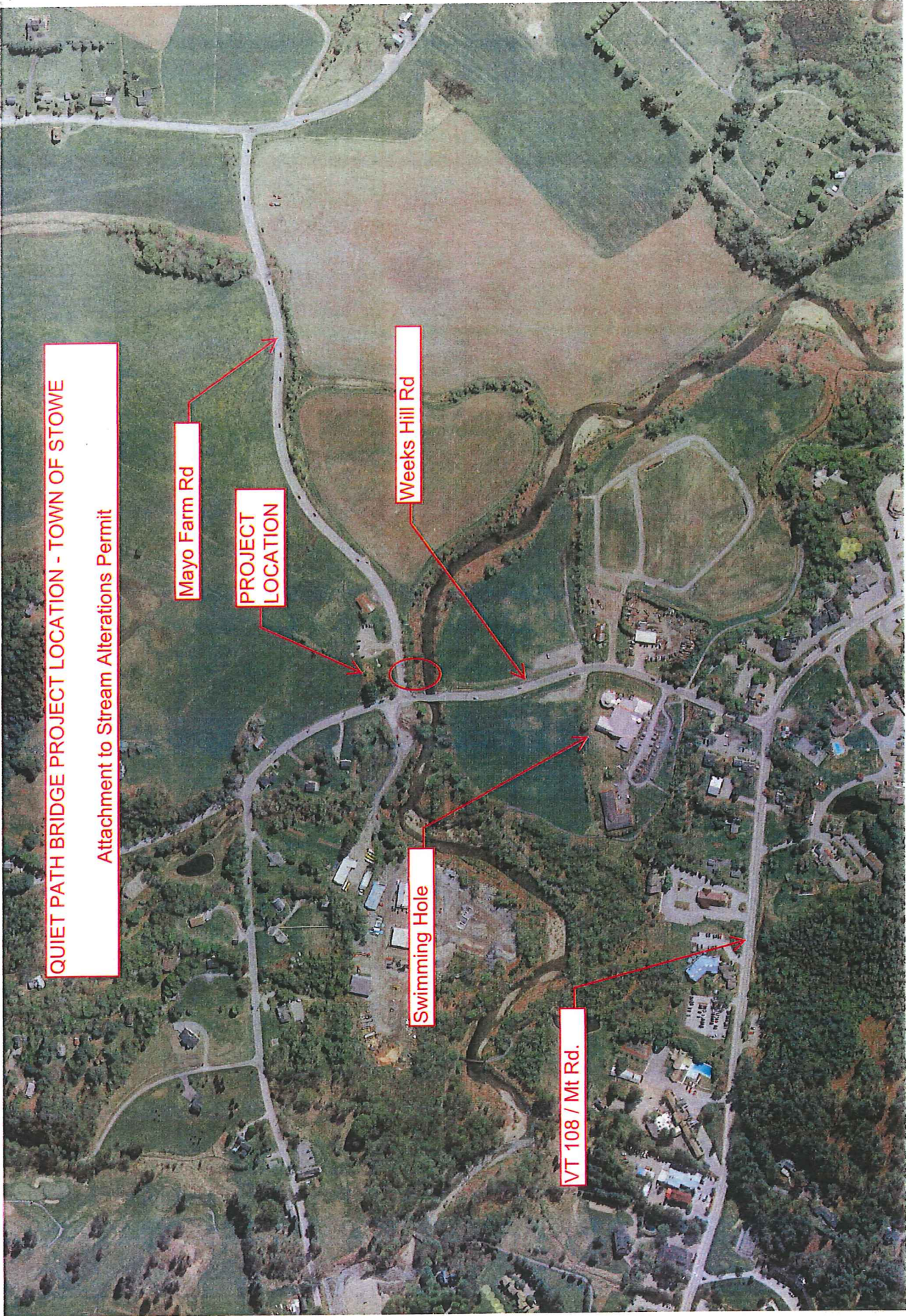
Mayo Farm Rd

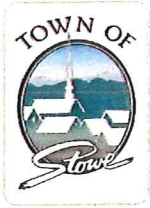
PROJECT
LOCATION

Weeks Hill Rd

Swimming Hole

VT 108 / Mt Rd.





Public Works Department

PO Box 730
67 Main Street
Stowe, VT 05672
802-253-8770

April 1, 2016

Zoning Department
Att: Richard Baker, Zoning Director

Subject: Hydrologic and Hydraulic Analysis
Quite Path Bridge

Dear Rich,

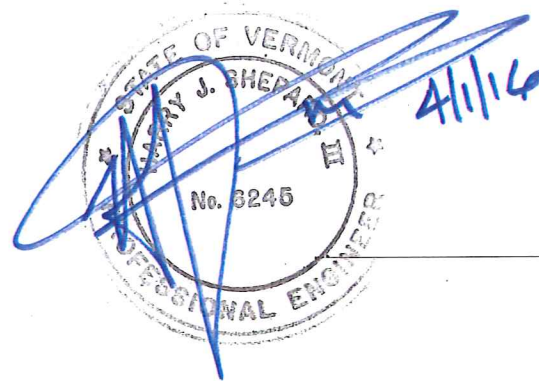
In accordance with the requirements of Article 7.7(1)A of the Town's Flood Hazard District regulations, this letter is to certify that this office has undertaken the required hydrologic and hydraulic analysis for the subject project and confirm that the proposed construction of the Quite Path Bridge **will result in no increase in flood level** during the occurrence of the base flood. A summary of our analysis results is enclosed herewith for your information.

If you have any questions or require anything further, please advise.

Sincerely,

Harry J. Shepard

Town of Stowe
Harry J. Shepard III, PE
Public Works Director/Town Engineer





Public Works Department

PO Box 730
67 Main Street
Stowe, VT 05672
802-253-8770

'HYDROLOGIC AND HYDRAULIC ANALYSIS and EVALUATION QUIET PATH BRIDGE

Weeks Hill Road and Mayo Farms Road

General Narrative: The Quiet Path Bridge is a proposed pedestrian bridge crossing of the West Branch of the Little River, immediately downgradient of the existing Weeks Hill Road bridge. Week Hill Road creates a dyke condition thru the flood plan with flood storage occurring on both sides of the Road and the adjacent Town owned Mayo Farms recreation fields. The existing Weeks Hill Road bridge is a single span steel girder bridge with a clear span of 60'. Existing original stone foundation bridge abutments on the north side of the bridge effectively reduce the hydraulic clear span of the existing bridge to approximately 54'. The Quiet Path Bridge is proposed to be constructed immediately downstream of the existing bridge with a 64' clear span structure. The hydraulic opening of the proposed bridge is approximately 39% larger than the existing bridge immediately upstream. Although the foundations abutment slightly encroach in the regulatory flood way, the road and existing bridge remain the hydraulic control for the river and flood plain hydrology proximate to the proposed bridge and no increase in water surface elevation during flood events of any recurrence interval will result from the proposed pedestrian bridge construction.

Hydrologic Data:	Drainage Area:	26.9 Square Miles
	Character of Terrain:	Hilly to Mountainous
	Stream Characteristics:	Sinuuous, semi alluvial, incised, past degradation
	Nature of Streambed:	Gravel, cobbles, some large boulders
	Ice Conditions:	Moderate
	Debris Conditions:	Moderate
	Hydraulic Rise:	Rapid
	Stage effected by Upstream Structure?	Yes-Weeks Hill Road and Bridge

Peak Flows:	Q _{2.33}	1450 Cubic Feet/Second (CFS)
	Q ₁₀	3000 CFS
	Q ₂₅	3400 CFS
	Q ₅₀	4000 CFS
	Q ₁₀₀	4750 CFS

Permit Information: Average Daily Flow: 50 CFS
Ordinary Low Flow: 25 CFS
Ordinary High Water: 630 CFS

Existing Structure Information

(Weeks Hill Road Bridge):

Structure Type:	One Span steel beam with concrete deck.
Clear Span:	60'
Vertical Clearance to Streambed:	16'
Waterway Area Q ₁₀₀ :	590 Sq.Ft.
Water Surface Elevation Q ₁₀₀ :	Upstream = 712.0 Downstream = 710.3
Velocity @ Q ₁₀₀ :	Upstream = 6.8 fps Downstream = 8.0 fps
Road Overtopped @ Q ₁₀₀	No-Freeboard = 6'±

Proposed Structure Information

(Quiet Path Bridge):

Structure Type:	One Span steel beam with wood deck.
Clear Span:	64'
Vertical Clearance to Streambed:	14'
Waterway Area Q ₁₀₀ :	820 Sq.Ft.
Water Surface Elevation Q ₁₀₀ :	710.2
Velocity @ Q ₁₀₀ :	7.2 fps
Bridge Overtopped @ Q ₁₀₀ ?	No-Freeboard = 1.1'±

See annotated copy of Site Plan sheet S1 and Bridge Elevation sheet S2 attached for additional information.

MAYO FARM ROAD

GRADE TO DRAIN

BLEND TO EX

ex quite path

4'-0" TYPE III STONE ARMOUR ON SLOPE (TYP)

FEMA FIRM FLOODWAY

WEST BRANCH RIVER

GRUITE PATH BRIDGE BOT. OF BRIDGE EL = 711.3

WEEKS HILL ROAD

WEEKS HILL ROAD BRIDGE

100 yr = 712.0

100 yr = 710.3

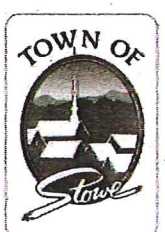
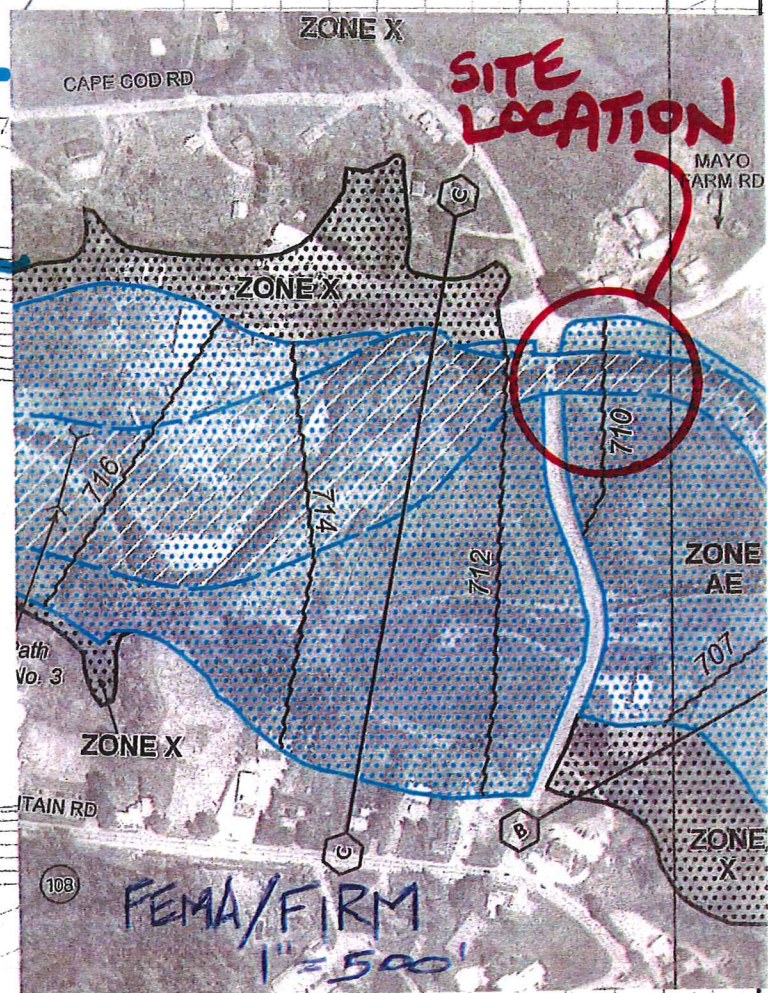
BLEND STONE ARMOUR TO MATCH EX.

ex sheet pile in front of ex pile cap
ex abutment

WEEKS HILL ROAD

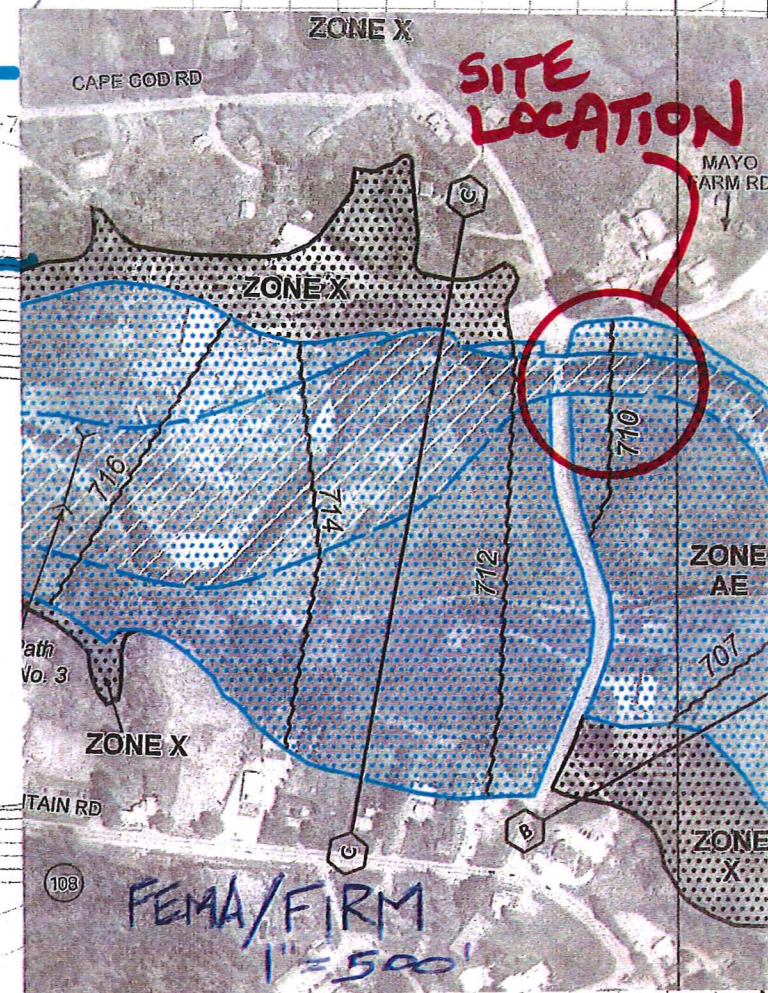
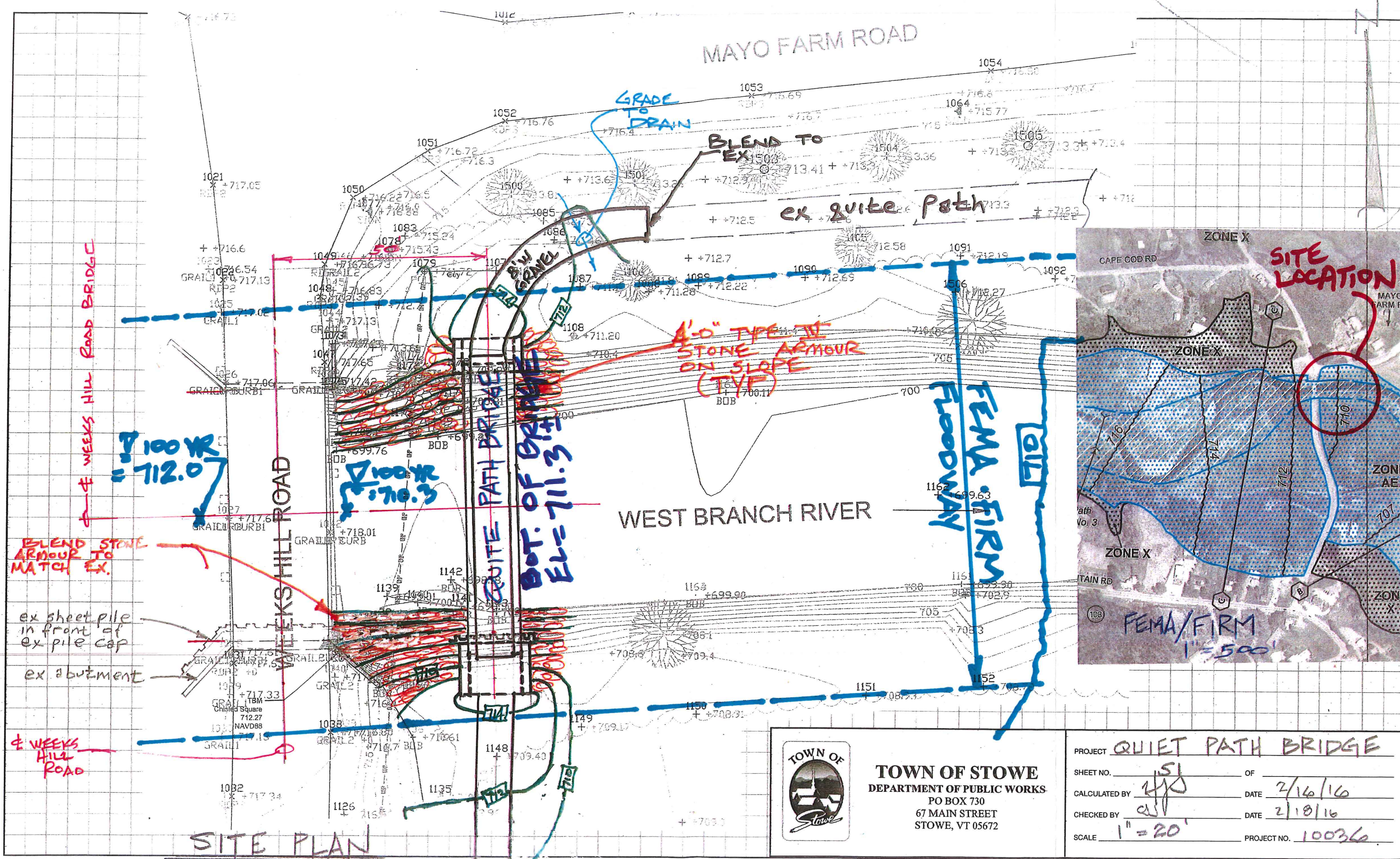
SITE PLAN

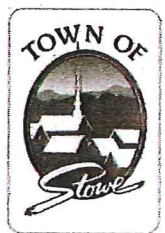
BLEND TO EX GRAVEL PATH



TOWN OF STOWE
 DEPARTMENT OF PUBLIC WORKS
 PO BOX 730
 67 MAIN STREET
 STOWE, VT 05672

PROJECT	QUIET PATH BRIDGE		
SHEET NO.	51	OF	
CALCULATED BY	JJD	DATE	2/16/16
CHECKED BY	CS	DATE	2/18/16
SCALE	1" = 20'	PROJECT NO.	10036




TOWN OF STOWE
 DEPARTMENT OF PUBLIC WORKS
 PO BOX 730
 67 MAIN STREET
 STOWE, VT 05672

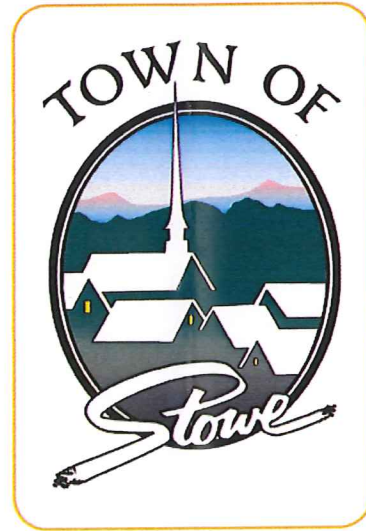
PROJECT	QUIET PATH BRIDGE		
SHEET NO.	51	OF	
CALCULATED BY	4/10	DATE	2/16/16
CHECKED BY	CSV	DATE	2/18/16
SCALE	1" = 20'	PROJECT NO.	10036

SITE PLAN

BLEND TO EX GRAVEL PATH

QUIET PATH BRIDGE

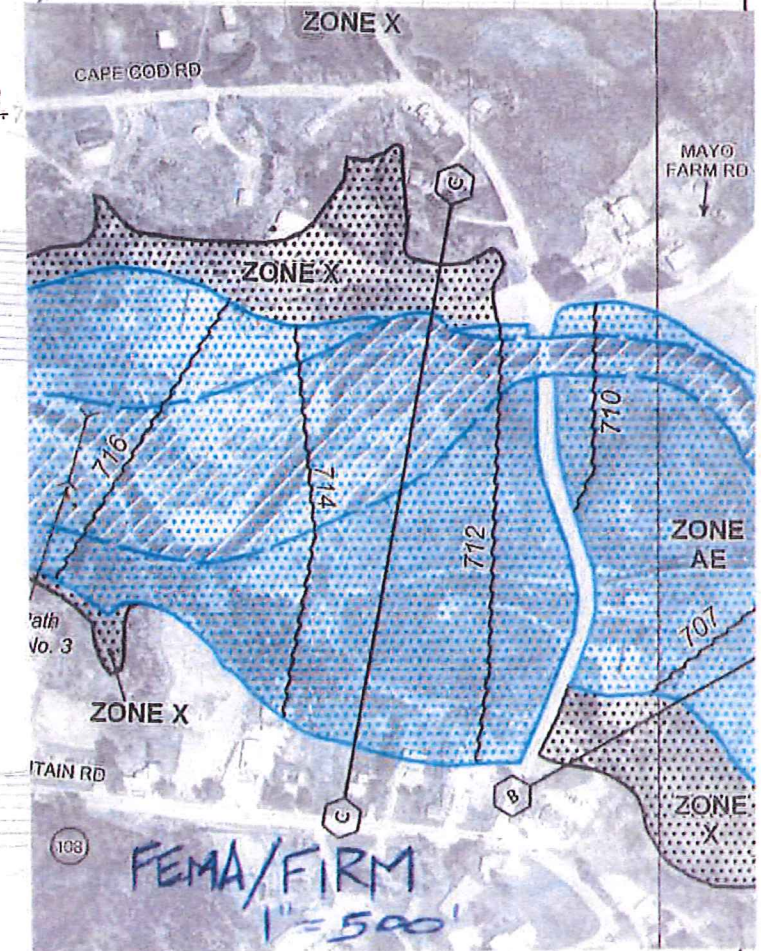
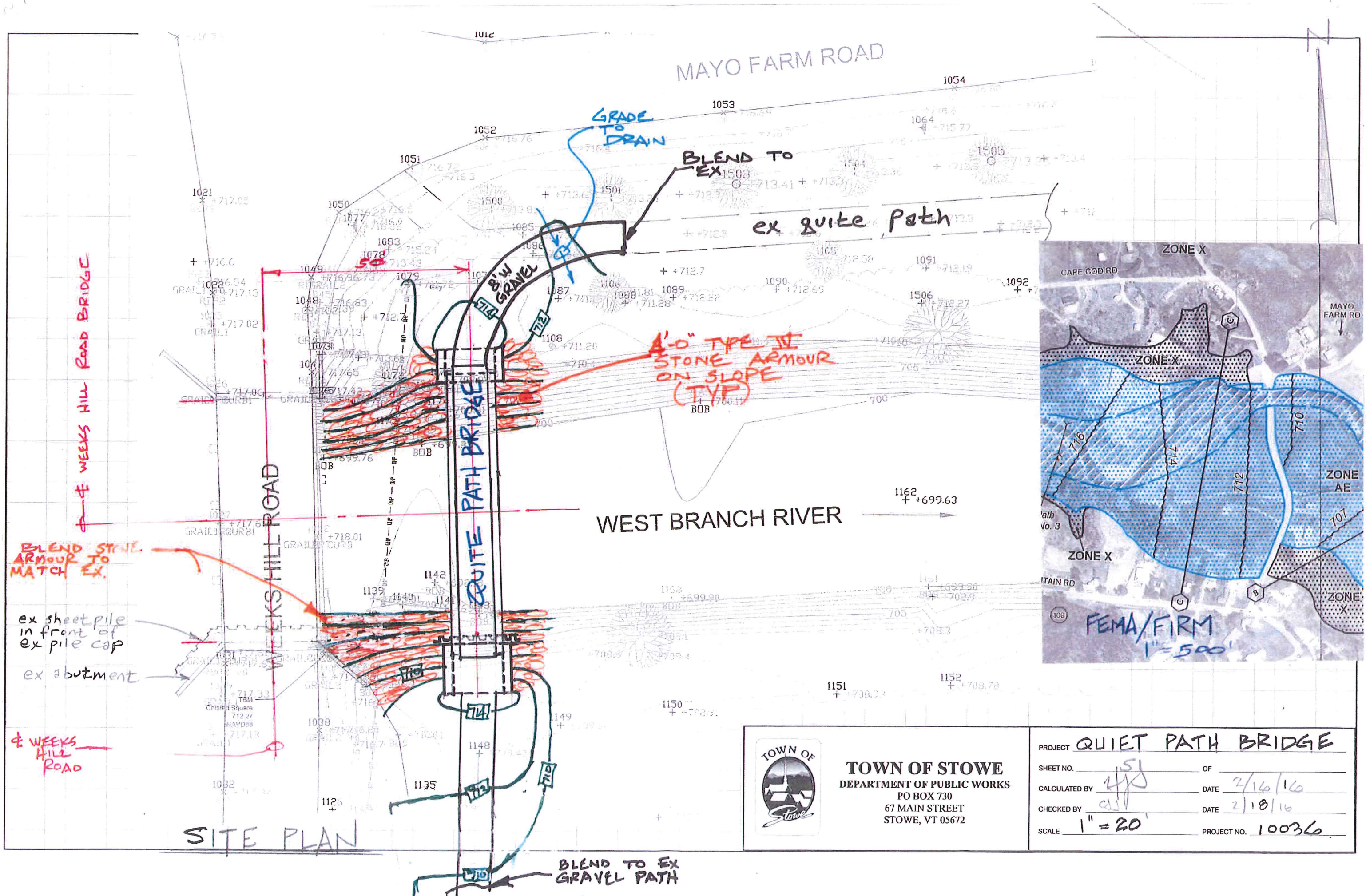
STOWE, VT




PUBLIC WORKS DEPARTMENT

ADDENDA #2 - ALTERNATE DESIGN

March 31, 2016



 <p>TOWN OF STOWE DEPARTMENT OF PUBLIC WORKS PO BOX 730 67 MAIN STREET STOWE, VT 05672</p>	PROJECT QUIET PATH BRIDGE
	SHEET NO. <u>51</u> OF _____
	CALCULATED BY <u>[Signature]</u> DATE <u>2/16/16</u>
	CHECKED BY <u>[Signature]</u> DATE <u>2/18/16</u>
	SCALE <u>1" = 20'</u> PROJECT NO. <u>10036</u>

SITE PLAN

BLEND TO EX GRAVEL PATH

BLEND STONE ARMOUR TO MATCH EX.

ex sheet pile in front of ex pile cap
ex abutment

Weeks Hill Road

4'-0" TYPE IV STONE ARMOUR ON SLOPE (TYP)

BLEND TO EX quite path

WEST BRANCH RIVER

MAYO FARM ROAD

Weeks Hill Road Bridge

QUIET PATH BRIDGE

GRADE TO DRAIN

8" W GRAVEL

WEEKS HILL ROAD

1032

1126

1135

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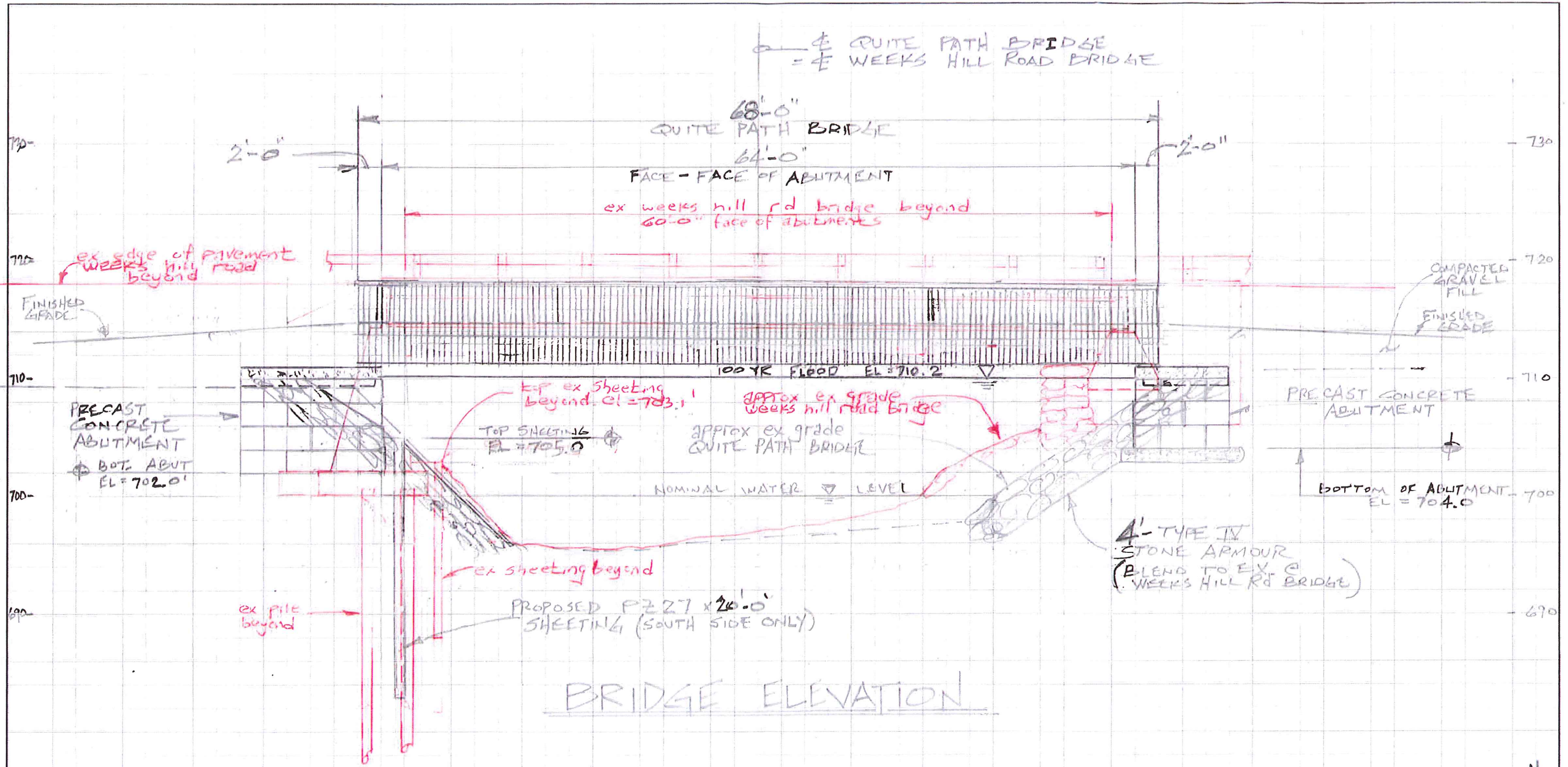
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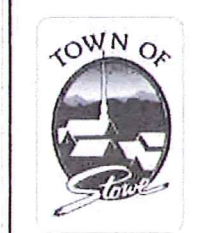
1090

1092



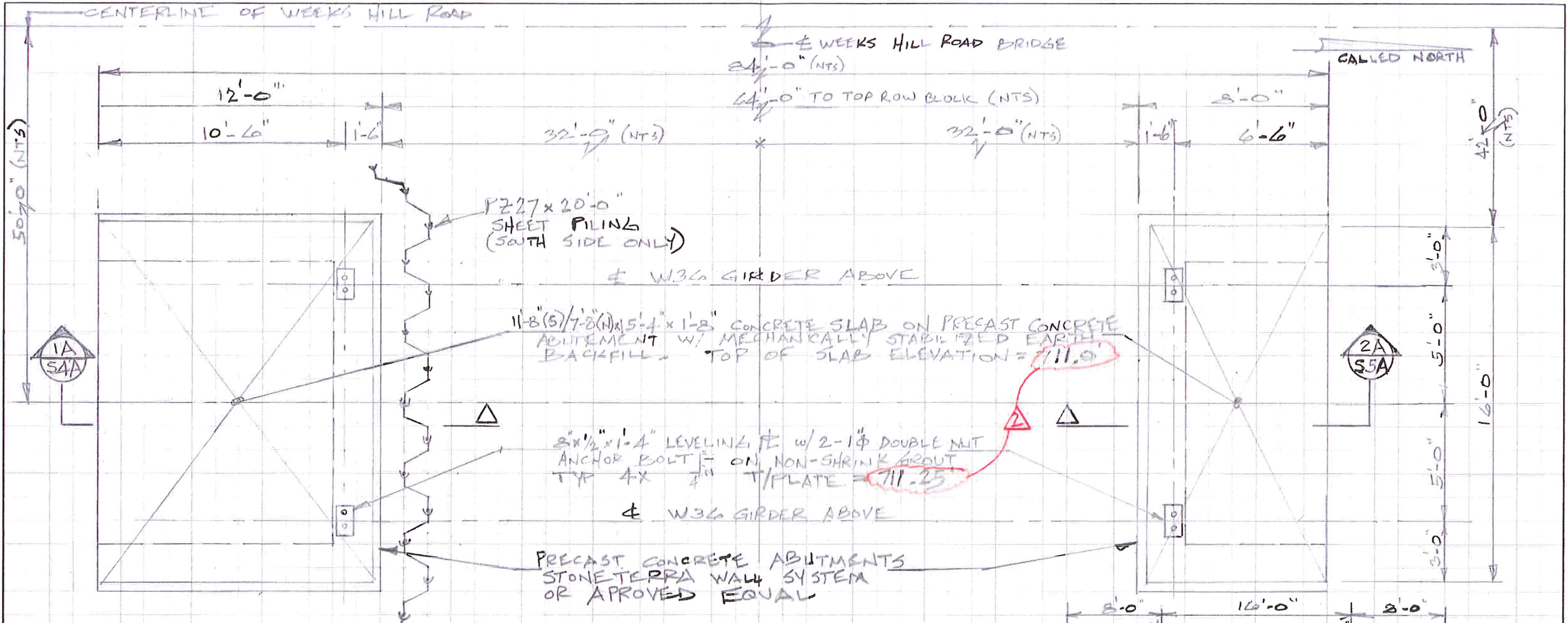
BRIDGE ELEVATION

ALTERNATE DESIGN - ADDENDA #2



TOWN OF STOWE
 DEPARTMENT OF PUBLIC WORKS
 PO BOX 730
 67 MAIN STREET
 STOWE, VT 05672

PROJECT	QUIET PATH BRIDGE		
SHEET NO.	S2A	OF	
CALCULATED BY	AJS	DATE	3/28/16
CHECKED BY		DATE	
SCALE	1/8" = 1'-0"	PROJECT NO.	10036



FOUNDATION PLAN

12'-0"										16'-0"										12'-0"									
CORNER					CORNER					CORNER					CORNER														
HD	FB	FB	FBCL	FB	FB	FBCR	FB	FB	HD	HD	FB	FB	FBCL	FB	FB	FBCR	FB	FB	HD	HD	FB	FB	FBCL	FB	FB	FBCR	FB	FB	HD
F	F	F	FCL	F	F	F	FCL	F	F	F	F	F	FCL	F	F	F	FCL	F	F	F	F	F	FCL	F	F	F	FCL	F	F
H	F	F	FCL	F	F	F	FCL	F	H	H	F	F	FCL	F	F	F	FCL	F	H	H	F	F	FCL	F	F	F	FCL	F	H
F	F	F	FCL	F	F	F	FCL	F	F	F	F	F	FCL	F	F	F	FCL	F	F	F	F	F	FCL	F	F	F	FCL	F	F

4 COURSES CR = 8'-0"

DELETE 1 ROW
SOUTH PRECAST ABUTMENT ELEV. 1/2" = 1'-0"

PRECAST SCHEDULE		
MARK	ITEM	QTY
FB	FULL BENCH	10
HB	HALF BENCH	4
FBCR	FULL BENCH CORNER RIGHT	2
FBCL	FULL BENCH CORNER LEFT	2
F	FULL	29
H	HALF	4
FCR	FULL CORNER RT.	5
FCL	FULL CORNER LT.	5
TOTAL		61 PICES

HD	FB	FBCL	FB	FB	FBCR	FB	HD
F	F	FCL	F	F	FCL	F	F
H	F	FCL	F	F	FCL	F	H

3 COURSES CR = 6'-0"

DELETE 1 ROW
NORTH PRECAST ABUTMENT ELEV. 1/2" = 1'-0"



TOWN OF STOWE
DEPARTMENT OF PUBLIC WORKS
PO BOX 730
67 MAIN STREET
STOWE, VT 05672

PROJECT QUIET PATH BRIDGE

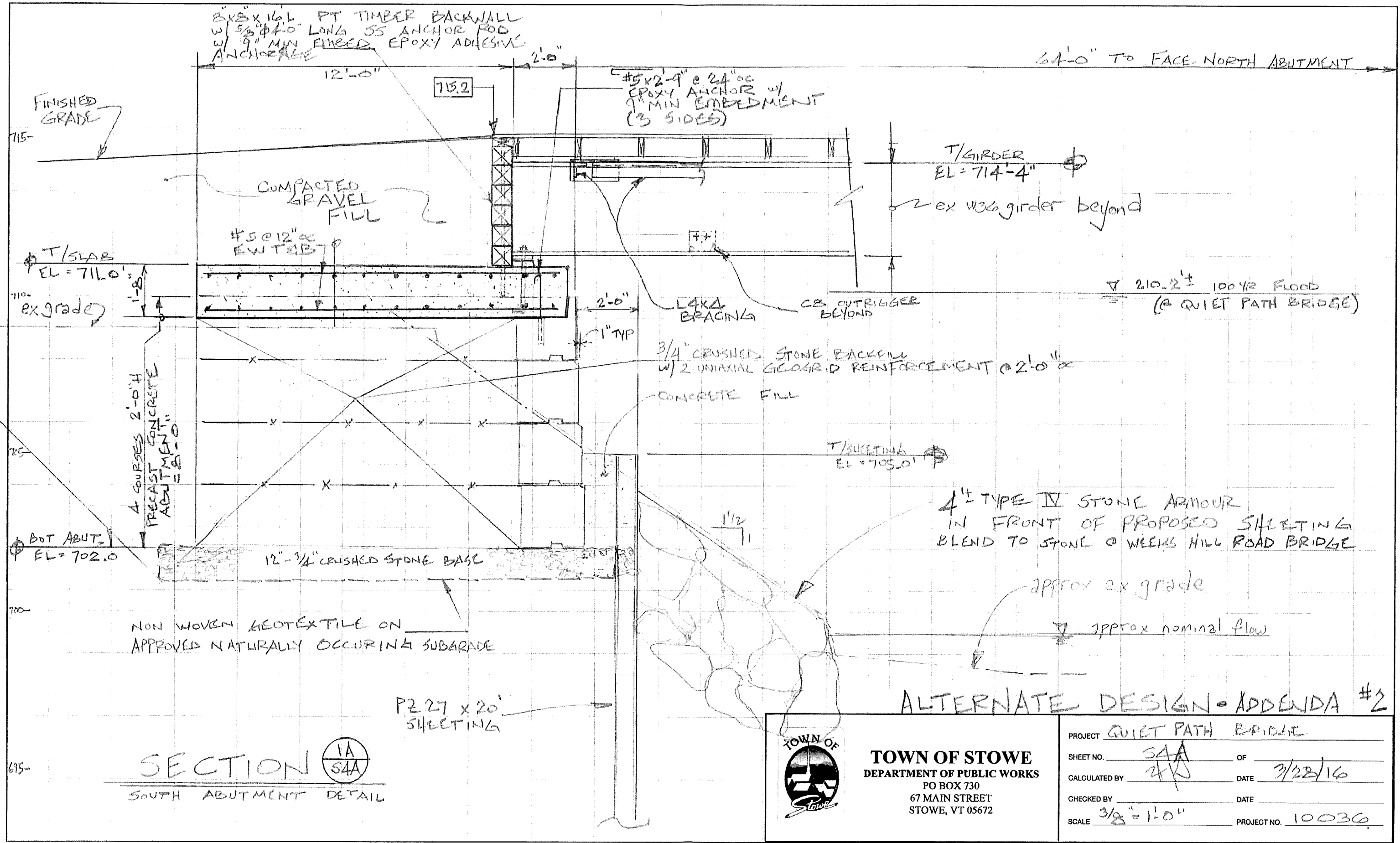
SHEET NO. 53A OF _____

CALCULATED BY [Signature] DATE 3/28/16

CHECKED BY _____ DATE _____

SCALE AS NOTED PROJECT NO. 10036

ALTERNATE DESIGN - APPENDIX #2

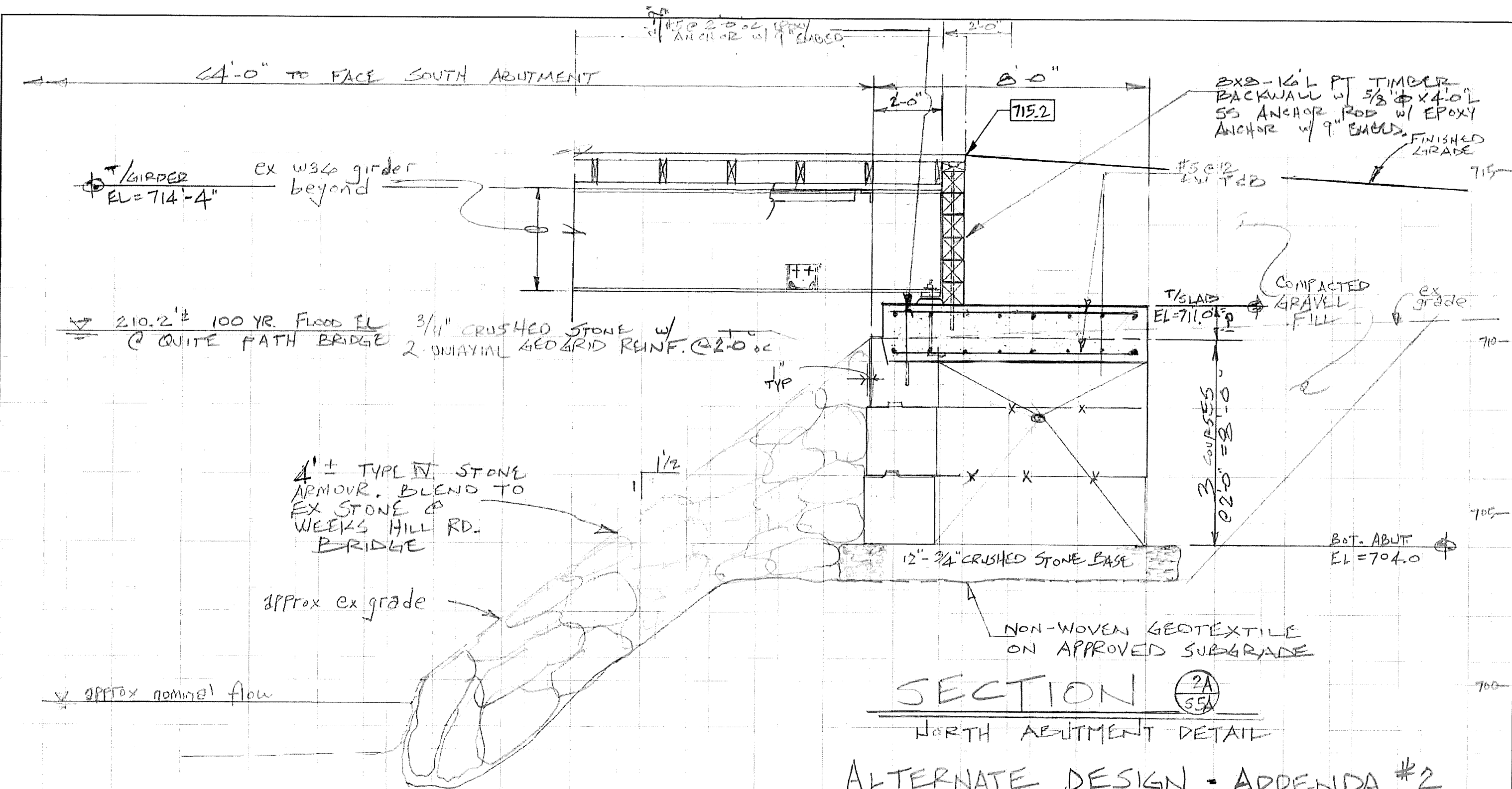


ALTERNATE DESIGN - ADDENDA #2




TOWN OF STOWE
DEPARTMENT OF PUBLIC WORKS
PO BOX 730
67 MAIN STREET
STOWE, VT 05672

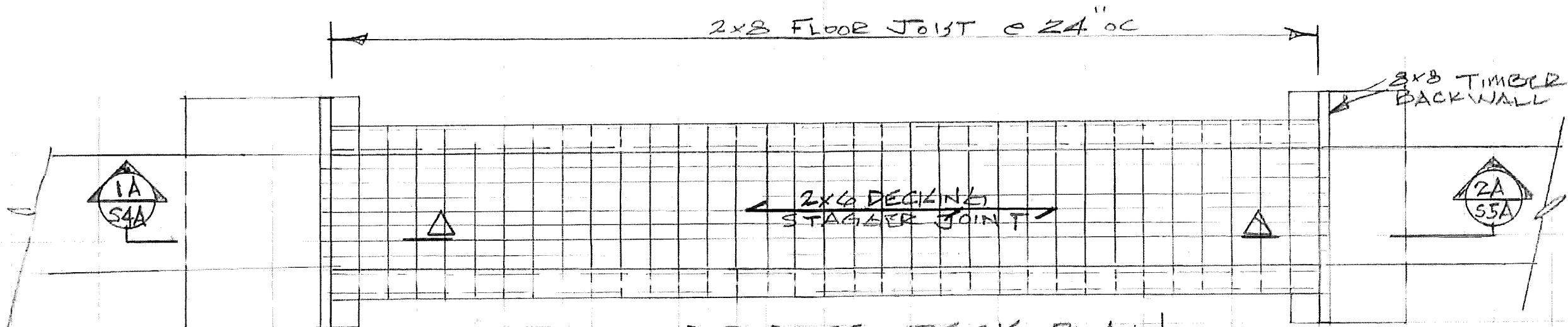
PROJECT	QUIET PATH BRIDGE		
SHEET NO.	54A	OF	
CALCULATED BY	SA	DATE	3/28/16
CHECKED BY		DATE	
SCALE	3/8" = 1'-0"	PROJECT NO.	10036



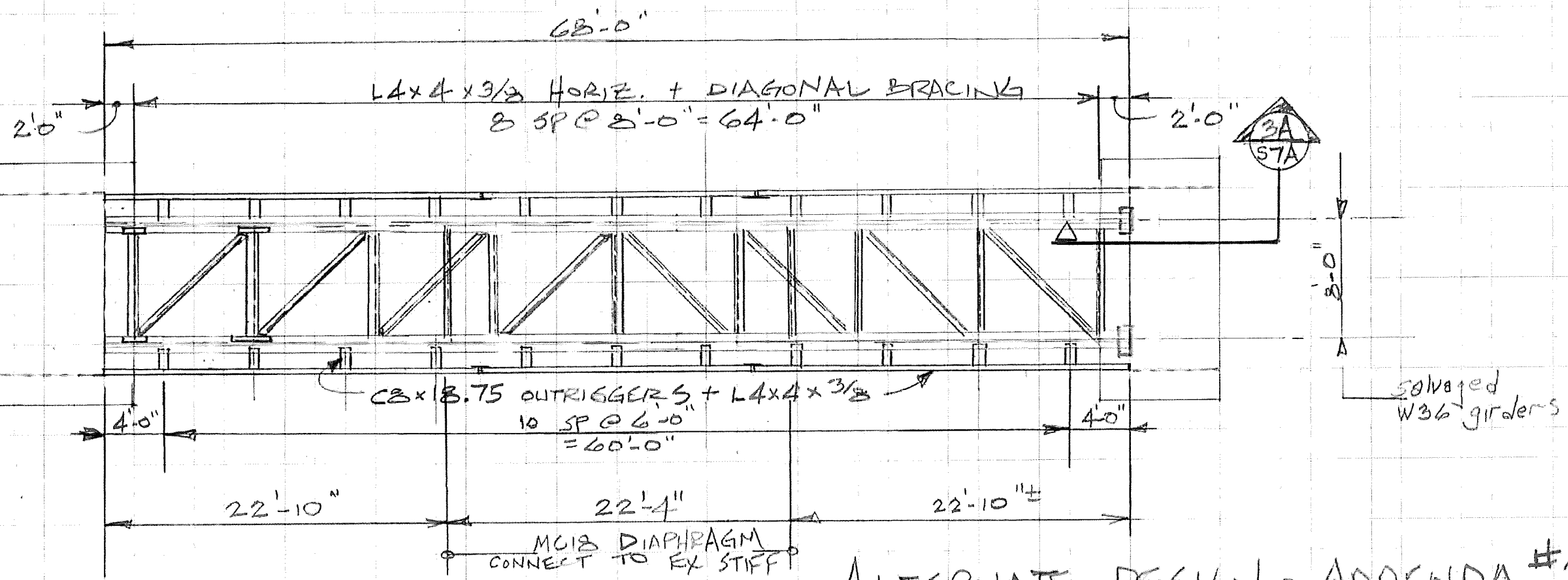
SECTION 2A
55A
NORTH ABUTMENT DETAIL

ALTERNATE DESIGN - ADDENDA #2

 TOWN OF STOWE DEPARTMENT OF PUBLIC WORKS PO BOX 730 67 MAIN STREET STOWE, VT 05672	PROJECT	QUIET PATH BRIDGE	
	SHEET NO.	55A	OF
	CALCULATED BY	<i>HJS</i>	DATE
	CHECKED BY		DATE
	SCALE	3/2 = 1'-0"	PROJECT NO.




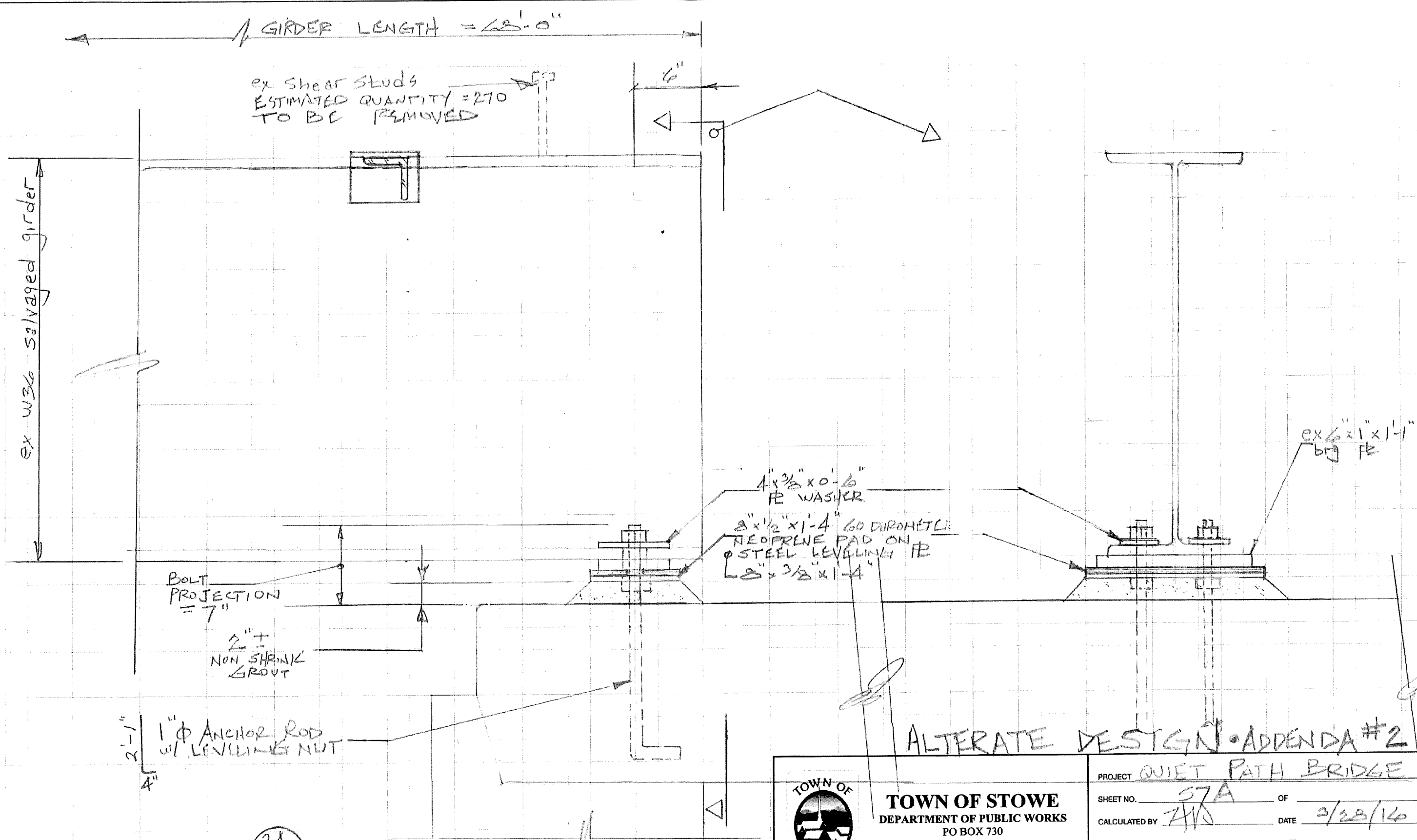
BRIDGE DECK PLAN



BRIDGE FRAMING PLAN

ALTERNATE DESIGN - ADDENDA #2

 <p>TOWN OF STOWE DEPARTMENT OF PUBLIC WORKS PO BOX 730 67 MAIN STREET STOWE, VT 05672</p>	PROJECT	QUIET PATH BRIDGE		
	SHEET NO.	56A	OF	
	CALCULATED BY	TRJ	DATE	3/28/16
	CHECKED BY		DATE	
	SCALE	1/8" = 1'-0"	PROJECT NO.	



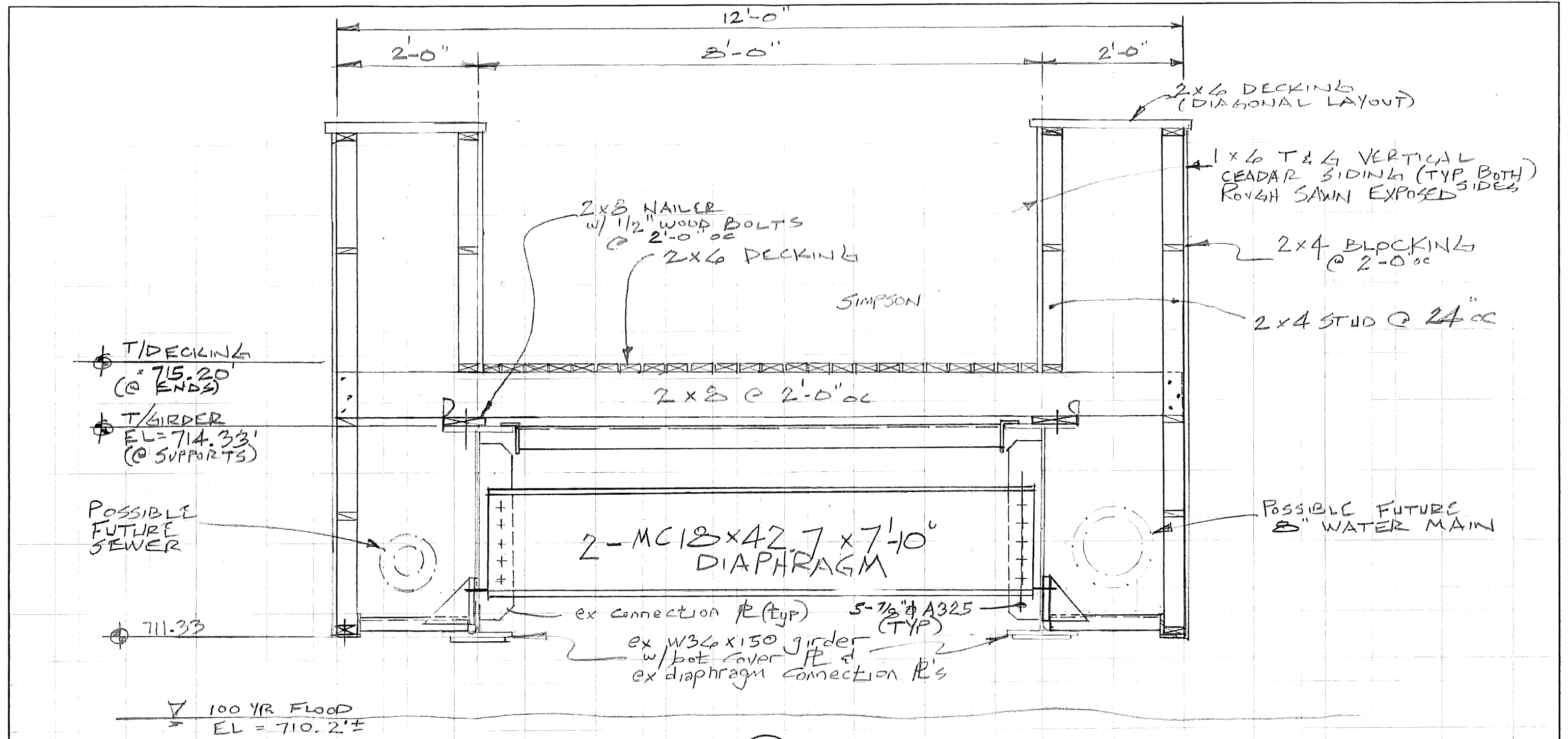
SECTION 3A
57A
 TYP GIRDER BEARING

ALTERATE DESIGN • ADDENDA #2



TOWN OF STOWE
 DEPARTMENT OF PUBLIC WORKS
 PO BOX 730
 67 MAIN STREET
 STOWE, VT 05672

PROJECT	QUIET PATH BRIDGE		
SHEET NO.	57A	OF	
CALCULATED BY	Z/A	DATE	3/28/14
CHECKED BY		DATE	
SCALE	1 1/2" = 1'-0"	PROJECT NO.	



SECTION 4A

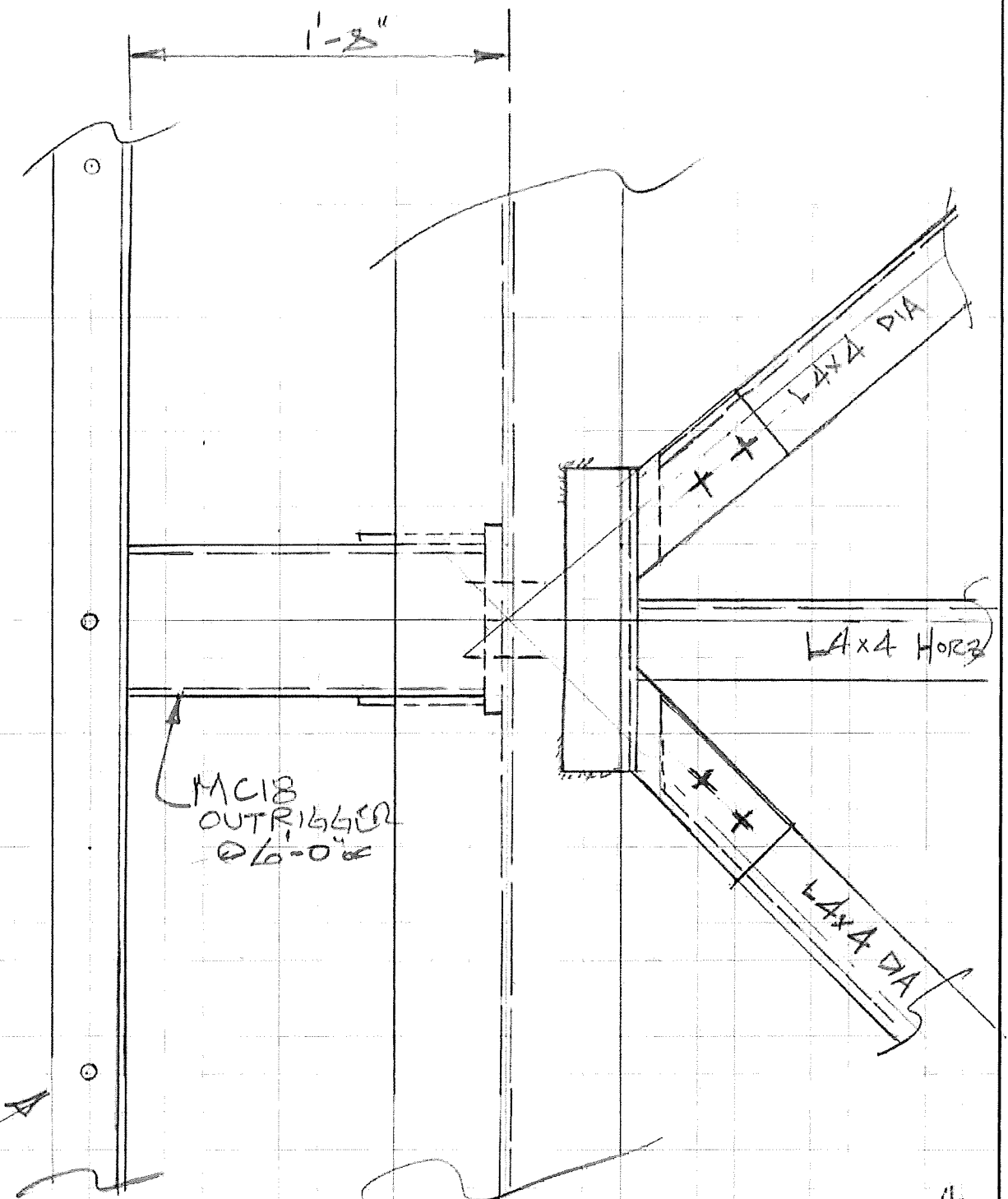
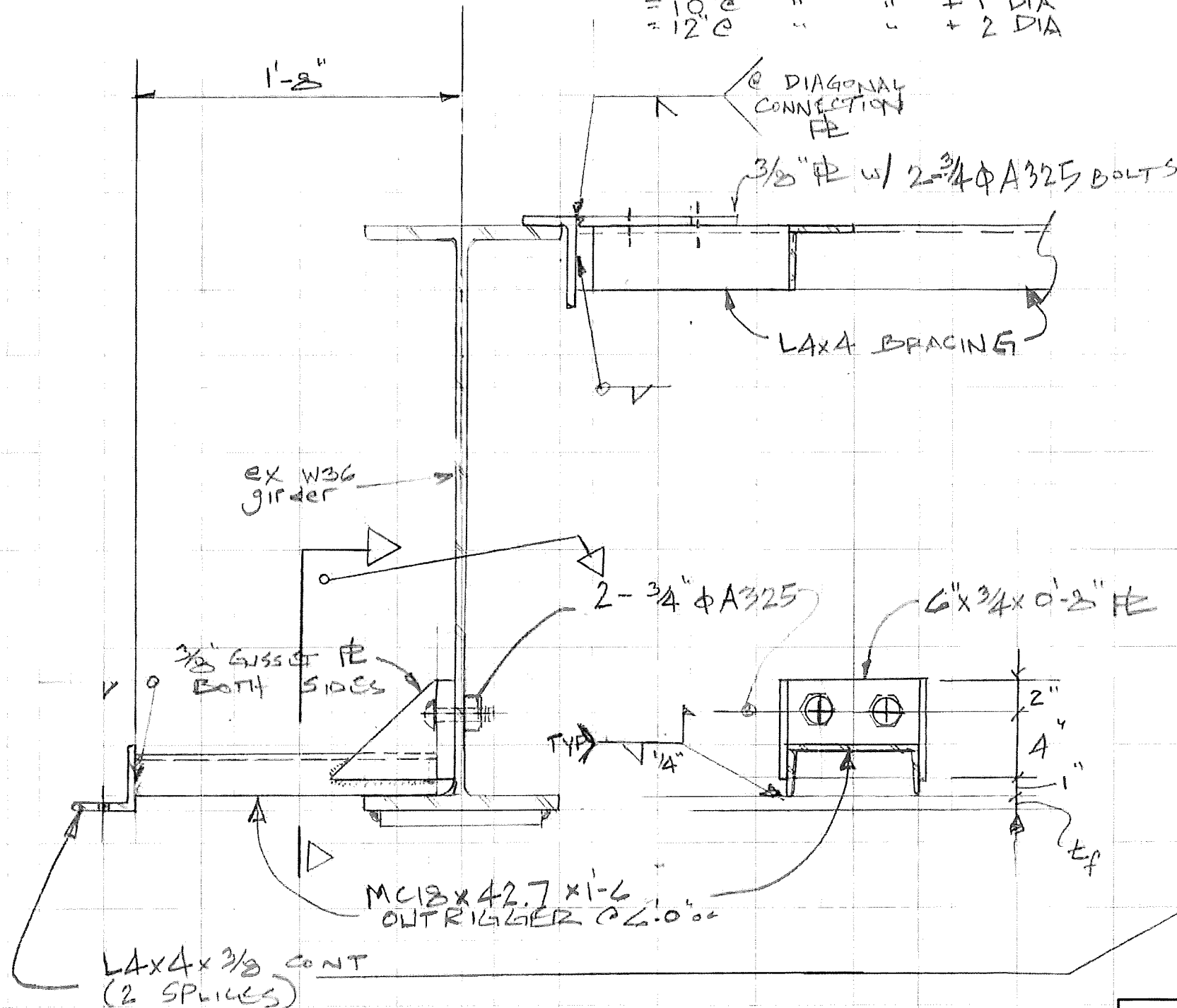
ALTERNATE DESIGN - ADDENDA #2



TOWN OF STOWE
DEPARTMENT OF PUBLIC WORKS
PO BOX 730
67 MAIN STREET
STOWE, VT 05672

PROJECT	QUIET PATH BRIDGE		
SHEET NO.	58A	OF	
CALCULATED BY	TJS	DATE	3/22/16
CHECKED BY		DATE	
SCALE	3/4" = 1'-0"	PROJECT NO.	

$L6 \times 3\frac{1}{2} \times 3\frac{1}{8} \times \text{VARIES LLV}$
 $L=6" @ L4 \times 4 \text{ HORIZ ONLY}$
 $=10" @ \quad \quad \quad +1 \text{ DIA}$
 $=12" @ \quad \quad \quad +2 \text{ DIA}$



L4x4x3/8 CONT (2 SPLICES)

SECTION 5A
S9A

ALTERNATE DESIGN - ADDENDA #2



TOWN OF STOWE
 DEPARTMENT OF PUBLIC WORKS
 PO BOX 730
 67 MAIN STREET
 STOWE, VT 05672

PROJECT	QUIET PATH BRIDGE		
SHEET NO.	S9A	OF	
CALCULATED BY	ZYS	DATE	3/28/16
CHECKED BY		DATE	
SCALE	1 1/2" = 1'-0"	PROJECT NO.	

DESIGN BASIS - GENERAL NOTES – TECHNICAL SPECIFICATIONS

DESIGN BASIS:

1. Codes; 2012 ASCE 7-Minimum Design Loads for Buildings and Other Structures
2. Live Loads;
Pedestrian Bridge: Uniform Live Load= 100 PSF
Concentrated = 4,000 LBS (4-1000 LB Wheel Loads)
3. Snow Loads;
Ground Snow Load = 70 PSF
Exposure Factor = 1.0
Thermal Factor = 1.2 (Unheated-Open Air)
Importance Factor = 1.0
4. Wind Load
Wind Speed = 90 MPH (3 second gust)
Exposure Category B
Importance Factor 1.0
5. Foundations: Mechanically Stabilized Earth with Precast Concrete facial units on a prepared sub-base of 12" min. of ¾" crushed stone in a geotextile envelope on a suitable naturally occurring subgrade capable of a foundation bearing capacity of 2000 PSF. Subgrade to be approved by the Town prior to installation of geotextile.

GENERAL NOTES:

1. All work shall be performed in compliance with applicable VOSHA Safety and Health Standards for Construction and any other safety regulation or requirement by other authorities with jurisdiction.
2. Jobsite safety is solely the responsibility of the Contractor. Review of the construction by the Town is for quality assurance and design compliance only, not the Contractors provisions for job site safety or compliance with applicable VOSHA standards. Lack of comment by the Town shall not be interpreted as approval or acceptance of the Contractors provisions for job site safety.
3. Protect the construction work zone with temporary fencing and any other safeguards deemed necessary to prevent the general public from entry into the work area.
4. This structure has been designed to be self supporting and stable after the construction has been completed. The stability of the structure prior to the completion of the construction is solely the responsibility of the Contractor.
5. The location of existing utilities is unknown. Existing utility information indicated is based upon information provided by others or surface indications of existing locations. These are approximate and not guaranteed and are for the Contractors guidance only. Prior to the start of construction, the Contractor shall register intent to dig with "Dig Safe" for a public utility mark out and shall use other methods to locate any private utilities which may be located in the area of the work. The Contractor shall be solely responsible for locating existing utilities and repairing any damage caused to the same by the construction operations.
6. Prior to the start of construction, the Contractor shall confirm all existing conditions, layout dimensions and elevations of the proposed work and existing utility locations. If any discrepancies are encountered or if any conditions preclude compliance with these design documents, the Contractor shall notify the Town and proceed as directed.
7. Fuel storage or equipment maintenance or repair shall not be permitted on site. The Contractor shall maintain on-site sufficient supply of materials to contain any fuel or oil spills and shall be solely responsible for any remediation required for the same.
8. Open burning or on-site burial of construction debris is prohibited. Legal off-site disposal of all construction debris and surplus excavation materials is required.
9. Existing conditions and features shall be maintained where new construction is not indicated, unless otherwise directed by the Town. Restore to original condition or better any existing condition or feature damaged by construction unless otherwise approved by the Town.
10. Submit for approval manufacturer's product data, shop drawings, test reports and/or certificates of compliance for all products proposed for use in the work to the Town for review and approval prior to fabrication and/or incorporation in the Work.

TECHNICAL SPECIFICATION:

SITE CONSTRUCTION

1. Whenever reference is made to "STANDARD SPECIFICATIONS", it shall mean the State of Vermont Agency of Transportation, 2011 Standard Specifications for Construction, including all supplements issued to date. The purpose and intent of citing the STANDARD SPECIFICATIONS is to ensure minimum standards of materials and workmanship. Method of Measurement and Basis of Payment paragraphs shall not apply to this project.
2. This project is based upon "Unclassified Excavation". The Contractor shall be responsible for providing all earthworks necessary to accomplish the work, regardless of the nature of the earth materials, rock or groundwater conditions encountered, at no additional cost to the Town.
3. The Contractor shall implement and maintain erosion control measures as required to prevent erosion of sedimentation downgradient of the Construction zone. Comply with the Vermont Department of Environmental Protection 2006 LOW RISK SITE HANDBOOK for Erosion Prevention and Sediment Control.
4. All excavation and construction shall be implemented in the dry. Provide, operate and maintain all equipment and facilities required for the control of groundwater and surface water encountered in the work. Dispose of all diverted water in a manner suitable to avoid erosion or sedimentation downgradient of the construction zone.
5. All earthwork materials utilized in the work shall be clean, hard, durable, uncontaminated, non-plastic, inorganic and compactable earthen materials meeting the gradation requirement for the products indicated.
6. Non-Woven geotextile for use in separation applications shall be a non-rotting, acid and alkali resistant fabric not susceptible to ultraviolet degradation, Mirafi 180N or and approved equal.
7. All subgrades shall be critically examined and approved by the Town. Any area's encountered which are soft unstable or yielding shall be excavated to such depths as required to achieve suitable subgrade and backfilled with compacted crushed stone of gravel fill.
8. All earthwork installation shall be monitored and tested for compaction by a qualified testing agent retained by the Town. If the specified compaction is not achieved, the Contractor shall implement other means required to achieve the specified compaction prior to the installation of a subsequent lift.

FOUNDATION CONSTRUCTION

1. Bridge abutments shall be Mechanically Stabilized Earth with Precast Concrete Facing Units
2. Precast Concrete Facing Units shall be "Stonetera Segmental Concrete Facing Unit manufactured by a precast concrete manufacturer licensed by Stonetera, Inc. or an approved equal. Facing Units shall have a minimum 28 day compressive strength of 3000 psi and shall meet the Freeze/Thaw protection requirements of ASTM C 1372 when tested in accordance ASTM C1262. Units shall be free of cracks, chips or other defects that in the opinion of the Engineer, are unacceptable. Units shall be installed in strict compliance with the manufacturers written installation instructions.
3. Ensure that the first course of wall units are fully bearing on the foundations subgrade stone and precisely level in all directions and square prior to installation of subsequent course. Stagger vertical joints in alternating courses.
4. Geogrids for abutment construction shall be "Stratagrid 350" manufactured by Stata Systems, Inc. or an approved equal. 2 layers of uniaxial geogrid shall be installed, 1 in each direction, at 2' oc. Geogrid shall be installed in strict compliance with the manufacturers written instructions and shall be taut and fully engaged between precast units prior to installation of subsequent lift of stone backfill.
5. Stone backfill shall be installed in 12" lifts compacted with 2 passes minimum with a 400LB minimum vibratory plate compactor. All spaces between units shall be stone filled.
6. Sheet piling shall comply with ASTM A 328 and shall be installed vertical with fully interlocked male/female lap joints driven with a vibratory hammer.
7. Concrete Materials (Cast in Place) shall be normal weight and have the following properties: f'_{c28} = 4000 psi, W/CM Ratio = 0.46 max., Air Entrainment = 5-7%, Slump = 2" - 4".
8. Reinforcement Materials; ASTM A615 Grade 60.
9. Reinforcement shall be securely tied in place before and during the pour. All lap splices shall be 36 bar diameters minimum unless otherwise detailed. Provide corner bars at all corners and intersections. Provide minimum concrete cover over reinforcement in accordance with ACI 318
10. Town will engage an independent testing agent to perform field and laboratory testing of all concrete pours. Contractor shall coordinate this work and provide assistance and materials required.
11. Epoxy Adhesive Anchorages shall be Hilti HY150 or approved equal.

STEEL CONSTRUCTION

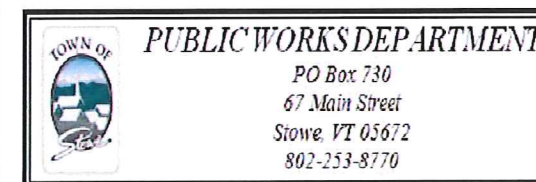
1. The Design, Fabrication and Erection of Structural Steel shall conform to the 14th Edition of the Steel Construction Manual by the American Institute of Steel Construction (AISC).
2. Structural Steel Materials:

Wide Flange Shapes:	ASTM A992 Grade 50
Angles, Plates and Bars:	ASTM A36
Structural Steel Bolts:	ASTM A325
Anchor Rods:	ASTM F1554, Grade 55
Welding Electrodes:	ASTM A70XX, Low Hydrogen
Existing Salvaged W36 Girders:	ASTM A36 (assumed)
3. All welding shall conform to the American Welding Society (AWS) Structural Welding Code D1.1 and be performed by certified welders in accordance with AWS Standards for the type, size and position. All faying surfaces shall be ground clean prior to welding.
4. Submit shop drawing and material certifications of all structural steel components and assemblies for review and approval by the Town, prior to fabrication. Detailing shall be in accordance with the AISC Manual "Detailing for Steel Construction".
5. Fabricate and assemble structural steel assemblies in the shop to the greatest extent possible. Properly mark and match for field erection.
6. Clean concrete bearing surfaces and steel base/bearing plates of bond reducing materials. Set bases level on adjustment nuts and level and plumb steel assemblies. Provide temporary bracing and shoring required for erection. Upon completion of final bolt up and adjustments, pack non-shrink grout in annular space between top of concrete and bottom of steel bearing surfaces.
7. Do not use gas cutting torches in the field to correct fabrication errors without the specific approval of the Engineer.

WOOD CONSTRUCTION

1. Wood construction shall conform to the latest version of the National Design Specification for Wood Construction (NDS) by the National Forest Products Association.
2. Framing lumber shall be #2 Southern Pine, pressure treated with ACQ-D in accordance with AWPA Standard P28-11 with 0.25 lb/ft³ minimum retention.
3. Decking lumber shall be Dense Standard Southern Pine, pressure treated with ACQ-D in accordance with AWPA Standard P28-11 with 0.40 lb/ft³ minimum retention.
4. Wood Connectors for Framing Lumber shall be manufactured by Simpson Strong Tie or an approved equal and shall be "Zmax" hot dipped galvanized in accordance with ASTM A653, G185.
5. Wood Fasteners for framing lumber shall be hot dipped galvanized in accordance ASTM A153, Class D.
6. Wood Fasteners for Decking Lumber and Wood Bolts for Framing Lumber shall be Type 316 Stainless Steel.
7. Nails and Screws shall conform to the applicable NDS requirement with regards to size and length specifically indicated and detailed.

See Addenda #1 for amendments to some notes, this sheet



PROJECT:
QUITE PATH BRIDGE
SHEET:
S-10
DATE:
FEBRUARY 16, 2016