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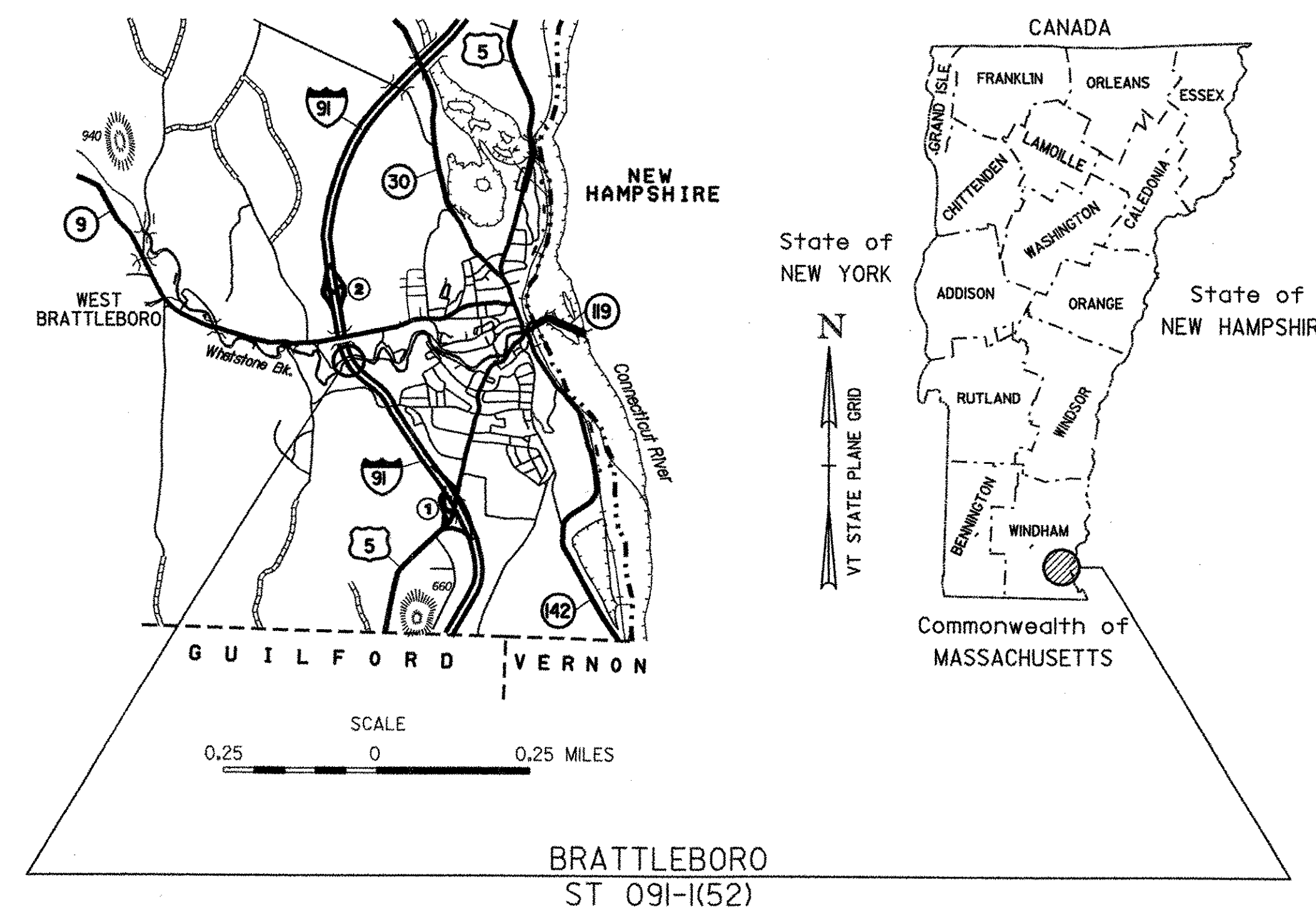
LIST OF QUANTITIES

ITEM NUMBER	DESCRIPTION	UNIT	TOTAL QUANTITIES		ROUND	FINAL
			BRIDGE	EROSION CONTROL		
204.30	GRANULAR BACKFILL FOR STRUCTURES (MOD.)	CY	35		3	
501.25	CONCRETE, CLASS B	CY	11		0.3	
506.60	STRUCTURAL STEEL (MOD. - HP 12 X 53)	LB	88500		697	
506.60	STRUCTURAL STEEL (CHANNELS AND TENSION RODS)	LB	11500		228	
507.15	REINFORCING STEEL	LB	925		24	
608.26	ALL PURPOSE EXCAVATOR RENTAL, TYPE II	HR	64		EST.	
613.10	STONE FILL, TYPE I (MOD. - CRUSHED STONE BERMS)	CY		10	EST.	
620.70	SNOW FENCE (MOD. - PDF)	LF		1000	35	
630.10	UNIFORMED TRAFFIC OFFICERS	HR	40		EST.	
630.15	FLAGGERS	HR	80		EST.	
635.10	MOBILIZATION	LS	1		-	
641.10	TRAFFIC CONTROL	LS	1		-	
649.51	GEOTEXTILE FOR SILT FENCE	SY		50	EST.	
651.15	SEED	LB		30	EST.	
651.18	FERTILIZER	LB		250	EST.	
651.20	AGRICULTURAL LIMESTONE	TON		1	EST.	
651.25	HAY MULCH	TON		1	EST.	
651.27	CEDAR BARK MULCH (MOD.)	CY		20	EST.	
652.10	EROSION PREVENTION & SEDIMENT CONTROL PLAN	LS		1	-	
652.20	MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN	HR		20	EST.	
652.30	MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN (N. A. B. I.)	LU		1	-	
654.10	EROSION MATTING	SY		100	EST.	

STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT BRIDGE PROJECT TOWN OF BRATTLEBORO COUNTY OF WINDHAM INTERSTATE ROUTE 91 BRIDGE NO. 6N AND 6S



PROJECT LOCATION
BEGINNING AT A POINT 0.549 MILES NORTH OF THE GUILFORD - BRATTLEBORO TOWN LINE AND EXTENDING NORTHERLY ALONG INTERSTATE 91 FOR A DISTANCE OF 0.079 MILES.

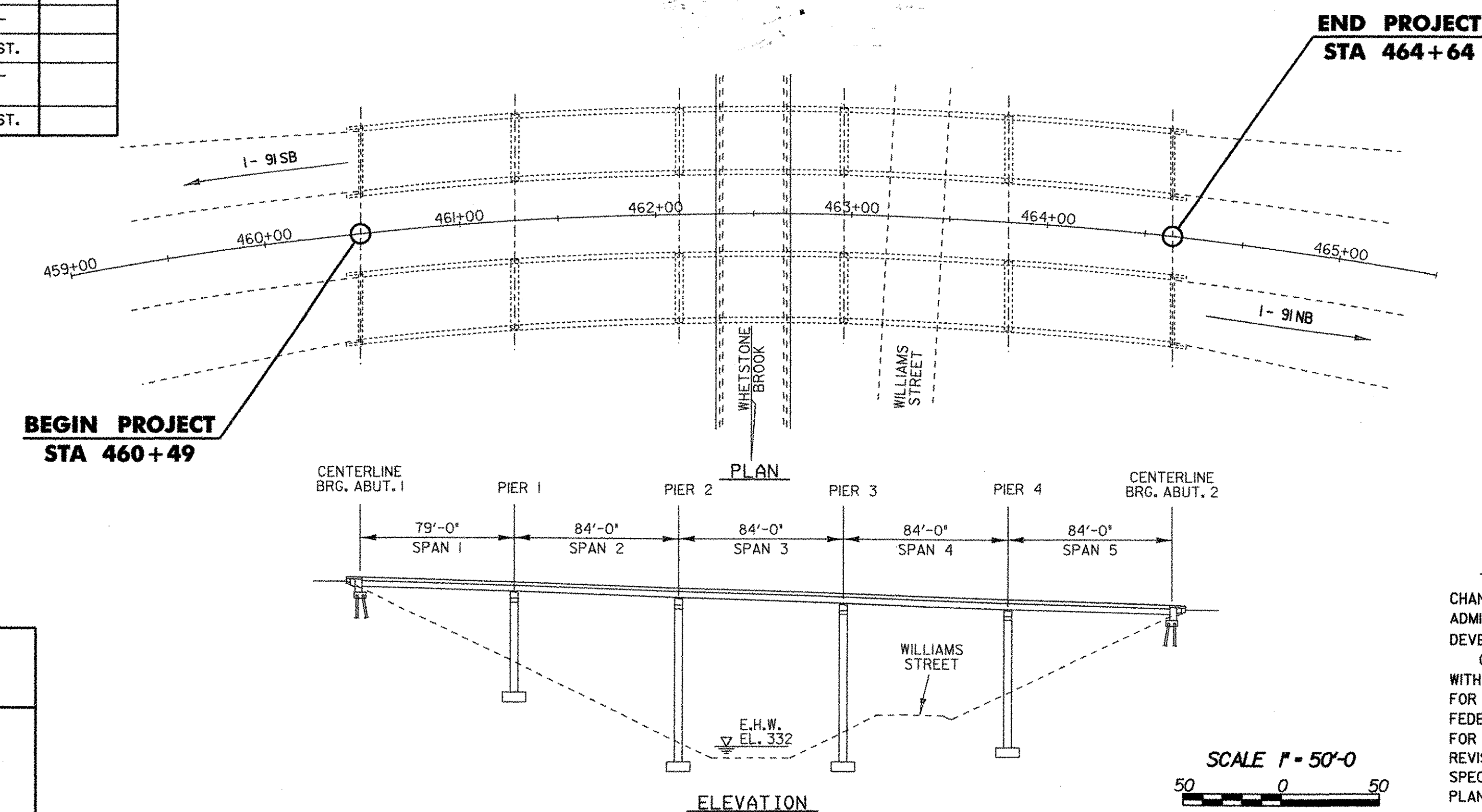
PROJECT DESCRIPTION
WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES THE SHORING AND REINFORCEMENT OF THE EASTERLY PIER COLUMNS FOR BRIDGES 6N AND 6S.

LENGTH OF PROJECT: 415.00 FEET

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 :	N. A.
SURVEYED DATE :	N. A.
DATUM	
VERTICAL	N. A.
HORIZONTAL	N. A.



BUILT AS DESIGNED

RECORD PLANS

CONTRACTOR: KUBRICKY CONSTRUCTION CORP. - GLENS FALLS, NY

RESIDENT ENGINEER: FRED ROSS

CONSTRUCTION BEGAN: SEPTEMBER 13, 2004

CONSTRUCTION COMPLETE: OCTOBER 6, 2004

RECORD PLANS BY: FRED ROSS & N. GARBACIK

I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

BY: *Fred W. Ross III* RESIDENT ENGINEER
DATE: 1-23-07

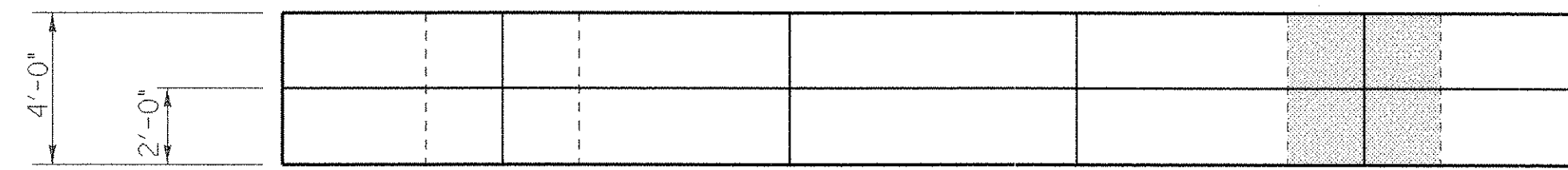
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

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 2001, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JANUARY 4, 2001 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

DIRECTOR OF PROGRAM DEVELOPMENT	
APPROVED <i>[Signature]</i>	DATE 4/28/04
PROJECT MANAGER : S. FARNSWORTH	
PROJECT NAME :	BRATTLEBORO
PROJECT NUMBER :	ST 091-1(52)
SHEET 1 OF 15 SHEETS	

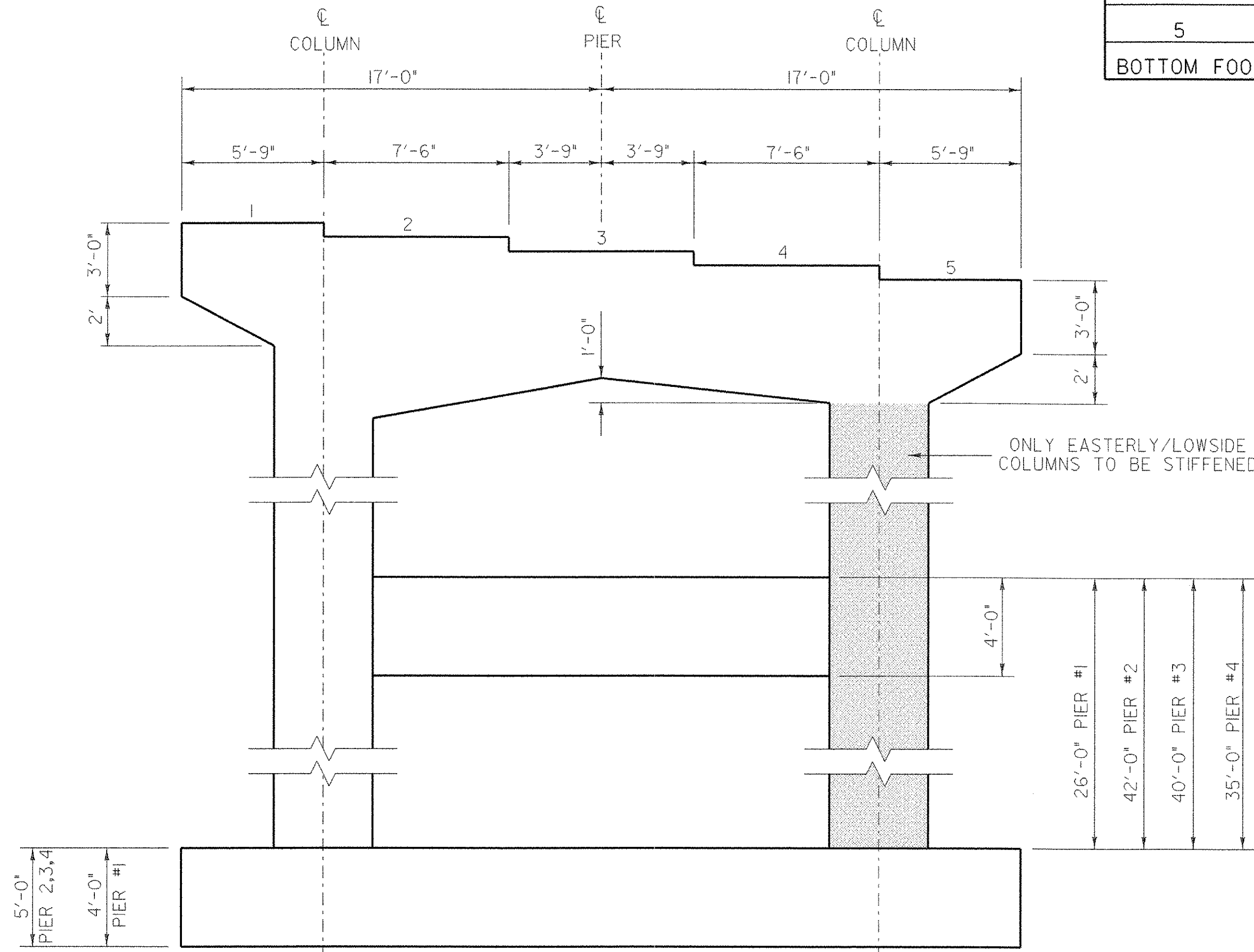
NOTE: ALL ELEVATIONS ARE REFERENCED TO THE ORIGINAL RECORD 1958, CONSTRUCTION PLANS



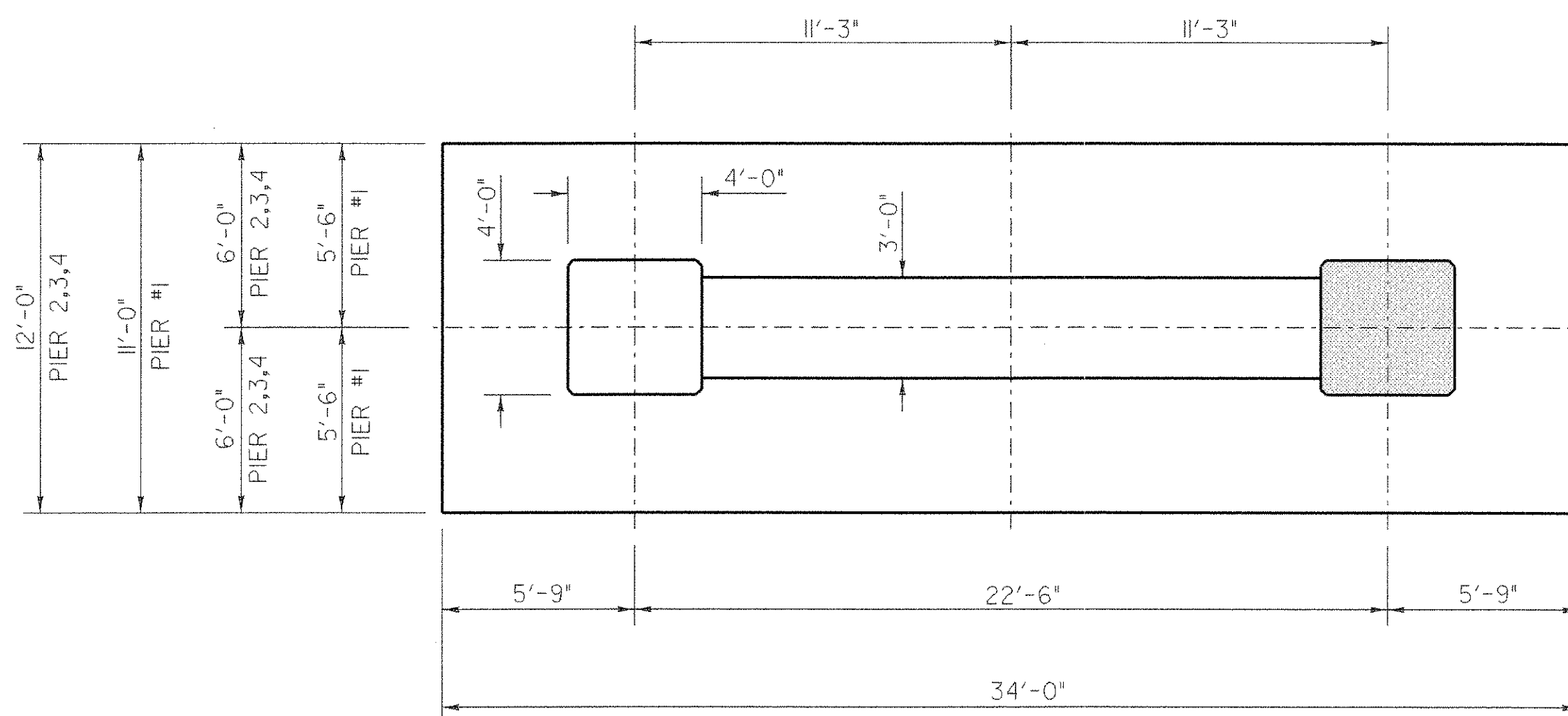
TYPICAL EXISTING PIER PLAN

SOUTHBOUND BRIDGE SEAT ELEVATIONS								
BRIDGE SEAT	PIER #1		PIER #2		PIER #3		PIER #4	
	SOUTH	NORTH	SOUTH	NORTH	SOUTH	NORTH	SOUTH	NORTH
1	412.01	411.85	409.49	409.31	406.95	406.76	404.40	404.20
2	411.41	411.28	408.91	408.73	406.36	406.17	403.80	403.61
3	410.86	410.71	408.33	408.14	405.77	405.58	403.20	403.01
4	410.29	410.14	407.75	407.56	405.17	404.99	402.60	402.41
5	409.72	409.57	407.17	406.98	404.58	404.40	402.00	401.81
BOTTOM FOOTING	353.90		318.90		318.90		326.90	

NORTHBOUND BRIDGE SEAT ELEVATIONS								
BRIDGE SEAT	PIER #1		PIER #2		PIER #3		PIER #4	
	SOUTH	NORTH	SOUTH	NORTH	SOUTH	NORTH	SOUTH	NORTH
1	412.16	412.01	409.55	409.36	406.90	406.71	404.25	404.06
2	411.59	411.44	408.97	408.78	406.31	406.12	403.65	403.46
3	411.02	410.87	408.39	408.20	405.72	405.53	403.05	402.86
4	410.45	410.30	407.80	407.62	405.13	404.94	402.45	402.26
5	409.88	409.73	407.22	407.04	404.53	404.35	401.85	401.66
BOTTOM FOOTING	353.90		318.90		318.90		326.90	



TYPICAL EXISTING PIER AND FOOTING ELEVATION



TYPICAL EXISTING COLUMN AND FOOTING PLAN

0 2 4
SCALE: 1/4" = 1'-0"

NOTE: SHADED AREAS REPRESENT COLUMNS REQUIRING REINFORCEMENT.

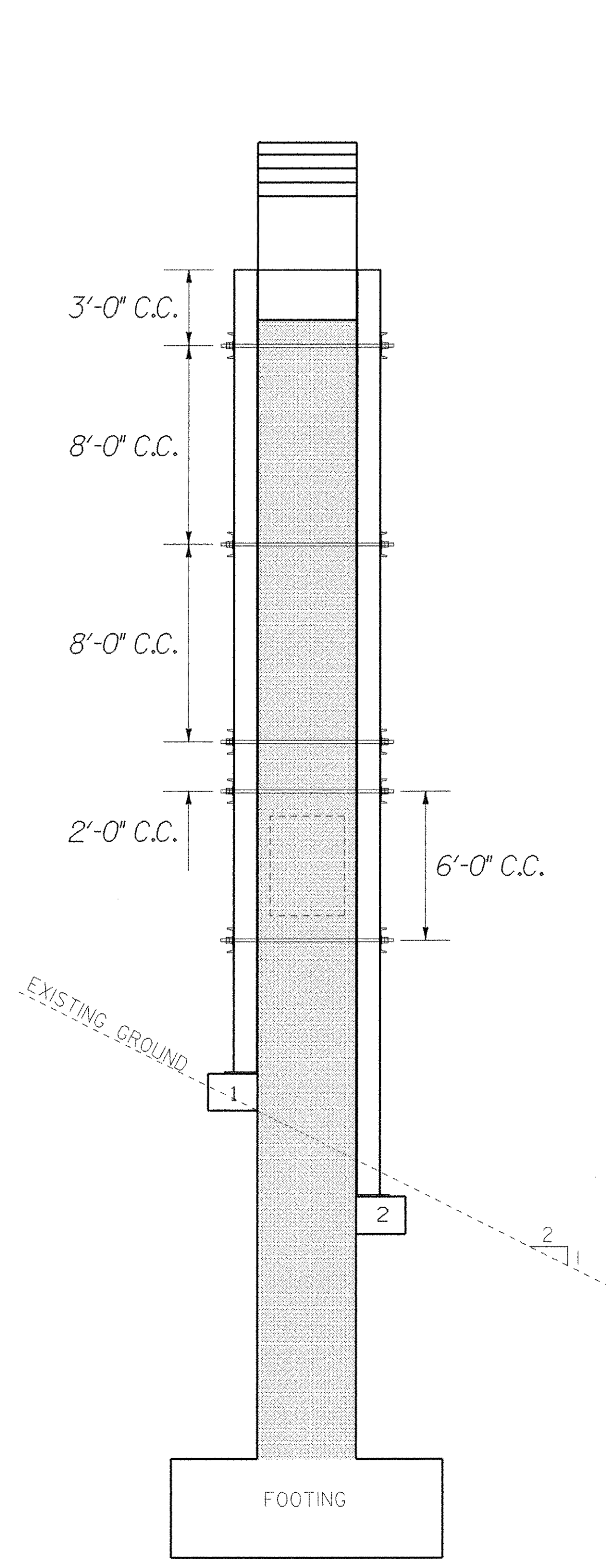
GENERAL NOTES

1. THE INTENT OF THIS PROJECT IS TO PARTIALLY STIFFEN THE EXISTING DETERIORATED PIER COLUMNS. ONLY THE EASTERLY MOST COLUMNS AT EACH PIER ARE INCLUDED FOR REHABILITATION. ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SEVENTEENTH EDITION, AND ITS LATEST REVISIONS.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY IN THE FIELD ALL EXISTING DIMENSIONS SHOWN IN THE PLANS. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES FAHRENHEIT UNLESS OTHERWISE NOTED.
3. ALL WORK ASSOCIATED WITH THIS PROJECT HAS BEEN DESIGNED TO BE CONSTRUCTED WITHIN THE EXISTING STATE OF VERMONT RIGHT-OF-WAY.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY AND RESOLVE ANY POTENTIAL CONFLICTS WITH UTILITIES THAT MAY BE CAUSED BY THE PROPOSED WORK ASSOCIATED WITH THIS PROJECT.
5. UNDER A SEPARATE CONTRACT THE AGENCY IS ALSO SCHEDULED TO HAVE THE EXISTING BRIDGE DECK JOINTS REPAIRED THROUGH THE INSTALLATION OF ASPHALTIC PLUG TYPE SYSTEMS. FLOYD ROBERTS, DISTRICT TRANSPORTATION ADMINISTRATOR FOR DISTRICT #2 IS IN CHARGE OF THESE REPAIRS AND SHALL BE CONTACTED BY PHONE AT (802)-254-5011 FOR ANY NECESSARY DETAILS. IT IS NOT ANTICIPATED THAT THE JOINT REPAIR OPERATION WILL BE IN CONFLICT WITH ANY OF THE WORK ASSOCIATED WITH THIS CONTRACT. HOWEVER, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY WHETHER OR NOT THIS WILL BE THE CASE AND SCHEDULE HIS/HER WORK ACCORDINGLY.
6. ITEM 204.30, GRANULAR BACKFILL FOR STRUCTURES (MOD.) HAS BEEN MODIFIED BY DELETING THE REQUIREMENTS IN SECTION 204.02 MATERIALS, FOR GRANULAR BACKFILL FOR STRUCTURES, 704.08, AND REPLACING IT WITH THE REQUIREMENTS FOR COARSE AGGREGATE FOR CONCRETE, 704.02A, 3/8" STONE. THIS MATERIAL SHALL BE USED TO BED AND BACKFILL THE CONCRETE PADS AT THE BASE OF THE SPLINT/REINFORCEMENT ASSEMBLIES. ALL EXCAVATION AND DISPOSAL OF MATERIAL REMOVED ASSOCIATED WITH THE CONSTRUCTION OF THE CONCRETE PADS WILL BE PAID UNDER ITEM 608.26, ALL PURPOSE EXCAVATOR RENTAL, TYPE II.
7. ITEM 506.60, STRUCTURAL STEEL (MOD.) (HP 12 x 53) HAS BEEN MODIFIED BY ADDING TO SECTION 506.02 MATERIALS, ALL OF THE REQUIREMENTS ASSOCIATED WITH SUBSECTION 730.01, STEEL PILING.
8. THE STEEL FOR THIS PROJECT WHICH INCLUDES THE STEEL PILING, CHANNELS, AND PLATES SHALL MEET AS A MINIMUM THE REQUIREMENTS OF AASHTO M 270, GRADE 250 (GRADE 36). STEEL PILING WILL BE PAID UNDER ITEM 506.60 STRUCTURAL STEEL (MOD. - HP 12 X 53). ALL OTHER STEEL COMPONENTS, INCLUDING THE PLATES, CHANNELS, RODS, BOLTS, NUTS, AND WASHERS WILL BE PAID UNDER ITEM 506.60 STRUCTURAL STEEL (CHANNELS AND TENSION RODS). THE BOLTS AND THREADED ROD SHALL MEET OR EXCEED THE REQUIREMENTS OF ASTM A 307 AND THE NUTS AND WASHERS SHALL CONFORM TO AASHTO M 291.

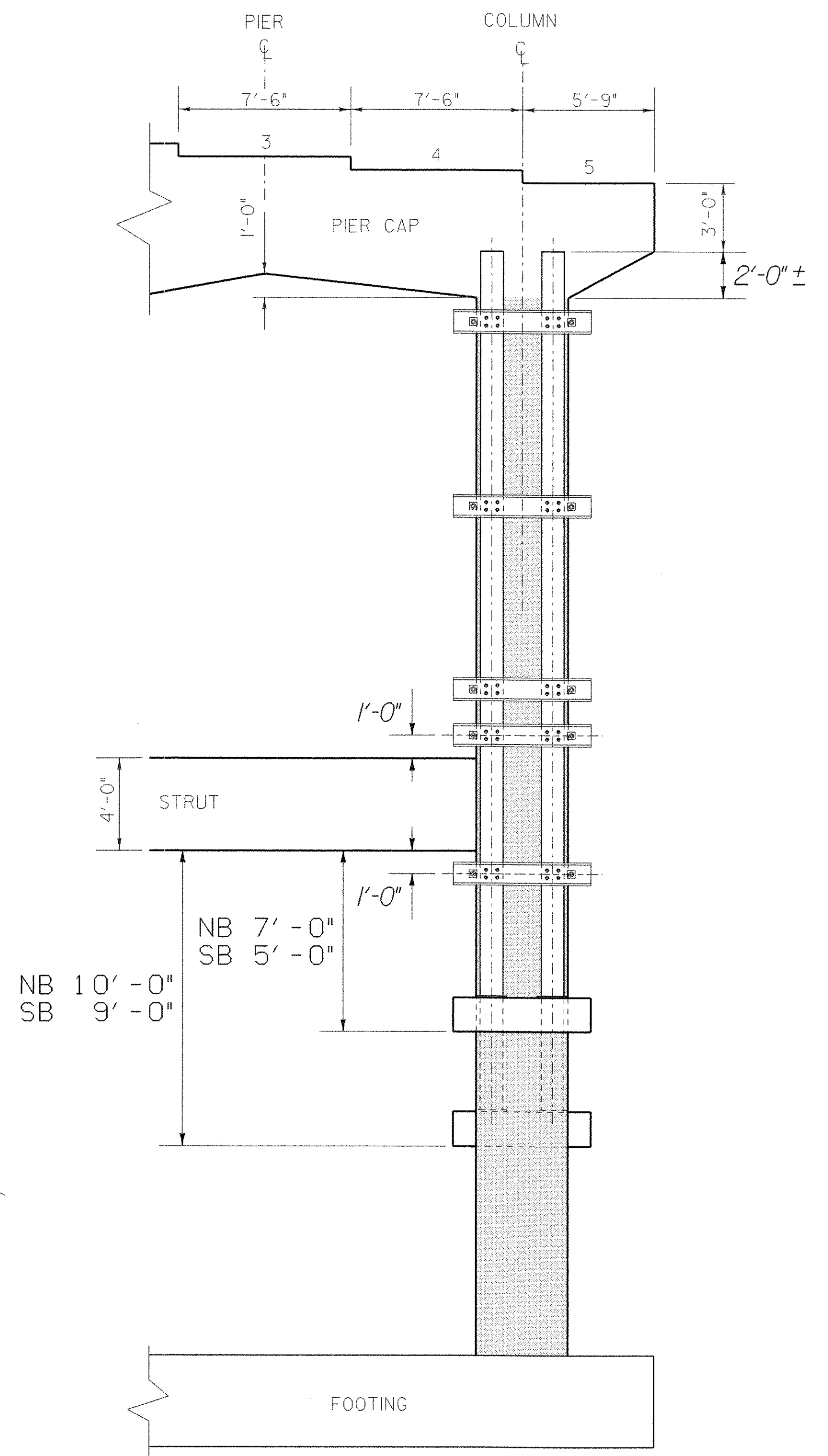
9. IT HAS BEEN ASSUMED THE CONTRACTOR WILL COMPLETE ALL WORK ASSOCIATED WITH THIS CONTRACT FROM BENEATH THE INTERSTATE AND ALL ACCESS TO THE SITE WOULD BE MADE FROM WILLIAMS STREET OR THE SOUTHERLY MEDIAN OPENING OF I-91. ITEM 641.10, TRAFFIC CONTROL HAS BEEN INCLUDED AS PAYMENT FOR ALL WORK ASSOCIATED WITH MAINTAINING TRAFFIC ON WILLIAMS STREET AND NEAR ANY ACCESS POINTS TO THE PROJECT AREA, EXCEPT FOR FLAGGERS WHICH WILL BE PAID FOR SEPARATELY UNDER THE APPROPRIATE ITEM. SHOULD IT BE DETERMINED THAT STAGING FROM THE INTERSTATE IS NECESSARY TO COMPLETE ANY OF THE WORK DETAILED IN THESE PLANS THEN IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DEVELOP A TRAFFIC CONTROL PLAN AND SUBMIT IT FOR APPROVAL TO THE STRUCTURES ENGINEER VIA THE RESIDENT ENGINEER. ALL COSTS ASSOCIATED WITH THE NECESSARY WORK INCURRED BY CHOOSING TO WORK FROM THE INTERSTATE SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 641.10, TRAFFIC CONTROL. ANY WORK ASSOCIATED WITH GAINING ACCESS OFF OF WILLIAMS STREET OR THE INTERSTATE SHALL BE CONSIDERED INCIDENTAL TO ITEM 635.10, MOBILIZATION.
10. WORK ON AND AROUND PIERS 2 AND 3 WILL BRING THE CONTRACTOR AND THEIR EQUIPMENT IN CLOSE PROXIMITY TO THE EDGE OF WHETSTONE BROOK. AS DIRECTED AND APPROVED BY THE ENGINEER THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT SILTATION OR POLLUTION, ESPECIALLY THE DISCHARGE OF RAW CONCRETE, INTO THE BROOK.
11. ITEM 649.51, GEOTEXTILE FOR SILT FENCE, HAS BEEN INCLUDED AND SHALL BE INSTALLED IN LOCATIONS DETERMINED AND AS DIRECTED BY THE ENGINEER. AS PER SPECIFICATION, MAINTENANCE OF THE SILT FENCE INSTALLATION WILL NOT BE PAID FOR SPERATELY BUT IS CONSIDERED TO BE INCLUDED IN THE BID UNIT PRICE FOR ITEM 649.51.
12. ESTIMATED QUANTITIES FOR SEED, FERTILIZER, AGRICULTURAL LIMESTONE, AND HAY MULCH HAVE BEEN INCLUDED TO BE USED AT THE DISCRETION OF THE ENGINEER ON AREAS DISTURBED IN COMPLETING THE NECESSARY WORK ASSOCIATED WITH THIS PROJECT. THE ENGINEER SHALL DETERMINE THOSE AREAS THAT ARE ELIGIBLE FOR PAYMENT AND WILL DIRECT THE CONTRACTOR TO STABILIZE ANY AND ALL DISTURBED AREAS AS SOON AS PRACTICALLY POSSIBLE, BUT IN NO MORE THAN 24 HOURS OF DISTURBANCE. DISTURBANCE FOR THIS PROJECT IS DEFINED AS SOILS THAT ARE MADE EROSION SUSCEPTIBLE IN COMPLETING THE WORK.
13. IN AREAS WHERE TURF ESTABLISHMENT IS NOT PRACTICAL ITEMS 651.27, CEDAR BARK MULCH (MOD.), AND 654.10, EROSION MATTING, HAVE BEEN INCLUDED FOR EROSION PREVENTION. THESE PRODUCTS SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE USED IN CONJUNCTION WITH OR AS AN ALTERNATIVE TO SEED AND HAY MULCH. ITEM 651.27 HAS BEEN MODIFIED TO DELETE THE REQUIREMENT THAT CEDAR STOCK IS THE PRIMARY COMPONENT OF THE BARK MULCH MIX. FOR USE ON THIS PROJECT THE MIX OF BARK MULCH SHALL BE ANY MIX OF SOFTWOOD COMPONENTS AS ARE READILY AVAILABLE BY SUPPLIERS.

PROJECT NAME:	BRATTLEBORO		
PROJECT NUMBER:	ST 091 - I(52)		
FILE NAME:	03a050/str/s03a050.dgn	PLOT DATE:	24-JUN-2004
PROJECT LEADER:	S. FARNSWORTH	DRAWN BY:	S. MORIN
DESIGNED BY:	S. FARNSWORTH	CHECKED BY:	M. FOWLER
s03a050gen.j		SHEET	2 OF 15

GENERAL NOTES AND TYPICAL EXISTING PIER DETAILS

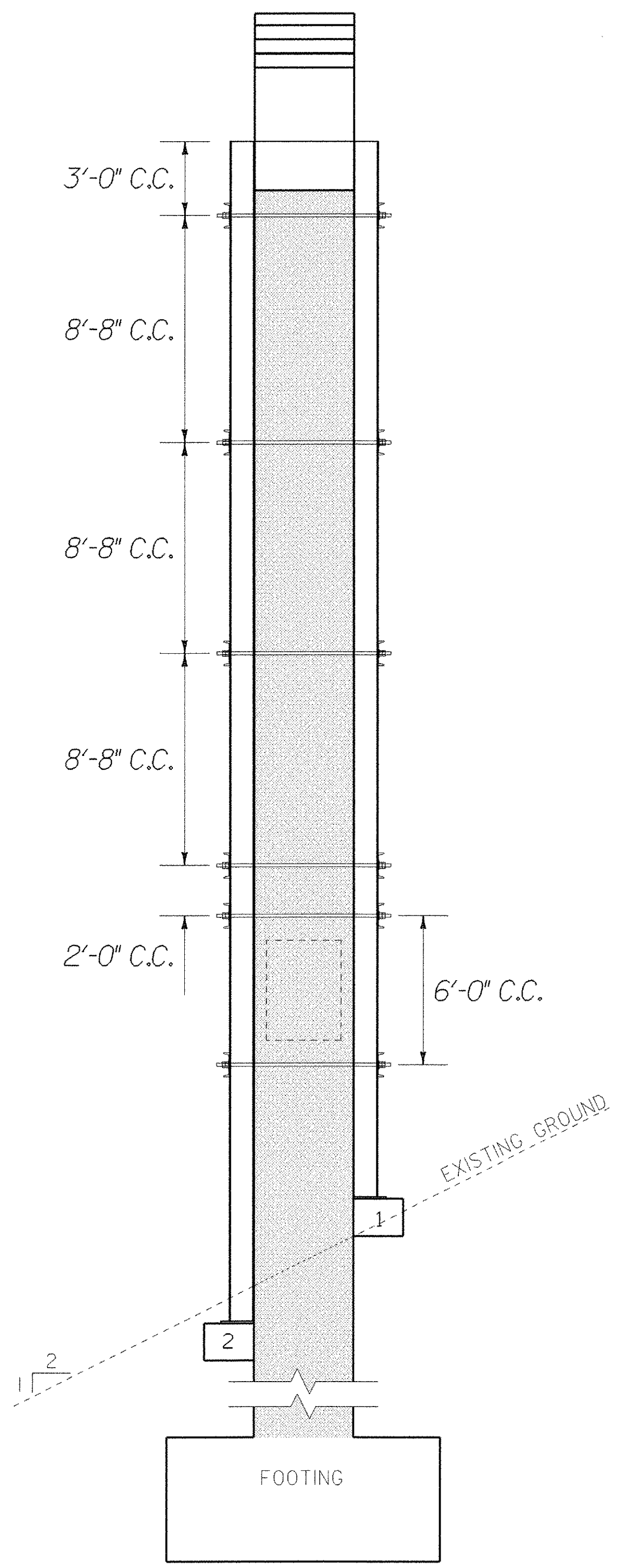


SIDE ELEVATION OF NB PIER #1



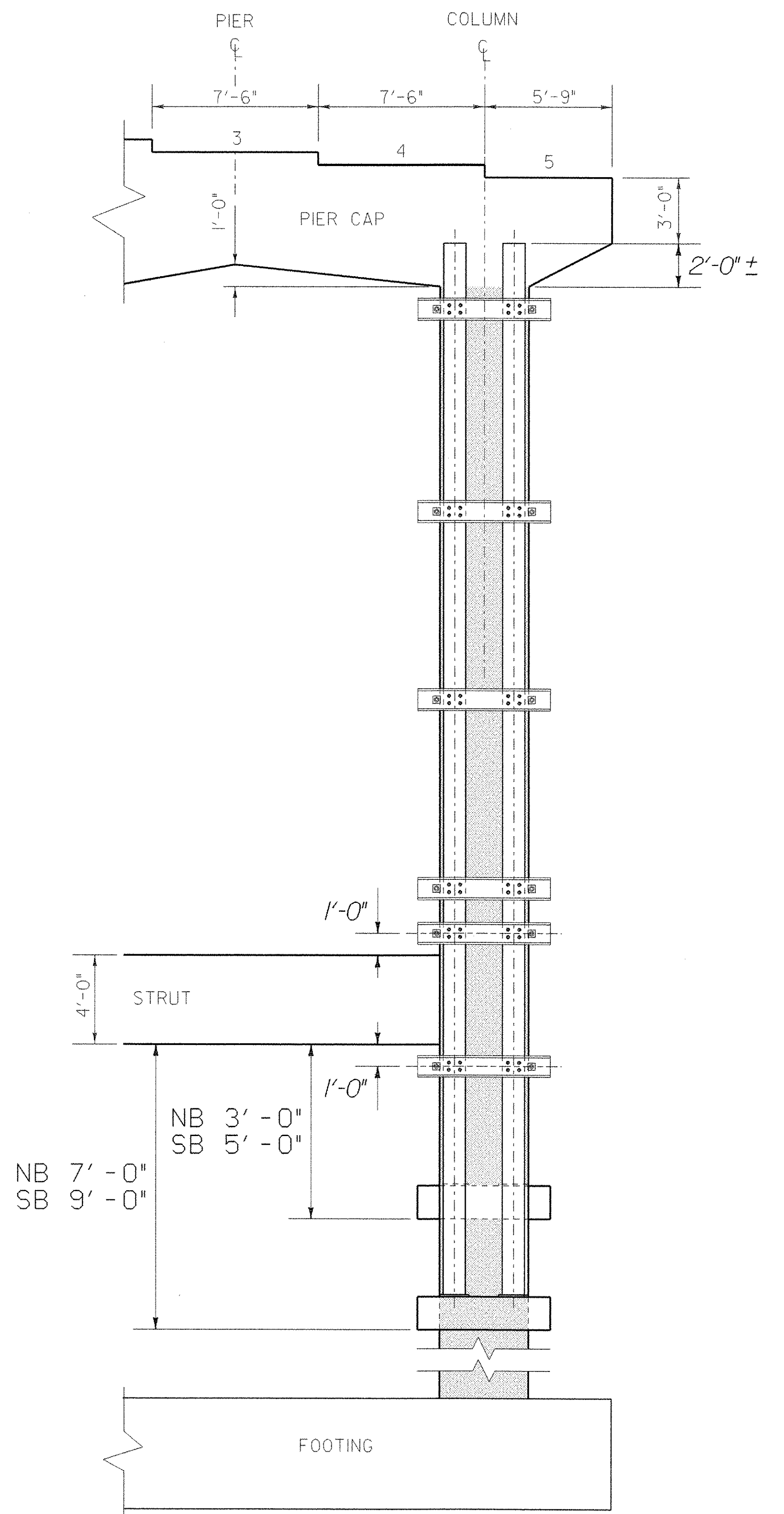
NB PIER #1 ELEVATION

NOTE: SOUTHBOUND (SB) PIER #1 SIMILAR.



SIDE ELEVATION OF NB PIER #4

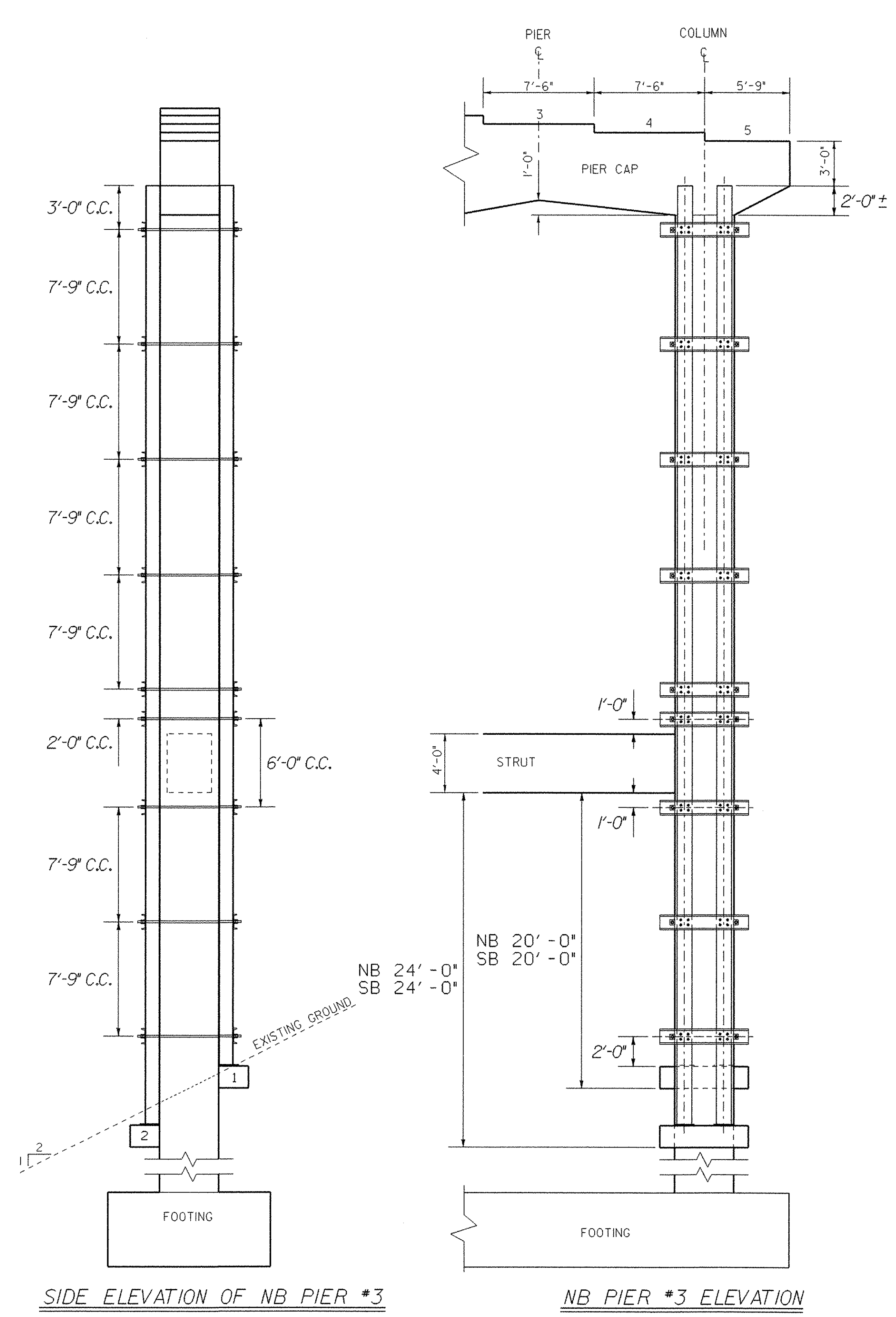
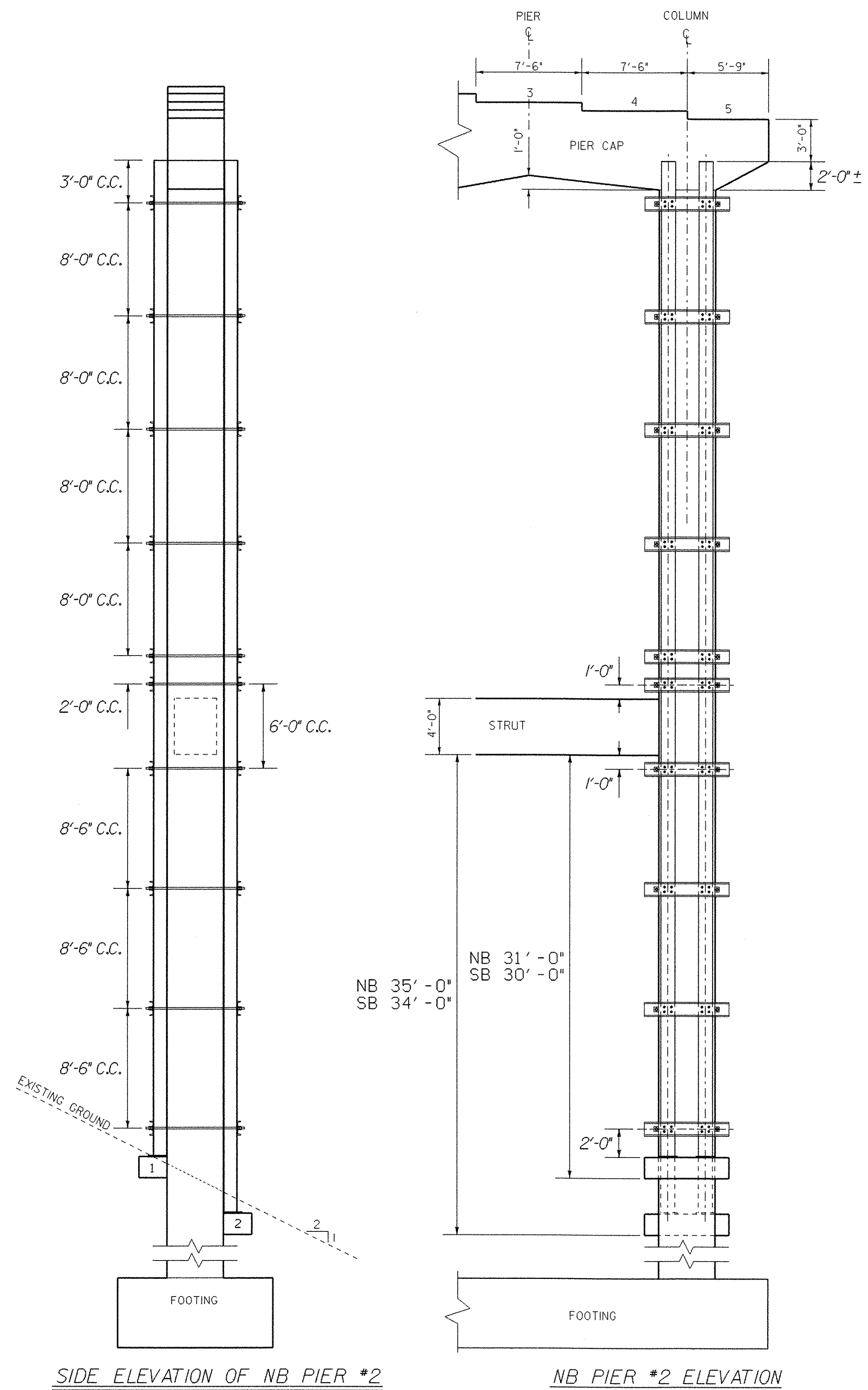
NOTE: SOUTHBOUND (SB) PIER #4 SIMILAR.



NB PIER #4 ELEVATION

NOT TO SCALE

PROJECT NAME: BRATTLEBORO	PLOT DATE: 24-JUN-2004
PROJECT NUMBER: ST 091 - (K52)	DRAWN BY: S. MORIN
FILE NAME: 03a050/str/s03a050.dgn	CHECKED BY: M. FOWLER
PROJECT LEADER: S. FARNSWORTH	SHEET 3 OF 15
DESIGNED BY: S. FARNSWORTH	
s03a050+yp.l	



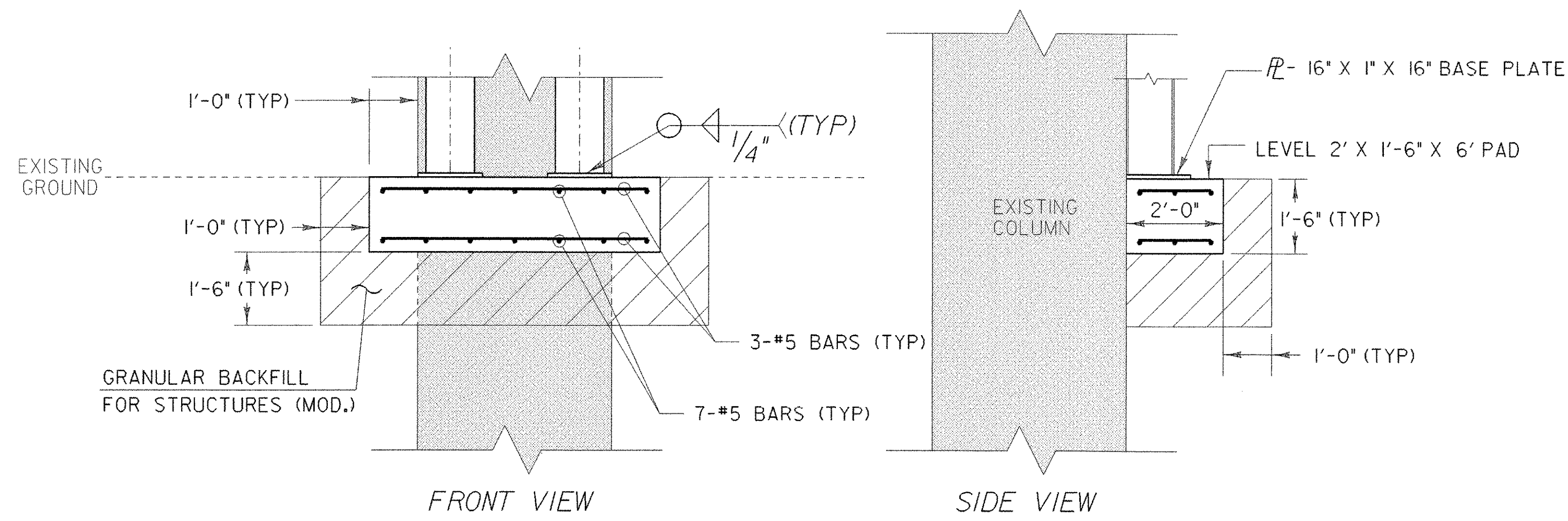
NOT TO SCALE

PROJECT NAME: BRATTLEBORO
PROJECT NUMBER: ST 091 - I(52)

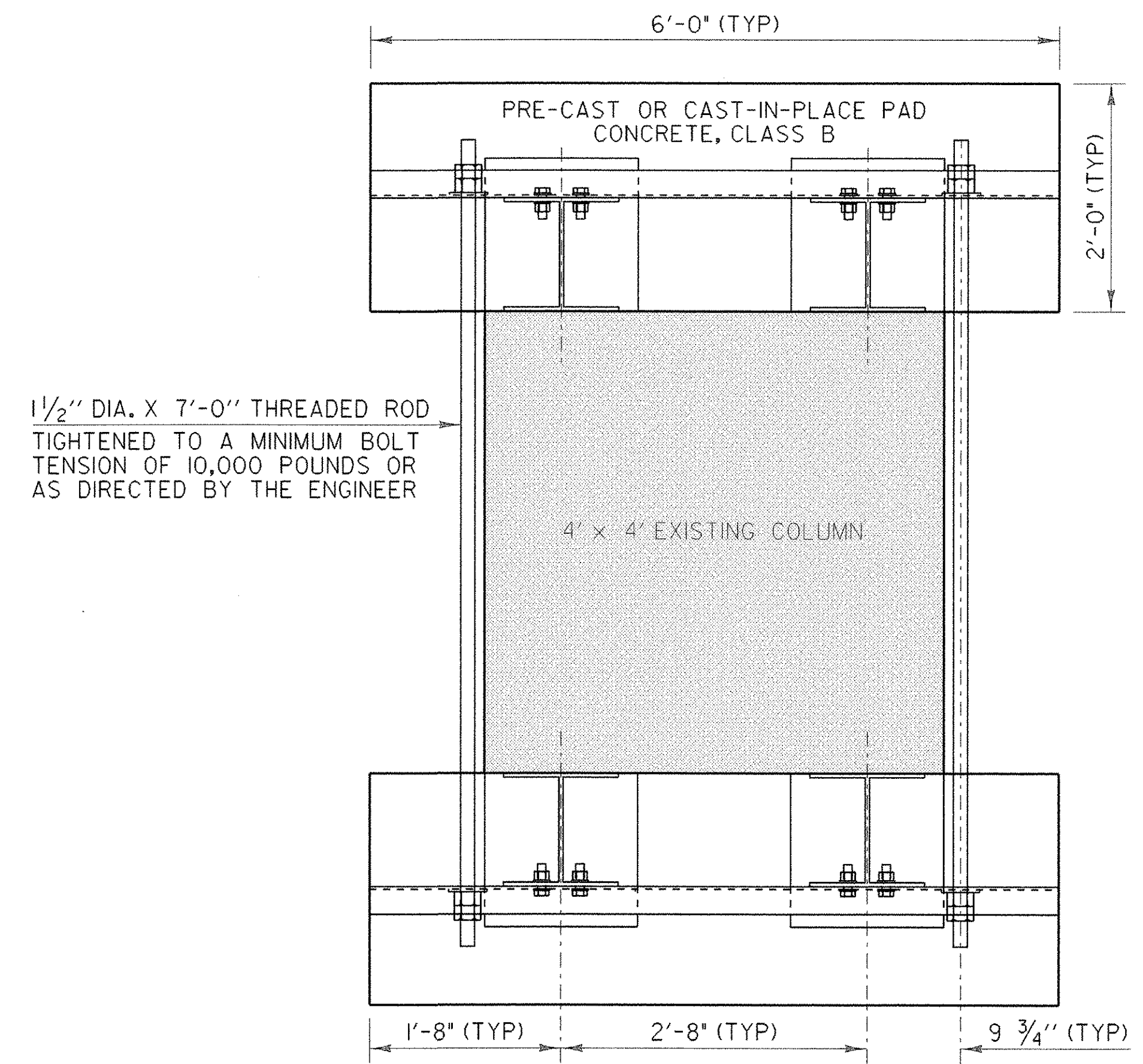
FILE NAME: 03a050/str/s03a050.dgn
PROJECT LEADER: S. FARNSWORTH
DESIGNED BY: S. FARNSWORTH
s03a050+yp2.i

PLOT DATE: 24-JUN-2004
DRAWN BY: S. MORIN
CHECKED BY: M. FOWLER
SHEET 4 OF 15

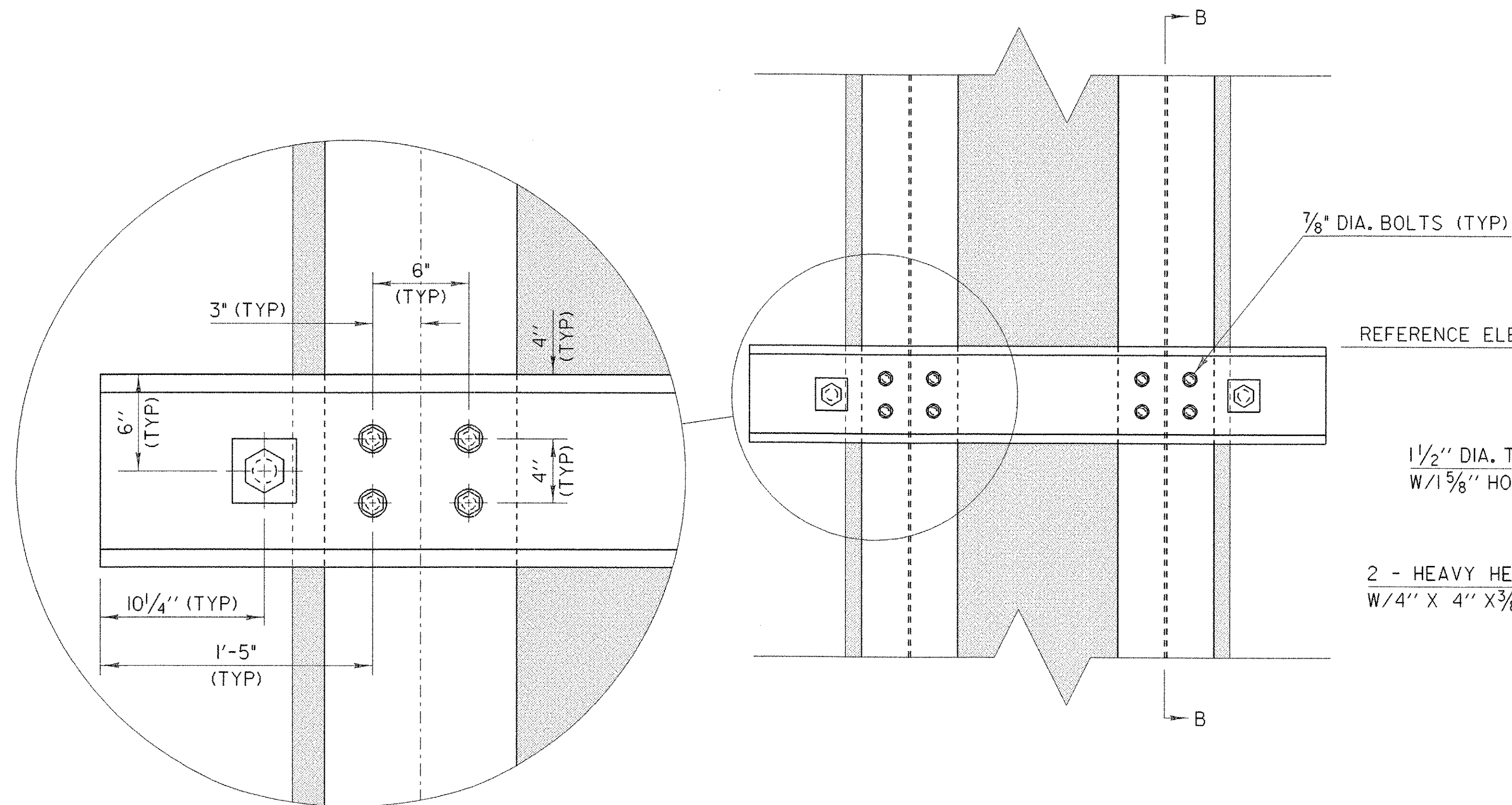
NOTE: MINIMUM CONCRETE COVER OF 3" REQUIRED FOR REINFORCING STEEL.



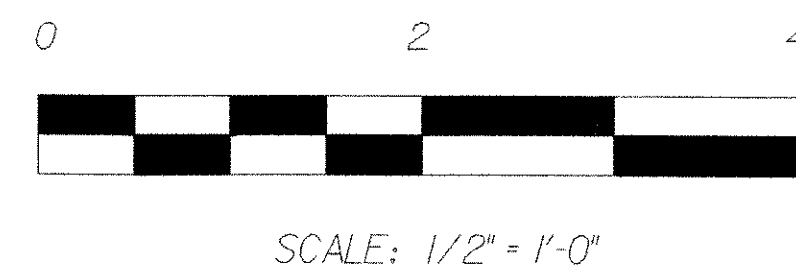
BASE PLATE AND PAD DETAILS



FRAMING DETAIL PLAN



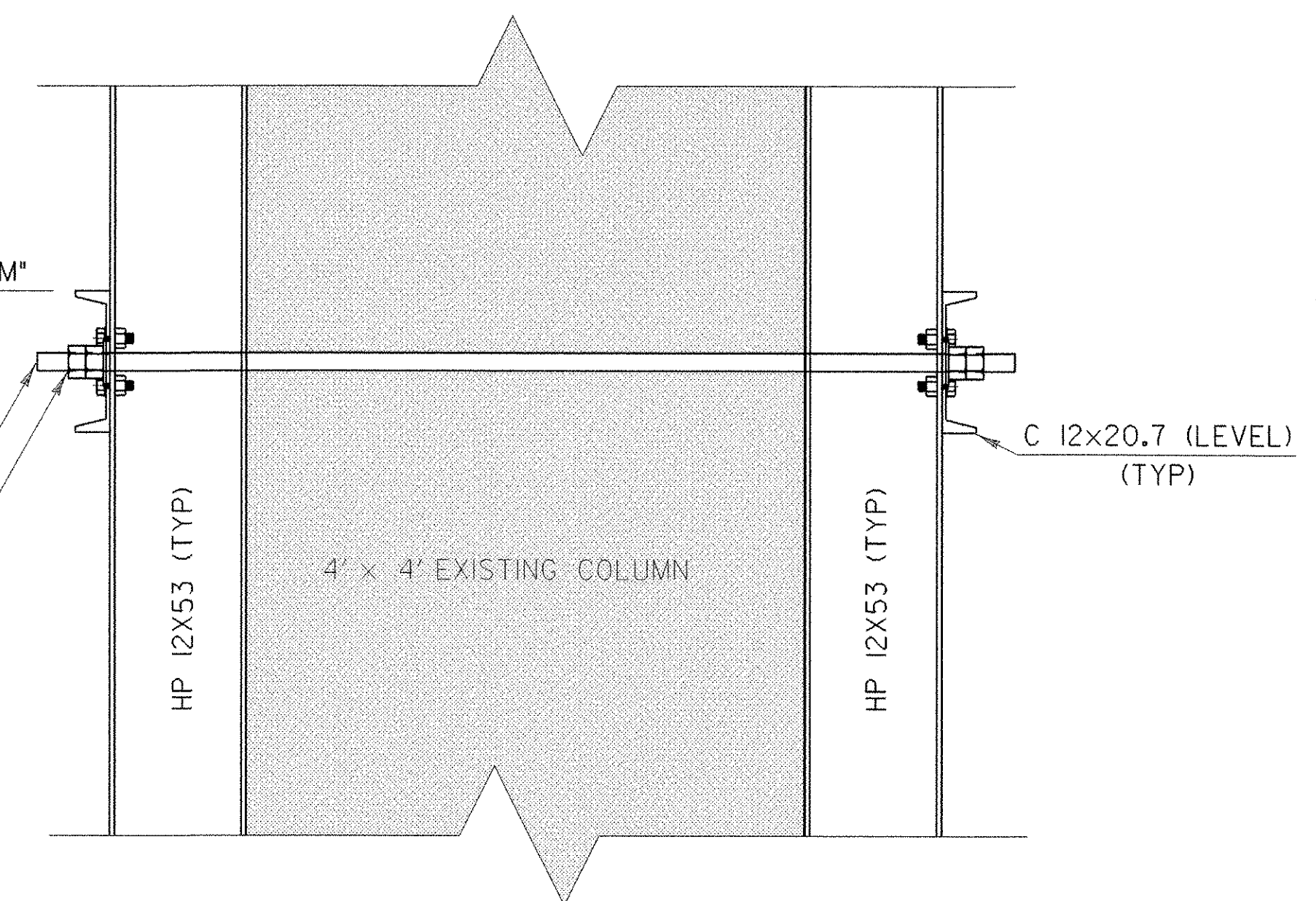
FRAMING DETAIL ELEVATION



REFERENCE ELEVATIONS 'J', 'K', 'L', 'M'

1 1/2" DIA. THREADED ROD (TYP)
W/1 5/8" HOLE (TYP)

2 - HEAVY HEX NUTS (TYP)
W/4" X 4" X 3/8" WASHER (TYP)



SECTION B - B

PROPOSED CONNECTION DETAILS

PROJECT NAME: BRATTLEBORO
PROJECT NUMBER: ST 091 - (52)

FILE NAME: 03A050/str/s03a050.DGN PLOT DATE: 24-JUN-2004
PROJECT LEADER: S. FARNSWORTH DRAWN BY: S. MORIN
DESIGNED BY: S. FARNSWORTH CHECKED BY: M. FOWLER
s03a050det.1 SHEET 5 OF 15

EROSION CONTROL NARRATIVE

DESCRIPTION OF PROJECT

This project involves the shoring and reinforcement of the easterly piers of bridges 6 north and south on interstate 91 in the town of Brattleboro. Each bridge is a 5 span structure with span 3 over the Whetstone Brook. The shoring and reinforcement of the piers consists of a splint system using H-piles and channel/tension rod connection to the existing piers with a concrete leveling pad at the base. The construction area does not approach buildings or other structures. No 'Threatened & Endangered Species,' Wetlands, or Historic Resources have been identified in the project area. The site is located at longitude 73°-34'-42" west and latitude 42°-50'-56" north.

It is anticipated that this project will last approximately one month.

Total disturbed area: 0.8 acres

SITE INVENTORY & ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS:

The property surrounding the project site consists of well established vegetation, moderate to steeply sloping, mixed softwood and hardwood riparian buffer with some well defined drainage ways. Due to the nature of the surrounding terrain, runoff water entering the project site will be primarily limited to that which is conveyed along roadway ditches, and that which follows Williams Street along the 5th grade in the area of the project limits. The current roadway ditches are well defined and are not lined with stone.

DRAINAGE, WATERWAYS, BODIES OF WATER:

Whetstone Brook is located in the project area and is considered an impaired waterway. There are no other water bodies or wetlands within the project area. The Whetstone Brook is classified as flashy and somewhat meandering, with upstream residential surroundings and in the area of the project consists of a man-made channel and streambed which was relocated from the existing as part of the interstate construction. The contributing drainage area at the bridge crossing is unknown.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES:

The topography of the project site is primarily constructed slopes with Williams street following parallel to Whetstone Brook which is contained by a constructed channel along each side. Development along Williams Street consists of residential and mixed use, all of which are located upstream and downstream of the project limits. Overhead utility service follows along Williams Street with the need for relocation of the utility poles unlikely.

VEGETATION:

In the vicinity of the project site, constructed slopes with grasses and small trees exist along Williams Street. The residences upstream of the project site have areas of lawn and landscape plantings. No fields or other agricultural crops exist near the project. Impacts to vegetation will be limited to that which are effected by construction equipment accessing the piers of the bridges.

Following construction, vegetation will be reestablished with standard seed & mulch practices.

SOILS:

The soils for the project site are mainly processed materials placed during construction of the interstate. The slopes within the site all have been blanketed with 12" of crushed rock with the channel banks being lined with the equivalent of Type III Stone Fill.

No Soil Erodibility Coefficient (K-value) has been assigned to these soils, however, it is evident low erodibility can be assumed. Generally, K-values indicate the following: 0.0 - 0.23 = low erodibility; 0.24 - 0.36 = moderate erodibility; 0.37 and higher = higher erodibility.

SENSITIVE RESOURCE AREAS:

No 'Threatened & Endangered Species' have been identified within the project limits and there will be no adverse effect to Historic or Archaeological features. Whetstone Brook is the only identified resource in vicinity of the project.

PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES:

Disturbance of soils near natural or man-made waterways consists of that which is necessary to place leveling pads for the pier reinforcing system. This disturbance will be very minimal and shall be stabilized the same day of placement.

TEMPORARY EROSION PREVENTION & SEDIMENT CONTROL

Temporary erosion prevention measures to be utilized include:

"Project Demarcation Fencing," denoted -PDF- on the plans, to delineate the limits the contractor can access with construction equipment. This measure limits the area that can be disturbed and exposed to erosion.

Seeding, mulching and biodegradable erosion control matting, or an equivalent product, will be utilized on all slopes steeper than 3:1. These slopes shall be stabilized within 48 hours of reaching final grade or during intermittent phases of construction activity.

Tracking of all exposed slopes, combined with temporary mulching, will also be utilized on a regular basis. Any slopes to be exposed for several days prior to final grading shall be tracked and mulched. The forecast of rainfall events shall also trigger protection of exposed slopes.

Temporary crushed stone berms will be placed in ditches to reduce flow velocities and thus reduce the potential for erosion. Stone berms will be placed along the ditches such that the elevation of the top of each stone berm corresponds with the elevation of the toe of the preceding upslope stone berm. See 'Erosion Control Details' sheet. The stone berm may be removed once the stone lining of the ditches is complete and the surrounding area stabilized.

Temporary measures to control sediment transport include:

Silt fence will be installed a distance of 5'-10' from the toe of slopes to prevent sediment transport to down gradient areas. Each line of silt fence will be placed along the contour with ends turned slightly uphill to create a ponding effect should water try to run along the fencing and around the ends. The maximum slope length between separate runs of silt fence is 100'. Silt fence shall be installed prior to any upslope earthwork.

Sand bags filled with clean, small diameter stone, or an equivalent barrier, will be utilized in lieu of silt fence at piers 2 and 3 where the work will be near the edge of Whetstone Brook.

Measures such as temporary crushed stone berms, silt fence, and sand bags shall be checked regularly for accumulation of sediment. Sediment build-up shall be removed when the level of sediment reaches one-half the height of the control measure. Sediments shall be disposed of in an approved area such that they will not be subject to erosion.

Stabilized construction entrances to the project site, staging areas, as well as to waste and borrow areas shall be established. The minimum size of a stabilized construction entrance is 12' x 50'. All surface water flowing to or diverted towards a construction entrance shall be piped under the stone. Pipes shall be appropriately sized for the contributing area, however, no pipes smaller than 6" in diameter shall be used. See typical detail on 'Erosion & Sediment Control Plan' sheet for materials and construction method to be utilized when constructing a stabilized entrance.

Temporary sediment settling basins may or may not be utilized on this project. If a settling basin is to be used for dewatering a cofferdam, it should be sized based upon the pumping rate and target particle size to be settled out for the project site. The follow sizing criteria is based upon a target particle size of 0.01 mm and is provided as general guidance. (See Sediment Settling Basin Sizing Criteria.)

PERMANENT EROSION CONTROL MEASURES

Permanent erosion control measures will be utilized as necessary:

Excavation associated with this project is very minimal and will not involve any drainage or change in grade.

Grass, or other suitable ground cover will be established on any of the slopes disturbed by the movement of construction equipment beneath the bridges.

GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

The Erosion Control Plans are meant as a guideline for preventing erosion and controlling sediment transport. The work outlined in this narrative consists of applying measures throughout the life of the project to control erosion and minimize the sedimentation of receiving waters. The measures include stabilization and structural practices, stormwater controls and other pollution prevention controls.

Coordinate the installation, use, and removal of erosion and sediment control measures with construction activities to ensure economical, effective and continuous erosion and sediment control. Employ temporary stabilization practices in incremental stages as construction proceeds. The contractor will use additional erosion control measures as necessitated by the sequence of construction and as directed by the Engineer. See section 105.23 of the Vermont AOT Standard Specifications for Construction, dated 2001.

Install all erosion and sediment control measures as shown in the Erosion Control Plan or as directed by the Engineer. Do not modify the type, size or location of any control or practice without approval of the Engineer. Any changes shall be noted on the plans, in the weekly inspection report, and reported to the appropriate authority in a timely manner. Inspect all control measures weekly and after each rainfall event. Repair measures promptly once damage is discovered.

Preventing initial soil erosion is much more effective than treating eroded sediment. Therefore, stabilize all disturbed areas promptly after construction activity has temporarily or permanently ceased. Temporary vegetation shall be established if the area is to be without construction activity for a period of 14 days. Perimeter control measures shall be installed following clearing, but prior to the start of any grubbing or grading activity, install other temporary controls in incremental stages as construction proceeds.

Maintaining vegetated buffers along stream banks, wetlands or other sensitive areas is a crucial erosion and sediment control measure that should be established wherever possible.

Control only sediment-laden runoff generated by the project site. Collect and route clean offsite runoff around or through the project site using diversion berms, diversion channels, culverts and/or temporary pipes.

Do not allow construction equipment to operate on the down slope side of perimeter control measures.

SEDIMENT SETTLING BASIN SIZING CRITERIA

PUMP FLOW RATE	REQUIRED SURFACE AREA	LENGTH / WIDTH = 2:1					
		L (ft)	W (ft)	L (m)	W (m)		
50	0.0032	595	55	35.0	17.0	10.6	5.3
100	0.0063	1200	111	49.0	24.5	15.0	7.5
150	0.0095	1776	165	59.6	29.8	18.2	9.1
200	0.0126	2368	220	68.8	34.4	21.0	10.5
250	0.0158	2970	276	77.0	38.5	23.4	11.7
300	0.0189	3560	330	84.4	42.2	25.8	12.9
350	0.0221	4155	386	91.2	45.6	27.8	13.9

PROJECT NAME: BRATTLEBORO

PROJECT NUMBER: ST 091-1(52)

FILE NAME: /03a050/str/s0a050ecn.xls

PROJECT LEADER: S. FARNSWORTH

DESIGNED BY: S. FARNSWORTH

EROSION CONTROL NARRATIVE

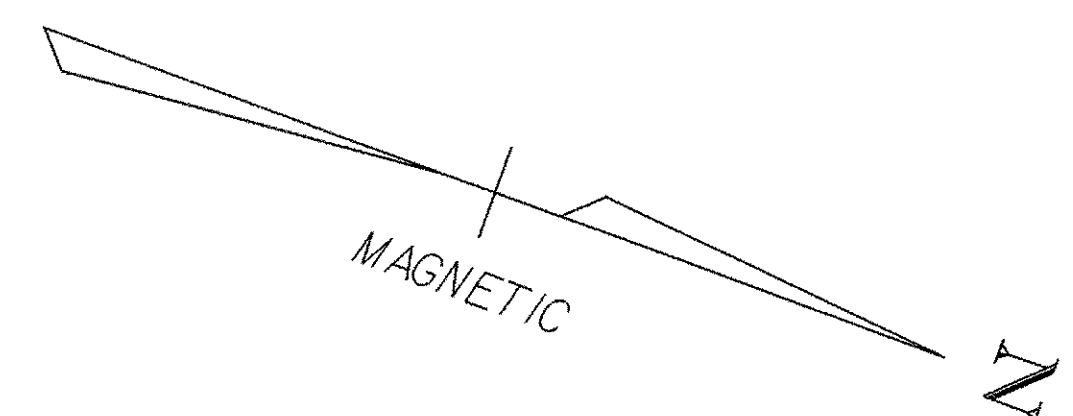
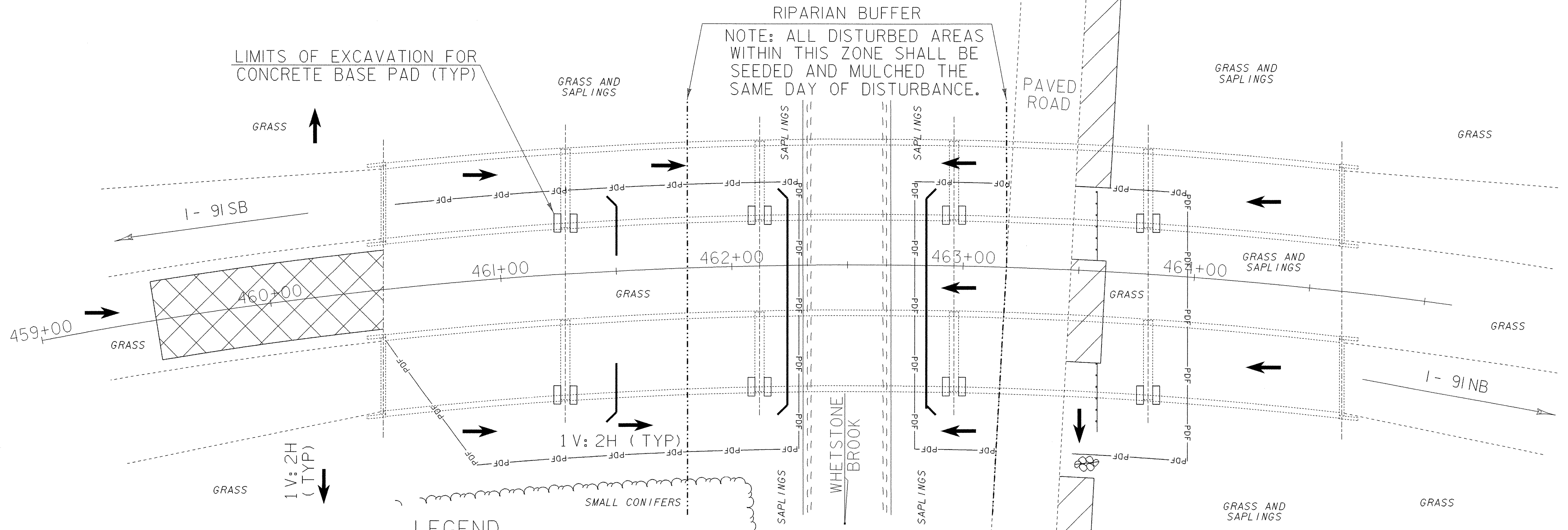
PLOT DATE: 4/9/04

DRAWN BY: M. FOWLER

CHECKED BY: M. FOWLER

SHEET 6 OF 15

NOTE: THE SCOPE OF THIS PROJECT IN NO WAY CHANGES THE TOPOGRAPHIC FEATURES OF ANY OF THE DISTURBED AREA. THEREFORE, THIS PLAN AND SHEET II OF THESE PLANS FULLY REPRESENTS THE EXISTING AND FINAL CONDITIONS OF THE PROJECT SITE. FOR ALL SLOPE RATES ASSOCIATED WITH THE FLOW ARROWS SEE SHEET II OF THESE PLANS.



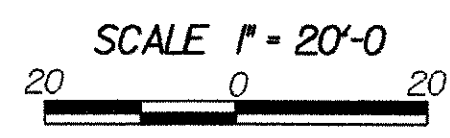
NOTE: ALL DISTURBED AREAS WITHIN THIS ZONE SHALL BE SEEDED AND MULCHED THE SAME DAY OF DISTURBANCE.

LIMITS OF EXCAVATION FOR CONCRETE BASE PAD (TYP)

LEGEND

	FLOW ARROW
	PROJECT DEMARCATION FENCING
	SILT FENCE
	SAND BAG BERM
	CRUSHED STONE BERMS
	STAGING AREA
	STABILIZED CONSTRUCTION ACCESS

NOTE: PAYMENT FOR ALL WORK AND MATERIALS ASSOCIATED WITH SANDBAGS SHALL BE MADE AT AN AGREED UPON PRICE BY THE RESIDENT ENGINEER AND THE CONTRACTOR AND BE SHALL PAID UNDER ITEM 652.30.

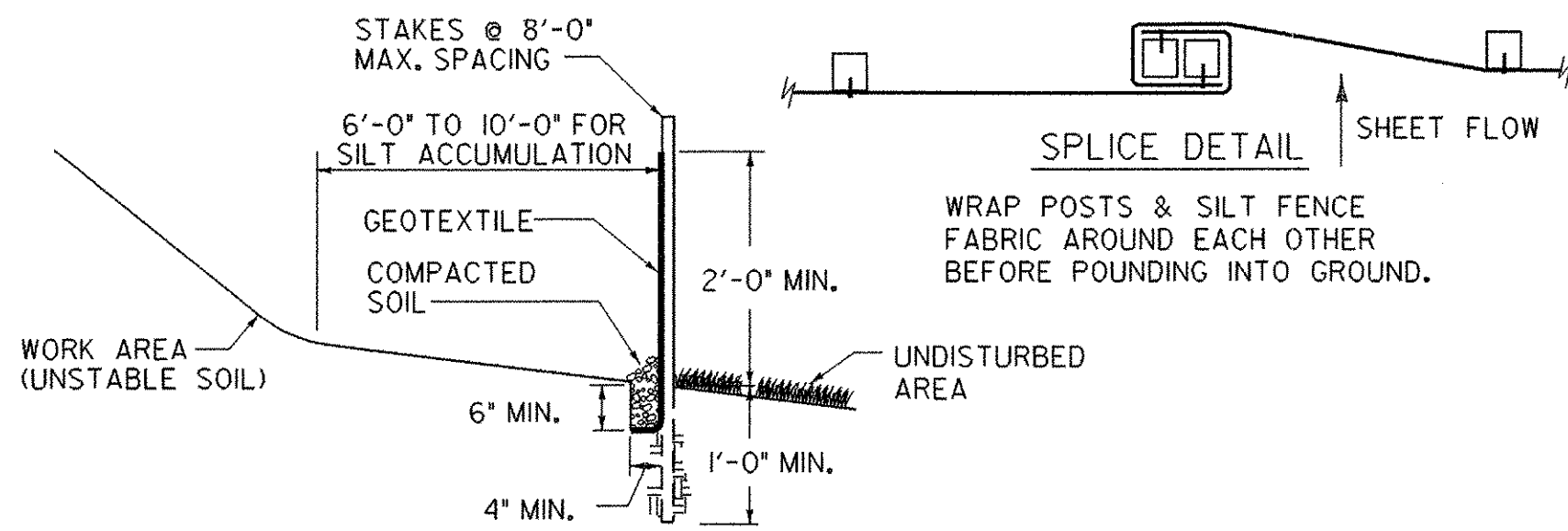


PROJECT NAME: BRATTLEBORO	PLOT DATE: 24-JUN-2004
PROJECT NUMBER: ST 091-I(52)	DRAWN BY: M. FOWLER
FILE NAME: 03A050/STR/s03a050.DGN	CHECKED BY: S. FARNSWORTH
PROJECT LEADER: S. FARNSWORTH	SHEET 7 OF 15
DESIGNED BY: S. FARNSWORTH	
s03a050ec.1	

EPSC PLAN

NOTE: REFER TO LATEST REVISIONS OF VERMONT STATE STANDARDS "T-1" AND "T-2" AND THE "VERMONT HANDBOOK FOR SOIL EROSION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" FOR ADDITIONAL EROSION CONTROL MEASURES.

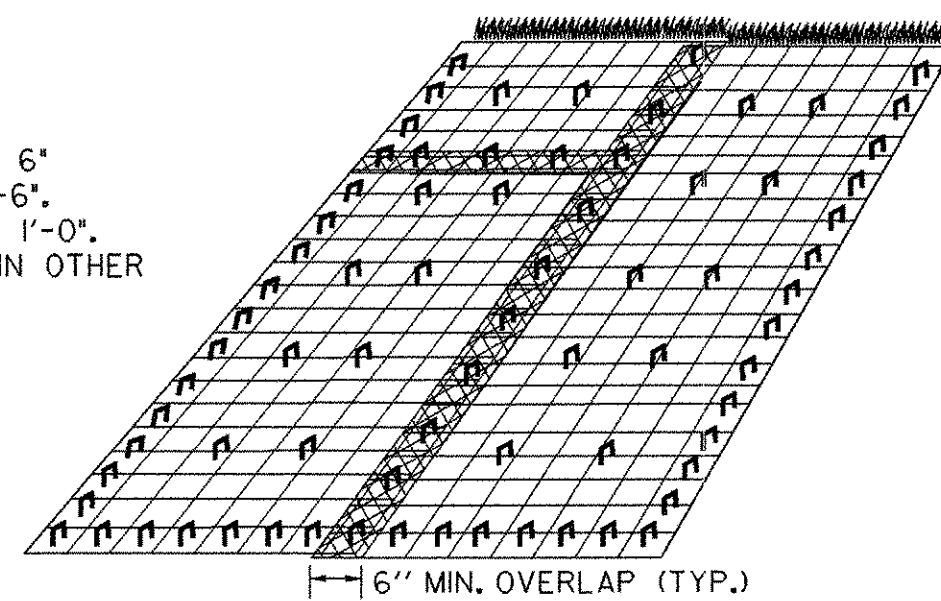
HAY BALES AND SILT FENCE ARE NOT TO BE USED ACROSS AREAS OF CONCENTRATED FLOW.



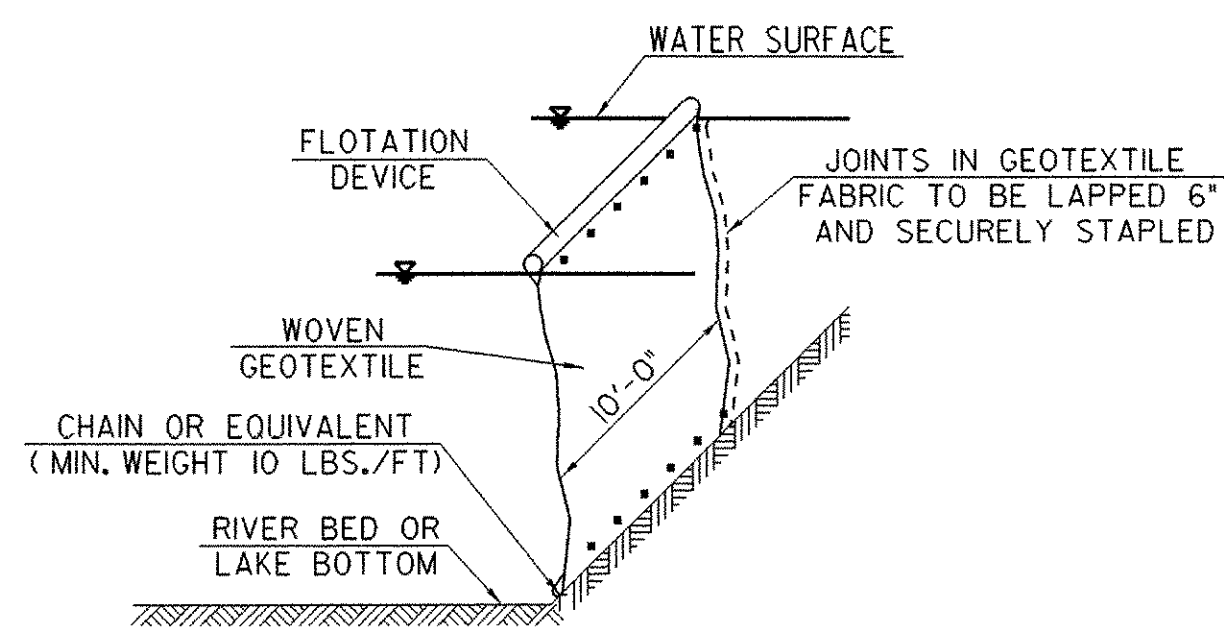
DETAIL "A"
SILT FENCE

- NOTES:
- DO NOT USE SILT FENCE IN STREAMS, DRAINAGE DITCHES, OR AREAS OF CONCENTRATED FLOW.
 - BACK WITH STAKED-IN-PLACE HAY BALES OR WIRE FENCE IF ADDITIONAL SUPPORT IS NEEDED.
 - MUST BE REMOVED WHEN SOIL IS STABILIZED.

- NOTES:
- ALL FABRIC OVERLAPS SHALL BE 6" MINIMUM WITH STAPLES EVERY 1'-6".
 - STAPLE EDGES OF FABRIC EVERY 1'-0".
 - USE 3'-0" MAX. STAPLE SPACING IN OTHER AREAS.
 - SEE "EROSION MATTING FOR DITCHES" DETAIL FOR ANCHORING AT TOPS OF SLOPES.

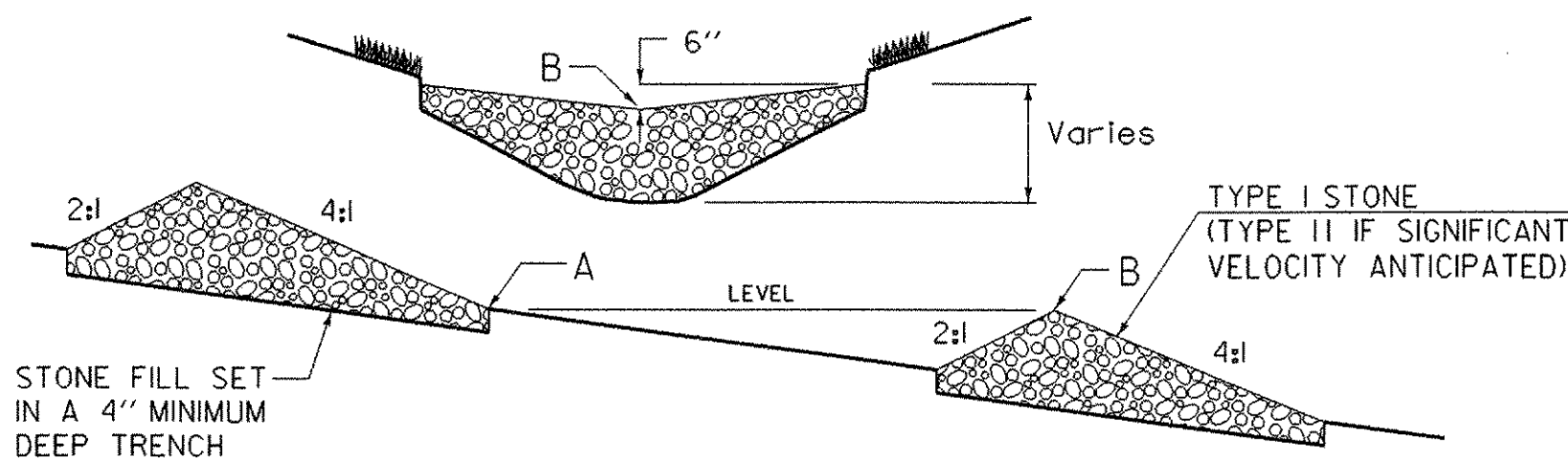


DETAIL "C"
EROSION MATTING FOR SLOPES STEEPER THAN 1:3



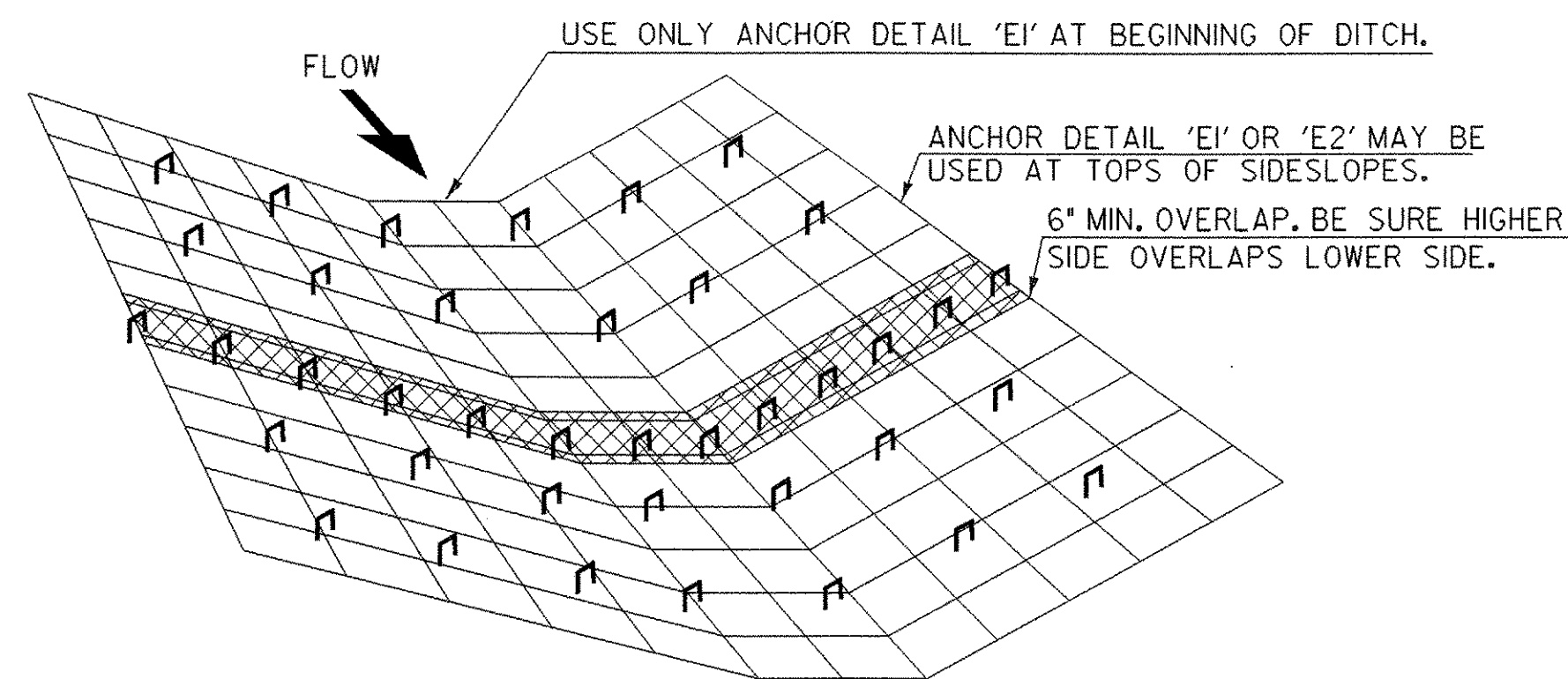
DETAIL "F"
FILTER CURTAIN

- NOT TO BE USED ACROSS THE FLOW OF WATER
- HEIGHT SHOULD BE SUFFICIENT TO ALLOW FOR VARIATIONS IN THE BOTTOM AND RISING WATER
- ANCHOR FIRMLY IN PLACE AS NEEDED
- INSTALL PRIOR TO EARTH DISTURBING ACTIVITIES AND/ OR INSTALLATION OF COFFERDAM WHERE APPLICABLE
- LEAVE IN PLACE UNTIL UP-SLOPE AREAS ARE STABLE AND COFFERDAM IS REMOVED
- USE CARE DURING REMOVAL TO PREVENT THE RELEASE OF CAPTURED SEDIMENT AS MUCH AS POSSIBLE



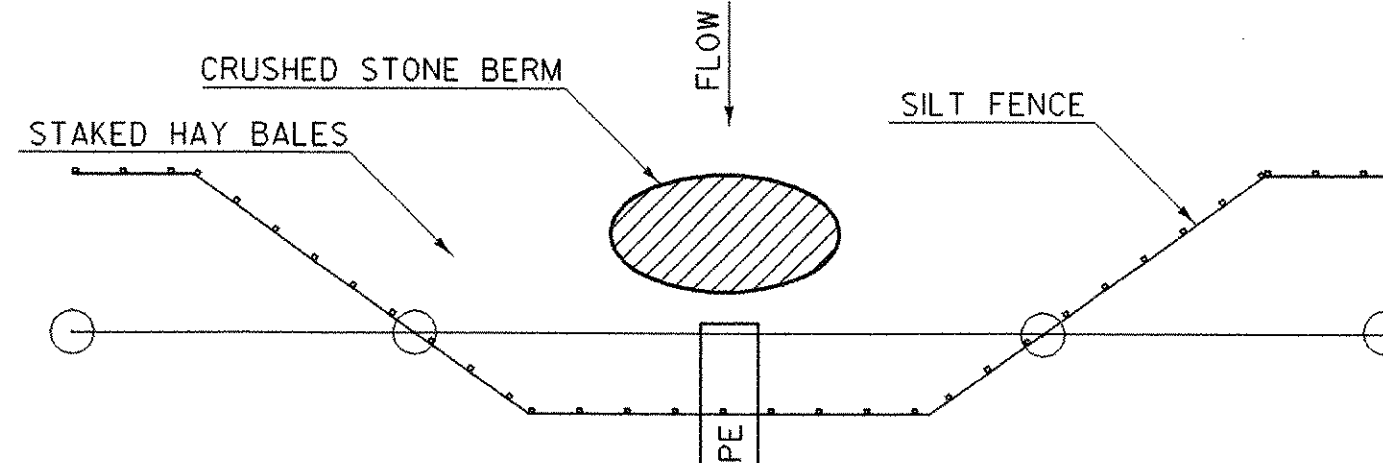
DETAIL "B"
TEMPORARY CRUSHED STONE BERM

- NOTES:
- STONE BERMS TO BE USED DURING ESTABLISHMENT OF GRASS LINED DRAINAGE DITCHES
 - LOCATE DOWNSTREAM STRUCTURE SUCH THAT POINT "B" IS APPROXIMATELY LEVEL WITH THE LOWEST GROUND ELEVATION "A" OF THE UPSTREAM STRUCTURE.

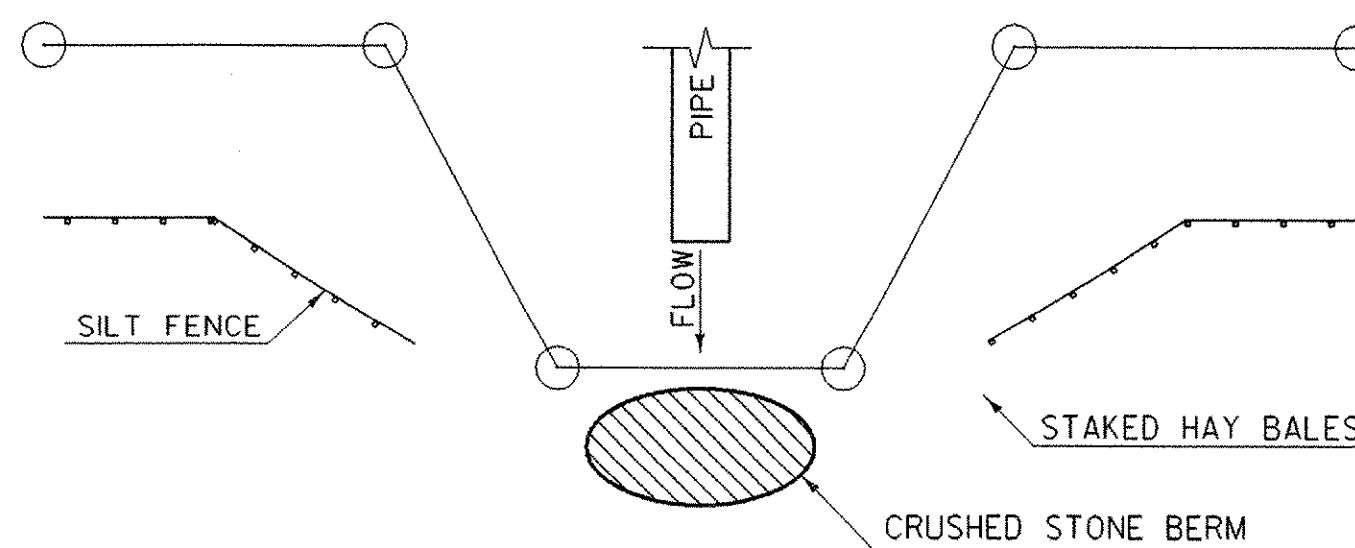


DETAIL "D"
EROSION MATTING FOR DITCHES

- TO BE USED WHERE SLOPE OF DITCHLINE RANGES FROM 1% - 2.5%. SLOPES EXCEEDING 2.5% SHALL BE LINED WITH STONE FILL, TYPE I.
- OVERLAPS SHALL BE 150 MINIMUM IN THE DIRECTION OF FLOW AND STAPLED EVERY 500 MIN. THROUGH BOTH FABRICS.
- USE 1000 MAX STAPLE SPACING IN OTHER AREAS.



DETAIL "G"
EXISTING PIPE INLET CONTROL



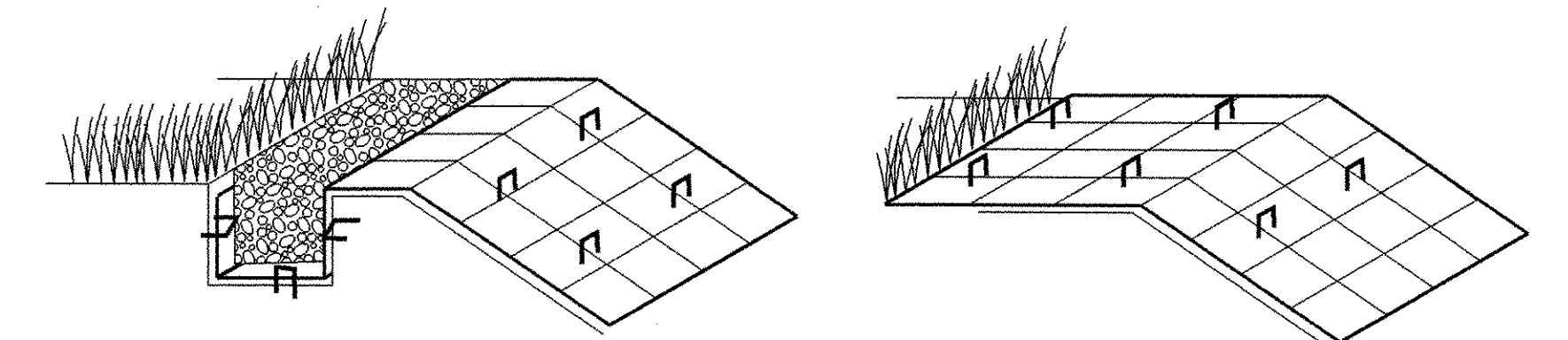
DETAIL "H"
EXISTING PIPE OUTLET CONTROL

**SEEDING FORMULA
RURAL AREAS**

% WT.	LBS./A.	NAME	PUR %	GERM %
37.5	22.5	CREeping RED FESCUE	98	85
37.5	22.5	TALL FESCUE	95	90
5.0	3.0	RED TOP	95	90
15.0	9.0	BIRDSFOOT TREFOIL	98	85
5.0	3.0	ANNUAL RYEGRASS	95	85
100.0	60.0			

GENERAL NOTES

- SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
- SEED: TO BE APPLIED PER SEEDING FORMULAS OR AS DIRECTED BY THE ENGINEER.
- FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).
- AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.
- HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.
- TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.



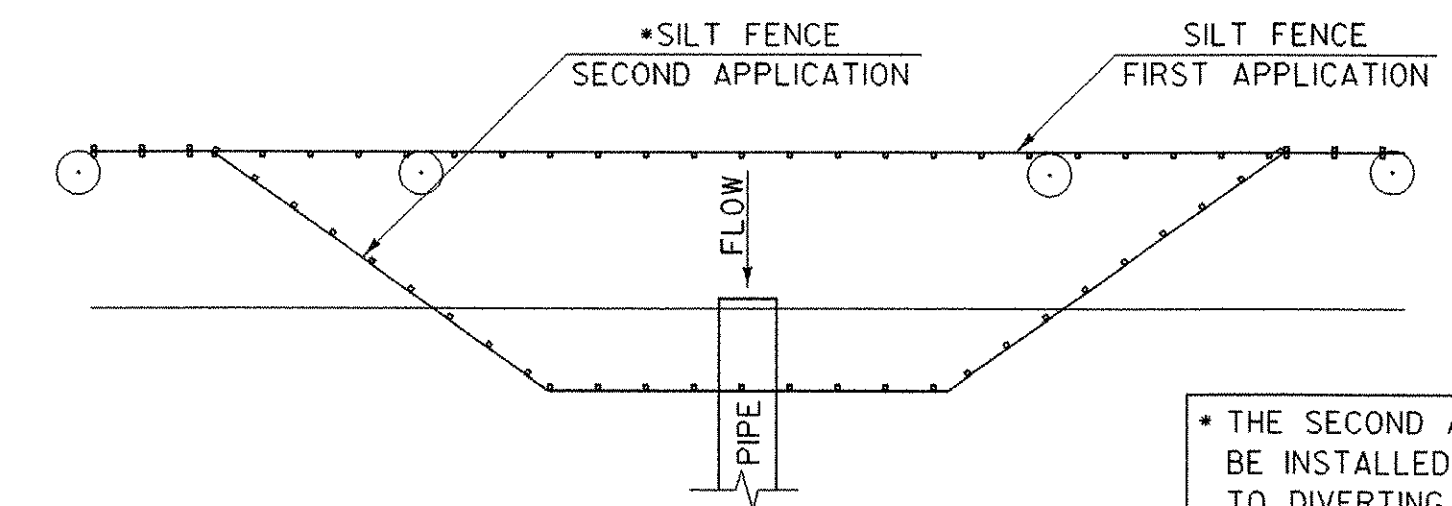
ANCHOR DETAIL 'E1'

INSERT & STAPLE FABRIC INTO 6" X 6" TRENCH PRIOR TO BACKFILLING & COMPACTING SOIL. USE 3 STAPLE PATTERN EVERY 20".

ANCHOR DETAIL 'E2'

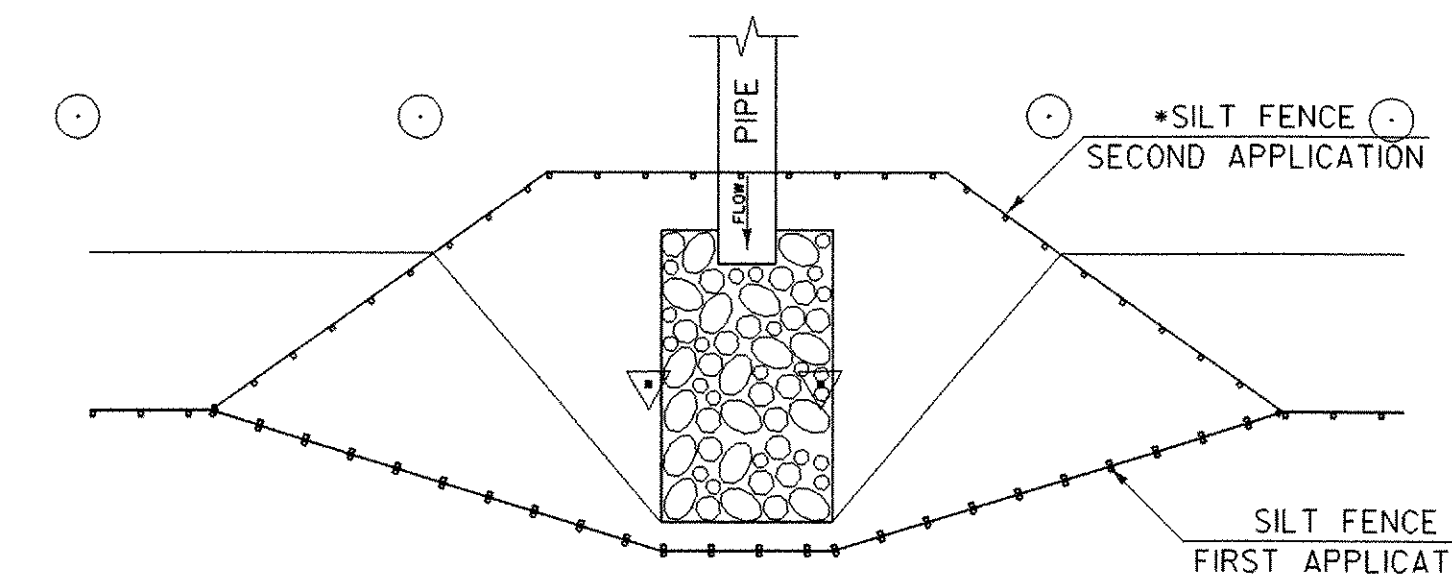
IF THE TOP OF SLOPE IS RELATIVELY FLAT EXTEND MATERIAL APPROXIMATELY 24" AND STAPLE EVERY 20" MINIMUM.

DETAIL "E"
ANCHOR DETAILS FOR EROSION MATTING



DETAIL "I"
PROPOSED PIPE INLET CONTROL

* THE SECOND APPLICATION OF SILT FENCE IS TO BE INSTALLED (REMOVE FIRST APPLICATION) PRIOR TO DIVERTING FLOW INTO NEW PIPE FOR BOTH PROPOSED INLET AND OUTLET CONTROLS



DETAIL "J"
PROPOSED PIPE OUTLET CONTROL

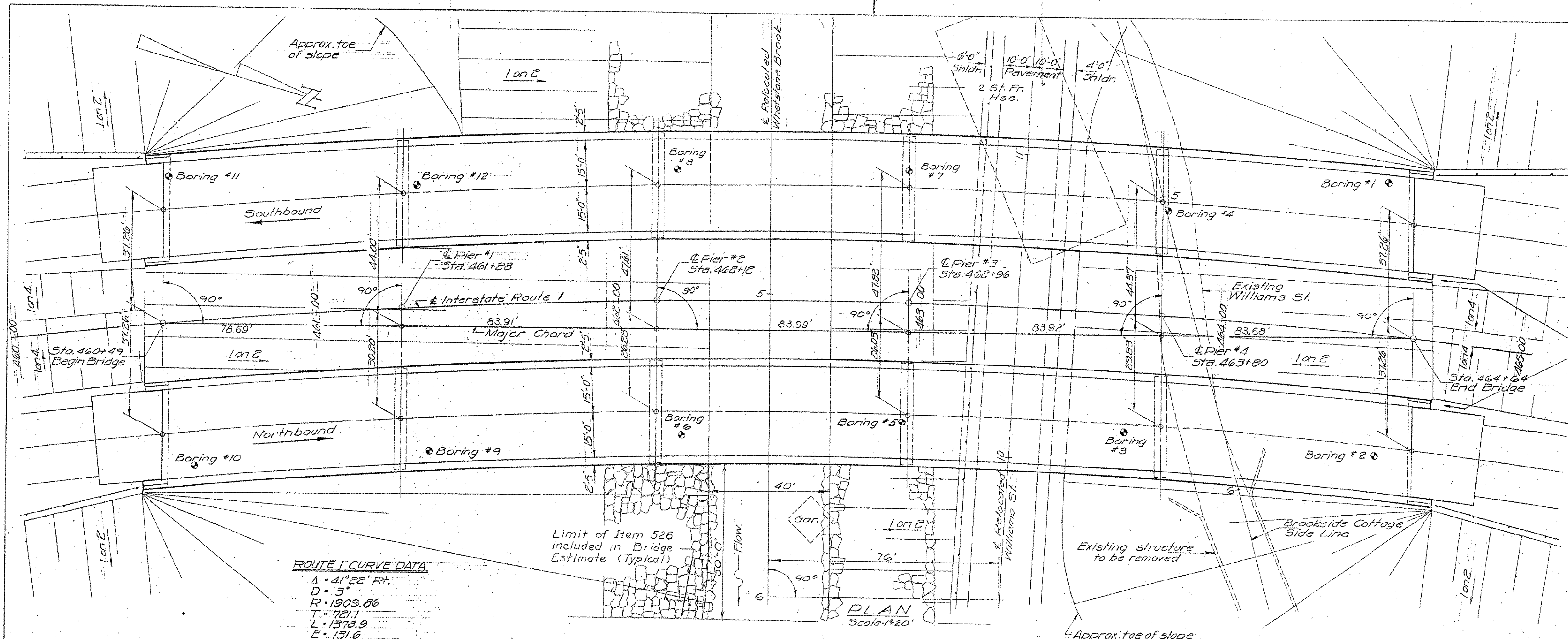
NOTE: DETAILS NOT TO SCALE

PROJECT NAME: BRATTLEBORO
PROJECT NUMBER: ST 091-(52)

FILE NAME: 03A050/STR/s03a050.DGN
PROJECT LEADER: S. FARNSWORTH
DESIGNED BY: S. FARNSWORTH
s03a050ecdet.1

PLOT DATE: 24-JUN-2004
DRAWN BY: M. FOWLER
CHECKED BY: S. FARNSWORTH
SHEET 8 OF 15

EROSION CONTROL DETAILS



ROUTE 1 CURVE DATA
 Δ = 41° 22' Rt.
 D = 3"
 R = 1909.66
 T = 721.1
 L = 1378.9
 E = 131.6

PLAN
 Scale = 1" = 20'

ESTIMATE OF QUANTITIES FOR TWO BRIDGES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
102	Borrow	C.Y.	47700
204	Sub-base of Crushed Rock Mod.	C.Y.	850
361-B	Bituminous Concrete Pavement (Mod)	Ton	390
318	Fir Linulion for Bridge Floors (Supp. Agree.)	sq. ft.	0
401-B	Concrete - Class 'B' (Mod)	C.Y.	2714
402	Reinforcing Steel	Lb.	442,910
403	Spiral Reinforcement 13B10 lbs.	Lb.	1
404-A	Structural Steel	Lb.	1,185,236
501	Furnishing Equipment for Dr. Piles	L.S.	1/6
222	Gravel Backfill	L.S.	0
504	Steel Piling	L.F.	22.00
556-C	Granite Bridge Curb	L.F.	1715
512	Bridge Railing	L.F.	1642
107	Structure Excavation	C.Y.	2268
407	Asphaltic-Asbestos Coating	S.Y.	144
526	Riprap for Bank Protection	C.Y.	2090
442	Removal of Present Superstructure	L.S.	1

For detail of guardrail treatment at approaches see standard sheet RS-57-7.
 * Rt. of Sta 464 + 25

GENERAL NOTES

- Materials and Construction shall conform to State of Vermont Department of Highways Standard Specifications for Highway and Bridge Construction, dated 1956.
- All design in accordance with AASHTO Standard Specifications for Highway Bridges, dated 1953. Loading is H20-36-44 truck as modified for National System of Interstate Highways.
- Concrete shall attain a minimum strength of 2000 psi prior to the addition of any superimposed load.
- All concrete to be Class 'B' throughout.
- All welding to conform with the American Welding Society Standard Specifications for Welded Highway and Railway Bridges.
- All piles to be 10BP42 and driven to a minimum bearing capacity of 37 tons. Abutment piles are to be driven to the following minimum elev. unless otherwise directed by the engineer:
 Abut #1 SB elev. 371
 #1 NB elev. 389
 Abut #2 SB elev. 322
 #2 NB elev. 317
- Use self-lubricating plates for expansion devices on piers (standard SB-20-56)
- The beam seat elevations have been lowered 1/2 inches to allow for camber.
- Computations for layout information given are based on the arc definition for computing a horizontal curve.

REFERENCE DRAWINGS

- BORING LOGS, PROFILES, & SECTIONS
 ABUTMENT DETAILS
 PIER DETAILS
 REINFORCING BAR SCHEDULE
 STANDARD DRAWINGS
- BRIDGE SHEET 2
 " " 3
 " " 4
 " " 5
 SB-5A-56
 SB-A5-SQUEEZ-57 (MOD)
 SB-20-56
 SCB-30-56
 SH-2 of 2
- 1958 RECORD PLANS
 INCLUDED FOR REFERENCE PURPOSES ONLY

BRIDGE 6N#5

VERMONT
 STATE HIGHWAY DEPARTMENT
 TOWN OF BRATTLEBORO
 INTERSTATE ROUTE 1

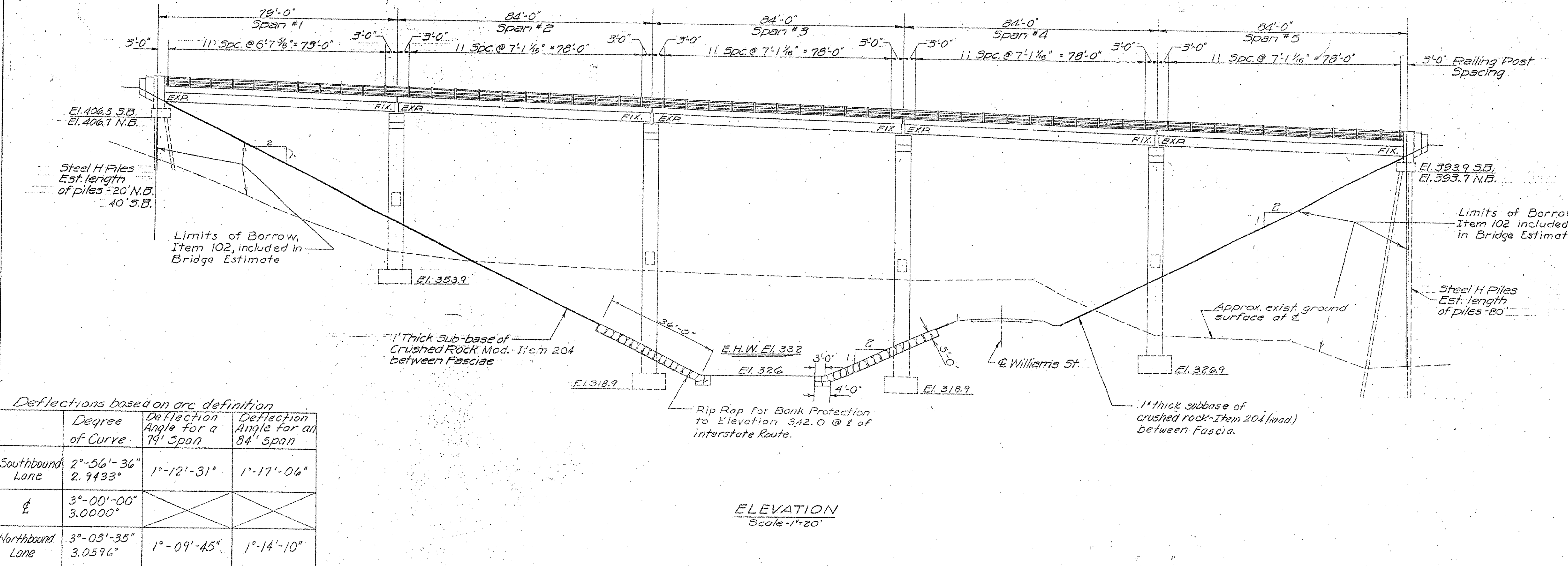
WHETSTONE BROOK BRIDGE

GENERAL PLAN
 AND ELEVATION

WM H. MCFARLAND
 ENGINEER
 BINGHAMTON, N.Y.

DESIGNED BY W.C. CHECKED L.H.S. DATE 8-15-57
 DRAWN BY L.M. 227 IN CHARGE H.G. COLE SCALE AS SHOWN

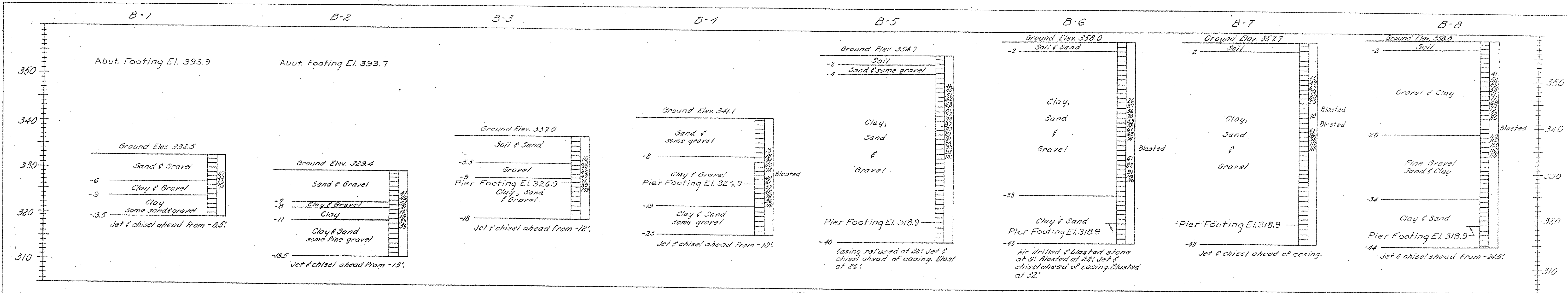
PROJECT NO 1- 91-1(2) SHEET 11 OF 15
 BRIDGE SHEET



Deflections based on arc definition

	Degree of Curve	Deflection Angle for a 79' span	Deflection Angle for an 84' span
Southbound Lane	2°-56'-36" 2.9433°	1°-12'-31"	1°-17'-06"
Centerline	3°-00'-00" 3.0000°		
Northbound Lane	3°-03'-35" 3.0596°	1°-09'-45"	1°-14'-10"

ELEVATION
 Scale = 1" = 20'

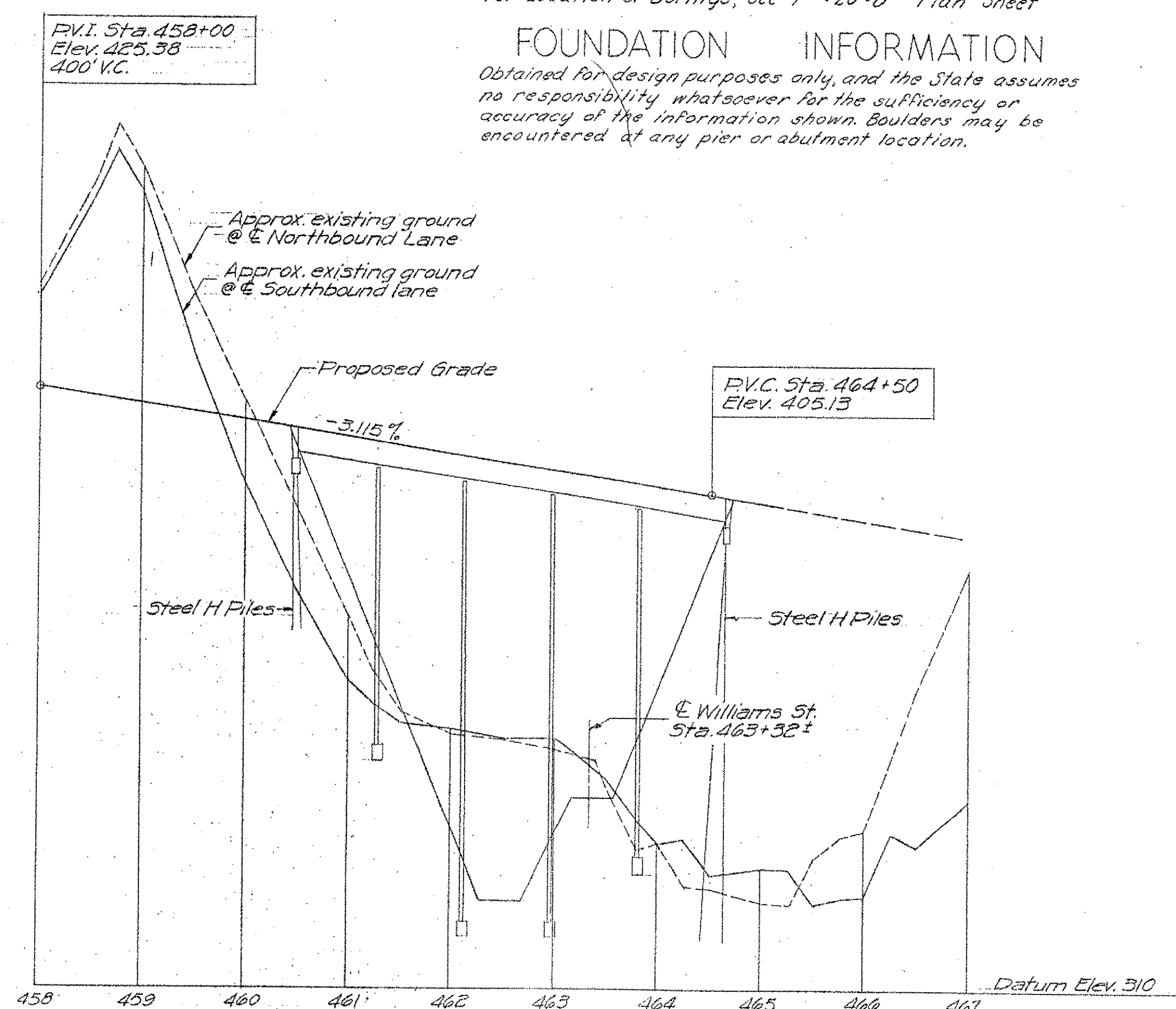


Weight of Hammer = 350#
Drop of Hammer = 24"
Diameter of Casing = 2 1/2"
Thickness of Shell = 3/8"

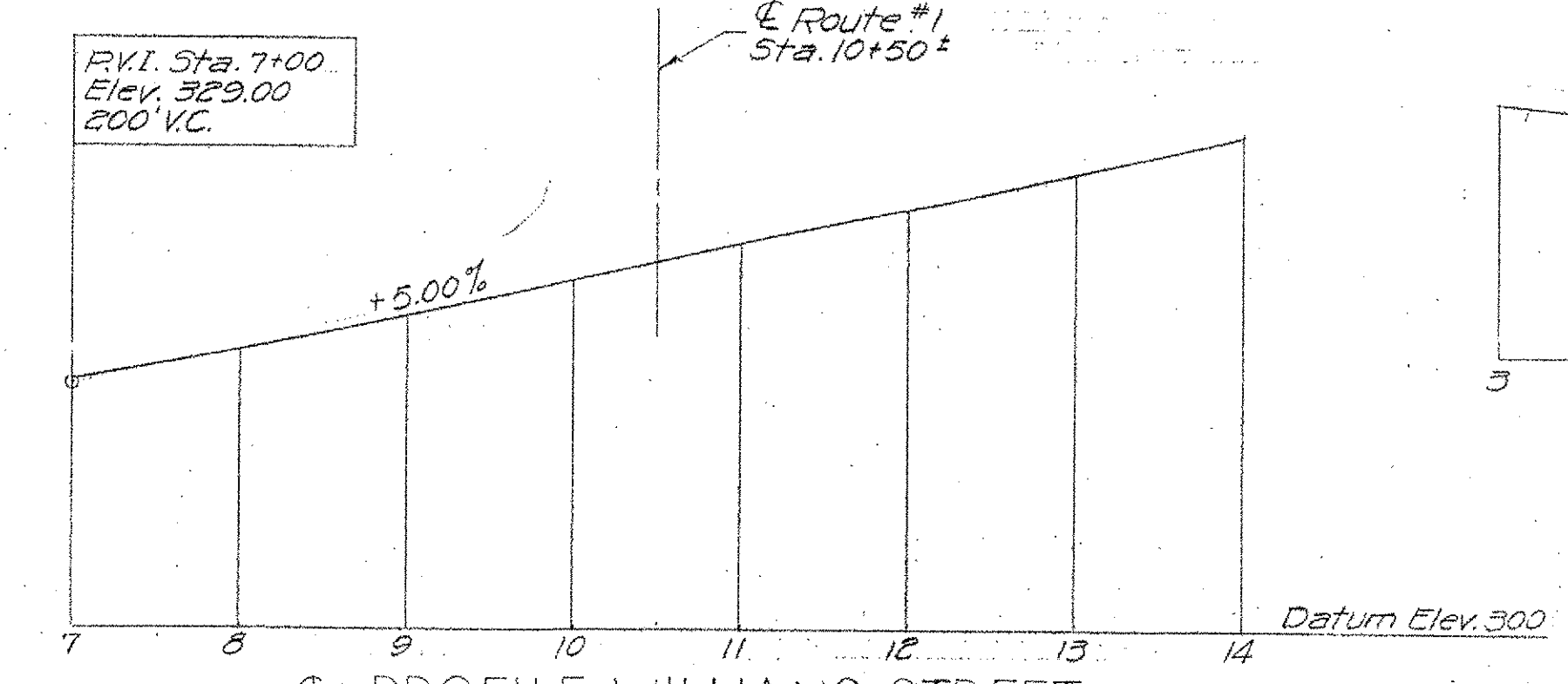
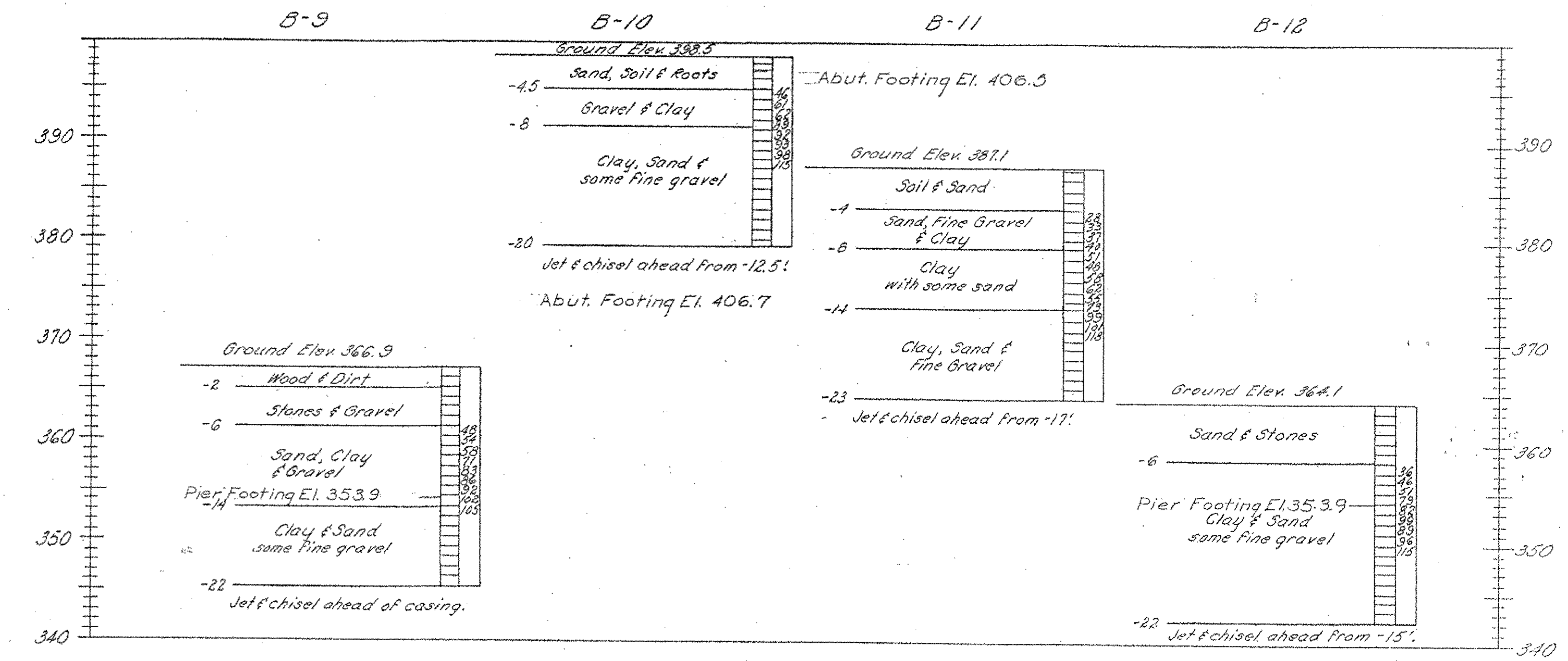
For Location of Borings, See 1" x 20' 0" Plan Sheet

FOUNDATION INFORMATION

Obtained for design purposes only, and the State assumes no responsibility whatsoever for the sufficiency or accuracy of the information shown. Boulders may be encountered at any pier or abutment location.



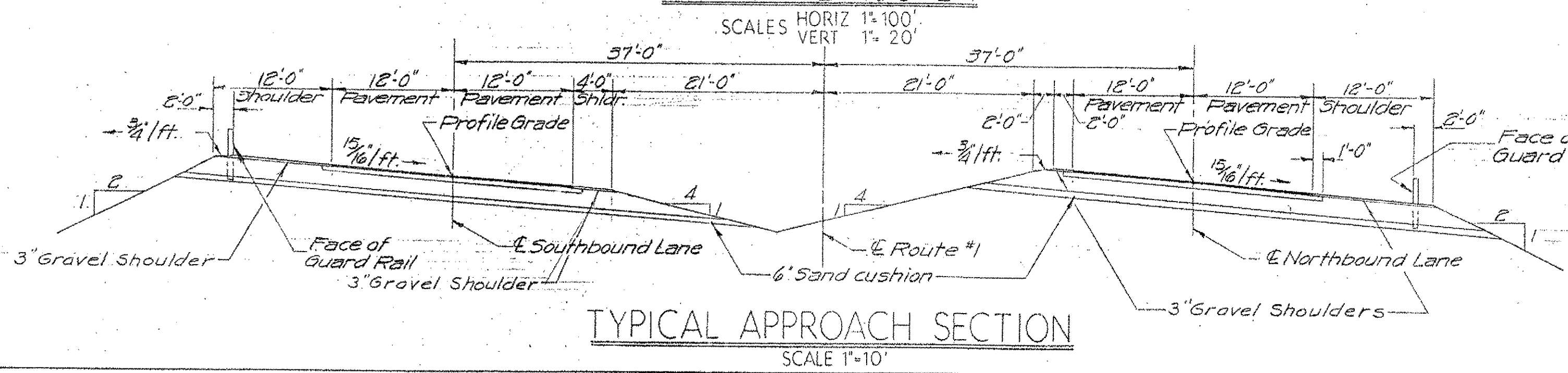
PROFILE ROUTE 1



PROFILE WILLIAMS STREET

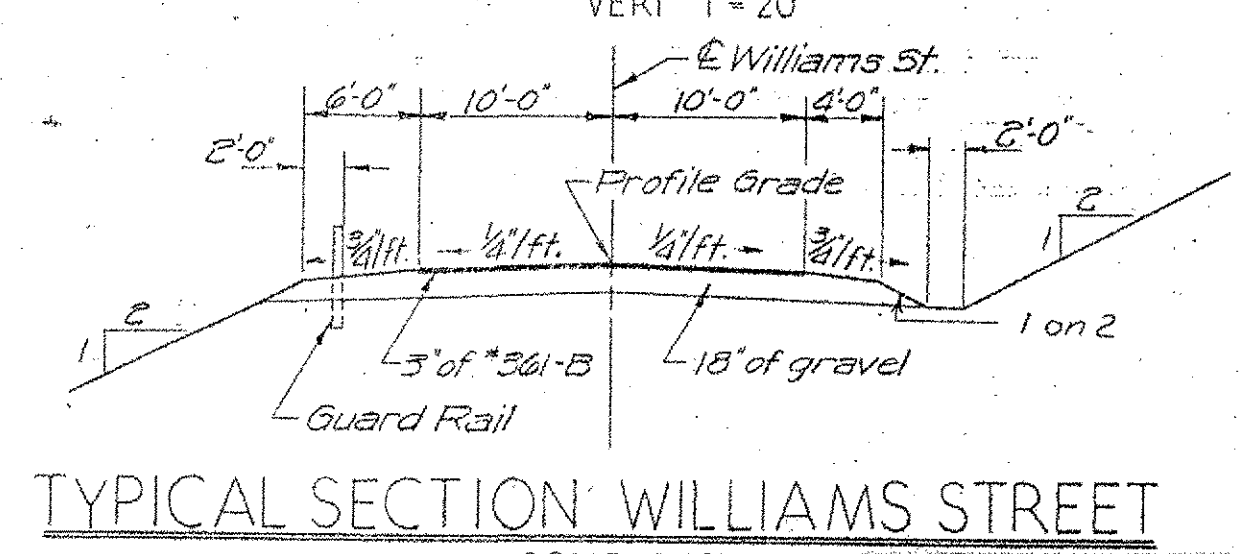
PROFILE OF PROPOSED STREAM CHANNEL

SCALES HORIZ 1"=100'
VERT 1"=20'



TYPICAL APPROACH SECTION

SCALE 1"=10'



TYPICAL SECTION WILLIAMS STREET

SCALE 1"=10'

1958 RECORD PLANS
INCLUDED FOR REFERENCE PURPOSES ONLY

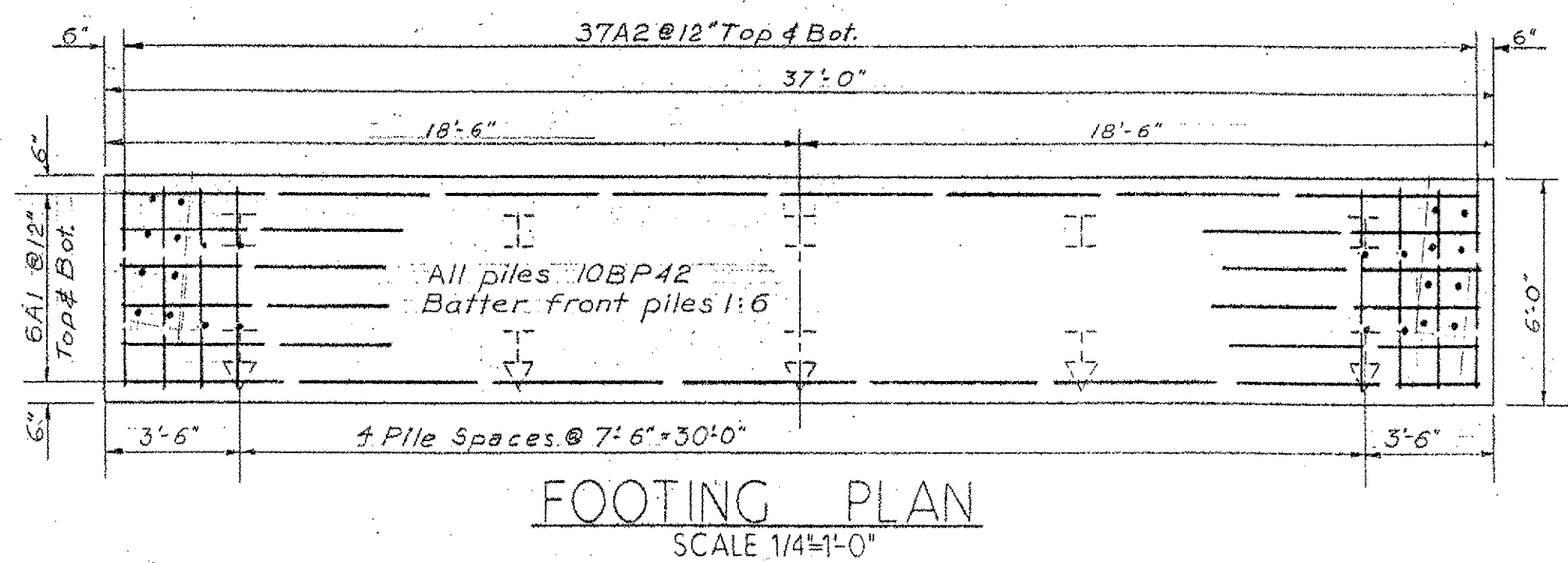
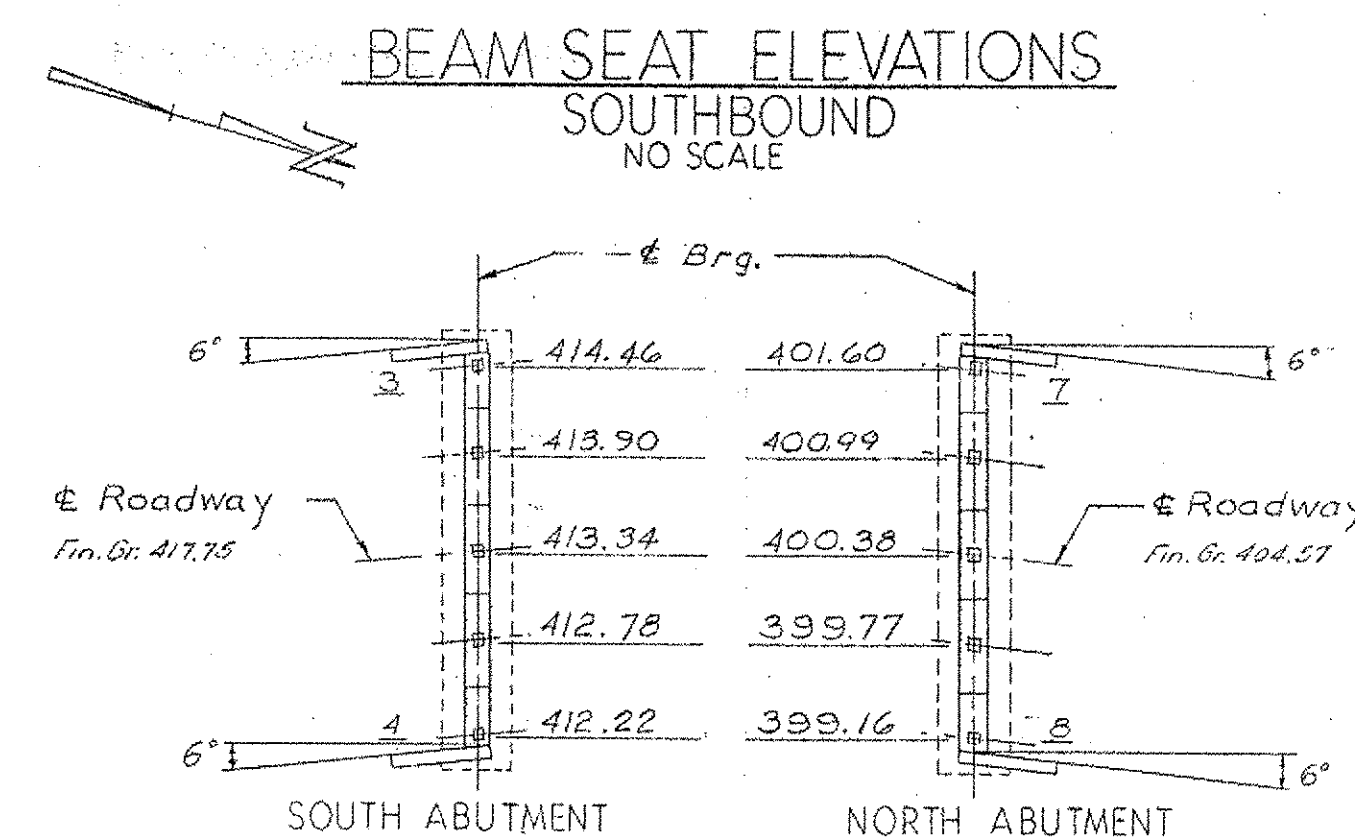
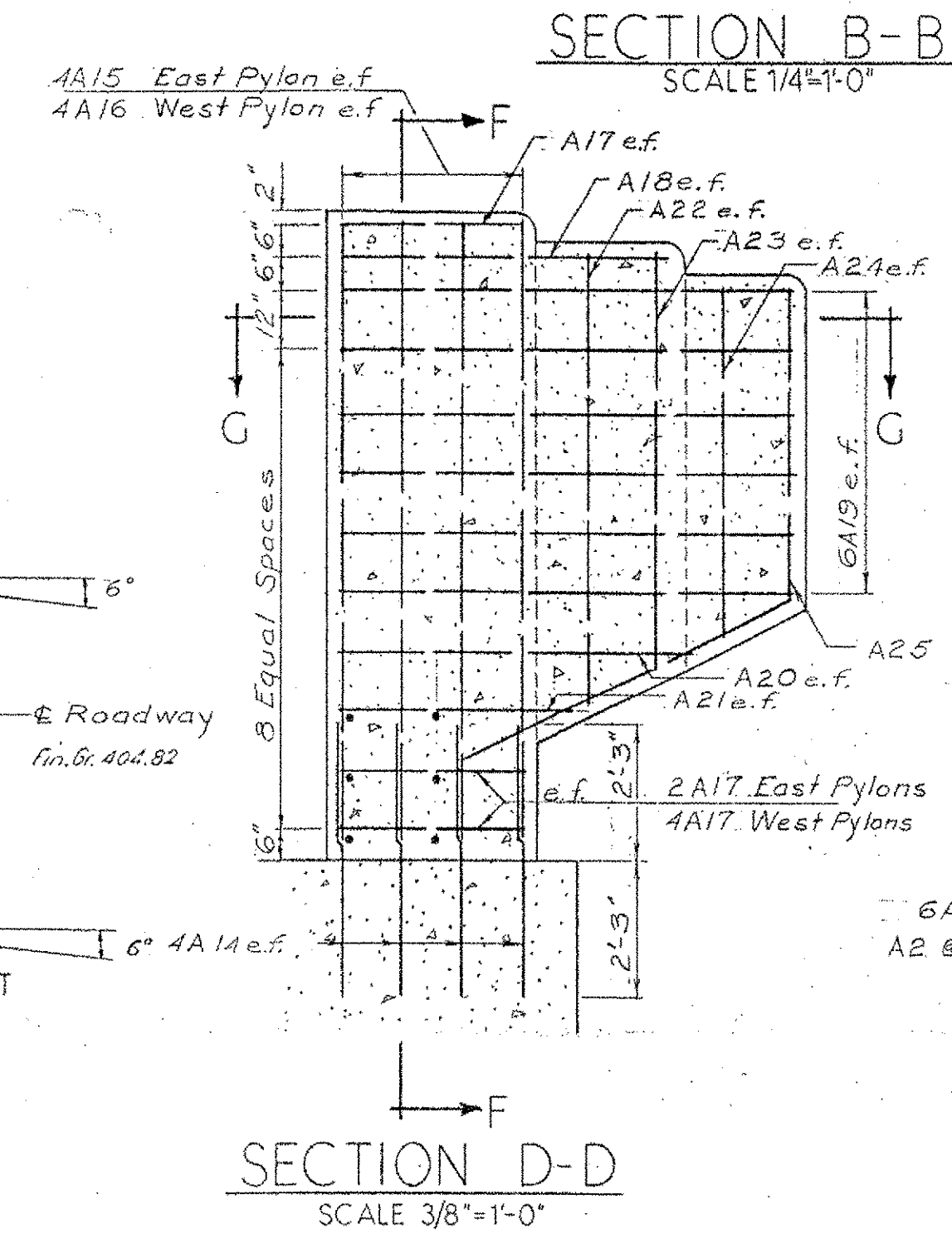
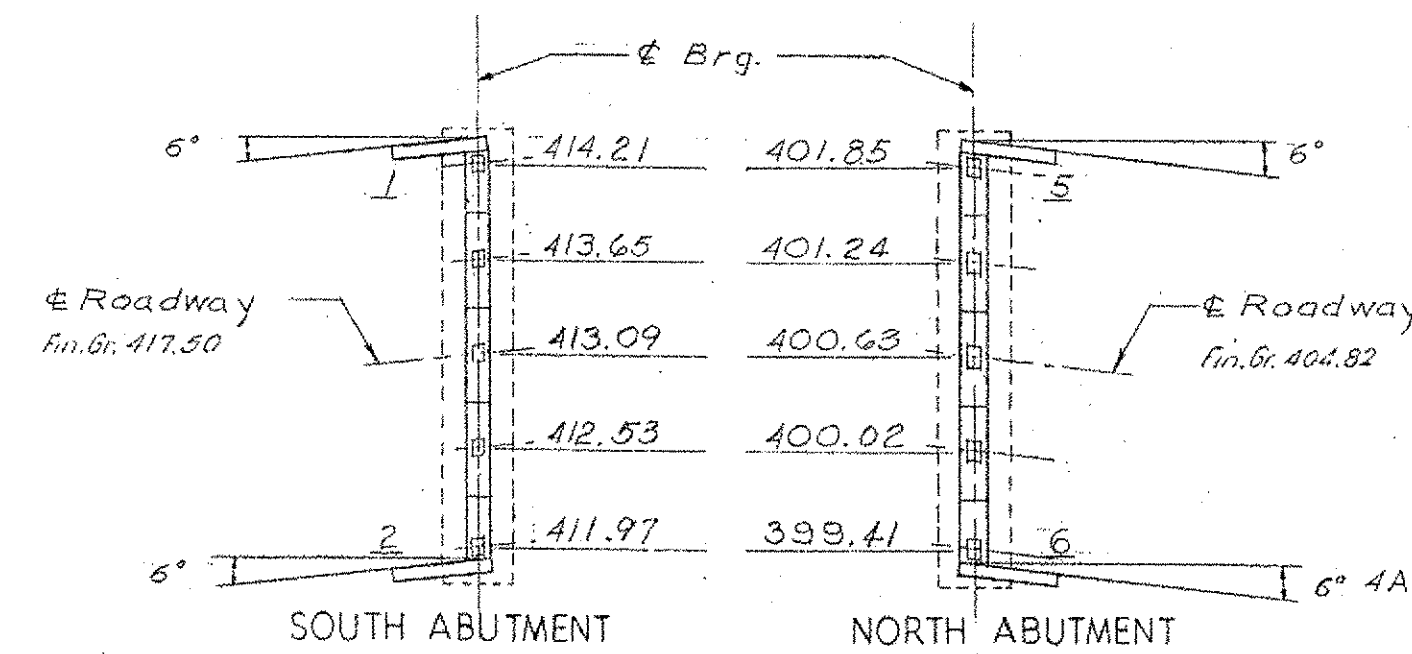
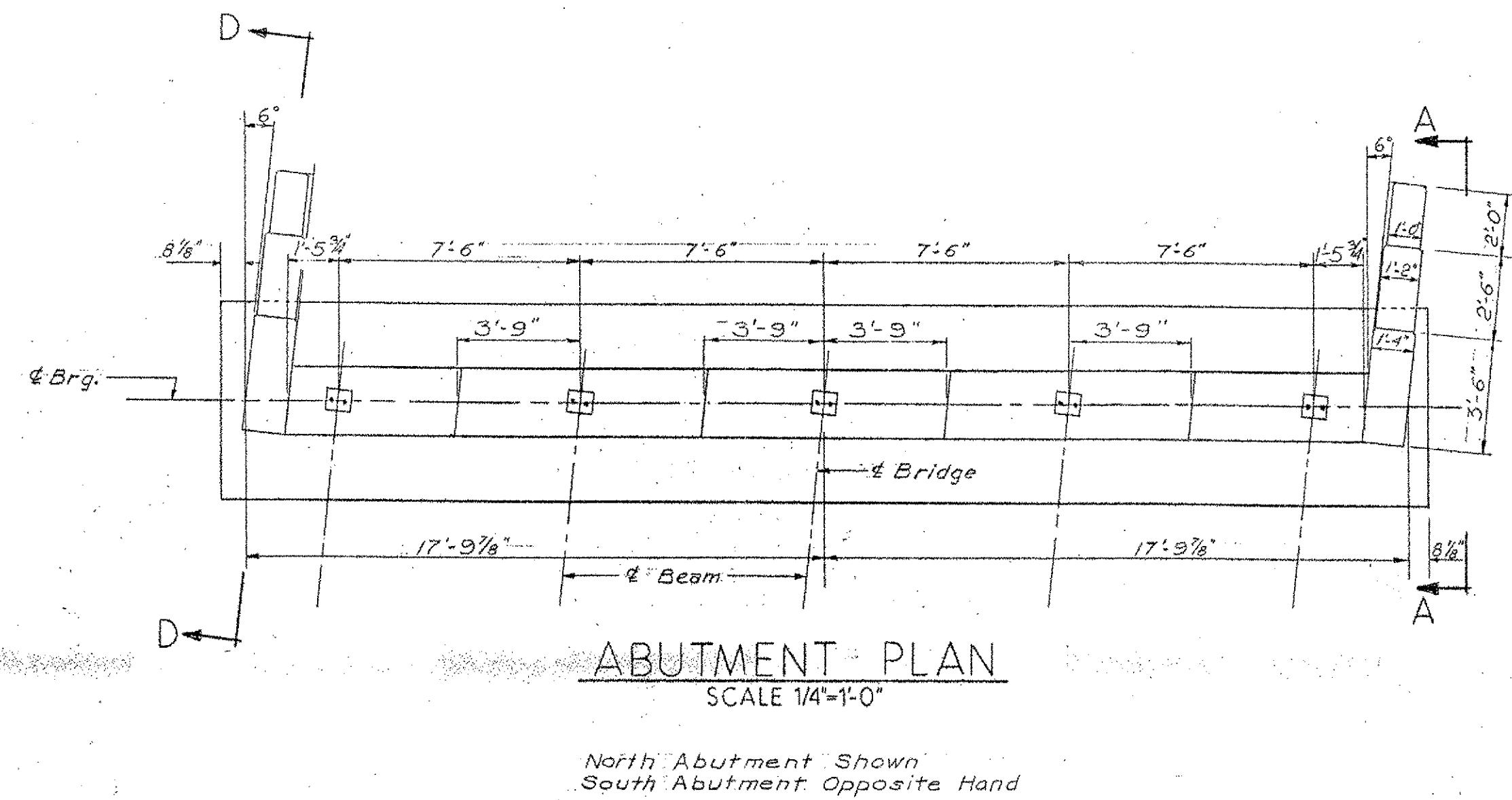
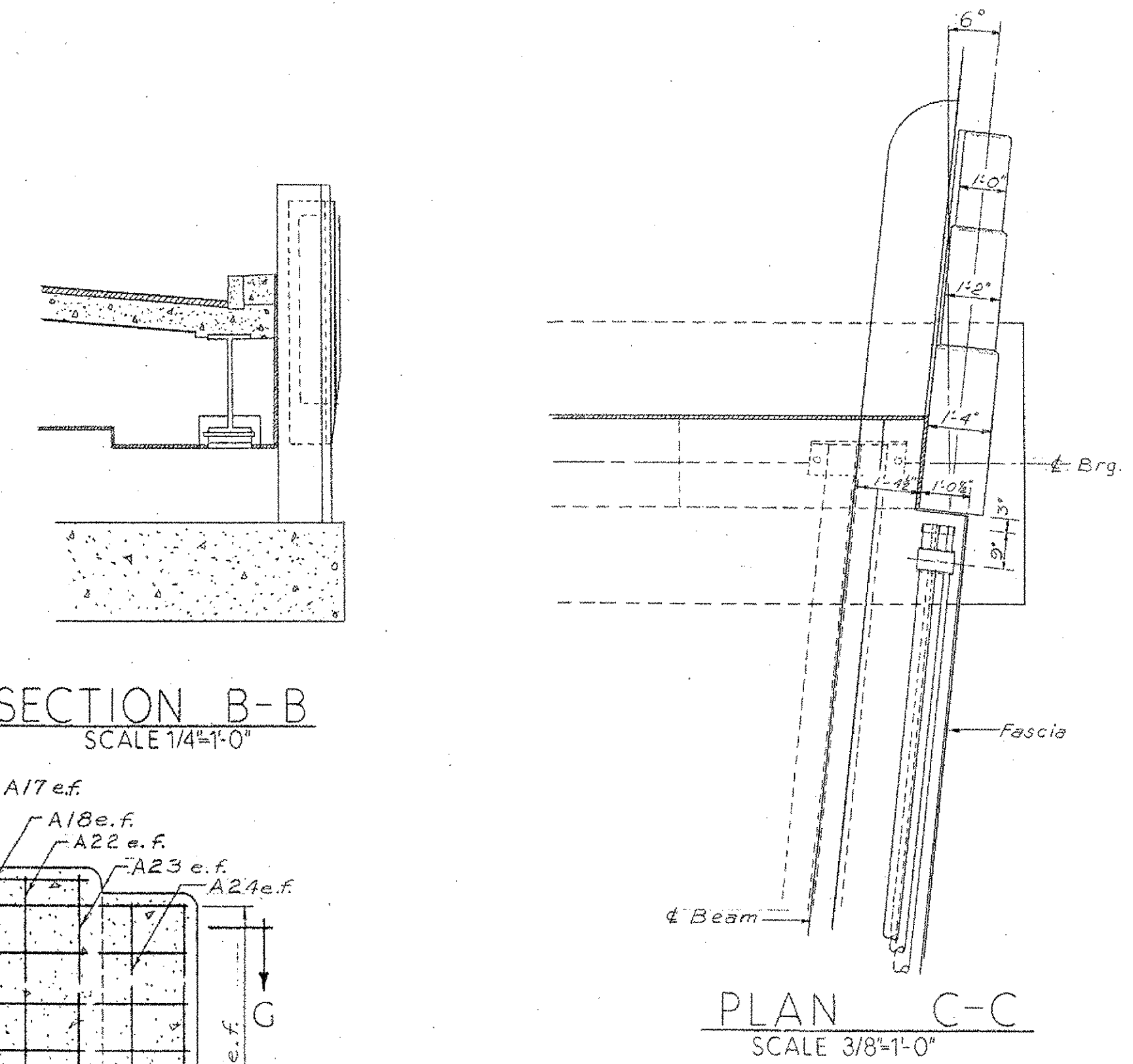
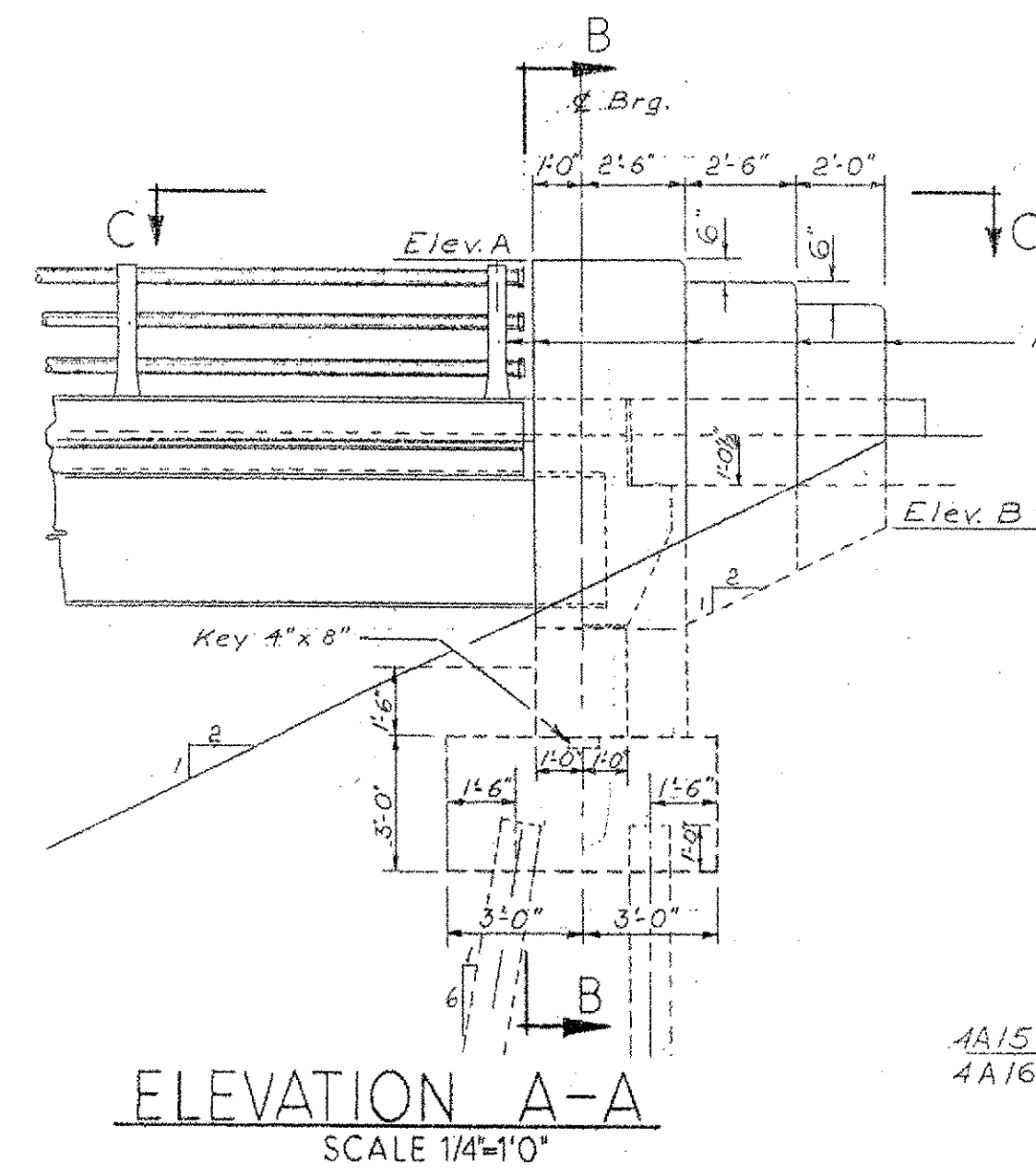
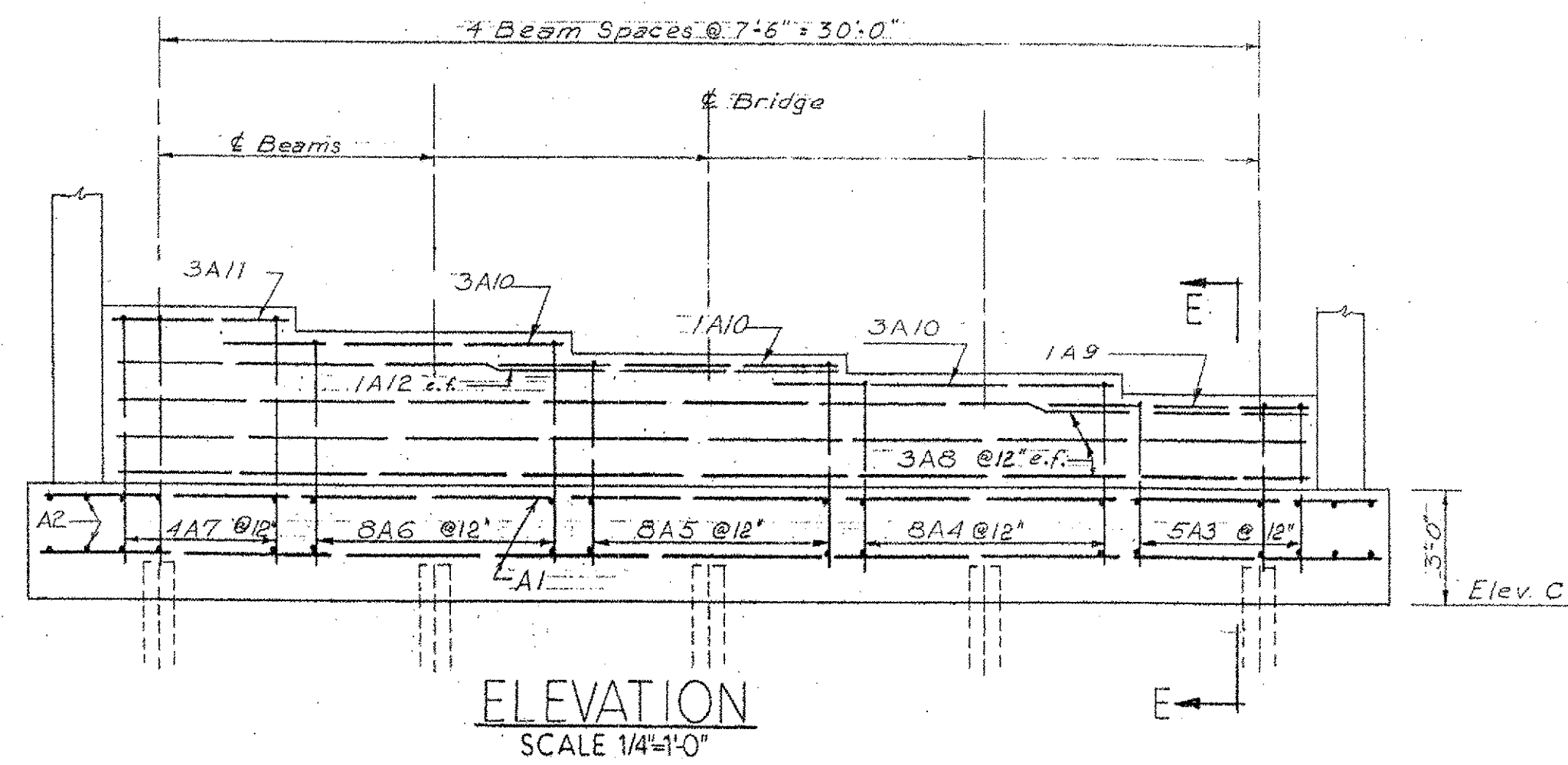
VERMONT
STATE HIGHWAY DEPARTMENT
TOWN OF BRATTLEBORO
INTERSTATE ROUTE 1

WHETSTONE BROOK BRIDGE
BORING LOGS, PROFILES
& SECTIONS

WM.H. Mc FARLAND
ENGINEER
BINGHAMTON, NY

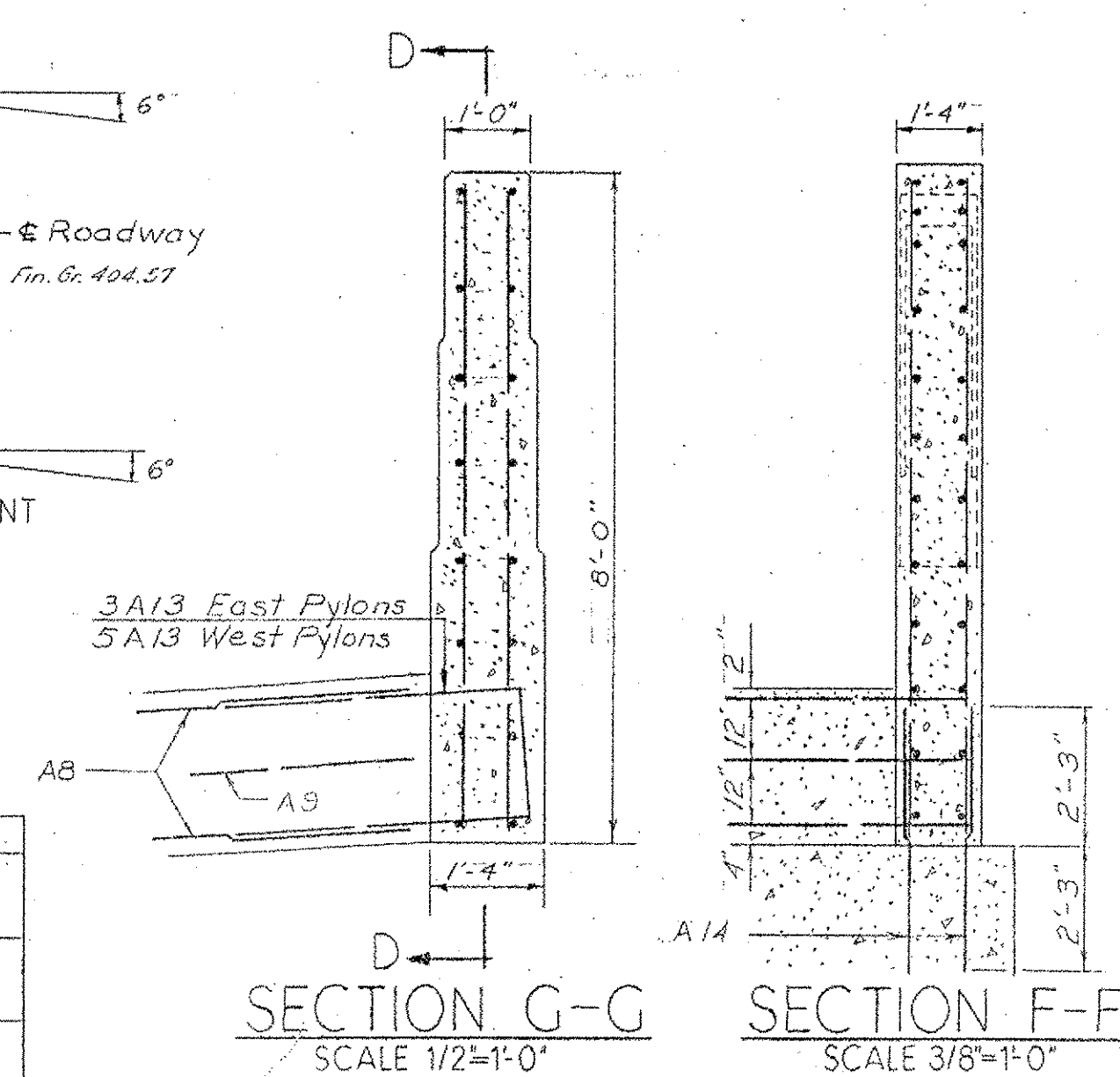
DESIGNED F.V.C. CHECKED L.H.S. DATE 10-3-57
DRAWN M.A.D. C.C.B. IN CHARGE H.S. Gales SCALE AS SHOWN

PROJECT NO. 1- 91-1(2) SHEET 12 OF 15
BRIDGE SHEET 2 OF 3



BEAM SEAT ELEVATIONS NORTHBOUND NO SCALE

Elevation	A	B	C
1	422.7	416.4	406.5
2	420.5	414.2	
3	423.0	416.7	406.7
4	420.7	414.4	
5	410.2	403.9	393.9
6	407.7	401.4	
7	409.9	403.6	393.7
8	407.5	401.2	



Note:
 All reinforcement shall be size #5.
 All piles shall be driven to a minimum bearing capacity of 37 tons.
 For General Notes see Sheet 1.
 All Bridge Seats to be sloped 1/4" per foot and coated with Asphaltic-Asbestos Coating Item 407.

ESTIMATED QUANTITIES

Item	N.W. Abutment		N.E. Abutment		S.W. Abutment		S.E. Abutment	
	Neat	Overrun	Neat	Overrun	Neat	Overrun	Neat	Overrun
Conc. Class 'B'	40	2	42	40	2	42	40	2
Asph. Aeb. Coat.	4	0	4	4	0	4	4	0
10BP42 Piles	800	0	800	800	0	800	400	0

1958 RECORD PLANS
 INCLUDED FOR REFERENCE PURPOSES ONLY

VERMONT
 STATE HIGHWAY DEPARTMENT
 TOWN OF BRATTLEBORO
 INTERSTATE ROUTE 1

WHETSTONE BROOK BRIDGE

ABUTMENT DETAILS

WM. H. Mc FARLAND
 ENGINEER
 BINGHAMTON, N.Y.

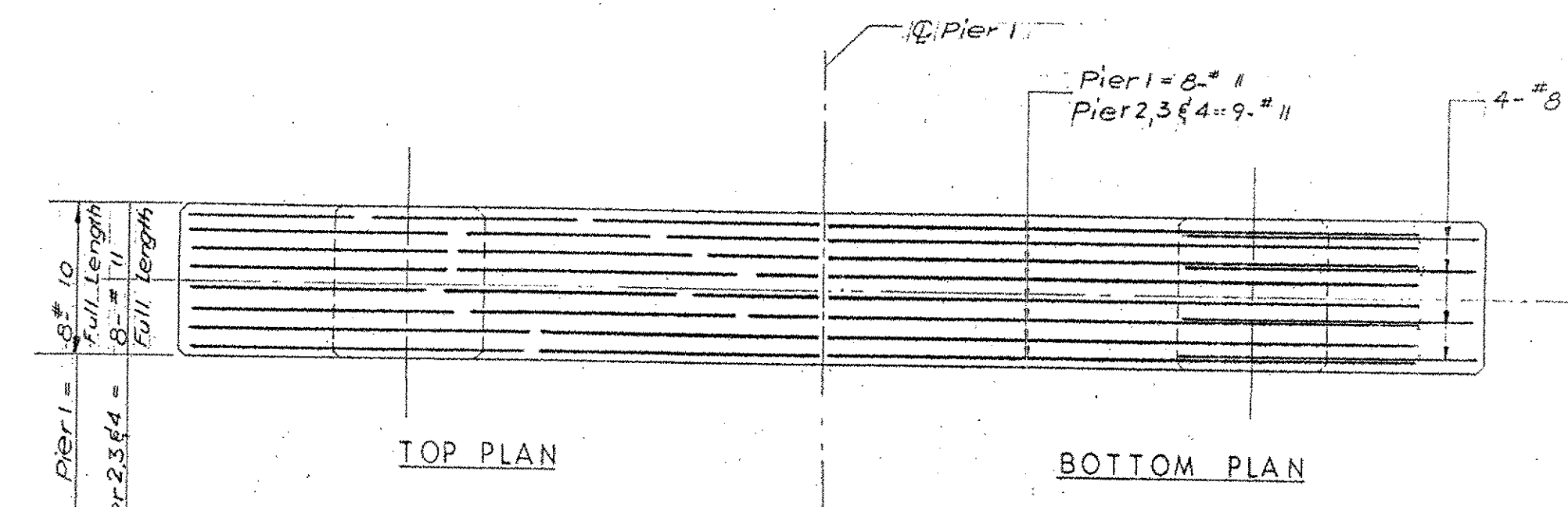
DESIGNED E.G.P. CHECKED K.W.R. DATE 6-19-57
 DRAWN H.B. & D.A.S. IN CHARGE H.G. COLES SCALE AS NOTED

PROJECT NO. I- 91-1(2) SHEET 13 OF 15

BRIDGE SHEET 3 OF 5

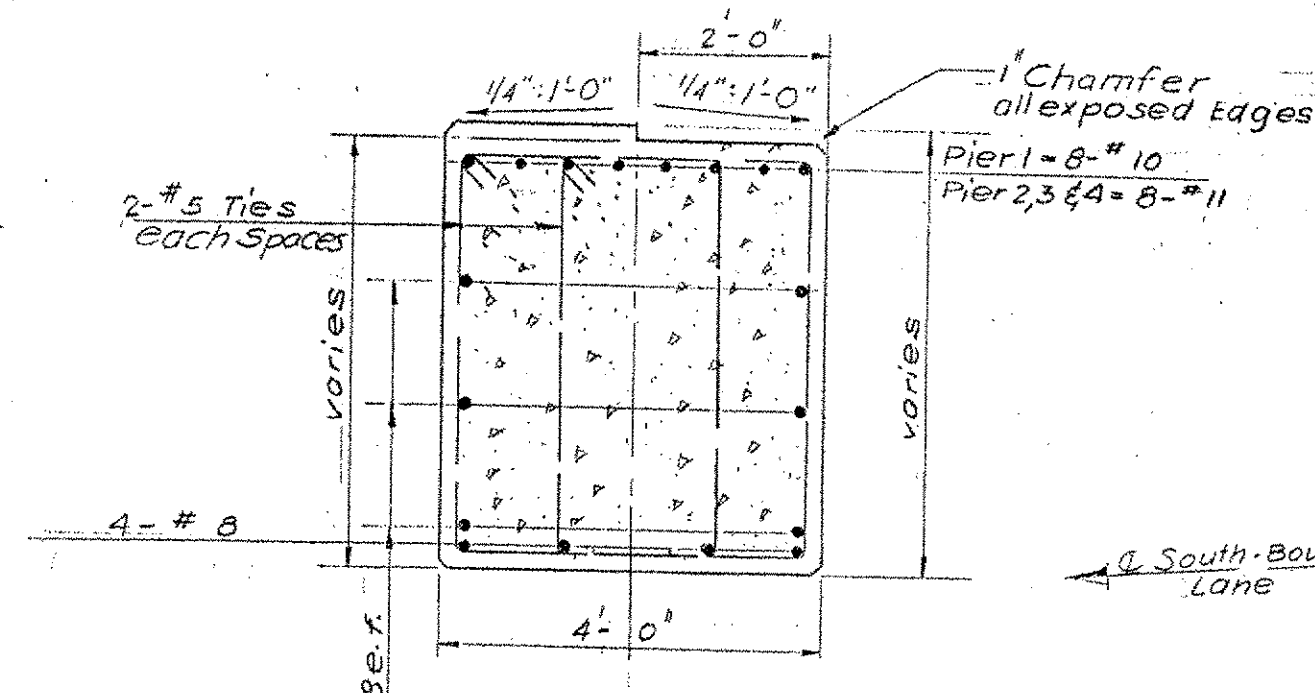
ESTIMATED QUANTITIES

Conc. Class	N.B.	Pier 1			Pier 2			Pier 3			Pier 4		
		Neat	Overrun	Total	Neat	Overrun	Total	Neat	Overrun	Total	Neat	Overrun	Total
Conc. Class B	N.B.	148	6	154	205	8	213	202	8	210	189	8	197
Asph.-Asb. Coat	N.B.	15	1	16	15	1	16	15	1	16	15	1	16
	S.B.	148	6	154	205	8	213	202	8	210	189	8	197
	S.B.	15	1	16	15	1	16	15	1	16	15	1	16

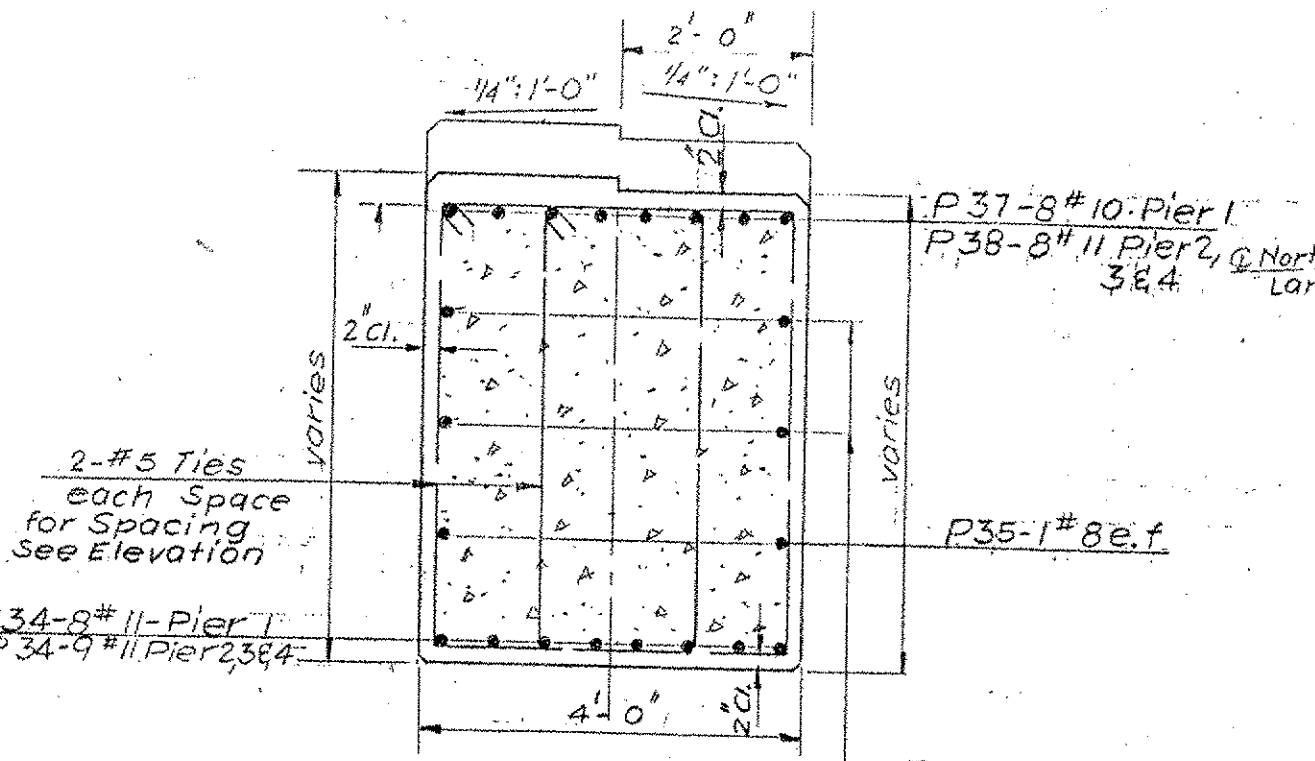
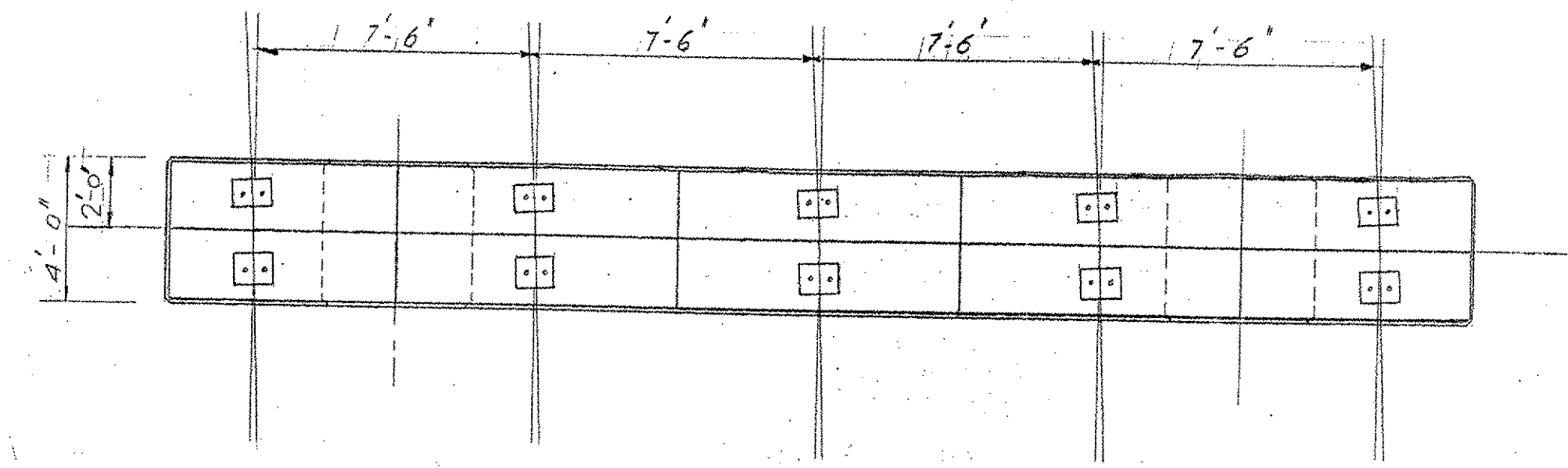


BEAM REINFORCEMENT

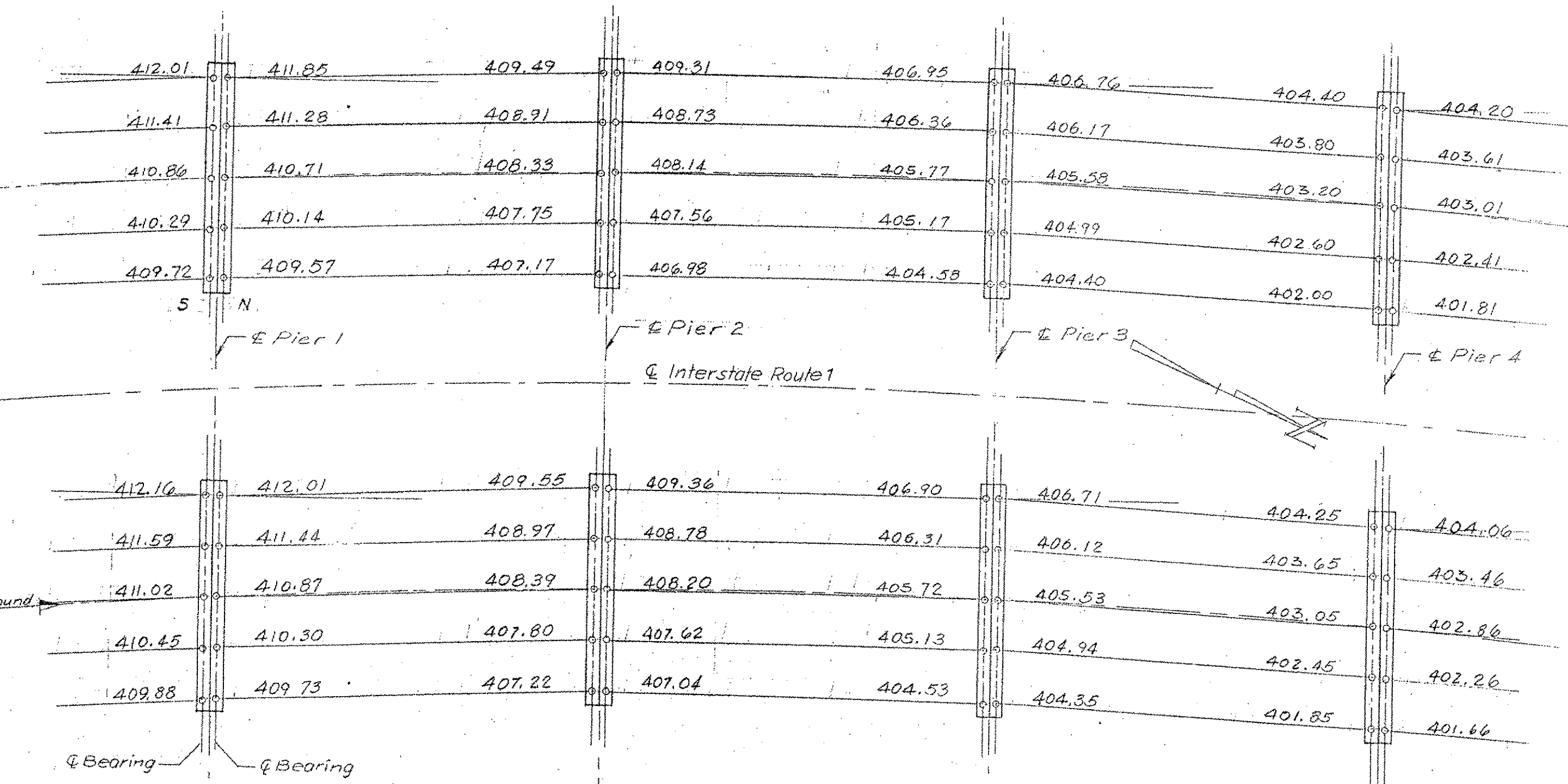
Scale: 1/4" = 1'-0"



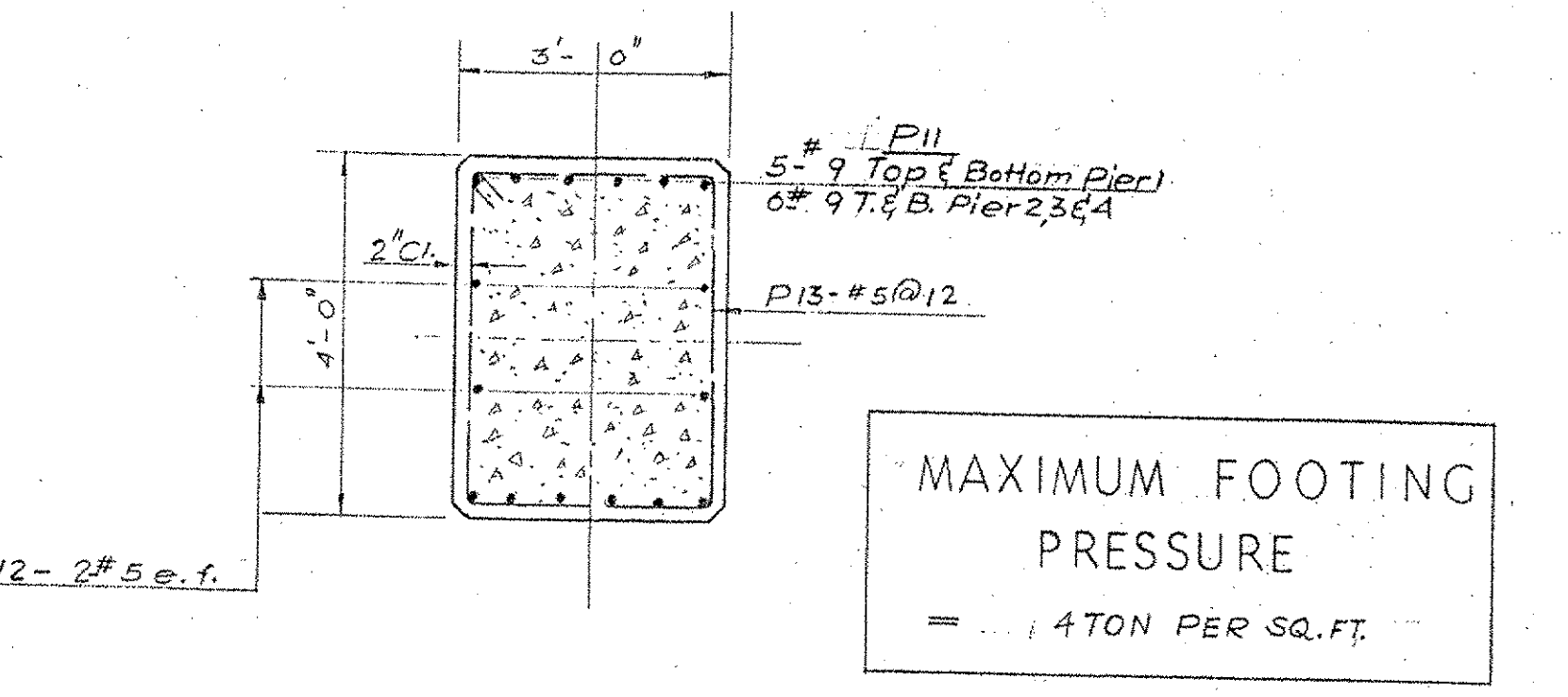
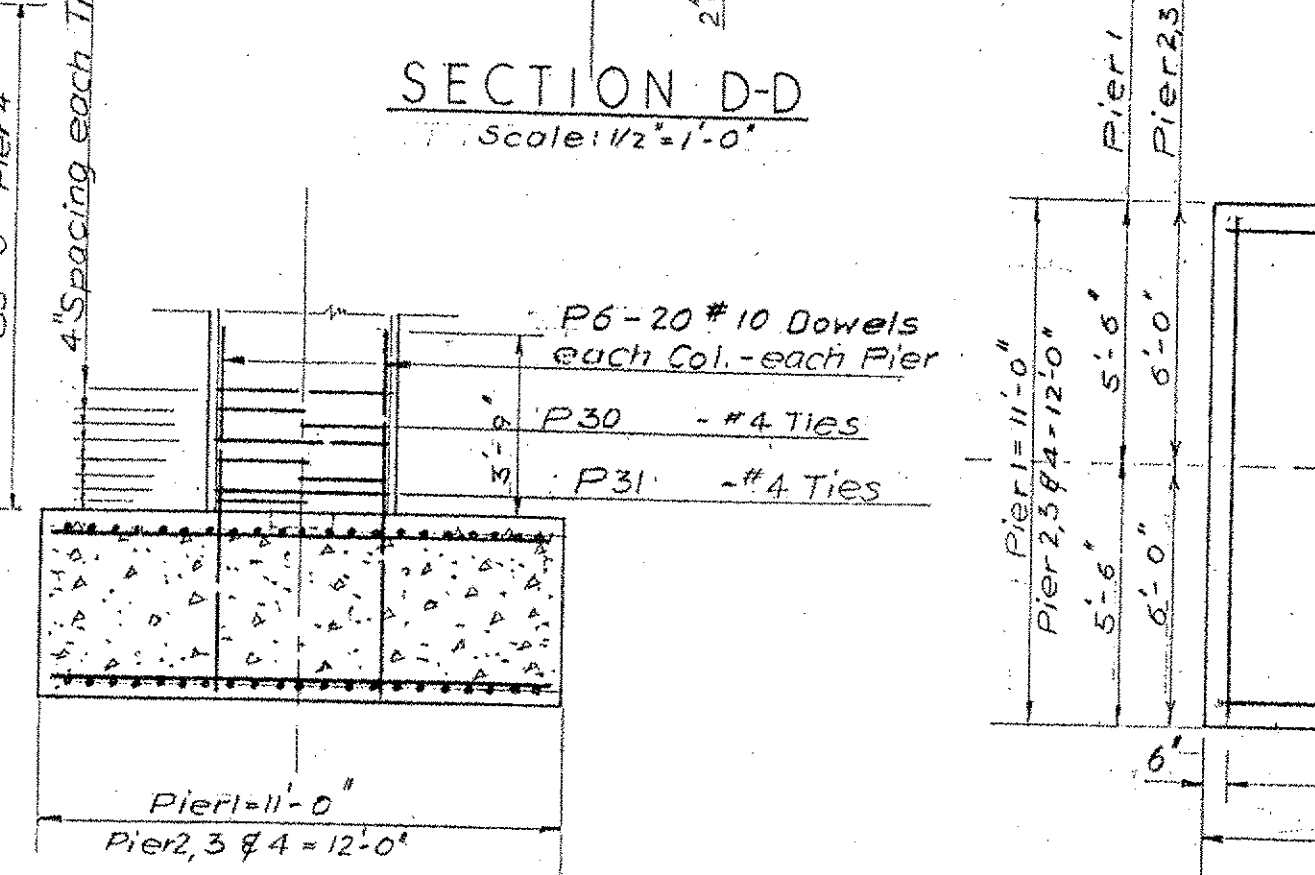
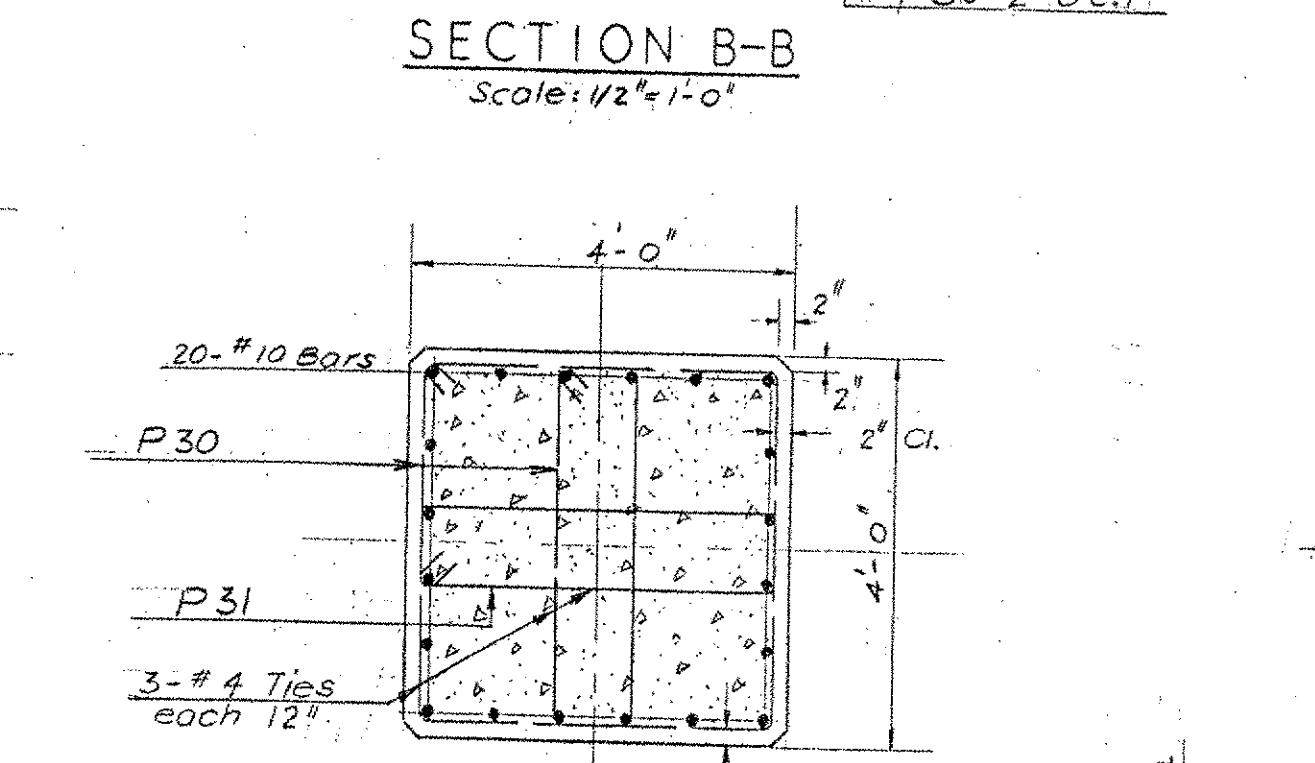
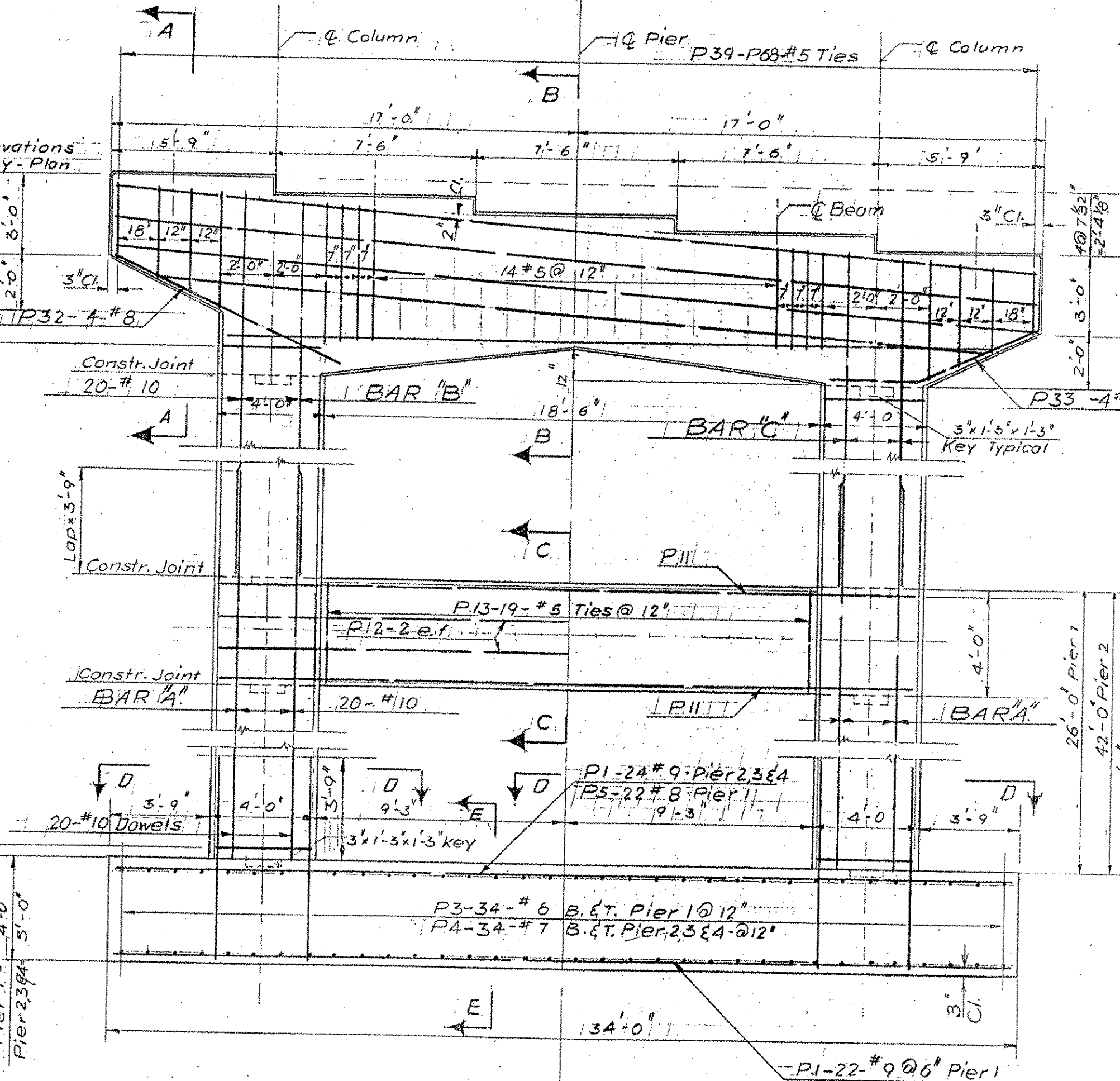
Note: All Bridge Seats to be sloped 1/4" per foot and coated with Asphaltic-Asbestos Coating Item 407



2-#5 Ties each Space for Spacing See Elevation



BEAM SEAT ELEVATIONS



MAXIMUM FOOTING PRESSURE
= 4 TON PER SQ. FT.

ELEVATIONS BOTTOM OF FOOTING	
PIER 1	353.9
PIER 2	318.9
PIER 3	318.9
PIER 4	326.9

COLUMN BARS			
Pier	Bar A	Bar B	Bar C
1 S.B.	P 7	P 14	P 15
1 N.B.	P 7	P 16	P 17
2 S.B.	P 8	P 18	P 19
2 N.B.	P 8	P 20	P 21
3 S.B.	P 9	P 22	P 23
3 N.B.	P 9	P 24	P 25
4 S.B.	P 10	P 26	P 27
4 N.B.	P 10	P 28	P 29

VERMONT
STATE HIGHWAY DEPARTMENT
TOWN OF BRATTLEBORO
INTERSTATE ROUTE 1
WHETSTONE BROOK BRIDGE
PIER DETAILS

WM.H.Mc FARLAND
ENGINEER
BINGHAMTON, NY

1958 RECORD PLANS
INCLUDED FOR REFERENCE PURPOSES ONLY

DESIGNED: E.W.C. CHECKED: F.W.C. DATE: 8-10-57
DRAWN: H.J. IN CHARGE: H.G.C. SCALE: AS NOTED
PROJECT NO: 91-1(2) SHEET 14 OF 15

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
ABUTMENTS																	
1	48	#5	36'-6"	A1	Str.												
2	236	#5	5'-6"	A2	Str.												
3	20	#5	10'-10"	A3	17		4'-7"	1'-8"	4'-7"								
4	32	#5	12'-0"	A4	17		5'-2"	1'-8"	5'-2"								
5	32	#5	13'-2"	A5	17		5'-9"	1'-8"	5'-9"								
6	32	#5	14'-4"	A6	17		6'-4"	1'-8"	6'-4"								
7	16	#5	15'-6"	A7	17		6'-11"	1'-8"	6'-11"								
8	24	#5	32'-6"	A8	Str.												
9	4	#5	7'-2"	A9	17												
10	28	#5	9'-7"	A10	17												
11	12	#5	4'-10"	A11	17												
12	8	#5	20'-0"	A12	Str.												
13	32	#5	8'-8"	A13	17		3'-6"	1'-8"	3'-6"								
14	64	#5	4'-6"	A14	Str.												
15	32	#5	10'-2"	A15	17												
16	32	#5	12'-7"	A16	17												
17	64	#5	3'-2"	A17	17												
18	16	#5	5'-8"	A18	17												
19	96	#5	7'-8"	A19	17												
20	16	#5	6'-0"	A20	17												
21	16	#5	4'-0"	A21	17												
22	16	#5	7'-8"	A22	17												
23	16	#5	7'-0"	A23	17												
24	16	#5	5'-11"	A24	17												
25	16	#5	5'-5"	A25	Str.												
PIERS																	
29	188	#9	33'-6"	P1	Str.												
30	144	#10	33'-6"	P2	17												
31	136	#6	10'-8"	P3	17												
32	408	#7	11'-8"	P4	17												
33	44	#8	33'-6"	P5	17												
34	320	#10	7'-6"	P6	17												
35	80	#8	29'-9"	P7	17												
36	80	#8	45'-9"	P8	17												
37	80	#8	43'-9"	P9	17												
38	80	#10	38'-9"	P10	17												
39	92	#9	26'-0"	P11	17												
40	32	#5	26'-0"	P12	Str.												
41	152	#5	13'-6"	P13	TI	5"	3'-8"	2'-8"	3'-8"	2'-8"	5"						
42	20	#10	27'-2"	P14	Str.												
43	#5	25'-5"	P15	17													
44	#5	27'-4"	P16	17													
45	#5	25'-7"	P17	17													
46	#5	42'-7"	P18	Str.													
47	#5	40'-10"	P19	17													
48	#5	42'-9"	P20	17													
49	#5	40'-11"	P21	17													
50	#5	42'-0"	P22	17													
51	#5	40'-3"	P23	17													
52	#5	41'-10"	P24	Str.													
53	#5	40'-3"	P25	17													
54	#5	36'-6"	P26	17													
55	#5	34'-8"	P27	17													
56	#5	36'-4"	P28	17													
57	20	#10	34'-6"	P29	Str.												
58	2136	#4	12'-5"	P30	TI	4 1/2"	3'-8"	2'-2"	3'-8"	2'-2"	4 1/2"						
59	1068	#4	9'-11"	P31	TI	4 1/2"	3'-8"	11"	3'-8"	11"	4 1/2"						
60	32	#8	9'-4"	P32	Str.												
61	32	#8	9'-9"	P33	19			3'-6"	4'-3"								
62	70	#11	28'-0"	P34	Str.												
63	16	#8	30'-8"	P35	17												
64	32	#8	33'-9"	P36	17												
65	16	#10	33'-9"	P37	17												
66	48	#11	33'-9"	P38	Str.												
67	16	#5	11'-8"	P39	TI	5"	2'-8"	2'-8"	2'-8"	2'-8"	5"						
68	#5	12'-8"	P40	17			3'-3"		3'-3"								
69	#5	13'-6"	P41	17			3'-8"		3'-8"								
70	#5	14'-8"	P42	17			4'-3"		4'-3"								
71	#5	16'-6"	P43	17			5'-2"		5'-2"								
72	#5	16'-5"	P44	17			5'-1 1/2"		5'-1 1/2"								
73	#5	16'-4"	P45	17			5'-1"		5'-1"								
74	#5	16'-3"	P46	17			5'-0 1/2"		5'-0 1/2"								
75	#5	16'-2"	P47	17			5'-0"		5'-0"								
76	#5	16'-0"	P48	17			4'-11"		4'-11"								
77	#5	15'-10"	P49	17			4'-10"		4'-10"								
78	#5	15'-8"	P50	17			4'-9"		4'-9"								
79	#5	15'-6"	P51	17			4'-8"		4'-8"								
80	#5	15'-4"	P52	17			4'-7"		4'-7"								
81	16	#5	15'-2"	P53	TI	5"	2'-8"	4'-6"	2'-8"	4'-6"	5"						

TYPICAL BAR BENDS

NOTES:

- All dimensions are out to out of bar.
- J' dimensions on 180° hooks to be shown only where necessary to restrict hook size otherwise standard hooks are to be used.
- Where J' is not shown, J' will be kept equal to or less than H. Where J' can exceed H, it should be shown.
- H dimension on stirrups to be shown where necessary to restrict hooks.
- Where bars are to be bent more accurately than standard bending tolerances, bending dimensions which require closer working should have limits indicated.
- Figures in circles show types.
- No allowance for bend curvature is to be made except for standard hook & radii in excess of same.

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
163																	
164																	
165																	
166																	
167																	
168																	
169																	
170																	
171																	
172																	
173																	
174																	
175																	
176																	
177																	
178																	
179																	
180																	
181																	
182																	
183																	
184																	
185																	
186																	
187																	
188																	
189																	
190																	

STANDARD HOOK DETAIL

BAR SIZES

Equivalent Size	Present (Numbers)
1/8"	#2
3/8"	#3
1/2"	#4
5/8"	#5
3/4"	#6
7/8"	#7
1"	#8
1 1/8"	#9
1 1/4"	#10
1 3/8"	#11

1958 RECORD PLANS INCLUDED FOR REFERENCE PURPOSES ONLY

Bar reinforcement metal shall conform to the requirements of the Standard Specifications for new Billet Steel Concrete Reinforcement Bars (Intermediate Grade) Serial Designation A.A.S.H.O. M31-48 or its latest revision. All bars shall be deformed to conform with A.S.T.M. Specifications A305-49.

Location	Pounds
S.W. Abutment	2426
N.W. "	2426
N.E. "	2426
Pier #1 S.B.	23,949
" #1 N.B.	23,978
Pier #2 S.B.	33,680
" #2 N.B.	33,701
Pier #3 S.B.	32,929
" #3 N.B.	32,945
Pier #4 S.B.	30,817
" #4 N.B.	30,788
Superstructure	169,898
Approach Slabs	16,124
Extra Steel	608
Total	439,091

Location	Pounds
Superstructure	174,193
Approach Slab	16,125

ESTIMATED QUANTITIES - Cont.

Location	Pounds
Superstructure	174,193
Approach Slab	16,125

VERMONT STATE HIGHWAY DEPARTMENT
TOWN OF BRATTLEBORO
INTERSTATE ROUTE 1
WHETSTONE BROOK BRIDGE
REINFORCING BAR SCHEDULE
DESIGNED BY W.M.C. FARLAND
CHECKED BY J.M. DATE 8-10-57
DRAWN BY D. WARTIN IN CHARGE F.C. COLES SCALE 1/8" = 1'-0"

PROJECT NO. 1-91(2) SHEET 15 OF 15