

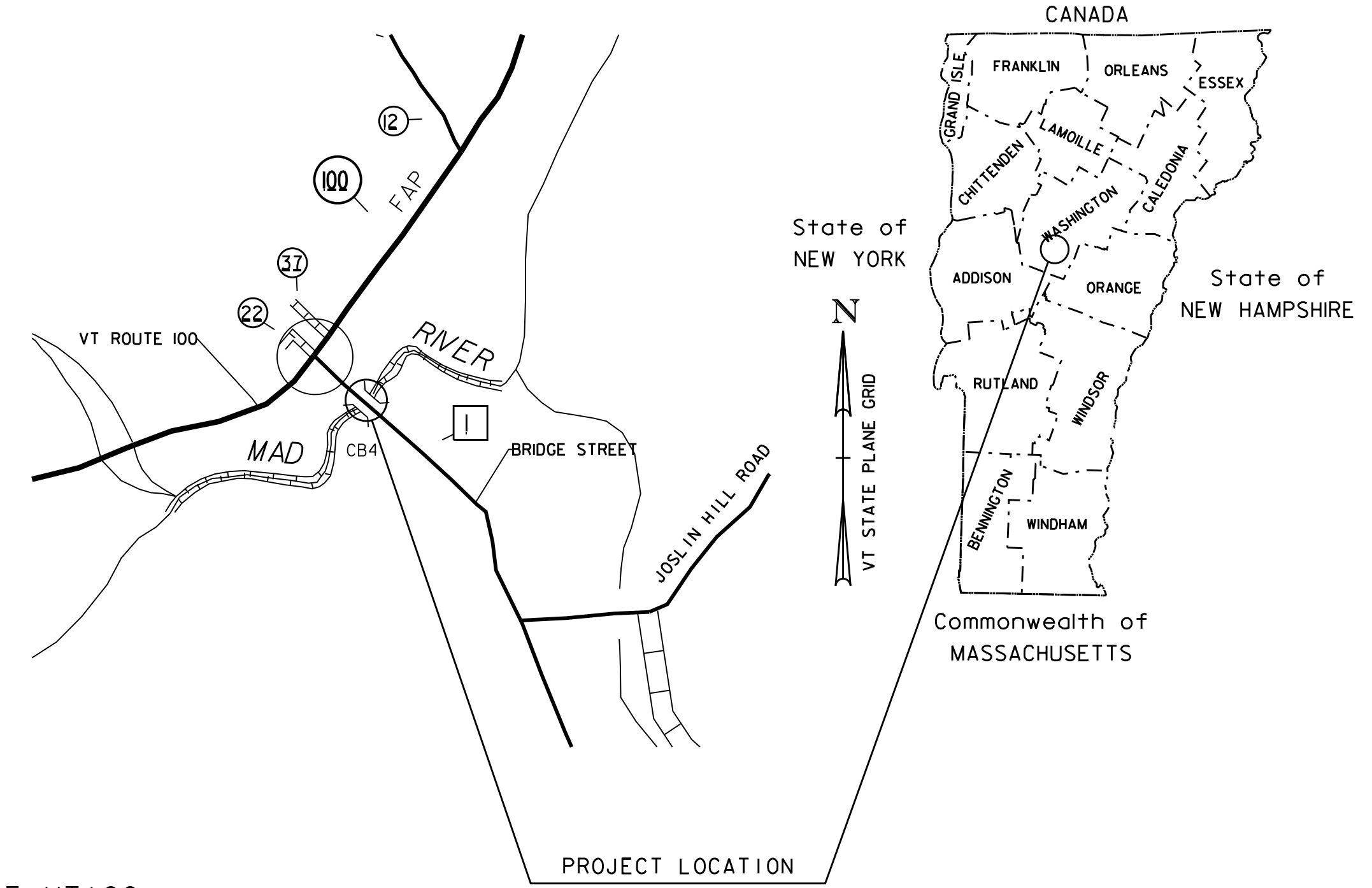
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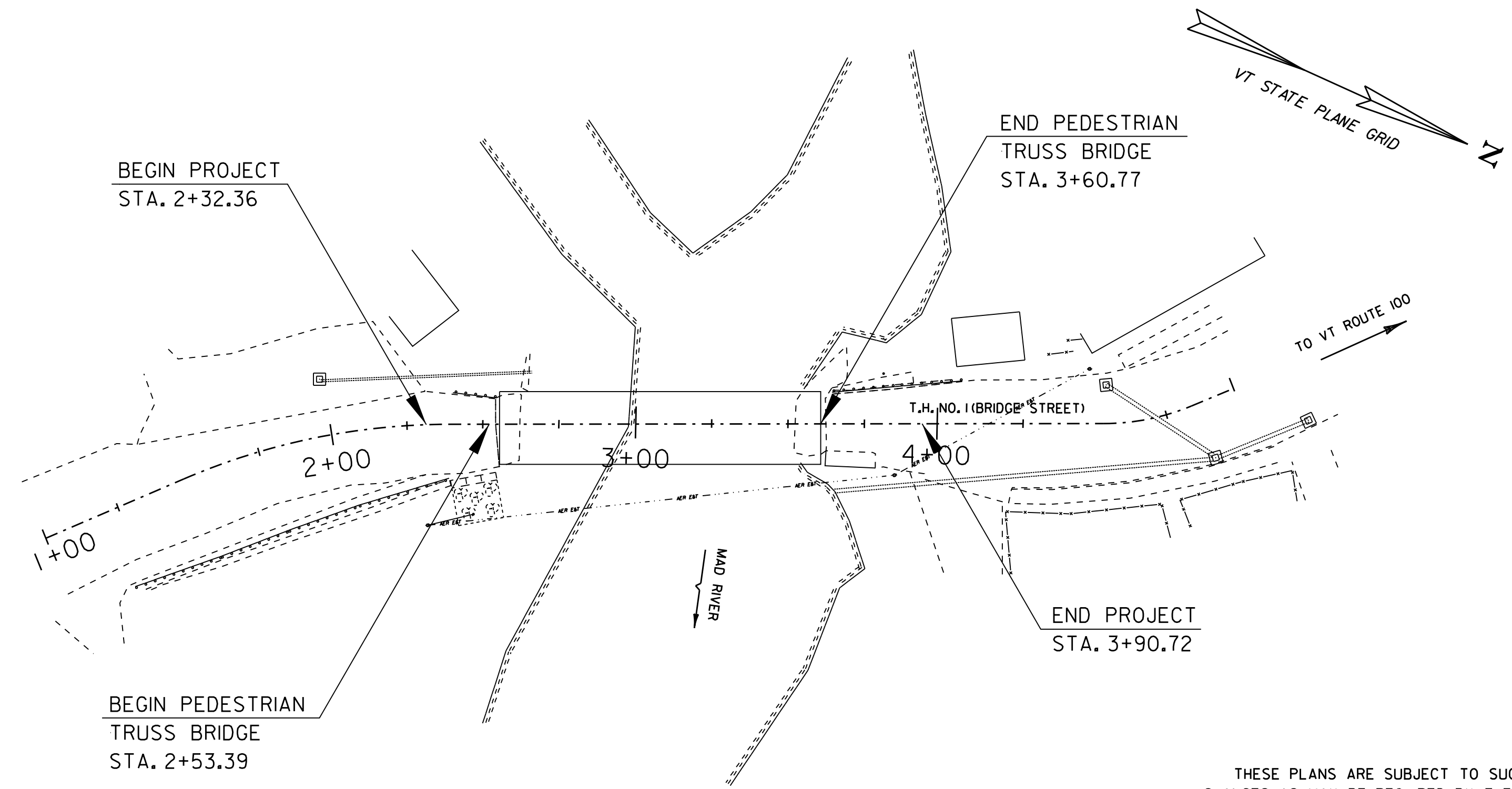
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TOWN OF WAITSFIELD COUNTY OF WASHINGTON PROPOSED IMPROVEMENT BRIDGE PROJECT



TOWN OF WAITSFIELD
COUNTY OF WASHINGTON
ROUTE NO : TH1 BRIDGE STREET BRIDGE NO : CB NO. 4
PROJECT LOCATION: LOCATED ON BRIDGE STREET, APPROXIMATELY 400 FEET EAST OF VT100
PROJECT DESCRIPTION: REHABILITATION OF THE EXISTING COVERED BRIDGE, INCLUDING REPLACEMENT OF THE EXISTING WALKWAY WITH A NEW SELF-SUPPORTING WALKWAY, ABUTMENT EXTENSIONS, NEW WINGWALLS, CONCRETE REPAIRS APPROACH GUARDRAIL, SIGNING, AND OTHER INCIDENTALS.



CONVENTIONAL SYMBOLS

COUNTY LINE	
TOWN LINE	
LIMITS OF ACCESS	
POINT OF ACCESS	
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY : DUBOIS & KING, INC.
SURVEYED DATE : 9/2010

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (GPS)

**PRELIMINARY PLANS
JANUARY, 2012**

NOT FOR CONSTRUCTION

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

TOWN OF WAITSFIELD
CHAIRMAN, BOARD OF SELECTMEN
APPROVED _____ DATE _____
PROJECT MANAGER : EVAN P. DETRICK, P.E.
PROJECT NAME : VILLAGE COVERED BRIDGE REHAB
PROJECT NUMBER : STP EH08 (6)
SHEET 1 OF 8 SHEETS

FINAL HYDRAULICS REPORT

ENGINEER

HYDROLOGIC DATA

DRAINAGE AREA= _____
 CHARACTER OF TERRAIN: _____
 CHARACTER & TYPE OF STREAM: _____
 NATURE OF STREAMBED: _____
 02.33= _____ 050= _____
 010= _____ 0100= _____
 025= _____ 0500= _____
 DATE OF FLOOD OF RECORD: _____
 WATER SURFACE ELEV.: _____ ESTIMATED DISCHARGE: _____
 NATURAL STREAM VELOCITY @ 0 _____
 ICE CONDITIONS: _____ DEBRIS: _____
 DOES THE STREAM REACH MAXIMUM HIGH WATER ELEVATION RAPIDLY: _____
 IS ORDINARY RISE RAPID? _____
 IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? _____
 IF YES, DESCRIBE: _____
 WATERSHED STORAGE _____ HEADWATERS _____ UNIFORM THROUGHOUT WATERSHED _____
 IMMEDIATELY ABOVE SITE _____

PROPOSED STRUCTURE

STRUCTURE TYPE: KING POST TRUSS & BURR ARCH COVERED BRIDGE, STEEL
 PEDESTRIAN TRUSS ON DOWNSTREAM SIDE.
 CLEAR SPAN (NORMAL TO STREAM): AS EXISTING
 VERTICAL CLEARANCE ABOVE STREAMBED: AS EXISTING
 WATERWAY OF FULL OPENING: AS EXISTING
 WATER SURFACE ELEV. @ 02.33= _____ f+ VELOCITY= _____
 010= _____ f+ _____
 025= _____ f+ _____
 050= _____ f+ _____
 0100= _____ f+ _____
 IS THE ROADWAY OVERTOPPED BELOW THE 0100? _____ FREQUENCY: _____
 RELIEF ELEVATION: _____ DISCHARGE OVER ROAD @ 0100: _____
 AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: _____
 VERTICAL CLEARANCE @ 0 25: _____
 SCOUR: _____
 REQUIRED CHANNEL PROTECTION: _____

EXISTING STRUCTURE

STRUCTURE TYPE: KING POST TRUSS & BURR ARCH COVERED BRIDGE YEAR BUILT: 1833
 CLEAR SPAN (NORMAL TO STREAM): 90- FEET PERP. TO ABUTMENT FACES
 VERTICAL CLEARANCE ABOVE STREAMBED: 16- FEET AVG.
 WATERWAY OF FULL OPENING: _____
 DISPOSITION OF STRUCTURE: TO REMAIN (WITH REPAIRS)
 TYPE OF MATERIAL UNDER SUBSTRUCTURE: _____
 WATER SURFACE ELEV. @ 02.33= _____ f+ VELOCITY= _____
 010= _____ f+ _____
 025= _____ f+ _____
 050= _____ f+ _____
 0100= _____ f+ _____
 LONG TERM STREAM BED CHANGES: _____
 IS THE ROADWAY OVERTOPPED BELOW THE 0100? _____ FREQUENCY: _____
 RELIEF ELEVATION: _____ DISCHARGE OVER ROAD @ 0100: _____

ADDITIONAL COMMENTS

NO HYDROLOGIC OR HYDRAULIC ANALYSIS HAS BEEN PERFORMED BECAUSE THE REHABILITATION WILL NOT CHANGE THE CLEAR OPENING SIZE OF THE BRIDGE.

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TEMPORARY BRIDGE SKETCH

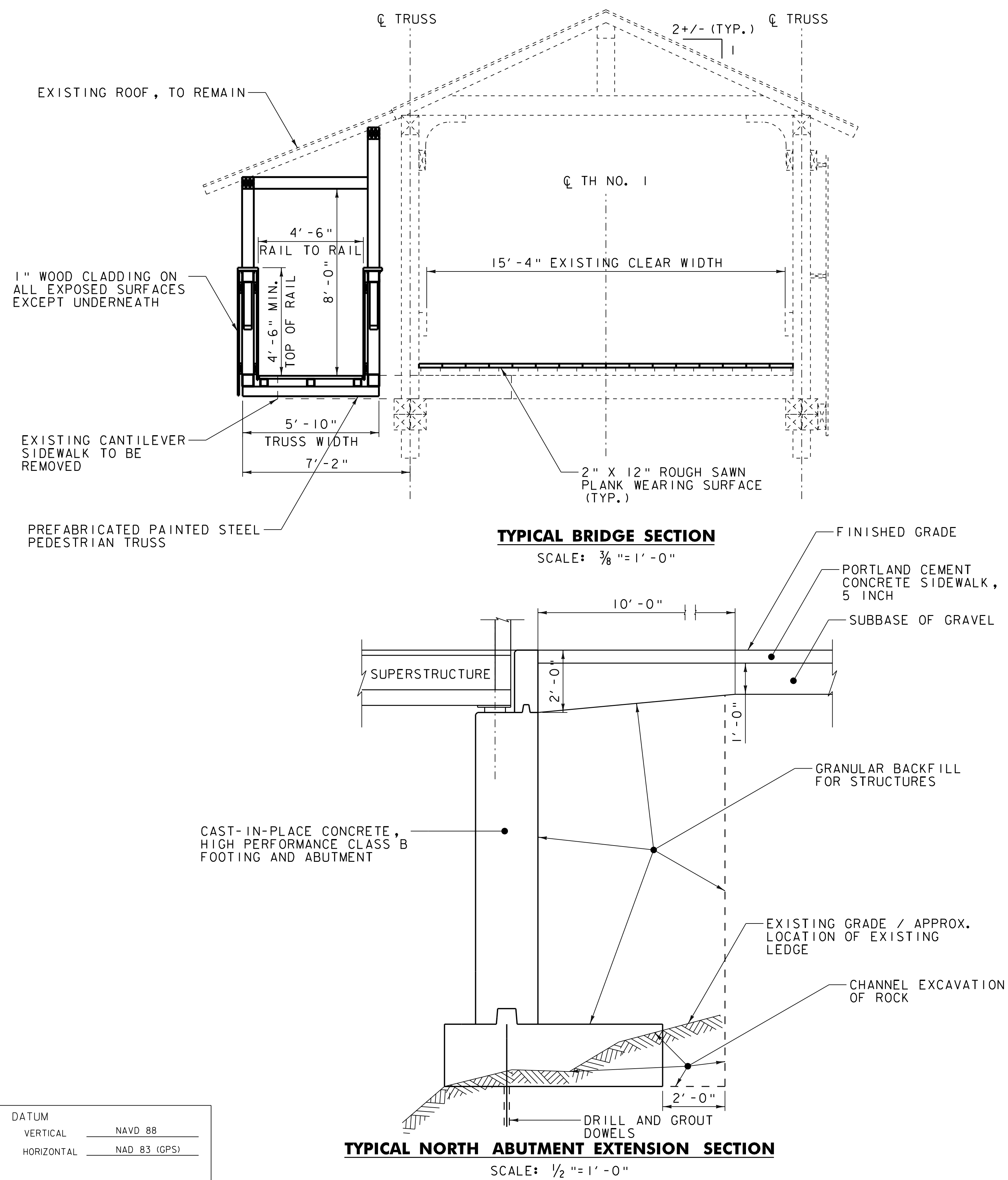
NOT TO SCALE

DESIGN CRITERIA:

- DESIGN LIVE LOAD AASHTO PEDESTRIAN, 85 PSF
- DESIGN SPAN 103'-9" @ BEARING TO @ BEARING
- ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL 4 KSF ON LEDGE 10 KSF
- ALLOWABLE LOAD FOR PILING TYPE ESTIMATED LENGTH
- STRUCTURAL STEEL AASHTO GRADE
- REINFORCING STEEL GRADE 60
- CONCRETE HIGH PERFORMANCE CLASS B $f_c' = 3500$ PSI
HIGH PERFORMANCE CLASS AA $f_c' = 4000$ PSI

TRAFFIC MAINTENANCE:

- IS TRAFFIC TO BE MAINTAINED? YES IF YES, ON EXISTING STRUCTURE YES OR ON TEMPORARY BRIDGE
- TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY TRAFFIC CONTROL SIGNALS REQUIRED
 MINIMUM CLEAR SPAN (NORMAL TO STREAM): VERTICAL CLEARANCE ABOVE STREAMBED:
 WATERWAY OF FULL OPENING:
 ARE SIDEWALKS REQUIRED? IF SO, ON WHAT SIDE?
 STRUCTURE TYPE: _____



TYPICAL BRIDGE SECTION
 SCALE: 3/8" = 1' - 0"

TYPICAL NORTH ABUTMENT EXTENSION SECTION
 SCALE: 1/2" = 1' - 0"

NO.	DATE	REVISIONS	BY	CHK'D

28 NORTH MAIN STREET
 P.O. BOX 339
 RANDOLPH, VT 05060
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TOWN OF WAITSFIELD
 WAITSFIELD, VERMONT
 WAITSFIELD VILLAGE (BIG EDDY)
 BRIDGE REHABILITATION
 PRELIMINARY INFORMATION SHEET

PROJECT NO: 620922
 DESIGNED BY: RHB
 DRAWN BY: JDG/RHB
 DATE: JAN. 2012
 CHECKED BY: RHD/EPD

DRAWING NO:
2
 SHEET 2 OF 8

QUANTITY SHEET 1

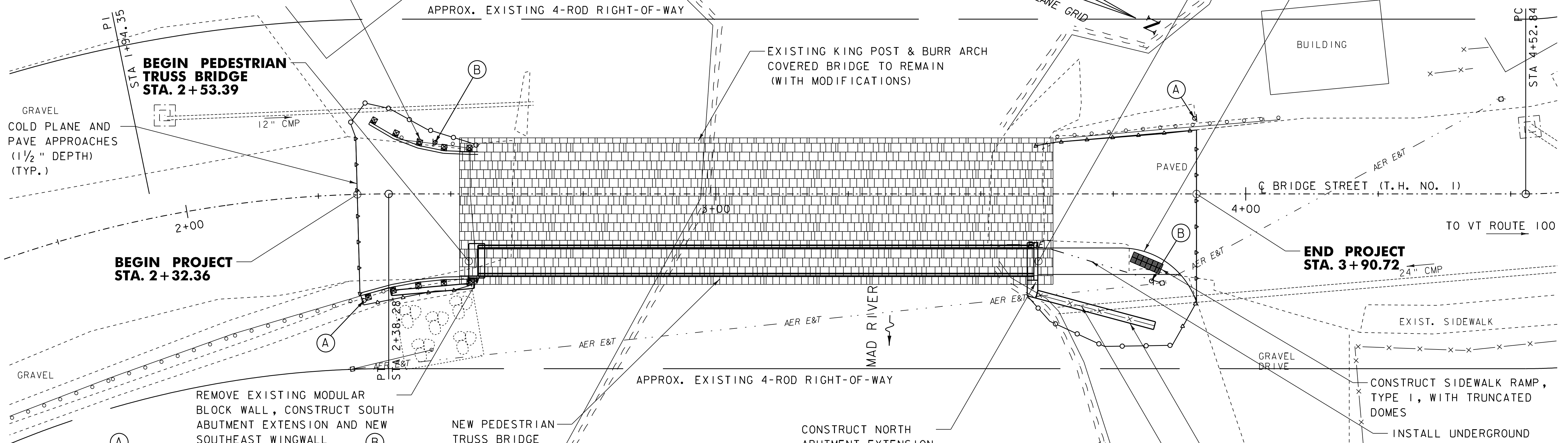
SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
							ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
							10				10		CY	COMMON EXCAVATION	203.15				
									8		8		CY	CHANNEL EXCAVATION OF ROCK	203.26				
									60		60		CY	STRUCTURE EXCAVATION	204.25				
									110		110		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30				
							135				135		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10				
							12				12		CY	SUBBASE OF GRAVEL	301.15				
							0.5				0.5		CWT	EMULSIFIED ASPHALT	404.65				
							12				12		TON	BITUMINOUS CONCRETE PAVEMENT	406.25				
									2		2		CY	CONCRETE, HIGH PERFORMANCE CLASS AA	501.32				
									60		60		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34				
									1		1		LS	SHORING SUPERSTRUCTURE	502.10				
									6500		6500		LB	REINFORCING STEEL	507.15				
									30		30		LF	DRILLING AND GROUTING DOWELS	507.16				
									10		10		GAL	WATER REPELLENT, SILANE	514.10				
									0.85		0.85		MFBM	STRUCTURAL LUMBER AND TIMBER, UNTREATED	522.20				
									4.25		4.25		MFBM	STRUCTURAL LUMBER AND TIMBER, TREATED	522.25				
									1.75		1.75		MFBM	NONSTRUCTURAL LUMBER, UNTREATED	522.30				
									1		1		EACH	PARTIAL REMOVAL OF STRUCTURE	529.20				
									1		1		LS	PREFABRICATED MULTI-MODAL BRIDGE (580 SF - EST.)	545.20				
									6		6		SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS II	580.14				
							15				15		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	618.10				
							15				15		SF	DETECTABLE WARNING SURFACE	618.30				
							45				45		LF	STEEL BACKED TIMBER GUARDRAIL	621.18				
										1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
							1				1		LS	MOBILIZATION/DEMOBILIZATION	635.11				
							1				1		LS	TRAFFIC CONTROL	641.10				
								5			5		LB	SEED	651.15				
								10			10		LB	FERTILIZER	651.18				
								0.1			0.1		TON	AGRICULTURAL LIMESTONE	651.20				
								0.1			0.1		TON	HAY MULCH	651.25				
								10			10		CY	TOPSOIL	651.35				
							60				60		SF	TRAFFIC SIGNS, TYPE A	675.20				
							100				100		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
							10				10		EACH	REMOVING SIGNS	675.50				
							35				35		LF	WIRED CONDUIT	678.23				
								3000			3000		DL	SPECIAL PROVISION (EROSION PREVENTION AND SEDIMENT CONTROL MEASURES) (N.A.B.I.)	900.615				
									22		22		LF	SPECIAL PROVISION (TIMBER RAILING)	900.640				

PROJECT NAME: **WAITSFIELD VILLAGE BRIDGE REHAB.**
PROJECT NUMBER: **STP EH08 (6)**
FILE NAME:
PROJECT LEADER: **EPD**
DESIGNED BY: **RHB**
QUANTITY SHEET #1
PLOT DATE: **01/19/2012**
DRAWN BY: **RHB**
CHECKED BY: **EPD**
SHEET **3** OF **8**

CONSTRUCT STEEL-BACKED
TIMBER APPROACH GUARDRAIL
(TYP. SOUTH APPROACHES)

**END PEDESTRIAN
TRUSS BRIDGE
STA. 3+60.77**

CONSTRUCT PORTLAND CEMENT
CONCRETE SIDEWALK, 5 INCH



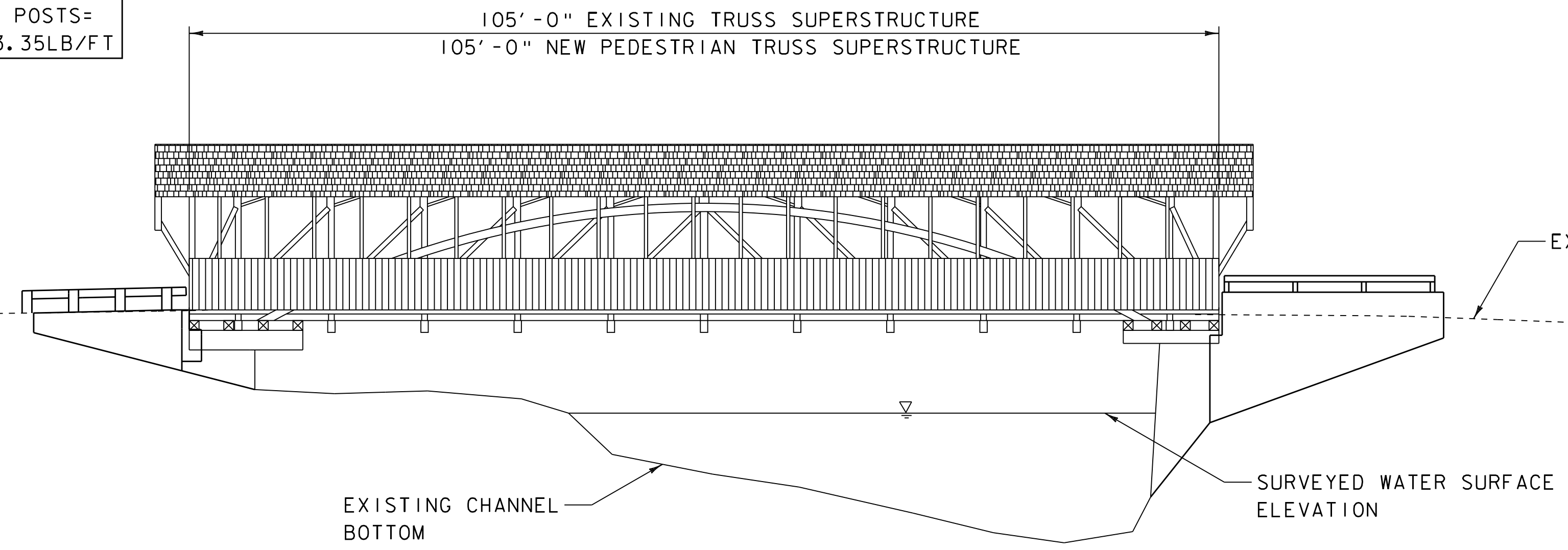
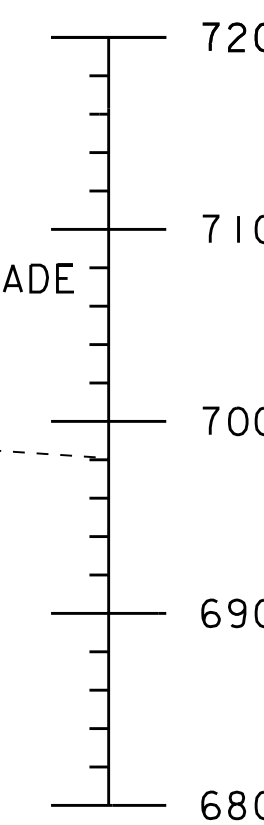
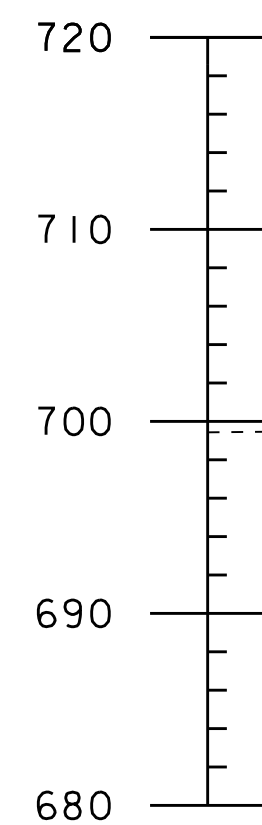
**BEGIN PROJECT
STA. 2+32.36**

**END PROJECT
STA. 3+90.72**

PLAN

SCALE 1" = 10'-0"
10 0 10

105'-0" EXISTING TRUSS SUPERSTRUCTURE
105'-0" NEW PEDESTRIAN TRUSS SUPERSTRUCTURE



ELEVATION AT DOWNSTREAM FASCIA

SCALE 1" = 10'-0"
10 0 10

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (GPS)

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BY	CHK'D
REVISIONS	
DATE	
NO.	
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TOWN OF WAITSFIELD WAITSFIELD, VERMONT	DESIGNED BY: RHB
WAITSFIELD VILLAGE (BIG EDDY) BRIDGE REHABILITATION	DRAWN BY: JDG/RHB
PLAN AND ELEVATION	CHECKED BY: RHD/EPD
PROJECT NO: 620922	DATE: JAN. 2012
DRAWING NO: 5	
SHEET 5 OF 8	

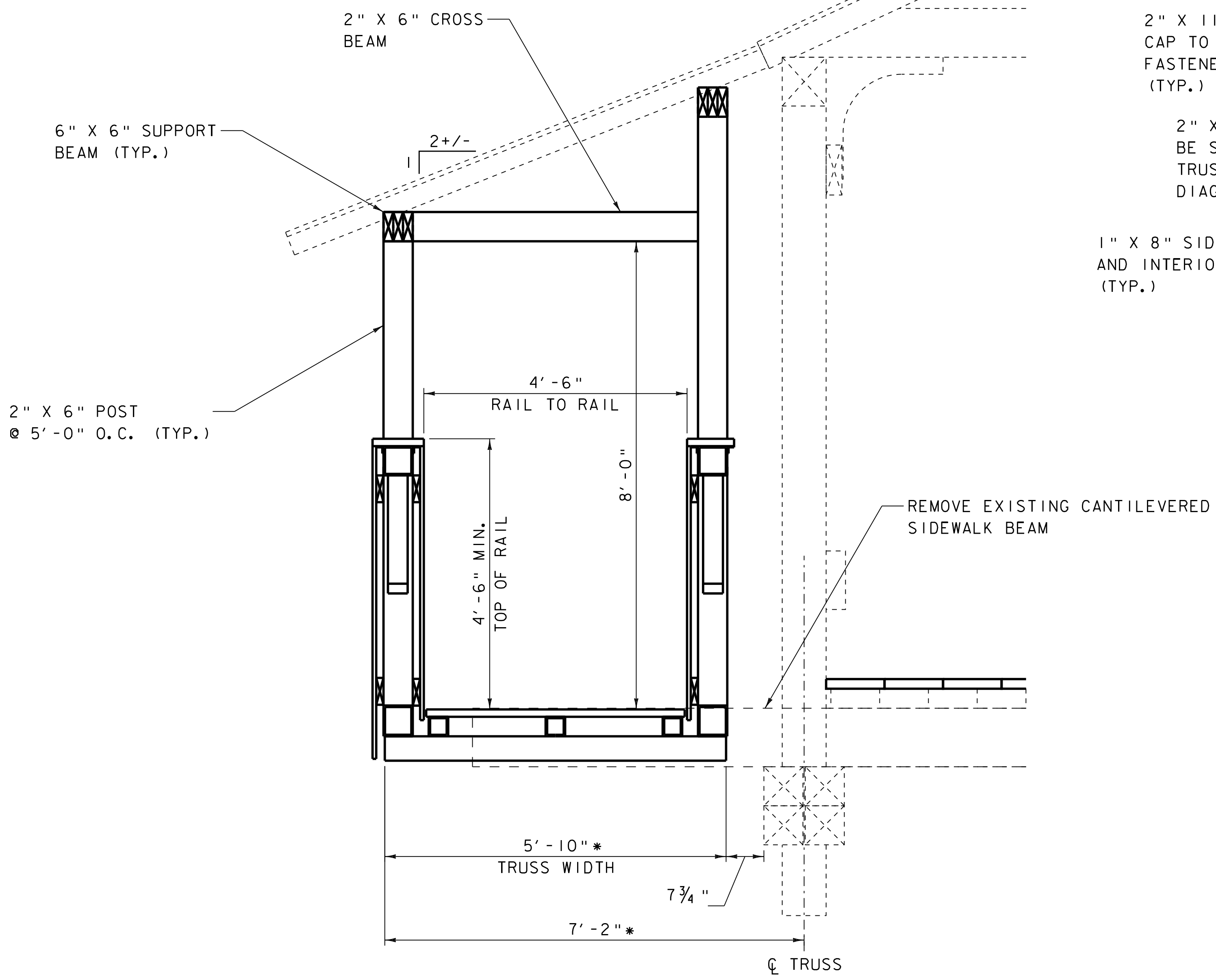
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PLOTTED 1/18/2012

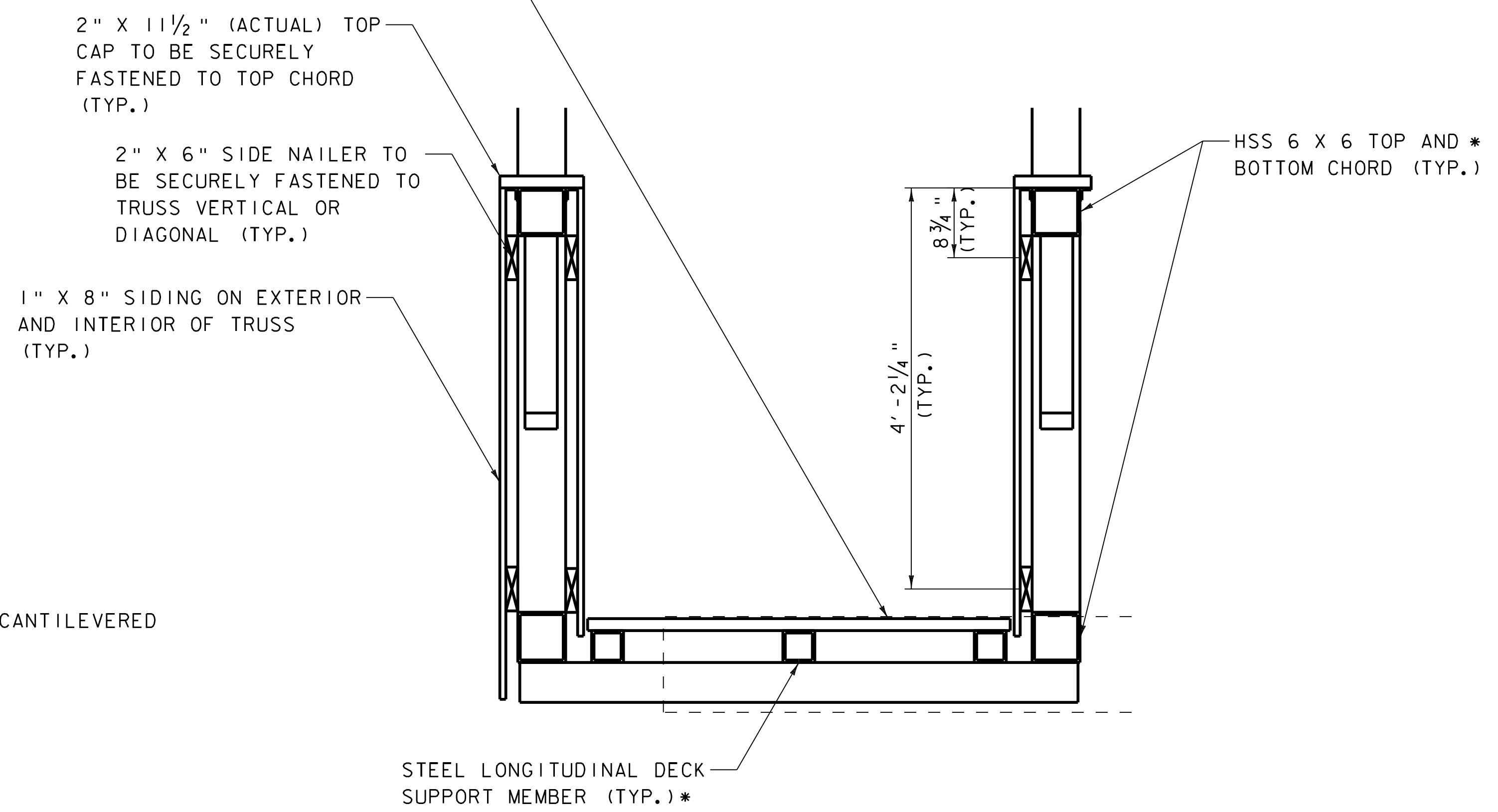
NOT FOR CONSTRUCTION - PRELIMINARY PLANS

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2" X 8" TIMBER DECKING, SECURELY FASTENED TO LONGITUDINAL DECK SUPPORT MEMBERS, SEE NOTE 3



TYPICAL SIDEWALK SECTION
SCALE: 3/4" = 1' - 0"



TYPICAL PEDESTRIAN TRUSS SECTION
SCALE: 1" = 1' - 0"

* SEE NOTE 2

NOTES:

1. NEW WALKWAY SIDING AND ROOF SUPPORT SYSTEM IS INTENDED TO CLOSELY RESEMBLE THAT OF THE EXISTING BRIDGE.
2. MEMBERS AND DIMENSIONS INDICATED ARE ASSUMED. ACTUAL MEMBER SIZES AND DIMENSIONS WILL BE BASED ON FABRICATOR'S DESIGN AND MAY VARY SLIGHTLY. DIMENSIONS NOT INDICATED SHALL BE MAINTAINED.
3. DECKING SHALL BE A MINIMUM SIZE OF 2" X 8", AS DESIGNED BY THE FABRICATOR.
4. LUMBER DIMENSIONS SHOWN ARE NOMINAL UNLESS OTHERWISE NOTED.
5. SIDING AND SIDE NAILERS TO BE OMITTED ON EXTERIOR OF TRUSS ABUTTING COVERED BRIDGE TRUSS, AS SHOWN.

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (GPS)

PLOTTED 1/18/2012

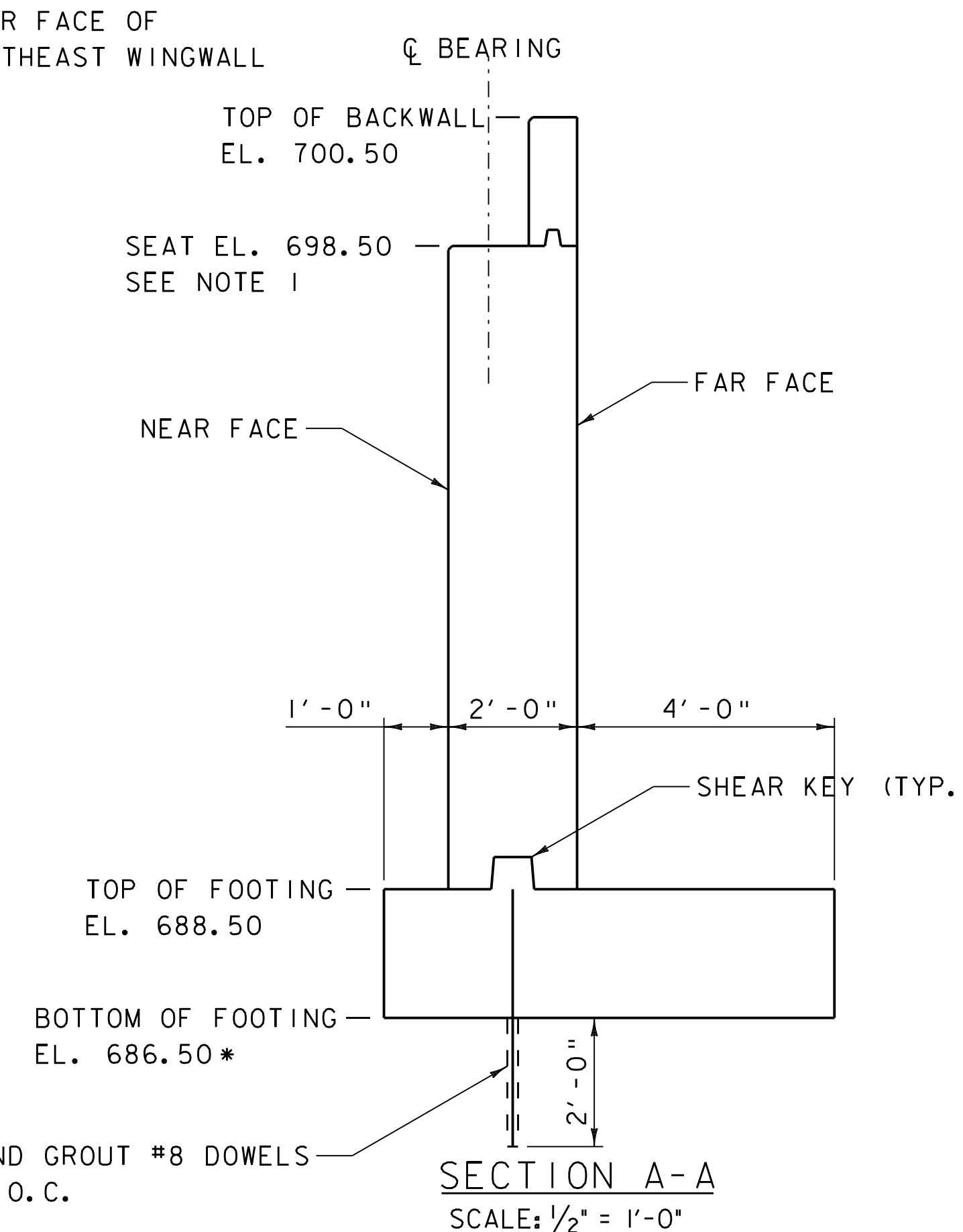
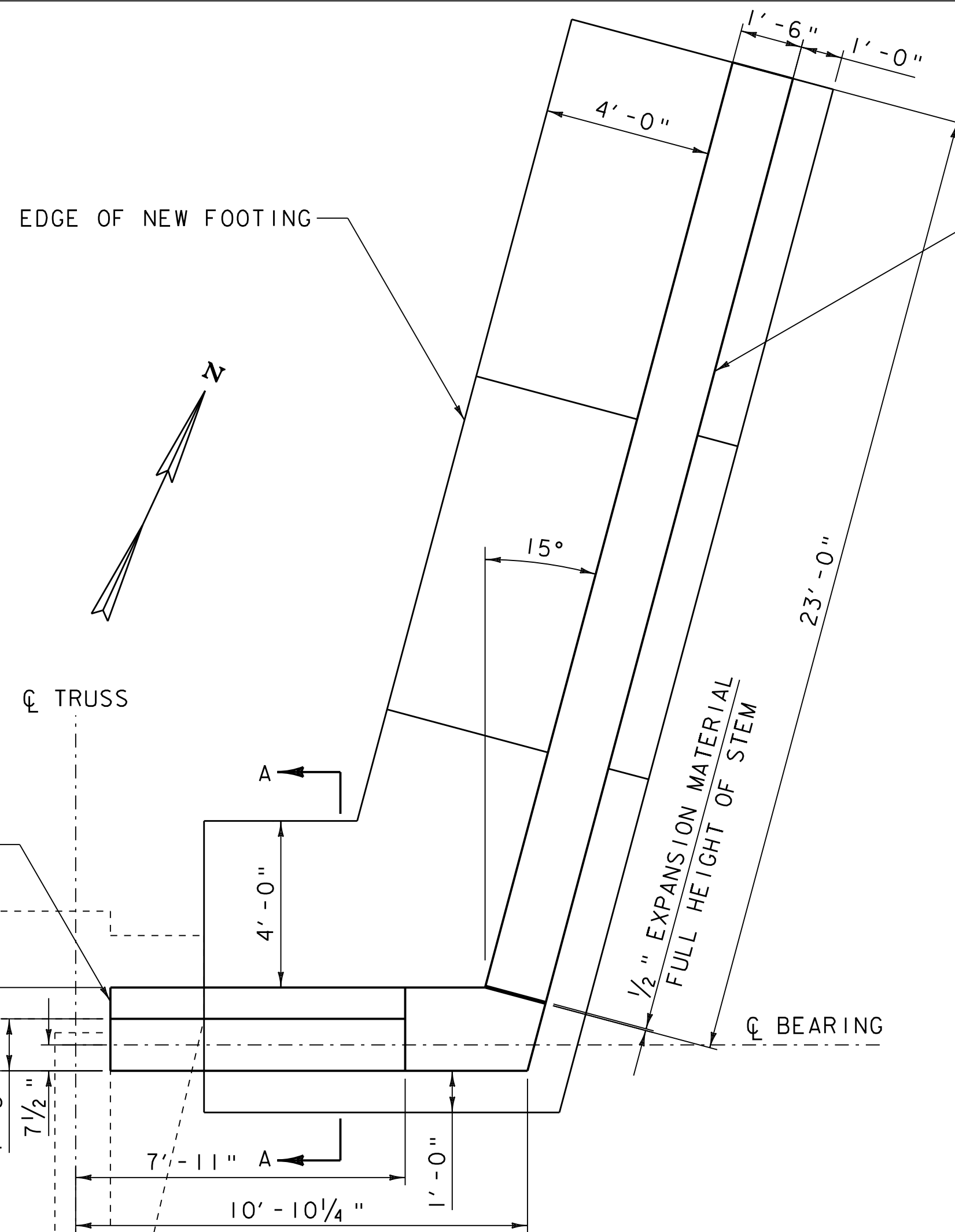
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BY	TCK'D
NO.	DATE
NO.	REVISIONS
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TOWN OF WATSFIELD WATSFIELD, VERMONT	PROJECT NO: 620922
WATSFIELD VILLAGE (BIG EDDY) BRIDGE REHABILITATION	DESIGNED BY: RHB
SUPERSTRUCTURE DETAILS	DRAWN BY: JDG/RHB
	DATE: JAN. 2012
	CHECKED BY: RHD/EPD
	DRAWING NO: 6
SHEET 6	OF 8

NOT FOR CONSTRUCTION - PRELIMINARY PLANS

NOTES:

- ELEVATION IS BASED ON A 2'-0" DEPTH OF SUPERSTRUCTURE AND BEARING FROM SIDEWALK GRADE TO BRIDGE SEAT. IF A DIFFERENT DEPTH OF SUPERSTRUCTURE AND BEARING IS USED, ADJUST THIS ELEVATION ACCORDINGLY, WHILE MAINTAINING A LOW CHORD NO LOWER THAN THIS ELEVATION.
- BOTTOM OF FOOTING ELEVATIONS AND FOOTING STEPS SHOWN ARE BASED ON AVAILABLE INFORMATION. FOOTING STEPS ARE INTENDED TO MATCH EXISTING LEDGE PROFILE. REFER TO SHEET 4, CONCRETE NOTES FOR ADDITIONAL INFORMATION REGARDING FOUNDATION PREPARATION AND THE NEW CONCRETE FOOTINGS.
- DETERIORATED CONCRETE AT WEST SIDE OF NORTH ABUTMENT TO BE REPAIRED USING ITEM 501.32, "CONCRETE, HIGH PERFORMANCE CLASS AA". FORMING TO FOLLOW SMOOTH CONCRETE SURFACES OF ABUTMENT AND WINGWALL. REFER TO SHEET 4, CONCRETE REPAIR NOTES FOR SURFACE PREPARATION INFORMATION.

 = APPROX. DETERIORATED OR SPALLED CONCRETE AREA



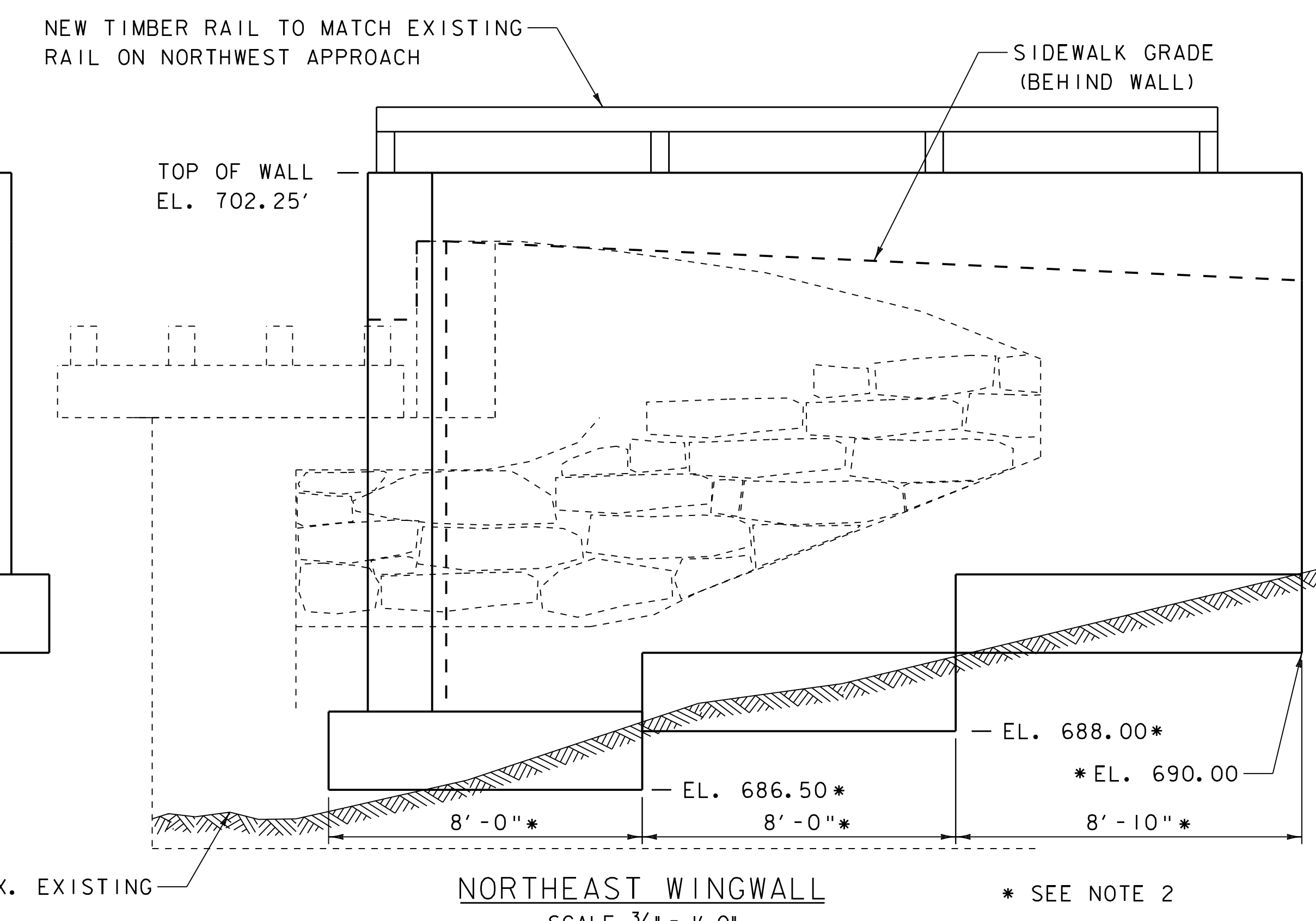
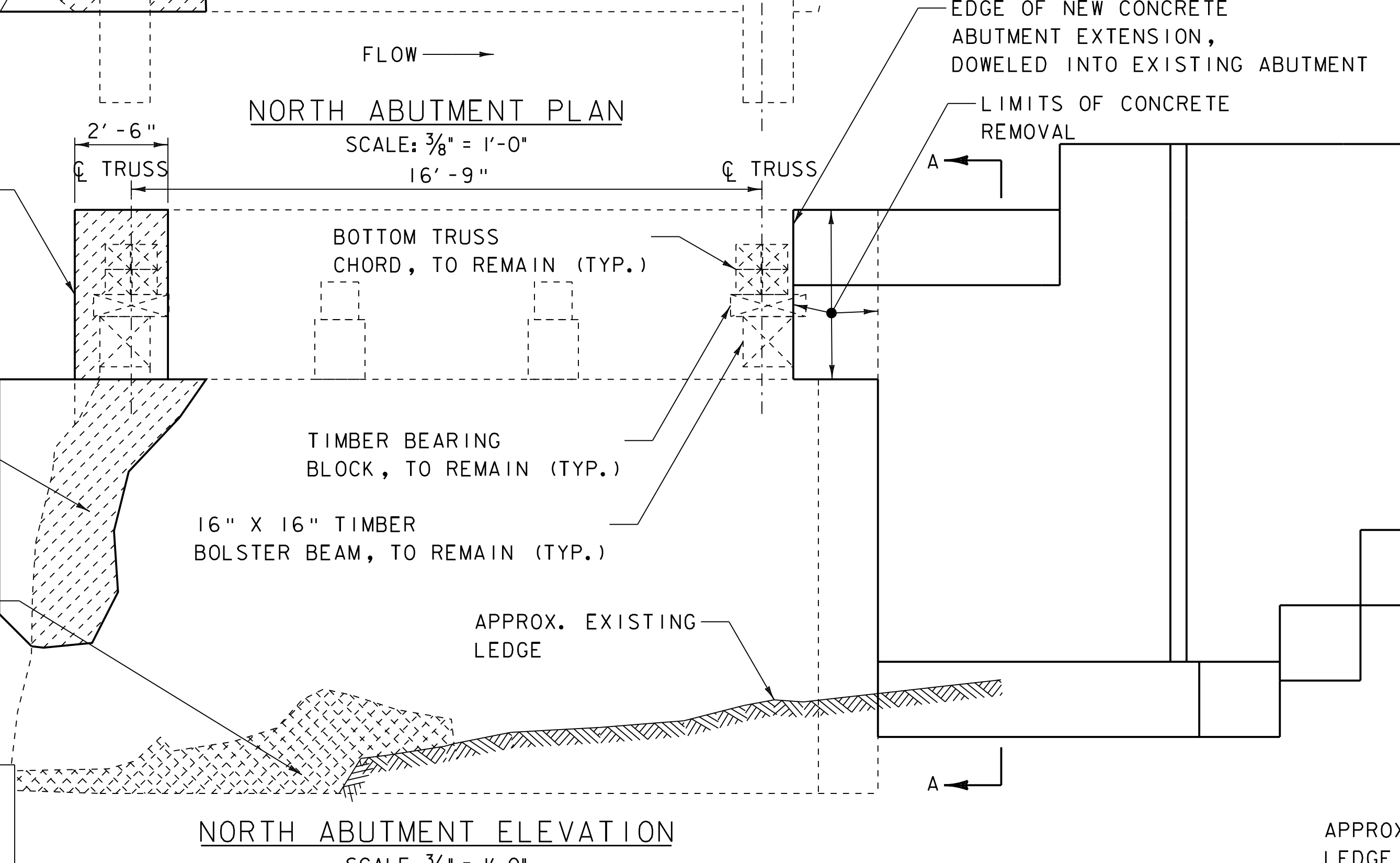
REPAIR DETERIORATED CONCRETE, SEE NOTE 3

REPLACE DETERIORATED BACKWALL WITH CAST-IN-PLACE CONCRETE, HIGH PERFORMANCE CLASS B, DOWEL INTO EXISTING

REPAIR DETERIORATED CONCRETE, SEE NOTE 3

FILL VOID IN CONCRETE WITH CAST-IN-PLACE CONCRETE, HIGH PERFORMANCE CLASS B

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (GPS)

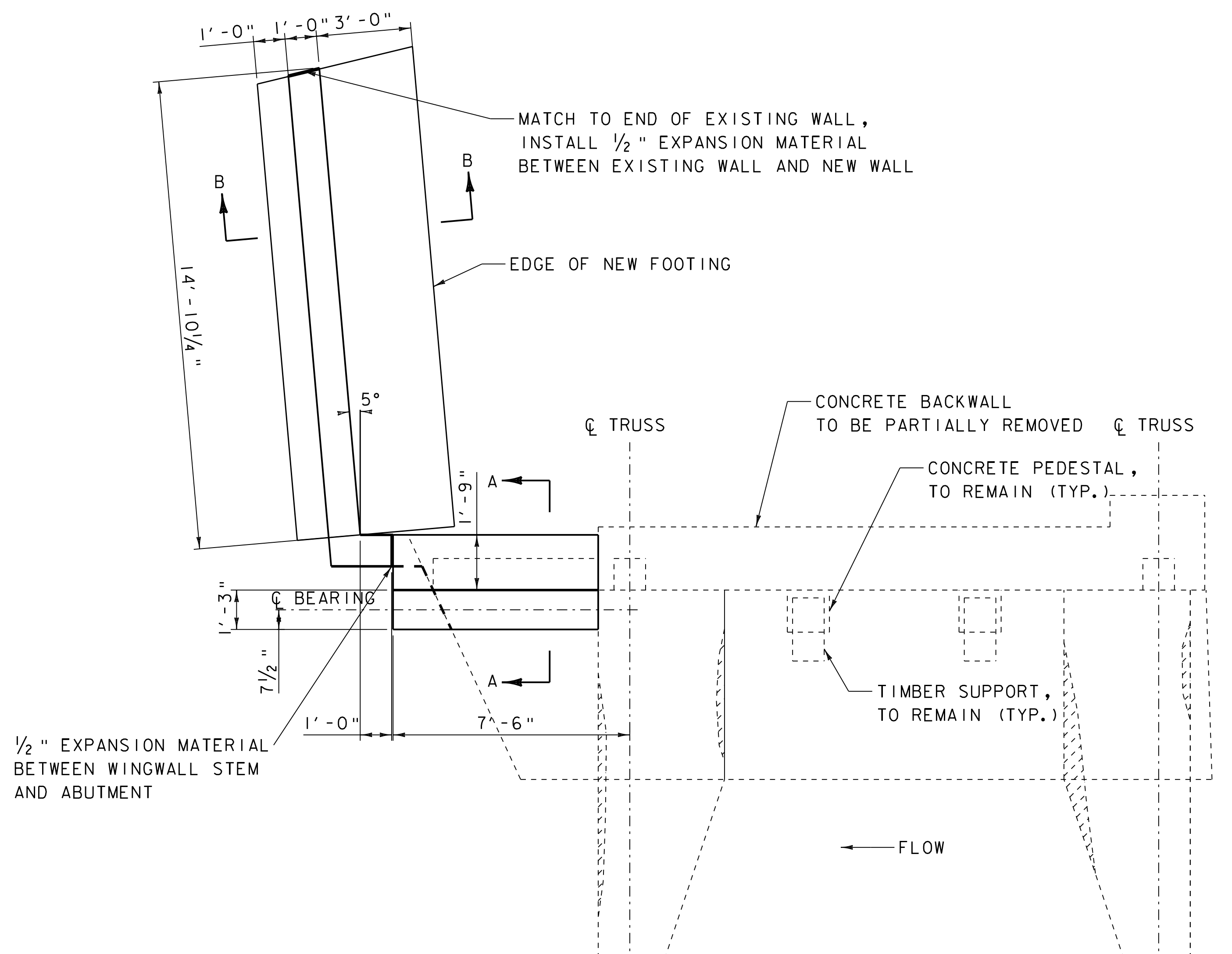


ENGINEER	
BY	CHK'D
NO.	DATE
NO.	REVISIONS
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TOWN OF WAITSFIELD WAITSFIELD, VERMONT WAITSFIELD VILLAGE (BIG EDDY) BRIDGE REHABILITATION	NORTH ABUTMENT MASONRY
PROJECT NO: 620922	DESIGNED BY: RHB
DATE: JAN. 2012	DRAWN BY: JDG/RHB
	CHECKED BY: RHD/EPD
DRAWING NO:	7
SHEET 7 OF 8	

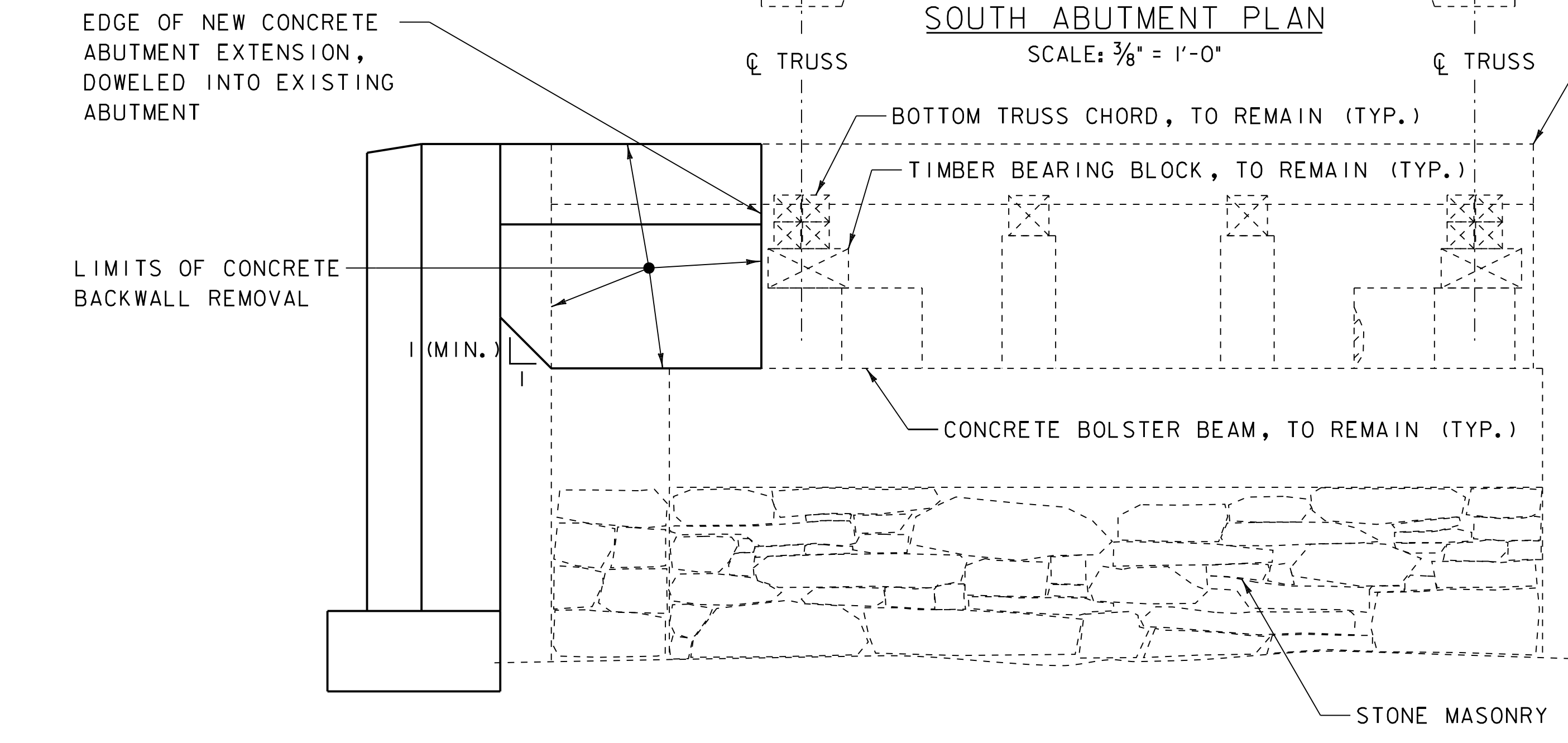
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NOT FOR CONSTRUCTION - PRELIMINARY PLANS

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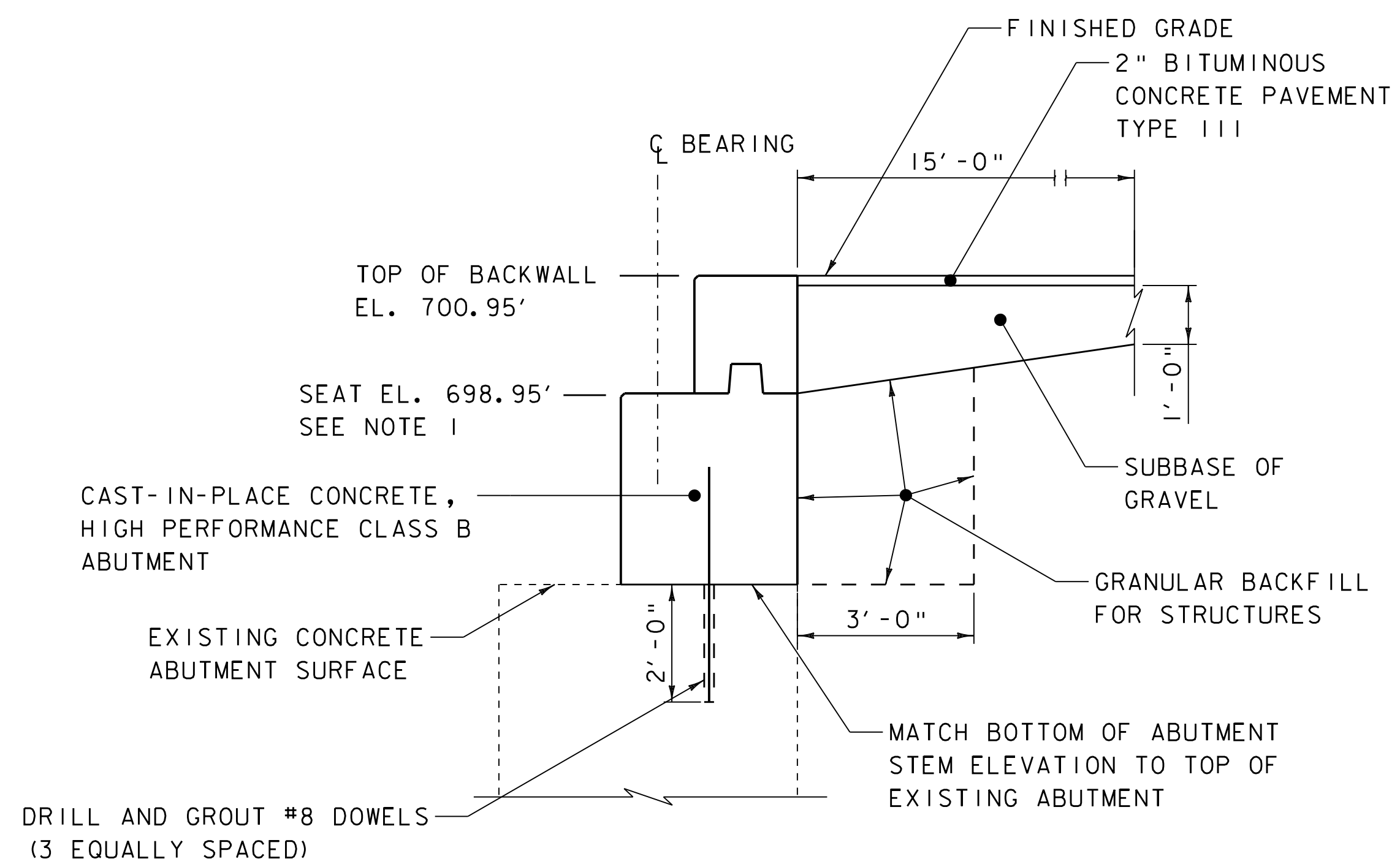


SOUTH ABUTMENT PLAN
SCALE: 3/8" = 1'-0"



SOUTH ABUTMENT ELEVATION
SCALE: 3/8" = 1'-0"

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (GPS)

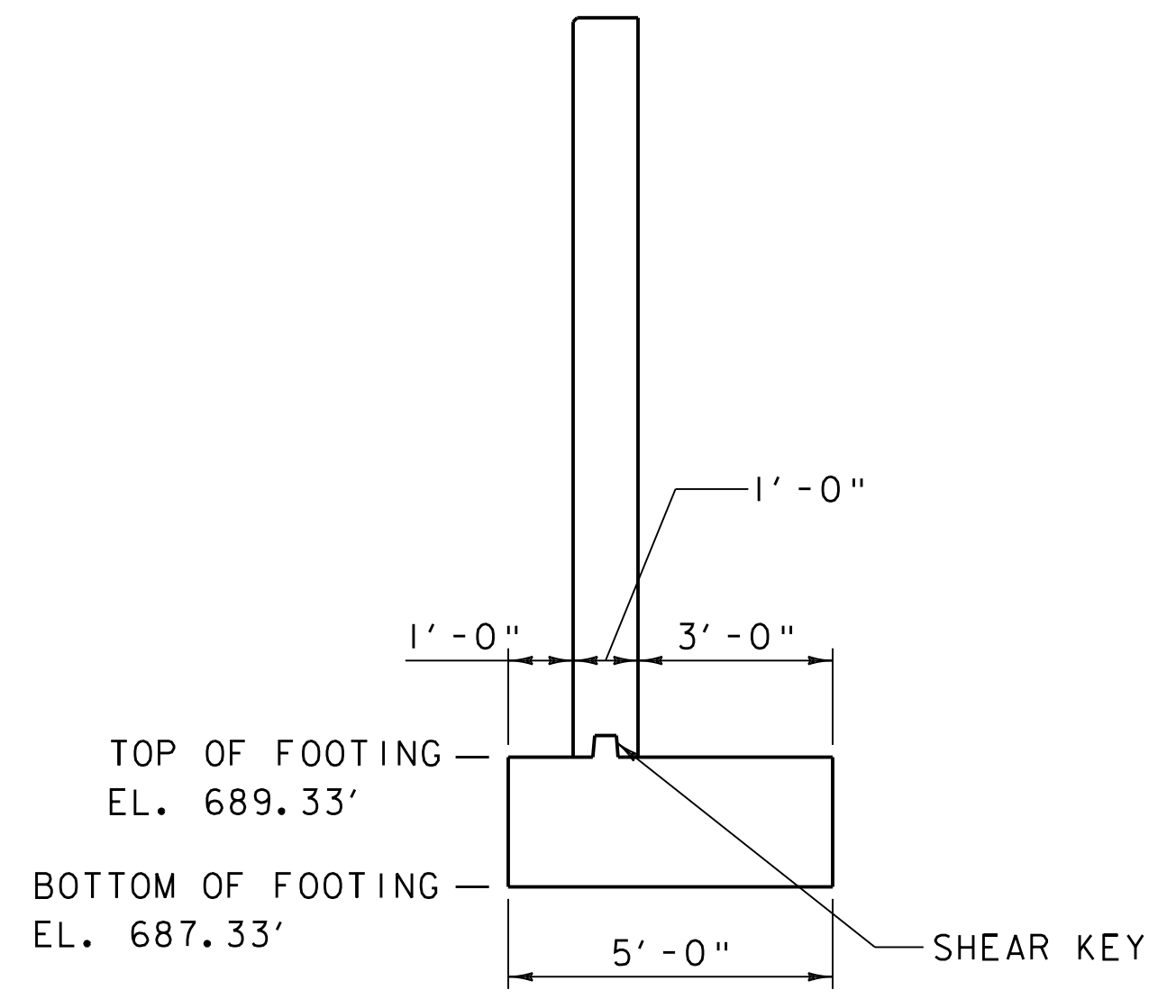


SECTION A-A
SCALE: 1/2" = 1'-0"

NOTES

- ELEVATION IS BASED ON A 2'-0" DEPTH OF SUPERSTRUCTURE AND BEARING FROM SIDEWALK GRADE TO BRIDGE SEAT. IF A DIFFERENT DEPTH OF SUPERSTRUCTURE AND BEARING IS USED, ADJUST THIS ELEVATION ACCORDINGLY, WHILE MAINTAINING A LOW CHORD NO LOWER THAN THIS ELEVATION.
- REFER TO SHEET 4, CONCRETE REPAIR NOTES FOR CONCRETE REPAIR INFORMATION.

= APPROX. DETERIORATED OR SPALLED CONCRETE AREA



SECTION B-B
SCALE: 3/8" = 1'-0"

ENGINEER	
	BY: CK'D
REVISIONS	
	DATE
	NO.
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<p>TOWN OF WATSFIELD WATSFIELD, VERMONT WATSFIELD VILLAGE (BIG EDDY) BRIDGE REHABILITATION</p> <p style="text-align: right;">SOUTH ABUTMENT MASONRY</p>	
PROJECT NO: 620922	DESIGNED BY: RHB
DATE: JAN. 2012	DRAWN BY: JDG/RHB
	CHECKED BY: RHD/EPD
DRAWING NO: 8	
SHEET 8 OF 8	