Attachment #95.4.3

Pedestrian Bridge at the Cochecho Riverwalk

July 12, 1996

dean/titlpg2.sam

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This project was funded in part by a grant from the Office of State Planning, New Hampshire Coastal Program, as authorized by the National Oceanic and Atmospheric Administration (NOAA), Grant Award Number NA57OZ0320.

Narrative

Narrative

The City of Dover received a NH Coastal Grant to build a pedestrian bridge over the Cochecho River. The grant amount of $50,000 was matched by funds from the City of Dover.

The original plan to accomplish the project entailed writing a Request for Proposals using a design/build concept. The successful bidder would design and construct the bridge. While many companies attended the required pre-bid meeting, we received only one proposal for the project at $281,000. This price was approximately $100,000 more than our budget.

Our strategy had to be revised at this juncture. We realized that to have any chance at completing the project successfully, we would have to take a more active role. We decided to hire an engineering firm experienced in bridge design to determine the most cost effective solution, design the preferred alternative, prepare an RFP for the manufacturing of the structure, prepare an RFP for the installation of the bridge, and finally, oversee the installation of the bridge as the City of Dover's resident engineer.

The preliminary analysis showed that a wooden truss superstructure capable of supporting the weight of siding and a roof could be manufactured and delivered to the site for less than $100,000. The installation was estimated at approximately $80,000. Requests for Proposals resulted in a bridge for $94,500 and the installation for $60,000 with options to cover the bridge with siding and a roof between $21,068 and $23,628 depending on the roofing material used. The bids were awarded to HEB Engineers of North Conway, NH, Chicks Industrial of Madison, NH and Moores Marine of Dover, NH.

The bridge was delivered to the site by Chick Industrial the first week of April, and subsequently erected then floated into place by Moore's Marine on June 1st. The bridge was opened June 7th for use by pedestrians and completed on June 28th.

dean/bridg2.sam

Project Summary

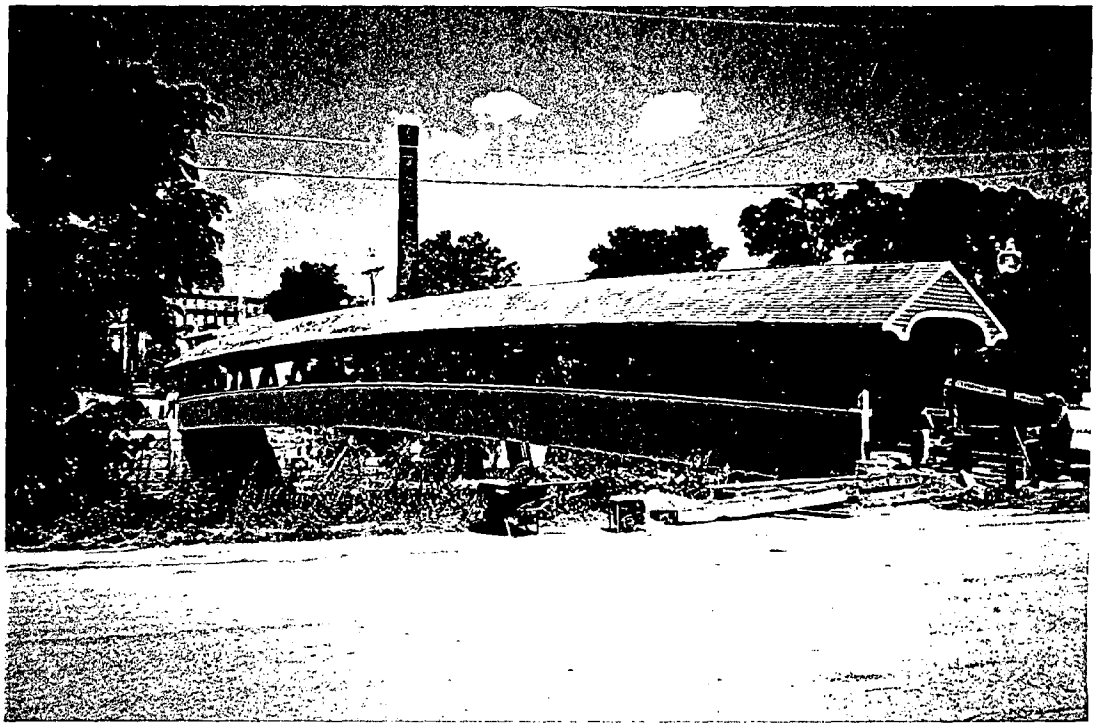
Project Summary

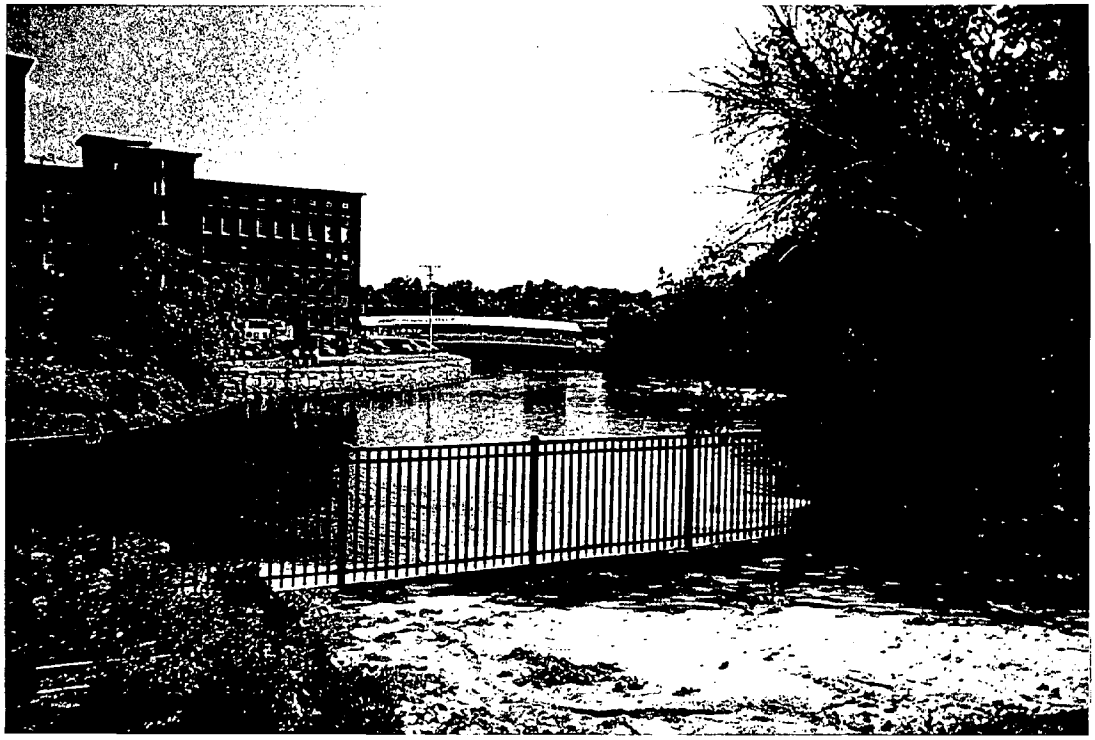
The following is a list of events which summarizes the pedestrian bridge project.

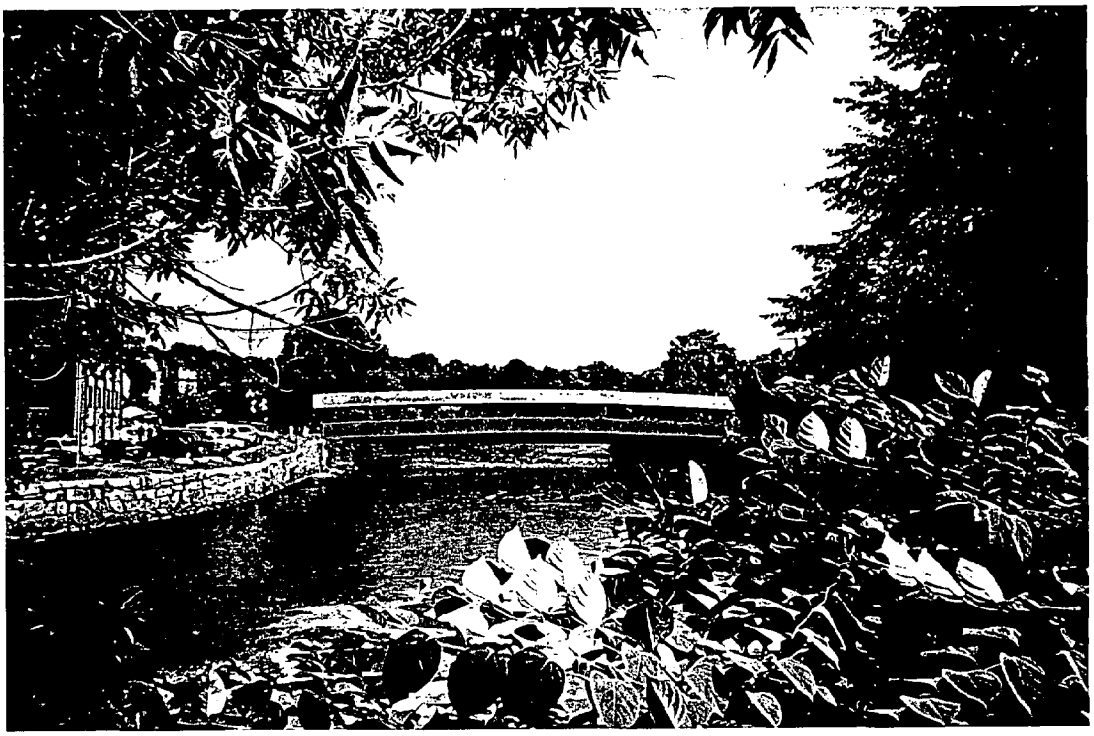
1. Prepare RFP for design/build of pedestrian bridge
2. Reject only bid as it was $100,000 over budget
3. Prepare RFP for engineering services to:
   a) Analyze various bridge alternatives
   b) Analyze existing abutments and make recommendations
   c) Design preferred alternative bridge and prepare RFP for manufacture of bridge superstructure
   d) Prepare RFP for installation of bridge and associated site work
   e) Oversee installation of bridge as City of Dover's representative
4. Award engineering services to HEB Engineers of North Conway, NH
5. Review report of HEB which summarized various bridge superstructures with preliminary cost estimates and selected a preferred alternative which met our budget
6. Engineering consultant prepared RFP for the manufacture and delivery of bridge superstructure
7. Awarded manufacture of bridge to Chicks Industrial of Madison, NH

8. Engineering consultant prepared RFP for the erection and installation of bridge
9. Moore's Marine of Dover, NH was awarded the bid to install the bridge
10. The cost of siding and roofing the bridge was $5,000 over budget
11. Applied and received a NH Coastal Program Grant to cover and side the pedestrian bridge
12. Received donation from Advanced Systems in Measurement and Evaluation, Inc., to pay for difference between the cost of asphalt and wood roof shingles
13. Chick Industrial delivered the bridge to the site the first week of April.
14. Moore's Marine erected bridge to 80% completion on land
15. Moore's Marine craned bridge onto barges and floated into place June 1st
16. Bridge opened to pedestrian traffic June 7th
17. Bridge completed on June 28th

Photos







Selected Press Coverage

Building bridges

Dover pedestrian walkway set to be done by March

By DAN TUOHY
Democrat Staff Writer

DOVER – The long-awaited pedestrian bridge over the Cocheco River is nearing completion and is expected to be erected by early March.

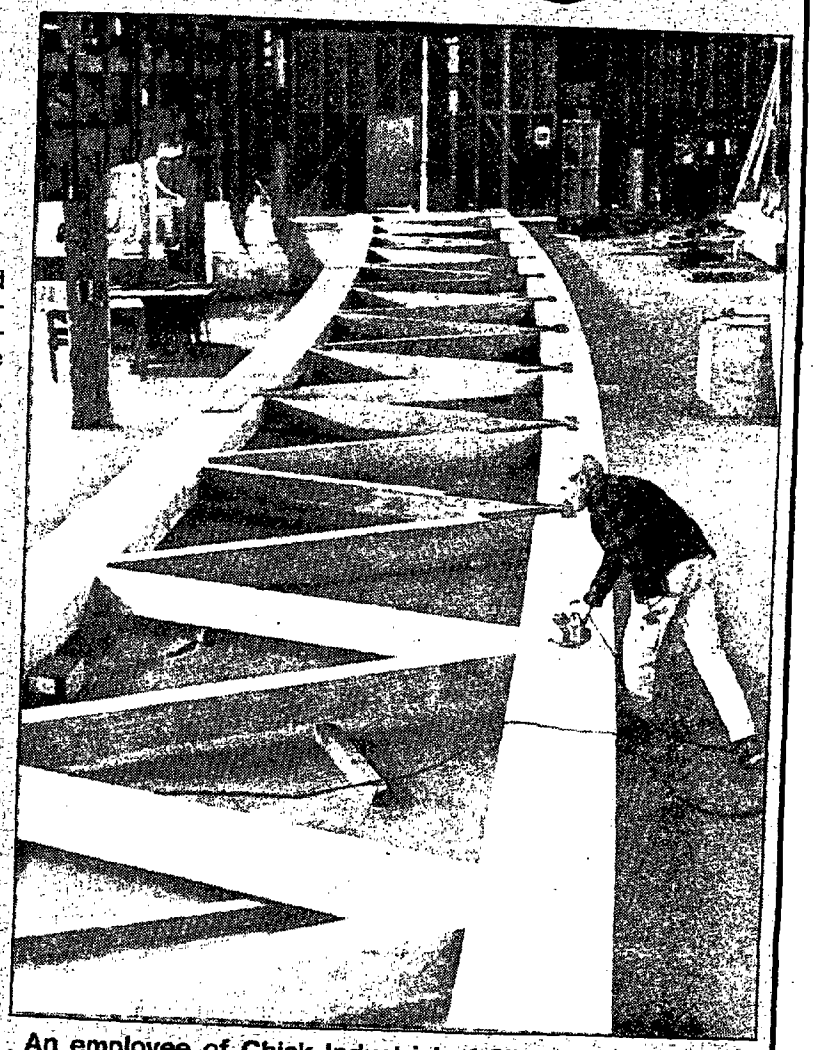
Chick Industrial of Silver Lake is preparing to ship pieces of the bridge structure to South Carolina where they will be pressure treated and returned to the Granite State.

The Silver Lake company will then put the pieces together in six parts before transporting them to Dover where Moore's Marine will put the finishing touches on the bridge, place it on a barge and secure it in place, said Dean Peschel, a city planner.

The covered bridge is an integral part of a 170-space parking project on River Street and the celebrated redevelopment of Dover's historic riverfront. The bridge will connect River Street to Washington Street and nearby One Washington Center, which houses more than 20 businesses.

Advanced Systems, a new tenant in the former Clarostat mill building, will lease at

☆ *Bridge*
Please turn to Page 12



An employee of Chick Industrial of Silver Lake prepares the 154-foot-long pedestrian bridge that will span the Cocheco River, connecting River Street to Washington Street. The $190,000 bridge is scheduled to be in place by March. (Courtesy photo)

least 100 of the parking spaces.

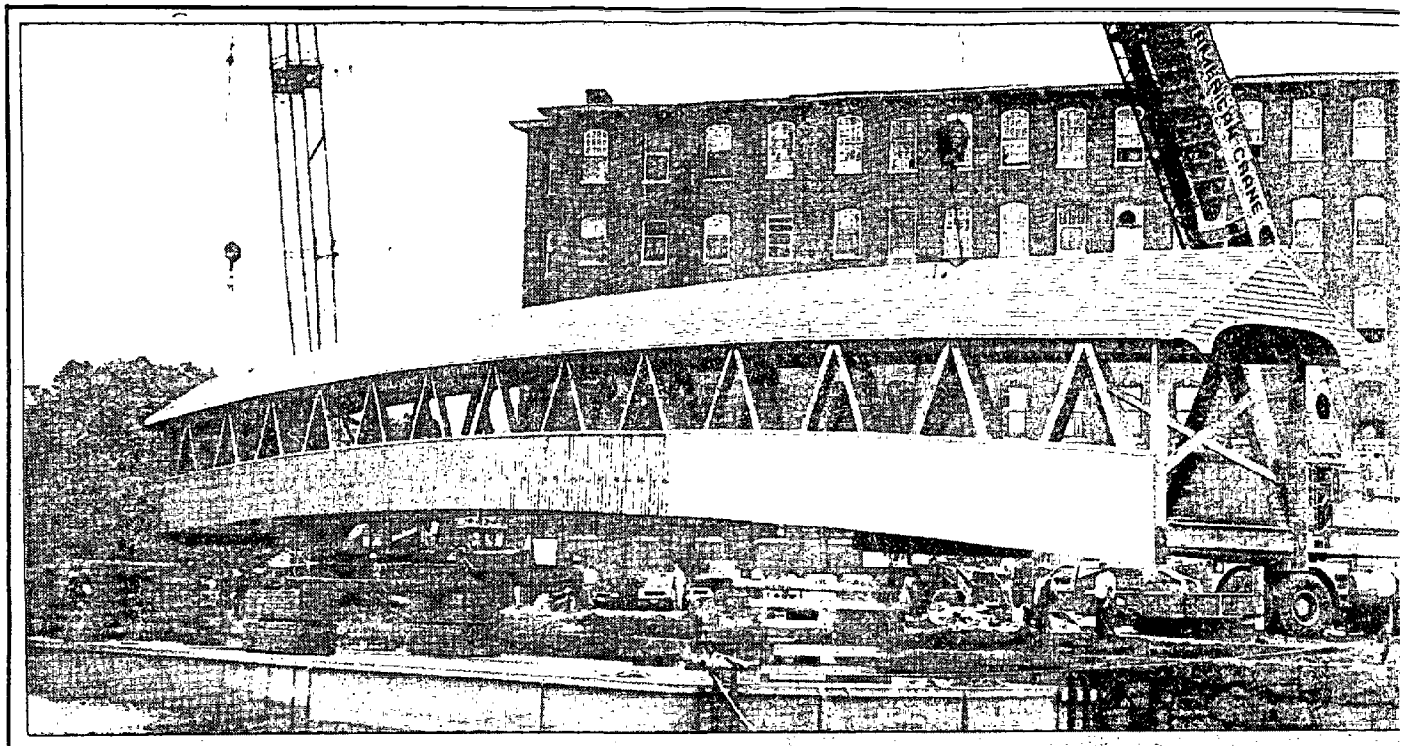
In addition to the redevelopment and increased parking it will make possible, the bridge will be an attractive part of the waterfront development on the historic river. It will provide a substantial walking loop for the Cochecho Riverwalk project, a public/private project that involves beautification efforts and a brick plaza at Henry Law Park.

The bridge will cost an estimated $190,000, of which $135,000 will be paid by the city and $55,000 will be provided by a COASTAL grant, which is federal money distributed through the Office of State Planning.

The bridge is a Warren Truss engineering type of bridge. It will be 154 feet long across the river and eight feet wide.

The bridge is what is known as a "drilled and cut" structure, made from Douglas fir shipped to New Hampshire from Oregon. The bridge will be erected beside the site of the former Washington Street bridge, in case the city ever seeks to replace the vehicle bridge.

Many other changes are in the works at the city-owned land off River Street. In addition to the parking project, city officials are planning to relocate the public works facility and possibly use some of the 35 acres for redevelopment.



Construction crews use cranes to place a foot bridge on a barge on the Cocheco River on Friday in Dover. The $185,000 bridge will span 155 feet across the Cocheco waters, connecting Washington and River streets.
(Staff photo – Mark Bolton)

Bridging the gap

Walkway over Cocheco being put into place in Dover

By DAN TUOHY
Democrat Staff Writer

DOVER – Bridge anyone?

You better believe it, is the answer put forth by many residents and city officials who are praising the covered pedestrian bridge that crews are now putting into place over the Cocheco River.

The bridge placement faced a delay of a couple of weeks due to circumstances beyond control, but it is now ready to go. It's now on a barge and will be moved into place with the help of the tides in the days ahead.

The $185,000 bridge will span 155 feet across the Cocheco waters, connecting Washington and River streets.

Those interested in lessons in bridge handling ought to keep a close eye on the downtown site, as the process is sure to be one of amazing proportion, according to Dover Planning Director Steve Stancel.

The barge will be positioned where the bridge will normally stand – the tide waters allowing crews to adjust it until it falls into place.

Moores Marine Construction Corp. of Dover assembled the bridge and is working to put it in its final resting place. Chick Industrial of Madison manufactured the bridge.

The delays were caused by extended testing of steel portions of the bridge and the shipping of bridge parts to the site, Stancel explained. The bridge was being put together behind One Washington Center.

The bridge is a crucial component of a new parking lot on River Street that provides about 100 parking spaces for employees of Advanced Systems in Measurement and

☆ Bridge
Please turn to Page 18

Evaluation, which relocated to nearby One Washington Center this year from offices on Watson Road.

Additional parking is available in a lot just off River Street, in the vicinity of the city's public works garage.

The parking, as well as the bridge, is heralded by city officials as instrumental to helping economic development. In addition, most business owners and city officials say downtown Dover has a lack of parking and they are working to solve that scarcity.

The pedestrian bridge will jib well with beautification efforts ongo ing along the historic waterfron downtown. The efforts, part of th Cochecho Riverwalk that begins a Henry Law Park and extends along the riverside, are aimed at making the park and riverfront more of a gathering place for friends and fami ly.

Leading the riverwalk project i the Greater Dover Chamber of Com merce and the city of Dover, wit significant private support fron businesses and residents.

Interim Reports

INTERIM REPORT - SEPTEMBER 30, 1995
COCHECHO RIVERWALK PEDESTRIAN BRIDGE

The City of Dover initiated the project by preparing a Request for Proposals which utilized the design/build concept. The proposal required a contractor and engineering company to design and build the pedestrian bridge. Research prior to preparation of the RFP indicated we could construct a covered pedestrian bridge for about $125,000.

Several companies expressed interest in the proposal at a mandatory site visit, however only one company submitted a proposal for $280,000.

We have regrouped and hired HEB Engineering to develop various alternatives for a pedestrian bridge with cost analysis, prepare specifications, review final bridge designs and oversee installation of the structure.

At this time we have selected the preferred bridge alternative and prepared a RFP for the superstructure. Bids are due October 5, 1995.

The bridge project schedule calls for a late December or January installation.

Enclosed are the three RFP's we have prepared to date.

dean/pedbrrep.sam

INTERIM REPORT - DECEMBER 31, 1995
COCHECHO RIVERWALK PEDESTRIAN BRIDGE

Bids for the bridge superstructure were received on October 5, 1995. John F. Chick & Son, Inc. of Silver Lake, New Hampshire was the low bidder at $94,500. The bid was awarded to John Chick & Son, Inc. by the Dover City Council on October 11, 1995. The bridge is scheduled for delivery in late January to mid February, depending on material availability.

Design specifications were prepared for the installation of the bridge, the site work for abutments and approaches, and a cover which includes sides and roof alternatives. A package was assembled and a Request for Proposals was advertised. Moore's Marine of Dover, NH was the low bidder at $81,068 and awarded the contract on December 13, 1995, by the Dover City Council.

The bridge completion date is mid February to mid March, depending on ice conditions in the river.

The total contract costs for engineering the bridge superstructure and installation and cover exceed our current budget by $5,000. We have asked the NH Coastal Program to partially fund the engineering study and design of the bridge as a separate project with left over Coastal Funds. Without access to these additional funds, it is very unlikely that the bridge will be covered.

dean/bridge3.sam

INTERIM REPORT
MARCH 31, 1996
COCHECHO RIVERWALK PEDESTRIAN BRIDGE

The delivery of the bridge superstructure from Chick Manufacturing has been delayed as a result of problems associated with welds on the steel plates. This problem is being rectified and the promised delivery date is the first week of April.

Moores Marine expects to spend four weeks erecting the bridge.

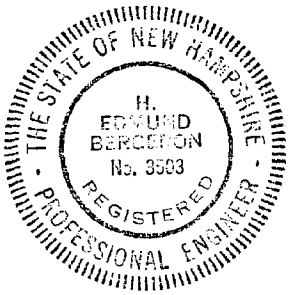
Our completion date is expected to be early May.

dean/bridge3a.sam

Engineering Documents

HEB

COCHECO RIVER PEDESTRIAN BRIDGE
PRELIMINARY REPORT
PREPARED FOR
CITY OF DOVER, NH
September 1995



Prepared by:
H.E. Bergeron Civil Engineers, P.A.
20 Swett Street, P.O. Box 440
North Conway, NH 03860
(603) 356-6936

H. Edmund Bergeron
Civil Engineers

P.O. Box 440
Swett Street
North Conway, NH 03860

603-356-6936

HEB

August 31, 1995

City of Dover Planning Department
City Hall
Dover, NH 03820

Attn: Mr. Dean Peschel, Planner
Re: Cocheco River Pedestrian Bridge

Dear Dean,

On August 10, 1995 the City of Dover authorized H. Edmund Bergeron Civil Engineers, PA to proceed with the design of the pedestrian bridge over the Cocheco River. The purpose of this preliminary report is to investigate various steel and timber truss alternatives and to make recommendations regarding the most suitable, aesthetic, and cost effective alternatives. The types of bridges to be evaluated include; open, clear span trusses (both timber and steel), and covered trusses (primarily wood).

The proposed pedestrian bridge, which has an approximate span of 154', is to cross the Cocheco River at the east end of Washington Street. This is the same location where the Washington Street vehicular bridge was located. That bridge, a steel truss built in 1897, was removed in the mid- to late-70's. Prior to removal it had been closed due to poor condition. Attempts were made to preserve the bridge as a historic land mark, but it was destroyed during removal. Cut stone abutments and retaining walls are all that remain of the original bridge.

The proposed pedestrian bridge has been under consideration by the City of Dover for some time. The bridge will connect the heavy pedestrian use area on Water Street with the proposed City parking area and Public Works and School Department Garages on River Street. It will also help tie together the City's improvements to the Cocheco River waterfront.

A. Existing Conditions:

The only remains of the original Washington Street Bridge are the abutments, which are constructed of cut granite slabs. Upon inspection by HEB, the abutments were determined to be in adequate condition for use in supporting the proposed pedestrian bridge. The tops of the abutments consist of concrete and

HEB

small stones, which will have to be removed to construct new concrete bridge seats, receive new bearing pads, and to match the existing grades. The approach to the bridge will be tied into the existing sidewalk, on the west side of the river that runs in front of the Clarostat building. The approach on the east side of the river will be tied into the proposed River Street parking area.

Down stream, about 50 feet from the proposed pedestrian bridge, there is a pipe bridge that carries sewage and gas. The pipe bridge initially was considered as a support for the pedestrian bridge, but was determined to be insufficient to hold the extra load.

B. Design Criteria:

Bridge: Although the pedestrian bridge will not regularly experience typical vehicular load, it will have to be able to support a 7,000 lb. snow plow. Both AASHTO and BOCA were consulted to determine the load from pedestrian traffic. The BOCA criteria is 100 psf and AASHTO is 85 psf (AASHTO will be used). The ground snow load in this area was determined to be 30 psf. Wind load is to be 25 psf and designed as if the bridge has enclosed sides and a roof.

Basic bridge design criteria will be obtained from "Standard Specifications for Highway Bridges," 1992 edition, by the American Association of State Highway and Transportation Officials. BOCA was considered as a reference to compare with AASHTO, since the bridge is subjected to pedestrian loads, not vehicular loads.

C. Bridge Type Study and Recommendations:

The following are different truss types with different options:

Truss types:
1) Warren truss
2) Part truss
3) Lattice truss

Options:
A) Steel
B) Wood
C) Deck width 10 feet
D) Deck width 12 feet
E) With a roof
F) Without a roof
G) With sides
H) Without sides

HEB

Manufacturers of pre-engineered bridges did not quote on lattice type trusses due to their high cost.

D. Subsurface Conditions:

The bridge abutments were determined to be in good structural condition, therefore borings to determine the subsurface conditions were not obtained.

E. Hydrologic and Hydraulic Study:

The Cocheco River is dam controlled upstream, and downstream is tidal controlled. A hydrologic and hydraulic study are not needed for the proposed bridge because the old Washington Street Bridge did not encounter any high water damage. The pipe bridge, located 50 feet down stream, also does not show any high water damage. It is lower than the proposed pedestrian bridge and spans the same width.

F. Cost Estimate:

See the attached engineer's opinion of construction cost for each alternate.

G. Recommendations:

At this time we recommend that the City select either the 8-foot or 10-foot-clear-width timber truss bridge described as Alternate No. 1 or 2. Our opinion of cost for these is $180,000 or $202,000 respectively.

As shown on the detailed estimate for Alternate No.4, we have not been able to finalize a price for a bridge provided by a local manufacturer. Chick Industrial of Silver Lake (Madison), NH. is very interested in building the bridge. They feel that they can produce the bridge for less than Western suppliers based on savings in shipping alone. Unfortunately, to date they have not been able to obtain reasonable prices for glulam beams and steel gussett plates. They are continuing to work on this and hope to furnish a price within a week. Allowing approximately one week for your review time before beginning final design would allow Chick to finalize their price without significantly affecting the project.

HEB

Please note that if the City makes it's decision on bridge width and supplier this week (and pre-purchases the bridge itself) it appears, from the quotes that we have, that delivery would not be for 12 to 14 weeks. This places erection during the month of December, which may be questionable in terms of weather. If the bridge is to be purchased by the general contractor, it definitely will result in mid-winter erection. Based on this information you may want to do the abutment work this fall and delay erection of the bridge until spring or delay bidding for the entire project until January with a schedule for start in early spring.

I hope that you find this report meets your needs. If you have any questions please let me know.

Sincerely,

H. Edmund Bergeron, PE.
President

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h.e.b.
H.E. BERGERON
CIVIL ENGINEERS, P.A.
Swett Street P.O. Box 440
NORTH CONWAY, NH 03860
(603) 356-6936

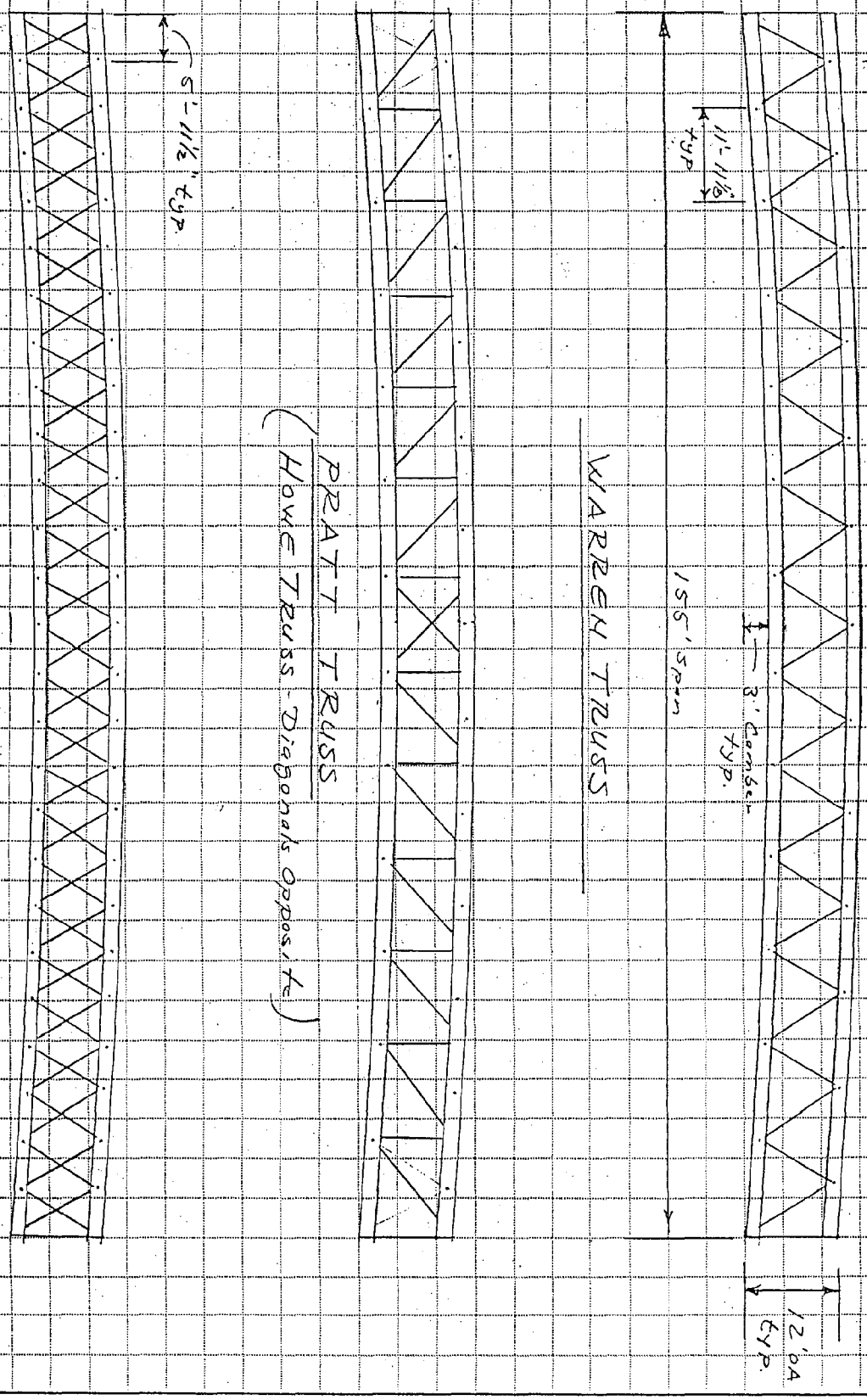
JOB Dover - Cocheco River Pedestrian Bt.

SHEET NO. 1 OF 2

CALCULATED BY HEB DATE 8/29/95

CHECKED BY DATE

SCALE 1" = 20'-0"



h.e.b.
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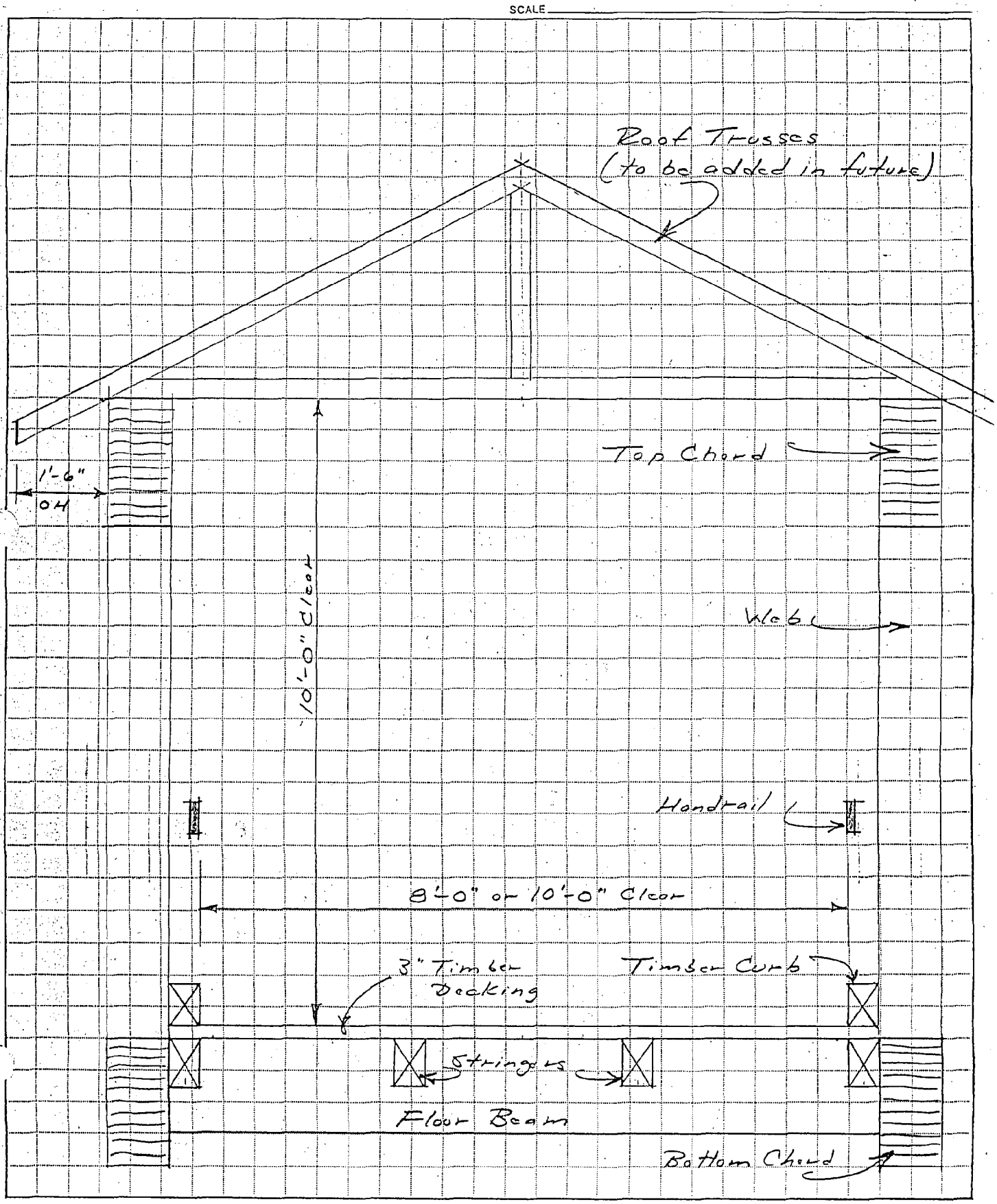
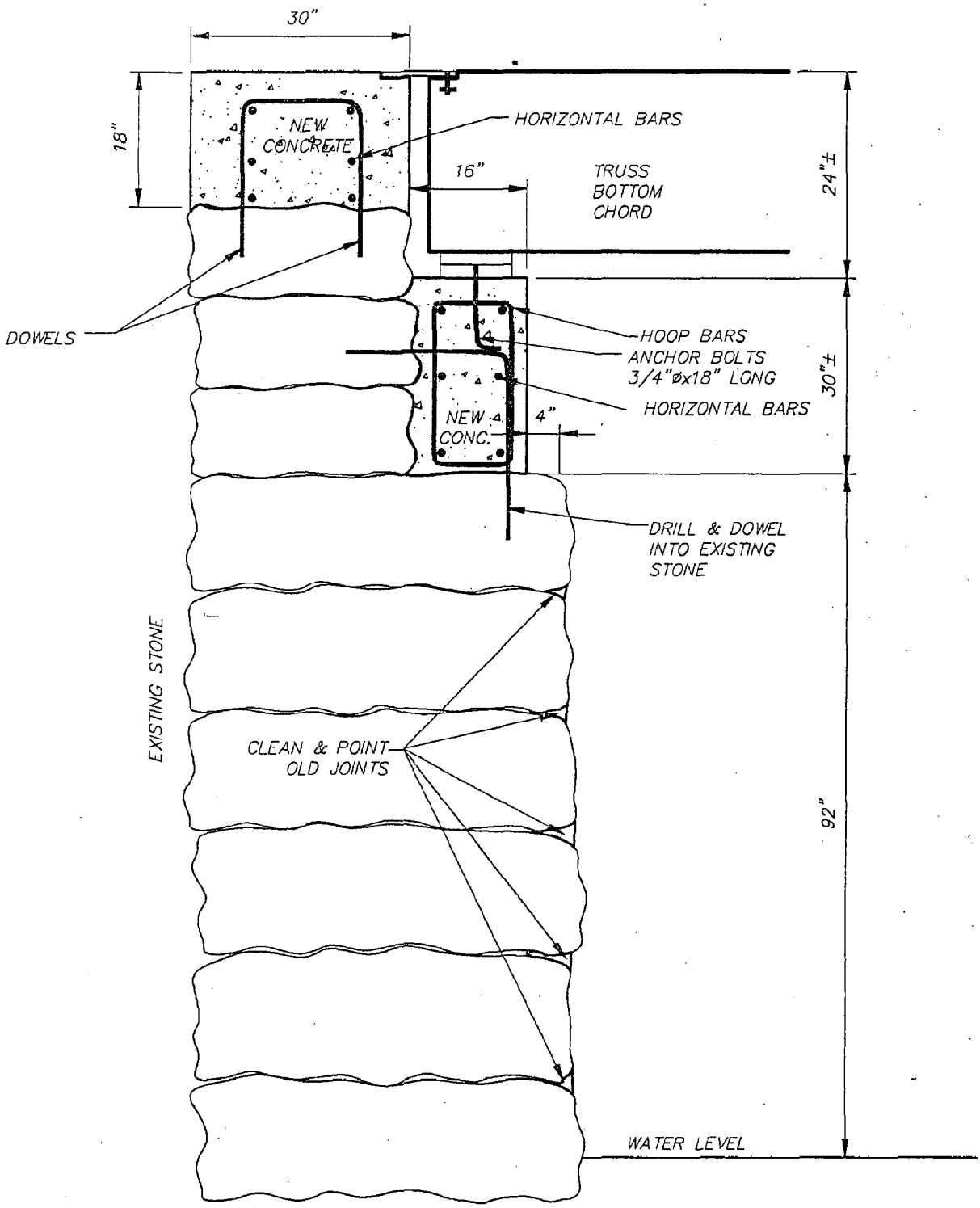
Swett Street P.O. Box 440
NORTH CONWAY, NH 03860
(603) 356-6936

JOB Dover - Cocheco River Pedestrian Br
SHEET NO. 2 OF 2
CALCULATED BY HEB DATE 8/29/95
CHECKED BY DATE
SCALE

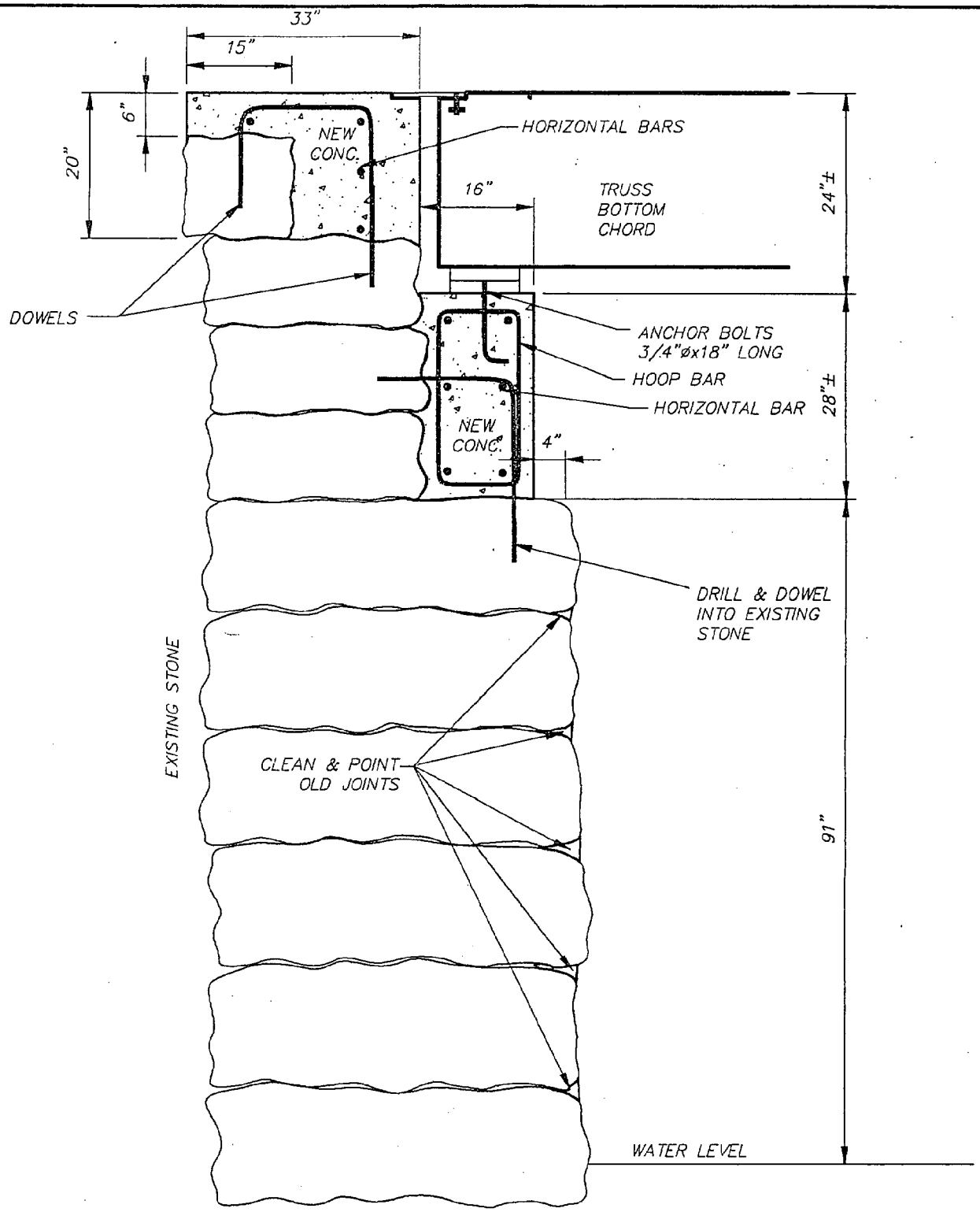




CROSS-SECTION VIEW

SCALE: 1" = 20'

H.EDMUND BERGERON CIVIL ENGINEERS, P.A. NORTH CONWAY, N.H. (603) 356-6936	PROPOSED EAST ABUTMENT REHABILITATION PREPARED FOR THE TOWN OF DOVER	FIGURE 1 DRWN: ALH SCALE: AS SHOWN DATE: 8/25/95 PROJ. # 95063



CROSS-SECTION VIEW

SCALE: 1" = 20'

H.EDMUND BERGERON CIVIL ENGINEERS, P.A. NORTH CONWAY, N.H. (603) 356-6936	PROPOSED WEST ABUTMENT REHABILITATION PREPARED FOR THE TOWN OF DOVER	FIGURE 2 DRWN: ALH SCALE: AS SHOWN DATE: 8/25/95 PROJ. # 95063

HEB

CITY OF DOVER, NEW HAMPSHIRE

COCHECO RIVER PEDESTRIAN BRIDGE
SUMMARY OF COSTS

Prepared by: H. Edmund Bergeron Civil Engineers, P.A.
P.O. Box 440, 20 Swett Street
North Conway, NH 03860

Date: September 15, 1995

	ALTERNATE	OPINION OF COST
1.	8-foot clear width - Timber Truss furnished by Western Wood Structures, Inc., Taulatin, OR	$180,000
2.	10-foot clear width - Timber Truss furnished by Western Wood	$202,000
3.	10'-clear width - Steel Truss furnished by Continental Bridge, Alexandria, MN	$241,000
4.	10-foot clear width - Timber Truss furnished by Chick Industrial, Silver Lake, (Madison), N.H.	No price yet

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ENGINEER'S PRELIMINARY OPINION OF PROBABLE COST - Alternate No. 1

Prepared for: Town of Dover
Prepared by: HEB Civil Engineers
Date prepared: 9/15/95

Pedestrian Bridge over the Cocheco River
8' Clear Wood Truss Bridge (Western Wood, Tualatin, OR)

Item	Description	Unit	Quantity	Unit Cost	Amount
206.2	Rock Structural Removal	C.Y.	4	$39.00	$156
206.19	Remove Existing Pavement	S.Y.	8	$5.00	$40
520.01	Class AA Concrete (Headwalls)	C.Y.	10	$460.00	$4,600
544	Reinforcing Steel	LB.	150	$0.50	$75
550.2	Anchor Bolts	Ea.	8	$12.00	$96
561.11	Bearing Pads	Ea.	4	$100.00	$400
	Base Plates	Ea.	4	$60.00	$240
692*	Mobilization	L.S.	1	$2,500	$2,500
	Lighting	Allow.	1	$5,000	$5,000
	Crane Rental	L.S.	1	$30,000.00	$30,000
ROOF					
	5/8" Plywood	S.F.	4200	$0.74	$3,108
	Roof Trusses	Ea.	84	$48.00	$4,032
	Shingles	Sq.	42	$110.00	$4,620
SIDES					
	Siding	S.F.	2480	$1.84	$4,563
BRIDGE TYPE					
	Pratt/Warren Timber PT Truss, Steel Gussette, 3" PT Timber Deck	L.S.	1	$97,000.00	$97,000

Subtotal	**$156,430**
15% Conting.	**$23,465**
Total	**$179,895**

Notes:

1. NHDOT average weighted unit prices used, except where noted by *.
2. Item numbers followed by * indicate lump sum allowance provided for that item.
3. Bridge Package includes design, fabrication, and delivery of trusses, wood deck, rails, curbs, and the hardware needed to accept the roof and siding.
4. Delivery of bridge 3-4 weeks for shop drawings, plus 9-10 weks additional for bridge.

ENGINEER'S PRELIMINARY OPINION OF PROBABLE COST - Alternate No. 2

Prepared for: Town of Dover
Prepared by: HEB Civil Engineers
Date prepared: 9/15/95

Pedestrian Bridge over the Cocheco River
10' Clear Wood Truss Bridge (Western Wood, Tualatin, OR)

Item	Description	Unit	Quantity	Unit Cost	Amount
206.2	Rock Structural Removal	C.Y.	4	$39.00	$156
206.19	Remove Existing Pavement	S.Y.	8	$5.00	$40
520.01	Class AA Concrete (Headwalls)	C.Y.	10	$460.00	$4,600
544	Reinforcing Steel	LB.	150	$0.50	$75
550.2	Anchor Bolts	Ea.	8	$12.00	$96
561.11	Bearing Pads	Ea.	4	$100.00	$400
	Base Plates	Ea.	4	$60.00	$240
692*	Mobilization	L.S.	1	$2,500	$2,500
	Lighting	Allow.	1	$5,000	$5,000
	Crane Rental	L.S.	1	$30,000.00	$30,000
ROOF					
	5/8" Plywood	S.F.	4200	$0.74	$3,108
	Roof Trusses	Ea.	84	$48.00	$4,032
	Shingles	Sq.	42	$110.00	$4,620
SIDES					
	Siding	S.F.	2480	$1.84	$4,563
BRIDGE TYPE					
	Pratt/Warren Timber PT Truss, Steel Gussette, 3" PT Timber Deck	L.S.	1	$116,100.00	$116,100

Subtotal	**$175,530**
15% Conting.	**$26,330**
Total	**$201,860**

Notes:

1. NHDOT average weighted unit prices used, except where noted by *.
2. Item numbers followed by * indicate lump sum allowance provided for that item.
3. Bridge Package includes design, fabrication, and delivery of trusses, wood deck, rails, curbs, and the hardware needed to accept the roof and siding.
4. Delivery of bridge 3-4 weeks for shop drawings, plus 9-10 weks additional for bridge.

ENGINEER'S PRELIMINARY OPINION OF PROBABLE COST - Alternate No. 3

Prepared for: Town of Dover
Prepared by: HEB Civil Engineers
Date prepared: 9/15/95

Pedestrian Bridge over the Cocheco River
10' Clear Steel Truss Bridge (Continental Bridge, Alexandria, MN)

Item	Description	Unit	Quantity	Unit Cost	Amount
206.2	Rock Structural Removal	C.Y.	4	$39.00	$156
206.19	Remove Existing Pavement	S.Y.	8	$5.00	$40
520.01	Class AA Concrete (Headwalls)	C.Y.	10	$460.00	$4,600
544	Reinforcing Steel	LB.	150	$0.50	$75
550.2	Anchor Bolts	Ea.	8	$12.00	$96
561.11	Bearing Pads	Ea.	4	$100.00	$400
	Base Plates	Ea.	4	$60.00	$240
692*	Mobilization	L.S.	1	$2,500	$2,500
	Lighting	Allow.	1	$5,000	$5,000
	Crane Rental	L.S.	1	$30,000.00	$30,000
ROOF					
	5/8" Plywood	S.F.	4200	$0.74	$3,108
	Roof Trusses	Ea.	84	$48.00	$4,032
	Shingles	Sq.	42	$110.00	$4,620
SIDES					
	Siding	S.F.	2480	$1.84	$4,563
BRIDGE TYPE					
	Continental High Profile Steel Box Truss (Painted), with 3"X12" PT wood deck	L.S.	1	$150,000.00	$150,000

Subtotal	**$209,430**
15% Conting.	**$31,415**
Total	**$240,845**

Notes:

1. NHDOT average weighted unit prices used, except where noted by *.
2. Item numbers followed by * indicate lump sum allowance provided for that item.
3. Bridge Package includes design, fabrication, and delivery of trusses, wood deck, rails, curbs, and the hardware needed to accept the roof and siding.
4. Delivery of bridge in 3 pieces 3-4 weeks for shop drawings after placing order, and 12 weeks for fabrication and delivery.

ENGINEER'S PRELIMINARY OPINION OF PROBABLE COST - Alternate No. 4

Prepared for: Town of Dover
Prepared by: HEB Civil Engineers
Date prepared: 9/15/95

Pedestrian Bridge over the Cocheco River
10' Clear Wood Truss Bridge (Chick Industrial, Madison, NH)

Item	Description	Unit	Quantity	Unit Cost	Amount
206.2	Rock Structural Removal	C.Y.	4	$39.00	$156
206.19	Remove Existing Pavement	S.Y.	8	$5.00	$40
520.01	Class AA Concrete (Headwalls)	C.Y.	10	$460.00	$4,600
544	Reinforcing Steel	LB.	150	$0.50	$75
550.2	Anchor Bolts	Ea.	8	$12.00	$96
561.11	Bearing Pads	Ea.	4	$100.00	$400
	Base Plates	Ea.	4	$60.00	$240
692*	Mobilization	L.S.	1	$2,500	$2,500
	Lighting	Allow.	1	$5,000	$5,000
	Crane Rental	L.S.	1	$30,000.00	$30,000
ROOF					
	5/8" Plywood	S.F.	4200	$0.74	$3,108
	Roof Trusses	Ea.	84	$48.00	$4,032
	Shingles	Sq.	42	$110.00	$4,620
SIDES					
	Siding	S.F.	2480	$1.84	$4,563
BRIDGE TYPE					
	Pratt/Warren Timber PT Truss, Steel Gussette, 3" PT Timber Deck	L.S.			Still waiting

94,500

Subtotal	**$59,430**
15% Conting.	**$8,915**
Total	**$68,345**

+ Bridge cost

Notes:

1. NHDOT average weighted unit prices used, except where noted by *.
2. Item numbers followed by * indicate lump sum allowance provided for that item.
3. Bridge Package includes design, fabrication, and delivery of trusses, wood deck, rails, curbs, and the hardware needed to accept the roof and siding.
4. Delivery of bridge 3-4 weeks for shop drawings, plus 9-10 weks additional for bridge.

HEB

CITY OF DOVER, NH
FINAL SPECIFICATION FOR
COCHECHO RIVER PEDESTRIAN BRIDGE
SEPTEMBER 21, 1995

Prepared by: H. Edmund Bergeron Civil Engineers, PA
PO Box 440, 20 Swett Street
North Conway, NH 03860
(603) 356-6936

H. Edmund Bergeron
Civil Engineers

P.O. Box 440
Swett Street
North Conway, NH 03860

603-356-6936

HEB

CITY OF DOVER, NH
FINAL SPECIFICATION FOR
COCHECO RIVER PEDESTRIAN BRIDGE
SEPTEMBER 21, 1995

The City of Dover, NH, intends to purchase a pre-engineered timber pedestrian bridge for installation on existing abutments (to be modified by the City). The location of the bridge is over the Cocheco River between Washington Street and River Street at the site of the former Washington Street vehicular bridge.

The bridge manufacturer's proposal price should include all engineering design, shop drawings and details, manufacturer all necessary components, and shipping to a designated site in Dover, NH. The bridge must include all necessary added load capacity and hardware to support a timber-frame roof and 50% wood sides to be installed by the City at a later date. The manufacturer should specify how the bridge is to be shipped (i.e. completely disassembled and broken down, or partially assembled and number of pieces). The manufacturer should furnish a separate per diem rate to furnish a technical advisor during the assembly of the bridge.

The specifications are as follows:

Design Criteria:

Truss type:	Warren
Span:	154 ft - 6 inches bottom chord overall 153 ft - 6 inches bottom chord center - center of bearing
Truss height:	Varies with the chord size. Top of deck to bottom of roof trusses 10 ft - 0 inches clear
Clear width (curb -curb)	8 ft - 0 inches
Chords	Glulaminated timber
Webs & other members	Solid sawn timber
Camber	3' - 0" at center of span

HEB

Loading Criteria:

Dead load	Based on actual material weights
Pedestrian live load or	85 pounds per square foot
Snow plow vehicle	7000 pounds
Snow load	30 pounds per square foot
Wind load	25 pounds per square foot

Material requirements:

Glulam Chords:	Douglas Fir or Southern Pine Allowable bending stress Fb, = 2400 psi and Modulus of elasticity E = 1.7 x E6 Industrial appearance grade with 100% waterproof glue. Completely fabricated, sawn and drilled prior to treatment. Manufacture Glulaminate lumber according to AITC specification 117-87.
Sawn Lumber:	Douglas Fir or other species meeting the stress requirements. Surfaced 4 sides (S4S) and completely fabricated, sawn and drilled prior to treatment. Manufacture according to AITC specification 108-80.
Pressure Treatment:	Glulam beams and sawn lumber will be pressure treated with Pentachlorophenol 0.3 pcf retention per AWPA specifications and AITC 109-84.
Hardware:	All steel hardware to connect the bridge superstructure together to be galvanized or Cor-ten weathering steel.

HEB

	This includes all gusset plates, braces, clip angles, hangers, rods, double grip spikes, and all miscellaneous nuts and bolts.
Handrails:	To be furnished and installed by the City.
Bearings:	The manufacturer shall furnish steel bearing plates and suitable neoprene bearing pads. Anchor bolts by the City.
Roofing & Siding:	To be furnished and installed by the City.
Shop Drawings & Engineering Calcs	To be furnished by the manufacturer, revised as requested by the Engineer and to bear the seal of a New Hampshire licensed professional engineer (structural).
Schedule:	Provide the City with schedule including time for delivery of shop drawings after manufacturer receives a purchase order from the City and time for delivery of the bridge to Dover, NH after approval of the shop drawings.
Proposal Date:	Return proposal to the City no later than 2 p.m., October 5, 1995.

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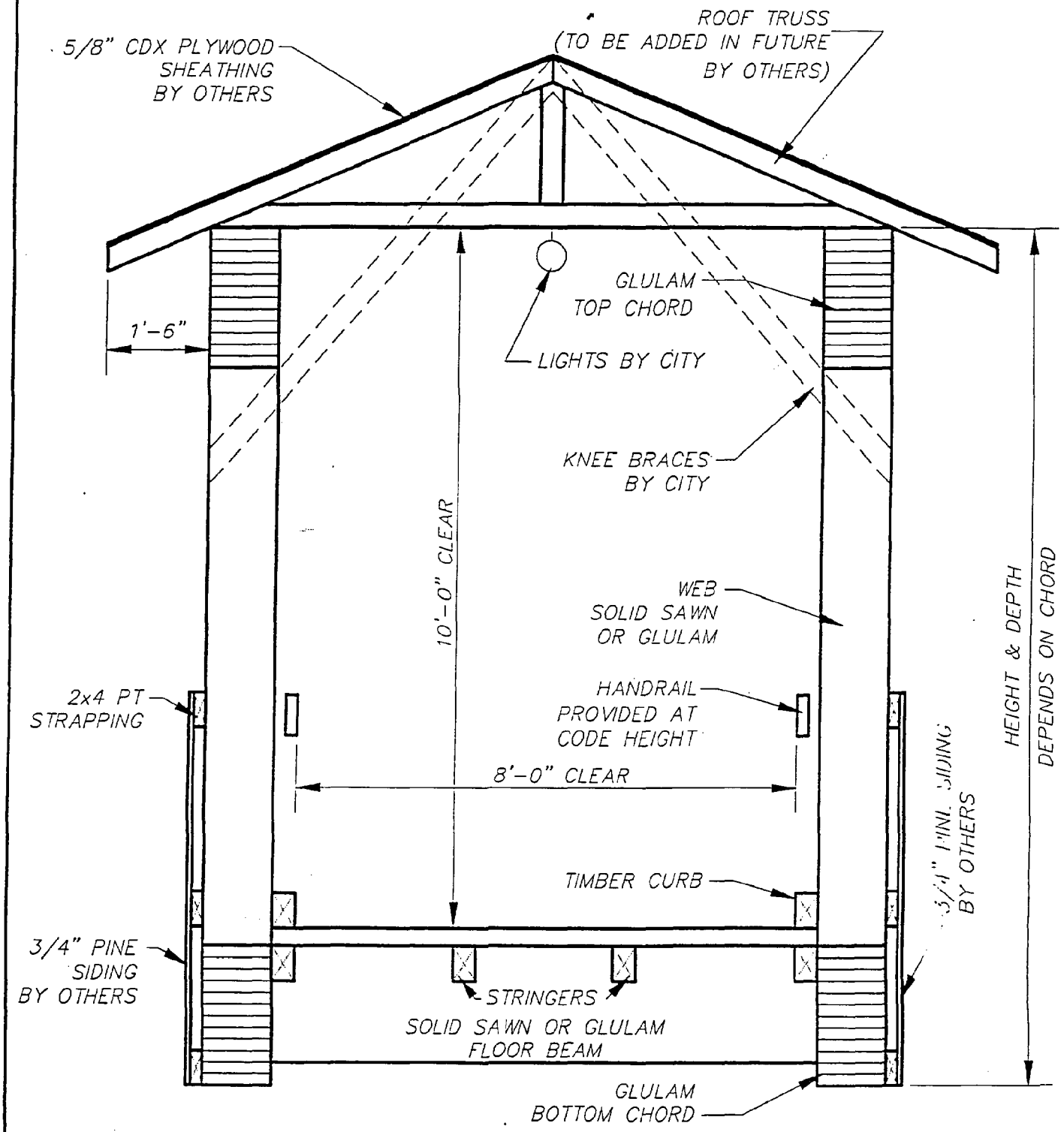


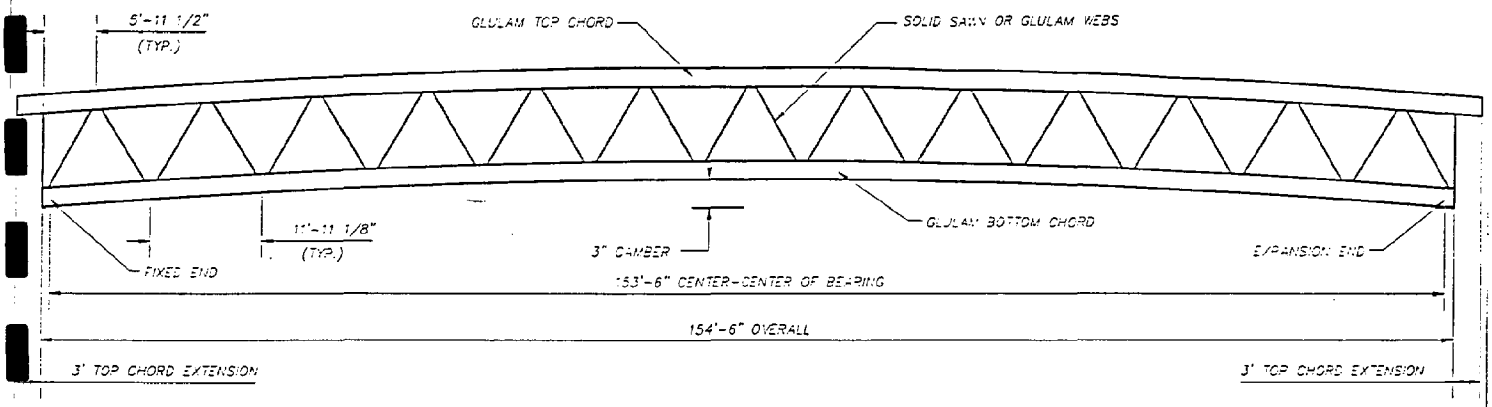
H.EDMUND BERGERON
CIVIL ENGINEERS, P.A.
NORTH CONWAY, N.H.
(603) 356-6936

COCHECO RIVER
PEDESTRIAN BRIDGE
PREPARED FOR
THE CITY OF DOVER, NH

FIGURE 1

DRWN: ALH
DATE: 9/22/95
SCALE: 1'=20'
PROJ. # 95063

Plotted: 09/22/1995, 10:31

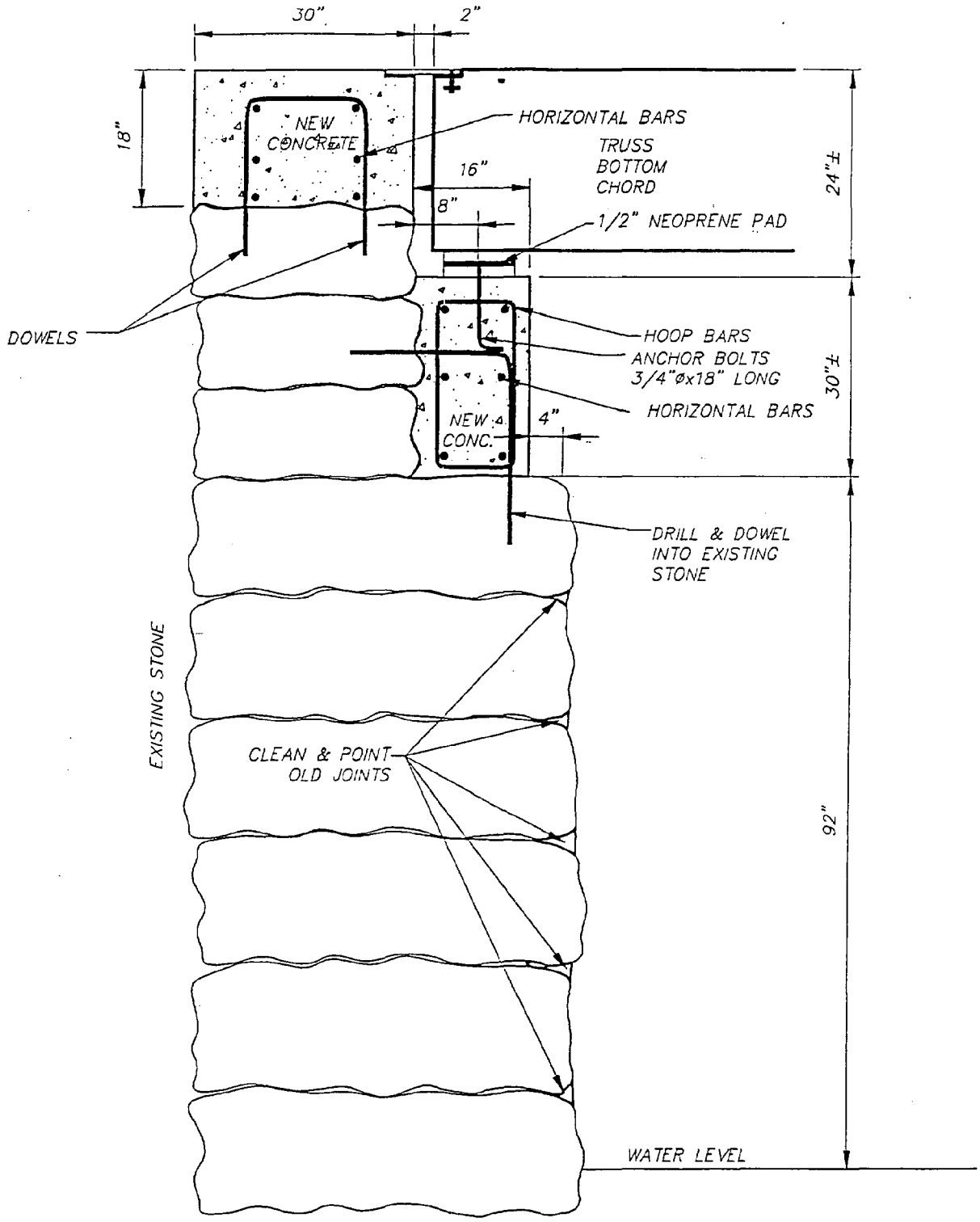


WARREN TRUSS

NOTES:

1. TRUSSES TOP TO BE CONSTRUCTED IN A SINGLE PLANE
2. CHORDS TO BE IN LONGEST POSSIBLE LENGTHS.
3. CONNECTIONS TO BE GALVANIZED OR COR-TEN WEATHERING STEEL GUSSET PLATES AT PANEL POINTS.
4. SEE ATTACHED SPECIFICATIONS FOR MATERIAL AND OTHER REQUIREMENTS

HEB — H. EDMUND BERGERON CIVIL ENGINEERS P.A. NORTH CONWAY, N.H. (603) 356-6936	COCHECO RIVER PEDESTRIAN BRIDGE PREPARED FOR THE CITY OF DOVER	FIGURE 2 DRWN: ALH SCALE: 1" = 10' DATE: 9/22/95 PROJ. # 95063

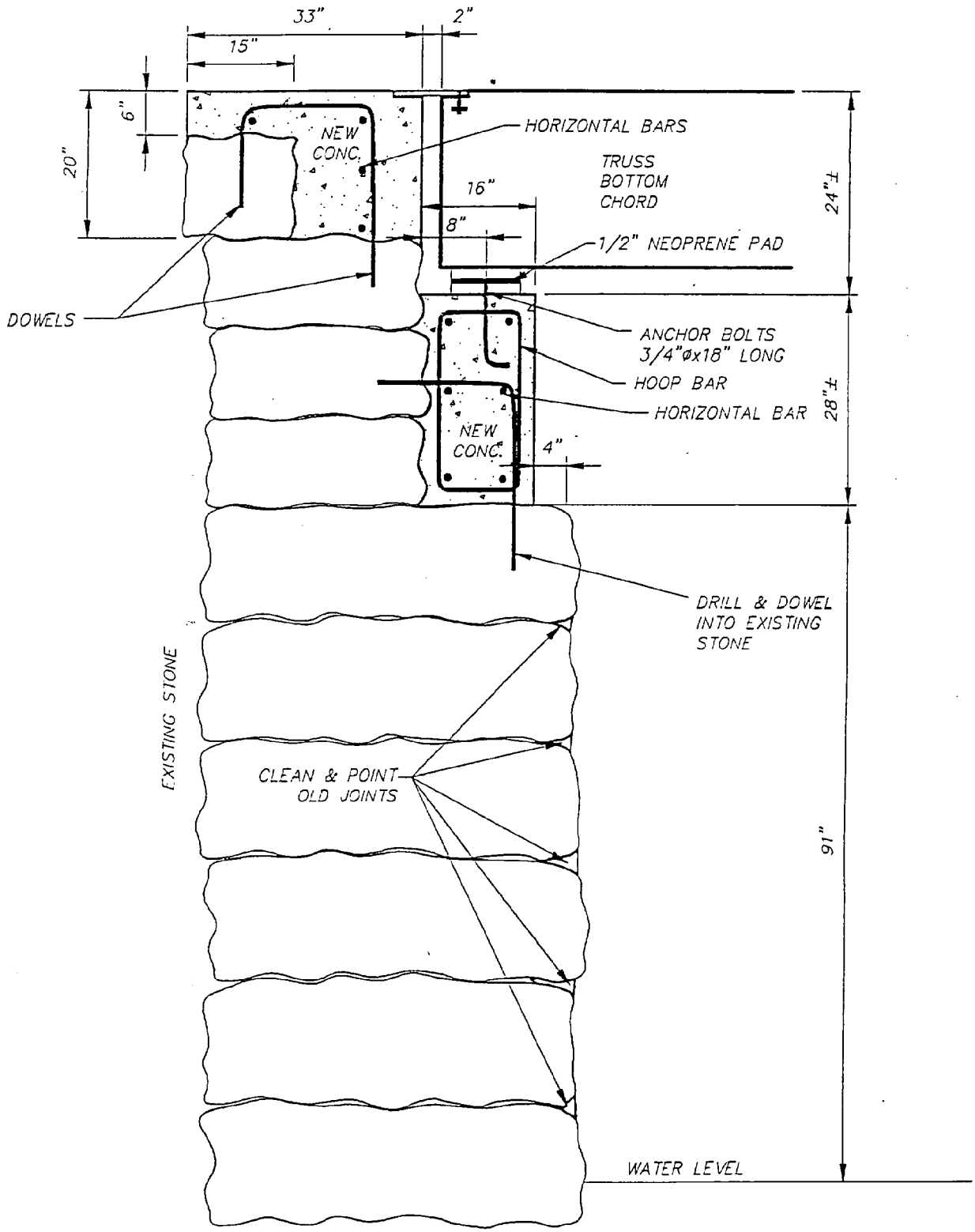


CROSS-SECTION VIEW

SCALE: 1" = 20'

Plotted: 09/22/1995, 10:11

HEB H.EDMUND BERGERON CIVIL ENGINEERS, P.A. NORTH CONWAY, N.H. (603) 356-6936	PROPOSED EAST ABUTMENT REHABILITATION PREPARED FOR THE TOWN OF DOVER	FIGURE 3 DRWN: ALH SCALE: AS SHOWN DATE: 8/25/95 PROJ. # 95063



CROSS-SECTION VIEW

SCALE: 1" = 20'

Plotted: 09/22/1995, 10:11

HEB H.EDMUND BERGERON CIVIL ENGINEERS, P.A. NORTH CONWAY, N.H. (603) 356-6936	PROPOSED WEST ABUTMENT REHABILITATION PREPARED FOR THE TOWN OF DOVER	FIGURE 4 DRWN: ALH SCALE: AS SHOWN DATE: 8/25/95 PROJ. # 95063

City of Dover Invitation to Bid
Cochecho River Pedestrian Bridge #B96024

The City of Dover, NH is requesting pricing information and availability for the purchase of a **Pedestrian Bridge** to be used to cross the Cochecho River in Dover, NH. Specifications and general information is as follows:

The bridge is to be pre-engineered, cover a span of approximately 154 feet, be constructed of glulaminated timber, and be delivered in pieces or in sections to Dover for installation by the City.

Any questions about the project may be directed to Mr. Dean Peschel at 603-743-6013 or Mr. Dan Kelly at 603-743-6030.

$ 94,500.00 bridge engineered, pre-fabricated, delivered, warranted

$ 400.00 per diem rate for technical advisor during assembly on-site

Shipping Information (number of pieces, sections, ?):
6 @ 55' x @ 12' Pre-fabricated Lam & Web Panels
Beams, joists, deck, curb & misc.hardware shipped loose.

anticipated delivery date:	90 days from acceptance of engineered drawings		
Submitted by:	John F. Chick & Son, Inc.		
	Rte # 113		
	Silver Lake, NH 03875		
Warranty/guarantee:	See Below *	**Price holds for:**	30 days
Telephone #:	800-258-4692	**Fax:**	603-367-8859
Signature:	Gary A. Gustafson	**Title:**	VP/Operations

Check here if appropriate: _____ **(X) NO BID**

Any deviations from the above stated specifications must be so noted and any bid prices must be reflective of these deviations. The FOB point is always to be Dover unless otherwise stated by the bidder. An FOB point other than the City of Dover must be so stipulated by the bidder.

* All members and assemblies will be made according to engineered drawing and will be free of workmanship defects. All Gluelams, pressure treating and steel fabricating will be done according to ANSI and/or AWPA standards. Certification available upon request.

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